



## Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

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[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 Odyssey 40.3, 2004  
Sailing vessel, Bermudian Sloop rig, FRP construction.

Type of survey: Pre- Purchase

### At the request of:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

This survey was carried out on [REDACTED] at Port Hamble,  
Hamble-Le Rice, Hampshire, UK. The above named being a potential  
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 the 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 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; this is a visual inspection. The engine was run and seen operating under load during the sea trial. It should be appreciated that some components may appear serviceable but found to be defective when the engine is run for a long period of time.
- ✚ The vessel was surveyed in and out of the water and tests carried out as described to ascertain any possible sources of water ingress.
- ✚ The hatches and port lights were not leak tested with a hose.

**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 the vessel is used, (or within a given time span if specified), and items which may affect insurability.
- ✚ ***Recommendations will be printed in bold 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 in the water at Port Hamble, in the slings of travel hoist for a one hour period before being launched again for a 30 minute sea trial with the brokers and prospective purchasers aboard. The weather was dry, sunny and warm. Many of the lockers were very full with spares and I was not able to empty these fully in the time of the survey.

No special conditions affected the survey other than as described in the text.



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

**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, anodes and Skin Fittings**

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.
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**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



### 1. Details of subject vessel:

The Jeanneau SunOdyssey 40.3 is one of the many Sun Odyssey range designed by Daniel Andrieu for comfortable cruising and built by Jeanneau SA, 85500, Les Herbiers, France. It is understood from the broker that [REDACTED] was chartered by S [REDACTED] Yacht Charters before going into private charter ownership.

### **Manufacturers' information from brokers' details (not verified by measurement)**

Length Overall	12.20m / 40'
Length of waterline	10.17m / 34'2"
Beam:	3.95m / 12'10"
Draft:	1.95m / 6'5"
Displacement	8090KG
CE Specification	A (number passenger not stated) <i>Source Internet</i>

The CE category is a rating system used in the EU to rate the seaworthiness of a (sailing / motor) boat. This CE category is mainly used by European boat builders although some US sailboat builders start to build boats to this specification. The European Directive specifying the CE Categories for recreational boats between 2.5 and 24 meter in length is the EU Recreational Craft Directive (RCD).

A: Ocean. Designed for extended voyages where conditions may exceed wind force 8 (Beaufort) and wave height of 4 meter (13' ft).

### **Boat specific information**

Registration	British Part 1 9 [REDACTED] <i>source copy certificate</i>
Hin Number	FR-IRI000 [REDACTED] B404 <i>Source Registration document, no mark found on hull</i>
Year of Build	February 2004 <i>Source from HIN number</i>
CE	No plate found aboard
MCA	Coded for charter but lapsed <i>Source Broker</i>

### 2. Keel

- This is an iron fin keel with large bulb at the bottom. It is attached to the flat bottom hull with at least 4 pairs and 2 single iron studs with metal plates, washers and nuts. The keel is painted with antifouling and primer.
- The keel was visually checked for damage and checked with a magnet for excess filler and none was found.
- It was noted when the boat was hanging with the keel unsupported a gap at the joint with the hull. This was 2mm at the aft end closing up to 0mm 70mm in. There were some rust stains on the keel at this point. The joint was tested with a spike all the way around every 50mm and closely visually inspected. The front edge of the keel joint was obscured by the



travel hoist slings. When the vessel was lowered onto its keel, the gap closed up. Apart from some water that squeezed from the aft end, no signs of any leaks seen on the keel while drying.

- d) Internally access was possible to all keel fixings. These had some surface corrosion; some have been painted with a blue paint, possibly rust oxide. The studs and nuts are all magnetic indicating a level of iron in the studs. The center bilge section was partially wet and the nuts here are more heavily corroded. All nuts and plates were struck hard with a hammer, none were found loose. The bilges were dried around the studs and during the sea trial no signs of any water ingress around the studs was noted.

Pictures for reference



Gap in joint for reference



Studs in centre bilge and aft

**Advisory note:-** The gap at the aft edge is aft of any keel fixing and is common in many FRP sailing vessels with flat bottom hull and fin keel. The hull is flexing. As far as I can ascertain there are no leaks to the keel bolts. When the vessel is next lifted or (suggest winter 2011 latest) clean the aft edge of the keel and rake out the keel joint filler paste. Paint non protected iron with a protective paint, re-bed joint with Sikoflex 256.

Keel studs, nuts and washers should be cleaned off with wire brush and painted with protective Zinc paint.



**3. Hull below Waterline:**

- a) Construction of the hull below the waterline is FRP with foam cored stringers and floors for added strength in places internally. It is coated in white antifouling over at least 3 previous coats of antifouling and primer. The hull has been well keyed for good adhesion.
- b) Light hammer sounding was carried out (not heavy enough to damage the anti-fouling) of the hull at regular intervals approximately 500mm spacing all over.
- c) The antifouling was removed in 18 patches approximately 50mm x 50mm at random around the hull below the water line. While scraping I was looking for evidence of wicking or blistering and once removed all patches were checked with 10x magnification.
- d) 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:

Air Temperature:	<b>20.8°C</b>
Relative Humidity:	<b>44.7%</b>
Time ashore	<b>30 minutes</b>
In summary the weather conditions for obtaining moisture readings were <b>good</b>	

Readings were as follows:

Meter	Range below waterline.	Range above waterline.
Sovereign Quantum, Scale A, 0-100 Shallow mode	<b>20 – 22 couple of readings of 25</b>	<b>13 - 14</b>
Deep Mode	<b>18 – 24</b>	<b>15</b>



These readings need to be considered in conjunction with the period the vessel has been ashore and the weather conditions when obtained. Readings can also be affected by internal fixtures and fittings as well as the type of resins used. As a rule of thumb you can expect the levels to drop by one range after a few weeks ashore.

The difference between readings above the water line (normally dry) and below should be noted.

The interpretation of the readings in shallow mode range;

- 0 – 15 : For all practical purposes may be considered dry.
  - 16 - 20: Some moisture present at low levels but of no great concern.
  - 21 - 30: Considered medium, but those at the top of the range i.e 30 are at the point where the risk of moisture related defects developing is significant.
  - 31- 45 Considered high and at a level where the risk of moisture related defects being present but not yet physically detectable is significant.
  - 46 – 60 Very High and will usually be accompanied by physically detectable signs. Likely to be accompanied by a significant increase when switching to deep mode.
  - 61 – 100 extremely high and indicative of possible laminate damage in addition to osmotic blistering. Likely to be accompanied by a significant increase when switching to deep mode.
- e) No signs of major damage, repairs or impact were found, the readings are good and normal for this type of construction and age of vessel.

**Advisory note:-** 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) Constructed of solid FRP with some foam core for strength. Finished in blue painted gel coat.
- b) Top side moulding found with no major distortions noted.
- c) The topsides were lightly hammer sounded and no indication of voids found. Moisture readings were taken and recorded as above.
- d) There are some minor gel repairs and scratches but nothing significant.

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

- a) The deck is of FRP with foam core in places. It has teak overlaid onto it. This is screwed at the inboard edges and stuck elsewhere. Access to the underside was greatly restricted by headlining panels and furniture. I was able to access some through aft locker, anchor locker and partially in aft cabins.



- b) The whole deck was carefully tested underfoot for signs of delaminating or other structural defects.
- c) The deck was carefully visually checked around the wooden plugs for fixings. There were no signs of splits or damage at the fixings. The teak has been scrubbed down and the black filler is proud in places. I was not able to insert a feeler gauge in any of the areas I tested between the joints and wood.
- d) No significant damage, defects or repairs noted.

**Advisory note:-** Teak decks should only be cleaned with salt water and scrubbed across the grain not along it. They should not be pressure washed. Teak is made of hard and soft grains and scrubbing along the grain or pressure washing will remove the soft grain.

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

- a) Constructed of FRP with foam core in places. It is of white with non slip pattern moulded into the gel coat.
- b) The whole area was carefully tested underfoot for signs of delaminating or other structural defects.
- c) The wooden hand rails were tested with a lever and found secure.
- d) No significant damage, defects or repairs noted.

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

- a) Constructed of solid FRP with foam core, mainly covered in teak or teak faced plywood, this is stuck down not screwed. There are two shallow lockers to port and starboard, two aft lockers, one containing the gas bottle storage. Two helm positions.
- b) Drainage is direct via the aft open passage way.
- c) The whole area was carefully tested underfoot for signs of delaminating or other structural defects.
- d) No significant damage, defects or repairs noted.

**Advisory note:-** The vessel is designed with a drop down centre seat in the transom for easy stern boarding and access to the transom platform. This design has caused two issues and the purchaser should be aware these. If it is not attached with a lanyard it can fall off the boat and be lost. When in its raised position, it is not secure and should not be stood or jumped on as injury can result.

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

- a) This is a mechanical joint. The deck is bolted to the hull flange with bolts through the alloy toe rail and below it. The joint has bonding paste between it. Access to the joint was very restricted internally.
- b) There is no significant damage to the toe rail or joint externally and no visible signs of leaks internally.



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

This is a Monocoque (single box) construction and a number of components contribute to the overall structure.

- a) The hull has floors and stringers bonding to them across the hull and along the hull.
- b) There is an inner moulding bonded to the hull and forms some of the furniture
- c) The bulkheads sit in channels in the inner moulding and are bonded in place.
- d) Bulkheads were carefully hammer sounded near the deck, hull and floors for signs of debonding
- e) All possible access was checked, lockers, under berths and the floors and inner mouldings for signs of delamination and cracks. Some of the under berth lockers were full of equipment and were not fully emptied but checks were made where possible.

**Advisory note:-** The forward bulkhead lower edge viewed in front cabin has a gap in the bonding by the inner moulding. There are no signs of stress or cracking of the bulkhead and as far as I can ascertain, this is not a structural issue, one of settlement. The joint can be filled with Sikaflex 256.

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

- a) The rudder is a spade rudder of foam cored FRP on a stainless steel frame. It is hung from the hull with a plastic bearing at the hull. There are two Lewmar wheels and pedestals. Access to the rudder tube, steering quadrants and underside of pedestals was not possible due to screwed in panels. I was able to access part of the steering with a camera through the port aft locker.
- b) The rudder tube is FRP and laminated to a strong floor in the cockpit locker and large webs bonded to the hull. There are no signs of corrosion on the rudder stock or cracks in the bonding viewed inside the boat. The wires where seen are not corroded.
- c) The rudder was leant on with full body weight in either direction and forced from the bottom and it did not give or any split open up.
- d) Moisture readings were taken and the rudder tested with a hammer as per the hull for delamination. The readings were higher than the hull at 35 – 64.
- e) The top of the rudder around the rudder stock has some cracks in the gel coat. I was not able to neither insert a spike into these nor crack them off.



Rudder port



Rudder Starboard

**Advisory note:-** When the boat is next lifted, check the top of the rudder again, grind out the cracks to solid laminate and re glass and epoxy. It is probable the high moisture readings are where water is entering at this area and sitting in the foam core. Many rudders surveyed of this construction have similar condition. If the boat is out for any length of time, drill 3 mm Ø holes through the rudder in the middle and at the bottom about 70mm up from base. Allow any water to drain out, allow drying as long as possible and then filling holes with epoxy. It is possible long term that the stainless steel in the rudder could corrode and eventually break up. There are no signs of this at present.

- f) Emergency steering is via a tiller that fits on stock through access in cockpit sole. Tiller not seen but not all lockers emptied.
- g) Raymarine ST6000 wheel pilot fitted and operated briefly under motor.

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

- a) Propeller is a 3 blade bronze feathering *MaxiProp*. This is fitted to a 30mm Ø stainless steel shaft supported by a bronze P bracket holding a rubber cutlass bearing.
- b) Inboard the FRP stern tube is connected to a Volvo Penta lip seal containing a rubber bearing.
- c) The propeller and P bracket were scraped and found shiny with no signs of dezincification. There was no play in the cutlass bearing. The shaft was found magnetic indicating a lower quality grade stainless steel. The stern gland when in the water and squeezed had air in it. The coupling bolts for the shaft coupling to gear box coupling are all loose but held by Nyloc nuts.

**Recommendation:-** *Tighten nut and bolt fixings on gear box to shaft coupling to prevent failure and shaft slipping back.*

**Advisory note:-** Ensure when ever boat is launched that the gland is squeezed so that air is expelled and water enters bearing for lubrication.

### **12. Cathodic Protection:**



- a) There is a hull anode, shaft anode and fitting for a Prop anode.
- b) The hull anode is partially wasted but if not replaced since last spring will last another season. The shaft anode was 50% wasted and the broker fitted an additional shaft anode alongside it. The propeller anode is missing although the bolts remain and there is evidence it was fitted.
- c) The anodes were tested for continuity to the propeller, shaft and P bracket and the circuit found complete.
- d) The connections to the engine block internally are a bit yellow.

**Advisory note:-** To ensure full Cathodic protect, remove and clean terminals on port side aft of engine block where yellow and refit. Purchase prop anode for *Maxiprop* in time for next lift out.

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

Some thru hulls may not be reported below but will be with relevant systems sections. 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 below water line on outlet spigot unless noted.
- ✚ Lying fair to hull unless noted

### **Below Waterline:**

- a) Engine seawater inlet – Located in saloon under aft cabin sole board – Yellow metal skin fitting with ball valve and yellow metal spigot for pipe. Surface corrosion on valve body, when scraped it is slightly pink indication some dezincification.
- b) Forward heads black (toilet) waste outlet – located forward heads locker cupboard - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.
- c) Forward heads toilet water inlet – located forward heads locker cupboard - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.
- d) Aft heads black (toilet) waste outlet – located aft heads locker cupboard - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.
- e) Aft heads toilet water inlet – located under saloon sole board - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.

Pictures for information only



Engine valve



Galley valve



Shower valve

**Important note:** The ball valves used in this boat are believed to be made from forged brass to the European standard CW617N. Whilst these valves are in very common marine use ordinary brass such as this is subject to dezincification in seawater.

The ISO standard relating to metallic valves and skin fittings below the waterline, ISO 9093-1, only requires the valves and associated fittings to have a service life of 5 years in terms of corrosion resistance. The valves and fittings here passed all the tests described above but consideration should be given to replacing them with DZR (dezincification resistant brass) or bronze both of which have a much longer potential lifespan. The through hull fittings to which the valves are attached did not show signs of dezincification when scraped back bright externally and are thus assumed to be DZR or bronze except where noted.

f) Log and depth fittings – located under cabin sole in forepeak. Plastic fittings.

#### **Above waterline**

- g) Forward heads sink outlet – located forward heads locker cupboard - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.
- h) Forward heads sink outlet – located forward heads locker cupboard - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.
- i) Galley Sinks drain – located starboard side behind saloon backrest - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe – both sinks attach. Slight corrosion on base of valve and ball lever spindle.
- j) Aft heads sink drain – located aft heads locker cupboard - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.
- k) Aft heads shower drain – located aft heads locker cupboard - Yellow metal skin fitting with ball valve and yellow metal spigot for pipe.
- l) Bilge pumps – located portside aft quarter – plastic skin fitting.
- m) Engine exhaust – located starboard aft quarter – stainless skin fitting.
- n) Gas locker drain – located stern centre – stainless sitting.

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

These were all checked;

✚ to be lying fair to the deck



- + fixings were randomly tested with screw driver for tightness
- + frames checked for damage
- + a secure method of closure
- + correctly fitted hinges
- + glazing checked for damage
- + gaskets checked

All found ok unless noted. The hatches were not hose tested for leaks.

- a) Companion way – sliding *Plexiglass* secure in runners, single *Plexiglass* washboard secured in place with stainless frames. Lock is substantial.
- b) Fore peak hatch, *Goiot*, aluminium framed, hinges forward with two means of locking shut. Size allows use as escape hatch.

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

The same checks as section 14. above were carried out. All found ok unless noted. The ports and windows were not hose tested for leaks.

- a) 2 fixed portlights *Plexiglass* in alloy frames below deck level.
- b) Opening aluminium framed *Goiot* saloon deck hatches, aft hinged, two catches.
- c) Opening *Plexiglass* from aft cabins to cockpit, and in coach roof.
- d) Coach roof main windows, fixed *Plexiglass* stuck to coach roof. Some signs of silicon applied, possibly to prevent leaks. No signs of leaks internally but they have FRP frame around them and hidden behind lining panels.

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

These are tested

- + under full body weight where practical
- + Terminal ends checked, type of wire tested.
- + Life line attachment points are tested with a crow bar levered against a wooden block.

All found Ok unless noted.

- a) Pulpit and pushpit are stainless steel welded tube, bolted through hull and deck joint with large washer and nut underneath. Viewed from port aft locker and anchor locker. Pulpit is slightly loose, access to bolts are good.  
**Advisory note:-** Tighten pulpit to deck.
- b) Two stainless steel guard wires, non magnetic, correct bottle screw terminals. Two wires across transom.
- c) Life line attachments in cockpit x 4
- d) Jackstay (life line) attachment points at aft deck. Attached to cleats forward. Jackstays are frayed.

**Advisory note:-** Jackstays did not yield to tests but they are frayed and exposed to UV and salt water constantly, suggest replace with new.

### **17. Rigging Attachment Points:**



- ✚ All attachment points were tested visually with 10 x magnification
- ✚ Nuts and bolts struck with hammer against sheer where possible
- ✚ Checked with magnet for quality of steel where possible
- ✚ Fittings tested with a substantial crowbar on wood block

Unless noted below, no movement found and no sign of seepage via deck fittings.

- a) Forestay chain plate is combined with stainless steel stem head fitting with bolts in sheer and tension.
- b) Inner forestay fitting is U Bolt through deck, no access to underside.
- c) Twin back stay fittings on transom, stainless steel chain plates bolted in sheer, washers on inside.
- d) Shrouds are stainless steel deck plates, underside of deck not accessible. Stainless steel bar attached to bronze turnbuckle fixing, in turn attached to stainless steel bar laminated to top of FRP Knees laminated to hull. There is some corrosion to Bronze turn buckle. It is possible that the shroud plates are leaking slightly but not significantly.

**Advisory note:-** To check underside of shroud plates unscrew wooden lining boards. If leaks found reseal with Sikaflex 259.

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

- a) Main Anchor is CQR plough, 12mm chain, 18mm warp operated by electric Lofrans pillar windlass running over nylon bow roller in stainless steel stemhead.
- b) Adequate cleats at bow, mid and stern.
- c) Windlass was tested during seatrial and operated without issues.

**Advisory note:-** Anchor to chain shackle is corroded. It withstood hammer testing but should ideally be replaced. There is no pin in the stem head to prevent the chain jumping off the roller when set.

- d) No kedge anchor was seen but the cockpit lockers were not emptied.

**Advisory note:-** A vessel of this size should have a second anchor of minimum 7KG with 10m of 6mm chain and 30m of 10mm warp if one is not supplied.

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

- a) Turning blocks and jammers all found of adequate size and securely through bolted, although inspection from under limited by linings.
- b) The winches fitted were all tested during the sea trial. They are a bit stiff,
- c) Genoa and main sheet tracks and cars operated correctly. No faults found.
- d) Spray hood in navy blue, stainless steel fittings. Good condition.

**Advisory note:-** Service all winches pre-season. This is standard maintenance.



### **20. Davits and Boarding Ladders:**

- a) Vessel has permanently attached stainless steel boarding ladder which extends below the waterline and is securely attached with two plastic and one stainless steel step.

### **21. Spars:**

- a) Main mast – is *Z diffusion*, silver anodised, mast head rig with twin spreaders. It is deck stepped. The mast was stepped so inspection was restricted to what could be reached from deck. The rivets, fixings and stress areas were carefully checked with 10 x magnifying glass and no fault found.
- b) Boom is *Z diffusion*, also silver anodies. Goose neck was carefully checked as were fixings for mainsheet and kicking strap, No faults were noted.
- c) Spinnaker pole is stowed on mast. The piston catch in the lower fitting is seized so could not lower to check top fitting.

**Advisory note:-** Free up lower piston, remove and check top piston.

### **22. Standing Rigging:**

- a) Rigging is 1x19 stainless steel.
- b) Rigging was examined where the wire enters the terminals under 10x magnification, no broken strands visible nor excess corrosion seen. The angles they enter the mast appears in line with rigging.
- c) The rigging screws are chrome bronze and stainless steel for inner forestay, examined under 10 x magnification for cracks or splits. Some were taped and split pins not checked here.

**Advisory Note:-** Check all split pins in bottle screws and ensure correctly turned over.

### **23. Running Rigging:**

- a) Running rigging is good condition for age of boat.

### **24. Sails and Covers etc:**

- a) The mainsail and genoa are stated 2008. They are white Mylar and during sea trial held shape well, the stitching was good where seen.
- b) In the forepeak was a spinnaker in a snuffer system. This was checked in the bag and no rips or tears seen but it was not hoisted and fully checked. The stitching was rubbed with the edge of a coin and no damage made.
- c) A second bag of beige sails with plastic film, very worn from what seen.
- d) No cruising chute seen aboard.

### **25. Navigation Lights:**



Vessel fitted with lights of correct size, securely mounted and seen working unless noted.

- a) White on stern
- b) Port and starboard on pulpit
- c) Steaming light on mast.
- d) Mooring light at mast head – could not see if lit.

#### **26. Bilge Pumping Arrangements:**

- a) Manual Plastimo 295 pump mounted in cockpit. Pick up is from main bilge with no strum box attached. Exit at transom through plastic skin fitting. “ clips fitted. Back side of pump not checked as behind panel.
- b) Electric automatic bilge pump. Pump mounted in starboard area behind berth backrests. Pick up from main bilge. No strum box fitted. Float switch in main bilge. Exit through transom. Pump did not operate.

**Advisory note:-** Automatic bilge pump to be made to work. It is most likely float switch or wiring as pump looks new. As there is a manual pump this is not a recommendation.

#### **27. Fire-fighting Equipment:**

The vessel had the flowing fire fighting equipment aboard.

- a) Automatic Fire extinguisher in engine compartment Type HFC 227ea – marked service due 2009, gauge showing on red.
- b) Port aft cabin 1KG powder type 5A34B – marked service due 2010
- c) Starboard aft cabin 1KG powder type 5A34B marked expires 31/12/12
- d) Forepeak cabin 1KG powder type 5A34B marked expires 31/12/12
- e) Fire blanket under galley sink.

**Advisory note:-** There are no regulations concerning private vessels in use. This vessel requires equipment replaced or serviced for MCA requirements if chartered. The fire blanket should be fixed near galley to be of use.

#### **28. Lifesaving and Emergency Equipment:**

The following was noted aboard

- a) 2 Horseshoe lifebuoys each with floating light
- b) Jonbouy
- c) 2 Rocket flares dated 12/2013
- d) Not all lockers were emptied and checked. The purchaser should check the inventory agreed.

#### **Advisory notes**

The lights were not working , probably requiring new batteries.



- 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 publishes a booklet, G16, "The Boat Safety Handbook" and this specifies levels of Safety Equipment for different categories of use. Booklet is obtainable from nautical bookshops or direct from the RYA, [www.rya.org.uk](http://www.rya.org.uk).

***Recommendation - this vessel be equipped with safety equipment to the level appropriate to proposed use.***

### **29. Engine and Installation:**

- a) Engine is a Yanmar Marine Diesel, fresh water cooled type 4JH3E. Engine number is E27257. The engine hour clock reads 1589.
- b) The engine is dusty at the front from fan belt dust. The engine bilge has a little oil / diesel / water at the front end. The engine was carefully checked over for signs of water, oil and diesel leaks. There are were no wet leaks found on the engine. The paint is bubbling in places above the alloy on the thermostat, heat exchanger and related surfaces.
- c) The cooling water goes from the sea valve to a plastic strainer mounted above the waterline. All connections are tight. The header tank level is a at minimum.
- d) The exhaust outlet is slightly corroded and ther is signs of an old leak from the top aft fixing bolt. It is currently tight. The hose is marine grade hose and has two clips. Where the hose joins the exhaust box behind the engine there was a significant water leak when the engine was running.
- e) The engine mounts are flexible, bolted to the FRP engine bearers. They were all hammer tested and the starboard aft top nut was found loose.
- f) Oil levels were correct in the engine and gear box and not excessively contaminated.
- g) The engine started from cold and also from hot and ticked over smoothly. There is constant blue smoke from the exhaust, not excessive but indicating some oil burn going on, probably from valve stem guides.

***Recommendation:- The starboard rear engine mount needs tightening and the engine alignment checked as it may have altered with lose fixings. The exhaust water leak at water trap needs investigating and fixing.***

**Advisory note:-** The fan belt should be checked and correctly adjusted. The fresh water header tank topped up and monitored to see if it loses water again. The areas of paint and surface corrosion should be cleaned off and the whole engine cleaned up and areas of bare metal painted to prevent corrosion.



**30. Fuel System:**

- a) Plastic fuel tank mounted under starboard aft cabin berth. Filler from starboard deck. Heater connection on top of tank. Fuel isolator valve to engine in fuel line at tank accessible from under berth. Hoses to primary filter and to engine and return to tank all metal braided to ISO 7840 spec. All connections checked, no leaks seen in diesel system.

**31. Accommodation General:**

- a) Brokerage details advises upholstery all new 2011 and new cabin sole boards. Wood is in good condition for age with minimal dark staining from damp. Boat feels clean and generally dry.
- b) Hidden areas of headlining and cupboards show condensation stains (black marks) on materials. Port aft cabin wood under the berth has dark stain but not currently damp.
- c) There is adequate ventilation through out the cabins.
- d) There is corrosion stains in the bilge under the mast, possible leaks from cables on deck that have signs of sealant around them.
- e) Catch under seat buy table in saloon missing.

**32. Gas Installation:**

This vessel has been MCA coded in the past and it was built RCD/CE compliant. 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.

**Gas Observation and action table**

Item	Result	Action required.
Condition and efficiency of self draining bottle storage	Good separate sealed locker with drain overboard at base and lid.	
Age and condition of flexible hose at bottle.	Hose marked 2008 and no signs of perishing when bent over, replacement required in 2013	
Age and condition of regulator	GDK regulator and separate tap. No issues	
Connection to copper pipe	correct	
Condition of copper pipe where accessible	Could not see any	
Is pipework adequately supported and not under stress	Could not access	



where accessible?		
Connections and Flexible pipe to cooker and other appliances	Metal braided hose and correct fittings, condition very good.	
Is cooker gimballed?	Yes with crash bar and strap.	
Are all appliances fitted with flame failure devices on all burners, and did these work properly under test?	Yes both burners and oven. Gas not connected so not tested.	
Are any appliances requiring flues properly fitted with same?	n/a	
Is a gas alarm fitted?	Yes but shows amber all the time indicating fault	Replace
Is each appliance fitted with an isolating tap	Yes in locker below cooker	
If fitted did leak bubble tester function?	Not fitted.	

**Additional Observations:**

There is no requirement to have a gas alarm in private use but in charter there is. This one not functioning correctly.

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). 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.

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

- a) Plastic tanks in forecabin and port aft cabin. Pressurised system with accumulator tank. Tank gauge by galley. Electric and engine heated *Quicknautic* calorifier.
- b) Water tested at galley tap and heads. All operated. No signs leaks at pipes were seen.

**34. Heads:**

- a) Toilets are manual with pump on toilet. Pipes fitted securely. Hoses for inlet and outlet all go correctly in large loop to underside of deck (swan neck) .

**35. Electrical Installation:**

DC circuits

- a) 2 banks of 2 12v Tudor marine batteries mounted under each aft cabin berth. Securely fitted with straps. Terminals all tight. Manual isolators for + & - sides and shunt switch.
- b) Charged by engine alternator from 12v system. Electronic isolator mounted under engine steps. All terminals tight.



- c) All wiring goes through switch panels, with combined switches and breakers.
- d) All professionally fitted.

#### 240v Circuits

- e) Shore power socket in aft cockpit locker with RCD breakers. Secondary breakers at switch panel for water heater, *Christec* battery charger and 240V sockets. Battery charger mounted under chart table seat. No issues noted.

#### **36. Electronic and Navigation Equipment:**

The following was seen aboard operating

- a) Two binnacle compasses
- b) Raymarine ST60 Tridata (speed, depth) displays at each wheel
- c) ST60 wind direction and speed displays at each wheel
- d) Raymarine RL70C GPS Radar / chart plotter with repeater in cockpit.
- e) VHF Simrad RD68 with DSS
- f) HF Radio ICM 802 with grounding plate mounted under transom through hull.
- g) Clock and barometer – clock stopped.

#### **37. Heating and refrigeration**

- a) Refrigeration is *Frigoboat* evaporator. Compressor and fan under cooker. Fridge operated, plate got cold but thermostat switch in ice box is seized at mid range.
- b) *Eberspachter* type diesel warm air blower mounted in cockpit aft locker. Mounting for heater is corroded but firm. I could not get heater to come out of ignition cycle (it clicks to ignite but does not fire up).

**Advisory Note:-** Heater requires attention to operate. Fridge require thermostat control fixing



## **RECOMMENDATIONS and CONCLUSIONS:**

### **Maintenance Overview:**

Cosmetic maintenance: Recently replaced cushions and cabin sole gives the boat a newer feel. It does not feel like an ex charter boat.

Technical Maintenance: The engine could do with a little TLC along with heater and fridge

### **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.*

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

Tighten nut and bolt fixings on gear box to shaft coupling to prevent failure and shaft slipping back.

#### **28. Lifesaving and Emergency Equipment:**

This vessel be equipped with safety equipment to the level appropriate to proposed use.

#### **29. Engine and Installation:**

The starboard rear engine mount needs tightening and the engine alignment checked as it may have altered with lose fixings. The exhaust water leak at water trap needs investigating and fixing.

### **Conclusions:**

For a 2004 vessel this one is very good. The Jeanneau range is strongly constructed.

██████████ has had some recent refurbishment and is well equipped. The hull is in good condition. The purchaser has advised they plan to do some more work around the engine and other items at the end of the year when it will be lifted again. With this in mind she is a good boat.