Vessel Survey:

XXX Spencer 53

Prepared For:

XXX

Date:

XXX

Merrick Marine LLC
13300 Bothell Everett Hwy #303/605 Mill Creek WA 98012-5312 merrick.marine@gmail.com +1.425.998.8546

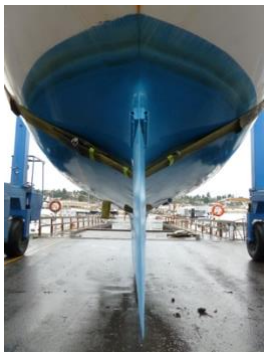
Table of Contents

Introduction

The vessel "XXX" was surveyed on XXX at XXX by Jim Merrick at the request of the buyer, XXX. The survey was conducted as a pre-purchase survey to assess the overall condition of the vessel and determine the present value of the vessel and its systems.

Port Quarter

Starboard Bow



Hull

General Information

Scope of Survey

This survey was conducted in accordance with the Code of Federal Regulations (CFR) as enforced by the United States Coast Guard (USCG) and Federal Communications Commission (FCC) in effect at the date of this survey as well as the voluntary standards of the American Boat and Yacht Council (ABYC) and Nation Fire Protection Association (NFPA).

The vessel was surveyed **both in and out of the water**

A sea trial **was** performed

A rig inspection **was** performed (by Jeff Keiser of Keiser Marine)

This vessel was surveyed without the removal of any parts, including fittings, tacked carpet, screwed or nailed boards, anchors and chain, fixed partitions, instruments, clothing, spare parts and miscellaneous materials in the bilges and lockers, or other fixed or semi-fixed items.

A mechanical inspection of the engine(s) is beyond the scope of this survey, and while observations are made regarding the visible condition of the engine(s) and related systems, this survey is not intended to indicate evaluation of the internal condition of the engine(s). Electronic equipment was checked for "power up" only.

No determination of stability characteristics or inherent structural integrity has been made and no opinion is expressed with respect thereto.

This survey report represents the condition of the vessel on the above dates and is the unbiased opinion of the undersigned, but it is not to be considered an inventory and no warranty is made either specified or implied of merchantability or fitness for a particular purpose.

Definition of Terms

The terms and words used in this report have the following meanings as used in this Report of Survey:

APPEARED	Indicates that a very close inspection of the particular system, component or item was not possible due to constraints imposed upon the Surveyor (e.g. no power available, inability to remove panels or requirements not to conduct destructive testing, etc.).
SERVICEABLE, OPERATIONAL	Sufficient for a specific requirement.
POWERED UP	Power was applied only. This does not refer to the operation of any system or component, unless specifically indicated.
REC Ax or **REC Bx**:	In the body of this report will indicate that a recommendation will be listed in the "Recommendations'' section, pertaining to the lettered item. Items with an "A" plus a number are considered safety-related items, whereas items listed with "B" are other deficiencies that should be addressed. PLEASE BE ADVISED THAT SOME DEFICIENCIES, OBSERVATIONS AND SUGGESTIONS MAY ALSO BE CONTAINED IN THE BODY OF THE REPORT.

Vessel Data

SURVEY NUMBER:	XXX	**VESSEL NAME:**	XXX
DATE OF SURVEY:	XXX	**HAILING PORT:**	XXX
SURVEY LOCATION(s):	XXX	**ATTENDING:**	XXX (buyer) XXX (seller) Jim Merrick (surveyor)
REPORT DATE:	XXX	**REQESTED BY:**	XXX
LEGAL OWNER:	XXX	**REGISTERED OWNER:**	XXX
LO ADDRESS:	XXX	**RO ADDRESS:**	XXX
BUILDER:	Spencer Boats LTD	**TYPE:**	Aux Sail
YEAR:	XXX	**MODEL:**	Spencer 53
LOA:	53'	**BEAM:**	13'
DEPTH:	8.4'	**DISPLACEMENT:**	30,000 pounds
SERVICE:	Coastal & offshore sailing	**HULL ID (HIN):**	(not sighted)
BALLAST:	13,000 pounds (lead)	**RIG:**	Sloop
HULL TYPE:	Sloop	**ST OR CG REG NUM:**	XXX
PROPULSION:	Single 60HP	**HULL MATERIAL:**	FRP / Foam core
FUEL CAPACITY:	170 gallons	**FUEL:**	Diesel
HOLDING TANK CAP.:	60 gallons (2 tanks)	**FRESH WATER CAP:**	195 gallons (2 tanks)

General Description

The Spencer 53 is a semi-custom center cockpit, with a full keel and a skeg hung rudder built by Spencer Boats in Richmond, BC. It was available as either a ketch or sloop rig, center or aft cockpit with many custom options. Approximately 32 of the 53s were built, *XXX* being hull number X, configured as a center cockpit, sloop rig.

Hull

The solid, uncored GRP hull was painted with anti-fouling bottom paint in serviceable condition. A lead ballast keel was internally bolted to the keel stub. The hull was percussion sounded by both myself and Jeff Keiser.

A HIN was not sighted on the vessel hull, although a factory placard was located in the companionway, and the CG registration number was affixed to the hull.

An area of delamination was evident where the strut enters the hull. The strut itself shows surface pitting, although it appears to be structurally sound. REC B1

The cutlass bearing in the strut has some play and should be replaced at the next haul out. REC B2

A crack was noted the area around an unused transducer mounting on the port side. REC B3

The hull/keel joint shows deteriorating sealant and should be monitored and replaced at the next haul out. REC B4

The leading edge of the lead keel shows significant damage, reportedly from a grounding in Mexico 5 years ago. The damage has been painted over, but not repaired. REC B5

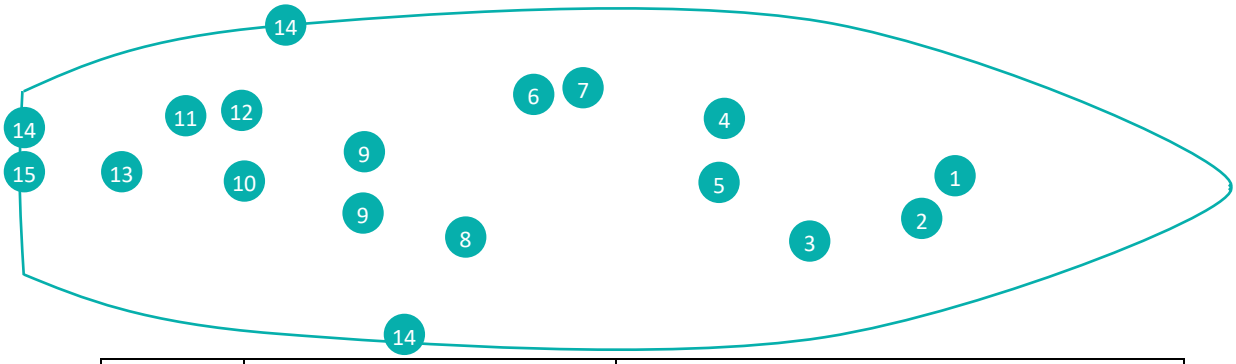
The hull areas around the through-hull fittings did not show evidence of saturation or other damage.

A small number of quarter-sized blisters were observed on the starboard hull near the bilge area. These were gelcoat blisters typical of the type of resin used in 1970. REC B6

Additional fields of ¼" blisters were observed in three areas on the hull. The may be from inadequate surface preparation in the bottom paint or may also be gelcoat blisters. All of the blisters were cosmetic in nature but should be monitored and repaired as needed. REC B7

Through Hulls and Seacocks

The vessel has the following through-hull fittings:



Number	Purpose	Condition
1	FWD head intake	Operational
2	FWD head discharge	Non-operational, seized closed
3	FWD sink discharge	Non-operational, seized open
4	Depth sounder	Not in use
5	Knotmeter paddlewheel	Operational (in keel)
6	Galley sink discharge	Non-operational, seized open
7	Sink sea water intake	Operational
8	Engine intake	Operational
9	Scuppers	Non-operational, seized open
10	Aft head intake	Operational
11	Aft head discharge	Non-operational, seized closed
12	Aft sink discharge	Non-operational, seized open
13	Rudder stock	Serviceable
14	Deck drains	Serviceable (above waterline)
15	Wet exhaust discharge	Serviceable (above waterline)

As noted above, a number of seacocks were non-operational. REC A1

All of the through hull fittings exhibited some pitting, which would appear to be from galvanic corrosion, calling into question the effectiveness of the bonding system (see the section on Bonding System below.)

The starboard scupper hose in the engine room exhibits bulging and cracking. REC A2

Deck and Superstructure

The vessel is a center cockpit, with companionways forward to the galley, and an additional to the aft salon. Both hatches were configured with sliding hatches and removable hatch boards. Raised cabins were both forward and aft of the cockpit with 12 opening portlights in the house, and 3 in the hull.

Port Side

Forward House and Deck

Aft House and Deck

A hard fiberglass dodger covers the main companionway and has rigid sides and windows. Two of the windows were cracked, but the dodger appeared structurally sound. The painted wood edge of the dodger roof exhibits some cracking paint along the joints. REC B8

Four dorade vents and two solar mushroom vents provide ventilation for the cabin. The starboard aft dorade box has become detached from the deck. An additional 6" deck port on the starboard side aft was taped over due to reported leakage. REC B9

A number of improperly filled holes were present in the deck and house. Gelcoat exhibits cracks and crazing at a number of locations as well as some pitting. REC B10

The design of the hull/deck joint was bonded and glassed over, providing a secure joint but prohibiting inspection.

Numerous lifeline stanchions were poorly secured and show significant play as well as leaks. REC A3

The opening portlight on the starboard side aft of the cockpit was taped over and showed evidence of leakage. REC B11

The deck and topsides are balsa-cored and were percussion sounded by Jeff Keiser. Crazing of the gelcoat was noted, no areas of delamination or wet core were noted.

The nonskid was in serviceable condition.

The bulkheads and stringers appeared to be in serviceable condition.

Cabin

The vessel was configured with a master cabin aft with a double berth to port, and ample storage to starboard. An en suite head to port and hanging locker to starboard separate the master cabin from a private salon just aft of the engine room.

The salon includes bench seating on either side and a secondary companionway to the cockpit. The headliner was missing in the salon.

The bulkhead immediately aft of the former location of the mizzen mast exhibits water damage and delamination. REC B12

A companion way along the starboard side connects the salon to the galley and provides access to the engine room to port. Storage and navigation table were present in this companionway.

The galley includes the primary companionway cockpit as well as electrical control panels, a dinette, and bench seating.

Forward of the galley was a head to starboard and hanging locker to port. A vee-berth with two single beds on either side complete the accommodations.

A watertight door provides access to the sail and anchor locker. The seals on the watertight door were failing. REC B13

Interior finish, upholstery, and bedding appear to be in serviceable condition.

Aft Cabin

Aft Head

Aft Salon

Nav Table

Engine Access

Primary Companionway

Galley

Forward Head

Vee-Berth

Galley

The stainless-steel galley sink includes hot and cold pressurized fresh water, filtered fresh water, and a hand pump that can be switched from seawater to fresh water.

The galley features both freezer and refrigerator top-loading sections, using an Frigoboat storage plate refrigeration system. The system appeared operational.

The vessel also includes a gimballed Force10 three-burner stove and oven. Propane was controlled with a Xintex S-2A gas control and detection system, which was not operational, preventing the stove and oven from being tested. REC B14

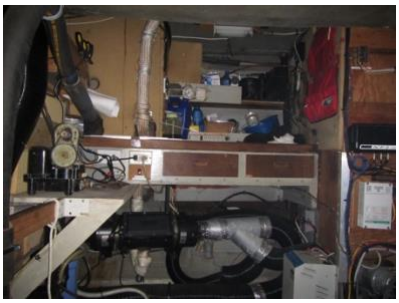
Systems

Propulsion

Power was a single, 60HP Isuzu QD-60 diesel engine serial number 619978, mated to a fixed 3-bladed propeller through a Hurth HDW-250 2:1 transmission serial number 33004002. No internal testing of the engine was performed. Engine hours showed 2,972 at completion of sea trial, however owner stated that the hours may not be accurate.

Isuzu QD-60

Engine Room Fwd



Engine Room Port

The engine belts were serviceable.

A leak was noted on the raw water pump on the engine. REC B15

A leak was also noted in the water lift muffler, possibly introducing both water and combustion gases into the cabin. REC A4

The exhaust hose changes to a larger diameter hose along the aft wall of the engine room with an improper hose-to hose-connection that could leak both water and combustion gases into the cabin. REC A5

The raw water intake from the through hull to the strainer was a white, multi-purpose hose, rather than a heavy-duty water hose. It was secured to the strainer using a single hose clamp, however it is below the waterline and should be secured with dual, opposing hose clamps. The output from the strainer was a heavy-duty hose that was cracking and should be replaced. It was also secured with a single hose clamp at both ends. REC A6

Engine coolant level was low. REC B16

The stuffing box features a conventional shaft seal that appeared serviceable, although no drips were observed underway or when shut down, so it may need to be adjusted for proper lubrication. REC B17

Evidence of past leaks were visible on the heat exchanger as well as rust and corrosion on many areas of the engine, transmission and motor mounts.

Fuel System

Fuel was held in a single, factory-installed 170-gallon fiberglass tank. The tank was properly vented overboard, and the deck fill was bonded.

Fuel lines appeared serviceable and of correct hose type. The sight glass at the Racor fuel filter/separator contained a large amount of sediment. REC B18

Electrical System

Two battery banks of 6v wet cell lead acid batteries provide house and start banks. The start bank consists of two batteries, and the house bank consists of six batteries in series/parallel configurations.

Start Bank

House Bank

Charger/Inverter

All batteries exhibited low electrolyte levels. REC B30

Charging was provided by the engine alternator via a Balmar Max Charge MC-614 voltage regulator, a Xantrex Freedom 15 charger/Inverter, and 130w of solar panels located on the stern pulpit. Both alternator and shore power charging were operational, as were the solar panels. The inverter function of the Xantrex was tested and found not to be operational. REC B20

The DC distribution panel includes amperage and voltage meters appeared properly installed and labeled with master and individual breakers. Where sighted, the DC wiring appeared to be of proper type, gauge, and was securely attached.

An AC panel was also installed with includes amperage and voltage meters as well as main and individual breakers and reverse polarity indication. The AC wiring appeared to be properly installed. Polarity and GFCI operation were tested at all outlets and found to be serviceable.

The ground pin of the upper outlet in the dual GFCI outlet in the forward cabin was found to be blocked with something. REC B21

An auxiliary 2,000-watt All-Power portable gasoline generator was also present on the aft deck. It was not tested.

Sanitation and Water System

The vessel features two electric pumping heads, each with their own 30-gallon type III holding tank. The tanks were connected to Y-valves to allow for overboard or tank discharge. The tanks were configured for both deck pump out or macerator pump-driven overboard discharge, and were properly vented overboard. Macerator pumps were not tested as the vessel was in a no-discharge zone.

Each tank was monitored with a TankWatch 4 tank gauge, which was not tested but reported to be operational.

The forward head was not operational, due to a reported leak.

The aft holding tank exhibited significant sewage smell when accessed, probably indicating that hoses may need to be replaced.

The forward macerator pump had a broken hose clamp on the input side. REC B22

A Katadyn PowerSurvivor-35E water maker was installed but was reported not to be working and was not tested.

The fresh water was stored in two plastic tanks, totaling 195 gallons. Pressurized hot and cold water was provided to all three sinks by a Jabsco Sensor-Matic 12v pump, which was operational.

Hot water was provided by an AC and engine-heat powered Torrid MV10 1500-watt 10-gallon hot water heater in the engine room. The water heater appeared operational for both engine heat and AC power.

The galley sink drain had a hose-to-hose connection that should be replaced with a proper coupling, as well as corroded hose clamps at top and bottom. REC B23

Helm/Steering System

The single pedestal helm was connected to a Wagner hydraulic steering system, which was serviceable.

An emergency tiller was located near the rudder head and was serviceable.

Attachment brackets for a Saye's Rig self-steering windvane rudder were present on the transom and rudder, but the vane itself was not present and could not be inspected. The bracket mounted on the rudder was missing fasteners. REC B24

Navigation and Electronics

The vessel has the following electronics:

B&G ACP 2 Network Pilot autopilot

B&G Wind Instrument (anemometer did not provide data) REC B25

B&G Network Speed

B&G Network Depth Sounder

B&G Network Multifunction display repeater

Furuno GP-30 GPS Navigator

Garmin 3210 GPS map multi-function display

Garmin GMR 36 radar

Icom IC-M710 SSB radio

Standard Horizon GX1500S DSC VHF radio with remote RAM mic

All electronics were powered up successfully, but not tested for functionality or accuracy except as noted.

Instruments

SSB

DSC VHF

A DVD player, two televisions, and a CD stereo system were also installed, but were not tested.

The helm also includes a mounted Danforth pedestal-mounted compass.

Corrosion Control and Bonding System

Three zincs were located on the propeller shaft, and a 6"x12" plate zinc was mounted to the hull midships on the starboard side. All zincs were in serviceable condition with about 50% remaining. Since the boat has been stored in fresh water for the last few years, there was little on-going wear from galvanic corrosion at this time. However, it was apparent that the bonding system was not working effectively, and there was significant pitting noted on all through hull fittings as well as the strut. REC B26

No corrosion analysis was conducted.

Heating and Cooling

The cabins were heated with an Espar D8LC-2000 forced air diesel heater, which was tested and operational.

An additional radiator-type heater powered from engine heat was installed under the settee but was disconnected.

No air conditioning was installed.

Propane

Two plywood propane lockers were located on the aft deck. The active bottle was stored in the port locker, and a spare in the starboard. Both boxes show significant peeling paint and delamination of the plywood. REC B27

The propane bottles were stored unsecured in the lockers, and lack proper chafe protection and sealing gasket where the propane line exits the box into a stainless pipe. REC A7

Ground Tackle, Stability, and Docking

The vessel has a 60# CQR plow-style anchor, with 5/16" galvanized chain rode. The rode was reported to be 300' in length. The anchor, swivel, and rode shackles were secured with stainless wire lashing.

A vertical Ideal ACW electric anchor windlass was installed with deck button control for hoisting. The deck and backing plate beneath the windlass appeared to be in serviceable condition. The windlass was tested and appears operational.

A secondary CQR anchor (without rode) was mounted on the aft deck.

A normal compliment of assorted fenders and mooring lines were on board.

Additional Equipment

A Mercury AA34001 5-person inflatable dinghy and Nissan 9.8hp four stroke outboard were mounted on the aft deck. The dinghy has a plywood floor with inflatable keel and appears serviceable. The outboard was not tested but was reported to be operational.

9.8HP Outboard

5-Person Dinghy

Dinghy Data

No davit system was installed, although the owner indicated that he uses a boom-mounted hoist to launch and recover the dinghy.

A Coastal Commander 6-man inflatable life raft was located in the cockpit. The raft was past the inspection date. The raft was not mounted in a secure, accessible manner and lacks a hydrostatic release and painter with weak link. REC B28

Sailing Equipment

Spars and Standing Rigging

The rigging aloft was not inspected and is not included in this survey.

The spars appear to be in serviceable condition with typical areas of corrosion around fittings of dissimilar metals.

Corrosion was present at the mast step. It does not appear structure at this time. REC B29

The tabs connecting the mast base to the hull were cracked and separating. REC A8

It was reported that standing rigging was replaced approximately 10 years ago when the rig was converted from a ketch to a sloop. Since that time, the vessel has spent a number of years in Mexico and enjoyed a few thousand miles of blue water sailing.

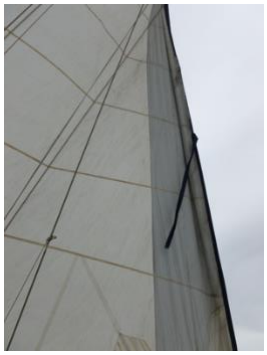
The chainplates were glassed into the hull and therefore not visible.

Sails

The vessel was equipped with Dacron main, 140% genoa, staysail, and spinnaker. The main and genoa were inspected and found to be in poor condition and are significantly worn and sun damaged.

Main

Main



Genoa

The main sail has a 24" tear along the first seam at the foot. REC B30

The outhaul car on the boom was drawn out nearly off the track. REC B31

The furling sail cover sewn to the genoa was significantly deteriorating at the foot.

The staysail and spinnaker were on-board but were not inspected.

Running Rigging

All of the running rigging was older, Dacron line that appears operational but shows significant aging and sun damage.

All blocks, tracks, and cam cleats appeared to be operational.

The genoa was installed on a ProFurl furler that was operational.

A Lewmar backstay adjuster was installed.

The babystay was detachable and the shackle was found to be serviceable.

Deck Equipment

A strong compliment of winches were installed, including Barient sizes 26, 25, and 10; Lewmar 48 3-speed secondaries; and an unfamiliar brand 3-speed for the genoa primaries. All winches turned with some resistance. REC B32

The port primary winch does not operate in the 3rd speed. REC B32

Lewmar sheet stoppers were used on the cabin top and in most applications.

Safety Equipment

Navigation lights

The vessel was equipped with port, starboard, stern, masthead tri-color, and steaming running light, as well as an all-around masthead anchor light per CFR. All were tested and operate properly.

Signaling

A number of handheld flares and aerial flares were on-board, all were more than ten years past their expiration date. REC A9

A bell was installed at the helm and a portable air horn was on board, which was tested successfully.

Life Saving

Eight adult Kapok-style type II PDFs were located in the forward sail/anchor locker.

A horseshoe-style throwable type IV PDF was mounted on the stern pulpit.

A first aid kit was on board.

A removable, extendable re-boarding ladder was mounted on the aft deck.

The vinyl covered wire lifelines (both upper and lower) exhibited significant corrosion at numerous locations. REC B33

An expired smoke detector with no battery was installed in the aft stateroom. REC B34

Pumps and De-watering

The vessel has a submersible and a remote-mounted electric bilge pumps, both with automatic float switches and manual switches with indicator lights. Manual operation appeared to be functional, automatic operation was not tested.

A manual Whale diaphragm bilge pump was mounted in the cockpit. It appeared operational.

A high-water alarm was located in the bilge and was reported to be operational but was not tested.

Fire extinguishers

Two portable B-I Halon BC extinguishers were in each companionway. An automatic B-II Halon BC was located in the engine room. An additional size B-I dry chemical ABC extinguisher was located at the helm**.** All extinguishers were properly mounted but were well past their inspection dates and the dry chemical unit has no pressure. REC A10

Placards and References

"Discharge of Trash" placard was sighted in the galley as well as a "Waste Management Plan." A "Discharge of Oil" placard was sighted in the engine room.

The Coast Guard Vessel Registration Certificate was sighted on board.

No Inland Navigation Rule book was sighted. REC B11

Sea Trial

The vessel was sea trialed on XXX. The winds were calm and the sea flat.

The engine was started after cooling for more than 12 hours in ~40-degree temperature. It started with minimal cranking and exhibited slight blue smoke on startup. The engine, transmission, and steering were test and verified operational. At 2,800 RPM the vessel obtained 7.6 knots. No significant sounds or vibrations were noted.

Recommendations

Based on our survey, the following findings and recommendations were observed:

Priority A Recommendations

The following recommendations are items that should be addressed for safety concerns or to be in compliance with CFR or other regulatory requirements:

A1. Non-operating seacocks can become a safety issue at sea and should be corrected. The seacocks may be able to be freed with penetrating oil, otherwise they should be replaced.

A2. The port 3" scupper hose engine room was showing bulging and cracking and should be replaced. This fitting is below the water line and the seacock was not operational, so the vessel should be hauled out to affect this repair.

A3. Lifeline stanchions are critical safety equipment and should be securely mounted with backing plates. All of the stanchions should be remounted with new fasteners, sealant, and backing plates or large washers.

A4. A leak in the water lift muffler was allowing water and exhaust gases to leak into the engine room. This should be addressed for safety.

A5. A connection has been made between to different diameter hoses by simply inserting one hose into the other and clamping them. This is not a secure connection and can allow water and exhaust gasses to enter the cabin. One section or the other of hose should be replaced with the same diameter and a connecting nipple should be used.

A6. The raw water intake was below the waterline, and connections should be made with dual, opposing hose clamps and with proper, heavy duty reinforced hose.

A7. A vapor-tight fitting should be used when the hose or wiring enter the propane locker to prevent gas from escaping into the cabin. The hose here exits into an unsealed pipe that leads to the cabin, and the risk of chafing also exists. The propane locker(s) should be repaired or replaced with proper seals.

A8. The tabs connecting the mast base to the hull were beginning to separate. Significant loads exist in this area under sail, so it is recommended that the tabs be repaired.

A9. Per CFR, a vessel of 40' to 64' must carry at least 3 day use and 3 night use, or 3 combination day/night flares. All of the flares on board were long past their expiration and should not be relied upon.

A10. All fire extinguishers on board were expired and should be serviced or replaced.
Note: None of the devices on board are subject to the Kidde extinguisher recall.

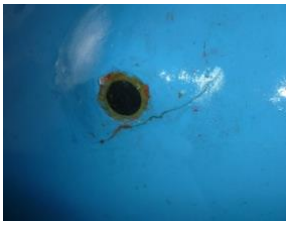
Priority B Recommendations

The following items are not considered safety issues or material defects, but are other deficiencies that should be addressed:

B1. The fiberglass over the attachment of the propeller strut to the hull show delamination. It should be monitored, and at a future haul out it should be excavated, cleaned or etched, sealed in epoxy, and re-glassed to prevent further damage or structural weakness.

B2. The cutlass bearing in the propeller strut has some play and should be monitored for further wear and replaced at a future haul out.

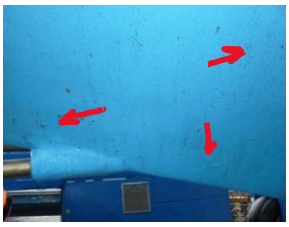
B3. There was a visible crack around an unused transducer through hull on the port forward side of the hull. This crack should be excavated and filled to prevent further damage.



B4. The sealant at the keel / hull joint was deteriorating. This should be monitored and excavated and replaced at a future haul out. This may be as a result of the grounding, and the keel bolts should be checked at the same time.

B5. There was damage to the leading edge, bottom and aft end of the lead keel, reportedly from a grounding in Mexico 3 years ago. These areas should be ground out, sealed with epoxy, and re-faired to prevent further damage.

B6. 6-8 quarter-sized blisters were found on the starboard side of the hull. These should be monitored, and at the next haul out they should be drained, excavated, filled, and sealed to prevent water intrusion into the layup.



B7. The fields of small blisters should be monitored for growth or expansion. At a future haul out, these should be ground out and sealed.

B8. The cracked windshield glass of the dodger should be replaced because it can break under pressure of a wave, potentially causing damage or injury. Where the joints in the dodger were exhibiting cracking, these should be repaired because the hand-holds in the roof could become weakened.

B9. Leaking or detached dorades and vents should be repaired as they can fail and admit significant amount of water in rough seas.

B10. Improperly filled holes in the deck can admit water into the cabin and core, potentially causing damage and weakening the deck. These holes should be excavated and filled with an epoxy filler.

B11. Leaking portlights should be repaired promptly, since water intrusion in the deck care can cause structural damage.

B12. Evidence of water damage to the bulkhead aft of the former location of the mizzen mast. While this was cosmetic and does not appear to be structural, should the rig be returned to a ketch rig, this bulkhead should be replaced to ensure the load bearing integrity for the deck-stepped mizzen.

B13. The seals on watertight hatch for the sail/anchor locker have deteriorated and no longer form a watertight seal.

B14. The propane control and detection system is an important safety feature of any vessel, and should be repaired, and the operation of the sensor and solenoid should be verified.

B15. A leak in at the belt-driven raw water pump was evident during operation. The pump and hoses should be checked, and impeller replaced.

B16. Engine coolant level was low and should be topped up with a proper

marine coolant mix.

B17. No water drips were observed from the stuffing box during operation. For proper lubrication and heat dissipation, the stuffing box should be adjusted so that it produces 2-3 drips per minute during operation.

B18. Sediment in the Racor fuel separator can lead to clogged filters or injectors. The separator bowl should be removed and cleaned. Also, consider cleaning the fuel tank as this is the source of the sediment.

B19. Low electrolyte in the batteries can lead to power battery performance and early failure. The cells should be topped up with distilled water or electrolyte solution and monitored for full charging.

B20. The Xantrex charger appeared to be operational for charging from shore power, but the inverter function was not operational. If AC inversion is desired, consider repairing or replacing the inverter.

B21. A foreign object was blocking the ground pin of the upper outlet in the forward cabin. Repair or replace the GFCI outlet to prevent improper grounding.

B22. The hose clamp on the input side of the macerator pump for the forward head has broken and should be replaced.

B23. The forward head sink drain like has an improper host-to-hose connection with significantly rusted hose clamps. The connection should be replaced or repaired with a proper coupling and new hose clamps.

B24. The attachment brackets for the self-steering vane on the rudder were missing fasteners, which could lead to steering failure. Replace or repair the fasteners.

B25. Anemometer did turn, but data was not transmitted. Repair or replace as desired.
The firmware on the Garmin instruments was not current. Fortunately, the process to update all of the instruments at one time is quite simple. We recommend you visit: https://www8.garmin.com/support/download_details.jsp?id=8743 for more information.

B26. Pitting on the strut and through hull fittings indicate that the bonding system may not be functioning as well as it could. It appears that the bonding connections at the through hull fitting were not making good connections. It is recommended that the bonding wires at each through hull fitting be detached, new crimp connectors fitted, and then the body of the seacock burnished and wire re-attached.

B27. The propane lockers on the aft deck were showing some deterioration, and the bottles were not secured inside. These can lead to a dangerous condition should they shift underway. The lockers should be replaced with watertight lockers and the bottles properly secured within them.

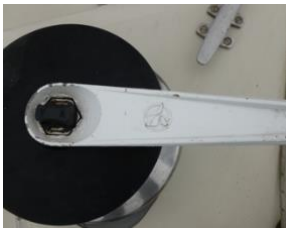
B28. If the life raft is to be kept onboard, it should be serviced and then properly re-installed with a painter, weak link, and hydrostatic release.

B29. Corrosion was present at the mast step. While not structural at this time, it would be wise to remove it and seal the mast base with an appropriate protective barrier.

B30. A tear in the foot of the main sail of approximately 24" inches should be repaired if the sail is to be used.

B31. The outhaul car on the main was extending nearly beyond the end of the track on the boom. This was likely due to the torn main, but the outhaul should be secured or the track extended to prevent the car from becoming detached.

B32. Properly operating winches are an important safety feature when coastal or blue water sailing. All of the winches should be rebuilt to ensure safe operation. The port primary winch does not operate in 3rd gear.



B33. The lifelines on board show numerous areas of corrosion that can lead to failure and pose a safety risk. It is recommended to replace the lifelines.

B34. While not required, it is recommended that a functioning smoke detector and CO2 detector be installed. A non-working, expired smoke detector was found in the aft stateroom.

B35. Per federal regulation, all vessels over 40' operating in US waters are required to carry a copy of the Inland Navigation Rules book.

Summary and Valuation

XXX was personally inspected on XXX by the undersigned surveyor. Subject to the corrections noted in "Recommendations" it appears to be suited for the intended purpose of liveaboard recreational use.

The vessel appears to have been adequately maintained, with no reported structural repairs or damage other than that which has been cited in this report.

Condition

The vessel was found to be in **fair.**

Rating of vessel condition was determined at time of survey upon completion and review of all reported survey information including recommendations and comparing vessel to the same or similar age models. Possible vessel condition ratings are as follows:

EXCELLENT	Essentially "like new" or "Bristol" in appearance.
ABOVE AVERAGE	Has had above average care with no obvious limitations.
AVERAGE	Ready for sale. May need some maintenance, updates, or cleaning.
FAIR	Needs a fair amount of maintenance or repairs to prepare for sale.
POOR	Needs substantial yard work or repairs before use.

Valuation

The **estimated replacement cost of this vessel is $540,000** based on information obtained from the manufacturer, local dealer(s), and BUC for similar sized and featured vessels in production today.

The "FAIR MARKET VALUE" is the most probable price in terms of money which a vessel should bring in a competitive and open market between two willing and informed parties, acting independently and in their own interest.

The price represents a normal consideration for the vessel sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

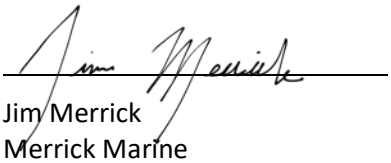
Based on available competitive data from similar vessels both recently sold and on offer through industry sources including BUC, NADA, Soldboat, Yachtworld, local brokers, and other sources the estimated **fair market value of this vessel is estimated to be $60,000 to $70,000.**

Certification

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

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the vessel that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.
- My compensation is not contingent upon the reporting of a predetermined value or direction in value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulate result, or the occurrence of a subsequent event.
- I have made a personal inspection of the vessel that is the subject of this report.
- This report is submitted without prejudice and for the benefit of whom it may concern.

Surveyor:



Date: XXX

Jim Merrick
Merrick Marine

Additional Photographs

Manufacturer Plate


CG Registration Number


Cutlass Bearing


Strut


Backstay Adjuster


Windlass


Roller Furler


Pedestal


Galley Sink

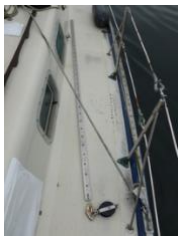

Setee


Engine Room


Aft Cabin


Generator


Rudder Post


Gelcoat Damage

Additional and high-resolution images, videos (if available), as well as a PDF copy of this survey can be found online at this link:

[link]