

SALOMON MARINE SURVEYS

SAMPLE PRE-PURCHASE CONDITION SURVEY

Lagoon 450 F • Fictional demonstration vessel

INDEPENDENT • TECHNICAL • EVIDENCE-BASED

Report information	Sample details
Vessel	M/Y? No — S/Y ATLANTIC LIGHT (fictional)
Make / model	Lagoon 450 F
Model year	2014
HIN / CIN	FR-CNB45XXXX414 (fictional)
Client	Sample Client
Inspection location	A Coruña, Spain (fictional sample)
Inspection date	14 August 2026 (fictional)
Surveyor	Niels Salomon Hauerslev
Report reference	SMS-SAMPLE-L450F-001

DEMONSTRATION REPORT — NOT A SURVEY OF AN ACTUAL VESSEL

This report is a worked example showing the intended Salomon Marine Surveys reporting standard. Vessel identity, observations, measurements, photographs and conclusions are fictional.

STRUCTURE FOLLOW-UP

PROPULSION
SERVICEABLEELECTRICAL MATERIAL
ITEMS

PURCHASE CONDITIONAL

1. Executive Summary

ATLANTIC LIGHT is presented in generally serviceable cruising condition with a well-equipped domestic and energy installation. The principal purchase issues in this sample are structural documentation and local evidence around the forward bulkhead area, age and documentary status of the saildrive diaphragms, elevated deck moisture around two fittings, and deficiencies in parts of an aftermarket lithium/solar installation.

Purchase-decision category	Sample conclusion
Critical structural concern	☐ No ☐ Yes ☒ Uncertain pending specialist/documentary follow-up
Major propulsion concern	☒ No immediate operational defect observed ☐ Yes
Major electrical / lithium concern	☐ Critical ☒ Material installation findings
Material moisture / core concern	☒ Localised ☐ Widespread
Specialist review recommended	☒ Yes — forward structural area and electrical remedial work
Overall	Purchase may remain viable, but structural evidence and specified material findings should be resolved or priced before completion.

1.1 Priority Findings

Priority	Finding	Recommended action
1	Forward bulkhead / mast-compression area: incomplete documentary trail plus local cracking at secondary finish/tabbing interface	Obtain Lagoon/dealer repair history and specialist structural review before purchase completion.
2	Saildrive diaphragm age not evidenced	Verify replacement date; budget replacement if documentary evidence cannot be produced.
3	Elevated moisture around port forward deck hatch and starboard chainplate/deck penetration	Open up/repair source as required; confirm core condition.
4	Lithium/solar refit: protection and cable-support deficiencies	Marine electrician to rectify and document installation.

1.2 Purchase Perspective

The sample vessel is not rejected on the basis of model reputation. The purchase recommendation turns on vessel-specific evidence: accessible structure, documentary status, observed cracking, moisture indications, machinery condition and the quality of modifications. A satisfactory structural follow-up and credible repair history would materially improve the risk assessment.

2. Scope, Method & Limitations

Sample scope: afloat inspection, haul-out, representative systems testing and sea trial. Non-destructive inspection only. Interior linings and permanently bonded furniture were not removed. Mast inspection was from deck/flybridge level; no aloft rig survey was undertaken.

Activity	Sample status
Afloat inspection	Completed
Haul-out	Completed
Sea trial	Completed — approx. 1.5 hours
Percussion / moisture screening	Representative accessible deck and suspect areas
Machinery checks	Cold start, idle, charging, ahead/astern and loaded running
Electrical checks	Representative functional inspection; no insulation-resistance or full load-bank test

2.1 Limitations

Tank interiors, concealed hull/deck core, internal laminate behind fixed furniture, saildrive diaphragm internal faces and hidden cable routes were not directly visible. Moisture-meter readings are comparative screening data, not proof of core condition. No destructive laminate testing was performed.

3. Vessel Particulars

Item	Sample particulars
Builder / model	Lagoon 450 F
Construction	GRP cruising catamaran
Configuration	Flybridge; four-cabin cruising layout
Engines	Twin diesel inboard engines
Propulsion	Twin saildrives
Rig	Fractional sloop-type catamaran rig
Electrical	12/24 V DC domestic systems with shore AC, inverter/charger, aftermarket lithium and solar
Fuel / water	Capacities to be confirmed against vessel documents / owner's manual
Status	Used private cruising vessel — fictional sample

4. Documentation & History

The seller supplied routine engine invoices and selected refit invoices. A complete builder/dealer structural file was not available at inspection. The sample HIN/CIN and machinery identifiers were recorded and would be reconciled against title/registration documents in a live assignment.

Record	Sample status	Comment
Registration / title	Seen	Identity consistent in sample file
Engine servicing	Partial	Recent routine servicing evidenced
Saildrive diaphragm replacement	Not evidenced	Material outstanding evidence
Standing rigging replacement	Invoice dated 2021	Visual inspection still required
Forward bulkhead inspection / repair file	Incomplete	Seller states prior inspection; supporting detail insufficient
Lithium / solar refit	Partial invoices	No complete as-built diagram supplied

5. Hulls, Underwater Body & Appendages

Hull surfaces were generally fair with expected cosmetic wear. No sample evidence of a recent major grounding was observed. Keel roots showed no obvious open cracking. Rudder bearings exhibited minor serviceable play. Antifouling condition was fair.

Area	Sample observation	Assessment
Port hull	Minor gelcoat repairs; no material distortion observed	Satisfactory
Starboard hull	Local cosmetic abrasion aft	Minor
Keels	No open root cracking observed	Satisfactory within visual scope
Rudders	Minor play, symmetrical	Monitor / service
Saildrives	External corrosion modest; anodes partly consumed	Service item
Through-hulls	Representative valves operated; mixed ages	Material maintenance planning
Bridge-deck underside	No significant impact repair identified visually	Satisfactory within scope
SAMPLE PHOTO PLACEHOLDER		SAMPLE PHOTO PLACEHOLDER
P001 — Sample: port hull / keel overview		P002 — Sample: starboard saildrive and anode

6. Structural Assessment

The structural inspection concentrated on accessible primary load paths: forward/main bulkhead regions, mast-compression structure, chainplate load transfer, forward beam attachments and hull-to-bridgedeck intersections. Port/starboard symmetry was used as an important comparison tool.

Area	Sample evidence	Conclusion
Forward bulkhead — port	Local hairline cracking at finish/tabling transition; no gross displacement visible	Requires documentary/specialist follow-up
Forward bulkhead — starboard	Cleaner appearance; no equivalent open crack noted	Useful comparison
Mast compression zone	No obvious crushing visible; access incomplete	Uncertainty remains
Forward beam attachments	No material external movement observed	Satisfactory visually
Chainplate load paths	No obvious detached tabbing in accessible portions	Satisfactory visually
Previous reinforcement	Evidence of prior work/finish differences; full repair specification not supplied	Material documentation gap

6.1 Lagoon 450 F Enhanced Review

For this model, the sample workflow specifically requires identification of hull/rig configuration, confirmation of any Lagoon/dealer structural inspection or reinforcement history, inspection of accessible forward-bulkhead zones, and correlation with rig condition. Lagoon publishes rig-tuning information distinguishing 450 F hulls up to no. 294 from hull 295 onward; exact applicability must be determined from the real vessel's HIN/hull number and documentation.

SAMPLE PHOTO PLACEHOLDER	SAMPLE PHOTO PLACEHOLDER
P010 — Sample: port forward bulkhead detail	P011 — Sample: starboard comparison area

7. Deck, Core & Exterior

Deck condition was generally presentable. Comparative moisture screening identified elevated readings around the port forward hatch corner and starboard deck penetration near the shroud/chainplate area. No conclusion about concealed core damage is made without opening or further investigation.

Area	Sample finding	Action
Port forward hatch	Elevated comparative moisture + historic staining below	Trace leak; investigate core locally
Starboard high-load deck penetration	Elevated comparative moisture	Re-bed / investigate as required
Flybridge	No material flex observed under normal foot loading	Routine
Davits / solar arch	Aftermarket installation secure visually	Check fasteners periodically
Trampoline / bow fittings	Serviceable	Routine

8. Rig, Sails & Steering

System	Sample observation	Assessment
Mast / boom	No obvious deck-level structural damage	Further aloft inspection optional/recommended by age
Standing rigging	Seller invoice indicates 2021 replacement	Documented age favourable
Chainplates	Accessible interior areas dry except starboard deck moisture signal	Investigate deck sealing
Sails	Mainsail serviceable; genoa UV strip aged	Budget maintenance
Steering	Smooth lock-to-lock; no abnormal binding	Satisfactory
Autopilot	Operated on sea trial	Satisfactory

9. Propulsion & Mechanical

Both engines started from cold without prolonged cranking in this fictional scenario. No abnormal exhaust smoke persisted after warm-up. Engine-room housekeeping was good. The principal purchase uncertainty is documentary rather than operational: saildrive diaphragm replacement age was not established.

System	Sample observation	Assessment
Port engine	Starts/runs normally; minor oil mist at breather	Minor
Starboard engine	Starts/runs normally	Satisfactory
Cooling / exhaust	No leak observed during test	Satisfactory
Saildrive diaphragms	Age not documented	Material
Bilge pumps	Automatic/manual operation sampled	Satisfactory
Fresh water	Pumps and representative outlets functioned	Satisfactory
Black water	Functional test limited	Limitation
Watermaker	Operated briefly; product-water quality not laboratory tested	Specialist/service check if important

10. Electrical, Lithium, Solar & Electronics

The vessel has a substantial aftermarket energy installation. Functional performance was generally good, but workmanship and protection require improvement in several locations.

System	Sample observation	Assessment
Lithium bank	BMS present; battery restraint satisfactory	Generally satisfactory
Main positive protection	One auxiliary feed appears insufficiently protected close to source	Material
Cable support	Unsupported heavy DC cable section near inverter	Material
Inverter/charger	Operational	Satisfactory
Solar	Charging observed; labels/isolators incomplete	Material/minor
Shore power / RCD	Representative test satisfactory	Satisfactory
Navigation electronics	Plotter, AIS, VHF and instruments powered	Satisfactory
Documentation	No complete as-built electrical diagram	Recommended
SAMPLE PHOTO PLACEHOLDER		SAMPLE PHOTO PLACEHOLDER
P030 — Sample: lithium bank / BMS		P031 — Sample: unsupported inverter cable

11. Interior, Domestic & Safety

Interior joinery was generally sound for age. Historic staining beneath the port forward hatch corresponds with the deck moisture signal. Escape hatches operated. Fire extinguishers were present but two sample units were beyond the service date. Liferaft service documentation was not current.

Item	Sample conclusion
Water ingress	Local historic evidence forward port cabin
Joinery / soles	Generally serviceable
Heads / showers	Representative operation satisfactory
Gas	Visual inspection only; hose/regulator date to verify
Fire equipment	Two units require service/replacement
Liferaft	Service evidence outstanding
Escape hatches	Operated at inspection

12. Sea Trial

Test	Sample result
Cold start	Both engines satisfactory
Ahead / astern	Positive engagement both sides
Loaded running	No abnormal persistent vibration noted
Temperatures / alarms	No alarm condition observed
Steering	Positive response; no unusual stiffness
Autopilot	Held course during representative test
Under sail	No unusual mast movement apparent from helm/deck observation
Structure	No conspicuous door jamming or gross movement during moderate conditions

13. Detailed Findings & Recommendations

Finding 01 — Forward structural area — incomplete evidence and local cracking

Location	Observation / evidence	Photo refs
Forward bulkhead / mast-compression region	Local hairline cracking was observed at a finish/tabling transition on the port side. Previous work is suggested by finish differences, but a complete repair specification or Lagoon/dealer file was not supplied.	P010-P014
Classification		Recommendation
Critical? No automatic classification. MATERIAL / potentially critical uncertainty until resolved.		Before purchase completion: obtain full structural inspection/repair history and have the accessible area reviewed by a suitably qualified composite/structural specialist. Expand access if advised.

Finding 02 — Saildrive diaphragm replacement age unverified

Location	Observation / evidence	Photo refs
Both engine rooms	No invoice or date marking sufficient to establish replacement age was provided.	P020-P021
Classification		Recommendation
Material		Obtain documentary evidence. If age cannot be established, price precautionary replacement into the purchase.

Finding 03 — Elevated deck moisture — port forward hatch

Location	Observation / evidence	Photo refs
Port forward deck / cabin	Comparative meter readings were elevated around one hatch corner and historic staining was visible internally.	P040-P043

Classification	Recommendation
Material	Trace leak source; remove/re-bed fitting as required and investigate core locally before cosmetic closure.

Finding 04 — Elevated moisture — starboard high-load penetration

Location	Observation / evidence	Photo refs
Starboard side deck	Elevated comparative readings around a deck penetration adjacent to a high-load area; no gross softness detected.	P044-P046
Classification	Recommendation	
Material	Investigate sealing and core condition; repair wet/damaged core if confirmed.	

Finding 05 — DC protection deficiency

Location	Observation / evidence	Photo refs
Energy installation	An auxiliary positive conductor appears to lack appropriately close source protection in the inspected arrangement.	P031-P033
Classification	Recommendation	
Material	Marine electrician to verify conductor rating, fault-current protection and fuse location; rectify before extended cruising.	

Finding 06 — Heavy DC cable insufficiently supported

Location	Observation / evidence	Photo refs
Near inverter/charger	Cable mass is carried over a span with inadequate mechanical support and chafe protection.	P034-P035
Classification	Recommendation	
Material	Add suitable support/chafe protection and inspect terminations for strain.	

Finding 07 — Fire extinguisher service dates

Location	Observation / evidence	Photo refs
Interior	Two extinguishers were beyond indicated service date in this sample.	P060
Classification		Recommendation
Minor / safety maintenance		Service or replace before use.

Finding 08 — Genoa UV strip ageing

Location	Observation / evidence	Photo refs
Rig / sails	UV cover shows weathering and local stitching deterioration.	P070
Classification		Recommendation
Minor		Sailmaker inspection and repair during next service period.

14. Outstanding Evidence / Specialist Follow-Up

Required	Reason	Timing
Lagoon/dealer forward structural inspection/repair file	Resolve structural history and scope of prior work	Before purchase completion
Structural specialist review if documentation remains incomplete	Determine significance of local cracking / prior work	Before purchase completion
Saildrive diaphragm replacement evidence	Establish maintenance liability	Before price/final completion
Electrical as-built diagram / electrician rectification note	Document modified energy system	Before extended cruising
Liferaft service certificate	Safety equipment status	Before offshore use

15. Conclusion

On the fictional evidence presented, ATLANTIC LIGHT would remain a possible purchase rather than an automatic reject. The key condition is resolution of the forward structural history and local observed evidence. If specialist review confirms sound structure and the remaining material items are either repaired or reflected in the purchase terms, the vessel's overall condition could be consistent with an actively cruised Lagoon 450 F of this age.

This sample deliberately separates three categories: observed defects, documentary uncertainty and model-specific inspection priorities. A known model concern is a reason to inspect carefully; it is not, by itself, a defect in the individual vessel.

REPORTING STANDARD

Observed evidence is separated from documentary uncertainty and model-specific inspection priorities. Findings are classified by purchase relevance, not by drama.

16. Surveyor Profile

Area	Profile
Surveyor	Niels Salomon Hauerslev
Marine background	Approx. 40 years of sailing experience; ownership and operation of monohulls and catamarans up to 53 ft; offshore, Mediterranean and Atlantic cruising; single-handed experience.
Technical background	Engineer with process / pharma / biotech background and former managing-director experience; strong emphasis on technical documentation and traceability.
Practical systems experience	Engines, watermakers, heating, plumbing, electrical/electronics, navigation, solar and lithium systems; practical refit and repair experience.
Survey experience	Survey work undertaken in Denmark and Greece; detailed written reporting.
Catamaran familiarity	Particular practical familiarity with Lagoon catamarans alongside other cruising yacht designs.

Appendix A — Sample Photo Index

Photo ref.	Location	Purpose / finding
P001	Port hull / keel	General condition
P002	Starboard saildrive	Anode / external condition
P010-P014	Port forward structural area	Finding 01
P020-P021	Saildrive spaces	Finding 02
P031-P035	Energy installation	Findings 05-06
P040-P043	Port forward hatch	Finding 03
P044-P046	Starboard deck penetration	Finding 04
P060	Safety equipment	Finding 07
P070	Genoa	Finding 08

Appendix B — Negotiation / Action Summary

Ref.	Action	Suggested treatment
F01	Resolve structural evidence / specialist opinion	Condition precedent to purchase or explicit risk allocation
F02	Saildrive diaphragm history	Seller evidence or buyer budget allowance
F03-F04	Deck moisture investigations	Repair evidence or negotiated allowance
F05-F06	Electrical remedial work	Rectify by marine electrician / price allowance
F07-F08	Routine safety / sail maintenance	Normal post-purchase service items

Model-specific reference used in preparing this demonstration: Lagoon's official Lagoon 450 support section, including its forward-bulkhead guidance, plus Lagoon 450 owner/manual documentation. References should always be reconciled to the actual vessel HIN/CIN and configuration.

Appendix C — Sample Disclaimer

This demonstration document is not an actual survey and must not be used to assess, insure, finance, value or purchase any real vessel. In a live report, scope, contractual terms, professional status, governing law, insurance wording and any valuation statement should be tailored to the engagement and jurisdiction. Manufacturer documentation should be checked against the specific HIN/CIN and configuration of the vessel.

SALOMON MARINE SURVEYS

Pre-Purchase Surveys • Condition Surveys • Catamaran & Cruising Yacht Specialist

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Detailed evidence. Clear purchase decisions.

Sample report for marketing and demonstration purposes only.