

Marine Surveys: More Than a Checklist

A marine survey is far more than just a checklist of items to inspect—it’s a comprehensive evaluation of each item’s condition. A proper survey examines the boat holistically. It assesses everything from the integrity of the hull and deck, including moisture readings, to the safety of electrical systems, an evaluation of the engines and propulsion systems, and the appropriateness and condition of safety equipment. This process ensures that any deficiencies or worn-out components are identified and documented, giving you a full picture of the boat’s seaworthiness and what can be expected in the short and long-term maintenance-wise.

That said, I have provided this checklist because, understandably, many people would like to save money on a professional survey. Boating is, of course, expensive. So here is a checklist. But please don’t consider it a replacement for a thorough, professional survey.

The following are descriptors generally used by surveyors to describe the condition of items on a boat. These descriptors are then placed in tables at the end of the survey according to their severity.

Condition descriptors for this report

Good	The item or area appears well-maintained with no obvious damage or issues.
Fair	The item or area shows normal wear or aging but remains functional and safe under current conditions.
Requires attention	The item or area shows significant wear, damage, or deterioration, possibly close to end-of-life OR is a critical safety concern that could not be checked adequately.
Powered Up Only	Equipment was turned on, and basic operation (e.g., display lights) was observed, but no full performance test was done.
Not Tested / Not Verified	No operation or inspection was performed beyond a basic visual check (or the item was inaccessible / beyond the survey scope).

Deficiency Severity (A, B, C, or N/A)

A (Critical)	Immediate attention required. Needed before safe use. Examples: severe leaks, unsafe fuel lines, major structural failures or components related to safety that could not be checked.
--------------	---

- B (Important) Significant but not immediately hazardous. Repair soon to avoid bigger problems. Examples: worn rigging, moderate leaks, or outdated fire extinguishers.
Cosmetic or minor issues that do not currently affect safety or performance. Examples: light rust, minor gelcoat cracks, or small cosmetic flaws. This classification may also include mechanical, electric, and electronic components that were only powered up but whose full functionality was not confirmed. Examples: Generator or engine that starts, VHF radio that turns on.
- C (Minor) No problem noted based on current observations (even if the item is older or only briefly tested).
- N/A (No Deficiency)

Hull exterior and propulsion				
Items	Condition	A,B,C	Remarks	Photos
Visual Inspection				
Primer, Barrier Coat, Anti-Fouling Paint				
Keel Joint				
Keel				
Hull Impact and Resonance Test				
Hull Humidity Testing				
Rub Rail				
Hull-Deck Joint				
Hull Anode(s)				
Thru-Hulls				
Rudder, rudder bearing and shaft				
Propeller Shaft(s)				
Shaft Support				
Propeller(s)				
Cutlass Bearing				
Propeller/Drive Anode(s)				
Porthole(s) in the Hull				
Fixed Lateral/Moon Windows in the Hull				
Sail drive (external)				
Stern Tube (external)				
Keel Bolts				

Spars and rigging

Items	Condition	A,B,C	Remarks	Photos
Rigging description				
Jib/Genoa Furler				
Forestay (as inspected from the deck)				
Spinnaker/Whisker Pole				
Shrouds (as seen from deck)				
Chainplates, pins and bolts				
Turnbuckles				
Main Mast				
Mast Base Support				
Boom				
Gooseneck				
Boomvang				
Winch (main mast)				
Deck Line Organizers				
Fairleads				
Genoa (Jib) Tracks and Cars				
Rope Clutches & Cleats				
Halyards				
Winches (halyards)				
Sheets (Genoa/jib)				
Winches (cockpit)				
Sheet (main)				
Traveller and tackle				
Backstay (as inspected from the deck)				
Aft Mast				
Winches at the Mizzen Mast				
Other Running Rigging				

Sails				
Items	Condition	A,B,C	Remarks	Photos
Main				
Genoa 1				

- Genoa 2
- Genoa 3
- Spinnaker
- Staysail
- Misen
- Other sail(s)

Deck, coachroof and swim platform				
Items	Condition	A,B,C	Remarks	Photos

- | | | | | |
|--|--|--|--|--|
| Deck Construction | | | | |
| Visual Inspection | | | | |
| Deck, coachhouse, cockpit and swim platform humidity testing | | | | |
| Pulpit | | | | |
| Bow Roller | | | | |
| Primary Anchor | | | | |
| Windlass | | | | |
| Anchor Locker | | | | |
| Anchor Chain and Rode | | | | |
| Deck Hatch(es) | | | | |
| Stanchions | | | | |
| Lifelines | | | | |
| Mooring cleats | | | | |
| Toe Rail/Gunwale | | | | |
| Handrails | | | | |
| Exterior Woodwork | | | | |
| Coachroof portholes | | | | |
| Coachroof fixed | | | | |
| Lateral/Moon Windows | | | | |
| Windshields, Frames, and Studs | | | | |
| Cockpit Bimini and Dodger | | | | |
| Cockpit Table(s) | | | | |
| Sliding | | | | |
| Roof/Companionway Hatch | | | | |
| Helm/Binnacle | | | | |
| Steering Tensioner/Lock | | | | |
| Cockpit Flooring | | | | |

Fuel and Water Fill Ports
and Waste Deck Pump-Out
Port

Cockpit Drains

Cockpit Lockers/Lazarettes

Propane/LPG Components
and Storage Compartment

Rear Pushpit

Propane/LPG

BBQ/grill

Swimming Platform Shower

Swimming Ladder

Swim Platform

Davits

Gauges and instrumentation summary

Items	Condition	A,B,C	Remarks	Photos
Fuel Gauge				
Engine Temperature Gauge/Alarm				
VHF Radio				
GPS Map Chartplotter 1				
Depth Sounder				
Autopilot				
Tachometer				
Digital Selective Calling (DSC)				
Engine Start				
Log Meter				
Wind direction indicator				
Engine Stop				
Engine Controls				
Voltmeter/Ammeter				
Other Gauges				
HF/SSD Radio				
GPS Map Chartplotter 2				
Radar				
Wind Speed Indicator				
AIS Transponder				
Magnetic Compass				

VHF Antenna

Anemometer

Other(s)

Engine Summary

Items	Condition	A,B,C	Remarks	Photos
-------	-----------	-------	---------	--------

Exhaust – Type

Cooling Type

Stuffing Box/Packing Gland

High Water Alarm

Primary Fuel Filter/Water

Separator

Secondary Fuel Filter

Manual Fuel Pump

Coolant Level and Quality

Engine Compartment

Extraction Blower

Engine(s)

Engine Model

Engine Serial Number(s)

Horsepower

Condition

Exhaust Outboard

Discharge Position

Engine Hours

Battery Charging Alternator

Saildrive Model

Saildrive Serial Number

Propeller Shaft (Interior)

Drive Coupling(s)

Inboard Shaft Support

Stern Tube

Throttle and Gear Controls

Transmission

Engine Anti-Vibration

Mounts

Belts and Pulleys

Hoses

Air Filter
 Seacock for Cooling Water
 Raw Water Strainer
 Cooling Canister
 Firewall Installed on Air
 Entrance
 Gas Vapor Detector
 Automatic Engine
 Compartment Fire
 Extinguisher System
 Oil Level and Condition
 Fuel Tank Anti-Siphon
 Engine/Transmission Oil
 Leak?
 Fuel Leak?

Engine summary

Items	Condition	A,B,C	Remarks	Photos
-------	-----------	-------	---------	--------

Exhaust – Type				
Fuel Tank Level Indicator				
Fresh Water Level Indicator				
Engine Water Inlet				
Toilet Inlet				
Bathroom Sink Drain Outlet				
Kitchen Water Drain Outlet				
Fuel Tank				
Fuel Tank Piping				
Fuel Tank Bracing				
Fuel Tank Cut-off Valve(s)				
Fuel Tank Sealing				
Fuel Tank Anti-siphoning Valve				
Fresh Water Tank				
Fresh Water Piping				
ABYC Potable Water Systems H-23 Compliant				
Black Water Tank				
Black Water Indicator				

Black Water Piping

Grey Water Tank

Grey Water Indicator

Grey Water Piping

Hot Water Tank

Overpressure Valve

Seacocks - Under the

Waterline – Type, Quantity,
and Condition

Toilet Outlet

Shower Outlet

Refrigerator Compressor

Cooling Inlet

Graywater Outlet

Pressure Wash Inlet

Graywater Outlet

Pressure Wash Inlet

Cabin and conveniences summary

Items	Condition	A,B,C	Remarks	Photos
-------	-----------	-------	---------	--------

Propane gas vapor detector

Lining

Sign of water ingress inside
the cabin?

Washroom sink faucet

Shower

Kitchen sink faucet

Refrigerator/Icebox drain

Woodwork

Upholstery

Kitchen counter

Storage cabinet/furniture

Floor

Ceilings

Doors/framing

Head toilet

Seawater pump for galley
sink

Refrigerator/Icebox

DC marine refrigerator
compressor
Stove
Microwave
Cabin ventilation
Air conditioning
Heating
Television
Fan(s)

Electrical summary

Items	Condition	A,B,C	Remarks	Photos
-------	-----------	-------	---------	--------

Distribution panel 110V				
Reverse polarity light				
Shore power receptacle				
Shore power cable				
Shore power overcurrent protection				
Galvanic isolator				
Isolation transformer				
Inverter				
Terminal connections				
Bundling support				
110V outlet receptacle(s) - GFCI equipped?				
110V sockets				
Battery test, conductance				
Batteries - same style and age				
Terminal connections				
Other electrical				
Freshwater pump(s)				
Port and starboard navigation lights				
Stern light				
Anchor light				
Steaming light				
Battery electronic insulator/combiner				

- External speakers
- Cabin lighting
- Starter battery(ies)
- House battery(ies)
- Battery test, electrolyte
- Battery selector(s) / Battery switch(s)
- Battery(ies) overcurrent protective device
- Breaker panel voltmeter/ battery monitor ammeter
- Shore battery charger 110V
- Wiring
- Washdown pump(s)
- Shower drain pump
- Macerator pump
- Electric toilet
- Radio AM/FM CD
- Socket 12V outlet
- Cabin fans
- Electric horn
- Water maker
- Bow thruster
- Windlass

Electrical summary

Items	Condition	A,B,C	Remarks	Photos
-------	-----------	-------	---------	--------

- Generator**
- Solar panels
 - Generator manufacturer
 - Generator sea strainer
 - Generator hoses
 - Generator anti-siphon
 - Generator cooling
 - Wind generator
 - Other
 - Methanol fuel cell

Safety equipment summary

Items	Condition	A,B,C	Remarks	Photos
Flares				
Smoke detectors				
Carbon monoxide detector				
Bilge pump, manual				
High water alarm				
Extra anchor				
Fire extinguishers				
Radar reflector				
Sound signal				
Life jackets				
LPG cut-off solenoid valve switch				
Bilge pump, automatic				
Emergency tiller connection				
Emergency tiller				
Liferaft				
Distress 406 Mhz Radio beacon				
Strobe light hi intensity				
Burglar safety				
Motion alarm system				
GPS tracking system				
Anti Theft marking				

Surveyor's conclusion regarding condition grading

After organizing the findings from the survey, and based on the surveyors experience, an overall opinion on the vessel's condition will be formed. This would then be detailed in the REPORT OF MARINE SURVEY & FINDINGS AND RECOMMENDATIONS sections of the report (These are the A,B,C's and associated remarks).

Marine Vessel Condition Grading

Then the vessel is "graded". BUC RESEARCH's condition grading, widely recognized in the marine industry, is used to adjust the base value range.

1. "EXCELLENT (BRISTOL) CONDITION", is a vessel that is maintained in mint or bristol fashion (usually better than factory new, loaded with extras, a rarity).

2. 'ABOVE AVERAGE CONDITION', has had above average care and is equipped with extra electrical and electronic gear.
3. "AVERAGE CONDITION", ready for sale requiring no additional work and normally equipped for her size.
4. "FAIR CONDITION", requires usual maintenance to prepare for sale.
5. "POOR CONDITION", substantial yard work required and devoid of extras.
6. "RESTORABLE CONDITION", enough hull and engine exists to restore the boat to usable condition.

Marine vessel appraisal comparative sources

Finally, the approximate value of the vessel is determined. Such sources as the following often help with this:

- boats.com
- boattrader.com
- yachtworld.com
- bucvalu.com

Additional insights are obtained through consultations with knowledgeable boat brokers and marine surveyors, personal experience, and current listings of similar vessels. Note that boat values vary significantly due to local market demands—for example, fresh water vessels in exceptional condition may command premiums.

Determination of fair local market value

Current fair market value is defined as the price that a willing seller would accept from a willing buyer—both acting prudently, knowledgeably, and without undue pressure. This valuation assumes that any components, systems, sails, or equipment not inspected are in serviceable condition commensurate with their age. Furthermore, for a vessel to achieve its fair market value in a competitive, open market, it is assumed that:

- Motivation: Both buyer and seller are motivated.
- Informed Decision-Making: Both parties are well informed or advised and act in their own best interest.
- Market Exposure: The vessel is allowed a reasonable time for exposure on the open market.
- Payment Terms: Payment is made in cash (U.S. dollars) or via comparable financial arrangements.
- Normal Consideration: The price reflects a typical market transaction, unaffected by special financing or sales concessions.

- **Informed Decision-Making:** Both parties are well informed or advised and act in their own best interest.
- **Market Exposure:** The vessel is allowed a reasonable time for exposure on the open market.
- **Payment Terms:** Payment is made in cash (U.S. dollars) or via comparable financial arrangements.
- **Normal Consideration:** The price reflects a typical market transaction, unaffected by special financing or sales concessions.

Market analysis

Vessel	Location	Price	Description

Valuation Conclusion

After taking into account all of the foregoing, the fair market value of the boat is estimated.