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Our Time and Experience
is our Stock in Trade

RE: "ALTAIR", 1996,
96' S&S-Derecktor Aluminum Sloop

RECOMMENDATIONS and COMMENTS

Notes:

A. The items marked with an asterisk (★) should be taken care of for safe operation and/or insurability.
B. Some of the following items describe systems that are either not operational or not functioning properly.
C. Some of the other items are considered to be issues of general maintenance.
D. There are 30 pages of survey TEXT that are an integral part of this report.

GENERAL:

1. Red and green running lights to NOT meet COLREGS. For a vessel of this waterline length, when under motor power, the Red and Green lights should be aft of the White Steaming Light. Common issue with sailing vessels of this era.

2. Drawings: Attempt to find the following drawings:
   -Tank location & capacity plan
   -General Arrangement
   -Rudder
   -Shaft Line
   -Docking plan

3. Recommend regular oil sampling for the following equipment:
   -Main engine
   -Transmission
   -Hundested gearbox
   -Two Generators
   -Bow Thruster Hydraulic pack
   -Lewmar sailing system power pack
   -Passarelle power pack
   -Crane power pack
   -Main steering power pack

SAFETY EQUIPMENT & SYSTEMS:

1. Safety Plan: Provide a safety plan with the vessel general arrangement and escape routes and location of all gear and equipment.

2. ★ Fire alarm system is not in service as two fire alarm sensors are being replaced so the system is operational. They are aboard now and to be installed. Prove system.

3. ★High level bilge alarm system shut off until fire alarm system is back in order. Prove ALL.

4. There are battery operated smoke detectors throughout. Ensure that detectors in the guest cabins are carbon monoxide type.

5. Engine room ventilation dampers. One damper not operational and awaiting parts. Repair and prove.

HULL BOTTOM:

1. Anti-fouling buildup is evident on the hull bottom. Prior to next anti-fouling coating suggest soda-blasting the build-up off. Note that epoxy barrier coats are in good order.

2. Damage to anti-fouling in a few locations support pads have been placed in dry docking. Fairing is damaged and needs repair prior to new anti-fouling.

3. The spur cutters have been removed from the propeller shaft. If they are not to be re-installed consider as zinc collar on the propeller shaft.

4. Water blast and clean and paint up inside all through hull fittings. Remove 8 x external grates prior to cleaning.

5. This vessel has NO zinc anodes in the thruster tunnel or on the thruster housing or on the rudder. Has not been an issue since new. Comment only. No action recommended.

STEERING:

1. The autopilot settings are such that the rams are very active and every few seconds there is a movement. Suggest adjustments to the pilot sensitively to reduce this.

2. The Autopilot solenoids and the whine of the autopilot motors can be heard in the aft cabin on port side of the bunk. Research methods to reduce noise.

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3. Rudder removed at Marine Group in California 2023. Bearings and seals reportedly replaced but NO details or drawings available. Comment only

TANKS:

1. 4 x black and gray tanks are due to be opened and flushed and cleaned.

2. Computank system for fresh water tanks is no longer supported. One tank does not work. Replace the tank gauge system.

3. Fresh water tank port side opened for examination. There has been pitting in these tanks in the past. A few pits are deep and could be 20% wasted. The tanks have a good coating system with good adhesion. No action required.

WATERMAKER:

1. Hour meter not operational. Repair of replace & prove.

GRAY WATER SYSTEM:

1. There is no method or fitting to pump the gray water to shoreside. Common on all yachts of this age. Consider a system to pump gray water to shore side. Have seen this down on other vessels with a "Y" fitting and valve into the black shoreside discharge hose.

BILGES & BILGE & FIRE PUMPS:

1. For the most part bilges are unpainted and many of the lower areas have had pitting in the past. There have been deep pits that have been puddle welded. Pitting is not considered severe. If the vessel was classed I do not feel the class surveyor would request any re-plating. They would more than likely request a Belzona type coating in the lower pitted areas. It is difficult to prepare old aluminum and to get bilge coating to adhere. Continue to keep bilges clean and dry with no coating system except where already coated in center engine room.

2. Both bilge and fire pumps were run through the forward fire hose. There are no vacuum or pressure gauges on the pumps. Both are operational but neither are exceptionally powerful.

3. Suggestion: Consider a portable pull-start diesel bilge-fire pump carried in the lazarette.

4. Forepeak Bilge: Some minor pitting noted. Wate blast and clean and examine.

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5. Mast bilge: Some pitting noted under refrigeration plant. There is NO access to the bilge under the refrigerators in this area. Consider and access panel in the bottom of the fridge to examine bilge. Also to properly blast and clean bilge consider removal of he fridge compressors.

6. Insulation and perforated aluminum sheathing hold the insulation in place is in poor condition on the forward ER bulkhead and outboard of the refrigeration plant. The insulation sits on stringers that have evidence of corrosion. Cut back the perforated sheathing and insulation 4 inches. Treat the aluminum stringers. Apply new sheathing an insulation.

7. Engine Room Bilge: Some pitting noted. Deep pit noted in flat section above keel in aft bilge suction area. Water blast engine room bilges. Concentrate on inaccessible bilge inboard of starboard engine stringer.

8. Guest bilge and lazarette bilge have minor pitting but good fairly good condition and no deep pits. Minor cleaning.

COMPRESSED AIR SYSTEM;

1. Air compressor is original from Kahlenberg. It is operational but noisy and old. Could be refit. Suggested. Replace with modern hydrovane compressor

REFRIGERATION:

1. Determine refrigerant type in fridges. Not marked and not in any literature.

2. Galley fridge lower has outboard compartment that is closed with a partition, Reason not determined,

3. Extensive time and expenses have been put into the lower freezer forward of the engine room. The outboard fridge has a huge holding plate and was originally a freezer. Despite all the time and expense they were not successful in making it into a freezer however it is a good refrigerator. Comment only. Note the only freezer is a domestic household chest freezer in the lazarette.

4. Suggestion: Consider defrost systems installed on all 4 cold boxes.

AIR CONDITIONING / VENTILATION

1. Galley and control room fan coil fins corroded. Anticipate replacement both units.

2. Galley has as inline heater. It was not proven.

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3. Armaflex insulation on chill water plumbing: Major replacement program should be planned on particularly ion the engine room. At the fan coils there is minor replacement and repairs necessary. Suggest removing handles on isolation valves and insulating valve stems. Secure handles nearby.

PLUMBING – PIPING - PUMPS

1. There are several locations throughout where flexible hose I connected to aluminum plumbing and there is corrosion on the aluminum piping. Remove the hoses, clean corrosion or cut pipe shorter if possible. Replace flex hose and use marine sealant when re-connecting.

2. Several locations where sea water plumbing could be double hose clamped. Review all systems and apply clamps where necessary.

MAIN ENGINE - TRANSMISSION:

SEE Separate report – Certified Diesel. They recently did a full re-build on the main engine.

1. Gear oil pressure gauges not working both stations. Check gauges and senders and replace if necessary and prove both.

2. The 35-amp alternator on the main engine was overcharging (33-volts DC). Investigate and re-condition or replace. Note that this unit charges the electronics bank and not the start bank.

3. Noise-Vibration: At a certain pitch the main engine has an evident noise and minor vibration. We experienced this a few times during the sea trial and the captain could find this vibration by adjusting pitch and throttle. We experiences this first at about 1800 RPM and then again at 1400 RPM, Captain reports that this is new. The undersigned and the engine surveyors did not determine the reason. It may have something to do with the engine exhaust at a certain engine load.

   With a knowledgeable captain an owner would never know this issue existed. Ideally further investigate.

4. The engine surveyors were not able to take back pressure readings because the pyrometer prove was not able to be removed and that is the only threaded fitting in the system. The engine was surveyed in 2006 and found to have higher back pressure than CAT recommends. This is a common issue on many sailing yachts of this size and type. Comment only. No action recommended.

5. Evidence of exhaust leak: Black soot on exhaust blanket over spray ring elbow. This is reportedly an old leak from before engine rebuild. Suggestion: Replace blanked with new black blanket like rest of system.

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GENERATORS: SEE ELECTRICAL HEADING

1. The 40 kW generator has 16000 hours with no history of rebuild. The unit load tested fine and have just been serviced. With these hours and the age of the unit must anticipate at least a top end overhaul and possibly a full rebuild.

2. The 25 kW generator has close to 15000 hours. The unit load tested fine. It is much newer than the 40 kW. Considering the hours must anticipate at least a top end overhaul and possibly a full rebuild.

3. The 40 kW generator is in a full sound shield. It is not exceptional loud in the main salon (52 dB) but it can be heard. The 25 kW generator is very quiet. Therefore the 40 kW is not run that often. Comment only

ELECTRICAL:

Notes:

Note 1: The ★ symbol indicates a recommendation for priority repair, as a hazard to personnel or equipment may exist.
Note 2: Various onboard electrical systems were not viewed during this visit, unless mentioned below.

Shore Power:

1. The shore power input breakers cable connections are made without the use of pins of ferrules. Re-connect the shore power input breakers using pins, ferrules or similar to reduce the risk of damage to the conductors.

2. The forward 100 amp square D shore power input breakers input and output connections show contamination. Current inject all four shore power input breakers to verify the trip characteristics are sound, anticipate replacements.



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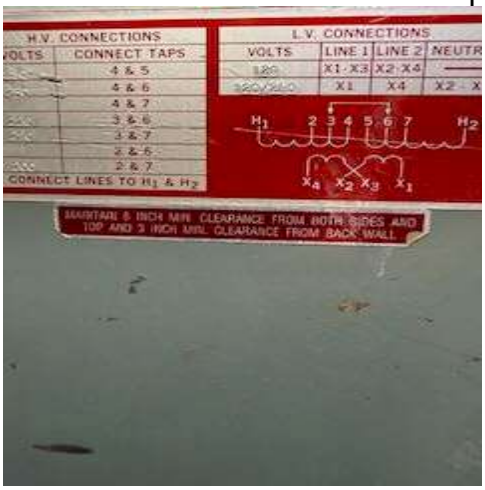
3. The forward port and starboard shore power inlets were not exercised during this visit. Demonstrate forward shore power inputs operational.

4. The shore power cable is not fitted with strain relief; the cable was found wrapped around a shore side cleat. Provide shore power strain relief.



5. During shore power use the cable was found coiled up on the dock, this is not recommended as this can cause unnecessary heat buildup in the cable. Flake out cable on the dock when is use.

6. The port and starboard shore power inputs are conditioned through the Tierney isolation transformers; the manufacture requires 6 inches clearance from both sides and 3 inches of clearance from the top for optimal cooling and heat dissipation, these requirements have not been provided. Provide free air space around these transformers as required.



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7. The port and starboard shore power inputs are conditioned through the Tierney isolation transformers; the transformers are original from build, although operational, it is suggested safety could be improved by the following recommendation. Clean and megger test shore power transformers windings.

8. The port and starboard shore power inputs are conditioned through the Tierney isolation transformers; the transformers are both fitted with transformer tap contactor enclosures; slight dust accumulation ca be seen on these contactors. Clean shore power transformer contactors.

9. The shore power input protection breakers are not E.L.C.I. (Equipment leakage Circuit Interrupter) or G.F.C.I. (Ground Fault Circuit Interrupter) to aid in preventing E.S.D. (Electrical Shock Drowning).

   (*If AC current leaks into water, it creates an electric field that can paralyze swimmers and cause drowning, even at low voltages that might not trigger a breaker.)* Suggestion: Install G.F.C.I shore power input breakers.

<u>Main Switchboard</u>:

1. The main switchboard buss A and B amp readings were fluctuating, occasionally the buss A L-2 would read 0 amps. Further review this condition and rectify, anticipate current transformer replacements and or meter replacements.



2. All main switchboard connections should be checked for proper torque as per fastener design and construction. Re-tighten all switchboard connections. This procedure to be performed annually within the main switchboard and all distribution boards to aid in reducing excessive heat caused by loose connections.

3. The main switchboard buss "A" port shore power supply available lamp was not illuminating. Further review this condition and rectify and further ensure all supply indicator lamps are operational.

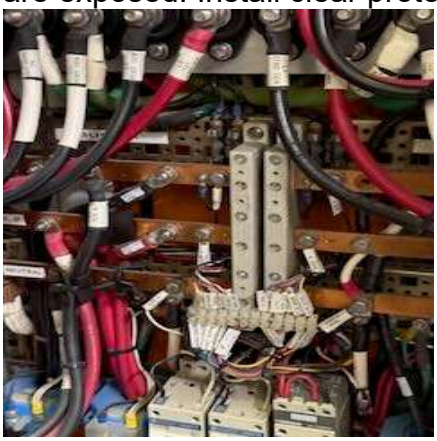
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4. ★The main switchboard starboard shore power input breaker is not secured to the provided din rail. Re-secure this breaker.



5. Unidentified light gauge conductors are connected to the port and starboard main switchboard mounted shore power breakers. Identify these conductors and verify exclusive over current protection has been provided.

6. ★ The main switchboard permanently energized buss bars and connection posts are exposed. Install clear protection covers.



7. ★The main switchboard VAC and VDC sections consumer breakers are fitted too hinged doors, these doors are not fitted with ground links. Install purposed ground cable links to both doors.

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8. ★Multiple Merlin Gerin series 9 consumer breakers in the main switchboard and throughout the vessel's distribution panels are not secured to the provided din rails, the associated securing clips have failed, this is a common occurrence with breakers of this age. Replace breaker securing clips, anticipate breaker replacements.



9. ★ The main switchboard consumer breaker supply buss combs are not fitted with end caps; this condition was found common practice throughout the vessels distribution system; picture below shows the buss combs at the guest inverter and 240 VAC breaker rails this is a tracking hazard. Install supply buss comb end caps.



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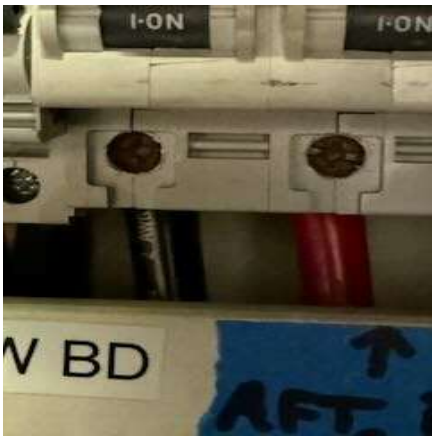
10. Dust accumulation can be readily seen on the main switchboard consumer breakers and door switches. Clean the entire switchboard.




11. Multiple main switchboard mounted consumer breakers amp rate is not eligible. Replace these breakers.



12. ★The main switchboard starboard shore power input breakers conductor securing hardware show contamination. Replace this breaker.



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13. ★The main switchboard 24 VDC section permanently energized fuse connections and solenoid connections are exposed. Install clear protection covers.



14. Cable duct covers are missing from both the main switchboard VAC and VDC sections. Replace cable duct covers.

15. The main switchboard mounted 100 amp starboard shore power over current protection breakers running temperature was captured at 54.5ºC / 129.9ºF. Further review this condition, verify connections are clean and tight, anticipate breaker replacement.



16. The main switchboard consumer breaker door has open breaker voids. Seal all open breaker voids.

17. The main switchboard is not fitted with door hold open devices. Provide door hold open devices.

18. No insulated mat has been provided in front of the main switchboard. Provide an insulated mat.

19. The main switchboard is not fitted with hand rails. Install insulated hand rails.

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20. The main switchboard is original, the internal components ae showing signs of age, although operational safety could be improved by the following suggestion. Suggestion is made to upgrade the main switchboard both VAC and VAC sections.

Generators:

1. The generators are not fitted with condensation heaters to aid in preventing damage to the rotating rectifies and associated connections. Suggestion is to install generator electrical end anti-condensation heaters.

2. The generators sea water cooling supply hoses are secured using a single hose clamp. Install a second (back-up) hose clamp.

3. The port 25 Kw generators local 125 amp over current protection breaker is connected without the use of pins or ferrules, the securing screws bears down directly on the copper conductors. Re-connect this and all similarly connected breakers using pins ferrules or similar to reduce the risk of damage to the conductors.



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4. Evidence of salt water intrusion can be readily seen in the port generators local 125 amp over current protection breaker enclosure. Trace source of water intrusion and eliminate.



5. Both generators local over current protection breakers enclosure lid clasps are broken/ missing. Replace enclosure lid closure clasps.

6. ★The starboard 40 Kw generators electrical ends output connections are nut and bolted then wrapped with electrical tape, which is not rated for the expected current, in addition the connections are not secured. Re-connect the generators output connections using approved post type connections rated for the expected currents.



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7. The port and starboard generators run hours are 14,758 for the 25 Kw set and 16,000 for the 40 Kw set, the windings were visually reviewed, the rotor and stator windings were found contaminated consistent with the number of hours run, including the rotating rectifiers and rotating diode packs.

   It is recommended that the port and starboard generator electrical ends be separated from the prime movers, chemically clean the rotor and stator windings, and polish the rotor and stator plates, then megger test. On acceptable megger test results replace the bearings and rotating rectifier assemblies.

8. During load testing of the generators the voltage and frequency was slightly below the nominal values. Adjust both generators voltage regulators and governors.

Batteries:

1. The vessels battery banks were not load tested. Load test all battery banks regardless of age.

2. The vessels battery banks are not secured against vertical movement. Provide means to secure all onboard batteries against vertical movement.

3. The house and electronics battery banks are not stored in battery boxes which are resistant to spilled battery electrolyte. Install purposed made type battery boxes for all onboard battery banks or at minimum coat the inner linings of the existing boxes with an electrolyte resistant material.

4. The generators and main engine starter and slave solenoid and alternator connections are exposed. Install suitable "boot" type protection covers.

5. The vessels battery banks are not identified. Label all battery banks.

6. The forward Victron energy 3000va charger/ inverter is not operational, including the main switchboard mounted remote panel. Repair or remove this system if no longer required.

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7. The aft Victron energy 3000Va charger inverters coaction cover is missing exposing permanently energized connections. Replace inverter connection cover.



8. The main engine mounted charge alternators voltage output was high a > 33 Volts, the alternator has now been disconnected. Service this charge alternator, anticipate replacement.

9. The electronics battery banks V+ connection was found loose with can lead to excessive heat and fluctuating voltage. Tighten this connection.

10. The lazarette Passerelle 24 VDC hydraulic pump motors connections are exposed. Provide suitable protection covers.



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11. The engine starting batteries permanently energized connection posts are exposed. Install insulated battery post protection covers.



Grounding:

1. ★No means to suppress the effects of a lightning strike. Provide means to suppress the effects of a lightning strike or at minimum install OBO type surge suppressors.

2. ★The propeller shaft is not grounded, resistance to the hull was captured at 6.5 Ω Ohms. Install propeller shaft brush gear and ensure the resistance from the propeller shafts to the vessels ground system is less than < 1 Ω Ohms.



3. ★The vessels is not monitored for VAC ground faults. Re-configure the vessels grounding system as a T-NS system, that meaning a. separate protective earth (PE) and neutral (N) with a single neutral to ground connection on the main switchboard, this configuration will allow for ground fault monitoring.

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4. ★The 12 and 24 VDC system is designed to be a floating system, meaning no intentional connect to earth (P.E.), the system has a negative (V-) ground fault. Trace and remove VDC ground faults.



5. ★All of the vessels GFCI (Ground Fault Circuit Interrupter) breakers throughout the vessel did not trip when tested using the receptacles test switches. Rectify this condition.

6. No local ground connections were sighted for the 40 Kw generator. Ensure both generators are fitted with exclusive ground connection cables.

General:

1. Relay retaining clip is missing from the control relay mounted in the AC meter box outboard of the main switchboard. Install a relay retaining clip to aid in preventing the relay from working loose.



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2. Multiple illuminated control switches are mounted to the VDC section of the main switchboard; several bilge pump and fan switches did not illuminate when energized. Rectify these conditions.

3. An unidentified Airpax type breaker secured to the inboard side of the main switchboard is exposed. Identify this breaker and re-connect within an approved electrical enclosure.



4. The machinery space Lewmar contactor control enclosure located outboard of the washer and dryer has the supply cable gland securing nuts adrift, in addition one of the glands as two cables in to a gland designed for a single cable. Rectify these conditions.



5. The water makers century supply pumps cooling fins and capacitor housing are showing signs of corrosion. Meger test this pump motor.

6. The wheelhouse 120 volt protection breakers supply buss comb is not fully inserted into the top of the protection breakers. Re-secure this supply buss comb.

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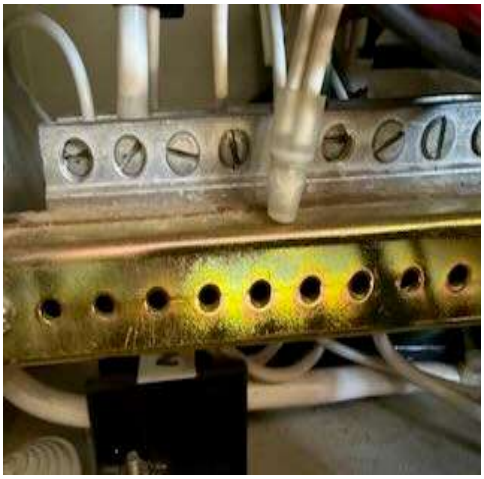
7. The starboard aft engine room mounted air compressors pressure switch connections are exposed and the supply cable is not fully encapsulated into the provided cable gland. Rectify these conditions.



8. The engine room forward water heater connection housing cover is adrift. Secure this connection cover.

9. The vessels power quality with regard to harmonic distortion was not reviewed. Perform a harmonic analysis especially as frequency drives are used in the air conditioning system.

10. The wheelhouse 120 volt distribution panels neutral conductors are not connected using pins or ferrules. Re-connect all similarly connected common neutral and ground buss conductors using pins, ferrul4s or similar to reduce the risk of damage to the conductors.



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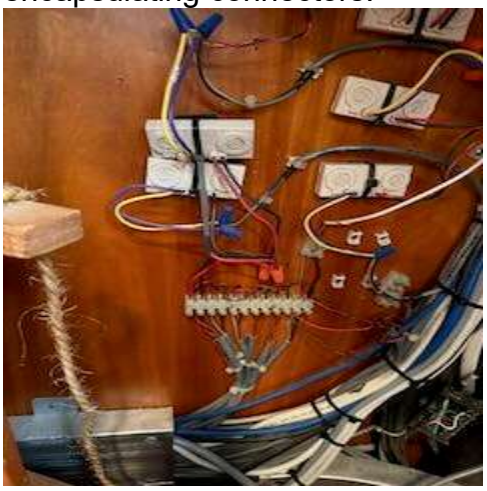
11. ★The crew overhead lights are connected to "Choc" block type connectors without the use of pins or ferrules, this type of connection does not fully encapsulate the connections. Replace this type of light connector with approved fully encapsulating type.



12. The wheelhouse frequency meter was not operational. Rectify these conditions and demonstrate operational.

13. Sections of rope lights are burnt out in the master cabin. Replace all burnt out rope lights.

14. Light fixture associated modules located behind the saloon seating are connected using house hold wire nuts. Re-connect these modules using approved fully encapsulating connectors.



15. The wheelhouse 25 kw metering for L-L and L-N voltages was not operating. Rectify these conditions and demonstrate operational.

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16. ★No cover has been provided over the propellers rotating shaft at the coupling assembly. Provide safety cover.



17. Evidence of water leaks can be seen at the refrigeration compressors overboard discharge valve. In addition these discharge hoses are single hose clamped, generally a backup second hose clamp is fitted. Further review this condition and rectify.



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18. The port generators fuel supply hose fittings are showing contamination. Replace all contaminated fuel line fittings.



19. ★The starboard engine room fan damper is missing. Replace this damper and demonstrate operational.

20. There is a Hull Potential meter in the control room above the switchboard. It reads in DC Volts. Out meter reads 1.19 Volts DC. This meter reads 0.98 volts DC at seal. It is reading slightly low. Could be the age of the transducer. No action required. Just post that it reads slightly low.

21. Old light fixtures in forepeak. Remove fixture & associated cable.

Cable:

1. Cables lack chafe at the inboard side of the main switchboard; in addition the cable entry is not sealed. Provide additional cable support and chafe protection and seal the cable entry.

2. Cables lack support and protection forward of the guest distribution panels. Provide additional cable support and protection.

3. The wheelhouse distribution panels cable entries are not sealed reducing the enclosures required I.P. rating. It is understood this condition is the yacht builder's standard however it is suggested safety could be improved by the following recommendation. Seal all openings and or install cable glads for protection against moisture intrusion and to prevent the spread of fire/ smoke/ gas.

4. The through deck cable glands are not sealed, this is common practice throughout the vessel. It is understood this condition is the yacht builder's standard however it is suggested safety could be improved by the following recommendation. Seal all openings to for protection against moisture intrusion and to prevent the spread of fire/ smoke/ gas and to contain electromagnetic interference (EMI).

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5. Romex type cables run next to Lewmar contactor control box outboard of the washer and dryer is not supported. Provide additional cable support and protection.



6. ★Multiple cables run throughout the vessels machinery space and interior are secured to plumbing or hydraulic lines and generally lack support and chafe protection. Further review the vessels entire cale raceways and support arrangement, anticipate extensive additional support and chafe protection.

7. The supply cable to the port engine room exhaust fan is line spliced. Re-connect this connection within an approved electrical enclosure.



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8. Cables associated with the aft capstan foot switches are excessive, unprotected and lack support and protection. Trim these conductors and provide adequate support and protection for these cables.



9. Wiring service is continuing to the sailing system, the associated PLC and connection enclosure doors are left in the open position. Close these enclosure doors, complete sail system works and demonstrate operational.

10. An unidentified circuit has been connected to a "Choc block" type connector and has fallen out of its connection enclosure and is now free swinging in the engine room. Rectify this condition.



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11. Cables run into the main engine local operator panel lack chafe protection. Install cable chafe protection.



12. It was not verified if the watertight penetrations from the lazarette it to the house are sealed. Further review this condition and verify all watertight bulkhead penetrations are sealed.



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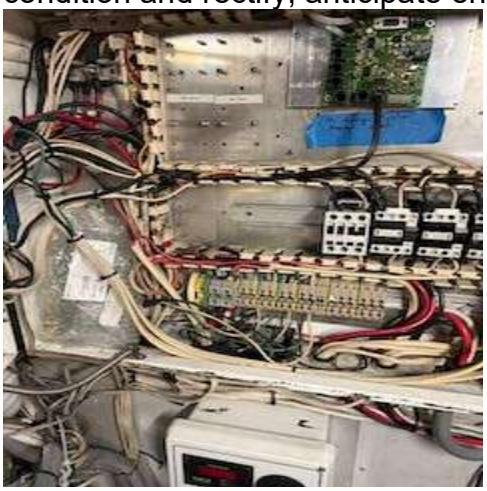
13. Cable running through the engine room framework lack chafe protection. Provide additional cable chafe protection.

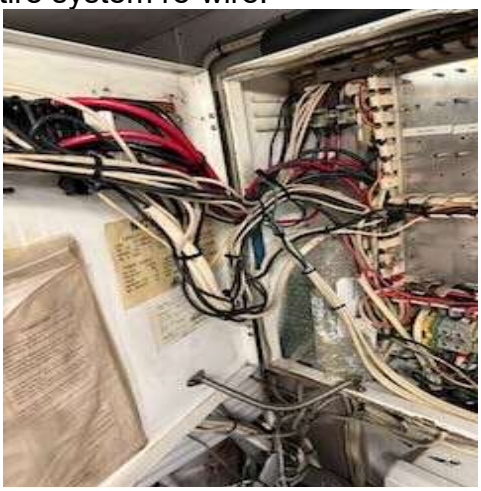


14. No sacrificial zincs have been fitted to the rudder, propeller shaft ad thruster tunnel. Suggestion is to fit sacrificial zincs in these areas.

Air Conditioning:

1. The internal and external wiring condition of the air conditioning system control enclosure is considered poor; cale lack support and protection. Further review this condition and rectify, anticipate entire system re-wire.





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2. The air conditioning compressors 50 amp double pole over current protection breakers running temperature was captured at 56.1.0ºC / 131.8ºF. Further review this condition, verify the connections are clean and tight and the over current is sized for the expected loads.



3. The air conditioning compressors supply cables in the main control enclosure has a running temperature was captured at 60.8.0ºC / 141.4ºF. Further review this condition, verify the connections are clean and tight and the cables are rated for the expected load.



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4. The air conditioning system main enclosure door mounted breaker connections are exposed. Provide suitable protection cover.



5. The air conditioning system main enclosure door mounted breaker "ON" lamps have been disconnected. Re-connect these indicator lamps or remove if no longer required.

6. The air conditioning system main enclosure door is not grounded. Ground this door.

7. Supply cables into the air conditioning compressors frequency drives are not chafe protected. Install cable chafe protection.

8. Sections of air conditioning chilled water line insulation are showing condensation; this can be readily seen at the compressor discharge lines. Further review all chilled water line insulation, anticipate insulation replacements.



<u>COMMUNICATION and NAVIGATION EQUIPMENT</u>:

1. Swing compass and provide deviation card.

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2. Prove the compass light.

3. Old Gyro-Trac flux gate compass system has not worked for some time. Could be removed.

GROUND TACKLE:

1. Port windlass motor: No hoses connected and needs replacement. Hydraulic motor is obsolete. Replace motor with NEW. Anticipate cost of this.

2. Sea water chain wash has been removed. Fire hose on foredeck can be used for this. No action necessary. The original chain wash pump controls and cabling should be removed.

3. There is a single hand-held wandering lead for the windlasses. Suggestion: Acquire another hand held wandering lead.

HYDRAULIC SYSTEM:

1. Hydraulic block outboard to starboard in the forepeak very rusty. Remove partition and re-condition hydraulic block,

2. Lewmar hydraulic power pack. The control box is fitted with a printed circuit board. If this fails the winch system goes down. Lewmar is out of business. Attempt to acquire a back-up printed circuit board./

3. There is still ongoing work on the original Nirvana sail control system. This includes some PLC replacement and re-conditioning of old panels as well as new Maretron components. Compete project.

SPARS – RIGGING – SAILING GEAR:

1. The mast was recently stepped and there is still ongoing work on the sailing systems. Local controls for the boom mandrel and vang are a work in progress. After work is complete plan for a sailing trial with the rigger Paul Hite, who was in charge of stepping the mast.

2. We have invoiced from Tony Hawker for the rigging. For underwriters; Please request Paul Hite to issue a report that he unstopped and re-stepped mast and note all jack pressures on report and that rig is tuned and ready.

   If Tony Hawker did any NDT on fittings that should be in the invoices as well.

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3. The captive main sheet winch works but it has not been used for years as it is a constant issue with overrides. (There is NO hydraulic feeder block to strip the line off and keel in tension). Either re-engineer this system to work properly or remove the winch.

4. If the captive main sheet winch is removed, Suggest upgrading the Lewmar 68 to a larger winch like the 111.

5. Spinnaker pole has not been used for years. Consider removal.

6. Aft diagonal shrouds are on the wrong side of the lifelines. Re-run lifelines.

7. There are 5 aluminum winch bases on the 68 & 66 winches that have cracks or breaks. These are anodized aluminum. Reason for the cracking is lack of maintenance years ago. Recommend EBAY of use sailing gear shops to acquire new bases. Not considered a structural issue.

8. Harken headstay furler recently rebuilt. Leaking oil/grease onto deck. Replace seal and rectify.

TENDER:

1. Tender is operational. It is a 2004 model and has had new tubes in the past and the outboard engine is only a few years old. The tender is old tired an not yacht quality. Suggestion. Consider a new tender.

CRANE:

1. Suggestion: Certify the crane, cable and tender lifting strops. Not mandatory for a private vessel.

EXTERIOR PAINT:

1. Hull topside paint: Last full paint 2021 in Anacortes WA. Above rub rail is only a few years old and cap-rail removed when this was done.

   Blisters at anchor chocks, transom and a few other location. Big touch-up evident starboard midships above boot stripe. Small ongoing repair port midships rub rail. Exhaust soot for main engine is into the paint under the transom. Anticipate cost and down time of re-painting hull topsides in next few years.

2. Superstructure paint: Last full paint 2021 in Anacortes WA, Holding up well with minor blistering. Flat sections have lost gloss. Anticipate cost and down time of re-painting.in next few years.

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INTERIOR:

1. The interior varnish a lot of signs of UV damage around all the hatches. Ideally strip and re-varnish all.

GALLEY and APPLIANCES:

MORE PHOTOS



Anti-fouling – build-up

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External Sea Strainers



Zinc anodes – Fair condition



Through hull – growth up inside



Prop shaft – room for anode or cutters

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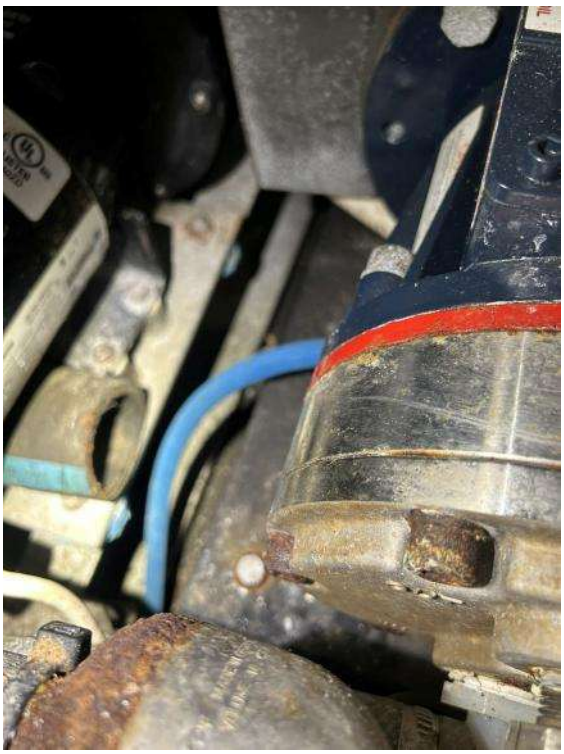
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Perf. Sheathing – ER bulkhead



Corrsion under insulation



Open unused pipe at watermaket pump

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Unsecured cabling



Corroded fan coil



Dripping chill water valve



Open junction box at steering

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Old light fixture forepeak



Un-used control box – forepeak



Unsecured cable forepeak



Gland thru bulkhead – re-seal

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Rusty condition of operational windlass



Rust hydraulics – chin locker area



Corrosion-aluminum pipe



Poor condition – Armaflex insulation

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Armalflex poor condition



Shaft seal – NO double hose clamps



Plug welds back of gray black tank



Corrosion on aluminum pipe under hose

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Water tank – old pitting – coating good

END

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