



## Marine Surveys UK

*"Pragmatic Surveys in Plain English"*

[www.marinesurveysuk.com](http://www.marinesurveysuk.com)

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Survey Report no: [REDACTED]

Name of Vessel: "[REDACTED]"

Type of Vessel: 1988 MG Yachts Spring 25, FRP Bermudian sloop rig sailing yacht.

### At the request of:

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

This survey was carried out on the [REDACTED] at Emsworth Marina, Emsworth, Hampshire UK. 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, 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.
- ✚ Hatches and Port lights were not tested for leaks with a hose.

### **Recommendations:**

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

### **Conditions of Survey:**

Vessel was examined on hard standing, sitting on its keel which was on blocks, the hull supported in on a metal storage cradle with 6 pads and a stern chock at the premises of Emsworth Yacht harbour , having been ashore since spring 2010 according to the owner.

No special conditions affected the survey other than as described in the text. The owner was with the boat for the first 30 minutes of the survey and brought the main sail, genoa and new electronic equipment that he intended to fit. He then took these items away again. He also turned on all electronics.



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

**Hull, Deck and Structure.**

1. Details of Subject Vessel, (General Description, Dimensions, Registration etc.).
2. Keel.
3. Hull below Waterline.
4. Topsides above Waterline including Rubbing Strake etc.
5. Deck Moulding.
6. Coach roof.
7. Cockpit.
8. Hull/Deck Join.
9. Bulkheads and Structural Stiffening including Internal Mouldings.

**Steering, Stern Gear, and Skin Fittings etc.**

10. Rudder and Steering.
11. Stern Gear.
12. Cathodic Protection.
13. Skin Fittings and other through Hull Apertures.

**On Deck.**

14. Main Companionway and other Accesses to Accommodation.
15. Ports Windows etc.
16. Pulpit, Stanchions, Pushpit, Lifelines and Jackstays.
17. Rigging Attachment Points.
18. Ground Tackle and Mooring Arrangements.
19. Other Deck Gear and Fittings.
20. Davits and Boarding Ladders.

**Rig.**

21. Spars.
22. Standing Rigging.
23. Running Rigging.
24. Sails and Covers etc.

**Safety.**

25. Navigation Lights.
26. Bilge Pumping Arrangements.
27. Fire fighting Equipment.
28. Lifesaving and Emergency Equipment.

**Engine.**

29. Engine and Installation.
30. Fuel System.

**Accommodation and onboard Systems.**

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



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**1.Details of subject vessel:**

MG Yachts started life as primarily a builder of racing boats, but sold a number of fairly high performance cruiser-racers through the 1980s, mostly designed by Tony Castro.

Tony Castro designed "Spring Of Tarrant", the prototype of the wing-keeled, twin-rudder Spring 25 in 1987/88, and the boat was used in the UK TV series "Howards Way". The Spring 25 then went into production in the UK, Brazil and Australia, the UK boats being marketed by MG Yachts. About 150 were built in the UK.

**Manufacturers' information from Owners manual board(not verified by measurement)**

Length Overall:	7.8m / 25'6"
Beam:	2.8m / 9'0"
Draft:	0.9m / 3'0"
Displacement:	2,000kg / 4,500lbs

**Boat specific information**

Registration	SSR [REDACTED]
Serial Number	MGS 25 [REDACTED]
Year of Build	1988
RCD	Not applicable

**2. Keel**

- a) The keel is a cast iron wing keel, attached to the hull with stainless steel studs and held in place with 4 pairs of studs. The top of the keel locates into a cut out in the hull.
- b) The keel is coated in places with epoxy filler to fair it and all covered in blue antifouling. There are some rust stains showing through which are mild surface rust.
- c) The underside of the wing is not antifouled and one piece of filler approximately 25mm<sup>2</sup> has come out of the starboard wing.
- d) The joint around the top is tight and well filled with flexible filler.
- e) Internally access to the studs is good. The stainless steel for the studs, nuts and backing plates is good quality, non magnetic. They were all tested with a hammer and no fault found.
- f) The forward starboard nut has minor corrosion stains on it. These appear to be surface corrosion only.

Advisory note:- Clean off corrosion stains in bilge area with wire brush and keep bilge area dry.

Wing can be faired with filler and the surface could be taken back to bare iron and re primed to give a fair surface.



**3. Hull below Waterline:**

- a) The owner advised that from new until spring 2010 the hull below the water line had been sheaved in copper sheets and bitumen type adhesive. This was removed in 2010 and the bitumen removed with a heat gun.
- b) The hull below the waterline is of solid FRP construction with heavier construction towards the keel. It is now coated with blue antifoul and silver grey primer.
- c) The vessel is supported by 7 pads on supports. There is some minor distortion to the hull around the pads but otherwise the hull is fair.
- d) Light hammer sounding (not heavy enough to damage anti-foul) did not suggest any delaminating or voids and there are no visible signs of significant damage or repairs.
- e) The Antifouling covering was removed back to clean white gel coat in 11 areas and the areas around the pads is clean gel coat. 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.
- f) There are no visible signs of significant damage or repairs to the hull below water line except on the water line. On the stem at the water line is sign of minor impact. The flow coat on the inside of the hull at the stem is also cracked.
- 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:	<b>8.8°C</b>
Relative Humidity:	<b>84.2%</b>
Time ashore	<b>1 year</b>
In summary the weather conditions for obtaining moisture readings were <b>fair</b>	



Readings were as follows:

Meter	Range below waterline.	Range above waterline.
Sovereign Quantum, Scale A, 0-100 Shallow mode	<b>19 -24 with one 28</b>	<b>21 - 27</b>
Deep Mode	<b>17 – 24 with one at 28</b>	<b>16 – 28</b>

The interpretation of the readings in shallow mode range;

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

These readings need to be considered in conjunction with the period the vessel has been ashore and the weather conditions when obtained. As a rule of thumb you can expect the levels to drop by one range after a few weeks ashore.

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

Advisory note:- Because the hull is solid and not cored and because the readings above the waterline are similar to those below it is my opinion that the readings were affected by the humidity and dew when the readings were taken and that the hull should be considered as good.

Advisory note:- The impact damage to the bow does not affect the structural integrity of the boat but if not repaired will allow water to penetrate the laminate.

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

- a) Similar composition to below waterline but less layup of FRP will have been used.



- b) Top side moulding found fair and finished in the original white gel coat. The gel coat surface is in generally good condition with little UV degrading except on the transom noted below.
- c) There are some minor star cracks on both port and starboard probably caused by minor impact.
- d) No stress crazing or cracking noted in way of bulkheads or other re-enforcing members.
- e) Transom has UV degradation to the gel coat, it has possibly be painted in the past and there are some gel chips on the edges.
- f) The aluminium rubbing strip has a rubber insert and is attached through the hull deck joint. There is minor damage to the strake aft and forward starboard.

Advisory note – Star cracks in the gel coat, if not repaired should be cleaned with acetone and heavily waxed to prevent water ingress into the laminates. UV degrading is a cosmetic problem only and can be painted over with suitable paint system.

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

- a) The deck is of solid GRP with balsa core in places. (Information from owners manual). Access to the underside was greatly restricted by inner moulding and only accessible from cockpit locker and anchor locker. This is because the majority of the underside of the deck has an internal moulding attached.
- b) The gel coat is very pale blue with moulded in non slip, there are no signs of pitting caused by UV or aggressive cleaning agents.
- c) The whole deck was carefully tested underfoot, lightly hammer sounded and moisture tested. The moisture readings were not significantly different to the hull. The side decks creak when walked on indicating some separation of the balsa core.
- d) The FRP toe rails have some minor star cracks from impact.

Advisory note:- The side decks have no significant stress areas and the deck creaking is not uncommon for a yacht this size and age. If a repair is required it will involve injecting resin into the affected areas.

### **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. As above there is no access to the underside due to inner moulding.

### **7. Cockpit:**

- a) Integral with the deck moulding and drains at aft end through plastic skin fittings connected to the transom plastic skin fittings by hose. Single clip on all hose connections. These were aggressively tested and found secure. The port is not accessible without removing a screwed panel.
- b) Deep locker to starboard has securely hinged lids and positive method of closure. The hinge screws are loose and the edge of the gel coat damaged by the hinges.
- c) The cockpit sole was solid under foot.
- d) There is a disused heater vent at the top edge of the cockpit which could compromise the weather tight integrity of the yacht in a large seas.



Advisory note:- Any "holes" that could allow water to flood the boat should be closed off. Suggest blanking off the unused heater vent.

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

- a) This is mechanical type. The deck moulding sits on top of the hull moulding. The joint is filled with a hard bonding paste. The aluminium rub rail is attached with stainless steel self tapping screws that go through the joint.
- b) Access is limited to the cockpit locker and in the anchor locker.
- c) Just in front of the chart table below the joint is hard clear resin that appears to have run down the lining possibly from a repair to stop a water leak.

### **9. 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) There is an inner moulding attached to the underside of the deck.
- c) A second inner moulding comprising floors and furniture is well bonded to the hull.
- d) The main bulkhead, aft, fits into locating slots in the hull and deck liner and is bonded in place.
- e) There are a number of floors which are moulded into the hull liner, and as stiffening in the under berth lockers. These are plywood bonded on all sides.
- f) The mast compression loadings are transferred through the deck onto a stainless post king post and then onto the GRP structure above the keel. These loadings transfer to the floors. There are no signs of movement in any area.

Advisory note:- In the saloon, under the port side berth locker the bonding around the plywood is coming away. This is directly above the cradle pad and I believe this is why the hull is deflecting slightly. Also, at the forward end under this berth the plywood floor is also debonded. Both these should be laminated back to the hull to give full strength back to the hull.

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

- a) Twin rudders of GRP construction made in two halves and bonded around stainless steel frames with stainless steel 316 rudder stocks. (Checked with magnet)
- b) There are no signs of damage to either rudder, both carefully checked around all edges.
- c) There is no excessive play in either top bushes.
- d) Rudder blades were lightly hammer sounded and moisture tested. The readings are 19 – 24 shallow 17 - 25 deep.
- e) Tiller is wood in stainless bracket in good condition.
- f) Rudder tubes are GRP and bonded to hull with wrapped around FRP. They come some 400mm above the water line and have nylon seals top.
- g) The tiller tube is well bonded to the deck and the linkages and clamps all appear in good condition and correctly fitted. Port side could not be hammer tested due to lack of access.



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

- a) Two blade yellow metal propeller on stainless steel shaft. No signs of dezincification. Hammer tested, no fault found.
- b) Test with magnet confirms 20mm 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.
- c) Shaft is supported outboard end by metal P bracket. Found secure, hammer tested and scraped.
- d) The cutlass bearing has been replaced recently. The Hex socket locating pin is not square and may not have been tightened back up.
- e) The shaft is protruding 70mm beyond the P bracket. The maximum it should protrude is 20mm. The owner said this was since he had removed shaft recently and not refitted it.
- f) Stern gland is a Manecraft Deep Sea shaft seal with rotating seal. The seal is marked 25 – 30. I would suggest this is too large for the 20mm shaft as they don't make this type of seal for 20mm shaft.

***Recommendation – Shaft must be correctly fitted so that it does not protrude more than 20mm out from the cutlass bearing.***

***The Deep sea seal should be replaced with a seal suitable for a 20mm shaft. PSS make a 20mm seal at about £160.***

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

- a) One hull anode fitted, partially worn. Checked for continuity with shaft and propeller with multi-meter, and no connection. No connection with P bracket either. When checked inside of boat, wires from anode stud go to rudder shafts but the wires to engine and shaft have not been fitted.

***Recommendation:- Reconnect hull anode to drive shaft system to protect shaft and propeller.***

### **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) Toilet outlet behind engine: Yellow metal thru hull with DZR ball valve. Tight to turn and difficult because handle is under locker.



- b) Heads water inlet behind engine: Yellow metal thru hull, with DZR ball valve. One clip only. I could not operate this valve as fouled by exhaust and stiff.
- c) Engine seawater inlet behind engine: Yellow metal thru hull with DZR ball valve. Handle is rusty.
- d) Galley sink drain: Yellow metal thru hull, with DZR ball valve. One clip only.
- e) Heads sink drain in heads cupboard: Yellow metal thru hull, with DZR ball valve. One clip only.
- f) Depth sounder thru hull. Clipper plastic thru hull. Has plug fitted.
- g) Depth sounder thru hull 2. Fitted below hull and bolted through.
- h) Log, plastic through hull.

***Recommendation:- Toilet outlet skin fitting valve should be turned so handle is accessible. Toilet inlet DZR vale should be freed up or replaced and turned so handle is accessible***

**Above Waterline:**

- i) Exhaust, bilge pumps and tank breathers all secure and not vulnerable to breaking in lockers.
- j) Obsolete Heater exhaust in transom. Pipe is turned upwards.

**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) Single wooden washboard in good condition, with vents. Slides in place in wooden runner and remain in position without companionway hatch being closed and can be locked in place.
- c) Fore hatch glazed acrylic aft hinged, Plexiglas is crazed and has secure means of closure, gaskets intact. Size means can be used as secondary escape.

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

- a) Aluminium framed acrylic windows in coach roof. Gaskets look intact. Condensation drips on inside.
- b) Lying fair to hull, no signs of weeping.
- c) 3 opening port lights in heads, aft cabin and into cockpit. All in good condition except gaskets are flattened and appear to leak.

Advisory note.:- Replace gaskets in opening port lights to prevent leaks into cabins

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

- a) Pulpit. Two legs bolted through deck. All tested with full body weight and visually checked. Both bases bolts are loose.
- b) Pushpit. Two separate, same fixing as pulpit and restricted access. All tested with full body weight and visually checked, no faults found.
- c) Stanchions. Aluminium in aluminium bases. Steel bolts through deck. All took my weight. Again limited access to underside.
- d) Single life lines. Of stainless steel wire, plastic coated, tested with magnet. Plastic in good condition, terminals good.



- e) 3 x life line attachments on deck. Tested with lever and secure.
- f) Two webbing jackstays fitted to deck. These have minor fraying.

Advisory Note:- UV is likely to damage webbing over time, if these have been on deck while stored, suggest they are tested before being relied upon.

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

- ✚ Main cap and lower shrouds attachment points. All attach to stainless steel plates which bolt through deck. There is no access to the underside of the deck to see the attachment. A stainless steel round section chain plate rod comes through the headlining and enters the side of the saloon. The attachment to the hull is behind a screwed panel which I did not access. They were tested with a substantial crowbar on wood block and no movement found. No sign of seepage via deck fittings seen.
- ✚ Forestay attaches to stainless steel bar which runs down outside of stem and through bolted with 4 bolts in sheer. Hammer tested and levered where possible and no fault found.
- ✚ Backstay attached to u bolt through transom. Checked with lever and no fault found.

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

- a) Shallow anchor locker with modified lid. Hinges are plastic and fixing bolts are loose and corroded. The securing bolts are missing and holes elongated in deck.
- b) Main bow anchor. This is 25lb CQR Plough anchor, 8mm chain. Chain not laid out and examined link by link but some links are corroded. Bitter end is tied with 6mm line. No rope fitted.
- c) Stem head fitting with single bow roller, bolted through deck with 3 bolts. Hammer tested and found to be loose. No pin in place to stop chain jumping off roller.
- d) Danforth Anchor in cockpit locker with approximately 1m chain and 3 Strand warp. The anchor shackle and shackle from chain to warp are corroded.
- e) Vessel has alloy cleats fore, aft and centre of deck of adequate size through bolted the laminate. All hammer tested, levered and found secure.
- f) Numerous mooring lines in cockpit lockers in fair condition.

Advisory note:- The Bow roller fitting needs to be removed and refitted with new sealant to be secure.

The MCA recommended ground tackle for this size boat in coastal cruising, category 3 which is 20 miles from a safe haven is 9KG Main anchor (25lb CQR is good), 8mm chain, 10m minimum (Spring time OK for this) plus 12mm warp. Total length of chain and warp being 4 x length boat so 30m. I do not know the length of the bow chain so may need to attach a warp to this. For the kedge anchor, 4KG is recommended, Spring Times kedge is bigger than this plus recommends 10m 6mm chain and 10mm warp, again 30m total. You might want to add some chain.

### **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. 3 No. Lewmar 16ST, Meissner 8. The Messner was a bit worn and the starboard Lewmar a bit tight.  
Advisory note:- Normal winter procedure would be to service these which consists of cleaning and lightly greasing.
- c) Deck hardware all of good quality and specification, and all are serviceable including 10 Spinloc clutches – not tested under load.

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

- a) No boarding ladder was fitted or seen aboard.
- b) The outboard is secured to a purpose made bracket on the transom that was securely fitted.

Advisory Note:- Boarding ladder either permanent or hang over the side type is advised to be carried to assist an man overboard incident.

### **21. Spars:**

#### **Mast**

- a) The mast down and laying in mast cradles on the deck. I could not access the first 6' of mast.
- b) The mast is single spreader fractional rig, silver anodised no signs of corrosion around fittings. 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 but was not fitted.

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

- a) Rigging was checked at top terminals, at spreaders but could not access last 6' or bottle screws as attached to mast and hanging out of reach. These were examined where the wire enters the terminal under 10x magnification, no broken strands visible nor excess corrosion seen.
- b) Rigging all 1x19.
- c) Furling system fitted and extrusion checked to within 6' of base. No signs of damage.

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

- a) Some frayed ends, most rigging has been left on deck and in boom. Some lines may need replacing when put to use.

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

- a) Main sail. Manufactured by UK Sail Makers, Viewed stowed in stack pack on dock. Brought down and taken away by owner. Battens were all intact as far as I could ascertain. Stitching and material checked with edge of 50p coin, stitching and material



appears fair, some evidence of chaffing at high wear areas. Material is not new but useable.

- b) Genoa is white and has sacrificial strip. Sails not unrolled. Material of sail is better than main sail. Sacrificial strip is completely destroyed and will need to be replaced.
- c) Stack pack bag has some small damage and will need patching at aft end.
- d) Lazy jack lines not seen.
- e) North sails spinnaker seen, checked in bag, some rust stains, no damage noted.
- f) Red storm jib seen in sail bag under forepeak locker. No signs damage.

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

Vessel fitted with

- a) Bi colour fitted to bow.
- b) All around white and tri colour light at mast head. Tricolour missing.
- c) No steaming light.

Note:- mast was down and wires disconnected so not tested.

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

- a) Manual Chimp bilge pump mounted in cockpit locker and operated from cockpit. Strum box pick up below galley. Viewed from above as galley door panel screwed shut. Clips all tight, single clips only. Discharge out transom.
- b) Rule 360 GPH submersible bilge pump mounted in engine compartment with float switch. Tested dry. Discharged through transom.
- c) Spec advised 2<sup>nd</sup> electric bilge pump. This was traced from transom discharge under galley where non return valve seen. Pump appears mounted under galley to collect from same bilge as main bilge pump under hull liner. As noted above, access is screwed shut. Not heard operating.

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

- a) There were the following fire-fighting appliances found onboard.
  - a. Fire blanket in galley
  - b. 1 KG BCF Gas extinguisher with no date.
  - c. 1.5KG Halon Fire extinguisher
  - d. Automatic halon fire extinguisher in engine compartment.

There are no regulations covering this vessel in private use however all Halon extinguishers are banned.

***Recommendation. Halon extinguishers must be removed from boat and disposed of responsibly. At least 2 new fire extinguishers to BS5423 fire rating 5A34B (most 1kg dry powder type meet these criteria) should be carried and fitted near cabin entrance points. Suggest 1 by companionway and one in cockpit locker.***

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

The following was found aboard –



- a) All flares expired
- b) 1 x horseshoe life buoy and bracket fitted
- c) 1 Throwing line

The RNLI operate an excellent free inspection and advice service concerning levels of safety equipment (SEA Check) and can be contacted on 08003280600 or via the RNLI website, [www.rnli.org.uk](http://www.rnli.org.uk).

The RYA also publish a booklet, G16, "The Boat Safety Handbook" and this specifies levels of Safety Equipment for different categories of use and it is ***Recommended this vessel be equipped to the level appropriate to proposed use.***

Booklet is obtainable from nautical bookshops or direct from the RYA, [www.rya.org.uk](http://www.rya.org.uk).

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

Engine is a Yanmar 1GM10 raw water cooled. Number 6345

- a) Engine has black dust, rust stains and paint is peeling.
- b) Rear of engine only accessible by mirrors and camera as access hatch to rear screwed in place.
- c) There is rust stains around lower pulley and alternator belt which is loose.
- d) Oil level in engine correct, oil does not contain visible metal particles.
- e) Engine stop cable is very tight.
- f) Engine is mounted on rubber mounts, tested with crow bar, ok condition. These are bolted to FRP engine beds, bolts all hammer tested and found secure.
- g) Evidence of minor water leak around water pump.  
This has leaked onto oil pipe below. Pipe was scraped and came clean.  
Grey engine paint has lifted around this area too due to water.
- h) Area around head gasket, paint has peeled in places.
- i) No diesel leaks seen.
- j) Engine turns over and has good compression.
- k) Morse control in cockpit operates fine.
- l) Exhaust elbow is good condition with no signs of rust, the exhaust hoses are well clipped and the exhaust box well mounted. Exhaust exit through hull is well fitted and secure.

***Recommendation – Alternator pulley and main pulley should be cleaned and belt tightened before use.***

Advisory note:- The engine has not been run for a year. It appears the water pump impellor is still in place. The engine should be thoroughly cleaned, any rust removed, and paint retouched so that any leaks can be easily seen. Suggest water pump impellor is checked before use. Engine stop cable freed off.

Outboard engine mounted on transom, Tohatsu Number 8788 Not started but turns over. Some moisture noted under cover but not excessive.

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



- a) Good quality stainless steel tank mounted in cockpit locker. It sits on a wooden shelf so the underside and forward side could not be checked. No signs leak or corrosion at the seams.
- b) Filler cap secure, filler hose is braided petrol type hose, joined with 2 copper 45° joints. The hose clips are secure but have some corrosion on them.
- c) Rubber hoses are clear braided all tested and found secure.
- d) There is a blocked of feed pipe for heater which is no longer fitted. The tank fitting is corroded on the top.
- e) The fuel line return has a shut of cock in it. The fuel feed has no shut off cock.
- f) Secondary fuel filter with metal bowl mounted in cockpit locker and has bulb priming pump fitted inline.
- g) Copper pipes are sound. There are no signs of leaks at any clips
- h) The fuel lift pump spigot is loose.

Advisory note:- Fuel lift pump inlet spigot should be tightened.

Advisory note:- All Fuel line should be ISO7840, the clear braided hose is not marked thus but was commonly fitted in this age boat. When replacing please fit ISO7840 marine fuel hose. The fuel shut off should be fitted in the feed pipe not the return. The priming bulb is non standard fit but suggest has been fitted to prime filters.

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

- a) Clean and tidy interior on the surface, evidence of condensation and possibly minor rain water leaks. (dirt around window white sealant, damp under aft cabin cushions, water in bilge))
- b) Water in bilge by navigation area. Must be rain water, possibly hatch left open.
- c) Cushions in good condition, saloon cushion has small tear at seam.
- d) Interior woodwork fair, evidence of items fitted and removed, screw holes etc.
- e) Inner mouldings make for clean layout, the galley moulding has been repaired not cosmetically well.

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

This vessel has not been MCA coded nor been required to be 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](http://www.calormarineshop.co.uk/rules-regs-answer.htm) Comprehensive information on standards and best practice. [www.boatsafetyScheme.com](http://www.boatsafetyScheme.com) Even if your boat is not required to comply with this standard it contains much sensible advice and the manual can be downloaded.

### **Gas Observation and action table**



Item	Result	Action required.
Condition and efficiency of self draining bottle storage	Gas locker is plastic bin securely mounted in cockpit locker with lid and drain. Drain does run down at correct angle but pipe slightly long and kink has allowed water to block drain.	<i>Shorten and refit gas drain hose to prevent water blockage</i>
Age and condition of flexible hose at bottle.	BS3212 Marked 1989	<i>Gas hose should be replaced as more than 5 years old.</i>
Age and condition of regulator	Fair	
Connection to copper pipe	Correct gland	
Condition of copper pipe where accessible	Green in places but scraped and found sound	
Is pipework adequately supported and not under stress where accessible?	Copper pipe not clipped and runs through bilge area under stern gear	If possible, secure copper pipe.
Connections and Flexible pipe to cooker and other appliances	BS3212 Marked 1989	<i>Gas hose should be replaced as more than 5 years old.</i>
Is cooker gimballed?	Cooker is gimballed, no crash bar fitted no gimbal lock	Advise fit crash bar
Are all appliances fitted with flame failure devices on all burners, and did these work properly under test?	FFD on burners, grill and stove, not seen working. Plastimo Atlantic 2500	
Are any appliances requiring flues properly fitted with same?	N/A	
Is a gas alarm fitted?	Yes. Sensor not tested.	
Is each appliance fitted with an isolating tap	No	<i>Isolating tap for gas should be mounted near cooker.</i>
If fitted did leak bubble tester function?	N/a	Consider fitting bubble tester.

**Additional Observations:**

Please note this survey is not a gas safety certificate, that is only obtainable after comprehensive pressure testing and assessment by a qualified person listed on the Gas safe register (formally CORGI) [www.gassaferegister.co.uk](http://www.gassaferegister.co.uk)



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

- a) Stainless steel water tank fitted under galley, hoses clear, clips good. Hand operated pumps at galley and heads.

**34. Heads:**

- a) Toilet is a Par Jabsco ITT , pump operates but tested without water.
- b) No signs of leaks. Swan necks correctly fitted in outlet pipe. None in inlet pipe.

Advisory note:- Best practice is to have a Swanneck fitted in the inlet side of the toilet to prevent flooding should toilet pump fail.

**35. Electrical Installation:**

DC circuits

- a) 12v alternator, charging
- b) Two batteries in starboard heads locker. 2 sealed 12v 110ah, starter battery and domestic. In plastic boxes, with lids. Straps to secure. Wiring tight and neat.
- c) Battery isolator switches for batteries.
- d) All circuits have fuses or switches doubling as Circuit breakers on panel.

240v Circuits

- a) 240V system. Socket is on transom with approved RCD circuit breaker fitted in heads locker with circuit breakers for circuits
- b) Battery charger plugged into 13amp domestic socket.
- c) Sockets all have protective covers to rear
- d) Separate light for saloon
- e) All appears well fitted.

Advisory note:- Socket on transom is slightly loose and should be looked at.

**36. Electronic and Navigation Equipment:**

- a) Owner advised he is fitting new electronic equipment being separate Raymarine ST60 speed and depth and Simrad wind. These were seen in boxes.
- b) Current equivalents of above, heads all faded and screens dull so not reported on.
- c) Radio is Compact SX25 – seen operating
- d) Garmin GPS Map 210 – seen operating
- e) Furuno Navigator GPS– seen operating
- f) Furuno Radar – Mast mounted so not connected but display seen working.
- g) GPS antenna on push pit.
- h) Contest compass, with bubble inside.

**37. Heating and refrigeration**

- a) Evidence of previously fitted heater (exhaust and vents) no longer present.



## **RECOMMENDATIONS and CONCLUSIONS:**

### **Maintenance Overview:**

Cosmetic Maintenance: The boat is generally clean and tidy with lockers painted out. There is some damp in the cabin from condensation.

Technical Maintenance: The engine looks a little neglected but drive system has been worked on and electronics kept maintained or replaced.

### **List of Recommendations:**

The Recommendations made in the Report are listed below with their respective section numbers. **All Recommendations should be carried out before use of vessel or as stated.**

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

Shaft must be correctly fitted so that it does not protrude more than 20mm out from the cutlass bearing.

The Deep sea seal should be replaced with a seal suitable for a 20mm shaft. PSS make a 20mm seal at about £160.

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

Reconnect hull anode to drive shaft system to protect shaft and propeller.

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

Toilet outlet skin fitting valve should be turned so handle is accessible. Toilet inlet DZR vale should be freed up or replaced and turned so handle is accessible

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

Halon extinguishers must be removed from boat and disposed of responsibly. At least 2 new fire extinguishers to BS5423 fire rating 5A34B (most 1kg dry powder type meet these criteria) should be carried and fitted near cabin entrance points. Suggest 1 by companionway and one in cockpit locker.

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

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

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

Recommendation – Alternator pulley and main pulley should be cleaned and belt tightened before use.

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

Shorten and refit gas drain hose to prevent water blockage Gas hose should be replaced as more than 5 years old. Isolating tap for gas should be mounted near cooker.

### **Conclusions:**

Once the recommendations are carried out and the owner fits the new electronics the boat will be a useable sailing vessel ideal for sailing in the Solent. There are some advisory notes that will improve the vessel. She is a typical example of this type of aged vessel, well priced and very suited to the use Mr R [REDACTED] has suggested, being sailing in the Solent with his wife as a novice sailor possibly venturing a few miles down the coast.