

GLADDING MARINE SURVEYING AND CONSULTING, LLC

1738 PICKWICK PLACE-FLEMING ISLAND-FLORIDA-32003

PHONE: 904-945-0511 FAX: 904-215-9243 EMAIL: gladdings@msn.com



SURVEY REPORT VESSEL: xxxxxxxxxxxxxx

Prepared by: Bill Gladding AMS® #810

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GENERAL INFORMATION

SURVEY PURPOSE: prepurchase

REQUESTED BY: xxxxxxxxxxxxx

FILE #: 2015-07-27 Hardin 44 Voyager 1979

REPORT DATE: July 27, 2015

CLIENT INFORMATION: xxxxxxxxxxxxx

OWNER INFORMATION: xxxxxxxxxxxxx

SURVEY DATE: July 27, 2015

SURVEY LOCATION: Holland Marine, Green Cove Springs

ATTENDING: xxxxxxxxxxxxx

ENGINE SURVEYOR: basic external checks and oil analysis by hull surveyor

VESSEL & MACHINERY DATA

Vessel identification numbers (sighted aboard, photos at end of report if found aboard)

Hull ID #: not found (vessel predates requirement) Documentation #: XXXXXXXXXX

Hailing Port: St Thomas, VI

Vessel type and dimensions (taken from builder's placard)

Manufacturer: Hardin International Co Ltd Model: 44 Voyager Year: 1979 Length: 44'6"

Beam: 13'4" Draft: 6'0" Weight: 32,000 lbs Hull composition: fiberglass

Engines (sighted aboard)

Type and #: single inboard Horsepower: 85@2,800 rpms Fuel type: diesel Manufacturer: Nanni

Model: 5.25 TDI Serial #: 3E8110 3xxxxx Hours: 525 (estimated/187.5 currently indicated)

Transmissions (sighted aboard)

Manufacturer: ZF Marine Model: ZF25-2.0 Ratio: 1.97 Serial #: 33xxxx

RECOMMENDATIONS

(Items on this list should be addressed on a priority basis)

1. Put aboard at least USCG Approved portable handheld fire extinguishers Size BCI or larger.
2. Put aboard at least three unexpired USCG approved day/night visual distress signals.
3. Put aboard at least one handheld or hull mounted sound signaling device.
4. Side and stern running lights are inoperative; service as necessary.
5. Anchoring light could not be seen to work in bright sunlight; prove its function.
6. Provide permanently installed means to allow unassisted reboarding by persons in the water using ABYC H-41, 41.9 for guidance (ladders, hand or foot holds or combinations thereof may be used to satisfy this requirement).
7. Steering hydraulic cylinder in aft berth is leaking; service as necessary then recharge and bleed steering system (install readily accessible fill fitting).
8. Rudder packing gland is leaking; service as necessary so it has zero leakage.
9. GFCI outlet in forward head does not trip when tested; service or replace as necessary.
10. Main engine exhaust hose connection on forward end of muffler under sole in aft stateroom leaks when engine is running; repair as necessary.
11. Main engine exhaust system is fitted with galvanized pipe between muffler and overboard thru-hull; replace with fiberglass pipe and/or hose.

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12. Put aboard reverse polarity indicator tester to confirm dock power is coming aboard correctly.
13. Wiring harness and hose currently lie against the main engine alternator; secure away from alternator to prevent chaffing damage.
14. Install CO/smoke alarms in main cabin and aft stateroom.
15. Attend to the following prior to returning vessel to service:
 - a. Bow sprit is easily pushed back and forth; refasten as necessary with larger bolts to insure it remains tightly fastened and does not leak.
 - b. Dolphin striker is bent to stbd and bow sprit stays and bobstay are loose; service as necessary to insure bow sprit is secure to properly support forestay.
 - c. Upon completion of work on bow sprit properly tension mast forestay and back stays.
 - d. Spreaders on mizzen mast are not aligned at same angle; a rigger should inspect the mizzen mast to insure it is serviceable including hardware, wire and rig tuning.
 - e. Replace circular retaining rings used to secure clevis pins and other rigging hardware with cotter pins.
16. Primary fuel tanks are reported to be fouled; recommend cleaning tanks prior to returning vessel to service to insure a reliable fuel supply.
17. Locate lever for windlass and stow where it is readily accessible when needed.
(Also see Summary Remarks and Notes section at end of survey)

This vessel was manufactured prior to enactment of some of the USCG 33CFR requirements and NFPA and ABYC standards and recommendations in effect today. This survey addresses those items thought to be necessary for safety but does not suggest complete compliance with current regulations or standards and recommendations.

INTENDED USE: recreational

SUITABLE FOR INTENDED USE: yes (upon completion of recommendations cited above)

NAVIGATIONAL LIMITS: coastal cruising waters of the USA and Caribbean Islands

For regular use in excess of 12 miles offshore suggest carrying Epirb and offshore type lifejackets

VALUATION

Pricing guides

Abos.com..... Model not listed
Bucvalupro.....\$68,300 to \$75,000
NADAguides.com.....\$49,950 to \$56,550
(Options not added to guide values unless noted otherwise)

Current listings

Yachtworld.com.....\$49,500 to \$124,000
(8 results – searched 1978 to 1980 44 to 45 foot Hardin in the USA)

Reported sales

Soldboats.com.....\$24,000 to \$82,000
(7 results – searched to 2012)

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Subject vessel was found to be in overall average or better condition. This production model has many copies currently in the market place. Recent sales history and current listings to use for comparison make a market approach a reliable means for establishing its value. Based upon comparison to similar vessels reported to have sold since 2012 it is the opinion of the undersigned the following values should apply:

Current value: xxxxxx

Replacement cost: \$702,000 (Bucvalupro.com)

APPROVAL

This survey may be used for valuation, insurance or mortgage requirements. This survey checks for compliance with U.S. Coast Guard regulations and American Boat and Yacht Council, Inc.

Recommended Standards and Practices. In addition, the general structural condition of the vessel and suitability for its intended service will be examined. This survey cannot check for latent defects which could not readily be discovered by inspection without removal of machinery, tanks, sheathing, joiner work, upholstery, bulkheads, ceiling, fascia or other fixed material, or disassembly of machinery, plumbing, wiring or other parts components or systems.

The undersigned has conducted this survey and issued this report for the sole use of the specified requesting party for an agreed fee based upon the intended use of the report; accordingly, others are not to use this report and not rely upon the contents of this report without payment to the Company of an additional agreed fee based upon the reevaluation of the same factors. The Company shall have no liability for property loss damages, and no liability for punitive damages all of which shall be deemed to have knowingly and voluntarily waived upon use of this report. In the event of dissatisfaction with the conduct of the survey, with errors contained in the report, or by omission of information, the sole and maximum remedy shall be limited to the amount of fee actually received for this report which shall be refunded regardless of the number of claims or suits, regardless of whether under theory of tort, contract, warranty, products, outrage or otherwise.

This survey contains opinions and observations based on my skill, experience and training as a marine surveyor and consultant. Under no circumstances shall the report be understood to constitute a representation, guarantee, or warranty expressed or implied of any kind as the condition or soundness for the subject vessel, its hull, engines, machinery, equipment or system or any appurtenances thereof, or the cost of effecting any repairs or modifications. The report of survey is not valid until the fee for the survey is paid in full.

Attorney fees; costs: In any litigation arising out of the contract, the prevailing party shall be entitled to recover reasonable attorney's fees and costs.



William K. Gladding, AMS® #810

Society of Accredited Marine Surveyors

Gladding Marine Surveying and Consulting, LLC

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SCOPE OF SURVEY

The vessel was inspected in and out of the water without making removals or opening parts normally concealed and without making borings to ascertain thickness or condition of structural members. As a result, some areas behind cabinetry and under decks were not reached. Fixtures and appliances were powered up and exercised where indicated. Locker doors and drawers were worked and examined for proper function. Potential leak sources such as portlights and deck hatches were examined for evidence of water stains or other indications of leakage. The hull exterior was inspected visually and sounded with a mallet to locate any voids, delaminating or cracking. The underwater gear and other fittings were inspected and checked for indications of damage, abuse or excessive wear. The vessel was attended during a trial run during which various readings regarding the vessel performance were monitored and systems aboard were observed while functioning.

Test equipment that may be referenced in the report:

- Tramex Skipper or GE Aquant moisture meter
- Ideal Suretest AC electrical test meter
- AC electric three light plug in tester
- Check-Line non-contact digital tachometer
- Multi-meter electrical tester
- Assorted hammers and measuring devices

VESSEL GENERAL DESCRIPTIONS

Exterior arrangement – ketch rigged sailing vessel noted the following:

- Hull – displacement type full keel with round bilges; rudder is hung on keel and propeller fully protected in an aperture; stem has long rake and bow sides flared outward; sheer is curved lowest point just aft of amidships then stepping up continuing aft to the stern; transom is raked and has short overhang
- Decks and superstructure – flush main deck from bow to stern; main cabin begins just aft of mast continuing aft nearly to the stern; recessed cockpit is located just aft of amidships between the main and aft trunk cabins
- Spars – cutter rigged ketch with aluminum main, wood mizzen and wood booms for stay sail, main and mizzen

Interior arrangement – lower levels forward and aft with raised deck between in main cabin noted the following:

- Staterooms – master aft, guest amidships stbd and saloon has two ¼ berths and settee that converts to full size
- Heads – one each forward and aft
- Galley – aft end of main cabin port side
- Dinette – stbd side of main cabin
- Saloon – main cabin
- Helm – aft end of cockpit
- Other – engine room has very good access

Structural elements

- Hull skin material and type cosmetic finish – hull appears to be solid molded fiberglass and has painted cosmetic finish
- Hull grid system layout and materials – hull is supported by transverse bulkheads and cabinetry

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- Hull deck joint – not accessible for inspection (appears to be matching flanges or similar)
- Continuous transverse bulkheads locations and materials – fiberglassed plywood at anchor locker, forward head aft end of main cabin and forward end of aft cabin
- Decks and superstructure materials and type cosmetic finish – solid and wood cored molded fiberglass with painted cosmetic finish and varnished teak trims and overlay in cockpit

SURVEY FINDINGS

UPGRADES/REBUILDS

Including but not limited to the following:

- 2015 – main mast replaced with aluminum
- 2014 – all underwater seacocks serviced
- 2014 – teak removed from decks and deck painted
- 2005 – Nanni diesel installed
- Cabin air-conditioner

TRIAL RUN

- Location – St. Johns River in vicinity of Green Cove Springs, FL
- Duration – approximately one hour
- Number of passengers – six
- Tanks levels:
 - Fuel – approximately 20 gallons
 - Water – partially filled
 - Waste – partially filled
 - Gray water – n/a
- Hull performance – vessel was motored and sailed with stay sail main and mizzen. Hull performance was good in both modes. Relatively light winds did not result in maximum performance under sail but under power theoretical hull speed of approximately 7.6 knots was achieved with relative ease
- Engine performance:
 - Wide open throttle rpms – 2,362 (engine rated to 2,800)
 - Temperatures and pressures – highest temperature recorded at engine thermostat housing 176 degrees F at wide open throttle (160 at cruise)
- Comments – vessel tacked easily in light winds and turned well under power

HULL ABOVE WATERLINE AND RELATED

Structural elements

Condition: above average

Condition of structural elements such as stringers, transverse framing, bulkheads, partitions and other similar type hull supports based upon visual inspection to insure they are maintaining their proper shape and remain securely attached, tap tested to insure they are not delaminated or deteriorated and in some cases examined using a moisture meter

Topsides

Structural condition: above average

Structural assessment based upon visual examination of hull's shape for damage, distortions, sagging, hogging or other signs structure is failing or is not adequately supported; moisture testing to locate areas where abnormal

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readings may indicate deterioration of laminates or cores; and tap testing areas that are suspect as a result of abnormal indications from visual inspection and readings from moisture meter

Cosmetic condition: above average

Cosmetic condition of paint, gelcoat and varnish based upon surveyor's opinion of appearance compared to similar type vessels considering factors such as gloss, extent of oxidation, flaking, discoloration, wear and tear or other factors

Comments:

- Hull paint is scraped port hull side at stern
- Refinishing is incomplete on name boards at bow

Deck drains

Condition: above average

Weather decks with in-hull drain systems: cockpit

The undersigned has witnessed several sinking and flooding events due to clogged deck drains backing up rain water on deck then flooding to hull interior. In order to prevent this type of event from occurring deck drain fittings and piping should be maintained leak free, kept clean and free of debris and hatch seals maintained to prevent water from leaking to hull interior or accumulating on weather decks and spilling to hull interior.

Decks & superstructure

Structural condition: average or better

Structural assessment based upon visual examination of hull's shape for damage, distortions, sagging or other signs structure is failing or is not adequately supported; moisture testing to locate areas where abnormal readings may indicate deterioration of laminates or cores; and tap testing areas that are suspect as a result of abnormal indications from visual inspection and readings from moisture meter

Cosmetic condition: above average

Cosmetic condition of paint, gelcoat and varnish based upon surveyor's opinion of appearance compared to similar type vessels considering factors such as gloss, extent of oxidation, flaking, discoloration, wear and tear or other factors

Comments:

- Teak overlay has been removed from decks and repairs made to areas that were unstable. Elevated readings were noted using GE Aquant meter and will likely continue indefinitely as it does not make sense to remove a serviceable deck for the sole purpose of lowering readings on a moisture meter
- Exterior cosmetic coatings reported to be Fabula, Inc products as follows:
 - Paint – Signature Finish
 - Varnish – Honey Teak

Exterior soft goods

Condition/appearance: average Wear & tear: light Serviceable: yes

Type & location:

- Cockpit Bimini – stainless framed and vinyl canvass

Exterior hardware

Condition/appearance: average Anchoring: securely fastened Bedding: appeared adequate

Type & location:

- Bow pulpit – welded stainless

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- Main deck safety rail – stainless stanchions and wire lifelines
- Hand rails and aft deck toe-rail – varnished teak

Tie-up gear

Condition/appearance: average Anchoring: securely anchored Bedding: appeared adequate

Type & location:

- Foredeck – stainless bollard and two each bronze fair leads and hawses
- Amidships – 2 x stainless fixed mooring cleats and 2 x bronze hawses
- Aft deck – 2 x stainless bollards and 2 x bronze fair leads

Rigging sailing

Inspection type – deck level dockside and under sail

Rig type – cutter rigged ketch

Rigging brand – unknown

Overall condition – average or better

Age of rigging as reported by vessel owner – aluminum main mast installed 2015 (used), wire inspected and sections replaced as necessary

Descriptions and/or comments:

- Keel – in-hull ballast
- Centerboard – n/a
- Mast and spars – appeared undamaged, standing in column
- Mast support, step, partners and chain plates:
 - Step – solid without deformation or other indications of instability
 - Partners – n/a (deck stepped rig)
 - Chain plates – stainless embedded in hull not accessible for inspection
- Hardware & fittings – appeared serviceable
- Standing rigging – 1 x 19 stainless wire with swaged stainless terminals, bronze turnbuckles and fully toggled lowers. Appeared serviceable (**except as noted in summary remarks and notes**)
- Running rigging – braided synthetic appeared serviceable (several halyards and sheets recently replaced)
- Furling systems – Harken 2 roller furling for jib spins freely appears serviceable
- Winches:
 - Mast – 2 x Hardin 16 SS, 1 x Barient 10H
 - Mizzen – Hardin 10 SS
 - Cockpit – 2 x Hardin 22 SS, 1 x Hardin 10 SS
- Sail inventory – serviceable fair to average condition:
 - 110 Genoa
 - 80 Jib
 - Stay Sail
 - Main
 - Mizzen

Anchoring gear

Condition/appearance: above average Function: appeared serviceable

Locations/descriptions:

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- Anchor pulpit – varnished laminated teak platform secured to bow sprit
- Chute(s) – 2 x stainless with bronze rollers

Exterior hatches, portlights and doors

Condition/appearance: average Function: normal Gaskets and seals: appeared serviceable

Location & type:

- Hull sides – hinged portlights/plastic framed plastic
- Foredeck and aft trunk cabin top (emergency escape and ventilation) – hinged deck hatches/built-in varnished teak and glass
- Companionway door – hinged and sliding/built-in varnished teak

Comments:

- Trim ring is cracked on one hinged portlight in port hull side near stern

Glazing materials

Condition/appearance: average or better Function: normal Gaskets and seals: appeared serviceable

Location & type:

- Main cabin front and sides – fixed windows/built-in wood and glass (sides) and plastic (front)
- Transom – fixed windows/built-in glass

HULL BELOW WATERLINE AND RELATED

Hull below the waterline

Structural condition: above average

Structural assessment based upon visual examination of hull's shape for damage, distortions, sagging, hogging or other signs structure is failing or is not adequately supported; tap testing for purposes of comparing variations in tap sound indicative of previous repairs, delaminating, moisture intrusion or blistering; and moisture testing if hull is sufficiently dried and does not have coatings that interfere with moisture meter function to locate areas where abnormal readings may indicate deterioration of laminates or cores

Cosmetic condition: average or better

Cosmetic condition based upon surveyor's opinion of hull appearance compared to similar type vessels considering factors such as paint build-up, smoothness of hull, blistering and other features that affect its appearance

Comments:

- Hull below waterline has scattered fiberglass blisters up to 2" diameter that appear to be shallow depth

Underwater gear

Condition/appearance: above average Function: normal Damage, abuse or excessive wear: none noted

- Propellers – 19" x 14" RH four bladed bronze alloy
- Shafting – 1 1/4" stainless
- Shaft support – Cutless® type bearing mounted in keel
- Shaft log – integral fiberglass
- Shaft seal – self-aligning bronze packing gland
- Fasteners – appeared secure

Comments:

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- Engine vibrates lightly while underway most likely due to dirty water flow past blunt trailing edge of keel. Does not vibrate hull or shaft

Rudders & linkages

Condition/appearance: above average Function: normal Damage, abuse or excessive wear: none noted

- Rudder description – composite fin type with stainless stock
- Thru-hull seal – fixed bronze packing gland
- Supports – packing gland and stainless brackets attached to trailing edge of keel
- Linkages – steel tiller and bronze clevis
- Steering components – bronze hydraulic cylinder

Thru-hulls, seacocks, transducers

Underwater – Threaded bronze fitted with ¼ turn valves, bonded with stainless clamps on hoses connections at the following bilge locations found to be serviceable and in above average condition unless noted otherwise:

- Forward head vanity – forward head sink drain
- Forward head – toilet inlet and discharge
- Aft port side cabinet main cabin – galley sink drain
- Port side of engine room under engine – air-conditioner and main engine inlets
- Aft engine room port and stbd – cockpit deck drain discharges
- Aft head vanity – aft head sink drain
- Aft head bilge – aft toilet inlet and discharge

Topsides – threaded bronze/serviceable

Transducers – serviceable (except as noted below)

Comments:

- Sum log paddlewheel is missing fins

ACCOMMODATIONS, HOUSEHOLD SYSTEMS AND COMFORT SYSTEMS

Interior spaces

Bulkheads, partitions and cabinetry found to be solid and in good condition, locker and cabinet doors and drawers found to be in average condition and working order. Interior décor was found to be in overall average condition with moderate wear and tear descriptions as follows:

- Cabinetry – varnished teak
- Doors – hinged varnished teak
- Decks – varnished teak parquet
- Bulkheads and partitions – varnished teak
- Ceilings – teak trimmed paint
- Counters – teak trimmed laminate
- Cushions – cloth skins
- Powered ventilation - none
- Fixtures and appliances - serviceable

Galley equipment

Condition/appearance: average Function: normal

Locations/descriptions – Located in galley except as noted:

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- Double stainless sink
- Three burner LPG range oven
- 2 x built-in ice boxes (not refrigerated)
- Magic Chef refrigerator

Sanitary system

Condition/appearance: above average Function: normal

Locations/descriptions:

- Quantity – two
- Manufacturer – Jabsco and Raritan Engineering
- Type – manual and 12 volt electric
- Vented loops – none (fitted with valves on inlets and discharges)

Air-conditioning

Condition/appearance: average Function: normal (cool program)

Locations/descriptions:

- Quantity - one
- Manufacturer – Cruisair
- Type – self-contained heat pump
- Controls – aft end of main cabin/knob type
- Equipment – aft main cabin bilge/16,000 btu
- Cooling pump – aft main cabin bilge/120 volt submersible

TANKS, PIPING AND RELATED

(Capacities listed in this section are based upon published specifications for this model unless stated otherwise)

Fuel

Found the following to be in average condition without evidence of leakage to level filled (main/0%, day tank 75%) where accessible for inspection:

- Tanks – 226 gallons capacity contained in two 100 gallon fiberglass tanks secured in main cabin bilge and one 26 gallon plastic tank secured in amidships cabin lower ¼ berth
- Fills – port and stbd side decks amidships (day tank by transfer pump only)
- Vents – hull sides
- Plumbing materials – Flexible fuel hose (except day tank vent)
- Shut-off valves – tank outlets
- Filters:
 - Transfer pump – aft main cabin bilge/Racor 200
 - Main engine – Racor 500/forward engine room bulkhead
- Level gauges – helm binnacle/day tank only

Comments:

- Clear hose used on day tank vent line does pose leakage hazard to hull interior
- Dual Racor set-up installed for main engine would aid in insuring an uninterrupted fuel supply if contaminated fuel were an issue

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Potable water

Found the following to be in average condition without evidence of leakage to level filled (partially filled) where accessible for inspection:

- Tanks – 200 gallons capacity contained in two fiberglass tanks secured in main cabin bilge
- Fills – port and stbd side decks amidships
- Vents – hull side
- Plumbing materials – plastic hose
- Shut-off valves – not found
- Filters – screen at pump inlet
- Pressure pump – aft main cabin bilge/West Marine 12 volt diaphragm type
- Accumulator tank – not found
- Water heater – aft main cabin bilge/Atlantic Marine Stainless 6 gallons, 120 volts & engine heated
- Dock water inlet – not found
- Level gauges – not found

Waste

Found the following to be in average condition without evidence of leakage to level filled (partially filled) where accessible for inspection:

- Tanks – 25 gallons capacity contained in one fiberglass tank secured inside amidships cabin lower ¼ berth
- Deck fitting – stbd side deck near stern
- Vents – hull side
- Plumbing materials – PVC pipe and hose
- Y-valves – aft head vanity/toggles toilet discharge between tank and overboard
- Overboard valve – aft head
- Discharge pump – amidships cabin lower ¼ berth/12 volt macerator
- Treatment device – forward gear locker/Raritan Engineering Lectra/San®
- Level gauges – not found

LPG/CNG system

Condition/appearance: average Function: normal Damage or abuse: none noted

- Storage locker – stowed on deck aft of mizzen mast
- Tank quantity and material – 15 pound LPG steel
- Solenoid valve, regulator, pressure gauge and control – yes (manual valve)
- Leakage test (should hold steady pressure for three minutes) – Held pressure for three minutes

ENGINES, AND ENGINE AND VESSEL CONTROLS

Engines

Condition/appearance: average or better Function: normal (except as noted below) Damage or abuse: none noted

- Type/description – four cylinders turbocharged diesel equipped with close coupled straight drive marine transmission
- Location - amidships
- Cooling system – closed loop freshwater with raw water cooled heat exchanger
- Mounting:
 - Foundations – hull stringers
 - Beds – angle aluminum brackets
 - Mounts – adjustable vibration isolator type

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- Cleanliness – fair to average
- Fluid levels and condition – visual inspection:
 - Engine oil – full/normal
 - Engine coolant – full/normal
 - Transmission oil – full/normal
- Accessibility – very good

Comments:

- Evidence of leakage (corrosion beneath it) from main engine vented loop but active leakage not noted while underway

Exhaust systems

Condition/appearance: average Function: normal Damage or abuse: none (except as noted in summary remarks and notes)

- Exhaust manifolds – close loop cooled cast iron
- Risers – raw water cooled cast iron
- Exhaust fittings – fiberglass elbow
- Muffler – square fiberglass box with stainless inlet and discharge nipples
- Exhaust outlet – transom/bolted stainless
- Straight runs – black rubber hose and galvanized pipe
- Connecting hoses – black rubber hose
- Hose clamps – double stainless at each connection point

Engine ventilation

Condition/appearance: average Function: normal

Location & type:

- Natural – from vessel interior (appeared adequate)
- Powered – DC blower

Engine controls

Condition/appearance: above average Function/ease of operation: normal

- Manufacturer/model – Teleflex or similar
- Description – single lever type sleeved cable manual system
- Locations – helm binnacle
- Neutral safety interlock – none (will start in gear)

Engine instrumentation

Condition/appearance: average or better Function: normal

- Manufacturer - Nanni
- Type – analog electric
- Locations – helm binnacle (rpms & hours, temperature and day tank fuel level)
- Alarms - audible

Steering

Condition/appearance: average Function/ease of operation: normal

- Manufacturer/model - Wagner

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- Description – wheel type manual hydraulic system
- Locations – helm binnacle
- Reservoir – integral to helm pump

EQUIPMENT

Pumps dewatering and utility

Condition/appearance: average or better Function: normal (except as noted in summary remarks and notes)

Type & location:

- Keel sump – dewatering x 2/Rule 1500 gph & Rule 3700 gph
- Port side bilge by galley – dewatering/manual diaphragm type

Windlass

Condition/appearance: average Function: normal

Locations/descriptions:

- Manufacturer/model – unknown
- Type – manual horizontal windlass with wildcat and warping head
- Service disconnect/overcurrent protection – n/a
- Test performed – ratcheted by hand using high and low speed without load

ELECTRICAL SYSTEMS

Galvanic corrosion protection

Condition/appearance: average Serviceable: yes

Descriptions:

- Anodes – zincs/propeller shaft and rudder hinges
- Bonding system - none
- Isolators/transformers - none

AC electrical system

Condition/appearance: average Function: normal

Locations & descriptions of significant components:

- Voltage – 120
 - Reverse polarity indicator – not found
- Inlet locations – port side of cockpit coaming
- Inlet circuit protection – main panel (within ten feet of inlets)
- Main panel:
 - Location – port side of engine compartment
 - Instrumentation – volt meter
 - Selector switches – n/a (no AC generator or inverter)
- Tests and examinations:
 - Shoreline electrical test – normal
 - Generator electrical test – n/a
 - AC/DC connection - yes
 - Condition of shore cord – average
 - Condition of shore cord inlet – average

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DC electrical system

Condition/appearance: average Function: normal

Locations & descriptions of significant components:

- Voltage - 12
- Panel locations – stbd side of engine compartment
- Panel instrumentation – volt meter
- Branch circuit protection - breakers
- Primary circuit protection – engine room/fusible link

Battery charging devices

Condition/appearance: average Function: normal Damage or abuse: none noted

Locations/descriptions:

- Electrical – forward engine room bulkhead/Statpower Truecharge 20+
- Mechanical – main engine/alternator
- Solar – none

Storage batteries

Condition/appearance: average Function: normal Damage or abuse: none noted

- Batteries – 3 x 4D lead acid wet cells located in dinette seat bases and engine room
- Disconnects – forward engine room bulkhead/rotary type switch

Battery disconnects or primary circuit protection for high amperage DC systems such as engine & AC generator cranking, windlasses, capstans, bow & stern thrusters and davits should be toggled off when not in use to prevent them from energizing unexpectedly due to failed components or short circuits that can lead to equipment damage or fire while vessel is not in use or unattended

ELECTRONICS AND NAVIGATION EQUIPMENT

Condition/appearance: average Function: normal

- Cockpit:
 - Ritchie binnacle mount magnetic compass
 - Plastimo bulkhead mount compass
 - Datamarine digital depth finder
- Navigation station – VHF radio

SAFETY EQUIPMENT

(Items in this section should be considered serviceable unless noted otherwise)

Fire safety equipment

- Fixed - none
- Portable – port side companionway/USCG Size BCI dry chemical

Gas detection systems

- CO – not found
- Smoke – not found
- LPG – not found

Emergency bilge pumps and high water alarms

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- Dewatering pumps – yes

- Alarms – audible

Signaling devices

- Flares – none
- Hull mounted sound - none

- Handheld sound - none
- Epirb – none

Navigation lights

- Side – bow pulpit
- Mast head – front of mast

- Stern – top of transom
- Anchoring – top of mast

Flotation devices

- Lifejackets – 4 x Type II adult
- Throwables – stbd side of aft deck/Lifesling

- Liferafts – none

Ground tackle

Condition/appearance: average or better Function: appears adequate for routine service

Locations/descriptions:

- Primary anchor – at ready/plow type, chain lead and warp

- Back-up anchor – at ready/plow type, chain lead and warp

Additional required (non-safety)

- Pollution placards (Vessels 26 feet and over with a machinery compartment) – stbd side engine room door interior
- Marpol Trash Placard (Vessels 26 feet and over) – port side of engine compartment
- Written trash disposal plan (Vessels 40 feet and over) – not found
- Navigation rules (Vessels 39.4 feet and over) – not found
- Vessel identification:
 - HIN – not found
 - Doc # - forepeak locker
 - Name - transom

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SUMMARY REMARKS AND NOTES

Items on the following lists are grouped in several categories according to the source of their advice. Items in bold face are also listed in the Recommendations section at the beginning of this report and should be addressed on a priority basis. The remaining items on the lists that follow will likely not interfere with the safe and reliable function of the vessel but may improve its utility and/or convenience.

REGULATORY AND/OR STATUTORY DEFICIENCIES

Items on this list may not affect vessel safety but if ignored may result in fines and/or penalties:

1. **Put aboard at least USCG Approved portable handheld fire extinguishers Size BCI or larger.**
2. **Put aboard at least three unexpired USCG approved day/night visual distress signals.**
3. **Put aboard at least one handheld or hull mounted sound signaling device.**
4. **Side and stern running lights are inoperative; service as necessary.**
5. **Anchoring light could not be seen to work in bright sunlight; prove its function.**

STANDARDS DEFICIENCIES

ABYC Standards and Technical Information Reports are advisory only; their use is entirely voluntary. They are guides to achieving a specific level of design or performance, and are not intended to preclude attainment of desired results by other means:

6. **Provide permanently installed means to allow unassisted reboarding by persons in the water using ABYC H-41, 41.9 for guidance (ladders, hand or foot holds or combinations thereof may be used to satisfy this requirement).**
7. **Steering hydraulic cylinder in aft berth is leaking; service as necessary then recharge and bleed steering system (install readily accessible fill fitting).**
8. **Rudder packing gland is leaking; service as necessary so it has zero leakage.**
9. **GFCI outlet in forward head does not trip when tested; service or replace as necessary.**
10. **Main engine exhaust hose connection on forward end of muffler under sole in aft stateroom leaks when engine is running; repair as necessary.**
11. **Main engine exhaust system is fitted with galvanized pipe between muffler and overboard thru-hull; replace with fiberglass pipe and/or hose.**
12. **Put aboard reverse polarity indicator tester to confirm dock power is coming aboard correctly.**
13. **Wiring harness and hose currently lie against the main engine alternator; secure away from alternator to prevent chaffing damage.**
14. **Install CO/smoke alarms in main cabin and aft stateroom.**

SUGGESTED REPAIRS AND/OR CHANGES

Items based upon surveyor's observations or experience that may improve the vessel's reliability, utility or longevity:

15. **Attend to the following prior to returning vessel to service:**
 - a. **Bow sprit is easily pushed back and forth; refasten as necessary with larger bolts to insure it remains tightly fastened and does not leak.**
 - b. **Dolphin striker is bent to stbd and bow sprit stays and bobstay are loose; service as necessary to insure bow sprit is secure to properly support forestay.**

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- c. **Upon completion of work on bow sprit properly tension mast forestay and back stays.**
 - d. **Spreaders on mizzen mast are not aligned at same angle; a rigger should inspect the mizzen mast to insure it is serviceable including hardware, wire and rig tuning.**
 - e. **Replace circular retaining rings used to secure clevis pins and other rigging hardware with cotter pins.**
16. Prior to sailing offshore routinely attend to the following:
- a. Inspect fasteners that secure bobstay chain plate to stem to insure they are not wasted.
 - b. Inspect chain plates for mast stays and shrouds to insure they are not wasted.
17. Sum log on hull bottom at port side has broken blades; replace or remove from hull during scheduled haul-out.
18. One of two doors in forward head medicine cabinet is loose from its hinge; refasten as necessary.
19. Finger pulls are missing from most access hatches in lower cabin sole; replace with new or suitable alternative.
20. Air-conditioner condensate runs out of pan onto plywood platform; extended condensate drain line to discharge condensate directly to keel sump to prevent deteriorating plywood platform.
21. Tank vent fitting on stbd hull side near cockpit is missing clam shell deflector; replace fitting with new.
22. **Primary fuel tanks are reported to be fouled; recommend cleaning tanks prior to returning vessel to service to insure a reliable fuel supply.**
23. Install valves on or near main engine where water heater hoses attach so they can be turned off when the engine heat is not needed to make hot water to avoid possible leakage and loss of main engine coolant that may result in overheating damage of the main engine.
24. **Locate lever for windlass and stow where it is readily accessible when needed.**
25. Engine room battery has too many connections on its terminals which are exposed; install buss bar adjacent to battery for excess electrical connections and install insulators over battery terminals.

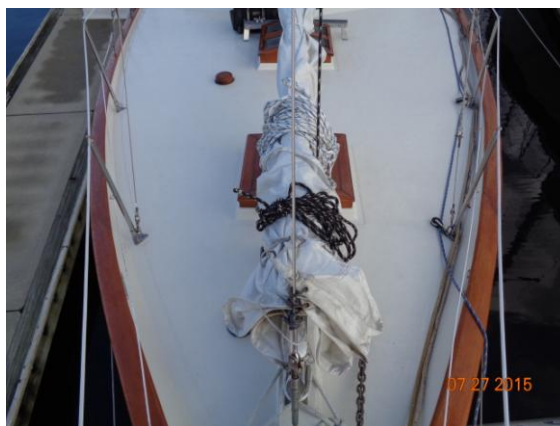
(End of report photo pages to follow)

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PHOTOS



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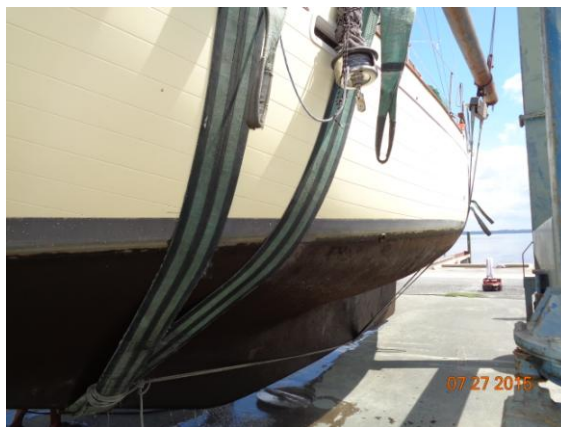
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