



Marine Survey Report



 / Fethiye

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Introduction

The primary aim of this document is to report on the factual condition of [REDACTED] at the time of the survey. Where the equipment has been inspected or tested and found to be in an unsatisfactory condition, recommendations for rectification, repair or replacement will be detailed in this report.

- This survey was carried out in accordance with instructions received from [REDACTED]
- The vessel was inspected whilst ashore on the hard-standing at the same place.
- The survey was conducted by [REDACTED] from YelkenOkulu.com Survey and Sailing Co.
- Survey was inspected at 19.11.2016. The survey was demanded by [REDACTED]
- The survey was carried out in accordance with agreed terms and conditions, and with relevant codes of practice published by the International Institute of Marine Surveying.

Scope

The sail yacht was inspected while she lay ashore. It had been taken ashore one day before the survey date. There was good, all-round access to the exterior of the hull. The only minor obstructions were the shoring supports. Access to the bottom of the keel was limited to the part not resting on chocks.

Internal inspection was limited to the areas that are normally accessible either directly or through lockers, inspection hatches, removable panels, etc. No part of the vessel was dismantled; no bolts were removed for inspection and no linings removed. Consequently, any part of the vessel, her equipment or fittings, which were unexposed or inaccessible, cannot be confirmed to be free from defect.

We have not inspected fibreglass laminate, woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are, therefore, unable to report that any such part of the structure is free from defects, rot or deterioration.

During the survey, sea trial test also was done by surveyor with the related company's officers.

General Description and Specifications

Boat Name	[REDACTED]
Model	Moorings 41.3
Year	2011
HIN number	FR-SPBAN837A111
Boat builder	Beneteau
Flag	USA
LOA	12.17 m
Beam	3,96 m
Displacement	7680 kg
Vessel type	Monohull sloop sailing yacht
Engine model	Yanmar / 3JH5E

All dimensions, weights and specifications that are written above, are taken from the original brochure that was published by the producer. The surveyor has made neither weight calculations nor measurements.

[REDACTED] was seen to be a Beneteau Oceanis 40 sailing vessel, a sloop rigged sailing yacht with an iron fin keel with half bulb. She was built by Beneteau France in 2011. But this boat was built for Moorings so it's model and type is Moorings 41.3.

The hull of [REDACTED] was moulded in hand laid GRP. White gelcoat was applied outer surface above the waterline, with one dark blue coloured bands running along the hull, just above the waterline.

Also dark blue antifouling was applied below the waterline. The hull was seen to be stiffened internally by a separately moulded glass fibre structure consisting of longitudinal stringers and transverse floors. This moulding was bonded to the internal surface of the hull using adhesive and GRP tabbing.

The cockpit, deck and superstructure were of moulded GRP with a core material between the two layers of laminate. They were finished with a white pigmented gelcoat. Hull to deck join was of the in-turned flange type. The deck moulding was finished with teak planking and a moulded non-slip texture on the coachroof.

Accommodation consisted of a double berth forward. The saloon had one settee berth on the starboard side and a curved seating & dining area on the starboard side. The nonfolding dining table was located along the centreline of the saloon. The galley space was on the port side, adjacent to the companionway hatch. A navigation station lay to the also the port side of the companionway. There was two dayheads compartment on the starboard side of the saloon and on the starboard side of the bow cabin.

Yanmar diesel engine drove a three-bladed fixed propeller via sail-drive system. One stainless steel fuel tank was located.

Moisture Content

Moisture test on hull are taken by Tramex Skipper Plus that is one of the perfect yacht surveyor moisture meter. Moisture levels where measured are taken with an electrophysics, capacitance type analog meter.

At the time of the hull inspection, we were informed that [REDACTED] had been out of the water for one day.

Readings measured were less than 5 (low) on the comparative scale (0 to 100) for surface moisture and between 30 and 70 (medium to high) when set to range 2, which measures deeper into the layup.

This product can identify areas where osmosis or the potential osmosis development, is present when used on Range2. Reading should be taken from the comparative scale (0-100) on the meter dial.

Hull Exterior

Material & Details of Construction

The hull was moulded in one piece with hand laid GRP. The cast iron fin keel with half bulb was through-bolted to the hull with steel fastenings.

General Appearance

The hull was sighted from a distance fore and aft and visually inspected all round.

Topsides / Bow and Aft

The topsides were inspected visually. The original gel-coat had been spray painted with a white paint coating to a high standard. Topsides has too many white gelcoat repairments and also it has some little cracks. These cracks caused by hitting the surface. These are not structural problems. When looked from one meter far from the grp sides, repairment's colour difference can be easily seen. Topsides are not shining and most probably wax and polish was done before April of 2016.



As you see at the above photograph, bow side of the boat was repaired before. The lines are not flat and symmetrical. Gelcoat repairment was done by brush on head of the boat. In some area, some grp reinforcement could be done.



Gelcoat repairments on starboards side of topside, was shown in red marks. One is about 30 cm diameter and the other one is about 13 cm diameter. And also this surface is not flat. Inside the boat, repairment can not be seen so this must be only gelcoat repairment.



Topside white gelcoat surfaces are not shining enough. This was and then protection polish can be done before the next summer session.



Bow topside of the boat and the aft side of the boat has Mooring's remaining sticker logos. These can be removed by applying wax.

Hull Below The Waterline

The hull antifouling below the waterline was too thick. Some places started peeling. For the next season, this antifouling must be removed. And also during the moister calculations, this thick antifouling shows much more moister on Tramex Moisture meter. Important repairment wasn't seen on keel area and grp parts under waterline.



Peeling antifouling that was because of thickness, can be seen on the above photo.



As seen on photo, edges of the rudder was repaired before by International filler. Because of this, moisture meter shows medium value moisture on that area.



Starboard hull, three gelcoat pin holes found during the survey. GRP part of the boat can be seen from this holes. These holes are most probably caused by bubbles staying on gelcoat during the production. Moisture meter levels show, grp doesn't have moisture inside.



General moisture on grp was about 15%. This is acceptable level for one day standing boat on land.



Sail-drive transmission system and three blade fixed propeller has not corrosion but they were painted with dark blue antifouling. Applying this grp antifouling is not acceptable for engine manufacturer. These must be painted by special metal antifouling.

Hammer Test Below the Waterline

The exterior surfaces of the hull, keel and bilge keels were then tested by hitting hand. The test gave sound returns with no indications of softening or delamination of the GRP.

Moisture Readings

At the time of the hull inspection, we were informed that [REDACTED] had been out of the water for one day. General moisture on grp was about 15%. This is acceptable level for one day standing boat on land.

Note that these readings are relative and do not indicate a moisture content as a percentage of dry weight. High moisture content is not generally a structural defect and is to be expected in older boats. Where some moisture has been absorbed, the likelihood of moisture related problems occurring are higher. When this occurs, the actual state of the laminate cannot be completely guaranteed without destructive testing and chemical analysis. The opinion given in this survey report is based on all the evidence available at the time but without destructive testing.

Keel

The fin with half bulb keel of [REDACTED] was made from cast iron. The keel was inspected, except where the bottom of the keel was hidden by supporting chocks and no evidence of hard. No any important structural damage can be seen on keel.





Bottom and bow side of the keel has some damages.



A hole type detachment on sealing between grp hull and keel.

Rudder and Steering

██████ had a balanced spade rudder constructed from a stainless steel stock encapsulated in a hollow GRP moulding. It was inspected visually and found to be in serviceable condition. There was a repairment the lower corner of the leading edge of the rudder moulding.

Hull Interior

There was not any water inside the spider frame structure on bilge area. There was also not any crack on spider frame, transverse floor and grp hull connection and bounding places.

Keel Bolts

The external surfaces of all accessible bolts were found to have evidence of corrosion. Keel's connection stainless steel bolts is seen alright. The material used on bolts are A2 type, this means 304 quality of stainless steel. There is no need changing fastening equipment.





Rusty keel connection was seen on the bow side of boat. This is because, air condition makes some water while working and water passes from these places to the bilge pump.

Hull Interior Moulding Structure

There was not any crack and detachment place seen on moulding structure.

Engine Beds

Engine beds were examined and were free of signs of crack or deformation.

Hull Fittings, Valves and Seacocks

The through-hull skin fittings were all in serviceable condition. Sea water inlets on below the waterline were bronze. Black water outlet valves were made of plastic. All of these valves were working. There is also speed impellor and depth transducer are made of plastic. Raymarine spare plug is on board.

Deck and External Fittings

Hull / Deck Joint

The deck was joined to the hull by an in-turned flange hull-to-deck joint. There was no any detection on joint places. In areas that could be accessed for inspection, there was no evidence of water ingress to the vessel interior through this join.

Deck Moulding

The deck moulding was a cored GRP composite, finished with white pigmented gelcoat. It incorporated the decks, coachroof and cockpit. The gel-coat finish on deck was generally matted by UV degradation.

Coach Roof



Some non-slip surface gelcoat finishing places on coach roof had too many damaged areas.



Too many scratches were seen on non-slip surface above the coach roof.

Cockpit

Neither gelcoat detachment nor scratch area was seen on cockpit place. Minor rusty connection steels were seen on cockpit closets and pulpits.

Teaks on Cockpit

Black caulking was removing and some teak wood started getting from their bonding places. Especially black caulking on aft stairs was not seen.



Hatches

Lewmar hatches were installed in the roof of the coach roof, cabins and saloon. It was found to be securely attached and showed no signs of water ingress. All the hatches are working properly.



Detachment was seen on starboard side hatch that was located on coach roof.



Shown place of hatch supporting rivets were not tight enough. In time they will loosen much more.

Ports, Windows and Ventilation

No water ingress from the windows, ports and ventilations were examined.

There were two one UFO type fixed ventilators on saloon and one located on bow cabin roof above the berth. These were in good condition.



Some black sikaflex sealing places are not in place on side of coach roof windows.

Deck Fittings and Equipments

The vessel's name was positioned on port side of the transom.

There were six aluminium mooring cleats: Two on the foredeck, two on the midship and two just forward of the rear quarters. All were inspected and found to be adequately secured to the deck.

Grab Rails / Guard Rails

One 20mm diameter tubular welded stainless steel grab rails were fitted to the saloon roof. They were in good condition and were tested with the Surveyor's weight and found well secured.

Additional hand holds were provided either side of the cockpit by two 25mm diameter tubular welded stainless steel guards. They were in good condition and were tested with the Surveyor's weight and found well secured.

The side stanchions were found to be made from tapered (25mm to 15 mm diameter) stainless steel tube and fitted with twin safety wires of 1 x 19 construction. The upper and lower wire was 5 mm diameter. The stanchion tubes were connected to the toe-rail via Aluminium bases. The stanchions, bases, lock nuts and safety wires were found secure and in good order.

- Port side of guard rail is not tighten enough.

Boarding Ladder

A welded stainless steel boarding ladder was attached to the transom of the vessel. It was found to be adequately secured to the transom.

Rigging and Sails

Mast

The mast could not be ascended with safety, so the rig was examined as far as possible from the deck. The lower part of the mast and tabernacle were in sound condition, with no sign of serious corrosion or physical damage.

It is advisable to take the mast down for a full inspection every few years, as part of the routine maintenance programme. In the short term, closer examination of the mast, spreaders and masthead gear would be possible once the boat is afloat.

Boom connection hinge part is not tighten enough that is shown below. Rivets started moving and this will need a repairment.



Boom

Boom was in good condition.

Shroud chain plates

The stainless steel chain plates were fabricated from welded stainless steel plate. They were closely examined and found to be free of cracks and generally free of corrosion

The chain plates were found to be adequately secured through the deck, with sufficiently sized bonding into the hull and no evidence of undue strain on the mountings.

Forestay & Backstay Chain Plates

The stainless steel forestay and backstay chain plates were examined and found to be free of corrosion, adequately secured to the hull and with no evidence of undue strain on the mountings.

Jib Furling System

The Facnor roller furling equipment was tested as far as practical and found generally in good working order with the reefing line square to the drum and of suitable length. The drum was examined and no defects were seen in either the bearings or in the rigging screw attachment.

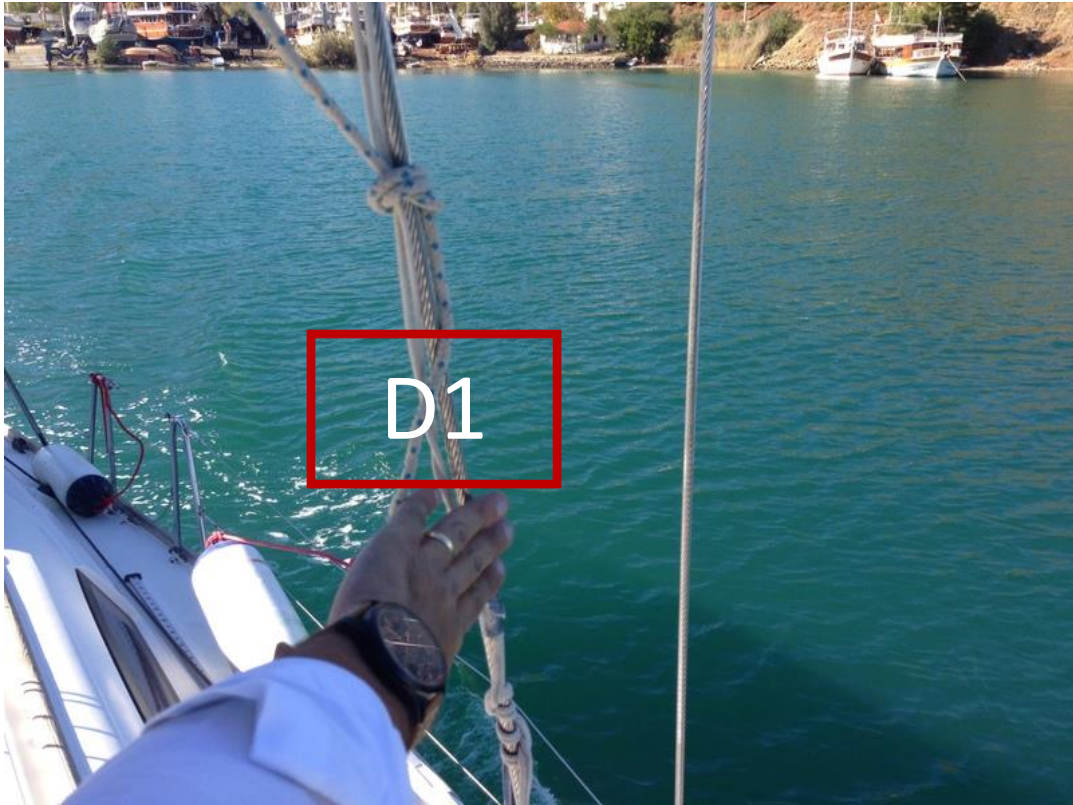
Standing Rigging

Zspar Diffusion mast was connected. There had two spreader and twin backstays.

The forestay was formed by the headsail reefing foil.

The standing rigging was formed from 10mm 1x19 stainless steel wire, with swaged terminals secured to the chain plates by toggles and bottle screws.

As far as could be ascertained, the bottle screws and toggles appeared to be in sound condition, with no signs of bending, splitting, cracking or other failure. They should, as a matter of routine, be stripped, inspected and greased before reinstallation.



D1 shroud was too loosen. It was about 5% tension and it must be around 19% of pressure.



Water is leaking from the deck to the inside support parts of shrouds. Because of this made corrosion on seen products of both side of the boat. Steel pins must be cleaned.

Winches, Clutches, Travelers, Cars

There were six Harken winches on cockpit area on [REDACTED]. All of them were self-tailing two speed winches. All of them were working. The winches listed above all functioned correctly. It is RECOMMENDED that all winches are dis-assembled and cleaned.

There were two sets of eight jammer type Spinlock clutches mounted on the coachroof for the purpose of holding the tensioned halyards and reefing lines. They were inspected and found to be securely mounted and functioning correctly.

Sails

The sail was found to be generally clean and well maintained. The mainsail was new and that's brand is Ulman Sails that was located in İzmir/ Turkey. Mainsail sliders were not working properly. Dropping the mainsail, sliders had too many friction and the mainsail stayed the middle of the mast. User must climb to the boom and pull the mainsail.



Mainsail stayed above the level of spreader.

The furling genoa was in its place, rounding the furling foil. The white ultraviolet sacrificial strip on the genoa was decayed and weakened by UV degradation and should be replaced.



Leech side of genoa, uv protection cushion started tearing.

Canvas

- Lazybag was fitted over the boom. The zip was working properly.
- Sprayhood windows were damaged from sun and it was not easy to see the bow side of the boat by looking behind the sprayhood.
- Bimini was in good condition. Only thing that, boom's aft edge was hitting the bimini and made a scratch on bimini.



Propulsion System

Engine & Transmission

[REDACTED] was fitted with Yanmar three cylinder 39 hp diesel engine with fresh water cooling, driving through a sail-drive gearbox. Engine control was via a single lever, giving forward and reverse gears and throttle control, mounted next to the starboard helm.

The engine bearers were securely mounted, and the flexible rubber engine mounts were in sound condition. The mounting bolts were tight. Externally, the engine was clean and in fair condition, with no evidence of oil leaks. The alternator belt appeared to be correctly tensioned. There was no evidence of leakage from the cooling system and oil system.

Engine room ventilation system was working properly.

Gear oil was in good condition.





Rpm meter of engine was changed but it was not original. Engine hour was just four hours.

Fuel System Engine & Transmission

There was a single stainless steel fuel tank mounted under the aft bunk. Access to the fuel tanks was limited. The visible parts of the fuel tanks were clean and free of damage and corrosion.

The fuel filter, fuel lines and clips were in sound condition.

Systems and Services

Anchor Windlass and Chain

A Quick, 12 volt electric windlass was installed on the foredeck. This was inspected and found to be adequately secured to the chain locker shelf.

Windlass was working properly.

Chain had not much corrosion on it.



Chain cover of windlass was broken.

Fresh Water System

There were two polyethylene fresh water tanks. The tanks were located on the bow cabin and starboard sides of the saloon, under the seats. These were found to be adequately secured to the adjacent structure.

Water from each tank fed into a pressurised water system, pressurised by one 25psi Jabsco automatic water system pump with pressure tank, located at the back end of the saloon, under the seats. The taps in the galley and heads were tested and were found to function, although the pressure was low. It is suggested that the accumulator is serviced or replaced.

This water system supplied cold water to taps in the galley and in the heads. A boiler was located also starboard side and provided hot water to these taps.

The boiler was heated by either hot water from the engine cooling system or by 220 volt AC electric heating.

LPG Installation

GRP gas cylinder storage locker was located within the port side of cockpit locker. Only one gas bottle was connected. There was not a spare bottle. The locker was inspected and found to be well secured and gas tight to a level above the top of the cylinder / pressure regulator.

Connected to the outboard gas cylinder was a pressure regulator. This was found to be clean and free from corrosion.



Gas pipe behind the oven was cut before and then connected by using a connector. This is not available for the gas system regulations.

Electrical System

Smantha had a 12 Volt dc electrical system with an engine starting battery and service batteries. Engine battery was located inside the engine room. Service batteries was located under the starboard cabin's berth. The batteries were located in an adequately ventilated area.

Battery charger system was working properly.

Engine alternator was charging battery groups.

Shore power fuse were located above the navigation panel inside the closet.

Navigation Equipment

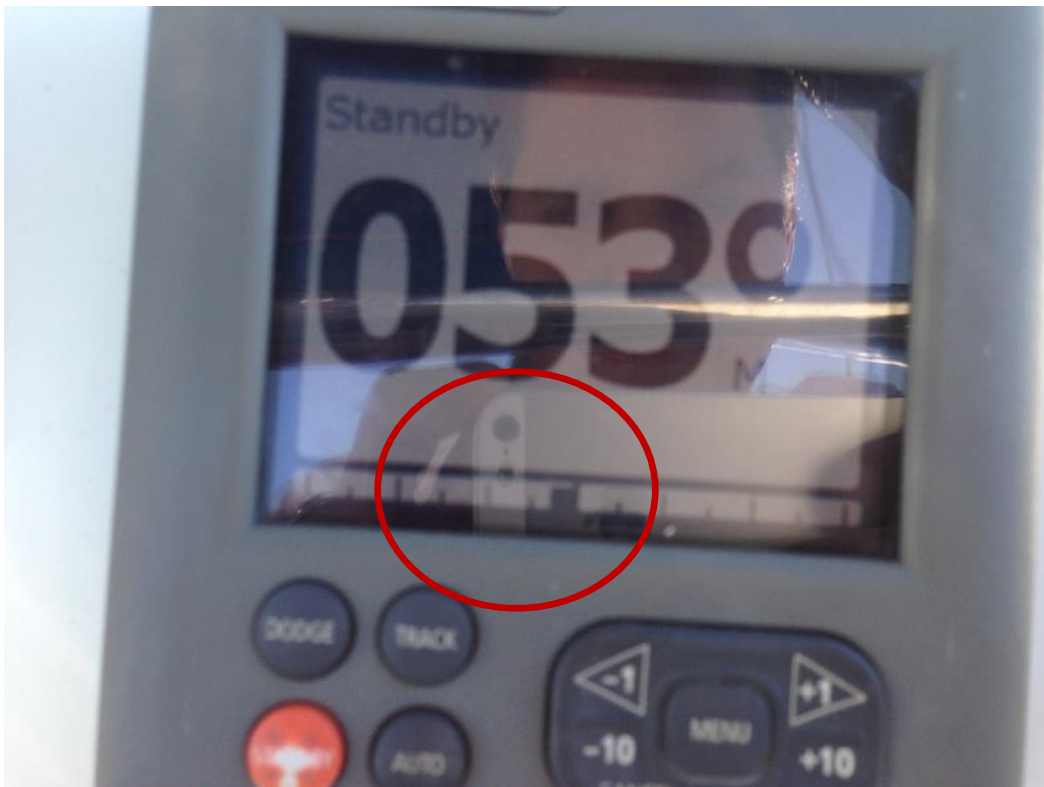
[REDACTED] was equipped with Raymarine System. Navigation instrument were ST 70 screens.

Raymarine 49 E, VHF radio was installed above the chart table. It was working properly.

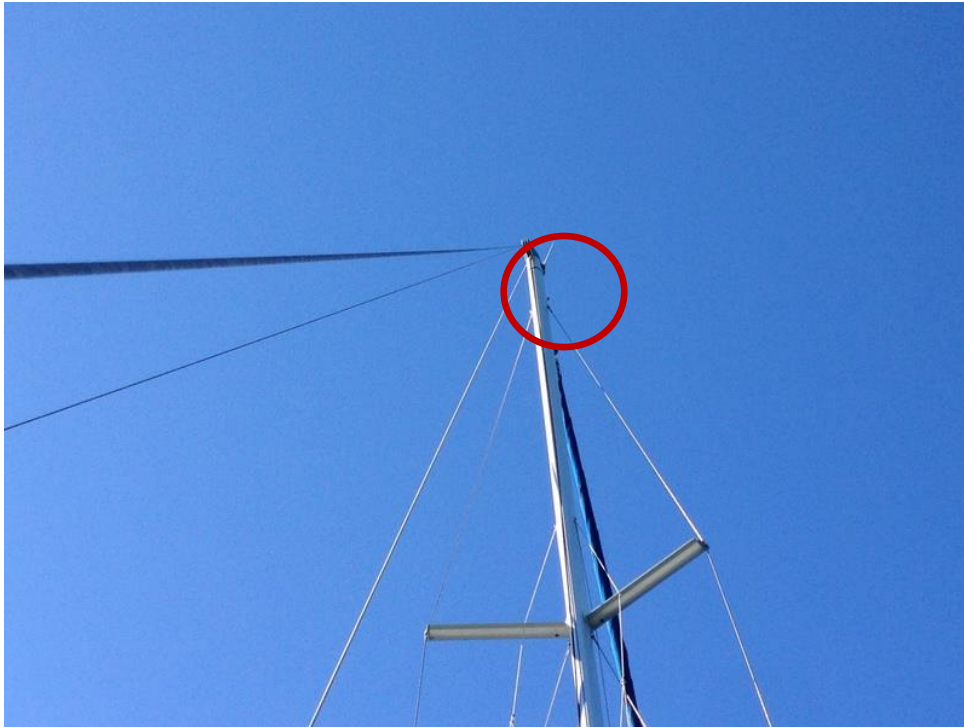
Wind speed & direction indicator was installed at the top of the mast, with two ST70 display mounted the port side at the helm.

Depth sounder display was mounted port side of the wheel at the helm. Depth, speed, temperature was working properly.

Raymarine C90 W Chartplotter was installed at the cockpit table. It was working properly but there was no card inside so user couldn't check the depths above 10 meter.



Autopilot's feedback must be calibrated. When you keep the boat straight, boat turns to starboard side. Rudder angle shows 5 degree more to the port side.



- VHF Antenna couldn't stand upright. It must be checked.
- There was not a windex wind indicator on the top of the mast.

Navigation Lights

A port & starboard lights were adequately attached to the pulpit. The deck level navigation lights were tested and found to function correctly. It was not possible to determine whether the masthead lights were functioning due to the excessive level of ambient light.



Port navigation light was supported by a plastic strip.

Accommodation and Decor

Bow Cabin

The plywood doors were found to be in serviceable condition and closed correctly.

All the lights are working properly.

Hatches, mosquito net and shutters were working properly.

Cushions were in good condition.



Bow cabin this door part needs to be tighten.

Main Saloon

All the hatches were working properly.

The saloon cushions were found to be in satisfactory.

Ceiling lights, galley light and navigation table light were also working properly.

TV was working via the inverter located under the starboard cabin berth.



Cosmetic defects on saloon.



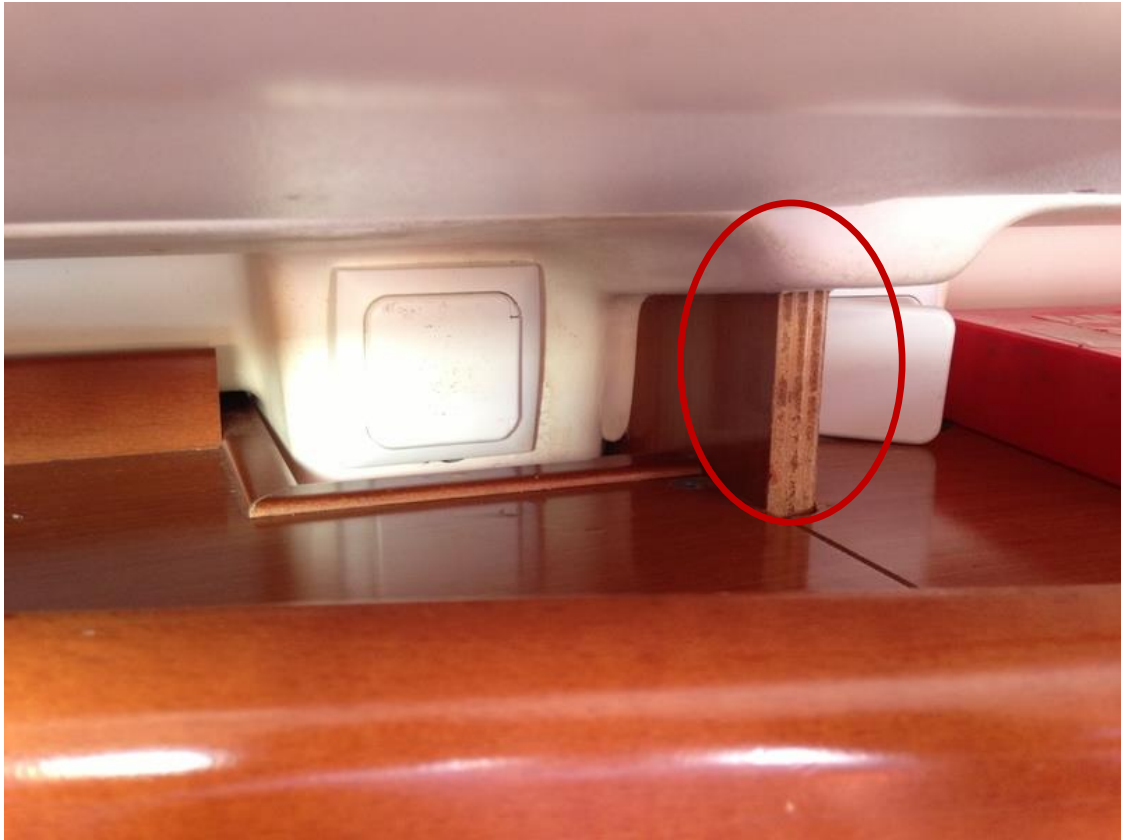
Cosmetic defects on saloon.



Cosmetic defects on saloon.



Cosmetic defects on saloon.





Dayheads

All shower pump systems were working properly.

All the hatches were working properly.

Manual WC systems were working properly.

Hot water was coming to the shower and taps on dayhead.

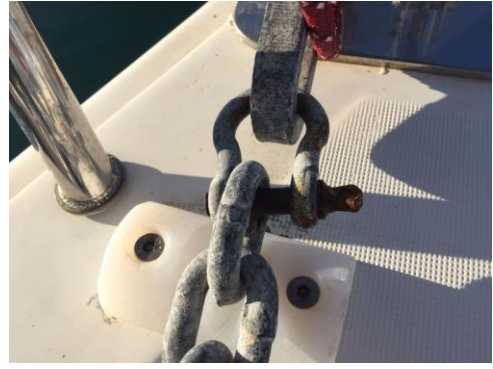


Steel parts at dayheads started corrosion.

Other Points



Cockpit courtesy desk light was not working.



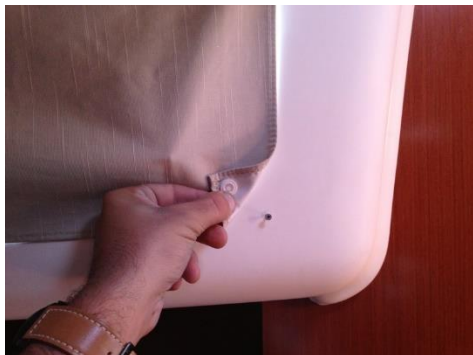
Mooring anchor chain shackle had corrosion.



Starboard wheel is moving and need to be tighten.



Pleksy shower door had a sctrach at dayhead in saloon



Some curtain holders were absent.



Wheel covers started losing their colour.