



Marine Surveys UK

Detailed scope of survey for Steel or Aluminium sail boat pre- purchase survey 2015

This scope of survey forms part of the agreement for survey. The surveyor carrying out the survey is a professional, trained and qualified surveyor who will use his best abilities to assess the condition of the vessel using various techniques described below. The survey report can be read in the knowledge these detailed inspections and tests are carried out as appropriate and applicable for the design and type of boat.

Hull, Deck and Structure.

2. Keel

If the vessel is ashore, the area of hull around the keel root is checked for deflection and support before the vessel is boarded ashore. The exterior condition of the keel is checked for condition and repairs. The joint /welds to the hull is carefully checked visually for distortion. The condition of the keel root reinforcing is checked for repairs and corrosion. If the boat is resting on the keel and cannot be viewed in tension this will be noted.

A lifting keel will be examined as far as the survey conditions allow and operated if possible, all areas checked where accessible.

3. Hull below Waterline, Topsides above Waterline including Rubbing Strake, deck, coachroof and cockpit:

The hull is visually checked for signs of deflections and distortion, condition of coatings and signs of repairs, damage, corrosion and other defects.

Thickness readings are taken using double echo meter to avoid damage to coatings across the hull, depending on condition found visually.

Any rubbing strake fitted is physically inspected and tested for condition and security.

The deck is visually checked distortion and crazing around load bearing fittings.

Hand rails are tested for security.

Visual inspection of the type and size of drainage, locker lids security against water entering the boat, condition of gratings, condition and security of wheel pedestal if fitted, stress crazing and damage particularly around load bearing fittings. Hose clips and security of drainage checked.

4. Bulkheads and Structural Stiffening including Internal Mouldings:

All access to reinforcement structure is checked – opening lockers, under berths, lifting sole boards where not screwed down - for signs of corrosion. Visual and physical tests carried out as required. Bulkheads are carefully hammer sounded near the deck, hull and floors for



signs of corrosion and stress. Area around mast base or king post checked for compression issues.

5. Rudder and Steering:

The rudder is leant on with full body weight in either direction. It is examined for damage, splits and weeping. Metal parts are checked for corrosion. Hangings, bolts and shoes hammer sounded as applicable. Rudder tube is checked for security inside the hull. Play in bushes checked. Wheel steering, cables checked where visible, quadrant checked for security. Emergency tiller located

6. Stern Gear:

Propeller checked for damage and corrosion. Prop nut locking checked for security on shaft with hammer. Cutlass bearings checked for play by lifting shaft. P Bracket if fitted vigorously shaken for security in hull. Shaft visually checked while rotating for straightness and freedom to turn. Tested with magnet for quality of stainless steel. Rope cutter checked for security if fitted. Stern gland checked with mirrors for corrosion on underside. Flexible hosing checked for splits if fitted. Any clips checked with mirror and hammer. Security of stern gland checked. Stern tube security checked. All bronze is scraped and checked for de-zincification. (Put simply, bronze is made of copper and zinc amongst other things and through insufficient bonding to an external zinc anode at some time, the zinc in the propeller istes away through electrolysis and leaves just the copper and is weakened).

Or sail drive

Date of diaphragm checked if possible. Corrosion checked visually on leg. Security of diaphragm fixing bolts hammer tested and condition. Condition of seawater intake on sail drive visually checked and aggressively shaken for security. The Propeller is checked for damage and corrosion. The Prop nut locking checked for security. The Shaft visually checked while rotating for straightness and freedom to turn. Gear engagement checked forward and astern. Cables checked where visible.

7. Cathodic Protection:

Visual inspection of metal parts for galvanic action. Anode fixings hammer tested for security. The anodes are tested with an ohm meter for continuity to the propeller, shaft and stern gland and other under water metals. Bonding wires checked where seen. Close inspection for corrosion around all metal parts.

8. Skin Fittings, Seacock and other through Hull Apertures:

No valves are dismantled as part of the survey. Examination from outside and inside the boat. Check for de-zincification by scraping. 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. Check 2 clips are correctly fitted below water line on outlet spigot. Check to be lying fair to hull. Access to seacocks checked. Type of material suitable for location.

On Deck.

9. Main Companionway , Access to Accommodation and

10. Ports, Windows etc.:

These are all checked as applicable: to be lying fair to the deck, fixings are randomly tested with screw driver for tightness, frames checked for damage, a secure method of closure, correctly fitted hinges, glazing checked for damage, gaskets checked, the hatches are not hose tested for leaks.

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

Tested under full body weight where practical and deck and fixing checked for flexing and cracking. Underside checked where possible for seepage and reinforcing backing panels. Terminal ends checked for corrosion and damage and correct materials. Lashings checked for UV degrading. Type of wire tested. Life line attachment points are tested with a crow bar levered against a wooden block. Jackstay material type and condition.

12. Rigging Attachment Points:

All attachment points are 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, Checking for movement, distortion of deck, Check terminals follow line of rigging, Check for seepage via deck fittings, wood on bulkheads.

13. Ground Tackle and Mooring Arrangements:

Suitability for use, Visual inspection of anchors, chain, warp, shackles, cleats, Shackles condition and lock wired, Windlass security and operation

14. Other Deck Gear and Fittings:

Turning blocks, jammers, frames securely fixed, The winches fitted are all tested as far as possible but not under load, for play on base and are free to turn. Genoa and main sheet tracks and cars operated.



15. Davits and Boarding Ladders:

General condition, working order, Visual inspection of attachment points for stressing and cracks, Extends below the waterline for easy recovery of Man over board.

Rig.

16. Spars:

If the mast is stepped inspection is restricted to what can be reached and viewed from deck on the mast and rigging. If it is down, the upper areas will be checked as well. Visual check for corrosion, wear, Visual check for standing in column and undistorted, Mast heel checked for compression, Fittings checked where accessible for security and stress cracking, Anodising condition, Winches in working order, Spreader sockets for movement by swigging shrouds

17. Standing Rigging:

Check terminals, rigging screws, toggles and where the wire enters the terminals under 10x magnification for corrosion and any visible damage to wire, check visible the angles the terminals enter the mast in line with the rigging wires. Check for good articulation of toggles. Check split pins are in place if they can be seen. Operated the furling system and check extrusion for straightness and damage. – weather dependant.

18. Sails and Covers etc:

Checked in situation, if weather permits the sails will be hoisted and checked using a blunt instrument to check stitching. If in bags they will be inspected as far as possible.

Safety.

19. Bilge Pumping Arrangements:

Check Adequate for type of vessel, operated if possible, check if Strum boxes fitted, check clips secure, hose condition where accessible.

20. Fire-fighting Equipment:

Check service dates, check gauges, check adequate for vessel. Condition of cylinders, Check no Halon aboard, check for smoke detectors

21. Lifesaving and Emergency Equipment:

Condition, service dates, is it adequate for area of operation?



Engine.

22. Engine and Installation:

The engine is visually checked using camera and mirrors for difficult to access areas looking for condition and leaks of oil or coolant. Flexible mounts are hammer tested looking for security and bonding failures. The seawater cooling system is traced and all clips checked where seen. The sea water pump is checked for leaks. The mixing elbow is checked for corrosion. Any asbestos present noted, check for condition of compartment. If the boat is afloat the engine will be started and run underload up to operating temperature and checked for leaks, exhaust emissions – blue smoke = oil burning etc. Gears engaged, shaft heard and seen turning. If the boat is ashore, there is no point in running the engine as it cannot be put underload, gears cannot be engaged, and normally there is not a big enough water supply to run to temperature when not under load. The gears cannot be engaged because the bearings are water fed at some point, having a rotating prop under the boat is highly dangerous and yards often wont allow it in case the boat falls over. We will report what we can see and here and if there is anything untoward we will advise to have the engine checked by a service company. If you want us to start the engine and the boat is safely checked and we have permission we will.

23. Fuel System:

Tank condition visually checked where accessible for condition, Tank security checked, Type of pipe work and hoses marine grade, well supported and free from stress or damage. Shut of valve location and condition. Check if water separator fitted aft tank and condition. Check location and condition of site gauges. Check security of hoses and system for visible leaks or signs of. Correct stowage of petrol away from source of ignition.

Accommodation and onboard Systems.

24. Accommodation General:

Inspection in all lockers and cupboards for damp, cracks, issues. Condition of furniture and wood for valuation only, check if suitable ventilation for cooking and over night.

25. Gas Installation:

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. 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.

Check - Condition and efficiency of self draining bottle storage, Condition and efficiency of self draining bottle storage, Condition of flexible hose at bottle, Condition of regulator,



Connection to copper pipe Condition of copper pipe where accessible, Is pipework adequately supported and not under stress where accessible? Connections and Flexible pipe to cooker and other appliances, Is cooker gimballed? Are all appliances fitted with flame failure devices on all burners, and did these work properly under test? Are any appliances requiring flues properly fitted with same? Is a gas alarm fitted? Is each appliance fitted with an isolating tap, If fitted did leak bubble tester function?

26. Fresh Water Tanks, Delivery and disposal.

Check material and condition of tank. Condition and type of hoses where seen. If water aboard or permission to put water aboard pumps will be operated, hot water checked etc. Remember you are responsible to arrange for it to be drained down if the boat is not bought.

27. Heads:

General condition and security of fittings, hoses, clips. Check if Swan necks fitted in hoses, Condition of tanks. Operated if afloat.

28. Electrical Installation:

DC circuits

Check security of batteries, battery terminal insulation, battery visual condition. Ventilation. Type of circuit protection, Condition and quality of system and operation of items, Switch test of DC systems, Check vessel fitted with navigation lights of correct size, conform to regulations and securely mounted and seen working unless noted.

240v Circuits

Provision of Shore side 30ma RCBO earth breaker, Circuit breakers for all appliances of appropriate value, Condition and quality of system and operation of items.

29. Electronic and Navigation Equipment:

Make note of items aboard and check for operation.

30. Heating and refrigeration

The general quality of the installation.

Data Protection

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