

'Yacht Name'



# ANCHOR HOUSE MARINE SURVEYS

## **Limited Outer Bottom Survey Report**

**Axopar 37**

(Yacht Name)

Trafalgar Wharf, Portchester, UK

Wednesday 22<sup>nd</sup> August 2018

Prepared on Behalf of the Purchaser



## CONTENTS

Summary -----	3
Circumstances -----	4
Description of the Yacht -----	5
Hull -----	6
Cathodic Protection -----	6
Hull Openings and Fittings -----	7
Stern Gear -----	8
Steering Gear-----	8
Other Issues -----	8
Sea Trial Results -----	9
Statement -----	10

'Yacht Name'

## Summary

'██████' is an Axopar 37 Version R, aft cabin type. She is in very good condition having been very lightly used with minimal hours. She appears not to have been altered from her original design. Main summary of points is as follows:

1. There is a small GRP defect / void immediately forward of the bow thruster on the port side.
2. The outer bottom laminates were tested for moisture content and the resulting readings were in the low to medium scale in the main. There are areas of medium to high moisture recorded around the bow thruster base moulding and the keel, midships to aft. Internally, this was due to excessive bilge water forward and a certain amount aft.
3. There is a paint crack along the keel base of the bow thruster moulding only.
4. The bilge water forward is due to a slowly leaking fresh water tank connection.
5. Both trim tab anodes require replacing.
6. The inboard hydraulic hose to the steering ram on the port engine requires tightening.
7. The searchlight on the radar arch is inoperable.
8. Both windscreen washers are inoperable with the starboard pipe detached and broken in areas.

I am satisfied that following completion of the work detailed in this report under the following headings and subject to a continued program of routine and specialist maintenance, '██████' will continue to give good service for many years.

Within this report principal repair recommendations are graded for your information according to priority as:

<b>"Urgent Recommendation"</b>	Must be done urgently before re-floating and certainly before any use is made of the vessel.
<b>"Recommendation"</b>	Should be done at the earlier of next docking or within twelve months or such other time scale as may be specified.
<b>"Suggestion"</b>	For information and consideration but not particularly significant to safety at this stage.
<b>"Note"</b>	For information only.

'Yacht Name'

## Circumstances

The survey and sea trial was carried out on the 22<sup>nd</sup> August 2018. [REDACTED] was inspected ashore at Trafalgar Wharf, Portchester and the sea trial took place on the Solent, outside of Portsmouth harbour. The weather at time of inspection was overcast, 20°C with light south westerly winds. The survey was carried out on the instructions of [REDACTED] to ascertain the condition of the yacht below the waterline and to produce a report prior to purchase.

No fastenings were drawn and no paint was removed above the water line externally. Due to the good condition of the hull and age of the yacht, no of paint was removed below the waterline to confirm coatings. Moisture meter readings were taken to determine the moisture content of the hull laminate. The hull was examined externally above and below the water line and internally where accessible, elsewhere internal mouldings prevented examination. The cabin soles, bunk boards hatches and portable joinery were removed as necessary to gain access to the interior of the vessel. The engine was not stripped, the tanks were not opened unless stated, nor their capacities checked.

**Please note:** This condition report is correct as per the date of survey stated above and as such, it cannot be guaranteed for any time after the survey was undertaken.



‘Yacht Name’

## Description of the Vessel

██████ is an Axopar 37 of all glass fibre construction, deep to shallow ‘V’, twin stepped hull. She has a fine entry and a transom stern, carrying her maximum beam aft of amidships.

She was built by Axopar Boats OY, Helsinki, Finland in April 2016 to a 2016 design.

The vessel’s principle dimensions as supplied are set out below:

<b>Length overall</b>	11.20m
<b>Beam</b>	3.30m
<b>Draft</b>	0.85m (to props approx.)
<b>Displacement</b>	4 tonnes (approx.)
<b>Fuel capacity</b>	730 litres
<b>Water capacity</b>	n/a
<b>Engine</b>	Twin Mercury Verado 350 outboards
<b>Stern gear</b>	n/a
<b>HIN</b>	FI AXOD7019 D616



<p><b>Hull</b></p> <p><i>Hull:</i> All original GRP construction, deep ‘V’, twin stepped planing hull running into a shallow ‘V’ bilge with a shallower run aft to a transom stern. She has bilge chines and spray rails moulded at and below the water line.</p> <p><i>Hull Coatings:</i> The outer bottom is coated with grey antifoul paint and this is smooth and well adhered to the underlying GRP in general. There are some small areas forward where the antifoul is thinner and lightly detaching.</p> <p><i>Gel Condition:</i> The gel appeared smooth overall with no obvious defects or signs of any blistering or delamination. However, there is a small defect / void immediately forward of the bow thruster on the port side of the keel.</p>  <p><b>Fig.1</b> – defect / void in bow thruster base moulding.</p> <p><i>Moisture Level:</i> Moisture readings were taken with a ‘Protimeter’ Aquant 2 meter at more than 80 positions over the outer bottom area and these produced readings mainly in the low to medium scale. There were high areas recorded (around 180 – 200) around the bow thruster base moulding, especially forward and along the keel, from midships to aft. Internal inspections showed varying levels of bilge water present. The scale used is 0 – 160 (dry) / 161 – 200 (medium) / 201 – 999 (wet).</p> <p><b>Cathodic Protection</b></p> <p><i>Anodes:</i> There are the following installations:</p> <ul style="list-style-type: none"><li>• 6 x specialist anodes on the transom shield base, trim ram bases, above the cavitation plate and inset into the underside of the cavitation plates per engine.</li><li>• 2 x circular anodes bolted through the trim tabs.</li><li>• 1 x cone anode on the bow thruster propeller.</li></ul>	<p><b>Recommendation</b> Replace the antifoul at the next service ashore and give consideration to applying an epoxy coating to the GRP to ensure maximum protection from moisture ingress.</p> <p><b>Recommendation</b> Repair the defect / void in the bow thruster base moulding and investigate under paint crack for possible GRP damage.</p> <p><b>Recommendation</b> Remove all bilge water and allow the areas to dry out and monitor for any future ingress.</p> <p><b>Recommendation</b> Repair the leaking fitting on the fresh water tank as this is causing the bilge water forward.</p>
---	---

**Bonding:**

This was good.

**Wastage:**

All anodes are wasted by:

- Engine – 5% approximately.
- Trim tab – 50%+ approximately.
- Bow thruster – 15 – 20%.



**Fig.2** – trim tab anode.

**Recommendation**

Replace both trim tab anodes.

**Hull Openings and Fittings**

**Sea Water Coolant Inlets:**

The engine coolant inlets are located on the leading edges of the outboard drive legs and these were clean and clear of debris / fouling.

**Toilet Inlet / Outlet:**

- The toilet inlet is a grill bronze fitting and is located forward on the starboard side. This is secure and in good condition. Internally, this is fitted to a good condition, bronze bodied, ball valve seacock which operated satisfactorily.
- The toilet outlet is a 18mm bronze fitting and is located forward on the port side. This is secure and in good condition. Internally, this is fitted to a good condition, bronze bodied, ball valve seacock which operated satisfactorily.

**Grey Water Outlet:**

The galley / heads sink outlet is an 18mm bronze fitting and is located far forward on the port side. This is secure and in good condition. Internally, this is fitted to a good condition, bronze bodied, ball valve seacock which operated satisfactorily.

**Scuppers / Other Outlets:**

There are 2 x 18mm bronze fittings located on the underwater transom sections, one per side. These are secure and in good condition. Internally, these are fitted to good condition, bronze bodied, ball valve seacocks which operated satisfactorily.

*Transducer:*

There is a 'Garmin' wand type transducer securely fitted to the transom base to outboard of the starboard engine.

**Stern Gear**

*Propellers:*

The propellers are 'Mercury' Revolution 4, stainless steel, four blade, outward turning types. There are signs of some minor corrosion in some areas as well as some very light blade edge damage. Serial numbers are as follow:

<b>Port Propeller</b>	857031A46 23P LH
<b>Starboard Propeller</b>	857030A46 23P RH

*Securing Arrangements:*

The propellers are secured to the shafts via locknuts and the installations are secure with no movement detected. Both propellers rotate smoothly by hand.

*Outboard Engine Securing Arrangements:*

Each outboard engine is fixed to the transom via twin brackets and six bolts which are all secure with no signs of movement evident externally. There are signs of very light surface corrosion on the various fixing points.

**Steering Gear**

*Mechanism:*

The outboard engines are turned via a hydraulic ram on the port engine, connected to the power steering system. There is a securely fitted stainless steel link bar connecting both 'tillers' and the installation is secure.

*Connections / Fittings:*

The inboard hose connection to the steering ram on the port engine is partially loose.

*Bow Thruster:*

There is a 'Sidepower', five bladed, electric bow thruster fitted. There was minimal backlash detected, the installation is secure and this operated satisfactorily.

**Other Issues**

The following issues whilst not part of the survey were noted during inspection of the yacht and during sea trial:

- There is a screw missing from the forward stainless steel tank securing bracket on the starboard side. This tank is accessed from the forward deck hatch and under the lockable sole board giving access to the bilge.
- The searchlight on the navigation mast is not operable.
- Both windscreen washers are inoperable and both pipes are either detached and / or broken. The pump can be heard working.

**Recommendation**

Tighten the loose fitting – potentially use a tab washer.

'Yacht Name'

### Sea Trial Results

Model		Hull Number			Date	
Axopar 37		FI AXOD7019 D616			22/08/2018	
Engine Make	Model	Rated HP	Gear Make	Model	Ratio	
Mercury	Verado 350	350	-	-	-	
Sea Condition		Wind Speed / Direction		Weather		
Slight		SW F1-2		Overcast, dry, 20°C		
Test Location			No of Passengers	Enclosure		
Solent			3	Hardtop		
Hull Bottom	Fuel Tank		Water Tank	Holding Tank		
Clean	25%		50%	n/a		
Port Engine Hours		Starboard Engine Hours		Generator Hours		
43.9		43.8		n/a		

Tests	
Engine start excess mechanical noise	None – immediate start and quiet.
Excess smoke at start up	None.
Acceleration	Smooth and progressive.
Acceleration from standstill	Smooth and progressive.
Water temperature max	75°C (approx.).
Oil temperature max	85°C (approx.).
Voltage min / max	Readings all noted within 14.2V – 14.4V.
Recorded top speed / rpm	41 knots at 4,100 (approx.).
Trim tab or similar	Good.
Crash stop	Good – no flooding of side decks / into accommodation.
Turning circle at cruising rpm	Good.
Thruster / engine turns	Slow to turn with bow thruster with heavy battery drain, engines better but require more than idle speed.
Vibrations	None noted – smooth at speed.
Navigation lights	Operable.
Anchoring	n/a
VHF operation	Operable.

Noted Equipment Defects Arising From Trials
The searchlight on the navigation mast is inoperable. Both windscreen washers are inoperable.

'Yacht Name'

## Statement

This report is a true and accurate description of [REDACTED] as far as could be ascertained at the time of the survey, but no guarantee is given or implied. We have not inspected equipment, woodwork or other parts of the structure which are not included within this report or were covered, unexposed or inaccessible and we are therefore unable to report that any such part is free from defect.

The purchaser should satisfy themselves that all systems which could not be tested or inspected at the time of survey are operable.

The yacht has not been examined for compliance with any code, rule or craft directives and no opinion as to such compliance is expressed or implied.

This report is provided for the sole use of the instructing client named within this survey report and no liability of any nature will be accepted by the surveyor to any third party.

This report is submitted without prejudice.



Rupert Keyzar  
**AssocIIMS**

Anchor House Marine Surveys  
26<sup>th</sup> February 2019

## Anchor House Marine Surveys

9 Martley Gardens, Hedge End, Southampton, Hampshire, SO30 2XA, United Kingdom  
**Tel** – +44 (0)7595 954882 **Email** – rupert@anchorhouse-marinesurveys.com

