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Survey Report no: [redacted]

Name of Vessel: "[redacted]"
Type of Vessel: Colvic Countess 28

At the request of:

[redacted]

PLEASE NOTE THIS IS A BASIC INSURANCE SURVEY only and contains considerably less information than a Pre- Purchase Survey. Therefore no liability is accepted to any party who may rely on information herein when deciding whether or not to purchase the vessel.

This survey was carried out on the [redacted] August 2010 at Langstone sailing club, Hampshire UK. The above named being the owner 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 an Insurance Survey and its purpose is to establish the structural condition of the vessel only. 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.

Recommendations:

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

Conditions of Survey:

Vessel was examined on hard standing, its keels on chocks at the premises of Langstone Sailing Club having been ashore for an undisclosed period of time.

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

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

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.~~ Not covered in insurance report.

Safety.

25. Navigation Lights.
26. Bilge Pumping Arrangements.
27. Fire fighting Equipment.
28. ~~Lifesaving and Emergency Equipment.~~ Not covered in insurance report.

Engine.

29. Engine and Installation.
30. Fuel System.

Accommodation and onboard Systems.

31. Accommodation General.
32. Gas Installation.
33. ~~Fresh Water Tanks and Delivery.~~ Not covered in insurance report
34. ~~Heads.~~ Not covered in insurance report
35. Electrical Installation.
36. ~~Electronic and Navigation Equipment.~~ Not covered in insurance report
37. ~~Heating & Refrigeration~~ Not covered in insurance report

1.Details of subject vessel:

Hulls moulded by Colvics in the 1980's for home completion or small yard fit out. The Countess 28 was designed in 1979 by Ian Anderson as a comfortable, solid cruising yacht. This vessel is a bilge keel. Built in 1985 this vessel is not plated to conform to neither the Regional craft directive coding category nor the CE ratings. No paperwork regarding VAT paid has been seen.

Manufacturers' information (not verified by measurement)

Length Overall	28'
Length waterline	24'3"
Beam:	10'2"
Draft:	3'10"
Displacement:	9,049lbs
CE Marked	no

Boat specific information

Registration	British small ships [redacted]
Build number	[redacted] – stated in documents, no marks seen on hull
Year of Build	Stated by broker 1985
RCD	Not applicable

2. Keel

a) The twin bilge keels are encapsulated type. Normally filled with steel / iron encapsulated in resin although lead has been used in some models. The keels were not magnetic and therefore this boat could be lead however it could be that the thickness of encapsulation is such that the magnet could not read it.
b) The keels and hull have had osmosis treatment in 2006, receipts have been seen. They have had 5 layers of epoxy applied covered with at least two layers of antifouling.
c) The keels were hammer tested and some voids were heard. Moisture readings were taken, the details area explained below. The hollow areas of the keels had readings off the scale over 100. There are no visible signs of any rust, leaks or distortion. The keels do have moisture in them, whether this is in the laminate or between the encapsulated ballast and the outer moulding in unknown.
d) There are no signs of serious grounding, there were some minor abrasions to the underside but a spike could not be inserted.
e) There are no signs of weeps, stains or bulges that would indicate a serious deterioration of the encapsulated ballast.
f) Seen from aboard there is minimal access to the top of the keel areas, small part seen and no signs rust or cracks in this area.
g) Both keels are lying fair to the hull.

Recommendation – over the next long term drying out period, or two years whichever comes first, the keels should be dried out and the voids filled with epoxy resin to retain strength in this area. This can be achieved by drilling into the voids and allowing drying out. The voids then injected with acetone, allow this to dry and then injected with epoxy.

3. Hull below Waterline:

a) Construction of the hull below the waterline is white gel coat with solid FRP construction utilising chopped strand matt and woven roving.
b) The hull below waterline has been treated for osmosis in 2006. The receipts state that the gel coat was peeled and 5 coats of epoxy was applied.
c) At the waterline the surface is now 0.45mm higher than the topside, indicating at least as much resin has been restored to the hull below waterline. There is also build up around some skin fittings.
d) The vessel is chocked on its keels only. No distortion was noted in hull.
e) In order not to damage the epoxy covering, the antifouling was not scraped back to gel coat as would be normal. The hull was though carefully examined and any areas that could have been blisters investigated. None were found.
f) There are no signs of impact or repair on the under-body which is found in good condition. As far as can be ascertained there is no stress crazing evident around root of keels or skeg. Light hammer sounding (not heavy enough to damage anti-foul) did not suggest any delaminating or voids. There are no visible signs of significant damage or repairs except as noted above.
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:	**25.3°C**
Surface temperature:	**25.4°C**
Relative Humidity:	**43.4%**
Time ashore	**unkown**
In summary the weather conditions for obtaining moisture readings were good.	

Readings were as follows:

Meter	Range below waterline.	Range above waterline.
Sovereign Quantum, Scale A, 0-100 Shallow mode	**18-20 (excluding high spots on keels)**	**14 -18**
Deep Mode	**18-21 (excluding high spots on keels)**	**15 – 18**

These readings are considered low, indication some moisture present but of no great concern except in Keel and rudder.

4. Topsides above Waterline including Rubbing Strake:

h) Topsides white gel coat with solid FRP construction utilising chopped strand matt and woven roving.
a) Top side moulding found fair with single chine finished in the original white gel coat.
b) The topsides were lightly hammer sounded and no indication of voids found. Moisture readings were taken and recorded above.
c) There is one blister shaped mark on the port topside, aft of amidships. This was checked with a moisture meter, no increase found. It could not be depressed with the wood end of a hammer. Conclusion is that it is a mark transferred from the mould.
d) No signs of damage or significant repairs.

5. Deck moulding:

a) The deck is of solid GRP with heavier laminate for strength in places. Access to the underside was greatly restricted by screwed up headlining panels throughout the boat. Underside could be seen in forward lockers and under mast where panel was removed. Plywood pads are laminated in for strength under some deck fittings and there appears to be balsa core or similar strength laminated into the deck in places.
b) The gel coat is white and dull from UV, no signs of UV cracking or deterioration. Treadmaster non slip is applied extensively on the deck.
c) The whole deck was carefully tested underfoot and no sign of delaminating or other structural defect found except above.
d) The deck, coachroof and cockpit were all lightly hammer sounded with no significant defects found.
e) Moisture readings were taken reading 18 shallow – 20 deep.

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 is a depression around the mast foot, 8mm at its maximum. There is slight flexing of the coach roof area below the mast when the shrouds were flexed. Moisture readings were taken in this area and they read 32- 36 shallow and 36 deep. This indicates moisture is present. The headlining panel below the mast was removed and there is a plywood pad laminated in the deck below the mast. A metal spike could be

inserted into the pad where various wires are fed through the deck up to 4mm only. The king post top plate, made from stainless steel, is not flush to the underside of the deck and there are no wedges present. The king post is not distorted and the wooden pad, laminated into the hull below the king post was hammer tested and moisture tested with no indication of failure.

Fig 1 -2 Depression around mast base on coach roof and aft

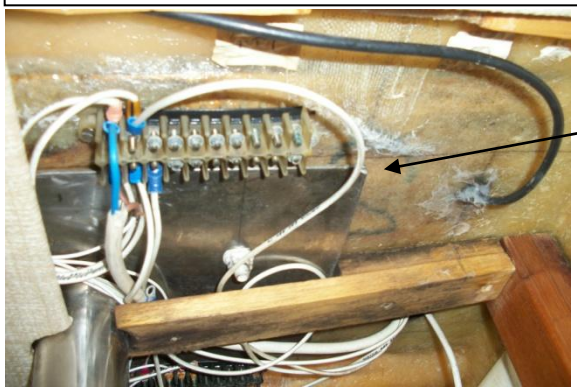

Fig 3 Underside of mast - note gap between deck and king post.

Recommendation – In the short term, hardwood wedges should be inserted between the kingpost and the deck after slackening the rigging off. Once inserted, the rigging can be re-tensioned. The cables should sealed above deck only to stop any further water ingress. In the next convenient period and before any heavy weather sailing in undertaken the plywood pad should be strengthened with resin or replaced.

7. Cockpit:

a) Integral with the deck moulding and constructed in the same way.

b) 2 cockpit drains at aft end. The cockpit drains have weeks growing in them.
Recommendation – Cockpit drains must be cleared and made free flowing. To be carried out before boat is launched.

Fig 4 weeds in cockpit drains

c) Cockpit lockers have securely hinged lid and positive method of closure. No gasket design but good lip.

8. Hull/Deck Join:

a) This is FRP bonded and over laminated inside. The deck moulding folds over the hull moulding. An alloy rubbing strake with rubber insert attached by bolts that go through the joint. This is then all laminated. Access restricted internally only to cockpit lockers and forepeak, where seen there is no signs of movement or water ingress.
b) The underside externally of the rubbing strake has a silicone sealant to prevent water entering the joint. This has broken down in places. Suggest this is dug out and resealed.

9. Bulkheads and Structural Stiffening including Internal Mouldings:

a) There are a number of bulkheads and 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. (Floors in this case are plywood panels on either side but not continuing full height to deck level).
b) Wooden bulkheads were tested with moisture meter. Discrete spike testing showed no deterioration in wood. The main bulkheads has been Formica covered in heads area, and the top edges on the other side are covered with headlining panels. The edges were tested where possible with a spike which could not be inserted.
c) The cabin sole access panels were all lifted and checked below but much of the sole area is covered with screwed down panels.
d) Please note compression post comments and recommendations in section 6 above

Fig 5 Well bonded floor panels

10. Rudder and Steering:

a) Skeg hung GRP rudder.
b) Hammer tested and found hollow towards front starboard side. No signs water coming out.
c) Moisture readings. 31 shallow – 52 - 57 deep towards the top.
d) Bronze rudder shoe has 3 stainless bolts and nuts, forward nut is loose. All tested with hammer.
e) Rudder tested with full body weight, no sign of movement.
f) No signs of distortion or impact damage. All seams checked and no signs cracking. Minor abrasions, spike could not be inserted.
g) Tiller is wooden with stainless steel stock. Not fitted.
h) Rudder tube extends into cockpit where there is a bearing. No access was available to area between cockpit sole and hull where rudder tube would extend, due to screen behind engine.

Recommendation – 1/ Tighten forward nut before launch. 2/ Rudder should be dried out and laminate filled with resin. This should be done during next stay ashore and maximum 2 years

11. Stern Gear:

a) Three blade bronze propeller on stainless steel shaft. Castellated nut and split pin with rope cutter. Receipts shown that in 2007 the propeller was replaced along with the shaft, nut, split pin and bearing and couplings.
b) Propeller scraped and hammer sounded. No signs of deterioration found.

c) Test with magnet confirms shaft to be of good grade stainless steel. Shaft rotated by hand, appears true with no binding of bearings present. No signs of corrosion on shaft. .05mm play in cutlass bearing. Good for another year.
d) Inboard stern gland is rope type packing gland with remote greaser. Greaser body is removed for winter. Slight signs that the gland may weep, but this is normal.

12. Cathodic Protection:

a) Hull anode is removed but studs remain.
b) There is continuity between studs and propeller.
Recommendation – replace hull anode before launch.

13. Skin Fittings and other through Hull Apertures:

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

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

Below Waterline:

a) Engine seawater inlet: Bronze thru hull and strainer with DZR valve.
b) Galley sink drain: Bronze metal thru hull, with DZR valve. Single clip only. Cannot close due to location. Suggest second clip fitted. *Recommendation – DZR needs turning on thru hull so can be closed.*

Fig 6 galley drain handle fouling cupboard top.

c) Heads water inlet: Blakes Seacock, bronze bolts. Single clip only. Suggest second clip fitted.
d) Toilet outlet: Blakes Seacock. Single clip only and hose not fully fitted although secure. Could not turn. *Recommendation – free off and fully fit hose before valve is opened. Suggest second clip.*

Fig 7 Heads outlet pipe not fitted fully on seacock.

e) Log transducer, plastic type.

Above Waterline:

f) Gas locker drain – plastic thru hull with gate valve. Thru hull cracked and when tested end came off. Pipe also contaminated so may not be clear

Fig 8 – 9 gas locker drain before and after testing

Recommendation – replace thru hull before launch and clear pipe before using gas bottle stowage locker.

g) Cockpit drains – plastic thru hulls. Cannot access inboard side. See section 7 above re clearing.

14. Main Companionway and other Access to Accommodation:

a) Main companionway access hatch is of sliding GRP, in good condition and secure in its runner.
b) No method to lock hatch from inside. Suggest barrel bolts fitted to inside top washboard to secure hatch.
c) Two plywood washboards in good condition, slide in place in runner and remain in position without companionway hatch being closed except in inversion condition.
d) Fore hatch alloy framed aft hinged, gaskets intact and sits outside lip.. Handles to secure quite tight. Large enough to be means of escape. Some silicon at front so possibly leaks.

15. Ports, Windows etc.:

a) Aluminium famed Perspex port lights. All showing signs of leaks and slight corrosion. Lying fair to hull. Stainless fixing hammer tested and sound if corroded.

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

a) Pulpit and push pit of stainless steel, flat feet and curved over transom. Washers below and pads. Full body tested with no movement found. Some evidence of silicon around bases.
b) Stanchions. Stainless steel in stainless steel bases which are bolted through with metal washers below. All found secure with body weight .
c) Double life lines. All good stainless steel, non magnetic and secure tested with magnet. Terminals good.
d) 4 x life line attachments on deck. Tested with lever.

17. Rigging Attachment Points:

- All attachment points were tested visually with 10 x magnification,
- Nuts and bolts struck with hammer against sheer
- 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 cap shrouds attachment points. U bolt on side deck, 2 bolts in tension through to angle bracket bolted to knees. Starboard side the aft locking nut is only on with one thread. This is secure but suggest checked periodically.

Fig 10 Note lock nut is not securely on thread.

b) Inner shrouds. Aft through coach roof, cannot access underside. Forward, u both through angle bracket as with outers. Mounted on forward bulkhead.
c) Forestay attaches to stainless steel fork on stainless steel stem head which is bolted to deck.
d) Backstay attached to chain plate on transom edge. Receipts show these were removed and rebedded in 2008.

18. Ground Tackle and Mooring Arrangements:

a) Main bower anchor. 35lb CQR mounted on deck. 8mm chain over electric windlass and thru hawse pipe to locker in forepeak. Chain not laid out and examined link by link and bitter end attachment not checked.
b) Mooring cleat on foredeck securely fitted below with nuts and washers
c) Stemhead fitting is stainless steel with single bow roller, hammer tested and no sign of major damage.
d) Vessel has alloy cleats aft and amidships of adequate size through bolted the laminate. All hammer tested, levered and found secure.
e) Second anchor and chain of Bruce type seen in cockpit locker.

19. Other Deck Gear and Fittings:

a) All found of adequate size and securely through bolted, although inspection from under limited by linings.

20. Davits and Boarding Ladders:

a) Vessel fitted with long folding stainless steel boarding ladder with steps extending well below water line for easy boarding from water. Inside large wooden pads and stainless nuts and washer. No signs of wear and secure when pulled and climbed on.

21. Spars:

Mast

a) The mast was stepped so inspection is restricted to fittings and area to head height. It is Kemp manufacture, silver anodised, no excessive signs of corrosion around base or fittings.
b) No damage or distortion to the extrusion was noted.

Boom

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

22. Standing Rigging:

a) Rigging could only be checked at deck level. These were examined where the wire enters the terminal under 10x magnification, no broken strands visible nor excess corrosion seen.

b) The rigging screws are chrome plated bronze open bodied type and all had split pins securing them and had good articulation. Some were taped so could not see split pins. All seen were found free from distortion or visible stress cracks, when examined under 10 x magnifications.
c) Brokers details state standing rigging replaced 2008. Receipts seen.
d) Furlex Furling systems free to turn. No signs of damage.

23. Running Rigging:

a) Running rigging that seen appears in fair condition with most ends burn closed.

24. Sails and Covers etc:

Not covered in insurance survey

25. Navigation Lights:

Vessel fitted with

a) Bi colour on bow securely mounted.
b) White on stern securely mounted
c) Masthead could not be seen
d) No lights tested as no power.

26. Bilge Pumping Arrangements:

a) Manual Bilge pump mounted and operated in cockpit locker. Operated dry and clips all found secure. Pick up under engine has strum box fitted.
b) Second pick up end seen in main bilge, could not find how or if this connects to cockpit bilge pump. Suggest if there is not one fitted, an electric bilge pump is fitted.

27. Fire-fighting Equipment:

a) There were the following fire-fighting appliances found onboard.
    a. 1 x 2KG powder fire extinguishers mounted under companionway in saloon, showing green on gauge. no date
    b. 1 x 2KG Powder in forecabin – showing green on gauge. no date
b) There was no access point in the engine compartment to discharge an extinguisher without removing the steps.
c) Fire blanket in galley.
   There are no regulations covering this vessel in private use. Suggest if no fire extinguisher found in cockpit locker, 3rd one is bought and fitted in cockpit locker.

28. Lifesaving and Emergency Equipment:

Not checked as part of insurance survey however note

a) Out of date flare pack was seen although brokers details state in date pack onboard

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 booklet is obtainable from nautical bookshops or direct from the RYA, www.rya.org.uk.

29. Engine and Installation:

Engine is a fresh water cooled Volvo Penta D130 B. Number 510221943[redacted], Gearbox MS10 number 501006420[redacted]

a) Engine reported new in 2007 and condition is of same. Invoice seen to verify.
b) No oil or significant water leaks seen.
c) Engine mounts are new and correctly bolted. Tested with crow bar, good condition bolted to grp engine beds, bolts all hammer tested and found secure.

d) Slight surface rust on bottom pulley.
e) Signs of slight water leak from inlet pipe of sea water strainer.
f) Seawater impellor removed and on chart table
g) Exhaust pipe double clips all clean condition, hammer tested in engine area and transom where seen. Reported all replaced along with engine. Invoice seen to verify.
h) TX control in cockpit operates fine.

30. Fuel System:

a) Tank mounted under starboard quarter berth locker. No access at all without removing screwed panels.
b) Rubber hoses marked ISO 7840 fitted with double clips, all tested and found secure.
c) Could not see tank shut off. May not have one.
d) Secondary fuel filter with glass bowl engine compartment
e) In locker at aft end of quarter berth there is a diesel smell and a bilge cleaner pad with diesel impregnated. The filler and breather pipes come through this locker. The filler is in the cockpit locker and has a spill tray. It is possible the diesel in the locker has come from here in the past.

31. Accommodation General:

a) Inside is clean but and tidy
b) Cushions in good clean condition.
c) Interior woodwork good condition.

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.** ***(R) Recommendation to be carried out before use.*** **(S) Suggestion only**
Condition and efficiency of self draining bottle storage	Gas bottle stirage is made to be in starboard aft cockpit locker. Drain is possibly blocked. See section 13.	*See section 13 re locker drain to be cleaned out*
Age and condition of flexible hose	Black hose, no markings in locker. Clip on regulator too large.	*(R) Suggest replace with new BS standard marked gas hose and correct pipe clips.*
Age and condition of regulator	Looks reasonably new.	
Condition of copper pipe where accessible	Slightly corroded in locker, small area	*(R) replace all fittings in gas locker*

	cleaned and it is only surface on pipes. Pipe fittings in gas locker corroded and one badly corroded.	
Is pipework adequately supported and not under stress where accessible?	Where seen in lockers it is laminated onto hull.	
Are all appliances fitted with flame failure devices on all burners, and did these work properly under test?	No flame failure devices on cooker. Cooker is old. Could not check heater.	*(S) Suggest change cooker for one with flame failure devices.*
Are any appliances requiring flues properly fitted with same?	Heater has exhaust exits but gas safe engineer should check.	*(R) Gas Safe engineer to check appliances.*
Is a gas alarm fitted?	Yes. Could not test as no batteries.	*(S) Test before relying on.*
Is each appliance fitted with an isolating tap	Yes.	
If fitted did leak bubble tester function?	Not seen	*(s) Consider fitting bubble tester.*

Fig 11 gas locker fittings corroded.

Additional Observations:
The system is as old as the boat and many fittings are corroded. *Recommend Gas safe engineer checks system before gas bottle connected.*

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.

Not checked as part of insurance survey

34. Heads:

Not checked as part of insurance survey

35. Electrical Installation:

12v circuits

a) No batteries on board. Secure boxes fitted under berth for them

b) Circuit breakers for many marked circuits at switch panel
c) All wires seem professionally and well installed
d) Battery isolator switch.
e) No items operated as no batteries aboard

240v Circuits
f) Male 240V socket in cockpit wired to domestic RCD panel then to double 240V plug socket.
g) Battery charger well mounted and hard wired into isolator switch and plugged into the socket.

36. Electronic and Navigation Equipment:
Not checked as part of insurance survey

37. Heating and refrigeration

Not checked as part of insurance survey

RECOMMENDATIONS and CONCLUSIONS:

Maintenance Overview:
Cosmetic maintenance: Generally kept clean and tidy.
Technical Maintenance: A lot of work has been carried out recently, engine and drive system replaced 2007, Osmosis treatment 2006, standing rigging replaced 2008. All professionally done.

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.***

2. Keel

- *Recommendation – over the next long term drying out period, or two years whichever comes first, the keels should be dried out and the voids filled with epoxy resin to retain strength in this area. This can be achieved by drilling into the voids and allowing drying out. The voids then injected with acetone, allow this to dry and then injected with epoxy.*

6. Coachroof:

- *Recommendation – In the short term, hardwood wedges should be inserted between the kingpost and the deck after slackening the rigging off. Once inserted, the rigging can be re-tensioned. The cables should sealed above deck only to stop any further water ingress. In the next convenient period and before any heavy weather sailing in undertaken the plywood pad should be strengthened with resin or replaced.*

7. Cockpit:

- *Recommendation – Cockpit drains must be cleared and made free flowing. To be carried out before boat is launched.*

10. Rudder and Steering:

- *Recommendation – 1/ Tighten forward nut before launch. 2/ Rudder should be dried out and laminate filled with resin. This should be done during next stay ashore and maximum 2 years*

12. Cathodic Protection:

- *Recommendation – replace hull anode before launch.*

13. Skin Fittings and other through Hull Apertures:

- Galley sink drain: Bronze metal thru hull, with DZR valve. Single clip only. Cannot close due to location. Suggest second clip fitted. *Recommendation – DZR needs turning on thru hull so can be closed.*
- Toilet outlet: Blakes Seacock. Single clip only and hose not fully fitted although secure. Could not turn. *Recommendation – free off and fully fit hose before valve is opened.*
- Gas locker drain – plastic thru hull with gate valve. Thru hull cracked and when tested end came off. Pipe also contaminated so may not be clear *Recommendation – replace thru hull before launch and clear pipe before using gas bottle stowage locker.*

32. Gas Installation:

- *(R) Suggest replace with new BS standard marked gas hose and correct pipe clips.*
- *(R) replace .all fittings in gas locker*
- *(R) Gas Safe engineer to check appliances.*
- *Recommend Gas safe engineer checks system before gas bottle connected.*