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Accredited Member of the Yacht Designers and Surveyors Association

REPORT OF A CONDITION SURVEY CARRIED OUT ON THE VESSEL:

"[redacted]"

Accredited Member YDSA

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A. GENERAL NOTES

The following survey was carried out afloat and ashore at Brighton Marina on Tuesday 20 October 2009 for:

[redacted]

Scope

The survey was carried out as a pre-purchase measure to assess the structural and material condition of the vessel. Where equipment was tested this is detailed in the text. References to condition are in relation to the vessel's age (i.e. good condition does not necessarily mean new).

Recommendations are restricted to:

(A) items which should be addressed before the vessel is used and/or which may affect insurability and;
(B) items which should be addressed in the near future order to prevent future problems.

Recommendations are printed in red for quick reference within the body of the report and are also listed in the summary. They do not cover cosmetic or minor defects, although suggestions to address these may be included.

The survey is for the client above. No liability is extended to anyone else.

Limitations

Parts of the vessel that were covered, unexposed or inaccessible due to fixed panels, linings etc. were not examined, so I cannot say these areas are free from defects other than where specified in the text. No fittings or fastenings were removed for examination other than where specified. Note it is not possible to detect some latent and hidden defects without destructive testing which is not possible without the owner's consent.

The mast was stepped so could only be inspected from deck level.

The boat was lifted out and held in slings ashore for about 40 minutes which limited the accuracy of hull moisture meter readings.

Conditions

The vessel was inspected at Brighton Marina. Weather conditions were dry and overcast, air temperature 13°c, 6° above dew point, 64% humidity. The boat was lifted and held for about 40 minutes over the yard lunch hour to allow the underwater hull to be inspected. Although moisture meter readings were obtained, these were marginal conditions for taking accurate measurements.

A sea trial was carried out two days later. A heavy swell was running but there was no significant wind.

SUMMARY

'[redacted] is a Gibsea 282, built to a design by Michael Joubert produced between 1988 and 1993. This boat was built in 1989. It is believed she was kept in the Mediterranean for several years, coming back to Brighton by the Canal Du Midi.

The boat appears to have been little used recently and would benefit from cosmetic work to improve her external and internal appearance. A good source of advice on renovating this kind of yacht is published Adlard Cole Nautical, 'Fitting out your boat' by Michael Naujok.

The brokers details appear accurate although statements that the engine was serviced and the rig checked could not be verified.

Overall the boat is in fair condition and her systems are in working order. Some work needs to be carried out to bring her into sea going condition as detailed below but nothing that could not be expected given her age. Her main structures are sound and she represents good value for the agreed purchase price.

(A) items which should be addressed before the vessel is used and/or which may affect insurability;

1. Remove and untangle the anchor chain and warp. Replace corroded chain and shackles (A).
2. Replace the mooring lines (A)
3. Replace the fire extinguishers and fit the fire blanket by the cooker (A).
4. Replace the flares (A).
5. Carry lifejackets and harnesses (A).
6. The gas installation does not comply with current day standards and should be refitted (A).

(B) items which should be addressed in the near future order to prevent future problems.

1. Repair deep chips to the gelcoat at the stem (B).
2. Tighten the bolts securing the tiller to the rudder stock (B).
3. Repack the stern gland (B).
4. Fit a rope cutter (B).
5. Replace the stern window (B).
6. Carry a kedge (spare) anchor (B).
7. Replace the cockpit spray hood (B)
8. Replace the standing rigging (B).
9. Replace running rigging as detailed in the text (B)
10. Carry a fog horn (B).

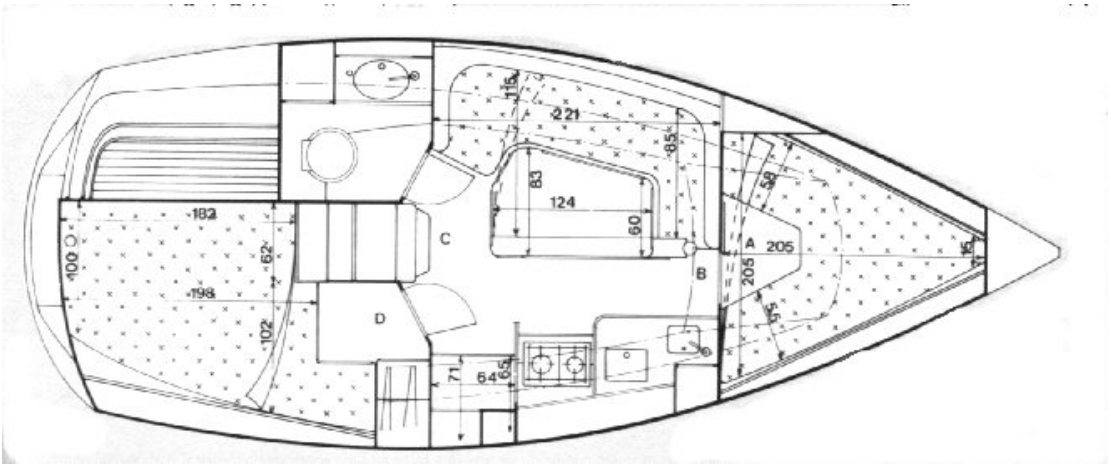
11. Have the engine serviced (B).

12. Carry a spare 10lt diesel fuel can (given the lack of fuel tank level indicator) (B).

C. VESSEL DATA

Dimensions taken from brokers details, not checked.

LENGTH OVERALL	:	8.4 m
LENGTH WATERLINE	:	7.1 m
BEAM	:	3.15 m
DRAFT	:	1.35 m
DISPLACEMENT	:	2700 kgs, 850 kgs ballast
BUILT	:	1989 Gibert Marine
HIN	:	[redacted]
WATER	:	50 lt bladder tank
FUEL	:	45 lt stainless steel tank under the cockpit
REGISTRATION	:	[redacted]
ENGINE	:	Yanmar 2GM20 18hp.



USE OF MOISTURE METERS

A 'Sovereign Quantum' capacitance type moisture meter which measures both shallow and deep seated moisture is used to check for ingress of moisture into GRP laminates. References to moisture meter readings throughout the text are in relation to a relative scale of 0-100, not moisture content as a percentage of dry weight.

Readings of between 0-15 are considered dry; 16-20 low and no cause for concern; 21-30 medium carrying some risk of future defects, 30 - 45 show a high risk of moisture related defects being present (but not necessarily physically detectable), greater than 45 usually indicates visible laminate damage.

Whilst high moisture content (i.e. greater than 30) is not generally a structural defect in itself and should be expected in older boats such as this, if moisture has been absorbed, the likelihood of problems occurring are higher. The actual state of the laminate cannot be completely guaranteed without destructive testing followed by chemical analysis. The opinions in this survey are based on all the evidence available at the time, but without destructive testing.

D. Hull, Deck and Structure.

D1. Keel.

The vessel has a cast-iron fin keel which is secured by studs and nuts. The nuts are concealed beneath glued panels within the internal moulding. The forward one of these panels was slightly loose. When lifted the space beneath was found to be dry and the forward keel nut had only slight signs of corrosion.

No signs of movement could be seen along the joint between the keel and the hull moulding. The flexible sealant in the joint is secure and has retained its elasticity. The hull moulding was checked internally and externally around the joint and no signs of cracking or damage seen which might indicate the vessel has grounded heavily.

The surface of the keel is in fair condition with some rust spots beginning to bleed through (shown). This is not significant at present although it is likely the keel will have to be cleaned back to bare metal and re-finished within the next five years.

D2. Hull below Waterline.

The hull moulding is a single skin GRP laminate using chopped strand mat and polyester resins. It has a single layer of grey epoxy primer and two or three coats of blue antifouling. The antifouling is in good condition with no signs of flaking or build up. The underwater hull is relatively clear of marine growth which suggests that the antifouling was renewed within the last 6-12 months.

The entire underwater area was visually inspected and hammer sounded. No signs of osmotic blistering, delamination, voids or damage were found. The antifouling was removed back to the epoxy coating in several test areas and the hull dried so far as was possible. Moisture meter readings ranged between 25-50 shallow and 25-60 deep after drying. Although some of these readings are high, in the absence of any visible signs of deterioration and given the short duration of the haul out and weather conditions, it is believed the underwater hull is in good condition at this time.

A skeg supports the stern tube. This has some surface blistering on both sides which is not unusual for appendages on older GRP hulls. Some of these blisters were opened and no signs of osmotic fluid were found inside. The blisters appear to be within the gel coat. No hollowness or delamination was detected from hammer sounding the skeg.

D3. Topsides above Waterline including Rubbing Strake etc.

The top sides are also a single skin GRP moulding with reinforcing provided by the internal mouldings and longitudinal stringers to support bunks and shelves.

The entire area was visually examined, lightly hammer sounded and checked with a moisture meter. The moulding is good with no signs of imperfections or discontinuities by way of bulkheads or load bearing areas. No signs of voids or delamination were found. Moisture meter readings varied between 18 and 25 shallow and 10 to 30 deep which, taken with the above, show the hull lamination is in good condition at this time.

The surface is finished in its original gel coat. There are several deep scratches within the gelcoat on the starboard side but none that penetrate through to the underlying laminate. These are too deep to be polished out and if it is desired to remove them they will need to

be filled. However, cleaning and wax polishing the entire topsides would conceal them sufficiently. The gelcoat on the port side is in good condition.

There are some chips to the gel coat at the lower edge of the transom to starboard. These do not go through to the underlying laminate and can be treated as described above.

There are some deep chips to the stem, particularly below the drain to the anchor locker. These go through to the underlying laminate and should be filled. Any loose material should be ground out and the area made good with white gel coat paste, secured with plastic masking tape whilst it sets (B).

D4. Deck Moulding.

The deck is a single moulding with a cored sandwich construction on horizontal areas to increase strength and insulation. These have an effective moulded nonslip pattern.
The deck was hammer sounded, weight loaded and inspected for cracks to the gel coat and any movement that might suggest delamination or other damage. None was found.
Moisture meter readings were taken where possible both inside and out and found to vary from 16-30 deep and 17-20 shallow which is satisfactory.

The gelcoat shows signs of UV degradation and would benefit from cleaning and wax polishing.

The fore deck has a flush fitting anchor locker. The hatch for this is in good condition and is secured by a stainless steel turn-button. This should have a plate to protect the underlying laminate but is missing.

D5. Coachroof.

The coachroof is integral with the deck moulding. No faults were found but the points made above on cleaning and polishing apply. Teak handrails either side are securely fastened.

D6. Cockpit.

The cockpit is self draining and integral with the deck moulding. There is a large locker to port which opens smoothly and can be securely locked. It tends to fall shut and should be secured with a bungee cord to the guard rail or a strut when open.

The cockpit sole is secure with no signs of cracking or movement when weight loaded.

The seating above this and to starboard has a teak decking, secured by screws covered with bungs. This is caulked with a black compound which is cracked and loose in places (shown). As part of the long-term maintenance it should be removed and replaced with 'Sikaflex 290'. Instructions on how to use this and similar products are at http://www.bluemoment.com/downloads/sikaflexmarinehandbook.pdf

The cockpit sole has a teak grating which is in poor condition (shown). It is recommended that this be taken apart and re-glued with 'Balcotan' marine adhesive.

All teak surfaces (gratings, seating and hand rails) would benefit from teak restorer and oiling after any repairs are done but before planked areas are recaulked. Garden furniture restorer is sufficient for this but care should be taken to not allow it to drip on the gelcoat.

D7. Hull/Deck Join.

The hull has an inboard flange to which the deck moulding is secured by bonding paste and aluminium pop rivets which also secure the toe rail. The joint is over laminated on the inside across the transom where there is no toe rail. Where accessible within the anchor locker (shown) and stern compartment, the joint is in good condition with no signs of movement or leakage.

D8. Bulkheads and Structural Stiffening including Internal Mouldings.

The hull is stiffened by internal mouldings which form the toilet compartment and galley work areas and is slotted to support bulkheads and locker sides. The area around the keel studs is similarly stiffened by an internal moulding with transverse and longitudinal stringers. All are securely bonded to the hull where visible.

There is a glassed in plywood bulkhead to separate the anchor locker from the cabin and glassed in longitudinal stringers to support shelving and bunk tops. Where seen, these are secure with no signs of lifting at the edge of the laiminations.

An 80mm diameter stainless steel mast compression post is securely attached to the deck head and internal moulding. It shows no signs of distortion or movement.

E. <u>Steering, Stern Gear, and Skin Fittings etc.</u>

E1. Rudder and Steering.

The rudder is a solid GRP blade, believed to be moulded in two halves over a stainless-steel stock with welded tangs. Its stock turns within a stainless steel tube which is bonded into the hull and deck mouldings with nylon bearings at each end. The tube was closely examined and no signs of movement found.

The rudder was examined, hammer sounded and weight loaded. No signs of splitting or delamination could be found. There is some movement both fore and aft and athwartships within the bearings, but within acceptable limits.

There is a teak tiller which is in good condition but weathered. It is secured to a stainless steel plate bracket and this to the head of the rudder stock by stainless steel through bolts. Both are loose and should be tightened (B).

A Navico tiller arm type autopilot was seen in its box. This was set up, tested and found to be in working order.

E2. Stern Gear.

The vessel has a three bladed, right-handed, manganese bronze propeller, 350mm pitch and 230mm diameter. The blades were scraped and hammer sounded and no signs of de-zincification found. The propeller is securely mounted on a 25mm shaft which is a non-magnetic grade of stainless steel. It has a bronze nut and locking tab washer, all in good condition and secure.

The propeller turns smoothly with no signs of binding or stiffness. There is some play in the bearing but within acceptable limits.

The shaft is secured outboard by a rubber bearing which is within a glassed-in bronze fitting. The inboard stern bearing is a standard bronze packing box, securely fastened with twin stainless steel hose clips to rubber hose which in turn is secured with twin clips to a glassed in GRP tube. The packing box is tightened close to its limit and will need to be re-packed if it is necessary to tighten it further (B).

The bearing was checked after the engine had been run for about an hour during the sea trial and found to be cool with no dripping.

There is no rope cutter. It is recommended that one be fitted especially if night cruising in is planned given the large number of net markers set by local inshore fishermen (B).

E3. Cathodic Protection.

There is a zinc anode forward of the rudder (shown). This is about 20% eroded and in no need of immediate replacement. Its studs were lightly hammer sounded and found to be secure. The anode was tested with a continuity meter to the propeller and no significant resistance found (i.e. the internal bonding is in good condition).

There is also a propeller hub anode which is secure and only slightly eroded.

Rest of survey cut, covers skin fittings, rig, engine, systems…