



Bugher Marine Services, LLC

7 Harrison Lane

Princeton Jct., NJ 08550

609-275-2600 phone, Web: www.bughermarine.com

e-mail – blair@bughermarine.com

(member: SAMS, ABYC, SNAME, IAMI, MTA of NJ)

**Vessel Surveys/Investigations, Yacht Deliveries,
Operator Training and Repossessions**



September 3, 2021

Marine Survey For: Neil Iden

207 Clearwater Dr., Forked River, NJ 08731

Date(s) of Survey: September 1 & 20, 2021

Survey Performed At: 207 Clearwater Dr. & Townsends Marina

Owner of Vessel: Neil Iden

Parties Present: B Bugher (9/1 & 9/20)

Weather Conditions: Overcast, Breezy, Warm (9/1), Clear, Warm, Humid (9/20)

Purpose of Survey: Insurance / Condition-Valuation

Vessel Name/Hailing Port: Stress Relief / Forked River, NJ

Manufacturer/Year/Model: Island Gypsy / 1987 / 40 Conv.

Standards used in this inspection/survey may include the following: USCG Navigation Rules International/Inland, ABYC Standards for small craft, NFPA 302, CFR Section standards 33 & 46. This marine survey is a general assessment of the vessel and its systems with regards to safety/compliance issues, and overall value of the vessel. In many cases, visual inspections only were utilized to determine the existence of devices or materials. Any actual test/operation results are noted as such. This was a non-destructive examination and did not include removal of fixed systems to allow viewing of areas that may not be readily accessible. Any testing of the engines or other vessel systems was done only to verify operation at present, not for the purposes of determining extent of wear, calibration or remaining life expectancy. Survey was first performed in-water with the vessel berthed at the owner's home. Vessel was hauled with the bottom pressure washed and underwater surfaces inspected at Townsend's Marina. Survey was performed for recreational use consideration. Unless noted otherwise, all visible/accessible equipment is in average/serviceable condition, appearing suitable for intended use.

Vessel Dimensions:

Length- 40'- 0"

Beam- 15'- 6"

Draft- 3'- 6"

Weight- 31,500 lbs.

Note: All vessel dimensions "approximate" from published data.

Vessel Numbering/Registration:

State Registration – Vessel did not display state registration numbering. (Annually or as required, vessel owner is reminded to obtain and display correct registration for the state/locale of berthing/use. This may include display of valid registration stickers/decals).

Federal Documentation – The vessel was Federally Documented, with an assigned number of **937171** found affixed to the vessel structure in the engine room. An internet search revealed this number is correct for this vessel.

Manufacturers Hull Identification Number – A hull ID number of **KHE40014A787** was very lightly engraved into the aft-starboard hull side (is illegible, this data is from USCG Documentation data), which indicates the vessel as a 1987 model, with hull built January 1987 by Kong & Halverson (Peoples Republic of China).

Notes: Owner is reminded to update/revise registration for the location of berthing/use with display of proper registration numbering and registration stickers/decals for that location. If vessel will remain documented (in the US), registration numbers may not need to be displayed, but updating of documentation data and display of correct/new name/hailing port are required and annual state registration stickers/decals may still be required for many states.

Vessel Exterior/Hull:

Hull type – Vessel was a modified vee fiberglass hull with believed fiberglass and some cored topsides, utilizing twin (2) diesel fueled straight inboard propulsion.

Visual inspection and random dead blow hammer soundings results –

Bottom Paint Condition – Bottom paint was in average/worn condition with evidence of minor marine growth. (Bottom prep and re-coating is suggested for the next seasons use as part of normal maintenance).

Visual Inspection and Random Hammer Soundings Revealed – No areas of suspected delamination, structure blistering, or structural voids/delamination were noted. Several small (about ½” diameter) and shallow gelcoat blisters were found primarily between the chine and the waterline on both sides (not a structure concern at present). A moderate suspected larger blister/void/soft spot about 4” in diameter was noted on the starboard side of the keel, roughly in line with the shaft log exit from the hull bottom. A similar smaller (about 1.5” diameter) suspected blister/void/soft spot was noted on the port side near the top of the keel, just aft of midship. (Both larger spots shown as chalk circles on the bottom in the photos).

Misc - Deck areas were solid with no “weak/springy” sections noted. Accessible stringers/bulkheads were secure with no sign of delamination or tabbing failure. The bow pulpit was split along the edges but was secure at present. Minor splitting was also noted around the bridge ladder cutout in the aft-starboard corner of the bridge floor.

Structure Moisture – Recent drizzle and high humidity prevented taking of meaningful non-destructive core moisture readings.

Hull to Deck Joint/Rubrail – Hull to deck joint was secure at all accessible locations. Rubrails were secure and in good overall condition.

Swim Platform/Ladder – A wooden (believed teak) bolt-on swim platform was secure across the transom. A hinged swim ladder was securely installed on port side of the swim platform. The swim/recovery ladder extended roughly 18” below waterline.

Trim Tabs/Through-hulls – Hydraulic double ram trim tabs were securely mounted to the hull bottom/transom. Metallic (believed bronze) thru-hull fittings were used below and above waterline. All fittings were secure and in visually serviceable condition.

Exterior/Finish - Finish on the hull sides and on the topsides was in overall slightly below average condition. Hull sides were in chalked/average condition, but the topsides had numerous areas of paint flaking and the gelcoat was wearing thin in several locations. Clear coated exterior wood trim was serviceable, but the finish was peeling in many areas. The starboard side deck drain was plugged, in the depressed area near the lower helm.

Covers, Cushions & Enclosures – Exterior perimeter cockpit gunwale bolster cushions were in very worn condition with UV deterioration, small tears and stitching failing. A short fabric bimini sunshade in worn condition with minor tearing was on secure tubular stainless framing from the aft edge of the bridge floor (shading the forward cockpit area). The bridge cushions were in overall worn but average/serviceable condition. A fixed fabric bimini top was secure to a welded tubular aluminum frame above the bridge/helm. A three sided (forward-port-starboard) bridge enclosure of clear vinyl/fabric was in cloudy/poor condition.

Layout:

Open cockpit is aft with starboard transom boarding/fish door to the swim platform. Bridge ladder is forward to starboard, with double sliding saloon entry doors just to starboard of centerline. Steps both sides from the cockpit lead to the side decks/bow area. Cabin has saloon aft with opposing sofas port-starboard. Lower helm, door to the starboard side deck and main electric panels are forward to starboard. Galley is forward to port. Forward-down from the saloon is the guest bunk stateroom to port and head/shower opposite. Master stateroom is forward with direct head/shower access in the aft-starboard corner. Engine/rudder area access is via a saloon floor hatch or a cockpit hatch.

Life Preservers/PFD's:

The following were found onboard:

<u>Type/Size</u>	<u>Quantity/Notes</u>
II-Adult	15
IV-Cushion	1 (no retrieval line attached)

Notes: A minimum of one (1) PFD of either type I, II or III in appropriate sizes so that one is available for each person on board is suggested to be carried. Additionally, a minimum of one (1) type IV throwable PFD is suggested to be carried. All PFD's are suggested to be removed from any sales/packaging materials and stored so as to be readily available. The type IV PFD is suggested to have a retrieval line attached, to aid in recovery of a person overboard. Type V PFD's may be used and counted towards the minimums but must be worn while underway.

Visual Distress Signals:

The following were found onboard:

<u>Type</u>	<u>Expiration Date</u>	<u>Quantity</u>
12 ga aerial flares	expired	6 (with two (2) operable launchers)
Hand flares	expired	3
Hand smoke flares	expired	1
Day distress flag	N/A	1

Notes: New visual distress signaling devices are suggested. A minimum of three (3) visual distress signals (or one (1) of the new/approved battery operated devices) meeting both day/night requirements is suggested to be carried. Pyrotechnic or battery-operated devices are suggested to be monitored for

deterioration or expiration dates, with new devices obtained as expiration dates arrive or if devices are unusable. Expired devices may be carried as spares only. Visual distress signals are suggested to be removed from any original sales/packaging materials so as to be readily available.

Navigation Lights and Shapes:

Sidelights - Separate lights, both illuminated OK.

Sternlight – Illuminated OK.

Masthead Light – Illuminated OK.

Anchor Light – Illuminated OK.

Sound Signals:

Bell – Was stored in the bridge locker.

Whistle (Horn) – An electric powered dual trumpet unit failed to sound.

Ergonomic & General Safety Issues (Exterior):

Railings/Rails - A tubular stainless steel railing with intermediate height vinyl coated cable, all on secure vertical stanchions was mounted around the bow and along part of the side decks. While side deck width was “average”, extreme care is still suggested to be used in transiting from cockpit to the side/forward decks, and while any persons are on the forward deck. Except for docking/anchoring/line handling or as approved by the vessel operator/master, persons are not suggested to be on the forward deck when the vessel is underway).

Secure tubular handrails and/or railings were mounted on the bridge sides along the side decks.

Toe Rail – A painted wood toe rail was securely installed along the side/forward decks.

Decks – Average/narrow width side decks were provided for access to the bow/forward areas. Extreme care is still suggested to be utilized by persons going forward, especially if vessel is away from the dock/underway. A non-skid pattern in worn condition was painted on the exterior deck areas.

Cleats - Were securely mounted with two (2) forward, two (2) amid-ships, and two (2) aft with corner chocks.

Ground tackle - Consisted of a galvanized Danforth 20-H flat fluke type anchor in a dual roller bow pulpit/roller assembly. Anchor rode was chain and nylon in overall secure/serviceable condition, but the direct rope-chain splice link was notably rusting. Bitter end of the rode is suggested to be secured to the vessel. Anchor is suggested to be mechanically retained in storage (by a cable, clip, line, etc).

Anchor/rode was handled by a Lewmar DC electric vertical windlass

Misc –A GoLight remote control searchlight was mounted forward on the bridge with upper helm control. Cockpit drained overboard via transom scuppers.

Notes: Person overboard recovery is probably most easily performed from the swim platform. This still requires a huge lift to the cockpit deck. All vessel owners/operators are suggested to develop and practice an overboard retrieval plan, including practice to avoid injury to a person in the water from either the vessel or propulsion machinery. This should include practice of lifting a weak or unconscious person from the water.

Helm Systems/Navigation Equip:

Steering Control – Fixed wheel hydraulic steering was securely installed and operated freely/smoothly. The Hydraulic steering reservoir starboard in the engine room was at OK fluid level and pressure. No evidence of hydraulic steering leakage was noted.

Bow and Stern thrusters – None.

Seating/Helm – Bridge helm consisted of securely mounted pedestal seats with armrests. Other bridge seating was secure bench type seats. Lower helm had no installed seating.

Clutch and throttle - Controls were dual lever push-pull cable types (four (4) levers for clutch and throttle functions at each helm).

Gauges/Accessories – Joysticks were at both helms for the trim tabs. Hydraulic reservoir was low on fluid but was securely mounted.

Engine instrumentation included the following (one for each engine/side): oil pressure, coolant temperature, tachometers, transmission pressure (upper helm); and oil pressure, coolant temperature, tachometers, transmission pressure and ammeters (lower helm); (all analog, no gauges were checked for calibration).

Navigational electronics -

Compass – Magnetic compasses in serviceable condition were at each helm along with a KVH Azimuth 314AC electronic compass at the upper helm.

VHF(s) – An Icom VHF was at the lower helm, with remote Command Mic's at upper and lower helms, and a West Marine VHF500DSC at the upper helm.

GPS/Chartplotter/Radar/Depth/Fishfinder – A Simrad GPS/Plotter/Radar multi-function display was at the upper and the lower helm, with an estimated 4' open array magnetron mounted above the bridge bimini framework. (Perimeter of the bridge helm display was deteriorating).

Autopilot – A Simrad AP26 autopilot was installed at the upper helm.

Misc – An analog rudder position indicator was installed at the upper helm.

Domestic Systems:

Water –Domestic water pressure was provided from a Seaflo #030-055-42 automatic pressure pump in good condition. Water capacity was provided by three (3) believed stainless steel water tanks. An aft shore water inlet was provided starboard corner-aft in the cockpit. No evidence of leakage was noted from accessible domestic water hoses, lines or fittings.

Domestic hot water was provided by a nominal/estimated 20-gallon fiberglass covered AC electric water heater (no heater labeling as to voltage/wattage/manufacture). Engine heat exchanger fittings were provided with engine coolant hoses just starting to show cracking.

Heads/MSD's: A single (1) Raritan electric macerator type head (toilet) was installed (in "newer" condition). System was converted to rinse/flush on domestic/fresh water (old raw water supply was closed/plugged). Waste was discharged to a believed poly holding tank system with deck pump-out (qualifies as a type III MSD). No leakage, odor or cracking hoses was noted on/around accessible systems/hoses/fittings. If overboard discharge is ever installed/used, it is only permitted offshore. Vessel owner/operator is suggested to check both local and state/federal regulations prior to any waste discharge. Fines may be incurred for illegal discharge of waste.

A Rule 1500 auto shower drain sump/pump was installed in the bilge near the head/shower. Head area incorporated a separate stall shower, and had a believed marble countertop.

Galley Systems/Appliances:

Range/Stove – A Jenn Air 220-v two burner stove and grille was installed in the galley. No stove lid/cover was installed.

Microwave - None.

Refrig/Freezer(s)/Icemaker – A Norcold #DE-0041R-12/120-v undercounter galley/saloon area refrigerator/freezer was installed in good condition.

Washer/Dryer – None.

Misc –None.

Entertainment Systems:

Saloon/Dinette – An Envision flat nominal 20” TV was installed along with a Sony SLV-D370P VHS/DVD player.

Air-Conditioning/Heating: The vessel uses dual (2) self contained raw water cooled believed reverse cycle Marine Air air conditioning/heating systems. Saloon (believed 16,000 BTU) and forward stateroom (believed 12,000 BTU) systems had analog controls. A believed common raw water pump, through-hull valve, strainer and hoses were in secure/serviceable condition.

General Furnishing Notes: The saloon sliding entry doors operated OK, but hold-open latching is suggested for both doors. Clear wood finish was deteriorated with wood darkening in the forward-lower and upper saloon (forward window) corner and in the port lower window corner. The saloon believed teak wood paneling is buckling aft, and aft port and starboard in the saloon. Wood finish is well worn throughout. Wood has deteriorated in the upper corner and near the aft-starboard foot of the berth; in the aft-starboard corner of the forward stateroom. Wood has deteriorated in the aft-starboard corner of the port bunk stateroom.

Overall, furnishings including flooring, floor coverings, head and hull liner, cabinetry, cushions and trim were all in average condition.

Water Pollution Reg's:

A bucket/bailer is suggested to be carried for containment of any pollution/oil for proper disposal once ashore. As a 40' and above vessel, a written waste management plan is suggested to be developed/carried (none found).

Oil Pollution Discharge Prohibition Placard - Was posted in the engine room.

Marpol Garbage Disposal at Sea Placard – Was not found (suggested to be posted in a galley cabinet).

Fire Extinguishing Equip/Misc Safety:

Portable –

<u>Qty</u>	<u>Type</u>	<u>In secure bracket</u>	<u>Factory test or re-certification date</u>	<u>Gauge Reads</u>	<u>Located</u>
1	10B:C	yes	2013	full	saloon port side
1	10B:C	yes	2015	full	saloon stbd side
1	10B:C	no	2013	full	loose in the galley
1	1A-10B:C	no	04/2006	full	loose in the galley

Standards suggest for the carrying of a minimum of four (4) portable fire extinguishers of minimum sizes 1A-10-B:C mounted in approved brackets so that one is available near the helm, near the galley, near the crew quarters, and near the engine compartment access. (Type A rating may be eliminated for the extinguisher dedicated to the engines/fuel compartment). Additional/correct minimum size (two more with minimum 1A-10B:C rating) extinguishers are suggested to be obtained/installed. All extinguishers are suggested to be mounted in approved brackets. All current extinguishers are due for annual re-certification. The current portable extinguishers (except for the one re-certified 04/2006) are Kidde plastic head models, Kidde has a major recall of many plastic head fire extinguishers, please go to www.Kidde.com, Product Safety Recall to get more information.

Fixed/Automatic – One (1) Fireboy #200CG fixed/automatic Halon 1301 fire extinguishing system was installed in the engine room. Unit was dated 11/1989 and was sized for a maximum compartment volume of 1000 cu.ft. (OK for current volume less tankage). No helm status indicator or diesel engine shutdown/override was installed.

One (1) Fireboy #70CG fixed/automatic Halon 1301 fire extinguishing system was installed in the engine room. Unit was dated 09/1986 and was sized for a maximum compartment volume of 350 cu.ft. (supplemental extinguisher, not sized adequately/by itself for current volume less tankage). No helm status indicator or diesel engine shutdown/override was installed. Diesel engine auto shutdown/override interlocks are suggested, since diesel engines may continue to run and draw-in/eliminate the adequate coverage capability of the extinguisher(s) (both are safety upgrades). Annual re-certification is also suggested for both units.

Note: All extinguishing systems (both fixed and portable) are suggested to be inspected annually, with periodic re-certification including reweighing so as to verify operability and no loss of contents. Re-certification of the existing portable extinguishers is suggested.

Ergonomic & General Safety Issues (Interior):

Emergency Cabin Egress – A forward stateroom overhead hatch was provided forward that opened/latched closed OK.

Smoke/Carbon Monoxide Detector(s) – While not required by standards at time of vessel construction, smoke and CO detectors are suggested for all accommodation spaces. (If battery units are installed, batteries for all units are suggested to be replaced annually, as part of normal maintenance).

Bilge Pumps:

<u>Location</u>	<u>Brand/Size</u>	<u>Auto Operation/Notes</u>
Fwd	Rule 1500	OK auto control
Fwd eng rm	Rule 2000	OK auto control
Aft	Rule 2000	OK auto control

Notes: All pumps were securely mounted with discharge hoses in secure/serviceable condition where visible. Bilges are reminded to be maintained clean/clear of debris, to minimize the possibility of blocking/stopping the pumps.

Electrical:

Batteries/DC:

<u>Size/Type</u>	<u>Believed Purpose</u>	<u>Comments</u>
(2) 8D lead-acid	engines	
(1) 4D lead-acid	house	

Batteries Secured in Place – All were secured against movement.

Batteries in Liquid Containment Trays/Cases – Full spill containment cases was provided.

Metallic Fuel Assemblies Within 12” of Batteries - None noted.

Battery Venting - To the bilge, which vents to the vessel exterior.

Battery Disconnect Switching - Was provided below the steps to the forward staterooms with manual switches for port, starboard, and generator.

Battery Covers – Full/vented covers were installed to protect against accidental battery terminal contact.

Circuit Protection - Was by labeled circuit breakers. No circuit breakers were found or became tripped during the survey.

Gauges – A digital ammeter was provided and showed readings OK.

Inverter – No DC to AC inverter was found.

Misc – Several small terminal blocks were a type where the machine screw bears direct onto the wire strands. These can damage/cut the wire and are suggested to be replaced with a type using a pressure plate(s) contacting the wire strands. Bonding to underwater metal appeared secure.

AC:

Shore Power – A single (1) nominal 50-amp/120//240-volt cable inlet was installed (currently supplying 120-v loads only via a 30-a 120-v cord). Cables/ends were in serviceable condition with no burning of contacts.

Shore Power Inlet Warning Label – Was not found (suggested to be posted at/near the cable inlets, reminding to shut-off shore power before connecting/disconnecting the cords).

Main Overcurrent/ELCI Protection – Local shore power main breakers were at the starboard side lower helm, within 10' of the shore cable connection points. No ELCI shore power breakers were found (not required at time of vessel construction)

Break-Then-Make Transfer Switching – Break-then-make switching for shore or generator power selection was provided.

Transformers – None found.

Branch Circuit Protection - Labeled two-pole and single pole circuit breakers were provided.

Gauges – A 150-v and a 250-v analog voltmeter were installed (150-v gauge showed readings OK).

AC Ground/ DC Negative Bonding - Tested as bonded.

Reverse Polarity Indication – Not required, but was provided.

Polarity - OK on all accessible 120-volt outlets.

Battery Charging – A 40-a Charles 5000sp series automatic battery charger was installed.

GFCI Protection - Was provided in the galley, with tripping at 7.4 ma / 141 ms (OK), but the forward galley receptacle wasn't GFCI protected. GFCI receptacles are suggested for all galley locations, and are also suggested if installed in the head areas.

Misc – The coverplate was missing for the 120-v duplex receptacle port side in the forward stateroom.

Fuel Systems:

Tank(s):

<u>Manufacturer</u>	<u>Mat'ls of Construction</u>	<u>Dated</u>	<u>Capacity</u>
No labeling	believed welded steel	believe original	495 liters (131 gals, fwd stbd)
No labeling	believed welded steel	believe original	840 liters (222 gals, aft stbd)
No labeling	believed welded steel	believe original	97 gals (port)

No labeling was found as to materials of construction, tank capacities, pressure testing, or fabrication dates. The tanks appear to be original construction. Capacities for fwd stbd and aft stbd tanks are from labels on the deck fills. The total fuel capacity (per published data) is 450 gals, so port tank capacity was assumed to be the remainder of the total capacity after reducing for the starboard fill labeling.

The tanks were painted, but moderate rusting was present, especially on the tank top surfaces. Without tank fabrication data and certification of fabrication/testing per standards, surface cleaning of rust/scale, verification of tank wall thickness (if feasible) and pressure testing/certification of the tanks is suggested. Much of the fuel tanks surfaces were inaccessible for inspection. The limited portions of the tank tops/inner faces that were visible showed no sign of leakage. No odor or evidence of fuel was noted in bilge areas or at accessible lines/fittings. Tanks were secured in place and did not sit in normal

bilgewater levels. Sight gauges with bottom only valving were installed (sight gauge valving is reminded to be left closed when level is not being checked).

Tank Fill Line(s) – Were clear hoses with no labeling, with single clamping at the visible tank connections. (Suggested to be new type A2 hose, with secure double clamping at all hose connections).

Vent Hose(s) - Were clear hoses with no labeling, (suggested to be new type A1, A2, or A1-15 hose), with secure clamping at all hose connections).

Supply and/or Return Lines - Where visible were copper, with badly corroded/deteriorated steel braid flex to the engines with no labeling remaining (suggested to be new type A1 or A1-15 hose, with connections securely clamped).

Fuel Filters - Main engines used Racor 900FG filters in good exterior condition, and fuel visible in the filter bowl was clean.

Bonding - Tested OK between the DC negative and all three (3) tanks, but no bonding was found to the metallic deck fill fittings (bonding at no more than 1-ohm is suggested).

Misc - Flexible hose connections were utilized to the engines. Tank vent and fill fittings were positioned so as not to normally discharge into the vessel.

Notes: All fuel tanks can deteriorate or be damaged, and often deteriorate from the inside with no external warning. While the flash point of diesel fuel does not present the volatility of gasoline, diesel fuel will ignite readily under warm/hot ambient conditions, or if sprayed onto hot engine components. The entire diesel fuel system is suggested to be monitored regularly for any deterioration or leakage, with the vessel/system immediately removed from service and repairs performed immediately if leaks are noted. If and when ethanol is ever blended into local diesel fuel, the tank compatibility with ethanol is suggested to be immediately verified.

Exhaust Systems:

A separate/dedicated raw water-cooled exhaust was provided from the main engines to believed fiberglass wrapped believed steel mufflers, and aft to through-hull outlets. Generator had a separate/dedicated exhaust, fiberglass muffler, and through-hull outlet. Except as noted, the exhaust hoses/connections were in secure/serviceable condition where visible, with double clamping noted at exhaust hose connections. All exhaust connections were generally accessible. No sign of leakage was noted from the exhaust system components.

The fiberglass coating/wrap on the main mufflers was peeling away, and moderate rust/scale was visible under the fiberglass, with minor rust staining (the integrity of the main mufflers is suggested to be verified). The main exhaust hoses were very stiff, with minor cracking noted at the visible cut ends of the hoses.

Notes: While diesel engines do not produce as much carbon monoxide as gasoline fueled propulsion, exhaust leaks can still be deadly. All exhaust system components are suggested to be inspected regularly for any deterioration or leakage with the vessel removed from service and repairs performed immediately if any deterioration or leakage is noted.

Ventilation:

Gravity ventilation openings for the engine/fuel compartment were in free and clear condition. Dual (2) nominal 4" rudder area/lazarette room believed heat exhaust fans were installed (not tested).

Miscellaneous Systems/Accessories:

A Shurflo Blaster #2088-534-344 raw water pump had through-hull intake valve and hoses secure/serviceable and was plumbed to cockpit and bow faucets.

Four (4) cockpit gunwale recessed rodholders were installed, with one each side believed Rupp #4486 (or similar type) double spreader outriggers mounted outboard port-starboard to the main cabin/bridge (spreader cables and tubular riggers in average/serviceable condition).

Engine(s)/Propulsion System(s):

<u>Make/model</u>	<u>Serial #'s Engine</u>	<u>Hours</u>
Caterpillar 3208	O1Z07265	1185 (port)
Caterpillar 3208	O1Z07269	1897.2 (starboard)

Vessel was equipped with two (2) diesel fueled turbocharged and intercooled straight inboard propulsion systems. Engines were in overall average external condition. Starboard hourmeter is believed "correct" with port hourmeter appearing to be a slightly newer design meter. Both engines are believed rated 375 Hp.

Fluids - Engines were fresh water cooled, through raw water heat exchangers. Raw water supply was through secure but stuck open (couldn't get valve handles to move) thru-hull valves and hoses.

Bilges/Spill Containment - Any spillage from the engines is contained by drip pans below the engines. Bilges were in average overall condition. Vessel owner is reminded to maintain bilges in clean and dry condition. Spill containment pads/pillows are suggested to be used and changed as needed. Vessel owner is liable for any pollution discharge.

Misc - Unless verified as recently performed and if/as suggested, routine full servicing including replacement of fluids/filters, check/replacement of belts and hoses, checking of impellers/coolers, cleaning of heat exchangers/intercoolers, turbocharger servicing/cleaning, injector testing/tune-up, replacement of anodes, etc is suggested as part of normal maintenance. Both exhaust raw water injection pipes/shower assemblies appear to be of original construction (no disturbance of paint noted on fasteners/fittings). Unless verified as recently changed, careful monitoring of the raw water exhaust components is suggested. Many feel that depending on construction methods, 15-20 years' service life is "average" for these components.

The engine is approaching 2000 hours, and many Caterpillar maintenance requirements suggest for removal/cleaning/testing of intercoolers & heat exchangers, inspection/servicing of the raw water system, and inspection/servicing of turbochargers, every 1000 hours. There is no indication when/if these services were performed (check with Caterpillar for exact details, but unless verified as performed, these services are usually strongly suggested).

Transmissions - Twin Disc #MG-507-1 transmissions were installed. Serial numbers are reportedly 5W4987 (port) and 5W4979 (starboard), with ratios of 1.512 : 1.

Propeller(s)/Rudders - Shafts were nominal 1.75" diameter with no abnormal wear noted. Propellers were three blade believed bronze alloy types sizes 24 x 18 in average/serviceable condition. Strut bearings showed normal/even wear with no play between prop shafts and bearings. Shafts were reasonably well centered into the through-hull log assemblies. Rudders were securely mounted with no abnormal side/vertical play. Conventional packing type prop shaft seals were installed, with hoses/clamps secure/serviceable and no leakage noted. Rudder post seals were conventional packing types with no leakage noted.

Underwater Anodes - Anodes in currently worn condition were securely mounted to the transom, shafts, trim tabs, and the struts. (Depending on aggressive nature of the waters where the vessel will be used/stored, new anodes may be suggested for the next seasons usage, and anodes are suggested to be checked for deterioration regularly with new installed/bonded to clean metal if deterioration approaches 50%.)

Start-In-Gear Protection:

Not tested. It is suggested to be verified that the clutch controls must be in neutral before engine starting is allowed.

AC Generator System(s):

<u>Make/model</u>	<u>Serial No.</u>	<u>Hours</u>
Westerbeke / 8KW	unknown	1270.0

Generator was inside a sound enclosure and tools were required for access. Visible exterior condition of the generator was average. Unless verified as recently performed, routine full servicing including replacement of fluids/filters, replacement of belts/hoses, checking of impellers/coolers, tune-up, replacement of anodes, etc is suggested as part of normal maintenance. Generator start controls near the lower helm included coolant temperature, oil pressure and charging voltage gauges.

Cooling System - Generator was fresh water cooled, using a seawater heat exchanger. Raw water supply was through a secure/serviceable through-hull valve and hoses.

Summary:

Vessel is a production built flybridge convertible design in overall average (but slightly below average exterior cosmetic) condition. Vessel is designed and is suitable for use in inshore/protected waters conditions, or in selected/moderate near coastal waters conditions by an experienced helmsperson. Notable issues which are suggested for attention include the following: (Numbers are for reference only and do not indicate any importance).

Major/Safety Issues:

1. Annually or as required, vessel owner is reminded to obtain and display correct registration for the state/locale of berthing/use. This may include display of valid registration stickers/decals).
2. If vessel will remain documented (in the US), registration numbers may not need to be displayed, but updating of documentation data and display of correct/new name/hailing port are required and annual state registration stickers/decals may still be required for many states.
3. A minimum of one (1) PFD of either type I, II or III in appropriate sizes so that one is available for each person on board is suggested to be carried (requirement will vary with different persons on board). Additionally, a minimum of one (1) type IV throwable PFD is suggested to be carried. All PFD's are suggested to be removed from any sales/packaging materials and stored so as to be readily available. The type IV PFD is suggested to have a retrieval line attached, to aid in recovery of a person overboard.
4. New visual distress signaling devices are suggested. A minimum of three (3) visual distress signals (or one (1) of the new/approved battery operated devices) meeting both day/night requirements is suggested to be carried.
5. The dual trumpet horn/whistle unit failed to sound.
6. Hold-open latching is suggested for both sliding saloon entry doors.
7. Standards suggest for the carrying of a minimum of four (4) portable fire extinguishers of minimum sizes 1A-10-B:C mounted in approved brackets so that one is available near the helm, near the galley, near the crew quarters, and near the engine compartment access. (Type A rating may be eliminated for the extinguisher dedicated to the engines/fuel compartment). Additional/correct minimum size (two more with minimum 1A-10B:C rating) extinguishers are suggested to be obtained/installed. All extinguishers are suggested to be mounted in approved brackets. All current extinguishers are due for annual re-certification. The current portable extinguishers (except for the one re-certified 04/2006) are Kidde plastic head models, Kidde has a

major recall of many plastic head fire extinguishers, please go to www.Kidde.com, Product Safety Recall to get more information.

8. Annual re-certification is also suggested for both fixed/automatic fire extinguishing units.
9. While not required by standards at time of vessel construction, smoke and CO detectors are suggested for all accommodation spaces.
10. The forward galley 120-v electric receptacle wasn't GFCI protected. GFCI receptacles are suggested for all galley locations, and are also suggested if installed in the head areas.
11. The 120-v electric coverplate was missing for the 120-v duplex receptacle port side in the forward stateroom.
12. Diesel fuel tank fill hoses were clear hoses with no labeling, with single clamping at the visible tank connections. (Suggested to be new type A2 hose, with secure double clamping at all hose connections).
13. Diesel fuel tank vent hoses were clear hoses with no labeling. (suggested to be new type A1, A2, or A1-15 hose), with secure clamping at all hose connections).
14. Diesel fuel supply and/or return lines had badly corroded/deteriorated steel braid flex to the engines with no labeling remaining (suggested to be new type A1 or A1-15 hose, with connections securely clamped).
15. The fiberglass coating/wrap on the main engine exhaust mufflers was peeling away, and moderate rust/scale was visible under the fiberglass, with minor rust staining (the integrity of the main mufflers is suggested to be verified).

General Issues:

1. A moderate suspected larger blister/void/soft spot about 4" in diameter was noted on the starboard side of the keel, roughly in line with the shaft log exit from the hull bottom. A similar smaller (about 1.5" diameter) suspected blister/void/soft spot was noted on the port side near the top of the keel, just aft of midship.
2. The bow pulpit was split along the edges but was secure at present. Minor splitting was also noted around the bridge ladder cutout in the aft-starboard corner of the bridge floor.
3. The starboard side deck drain was plugged, in the depressed area near the lower helm.
4. Anchor rode direct rope-chain splice link was notably rusting.
5. The perimeter of the bridge helm GPS/radar/plotter display screen was deteriorating.
6. The water heater heat exchanger engine coolant hoses were just starting to show cracking.
7. As a 40' and above vessel, a written waste management plan is suggested to be developed/carried (none found), and a Marpol Garbage Disposal at Sea placard is suggested to be posted in/near the galley.
8. Several small DC electric terminal blocks were a type where the machine screw bears direct onto the wire strands. These can damage/cut the wire and are suggested to be replaced with a type using a pressure plate(s) contacting the wire strands.
9. A Shore Power Inlet Warning Label was not found (suggested to be posted at/near the cable inlets, reminding to shut-off shore power before connecting/disconnecting the cords).
10. The diesel fuel tanks were painted, but moderate rusting was present, especially on the tank top surfaces. Without tank fabrication data and certification of fabrication/testing per standards, surface cleaning of rust/scale, verification of tank wall thickness (if feasible) and pressure testing/certification of the tanks is suggested.
11. No bonding was found to the diesel fuel metallic deck fill fittings (bonding to DC ground at no more than 1-ohm is suggested).
12. The main engine exhaust hoses were very stiff, with minor cracking noted at the visible cut ends of the hoses.

13. The main engine raw water supply through-hull valves were stuck open (couldn't get valve handles to move).
14. Both exhaust raw water injection pipes/shower assemblies appear to be of original construction (no disturbance of paint noted on fasteners/fittings). Unless verified as recently changed, careful monitoring of the raw water exhaust components is suggested. Many feel that depending on construction methods, 15-20 years' service life is "average" for these components.

Miscellaneous/Cosmetic Issues (some are issues often found on vessels of this age/type):

1. Several small (about ½" diameter) and shallow gelcoat blisters were found primarily between the chine and the waterline on both sides (not a structure concern at present).
2. The topsides had numerous areas of paint flaking and the gelcoat was wearing thin in several locations.
3. Clear coated exterior wood trim was serviceable, but the finish was peeling in many areas.
4. Exterior perimeter cockpit gunwale bolster cushions were in very worn condition with UV deterioration, small tears and stitching failing.
5. A short fabric bimini sunshade in worn condition with minor tearing was on secure tubular stainless framing from the aft edge of the bridge floor (shading the forward cockpit area).
6. A three sided (forward-port-starboard) bridge enclosure of clear vinyl/fabric was in cloudy/poor condition.
7. Hydraulic trim tab reservoir was low on fluid.
8. Clear wood finish was deteriorated with wood darkening in the forward lower and upper saloon (forward window) corner and in the port lower window corner.
9. The saloon believed teak wood paneling is buckling aft, and aft port and starboard in the saloon. Wood finish is well worn throughout.
10. Wood has deteriorated in the upper corner and near the aft-starboard foot of the berth; in the aft-starboard corner of the forward stateroom.
11. Wood has deteriorated in the aft-starboard corner of the port bunk stateroom.

Notes: Safety/Major issues are regulatory/safety issues and/or items which might more rapidly affect vessel safety or integrity/value. General issues are items which are less likely to rapidly affect vessel safety/integrity or value. Miscellaneous/Cosmetic issues are least likely to affect vessel integrity/value. General notes on all issues and additional miscellaneous comments are in the report body which should be read.

Appraisal:

Powerboat Guide no longer lists this vessel. NADA lists this vessel at an approximate retail range of from \$49,900 to \$56,600. BUC lists this vessel at an approximate retail range of from \$55,100 to \$60,600. (BUC condition 4 or equivalent used in all pricing).

A search of area publications revealed very few similar (not necessarily identical) vessels for sale with ASKING prices ranging from \$37,500 to \$62,000.

Based upon the above information, vessel condition/equipment and current market conditions, it is reasonable to expect that this vessel if sold by a non-pressured seller to a willing buyer, would have a current retail value in the Northeast market of approximately \$39,000.

BUC lists base vessel replacement cost at approximately \$890,500.

This survey takes into account listed examinations, items and equipment and covers general conditions, which are visible or capable of being examined by normal techniques. This survey cannot guarantee the discovery of “hidden” conditions. While this survey checks for general compliance with industry and governmental standards for safety, it cannot ensure that a vessel is “seaworthy” for specific conditions. The ability of a vessel to safely handle sea conditions is greatly dependent upon operator experience. Any suggestions/recommendations referenced in this report should be made in accordance with ABYC or other regulatory standards as may be applicable.

The above statements are believed to be true/correct. Bugher Marine Services, LLC, does not have any interest in, or association with this vessel. This report was not developed to create predetermined results. Compensation was not contingent on results. Analysis, opinions & conclusions are solely those of Bugher Marine Services, LLC. Appraisal follows USPAP guidelines for Sales Comparison Approach. This survey is submitted without prejudice.



September 20, 2021

Blair Bugher-AMS, President BMS
(Licensed Capt. OUPV/Masters)

Date

Enclosures: vessel photos previously sent electronically