



# Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

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Survey Report no: [REDACTED]

Name of Vessel: "[REDACTED]"

Type of Vessel: Maxi 95 Centre cockpit,FRP  
Bermudian sloop sailing vessel

Type of survey: Pre-purchase

## At the request of:

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

This survey was carried out on the [REDACTED] on the hard at Birdham Pool, Birdham, Chichester, UK having been out of the water for 1 day. 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.
- ✚ Access to the saloon and interior except aft cabin was not possible due to engine replacement.
- ✚ The engine, systems and electrics could not be accessed or tested.

### **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, 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.
- ✚ The hatches and port lights were not leak tested by 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 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 on the hard, the keel sat on wooden pads and the hull supported by wooden struts. A new engine was in the process of being fitted. The old engine was removed as was the shaft and propeller. I was not able to access the main cabin at all.

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, 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.
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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 Maxi 95 was designed in the '70's by Pele Peterson , the Swedish former Olympic sailing champion as a comfortable and safe, fast charter yacht with wheel steering for a family of 4. Nearly 2000 were built and are sailed throughout the world. The Maxi 95 was a popular flotilla charter yachts in Greece and Croatia. Island Sailing used a number of these as flotilla yachts and then Lead Yachts for their flotillas. Island Sailing had a Maxi 95 called [REDACTED]

**Manufacturers' information from owner manual on web (not verified by measurement)**

Length Overall	9.5m
Length waterline	7.8m
Beam:	3.2m
Draft:	1.5m
Weight of lead	1.6 Tonnes
Displacement	4 Tonnes

**Boat specific information**

Registration	
Hull / builders number	[REDACTED] – noted on hull
Year of Build	1979 –sellers information

**2. Keel**

- a) The fin keel in part of the hull moulding of FRP (fibre reinforced plastic) with cast lead ballast inserted. (Information on ballast from original owners manual on web. The url is <http://www.maxiowners.org/maxi-yachts/maxi-95/76-maxi-95-owners-manual.html>).
- b) The keel is coated in 3 layers of antifouling and 4 coats of epoxy.
- c) The underside was checked by mirror except where the keel is sitting on two blocks. There are no signs of serious damage to the keel.
- d) There are a few small 3.5mm pimples on the keel which will be explained in the keel section.
- e) The keel was scraped and checked as per the hull below and the readings are explained with the hull section 3 below.
- f) The readings were Port side aft 26 shallow and 22 deep, forward 36 shallow, 28 deep. Starboard side 48/42 aft, 50/47 mid, 44/29 forward.
- g) The keel was hammer sounded for delaminated FRP or voids. There are some hollow areas where I suspect the lead is not tight against the FRP but this is of no concern.



**3. Hull below Waterline:**

- a) The hull below the waterline is of solid FRP construction utilising sprayed on chopped strand matt and resin followed by hand lay woven roving in areas of reinforcement. (construction information from owners manual on web and woven roving can be seen in anchor locker and other areas.)
- b) The vessel was seen sitting on its keel on two wooden block, supported around the hull by wooden supports. No distortion was noted in the hull.
- c) A large number of 3.5mm diameter pimples were noted in places around the hull through the antifouling. Some of these had broken open.
- d) Light hammer sounding was carried out (not heavy enough to damage anti-foul) of hull at regular intervals approximately 500cm spacing all over. There are two dull sounding areas, one port forward and around the exhaust outlet.
- e) The antifouling was removed in 33 patches approximately 50mm x 50mm at random around the hull below the water line. There were 3 layers of antifouling well applied over 4 layers of epoxy – white and grey layers, these are applied over clear gel coat resin. While scraping I was looking for evidence of wicking (white fibres with water ingress) or blistering and once removed all patches were checked with 10x magnification.
- f) There are no visible signs of significant damage or repairs to the hull below water line.
- g) 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. (It should be noted that the Sovereign Meter scale was 0 – 25 and the Sovereign Quantum meters 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>4.2°C</b>
Surface temperature:	<b>3.2°C</b>
Relative Humidity:	<b>77.2%</b>
Time ashore	<b>2 days</b>
In summary the weather conditions for obtaining moisture readings were <b>fair</b>	



Readings were as follows:

Meter	Range below waterline.	Range above waterline.
Sovereign Quantum, Scale A, 0-100 Shallow mode	<b>Hull 28 - 45</b> <b>Rudder 13</b> <b>Skeg 26 - 62</b>	<b>17 – 18</b>
Deep Mode	<b>Hull 23 – 44</b> <b>Rudder 13</b> <b>Skeg 21 – 40</b>	<b>14 – 20</b>

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.

These readings need to be considered in conjunction with the period the vessel has been ashore and the weather conditions when obtained.

As a rule of thumb you can expect the levels to drop by one range after a few weeks ashore. Always storing the boat ashore out of season to allow some natural drying out to occur will contribute significantly to maintaining condition.

I investigated with a sharp chisel some of the pimples. Some contained a small amount of liquid. They are located between the clear gel coat and the layers of epoxy applied later in the boats life. The clear epoxy had dry strands of fibre visible in places on the surface but in the 3 places I investigated, the laminate is solid below this. One patch of antifouling I removed had a very high reading of 40 shallow, 28 deep. To see if the epoxy was causing the higher reading I removed the epoxy completely to the clear gel coat and then dried it off and took another reading. It has gone up to 62. Below the clear gel coat, a white area approximately 10mm diameter is visible. This indicated a void and the moisture readings suggest this is close to the surface. Taking all the evidence, it would appear that the hull has some voids in the laminates; there is possibly some delaminating in two areas. There are blisters forming between the epoxy and the gel coat, but these will not damage the hull. The boat is 31 years old and built with the spray method, very solidly and will last a good few years longer before



any major work is required on the hull. If however the boat comes to be sold, high moisture readings will put some people off.

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

- a) Top sides are constructed in the same way as the hull below the water line.
- b) They are finished in off white gelcoat.
- c) Top side moulding found fair (not distorted). There are a number of scratches and scuffs on the sides and minor repairs. The stem has bright white gel coat filler applied and not faired flush. Starboard bow the white gel coat has been scuffed off the clear resin below.
- d) The topsides were lightly hammer sounded and no indication of voids found. Moisture readings were taken and recorded as above.
- e) A rubber moulded rubbing strake runs around the deck and hull joint. This is well fitted apart from a slight deflection at the transom with no major signs of damage.

Advisory note – Gel coat that is damaged to the laminates and hairline cracks should be cleaned with acetone and filled and faired with gel coat filler to prevent moisture ingress into the laminates.

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

- a) The deck is of FRP of sandwich construction with core stiffening of foam or balsa normally. Access to the inside of the boat was restricted and the deck has material headlinings fitted. Where seen, load bearing fittings are through bolted with stainless steel bolts, nuts and large penny washers or plates.
- b) The gel coat is off 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.
- d) The deck was lightly hammer sounded.
- e) The shrouds were pulled heavily to check for flex around the mast step.
- f) There is some minor flexing on the starboard deck and starboard of the mast but the mast base does not flex.
- g) The anchor locker lids have some gel coat damage around the edges and the starboard lid hinge is loose.
- h) Starboard side deck by cockpit has a cosmetically poor gel coat repair.

Advisory note – the deck flexing is minor and not unexpected on a boat of this age. These areas should be monitored occasionally and if they get worse, they can be stiffened by a repair process involving injecting resins into the affected area.

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

- a) Integral with deck moulding and constructed in the same way.
- b) The whole area was carefully tested underfoot and no sign of delaminating or other structural defect found. There is a slight flex on main coach roof.
- c) There is a hairline crack on the aft cabin coach roof port side forward about 500mm long. This does not flex.



Advisory note:- cracks in gel coat should be attended to stop water ingress into the laminates. One method is to simply clean out with acetone and then polish the area with suitable marine polish.

### **7.Cockpit:**

- a) Integral with the deck moulding. There are two drains, moulded into cockpit and connected to gate valves and bronze through hulls. These are reported below.
- b) 2 lockers to port and starboard. Both have hinged lids and positive method of closure with lips to prevent water going below.
- c) Port locker forward hinge is loose.
- d) A moulded cockpit table plinth housing the engine control panel and wheel. There are no signs of flexing of the cockpit sole.
- e) The base of the cockpit is moulded up to 100mm at the companion ways to prevent water going below.

### **8. Hull/Deck Joint and Toe Rails**

- a) This is bonded type. The hull and deck are hand bonded completely with FRP with a bonding paste used between. (Information from Owners manual). Where seen (in the anchor locker) the bonding is good.
- b) Access to the rest of the hull deck joint has not been possible.

### **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 shell mouldings are robust in the first place.
- b) There is an inner lining bonded into the hull moulding. (owners manual)
- c) No other structure has been viewed due to restricted access and therefore at the present time I cannot comment further.

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

- a) The blade rudder consists of a moulded blade around a stainless steel stock with a close cell foam core.
- b) It is skeg hung.
- c) The lower quarter of the blade is missing exposing the foam core and stainless steel frame.
- d) The bottom bearing has minor play. There is no play in the top bearing.
- e) There are no splits of the edges (except the obvious missing section) and when leant on with full body weight I could not open the joint.
- f) No movement was detectable between the blade and stock where it emerges from the top of the blade when the strength of one man was applied to the trailing edge of the blade with the helm hard over.
- g) The steering wheel is not present and therefore play could not be checked in the bearing
- h) Rudder tube is GRP bonded into the hull with a rope packing bearing at top. This bearing casing has surface corrosion on it, indicating a leak.



Advisory note – While the boat is ashore, take the opportunity to clean this off and repack the bearing.

- i) There is a mild steel frame bolted to the stainless steel rudder stock and the cables are attached to this. The cable ends are fouling the wooden locker lid badly. One cable is not correctly clamped.
- j) Emergency tiller was seen in cockpit locker.
- k) A ST3000 wheel pilot is present. This was not attached as the wheel is missing and was not checked.

***Recommendation – The steering needs to be attended to before launch. A new rudder or a good repair is required; the steering cables need to be correctly clamped. The top bearing repacked and the casing cleaned. The bracket and attachment of cables to it needs fitting so that the steering does not get fouled on the locker. The wheel fitted and bearings checked.***

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

- a) The propeller was not present, the shaft was not fitted as the engine was being replaced and the cutlass bearing housing was loose.

***Recommendation –Stern gear need to be correctly fitted.***

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

- a) There is a no hull anode designed on this boat and none fitted
- b) A propeller anode should be fitted
- c) There are no signs of galvanic action below the water line.

### **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 on outlet spigot unless noted.
- ✚ Lying fair to hull unless noted

Please note access to the inside of some skin fittings was not possible and so I cannot report on condition at present.

### **Below Waterline:**



- a) Port side in keel – engine seawater intake though hull was removed as part of engine replacement work.
- b) Port side 22mm Internal diameter bronze thru hull, presume galley sink drain – no access to inside boat.
- c) Port side 12mm Internal diameter bronze thru hull, presume galley seawater intake – no access to inside boat.
- d) Portside 32mm Internal diameter bronze thru hull, cockpit drain and bilge pump outlet. Bronze gate valve. Clips corroded but solid.
- e) Portside 12mm internal diameter bronze through hull on water line – gas locker drain. No valve on spigot. Clear plastic non reinforced hose with inline valve.
- f) Starboard 32mm Internal diameter bronze thru hull, cockpit drain outlet. Bronze gate valve. Clips corroded but solid.
- g) Starboard side 32mm Internal diameter bronze thru hull, presume toilet holding tank outlet – no access to inside boat.
- h) Starboard side 46mm Internal diameter bronze thru hull, exhaust pipe outlet double clips and pipe goes to swanneck.
- i) Starboard side 12mm Internal diameter bronze thru hull, presume toilet holding seawater inlet – no access to inside boat.
- j) Starboard side 23mm Internal diameter bronze thru hull, presume toilet sink drain – no access to inside boat.

***Recommendation – boat cannot be launched without engine intake correctly fitted. All non checked seacocks to be checked before launch. Any corroded clips should be replaced.***

***Recommendation – a DZR valve should be fitted to this gas thru hull being so close to waterline and a swanneck loop not being suitable for gas locker drain.***

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

- a) Main companionway access hatch to saloon is Wooden folding cover, securely attached and secure method of closure. Double wooden door, hinged at sides, 100mm above cockpit sole. Secure method of closure.
- b) Access to aft cabin is hatch to saloon is wooden folding cover, securely attached and secure method of closure with single wash board of plywood in good condition. Slides in place in wooden runners and can remain in position without hatch being closed except in inversion condition. 100mm above cockpit sole.
- c) Fore hatch & Saloon hatch both forward hinged, Plexiglas in fair condition, some scratches from cleaning. Not able to access from inside.

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

- a) Saloon and aft cabin windows are Plexiglas stuck on and secured in corners with stainless crews and rubber washers. No cracks, they have scratches and have faded.
- b) Forward starboard fixing screw rubber is split and may be a sign they are all perishing in which case they should be replaced to prevent leaks.

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



- a) Pulpit is step through type. Bolted to deck with stainless steel nuts and bolts with washers underneath. All tested with full body weight and visually checked.
- b) Pushpit. Bolted to deck with stainless steel nuts and bolts with washers underneath. All tested with full body weight and visually checked.  
Advisory note:- starboard push pits is bent inwards. They are not cracked and still secure to deck.
- c) Stanchions. In stainless steel set in stainless steel bases. The bases are designed so stanchions are slightly loose to avoid corrosion and easy draining. All tested with full body weight and visually checked.  
Advisory note:- Starboard midships is bent at bottom, All are still secure and useable.
- d) Life lines. Of stainless steel wire, tested with magnet and securely attached.  
Advisory note:- centre life lines removed for access by engineers.
- e) No Jack Stays fitted.
- f) No Life line attachments noted.

### **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. No sign of seepage via deck fittings.

- a) Main forestay. Stainless steel fitting bolted through deck, attached to closed bottle screw, inturn attached to stainless steel plate through bolted stem head.  
***Recommendation – The forestay fixing bottle screw threads are badly corroded. This should be removed and the threads checked and replaced if necessary.***
- b) Baby stay fitting is stainless steel u bolt through deck. Underside could not be checked.
- c) Main cap and lower shrouds attachment points. These consist of stainless steel plates fitted over raised FRP mouldings on the deck. Fitting is two stainless steel bolts and Nyloc nuts in sheer.
- d) Split backstay attached to long "u" bolts going through deck. Access to underside of unbolts not possible due to fixed headlining panels.

Advisory note:- The lining around the backstay fittings is stained, indicating possible leak at u bolts. This could cause corrosion. Advice is to remove headlining and check underside.

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

- a) Main bow anchor. This is 25lb plough anchor in steel with 10mm chain and 15mm 3 strand warp. Chain not laid out and examined link by link. Bitter end attachment is to forestay attachment bracket.
- b) Second anchor – Brittany anchor, chain seen in cockpit locker.
- c) Stemhead fitting is part of bow sprit with nylon roller which is securely attached to deck and stem, slightly dented and wood repaired.



- d) Vessel has stainless steel cleats fore and aft of adequate size through bolted the laminate. All hammers tested, levered and found secure.

Advisory note:- The both anchor shackles and bitter end shackles are corroded. They should be replaced before being relied upon.

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

- a) All found of adequate size and securely through bolted, although inspection from under limited by linings and access to saloon.
- b) There a 5 winches fitted, all tested but not under load.
- c) Deck hardware all of good quality and specification, and all are serviceable except where noted.
- d) Genoa tracks and cars checked
- e) Mainsheet jammers and cleats all functioning.

Advisory note – starboard aft winch would not turn, port forward winch has play in it. Advice is to get all winches serviced before use. Port aft genoa track car is very tight to move and should be freed up.

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

- a) Vessel fitted with folding stainless steel boarding ladder with 4 stainless steps. No signs of wear and secure when pulled and climbed on.

Advisory note:- only 1 step extends below water line and therefore boarding from water will not be as easy as if two steps extended below.

### **21. Spars:**

#### **Mast**

- a) Mast head rigged single spreader rig. The spreader bases are welded tangs. The mast was stepped so inspection is restricted to fittings and area to head height. It is a Petterson Brand mast made in La Rochelle, France. Black anodised with no signs of corrosion around base or fittings except rivets slightly corroded but not affecting mast. No damage or distortion to the extrusion was noted.
- b) Mast is deck stepped. There is silicon around the fittings suggesting leaks.

#### **Boom**

- c) Boom was laying on the deck.
- d) Black anodised in similar condition to mast.
- e) Main sheet and kicking strap attachment points secure.
- f) Goose neck no signs of wear noted.

#### **Spinnaker pole**

- a) Parrot beaks intact and pistons operate. Pole is not bent but is marked.

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



- a) Mast shrouds and back stay 1x19 wire. 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 OS chrome plated bronze open bodied type and had split pins securing them where seen. They were taped but where visible, were found free from distortion or visible stress cracks, again under 10x magnification.
- c) Genoa furling system – turned by hand and no faults noted.
- d) The rigging was checked for correct angle entering mast.

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

- a) Running rigging appears in good condition with most ends burn closed.
- b) Halyards will need to be pulled down to check where running in mast.

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

- a) Not checked as below decks and purchasers have had sea trial and seen them.

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

Vessel fitted with lights of correct size, securely mounted. Not seen working as batteries disconnected.

- a) White on stern
- b) Port and starboard on pulpit.
- c) Steaming light on mast.
- d) Mooring light at mast head

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

- a) Pick ups not seen as no access to inside boat.
- b) Manual bilge pump, mounted in cockpit locker, operated from cockpit. Operated dry.
- c) No other pumps noted.

Advisory note:- rubber dust cover around bilge pump handle access in cockpit is split and could allow water into cockpit locker. Advice is to replace dust cover.

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

- a) None seen as could not check below.

***Recommendation:-. Fire extinguishers should be serviced or replaced every 5 years. The MCA recommend one fire extinguishers be fitted at every exit to open space and one automatic in engine space or manual one mounted near the engine space and ability to discharge into engine compartment without opening hatches. Plugged hole is a good solution. Fire blanket at galley and 2 buckets with lanyards. This vessel should be equipped to this standard.***

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



The following was seen aboard.

- a) 1 Horseshoe lifebuoy both with 2 floating lights, one throwing line.

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:**

- a) New engine being installed along with modifications to exhaust.

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

- a) Fuel filler is on deck and secure and of correct quality.
- b) Stainless steel fuel tank in starboard cockpit locker under wooden cover. Good quality stainless checked with magnet. Could not access underside but seams that were seen and checked with mirrors where possible fittings and top. Minor surface rust.
- c) No smells of diesel
- d) Fuel tank is vented through hose which is not ISO 7840 but clear fibre reinforced hose.
- e) Fuel supply is copper pipe. No valve seen,

Advisory note. System could not be checked beyond tank as lack of access into saloon.

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

- a) Aft cabin only checked. Headlining is generally clean and well fitted but not original.
- b) Wood is stained in places and would benefit from cleaning and varnishing.
- c) Cushions were clean.

Advisory note:- majority of accommodation could not be checked through lack of access due to engine being installed.

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

As far as I can ascertain This vessel has not been MCA coded and was built before RCD/CE introduced

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.

**Gas Observation and action table**

Item	Result	Action required.
Condition and efficiency of self draining bottle storage	Mounted in plastic crate screwed to wood block in cockpit locker. Plastic pipe fitted in base as drain , this is too long and full of water making it not effective for gas drain.	<i>Drain hose should be shortened and run downwards directly to thru hull which should have dzt valve as on water line.</i>
Age and condition of flexible hose at bottle.	BS marked fitted December 2006 . Gas hoses should be replaced every 5 years.	
Age and condition of regulator	No signs of corrosion and operated.	
Connection to copper pipe	clips	
Condition of copper pipe where accessible	Not seen as behind joinery.	
Is pipework adequately supported and not under stress where accessible?	Not seen	
Connections and Flexible pipe to cooker and other appliances	Not seen	
Is cooker gimballed?	Not seen	
Are all appliances fitted with flame failure devices on all burners, and did these work properly under test?	Not seen	



Are any appliances requiring flues properly fitted with same?	Not seen	
Is a gas alarm fitted?	Not seen	
Is each appliance fitted with an isolating tap	Not seen	
If fitted did leak bubble tester function?	Not seen	Consider fitting bubble tester.

**Additional Observations:**

I was not able to check gas system beyond the bottles. The plastic container would be fine provided drain is correct and it is securely fitted and cannot move. At the moment the hose is being stretched.

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) Stainless steel tank in port cockpit locker. Access limited. Where seen no signs excessive corrosion. Filler is from fitting in cockpit seat.
- b) Not able to check further due to access.

**34. Heads:**

- a) Not able to access heads.
- b) Stainless steel holding tank in cockpit locker securely mounted. Not able to access any further.

**35. Electrical Installation:**

DC circuits

- a) Not checked as being worked on.

240v Circuits

- a) Lead seen in cockpit locker.
- b) Flexible domestic cable seen in aft cabin with solid domestic 240V socket not mounted securely.
- c) Could not access inside boat to check system.

Advisory note:- all 240V shore systems MUST have correctly fitted RCD. I am not able to say if this yacht has this at this point.

**36. Electronic and Navigation Equipment:**



- a) None seen to check

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

- a) None seen to check

## **RECOMMENDATIONS and CONCLUSIONS:**

### **Maintenance Overview:**

Cosmetic maintenance: The repairs to gel coat seen are not cosmetically good. I cannot comment on the interior yet.

Technical Maintenance: A new engine is being fitted professionally so from this I would suggest maintenance is taken seriously although the home made gas box might indicate otherwise.

### **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.*

**These are only as complete as has been able to access so far.**

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

The steering needs to be attended to before launch. A new rudder or a good repair is required; the steering cables need to be correctly clamped. The top bearing repacked and the casing cleaned. The bracket and attachment of cables to it needs fitting so that the steering does not get fouled on the locker. The wheel fitted and bearings checked.

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

Stern gear need to be correctly fitted.

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

Boat cannot be launched without engine intake correctly fitted. All non checked seacocks to be checked before launch. Any corroded clips should be replaced.

A DZR valve should be fitted to this gas thru hull being so close to waterline and a swanneck loop not being suitable for gas locker drain.

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

The forestay fixing bottle screw threads are badly corroded. This should be removed and the threads checked and replaced if necessary.

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

Fire extinguishers should be serviced or replaced every 5 years. The MCA recommend one fire extinguishers be fitted at every exit to open space and one automatic in engine space or manual one mounted near the engine space and ability to discharge into engine compartment



without opening hatches. Plugged hole is a good solution. Fire blanket at galley and 2 buckets with lanyards. This vessel should be equipped to this standard.

**Conclusions:**

I am not able to fully conclude the survey at this stage. From what I have seen the hull is showing some signs of water ingress but not particularly excessively and if the boat is stored ashore every winter and areas can be attended to and the hull should maintain its condition. Cosmetically she is not very pretty externally and some modifications are a bit dubious – gas locker and steering. The professionally fitted engine is a plus point. This is certainly a boat for hands-on maintenance competent owners who need to keep on top of maintenance like replacing pipe clips when corroding etc.