



Salient
Marine Surveys

REPORT OF CONDITION SURVEY ON “EXAMPLE” BENETEAU ANTARES 6



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A. GENERAL NOTES

The following survey was carried out at on Thursday the 1st and Friday the 2nd of May 2014 at the request of: Redacted.

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

SCOPE

The survey 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 effect insurability.
- b) Items which should be addressed in the near future, to prevent future problems.

Recommendations are printed in *red italics* 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 maybe included.

CONDITIONS

The vessel was inspected ashore over two days, the 1st day temperatures were around 15 degrees Centigrade with intermittent rain and the second day was 16 degrees and overcast. Humidity was 64% which is not ideal for taking moisture meter readings.

LIMITATIONS

Parts of the vessel that were covered, unexposed or inaccessible due to fixed panels, mouldings, coatings etc, were not examined so I cannot say these areas are free from defects other than where specified.

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 or dismantling, which is not possible without the owner's consent. No such tests were carried out on this boat except where specified in the text.

B. SUMMARY

SUMMARY

“Example” is a Beneteau Antares 6 built in 2008 with a model year of 2009. The boat is generally in very good condition and appears to have been well cared for. The hull has no signs of moisture related defects.

Various minor defects were found, but these were commensurate with the age and type of vessel and I have summarised these below and included them in the main body of this report.

RECOMMENDATIONS

TYPE A RECOMMENDATIONS:

There are no items which should be addressed before the vessel is used and/or which may affect insurability.

TYPE B RECOMMENDATIONS:

Items which should be addressed in the near future to help prevent problems arising and/or to maintain value.

- 1) *Electric Windlass Mounting. The bulkhead that the windlass is mounted on is deflecting 4 mm and this has resulted in the gel coat at the top edge and top corners cracking. It is recommended that the bulkhead is reinforced and the gel coat should be “vee’d” out and repaired with gel coat paste. (B)*
- 2) *The rubber flaps over the cockpit drain holes in the transom under the bathing platform are perished and torn and require replacement. (B)*
- 3) *Toilet discharge ball valve requires lubricating. (B)*
- 4) *The wiper rubbers are much worn and require replacement. (B)*
- 5) *The flares expired in 2010, they need disposing of appropriately and new ones acquired. (B)*
- 6) *There is no fixed VHF set fitted. It is recommend that you fit one for safety reasons.(B)*

C. VESSEL DATA

Data taken from broker’s literature and manufacturer’s website, this has not been checked.



Type:	Beneteau Antares 6
Length Overall:	7.20m
Beam:	2,59m
Draft:	0,70m
Displacement:	1920kg
Built:	2009
HIN:	Redacted
Engine:	Yanmar 4JH4-HTE 110HP
Fuel Tanks:	120L
Water Tank:	20L

D. HULL, DECK AND STRUCTURE.

USE OF MOISTURE METERS.

A ‘Sovereign Quantum’ capacitance type moisture meter which measures both shallow and deep seated moisture was used to check for ingress of moisture into the GRP laminate. 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 but of no concern, 21-30 medium and approaching the point where risk of moisture related defects developing is becoming significant, 31-45 high and at a level where the risk of moisture related defects being present but not yet physically detectable is significant, 46-60 is very high and often accompanied by physically detectable signs. 61-100 is extremely high and indicative of possible laminate damage in addition to osmotic blistering.

Readings are considered in conjunction with the period the vessel has been ashore and the weather conditions when the readings were obtained. Boats built in the last 15 years are generally far more moisture resistant and will dry out quicker. High moisture content (i.e. greater than 30) is not generally a structural defect in itself and should be expected in older boats. It also possible for readings to be increased if the boat has an epoxy barrier coat or a copper powder and resin based antifouling. 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.

D1. HULL BELOW THE WATERLINE.

The vessel has a hard chine, medium V hull with two spray rails, a flat spray deflector and a keel running for approximately $\frac{3}{4}$ of the length of the hull. When surveyed the hull was found to have a recently applied coat of antifouling which appears to be adhering well.

The vessel was inspected out of the water, on the hard in a cradle. The underwater area was hammer sounded and visually inspected and no signs of delamination were found. No blisters were found on the hull of Osmotic or any other kind. The underwater area of the hull was subjected to moisture meter readings on the hull length 20 areas were checked. No antifoul was removed for the test.

The table below details the below the waterline meter readings:

Sovereign Quantum Meter	Range below waterline	Range above waterline
Shallow Reading	14 – 32	14 – 21
Deep Reading	11 – 28	12 – 14

I did find high readings in the area of the transom halfway between the edge of the hull and the centreline of the hull on the port side. Close inspection and hammer sounding showed no apparent defects, this in conjunction with the lack of any physical signs of deterioration, I conclude the underwater hull is considered to be in good condition.

D2. TOPSIDES ABOVE WATERLINE

The top sides are in very good condition, and appear to have been well maintained. All the original transfers are present and in good condition and there was no evidence of previous repairs or collisions.

D3. DECK MOULDING

The deck moulding is integral with the coach roof. Horizontal surfaces are balsa cored GRP sandwich construction with a moulded diamond tip type non slip pattern. The deck was tested by checking for flex under foot, light hammer sounding and random testing with the moisture meter. These tests found no apparent defects in the structure, with no cracks or crazing found in corners or flat surfaces.

D4. COACHROOF AND PILOTHOUSE

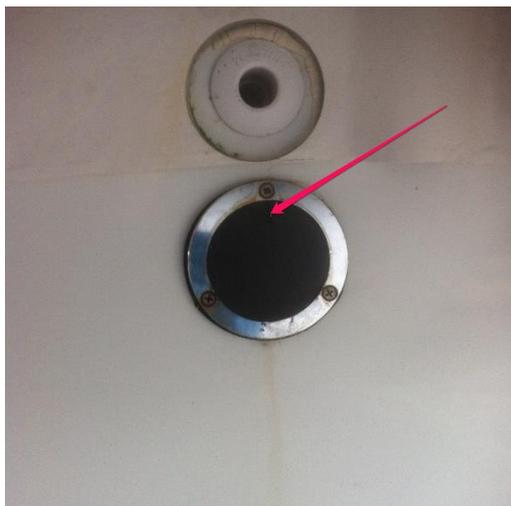
As for the deck, this area was found to be in good condition and well maintained. The pilot house is a separate moulding secured to the coachroof. The coachroof has a stainless steel grab rail, this and the moulding were found to be secure when tested.

D5. COCKPIT

There is a full width cockpit with a boarding gate onto the bathing platform. A section of the floor hinges up with gas struts to assist and hold the engine access cover open, these worked smoothly and effectively. The floor appears to be of cored construction with a moulded diamond tip type non slip pattern.



There are two aft cockpit drains located port and starboard in the transom, these have rubber flaps to prevent water coming into the cockpit when motoring astern or in a following sea. Both these flaps are perished and split. *It is recommended these flaps are replaced prior to re launching the boat.*



D6. HULL/DECK JOIN

There is a white PVC sheer rail guard along the hull – deck join, which is in very good condition. It was not possible to see how the hull – deck join is made, but there are no apparent visible signs of defects.

D7. BULKHEADS AND STRUCTURAL STIFFENING INCLUDING INTERNAL MOULDINGS

The hull is internally reinforced with a separate floor moulding which is bonded to the hull made up of longitudinal stringers and athwart ships sections. There is a bulkhead forward to the anchor locker. The plywood face has a removable panel to access the electric windlass, this was removed and an inspection showed no visible signs of defects, even though as mentioned in section F4, the gel coat has cracked in the other side of this panel from excessive tension from the electric windlass.

E. STEERING, STERN GEAR AND SKIN FITTINGS

E1. STEERING AND RUDDER

The steering is controlled from within the pilot house by a wood and stainless steel wheel at the helm. Under the forward locker in the cabin an emergency stainless steel tiller was found in what is assumed to be its original packing.

The wheel was tested by turning from lock to lock and was found smooth and light with an absence of tight spots.

The stainless steel rudder was hammer sounded, aggressively tested for excessive free play in the bearings and swung from lock to lock, no defects were found.

E2. STERN GEAR

The vessel has single propeller shaft with a bronze, three blade, right handed propeller secured by a nut with a tab washer. The propeller was hammer sounded and rang true and an area of the propeller was scraped back to bare metal to check for dezincification, no visible defects were found and the propeller appears to in be good condition.

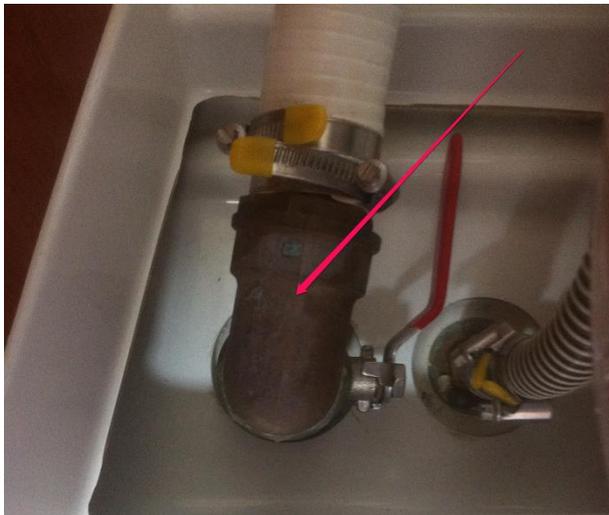
The propeller and shaft were tested by applying body weight move up and down and side to side to check for cutlass bearing wear, there was close to 2mm of movement. *It is recommended that this play is monitored, as more than 2mm play would require the cutlass bearing to be changed.*

E3. CATHODIC PROTECTION

There is a sacrificial anode bolted to the port side of the underwater transom, this was only wasted approximately 15%, and the anode mounted on the propeller boss was in the same condition. The boat can be re launched with these anodes if it is going to be used in similar waters to its historical use.

E4. SKIN FITTINGS AND THROUGH HULL APERTURES

The following through hull skin fittings were examined from inside and outside the vessel. All were hammer tested externally and valves opened and closed to their fullest extent where possible, connecting hoses checked for security and hose clips checked for corrosion and security.



1) Forward sea toilet discharge ball valve was found to be securely double clipped with no visible signs of defect. The ball valve handle was found to be extremely stiff to operate. *It is recommended that this ball valve is serviced before the vessel is re launched.*

2) Forward sea toilet inlet ball valve was found to be securely double clipped with no visible signs of defect. The ball valve handle was operated and found to be smooth and

easily operated.

3) In the engine compartment the raw water inlet valve was found to be securely double clipped with no visible signs of defect. The ball valve handle was operated and found to be smooth and easily operated.

In addition to the above there are various nylon through hull skin fittings above the water line. These were visually inspected and lightly hammer sounded and all found in good order.

F1. DECK STRUCTURES

F1 MAIN COMPANIONWAY AND OTHER ACCESSES TO ACCOMMODATION

The pilot house is accessed by a “patio door” style glazed sliding door. The door and lock work smoothly and the seal appears in good condition.

F2 PORTS, WINDOWS ETC.

There is an aft hinged opening hatch in the cabin, which operated smoothly and there were no visible signs of water ingress.

The pilot house has a split windscreen with a small sliding hatch in the starboard and port side window, these operated smoothly with no visible signs of water ingress. There is also a sliding, glazed roof hatch, this operated smoothly with no visible signs of water ingress.

All the glazing in the pilot house appeared in good condition with no visible signs of water ingress.

F3 PULPIT, STANCHIONS

The vessel has a stainless steel pulpit and guard rail, this was found to be in good condition with no excessive flexing when tested.

F4 GROUND TACKLE AND MOORING ARRANGEMENTS

The vessel has a 10kg Danforth type anchor. This in good condition and of adequate size for the boat. This is attached to 8mm chain with bitter end secured with rope to a cleat in the anchor locker.

In the anchor locker there is a Lewmar electric windlass with a remote control. This was operated and all appeared to work correctly. The bow roller also worked smoothly and without apparent defect.



The Lewmar electric windlass, mounted in the anchor locker is bolted to a bulkhead. This bulkhead is deflected forward by up to 4mm and cracks in the gel coat have formed at the top joint and corners.

This has been caused by excessive tension applied to the anchor chain by the operator of the electric windlass, the windlass is also oversized for the size of vessel and anchor. This means that it needs to be operated

carefully to ensure that excessive tension is not applied that may damage the mooring gear. No winch handle could be located to operate the windlass clutch manually.

The bulkhead requires strengthening to take the forces of the large electric windlass. The back of this bulkhead is easily accessible from the cabin and a substantial piece of plywood or stainless steel can be bolted to the bulkhead aperture to increase strength. The gel coat should be "Vee'd" out and repaired with gel coat paste. Care should be taken when operating the electric windlass to ensure that excessive tension is not applied. In addition, a method of holding the anchor secure without using the electric windlass is recommended, as leaving the electric motor in the windlass under tension for long periods shortens the life of the motor. Alternative securing of the anchor can include a pin fixing through the bow roller, or a rope to take tension back to a secure point in the anchor locker. A winch handle should be acquired and secured in the anchor locker to operate the windlass clutch manually.

There are pairs of cleats on the bow and in the cockpit near the stern, these are of adequate size and the mountings appear free from stress cracks.

F5 BOARDING LADDERS

There is a folding stainless steel boarding ladder concealed in a hatch on the bathing platform. This operated smoothly and appeared without defect and withstood a weight test satisfactorily.

H SAFETY

H1. NAVIGATION LIGHTS AND SOUND SIGNALS

A small combined port and starboard light is mounted in the centre just in front of the pilot house windscreen and an anchor light is mounted on a folding support on top of the pilot house roof. These were switched on and worked. There is no horn fitted, depending on the

nature of sailing you intend to do, you may wish to fit one. There are spare electrical switches available for this purpose.

H2. BILGE PUMPING ARRANGEMENTS

There are two bilge pumps, one electric and one manual. The electric pump was switched on and ran, however there was no water in the bilge to test and the same with the manual pump, this was tested and sounded serviceable but there was no water to test it with.

H3. FIREFIGHTING EQUIPMENT

There is a dry powder fire extinguisher located on the rear of the inside to the pilot house. This was visually checked to be in the green zone for pressure. No expiry date could be found.

H4. LIFESAVING AND EMERGENCY EQUIPMENT

It is assumed that lifejackets will be carried, none were located on-board. There is a container of flares for inshore use under the starboard cabin bunk. These flares expired in 2010. *The flares need disposing of appropriately and new ones acquired appropriate to where you intend to operate the vessel (B)*

A horse shoe buoy was located in the cabin with the name of the vessel on it.

I. ENGINE

I1 ENGINE INSTALLATION

The vessel has a Yanmar 4JH4-HTE 110HP Diesel engine fitted. The engine hour's counter in the Tachometer shows 107.8 hours run.

There is evidence of superficial cosmetic corrosion on the engine, this is commensurate with the age and type of engine. To maximise future value of the vessel, you may consider wiping all the engine surfaces with an oily rag to slow down the spread of corrosion.

I2. RUNNING AND SERVICE CHECKS

The following visual checks were made:

- Engine oil level was up to level and clean.
- There was no evidence of water in the oil on the inside of the oil filler cap or the inside of the rocker box cover.
- The engine mountings showed no visual sign of cracking or sagging.
- The drive belts are protected by a cover and were not inspected.

It was not possible to run the engine, *it is recommend to have a sea trial to ensure the engine is in good condition.*

There were no invoices or service record for the engine on board. *It is recommended you ask to see invoices or service book to ensure engine has been maintained manufactures specifications.*

13. CONTROLS AND INSTRUMENTS

The helm position has a single lever type control for the engine and gearbox. This was tested and operated smoothly. The engine instrument panel is a Yanmar unit containing a Tachometer, four warning lights, ignition key and starter button. The ignition was switched on and the warning lights illuminated and the warning buzzer sounded. There is also a VDO make fuel gauge, this displayed 2/3rds full.

14. EXHAUST SYSTEM

The exhaust system was inspected visually and the hoses and waterlock/silencer check for secure mounting. No defects were found.

15. FUEL SYSTEM

The fuel tank is rotation moulded plastic with a capacity of 120 litres. This feeds a primary filter and then a secondary filter located on the engine. No visual signs of leaks and all piping appeared to in good condition and appropriately attached with ISO 9740 markings found on the pipes.



The primary Diesel fuel filter is showing signs of corrosion, whilst this is only a cosmetic issue, you may consider having this taken back to bare metal, an alloy primer and appropriate paint to bring this back to good condition.

J ACCOMMODATION AND ON BOARD SYSTEMS.

J1. ACCOMMODATION GENERAL

The forward cabin contains a U shaped seating, converting to a double bed using infills. Cloth covered cushions and removable table. There are cubbyholes port and starboard and storage under the seating.

All areas and voids were investigated and no visual sign of defects were found.

The interior is in very good condition and has seen very little wear and tear.

J2. FRESH WATER TANKS AND DELIVERY

There is a small galley to port with a 20 litre plastic jerry can plumbed into a manual pump with a small sink that drains overboard, the pump was tested and works correctly.

J3. HEADS

The heads has a Jabsco manual sea toilet fitted, this was found to be securely located. The heads like the rest of the interior is in very good condition. The pump was operated and worked smoothly but there was no liquid in the system to test definitively.

J4. ELECTRICAL INSTALLATION

The vessel has a 12 volt system, charging is via an engine mounted alternator, there are two batteries installed under the helm position floor. The batteries were contained in purpose built plastic battery boxes and appeared to be well secured all wiring was in in good condition, neatly installed and secured adequately.

J5. ELECTRONIC AND NAVIGATION EQUIPMENT

The electrical systems are controlled from switches located around the helm position.

All switches were tested and seen working.

The following electronic and navigational equipment was tested and seen working:

- Raymarine A60 Chartplotter with Navionics UK & Ireland Gold/X Compact Flash installed.
- VDO Dayton Stereo with 2 speakers.

A Plastimo magnetic compass mounted forward of the helm position has a clear plastic globe with no bubbles and swings freely, returning to original direction when deflected.

All lights were tested and found working.

J6. REFRIGERATION

There is a Waeco front opening refrigerator of 42 litres capacity, this was switched on and appeared to be operating correctly.

M. Newton

Mike Newton.

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