



Marine Surveys UK

"Pragmatic Surveys in Plain English"

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[Yacht surveyor](#), Affiliate member

YDSA, Full member BMSE, MECAL

MCA coding surveyor

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Survey Report no: [REDACTED]

Name of Vessel: "[REDACTED]"

Type of Vessel: Fisher 25, FRP construction, double mast ketch rig.

At the request of:

[REDACTED]

This survey was carried out on the [REDACTED] in the water and on the hard on [REDACTED] [REDACTED] at Emsworth Marina, Emsworth, Hampshire . 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 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 and also running the engine.
- ✚ The hatches and port lights were not leak tested.

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 in the water and on the hard at the premises of Emsworth Marina having been afloat for the season.

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



1. Details of subject vessel:

I believe around 250 Fisher 25's have been made to date, this being one of the earlier ones, the design going back to the 1970's. The Fisher line is easy recognizable: Designed by Wyatt & Freeman, the professional looking wheelhouse and a hull resembling Danish fishing ships with rounded stern and high water displacement. The double masts with ketch sail plan is another distinctive feature of the line. I understand from the broker that Fairways Marine and North shore produced the mouldings and then various yards completed the fit out.

The builders certificate states that this vessel was built by Langstone Marine Limited, Southmoor Lane, Havant at their Langstone yard.

Manufacturers' information from builders certificate (not verified by measurement)

Length Overall	24'2"
Beam:	9'3"
Draft:	4'
Gross Tonnage	5.42 Tons
CE Marked	no

Boat specific information

Registration	SSR [REDACTED] (papers in brokers office and marked on vessel)
Year of Build	1976 – stated on builders certificate
RCD	Not applicable
Yard number	No marking on vessel – paperwork states [REDACTED]

2. Keel

- a) The long keel is integral to the hull and fully encapsulates cast iron or concrete ballast.
- b) The keel was treated as part of the hull for the purpose of checking gel coat and laminates and is included in section 3.
- c) The vessel is sitting on its keel on two blocks, the underside was checked where possible and no signs of damage were noted



3. Hull below Waterline:

- a) Construction of the hull below the waterline is brown / tan gel coat with solid FRP construction.
- b) The vessel seen sitting on its keel on wooden blocks and in a cradle. No distortion was noted in hull.
- c) Light hammer sounding (not heavy enough to damage anti-foul) of hull all over. No sounds of delaminating were noted.
- d) The antifouling was removed in 16 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.
- e) No evidence was found of wicking or blisters
- 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.

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:	3.3^oC
Surface temperature:	3.8^oC
Relative Humidity:	72%
Time ashore	30mins – 1 day
In summary the weather conditions for obtaining moisture readings were fair	

Readings were as follows:



Meter	Range below waterline.	Range above waterline.
Sovereign Quantum, Scale A, 0-100 Shallow mode	20 -62	13-15
Deep Mode	21 - 59	11-12

The interpretation of the readings in shallow mode range;

- 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.

Advisory note:- There were some high readings below the water line and I went back a second day to double check moisture ON the hull was not affecting the readings. I concluded it was not, as I dried the patches again and tested again and got similar readings. The readings indicate to me that there are pockets of moisture in the hull but that these have not yet caused any blisters. The boat is 34 years old and has the original gel coat. I cannot say if this moisture is recent or has been around for a long time. Unless the boat has change its operating environment recently, I would conclude that the moisture has been in the hull for some time. There are no sounds of delaminating nor visual signs. There is nothing to say that blisters will ever appear. Unfortunately though, moisture in the hull will affect the resale value.

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.
- b) Top side moulding found fair, painted with Awl Grip paint in 1999 (brokers details) in Blue. Some areas scuffed but not through to original gel coat.
- c) Moulded into the topside adjacent to the deck line is a plinth on which a teak rubbing strake is mounted. Above this 3 further teak strips. These are varnished, well mounted, no signs of damage.
- d) The topsides were lightly hammer sounded and no indication of voids found. Moisture readings were taken and recorded 13 -15 shallow, 11- 12 deep mode.
- e) Silicon type filler is coming away at top of topsides and underside of wooden capping forward.



5. Deck moulding:

- a) The deck is of GRP with heavier laminate for strength in places, balsa core for extra stiffness and plywood pads are laminated in for strength under some deck fittings along with metal plates. Access to the underside was greatly restricted by head lining in all spaces except port side engine wheel house and port aft quarter.
- b) The gel coat is white with Treadmaster diamond non slip covering a lot of areas.
- c) The whole deck was carefully tested underfoot for signs of delaminating or other structural defect.
Advisory note: Port side foredeck flexes slightly.
- d) The deck was lightly hammer sounded with no significant defects found.
- e) Moisture readings were taken across the deck, coach roof and cockpit and were found :-
Foredeck 30 shallow – 27 deep.
- f) There are two drains at the aft end of the side decks / bulwarks.

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) There was no flexing of the coach roof area below the mast when the shrouds were flexed.
- c) The moisture readings around the mast base were 23 shallow and 29 deep. Hand rails were tested with a lever and found secure.
- d) Starboard side, forward of wheel house there are a number (more than 10) of bumps in the gel coat. These range from 2mmø to 25mmø. Moisture readings here were 33 shallow and 66 deep.
Advisory note:- Without destructive testing I cannot be certain these are fluid blisters but I suspect they are. Forward of this, just inboard of the round air vent readings are 30 shallow, 35 deep and inboard at the "Mickymouse ear" vent 28 shallow, 42 deep. A repair would be to grind off, dry out and re-gelcoat, possibly covering this section with Treadmaster.

7. Cockpit:

- a) Integral with the deck moulding with 2 cockpit drains at forward end and two at the aft.
Forward cockpit drains – Blakes seacock, move easily. Single clips only. Difficult to access although they have lanyards attached. Tested as section 13 below. Aft drains not seen from inside hull.

Advisory note:- Best practice is for all hoses and pipes to be secured with 2 clips on each spigot in case one breaks. Please note for single clips reported in other sections.

- b) Mizzen mast sits on to cockpit sole. The cockpit sole flexes under my bouncing weight and there are stress cracks in the gel coat at the aft end of cockpit sole. There is little extra strengthening under the mizzen mast.
- c) Lazarette locker has securely hinged lid and positive method of closure. Good lip design to prevent water entering.



Advisory note:- The vessel is designed for the mizzen mast, it is not an extra and has not caused a problem in 34 years, therefore it is unlikely to do so now as there is no deterioration in the cockpit sole.

The vessel has deck house as part of same moulding, all components are reported in relevant sections below.

8. Hull/Deck Join:

- a) This is FRP bonded and through screwed along its length. The deck moulding folds over the hull moulding at the bulwark. The joint is filled with a hard bonding paste. A Teak capping is attached by bolts that go through the joint.
- b) Where seen there is no signs of movement or water ingress of the joint.
- c) The bulwark capping is split both sides around the rigging attachment points.
- d) Access to the joint was restricted to the cockpit locker, port aft of amidships and bow locker due to fixed linings.

Advisory note:- In the heads compartment and forepeak port side there are signs of water ingress which when viewed with the splits in the capping would appear to be related. The leak should be stopped to prevent damage to the bulkheads structure.

There is also damp in the starboard quarter berth aft end. Further investigation of the quarter berth damp is required to determine if the leak here is hull / deck joint or something else, like scuppers drain.

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) The 4 main bulkheads are laminated to the deck and hull at the base.
- c) There are a number of floors bonded to the hull throughout the length of the hull. Where seen the bulkheads and floors are well bonded with no signs of movement or cracking found. The wooden cabin furniture is bonded in many places and forms part of the structural strength. (Floors in this case are plywood panels on either side forming the cabin furniture and not continuing full height to deck level).
- d) Wooden bulkheads have Formica on the sides in the heads and could not be checked for moisture. Wood edges were possible were tested with moisture meter, although most edges are covered in headlining or wood covers. Discrete spike testing showed no deterioration in wood except where noted below. The inboard edges of the bulkheads are supported by solid teak posts spanning cabin roof to hull.
- e) Portside forward side of forward bulkhead lower port corner is damp and a spike could be inserted through 2 or 3 wood laminates. The berth under board is also wet and soft at the point it meets the wet bulkhead. The base of the bulkhead in the port corner visible in cabin is also soft as is the base of the chain locker bulkhead forward. Viewed from under the cockpit



sole although the bases of the teak posts appear damp I was not able to insert a metal spike more than 0.5mm into the wood.

Advisory note:- The size of the wet patches is such that they are not causing a structural problem at the moment. The forward bulkhead I believe is wet due to the split capping mentioned above and rigging attachment points leaking. Once this leak is cured, the bulkheads should be dried and treated for rot and strengthened with ply pads securely attached.

- f) The cabin sole is painted ply on top of a wooden frame so access to the inside of the hull at this point was limited to the top of the keel and partially up the hull sides. The bilge was dry.
- g) The main mast compression loadings are transferred onto an aluminium mast foot spanning the two main bulkheads, these loadings are transferred through the bulkheads to the hull then these loadings transfer to the floors.
- h) The mizzen mast sits on the cockpit sole. Just forward of this underside is a ply partial bulkhead. There is no extra strengthening visible but there may be ply pads laminated in cockpit sole.

10. Rudder and Steering:

- a) FRP moulded transom hung rudder is skeg supported, with gudgeon and pintle attachments. All rudder brackets, pintle, gudgeon and shoe are bronze.
- b) All fixing nuts and bolts were hammer tested and found secure.
- c) Wheel steering from the deck house via wooden wheel and Vetus steering cable which is well attached. Mild steel bracket inside transom onto wooden pad, through bolted transom with 4 bolts. All tested and found secure.
- d) Fitting at cable end to Rudder is rusted / corroded as is bolt. Tested with hammer and found secure.

Advisory note:- clean or replace end fitting to prevent seizing up unexpectedly.

- e) Rudder tested with full body weight, no signs of movement at seams.
- f) Minor play in lower gudgeon bushes.
- g) Emergency tiller is wooden and fits into with stainless steel stock. Tested under full body weight and found secure.
- h) Navico Wheel pilot WP5000 fitted to wheel and operated full lock to lock.

11. Stern Gear:

- a) 3 blade bronze propeller on stainless steel shaft. No signs of damage
- b) Shaft is supported outboard end by bronze cutlass bearing housing; Found secure, hammer tested and scraped.
- c) Inboard stern gland is bronze greased rope type gland with remote greaser securely mounted under wheel house sole under seat. The gland is attached to the stern tube by rubber hose,



securely attached with single stainless steel clip either end. These were checked underside with a mirror, struck with hammer and found secure and free from corrosion.

12. Cathodic Protection:

- a) Hull anode is partially wasted. Checked for electrical continuity with shaft, bearing housing, gudgeons and found complete. Wires inside vessel confirm this and are well fitted.

13. Skin Fittings and other through Hull Apertures:

Some thru hulls may not be reported below but will be with relevant systems sections and have been tested the same way.

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) Engine seawater inlet: Yellow metal thru hull with DZR valve. One clip only on strainer.

Above Waterline:

- b) Galley sink drain. Yellow metal thru hull – green residue around thru hull. DZR Valve, 1 clip only.

Advisory note. Green residue can indicate either salt water leak or low grade material. Clean off and monitor, check records if replaced. Lots of tape around sink and pipe suggesting possible leaks.

Advisory note:- It is best practice to have 2 clips on all pipes leading to through hulls to create secure fixture.

14. Main Companionway and other Access to Accommodation:

- a) Main companionway access is vertical door, sliding wood with toughen glass. Key to lock closed. Barrel bolt to keep open and lock from inside. Cill is 300mm above cockpit floor.
- b) Fore hatch aluminium framed, perpex cover, hinged forward. Gaskets intact. Secure method of closure. Can be opened from outside if not locked.



15. Ports, Windows etc.:

- a) Deck house windows are aluminium framed with glass. Seals are in fair condition, no signs of leaks. Reported by broker replaced in 2005 although document I saw only mentioned saloon windows.
- b) Deck house two opening windows, slide down and secure method of closure. Seals appear good.
- c) Perspex sliding roof light in deck house, operates well. No approval markings seen.
- d) Saloon portlights, aluminium framed glass, starboard forward opens. Gaskets and rubbers good. Reported by broker replaced 2005.
- e) Round non opening port lights below weather deck in forepeak, glass with chrome bronze frames forward. No signs leaks and secure in hull.
- f) Opening port light in heads. Damp around headlining but could be rigging attachments or condensation rather than port light.

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

- a) Pulpit and push pit of stainless steel, flat feet with studs through teak capping and deck with washers underside. Full body tested, no movement noted.
- b) Stanchions. Alloy in bronze chromed bases which are bolted through deck. Access to underside limited. Found secure with body weight test.
- c) Double life lines. All good stainless steel, non magnetic, plastic coated and secure. Terminals good. Reported by broker replaced 2002.
- d) No life line attachment points 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 500mm crowbar on wood block

Unless noted below, no movement found.

- a) Main mast upper shrouds attachment points. U bolts welded either through or on top stainless steel plates, on teak capping on bulwark, no access to underside without removing headlining. Previous surveyed Fisher 25 has 2 bolts in tension through alloy plate with 2 nuts on each. Port side there is evidence of sealant being applied around fitting.
- b) Main mast Forward lower shrouds fixing point, same as Main shrouds and positioned forward of them.

Recommendation: Main mast forward shroud plates noted to have distorted plates atop, with the appearance that the teak capping is being depressed by the u bolt tension. Further investigation is required to determine the cause of this depression and if structural.

- c) Main mast Aft lower shrouds fixing point, same as Main shrouds and positioned aft of them.
- d) Mainmast Forestay attaches to stainless steel fork on stainless steel stem head which is bolted to deck. 6 bolts in tension 3 in sheer. Clevis pin in place.



- e) Mainmast and Mizzen backstays attached to u bolt on teak capping. Bolted through teak and deck to washers underside. Access to starboard only by camera.
- f) Mizzen mast shrouds attach to deck house roof. No access underside due to head linings.

18. Ground Tackle and Mooring Arrangements:

- a) Main bow anchor. 25lb plough anchor mounted on deck. Shackle to chain rusted but sound. 8mm chain thru hawse pipe to locker in forepeak. Chain not laid out and checked link by link. Links in locker no major signs of corrosion. Some links on deck corroded but solid when tested with hammer. Bitter end tied off.
- b) Simpson Lawrence Manual Windlass, through bolted with laminated ply pad underneath. Bolts secure when tested with hammer, no signs corrosion.
- c) Brittany type anchor in cockpit locker. No chain attached.
- d) Mooring cleat on foredeck securely fitted below with large nuts below.
- e) Stemhead fitting is stainless steel with single bow roller, Hammer tested and no sign of major damage.
- f) Vessel has alloy cleats aft, amidships and forward of adequate size through bolted the laminate. All hammer tested, levered and found secure.
- g) Various warps and fenders seen aboard.

Advisory note:- MCA recommends for this size vessel 30m of cable including 10m chain with kedge anchor being 5kg plus 6mm chain and 10mm warp, again 10m of chain in 30m cable.

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. Cockpit 2 x Lewmar 7
 - b. Mast 1 x Lewmar 7

20. Davits and Boarding Ladders:

- a) Vessel has fixed boarding ladder with one step below water line.

Advisory note :- This vessel will be difficult to board from the water. Best practice is to have at least two steps below the waterline.

21. Spars:

Mast

- a) Main mast – Deck stepped single spreader masthead rig. The mast was stepped so inspection is restricted to fittings and area to head height. It is silver anodised, no excessive signs of corrosion around base or fittings. 2 screws missing from base but of no structural strength.
- b) No damage or distortion to the extrusion was noted.
- c) Alloy cleat snapped at head height.
- d) Spreaders fit into stainless steel sockets.



- e) Headsail furling system seen with no sail, turned freely.

Booms and Mizzen

- a) Silver anodised in similar condition to mast.
- b) Main sheet and kicking strap attachment points secure.
- c) Goose necks no signs of wear at the mast fittings.

Booming out pole

- a) Stowed on deck, parrot beaks operated. No signs damage.

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 removed and had good articulation. All seen were found free from distortion or visible stress cracks, when examined under 10 x magnifications.
- c) Main mast shrouds have tight plastic covers.
- d) All standing rigging and terminals reported replaced 2001 by broker.

Advisory Note:- Plastic shroud covers trap dirt near terminals and can accelerate damage to wire rigging in swages. If retained, they should be positioned up from terminals so dirt can run off easily.

23. Running Rigging:

- a) Running rigging seen appears in fair condition with most ends burn closed and thimbles in place.

24. Sails and Covers etc:

All sails were off mast and stowed in forepeak. They were checked here, not fully un-rolled. Stitching randomly checked on each sail with 50p coin for wear.

- a) Main sail. Tan coloured. Some repairs noted. Head faded more than rest as would be expected. Sail very soft indicating resin gone from cloth. What seen stitching in fair condition.
- b) Mizzen similar condition to main sail.
- c) Genoa similar to main sail too. Sacrificial strip has been replaced since sail new. Evidenced by missing stitching rows and double stitching.
- d) Blue sail covers partially un-furled and appear in sound condition, clean.



25. Navigation Lights:

Vessel fitted with the following lights of correct size and seen working unless noted

- a) White on stern – lens is cracked.
- b) Separate Port and starboard on coach roof – Port light is dim.
- c) Steaming light on mast
- d) Mooring light at mast head – could not see lit.

Recommendation- Port light needs to be brighter – possibly wrong wattage bulb or poor connection. Mast head needs to work. Boat should not operate outside daylight hours until fixed.

26. Bilge Pumping Arrangements:

- a) Manual bilge pump, Henderson MKV mounted in and operated from cockpit locker. 30mm inside diameter pipe. Only one clip at all points. Operated.
- b) Electric bilge pump. Operated manually. Could not see if strum boxes fitted due to dirty bilge water.
- c) Both operate from bilge at aft end of keel only.
- d) Plastic thru hulls just below deck level in lazarette locker for manual and electric bilge pumps. Single clips.

27. Fire-fighting Equipment:

- a) There were the following fire-fighting appliances found onboard.
 - a. 1 x 2kg powder fire extinguisher mounted by chart table. Green on gauge. No date.
 - b. 1 x 1KG dry powder in saloon, green on gauge, no date seen. Not mounted.
 - c. Fire blanket by chart table, near galley.
 - d. 1 x 1KG powder fire extinguisher in forepeak, not mounted. Expired.
- b) There was no access point in the engine compartment to discharge an extinguisher without removing the steps.

There are no regulations covering this vessel in private use.

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

Advisory note:- Suggest new extinguisher 1KG BS5423 fire rating 5A34B (most 1kg dry powder type meet these criteria) mounted in forepeak and saloon and 2KG mounted in Wheel house with hole fitted with plug in wheel house floor. I would also have a 3rd 1KG mounted in the lazarette.



28. Lifesaving and Emergency Equipment:

The following was found aboard –

- a) 2 x Lazias horseshoe life buoys, one with line attached.
- b) Danbouy light – working
- c) XM Yachting Danbouy with flag. Plastic is sun damaged but operable.
- d) Flare pack – out of date
- e) Gas fog horn – low on gas

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.

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.

29. Engine and Installation:

Engine is Volvo Penta MD2B, 2 cylinder - number ■■■ (Info from engine plate). Raw water cooled. Engine hours 1230 on indicator.

- a) General appearance – has been repainted in past.
- b) No signs water or diesel leaks on engine
- c) Bilge has black oil in it.
- d) Engine is mounted on rubber mounts. Tested with crow bar, good condition. No signs of corrosion and these are bolted to laminated engine beds. Bolts all hammer tested and found secure.
- e) Exhaust hose is marine grade, stainless steel water trap by engine, hose loops up to deck level then exits transom through bronze fitting. 2 clips. Clips on water trap exit have been loosened and lifted above spigot.

Recommendation – Clips on hose on water trap should be refitted securely.

- f) Volvo Penta control in wheel house. Cables correctly clipped and attached and operates correctly.
- g) Oil levels in engine is at low level
- h) Engine stop cable is a bit tight and needs pulling long way up to operate.
- i) Engine vent hoses kinked in lockers where they attach to deck. Care should be taken when stowing in these lockers.

Advisory note:- To start engine owner advised need to depress button on fuel pump and turn key. This means engine covers have to be off and your arm span needs to be 6'! Not ideal.

- j) Engine was started in water. A lot of grey "smoke" from exhaust and deposits left on water. Grey smoke continued while engine ran. Water from exhaust was not plentiful. The gear box made a whine while turning.



Advisory note:- Old Model Volvo Pentas were known to smoke but this was excessive and indicates to me low compression and possibly dribbly injectors. The water pump could do with being bigger and the gear box looked at.

30. Fuel System:

- a) Stainless steel tank mounted under cockpit. Bolted to laminate bearers. Checked underneath with mirror and all visible seams examined from engine bay and lazarette locker. Underside not corroded or recently painted. Not able to reach to hammer test all seams. Filled from cockpit. No drain tap seen.
- b) Copper pipe from fuel tank to primary Volvo Penta metal bowl filter. This was scraped and found shiny. Copper pipe from this filter mounted securely and attached to rubber diesel hose correctly marked ISO 7840. One hose clip only. Fittings at this joint are corroded and a "bit damp" with diesel.

Advisory note – remove and remake this joint.

31. Accommodation General:

- a) Inside is clean, Cushions in good clean condition.
- b) Interior woodwork fair condition except where noted
- c) Heads is damp and head lining black under deck.
- d) No crash bar or safety strap at galley.

32. Gas Installation:

This vessel has not been MCA coded nor has it been RCD 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.

Sources of further information:

www.calormarineshop.co.uk/rules-regs-answer.htm Comprehensive information on standards and best practice. 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. <i>Recommendation to be carried out before use.</i>
Condition and efficiency of self draining bottle storage	Bottle has own frp locker in cockpit with own drain overboard	
Age and condition of flexible hose	Correct hose at bottle dated 02/06. Life is 5 years. Hose at cooker is marine fuel hose. Heater pipe is steel marked 1999.	<i>Replace cooker hose with BS rated gas hose.</i> <i>See note on heater.</i>
Age and condition of regulator	Fair condition no signs corrosion	
Condition of copper pipe where accessible	Where seen good	
Is pipework adequately supported and not under stress where accessible?	Copper pipe to gas water heater is strapped to water supply pipe port side under quarter berth.	<i>Clip copper pipe in quarter berth locker to prevent damage from objects put in locker.</i>
Are all appliances fitted with flame failure devices on all burners, and did these work properly under test?	FFD on burners and oven Gas water heater not tested Gas fire not tested.	
Are any appliances requiring flues properly fitted with same?	Water heater has flue. Gas heater no flue.	<i>Recommend gas heater checked by gas safe engineer before use.</i>
Is a gas alarm fitted?	Yes – Tested on button not sensors	
Is each appliance fitted with an isolating tap	Manual for water heater and fire. Cooker is electric part of sensor.	
If fitted did leak bubble tester function?	N/a	Consider fitting bubble tester.



Additional Observations:

Open gas heater fitted below engine steps, although wood is shielded with metal, this looks highly dangerous to me from a burning point as well as lack of ventilation.

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

33. Fresh Water Tanks and Delivery.

- a) Flexible water tank fitted in forepeak underberth.
- b) Water pipes clear
- c) Flojet electric pressure system.
- d) Taps at heads and galley. Not operated as water emptied for winter.
- e) Gas water heater. Not tested. Check as above.

34. Heads:

- a) Toilet is a Jabsco PAR ITT. No signs leaks
- b) Swan necks for inlet and outlet to under deck well secured to toilet.
- c) Blakes sea cocks for inlet and outlet, single clips only. Working.
- d) Heads sink drain. Bronze thru hull and DZR valve. 1 clip only.

35. Electrical Installation:

12v circuits

- a) 12V alternator charging :-
- b) 2 x 12v batteries. 1 is 110ah, other not marked but physically same size. Gel filled. Fitted in purpose made wooden boxes. No straps to hold down. OK except in full inversion situation. Terminals tight. Charge indicators on batteries one is green – good charge, one is black – no charge. Volt meter showed both having 12V.

Advisory note:- Battery straps should be fitted.

- c) Battery isolator switch mounted under wheel housing, terminals tight.
- d) No separate charging isolators seen. Various fuse panels, wiring not neat. Some marine grade wires fitted. Many “choc block” terminals which are not good in marine environment although often used.

Advisory Note:- 12V circuits should be checked for security and terminals made secure and water tight.

240v Circuits

240V lead and attached socket in locker with breaker attached. No 240V circuit installed on boat.



36. Electronic and Navigation Equipment:

The following was seen aboard operating

- a) Silva S15 DSC VHF Radio
- b) Clipper Duo Depth and log. Thru hull for log plastic, securely fitted port side engine compartment. Depth fitting under cabin sole, Lots of tape and Sikaflex 251. Not thru hull.
- c) Clipper wind instrument.
- d) Plastimo offshore compass – no light seen.
- e) Handheld Garmin GPS – not seen operating.
- f) Anchor ball shape
- g) Metal radar reflector
- h) Clock and barometer

Advisory note – Compass light should be fixed or torch kept close by.

37. Heating and refrigeration

- a) 240v ice box in deckhouse not seen working.
- b) Plastimo open gas fire mounted under steps, see gas section.



RECOMMENDATIONS and CONCLUSIONS:

Maintenance Overview:

Cosmetic maintenance: The vessel looks very pretty and has been kept cosmetically tidy.

Technical Maintenance: Many systems and items have been replaced or renewed. The engine is 34 years old and tired. The gearbox, although replaced is whining.

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.

17. Rigging Attachment Points:

Recommendation: Main mast forward shroud plates noted to have distorted plates atop, with the appearance that the teak capping is being depressed by the u bolt tension. Further investigation is required to determine the cause of this depression and if structural.

25. Navigation Lights:

Recommendation- Port light needs to be brighter – possibly wrong wattage bulb or poor connection. Mast head needs to work. Boat should not operate outside daylight hours until fixed.

27. Fire-fighting Equipment:

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

28. Lifesaving and Emergency Equipment:

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

29. Engine and Installation:

Recommendation – Clips on hose on water trap should be refitted securely.

32. Gas Installation:

Replace cooker hose with BS rated gas hose.

Clip copper pipe in quarter berth locker to prevent damage from objects put in locker.

Recommend gas heater checked by gas safe engineer before use.

Conclusions:

The vessel has been around for 34 years and appears generally well maintained. The hull below water will be a concern and will affect resale value however it does not appear to be causing any other problems. The water ingress in the port bulwark capping should be addressed. She is a good sturdy vessel needing some work to make here excellent, most, if not all is in the capability of a good DIY person.