# Frank Abbey Marine Surveyor & Consultant Inc.

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Marine Survey Prepared for: xxxxxxx xxxxxxx

Vessel: 2002 Hunter 386

Date: *xxxxxx xx*, 201x

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# **Frank Abbey Marine Surveyor & Consultant Inc.** 516-236-1911 : PO Box 729; Massapequa Park, N. Y. 11762 : fta102@yahoo.com

# **PREFACE TO SURVEY**

**A)** Survey is conducted in accordance with the Standards & Recommendations established, by the American Boat & Yacht Council Inc., (ABYC) and the Code of Federal Regulations for Recreational Boats, (CFR).

**B)** The Survey is a visual inspection, utilizing non-destructive inspection methodologies, i.e., mallet sounding, moisture meter and pyrometer. No determination /opinion of the vessel's characteristics or inherent structural integrity will be made or expressed. All observations are strictly in the nature of opinion. The facts as discovered and presented in this report are in no way deemed a guarantee & / or warranty, for the vessel, either expressed on implied.

**C)** The Scope of this Survey provides only for inspection to those areas, of the hull, topsides and decks that are normally viewable /accessible, without removing structural components i.e., bulkheads, partitions, liners, joinery, frp. pan etc. The Surveyor does not utilize devices (other than a moisture meter & infrared heat gauge) that substitute for the direct viewing of any area. The report will not speculate regarding the condition of areas not normally viewable or accessible. The Surveyor will not be responsible for: The lack of discovery of illegal / unsafe conditions, alterations or other conditions that by design / purpose are, in a manner so as to conceal their existence for normal viewing, (i.e. heavy buildup of bottom paint),including, but not limited to cosmetic attempts to conceal blemishes / decay / dry rot /damage / imperfections etc..

**D)** The scope of the machinery / engine sections of this survey are limited to comments regarding the operating characteristics exhibited, at time of the survey, for the machinery (if any) that is commissioned & operated, at time of survey. Readings from the vessel's gauges if any) will be recorded in the survey: Those readings are not verification of the accuracy of the gauges or sending units. Deviations, if apparent from normal performance standards, will be noted. No reference of information should be construed to indicate evaluation of the internal condition of any machinery / engines.

**E)** The Surveyor will not disassemble any parts / items of any engine or other machinery. The Survey will not speculate regarding the condition of internal parts / components of engines or other machinery.

**F)** The scope of the Survey section for Navigation & Electronic Equipment is limited to those items installed, at the time of survey; in that they powered on and the screen displays were optional. No affirmation regarding the equipment's accuracy / performance is expressed or implied.

**G)** The individual / entity requesting this survey is responsible for all fees and arrangements necessary: for the vessel to be prepared, hauled out (on land), commissioned and operated at the test-run.

**H)** The vessel's estimated "current fair market value" (i.e. the monetary or its equivalent, that a willing seller will accept, with neither party being under any undue pressure to act in the matter, for the vessel, from a willing buyer), is based on one or more of the following: "BUC Research", various other publications or electronic sites listing boats for sale.

I) Third parties who wish to obtain a copy of the survey report should contact the person for whom the survey was performed. F Abbey Marine Surveyor Inc. will issue copies only on instruction from & with the permission of the original client. Fees for additional copies and transmittal expenses will be charged to the original client.

END OF TEXT

# Frank Abbey Marine Surveyor & Consultant Inc.Frank T. Abbey Certified Marine Surveyor ACMS# 0181Member: ACMS: Association of Certified Marine Surveyors & A.B.Y.C. American Boat & Yacht Council516-236-1911PO Box 729; Massapequa Park, N. Y. 11762-0729fta102@yahoo.com

VESSEL: 2002 Hunter 386

Date: xxxxxx xx, 201x

Requested By: xxxxx xxxxxx

Address: xxx xxxxxxx Av. xxxxxxN. Y. xxxxx

<u>Survey; Date / Situation / Location:</u> x-xx-1x / vessel blocked on shore; mast stepped, all standing & - running rigging in place; head & mainsails set on their furling systems; client attending :: x-xx-1x / vessel afloat (at the dock) engine, gen-set & systems commissioned; client attending / xxxxxx N.Y.

Reason for Survey (as requested by client): Condition & value; for pre-purchase

Description:Hull ID#:HUN38xxxx02 (photograph redacted)Year & Builder:2002 :: Hunter Marine Co.Model:Type of Vessel:sloop rig sail w/diesel aux.Hull Color:Documentation #:xxxxxxx (\*number not sighted on hull; reported as 'expired" on USCG data base).

Value: \$x0,000 vessel's reported purchase price (a discount to BUC Research value range) see page 10.

Dimensions (from published specifications): L.O.A.: 38'- 3" Hull Length: 37'- 1" L.W.L: 32'- 6" Beam: 12'- 7" Draft (shoal): 5'- 00" Weight: 16,000 lbs. Ballast (lead): 5,900 lbs. Mast Height: 59'- 6"

**Structural:** <u>Type of construction</u>: Molded fiber reinforced plastic (frp. w/ Kevlar laminate); frp. grid - pan for - stringers / other structural reinforcements; gel coat finish. Glasswork, as sighted, appeared neat and well finished.

Decking: frp. over wood / other core material, with gel coat and non-skid finish.

Hull to Deck Assembly: (as sighted) outward turned flange, secured w/ ss. through-bolts; vinyl rub-rail.

Bulkheads: frp. and teak laminated plywood.

Joinery: teak (solids & veneers) and corrian.

Survey tools which may utilized: "Tramex/Skipper" and "GRP" moisture meters; infra-red pyrometer. (Legend: \* = Item needs attention, see page 11 // Na. = Not Applicable // Ns. = Not Sighted)

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**Hull & Bottom:** construction (as reported by Hunter) solid frp. bottom, Kevlar laminate stem - to -keel sump and cored hullsides; molded frp. inner / liner grid pan (appears to reinforce the hull and support keel and rig loads); free-standing frp rudder; frp. stub with shoal fin type keel w/ bulb & winglets, the external ballast (appeared as lead) is covered with fairing compound., supported / secured via 6- ss. keel bolts (as sighted in the keel sump). Bottom with smooth coatings (over prior applications) of black anti-fouling paint. Gel coat finish (above the waterline) appeared sound and very-good (no damage evident) condition.

The hull & bottom were sighted & sounded (via percussion taps, at random locations) and appeared fair, true and sound; no damage (storm damage / repairs ) or readily detectable defects (evidence of laminate separation / voids / blisters) evident; keel & rudder showed no damage / evidence of hard grounding. Hull & structures (as sighted accessed): Hullside, no hard-spots or deformation evident; frp. grid pan appeared sound (no stress cracks evident; keel (external ballast bulb - wing) to hull joint appeared sound; keel - bottom & rudder no damage or hard grounding events evident; hullsides (above the line of antifouling paint) no elevated moisture readings evident. Moisture readings, on hullsides (above the waterline) were in the "dry" range.

[Note: The frp. grid / pan and secured in place cabin structures (i.e. joinery - cabinets - sole) prevented sighting / examination of the internal hull structure, the chain plate's below deck condition, their attachment to hull structure and those structures.]

**Decks:** Gel coat finish appeared in very good condition; no damage or stress cracks (deck surfaces or-@ / around hardware) evident. Decks / cabin top @ mast step (as sighted / accessed & percussion sounded) appeared sound & tight; no delamination / elevated moisture readings or (at the mast step) compression / deformation / cracks evident.

[Moisture readings via Tramex Skipper Meter; set on Range# 1, scale reads 0 - 100, 0 - 25 is the "dry-range". Metered surfaces appeared free of surface condensation & salt residue.]

**Deck Hardware:** stainless steel (ss.) bow, stern & grab rails, transom ladder, life line bases & tube stanchions w/ dual ss. wire life-lines (gates port & stbd. and @ stern rail, dual-anchor roller, 6- cleats, radar-arch (w/ mainsail control gear), hatch hardware; frp. sea hood @ companionway hatch -slide; frp. console w/ steering & engine controls and navigation electronics . Hardware, as accessed appeared sound and tight.

(Sail hardware on page 3A)

Accommodations & Ventilation and Cockpit: Companionway entry on center (engine access via hinged companionway steps): Salon; Head w/ shower aft to port; Galley ("U" shape) aft stbd.; Navigation station - w/ AC & DC electric system main panels aft port; Dinette ("U" shape) stbd.; Settee stbd.; V-Berth cabin fwd.; Master Cabin (aft. of salon entry aft @ the galley) w/ double berth. Joinery (teak, corrian and teak & holly sole), upholstery (cloth) and equipment appeared clean in near new condition. Bins, cabinets and lockers (as accessed) appeared clean & dry.

*Lewmar* hatches (6) & portlights (9) and 2- cowl vents. Cabin space dry at time of survey; no stains / - active leaks evident. \*Note# 3.

Cockpit; bimini / dodger w/ ss. frames (cloth not installed / deployed at survey.)

#### -<u>SAIL Equipment-</u>

Mast: 1- aluminum (clear anodized finish) extrusion by Selden Spars; deck-stepped (coach roof top).

<u>Remarks:</u> *B* & *R* fractional sloop rig; 2-sets of swept-back aluminum spreaders; deck-step supported by ss. compression post (cabin frp. headliner to frp. grid / pan); frp. structures @ deck step & compression post appeared sound; no compression / distortion / stress cracks evident.

**Boom:** 1- aluminum (clear anodized finish) extrusion by Selden Spars.

<u>Remarks:</u> fixed goose-neck (cast aluminum); block on car (runs in slot) for mainsail furling system; ss. eyestraps (in under-side slot) attachments main sheet blocks & boom vang.

**Standing Rigging:** ss. wire Turnbuckles: ss. <u>Chain Plates:</u> ss. plate (cap shrouds; bolted to the hullsides) and ss. fitting (lower shroud (bolted on the deck to ss. tie-rods (in the cabiin) appeared as bolted to the frp. grid / pan; no access to view termination at hull grid.); welded ss. plates stemhead (forestay; bolted to deck).

<u>Remarks:</u> *B&R rig* (no back-stay); forestay (inside roller furler foil; not sighted); cap w/ single lower & 3-intermediate (mast to spreaders) shrouds. Chain plates as (sighted / accessed) appeared sound and tight to the hull; no stress cracks / deformation evident at chain plates and stemhead.

Running Rigging: No. of Halyards: 2 (mainsail & headsail)- all rope

Headsail Roller Furler: Pro-Furl (single line drum). Mainsail Furler: Selden in-mast.

<u>Remarks:</u> Headsail drum-line lead aft (via blocks @ stbd. stanchion bases) to a cleat at the cockpit. Mainsail furling control line lead to on mast ratchet-winch and to rope clutch (port cabin top) via turning blocks. \*Note# 14 & 15.

Winches:	No. of	f :: Mfg. :.	: Size ::	S-T	(self tailing) :: Location /	<i>Comments</i>
	4 -	Lewmar	40	yes	cabin top port & stbd.	/ 2- speed halyards - control lines
	1-	Lewmar	Nl.	ves	on the mast	for mainsail furler line.
	1	Lewina	111.	yes	on the mast	for manibali futier fille.

<u>Remarks:</u> appeared operational. (Service history unknown; suggest clean / service / lube.)

Sails: roller-furling headsail; roller-furling mainsail.

**Sail Control Gear:** 2- four gang rope clutches (cabin top port & stbd; appeared to serve main & headsail sheets, halyards, mainsail furler line, boom vang, other sail controls) appeared satisfactory; *Harken* mainsail line-control traveler system; *Selden Rod-kicker* boom-vang w/ external *Lewmar* blocks; *Schaefer* - T tracks w/ ball bearing block on car (headsail sheet leads); *Schaefer & Harken* (ball bearing) and *Lewmar* - blocks for sail control lines (halyards and all control lines are lead aft to the cockpit (via blocks)too the rope - clutches and winches.

<u>Underwater Gear:</u> Prop Shaft: ss.; 1 dia. (new) <u>Struts:</u> bronze; 1- P type. <u>Shaft Bearing:</u> cutlass (new) <u>Propeller:</u> bronze; 2- blade (reconditioned). <u>Thruhulls:</u> bronze (below waterline) & nylon. <u>Seacocks:</u> bronze ballvalves. <u>Rudder:</u> molded frp. (free-standing balanced blade); appeared sound, no shaft play evident. Evidence of Corrosion: none evident, at time of survey.

<u>Remarks:</u> (Note: materials, ss., bronze etc. are described as they appeared, no testing as to their content/quality.). 9-21-15 survey day; prop shaft & cutlass bearing new and propeller reconditioned; to correct deficiencies noted at the 8-20-15 survey day. Seacocks (\*except as \*Note# 4)appeared operational. Through-hulls & transducers appeared intact. Gear, as accessed, appeared sound and tight to the hull

Engine: inboard diesel Mfg.: Yanmar Model: 3JH3E (3 cyl.) Serial #s: A02322

Power: 35.5hp (continuous) @ 3,650 rpm & 38.8hp (maximum) @ 3,800 rpm Hours: 0187.4 (meter)

Engine Bearers: frp. grid - pan. Engine Mounts: cushion type steel pads.

Stuffing Box: drip type; bronze (re-packed with installation of new prop shaft); appeared satisfactory.

Transmission: Yanmar; lube oil, no unusual colorations evident; appeared to shift smooth & easy.

Engine Control: cable; single lever @ steering pedestal; appeared operational. \*Note# 10.

<u>Type of Cooling:</u> fresh water; raw water intake via bronze ballvalve, Lexan strainer & hd. hose; under salon sole hatch (fwd. at companionway steps).

<u>Remarks</u>: Appeared neatly rigged; clean external surfaces; no salt-soot-rust stains / residue evident; lube - oil, no unusual colorations evident; fresh water / anti freeze, no unusual colorations evident; tachometer, warning lights & alarms @ cockpit panel. 9-21-15; engine (cold or hot) started quick / easy (no blue smoke evident); as run at idle & above idle speed (apx. 30 minutes vessel at the dock) no fluid leaks and no warning lights on / alarms sounded. (*Note: When vessel is next run in gear away from the dock monitor the shaft stuffing box for proper sea water drip (shaft turning & at rest) and adjust as needed. After apx. 5 hours of run time, check engine alignment, adjust as needed.)* 

Exhaust System: cast iron manifold & riser and type SAE J2006 hose.

<u>Muffler:</u> frp., in-line type; under aft cabin berth.

<u>Remarks:</u> Appeared (as sighted / accessed) in satisfactory condition; viewed connections (except as \*Note# 7) were double clamped.

#### Engine Space Ventilation: natural

<u>Air Conditioning:</u> 120v <u>Mfg:</u> Marine Air <u>No. of Units:</u> - 1 - <u>Reverse Cycle:</u> yes

Location: under dinette's fwd. settee...

<u>Raw Water Intake:</u> bronze ballvalve, lexan strainer, hd. hose and 120v raw water pump; under salon sole aft hatch.

<u>Remarks</u>: Appeared (as sighted / accessed and except as noted) satisfactory and operational; produced air chilled @ 47 - 41f, at the vents; ambient temp @ 68 -76f.; operated for apx. 40 minutes.

Gen-Set: Location / Access: in an frp. case; transom's stbd. locker / tight.

Make: Fischer Panda Model: tag not sighted Serial #: tag not sighted.

<u>Fuel:</u> diesel <u>Kw.:</u> tag not sighted <u>Indicated Hours:</u> 0347 (LCD meter @ gen-set control panel)

Raw Water Intake: bronze ballvalve, lexan strainer & hd. hose; under galley sole hatch.

Exhaust system: wet exhaust via frp. aqua-lift type muffler & type J2006 hose w/ double clamps; outlet port @ transom.

<u>Remarks</u>: Engine (as sighted / accessed); showed clean external surfaces, lube oil & f.w. / anti-freeze fluids, no unusual colorations evident. Started quick & easy and appeared to run well under all loads; operated for apx. 1- hour under load powering the vessel's circuits & equipment; volts @ 120 and polarity correct at the outlets. [It would prudent, to frequently inspect the gen-set's raw water intake, fuel and engine exhaust systems.]

**Fuel System:** Location of Tank: 1- in transom port locker.

Fuel: diesel Fill Label: Diesel Tank Material: cast poly-plastic

Capacity: 30 gal. Status: 1/4 full

Secured: blocked (as sighted).

Fill Lines: A2 hose Feed Lines: A1 hose Vent Lines: A1 hose

Filters: 2- Parker R12-T remotes (one each engine & gen-set).

<u>Valves:</u> 2- ball type (appeared operational); @ on tank engine feed fittings.

<u>Remarks:</u> (No aerostatic tests performed.) System, as sighted & accessed, appeared in satisfactory condition, no leaks or vapors detected at this time. Entire tank structure & run of lines not directly sighted, due to their installation in the hull.

Electrical System D.C.: 12v Panel Location: salon @ navigation station.

<u># of Batteries:</u> 2-12v; 1-G27 (fwd. in salon port settee) & 1-4D (aft in salon port settee).

Secured: 1- nylon strap @ each battery. Covered: 4D yes (\*G27 no)

OverCurrent Protection: breakers & fuses.

<u>Battery Switches:</u> 2- *Guest*; 1- (engine starter) off - on function; 1- (house service) off - #1 - both - #2 functions; at the navigation station.

<u>Remarks:</u> "yellow' colored wire insulation denotes DC negative service; salon panel rigged w/ 1- volt & amp meters, 1- main & 22 branch breakers; 1- main & 4- branch breakers @ house service battery switch panel; anchor windlass breaker adjacent to the battery switches. System (as sighted / accessed) appeared neatly rigged, operational and (except as \*Note# 5 and that the 4D battery was not a full charge) in satisfactory condition. (suggest additional straps / blocks to secure the 4D battery.)

#### \*D.C to A.C. Inverter System: Inverter: Xantrex Freedom Marine 20; in salon port settee.

<u>DC power source:</u> 1-4D (aft in salon port settee); *BlueSeas* battery switch & 1- high capacity in-line fuse (covered) aft of the battery.

<u>Remarks</u>: Freedom control panel (LED volt & inverter status indicators) at the navigation station. Inverter powered on and provided 120v power to the ships 120v system. \*Note# 2; system should not be powered on until it is properly rigged. *[Note: The Inverter (improperly rigged) with a limited / inadequate DC power source are; as the vessel is equipped with a diesel gen-set and a non electric galley stove / oven; superfluous. Recommend consider removing the inverter & it's 4D battery and rigging (in their place) G27 / G31 batteries dedicated to the vessel's DC navigation gear and house systems and have the gen-set serve its function of powering the vessel's 120v domestic appliances and onboard battery charger.]* 

Electrical System A.C.: 120v 30 amp Panel Location: salon @ navigation station.

<u>Shore Power Input:</u> 1- 120v 30 amp (inside cockpit aft port locker) w/ galvanic isolator (installed behind the salon panel 120v panel.) <u>OverCurrent Protection:</u> breakers & GFCI outlets.

Battery Charger: ProTech-4; in salon port settee; appeared operational..

<u>Remarks:</u> salon panel; two sets (Line A & Line B) volt & amp meters and reverse polarity indicators; Line A w/ 2- main breakers (shore & gen-set) with source select (shore / gen-set) slide-lock outs & 5branch breakers Line B w/ 2- main breakers (shore & gen-set) & 3- branch breakers (for air conditioner system). System (as sighted / accessed) appeared neatly rigged, operational (energized via gen-set power; shore power not available at the dock) and (except as \*Note# ) in satisfactory condition.

Fire Extinguishers: Class :: Size :: Location
\*None sighted onboard at time of survey

Fixed Fire Extinguisher: [Suggest install, for enhanced service fixed extinguisher in engine & gen-set spaces.]

Remarks: \*Note# 17.

Bilge Pumps: Mfg. /Type	:: Size ::	: Secured	:: Location	
12v <i>Rule</i> / sub.	2000	ves	keel sump	
unk. / manual	not listed	d yes	keel sump pick-up; operates from the cock	pit.

*Shower Sump:* boxed *Atwood* 12v; under salone sole keel sump hatch..

<u>Remarks:</u> Bilge as sighted / accessed appeared clean. DC pumps appeared to power on. Keel-sump (as sighted / accessed) appeared clean & dry. No intrusion or unusual accumulation of bilge water evident; pump did not cycle on during time of in-water survey.

[Recommend based on vessel size; install an additional 12v pump and a high water alarm.]

#### **Domestic Water System:**

<u># of Tanks:</u> - 1 - <u>Tank Material:</u> plastic <u>Location:</u> under fwd. berth

Secured: not sighted (tank space covered by screwed in place joinery panel)

<u>Capacity:</u> 75 gal. (Ra.) <u>Status:</u> empty (as per LCD panel gauge).

<u>Pump:</u> 12v <u>Sinks:</u> - 2 -

Water Heater: 6 gal.; 120v powered; under dinette fwd. settee.

<u>Remarks:</u> System (as sighted / accessed) appeared satisfactory; 12v pump powered on; water heater (120v breaker briefly engaged) showed (via panel's 120v amp & volt meters) current draw. Tank fill installed under the foredeck anchor well hatch.

Marine Sanitation Device (MSD.): <u>Type:</u> raw water flush.

Pumps: manual flush @ MSD; \*12v macerator w/ ballvalve seacock (transom aft port locker).

Holding Tanks: -1 -- Material: plastic (30 gal. Ra.) Secured: brackets / blocked (as sighted).

Location: transom aft port locker.

<u>Thruhull Valves:</u> 2- bronze ballvalves; raw water intake, under salon sole aft hatch; macerator outlet, adjacent to macerator pump in transom aft port locker.

<u>Remarks:</u> Type III MSD; with a holding tank and tank deck pump out (not labeled). Flush pump appeared operational; seacocks appeared operational. \*Note# 6. (suggest keep macerator outlet seacock closed and MSD raw water intake seacock closed unless systems are in use.)

#### Galley Equipment: Stove: Force 10 3- burners w/ fiddles & oven. Fuel: LPG

<u>Secured:</u> gimbaled <u>Stove-Ventilation:</u> companionway & overhead hatch.

Joinery Protected: metal flame shield @ joinery panel port of the stove.

<u>Tank & Location</u>: 1- (10 lbs. est) in a dedicated & vented frp. transom locker w/ hinged latched cover; molded in @ the transom aft port corner; manual valve & DC solenoid in the locker; *Trident* LPG control - panel fwd. at the stove.

Refrigeration: Alder Barbour 12v; compressor aft under dinette stbd. settee .

Other Equipment: Xantrex S2 propane / cng fume detector.

<u>Remarks</u>: Galley joinery & appliances appeared clean and in near new condition. LPG tank (10 lb. est) & system (as sighted / accessed; run of lines, tank locker to stove could not be sighted) appeared satisfactory; - pressure tested (as per ABYC std. A-1.10.3.1) no leak indicated. Refrigeration system powered on / - appeared operational; freezer @  $06.3^{\circ}$ f, refrigerator @  $38^{\circ}$ f. (Open flame devices, i,e. galley stove not tested at the survey.) \*Install stove operating instructions & hazard warning sign, at the stove & tank locker.

#### Steering System: Type: wheel @ pedestal; cable to quadrant

<u>Remarks:</u> System appeared operational; smoothly turned from stop-to-stop; frp. rudder no play / damage evident. Emergency steering via tiller to rudder shaft, access via plate aft in cockpit deck. (\*emergency tiller needs to be securely stowed in a labeled accessible location for quick access.)

Safety Equipment:Personal Flotation Devices:type IIType IV Flotation Device:Life-Sling ring.Navigation Lights:12v \*Note# 11.Sound Producing Device:portable air hornFlares: noneCO Detector:@ fwd. & aft berths.Life Rafts:---First Aid Kit:---

Other Equipment: ss. transom ladder; Life-Sling (person in water retrieval system; not tested.)

<u>Remarks:</u> red - green & stern running lights powered on. \*Install flare kit as per Federal requirements. \*Vessels over 26' must have Oil Discharge placard and MARPOL Trash placards. *Note: It is the vesselowner's responsibility to maintain & keep up-to-date all USCG / Federal required safety equipment and to have that equipment on board when the vessel is in use.* (Test / inspect *Life-Sling* components and deployment procedure.) [Suggest type I PFDs w/ signal light & whistle attached for use in other than calm inland / inshore waters.]

Anchor: 7	Гуре :	: Rode	::	Chain	
daı	nforth	1⁄2" lir	ne	<sup>1</sup> /4"	

Windlass: S.L.; 12v powered, ss. w/ horizontal capstan; in foredeck locker.

<u>Remarks:</u> 2- ss. rollers at stem-head. Windlass powered on (raised & lowered the rode; no load applied). [anchor rode (rope & chain) needs to be neatly coiled (with chain section on top) stowed in the locker so that it can be deployed (with out jamming) by windlass. [Suggest rig a quality anchor, best suited for vessel's use area.]

#### Navigation Electronic Equipment: VHF Radio: Ray 215 Compass: Ritchie

<u>GPS - Chart Plotte - Radar:</u> *Ray RL70C* (color LCD display).

Depthsounder: Ray ST60 (LCD digital display). Speed / Knotmeter: Ray ST60 (LCD digital display).

<u>Auto – Pilot:</u> Ray ST500T (LCD digital display); powered on data engaged and appeared to move the rudder.

<u>Remarks:</u> (9-21-2015) Depthsounder & Knotmeter powered on & showed data. \*Ray RL70C screen display powered on: A) radar function not operational (no data available). B) GPS function not operational (screen read "no data available"). C) plotter function unknown; no chart chip installed at time of survey. (Client reports that radar unit is being repaired.)

<u>Other Systems / Equipment:</u> tote bag with boat equipment manuals; small set of Yanmar basic engine tools; cloth covers for cockpit winches; ss. bimini frame; cloth w/ isinglass bimini & dodger(?) not installed / deployed (folded and stowed in cabin space) at time of survey; \*DC audio system \*Note# 13.

Survey Conducted in Accordance with A.B.Y.C. Standards and the Code of Federal Regulations for Recreational Boats. SUMMARY REMARKS: *This survey was conducted on xxxxxx xx & xxxxxxxx xx, 201x at xxxxxx* 

Marine (selling broker) in xxxxx xxxx N. Y.; with the vessel blocked on-shore, mast and all standing & running rigging stepped & in place and main & head-sails bent-on their furling systems. The vessel a 2002 Hunter 386 is a fractional sloop (B&R Selden rig) rigged sailboat powered by a Yanmar 3-cylinder diesel auxiliary engine (w/ new prop shaft & cutlass bearing and reconditioned propeller; done prior to the in water test day) and is rigged with; Pro-Furl headsail & Selden in-mast mainsail roller furling systems, Harken mainsail line control traveler, self-tailing winches, rope clutches & headsail sheet leads (cars on T track) and is well equipped with; air conditioning, diesel gen-set, 120v shore power system, 120v water heater, DC refrigeration, LPG stove & oven, 12v powered anchor windlass, radar, gps / plotter, auto pilot and cockpit bimini: The cabin has; teak joinery, V-berth guest cabin, head with shower, convertible dinette / settees, navigation station and a master cabin w/ double berth.

The hull and bottom (with keel & rudder) were sighted and sounded and appeared fair, true and sound; no hard spots / deformation, damage from hard grounding or storm damage evident. The decks appeared sound and tight. The hull, topsides & decks gel coat finishes appeared in very good condition. The cabin space teak joinery appeared well fitted & finished and in generally near-new condition as did the upholstery & trim. The deck hardware, standing & running rigging, mast deck step and sail control gear (as sighted / accessed) appeared sound and tight to the structures; no hull - deck deformation / distortion evident at rigging and hardware attachment areas.. The vessel's hardware, systems and equipment, except as noted, appeared sound operational and in proper condition. The items noted to require attention appeared as repair / service and ABYC Standards compliance issues that should prove not too complex to correct and restore to proper condition.

The vessel as powered rigged & equipped (i.e. air conditioning, diesel gen-set, electronics), at time of survey, appeared (excluding the noted items) sound and in above BUC Condition: With the noted items corrected the vessel should then appear sound overall and in Better than BUC Condition. The \$xx,000 survey noted value is the vessel's reported purchase price: That price is a discount from the \$95,300 -\$104,500 current value range for "Better than BUC Condition" and the \$84,300 - \$92,700 current value range for "BUC Condition" valuation categories.

The above captioned vessel appeared to meet the ABYC standards & USCG / Federal requirements in effect when it was constructed.

\* The following is the list of Deficiencies, (not listed in priority order), that require correction.

1-- latch, on door to fwd. cabin, not operational - does not engage striker plate & hold door closed.

2-- the DC (12v)- to- AC (120v) Inverter system (under salon's port settee; powered via a 4-D battery) is not properly rigged (inverter provides 120v power directly to the vessel's 120v panel) and presents an electric & shock hazard: The system needs to rigged

(*i.e. source transfer switch, safety labeling, overcurrent protection etc.*) to conform to ABYC Standards: *std. A- 31.5.3.6*: A visible means (e.g., voltmeter or lamp) of determining that the inverter is on line" and/or in "standby" mode shall be provided at the AC main electrical distribution panel.

*std. A- 31.6.5.2*: "If an inverter and any other source(s) of AC can supply a branch circuit or receptacle, then the transfer from one power source circuit to another shall be made by a means that opens one source circuit before closing the alternate source circuit, preventing arc-over or feedback between sources.

std. A- 31.6.5.2.1: "The transfer switch (e.g., switch gear) shall be protected against overcurrent."

*Std. E- 11.5.5.6*: "Isolation of Sources – Individual circuits shall not be capable of being energized by more than one source of electrical power at a time. Each shore power inlet, generator, or inverter is considered a separate source of power."

*std. E- 11.5.5.6.1*: "Transfer of Power - The transfer of power to a circuit from one source to another shall be made by a means that opens all current-carrying conductors, including neutrals, before closing the alternate source circuit, to maintain isolation of power sources."

*std. E- 11.5.5.7* "Power Source Disconnecting Means: - A means for disconnecting all power sources from the load shall be provided at the same location.

*std. E-11.10.2.8*: a proper sized over current protection device is needed at the inverter's 120vAC power output to the ship's 120v system.

[NOTE: The inverter system (as currently improperly rigged) should not be powered on: Recommend disconnect the inverter from its DC power source and disconnect the inverter's AC output from the ship's 120v system.]

3-- port side latch, on hatch over fwd. berth, is too tight / needs adjustment can not close.

4-- galley sink's drain seacock (bronze ballvalve; under cabinet) is stiff / can not be closed.

5-- DC panel breaker labeled "spare" (installed below macerator breaker) powers on the depth sounder & radar; needs to be labeled to denote its function.

6-- 12v macerator pump: A) did not power on. B) its push on switch (installed on the DC panel) needs to be labeled to denote its function.

7-- the second hose clamp, at the on engine exhaust hose connection, needs to be re-installed & secured at the hose - riser connection.

8-- engine at idle speed (in neutral) ran rough w/ excessive shacking (cause undetermined).

9- Hunter LCD tank monitor (waste & water) gauge reads fresh water tank as full; yet the tank is empty.

10- shift disengagement control button is missing on engine shift-throttle control (cable w/ single dual function lever); repair / replace as needed. (*shift function appeared operational; was engaged via inserting a small dia. screwdriver into the hole (machined into the lever's shaft) and pushing in on the mechanism.*)

11-- mast-head / steaming navigation light did not power on.

12-- spreader / deck light (on mast fixture) and cockpit lights (on radar arch) did not power on.

13-- DC audio system not operational (did not power on with blown in line fuse replaced).

14-- mainsail in mast furler system (Selden) appeared stiff, could not be completely deployed (operation manual not available at survey to determine proper procedure; recommend consult with rigging technician).

15-- headsail roller-furler (Pro-Furl) system; check operation manual / consult with rigging technician to determine how the furling drum line should be rigged; it chafes against the drum's ss. cage.

16-- install 2- BI portable fire extinguishers to meet minimum (for this size vessel) Federal requirements.

17-- battery volt test select switch (installed @ DC panel) shaft is stripped and its knob is missing.

Other Notes / Comments: A) domestic water system not commissioned at time of survey. B) bimini / dodger not installed at time of survey. C) Absent documentation; canvas (term used to describe biminis, enclosures, covers etc.) should be assumed to be original equipment. D) The vessel's standing rigging was inspected from deck level only. Standing rigging and spars are presumed (absent other documentation) to be original equipment. Masts, rigging & chain-plates should be un-stepped periodically for inspection & routine preventative maintenance: If "blue water" voyaging / extended cruising is contemplated the rigging should also then be inspected by a qualified marine rigger.

-End of Notes-

#### Submitted in good faith and without prejudice,

Frank T. Anna (xxxxxr xx, 201x; via e-mail)

#### FRANK T. ABBEY // Member A.C.M.S // Certified Marine Surveyor; ACMS Certificate# 0181 Conditions of Report Acceptance

This survey was prepared; for the benefit of the named client; to determine the vessel's condition and approximate market value. The survey was conducted utilizing methods of non-destructive testing; and is based upon a visual inspection of the vessel; i.e. without removing panels, joinery etc., or disassembling / removing any machinery, to expose parts normally concealed. The survey is not rendered as a warranty, but and opinion of the above signed surveyor as to the condition of the vessel and equipment ONLY on the survey date. The Surveyor does not warrant or guarantee the performance, stability or characteristics of the vessel or its machinery and accordingly shall suffer no liability for errors or omissions or for not being able to properly evaluate parts. Our liability for any loss or damage arising out of this inspection and report, shall be limited to the fee paid for the services rendered herein. No reference in the report should be construed to indicate compliance of any equipment with manufacture's specifications. Recommendations (which are not meant to imply that All Deficiencies have been identified) are based upon standards set forth by the American Boat and Yacht Council and United States Coast Guard; in addition some comments may be based on the general experience of the Surveyor. The request and / or use of the survey shall constitute agreement of the Preface and above Conditions.

\*\*NOTE: Ultimate responsibility for, the vessel's Safe operation & maintenance and Safety of the crew & passengers, lies with the Owner and Master.\*\*

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# Hull ID# photo redacted







































End of Survey Photographs and Report