



Marine Surveys UK

"Pragmatic Surveys in Plain English"

www.marinesurveysuk.com

[Yacht surveyor](#), Affiliate member

YDSA, Full member BMSE, MECAL

MCA coding surveyor

Marine Surveys UK, Matthew West
4 Brook Cottages, Mill Lane
Westbourne, Emsworth
Hants, PO10 8RT
07798554535

matt@marinesurveysuk.com

Survey Report no: [REDACTED]

Name of Vessel: "Unnamed"

Type of Vessel: *American* Hunter 22, FRP (Fibre Reinforced Plastic) Bermudian Sloop rigged, lifting keel trailer sailor.

At the request of:

[REDACTED]

This survey was carried out on [REDACTED] on it's trailer at a private house in Wimbourne Dorset. The above named being the owner of the vessel.

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



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.
- ✚ The vessel has been built on design drawings and stability has not been assessed by the surveyor.

Scope of Survey:

- ✚ This is an Insurance Survey and its purpose is to establish the structural 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.
- ✚ 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 and advisory notes:

- ✚ 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. These will not be made concerning cosmetic or other minor defects, although relevant suggestions may be made in the text.
- ✚ ***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.
- ✚ **Advisory notes** are suggestions to prevent a problem getting worse or general advice and do not have to be carried out before the vessel is used nor should affect the boats current insurability.

Conditions of Survey:

Vessel was examined out of the water on its trailer. The boat is undergoing a refit. The mast and rigging was on the ground. The interior was being worked on. 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.).
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, anodes and Skin Fittings

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.



1. Details of subject vessel:

Designed and built by Hunter Marine, PO Box 1030B, Route 441, Alachua, Florida 32615, USA, the Hunter 22 is a trailer sailor with lifting keel.

Manufacturers’ information from websites (not verified by measurement)

Length Overall	22’3”
Length of waterline	18’4”
Beam:	7’11”
Draft:	23” up 5’ down
Displacement	3400lbs
Ballast	1400lbs



Boat specific information

Registration	None
Number	HJN22 [REDACTED]
Year of Build	Assumed 1981 – Model built 1980 – 1986

2. Keel

- a) Keel is a lifting FRP moulded keel. The keel was retracted in the casing and on its trailer so access was restricted only to leading edge about 100mm each side.
- b) The keel has numerous layers of antifouling applied. A patch was removed to check surface. The area was hammer sounded and moisture reading taken.
- c) An area some 60mm up from the bottom of the keel for 200mm further sounded delaminated. The moisture readings on the keel are considered very high. The surface had no indication of wicking or blistering.
- d) Because of the restricted access I was not able to check the keel pivot or bushes.
- e) The inside of the keel housing was not visible and of the lifting system only the halyard is visible and the clam cleat.

Recommendation: Keel should be lowered, fully checked for delamination, pivot bushes checked. Depending on what is found suitable repairs carried out if required. Lifting mechanism should be operational.



3. Hull below Waterline:

- a) Construction of the hull below the waterline is solid FRP coated in blue antifouling.
- b) Light hammer sounding was carried out (not heavy enough to damage the anti-fouling) of the hull at regular intervals approximately 500mm spacing all over.
- c) The hull was visually checked for evidence of wicking or blistering.
- d) Moisture readings were taken and the hull can be considered dry.
- e) No evidence of major damage or repair was noted.

4. Topsides above Waterline including Rubbing Strake:

- a) Constructed of solid FRP, finished in white gel coat and now hand painted white and in the process of being flatted back.
- b) Top side moulding found fair (no signs of major distortion).
- c) The topsides were lightly hammer sounded and no indication of voids found. Moisture readings were taken and the top sides can be considered dry.
- d) No evidence of major damage or repair was noted.

5. Deck moulding:

- a) The deck is of cored FRP. Core material not known. The deck has been painted over moulded non slip material in blue and white.
- b) The whole deck was carefully tested underfoot for signs of delaminating or other structural defects.
- c) Stress crack around starboard aft stanchion post
- d) No evidence of major damage or repair was noted except above.

Advisory note: Stress cracks should be waxed or repaired to prevent water ingress in the laminates below.

6. Coachroof:

- a) Constructed as part of the same moulding as the deck and finished in the same way.
- e) The whole area was carefully tested underfoot for signs of delaminating or other structural defects.
- b) Hand rails were tested with a lever
- c) There is some flex around the mast base area. **See section 9.**

7. Cockpit:

- a) Constructed as part of the deck moulding and finished in the same way. There is a locker to port and a lifting lid to starboard.
- b) Drainage is via two FRP drains at the aft end. These are connected to rubber hose T piece below deck and exit the FRP drain under the transom. Clips were secure.
- c) The cockpit sole did not flex under foot.
- d) The port locker lid is hinged and has a gully around lip to prevent water ingress below.



- e) The starboard lift up cover is detached.

8. Hull/Deck Join:

- a) This is a mechanical joint with the deck placed on the flange of the hull and bolted through it through the aluminium toe rail. Bonding paste is used in the joint. Where there is no toe rail, bonding paste alone secures it.
- b) The transom hull deck joint is debonded, and can be lifted only held in place by the two fixings of the pushpit.
- c) No other areas appear to be lifting and no major damage was noted to the toe rail or hull and deck joint.

Recommendation: The transom hull deck joint should be reattached. By removing the push pit, it may be possible to lift the deck enough to apply epoxy bonding paste into the joint and clamping until set. In addition, it would be prudent to laminate strips of FRP across the joint internally.

9. Bulkheads and Structural Stiffening including Internal Mouldings:

This is a Monocoque (single box) construction and a number of components contribute to the overall structure.

- a) Bulkheads were carefully hammer sounded near the deck, hull and floors for signs of debonding and moisture ingress.
- b) All possible access was checked, lockers, under berths and the floors and inner mouldings for signs of delamination and cracks.
- c) The forward bulkhead which forms the anchor locker aft is no longer bonded to the deck.
- d) The main bulkhead is intentionally in two parts and has two functions. The shroud chain plates are attached to them and they also form part of the ridged shell to transfer the mast loadings to the hull. The starboard bulkhead was spike tested and found to be rotten around the chain plate area due to moisture leak from the deck where the chain plate passes through.
- e) The mast base is not directly above the king post (in this case box section wood on the front of the starboard bulkhead). The deck will have had a plywood pad bonded to it. The deck head area in front of the mast is compressed downwards.
- f) A starboard amidships floor (in this case, a plywood panel laminated to the hull but not extending to deck level) accessible from the saloon underberth forward locker is debonded from the hull.
- g) Under the cabin sole boards, there is evidence that some structure has been cut away. Not knowing this boat design, unless the owner can shed a different light, research on the web indicates that the boat should have some 1400lbs of lead ballast of which 1250lbs is ballasted in the hull. Is this area where the lead was bonded and has it been removed?





Recommendations: Anchor locker bulkhead, laminate to deck securely.

Starboard main bulkhead – Replace OR screw and glue marine plywood on both sides of a size approximately 500mm² and refit chain plate through this as well. On the back section, the chain plate will only be able to go through original bulkhead and new front support to keep in line with deck hole. To support mast base, jack up deck if possible, then suggest fitting L bracket of 5mm stainless steel to king post with fillet supports and fill any void with plywood pad.

Starboard floor – laminate to hull

Lead ballast – in the absence of detailed drawings or evidence to contrary from the owner 1250lb of ballast ingots will need to be fitted under cabin sole boards.

10. Rudder and Steering:

- a) The rudder is transom hung. The rudder is off the boat. The rudder blade is of moulded FRP.
- b) Pintals bearings are fixed solidly to transom and rudder box has no signs of stress.
- c) The base of the rudder blade has a split which I could not fully insert a surveyors spike. (60mm).

Recommendation: Bottom of rudder blade to be ground back to solid laminates and rebuilt with FRP and epoxy resin to prevent water ingress.

11. Stern Gear:

- a) The boat has an outboard motor which was not present for the survey.

12. Cathodic Protection:

- a) There are no hull anodes.
- b) The outboard should have suitable anodes.

13. 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 below water line on outlet spigot unless noted.
- ✚ Lying fair to hull unless noted

Below Waterline:

- a) Sink drain – Plastic skin fitting with bronze gate valve.
- b) Cockpit drain FRP – reported above.

Recommendation: Replace plastic skin fitting with Bronze. The reason being plastic can sheer off if struck and should not be used under the water line unless Tru Design ISO 9093-3.

Above waterline

- c) Bilge pump outlet – plastic. Hose is not attached. See section 26.

14. Main Companionway and other Access to Accommodation:

These were all checked;

- ✚ to be lying fair to the deck
- ✚ fixings were 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

All found ok unless noted. The hatches were not hose tested for leaks.

- a) Companion way is sliding Perspex and Perspex wash board in runners.
- b) Forehatch is 500mm² Aft hinged. 2 catches to close.

15. Ports, Windows etc.:

The same checks as section 14. above were carried out. All found ok unless noted. The ports and windows were not hose tested for leaks.

- a) Perspex in plastic frame, stainless steel fixing bolts.
No significant faults found.



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

These are tested under full body weight where practical, terminal ends checked, type of wire tested. Life line attachment points are tested with a crow bar levered against a wooden block.

- a) Stainless steel pulpit and push pit with single stainless steel 1 x19 wire guard rail.
- b) Port forward guard wire fixing is mild steel split ring.
- c) Pushpit mounting is loose. Strengthening plates below deck is wood which has rotted.



Pushpit backing wood

Recommendation: If pushpit is fitted, replace backing plates with marine plywood and large stainless steel washers

Advisory note:- Replace split ring with stainless steel split pin.

17. 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) Fore stay chain plate is lifting from deck and the stem bolts are angled upwards.
- b) Back stay chain plate is secure on transom.
- c) Shrouds chain plate fixings are intact but the bulkhead the starboard one attaches to is rotten. See section 9 above for recommendation. Water is leaking past the starboard chain plate deck fitting.

Recommendation: Remove forestay chainplate, strengthen backing plate – plywood with large penny washers or stainless steel plate. Clean bolt holes and fill with epoxy. Re drill when dry to correct size and refit chain plate.



18. Ground Tackle and Mooring Arrangements:

- a) None seen.

Recommendation: Fit ground tackle suitable to the area and type of operation used.

19. 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.

20. Davits and Boarding Ladders:

- a) Vessel has permanently attached stainless steel boarding ladder which extends below the waterline and is securely attached.

21. Spars:

- a) The mast was inspected on the ground. Alloy mast, single spreader rig.
- b) Spreaders are attached to mast bracket with mild steel split pins which are corroding.
- c) Boom was inspected on deck.
- d) No other significant issues noted to mast or boom. Some minor corrosion around rivets.

Recommendation: Replace spreader split pins with stainless split pins.

22. Standing Rigging:

- a) Rigging was examined where the wire enters the terminals under 10x magnification, the wires were bent back against the terminals to check for stress fractures..
- b) The rigging screws are stainless examined under 10 x magnifications.
- c) No broken strands visible nor excess corrosion seen.
- d) No age given to the rigging.

23. Running Rigging:

- a) Some seen aboard, good condition.

24. Sails and Covers etc:

- a) None aboard

25. Navigation Lights:

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

- a) White on stern – no power aboard
- b) Bi colour on bow – no power aboard
- c) Steaming light on mast – mast not fitted.
- d) Mooring light at mast head – Not fitted



Recommendation: *Vessel should be fitted with working navigation lights appropriate to the area of operation.*

26. Bilge Pumping Arrangements:

- a) New Manual bilge pump seen aboard but not fitted. Hose to outlet not clipped.

Recommendation: *Complete installation of bilge pump including correctly securing hose to outlet.*

27. Fire-fighting Equipment:

- a) Nothing seen aboard

Recommendation: *There are no regulations covering this vessel in private use. The Boat safety scheme recommends 1 Fire extinguishers of Powder type 1kg 5A 34B for this type of vessel. I would suggest that at least one extinguisher in service is fitted on board.*

28. Lifesaving and Emergency Equipment:

The following was noted aboard

- a) Nothing aboard

Advisory notes

- The RNLI operate an excellent free inspection and advice service concerning levels of safety equipment (SEA Check) and can be contacted on 08003280600 or via the RNLI website, www.rnli.org.uk.
- The RYA also publishes a booklet, G16, "The Boat Safety Handbook" and this specifies levels of Safety Equipment for different categories of use. Booklet is obtainable from nautical bookshops or direct from the RYA, www.rya.org.uk.

Recommendation - this vessel be equipped with safety equipment to the level appropriate to proposed use.

29. Engine and Installation:

- a) Engine is an outboard. It was not present.
b) Mounting bracket well secured with backing plate supporting inside of transom.

30. Fuel System:

- a) None seen.

31. Accommodation General:

- a) In process of restoration.



32. Gas Installation:

None fitted

33. Fresh Water Tanks and Delivery.

a) FRP tank, filler secure on deck.

34. Heads:

None fitted

35. Electrical Installation:

DC circuits

- a) Battery not aboard but fixing strap seen. Wiring generally OK with correct fixings,
- b) Panel with RCD breakers and switches.

240v Circuits

- a) Shore power socket wired directly to 13amp socket.

Recommendation: If shore power is fitted it must have an RCCB fitted along with RCD for each circuit.

36. Electronic and Navigation Equipment:

The following was seen aboard operating

- a) VHF radio – Compact Shore line no power to check
- b) Magellan GPS – No power to check.
- c) Compass – light not seen working.

37. Heating and refrigeration

- a) None fitted.



RECOMMENDATIONS and CONCLUSIONS:

List of Recommendations:

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

2. Keel

Recommendation: Keel should be lowered, fully checked for delamination, pivot bushes checked. Depending on what is found suitable repairs carried out if required. Lifting mechanism should be operational.

8. Hull/Deck Join:

Recommendation: The transom hull deck joint should be reattached. By removing the push pit, it may be possible to lift the deck enough to apply epoxy bonding paste into the joint and clamping until set. In addition, it would be prudent to laminate strips of FRP across the joint internally.

9. Bulkheads and Structural Stiffening including Internal Mouldings:

Recommendations: Anchor locker bulkhead, laminate to deck securely.

Starboard main bulkhead – Replace OR screw and glue marine plywood on both sides of a size approximately 500mm² and refit chain plate through this as well. On the back section, the chain plate will only be able to go through original bulkhead and new front support to keep in line with deck hole. To support mast base, jack up deck if possible, then suggest fitting L bracket of 5mm stainless steel to king post with fillet supports and fill any void with plywood pad.

Starboard floor – laminate to hull

Lead ballast – in the absence of detailed drawings or evidence to contrary from the owner 1250lb of ballast ingots will need to be fitted under cabin sole boards.

10. Rudder and Steering:

Recommendation: Bottom of rudder blade to be ground back to solid laminates and rebuilt with FRP and epoxy resin to prevent water ingress.

13. Skin Fittings and other through Hull Apertures:

Recommendation: Replace plastic skin fitting with Bronze. The reason being plastic can shear off if struck and should not be used under the water line unless Tru Design ISO 9093-3.

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

Recommendation: If pushpit is fitted, replace backing plates with marine plywood and large stainless steel washers

17. Rigging Attachment Points:

Recommendation: Remove forestay chainplate, strengthen backing plate – plywood with large penny washers or stainless steel plate. Clean bolt holes and fill with epoxy. Re drill when dry to correct size and refit chain plate.

18. Ground Tackle and Mooring Arrangements:

Recommendation: Fit ground tackle suitable to the area and type of operation used.



21. Spars:

Recommendation: Replace spreader split pins with stainless split pins.

25. Navigation Lights:

Recommendation: Vessel should be fitted with working navigation lights appropriate to the area of operation.

26. Bilge Pumping Arrangements:

Recommendation: Complete installation of bilge pump including correctly securing hose to outlet.

27. Fire-fighting Equipment:

Recommendation: There are no regulations covering this vessel in private use. The Boat safety scheme recommends 1 Fire extinguishers of Powder type 1kg 5A 34B for this type of vessel. I would suggest that at least one extinguisher in service is fitted on board.

28. Lifesaving and Emergency Equipment:

Recommendation - this vessel be equipped with safety equipment to the level appropriate to proposed use.

35. Electrical Installation:

Recommendation: If shore power is fitted it must have an RCCB fitted along with RCD for each circuit.

Conclusions:

The boat is currently undergoing a refit and many items are missing. The hull is in good condition and once the paint is flatted completely on the topsides and cleaned up will look good. Clearly many items are currently missing but if the recommendations are carried out she will be a perfectly useable boat with many more years left in here although the expense of completing may be more than the boat is worth.



STATEMENT OF VALUATION

The "**FAIR MARKET VALUE**" is the most probable price in terms of money which a vessel should sell for in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus. The price is based on what the buyer would receive after brokerage commissions.

Implicit in this definition is the action of a sale at a specified date and the passing of full title from seller to buyer under conditions whereby:

- a. Buyer and seller are typically motivated.
- b. Both parties are well informed or well advised, and each is acting in what they consider their own best interest.
- c. A reasonable time is allowed for exposure in the open market.
- d. Payment is made in terms of cash in Pounds Sterling or in terms of financial arrangements comparable thereto; and
- e. The price represents a normal consideration for the vessel sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.
- f. It is an assumption that the vessel is V.A.T. paid in EEC.
- g. The Fair market Value is what the owner would expect to receive AFTER brokerage fees.

In considering available information I have found at 8 examples of this model for sale in recent years, all in the USA. Details of boats on the market are appended. The current global financial situation and availability of credit also has an effect on value.

In her current condition with the items seen fair market value would be around £500.

With all the work carried out in the report as well as bringing her back together and with a good hull finish, Fair Market Value could be between £3000 and £4000.

Year	Advertised	Where	Broker
1982	\$2,850 sold	USA May 2005	Private without trailer
1981	\$2,100 sold	USA March 2011	Private with trailer
1981	\$4,250	USA June 2010	Private excellent cond' with trailer
1981	\$2,885	USA Feb 2007	Private



1982	\$4,800	USA May 2011	Private excellent with trailer and lots of gear
1983	\$6,500	USA Aug 2010	
1983	\$3,200	USA April 2011	Private excellent without trailer or outboard
1983	\$895 Sold	USA Jan 2009	Needed fixing up