



Marine Surveys UK

"Pragmatic Surveys in Plain English"

www.marinesurveysuk.com

[Yacht surveyor](#), Affiliate member

YDSA, Full member BMSE, MECAL

MCA coding surveyor

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Survey Report no: [REDACTED]

Name of Vessel: "[REDACTED]"

Type of Vessel: Fairline Targa 27, Petrol Motor boat,
fast planning hull, FRP construction.

At the request of:

[REDACTED]

This survey was carried out on the [REDACTED]
Eastney Cruising Association Club, Langstone Harbour,
Portsmouth, Hampshire, UK. 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. The
recommendations and conclusions are at the end of the report.**



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.
- ✚ The report focuses on issues and does not describe all items or tests carried out.

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.
- ✚ 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 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.
- ✚ ***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 on hard standing at the above premises, the weather was dry. No special conditions affected the survey other than as described in the text.



Information is reported in the sections below, followed by summary and recommendations. A separate valuation is supplied.

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. Ground Tackle and Mooring Arrangements.
18. Other Deck Gear and Fittings.
19. Davits and Boarding Ladders.

Safety.

20. Navigation Lights.
21. Bilge Pumping Arrangements.
22. Fire fighting Equipment.
23. Lifesaving and Emergency Equipment.

Engine.

24. Engine and Installation.
25. Fuel System.

Accommodation and onboard Systems.

26. Gas Installation.
27. Electrical Installation.
28. Electronic and Navigation Equipment.



Year of Build 1990 Source Owner

2. Hull below Waterline including keel:

- a) Construction of the hull below the waterline is solid FRP, it has a hard chine (edge of hull and topsides) with 3 spray rails, coated in old blue antifouling
- b) The vessel was examined sitting on wooden blocks in two areas with metal supports on the sides.
- c) 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.
- d) The hull was carefully examined, paying particular attention to the spray rails and the antifouling was removed at random around the hull below the water line. While scraping I was looking for evidence of wicking or blistering and once removed areas were checked with 10x magnification.
- e) Moisture readings were taken using a capacitance type moisture meter of Sovereign Quantum type, operating in both shallow and deep reading modes.

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

Air Temperature:	15.8°C
Relative Humidity:	59%
Time ashore	Unkown
In summary the weather conditions for obtaining moisture readings were good	

Readings were as follows:

Meter	Range below waterline.	Range above waterline.
Sovereign Quantum, Scale A, 0-100 Shallow mode	16 - 18	10 - 13
Deep Mode	14 - 15	9 - 14

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.

The difference between readings above the water line (normally dry) and below should be noted.

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.
- f) No signs of major damage or repair were noted to the hull, no distortion, no stress cracks were found.

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

3. Topsides above Waterline including Rubbing Strake:

- a) Constructed of solid FRP, with a single spray rail, finished in original white gelcoat.
- b) Top side moulding found fair with no signs of major damage or repair noted.
- c) The topsides were lightly hammer sounded and no indication of voids found. Moisture readings were taken and recorded as above.
- d) The rubbing strake is black rubber in alloy frame and has minor distortions, corrosion and minor damage around it in various places.

4. Deck moulding:

- a) The deck is of solid FRP with moulded in non slip pattern in white. Access to the underside was greatly restricted by headlining panels.
- b) The whole deck was carefully tested underfoot for signs of delaminating or other structural defects.
- c) No major faults found.

5. Coachroof and wheel house mouldings:

- a) Constructed as part of the deck moulding in the same way. White gel coat with moulded in non slip pattern.
- d) The whole area was carefully tested underfoot for signs of delaminating or other structural defects.
- e) No major faults found.

6. Cockpit:



- a) Constructed as part of the deck moulding in the same way. There is a hatch in the sole for access to the engines. There is a screwed down hatch over the fuel tanks.
- b) Drainage is direct overboard through the transom door and through two drains located in the gulley around the engine hatch.
- c) The helm seat is moulded and secure.
- d) Behind the aft seat, 3 large holes have been cut in the FRP.

Advisory note:- The 3 large cut outs in the cockpit aft seat backrest lead directly into the engine compartment. They are located well above the cockpit sole and the cockpit would have to have some 600mm of water in it for it to cause a down flooding problem. It is very unlikely that these will cause a problem of water ingress into the boat. They also mean that the engine room cannot have the air supply cut off should a fire start, however the engine compartment is not sealed at the front sides and air can come in from the accommodation. I would advise to seal off but because of the above it is not a recommendation i.e obligatory.

7. Hull/Deck Join:

- a) This was viewed in the anchor locker, engine compartment only. It is a mechanical and bonded joint.
- b) No signs of damage or leaks noted.

8. 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 de-bonding
- b) All possible access was checked, lockers, under berths and the floors and inner mouldings for signs of delamination and cracks.
- c) No faults found.

9. Rudder and Steering:

- a) Steering is via the stern drives. I was not able to access behind the wheel. The Volvo Penta cable operates a ram on the starboard outdrive that links to the port one. All connections were checked and tapped with a hammer. Although there is some corrosion on the arms to the stern drives, they operated on full lock port and starboard.
- b) There are two hydraulic trim tabs. These are firmly mounted. They were not operated. No sign of leaks.

10. Stern Gear:

- a) These are two Volvo Penta stern drives (A31A) with duo props. The drives have been recently painted. No visible signs of corrosion externally. The propellers are either new or refurbished and in good condition. They were not fully fitted and being worked on.



- b) The bellows were checked with mirrors and the clips struck with a hammer. No faults were noted.
- c) The hydraulic pump units for the trim have corroded frames but are still firmly attached. These were not operated.
- d) The fixing bolts have steel backing plates, are Nyloc nuts, minor surface corrosion. All struck firmly with a hammer, nuts and bolts and found secure.
- e) There is surface corrosion on the stern drives viewed from within the boat, linkages have been greased.

Advisory notes:- The hydraulic trim motor frames are unsightly and will continue to corrode if not cleaned and painted.

11. Cathodic Protection:

- a) These were all removed and in process of being replaced by the owner. There are bolted directly to the stern drives and trim tabs.

12. Skin Fittings and other through Hull Apertures:

Some thru hulls may not be reported below but will be with relevant systems sections. No skin fittings or valves were dismantled as part of this survey but the following routine tests were carried out:

- ✚ Examination from outside and inside the boat. Checked for de-zincification
- ✚ All valves open and closed to their full extent where possible.
- ✚ Any fixing bolts hammer tested where accessible.
- ✚ Bodies of metal valves or sea cocks tested with a hammer inside the boat and external parts hammer tested outside the boat.
- ✚ Fittings aggressively tested inside the boat for security in the hull.
- ✚ Hose clips inspected and hoses aggressively tested for security. Best practice is for 2 clips correctly fitted below water line on outlet spigot.
- ✚ Lying fair to hull unless noted

No faults found unless noted.

Below Waterline:

- a) Holding tank outlet – Located engine compartment - Bronze skin fitting, Ball valve. Single clip only.
- b) Plastic Log – located engine compartment
- c) Plastic depth – located engine compartment
- d) Toilet direct outlet – Located under aft cabin berth – Bronze skin fitting, gate valve – green corrosion on valve but passed tests above. Single clip.
- e) Toilet Seawater inlet – Located under aft cabin berth – Bronze skin fitting, DZR ball valve – Valve very clean but skin fitting very pitted



Recommendation:- Replace toilet sea water inlet skin fitting with Bronze or DZR material.

Above waterline

- f) Cockpit drains – Plastic skin fittings on each topside aft quarter. (side of boat towards back end) . Single clips
- g) Engine bilge pump – Plastic skin fitting port side aft quarter. Single clips.
- h) Hot water system pressure release valve – Plastic skin fitting port side aft quarter. Single clips.
- i) Galley sink drain – port side topsides, plastic skin fitting. Single clip.
- j) Mid bilge pump – port side metal.
- k) Holding tank breather - port side metal
- l) Water tank breather – starboard side metal.

13. 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

No faults found unless noted. The hatches were not hose tested for leaks.

- a) Companion way is side hinged door with lip 50mm above cockpit level and fold over companionway hatch. Secure domestic lock.
- b) Saloon hatch is aft hinged Bowmar plastic hatch. 2 catches to secure.

14. Ports, Windows etc.:

The same checks as section 14. above were carried out. No faults found unless noted. The ports and windows were not hose tested for leaks.

- a) Fixed *Plexiglass* in alloy frames in coachroof.
- b) Opening Lewmar *Plexiglass* in heads.
- c) Cockpit windows glass in alloy frames, some perishing of rubbers.

15. 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) Combined side rails and pulpit in stainless steel tubing, single top rail, bolted through deck. No access to underside.
- b) Single guard wire fitted in a) above. Minor corrosion at front end starboard side.
- c) No life line attachments seen.
- d) Cockpit area has hand rails and a stern gate.



- e) No faults noted.

16. Ground Tackle and Mooring Arrangements:

- a) Main Anchor is Danforth type, steel, no weight marked, believe to be 8KG. 8mm galvanised chain. No laid out and checked link by link. No signs of corrosion. Bitted end not seen.
- b) Lewmar pillar windlass, secure to deck. Not operated.

Advisory note:- The anchor stem is slightly bent but will still operate but not as efficiently as designed. Ground tackle (Anchoring gear) is suitable for inshore cruising in favourable weather. For anything more an additional anchor should be carried and extra chain and warps which can be advised on if required. Ensure bitter end of chain is tied off as not seen.

17. Other Deck Gear and Fittings:

- a) Wiper blades are slightly corroded. Not operated.
- b) There is a full canopy over the cockpit with clear screens making it suitable for use under power. This is showing signs of weather deterioration.

18. Davits and Boarding Ladders:

- a) Vessel has permanently attached stainless steel boarding ladder which extends below the waterline and is securely attached. The wooden or plastic steps are missing.

Advisory note: Fit steps to prevent metal bending when used.

19. Navigation Lights:

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

- a) White to stern on radar arch
- b) Port and starboard on coach roof – not working.
- c) Steaming light on radar arch
- d) All around white on radar arch

Recommendation:- Port and starboard navigation lights not working. Intermittent fault on port light. Both must be working before operating vessel after dusk or in reduced visibility.

20. Bilge Pumping Arrangements:

- a) Main saloon shallow bilge has Attwood V625 electric pump with float switch attached. Operated dry with float switch.
- b) Engine compartment has Jabsco 1100 electric bilge pump. It has a float switch. It operated manually from helm position but not on float switch. Float switch was able to turn and get stuck under hoses.
- c) There is no manual bilge pump fitted.



Recommendation:- Best practice to prevent pollution at sea is not to have float switches operating in the engine compartment while engines are running but a bilge alarm should be used instead visible or audible at helm. However when moored up unattended a float switch is allowed. Engine bay float switch should be made operable on a 2 way switch for manual or auto and or a bilge alarm fitted.

Vessel should carry a bucket with rope attached to use as bilge pump and fire fighting.

Advisory note:- Carry roving manual bilge pump.

21. Fire-fighting Equipment:

- a) 2 x automatic 1KG 5A34B powder fire extinguishers fitted in engine – no dates seen.
- b) 1 x manual 1KG 5A34B powder fire extinguishers fitted under helm station – no dates seen.
- c) Owner advised that they have not been serviced in 5 years since owned.
- d) No fire blanket at galley.

Recommendation:- All Fire extinguishers should be replaced or serviced as 5 years since last. Fire blanket should be fitted at galley. Bucket with rope carried.

22. Lifesaving and Emergency Equipment:

The following was noted aboard

- a) Nothing seen.

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.

23. Engine and Installation:

- a) Boat is fitted with twin Volvo Penta 431 Petrol engines 205HP
- b) Engine numbers Port 1101556 [REDACTED], Starboard 1101671 [REDACTED].
- c) No signs of oil or water leaks on the engine or in the bilge. Engine were dry, missing some paint and have some surface corrosion.
- d) No service records were seen.
- e) Engines are mounted on flexible mounts bolted to FRP engine bearers moulded to the hull. No signs movement found.



- f) The engines were not run up.
- g) Compartment has air extraction fans which operated and sign on helm to operate for 5 minutes before starting engines and after shutting down.

Advisory note:- Suggest engines and engine bay given through degreasing and wash out and then spray rust inhibitor on all metal parts as a minimum, or clean and repaint anything with surface corrosion and rust inhibit all non painted parts.

24. Fuel System:

- a) Fuel tanks were mounted outside of engine compartment in locker under cabin sole which was screwed in place and could not be checked.
- b) Remote shut off for each tank mounted easily accessible in cockpit area.
- c) Copper pipes from tanks to valve and from valves to engines were checked. There is surface corrosion on the copper pipes in the engine compartment. This was scraped back to shiny metal below with minimal pitting where seen. Could not check behind clips.
- d) Connections from copper pipes to flexible metal braided hoses. Surface corrosion noted at joints, no signs leaks but engine not run.
- e) No signs of leaks at filters or engines.

Recommendation:- Copper petrol pipes should be cleaned up with wire brush and carefully checked for leaks or replaced.

25. Accommodation General:

- a) Dry and clean with no signs major damage or leaks from rain water.

26. Gas Installation:

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

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 Comprehensive information on standards and best practice. 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	Mounted in anchor locker at bow with drains direct overboard	
Age and condition of flexible hose at bottle.	No date seen, black BS marked hose, no signs perishing when bent.	
Age and condition of regulator	Fair condition, no faults seen.	
Connection to copper pipe	Correct gland to copper pipe.	
Condition of copper pipe where accessible	Where seen good.	
Is pipework adequately supported and not under stress where accessible?	Could not access except under galley sink where it is secure.	
Connections and Flexible pipe to cooker and other appliances	Behind fixed panels – not seen.	
Is cooker gimballed?	No	
Are all appliances fitted with flame failure devices on all burners, and did these work properly under test?	Two burner hob with FFD’s tested and operated. Oven and Grill with FFD. No tested.	
Are any appliances requiring flues properly fitted with same?	N/A	
Is a gas alarm fitted?	No	Consider fitting gas alarm.
Is each appliance fitted with an isolating tap	Yes under sink.	
If fitted did leak bubble tester function?	No	Consider fitting leak detector.

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



27. Electrical Installation:

DC circuits

- a) 3 batteries in engine compartment, two in FRP boxes with lids, one in plastic battery box. Terminals tight. Secured in place. Ventilation direct to engine space.
- b) Isolation switches by batteries for each battery and windlass.
- c) Fairline switch panel in cabin with electric circuit breakers for all circuits and switches at helm position.
- d) 12v wiring appears original and professional.

240v Circuits

- e) Socket under helm for 220V shore power
- f) No RCD breaker seen
- g) Fairline switch panel with circuit breaker and individual breakers and switches for Battery charger, immersion heater, sockets and a spare.
- h) All professionally installed.

Advisory note:- I strongly advise the fitting of an RCD (explained below). Since the boat was built (and therefore not a legal requirement for this boat) it has become law in the regional craft directive and domestic wiring to have a Residual current circuit breaker fitted directly after the shore power lead before the circuit breaker.

*A **residual-current device (RCD)**, similar to a **residual current circuit breaker (RCCB)**, (formerly known as an Earth leakage circuit breaker or ELCB) is an electrical wiring device that disconnects a circuit whenever it detects that the electric current is not balanced between the energized conductor and the return neutral conductor. Such an imbalance is sometimes caused by current leakage through the body of a person who is grounded and accidentally touching the energized part of the circuit. A lethal shock can result from these conditions. RCDs are designed to disconnect quickly enough to mitigate the harm caused by such shocks although they are not intended to provide protection against overload or short-circuit conditions.*

28. Electronic and Navigation Equipment:

The following was seen aboard operating

- a) Compass
- b) Garmin GPS Map 198C sounder
- c) Log – turned on but not seen operating
- d) VHF Cobra Marine DSC.

The above is adequate for purposes of navigation.



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.*

12. Skin Fittings and other through Hull Apertures:

Replace toilet sea water inlet skin fitting with Bronze or DZR material.

19. Navigation Lights:

Port and starboard navigation lights not working. Intermittent fault on port light. Both must be working before operating vessel after dusk or in reduced visibility.

20. Bilge Pumping Arrangements:

Best practice to prevent pollution at sea is not to have float switches operating in the engine compartment while engines are running but a bilge alarm should be used instead visible or audible at helm. However when moored up unattended a float switch is allowed. Engine bay float switch should be made operable on 2 way switch for manual or auto and or a bilge alarm fitted.

Vessel should carry a bucket with rope attached to use as bilge pump and fire fighting.

21. Fire-fighting Equipment:

All Fire extinguishers should be replaced or serviced as 5 years since last. Fire blanket should be fitted at galley. Bucket with rope carried.

22. Lifesaving and Emergency Equipment:

This vessel be equipped with safety equipment to the level appropriate to proposed use.

24. Fuel System:

Copper petrol pipes should be cleaned up with wire brush and carefully checked for leaks or replaced.

Conclusions:

The structure of the vessel is good for her age, there are some signs of salt water corrosion occurring in the engine bay which should be attended to stop getting worse but very few faults found. No service records seen. As far as insurance requirements go, there are few to be done, I would advise the owner to consider implementing the advisory notes in the text.



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