

Craft: Halcyon 27: "Xebec"

Xebec

Pre-purchase survey report

Survey date 10th February 2008

Surveyed by William Copeland

For Mr Ignacio



Photo 5384: Xebec on hard standing at Yacht Haven Quay, Plymouth

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Survey report

This is the survey report for Xebec, a Halcyon 27, said to have been built in 1970.

This is to certify that I, William Copeland, acting upon instructions from Mr Ignacio, attended the above vessel as she lay ashore at Yacht Haven Quay, Plymouth, on 10th February 2008 for the purpose of ascertaining her general condition prior to purchase.

This report is a factual statement of the examination carried out within the limitations stated below and with opinions given in good faith as far as seen at the time of the survey. It implies no guarantee against faulty design or latent defects or the suitability of the vessel for any purpose. The information contained within this report is confidential to the client who commissioned the survey, and liability to any other person is excluded. Only signed copies of the report are valid. Copyright of the report remains with Copeland Yacht Surveys Ltd..

This report must be read in conjunction with the survey contract, where items included and excluded from the survey are detailed and agreed to by you.

Within the report, I recommend certain improvements or repairs that are summarised at the back of the report. These recommendations are categorised into:

- **urgent** - they must be done before you use the boat, as they relate to safety on board, meaning the boat is not safe without these being carried out or they are considered essential for maintaining the integrity or structure of the boat or equipment;
- **necessary** - they must be done as soon as is practical (e.g. over a winter) or as stated, meaning they are not immediately serious but they need attention;
- **advisable** - they should be done to preserve the value, cosmetics or handling of the craft.

Limitations of survey

- No ceilings, linings, joinery or fastenings were removed except as stated and no opinion is given or implied on any part of the structure of the vessel or its equipment where they are obscured, inaccessible or otherwise unavailable to the surveyor at the time of survey. I am therefore unable to report that any such part of the vessel or equipment is free from defect.
- None of the fastenings or stern gear or keel bolts were drawn or removed for inspection (unless specified otherwise herein).
- The machinery has been inspected visually, but no dismantling or operating of the engine was undertaken (unless specified otherwise herein), meaning that the mechanical condition of the engine and its ancillary parts is beyond the scope of this survey.
- The electrical, plumbing, gas and other services have been inspected where visible but have not been operated (unless specified otherwise herein) and the gas system has not been pressure tested.
- Fuel and water tanks have been examined externally in situ and have not been pressure tested. Their contents have not been tested for contamination.
- Windows, hatches and external doors have not been pressure tested for water tightness.
- Skin fittings have not been removed or dismantled.
- Internal ballast and anchor chains were not removed (unless specified otherwise herein).

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- Electronic devices have only been switched on but their functions have not been tested, so no functional report is given.
- By agreement: rigging was only inspected from deck level

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1. Yacht data

Yacht name	Xebec (seen on stern in black lettering and on dodgems)
Yacht class	Halcyon 27
Year of yacht	Said to be 1970
HIN	None found
CE mark / RCD category	None found
Manufacturer	Offshore Yachts Ltd, Royston
Ships register	ON 342001, RT 3 and 87/100 (carved plate on forward bulkhead, starboard side in fore cabin)
General construction	GRP
Length overall	27ft (internet details)
Beam overall	7ft 8in (internet details)
Rig	Masthead sloop
Keel	Long keel

The above information is from a range of sources and has not been confirmed.

2. General survey information

I carried out the survey on 10th February 2008. She was on hard standing at Yacht Haven Quay, Plymouth.

The day was sunny and bright with winds gusting up to Force 5.

The survey was a pre-purchase condition survey.

The survey was commissioned by Mr Ignacio

I am told that her intended use after purchase is extended cruising.

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3. Hull structure

The external hull structure was inspected as stated, and the following was noted.

External hull structure observations

3.1 Xebec had white GRP topsides that were unpainted. There were a number of minor damages, scratches and scuffs to the topsides. The most significant of these were as follows, needing the improvements stated:

Starboard side:

- At the 3rd stanchion, gel coat cracks with crazing over an area 22cm long. The cracks were mostly vertical. The GRP was sound here, but the cracks should be ground out and filled within 2 years to reduce the likelihood of water ingress.
- Below the push pit post, at the moulded cove line, a gel coat chip of serviceable condition.

Port side:

- Below the aft pulpit post, 30cm above the boot top, 2 minor repairs of serviceable condition.
- Below the beaching leg attachment point, a circular repair, plus a 6cm and a 7cm crack, with a 14cm diagonal crack aft of these, and with cracks leading aft for up to 45cm. This area was not visible internally due to the cabin ply linings. The GRP was secure around this whole area, but the cracks should be ground out and filled within 2 years, to reduce the likelihood of water ingress.

Necessary action: repair GRP cracks within 2 years.

3.2 She had a hard wood strake that was secure and was of serviceable condition.

3.3 She had a cove line that was moulded as part of the original hull mould.

3.4 At the waterline there was a grey boot top. Below this there was red anti foul. From the boot top down, there was an epoxy coating system that had been applied in a rough manner. The owner has said that he peeled the gel coat and then applied 3 coats of epoxy. Based on my inspection, the evidence supports this, with the epoxy layers being light grey, dark grey and then white on top. Due to the rough application, there were a number of areas where the epoxy was not smooth and was quite thick, e.g. below the second stanchion starboard

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side. You should note that such a coating can disguise any further signs of damage below the waterline, but no such damage was seen.

3.5 There was an area of the epoxy coat, 63cm forward of the propeller, port side, where the coat had failed and it was coming away to expose the fibreglass below. This is shown in photo 5386 below:



Photo 5386: area of epoxy failure on hull forward of propeller

This area remained sound, but the area should be ground back to firm material and filled before re-launch.

Urgent action: grind back area where epoxy coat has failed and re-fill before re-launch.

3.6 Xebec had a long keel. It was straight. It had no signs of significant damage and no signs of serious grounding, but note that the epoxy coat could disguise such signs.

3.7 In order to inspect the hull more closely and to take moisture readings, 10 patches of anti foul were removed (5 each side) from the hull and the exposed areas of hull were inspected.

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3.8 The patches were tested with a Tramex moisture meter set to scale 1. The Tramex meter determines the amount of water within the GRP structure and readings of 10 imply a dry hull and 20 a wet hull on scale 1. The following readings were taken:

1. The following readings were taken:

Topsides: readings between 10 and 14 (taken as a datum point)

Port side: range 14 to 17, average 15.2

Starboard side: range 14 to 17, average 14.7

For a boat of Xebec's age, I would not consider these unusual.

3.9 The hull was sounded throughout with a hammer and it was found to be sound except at the area 63cm forward of the propeller as described in 3.5. There were no significant voids detected and no signs of de-lamination.

3.10 The patches were inspected visually, and no signs of other hull defects such as osmotic blisters or wicking fibres were found, but note that the thick epoxy coat would disguise all but extremely bad areas.

3.11 From the results in 3.8, 3.9 and 3.10, her hull would be classed as being damp to wet on the dry-damp-wet scale. However, her structure remained sound. I would class her as being in stage 2 of osmosis now, although in her past she may well have been in the early stages of stage 3, and hence the epoxy coating.

Stage 1 of osmosis is where negligible amounts of water have been taken on and the GRP is inert; stage 2 is where some small amounts of water have been taken on, but the GRP structure has remained sound; and stage 3 is where larger amounts of water have been taken on and osmotic blisters have formed around voids. The later stages of stage 3 often require significant treatment, but not all boats reach stage 3.

It should be noted that all GRP boats suffer from osmosis progressively through their lives, and the rate of osmosis development depends on many factors such as (but not limited to) construction, time in water, fresh or salt water, damage and temperature of water. The results above are also snapshot readings taken to gauge the rate of a process that generally takes years to become a serious problem. You may therefore wish to have the boat tested regularly to monitor any osmosis progress.

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Internal hull structure and shroud attachment observations

Where possible, the internal hull structure and shroud attachments were inspected as stated and the following was noted.

3.12 The internal hull was inspected in the following locations and was found to be of serviceable condition:

- Inside the fore cabin forward locker
- Under the forward berths (except under the anchor chain)
- Under the fore cabin and main cabin sole (the encapsulated ballast could be seen here)
- Around the port hanging locker and the port berth trotter box, including the main bulkhead joins
- Under the port and starboard berths
- Under the galley
- In the starboard cockpit locker
- Around the equipment and tanks in the port cockpit locker
- In the stern cockpit locker around the equipment
- Under the cockpit sole and around the engine as seen from the cabin and the cockpit sole access point

3.13 The internal hull was inspected in the following locations and was found to be defective with the stated improvements required:

- At the 3rd part bulkhead (aft of the anchor chain), port side, above the stringer frame, there was a crack along the GRP tab at the bulkhead to hull interface. This required glass matting to be applied.
- At the forward end of and under the port berth, a small amount of the GRP tabbing was detached from the joinery. This should be re-attached.

Urgent actions: apply glass mat and resin to 3rd part bulkhead at hull join; re-attach GRP tabbing under port berth: both before re-launch.

3.14 It was not possible to inspect the internal hull in the following locations, meaning that I estimate a total of 15% of the internal hull was seen:

- Under the anchor chain
- In the fore cabin above berth height due to ply linings
- Around the main cabin due to joinery and linings above berth height
- Under the equipment and tanks in the port cockpit locker

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- Under the cockpit sole, except as could be seen from the cabin and cockpit sole access points

3.15 The backstay split and was attached via 2 u-bolts in the stern. The bolts had ply backing. The backing was quite wet but it was sound. I would advise you to re-seal the u-bolts to reduce moisture ingress. The arrangement remained of serviceable condition.

3.16 The 3 shrouds each side passed to u-bolts that were taken through the side decks and to ply backing pads with steel plates. These arrangements were of serviceable condition.

4. Deck

The deck was inspected as stated and the following was noted.

Deck observations

4.1 The deck was laid over the hull, and the join was bolted through the strake. There were no signs of serious leaks from the hull to deck join, but, where seen, a large proportion of the bolts, washers and nuts were corroded. No action was required, but note that in the future it may become necessary to replace some of these attachments.

4.2 The toe rail was moulded as part of the deck moulding.

4.3 Note that the deck had been painted over the last few years, and that some deck defects could have been disguised by the paint coating.

4.4 There were 2 tiers to the coach roof: the most forward carried the fore hatch and the most aft carried the mast.

4.5 The mast was supported on a significant wooden plate that stretched between the 2 internal bulkheads. Internally, the second main bulkhead had a crack to the plastic lining port of centre, as shown in photo 5389 over the page:

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Photo 5389: crack to lining around 2nd bulkhead

On deck, to starboard and aft of the mast, in line with the second bulkhead, there was a slightly raised area. The linings would have to be fully removed to ascertain the extent of any damage here, but no evidence of further damage was found. The cause of the defect could have been a large impact that twisted the bulkhead (starboard side going up, port side down), or the boat may have been manufactured like this initially. There were no signs of a large impact, as no other bulkheads were damaged and there were no other signs of twisting in the hull.

4.6 Internally, port side, at the hull to main bulkhead join, there was evidence of a minor leak. Due to the internal lining, it was not possible to locate this, although I would suspect the vent area, so you may wish to improve the water tightness of this area.

4.7 The deck and coach roof was sounded throughout and tested underfoot and it was found to be sound.

4.8 Xebec had wooden coamings that were varnished. At their bases, the wood had absorbed some water and had started to blacken. However, the wood remained sound. You should ensure that the coaming to GRP mouldings are kept well sealed and that the wood sanded back to firm material, filled and is kept well varnished.

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4.9 There were 2 cockpit drains at the aft end of the cockpit. They led aft via relatively new hoses that were double clipped and they exited at the waterline.

4.10 Inside the aft half of the cockpit lockers, there was some mould growth. There was an access point in the cockpit sole that I suspect was not water proof, and it had a damaged closure. There was a large amount of water in the form of condensation inside this whole space. The seal around the ply cockpit sole was most likely not waterproof, but the ply was sound. It was also possible that water was entering via the deck fittings. Improvements were required to all these areas to make the cockpit water tight, and I would advise that the access point be renewed, the sole be re-sealed and the deck fittings be sealed.

Advised actions: sand back coamings, seal joins, fill coamings and varnish; renew cockpit access point, seal cockpit sole and deck fittings.

5. Sea-cocks and skin fittings

Xebec had 4 skin fittings plus a radio ground plate or old transducer and a transducer.

They were all inspected from the inside and the outside as stated and the following was noted.

Sea-cock and skin fitting observations

5.1 The transducer was mid ships starboard side. It was secure. Note that it had some epoxy coating over it externally so it could not be fully inspected.

5.2 Starboard side, forward of the transducer was either an old radio ground plate or an old transducer. It was mounted on what was most likely a hard wood support, although the whole fitting had layers of epoxy over it, so it could not be fully inspected.

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5.3 There were the following sea cocks with the following properties (note that some were coated in epoxy, so that the materials of the fixing plates could not be determined):

Function & location	Fixing plate, hammer test	Valve type	Hose clamps and hose	Fitting security	Bung
Heads intake, starboard forward	Bronze, secure to hammer. Coated in epoxy. External strainer	Ball, operational but stiff	Double clamps, serviceable hose	Secure	None
Heads waste, aft of intake	Secure to hammer. Coated in epoxy	Ball, operational	Double clamps, serviceable hose with u-bend	Secure	None
Stern gland lubrication, port side aft	Secure to hammer. Coated in epoxy. External strainer	Ball, operational	Double clamps with mild corrosion, serviceable hose	Secure	None
Engine intake, aft of stern gland lubrication	Secure to hammer. Coated in epoxy. External strainer	Ball, operational	Double clamps, serviceable hose with internal filter	Secure	None

5.4 The skin fittings required the following improvements:

Urgent actions: free heads intake valve; replace corroded hose clamps for stern gland lubrication; provide bungs for all skin fittings below the waterline: all before re-launch.

6. Steering

The steering equipment was inspected as stated and the following was noted.

Steering observations

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6.1 Xebec had a transom hung rudder with a tiller. The rudder was supported on a heel bearing at the aft end of the keel, 2 gudgeons on the stern, 2 gudgeons on the rudder, and with a pin passing through the 4 gudgeons. The pin had a nut and securing pin. Note that the fittings on the boat were coated in epoxy or paint: they were all secure to the hammer. There were no signs of cracks or of serious corrosion to the rudder fittings.

6.2 The rudder was secure. It had about 5mm of vertical play on its supports.

6.3 The rudder had no signs of significant damage, but note that it was heavily coated with epoxy, like the hull.

6.4 There was a Hasler wind vane self steering mechanism that was not tested but was of serviceable condition.

6.5 There was a varnished tiller of serviceable condition.

6.6 Note that when she was put hard to starboard (tiller to port side), the rudder did rub against the hull. This was only minor.

6.7 The rudder was inspected for signs of GRP degradation. Note that it was heavily coated in epoxy, but no significant signs were found. It was sounded and was found to be sound.

6.8 Moisture readings were high on the rudder, and this is not uncommon.

7. Stern gear

The stern gear was inspected as stated and the following was noted.

Stern gear observations

7.1 The propeller shaft was 25mm diameter and exited the hull forward of the rudder. It was secure and had less than 1mm of lateral movement in the shaft.

7.2 The propeller was of bronze. It had 3 blades. It was coated with a hard black anti foul. It was very slightly pink from de-zincification in places. It had no significant damage or wear and was of serviceable condition.

7.3 The propeller was secured with a bolt.

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7.4 The cone anode aft of the propeller had almost completely wasted and needed replacing. There was a pear anode on the hull. There was no electrical connectivity between the hull anode and the propeller. The anode was encrusted and had some paint coverings. Internally, there was a bonding wire from the anode to the engine. The anode studs were heavily corroded internally. I recommend you clean off these studs and re-establish a connection between the anode and the propeller.

Urgent actions: replace cone anode; brush off pear anode; brush off anode studs; re-establish electrical connectivity between anode and propeller: all before re-launch.

8. Spars and rig

The spars and rig were inspected from deck level and the following was noted.

Spars observations

8.1 The mast was of anodised aluminium. It was relatively new. It had some minor scratches and scuffs but had no significant damage or corrosion: it was of serviceable condition.

8.2 The boom was of gold anodised aluminium. It was heavily scratched and scuffed, but it remained of serviceable condition.

8.3 There was a spinnaker pole on the starboard side deck: it was heavily scratched and its rivets had some mild corrosion. Its pins were free and it was of serviceable condition.

8.4 Atop the mast there was a VHF antenna and a wind vane.

8.5 There were 4 cleats on the mast: they were secure.

8.6 There was a Barbarosso 16 winch and a Lewmar 6 winch on the mast. They were both on supporting plates and they were secure.

8.7 The kicker was of serviceable condition.

8.8 The goose neck was of serviceable condition. There was a mainsail roller reefing system. At the forward end of the boom, the reefing system had some mild corrosion to it that should be monitored on an on-going basis, but the system remained of serviceable condition.

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8.9 The running rigging was of serviceable condition. Note that for your type of sailing, you may wish to take the rigging back to the cockpit for safety reasons.

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Rig observations

8.10 Xebec had a pair of spreaders, a pair of upper shrouds that were continuous at the spreaders, 2 pairs of lower shrouds (one forward, one aft), a forestay and a split backstay.

8.11 The standing rigging on such a craft should be replaced every 10 years, and certainly before undertaking a journey to Spain, so I recommend you do this. You should budget for its replacement within the purchase of the yacht.

8.12 There was a pair of spreaders that were inspected from deck level: they appeared to be of serviceable condition.

8.13 The forestay was contained within the roller jib foil and was not available for inspection. It was taken to the stem head fitting. It finished here with appropriate articulation and its fixings were of serviceable condition.

8.14 The backstay split at boom height. Above the boom, the wire was 6mm diameter, and below the wires were 5mm. Wired shackles were used to secure the backstay. The fittings were of serviceable condition.

8.15 The 6 shrouds were attached to 6 u-bolts. All wires were 6mm diameter. The shrouds ended with appropriate articulation and their fixings were of serviceable condition.

Urgent action: replace standing rigging before re-launch if it is less than 10 years old.

9. Deck fittings and loose deck gear

The deck fittings and loose deck gear were inspected as stated and the following was noted.

Deck fittings observations

9.1 The following deck fittings were inspected and were found to be secure and serviceable:

- Stem head fitting, secured through the fore deck, containing 2 bow rollers
- Fuel filler, port side aft
- 3 stanchion posts each side
- 4 post push pit
- 4 post pulpit

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- 2 plastic coated guard wires each side
- 2 harness points forward on the fore deck and 2 on the coach roof at the cockpit (note that no jack stays were seen)
- 4 wooden grab rails on the coach roof
- Jib sheet blocks on cars on tracks on the side decks
- Deck cleats: 3 on fore deck, 2 aft
- Cleats for sails: 1 on coach roof, 2 in cockpit plus one wooden cleat for the jib furling mechanism on the port coaming
- 2 fairleads forward and 2 aft
- Plastimo Contest compass in port cockpit bulkhead
- Main sheet track across companion way secured to wooden support (this must be kept varnished)
- Main sheet blocks and tackle
- Selden Furlex 200S (sail was unfurled about $\frac{1}{4}$) with furling port side
- 2 blue spray sides with "Xebec" in white lettering
- Spray hood in light blue with 2 windows
- Sail cover in light blue with some small tears
- Radar reflector in cockpit (not mounted)

9.2 The following deck fittings were inspected and were found to require the stated improvements:

- 2 cockpit winches: the starboard one was seized and the port one was on anti-clockwise instead of clockwise
- Jack stays were absent
- Fittings for a storm jib were absent

Necessary action: free the cockpit winch before sailing; fit jack stays before putting to sea; fit a storm jib before setting off for Spain.

Sails observations

9.3 The mainsail could not be raised due to the winds. Its 3 corners were inspected and they were of serviceable condition. The mainsail was relatively new.

9.4 The jib was white and had a white sacrificial strip. It could not be fully unfurled due to the winds. The edges of the strip were starting to fray, but the sail remained of serviceable condition.

9.5 There was a red, white and blue spinnaker in the fore cabin. It could not be fully inspected so its 3 corners were seen: the bronze eyes had elongated, so this must be monitored, but the sail remained of serviceable condition.

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9.6 As described in 9.2, there was no storm jib and one should be aboard for the trip to Spain.

10. Anchoring arrangements

The anchoring arrangements were inspected as stated and the following was noted.

Anchoring arrangements observations

10.1 There was 20lb CQR Sowerter anchor in the starboard cockpit locker. There was a securing position for it on the fore deck. It was of serviceable condition.

10.2 There was a significant length of serviceable chain in the fore cabin. It could be led via a pipe to the fore deck.

10.3 There was a manual windlass on the foredeck: it was tested as working and it was secure.

11. Windows, hatches and companionway

The windows, hatches and companionway were inspected as stated and the following was noted.

Windows, hatches and companionway observations

11.1 There was a wooden fore hatch in the fore cabin. Its catch was hard to operate. Note that it hinged at the aft end, so it MUST be kept secured at sea. The hatch was of serviceable condition. It had a canvas cover also.

11.2 There were 4 windows in the fore cabin plus 4 in the main cabin: they were all secure with no signs of leaks.

11.3 The companion way was by way of 2 steps down the galley joinery to the cabin sole. There were 2 wash boards of varnished ply. This arrangement was of serviceable condition.

11.4 There was a varnished hatch with lock: it was of serviceable condition.

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12.Lifesaving and safety

The lifesaving and safety equipment was inspected as stated and the following was noted.

Lifesaving and safety observations

12.1 There were 2 Firemaster 600g dry powder fire extinguishers as follows:

- At the companion way
- In the starboard cockpit locker

Both were dated expiry 1986 and so must be replaced as soon as you buy the boat.

12.2 There was a set of flares in the cockpit locker. Some were expiry 1992 and they were leaking, so they must be disposed of appropriately immediately. The remainder were expiry 2004, so they must also be disposed of. Note that some of the latter were white flares by Pains Wessex and they have a product recall out for some of their white flares as they can be dangerous.

Urgent actions: replace fire extinguishers as soon as you buy the boat; dispose of old flares and update with new ones suitable for your type of cruising.

12.3 You should ensure that the boat is kitted out to RYA standards for all safety equipment relevant for your type of boating before re-launch. The equipment recommended is summarised in the RYA Boat Safety Handbook.

13. Cooking system

The cooking system was inspected as stated and the following was noted.

Cooking system observations

13.1 There was an Electrolux Origo 3000 stove with liquid fuel. It was not tested.

14.Fuel system

The fuel system was inspected as stated and the following was noted.

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Fuel system observations

14.1 There was a steel tank in the port cockpit locker. It was secure and was of serviceable condition. It had a vent aft.

14.2 There was a fuel shut off valve in the port cockpit locker: it was operational.

14.3 The first fuel filter had a sight glass: it was clear.

14.4 The fuel lines were of clear plastic. They were of serviceable condition, but note that they should ideally be to BS 7840, which implies they are fire resistant for 2.5 minutes. You should check local requirements in Spain in case ISO/BS hoses are required. The current hoses were of serviceable condition.

14.5 Note that the last length of the fuel line return was in copper and that this was of serviceable condition.

15.Engine

The engine was not fully tested, and I recommend that you employ a marine engineer to review and test the engine fully. However, the engine was inspected as stated and the following was noted.

Engine observations

15.1 The engine was by Beta. It was 2 cylinder and was fresh water cooled via a heat exchanger with a sea water input.

15.2 It was on 4 engine mounts that were on significant bearers: this arrangement was of serviceable condition.

15.3 There were no signs of significant oil, water or fuel leaks.

15.4 The hoses on the engine were of serviceable condition.

15.5 The stern gland consisted of a short flexible hose. It was out of reach but appeared of serviceable condition. You must monitor this upon re-launch. The hose was double clipped at both ends.

15.6 The engine was controlled remotely by a single lever port side aft in the cockpit. The controls operated smoothly and the wires showed no signs of corrosion.

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15.7 There was no fire extinguishing point for the engine, and one is advised.

15.8 The exhaust manifold on the engine had some fixings that were slightly corroded, so these must be monitored. The manifold remained of serviceable condition. The exhaust hoses passed aft via a Vetus water lock under the cabin sole to the stern where the exhaust exited aft above the waterline. Despite the water lock, a u-bend in the stern locker would be advised to prevent back flooding. The exhaust clamps were singles only, and doubles are recommended.

Urgent action: double clamp all exhaust hoses; consider a u-bend in the stern locker for the exhaust hose: before re-launch.

16. Electrical systems

Whilst reasonable endeavours were made to test the 12V systems, where stated, items were tested for starting up. There can be no guarantee therefore that all functions were working. The DC systems were inspected as stated and the following was noted.

12 volt DC systems observations

16.1 There was one battery that was an 85Ah leisure battery. It was not secured. It read 12.67V. You reported that it started the engine.

16.2 A second battery would be advised for starting the engine.

16.3 There was a 0/1/2/both isolation switch under the navigation table. There was one fuse board here plus another at the companion way.

16.4 Some of the boat wiring was old, but it appeared of serviceable condition.

16.5 The following systems were tested as working:

- Port, starboard and stern lights
- Galley light, main cabin bulkhead light, heads light, fore cabin light

16.6 The following systems were not working properly:

- Navigation station light
- VHF: it started but you said did not communicate correctly
- Auto helm bi-data
- Speakers for FM radio

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- Deck light

16.7 It was not possible to test the mast head lights as the day was too bright: you should therefore check they operate appropriately.

Necessary actions: secure the battery; consider a second battery for engine starting; repair or renew VHF; ensure electrics operating appropriately: before re-launch.

17.Plumbing systems

The plumbing systems were inspected as stated and the following was noted.

Plumbing systems observations

17.1 There was a poly tank in the port cockpit locker. It was empty. The galley sink was fed by this tank by way of a small water pump. The pump started, but there was no water to pump.

17.2 There was a sea toilet with a hand pump. It could not be tested.

18.Bilge pumping

Bilge pumping was inspected as stated and the following was noted.

Bilge pumping observations

18.1 There was a manual bilge pump in the port cockpit locker. It was tested as working. Its hose led to beneath the engine where there was a strum box.

18.2 There was some water in the bilge. The owner said he had washed the lockers and bilge out recently, but you should monitor the amount of water entering. Any water entering would most likely be via the stern gland or the deck fittings.

19.Accommodation

The accommodation was viewed as stated and the following was noted.

Accommodation observations

19.1 There was a fore cabin with 2 V berths, a hanging locker to port and a heads to starboard. The main cabin had a berth each side, the

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galley aft under the companion way and to port and the navigation table to starboard.

19.2 The upholstery was in blue and was of serviceable condition.

19.3 The joinery around the cabin was of serviceable condition, including the floor.

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20. Summary of repairs and maintenance

This section provides a summary of the work required on the boat. This section **MUST** be read in conjunction with the rest of the survey report – **DO NOT JUST READ THIS SECTION.**

Items of general boat maintenance or items noted in the survey for aesthetic or comfort reasons are not listed here.

20.1 Urgent repairs or changes

These must be done as soon as possible or when stated, as they relate to safety on board, and the boat is **not safe** without these being carried out or they are considered essential for maintaining the integrity or structure of the boat or equipment:

- **Grind back area where epoxy coat has failed and re-fill before re-launch.**
- **Apply glass mat and resin to 3rd part bulkhead at hull join; re-attach GRP tabbing under port berth: both before re-launch.**
- **Free heads intake valve; replace corroded hose clamps for stern gland lubrication; provide bungs for all skin fittings below the waterline: all before re-launch.**
- **Replace cone anode; brush off pear anode; brush off anode studs; re-establish electrical connectivity between anode and propeller: all before re-launch.**
- **Replace standing rigging before re-launch if it is less than 10 years old.**
- **Replace fire extinguishers as soon as you buy the boat; dispose of old flares and update with new ones suitable for your type of cruising.**
- **Double clamp all exhaust hoses; consider a u-bend in the stern locker for the exhaust hose: before re-launch.**

20.2 Necessary repairs or changes

These should be done as soon as practical and before the suggested time period expires as they are not yet serious but they need attention:

- **Repair GRP cracks within 2 years.**
- **Free the cockpit winch before sailing; fit jack stays before putting to sea; fit a storm jib before setting off for Spain.**
- **Secure the battery; consider a second battery for engine starting; repair or renew VHF; ensure electrics operating appropriately: before re-launch.**

20.3 Advisable repairs or changes

These should be done to preserve the value, cosmetics or handling of the craft:

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- **Sand back coamings, seal joins, fill coamings and varnish; renew cockpit access point, seal cockpit sole and deck fittings.**

21.Further reading

You may wish to find out more from the following publications:

RYA Boat Safety Handbook – available from the RYA.

Boat owner's mechanical and electrical manual – by Nigel Calder

Fibreglass Boats – Hugo du Plessis

Gas standards: (for inland waterways, but a good practice guide)

http://www.boatsafetyscheme.com/downloads/BSS_Guide_chap7.pdf

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22.Summary and conclusions

22.1 Xebec was of serviceable condition, and the repairs above should be carried out when stated, especially those to the GRP tabs and bulkhead connections, the sea cocks, the standing rigging, the fire extinguishers and the exhaust system. She should then be suitable for extended cruising.

22.2 Note that there are other improvements to make extended cruising easier and safer, and these would include taking the rigging to the cockpit, fitting jack stays, installing an extra battery and installing a storm jib system.

END OF REPORT

Signed

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