



# Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

[www.marinesurveysuk.com](http://www.marinesurveysuk.com)

[Yacht surveyor](#), Affiliate member

YDSA, Full member BMSE, MECAL

MCA coding surveyor

Marine Surveys UK, Matthew West  
4 Brook Cottages, Mill Lane  
Westbourne, Emsworth  
Hants, PO10 8RT  
07798554535  
[matt@marinesurveysuk.com](mailto:matt@marinesurveysuk.com)

Survey Report no: [REDACTED]

Name of Vessel: "[REDACTED]"

Type of Vessel: Jeanneau Sun 2500

## At the request of:

[REDACTED]



This survey was carried out on the [REDACTED] at Hamble Point Marina, Hamble, Southampton Hampshire UK. The above named being a prospective purchaser of the vessel.

**Limitations:**

- ✚ Where access is restricted by fixed panels, linings etc. it was not possible to examine and I cannot say those areas are free from defects.
- ✚ This Report has been prepared for the use of Commissioning Client and no liability is extended to others who may see it.
- ✚ In some cases it is not possible to detect latent and hidden defects without destructive testing which is not possible without the Owner's consent.

**Scope of Survey:**

- ✚ This is a Pre-Purchase Survey and its purpose is to establish the structural and general condition of the vessel. Where items of equipment have been tested this will be stated in the text.
- ✚ Camera and Snake Endoscope electronic equipment was used in places to view normally inaccessible areas and the pictures analysed to identify any issues.
- ✚ A general inspection of the engine and installation will be made, but this is a visual inspection only without running the engine. It should be appreciated that some components may appear serviceable but found to be defective when the engine is run.
- ✚ The vessel was surveyed out of the water and tests carried out as described to ascertain any possible sources of water ingress, however, the vessel was not surveyed in the water and when launched, best practice is to thoroughly check for any leaks.

**Recommendations:**

- ✚ These will not be made concerning cosmetic or other minor defects, although relevant suggestions may be made in the text.
- ✚ Recommendations will be restricted to those defects which should be rectified before vessel is used, (or within a given time span if specified), and items which may affect Insurability
- ✚ *Recommendations will be printed in red italics for quick reference.*
- ✚ *The recommendations are contained in the body of report in order that they may be read in context, and are also listed as part of the Conclusions at the end of this Report.*

**Conditions of Survey:**

Vessel was examined on hard standing, its keel unsupported, hull supported in metal storage cradle at the premises of Hamble Point Marina, having been ashore for an unspecified period.

No special conditions affected the survey other than as described in the text. The prospective purchaser was present for some of the survey.



Information is reported in the Sections below, followed by recommendations and conclusions and valuation

**Hull, Deck and Structure.**

1. Details of Subject Vessel, (General Description, Dimensions, Registration etc.).
2. Keel.
3. Hull below Waterline.
4. Topsides above Waterline including Rubbing Strake etc.
5. Deck Moulding.
6. Coach roof.
7. Cockpit.
8. Hull/Deck Join.
9. Bulkheads and Structural Stiffening including Internal Mouldings.

**Steering, Stern Gear, and Skin Fittings etc.**

10. Rudder and Steering.
11. Stern Gear.
12. Cathodic Protection.
13. Skin Fittings and other through Hull Apertures.

**On Deck.**

14. Main Companionway and other Accesses to Accommodation.
15. Ports Windows etc.
16. Pulpit, Stanchions, Pushpit, Lifelines and Jackstays.
17. Rigging Attachment Points.
18. Ground Tackle and Mooring Arrangements.
19. Other Deck Gear and Fittings.
20. Davits and Boarding Ladders.

**Rig.**

21. Spars.
22. Standing Rigging.
23. Running Rigging.
24. Sails and Covers etc.

**Safety.**

25. Navigation Lights.
26. Bilge Pumping Arrangements.
27. Fire fighting Equipment.
28. Lifesaving and Emergency Equipment.

**Engine.**

29. Engine and Installation.
30. Fuel System.

**Accommodation and onboard Systems.**

31. Accommodation General.
32. Gas Installation.
33. Fresh Water Tanks and Delivery.
34. Heads.
35. Electrical Installation.
36. Electronic and Navigation Equipment.
37. Heating & Refrigeration



Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

[www.marinesurveysuk.com](http://www.marinesurveysuk.com)



Marine Surveys UK

*“Pragmatic Surveys in Plain English”*

www.marinesurveysuk.com

**1.Details of subject vessel:**

Designed by Oliver Petit and the Jeanneau design team, the Jeanneau Sun 2500 was first produced in 2005 and still in production with a choice of fixed or lifting keel. They claim to be inspired by the mini transat boats.

Courtezan is the lifting keel model and the moderate draft makes them ideal for exploring shallow waters and can be beached on her keel and twin rudders. It has fractional rig with single spreaders.

This vessel was built under licence in Poland by Ostroda Yacht for Chantiers Jeanneau SA, 85505 Les Herbiers, France. The manufacturer plate on the vessel states that the vessel was built to the Regional craft directive coding category C for 6 persons, and conforms to CE0098. This is the inshore category with significant wave ufort wind strength up to and including force 6.



Marine Surveys UK

## Yacht and Small Craft Surveyors

### *“Pragmatic Surveys in plain English”*

Matthew West

4 Brook Cottages

Mobile 07798554535

Mill Lane

Email: matt@marinesurveysUK.com

Westbourne

Web address:

Emsworth

www.marinesurveysUK.com

Hampshire

PO10 8RT

Survey Report no: 1007

Name of Vessel: “Courtezan”

Type of Vessel: Jeanneau Sun 2500



Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

[www.marinesurveysuk.com](http://www.marinesurveysuk.com)

**At the request of:**

Mr Andrew Butcher

Three Corner Meadow

Cargreen

Saltash

Cornwall

PL12 6PA



This survey was carried out on the 11<sup>th</sup> August 2010 at Hamble Point Marina, Hamble, Southampton Hampshire UK. The above named being a prospective purchaser of the vessel.

**Limitations:**

- ✚ Where access is restricted by fixed panels, linings etc. it was not possible to examine and I cannot say those areas are free from defects.
- ✚ This Report has been prepared for the use of Commissioning Client and no liability is extended to others who may see it.
- ✚ In some cases it is not possible to detect latent and hidden defects without destructive testing which is not possible without the Owner's consent.

**Scope of Survey:**

- ✚ This is a Pre-Purchase Survey and its purpose is to establish the structural and general condition of the vessel. Where items of equipment have been tested this will be stated in the text.
- ✚ Camera and Snake Endoscope electronic equipment was used in places to view normally inaccessible areas and the pictures analysed to identify any issues.
- ✚ A general inspection of the engine and installation will be made, but this is a visual inspection only without running the engine. It should be appreciated that some components may appear serviceable but found to be defective when the engine is run.
- ✚ The vessel was surveyed out of the water and tests carried out as described to ascertain any possible sources of water ingress, however, the vessel was not surveyed in the water and when launched, best practice is to thoroughly check for any leaks.

**Recommendations:**

- ✚ These will not be made concerning cosmetic or other minor defects, although relevant suggestions may be made in the text.
- ✚ Recommendations will be restricted to those defects which should be rectified before vessel is used, (or within a given time span if specified), and items which may affect Insurability
- ✚ *Recommendations will be printed in red italics for quick reference.*
- ✚ *The recommendations are contained in the body of report in order that they may be read in context, and are also listed as part of the Conclusions at the end of this Report.*

**Conditions of Survey:**

Vessel was examined on hard standing, its keel unsupported, hull supported in metal storage cradle at the premises of Hamble Point Marina, having been ashore for an unspecified period.

No special conditions affected the survey other than as described in the text. The prospective purchaser was present for some of the survey.



Information is reported in the Sections below, followed by recommendations and conclusions and valuation

**Hull, Deck and Structure.**

- 38. Details of Subject Vessel, (General Description, Dimensions, Registration etc.).
- 39. Keel.
- 40. Hull below Waterline.
- 41. Topsides above Waterline including Rubbing Strake etc.
- 42. Deck Moulding.
- 43. Coach roof.
- 44. Cockpit.
- 45. Hull/Deck Join.
- 46. Bulkheads and Structural Stiffening including Internal Mouldings.

**Steering, Stern Gear, and Skin Fittings etc.**

- 47. Rudder and Steering.
- 48. Stern Gear.
- 49. Cathodic Protection.
- 50. Skin Fittings and other through Hull Apertures.

**On Deck.**

- 51. Main Companionway and other Accesses to Accommodation.
- 52. Ports Windows etc.
- 53. Pulpit, Stanchions, Pushpit, Lifelines and Jackstays.
- 54. Rigging Attachment Points.
- 55. Ground Tackle and Mooring Arrangements.
- 56. Other Deck Gear and Fittings.
- 57. Davits and Boarding Ladders.

**Rig.**

- 58. Spars.
- 59. Standing Rigging.
- 60. Running Rigging.
- 61. Sails and Covers etc.

**Safety.**

- 62. Navigation Lights.
- 63. Bilge Pumping Arrangements.
- 64. Fire fighting Equipment.
- 65. Lifesaving and Emergency Equipment.

**Engine.**

- 66. Engine and Installation.
- 67. Fuel System.

**Accommodation and onboard Systems.**

- 68. Accommodation General.
- 69. Gas Installation.
- 70. Fresh Water Tanks and Delivery.
- 71. Heads.
- 72. Electrical Installation.
- 73. Electronic and Navigation Equipment.
- 74. Heating & Refrigeration



Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

[www.marinesurveysuk.com](http://www.marinesurveysuk.com)



**1.Details of subject vessel:**

Designed by Oliver Petit and the Jeanneau design team, the Jeanneau Sun 2500 was first produced in 2005 and still in production with a choice of fixed or lifting keel. They claim to be inspired by the mini transat boats.

Courtezan is the lifting keel model and the moderate draft makes them ideal for exploring shallow waters and can be beached on her keel and twin rudders. It has fractional rig with single spreaders.

This vessel was built under licence in Poland by Ostroda Yacht for Chantiers Jeanneau SA, 85505 Les Herbiers, France. The manufacturer plate on the vessel states that the vessel was built to the Regional craft directive coding category C for 6 persons, and conforms to CE0098. This is the inshore category with significant wave height up to and including 2m and Beaufort wind strength up to and including force 6.

**Manufacturers' information (not verified by measurement)**

|                 |                         |
|-----------------|-------------------------|
| Length Overall: | 7.5m / 24'6"            |
| Beam:           | 2.9m / 9'5"             |
| Draft:          | 0.69m-1.75m / 2'3"-5'7" |
| Displacement:   | 2,240kg / 4,983lbs      |
| CE Marked       | C6                      |



**Boat specific information**

|                       |                  |
|-----------------------|------------------|
| Registration          | Unknown          |
| HIN Number            | PL-IR100077F505  |
| Month & Year of Build | June 2005        |
| RCD                   | No marking found |

Note: The brokers' details state the vessel in 2006. The manufacturer has to identify when it was built in the HIN number but it maybe that the vessel was first commissioned / sold in 2006.

Please note that we did not see an operating manual on the vessel and this is required for CE conformity.



## 2. Keel

- a) The keel comprises an iron keel stub with a GRP lifting keel (centre board) internally, hinged on a stainless steel pivot with nylon bushes. It operates by halyard rope attached to a stainless steel 1x19 wire which is attached with an eye bolt into aft edge of keel. This runs up the king post through the deck to the starboard coachroof winch
- b) The keel stub has lugs cast at the top which locate into mouldings in the hull and keel bolts locate from inside the hull into these lugs to secure it to the hull. The area around these faired with a mastic / sikoflex product.
- c) At the forward end of the keel at the lug, rust or corrosion stains were noted. I was able to insert a metal spike into the mastic /sikoflex and water drops were pushed out.



Fig 1 - 2 Area at front of keel

The starboard forward lug also had signs of rust. This was scraped back and found to be surface keel rust. I suggest the mastic is removed from around the lugs, the rust cleaned off, confirm the rust is from the keel and not keel bolts. If not the keel bolts, the area should then be primed and new Sikoflex inserted and faired.

- d) The keel is coated in clean white anti-foul over layer of epoxy and Gel shield. It was lightly hammer tested and checked with magnet all over and there are no signs of filler or damage.
- e) The underside of the keel stub was checked by mirror and when lifted in slings. There is minor surface rust where it has not been treated with primer and surprisingly little barnacle growth.
- f) Internally only the aft two keel bolts accessible, the others being presumed under the inner moulding. The two accessible bolts were tested with magnet and found to be low grade stainless steel, not 316. This can be more prone to crevice corrosion. There is no sign of corrosion on the surfaces and I suggest they are removed and checked after 2 more years use. I would also suggest they are replaced with 316 grade bolts.
- g) The vessel was suspended in slings and the centreboard operated. The wire attachment was checked and found 316 stainless steel with light surface corrosion. The fittings were all hammer tested and found sound.
- h) The operating halyard was checked at attachment and no wear found.
- i) The centre board blade was hammer sounded and checked with a moisture meter (operation explained later in report in detail) and readings were 27 – 38 shallow and 29 deep. 3# 10mm diameter blisters were found. While these are true osmotic blisters between the gel coat and laminate and the moisture reading backs this up, they are in early stages. To prevent further deterioration, I suggest that the centre board is cleaned off and dried off, these blisters ground out and the centreboard painted with and epoxy coating and gel shield.
- j) Some play was noted in the pivot of the centre board. This play is more than would be found on a new boat but not excessive. Removal of the centreboard and replacement of nylon bushes looks a relatively straight forward task with good access to either side of the pivot pin through the mastic filled holes but will require the vessel to be lifted a few feet higher than normal storage.
- k) The centreboard supported the weight of one man pulling hard against it.
- l) There does not appear to be a method to lock the centre board in place which if designed like this is not a problem, however an operating manual will confirm correct use.

## 3. Hull below Waterline:



- a) The hull below the waterline is of solid FRP construction utilising chopped strand matt, woven roving and cloth composite.
- b) The vessel is sitting in a cradle with the keel stub hanging. It is sitting on 4 # 40c x 40cm wooden pads with carpet evenly spaced. There are no signs of distortion in the hull.
- c) The hull has white antifouling applied over layers gel shield and I believe an epoxy coating which is well attached over dark blue gel coat.
- d) Light hammer sounding (not heavy enough to damage anti-foul) did not suggest any delaminating or voids and there are no visible signs of significant damage or repairs.
- e) The Antifouling covering was removed back to clean blue gel coat in 4 areas. Because of the possible epoxy coating a further 12 areas of only antifouling was removed, at random approximately 50mm x 50mm. The antifouling came away fairly easily but the epoxy coating was well attached. Each area was checked under 10x magnification and no signs of wicking or Osmotic blistering was evident where the surface was exposed or through the antifouling.
- f) Moisture readings were taken where the antifouling was removed using a capacitance type moisture meter of Sovereign Quantum type, operating in both shallow and deep reading modes.

The meter was first checked for correct calibration.

The readings recorded below are from the meter operating in the shallow and also deep mode on the relative scale 0-100.

The readings are relative and **do not** express 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. However where some moisture has been absorbed the likelihood of moisture related problems occurring is higher, and the actual state of the laminate cannot be completely guaranteed without destructive testing followed by chemical analysis. The opinion given in this survey is based on all the evidence available at the time but without destructive testing.

The conditions prevailing when the readings were taken were as follows:

|   |                   |
|---|-------------------|
| <b>Air Temperature:</b>   | <b>19.9°C</b>     |
| <b>Surface temperature:</b>   | <b>20.2°C</b>     |
| <b>Relative Humidity:</b>   | <b>35.5%</b>      |
| <b>Time ashore</b>  | <b>2 months +</b> |
| <b>In summary the weather conditions for obtaining moisture readings were fair.</b> |                   |

Readings were as follows:

| Meter  | Range below waterline. | Range above waterline.         |
|--|------------------------|--------------------------------|
| Sovereign Quantum, Scale A, 0-100 Shallow mode | <b>10 -20</b>          | <b>10 – 18</b>                 |
| Deep Mode                                      | <b>13 - 22</b>         | <b>No significant increase</b> |



The values taken below the waterline on gel coat were 10 -16 shallow and 13 -20 deep. This normally indicates some moisture present at low levels but of no great concern. I checked brand new never launched yacht alongside Courtezan and she had similar readings. Readings through epoxy will be higher than bare gel due to their composition, therefore for practical purposes this hull can be considered dry. Always storing the boat ashore out of season to allow some natural drying out to occur will contribute significantly to maintaining condition.

#### **4. Topsides above Waterline including Rubbing Strake:**

- a) Similar composition to below waterline but less layup of FRP will have been used.
- b) Top side moulding found fair and finished in the original dark blue gel coat. The gel coat surface is in generally good condition with little UV degrading. There is some abrasion noted conducive to where fenders would hang. I suggest fender socks are purchased. Exceptions noted below
- c) Gel coat crazing was noted starboard side amidships below rubbing strake approximately 70mm long and port side same position 400mm long.

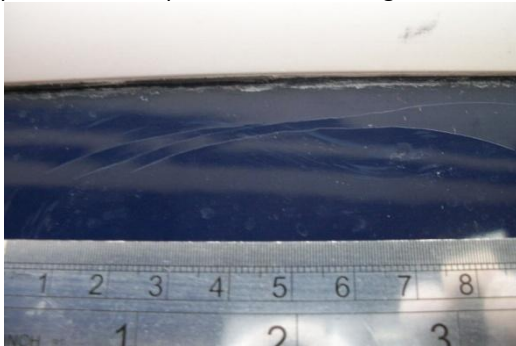


Fig 3 Stress crazing starboard side.

This area could not be depressed with hammer handle and body weight. Because of their location amidships it would indicate these have been caused by minor impact possibly coming along side although protected by fenders. There will be damage to the laminate but there are no major loadings at this place. i.e rigging attachments. I suggest they should be sealed to stop water ingress, either by waxing or a better repair would be to grind back and expertly flow coat and polish however I would recommend a professional to get the correct match and finish.

- d) No stress crazing or cracking noted in way of bulkheads or other re-enforcing members.

#### **5. Deck moulding:**

- a) The deck is of solid GRP with foam core in places. Access to the underside was greatly restricted by inner moulding and only accessible from cockpit locker and small hatch in anchor locker. This is because the majority of the underside of the deck has an internal moulding attached.
- b) The gel coat is white with moulded in non slip, there are no signs of pitting caused by UV or aggressive cleaning agents.
- c) The whole deck was carefully tested underfoot and no sign of delaminating or other structural defect.
- d) The deck was lightly hammer sounded and moisture tested with no significant defects found.

#### **6. Coachroof:**

- a) Integral with deck moulding and constructed in the same way. The whole area was carefully tested underfoot and no sign of delaminating or other structural defect.
- b) Minor flexing of the coach roof area below the mast when the shrouds were flexed. Tested with moisture meter and readings were 12 shallow and 18 deep on the starboard side. The base readings were 10 shallow 18 deep. There is a ply pad laminated into the coach roof at this point and the reading would suggest some water ingress which is can be coming from around electrical plugs or lifting keel halyard access. I suggest that the leak is found to prevent further ingress. This may involve lifting the mast.

#### **7. Cockpit:**



- a) Integral with the deck moulding and drains at aft end through stainless steel thru hulls direct out of transom and rubber flaps to prevent too much back flow.
- b) Deep locker to starboard has securely hinged lids and positive method of closure. Gaskets in good condition.
- c) The forward hinge area of the lid has laminate damage, which is unsightly and difficult to repair. Suggestion for repair is to dry out the laminates, clean out with acetone, fill with resin and clamp until cured. A strengthening piece of timber could be laminated inside the lid and longer bolts used on the hinge.

Those areas of the above mouldings comprising deck, coach-roof and cockpit were tested with deep reading moisture meter to identify any moisture ingress to the core material and except where noted readings were 10 across the deck which is good low level.

#### **8. Hull/Deck Join:**

- a) This is mechanical type. The hull is moulded with an internal flange, the deck moulding sits on top of the hull moulding. The joint is filled with a hard bonding paste. The aluminium toe rail sits on the deck and stainless steel self tapping screws go through the joint.



Fig 4 Underside of forward hull and deck

- b) Access is limited to the forward end of the cockpit locker, through a small hatch in the anchor locker. Inside the vessel some areas of the joint are accessible behind the material linings.
- c) Internally no signs or evidence of any leaks on linings although there is lying water in the heads under sink locker and in the bilge.

#### **9. Bulkheads and Structural Stiffening including Internal Mouldings:**

This is a Monocoque construction and a number of components contribute to the overall structure.

- a) The shell mouldings are robust in the first place.
- b) There are a number of large floors bonded to the hull throughout the length of the hull. These are bonded using a bonding compound not grp laminates. (Floors in this case are transverse frames (grp mouldings filled with foam) across the centreline but not continuing full height to deck level).
- c) There is an inner moulding bonded to the hull and also bonded to the floors running from forward of the mast / keel to the about 500mm from the transom.
- d) The forward and aft bulkheads are bonded with the same paste on most sides to the hull and deck.
- e) The mast compression loadings are transferred onto a plywood block laminated into the deck, then through a stainless steel king post and then onto the GRP structure that houses the lifting centre board. These loadings transfer to the floors. There are no signs of movement in any area.
- f) At the forward edge of the forward floor bond there are 4 small hairline cracks in the bonding paste. I scraped one of these with a scraper and it disappeared. Having had the location of the forward keel bolt confirmed not to be in this area, these cracks could be caused at construction time due to excess chemical heat in the joint. There is what appears to be rust stains in the remaining cracks. There is lying water in this area, where the flexible water tank is housed and the rust could be from the clips.



*Fig 5 Cracks in forward edge of bonding of forward floor.*

### **10. Rudder and Steering:**

- a) Twin rudders of GRP construction made in two halves and bonded around stainless steel frames with stainless steel 316 rudder stocks. (Checked with magnet)
- b) The base of each rudder appears to have had sacrificial rubber shoes which are no longer present, only Sikoflex remains. Suggest that new shoes are purchased before beached to protect rudder bottom edge.
- c) Starboard rudder has slightly more lateral play than port rudder but not excessive.
- d) The tiller movement is a bit stiff. The rudders are linked to the tiller with mechanical universal joints. These joints are dry nylon. Suggest they are lubricated with marine grease to ease steering.



*Fig 6 – 7 Joints for steering and rudder tube*

- e) Rudder blades were lightly hammer sounded and moisture tested. The readings are 23 – 33 shallow 19 - 28 deep. There are no signs of any blisters and they have been treated as per the hull. There is the possibility of osmotic problems arising at these levels bearing in mind the centreboard report. However, as these are easier to repair if required at any time.
- f) Tiller is wood in stainless bracket in good condition.
- g) Rudder tubes are GRP and bonded to hull with substantial webs. They come some 400mm above the water line and have nylon seals top and bottom.

### **11. Stern Gear:**

- a) Two blade yellow metal folding propeller on stainless steel shaft. No signs of dezincification. Hammer tested, no fault found.
- b) Test with magnet confirms shaft to be of low grade stainless steel. Shaft rotated by hand, appears true with no binding of bearings present. No signs of corrosion on shaft, suggest check for crevice corrosion under propeller if propeller removed.
- c) Shaft is supported outboard end by metal P bracket. Found secure, hammer tested and scraped. P Bracket is pink in colour in places which indicates dezincification of metal. The rear edge when struck with a file



damaged relatively easily. In the cockpit locker, the owner has left the original propeller which is also dezincified, indicating that the same material may have been used for this.

- d) The cutlass bearing has been replaced recently; there is a small amount of play.
- e) Stern gland is Volvo Penta rubber lip seal with stainless steel clamp onto FRP tube. Checked underside with mirror, hammer tested. No fault found.

**12. Cathodic Protection:**

- a) One shaft anode fitted, partially worn. Checked for continuity with shaft and propeller with multi-meter, good connection. No connection with P bracket.

**13. Skin Fittings and other through Hull Apertures:**

No skin fittings or valves were dismantled as part of this survey but the following routine tests were carried out:

- ✚ Examination from outside and inside the boat. Checked for de-zincification
- ✚ All valves open and closed to their full extent where possible.
- ✚ Any fixing bolts hammer tested where accessible.
- ✚ Bodies of metal valves or sea cocks tested with a hammer inside the boat and external parts hammer tested outside the boat.
- ✚ Fittings aggressively tested inside the boat for security in the hull.
- ✚ Hose clips inspected and hoses aggressively tested for security. 2 clips correctly fitted unless noted.
- ✚ Lying fair to hull unless noted

**Below Waterline:**

- a) Toilet outlet in cockpit locker: Yellow metal thru hull with DZR ball valve,
- b) Heads water inlet in cockpit locker: Yellow metal thru hull, with DZR ball valve. One clip only.
- c) Engine seawater inlet behind engine: Yellow metal thru hull and strainer with DZR ball valve.
- d) Galley sink drain: Yellow metal thru hull, with DZR ball valve. One clip only.
- e) Heads sink drain in heads cupboard: Yellow metal thru hull, with DZR ball valve. One clip only.
- f) Depth sounder thru hull. Autohelm plastic thru hull.

It is suggested that a second clip is fitted to each hose with one clip below the waterline to follow best practice.

**Above Waterline:**

- g) Exhaust, bilge pump and tank breathers all secure and not vulnerable to breaking in lockers.

**14. Main Companionway and other Access to Accommodation:**

- a) Main companionway access hatch is of sliding GRP, in good condition and secure in its runner.
- b) Single Acetal washboard in good condition, with vents. Slides in place in wooden runner and remain in position without companionway hatch being closed except in inversion condition.
- c) Fore hatch circular Giot aft hinged, Plexiglas in good condition has secure means of closure, gaskets intact. Size means cannot be used as secondary escape.

**15. Ports, Windows etc.:**

- a) Aluminium famed port light above galley and heads. Gaskets in good condition as are the 4 locks on each.
- b) Lying fair to hull, no signs of weeping.

**16. Pulpit, Stanchions, Pushpit, Lifelines and Jackstays:**

- a) Pulpit. 4 legs each with internal studs that go through deck with plywood pad under and stainless nuts. Access to underside only possible in one place to one leg. Full body tested with no movement found.
- b) Pushpit. Two separate, 3 leg same fixing as pulpit and restricted access. All tested with full body weight and visually checked, no faults found.
- c) Stanchions. Stainless steel in aluminium bases. Steel bolts through deck. All took my weight except as noted. Again limited access to underside.
- d) Single life lines. Of stainless steel wire, plastic coated, tested with magnet. Plastic in good condition, terminals good.
- e) 3 x life line attachments on deck. Tested with lever and secure.

**17. Rigging Attachment Points:**

- ✚ Main cap and lower shrouds attachment points. All attach to ringbolts which bolt through toe rail and deck. There are no chain plates underneath. Access while limited to underside showed stainless steel nut and washer. They were tested with a substantial crowbar on wood block and no movement found. No sign of seepage via deck fittings.
- ✚ Outer forestay attaches to stainless steel ring around bow spit in turn mounted on stainless steel stem head plate which is bolted to deck in tension with 4 bolts. Hammer tested and levered where possible and no fault found.
- ✚ Split backstay each attached to u bolt through deck. Checked with lever and no fault found.

Note: all the rigging attachment points appear lightly designed; however rigging is also small size. Category C would indicate that it is not designed for heavy weather sailing.

**18. Ground Tackle and Mooring Arrangements:**

- a) Main bower anchor. This is 35kg Bruce anchor with chain and warp. Chain not laid out and examined link by link
- b) Anchor shackle badly corroded. Suggest replacement shackle and seize with wire.



Fig 8 Corroded anchor shackle

- c) Stemhead fitting is stainless steel with single bow roller, hammer tested and no sign of major damage.
- d) Vessel has stainless steel cleats fore and aft of adequate size through bolted the laminate. All hammer tested, levered and found secure.
- e) Numerous mooring lines in cockpit lockers in fair condition.

**19. Other Deck Gear and Fittings:**

- a) All found of adequate size and securely through bolted, although inspection from under limited by linings.
- b) The following winches fitted were all tested as far as possible but not under load.
  - a. Coachroof, 2 x Harken 16.1 Self Tailing winches



- c) Deck hardware all of good quality and specification, and all are serviceable.

**20. Davits and Boarding Ladders:**

- a) Vessel fitted with folding stainless steel boarding ladder with 2 Acetal steps, extending below water line for easy boarding from water. No signs of wear and secure when pulled and climbed on. Suggest Lanyard needs to be attached.

**21. Spars:**

**Mast**

- a) Single spreader fractional rig. The mast was stepped so inspection is restricted to fittings and area to head height. It is Z Spar mast, silver anodised no signs of corrosion around base or fitting. No damage or distortion to the extrusion was noted.

**Boom**

- a) Silver anodised in similar condition to mast.
- b) Main sheet and kicking strap attachment points secure as is the boom strut.
- c) Goose neck no signs of wear at the mast fitting.

**22. Standing Rigging:**

- a) Rigging could only be checked at deck level. These were examined where the wire enters the terminal under 10x magnification, no broken strands visible nor excess corrosion seen.
- b) The rigging screws are chrome plated bronze open bodied type and all had split pins securing them and had good articulation. All were found free from distortion or visible stress cracks, when examined under 10x magnification.
- c) Rigging all 1x19.
- d) Furling systems free to turn. No signs of damage.

**23. Running Rigging:**

- a) Running rigging appears in good condition with most ends burn closed. Looks reasonably new.

**24. Sails and Covers etc:**

- a) Main sail. Viewed furled on boom. Stitching and material checked with edge of 50p coin, stitching and material appears very good. Possibly some full length battens seen.
- b) Genoa is white and is marked UV Protected – Elvestrom by Sobastad. Sails not unrolled.
- c) Spray hood sound and fixings secure.
- d) Sail cover appears sound, zipper tested and worked.
- e) Lazy jack lines in place.

**25. Navigation Lights:**

Vessel stated fitted with

- a) All around tri colour light at mast head. Could not confirm or see if lit in daylight.

**26. Bilge Pumping Arrangements:**

- a) Manual Bilge pump mounted in cockpit. Mounted behind screwed panel, could not test clips. Operates dry.



- b) Rule 500GPH submersible bilge pump which was heard running operated at switch panel.

**27. Fire-fighting Equipment:**

- a) There were the following fire-fighting appliances found onboard.
- a. Fire blanket in galley
  - b. Aperture in engine steps to discharge portable extinguisher.
  - c. 1KG powder powder extinguisher out of date in saloon.

There are no regulations covering this vessel in private use.

*Recommendation. At least 2 new fire extinguishers to BS5423 fire rating 5A34B (most 1kg dry powder type meet these criteria) should be carried and fitted near cabin entrance points. Suggest 1 by companionway and one in cockpit locker.*

**28. Lifesaving and Emergency Equipment:**

The following was found aboard –

- a) All flares expired
- b) 1 x horseshoe life buoy and bracket fitted along with Danbouy light.

The RNLI operate an excellent free inspection and advice service concerning levels of safety equipment (SEA Check) and can be contacted on 08003280600 or via the RNLI website, [www.rnli.org.uk](http://www.rnli.org.uk).

The RYA also publish a booklet, G16, "The Boat Safety Handbook" and this specifies levels of Safety Equipment for different categories of use and it is *Recommended this vessel be equipped to the level appropriate to proposed use.*

Booklet is obtainable from nautical bookshops or direct from the RYA, [www.rya.org.uk](http://www.rya.org.uk).

**29. Engine and Installation:**

Engine is a Yanmar 1GM10 raw water cooled. Number 21954

- a) Engine is generally clean, cables greased.
- b) Oil level in engine and gearbox correct.
- c) Engine is mounted on rubber mounts, tested with crow bar, good condition. No signs of corrosion and these bolted to grp engine beds, bolts all hammer tested and found secure.
- d) Evidence of long term water leak around water pump.



Fig 9 -10 Corrosion on oil pipe and cleaned underside.



This has leaked onto oil pipe below. Pipe was scraped and came clean.

Grey engine paint has lifted around this area too due to water.

Suggest remove water pump, replace all gaskets and seals in it and remove and reattach pipes. Clean and paint engine where pain removed and replace pump.

- e) Area around head gasket, paint has peeled in places. It appears to have run hot to cause this, possibly due to water leak from pump. Suggest clean up and repaint area.



Fig 11 Peeled paint around head gasket

- f) No diesel leaks seen.
- g) Engine not seized, can turn over.
- h) TX control in cockpit, rear side is protected and operates fine.

Suggestion: Engine should be run in water and check not running hot with good flow of water from exhaust.

### **30. Fuel System:**

- a) Plastic fuel tank mounted in transom.
- b) Rubber hoses correct ISO 7840 fitted with double clips, all tested and found secure.
- c) Fuel tank has shut off in aft cabin which operates fine.
- d) Secondary fuel filter with metal bowl engine compartment
- e) Filler cap secure.

### **31. Accommodation General:**

- a) Clean and tidy interior
- b) Cushions in good condition
- c) Interior woodwork good except around base of heads door and wood trim above king post.
- d) Inner mouldings make for clean layout.
- e) There is a water leak under the mast area, evidenced by water in the forward saloon light and staining in wood above king post. Water is lying under fresh water tank and in head cupboard. Probable rain water leaks from mast and possibly toe rail in heads. There had been a great deal of rain over previous days. See suggestion in 6b above.

### **32. Gas Installation:**

This vessel has not been MCA coded but has been RCD compliant in the past.

Irrespective of the above **ALL** gas systems are subject to the checks listed below as part of this survey. Recommendations will be made where there is an obvious serious safety issue and these must be carried out before use. Suggestions will also be made where appropriate to enhance safety criteria, particularly with systems where there is no mandatory requirement to conform to a standard. It must be understood however that some Insurance companies require a declaration from the assured that the gas system conforms to **current** standards and if that is the case here upgrading may be required as a condition of the insurance policy.

### **Sources of further information:**

[www.calormarineshop.co.uk/rules-regs-answer.htm](http://www.calormarineshop.co.uk/rules-regs-answer.htm) Comprehensive information on standards and best practice. [www.boatsafetyscheme.com](http://www.boatsafetyscheme.com) Even if your boat is not required to comply with this standard it contains much sensible advice and the manual can be downloaded.

Page 20 of 37

[Yacht surveyor Hamble](#), [Yacht surveyors Littlehampton](#), [Marine surveyors Chichester](#), [Marine surveyor Poole](#)



Gas Observation and action table

| Item   | Result   | Action required.<br>(R) Recommendation to be carried out before use.<br>(S) Suggestion only |
|--|--|---|
| Condition and efficiency of self draining bottle storage   | Gas is canister in cooker.                           |   |
| Age and condition of flexible hose   | n/a  |   |
| Age and condition of regulator   | n/a  |   |
| Condition of copper pipe where accessible  | n/a  |   |
| Is pipework adequately supported and not under stress where accessible?                                      | n/a  |   |
| Are all appliances fitted with flame failure devices on all burners, and did these work properly under test? | Cooker fitted with flame failure devices on burners. |   |
| Are any appliances requiring flues properly fitted with same?  | n/a  |   |
| Is a gas alarm fitted?   | no   | (s) Consider fitting gas alarm..  |
| Is each appliance fitted with an isolating tap   | Yes.   |   |
| If fitted did leak bubble tester function?   | N/a  |   |

Additional Observations:

Only gas appliance is a Bright Spark camping cooker, single burner with internal gas canister.

Please note this survey is not a gas safety certificate, that is only obtainable after comprehensive pressure testing and assessment by a qualified person listed on the Gas safe register (formally CORGI) [www.gassaferegister.co.uk](http://www.gassaferegister.co.uk)

**33. Fresh Water Tanks and Delivery.**

- a) Plastimo flexible tank with clips secure under berth. There is water in this locker area and tank is empty.
- b) Hand pump in heads and foot pump in galley. Both operate and water appears clean and tastes ok.

**34. Heads:**

- a) Toilet is a Par Jabsco ITT , pump operates but tested without water.
- b) No signs of leaks. Swan necks correctly fitted in inlet and outlet pipes.

**35. Electrical Installation:**

12v circuits

- a) Engine start battery in plastic box, secured with strap. Both terminal wires loose in fitting. Suggest tighten up.



- b) Domestic battery in port underberth locker, 12v 85amp, showing green in site tube. Secured in battery box. This has been wired in with isolating relay. Cables not big enough for engine start so hopefully cannot be drawn on for this.
- c) One Battery isolator switch for engine battery.
- d) All circuits have switches and fuses through Jeanneau switch panels.

240v Circuits

- e) None

**36. Electronic and Navigation Equipment:**

- a) Radio is Raymarine Ray 54E Dsc NOT Simrad Radio RD68 DSC VHF as stated in brokerage details. Turned on and operates on receive. Not checked transmit.
- b) Raymarine ST60+ wind instrument.
- c) Raymarine ST40 depth sounder.
- d) Raymarine smart tiller pilot.
- e) GPS antenna on push pit.
- f) Contest compass, appears good with no bubble inside although mounted close to various electronic equipment.  
Head units all checked for power and came on. No other items seen.

**37. Heating and refrigeration**

- a) No heating or refrigeration system fitted



**RECOMMENDATIONS and CONCLUSIONS:**

**Maintenance Overview:**

Cosmetic maintenance: The vessel is very clean and tidy with very little damage. The water leak in the saloon should be found and fixed.

Technical Maintenance: No major maintenance appears to be required with exception of P Bracket and water pump. The oils are clean and engine area all clean.

**List of Recommendations:**

The Recommendations made in the Report are listed below with their respective section numbers. ***All Recommendations should be carried out before use of vessel or as stated.***

**27. Fire-fighting Equipment:**

*Recommendation. At least 2 new fire extinguishers to BS5423 fire rating 5A34B (most 1kg dry powder type meet these criteria) should be carried and fitted near cabin entrance points. Suggest 1 by companionway and one in cockpit locker.*

**28. Lifesaving and Emergency Equipment:**

*Recommended this vessel be equipped to the level appropriate to proposed use.*

**Conclusions:**

There is a high level of electronics listed as supplied with this boat, all in apparent good order and once the recommendations and suggestions are carried out, the hull polished, this vessel will be a good example, well equipped and suitable for inshore cruising.

**Manufacturers' information (not verified by measurement)**



|                 |                         |
|-----------------|-------------------------|
| Length Overall: | 7.5m / 24'6"            |
| Beam:           | 2.9m / 9'5"             |
| Draft:          | 0.69m-1.75m / 2'3"-5'7" |
| Displacement:   | 2,240kg / 4,983lbs      |
| CE Marked       | C6                      |

### **Boat specific information**

|                       |                         |
|-----------------------|-------------------------|
| Registration          | Unknown                 |
| HIN Number            | PL-IR10 [REDACTED] F505 |
| Month & Year of Build | June 2005               |
| RCD                   | No marking found        |

Note: The brokers' details state the vessel in 2006. The manufacturer has to identify when it was built in the HIN number but it maybe that the vessel was first commissioned / sold in 2006.

Please note that we did not see an operating manual on the vessel and this is required for CE conformity.



## **2. Keel**

- m) The keel comprises an iron keel stub with a GRP lifting keel (centre board) internally, hinged on a stainless steel pivot with nylon bushes. It operates by halyard rope attached to a stainless steel 1x19 wire which is attached with an eye bolt into aft edge of keel. This runs up the king post through the deck to the starboard coachroof winch
- n) The keel stub has lugs cast at the top which locate into mouldings in the hull and keel bolts locate from inside the hull into these lugs to secure it to the hull. The area around these faired with a mastic / sikoflex product.
- o) At the forward end of the keel at the lug, rust or corrosion stains were noted. I was able to insert a metal spike into the mastic /sikoflex and water drops were pushed out.



*Fig 1 - 2 Area at front of keel*

The starboard forward lug also had signs of rust. This was scraped back and found to be surface keel rust. I suggest the mastic is removed from around the lugs, the rust cleaned off, confirm the rust is from the keel and not keel bolts. If not the keel bolts, the area should then be primed and new Sikoflex inserted and faired.

- p) The keel is coated in clean white anti-foul over layer of epoxy and Gel shield. It was lightly hammer tested and checked with magnet all over and there are no signs of filler or damage.
- q) The underside of the keel stub was checked by mirror and when lifted in slings. There is minor surface rust where it has not been treated with primer and surprisingly little barnacle growth.
- r) Internally only the aft two keel bolts accessible, the others being presumed under the inner moulding. The two accessible bolts were tested with magnet and found to be low grade stainless steel, not 316. This can be more prone to crevice corrosion. There is no sign of corrosion on the surfaces and I suggest they are removed and checked after 2 more years use. I would also suggest they are replaced with 316 grade bolts.
- s) The vessel was suspended in slings and the centreboard operated. The wire attachment was checked and found 316 stainless steel with light surface corrosion. The fittings were all hammer tested and found sound.
- t) The operating halyard was checked at attachment and no wear found.
- u) The centre board blade was hammer sounded and checked with a moisture meter (operation explained later in report in detail) and readings were 27 – 38 shallow and 29 deep. 3# 10mm diameter blisters were found. While these are true osmotic blisters between the gel coat and laminate and the moisture reading backs this up, they are in early stages. To prevent further deterioration, I suggest that the centre board is cleaned off and dried off, these blisters ground out and the centreboard painted with an epoxy coating and gel shield.
- v) Some play was noted in the pivot of the centre board. This play is more than would be found on a new boat but not excessive. Removal of the centreboard and replacement of nylon bushes looks a relatively straight forward task with good access to either side of the pivot pin through the mastic filled holes but will require the vessel to be lifted a few feet higher than normal storage.
- w) The centreboard supported the weight of one man pulling hard against it.
- x) There does not appear to be a method to lock the centre board in place which if designed like this is not a problem, however an operating manual will confirm correct use.

## **3. Hull below Waterline:**



- g) The hull below the waterline is of solid FRP construction utilising chopped strand matt, woven roving and cloth composite.
- h) The vessel is sitting in a cradle with the keel stub hanging. It is sitting on 4 # 40c x 40cm wooden pads with carpet evenly spaced. There are no signs of distortion in the hull.
- i) The hull has white antifouling applied over layers gel shield and I believe an epoxy coating which is well attached over dark blue gel coat.
- j) Light hammer sounding (not heavy enough to damage anti-foul) did not suggest any delaminating or voids and there are no visible signs of significant damage or repairs.
- k) The Antifouling covering was removed back to clean blue gel coat in 4 areas. Because of the possible epoxy coating a further 12 areas of only antifouling was removed, at random approximately 50mm x 50mm. The antifouling came away fairly easily but the epoxy coating was well attached. Each area was checked under 10x magnification and no signs of wicking or Osmotic blistering was evident where the surface was exposed or through the antifouling.
- l) Moisture readings were taken where the antifouling was removed using a capacitance type moisture meter of Sovereign Quantum type, operating in both shallow and deep reading modes.

The meter was first checked for correct calibration.

The readings recorded below are from the meter operating in the shallow and also deep mode on the relative scale 0-100.

The readings are relative and **do not** express 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. However where some moisture has been absorbed the likelihood of moisture related problems occurring is higher, and the actual state of the laminate cannot be completely guaranteed without destructive testing followed by chemical analysis. The opinion given in this survey is based on all the evidence available at the time but without destructive testing.

The conditions prevailing when the readings were taken were as follows:

|   |                   |
|---|-------------------|
| <b>Air Temperature:</b>   | <b>19.9°C</b>     |
| <b>Surface temperature:</b>   | <b>20.2°C</b>     |
| <b>Relative Humidity:</b>   | <b>35.5%</b>      |
| <b>Time ashore</b>  | <b>2 months +</b> |
| <b>In summary the weather conditions for obtaining moisture readings were fair.</b> |                   |

Readings were as follows:

| Meter  | Range below waterline. | Range above waterline.         |
|--|------------------------|--------------------------------|
| Sovereign Quantum, Scale A, 0-100 Shallow mode | <b>10 -20</b>          | <b>10 – 18</b>                 |
| Deep Mode                                      | <b>13 - 22</b>         | <b>No significant increase</b> |



The values taken below the waterline on gel coat were 10 -16 shallow and 13 -20 deep. This normally indicates some moisture present at low levels but of no great concern. I checked brand new never launched yacht alongside Courtezan and she had similar readings. Readings through epoxy will be higher than bare gel due to their composition, therefore for practical purposes this hull can be considered dry. Always storing the boat ashore out of season to allow some natural drying out to occur will contribute significantly to maintaining condition.

#### **4. Topsides above Waterline including Rubbing Strake:**

- e) Similar composition to below waterline but less layup of FRP will have been used.
- f) Top side moulding found fair and finished in the original dark blue gel coat. The gel coat surface is in generally good condition with little UV degrading. There is some abrasion noted conducive to where fenders would hang. I suggest fender socks are purchased. Exceptions noted below
- g) Gel coat crazing was noted starboard side amidships below rubbing strake approximately 70mm long and port side same position 400mm long.

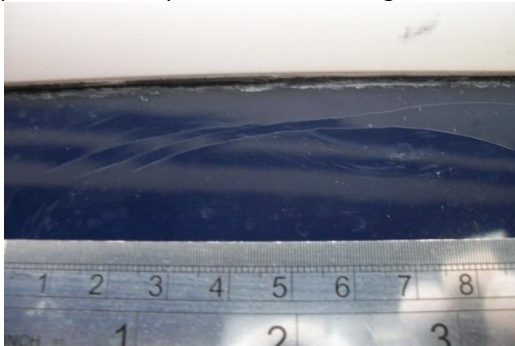


Fig 3 Stress crazing starboard side.

This area could not be depressed with hammer handle and body weight. Because of their location amidships it would indicate these have been caused by minor impact possibly coming along side although protected by fenders. There will be damage to the laminate but there are no major loadings at this place. i.e rigging attachments. I suggest they should be sealed to stop water ingress, either by waxing or a better repair would be to grind back and expertly flow coat and polish however I would recommend a professional to get the correct match and finish.

- h) No stress crazing or cracking noted in way of bulkheads or other re-enforcing members.

#### **5. Deck moulding:**

- e) The deck is of solid GRP with foam core in places. Access to the underside was greatly restricted by inner moulding and only accessible from cockpit locker and small hatch in anchor locker. This is because the majority of the underside of the deck has an internal moulding attached.
- f) The gel coat is white with moulded in non slip, there are no signs of pitting caused by UV or aggressive cleaning agents.
- g) The whole deck was carefully tested underfoot and no sign of delaminating or other structural defect.
- h) The deck was lightly hammer sounded and moisture tested with no significant defects found.

#### **6. Coachroof:**

- c) Integral with deck moulding and constructed in the same way. The whole area was carefully tested underfoot and no sign of delaminating or other structural defect.
- d) Minor flexing of the coach roof area below the mast when the shrouds were flexed. Tested with moisture meter and readings were 12 shallow and 18 deep on the starboard side. The base readings were 10 shallow 18 deep. There is a ply pad laminated into the coach roof at this point and the reading would suggest some water ingress which is can be coming from around electrical plugs or lifting keel halyard access. I suggest that the leak is found to prevent further ingress. This may involve lifting the mast.

#### **7. Cockpit:**



- d) Integral with the deck moulding and drains at aft end through stainless steel thru hulls direct out of transom and rubber flaps to prevent too much back flow.
- e) Deep locker to starboard has securely hinged lids and positive method of closure. Gaskets in good condition.
- f) The forward hinge area of the lid has laminate damage, which is unsightly and difficult to repair. Suggestion for repair is to dry out the laminates, clean out with acetone, fill with resin and clamp until cured. A strengthening piece of timber could be laminated inside the lid and longer bolts used on the hinge.

Those areas of the above mouldings comprising deck, coach-roof and cockpit were tested with deep reading moisture meter to identify any moisture ingress to the core material and except where noted readings were 10 across the deck which is good low level.

### **8. Hull/Deck Join:**

- d) This is mechanical type. The hull is moulded with an internal flange, the deck moulding sits on top of the hull moulding. The joint is filled with a hard bonding paste. The aluminium toe rail sits on the deck and stainless steel self tapping screws go through the joint.



Fig 4 Underside of forward hull and deck

- e) Access is limited to the forward end of the cockpit locker, through a small hatch in the anchor locker. Inside the vessel some areas of the joint are accessible behind the material linings.
- f) Internally no signs or evidence of any leaks on linings although there is lying water in the heads under sink locker and in the bilge.

### **9. Bulkheads and Structural Stiffening including Internal Mouldings:**

This is a Monocoque construction and a number of components contribute to the overall structure.

- g) The shell mouldings are robust in the first place.
- h) There are a number of large floors bonded to the hull throughout the length of the hull. These are bonded using a bonding compound not grp laminates. (Floors in this case are transverse frames (grp mouldings filled with foam) across the centreline but not continuing full height to deck level).
- i) There is an inner moulding bonded to the hull and also bonded to the floors running from forward of the mast / keel to the about 500mm from the transom.
- j) The forward and aft bulkheads are bonded with the same paste on most sides to the hull and deck.
- k) The mast compression loadings are transferred onto a plywood block laminated into the deck, then through a stainless steel king post and then onto the GRP structure that houses the lifting centre board. These loadings transfer to the floors. There are no signs of movement in any area.
- l) At the forward edge of the forward floor bond there are 4 small hairline cracks in the bonding paste. I scraped one of these with a scraper and it disappeared. Having had the location of the forward keel bolt confirmed not to be in this area, these cracks could be caused at construction time due to excess chemical heat in the joint. There is what appears to be rust stains in the remaining cracks. There is lying water in this area, where the flexible water tank is housed and the rust could be from the clips.





*Fig 5 Cracks in forward edge of bonding of forward floor.*

### **10. Rudder and Steering:**

- h) Twin rudders of GRP construction made in two halves and bonded around stainless steel frames with stainless steel 316 rudder stocks. (Checked with magnet)
- i) The base of each rudder appears to have had sacrificial rubber shoes which are no longer present, only Sikoflex remains. Suggest that new shoes are purchased before beached to protect rudder bottom edge.
- j) Starboard rudder has slightly more lateral play than port rudder but not excessive.
- k) The tiller movement is a bit stiff. The rudders are linked to the tiller with mechanical universal joints. These joints are dry nylon. Suggest they are lubricated with marine grease to ease steering.



*Fig 6 – 7 Joints for steering and rudder tube*

- l) Rudder blades were lightly hammer sounded and moisture tested. The readings are 23 – 33 shallow 19 - 28 deep. There are no signs of any blisters and they have been treated as per the hull. There is the possibility of osmotic problems arising at these levels bearing in mind the centreboard report. However, as these are easier to repair if required at any time.
- m) Tiller is wood in stainless bracket in good condition.
- n) Rudder tubes are GRP and bonded to hull with substantial webs. They come some 400mm above the water line and have nylon seals top and bottom.

### **11. Stern Gear:**

- f) Two blade yellow metal folding propeller on stainless steel shaft. No signs of dezincification. Hammer tested, no fault found.
- g) Test with magnet confirms shaft to be of low grade stainless steel. Shaft rotated by hand, appears true with no binding of bearings present. No signs of corrosion on shaft, suggest check for crevice corrosion under propeller if propeller removed.
- h) Shaft is supported outboard end by metal P bracket. Found secure, hammer tested and scraped. P Bracket is pink in colour in places which indicates dezincification of metal. The rear edge when struck with a file



damaged relatively easily. In the cockpit locker, the owner has left the original propeller which is also dezincified, indicating that the same material may have been used for this.

- i) The cutlass bearing has been replaced recently; there is a small amount of play.
- j) Stern gland is Volvo Penta rubber lip seal with stainless steel clamp onto FRP tube. Checked underside with mirror, hammer tested. No fault found.

**12. Cathodic Protection:**

- b) One shaft anode fitted, partially worn. Checked for continuity with shaft and propeller with multi-meter, good connection. No connection with P bracket.

**13. Skin Fittings and other through Hull Apertures:**

No skin fittings or valves were dismantled as part of this survey but the following routine tests were carried out:

- ✚ Examination from outside and inside the boat. Checked for de-zincification
- ✚ All valves open and closed to their full extent where possible.
- ✚ Any fixing bolts hammer tested where accessible.
- ✚ Bodies of metal valves or sea cocks tested with a hammer inside the boat and external parts hammer tested outside the boat.
- ✚ Fittings aggressively tested inside the boat for security in the hull.
- ✚ Hose clips inspected and hoses aggressively tested for security. 2 clips correctly fitted unless noted.
- ✚ Lying fair to hull unless noted

**Below Waterline:**

- h) Toilet outlet in cockpit locker: Yellow metal thru hull with DZR ball valve,
- i) Heads water inlet in cockpit locker: Yellow metal thru hull, with DZR ball valve. One clip only.
- j) Engine seawater inlet behind engine: Yellow metal thru hull and strainer with DZR ball valve.
- k) Galley sink drain: Yellow metal thru hull, with DZR ball valve. One clip only.
- l) Heads sink drain in heads cupboard: Yellow metal thru hull, with DZR ball valve. One clip only.
- m) Depth sounder thru hull. Autohelm plastic thru hull.

It is suggested that a second clip is fitted to each hose with one clip below the waterline to follow best practice.

**Above Waterline:**

- n) Exhaust, bilge pump and tank breathers all secure and not vulnerable to breaking in lockers.

**14. Main Companionway and other Access to Accommodation:**

- d) Main companionway access hatch is of sliding GRP, in good condition and secure in its runner.
- e) Single Acetal washboard in good condition, with vents. Slides in place in wooden runner and remain in position without companionway hatch being closed except in inversion condition.
- f) Fore hatch circular Goyot aft hinged, Plexiglas in good condition has secure means of closure, gaskets intact. Size means cannot be used as secondary escape.



**15. Ports, Windows etc.:**

- c) Aluminium famed port light above galley and heads. Gaskets in good condition as are the 4 locks on each.
- d) Lying fair to hull, no signs of weeping.

**16. Pulpit, Stanchions, Pushpit, Lifelines and Jackstays:**

- f) Pulpit. 4 legs each with internal studs that go through deck with plywood pad under and stainless nuts. Access to underside only possible in one place to one leg. Full body tested with no movement found.
- g) Pushpit. Two separate, 3 leg same fixing as pulpit and restricted access. All tested with full body weight and visually checked, no faults found.
- h) Stanchions. Stainless steel in aluminium bases. Steel bolts through deck. All took my weight except as noted. Again limited access to underside.
- i) Single life lines. Of stainless steel wire, plastic coated, tested with magnet. Plastic in good condition, terminals good.
- j) 3 x life line attachments on deck. Tested with lever and secure.

**17. Rigging Attachment Points:**

- ✚ Main cap and lower shrouds attachment points. All attach to ringbolts which bolt through toe rail and deck. There are no chain plates underneath. Access while limited to underside showed stainless steel nut and washer. They were tested with a substantial crowbar on wood block and no movement found. No sign of seepage via deck fittings.
- ✚ Outer forestay attaches to stainless steel ring around bow spit in turn mounted on stainless steel stem head plate which is bolted to deck in tension with 4 bolts. Hammer tested and levered where possible and no fault found.
- ✚ Split backstay each attached to u bolt through deck. Checked with lever and no fault found.

Note: all the rigging attachment points appear lightly designed; however rigging is also small size. Category C would indicate that it is not designed for heavy weather sailing.

**18. Ground Tackle and Mooring Arrangements:**

- f) Main bower anchor. This is 35kg Bruce anchor with chain and warp. Chain not laid out and examined link by link
- g) Anchor shackle badly corroded. Suggest replacement shackle and seize with wire.



Fig 8 Corroded anchor shackle

- h) Stemhead fitting is stainless steel with single bow roller, hammer tested and no sign of major damage.
- i) Vessel has stainless steel cleats fore and aft of adequate size through bolted the laminate. All hammer tested, levered and found secure.
- j) Numerous mooring lines in cockpit lockers in fair condition.

**19. Other Deck Gear and Fittings:**

- d) All found of adequate size and securely through bolted, although inspection from under limited by linings.
- e) The following winches fitted were all tested as far as possible but not under load.
  - a. Coachroof, 2 x Harken 16.1 Self Tailing winches



- f) Deck hardware all of good quality and specification, and all are serviceable.

**20. Davits and Boarding Ladders:**

- b) Vessel fitted with folding stainless steel boarding ladder with 2 Acetal steps, extending below water line for easy boarding from water. No signs of wear and secure when pulled and climbed on. Suggest Lanyard needs to be attached.

**21. Spars:**

**Mast**

- b) Single spreader fractional rig. The mast was stepped so inspection is restricted to fittings and area to head height. It is Z Spar mast, silver anodised no signs of corrosion around base or fitting. No damage or distortion to the extrusion was noted.

**Boom**

- d) Silver anodised in similar condition to mast.
- e) Main sheet and kicking strap attachment points secure as is the boom strut.
- f) Goose neck no signs of wear at the mast fitting.

**22. Standing Rigging:**

- e) Rigging could only be checked at deck level. These were examined where the wire enters the terminal under 10x magnification, no broken strands visible nor excess corrosion seen.
- f) The rigging screws are chrome plated bronze open bodied type and all had split pins securing them and had good articulation. All were found free from distortion or visible stress cracks, when examined under 10x magnification.
- g) Rigging all 1x19.
- h) Furling systems free to turn. No signs of damage.

**23. Running Rigging:**

- b) Running rigging appears in good condition with most ends burn closed. Looks reasonably new.

**24. Sails and Covers etc:**

- f) Main sail. Viewed furled on boom. Stitching and material checked with edge of 50p coin, stitching and material appears very good. Possibly some full length battens seen.
- g) Genoa is white and is marked UV Protected – Elvestrom by Sobastad. Sails not unrolled.
- h) Spray hood sound and fixings secure.
- i) Sail cover appears sound, zipper tested and worked.
- j) Lazy jack lines in place.

**25. Navigation Lights:**

Vessel stated fitted with

- b) All around tri colour light at mast head. Could not confirm or see if lit in daylight.

**26. Bilge Pumping Arrangements:**

- c) Manual Bilge pump mounted in cockpit. Mounted behind screwed panel, could not test clips. Operates dry.



- d) Rule 500GPH submersible bilge pump which was heard running operated at switch panel.

**27. Fire-fighting Equipment:**

- b) There were the following fire-fighting appliances found onboard.
- a. Fire blanket in galley
  - b. Aperture in engine steps to discharge portable extinguisher.
  - c. 1KG powder powder extinguisher out of date in saloon.

There are no regulations covering this vessel in private use.

*Recommendation. At least 2 new fire extinguishers to BS5423 fire rating 5A34B (most 1kg dry powder type meet these criteria) should be carried and fitted near cabin entrance points. Suggest 1 by companionway and one in cockpit locker.*

**28. Lifesaving and Emergency Equipment:**

The following was found aboard –

- c) All flares expired
- d) 1 x horseshoe life buoy and bracket fitted along with Danbouy light.

The RNLI operate an excellent free inspection and advice service concerning levels of safety equipment (SEA Check) and can be contacted on 08003280600 or via the RNLI website, [www.rnli.org.uk](http://www.rnli.org.uk).

The RYA also publish a booklet, G16, "The Boat Safety Handbook" and this specifies levels of Safety Equipment for different categories of use and it is *Recommended this vessel be equipped to the level appropriate to proposed use.*

Booklet is obtainable from nautical bookshops or direct from the RYA, [www.rya.org.uk](http://www.rya.org.uk).

**29. Engine and Installation:**

Engine is a Yanmar 1GM10 raw water cooled. Number 21954

- i) Engine is generally clean, cables greased.
- j) Oil level in engine and gearbox correct.
- k) Engine is mounted on rubber mounts, tested with crow bar, good condition. No signs of corrosion and these bolted to grp engine beds, bolts all hammer tested and found secure.
- l) Evidence of long term water leak around water pump.



Fig 9 -10 Corrosion on oil pipe and cleaned underside.



This has leaked onto oil pipe below. Pipe was scraped and came clean.

Grey engine paint has lifted around this area too due to water.

Suggest remove water pump, replace all gaskets and seals in it and remove and reattach pipes. Clean and paint engine where pain removed and replace pump.

- m) Area around head gasket, paint has peeled in places. It appears to have run hot to cause this, possibly due to water leak from pump. Suggest clean up and repaint area.



Fig 11 Peeled paint around head gasket

- n) No diesel leaks seen.  
o) Engine not seized, can turn over.  
p) TX control in cockpit, rear side is protected and operates fine.

Suggestion: Engine should be run in water and check not running hot with good flow of water from exhaust.

### **30. Fuel System:**

- f) Plastic fuel tank mounted in transom.  
g) Rubber hoses correct ISO 7840 fitted with double clips, all tested and found secure.  
h) Fuel tank has shut off in aft cabin which operates fine.  
i) Secondary fuel filter with metal bowl engine compartment  
j) Filler cap secure.

### **31. Accommodation General:**

- f) Clean and tidy interior  
g) Cushions in good condition  
h) Interior woodwork good except around base of heads door and wood trim above king post.  
i) Inner mouldings make for clean layout.  
j) There is a water leak under the mast area, evidenced by water in the forward saloon light and staining in wood above king post. Water is lying under fresh water tank and in head cupboard. Probable rain water leaks from mast and possibly toe rail in heads. There had been a great deal of rain over previous days. See suggestion in 6b above.

### **32. Gas Installation:**

This vessel has not been MCA coded but has been RCD compliant in the past.

Irrespective of the above **ALL** gas systems are subject to the checks listed below as part of this survey. Recommendations will be made where there is an obvious serious safety issue and these must be carried out before use. Suggestions will also be made where appropriate to enhance safety criteria, particularly with systems where there is no mandatory requirement to conform to a standard. It must be understood however that some Insurance companies require a declaration from the assured that the gas system conforms to **current** standards and if that is the case here upgrading may be required as a condition of the insurance policy.

### **Sources of further information:**

[www.calormarineshop.co.uk/rules-regs-answer.htm](http://www.calormarineshop.co.uk/rules-regs-answer.htm) Comprehensive information on standards and best practice. [www.boatsafetyscheme.com](http://www.boatsafetyscheme.com) Even if your boat is not required to comply with this standard it contains much sensible advice and the manual can be downloaded.

Page 34 of 37

[Yacht surveyor Hamble](#), [Yacht surveyors Littlehampton](#), [Marine surveyors Chichester](#), [Marine surveyor Poole](#)



Gas Observation and action table

| Item   | Result   | Action required.<br>(R) Recommendation to be carried out before use.<br>(S) Suggestion only |
|--|--|---|
| Condition and efficiency of self draining bottle storage   | Gas is canister in cooker.                           |   |
| Age and condition of flexible hose   | n/a  |   |
| Age and condition of regulator   | n/a  |   |
| Condition of copper pipe where accessible  | n/a  |   |
| Is pipework adequately supported and not under stress where accessible?                                      | n/a  |   |
| Are all appliances fitted with flame failure devices on all burners, and did these work properly under test? | Cooker fitted with flame failure devices on burners. |   |
| Are any appliances requiring flues properly fitted with same?  | n/a  |   |
| Is a gas alarm fitted?   | no   | (s) Consider fitting gas alarm..  |
| Is each appliance fitted with an isolating tap   | Yes.   |   |
| If fitted did leak bubble tester function?   | N/a  |   |

Additional Observations:

Only gas appliance is a Bright Spark camping cooker, single burner with internal gas canister.

Please note this survey is not a gas safety certificate, that is only obtainable after comprehensive pressure testing and assessment by a qualified person listed on the Gas safe register (formally CORGI) [www.gassaferegister.co.uk](http://www.gassaferegister.co.uk)

**33. Fresh Water Tanks and Delivery.**

- c) Plastimo flexible tank with clips secure under berth. There is water in this locker area and tank is empty.
- d) Hand pump in heads and foot pump in galley. Both operate and water appears clean and tastes ok.

**34. Heads:**

- c) Toilet is a Par Jabsco ITT , pump operates but tested without water.
- d) No signs of leaks. Swan necks correctly fitted in inlet and outlet pipes.

**35. Electrical Installation:**

12v circuits

- f) Engine start battery in plastic box, secured with strap. Both terminal wires loose in fitting. Suggest tighten up.



- g) Domestic battery in port underberth locker, 12v 85amp, showing green in site tube. Secured in battery box. This has been wired in with isolating relay. Cables not big enough for engine start so hopefully cannot be drawn on for this.
- h) One Battery isolator switch for engine battery.
- i) All circuits have switches and fuses through Jeanneau switch panels.

240v Circuits

- j) None

**37. Electronic and Navigation Equipment:**

- g) Radio is Raymarine Ray 54E Dsc NOT Simrad Radio RD68 DSC VHF as stated in brokerage details. Turned on and operates on receive. Not checked transmit.
- h) Raymarine ST60+ wind instrument.
- i) Raymarine ST40 depth sounder.
- j) Raymarine smart tiller pilot.
- k) GPS antenna on push pit.
- l) Contest compass, appears good with no bubble inside although mounted close to various electronic equipment.  
Head units all checked for power and came on. No other items seen.

**38. Heating and refrigeration**

- b) No heating or refrigeration system fitted



**RECOMMENDATIONS and CONCLUSIONS:**

**Maintenance Overview:**

Cosmetic maintenance: The vessel is very clean and tidy with very little damage. The water leak in the saloon should be found and fixed.

Technical Maintenance: No major maintenance appears to be required with exception of P Bracket and water pump. The oils are clean and engine area all clean.

**List of Recommendations:**

The Recommendations made in the Report are listed below with their respective section numbers. **All Recommendations should be carried out before use of vessel or as stated.**

**27. Fire-fighting Equipment:**

*Recommendation. At least 2 new fire extinguishers to BS5423 fire rating 5A34B (most 1kg dry powder type meet these criteria) should be carried and fitted near cabin entrance points. Suggest 1 by companionway and one in cockpit locker.*

**28. Lifesaving and Emergency Equipment:**

*Recommended this vessel be equipped to the level appropriate to proposed use.*

**Conclusions:**

There is a high level of electronics listed as supplied with this boat, all in apparent good order and once the recommendations and suggestions are carried out, the hull polished, this vessel will be a good example, well equipped and suitable for inshore cruising.