

**ANTIGUA MARINE**  
SURVEY & CONSULTING, INC

1990 Catalina 42

“ \_\_\_\_\_ ”



MEMBER OF THE SOCIETY OF ACCREDITED MARINE SURVEYORS

**ANTIGUA MARINE**  
SURVEY & CONSULTING, INC

REPORT OF MARINE SURVEY OF THE VESSEL

“ \_\_\_\_\_ ”

**1990 Catalina 42**

CONDUCTED BY  
Jean K Levine  
Jeff Grossman

CONDUCTED FOR

CONDUCTED ON  
August 28, 2009

WRITTEN REPORT COMPLETED ON  
August 30 2009

MEMBER OF THE SOCIETY OF ACCREDITED MARINE SURVEYORS

**ANTIGUA MARINE**  
**SURVEY & CONSULTING, INC**

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# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### I. INTRODUCTION

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#### SCOPE OF SURVEY

Acting at the request of \_\_\_\_\_, the vessel ““\_\_\_\_\_”” was surveyed on Friday August 28, 2009 from 10:30 to 18:00. The “in the water” inspection was conducted at the boat’s home slip in \_\_\_\_\_, Pasadena, Maryland. In attendance: \_\_\_\_\_, Jean Levine and Jeff Grossman. The reason for the survey was to ascertain the physical condition and value of the vessel for pre-purchase evaluation. Heavy cloud cover with intermittent rain accompanied by lightening prevented the use of a moisture meter. The “out of water” inspection of below the waterline machinery was conducted from 13:30 to 15:00 in the slings of the Travel lift. The vessel was pressure washed by employees of the \_\_\_\_\_ Marine Yard at this time. Afterward the vessel was re-floated and a sea trial was conducted in the waters of the Patapsco River from 15:00 until 16:30. The HIN CTYT0136G990 was verified from the manufacturers ID plate on the transom. The engraved HIN on the starboard stern quarter was worn and illegible. The vessel documentation expired June 2007, no current registration numbers sighted on the vessel. AC and DC power was used to check operation of the electrical systems specified in this report only. No reference or information should be construed to indicate evaluation of the internal condition of the engine or the propulsion system’s operating capacity. It is recommend that all diesel engines be surveyed by a qualified engine technician to determine the condition of the engines, gears and pumps, heat exchangers, coolers, etc. Electronic equipment was checked for “power up” only.

This vessel was surveyed without 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. Locked compartments or otherwise inaccessible areas would also preclude inspection. Owner is advised to open up all such areas for further inspection. Further, 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 or a warranty either specified or implied.

# **ANTIGUA MARINE**

## **SURVEY & CONSULTING, INC**

# **I. INTRODUCTION**

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## **CONDUCT OF SURVEY**

THE MANDATORY STANDARDS PROMULGATED BY THE UNITED STATES COAST GUARD (USCG), UNDER THE AUTHORITY OF TITLE 46 UNITED STATES CODE (USC); TITLE 33 AND TITLE 46, CODE OF FEDERAL REGULATIONS (CFR), AND THE VOLUNTARY STANDARDS AND RECOMMENDED PRACTICES DEVELOPED BY THE AMERICAN BOAT AND YACHT COUNCIL (ABYC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAVE BEEN USED AS GUIDELINES IN THE CONDUCT OF THIS SURVEY.

The use of the word "appears" is intended to indicate that a close or complete inspection was not possible or it was not deemed appropriate at the time of this survey. The deficiencies reported herein reflect the conditions observed at the time the survey was conducted.

Use of asterisks \* in the body of the report will indicate that a finding will be listed in the Findings and Recommendations section pertaining to the asterisked item, following the body of the report.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### I. INTRODUCTION

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#### VESSEL DESCRIPTION

““\_\_\_\_\_”” is a three cabin Catalina 42 with two staterooms aft and the owner’s stateroom forward. The Catalina 42 is an aft cockpit fiberglass sloop with a wide beam and inboard shrouds, a slight overhang on the bow and a modified reverse scoop transom. There are three opening ports on each side of the cabin house and two non opening portlights in the hull amidships in the main saloon. The underbody has a long horizontal skeg that runs aft from the wing keel to the spade hung rudder. According to the vessel documentation records she was built by Catalina in 1989 and finished in 1990. The three interior cabins and main saloon are finished in teak with white Formica finishes in the galley and heads. Moving from bow to stern: forward is the master stateroom head with separate shower stall; a double berth offset to port with lockers and cabinetry to starboard. The main saloon has L shaped settee to port with table and a bench seat along the centerline. The galley is along the starboard side with cabinetry outboard and above. The side facing navigation station is to port and on the starboard side is the aft head. On either side of the companionway are two staterooms with double berths and hanging lockers. Other amenities non standard for this vessel include: a Leisure Furl in boom furling main sail system; a Northern lights diesel generator, Raymarine RL70 radar and GPS/Chart plotter with repeater at helm, Auto Helm 7000, Auto Prop 3 bladed feathering prop, upgraded anchor windlass, two reverse cycle heat and air conditioning systems, an upgraded 4 burner CNG stove, 15” Flat screen TV/ DVD, Jensen stereo/CD. This added equipment was considered in the valuation of the vessel. The overall condition of the yacht and its systems reflect above average care and maintenance.

# ANTIGUA MARINE

SURVEY & CONSULTING, INC

## I. INTRODUCTION

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### Interior



Port side Main Saloon



Starboard side Main Saloon and Galley



Navigation Station

**ANTIGUA MARINE**  
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**II. GENERAL INFORMATION**

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NAME OF VESSEL: ..... “ \_\_\_\_\_ ”  
TYPE OF SURVEY: ..... Pre-purchase  
OVERALL VESSEL RATING: ..... \*\*\* AVERAGE  
ESTIMATED MARKET VALUE: ..... \$110,000  
ESTIMATED REPLACEMENT COST: ..... \$300,000  
YEAR/MAKE/MODEL OF VESSEL: ..... 1990 Catalina 42  
HULL IDENTIFICATION NUMBER (HIN): ..... CTYxxxxxxxxxxx  
HAILING PORT: ..... Annapolis, Maryland  
DOCUMENTATION NUMBER: ..... 9xxxxxx  
OWNER’S NAME: .....

PLACE OF SURVEY/ HAUL OUT:..... Pasadena, Maryland  
DATE OF SURVEY: ..... August 28, 2009  
HULL MATERIAL: .....Fiberglass  
HULL TYPE: .....Full Displacement  
LENGTH OVER ALL (L.O.A.): .....41’ 10” per Catalina  
LOAD LENGTH WATERLINE (L.W.L.): .....36’ 0” per Catalina  
BEAM: .....13’ 10” per Catalina  
DRAFT: ..... 4’ 10” per Catalina  
DISPLACEMENT: .....18,000 LBS per Catalina  
OVERHEAD CLEARANCE: .....60’estimated measurement  
PROPULSION SYSTEM: .....Yanmar 4JHBE 44 HP  
FUEL CAPACITY: .....39 gallons per label  
AC POWER: .....Northern Lights Diesel Generator,  
Two (2) 125 volt, 30 amp inlets.  
DC POWER: ..... One (1) Group 24 Genset start  
One (1) Group 27 Engine start Two (2) 4D lead acid house  
FRESH WATER CAPACITY: .....120 gallons (3 tanks)  
HOLDING TANKS: .....38 gallons (2 tanks)  
INTENDED USE: .....Recreational coastal



# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

## II. GENERAL INFORMATION

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

**APPEARS:**

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 tests).

**FIT FOR INTENDED USE:**

Use which is intended by Survey Purchaser (present or prospective owner)

**SERVICEABLE: ADEQUATE:**

Sufficient for a specific requirement.

**POWERS UP:**

Power was applied only. This does not refer to the operation of any system or component unless specifically indicated.

**EXCELLENT CONDITION:**

New or like new.

**GOOD CONDITION:**

Nearly new, with only minor cosmetic or structural discrepancies noted.

**FAIR CONDITION:**

Denotes that system, component or item is functional as is with minor repairs. (MONITOR OFTEN)

**POOR CONDITION:**

Unusable as is. Requires repairs or replacement of system, component or item to be considered functional.

**USE OF \*:**

Use of \* in the body of this report will indicate that a finding will be listed in the "Findings and Recommendations" section pertaining to the \* item.

Asterisks \* in this General Information section refers to the source of such information as follows:

- \* Per Manufacturer's Specifications
- \*\*Refer to Summary and Valuation Section
- \*\*\* Per USCG Documentation
- \*\*\*\* Per Buc Book

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### HULL COMPOSITION AND STRUCTURE

##### MATERIAL & TYPE:

FRP (fiber reinforced plastic). Full displacement hull, wing keel and spade rudder.

##### EXTERIOR HULL:

Off white Gel coat with red trim stripe under hull deck joint and just above waterline, good condition.

##### PORTLIGHTS:

Eight Lewmar opening ports in black aluminum frames: serviceable.

Four non opening hull portlights, two on each side of hull amidships, no leaks sighted.

##### BULKHEADS

Three full teak bulkheads, main companionway, between main saloon and forward stateroom; forward stateroom and forward head, attachment points could not be seen due to slotted headliner and trim pieces.

##### STRINGERS:

Where visible under floor boards of main saloon was a fiberglass grid system, serviceable.

##### STEM:

Stainless steel stem plate through bolted with three stainless steel bolts with washers and nuts, serviceable.

##### TRANSOM: \*

Modified reverse scoop transom with split stern rail and walk thru to swim platform. \*The portside of the FRP scoop has a 3" diameter discolored Gel coat repair, soundings were unremarkable. Under the teak stern step is a hot & cold fresh water stern shower, serviceable.

##### BILGE:

Deep bilge accessed under the center floor boards of main saloon, contained 2" of clear water, which appeared normal. Generally clean and limber holes were clear.

##### KEEL:

Keel is attached to molded keel stub with stainless steel bolts, bolts sighted in bilge area under main saloon, clean and free of rust.

##### TEAK HAND RAILS AND TRIM:\*

Exterior Teak hand rails, needs refinishing. \*The teak eye brow trim pieces are split at the scarf joints on both port and starboard. Repair and refinish.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### DECK CONSTRUCTION:

FRP, with balsa core, per Catalina, light tan non skid, percussive soundings unremarkable: good condition

#### COCKPIT AND SCUPPERS:

Large aft cockpit FRP with light tan non skid, good condition, cockpit drains aft thru stern scoop.

#### HULL TO DECK JOINT:

Overlap from hull to deck with bedding material and bolts per Catalina, could not be seen due to screwed trim pieces.

#### STANCHIONS:

Stainless Steel stanchions are through bolted to large washers and nuts visible along the electrical conduit in the main saloon portside forward. Good condition.

#### LIFELINES:

Upper and lower plastic coated wire run perimeter of deck and attached aft on either side by pelican clips, well fit, no corrosion sighted, good condition.

#### HATCHES/ CLEATS: \*

One (1) 20" aluminum framed hatch over forward head, crazed Lexan, missing screen.

Four (4) 10" aluminum framed hatches two over forward stateroom, two over aft staterooms, crazed Lexan. Two (2) 18" hatches over main saloon, portside hatch crazed Lexan,\* leaking around inside frame, missing screen; starboard side hatch, over galley has \* outboard dog broken, crazed Lexan.

Six (6) cleats total, three each side, port and starboard, serviceable.

#### ANCHOR PLATFORM AND GROUND TACKLE:\*

Stainless steel platform with two bow rollers bolted to deck: good condition.

45 LB CQR Anchor mounted on roller, 3/8" G4 chain approx 30" attached to 5/8" line estimated 175', per owner: good condition. \*Mouse shackle that attaches anchor to chain, power button arrow points wrong direction.

#### WINDLASS/ WATER WASH DOWN:

Maxwell, horizontal mount, windless operated. Good condition.

Jabsco "Par" diaphragm pump: did not operate.

#### BIMINI / DODGER/DORADES:

Stainless steel frames with navy blue canvas bent on both, complete coverage of the cockpit: single stitched, fair condition. Port and starboard plastic Dorade vents, fair condition.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### SHIPBOARD AMENITIES

##### ACCOMODATIONS:

The forward master stateroom has double berth offset to port, cabinetry to starboard. Main saloon has large L shaped settee to port and bench seat on the centerline that converts into berth. Both the two aft staterooms have double berths with cabinetry outboard.

##### JOINERY AND FINISH: \*

Teak bulkheads and cabinetry with varnished finish. Generally in very good condition, \*signs of water stains on the portside outboard surface behind the L shaped settee. Solid wood cabin and head doors throughout vessel well fit, good condition.

##### FABRICS AND CUSHIONS:\*

High quality dark blue cushions pleated and padded, generally in good condition, port aft stateroom mattress has \*small tear, the other mattresses are in good condition. Window coverings: good condition, except the portside aft over Nav table has stain.

##### HEADLINER: \*

Part of fiberglass deck mold, off white in good condition throughout vessel. \* Noted leak in forward stateroom at mast, most forward bolt.

##### LIGHTS & FAN FIXTURES:

12 volt cabin lights and Hella fans throughout vessel; operate.

##### HEADS:

One head with separate shower stall forward to port, the second head is located to starboard of the companionway: operate. Both Heads are Jabsco manual, properly installed with vented loop and Y valve to holding tanks.

##### HOLDING TANKS/CAPACITY/LOCATION:

Plastic tanks, estimated 20 gallons forward portside under berth, 18 gallons starboard under aft berth, plumbed to both Macerator pumps and deck pump out.: serviceable.

##### SHOWERS:

Forward separate shower stall, teak seat, with sump, hot and cold water, operates.

##### AIR CONDITIONING AND HEAT: \*

Two (2) Lunaire reverse cycle heat and air conditioning units; under forward settee main saloon, aft starboard cockpit locker. Aft unit cooled two aft staterooms, main saloon unit did not adequately cool saloon and forward stateroom. Additional unit may be needed.

# ANTIGUA MARINE

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### III. SYSTEMS

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GALLEY



#### SINKS:

Double stainless steel sink, good condition.

#### REFRIGERATION:

Adler Barbour DC refrigerator/freezer, top loading, a thermometer was placed inside during survey for 45 minutes and measured 50 degrees F at the top and 20 degrees F at the bottom.

#### MICROWAVE:

Princess by Seaward, securely mounted inside cabinet, good condition, operates.

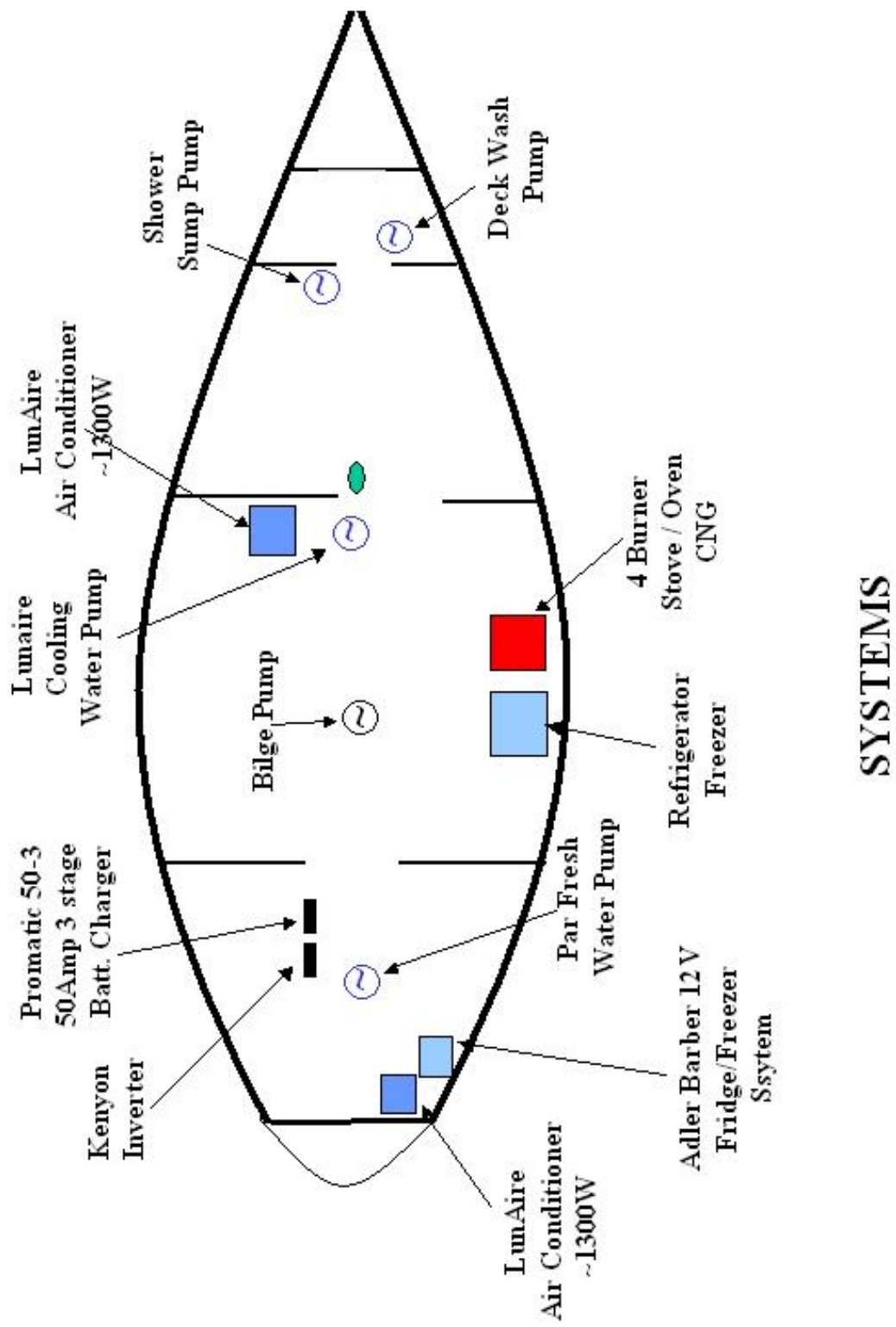
#### STOVE/OVEN:

Princess four burner CNG stove and oven, stove top was lit, gauge at tank reported system pressure, serviceable.

CNG LOCATION/MOUNTING: Starboard aft cockpit locker, vents from top, secure, with pressure valve and shut off. Flexible hose to stove could be seen under stove, could not be seen as it ran through the conduit.

# ANTIGUA MARINE

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## SYSTEMS

# ANTIGUA MARINE

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### III. SYSTEMS

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#### ELECTRICAL SYSTEMS

##### MAIN BREAKER PANEL:

Located port side aft at navigation station, properly labeled with analog displays for voltage. AC source selector switch for shore power/ generator is located at the main panel and is properly labeled. Vigil AC input control for Inverter/Shore Power/Genset selection is also located at the main panel and has proper guard bars and labeling.



##### INVERTOR/CHARGER:

Kenyon Inverter/Shore Power manager, model and capacity could not be determined. Inverter operated and energized outlet for television.  
Promatic 50-3 three stage 50Amp Battery Charger. Voltages of 14.5V measured at starting batteries and meters indicating charging activity.

**ANTIGUA MARINE**  
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## **III. SYSTEMS**

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### **ELECTRICAL**

**SHORE POWER:**

One 50' 30 amp 120V vinyl cord, serviceable. Two 30 amp 120V connectors mounted on port transom. Inboard connector powers Air Conditioning and Charging systems. Outboard connector powers outlets and other 120V systems.

**OUTLETS: \***

Various 120 volt outlets, none are GFCI.

**BATTERIES: \***

One Group 27 engine starting battery aft of engine accessed from port aft berth. Age unknown. One Group 24 Genset starting battery aft of engine accessed from port aft berth. Label showed purchased in Sept 2005. Terminals are secured with wing nuts. Recommend replacing with ABYC approved connectors. Two (2) 4D lead acid batteries for the house bank under aft berth. Capacity and age could not be determined. All batteries properly mounted, secured and vented.

**BATTERY SWITCHES:**

Guest Battery switches for isolating the engine/generator or house banks are located in the port aft stateroom. Windlass enable switch is also located in the port aft stateroom.

**ROUTING:**

Wire properly bundled and secured throughout vessel.

**LIGHTENING PROTECTION SYSTEM: \***

The vessel does not have a Lightning Protection system.



# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### PROPULSION

##### ENGINE LOCATION/VENTILATION:

Engine located under companionway steps in compartment with sound proofing and secured by adjustable motor mounts through bolted to FRP stringers. Isolated area under engine collects any discharge from engine with no limber holes to bilge. Clean.



##### MAKE/MODEL/HP/SERIAL NUMBER/HOURS:

Yanmar Model 4JHBE 44HP Serial# 03879 1421.3 Hours per hour meter

##### ENGINE COOLANT/EXHAUST: \* \*

Closed reservoir type cooling with raw water cooled exhaust. Observed raw water inlet seacock and sea strainer, reinforced hoses single clamped and bulging. Replace and double clamp hoses from intake sea cock to strainer and from strainer to engine. The exhaust elbow had no visible signs of corrosion and the reinforced hoses were properly double clamped.

##### TRANSMISSION AND SHAFT:

Straight stainless steel prop shaft 1&1/4" diameter with drip less shaft seal. Serviceable.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### GENERATOR

Northern Lights 3 cylinder estimated at 4.5 KW (could not access model or power labels). Genset hours per meter: 337.5. Operated Genset and loaded with both air conditioners while underway for approximately 20 minutes.

#### LOCATION/EXHAUST

Inside port cockpit locker, properly secured, reinforced hoses to wet exhaust, double clamped and serviceable.

### ELECTRONICS AND NAVIGATION EQUIPMENT

#### VHF/ANTENNA

ICOM M56 at Navigation powered on and successful radio check on channel 16 to a station five nautical miles away. VHF antenna mounted on top of mast, visually inspected during rig inspection, serviceable.

#### COMPASS \*

Ritchie SP5C binnacle compass. Noted 23 degree (W) difference from digital (autopilot) compass while on Northerly heading and no difference between compasses on a Westerly heading. Recommend checking calibration of digital compass and creating deviation card for binnacle compass.

#### GPS/CHARTPLOTTER/RADAR

Raymarine RL-70C mounted at helm, operated during sea trial. Radar showed returns and plotter showed position consistent with chart.

#### RADAR

Raymarine RL-70 monochrome display at navigation station with 24" Radome.  
Operated during sea trial.

#### SAILING INSTRUMENTS \*

Raymarine at helm station, depth, wind, speed. All operated during sea trial. Note: Speed only available from GPS, no in water transducer available on the vessel. Windex wind direction indicator at masthead. Note: Windex missing port tacking angle square marker.

#### AUTO PILOT

Auto helm 7000, operated during sea trial.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### ENTERTAINMENT

Jensen stereo / CD player, XM satellite capable, located at Navigation station. Powered up and received FM radio station. Four speakers mounted in cabin with two portable cockpit speakers. Flat panel TV located in forward stateroom with Omni antenna on mast. Powered up and showed good reception of a station.

#### STEERING SYSTEM: \*

Edison pedestal with equipment pod and destroyer wheel. Pulleys, cable and chain in pedestal and under cockpit sole, quadrant visible under helm seat, appeared serviceable. Noted some play in wheel, some slack in cable, and bolt holding cable to quadrant backed out some. Recommend monitoring and consider tightening bolt and cable.



Throttle control at helm.



Steering quadrant bolt backing out.

#### THROTTLE CONTROLS: \*

Separate engine throttle lever and transmission control. Linkage could only be seen inside engine compartment. Throttle operated smoothly during sea trial, note: transmission shifter stiff.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### RIGGING AND SAILS

##### MAST AND SPARS

Sloop rigged with Aluminum mast and Leisure Furl in boom furling system, mast appeared in column, boom was replaced in 2006 per receipts on board.

##### STANDING RIGGING

Double spreader rig with slightly swept back spreaders. Continuous rigging with 1x19 wire shrouds: intermediate 5/16", upper 3/8", lowers 3/8", backstay 3/8"

The standing rigging was inspected at deck level and aloft to the masthead. Serviceable.

##### MAST SUPPORT \*

Mast is stepped on floor grid system on top of keel. Mast base looked clean with no sign corrosion. The shrouds are connected to rods inside the cabin and terminate in chain plates bolted to fiberglass stringers. Only the starboard chain plate was accessible and it was serviceable. Note: Partners not in place where mast passes through deck. Recommend placing partner wedges in opening.

##### RUNNING RIGGING \*

The running rigging was inspected at deck level and aloft to the masthead. Furling gear, traveler controls and sheets lead back to the cockpit. There are one main and two jib halyards plus main downhaul for in boom furling. Masthead inspection found jib halyard snap shackle failed and barely holding jib. Replaced with port jib halyard. Recommend mousing screw shackle pins at jib head and replacing shackle on starboard jib halyard. All other running rigging serviceable.

##### WINCHES

Two Primary Lewmar 52ST jib sheet winches on cockpit coaming.

One Lewmar 40ST winch on port cabin top.

One Lewmar 40ST Power winch on starboard cabin top.

All winches serviceable.

##### SAIL INVENTORY \*

Mainsail: Quantum composite full battened in boom furling.

Genoa: 130% (per owners records) Quantum composite with foam luff stripes and single stitched blue UV protection. Overall good condition but stitching on leech UV protection failing. Recommend re-stitching UV protection and requesting sail loft double stitch all UV panels with UV resistant thread.

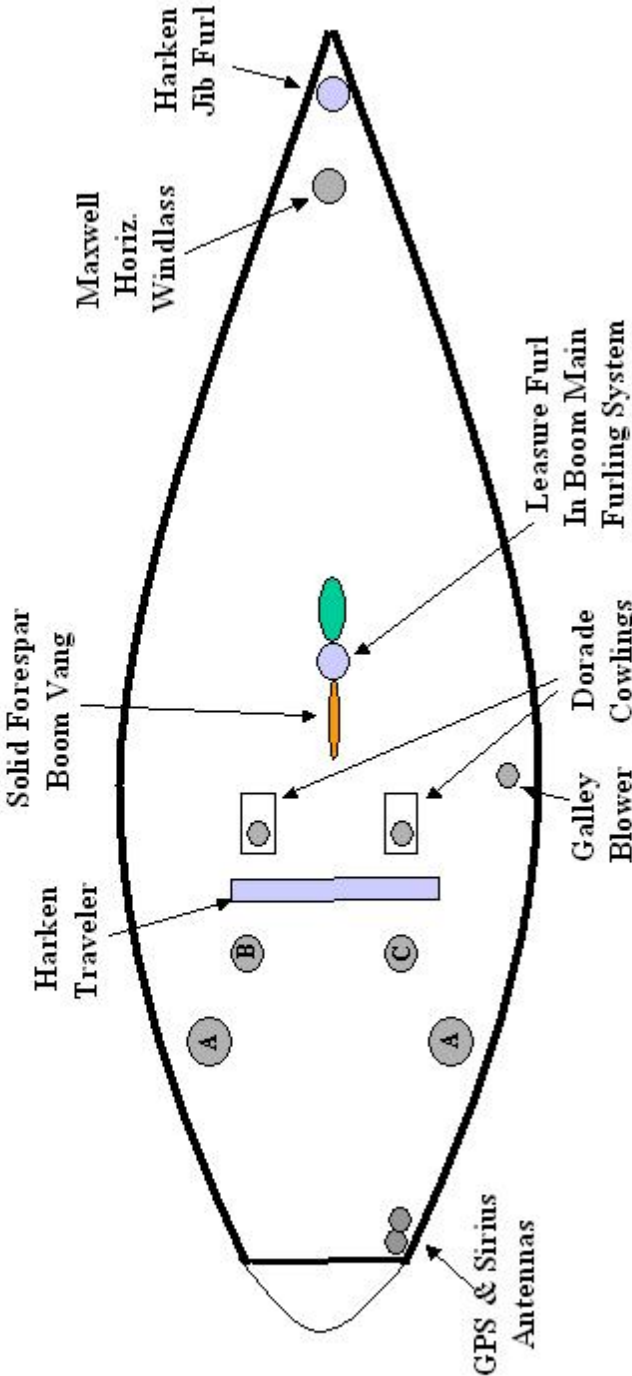
##### SAIL TRACKS \*

Outboard and inboard Aluminum jib tracks thru bolted with metallic fasteners, carts moved easily.

Track on forward end of mast with cart, ring on cart bent and warped. No spinnaker or whisker pole offered with vessel. Recommend replacing cart before adding either pole type to vessel.

# ANTIGUA MARINE

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- A: Lewmar 52ST Winches (2)
- B: Lewmar 40ST Winch
- C: Lewmar 40ST Power Winch

## DECK HARDWARE

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## **III. SYSTEMS**

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### **FUEL SYSTEM**

**FUEL TANKS CAPACITY/LOCATION/INSTALLATION:**

Total Capacity: 39 gallons as read from label on top of tank.

One (1) aluminum diesel fuel tank under starboard aft berth, properly secured, vented and grounded.

**FUEL LINES PIPING AND HOSES: \***

Fuel lines run from tank to Racor fuel water separator and from Racor to lift pump are not \* USCG A1 hose and showed wear spot near lift pump. Fuel hose connection to deck fill was seen from inside locker, serviceable.

### **FRESH WATER SYSTEM**

**WATER TANKS CAPACITY/LOCATION/INSTALLATION:**

Estimated total 120 gallons, three (3) plastic molded tanks; under forward berth, under portside main saloon settee, under portside aft berth. Good condition, all properly secured, with snap fitting hoses through out system, pressure pump aft of engine on centerline, serviceable.

**HOT WATER TANK:**

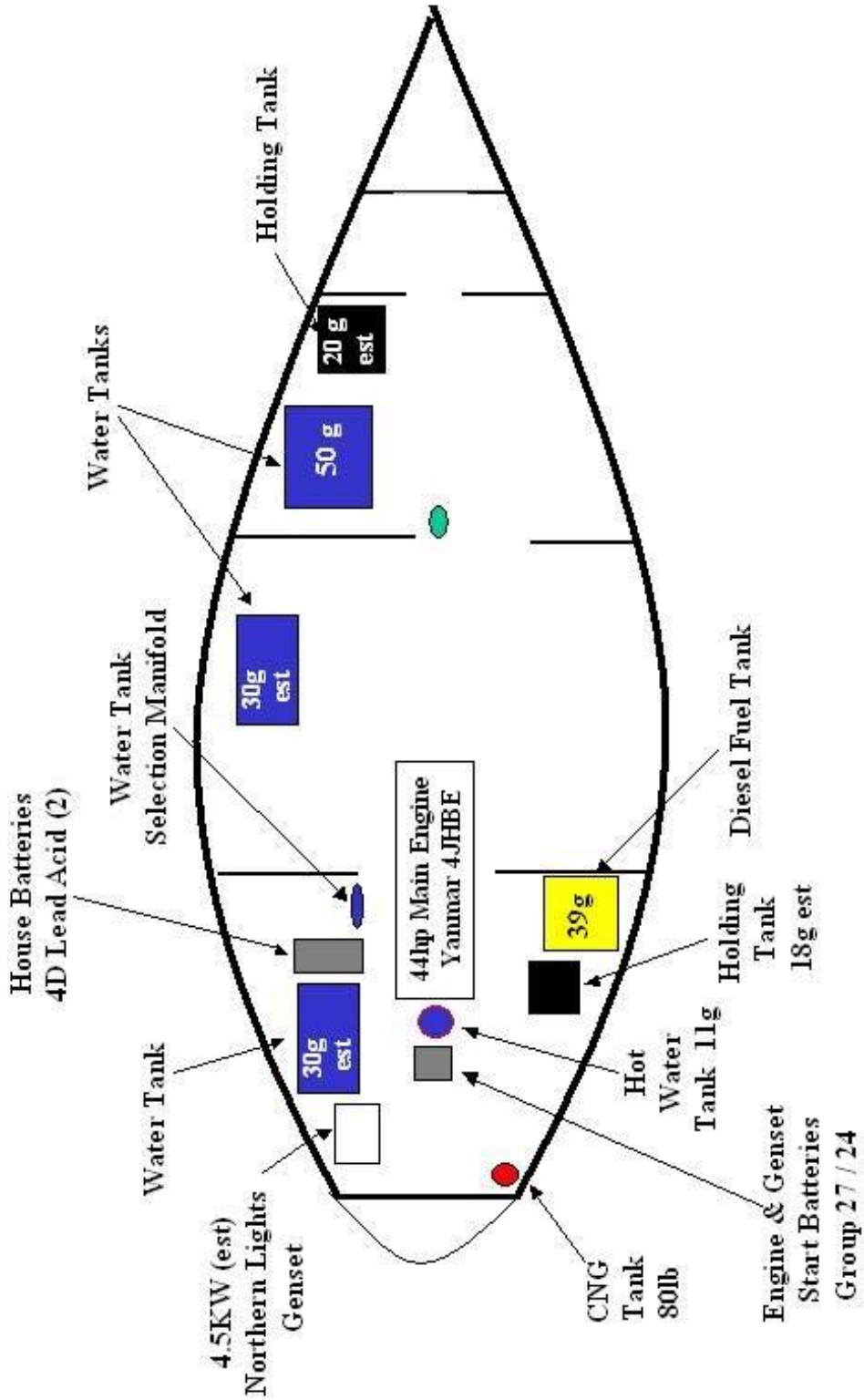
Total capacity 11 gallons per Catalina, located on centerline aft of engine, good condition.

**FRESH WATER COCKPIT SHOWER:**

Hot and cold fresh water shower mounted under teak stern step, operates.

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## TANKAGE, BATTERIES & MOTORS

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## **III. SYSTEMS**

---

### **THRU-HULLS**

Material Marlon seacock valves on all fittings below waterline.

Location and operation;

\*Depth sounder transducer and Knot meter impeller, not visible under screwed down cabin sole.

Forward head inlet and outlet sea cocks, under forward stateroom berth, operate.

Forward head sump outlet, and macerator outlet under forward stateroom berth, operate.

Forward head sink outlet, under starboard cabinet in forward stateroom, operates.

Air Conditioning inlet, under main saloon sole aft of mast, operates.

Galley sink drain under starboard cabinet aft of sink, operates.

Aft head inlet and sink outlet under sink in aft head, operate.

Engine inlet under port aft berth, operates.

\*Air Conditioning inlet for aft unit and Generator inlet seacock under aft berth, they could not be accessed without removing screwed down access board.

\*Remove access panel and inspect.

### **BONDING**

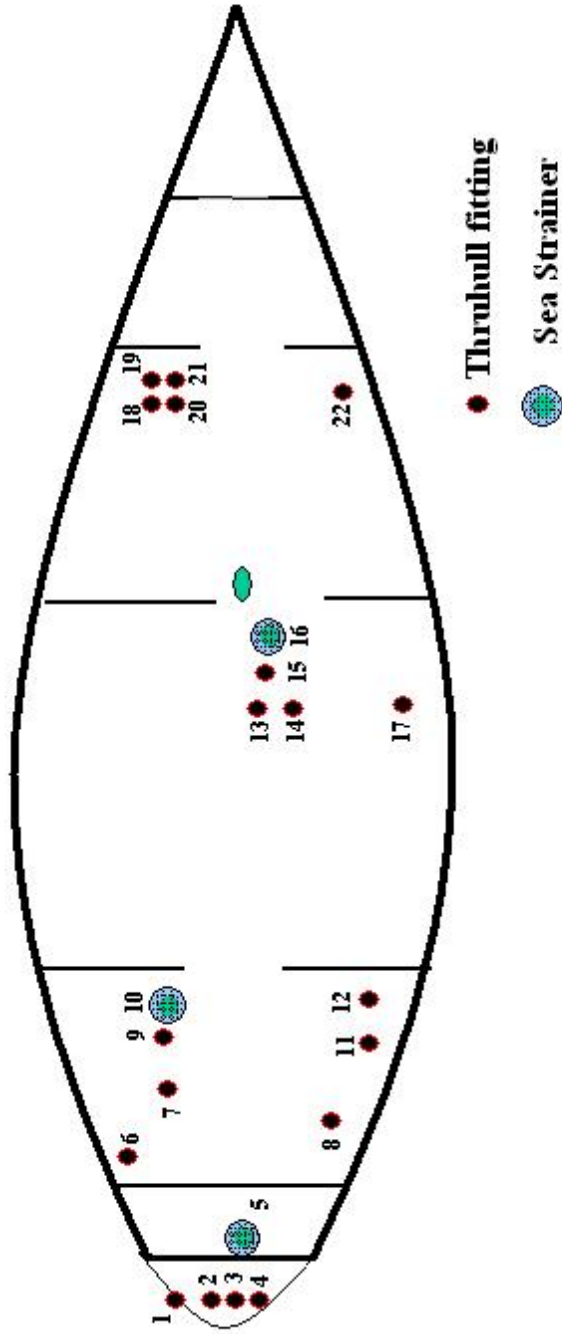
All thru hulls and sea cocks are Marlon, the engine block, fuel tank and fuel fill fittings had green bonding wire attached otherwise no bonding system was present.



# ANTIGUA MARINE

SURVEY & CONSULTING, INC

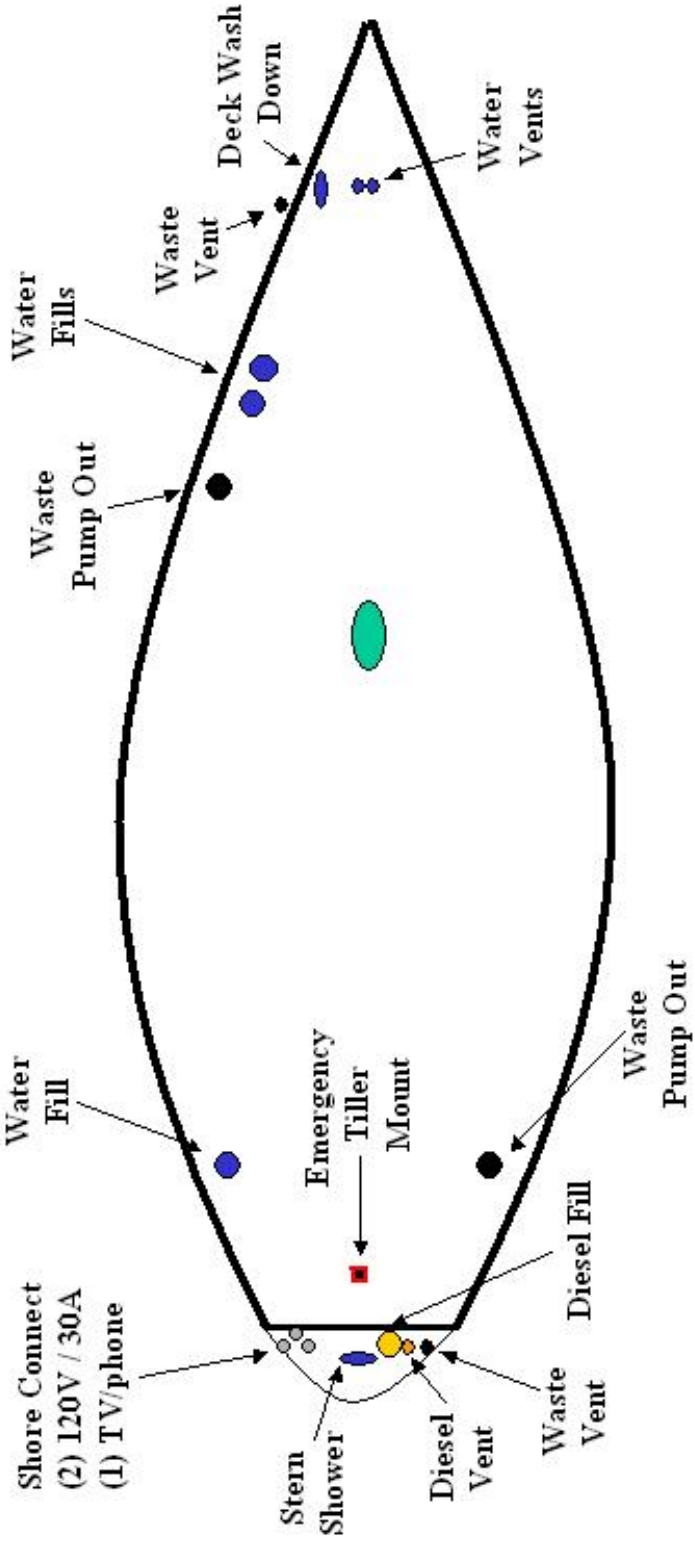
- |                               |                            |                               |
|-------------------------------|----------------------------|-------------------------------|
| 1) Engine Exhaust             | 9) Main Engine Inlet       | 17) Galley Sink Drain         |
| 2) Genset Exhaust             | 10) Main Engine Strainer   | 18) Fwd Head Macerator Outlet |
| 3) Manual Bilge Pump Outlet   | 11) Aft Head Sink Drain    | 19) Head Outlet               |
| 4) Electric Bilge Pump Outlet | 12) Aft Head Inlet         | 20) Shower Sump Outlet        |
| 5) Aft AirCon. Strainer       | 13) Speed Transducer Blank | 21) Head Inlet                |
| 6) Genset Inlet               | 14) Depth Transducer       | 22) Fwd Head Sink Drain       |
| 7) Aft AirCon. Inlet          | 15) Main AirCon. Inlet     |                               |
| 8) Aft Head Macerator Outlet  | 16) Main AirCon. Strainer  |                               |



## THRUHULLS & STRAINERS

# ANTIGUA MARINE

SURVEY & CONSULTING, INC



## DECK FITTINGS

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### OUT OF WATER INSPECTION

##### BELOW WATERLINE MACHINERY

###### PROPELLER:

One (1) 18" X 13", three bladed feathering Auto Prop propeller, serviceable.

Stainless steel prop shaft 1 1/4" diameter, good condition.

Shaft bearing: serviceable.

###### RUDDER:

###### MOUNTING/MATERIAL:

Spade hung FRP rudder, soundings unremarkable, off white bottom paint, fair condition. Rudder post and collar could not be measured due to access: serviceable.

###### TRANSDUCERS/SCOOPS/THRU-HULLS:

Main engine, Genset, head, sink and sump thru-hulls all flush mounted; both AC inlet thru-hulls have external coarse strainers: serviceable. Depth and knot meter impeller blank: serviceable.

###### ZINCS:

Two (2) zincs, on shaft and just aft of prop on the end, serviceable.

###### CONDITION OF HULL (WETTED SURFACE):

###### BOTTOM PAINT:

Black bottom paint with red barrier coat underneath. Hull was pressure washed at time of haul out, loose paint chipped off. Hull bottom reported by owner last painted February 2006 at Oak Harbor Marine, Fair condition.

Recommend stripping off bottom paint and refinish with appropriate coating for salt water marine environment.

###### BLISTERS: \*

None sighted.\* Percussive soundings approximately 40 inches outboard of the leading edge of the keel on both port and starboard sides of the hulls wetted surface, reveal possible internal void approximately 8" in diameter on the starboard side and a 4" diameter on the port side. Monitor, further investigate.

**ANTIGUA MARINE**  
**SURVEY & CONSULTING, INC**

## **III. SYSTEMS**

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### **SAFETY EQUIPMENT**

Personal Floatation Devices (PFD's) 4 Type I located in starboard stateroom.

One Throwable Type IV Device, located on starboard stern rail.

Life sling mounted port stern rail. Good Condition

Sound signals: hand held air horn.

Visual Distress Signals: Orion Pre-packaged flare kits with day and night flares and twelve gauge gun, January 2013.

Navigational Lighting: Bow lights and stern lights operated, anchor light operated.

\*Starboard spreader light did not operate, portside spreader and foredeck light operate.

Written waste disposal plan, not found

Navigation Rules:\* Not found

First Aid Kit: \* Not found

### **DEWATERING SYSTEMS**

#### **BILGE PUMPS:**

One electric bilge pump, one manual bilge pump: both operate.

High water alarm wired to float switch.

#### **EMERGENCY STEERING:**

Emergency tiller under port aft berth. Control head of autopilot located at helm.

#### **FIRE EXTINGUISHING SYSTEMS: \***

Automatic Sea Fire system installed in engine compartment, one (1) forward stateroom next to mast hung on bulkhead. No inspection tags.

\* ABYC recommends Four (4) one at helm, one in the galley, one in crew quarters and one next to engine compartment with annual inspection on dated tags.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### III. SYSTEMS

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#### SEA TRIAL REPORT

After the haul out the vessel was re-floated, a sea trial was performed from 15:00 to 16:30 in the water from \_\_\_\_\_ Marine to the Patapsco River between Riviera Beach and Smallwood Park. Heavy cloud cover with intermittent rain and lightening, winds north east at 10 to 15 knots, a light chop on the water. On board \_\_\_\_\_ and Jeff Grossman and Jean Levine. The main sail was hoisted to the top of the mast with out full tension on the luff per the current owner, \_\_\_\_\_. The Quantum sail is made of a composite material with full battens and reinforced clew, the lower third of the sail is creased apparently from the tension of the furling process, with black mold speckles along the foot of the sail. The sail was then reefed to the third batten, the boom furling system operated smoothly under these conditions. The jib was then unfurled. It is also a Quantum composite sail, four foam luff stripes and single stitched navy blue Sunbrella cover on the leech. The stitching was loose along the leech, and the Sunbrella cover. The leading edge of the tack was worn with loose stitching as well as the clew. The head stay tension was observed, serviceable, the starboard and port shroud tension was firm. The vessel was sailed close hauled on port tack, then on starboard without full tension on the jib per the current owner. One tack was executed all the running rigging, winches and furling gear operated smoothly.

The sails were then furled and the vessel was motored at 2200 RPM, heavy vibration noted. Max RPM for the engine per Yanmar is 3600 RPM, it appears that the engine could not develop its full motoring speed with the current pitch on the prop. \* Recommend engine mechanic further investigate. The vessel was brought to a quick stop from 7.5 knots to 0 in her own length.

At 4 knots, circled to starboard in her own length, then to port. The vessel was operated in reverse to back into the slings at the travel lift and in the turning basin. The steering was loose, further inspection of the steering quadrant revealed a loose bolt, recommend adjustment.

The throttle lever operated smoothly but the transmission lever was stiff. The vessel was put on a course of 240 and held course with the auto pilot, a 5 degree course change was made by tapping the one degree change button, then the 10 degree button both + and - keys operated and the vessel turned to correct new heading. The binnacle compass and the auto helm compass differed by 23 degrees on a Northerly heading and showed no difference on a westerly heading, recommend further investigate and swing compass or create a deviation card.

**ANTIGUA MARINE**  
**SURVEY & CONSULTING, INC**

## **IV. FINDINGS AND RECOMMENDATIONS**

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Deficiencies noted under A 'SAFETY' should be addressed as soon as possible. These findings represent an endangerment to personnel and/or the vessel's safe and proper operating condition. Findings may also be in violation of U.S.C.G. regulations.

### **A. SAFETY DEFICIENCIES**

1. Automatic Sea Fire system installed in engine compartment, one (1) forward stateroom next to mast hung on bulkhead. No inspection tags. (page 28)

\* ABYC recommends Four (4) one at helm, one in the galley, one in crew quarters and one next to engine compartment with annual inspection on dated tags.

Deficiencies noted under B "OTHER DEFICIENCIES" should be corrected in the near future so as to maintain standards and to help the vessel to retain its value

### **B. OTHER DEFICIENCIES NEEDING ATTENTION**

1. Engine could not be operated at manufactures recommended RPM on sea trial, engine mechanic should further investigate.

2. Batteries installed with wing nuts. Replace with locking nuts. (page 15)

3. Engine raw water intake hose bulging from sea cock to strainer and from strainer to engine. Replace with new; in addition recommend replacing strainer with more visible basket. (page 16)

4. Binnacle compass read 23 degree variance on northerly heading and none on westerly heading, recommend calibration. (page 17)

5. Steering cable bolt backing out, loose play in wheel. Adjust bolt and tension. (page 18)

6. Jib halyard snap shackle failed, replace with locking shackle. ( page 19)

7. Fuel hose from tank to Racor is not USCG A1, and is worn near lift pump, replace. (page 21)

8. Jib single stitching on Sunbrella cover failed, reinforce tack and clew, have sail serviced by loft.

9. Percussive soundings approximately 40 inches outboard of the leading edge of the keel on both port and starboard sides of the hulls wetted surface, reveal possible internal void approximately 8" in diameter on the starboard side and a 4" diameter on the port side. Monitor, further investigate.

10. Teak eye brow trim split at scarf joint.. repair and refinish. (page 10)

11. Small cracks in Gel coat around perimeter of cap rail and near stanchion bases on the out board sides, monitor.

**ANTIGUA MARINE**  
**SURVEY & CONSULTING, INC**

## **IV. FINDINGS AND RECOMMENDATIONS**

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### **C. SURVEYORS NOTES AND OBSERVATIONS**

1. Transom has small Gel coat repair on port side scoop. (page 10)
2. Hatches port main saloon leaks, starboard main saloon hatch outboard dog broken off. (page 11)
3. Mouse shackle from anchor to chain, rotate arrow on power pedal for windlass. (page 11)
4. Water spots on teak outboard of port settee in main saloon, small tear in port aft mattress cover, port window covering over Nav station stained. (page 12)
5. Noted leak in forward stateroom at mast, most forward bolt. Rebed.
6. Main saloon air conditioner does not adequately cool. (page 12)
7. Outlets are not GFCI, ABYC recommends use in head, galley, and weather decks. (page 15)
8. Windex at mast head missing port tacking angle square. (page 17)
9. Throttle controls operated but transmission lever stiff. (page 18)
10. Recommend placing partner wedges where mast passes through deck opening. (page 20)
11. Recommend mousing screw shackle pins at jib head (page 20)
12. Replace snap shackle on starboard jib halyard. (page 20)
13. Cart on mast pole track broken. (page 20)
14. Knot meter impellor not installed. (page 24)
15. Remove screws on panels covering thru-hull for ease of access. (page 24)
16. USCG regulations require vessels over 40 feet to have on board a copy of the Navigation Rules and a written waste deposal plan.
17. Recommend annual inspection of all safety gear, check PFD's for wear, reflective tape and whistles, add name of vessel on each. Review contents of first aid kit. Replace batteries in flash lights, test vessel navigation lights.
18. No carbon monoxide detector sighted.

# ANTIGUA MARINE

## SURVEY & CONSULTING, INC

### V. SUMMARY AND VALUATION

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It is the surveyor's experience that develops an opinion of the OVERALL VESSEL RATING OF CONDITION: After the survey has been completed and the findings have been organized in a logical manner.

The grading of condition, developed by BUC RESEARCH, and accepted in the marine industry, for a vessel at the time of survey, determines the adjustment to the range of base values in the BUC VALUE PRO PRICE GUIDE, and through comparative analysis of similar vessels sold on Yacht World as a consideration to determine the Market Value.

The following is the accepted marine grading system of condition:

"EXCELLENT (BRISTOL) CONDITION" is a vessel that is maintained in mint or Bristol fashion - usually better than factory new - loaded with extras - a rarity.

"ABOVE AVERAGE CONDITION" has had above average care and is equipped with extra electrical and electronic gear.

"AVERAGE CONDITION" ready for sale requiring no additional work and normally equipped for her size.

"FAIR CONDITION" requires usual maintenance to prepare for sale.

"POOR CONDITION" substantial yard work required and devoid of extras.

"RESTORABLE CONDITION" enough of hull and engine exists to restore the boat to usable condition.

As a result of my investigation, as shown in the SYSTEMS AND FINDINGS AND RECOMMENDATIONS section of this REPORT OF SURVEY, and by virtue of my experience, my opinion is the vessel " \_\_\_\_\_ " is \*\*\* AVERAGE .



**ANTIGUA MARINE**  
**SURVEY & CONSULTING, INC**

## **V. SUMMARY AND VALUATION**

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1. The "FAIR MARKET VALUE" is the most probable price in terms of money which a vessel should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition; is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- a. Buyer and seller are typically motivated.
- b. Both parties are well informed or well advised, and each, acting in what they consider their own best interest.
- c. A reasonable time is allowed for exposure in the open market
- d. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and

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.

Therefore, after consideration of the reliability of the data, the extent of the necessary adjustments and condition of the vessel, it is your surveyor's opinion that the

**"FAIR MARKET VALUE"** of the yacht known as "" \_\_\_\_\_ "" is **\$110,000**.

2. The "ESTIMATED REPLACEMENT COST" indicates the retail cost of a new vessel of the same make/model with similar equipment offered by the same manufacturer.

**"ESTIMATED REPLACEMENT COST"** of the subject vessel is **\$300,000**.

**ANTIGUA MARINE**  
**SURVEY & CONSULTING, INC**

**V. SUMMARY AND VALUATION**

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In accordance with the request for a marine survey of the vessel "Imagine", for the purpose of evaluating its present condition and estimating its Fair Market Value and Replacement Cost, I herewith submit my conclusion based on the preceding report. The subject vessel was personally inspected by the undersigned on August 28, 2009. The vessel has been cosmetically well maintained. Subject to correction of deficiencies listed in section IV A. (Safety), the vessel is considered to be suitable for its intended use. Other deficiencies list should be attended to in a timely fashion.

**SURVEYORS CERTIFICATION:**

I certify that, to the best of my knowledge and belief:  
The statements of fact contained in this report are true and correct.

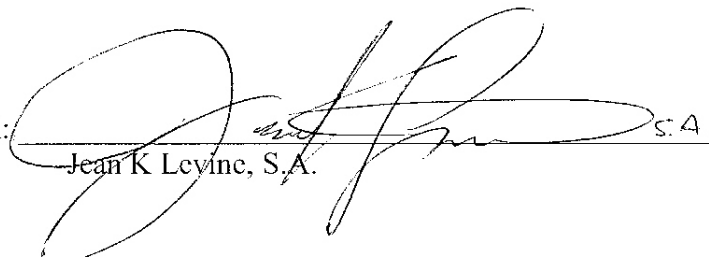
The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions.

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.

ATTENDING SURVEYOR:

  
Jean K Levine, S.A.