

# **Christian & Company**

## **MARINE SURVEYORS**

### **STANDARD SURVEY**

Client: Removed for Privacy

Date of report: April 12, 2022

Current owner: Removed

Our file #: 22 - 20414web

This inspection was performed upon the request of the client listed above on April 8, 2022 while the vessel was hauled at Driscoll Boatworks Shelter Island and afloat at Cabrillo Isle Marina, San Diego, CA. The client, mechanic and Kells Manthei (undersigned surveyor) attended.

### **Scope of Services**

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

### **VESSEL DESCRIPTION**

**Marine Claims Assistance - Vessel Inspections**  
**1276 Scott Street – San Diego, CA 92106**  
**TEL 619.223.7380 800.944.4789 FAX 619.223.7390**  
**[office@themarinesurveyors.com](mailto:office@themarinesurveyors.com) - [themarinesurveyors.com](http://themarinesurveyors.com)**

Client's Name Removed  
April 12, 2022

"Removed"  
1990 Carver Yachts 36 / ACMY

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Builder:	Carver Yachts	Doc. #:	Removed
Model/type:	36 / aft cabin	HIN:	Removed
Year:	1990 (model year)	Engines:	Two Crusader
Length:	40'	Name:	"Removed"
Draft:	3' 5"	Hailing port:	San Diego, CA
Beam:	13'	Weight:	29,000 lb. (travel lift scale)
* listing specifications		Dry weight:	18,000 lb. *

## HULL & STRUCTURE

Keel & bottom: Molded fiberglass construction, unknown core, modified-V shape, single hard chine, one partial lifting strake per side, black antifouling paint

Topsides & transom: Molded fiberglass construction, unknown core, white gelcoat, blue and brown vinyl boot stripes, rubber rub rail with metal strip

Decks & superstructure: Molded fiberglass construction, unknown core, white gelcoat, particle nonskid deck surface

Deck hardware: Four sets of cleats, stainless steel bow rail with single lifeline, stainless steel grab rails, metal radar arch, bow blank with integral anchor roller, transom "escape hatch", transom ladder, swim step, foredeck hatch, fender holders

Longitudinals/stringers: Fiberglass encased stringers, unknown core

Athwartships/bulkheads/frames: Plywood bulkheads

Layout/interior components: Aft cabin motor yacht, deck aft with steps to port forward up to the flybridge, helm aft on the flybridge, sliding door to starboard of center on the aft deck leads to the salon, engines and generator are located below the salon, steps to starboard aft in the salon lead to the aft cabin, aft cabin includes an island berth and ensuite head to starboard, salon amidships, galley to starboard forward, head to port forward, cabin forward with a berth

Bilge: Holding minimal 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, except where noted. There are approximately 30 - 40 blisters on the bottom ranging between 1/4" to 2.5" in diameter. The age of the bottom paint is unknown. A diver cleaned the bottom the day prior to the survey. The hull sides and transom were visually inspected and randomly sounded. The hull sides and transom are in satisfactory structural condition, except where noted. The boot stripes are damaged. There are miscellaneous cosmetic deficiencies on both hull sides. The metal strip on the port and starboard rub rails is indented by the forward of amidships cleat. There are miscellaneous cracks on the exterior side of the gunnel on both sides. The gelcoat is thin at the bow above the rub rail. The discharge through hull fittings to starboard aft and port forward do not have exterior fittings. The port forward discharge through hull fitting had tape over it at the start of the survey and the tape fell off during the sea trial. The

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deck and superstructure were visually inspected and randomly sounded. The deck and superstructure are in satisfactory structural and cosmetic condition, except where noted. A sound difference was noted when percussion testing port forward on the flybridge deck, a "crackling sound" was noted when weight was applied to this area. The black to starboard forward on the superstructure is cracking. 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, except where noted. The sideline is failing to port on the flybridge. The flybridge upholstery is aged and the helm upholstery is damaged. The bimini top is aged. The paint is failing on the aft deck hardtop support. The aft deck enclosure is aged. The transom "escape hatch" is damaged and crazed and there are no locks on the hatch. There is standing water to starboard inside the helm console. The windscreen is crazed. 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 minimal water; the origin of the water is beyond the scope of this survey. The bilge was dry prior to the sea trial and upon completion there was water in the amidships bilge. The interior cabin spaces are neat, clean and orderly. The interior of the vessel is in satisfactory cosmetic condition, except where noted. Equipment has been removed to starboard forward in the salon (potentially an ice maker or small refrigerator), there is water staining inside of the empty cubby. There are rust stains on the interior of the transom and corrosion blooming from the transom fittings. There is staining in the center forward locker. There was water below the refrigerator in the galley. 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 Crusader C454, 350 h.p.

Engine application: Gasoline, 8 cylinders, freshwater cooled, inboard

Serial Numbers: S – 84897, P – 84892

Transmissions: Velvet Drive, tags illegible

External/peripherals: Suitable application, satisfactory installation

Engine controls: Push – pull cables, double lever controls, single flybridge helm

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

Propulsion gear/shaft logs: Bronze packing glands, 1 3/8" (35mm) diameter stainless steel propeller shafts, Michigan Dyna Quad bronze four blade 22 x 22 counter rotating propellers, two bronze struts per side

Steering system/rudder ports: Hynautic hydraulic steering, single actuator, bronze

packing glands, bronze rudders, single helm

Ventilation: Two blowers and natural

Generator: 7.3 Kohler model 7\_3E, serial number 0796060 in a sound box center aft in engine room, in a sound box located aft in the engine room on centerline, fiberglass water lift muffler, port hull side amidships discharge

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

Location of through hulls as visible: See chart

Seawater systems: Reinforced flexible hoses, single clamped connections

Bilge pumps: Rule 2000 in steering locker, Rule 1500 forward in engine room, submersible automatic pump in the amidships bilge (size not recorded)

**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. A cold start was not seen. The engine hours were recorded as 1291.3 to port and 402.1 to starboard at the start of the survey and 1292.4 to port and 403.3 at its conclusion per the hour meters. The wide open throttle test was aborted as the starboard engine struggled (coughing) under load at 2,000 rpm (per the tachometer). The external surfaces and peripheral components of the engines and transmissions appear satisfactory, except where noted. There is minimal corrosion on both engines' exhaust risers at their connections to the engines. The cooling hoses on the starboard engine are cracked. There is corrosion on the starboard engine's heat exchanger and minimal corrosion on the port engine's heat exchanger. There is corrosion on the starboard engine's oil cooler and stains on the large hose. There is rust on both engines' motor mounts. The starboard tachometer displayed 200 rpm higher than the port. The engine controls functioned normally. The exhaust system is properly arranged and installed. The propulsion components including the propellers, propeller shafts, struts and shaft seals were visually inspected. The propellers were percussion tested and spun with a fixed object adjacent to the blades. The propeller shafts were manipulated in the struts and observed while underway. Overall the propulsion components are in satisfactory condition, except where noted. There is corrosion and salt crystals blooming from both propeller shaft seals. The starboard propeller shaft squeaked when coming to a stop. The edges of the propellers are rough and there is minor damage to some blades. The steering system was visually inspected and test operated. The steering system functioned normally. The rudders were tested, the starboard rudder was more "dull". There is a pinhole on the steering actuator that discharged fluid when turned all the way to port. The engine room blower was energized. The intake for the engine room blowers is not at the lowest part of the bilge. The port blower sounds "rough". The generator was visually inspected, test operated and loaded. The generator did not function normally. The generator struggled when running and could not keep a load. There is corrosion on the generator's internal sea strainer and the hoses appear aged. The generator's sound box is not secured. The through hulls were visually inspected and the valves were manipulated. The through hulls are in satisfactory condition, except where noted. The waste overboard discharge

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through hull is weeping water at its joint. The seawater intake through hull for the aft head is corroded and is missing its valve handle; the position of the valve is unknown. The seawater systems were visually inspected and most components were tested. Overall, the seawater systems are satisfactory, except where noted. There is corrosion blooming on fittings on the interior of the transom. The starboard trim tab actuates slower than the port. The electric bilge pumps were energized with their float switches. The engine room bilge pump is mounted sideways and its float switch is not secure. The forward bilge pump and its float switch are not secured and the float switch was "sticky" when tested.

**Summary: Satisfactory**

**TANKAGE**

Fuel: 258 gallon total capacity in two aluminum tanks, one tank per side in the engine room

Fill & vent: Fill fittings located on either side amidships, one per side, marked "gas", fill and vent hoses not seen

Feed: Port feed hoses are USCG type A1 (dated 1990), starboard feed hoses are USCG type A1-15 (dated 2010)

Water: 68 gallon capacity in one aluminum tank located below the aft berth, fill fitting to port on the transom, marked "water"

Holding: Unknown capacity in two plastic tanks located in the engine room bilge and below the dinette bench, deck fittings located to port amidships, marked waste

**Comments:** The fuel system including the tanks, fill, vent, and feed lines was visually inspected as installed. Where visible the fuel system components are in satisfactory condition, except where noted. The fuel fill and vent hoses were not seen. The starboard fuel feed hoses are dated 2010, the port are dated 1990. 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 transom shower did not function when tested. There is low water pressure in the aft shower. There is no hose on the water heater's pressure relief valve. Accuracy of tank level gauges is beyond the scope of this survey. The aft head did not draw water when tested. There is moisture on the sanitation hoses at the forward holding tank. There is no pump in the forward sump box (located below the forward berth).

**Summary: Satisfactory**

**ELECTRICAL SYSTEMS**

AC system: 120 volt system, 30A 125V shore power inlet to starboard on the transom, 30A 125V shore power cord

DC system: 12 volt system, one battery switch located below the bottom step aft in the

salon, one Interstate SRM-27 12 volt wet cell battery, two Interstate 24M-XHD 12 volt wet cell batteries, two 12 volt maintenance free batteries, all in plastic boxes located center forward in engine room

Wiring: Mostly original multi-strand wires

Circuit protection: Electrical distribution panel to starboard aft in the salon includes main and branch AC and DC circuit breakers, AC voltmeter, AC ammeter and AC source selector switch, DC sub panel located below the helm console

**Comments:** The electrical system including the shore power cord, shore power inlet, batteries, wiring, circuitry components and circuit protection equipment was visually inspected and most components were tested. Overall the electrical system is in satisfactory – marginal condition. The spotlight is inoperative. Electronics have been removed from the helm. There is no vhf installed. The Heart Interface Link 20 battery monitor is inoperative. The knob is missing from the AC source selector switch. There are wire nuts in use at the forward bilge pump's connections, on the light in the aft head and starboard blower. There is speaker wire (apparently) in use in the aft head. The aft head lights are inoperative. An outlet to starboard forward in the salon is not secured, it has no faceplate. One overhead light is inoperative in the salon and one in the aft cabin. There is screen burn on the Garmin GPS device. There are wing nuts in use on one battery. There are no lock washers in use on the batteries. There is no terminal protection on the batteries. Smaller wires are below larger on the aft wet cell battery. The mechanic tested the batteries, the generator's battery load tested at "0 volts". The condition and age of the batteries is beyond the scope of this inspection.

**Summary: Satisfactory – Marginal**

### **SAFETY AND LIFE SAVING**

Portable fire extinguishers: Three type B:C size I located one per side on the flybridge (2019) and at the steps to the aft cabin (2008), one Halon 1211 extinguisher in the galley (1990)

Fixed fire system: Fireboy 70CG, Halon 1301 agent, tag not seen

Flotation devices: Five adult type III PFDs located forward on the flybridge, four adult type II PFDs located forward on the flybridge

Horn/distress flares: Canister air horn, no flares seen

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

Anchor & ground tackle: 20 Kg. Bruce Anchor with chain and line rode

Other equipment: CO alarms located aft in the salon, in the aft cabin and in the forward cabin

**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. There are no flares aboard. The carbon monoxide alarms were found disconnected and did not function after reconnecting. There are no smoke alarms aboard. A suitable sound signaling device is aboard. The electric horn is inoperative. A garbage placard was seen. The navigational and anchor lights are properly arranged, installed and mostly functional. The anchor light did not illuminate. The lens of the steaming light is crazed and was difficult to see. The ground tackle including the anchor and rode was visually inspected as installed and appears satisfactory. There is no secondary securing mechanism for the anchor. There is no secondary anchor or rode aboard. The entire length of the anchor rode was not inspected and should be inspected prior to use. The compass is dry.

**Summary: Marginal**

### **ACCESSORIES**

Newmar Phase Three PT-25 battery charger, Garmin GPS map 176C plotter, engine instruments include two tachometers, two fuel consumption gauges, two hour meters, two water temperature gauges, two voltmeters and two oil pressure gauges, two fuel level gauges, trim tabs, trim tab level indicators, Ritchie compass, flybridge bench seating, partial aft deck enclosure, West Marine speakers, wicker chairs, Nexgrill LP BBQ grill, transom shower, Shurflo 2088-433-344 freshwater pump, engine synch gauge, step lights, TV / phone inlet, oil placard, aft cabin includes island berth, LG tv, overhead lights, reading lights and ensuite head, aft head includes sink, shower enclosure, vent fan and electric head, Atwood EHM11-SM water heater with heat exchanger, Heart Interface Link 20 battery monitor, salon includes sofa, Robertson AP 2500 autopilot, engine room lights, galley includes sink, Vitrifrigo DP2600IBD4-F-2 refrigerator / freezer and Nostalgia Retrowave microwave, dinette, forward head includes sink, vent fan and electric head, Vizio TV, forward cabin includes berth and reading lights, Pyle stereo, Weems & Plath clock and barometer, two direction electric windlass with foredeck controls

### **SUMMARY**

The vessel is a fiberglass aft cabin motor yacht equipped with two gasoline inboard engines and a generator. The vessel was built in Pulaski, Wisconsin. No ownership information was obtained. The listing broker had no disclosures and had no knowledge of any significant events in the vessel's history such as submersions, collisions, fires, etc. The vessel was inspected while hauled, afloat and underway on a sea trial in San Diego Bay. The vessel is basically structurally sound and upon completion of the recommendations should be suitable for its intended purpose as a near 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**

\$45,500

**NEW REPLACEMENT  
VALUE**

\$541,000

**INVESTMENT**

\$54,000

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

**Explanation of value opinion:** The value is based on the Soldboats.com reported sales prices, Yachtworld.com, Boats.com and BoatTrader.com current listings. The vessel that sold for \$62,266 in October 2020 in Rothesay, NB, Canada is equipped with Cummins diesel engines; diesel engines typically hold more value than similarly sized gasoline engines, and the vessel sold towards the beginning of the Covid-19 induced spike. The vessel that sold for \$52,000 in Isleton, CA in March 2021 is the same vessel that sold for \$64,000 in December 2021; it was kept in a covered dock and its navigational electronics are installed. The surveyed vessel only has one helm station whereas several of the comparable vessels have upper and lower helm stations. The surveyed vessel exhibits deferred maintenance and several of its navigational electronics have been removed. The interior of the surveyed vessel has been updated, however, no other notable upgrades have been performed. The market continues to have an upward value movement due to the extended Covid-19 induced spike.

Length ft	Boat	Year	Sold Date	Sold Price	Listed Price	Boat Location
36	Carver 36	1987	31-Jan-22	42,500	49,900	Brisbane, CA, USA
36	Carver 36 Aft Cabin Motor Yacht	1992	3-Dec-21	64,000	64,000	Isleton, CA, USA
36	Carver 36 Aft Cabin PM	1992	13-Mar-21	52,000	59,900	Isleton, CA, USA
36	Carver	1988	5-Jan-21	25,000	34,950	Stockton,



	3607 Aft Cabin Motoryacht					CA, USA
36	Carver 3607 Aft Cabin Motoryacht	1989	22-May-21	51,558	55,445	Sidney, BC, Canada
36	Carver 3607 Aft Cabin Motoryacht	1988	14-May-21	46,402	47,591	Gananoque , ON, Canada
36	Carver 3607 Aft Cabin Motoryacht	1989	23-Dec-20	36,090	38,867	Gananoque , ON, Canada
36	Carver 3608 Aft Cabin	1990	20-Oct-20	62,266	67,342	Rothsay, NB, Canada
36	Carver 36 Aft Cabin Motoryacht	1991	2-Oct-20	57,507	80,900	Lefroy, ON, Canada

## Carver AFT CABIN

US\$56,900 \*

36 ft / 1989

San Diego, California, United States

Sale Pending

California Yacht Sales, Inc.

## Carver 36 Aft Cabin Motor Yacht

US\$55,900 \*

36 ft / 1991

North Fort Myers, Florida, United States

United Yacht Sales - Florida, Sarasota / Ft. Myers / Naples / Cape Coral Area

One-click Contact

## Carver 3607 Aft Cabin Motoryacht

US\$34,900 \*

36 ft / 1989

Benton Harbor, Michigan, United States

Sale Pending

Pier 1000 Marina

## Carver 36 Aft Cabin Motoryacht

US\$60,000 \*

36 ft / 1987

Grand Rivers, Kentucky, United States

Green Turtle Bay Yacht Sales

## Carver 3607 Aft Cabin Motoryacht

US\$58,693 \*

36 ft / 1990 Penetanguishene, Ontario, Canada

Sale Pending

Georgian Harbour Yacht Sales Inc.

## Carver 36 Aft Cabin Motoryacht

US\$48,000 \*

36 ft / 1989

Beach Haven, New Jersey, United States

Jersey Marine

## Carver 350 Aft Cabin

US\$49,999 \*

36 ft / 1993

Portland, Oregon, United States

Sale Pending

W S Yacht Brokers

Live Video TourRequest Info

## Carver AFT CABIN

US\$54,500 \*

36 ft / 1991

Fort Lauderdale, Florida, United States

Rick Obey Yacht Sales

## Carver 350 Aft Cabin

US\$58,000 \*

35 ft / 1993

Grasonville, Maryland, United States

Sale Pending

Knot 10 Yacht Sales

## Carver 350 Aft Cabin Fly Bridge

US\$59,995 \*

35 ft / 1993

Madisonville, Louisiana, United States

Sale Pending

Gulf South Yacht Sales

1.  
Save

1989 Carver 3807 Aft Cabin Motoryacht

**1989 Carver 3807 Aft Cabin Motoryacht**

\$66,700

San Diego, CA 92101

Pop Yachts

Client's Name Removed  
April 12, 2022

*"Removed"*  
1990 Carver Yachts 36 / ACMY

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**Carver 3609 Aft**  
**Wyandotte, Michigan**  
1987  
**\$25,000**  
Seller Active Marine

## RECOMMENDATIONS

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

### PRIMARY

1. Maintain the fire extinguishers per NFPA recommendations. Extinguishers should be inspected and tagged annually and inspected by a qualified technician or replaced every six years. Fire extinguishers should be evenly spaced throughout the vessel for easy access in emergencies.
2. There are no flares aboard, provide federally required, approved and current distress signal flares.
3. The carbon monoxide alarms were found disconnected and did not function after reconnecting them. Replace the alarms and prove them functional
4. We strongly recommend installing smoke alarms.
5. The all-around / anchor light did not illuminate. Service or replace components as necessary and prove the light properly functional.
6. Provide a secondary securing mechanism for the primary anchor.
7. We strongly recommend providing a secondary anchor and rode for emergencies or two anchor situations.
8. The compass is dry, address as desired.
9. The starboard engine struggled and would begin to "cough" at 2,000 rpm. Determine the cause of the engine's trouble, eliminate the cause, service or replace components as necessary and prove the engine properly functional.
10. The spotlight is inoperative. Service or replace components as necessary and prove it properly functional.
11. There is no vhf installed (one was found with clipped wires in a locker on the aft deck) We strongly recommend installing a vhf and proving it properly functional.
12. Several electronics have been removed from the helm console. Install the missing electronics at the helm as desired.
13. There are wire nuts in use in several locations including: the aft head, on the starboard blower and on the forward bilge pump connections. Replace with crimped connections or terminal boards per ABYC recommendations.
14. There are wing nuts in use on the forward maintenance free battery. Replace with steel nuts and lock washers per ABYC recommendations.
15. There is no terminal protection for the batteries. Provide terminal protection per ABYC recommendations.
16. There are smaller wires below larger wires on the wet cell batteries. ABYC recommends larger wires to be installed below smaller. Address appropriately.
17. The mechanic load tested the batteries and the generator battery tested at "0 volts". Address appropriately.

18. Properly secure the outlet to starboard forward in the salon and install the faceplate.
19. Install the knob that is missing from the AC source selector switch.
20. The fuel fill and vent hoses were not seen. Gain access (as possible) and address deficiencies that may be found.
21. The port fuel feed hoses are dated 1990. The industry accepted standard for the life expectancy of fuel hoses is 10 years. Either replace the hoses or assure they are suitable for continued use and replace as necessary.
22. Determine the cause of the moisture on the sanitation hoses at the forward holding tank and address appropriately.
23. The transom shower did not function when tested and there was low water pressure from the aft shower fixture. Address appropriately or as desired and prove the showers properly functional.
24. We recommend installing a hose on the water heater's pressure valve that drains into the bilge.
25. The valve handle for the aft head's seawater intake through hull is missing, the through hull is corroded and the position of the valve is unknown. The head did not draw water when tested. Determine the cause of the corrosion, eliminate the cause, service or replace components as necessary, install the valve handle and prove the through hull and head properly functional.
26. There is limited access to the aft head's seawater intake through hull. Gain access, inspect and address deficiencies.
27. The generator struggled when running and did not keep a load. Service or replace components as necessary and prove the generator properly functional.
28. The port engine room blower sounded "rough". Service or replace components as necessary and prove the blower properly functional.
29. The blowers do not go to the lowest part of the bilge. We recommend installing the blowers so that they pull from the lowest point in the bilge.
30. A cold start of the engines was not seen. A cold start provides greater detail as to the condition of the engines. We strongly recommend performing a cold start when possible.
31. The cooling hoses on the starboard engine are cracked. Replace the hoses to eliminate liabilities.
32. There is corrosion on the starboard engine's heat exchanger. Determine the cause of the corrosion, eliminate the cause, service or replace as necessary and clean the components to allow detection of future weeps, leaks and corrosion accumulation.
33. There are salt crystals and corrosion on both propeller shaft seals. Determine the cause of salt crystals and corrosion, eliminate the cause, service or replace components as necessary and clean the area to allow detection of future weeps or leaks.
34. There is corrosion on the starboard engine's oil cooler and stains on the large hose. Determine the cause, service or replace components as necessary and clean the components to allow detection of future weeps or leaks.
35. There is minor corrosion on the exhaust riser connections on the engines. Determine the cause of the corrosion, eliminate the cause, service or replace components as necessary and clean the components to allow detection of future weeps, leaks and corrosion accumulation.
36. There is a pinhole on the steering actuator that discharges hydraulic fluid when the steering is turned hard to port. Determine the significance and cause of the



- pinhole and leak, eliminate the cause, service or replace components as necessary and clean the area to allow detection of future weeps or leaks.
37. Water was seen weeping at the joint of the waste overboard discharge through hull. Determine the cause of the water leak, eliminate the cause service or replace components as necessary, clean and dry the area to allow detection of future weeps or leaks.
  38. The engine room bilge pump is mounted sideways and its float switch is not secure. Properly mount the pump and secure its float switch to allow the bilge pump to properly function.
  39. The forward bilge pump and float switch are not secure and the float switch was "sticky". Properly secure the bilge pump and float switch so it can properly function, address the "stickiness" of the float switch as necessary.
  40. There are rust stains and corrosion on the starboard rudder port. Determine the cause of the rust stains and corrosion, eliminate the cause, service or replace components as necessary and clean the area to allow detection of future weeps, leaks, rust and corrosion accumulation.
  41. The starboard tachometer displayed 200 rpm higher than the port. Address appropriately and prove the tachometers properly functional.
  42. We strongly recommend providing a reboarding device for the accidental swimmer.
  43. The transom escape hatch frame is damaged, the lens is crazed and there are no locks on the hatch. Address appropriately or as desired.
  44. There is no pump in the forward shower sump box. Address as desired.
  45. The Heart Interface Link 20 digital battery monitor did not function. Address as desired.
  46. Bring aboard the Certificate of Documentation per federal regulations.

## **SECONDARY**

1. There are rust stains and corrosion accumulation on fittings on the interior of the transom. Determine the cause of the stains and corrosion, eliminate the cause, service or replace components as necessary and clean the area to allow detection of future weeps or leaks.
2. The lens on the steaming light is crazed and it was difficult to see when tested. Replace the lens as necessary.
3. The starboard trim tab actuates slower than the port. Address as necessary or desired.
4. The electric horn is inoperative, however, there is a canister air horn aboard which is a suitable sound signaling device. Consider servicing the electric horn and proving it properly functional.
5. The "mushroom" through hull fittings for the port forward and starboard aft hull side discharge through hulls are missing. Replace the fittings.
6. Water was seen in the amidships bilge after the sea trial. Determine the cause of the water, eliminate the cause, service or replace as necessary and clean and dry the bilge to allow detection of future weeps or leaks.
7. The flybridge upholstery is aged, the helm upholstery is damaged, the side liner is failing to port on the flybridge, the bimini top is aged and the aft deck enclosure is aged. Address as desired.
8. The paint is failing on the aft deck hard top supports. Address as desired.

9. Equipment has been removed to starboard forward in the salon (such as an ice maker or refrigerator) and there is water staining inside of the cubby. Address the staining as desired. Reinstall the equipment as desired.
10. The bilge access in the galley and in the aft head has been "tiled" over and there is no easy access to the bilge space. Consider installing a way to allow easy access to the bilge spaces that does not require a tool.
11. Address the miscellaneous cracks on the exterior of the gunnels as desired.
12. The strike strip on the port and starboard rub rails is indented by the forward of amidships cleats. Address as desired.
13. Address the thin gelcoat at the bow above the rub rail as desired.
14. The boot stripes are damaged, address as desired.
15. Address the miscellaneous cosmetic deficiencies on the hull sides as desired.
16. Address the staining in the locker to center forward in the aft cabin as desired.
17. The wind screen is crazed, address as desired.
18. There is standing water to starboard below the helm console. Determine the cause of the water, eliminate the cause, service or replace components as necessary, clean and dry the area to allow detection of future weeps or leaks.
19. Determine the source of the water below the refrigerator in the galley. Address appropriately.
20. A sound difference was noted when percussion testing the deck to port forward of the helm on the flybridge and a "crackling" sound was heard when weight was applied. Determine the significance of the sound difference and the "crackling" and address as necessary or desired.
21. The black to starboard forward on the superstructure is cracking. Address as desired.
22. There are approximately 30 – 40 blisters on the hull bottom ranging in size between ¼" and 2.5" in diameter. Address as desired.
23. The starboard rudder sounded "dull" when percussion tested. Determine the significance of the "dull" sound and address as desired.
24. The edges of the propellers are rough and some have minor damage. Address as necessary or desired.
25. There is rust on the engine mounts. Consider cleaning and painting the mounts to allow detection of future weeps, leaks and rust accumulation.
26. Properly secure the generator's sound box.
27. There is corrosion on the generator's internal sea strainer and the hoses appear aged. Determine the cause of the corrosion, eliminate the cause, service or replace components as necessary and clean the components to allow detection of future weeps or leaks. Replace the hoses to eliminate potential liabilities.
28. There is screen burn on the Garmin GPS. Address as desired.
29. The following components were not tested or inspected: TV / phone inlet, aft shower sump, all functions of entertainment devices and 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 12, 2022

By: Mr. Kells Manthei, SAMS SA

Date