

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 NAME: xxxxxxxxxxxxx

Prepared by: Bill Gladding AMS® #810

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GENERAL INFORMATION

SURVEY PURPOSE: prepurchase
FILE #: 2017-05-08 Bayliner 4788PYMY 2001

REQUESTED BY: xxxxxxxxxxxxxx
REPORT DATE: May 9, 2017

CLIENT INFORMATION: xxxxxxxxxxxxxx
OWNER INFORMATION: xxxxxxxxxxxxxx

SURVEY DATE: May 7 & 8, 2017
SURVEY LOCATION: xxxxxxxxxxxxxx
ATTENDING: xxxxxxxxxxxxxx
ENGINE SURVEYOR: xxxxxxxxxxxxxx

VESSEL & MACHINERY DATA

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

Hull ID #: BLBAxxxxxx01 Documentation #: xxxxxxx Hailing Port: xxxxxxxxxxxxxx

Vessel type and dimensions (taken from 2017 Powerboat Guide)

Manufacturer: Bayliner Model: 4788 Pilothouse Motor Yacht Model year: 2001
Length overall: 54'0" Beam: 15'1" Draft: 3'4" Weight: 29,990 lbs Hull composition: fiberglass

Engines (sighted aboard)

Type and #: twin inboard Horsepower: 370@3,000 rpms Fuel type: diesel Manufacturer: Cummins
Model: 6BTA5.9-M3 Serial #: port (46011xxx), stbd (46009xxx) Hours: port (1,895.5), stbd (1,897.4)

Transmissions (sighted aboard)

Manufacturer: ZF Marine Model: HSW800A2-2.0 Ratio: 1.96 Serial #: port (1814xxxx), stbd (1814xxxx)

Alternating Current Generator (sighted aboard)

Manufacturer: Westerbeke Model: 12.5BTDA KW: 12.5 Fuel type: diesel Serial #: 38xxx
Hours: 300.2

TENDER DATA

Identification numbers

Hull ID #: CN-USAxxxxxx313 Registration #: xxxxxxx Manufacturer: Mercury Inflatables Model: AA300049M Model year: 2013 Length: 9'6" Beam: 5'4"

Engine

Type and #: outboard Horsepower: 9.8 Fuel type: gas Manufacturer: Tohatsu Model: 3V2(MFS9.8A3) Serial #: 036xxxxxx

RECOMMENDATIONS

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

1. **Portable handheld fire extinguishers have exceeded their useful service life; replace with new located as follows:**
 - a. Cockpit stbd storage locker.
 - b. Galley cabinet.
 - c. Galley equipment room.
 - d. Flybridge (add to existing inventory)

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2. Put aboard at least three unexpired USCG approved day/night visual distress signals or other type USCG Approved system that satisfies the requirement (certain battery powered beacons are now approved).
3. Stbd propeller shaft Lasdrop® hull seal leaked profusely when vessel was operated above hull speed; service as necessary to restore its normal leak free function.
4. Manually switched dewatering bilge pump in engine room is inoperative; service as necessary to restore its normal function (rewiring if necessary should be done using waterproof connections).
5. Top of AC generator muffler was noted to be wet; monitor for active exhaust leakage, repair or replace if necessary.
6. Replace missing clamps on AC generator exhaust system hose connections at the following locations:
 - a. Inside sound shield port side aft end bottom.
 - b. Muffler inlet connection (space permitting on nipple).
7. House battery bank located in port side lazarette has several connections and fuse holder that are corroded; service as necessary to insure reliable function and charging of the house battery bank.
8. Install level switches at each bilge location that sound audible alarm when excess water is present.

(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: warm coastal waters of the USA and Caribbean Islands

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

VALUATION

Subject vessel was found to be in overall above average condition. *It is well equipped for its intended use cruising inland and coastal waters. It appears to have received better than average care over its life and has far less wear and tear than one would expect for a vessel its age.* This production model has many copies currently in the market place. Ample recent sales history, current listings and pricing guides found on May 8, 2017 to use as comparison make a market approach a reliable means for establishing its value. Based upon analysis of the data below it is the opinion of the undersigned the following values should apply:

Current value: \$xxxxxxx Replacement cost: \$712,000 (Bucvalupro.com)

Pricing guides

2017 Powerboat Guide.....	\$145,000 to \$193,000
Abos.com.....	\$166,000 to \$197,000
Bucvalupro (2000 model).....	\$140,000 to \$154,000

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NADAguides.com.....\$140,200 to \$158,900

(Options not added to guide values unless noted otherwise)

Current listings

Yachtworld.com.....\$179,999 to \$248,000

(10 results – searched 2000 to 2002 models in the USA)

Reported sales

Soldboats.com.....\$130,000 to \$246,322

(17 results – searched April 2016 to present)

Valuation based upon depreciated replacement cost

\$712,000 depreciated at 7% annually..... \$222,950

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
- Flir® One Android infrared camera
- 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 – classic pilothouse motor yacht with cockpit noted the following:

- Hull – modified V-bottomed planing type with shallow keel, round bilges and upper chine; stem is raked forward and hull sides outward at the bow; curved sheer slopes downward from the bow to amidships then continues nearly level to the stern; full height transom stern with bolted on swim platform
- Decks and superstructure – flush main deck from the bow aft to the main cabin with narrow cat walks aft to the stern around the recessed stern cockpit; superstructure consists of trunk cabin forward followed by the pilothouse all at main deck level; main cabin aft of the pilothouse at cockpit deck level; flybridge begins at aft end of pilothouse with upper deck that extends aft over the cockpit; flybridge has spoiler above and Bimini top shades

Interior arrangement – split level lower cabin forward in hull followed by main cabin at cockpit deck level; pilothouse above lower cabin at main deck level noted the following:

- Staterooms – three in lower cabin
- Heads – two in lower cabin
- Galley – forward end of main cabin
- Dinette – main cabin
- Saloon – main cabin (lounge area at flybridge also)
- Helm – pilothouse and flybridge
- Other:
 - Equipment room beneath galley
 - Spacious lazarettes

Structural elements

- Hull skin material and type cosmetic finish – fully foam cored molded fiberglass gelcoat cosmetic finish

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- Hull grid system layout and materials – four continuous fiberglassed wood stringers various transverse supports between
- Hull deck joint – overlapping flanges mechanically fastened
- Continuous transverse bulkheads locations and materials – fiberglassed plywood at anchor locker, aft end of lower cabin forward and each end of engine room
- Decks and superstructure materials and type cosmetic finish – solid and balsa cored molded fiberglass gelcoat cosmetic finish foam rubber overlay cockpit and swim platform

SURVEY FINDINGS

UPGRADES/REBUILDS

Including but not limited to the following:

- Tender crane
- Tender & outboard engine
- Inverter/charger system and additional battery
- Stern thruster
- Flybridge and upper deck Biminis
- Cockpit enclosure

TRIAL RUN

- Location – ICW and Cape Fear River in the vicinity of Southport Marina Southport North Carolina
- Duration – approximately one hour elapsed on main engine hour meters
- Number of passengers – six
- Tanks levels:
 - Fuel – 75%
 - Water – 50%
 - Waste – nearly empty
- Hull performance – vessel reached and average top speed of 21 knots several knots slower than expected based upon 20 to 22 knot cruise speed specified in the 2017 Powerboat Guide but not unexpected considering more than ½ load of fuel and water, six passengers and weight of gear aboard
- Engine performance:
 - Wide open throttle rpms – 3,000 (matches engines rated maximum)
 - Temperatures and pressures – remained normal at all operating speeds
- AC generator performance:
 - Voltage and frequency - normal
 - Loads applied – all air-conditioners and refrigerators
- Comments – vessel performed well in all respects. ***Hull performance seemed to be best with trim tabs down.***

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

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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 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

Condition other features: **above average (except as noted in summary remarks & notes)**

- Guards:
 - Sheer (PVC & stainless)
 - Swim platform (PVC)
- Swim platform – molded fiberglass supported on stainless brackets
- Permanently installed means for reboarding – folding stainless ladder

Deck drain systems

Type: scuppers Condition: average or better

Weather decks with in-hull drain systems: sliding door pockets, cockpit, upper deck & storage lockers

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: above average

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

Exterior soft goods

Condition/appearance: overall average or better Wear & tear: **average or better (except as noted in summary remarks & notes)** Serviceable: yes

Location & type (installed at time of survey):

- Flybridge & upper deck Biminis (stainless & canvass)
- Flybridge & foredeck seat cushions and cockpit bolster (vinyl skins)
- Covers for foredeck seat, upper deck hatch & flybridge (canvass)
- Pilothouse & main cabin window shades (vinyl screens)
- Aft deck screen enclosure (vinyl & canvass)
- Tender cover (vinyl)

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Exterior hardware

Condition/appearance: above average Anchoring & bedding: appeared adequate

Location & type:

- Bow & upper deck safety rails (welded stainless)
- Main cabin hand rails (welded stainless)
- Flybridge ladder (welded stainless & plastic treads)

Tie-up gear

Condition/appearance: above average Anchoring & bedding: appeared adequate

Location & type:

- Foredeck & amidships (6 x stainless fixed mooring cleats)
- Cockpit (2 x stainless fixed mooring cleats & hawses)
- Transom (2 x stainless fixed mooring cleats)

Anchoring gear

Condition/appearance: above average Function: normal

Locations/descriptions:

- Anchor pulpit – molded fiberglass bolted to main deck
- Chute(s) – single stainless with plastic roller

Glazing materials

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

Location & type:

- Flybridge – fixed windscreen (aluminum, glass & plastic)
- Pilothouse – fixed windows (aluminum & glass)
- Main cabin – fixed & sliding windows (aluminum & glass)

Exterior hatches, portlights and doors

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

Location & type:

- **Secondary egress (escape) - foredeck**
- Hull sides – hinged portlights (aluminum & plastic)
- Foredeck & cockpit – hinged locker lids (molded fiberglass)
- Foredeck – hinged deck hatches (aluminum & plastic)
- Pilothouse sides & aft end of main cabin – sliding doors (aluminum & glass)
- Flybridge/pilothouse – hinged door (aluminum & plastic)
- Stbd side of transom – hinged gate (molded fiberglass)

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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: above average

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

Stern thruster

Condition/appearance: average Function: normal

- Location – lazarette centerline
- Manufacturer/model – Vetus 185mm 95kgf
- Type – 7 1/4" 12 volt tunnel type
- Service disconnect – port side lazarette (rotary switch)
- Overcurrent protection – port side lazarette (fuse)
- Test performed – operated from upper & lower helms

Comments:

- **Thruster propeller has moderate end play on shaft but remains serviceable**

Underwater gear

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

- Propellers – 24" x 24" four bladed bronze alloy
- Shafting – 2" stainless
- Shaft support – single bronze I-type strut each side
- Bearings – rubber Cutless® type
- Shaft log – integral fiberglass bronze thru-hull
- Shaft seal – Lasdrop® dripless type
- Fasteners – appeared secure

Rudders & linkages

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

- Rudder description – cast bronze spade stainless stock
- Thru-hull seal – fixed bronze packing gland
- Supports – fiberglassed wood table, bronze bearings & collars
- Linkages – bronze tillers & clevises, steel tie-bar
- Steering components – aluminum hydraulic cylinder
- Emergency tiller – n/a

Trim tabs

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

- Manufacturer – Bennett Marine
- Type – 12 volt electric hydraulic

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- Controls – dual rocker switches
- Pump - lazarette
- Planes – 4 each 18”w x 12”l hinged stainless single actuators
- Test performed – vessel trim and running angle adjusted while underway

Thru-hulls, seacocks, transducers

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

- Underwater – Threaded bronze fitted with ¼ turn valves, bonded with stainless clamps on hoses connections at the following bilge locations:
 - Forward of port main engine – **air-conditioner inlet**
 - Forward of stbd main engine – **waste overboard discharge**
 - Engine room aft centerline – **main engine inlets**
 - Lazarette port side – **raw water pump inlet**
 - Lazarette stbd side – **AC generator inlet**
- Topsides – threaded chromed bronze
- Transducers – aft end of lower cabin (in-hull & thru-hull)

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 above average condition and working order. Interior décor was found to be in overall above average condition with very little wear and tear descriptions as follows:

- Doors – hinged & sliding (varnished hardwood)
- Decks – carpeted except as follows:
 - Heads – molded fiberglass
 - Galley – wood pattern laminate
- Cabinetry – varnished hard wood
- Bulkheads and partitions – varnished hardwood, padded vinyl & carpeted
- Ceilings – padded vinyl & vinyl headlinings
- Counters – molded fiberglass, cut composite & varnished hardwood
- Cushions – vinyl skins
- Natural ventilation – opening appliances
- Powered ventilation – head enclosures
- Fixtures and appliances – serviceable

Entertainment equipment

Condition/appearance: average Function: appeared serviceable

Locations/descriptions:

- Main cabin:
 - TV (Element 21”)
 - Stereo, DVD, CD MP3 (touch screen type)
- Aft stateroom – TV (Element 18.5”)
- Flybridge – stereo (Dual)

Galley equipment

Condition/appearance: above average Function: normal

Locations/descriptions – Located in galley except as noted:

- Sink (double stainless)

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- Range & oven (Princess three burner electric)
- Microwave (GE JVM1630WB002)
- Trash compactor (Broan or similar)
- Refrigerator freezer (Norcold DE461 AC/DC)
- Coffee maker (Mr. Coffee)
- Upper deck – refrigerator freezer (Norcold DE451 AC/DC)
- Lower cabin companionway – clothes washer/dryer (Splendide Comb-O-Matic SWD1054M)

Sanitary system

Condition/appearance: above average Function: normal

Locations/descriptions:

- Quantity - two
- Manufacturer - Sealand
- Type – 12 volt vacuum flush freshwater rinse
- Vented loops (if required) – n/a
- Y-valves (direct overboard discharge) – none

Air-conditioning

Condition/appearance: above average Function: normal (except as noted in summary remarks & notes)

Locations/descriptions:

- Quantity - three
- Manufacturer – Marine Air Systems
- Type – self-contained heat pump
- Controls – digital (forward stateroom, main cabin & pilothouse)
- Equipment – forward stateroom, main cabin & pilothouse
- Cooling pump – engine room forward port side (120 volt centrifugal)
- Test performed – all units tested heat & cool programs

Comments:

- **Vessel is also fitted with forced air electric heaters**

TANKS, PUMPS, 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 above average condition without significant corrosion or evidence of leakage to level filled where accessible for inspection:

- Tanks – 444 gallons capacity contained in two aluminum tanks secured in equipment room beneath galley
- Fills – main cabin exterior cat walks port and stbd sides
- Vents – hull sides
- Plumbing materials – USCG Approved Type-A hose
- Shut-off valves – at fuel filters
- Filters – equipment room beneath galley:
 - Main engines – Racor housing Fleet Guard FS19754 element
 - AC generator – Racor R20T
- Level gauges – helm consoles

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Potable water

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

- Tanks – 200 gallons capacity contained in two plastic tanks secured in forward berth and forward stateroom bilge
- Fills – foredeck port side
- Vents – hull sides
- Plumbing materials – plastic tubing
- Shut-off valves – equipment room beneath galley
- Filters – screen at pump inlet
- Pressure pump – equipment room beneath galley (Jabsco Par-Max 3.0)
- Accumulator tank – attached to pump (Shurflo 181-201)
- Water heater – equipment room beneath galley (Seaward S-1800 [18 gallons, 120 volts & engine heated])
- Dock water inlet – transom centerline
- Level gauges – main electric panel

Waste

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

- Tanks – 48 gallons capacity contained in one plastic tank secured outboard of the stbd main engine
- Deck fitting - main cabin exterior cat walk stbd side
- Vents – hull side
- Plumbing materials – PVC and black rubber sanitary hose
- Y-valves – none
- Overboard valve – forward of stbd main engine
- Discharge pump – engine room bulkhead forward of stbd main engine (12 volt macerator)
- Vented loop (if required) - yes
- Treatment device – none
- Level gauges – main electrical panel

ENGINES, AND ENGINE AND VESSEL CONTROLS

Engines

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

- Type/description – inline six cylinders diesels turbocharged and aftercooled equipped with close coupled straight-drive marine transmissions
 - Mounts – adjustable vibration isolator type
- Location - amidships
- Cooling system – closed loop freshwater with raw water cooled heat exchangers
- Mounting:
 - Foundations – hull stringers
 - Beds – angle steel brackets
- Cleanliness – above average
- Fluid levels and condition – based upon visual inspection:
 - Engine oil – full (normal)
 - Engine coolant – full (normal)
 - Transmission oil – full (normal)
- Accessibility - good

Comments:

- **Raw water pump impellers reported replaced by current vessel owner August 2016**

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Exhaust systems

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

- Exhaust manifolds – freshwater cooled cast iron
- Risers – raw water cooled stainless
- Exhaust fittings – bronze elbow
- Muffler – can shaped fiberglass
- Exhaust outlet – transom corners (integral fiberglass)
- Straight runs – black rubber hose
- Connecting hoses – black rubber hose
- Hose connection clamps – double stainless at each connection point

Engine ventilation

Condition/appearance: above average Function: normal

Location & type:

- Natural – hull sides amidships
- Powered – DC blowers

Engine controls

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

- Manufacturer/model - Hynautic
- Description – dual lever type manual hydraulic
- Locations – upper & lower helms
- Neutral safety interlock (prevents starting in gear) – yes

Engine instrumentation

Condition/appearance: above average Function: normal (except as noted in summary remarks & notes)

- Manufacturer - Faria
- Type – analog electric
- Locations – upper & lower helms (except as noted below):
 - RPMs
 - Oil pressure
 - Temperature
 - Volts
 - Fuel
 - Synchronizer (lower only)
- Alarms – yes (audible & visual)

Steering

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

- Manufacturer/model - Hynautic
- Description – wheel type manual hydraulic
- Locations – upper & lower helms
- Reservoir - lazarette

EQUIPMENT

Pumps dewatering and utility

Condition/appearance: above average Function: normal (except as noted in summary remarks & notes)

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Bile location, type & description:

- Lower cabin companionway port side:
 - Shower sump (Johnson 1000 gph in plastic box)
 - Shower sump (Jabsco 12 volt diaphragm type)
- Aft bilge lower cabin companionway:
 - Dewatering (Flojet 12 volt diaphragm type)
 - Dewatering (Johnson 1250 gph or similar)
- Galley equipment room – dewatering (2 x Johnson 1250 gph)
- Engine room – dewatering (2 x Johnson 1250 gph)
- Lazarette port side – raw water washdown (Flojet diaphragm type)

Rigging utility

Condition/appearance: above average Anchoring & bedding: appeared adequate

Type, location & description:

- Tender crane – painted box section aluminum with manual boom articulation and 12 volt winch (upper deck)
- Outboard engine storage bracket (upper deck)

Comments:

- **Moderate to heavy effort required to swing tender crane boom in and out**

Windlass

Condition/appearance: above average Function: normal

Descriptions (windlass located at foredeck unless noted otherwise):

- Manufacturer/model – Muir Cougar
- Type – 12 volt horizontal with wildcat and warping head
- Control locations - foredeck
- Service disconnect – main electrical panel
- Overcurrent protection – main cabin aft end port side (breaker)
- Test performed – anchor lowered down and up from water several times

Accessories

Condition/appearance: above average Function: normal

Description & location:

- Spare propellers (flybridge lounge seat [reported by current owner to be 24” x 25”])

ELECTRICAL SYSTEMS

Galvanic corrosion protection

Condition/appearance: above average Serviceable: yes

Descriptions & locations:

- Anodes (zinc unless noted otherwise) – propeller shafts, rudders, trim tabs and bar type on transom
- Bonding system - yes
- Galvanic isolators – electrical testing indicates isolators are installed

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AC electrical system

Condition/appearance: above average Function: normal

Locations & descriptions of significant components and features:

- Voltage – 120
- Inlet types & locations – 120 volts, 2 x 30 amps & 1 x 50 amps (stbd side of pilothouse)
- Inlet circuit protection – main panel
- Main panel:
 - Location – pilothouse stbd side
 - Instrumentation – volt & amp meters
 - Source selector switches – rotary & toggle type with sliding interlock
- Reverse polarity indicator - yes
- Tests and examinations:
 - Shoreline output - normal
 - Generator output – normal
 - Inverter output - normal
 - AC/DC grounding connection - yes
 - Condition of shore cord – above average
 - Condition of shore cord inlet – above average

DC electrical system

Condition/appearance: above average Function: normal

Locations & descriptions of significant components:

- Voltage - 12
- Panel locations – pilothouse stbd side
- Panel instrumentation – volt meter
- Branch circuit protection - breaker
- Primary circuit protection – breaker (main cabin aft end port side)

Alternating current generators

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

Description:

- Type – four cylinders naturally aspirated diesel equipped with close coupled AC generator end
- Location – lazarette centerline
- Circuit protection:
 - Generator – yes
 - Main panel – yes
- Accessories – drip pan, sound shield and remote control
- Fuel, exhaust, cooling water and electrical connections – serviceable
- Vented loop (may be necessary for deep draft installation) – none installed

Battery charging devices

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

Locations/descriptions:

- AC electric:
 - Engine room aft port side (Promariner Prosport 20 Plus Triple bank)
 - Engine room aft stbd side (see inverter section that follows)
- Alternators – main engines
- Renewable – none
- Charger controllers – n/a

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Inverters

Condition/appearance: above average Function: normal

Locations/descriptions:

- Location, make & model – engine room aft stbd side (Magnum Energy MS2812)
- Output – AC/2,800 watts @ 120 volts; DC/125 amps @ 14.0 volts
- Disconnect location – lazarette port side
- Overcurrent protection location & type – lazarette port side (fuse)
- Installation indicated at man panel? – inverter control at main panel

Storage batteries

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

Damage or abuse: none noted

- Batteries – flooded lead acid secured in covered plastic boxes located in lazarette:
 - House/inverter/thruster – port side lazarette (2 x 8D)
 - Main engine cranking – stbd side lazarette (8D each engine)
 - AC generator cranking – stbd side lazarette (Group 24)
- Disconnects – main cabin aft end port side and port side lazarette

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 or better Function: normal

- Flybridge:
 - Magnetic compass (Danforth Constellation)
 - VHF (Raytheon Ray 220)
 - Chart plotter & radar (Raymarine E70012R)
 - Digital depth (Raytheon ST60)
 - Remote control searchlight
 - Autopilot (Raytheon wired remote)
- Pilothouse
 - 3 x windshield wipers
 - 2 x window defoggers
 - VHF (Raytheon Ray 210)
 - Autopilot (Raytheon ST6000+)
 - Chart plotter & radar (Raymarine Hybrid Touch 12")
 - Fish finder (Raytheon L750)
 - Remote control searchlight
- Autopilot pump (lazarette stbd side)

SAFETY EQUIPMENT

(Items in this section should be considered compliant with applicable sections of Code of Federal Regulations and serviceable unless noted otherwise)

Fire safety equipment

- Fixed - none
- Fixed fire system manual activator – n/a
- Portable handheld USCG Approved Sizes located as follows – **none serviceable**

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Comments:

ABYC recommends compliance with this standard (A-4) for all boats, associated equipment, and systems manufactured after July 31, 2009:

4.5.1 Fire extinguishing equipment (portable or fixed) shall be U.S. Coast Guard approved, and listed or approved by a recognized independent testing laboratory. The installation and use of such fire extinguishing equipment shall be in accordance with the manufacturer's instructions.

4.5.2 Inboard and sterndrive boats with engine compartments shall have either:

4.5.2.1 a fixed fire extinguishing system installed to protect the engine compartment ([see A-4.7](#)), or

4.5.2.2 a single suitably sized clean agent portable fire extinguisher provided and installed in proximity to a port to permit discharge directly into the engine compartment without opening the primary access. ([See Table IV](#) for determination of the minimum portable clean agent fire extinguisher size for this usage).

Gas detection systems

- CO – galley
- Smoke – each stateroom & galley

Emergency bilge pumps and high water alarms

- Dewatering pumps – vessel if equipped with multiple pumps at each bilge location
- Audible alarms – **not found** (indicator lamps at lower helm)

Signaling devices

- Flares - **expired**
- Hull mounted sound - yes
- Handheld sound – not found
- Epirb – not found

Navigation lights

- Side – anchor pulpit (combination type)
- Mast head – front of flybridge
- Stern – aft end of upper deck
- Anchoring – top of spoiler

Flotation devices

- Personal & throwable USCG Approved devices located as follows:
 - Flybridge lounge seats (4 x Type II adult & 2 x Type III adult)
 - Upper deck (Lifesling²)
- Liferafts – none

Ground tackle

Condition/appearance: above average Function: appeared adequate for routine service

Locations/descriptions:

- Primary anchor – 45 lb CQR, chain lead & laid nylon rode (at ready)
- Back-up anchor – conventional, chain lead & laid nylon rode (lazarette)

Additional required (non-safety)

- Pollution placards (Vessels 26 feet and over with a machinery compartment) – underside of engine and lazarette hatches
- Marpol Trash Placard (Vessels 26 feet and over) – inside galley sink cabinet
- Written trash disposal plan (Vessels 40 feet and over) – **not found**

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- Navigation rules (Vessels 39.4 feet and over) – not found
- Vessel identification locations:
 - HIN – upper stbd transom corner
 - Documentation # - forward engine hatch coaming (letters undersize)
 - 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. **Portable handheld fire extinguishers have exceeded their useful service life; replace with new located as follows:**
 - a. **Cockpit stbd storage locker.**
 - b. **Galley cabinet.**
 - c. **Galley equipment room.**
 - d. **Flybridge (add to existing inventory)**
2. **Put aboard at least three unexpired USCG approved day/night visual distress signals or other type USCG Approved system that satisfies the requirement (certain battery powered beacons are now approved).**
3. Put aboard the following as required by Code of Federal Regulations:
 - a. Written Trash Disposal Plan (<http://www.gladdingmarinesurvey.com/pdf/uscgwaste.pdf>)
 - b. Copy of Navigation Rules

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:

4. **Stbd propeller shaft Lasdrop® hull seal leaked profusely when vessel was operated above hull speed; service as necessary to restore its normal leak free function.**
5. Stern thruster anode has significant wastage; replace with new.
6. **Manually switched dewatering bilge pump in engine room is inoperative; service as necessary to restore its normal function (rewiring if necessary should be done using waterproof connections).**
7. **Top of AC generator muffler was noted to be wet; monitor for active exhaust leakage, repair or replace if necessary.**
8. **Replace missing clamps on AC generator exhaust system hose connections at the following locations:**
 - a. **Inside sound shield port side aft end bottom.**
 - b. **Muffler inlet connection (space permitting on nipple).**
9. **House battery bank located in port side lazarette has several connections and fuse holder that are corroded; service as necessary to insure reliable function and charging of the house battery bank.**
10. **Install level switches at each bilge location that sound audible alarm when excess water is present.**

SUGGESTED REPAIRS AND/OR CHANGES

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

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11. Swim platform corners are spider cracked, crushed slightly and section of rub rail is missing port side; repair as necessary to improve its cosmetic appearance.
12. Canvass on forward section of flybridge Biminis has areas where stitching is failing; service as necessary to insure it remains securely attached to frame while underway.
13. Latch is missing from lazarette stbd hatch; replace with new to insure it remains tightly closed when shut.
14. Air-conditioner hull exterior clam shell scoop is missing a deflector bar; replace scoop with new.
15. Overhead light fixture in middle port stateroom has dried water stain; monitor for active leakage, locate and repair if necessary.
16. Forward stateroom air-conditioner filter is dirty; service as necessary, inspect other units and service if necessary.
17. Forward air-conditioner does not run heat program possibly due to control programming; service as necessary to restore heat program function.
18. Puddle of water noted under water heater; locate source of leakage and repair as necessary (possibly leaking water heater).
19. Install isolation 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.
20. Engines performed well at lower rpm ranges (hull speed) but exhibited the following that should be inspected and serviced by a Cummins engine specialist to insure their reliable function:
 - a. Engines turn over slowly when started; troubleshoot and repair as necessary.
 - b. Engines smoked moderately at low rpms possibly due to inoperative inlet air heaters; service as necessary to reduce/eliminate smoke.
 - c. Engine oil lube oil noted leaking from both turbochargers; determine source of leakage and repair as necessary.
 - d. Lube oil noted on top of stbd main engine between valve covers prior to trial-run; clean oil, monitor for active leakage and repair leakage if necessary.
 - e. Stbd main engine after cooler is of indeterminate age; replace with new if found to be original.
 - f. Inspect engines to insure all normal maintenance items are serviced; perform any work necessary to insure reliable function of main engines.
21. Lower helm stbd engine instruments indicate out of range compared to other helm locations; service as necessary to restore their normal function.
22. Lower helm stbd ignition switch malfunctioned intermittently; service or replace as necessary to insure its reliable function.
23. AC generator battery does not appear to be connected to onboard AC electric battery charger; suggest connecting battery to charger to insure it is maintained during periods vessel is not in use.
24. Inverter powered circuits are not indicated on main electrical panel; suggest labeling inverter circuits to furnish quick reference for panel operators.
25. Running lights functioned normally when switched at lower helm but not at flybridge; service as necessary to insure their reliable function from both helm locations.

(End of report photo pages to follow)

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PHOTOS



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