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Ruolo Periti ed Esperti della CCIAA di Roma n°1871

Iscritto per le categorie e sub categorie XXIII –attività marittime e aeree e di navigazione interna 002 004

iscritto all'albo del **TRIBUNALE PENALE DI ROMA**

On 21/7/2022 the undersigned Stefano Pisano

**██████████ to evaluate the condition of the vessel in question
in order to evaluate the purchase.**

MODEL : GRAND BANKS 52 EUROPA NAME : ██████████
██████████

LOA :16,40 MT MAX BEAM : 4,7 MT DRAFT : 1,57 MT

BUILDER : GRAND BANKS

NUMBER : ██████████ ENGLISH REGISTER

HULL NUMBER : ██████████

MATERIAL : G.R.P. polyester YEAR: 1997

ENGINES : 2X CATERPILLAR 3126- 420 HP

NUMBERS : ██████████

PEOPLE : 12 P

OMOLOGAZIONE CE : A

EMPTY DISPLACEMENT : 23.500 KG

DIESEL CAPACITY: 4500 LT ca MAX AUTONOMY: 1003 NM

FRESH WATER CAPACITY: 1890 LT ca



Required questions:

Pre purchase survey

To answer the questions, the undersigned Expert made use of the following data:

- On-board documents provided by the shipowner
- Inspection on 20th July at Porto romano Fiumicino
- Sales card and boat description made by [REDACTED]

PREPARATION FOR SURVEY : No parts of the craft were dismantled and no bolts were drawn for inspection. No attempt was made to open up or prove machinery or systems. The electrical installation was not examined in detail, only switch tested.

INACCESSIBLE AREAS : I have not inspected the mouldings, woodwork or other parts of the structure which were covered, unexposed or inaccessible and I am therefore unable to report that any such part of the structure was free from defect.

Chapter 1

- External hull
- Internal hull
- Rudders
- Ship sides

At the time of the inspection, the boat was hauled after sea trials
No marine concretions or plant residues were present.

Random areas of antifouling were scraped back to the gelcoat in order to check for any blistering or other signs of osmosis. No evidence of osmotic blistering or wicking was found in the prepared areas.

The original gel coat extremely compact and uniform.

The hull humidity was measured with the following instrument: RYOBI DIGITAL HUMIDITY MEASUREMENT Meter; the values found below the waterline were normal (4%-8%).

The test was carried out less than 5 days after towage.

There are no other signs of contact with the seabed.

Random hammer tapping was carried out over this area of the hull to check for any evidence of separations or voids in the fibreglass.

The soundings were considered satisfactory.

On examination the hull did not show any anomalies.

The craft was fitted with a bow and a stern thruster. The tubes were firmly glassed in the hull and the edges of the apertures were well sealed; the propellers were intact; the stern thruster was not operative

SCANNING WITH ULTRASONIC THICKNESS GAUGE

INSTRUMENT DESCRIPTION:

The TRITEX Multigauge 5650 Ultrasonic Thickness Gauge is an ultrasonic thickness gauge designed for metal and composite material thickness gauging applications. The meter uses multiple echoes to ignore coatings up to 6mm thick. All probes feature Intelligent Probe Recognition (IPR), which automatically adjusts settings in the meter as it transmits recognition data - the result is a perfectly matched probe and meter for improved performance. In addition, the Automatic Measurement Verification System (AMVS) ensures that only real measurements are displayed, even on the most heavily corroded metals and delaminated composites.

ULTRASOUND EXAMINATION NOTES

This type of examination is conducted when some structural deficiencies are detected visually or by typing examination. Although the instrument is extremely precise, it is not able to detect any possible anomaly such as porosity or delamination also considering the small diameter of the probe.

EXAME RESULT

no anomalies detected
average hull thikness 5 cm

The hull internally for the areas inspected, in other words those that could be reached, did not show any anomalies, sure enough the bulkheads and faceplates appeared solid and in good order. No anomalies were found on the countermould areas.

In the central bilges areas was found salt water while in the engine room bilges were found water, hydraulic oil and few diesel liquids.

The rudder blades appeared intact, the left one had a little break over painted of the shape on top.

The stainless steel shafts were in serviceable condition

The shafts of the rudders, where visible, did not show any oxidation; the bronze 4 blades propellers did not show any anomalies; were firmly secured with nuts and tag.

Stabilizer rudder were found with swing especially the right one; from inside was found water coming in from the shaft and hydraulic oil leaks from both systems - need to be serviced both hydraulic system and for the right one the bush has to be changed.

Stern flaps were found in a service condition with just few leaks form hydraulic pistons.

The vee of the hull, spray rails and chines were in good condition with no evidence of any serious damage or repairs.

The antifouling was smooth and newly applied

The anodes were 90 %

HULL - WATERLINE TO GUNWALES :-

The white gelcoat of this area was found to be in good condition with no evidence of any serious damage or stress cracking. A couple of minor scratches and abrasions were noted but these were considered to be superficial. The wooden covered transom, was also found to be in good condition with only minor scratches and abrasions .

The stainless steel framed portholes were securely fastened and free from damage.

The engine vents were founds free from damage.

The fibreglass moulded bathing platform was in fair condition and the port stern quarter and the centre section of the platform was solid.

SUPERSTRUCTURE :

The white gelcoat of this area was in good condition with no evidence of any serious damage. There were no signs of any serious stress cracking .

The teak on the deck was wel sealed and the wood was in good condition

The hatches closed well and glasses were in fair conditions with no leaks even the glasses of the cabin had no traces of leaks.

The structural parts of the deck were inspected and no structural damage was noted, bondings of the bulkhead were sound and intact.

The anchor was firmly stowed on the bow roller and the chain was well tethered. The electric windlass was securely mounted to the foredeck.

The unit was switch tested and found to be operative via the deck switches .

The aluminium mast to support radar and instruments on top was in good conditions.

On the dinghy crane there was some imperfections by galvanic on the paint over aluminium. Crane did not work by controller.

The bow and side rails, cleats and other deck fittings were firmly secured .

The fuel deck fillers were correctly labelled.

Pulpits and stanchions appeared in good

INTERIOR :-

The internal structure of the hull was inspected in this area where possible.

The interior layout of the craft consisted of 3 double cabin and 2 toilette.

There was no evidence of any serious water leaks from the hatches or portholes at the time of survey .

The blinds, carpets, moquettes and upholstery were in a good and clean condition.

The leathercloth head and side linings were well secured and intact.

The upholstery on all beds, the sofa in the dinette and the outdoor cushions were checked.

The woodwork of the interior was sound and free from any serious water damage.

The doors hinges and handles were operative.

The interior lights were tested and found to be operative .

The internal structure of the galley's area wasn't inspectable.

No structural damage or repairs were noted and the bondings of the stringers, bearers and bulkhead were sound and intact.

The bilges were not dry with a little dirty

The toilets were firmly mounted

Chapter 2

- Engines room
- Engines
- Generator
- Service pumps
- Sea cocks
- Wheel house

The engine room is in a fairly good state of use; water and oil leaks leading to the deterioration of some metal parts; it is therefore advisable to reclaim the engine rooms and eliminate the infiltrations; it is therefore advisable to work on them before the deterioration causes damage.

Central bilge between engines shows hydrocarbons and water -5 lt approx
The systems appear to be in good condition, as are the sleeves and pipes, which are soft and not crystallised.

Externally, the engines appear with no sign of damage, and few leaks of oil mostly reported on the left engine;

they run regularly and respond positively to expectations considering the hours. (see mechanic report before and after sea trials)

The generator appears to be in fair condition and visually it can be seen that something occurred at the cooling system line; leaks and corrosion are visible.

The service pumps inspected in the engine rooms respect the operating requirements.

During cruising the shaft lines of both engines works properly with no abnormal fluctuations.

The right rubber of the shaft suffers a leaks from Racor filter mounted above it.

The automatic fire extinguisher is on green and well mounted.

The wheelhouse was working properly and the bushings of the rudders did not show any oscillations;

Were also the subject of verification of the seacocks and their valves, those made of bronze appeared visually in good condition but even if of good material the valves were blocked; it is recommended maintenance and lubrication for all.

It is recommended to change the seacock of generator and to pay attention to the ones of air condition system (3 seacocks). These are made of brass

The rubber hoses connected to them and their hose clamps were in a decent shape.

Diesel tanks made by steel over painted, shows rust especially at the edges of the left one. Both ***must be investigated thoroughly***- serviced and fixed or changed.

Systems and accessories inspections following sales card

The following accessories were checked by expert technician during the inspection and sea trials :

windlass, n. 3 tonnage winches, cabin lights, navigation lights, bow and stern thrust, bilge pumps, fresh water pumps, deck shower, drain pumps, waste pumps, boiler, generator, watermaker, n. 3 air condition system (1 for galley, 2 for cabins), n. 2 webasto, n. 4 fridge, n. 2 plotter, n. 2 autopilot, wind and tridata navigation instruments, depth sounder, vhf, flybridge instruments, dinghy crane, hydraulic pump for mast, cookers, microwave, oven, kitchen extractor, tv, travel TV, antenna sat, hydraulic gangaway.

A test was carried out with positive results of efficiency of electronic and analogic engine controls.

A visual check of the anchor line, i.e. anchor, joint and chain, did not reveal any anomalies exceeding the normal state of use.

The batteries of both the services and the engines were tested with the electronic instrument Ancel, which gave a positive result both for the state of use and for the state of charge.

A visual check was also carried out on both the electrical and hydraulic systems, and no important anomalies were found (only few leaks must be fixed).

The systems maintain their original layout and each connection, whether electrical or hydraulic, has not been altered.

Systems found out of order :

- stern thruster
- bow electric wc
- dinghy crane
- stern left tonnage winch
- plotter of flybridge

safety equipment

- 2 life raft serviced 2021
- fire extinguishers on green
- epirb

SEA TRIALS

n.b

sea trial occurred with flat sea and no wind; on board were the owner, the broker, the commitment, the mechanic, the system's technical, the shipyard manager (porto romano) and the undersigned surveyor.

"OTTAVIANI" MECHANICAL SERVICE REPORT

Visit and sea trial Grand Banks 52

Engines: CATERPILLAR 3126 [REDACTED]

Engine hours on right engine hour counter: 786

Engine hours on the left engine hour counter: 785

Both engines at approx. 1,800 engine hours were landed and restored to zero hours (information provided by the and verified at the CATERPILLAR centre where the service was carried out).

The engines are in good condition, while in the left engine there is a slight oil leakage in the rear part between the oil sump and crankcase at flywheel height (work to be verified during repair process).

The engines paintwork was in good shape.

The engine oil and coolant levels were normal, the seawater pumps did not show any leaks.

The condition of the engine mounts was regular.

The inverter oil levels were in good shape.

During the sea trial the engines started at the first stroke, they were tested for approx. 60 minutes in total without detecting any problems, they regularly reached operating temperatures and pressures, and were taken to various speeds, specifically;

1800-2000-2200-2400 and finally to 2600 rpm where the coolant temperature of the left and right engine instrument read approx. 85° and the oil pressure 3.7 right engine and 4.0 left engine.

Going down to the engine room with the laser gauge, the left engine showed a temperature of 81° and the right motor 83°

The hydraulic seals of both axles did not leak.

The generator was in good condition and functioning, while the heat exchanger had a lot of oxide caused by seawater oozing (solved by cleaning and replacing orings of the covers.

There was clean engine oil on the base of the generator, probably dropped during a refill.

CONCLUSION:

We recommend a complete engine seasonal service and a checkthe of the oil leakage in the right engine.

Also a complete seasonal service of the generator with dismantling and cleaning of the heat exchanger.

THERMOGRAPHIC EXAMINATION

The engines were scanned with THERMAL CAMERA FLIR in order to detect over-temperature areas relevant to the engine or to correlated systems, which may require further analysis.

EXAM RESULT

no anomaly detected

Recommended works summary

- seacocks for A/C systems not in bronze - to keep under control
- seacock of generator not in bronze with leaks - to be changed
- all others seacocks bronze locked - to be serviced
- A/C cooling grid deteriorated - change
- water in bilge with oil - to clean and check
- both stabilizer rudders with oil leak from pistons - to be serviced
- the right stabilizer with leaks and swing - new bush
- diesel leaks on the handles of Racor of engines- fix
- diesel tanks with rust especially the left one - fix or change
- black hose (approx 35 mm diameter) from hydraulic oil tank - to tighten
- some cosmetics gelcoats defects on the walls (bottazzo)
- some cosmetics defects on dinghy crane
- outboard engine to service - It' s a Yamaha not a Suzuki as described on sales card.
- small (5 cm) detachment between wood and grp of the bulkhead of engine room in bilge area -fix
- rusty on anchor chain on bottom- clean
- little filler needed on top of left rudder and at the bottom of both rudder
- clean all bilges to control any new leaks
- stern thruster - to be serviced
- bow electric toilet - to be serviced
- stern left tonnage winch - to be serviced

- plotter of flying bridge - fix

Note

SOME ITEMS MAY NOT BE FULLY COVERED BECAUSE THEY ARE NOT RELEVANT TO THE EXPERTISE REQUESTED.

THE VALIDITY OF THE CONCLUSIONS IS SUBJECT TO THE MAINTENANCE OF THE CHARACTERISTICS VERIFIED EXCLUSIVELY DURING THE INSPECTION.

THE ASSESSMENT OF ANY HIDDEN DEFECTS OR FLAWS IN THE COMPONENTS OF THE MATERIALS NOT INSPECTED IS ALSO EXCLUDED DUE TO THE IMPOSSIBILITY OF PERFORMING MECHANICAL AND/OR NON-DESTRUCTIVE TESTS ON THEM.

THE ASSESSMENT OF ANY HIDDEN DEFECTS OR FLAWS IS ALSO EXCLUDED DUE TO THE IMPOSSIBILITY OF REACHING CERTAIN OBSTRUCTED OR INACCESSIBLE COMPARTMENTS OR SPACES.

THIS REPORT IS FOR THE EXCLUSIVE USE OF THE ABOVE-MENTIONED CLIENT.

The inspection, although thorough, was mainly of a visual nature and although it was carried out with the utmost care and in good faith, it cannot be guaranteed that every anomaly or defect present on the boat at the time of the inspection was discovered.

The report will be deemed to have been accepted by silence within 3 days of delivery. The information acquired for the purpose of and during the course of the service shall remain confidential and shall be used exclusively for the performance of the professional activity;

The commercial valuation is referred to the single unit and cannot be attributed to other similar models on the market.

The assessment for the presence of encumbrances or mortgages is excluded.

Should the following report be used for insurance purposes, it does not in any case exonerate the Insurant

from complying with the legal and policy provisions to which the insurance cover is bound.

For any dispute, the client accepts arbitration as the first method of confrontation. Thereafter, the Court of Rome shall have jurisdiction for any dispute.

Photos of some anomalies detected



Figura 2: left tank rusty



Figura 1: hydraulic bad mounted



Figura 4: generator seacock



Figura 3: left engine leak



Figura 5: engine room bilge



Figura 6: gasoline leak over rubber

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Fiumicino 23/7/2022