

FRANCOISE RAMSAY
SAMS ACCREDITED MARINE SURVEYOR

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SURVEY REPORT #6715

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By Request of: Charley Eddy
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Date: Mars 19, 2018

Vessel Name: "SNUG HARBOR"

Type: Auxiliary Sail, sloop

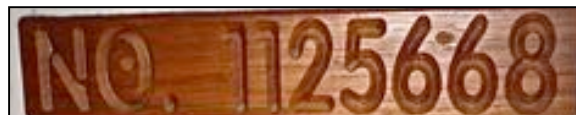
Service Area: San Francisco Bay, offshore

Official #: USCG Document # 1125668

Hailing Port: San Francisco, CA

Certificate aboard / numbers attached: Yes / Yes

Hull ID #: US – CTYY0097F102



Purpose of Survey: Condition and value for insurance underwriting purposes

(Note: this survey is not to be used for transfer to a third party or use other than intended)

Where Surveyed: In dry dock @ the Boat Yard at Grand Marina, Alameda

Attending: Francoise Ramsay (surveyor)

Broker/Agent: Not reported

Estimated Fair Market Value: \$280,000

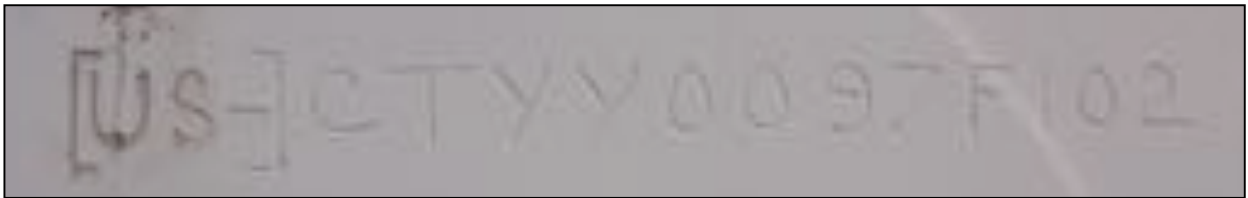
Estimated Replacement Cost: \$500,000

(See Notes on Valuation)

VESSEL PARTICULARS**Vessel Documentation:** As per USCG database

Vessel Name:	SNUG HARBOR	USCG Doc. No.:	1125668
Vessel Service:	RECREATIONAL	IMO Number:	*
Trade Indicator:	Recreational	Call Sign:	WDE2991
Hull Material:	FRP (FIBERGLASS)	Hull Number:	CTYY0097F102
Ship Builder:	CATALINA YACHTS INC	Year Built:	2001
		Length (ft.):	47.7
Hailing Port:	SAN FRANCISCO CA	Hull Depth (ft.):	5.3
Owner:	EDDY FAMILY TRUST UDT DTD 2/9/00 18045 REED KNOLL LOS GATOS, CA 95033	Hull Breadth (ft.):	14
		Gross Tonnage:	17
		Net Tonnage:	15
Documentation Issuance Date:	March 13, 2013	Documentation Expiration Date:	*

Previous Vessel Names:	No Vessel Name Changes	Previous Vessel Owners:	EDDY FAMILY TRUST UDT DTD 2/9/00
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*Hull Identification Number (HIN) as stamped on starboard quarter*

Builder: CATALINA Yachts Inc.
Place of build: Woodland Hills, CA
Designer: Gerry Douglas
Production Year: 2001
Model Year: 2002
Model: C-470
Hull#: 097
LOA: 47' 11"
LOD: 46' 4"
LWL: 42'
Beam: 14'
Draft: 7' 10"
Displacement: 27,270 lbs.
Ballast (type/amount): Lead / 9,020 lbs.
Hull Type: Fin keel / spade rudder
Material: Molded fiberglass
Color: - Topsides: white w/ green boot stripe
- Decks and superstructure: white w/ light grey non-skid
- Hull bottom: red anti-fouling



HULL AND SUPERSTRUCTURE:

Deck: Fiberglass with molded non-skid

Cabin Sole: Teak and holly veneer plywood

Bulkheads: Teak veneer plywood

Hatches/Ports: (10) LEWMAR deck hatches, (10) LEWMAR opening ports, (5) hull ports, (4) fixed windows

Construction Scantlings: Single skin gel coat over multiple layers of resin impregnated fiberglass
 Hull: hand-laid laminate hull & partial hull liner / structural grid, end-grain balsa core above water line
 Decks and superstructure: molded deck and deck liner with end-grain balsa core

Superstructure: Low-profile cabin trunk, T-shaped aft cockpit

Interior Layout: Two-cabin layout

- Forward: Forward head w/ built-in laundry, forward stateroom w/ Pullman type double berth to port, hanging and storage lockers opposite
- Mid: Salon w/ C-shaped dinette to port, straight settee opposite followed by U-shaped galley to port, navigation station opposite
- Aft: Master stateroom w/ en-suite head & shower (also accessible from main cabin), island queen berth and P/S hanging and storage lockers

Comments: - The wetted surfaces were examined visually and with a sounding hammer; they were found sound with no evidence of osmotic blisters or delamination noted. The anti-fouling paint is to be renewed during haul-out

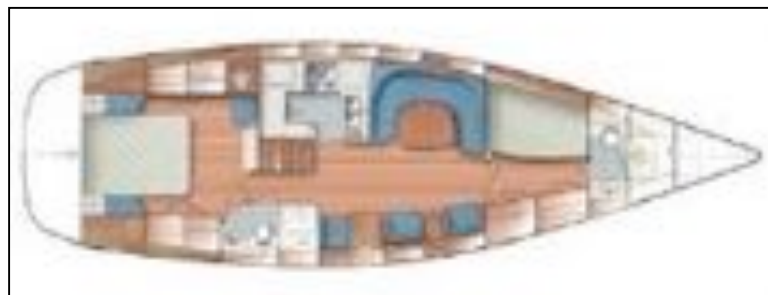
- The topsides are in very good condition
- The decks and the superstructure are in very good condition
- The interior is well appointed. It shows little wear and tear and is deemed in excellent condition



View of the main cabin



Forward cabin



CATALINA C-470 – 2-cabin layout

PROPULSION SYSTEM

Comments: The engine was not operated in this out-of-water survey. Engine is very clean and free of surface corrosion. The engine space insulation has been redone. The shaft seal was being replaced during survey. The MARETRON engine monitoring system is a valuable upgrade

Type: Diesel, 4-cycle, turbocharged intercooled

Hours: 1850.7 by meter

Manufacturer: YANMAR

Model: 4JH3-HTE

Serial Number: E11034

#Cylinders: Four, vertical in-line

Rated Horsepower: 92 HP @ 3700 rpm (continuous rating)

Year: 2001 - original

Cooling System: Intercooler

Alarms: Yes – low oil pressure, overheat, charging system

Gauges: - CATALINA custom panel: tach/hour meter, oil press., water temp., voltmeter

- MARETRON engine monitoring system connected to SeaTalk network

Exhaust Type: Seawater-cooled / wet exhaust

Exhaust Line: 1 5/8" wet exhaust hose

Silencer: ULTRA fiberglass waterlift muffler

Marine Gear: KANZAKI

Model: KM4A

Reduction Ratio: 3.30:1

Serial Number: 15617

Belts/Hoses: Satisfactory

Shaft: 1 1/2" stainless steel

Stuffing Box: PYI Packless Shaft Seal (PSS) – new 2018

Shaft strut: Stainless steel P-bracket

Shaft Bearing: Cutlass type – modest wear

Propeller: PYI Max Prop 3-blade feathering 20" D

Controls: MORSE single lever at stbd helm

Eng. Beds: Fiberglass cradle

Eng. Mounts: Vibration-dampening type

Eng. oil /Coolant Levels: Satisfactory

Other: - Engine manual and spares, alternator belts, filters, etc.

- SHARK shaft-mounted kelp cutter



Top view of engine



New shaft seal

MECHANICAL SYSTEMS

Comments: Systems are well installed, including the recent upgrades such as hydronic heating and water maker. All are operational and accessible for routine maintenance.

Ventilation

Engine Space: ATWOOD Turbo 4000 4" in-line 12v blower and natural

Cabin: (4) HELLA cabin fans, HOLMES portable fan, (2) NICRO solar-powered vents

Steering

Wheel/Tiller: Twin EDSON 32" stainless steel destroyer type wheel w/ leather cover

Steering Gear: EDSON cable steering

Emergency Steering: Emergency tiller – in storage bag

Rudder: Foam-cored fiberglass, elliptic spade rudder

Rudder Post/Gland: Fiberglass tube and bearing

De-watering

Bilge Pump(s)-Manual: WHALE Gusher Mk3 diaphragm in cockpit

Electric: - Primary: JABSCO 1950 w/ SURE BAIL float switch

- Secondary: RULE 2000 w/ float switch and high bilge water audible alarm

- JABSCO 37202-0000 diaphragm type w/ manual switch at electrical panel

- AQUALARM bilge pump counter

Freshwater system

Potable Water-Manual: WHALE hand pump at galley sink

Pressure: SHURFLO Smart Sensor 5.5 variable speed type

Showers: Handheld in each head and at transom

Sump/Pump: Enclosed sump w/ RULE 800 pump and float switch

Water Heater: SEAWARD 20 gals – 120 VAC & engine cooling loop

Other: SPECTRA Ventura 200T reverse osmosis water maker

- SPECTRA Z-Brane electronic water treatment system – new 2014

- Original SHURFLO pressure pump and accumulator tank off-line but still in place as back-up

Marine Sanitation

Head(s): (2) RARITAN Elegance electric

Holding Tank: Yes – see Tankage and Plumbing

Macerator: JABSCO 12V

USCG Approved: Yes – type III MSD w/ "Y" valve (frwd head only)

Climate Control

Heating: WEBASTO boiler, 3-zone hydronic system

Heating: - WEBASTO boiler, 3-zone hydronics system

- HOLMES small portable space heater

Head(s): - Frwd: RARITAN Elegance electric – fresh or saltwater flush

- Aft: SEALAND Vacuflush - fresh water flush

Holding Tank: Yes – see Tankage and Plumbing

Macerator: (2) JABSCO

USCG Approved: Yes – type III MSD w/ "Y" valve (frwd head only)

Other: GROCO Sweet Tank holding tank ventilation system

Other

- MAXWELL 1200 12V vertical dual action w/ (2) deck switches anchor windlass

- WHALE foot pump for icebox drain

- Small JABSO seawater pressure pump at galley

- SONIHULL Ultra Sonic hull antifouling system

- JABSCO HotShot series 70 psi seawater wash-down pump



Anchor windlass gearbox and motor



Water maker and treatment system

ELECTRICAL SYSTEMS

Comments: The electrical systems have been upgraded with a 435 W solar array to meet on-board energy needs in cruising mode. All the incandescent lights have been replaced with LEDs.

DC System – 12V

Batteries/Amps: (1) LIFELINE GPL-2700T / 12V group 27 Deep Cycle AGM / 1020 MCA
 - (3) LIFELINE GPL-8DL / 12V group 8D Deep Cycle AGM / 255 Ah – in parallel for a 765 Ah house bank

Battery Storage: Dedicated bilge compartment, top blocking

Battery fluid level: Sealed type

Battery Terminals/Connections: Tight, clean

Engine Alternator/Amps: BALMAR / 105 A

Vapor Proof Switch: (2) PERKO

Panel/Location: Above chart table

Circuit Protection: Magnetic breakers

Other: - DC analog voltmeter and ammeter

- XANTREX Digital Echo-Charger

- (3) SHELL 85 W solar panels on dodger

- (3) LARLAND 60W solar panels on bimini

- (2) BLUE SKY ENERGY Solar Boost 2000E solar charge controllers

- BALMAR MC-614 Max Charge remote alternator regulator

- AIR BREEZE wind generator

Cabin Lights: LED

Navigation/Anchor Lights: Operational

AC System – 120V

Shore Power: (2) SMART PLUG 30 A inlet & cable – Main and auxiliary

Charger/Inverter: MAGNUM Magna Sine 2812 2800 W inverter and 125 A charger

Panel/Location: Above DC panel

Circuit Protection: - (2) double-pole main breakers

- Single-pole circuit breakers

Other: MAGNUM inverter/charger control panel

Wiring: Stranded copper

Installation: Well loomed



Battery storage



Inverter/battery charger



Upgraded shore power inlets



Dodger-mounted solar array

TANKAGE AND PLUMBING

Comments: The fuel capacity has been increased with the removal of a water tank and replacement with a new fuel tank prior to offshore cruising.

Fuel Tanks/Capacity: Three / 2x42 + 55 gals (total 140 gals)

Material: Aluminum

Location: Two under aft berth, one under salon sole

How Secured: Framing, welded brackets

Accessibility/Condition: Satisfactory

Fill/Vent: On deck / topside

Fuel Lines/Clamps: A1 fuel hoses

Filters: - Dual RACOR 75500FGX w/ vacuum gauge and secondary – engine

- GAR-BER cartridge type - heater

Shut-off Valve: At tanks and filters

Manifold: Above engine

Gauge: WEMA analog gauge system

Water Tanks/Capacity: Four / 160 gals

Material: Cross-link polyethylene

- Location:** Under cabin sole
- How Secured:** Framing
- Accessibility/Condition:** Not inspected
- Fills/Vents:** P/S deck / topsides
- Hoses/Clamps:** Satisfactory
- Valves/Manifold:** Under cabin sole
- Gauge:** WEMA analog gauge system
- Other:** JABSCO shore water inlet
- Holding Tank/Capacity:** Two / 66 gals
- Material:** Polyethylene
- Location:** Under frwd berth and aft head
- How Secured:** Framing
- Discharge:** Dockside pump-out via deck fitting or overboard discharge via macerator pump
- Gauge:** GOBIUS 4 level indicator
- Thru-Hull Fittings:** Reinforced plastic
- Sea Valves/Skin Fittings:** From stem to stern

Location	Function	Type	Condition/Operation
Under frwd berth, frwd	Water maker inlet	Marelon ball valve	Satisfactory
Under frwd berth, frwd	Speed	Paddlewheel, plug	Satisfactory
Under frwd vanity	Wash-down inlet	Marelon ball valve	Satisfactory
Under frwd vanity	Vanity sink drain	Marelon ball valve	Satisfactory
Under frwd berth, aft	Head overboard outlet	Marelon ball valve	Satisfactory
Under frwd berth, aft	Macerator outlet	Marelon ball valve	Satisfactory
Under frwd berth, aft	Head inlet	Marelon ball valve	Satisfactory
Frwd bilge, stbd	Depth	Transducer	Satisfactory
Under galley sink	Icebox drain and seawater pump inlet	Marelon ball valve	Satisfactory
Under galley sink	Galley sink drain	Marelon ball valve	Satisfactory
Under galley sink	Shower drain	Marelon ball valve	Satisfactory
At nav station	Head overboard outlet	Marelon ball valve	Satisfactory
At nav station	Macerator outlet	Marelon ball valve	Satisfactory
At nav station	Former head inlet	Marelon ball valve	Capped
In front of engine	Engine intake	Marelon ball valve	Satisfactory
Under aft vanity	Vanity sink drain	Marelon ball valve	Satisfactory
Port quarter	Engine exhaust	Anti-siphon loop	Satisfactory
Lazarette, centerline	Propane lockers drain	No valve, above water line	

- Clamps/Hoses:** Stainless steel, double / reinforced type
- Seawater Strainers:** PERKO bronze – engine seawater inlet



Dual primary



Freshwater manifold

GALLEY EQUIPMENT

Comments: The galley is spacious and well appointed.

Sink(s): Single basin stainless steel

Refrigeration: Built-in refrigerator and freezer w/
ADLER BARBOUR refrigeration system

Stove Type: PRINCESS propane, gimbaled

Burners/Oven: Three w/ oven

Tank Stowage: Two dedicated transom lockers

Tanks/Type: (2) 10# aluminum vertical, - port tank dated
11/01, stbd tank 8/17

Shut-off Valve: SEAWARD safety solenoid 12v

Pressure gauge: Yes

Microwave: LG

Other: - GOURMET stove exhaust fan & light
- MAGMA barbecue



View of galley

ELECTRONICS/NAVIGATION EQUIPMENT

Comments: Well equipped

Compass: (2) RITCHIE Powerdamp 4 inch, flush mount

VHF Radio: STANDARD Horizon Explorer w/ RAM Mic3 handheld extension

SSB Radio: ICOM IC-M802 w/ AT-140 antenna tuner and SP-24 speaker

Autopilot: RAYMARINE EV-400 w/ p70 control head

Speed/Log/Depth: (2) RAYMARINE i50 at helm

Wind: RAYMARINE i60 and DAVIS Windex masthead vane

GPS/Plotter/Radar: RAYMARINE eS127 Hybrid Touch

Stereo/Radio: - SONY CDX-GT740UI AM/FM/CD

- SONY CDX-646 10-disc changer

- (2) BOSE cabin speakers, and cockpit speakers

Television: SAMSUNG 28" flat screen TV with YAMAHA ATS-1060 sound bar

Barometer: LA CROSSE digital weather station

Other: - FUJINON 7x50 binoculars

- PACTOR SCS PTC-II modem

- Masthead TV antenna

- DIGITAL YACHT iNAVHub wireless router

- CANON iP110 printer

- RAYMARINE AIS650



Touch-screen color display



Navigation station

DECK EQUIPMENT

Comments: Well equipped for offshore cruising. The dinghy and outboard engine are new

Ground tackle: - ROCNA 66# plow type / 5/16" high tensile chain x 250' – primary

- BRUCE 44# claw type / 5/16" x 10' and 3/4" 3-strand nylon x 300'
- FORTRESS FX-23 aluminum fluke type
- Snubber
- Anchor bridle
- Dual stainless steel bow roller
- Split chain locker

Bow/Stern Pulpit: Welded 1" stainless steel

Stanchions/Lifelines: 1" SS / double wire w/ PVC cover

Dock Lines: Three-strand nylon

Fenders: (4) large pneumatic w/ fleece cover

Covers: Dodger, bimini, steering wheels, cockpit table

Swim/Boarding Platform: Swim step, built-in transom

Swim/Boarding Ladder: Modified stainless steel and high-density plastic, transom mount, tilts up in stored position

Other: - Dinghy davits, stainless steel

- 2018 AB RIB inflatable dinghy, registration: CF 3083 RZ – new 2018
- TOHATSU 4-stroke 20 HP outboard engine – new 2018
- Outboard engine storage bracket
- Dinghy wheels
- (2) stern seats
- Drop-leaf cockpit table
- Sun awning
- DAGGER Blackwater 11.5 and NECKY Manitou Sport 1-man kayaks



View of cabintop and decks



View of cockpit

SPARS, RIGGING AND SAILS

Comments: The standing rigging has been all replaced in 2010

Type of Rig / # Masts: Sloop / One

Make/Material: CHARLESTON aluminum mast

Where Stepped: On deck with stainless steel bearing plate and compression post

Keel bolts: (12) 1" stainless steel – no corrosion noted

Standing Rigging: 1x19 SS wire

Terminals: Swaged

Turnbuckles/(pins?): Chromed bronze, open type / yes

Chainplates/Stem: Stainless steel plate and tie-rods

Running Rigging: Dacron braid

Winches: (2) HARKEN #66ST primary, (2) HARKEN #44ST with stbd electric

Rigging details: - SCHAEFER 3100 roller furler

- SHAEFER in-boom furling
- Rigid boom vang
- GARHAUER main traveler and jib tracks
- DUTCHMAN boom brake
- (10) LEWMAR line stoppers
- All line lead aft
- FORESPAR pole, stored at mast

Sail inventory: - Dacron furling mainsail, DOYLE 110% furling jib

- Cruising spinnaker w/ dousing sleeve

Other: Bosun's chair

SAFETY/REQUIRED EQUIPMENT

Comments: All in compliance – additional offshore safety equipment

Throwable Device: LIFESLING in hard case

PFD's: (2) USCG Type V

VDS: ORION 12-gauge and handheld flare kit – exp. date 1/21

Horn: Handheld canister

Radar Reflector: Yes, in rigging

Oil/Pollution Placards: Yes / Yes

Fire Extinguishers: (3) 2008 KIDDE 2.5# dry chemical handheld units

Fire Port: Yes

CO detector: (2) FIRST ALERT

Other: - 2008 WINSLOW 6-person liferaft, model: 60SLOP

- Set of jacklines
- WEST MARINE medical kit
- ACR Abandon Ship bag w/ flares, GARMIN GPSmap 76CSx, etc.
- ACR Satellite 3 406 MHz EPIRB emergency beacon, UIN: 2DCC5 EFE9A FFBFF
- High bilge water alarm

REMARKS AND RECOMMENDATIONS

This cruiser is the largest of the Catalina line of sailboats. It was designed and built to very good standards. "SNUG HARBOR" was found structurally and mechanically sound. It has been significantly upgraded for offshore cruising by knowledgeable owner; these upgrades include, diesel water heating, water maker, dinghy davits, additional fuel tank, SSB radio, etc. This boat has been cruised, and is extremely well maintained. It is deemed **in Bristol condition**, and fit for its intended service. A pleasure to survey!

(In as far as may be ascertained from a general inspection, without making extensive removals or opening up to expose ordinarily concealed areas, and without taking borings to determine thickness or soundness of structures and members, or testing for tightness of components.)

Note: The N.F.P.A. National Fire Protection Association, and ABYC (American Boat and Yacht Council), do not represent legal requirements, only safety standards. Non-conformity can affect insurance. U.S.C.G Requirements are law by the Federal Boat Safety Act of 1971.

SAFETY / REQUIRED ITEMS:

No items

REPAIR / MAINTENANCE ITEMS:

No items

NOTES ON VALUATION

Replacement value is defined as the cost of building a new vessel of like or similar style in the current market situation and includes applicable freight and taxes.

Builder is still in business; subject model is no longer in production. Some comparable:

- A 2017 47' DELPHIA 47 located in Annapolis, MD is listed at \$498,200
- A 2018 47' HUNTER 47 located in FL is listed at \$389,000
- A 2018 47' JEANNEAU Odyssey 479 located in Seattle, WA is listed at \$389,838
- A 2018 47' TARTAN 4700 located in Anacortes, WA is listed at \$697,400

Taking into account custom features and additional equipment, replacement value is assessed at **\$500,000**

Fair market value is the amount of money at which a given property would change hands between a willing buyer and a willing seller, in an appropriate marketplace, when neither is acting under compulsion and both have reasonable knowledge of the facts.

To assess this value, a variety of information sources was consulted:

- Internet websites listings such as YACHTWORLD.com and SOLDBOAT.com
- Local magazines and classified ads.

Soldboats.com database shows only one recent sale of a 2007 C-470; this boat, located in Annapolis, MD, sold for \$260,000 in May 2017

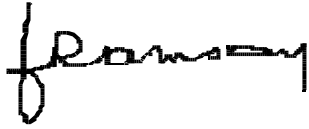
There is one 2008 C-470 currently listed on Yachtworld.com; this boat, located in Kemah, TX, is listed at \$289,000

Given "SNUG HARBOR" Bristol condition, upgrades and additional equipment, FAIR MARKET Value is assessed at **\$280,000**

SURVEY SCOPE AND LIMITATIONS

1. I certify that I have no present or prospective interest in this vessel and have no personal interest or bias with respect to the parties involved. My compensation is not contingent on reporting a pre-determined condition or value that favors the cause of the client, broker or underwriter. I have made a personal inspection of the above-captioned vessel and subsequently prepared and submitted this report in good faith.
2. This survey report set forth the apparent condition of the vessel and its areas open to inspection, including hull, machinery, equipment, fittings and gear. Only non-destructive methods were used and unless expressly stated, there have been:
 - no borings, no removal of bulkheads, panels, ceilings or other portions of vessel's structure not otherwise readily accessible for inspection.
 - no operation or opening or removal of any portion of her machinery, electronics, wiring, auxiliaries, tanks or fittings for internal examination.
 - no lofting or raising of sails, no inspection of spars, rigging and lights aloft.Also excluded from the Surveyors' duties are the unloading of cluttered holds or lockers, the cleaning of the hull and the operation of the vessel.
3. This report is based upon facts discovered during survey and the Surveyor's knowledge and experience, without warranty, either specified or implied.
4. This report represents the physical condition and estimated value of the vessel only on the date of the survey, and may not be relied upon thereafter. It does not include a determination as to the seaworthiness of the vessel, nor does it include stability tests necessary to determine such limitations, nor does it attempt to itemize waters unsuitable for the vessel's use.
5. This survey is prepared for the exclusive use of the client whose name and address appear on the front page. The intended users of this report and valuation are the client and those lenders and underwriters who may finance or insure this vessel for this client only. This report is not transferable to any other person or entity; therefore, this surveyor assumes no liability arising out of the reliance on the information contained herein by persons or entities not parties to this survey.
6. This survey report is the result of a verbal contract between the Surveyor and the requesting party. If, upon receipt of this document, the requesting party disagrees with any of the following terms and conditions, it should contact the Surveyor immediately. In the event of dissatisfaction with the conduct of the survey, with errors contained in the report, or with omission of information, it is agreed by all concerned that the Surveyor's liability is restricted and that the sole and maximum remedy shall be limited to the amount of the rendered service fee for this survey and report. The use of this report constitutes acceptance of, and agreement to all the terms and conditions stated above.

Signed without prejudice,

A handwritten signature in black ink, appearing to read 'framsay'. The signature is written in a cursive style with a large initial 'f'.

Françoise Ramsay
SAMS Accredited Marine Surveyor #962
ABYC Master Technician (Standards, Electrical, Marine Systems)
RYA Yachtmaster 200GT