

SURVEY REPORT

SUBJECT: 1999 Catamaran Houseboat
Length 117'4" Beam 23'8" Draft 28" Freeboard 3'8"

DESCRIPTION: The boat is a catamaran design. The two hulls are tied together by 4 cross members. The engine compartment is separate but attached to the hulls and spans the width between them. At the front a wooden deck spans this distance then above it is the bridge and upper controls. The superstructure is a custom built modular home built by Patriot Company. There are propulsion controls both in the forward area of the house and on the bridge.

DEMENTIONS ETC.: The construction of the hulls, decks and engine compartment are all 10 gauge P&O steel that equates to a bit thicker than 3/16". The hulls are 117'4" long. Their width is 4' and height 6'4" to the chine. About 7' to the bottom of the "V". The deck between the hulls at the front of the superstructure is 2 X 6 pressure treated lumber and under the house, weather-proof plywood. This is supported by 2 X 12 joists in addition to the steel crossmembers. The joists are secured with stainless steel lag bolts to the steel.

HULL: The hulls are 117'4" long X 4' wide. They are 6'4" to the chine. There are no bulkheads though at the attachment point of the steel crossmembers there are frames that serve a further support. They can be considered partial bulkheads. There is one hatch to each hull so they are basically open. The bulkheads each have weep holes.

The four cross braces are spaced 10' apart starting at a point approximately where the superstructure front is located. They extend aft to a point just forward of the engine compartment. The engine compartment is basically a "pod" that extends to the within about 3' from the stern and spans the space between hulls (15'8"). It is 13' in length and the forward end is sloped to rom a water deflector. The bottom of the

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engine compartment will be 6" to 1' above the water when at rest. In this area there is a separate compartment adjacent to the pod which contains the furnace and air condition system. Access to this area is from a hatch inside of the house. This compartment is sheathed in fireproof drywall. The crossmembers are box truss's and of themselves are sufficient support however between each truss is additional cross bracing. The engine compartment acts as an additional support firmly securing the two hulls to each other. The bridge is supported by 4 6X6 steel columns with braces. The deck is wood.

MACHINERY: The propulsion engines are 2 - 460 Ford Cobras that develop about 375hp each they are properly mounted on steel stringers. They drive 2 Stern Power drives via drive shafts with 2 universal joints on each. These are heavy duty commercial drives each of which turns a 20" propellor. Estimated speed is 12 mph.

There is a 25 KW Marathon 220v generator properly mounted within the engine compartment. This services all electric needs of the boat.

The gas tanks are steel and located within the engine compartment.

CONTROLS: The propulsion system operates via Vetus controls (2 station). The steering is Hydraulic hydraulic serving the 2 stations, one on the bridge. The other in the house. The systems are properly installed.

SUPERSTRUCTURE: This was custom made for the owner. It was constructed to protect from water incursions and has the usual domestic appliances all of which are electric powered, General Electric. The plumbing and electrical systems were upgrade by the owner.

ELECTRICAL SYSTEMS: There are 2 systems on the boat. The 12v services the propulsion system, instruments etc. The other is 220v to service the electric range and air conditioner. This is split to 110v to service all other electrical needs. The 220v/110v system came with the house but this along with the plumbing was upgraded and run through conduit.

PLUMBING: The house plumbing was changed to CPVC and is protected from freezing. The water supply (when not connected to the city system) is 200 gal. located in a heated compartment on the front deck.

HEATING AND AC: The airconditioner is a 2 1/2 ton Bard central system. It is vented from the compartment that houses it and the air flow escapes in the space under the deck. The furnace is manufactured by Miller and is electric.

MOORING: The mooring area is in North Bend Ohio on the Ohio River. The dock is parallel to the shore and secured in place by metal spar

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poles anchored to concrete piers (dead Men) on shore. There are further secured by braees (X brace) between the spars. There is then steel cable from the upstream area of the dock secured at an angle to another "dead man". The spars and cable raise or lower vertically with the rise and fall of the river.

There are 2 spud poles on the boat. These can be raised or lowered from the deck and are used to further secure the vessel. This is unusual.

The dock is about 80' and consists of 10 4'X4'X8' steel tanks secured to each other by steel pins and cable. A wooden deck covers the top of the floats.

The river sailing line is nearly the middle at the dock location. The heavier flow starts about 2-3 miles downstream thus any debris field is downstream. The location is mile 487.66 on Ohio River chart #98.

VALUE: The value of the boat, furnishing, fittings and all equipment is about \$480,000.00. This is based on about \$180,000.00 in material and furnishings and \$300,000.00 labor. This figure is the estimated reconstruction cost at a shipyard.

CONCLUSION: The boat construction including the superstructure complies with the American Boat and Yacht Council, National Fire Protection and US Coast Guard rules. This includes all catagories: Hull, superstructure machinery, electrical, navigation etc.

A bow thruster is to be installed.

RECOMMENDATION: None

SUMMARY: The boat is strongly built. Only quality products were used and the workmanship is professional.

This survey was conducted without prejudice to any part.

Respectfully submitted