

**The intent of this report** is to provide a prospective buyer with a guideline and checklist on a sea trial. In many purchases, the sea trial is the only opportunity to really check the functionality of many onboard systems. Whether the buyer uses this information to obtain price reductions from the seller or to begin a comprehensive list and budget of required repairs, the buyer will be rewarded by using this systematic approach. At the very least, this checklist will enable a buyer to compare two or more vessels. This approach is intended to be a comprehensive sea trial and not a replacement of more detailed inspections, surveys, and analysis.

All buyers are strongly advised to consult qualified professionals to inspect all aspects of a vessel prior to finalizing any transaction. These include:

- Condition and Valuation Survey
- Mechanical Survey
- Electronics Survey
- Rigging and Sails Survey
- Other Surveys and Inspections as necessary

### Top 10 Sea Trial Do's & Don'ts

#### Do:

- 1 Have the owner (or his representative) operate the boat
- 2 Bring a flashlight, GPS, inspection mirror, and clipboard
- 3 Bring a knowledgeable friend or professional
- 4 Trust your intuition and common sense
- 5 Be friendly and consultative
- 6 Make sure the engine(s) are cold when you arrive
- 7 Wear white-soled shoes and offer to take them off
- 8 Plan on about 3 hours for the sea trial
- 9 Discuss your findings with the owner
- 10 Remember - the owner loves his boat, don't belittle it

#### Don't:

- 1 Bring lots of friends - this is not a joy ride
- 2 Be arrogant, adversarial, or confrontational
- 3 Be in a hurry - don't let the broker hurry you along
- 4 Be the primary operator - you may become liable
- 5 Go directly to the yard for the survey haul-out. Take your time
- 6 Be afraid to ask questions
- 7 Be afraid to do another sea-trial if something needs correction
- 8 Have unreal expectations - know the value and be fair
- 9 Accept anything as "minor"
- 10 Haggle with the owner now. Just gather information, haggle later

Overall, having the owner aboard during the sea trial has pluses and minuses. On the minus side, he may be overly protective of his pride and joy and hinder your investigation, you may not feel comfortable really digging into the boat. Many brokers prefer to keep buyers and sellers apart. On the plus side, this may be your only opportunity to meet him, take the time to praise his boat (even if it's not overly worthy) and let him know how much you appreciate his time. Keep in mind the owner loves his boat and may not see even extreme defects ("no one has an ugly dog"). Rather than use an offer strategy of a long list of deductions culminating in an obscenely low offer, the most successful offers usually start with "I really, really like this boat and I want to be her next steward and caretaker. I know it's not quite what you were hoping for, but the best I can offer is \$XXXX." If the owner has met you (and the sea trial is the most logical place to do so) and likes you and can picture you and your family enjoying his pride and joy, he'll do his best to accept the offer. If you haven't met, he'll just assume you are low-balling him.

Finally, remember that if the operator of the boat (broker, hired captain, other) cannot demonstrate the systems or there is a major defect that needs repair before the sea trial can be continued, request another sea trial (could be as simple as cleaning the bottom). If the owner was aboard and you were not able to spend enough "alone time" with the boat, go back. If you need to do another sea trial, depending on the circumstances that led to it, offer to pay for a captain to be aboard or split the fee with the owner if necessary. You're the buyer and you need to be thorough. Just be fair and lead with a smile and make sure you are satisfied - no one else will. If something doesn't make sense or "feel" right, investigate - trust your common sense and intuition, even if you're not that knowledgeable. **DO NOT SIGN-OFF ON THE SEA TRIAL UNTIL YOU ARE FULLY SATISFIED!** A sea trial is a fun, exciting event and can be easily glossed over ("the boat ran - sea trial is okay").

Date:	
Owner	
Vessel Name	
Year:	
Builder	
Designer	
Model	
Length	
Clean Bottom?	
Trim? (does vessel list?)	
Location	
Sea Trial Conditions	

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	Pre-start measurements		
	Port	Stbd	Generator
Engines Cold?			
Coolant level			
Contamination?			
Oil level			
Trans Fluid level			
Shaft Rotates?			

Coolant should be clean - floating stuff (contamination) may indicate blow-by or oil leak  
Check fluid levels accurately - you will re-check at the end of the sea trial to look for loss  
Should rotate freely by hand. Binding indicates engine alignment problems, prop shaft or cutless bearing issues.

	Post-run measurements		
	Port	Stbd	Generator
Engines Cold?			
Coolant level			
Contamination?			
Oil level			
Trans Fluid level			

Allow engines to cool down before re-checking, perhaps returning the next day.

**Definitions:** None

**Objectives** Get all basics on the boat so you remember them later. Always start with cold engines

**Change in fluid or fluid level indicates problems. Investigate thoroughly! Fluid loss is the most common, but also look for fluid increase (fuel getting into the oil) or dramatic change in appearance (milky in oil indicates water)**

**Performance**

	Engine Hours	RPM Readings			Start-up observations			Warmed-up observations		
		Idle	WOT* Neutral	WOT* in gear	Smoke?	Color of smoke?	Oil slick?	Smoke?	Color of smoke?	Oil slick?
Port/Single										
Starboard										
Generator		N/A	N/A	N/A						

\*WOT = "Wide Open Throttle" Maximum power; throttle lever pushed all the way forward

**Speed Over Ground Measurements (GPS - in Knots)**

WOT		knots
Cruise		knots
Probable Cruise RPM		RPM (ask owner)
Time to plane		Seconds

**Comments and observations**

**Objective**

Engine(s) should be stone cold when you arrive. Inform the broker of this before the sea trial.

Some start-up smoke is relatively normal but should disappear within a few seconds.

A start-up oil slick is also somewhat normal in diesels as unburned diesel is exhausted.. Should clear when engine is warm, though some engine's are cleaner than others

Idle should be smooth after a minute or two of operation. On twins, the RPM should be very close.

It's normal for the operator to "bump-up" RPMS when an engine starts cold

Diesel engines should start within a couple seconds of cranking. Suspect compression if prolonged cranking is necessary.

WOT difference in gear (underway) and in neutral. Should be about 10%-15% difference in max RPM's. Suspect improper propeller if otherwise

Ask owner to run boat at WOT (underway) for at least 5 minutes. Diesels will throw black smoke (normal at WOT). Check for overheating (guage), bad noises, etc.

If owner objects to running boat at WOT, discuss with him and use your best judgement - remember, it's his boat.

Try to "load-up" the generator by turning on heaters and such. Run it for the entire trip. Check for overheating and consistent A/C output (should be 120V)

	ENGINE (SINGLE or PORT)						ENGINE (STARBOARD)						GENERATOR						COMMENTS
	Not Installed/Applicable	Appeared Satisfactory	Not inspected	Corosion (5=extreme)	Requires maintenance	Requires immediate service	Not Installed/Applicable	Appeared Satisfactory	Not inspected	Corosion (5=extreme)	Requires maintenance	Requires immediate service	Not Installed/Applicable	Appeared Satisfactory	Not inspected	Corosion (5=extreme)	Requires maintenance	Requires immediate service	
<b>Visual</b>																			
Cooling System																			
Raw Water Pump																			
Fresh Water Pump																			
Exhaust riser/elbow																			
Heat exchanger																			
Hoses																			
Sea Strainer																			
Thru hulls operate freely?																			
Oil Leaks																			
Hoses																			
Filters																			
Coolers																			
Fuel System																			
Primary Fuel Filter																			
Secondary Fuel Filter																			
Injector Pump																			
Fuel tanks																			
Rodder(s)																			
Steering mechanism(s)																			
Drive Train																			
Transmission																			
Drive shaft (rotates freely by hand?)																			
Engine Mounts																			
Starting battery																			
Stuffing box																			
Overall																			
Service Access																			
Appearance																			
Installation Quality																			
Wiring																			

	ENGINE (SINGLE or PORT)						ENGINE (STARBOARD)						GENERATOR					
	Not Installed/Applicable	Appeared Satisfactory	Not inspected	Corrosion (5=extreme)	Requires maintenance	Requires immediate service	Not Installed/Applicable	Appeared Satisfactory	Not inspected	Corrosion (5=extreme)	Requires maintenance	Requires immediate service	Not Installed/Applicable	Appeared Satisfactory	Not inspected	Corrosion (5=extreme)	Requires maintenance	Requires immediate service
<b>Operational</b>																		
Safety																		
Fumes?																		
Engine room blower																		
Engine room lights																		
Insulation																		
Engine alarm(s)																		
Fire extinguisher																		
Starting																		
Gear lever smooth?																		
Throttle lever smooth?																		
Neutral detent present																		
Ignition switch																		
Starts smoothly?																		
Cold idle?																		
Exhaust smoke?																		
Vibration?																		
Exhaust water flow?																		
Gear engages quickly?																		
Engine Instrumentation																		
Engine temp																		
Amps																		
Volts																		
Oil pressure																		
Tachometer																		

	Not Installed/Applicable	Appeared Satisfactory	Not inspected	Corrosion/wear (5=extreme)	Requires maintenance	Requires immediate service	COMMENTS
Bilge Pumps							
Forward							
Midships							
Aft							
Manual							
High water							
Water System							
HW Heater							
FW Pump							
Accumulator Tank							
Galley Faucet							
Head Faucet							
Outside shower							
Inside shower							
Cockpit sink							
Watermaker							
Hours on membrane							
Hours on Watermaker							
Proper Maintenance?							
Head system							
Head Faucet							
MSD							
Second head							
MSD							
Interior Upholstery							
Bridge canvas/upholstery							
Ambient lighting							
Fwd cabin							
Fwd head							
Galley							
Saloon							
Aft cabin							
Aft head							
Deck lights							
Engine room lights							
Other							

	Not installed/Applicable	Appeared Satisfactory	Not inspected	Corrosion/wear (5=extreme)	Requires maintenance	Requires immediate service
Galley						
Stove						
Propane system						
Refrigeration						
Other						
HVAC						
Heater						
AC						
Fan(s)						
Electrical						
Wiring						
Fuse panel						
Battery charger						
Fuel Gauge						
Inverter - operational?						
Electronics - check interface						
A/P						
Chartplotter						
Serial Port						
Data Transfer						

	Not Installed/Applicable	Satisfactory for intended use	Not inspected	Corrossion (5=extreme)	Requires maintenance	Requires immediate service	
VHF Radio							COMMENTS
VHF Radio (2)							
SSB							
Intercom System							
Loud Hailer							
Television							
Stereo							
Depth sounder							
Fish finder							
Knot meter							
Knot log							
Wind gauge							
Instrument lights							
GPS #1							
GPS #2							
RADAR							
Loran							
Chart plotter							
PC							
Autopilot							
Docking lights							
Running lights							
Anchor light							
Trim Tabs							
Rudder angle indicator							
Engine synchronizer							
Windshied wiper (S)							
Windshield wiper (P)							
Stabilization							