



## Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

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Survey Report no: [REDACTED]

Name of Vessel: "[REDACTED]"

Type of Vessel: Dufour 36 Classic, 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] 2010 in the water and in slings at Sovereign Harbour, Eastbourne. 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 for 1.5 hours in slings at the premises of Premier Marinas, Eastbourne having been afloat for the season and then recently hauled and antifouled according to the owner. The owner was present at all times.

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.).
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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.**

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

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35. Electrical Installation.
36. Electronic and Navigation Equipment.
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**Details of subject vessel:**

The Dufour 36 Classic is a standard production boat built by Dufour Yachts, Rue Blaise, Pascal, 17180, Perigny, France to CE 0062 as stated in owners manual. She is FRP construction, shoal keel and twin spreader, Bermudian sloop rigged with inmast furling system.

**Manufacturers’ information from Dufour website (not verified by measurement)**

Length Overall	11.07m
Length waterline	9m
Beam:	3.76m
Draft:	1.45m
Displacement:	5909kgs
CE Specification	0062 from owners manual

**Boat specific information**

Registration	None seen
HIN number	FRDUFD [REDACTED] E202 – (from number on hull).
Year of Build	May 2002, Model 2002
CE	Category A, 10 persons, RCD 95/25/CE Beaufort 8 – 4m wave height (owner’s Manual)

1. **Keel**

- a) The vessel has a shoal iron keel attached to the hull with stainless steel studs, stainless steel backing plates inside with two stainless steel nuts on each stud.
- b) Access was only possible to 2 pairs of studs from inside the vessel as cabin sole boards were screwed down. These were hammer tested and found, clean and not corroded.
- c) The keel was lying fair to the hull, there was corrosion stains around the aft end of the keel to hull joint. The vessel was hanging in its slings. I was able to “squeeze” the joint by lifting the aft end of the keel and water came out. I could insert a metal spike only 1mm into the joint. It is often the case with mass produced boats that the keel is not exactly shaped to the hull at the aft end and I have often seen gaps here. See fig 1  
***Recommendation – The aft keel studs should be accessed and then tightened to correct torque. When the boat is next ashore, slacken the aft keel stud, dry the area and apply Sikaflex 291 sealant to prevent further water ingress.***
- d) The keel had a good covering of antifouling and further coat 2 coats were applied to the underside while ashore.



- e) The underside was checked as was the whole keel and there were no signs of impact or repairs.
- f) The bilge of the boat was completely dry.

**2. Hull below Waterline:**

- a) Construction of the hull below the waterline is solid FRP construction with white gel coat.
- b) The vessel was seen hanging in slings; no distortion was noted in the hull.
- c) Light hammer sounding was carried out (not heavy enough to damage anti-foul) of hull at regular intervals approximately 500cm spacing 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. There were at least 3 layers of antifouling well applied over a cream primer. While scraping I was looking for evidence of wicking or blistering and once removed all patches were checked with 10x magnification. No evidence was found.
- e) There are no visible signs of significant damage or repairs to the hull below water line.
- f) Moisture readings were taken where the antifouling was removed using a capacitance type moisture meter of Sovereign Quantum type, operating in both shallow and deep reading modes.

The meter was first checked for correct calibration.

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

The readings are relative and **do not** express moisture content as a percentage of dry weight. High moisture content is not generally a structural defect, and is to be expected in older boats. However where some moisture has been absorbed the likelihood of moisture related problems occurring is higher, and the actual state of the laminate cannot be completely guaranteed without destructive testing followed by chemical analysis. The opinion given in this survey is based on all the evidence available at the time but without destructive testing.

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

<b>Air Temperature:</b>	<b>15°C</b>
<b>Surface temperature:</b>	<b>13.8C</b>
<b>Relative Humidity:</b>	<b>63.1%</b>
<b>Time ashore</b>	<b>30 mins</b>
<b>In summary the weather conditions for obtaining moisture readings were fair</b>	

Readings were as follows:



Meter	Range below waterline.	Range above waterline.
Sovereign Quantum, Scale A, 0-100 Shallow mode	19 - 25	11
Deep Mode	15-20 with 1 reading aft of keel 26	11

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.

The deep mode reading of 26 was immediately aft of the keel and could be attributed to the loose keel and water entering the FRP around the stud.

Always storing the boat ashore out of season to allow some natural drying out to occur will contribute significantly to maintaining condition.

**3. Topsides above Waterline including Rubbing Strake:**

- a) Solid FRP with a foam core above the waterline finished in white gel coat.
- b) Top side moulding found fair with no signs of major damage or impact.
- c) There is a minor star crack on the port aft quarter near to the toe rail and a couple of gel coat scratches.

Advisory note – Star cracks in the gel coat, if not repaired should be heavily waxed to prevent water ingress into the laminates.

- d) The topsides were lightly hammer sounded and no indication of voids found. Moisture readings were taken and recorded as above.

**4. Deck moulding:**

- a) The deck is of FRP with a foam core in places. Moulded in white non slip. There is limited access to the underside except in cockpit lockers and anchor well.
- b) Moisture readings were taken and recorded 10 - 13 shallow with no change on deep mode.
- c) The whole deck was carefully tested underfoot and no sign of delaminating or other structural defect found.
- d) The deck was lightly hammer sounded with no significant defects found.
- e) There is a star crack in the gel coat at the starboard extreme forward end of the deck approximately 30mm long. See advisory note above.

**5. 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.
- c) There was no flexing of the coach roof area below the mast when the shrouds were flexed.
- d) Hand rails were tested with a lever and found secure.
- e) Moisture readings taken as per deck above.

6. **Cockpit:**

- a) Integral with the deck moulding with drainage through transom.
- b) Sole and seats have teak faced ply attached with small s/s screws. These are starting to show through where the teak has been aggressively cleaned.
- c) 2 cockpit lockers, both with secure means of closure, gaskets and hinges found sound.
- d) Transom seat lifts out, and is not attached by lanyard. Care needed when taking out not to drop overboard.

7. **Hull/Deck Join:**

- a) This is a bonded and mechanical joint. The hull is moulded with a flange which the deck is bonded to with epoxy paste and has aluminium toe rail attached with stainless steel screws through the joint. All stanchion bases and pushpit / pulpit are bolted through the joint.
- b) The toe rail is in sections, all found fair and tight to the deck with no signs of significant damage or distortion.
- c) The transom stepped sugar scoop is bonded with FRP laminate, seen from aft cabin inspection hatches.

8. **Bulkheads and Structural Stiffening including Internal Mouldings:**

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

- a) The shell mouldings are robust in the first place.
- b) A large forward bulkhead sits atop the forward floor. Bulkheads were carefully hammer sounded near the deck, hull and floors with no faults found.
- c) There is a full inner liner bonded to the hull and a second to the underside of the deck giving further strength and there were no signs of cracks or movement found.
- d) The floors are top hat sections of the inner liner. The Floors are well bonded with no signs of movement or cracking found. (Floors in this case are FRP box sections spanning the hull bottom but not continuing full height to deck level).
- e) The various under berth lockers are also bonded to the hull adding to the strength.
- f) The main mast compression loadings are transferred to the forward bulkhead and wooden king post. There are no signs of movement or distortion in this area.

9. **Rudder and Steering:**

- a) Whitlock wheel steering linked to rudder by stainless steel rod under cockpit sole.



- b) Rudder tube is secured through hull with substantial plywood webs laminated to support it. Nylon bearing at top and bottom of tube.
- c) Secondary steering via Raytheon ST4000+
- d) Emergency tiller access through transom and owner advised tiller aboard but not seen.
- e) Wheel has no signs of distortion and is secure on its shaft. Painted alloy is showing signs of corrosion under paint by wheel. Pedestal was tested under full body weight and showed no movement.
- f) Linkages under sole were viewed and appeared tight although I could not reach them. Linkage securely fasted to aluminium rudder stock.
- g) Autopilot hydraulic ram securely mounted with bolts.
- h) Rudder is GRP moulded blade supported at hull only. Minor play in lower nylon bush. There is full movement lock to lock. When tested under full body weight on either lock, no gaps appeared at the joins.
- i) Moisture readings were 15 – 16 shallow and 11 -13 deep. There were no signs of any damage.

**10. Stern Gear:**

- a) Volvo Penta sail drive. Type MS25S. Number 5025 02 13849. Ratio 2.47:1 (plate on drive)
- b) Main seal reported replaced 2 years after launch (2004) by owner and appears in good condition.

Advisory note:- Volvo Penta recommend that the seal between the hull and sail drive is changed every 7 Years. This job is within the skill set of a competent DIYer. The kit from Keypart is £164 but must be done when out of the water.

- c) 2 blade aluminium propellor is painted black and attached with cone nut, securely fixed. There is slight play in the propeller bush.
- d) Rope cutter is attached securely.
- e) The leg is painted with grey paint, presumably non copper antifouling.

**11. Cathodic Protection:**

- a) One anode only on the sail drive which has electrical continuity to propeller.
- b) The owner advised the anode was recently replaced. There were a number of areas of deep pitting on the anode.

Advisory note:- Anode will need regular checking for wasting as it appears berth where it is currently is causing increased wastage.

**12. 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

**Below Waterline:**

- a) Head sink drain – Bronze thru hull with DZR valve. Located starboard side, heads cupboard.
- b) Head shower pump out - Bronze thru hull with DZR valve. Located starboard side, heads cupboard.
- c) Seawater galley wash up is bronze thru hull with DZR valve that doubles as fridge drain pump out. Located starboard side, galley cupboard.
- d) Galley sink drain bronze DZR valve. Located starboard side, galley cupboard.
- e) Log and Depthsounder transducers, plastic Raytheon. When the boat was first lifted the slings were on the log fitting. The boat was re-launched and re-lifted. No damage appears to have been done.

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

- a) Companion way hatch is sliding Plexiglas. Secure in its runners. No damage noted.
- b) Washboard is single Plexiglas and can only be secured when hatch is closed. ***Recommend for blue water cruising, wash board and hatch is modified so that washboard can remain in place with hatch open or closed and can be secured from inside vessel.***
- c) Saloon hatch is Lewmar 500mm x 500mm aluminium framed, perspex cover, hinged aft. Gaskets intact. Secure method of closure with 2 handles that can be opened from outside. Can be used as emergency escape.
- d) Fore hatch Lewmar 500mm x 500mm aluminium framed, perspex cover, hinged aft. Gaskets intact. Secure method of closure with 2 handles that can be opened from outside. Can be used as emergency escape. ***Recommend for blue water cruising, fore deck hatch is turned 180° so it hinges forward. Alternative is to have plywood blanks aboard in case of breakage.***

**14. Ports, Windows etc.:**

- a) Saloon has two Perspex windows in aluminium frame. No visible signs of leakage.
- b) Various opening hatches by Lewmar, all checked, all found secure, gaskets intact.
- c) No hatches or ports below the weather deck except into cockpit from aft cabins.
- d) All port lights and window acrylic are scratched and UV speckled.

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

- a) Twin guard rails around deck, stainless steel, with tensioning buckles. All found secure.
- b) Pulpit, stainless steel drop head with ply pad. Bolted through deck. Secure under full body weight.



- c) Pushpits, stainless steel, bolted through deck with washers underneath. Both secure under full body weight.
- d) Stanchions stainless steel in alloy bases. No signs corrosion or distortion noted.
- e) Webbing jackstays are secured to toe rails. No signs of damage to stays or stitching.

**16. 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 mast shrouds and lowers attachment points. Stainless steel plate bolted through deck. No access to underside of deck to check nuts. This transfer's load via stainless steel bar attached to stainless steel plate via clevis pin and in turn around stainless steel bar bonded to hull / knee. Starboard side knee visible only. Minor corrosion noted on bar at knee.
- b) Backstay is attached to substantial stainless bracket bolted through transom with 5 stainless bolts in sheer tension, secured with large washers and locknuts. Inside checked.
- c) Forestay attached to large stainless steel stem head, bolted through deck and stem. Nuts checked in anchor well.

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

- a) Main Anchor is Brittany type, weight not marked on it. Suggest is 10KG
- b) Securely shackled to 10mm chain over Lofrans electric windlass which was operated with a few meters of chain. The chain was not laid out on deck and checked link by link, checked in locker only. 12mm warp attached to bitter end. Length not checked. Condition is good.
- c) Double bow roller on stainless steel stem head, hammer tested and found secure. No pin to stop chain jumping off roller when at anchor.
- d) Adequate mooring cleats and fairleads fore and aft, checked with crow bar and found secure.
- e) No kedge anchor found aboard.
- f) Various warps and fenders aboard in fair to good condition. Owner advised fenders on boat are not being sold with boat.

***Recommendation that vessel this size should have minimum 14KG main anchor, with 10m x 8mm chain, and 12mm warp. Main bow anchor cable length (chain and warp) to be 48m. Kedge anchor should be 6KG with 10m 6mm chain and 10mm warp. Length as above.***

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

- a) Turning blocks and jammers all found of adequate size and securely through bolted, although inspection from under limited by linings.



- b) The 4 winches fitted were all tested as far as possible but not under load and found no play on base and were free to turn.
- c) Genoa tracks and cars operated correctly. No faults found.

19. **Davits and Boarding Ladders:**

- a) Vessel has fixed folding boarding ladder. Which extends well below the waterline and is securely attached under lift up GRP Hatch

20. **Spars:**

**Mast**

- a) Main mast – Twin spreader, Selden Masts aluminium anodised mast with masthead rig. The mast was stepped so inspection is restricted to fittings and area to head height. No excessive signs of corrosion around base or fittings.
- b) In mast furling system, no sign of damage to fittings, seen operating on berth.
- c) No damage or distortion to the extrusion was noted.
- d) Headsail furling system seen free to turn.

**Boom**

- 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 spar / spinnaker pole**

- a) Aluminium telescopic pole stowed on guard rails.
- b) Parrot beaks at end operate freely.

21. **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 with good articulation. All were taped so could not see split pins. Where seen were found free from distortion or visible stress cracks, when examined under 10 x magnifications.

22. **Running Rigging:**

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

23. **Sails and Covers etc:**

- a) Main sail by UK Sailmakers for Dufour. Inmast furling. Owner unfurled sail. Stitching checked with 50p coin for wear and found sound where seen.
- b) Genoa, white with blue sun protection. Seen in sail bag. Not fully unrolled. Stitching checked with 50p coin for wear and found sound where seen.



- c) Blue spray hood stainless frames. Frames securely fitted and material and plastic screens in fair condition.
- d) Cruising chute or spinnaker in bag on boat but owner says not part of inventory.

**24. Navigation Lights:**

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

- a) White on stern
- b) Separate port and starboard lights on pulpit (port was not working, owner dismantled and made work).
- c) Steaming light on mast.
- d) Mooring light at mast head has been replaced with Tri colour.

***Recommendation – All around white light must be operational for use after dark.***

**25. Bilge Pumping Arrangements:**

- a) Manual bilge pump, mounted in cockpit locker, operated from cockpit. 45 litres per minute.
- b) Electric bilge pump, operated from main switch panel with bronze strum box. Automatic float switch in bilge. Not able to test as bilges very dry and clean and owner would not permit salt water.
- c) Bilge pumps pipes are of adequate size, securely clipped and exit through chromed bronze thru hulls above the waterline starboard aft quarter.
- d) I could only see one bilge pick up, previous Dufours surveyed share same pick up pipe.

**26. Fire-fighting Equipment:**

- a) There were the following fire-fighting appliances found onboard.
  - a. The two fire extinguishers seen were expired 2007. Owner advises none are on inventory.
  - b. Fire Blanket in galley
- b) There is an access point in the engine compartment to discharge an extinguisher without removing the steps.

There are no regulations covering this vessel in private use however;

***MCA Recommendation:- One multipurpose fire extinguisher to a recognised standard, with minimum fire rating of 13A/113B or smaller extinguishers giving equivalent rating for engine compartment plus not less than one multipurpose fire extinguisher to a recognised standard, with minimum fire rating of 5A/34B provided at each exit from accommodation spaces to open deck plus two fire buckets with lanyards.***

***Suggest one in forepeak, one in aft cabin, one in cockpit locker plus one for engine, plus two fire buckets with lanyards.***

**27. Lifesaving and Emergency Equipment:**

The following was found aboard –

- a) Horseshoe lifebuoy.



- b) Owner advised no other items for sale with boat.

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).

**28. Engine and Installation:**

- a) Engine is Volvo Penta MD2030 fresh water cooled. Number 5102144421
- b) Engine hour meter shows 144.5 hours.
- c) Engine and bilge is very clean, no signs of water or diesel leaks.
- d) Exhaust system is marine grade, well clipped at engine and stainless steel water trap mounted behind engine, swan neck in transom locker to deck level and exits through stainless steel fitting at waterline correctly clipped.
- e) Gear and throttle cables well attached and clipped and operate as intended via control on wheel pedestal.
- f) Engine mounts are flexible at front of engine mounted to moulded engine bearers. Tested with crow bar and found secure. Rear mount is rubber, part of sail drive. No signs of damage or wear found.
- g) Seawater intake is through sail drive unit, via valve on sail drive, through clear wire braced water hose. Plastic filter is mounted in the engine compartment, above the waterline and found clear.
- h) Engine compartment is vented via natural and forced ventilation, plastic vent hoses run through the cabin and vent through the transom above the top step. One has a fan in the line which was heard operating.
- i) There is slight corrosion / salt around seawater pump front cover.

**29. Fuel System:**

- a) Fuel filler is on transom step, pipe is securely fitted and clipped.
- b) Polyurethane tank, reported by Dufour as 160 litres mounted in starboard aft cabin under berth.
- c) No signs of leaks or smells of diesel
- d) Fuel tank is vented through hose which is swan necked and through stainless protected vent on aft quarter. Securely clipped.
- e) Fuel tank shut off mounted on top of tank accessed via hole in cover.
- f) Pipe is ISO 7840 and well clipped.
- g) CAV type primary fuel filter with glass bowl in engine compartment.

**30. Accommodation General:**

- a) Inside is exceptionally clean, including inside lockers.



- b) Cushions in good clean condition.
- c) Interior woodwork in very good order.
- d) Accommodation is well ventilated with both main hatches having closable vents, as does the aft cabins and the galley has opening hatch above the stove.
- e) Bilges are very clean
- f) There are no indications, either smell or visible, that the boat is damp.

**31. Gas Installation:**

This vessel has not been MCA coded. It was built RCD/CE compliant.

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

**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.
<b>Condition and efficiency of self draining bottle storage</b>	Bottles are mounted in open area below transom seat, venting directly overboard	
<b>Age and condition of flexible hose at bottle.</b>	Hose BS3212/2 Marked April 2002. Does not show signs of perishing when bent	<b>Gas hose is 8 years old and</b>



	back. Correctly fitted with pressed fittings	<b>should be replaced after 5 years</b>
<b>Age and condition of regulator</b>	Age unknown. Fair condition, signs of corrosion	Advisory note:- Replace and keep as spare.
<b>Connection to copper pipe</b>	Correct gland through cockpit to pipe.	
<b>Condition of copper pipe where accessible</b>	Not seen as behind joinery.	
<b>Is pipework adequately supported and not under stress where accessible?</b>	Not seen	
<b>Connections and Flexible pipe to cooker and other appliances</b>	Correct glands both ends. Marked BS3212/2 April 2002.	<b>Cooker hose should be replaced.</b>
<b>Is cooker gimballed?</b>	Cooker is gimballed.	
<b>Are all appliances fitted with flame failure devices on all burners, and did these work properly under test?</b>	FFD on burners and stove, not seen working.	
<b>Are any appliances requiring flues properly fitted with same?</b>	N/A	
<b>Is a gas alarm fitted?</b>	No	Suggest fit gas alarm
<b>Is each appliance fitted with an isolating tap</b>	Cooker yes in locker underneath.	
<b>If fitted did leak bubble tester function?</b>	N/a	Consider fitting bubble tester.

**Additional Observations:**

None

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)

**32. Fresh Water Tanks and Delivery.**



- a) Two polyurethane tanks, one in forepeak under berth and one in port aft cabin under berth.
- b) Hot water calorifier from engine and AC system. Fittings secure. No signs corrosion.
- c) Pressurised water system. All piping is red and blue push fit connectors. Well laid out and marked.
- d) Seen operating at galley, heads compartment and heads shower.
- e) Transom shower not tested.

**33. Heads:**

- a) Toilet is a Jabsco PAR ITT with locking handle, mounted below waterline
- b) No signs of leaks.
- f) Toilet inlet is bronze thru hull, with DZR valve. Swan neck in pipe is only 500mm above water line and not to underside of deck.  
***Recommend that inlet pipe is extended to reach below deck level, until then valves should remain closed at sea.***
- g) Toilet outlet is bronze through hull with DZR valve. Pipe goes to holding tank mounted behind locker in heads, not seen. Pipe securely clipped to toilet.

**34. Electrical Installation:**

DC circuits

- a) 12v 60amp hour alternator, charging
  - a. 1 x 12v 85ah engine start battery, gel filled, indicator light black (partial discharge), in plastic battery box and securely fastened behind engine. Positive wire was loose in terminal, owner tightened.
  - b. 1 x 12v 110ah domestic battery, gel filled, indicator light green in plastic battery box and securely fastened in box behind engine. Terminals tight.
  - c. Via electronic isolating diode mounted securely in port aft cabin.
- b) Isolating switches in + side, terminals tight.
- c) 12v wiring is professionally wired and neat and tidy. All circuits appear to go through separate RCD breakers on panel.
- d) Solar panel on coach roof, reported 40W by owner, charges batteries through dedicated regulator mounted behind switch panel. Seen working.

240v Circuits

- a) Factory installed AC 30amp European system with socket on transom to main RCD on switch panel with separate RCD's for Battery charger, water heater and sockets. No signs of tampering or modifications. Works on UK dock power through lead onboard.
- b) Battery charger mounted in starboard transom area.

**36. Electronic and Navigation Equipment:**

The following was seen aboard operating



- a) Raytheon ST60 Tridata
- b) Raytheon ST60 wind
- c) Raymarine Pathfinder C80 plotter / Radar
- d) Furuno GPS
- e) Simrad RD68 DSC VHF

35. **Heating and refrigeration**

- a) 12v refrigeration with evaporator plate in ice box. Seen working and felt cooling down.



## **RECOMMENDATIONS and CONCLUSIONS:**

### **Maintenance Overview:**

Cosmetic maintenance: Exceptionally tidy and clean throughout the boat with minimal marks or damages

Technical Maintenance: Engine is reported to be professionally maintained and its appearance backs this up. All functions and systems were tested as reported above and operated well.

### **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**

*The aft keel studs should be accessed and then tightened to correct torque. When the boat is next ashore, slacken the aft keel stud, dry the area and apply Sikaflex 291 sealant to prevent further water ingress.*

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

*Recommend for blue water cruising, wash board and hatch is modified so that washboard can remain in place with hatch open or closed and can be secured from inside vessel.*

*Recommend for blue water cruising, fore deck hatch is turned 180° so it hinges forward. Alternative is to have plywood blanks aboard in case of breakage.*

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

*Recommendation that vessel this size should have minimum 14KG main anchor, with 10m x 8mm chain, and 12mm warp. Main bow anchor cable length (chain and warp) to be 48m. Kedge anchor should be 6KG with 10m 6mm chain and 10mm warp. Length as above.*

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

*Recommendation – All around white light must be operational for use after dark.*

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

*MCA Recommendation:- One multipurpose fire extinguisher to a recognised standard, with minimum fire rating of 13A/113B or smaller extinguishers giving equivalent rating for engine compartment plus not less than one multipurpose fire extinguisher to a recognised standard, with minimum fire rating of 5A/34B provided at each exit from accommodation spaces to open deck plus two fire buckets with lanyards.*

*Suggest one in forepeak, one in aft cabin, one in cockpit locker plus one for engine, plus two fire buckets with lanyards.*

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

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

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

*Gas hose is 8 years old and should be replaced after 5 years*

#### **34. Heads:**

*Recommend that inlet pipe is extended to reach below deck level, until then valves should remain closed at sea.*



**Conclusions:**

Very nice example of this model, well maintained and exceptionally clean..  
Recommendations are easy, quick and relatively cheap to implement.

**Appendix**

*Fig 1 keel joint*

