

EXPERT ON BOARD

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How to check any boat is safe

Whether you're chartering, sailing with friends or helping with a delivery, Tom Cunliffe shows you how to avoid nasty surprises

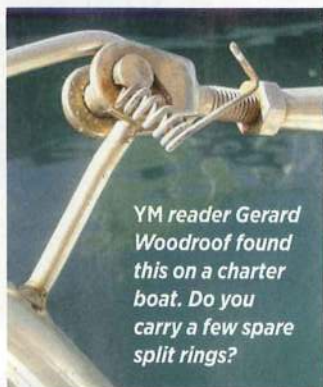


Professional Yacht Deliveries' skippers have checklists they use to make sure an unknown boat is seaworthy

Suppose it would be fair to say that those among us who are private boat owners generally fall into three categories. The first are the perfectionists. I've known a few of these. They might not be your favourite choice for a lively night in the pub, but they certainly won't drown you. Even if their boats aren't brand-new, they are pristine in all matters relating to safety. These exemplars to the rest of us won't slip their dock lines if a seacock is sticky or they know the stern light only works after an educated tap on the lens.

Tackling the snaglist

The second group are in direct contrast. They don't bother with engine checks, they ship only the most basic tool kit of rusty spanners and feel hard done-by when the fuel runs out even though the gauge has read full



YM reader Gerard Woodroof found this on a charter boat. Do you carry a few spare split rings?

PHOTO: GERARD WOODROOF

since last season. These guys aren't much of a laugh either and I'm pleased to advise that, according to the publisher's demographic, they don't read *Yachting Monthly*, so we can write them out of our considerations. The third group takes in most of us. We rub along comfortably with our boats. We know the odd non-vital item needs attention

but we understand that we can live without it should it fail. If it compromises our safety, we fix it. We carry comprehensive tool and spares kits so that we can deal with most contingencies and we have a job list either posted on the bulkhead or, these days, tapped into our smart phones. Mine never seems to shrink much, but it does contain different things from two months ago, indicating that life still stirs in my system. To my wife's private fury, 'Shelf in galley locker' seems to have been hanging around for over a year, but 'sort out chafe at main halyard masthead sheave' has been expunged, to be replaced with, 'Find someone to gas the fridge.'

Operating a yacht that is less than 100% represents reality for the majority of us. That's cruising as we know it. It's as natural as drawing breath.

Into the unknown

But what about taking on a strange boat? Suppose we are chartering, or perhaps helping out an inexperienced pal who just bought a used yacht and we're Shanghaied to deliver her a hundred miles up the coast with him? We don't know what compromises have been made, and we might not like them if we did. The tool kit is probably going to be inadequate, the spares ancient or non-existent, and goodness knows what failures of gear await as soon as she heels

to the breeze. In short, we're dragged unceremoniously out of our comfort zone.

Here's a reader's letter that came in recently and which triggered off this article. It mirrored my own experience with charter boats in exotic locations and, if you charter, I'm willing to bet it will sound familiar to you too. The only surprise was that

the fridges seem to have worked on all the boats mentioned.

'We've had three charters this year - two in Greece and one in the Canaries. In each case we have had significant problems with the yacht, and in the

Canaries, these put us at risk.

Our first Greek boat had no wind data, no plotter and no log, and the anchor chain kept jumping off the gypsy due to wear on guide plates. The second also had no wind data and no log, the fuel gauge didn't work, the plotter was stuck on the homeport and the windlass motor was clapped out. We had to wait a day for the engineer.

In the Canaries the GPS, wind and depth data were unreadable, the plotter and fuel gauge broken, the VHF suspect, an engine that alarmed for unknown reasons and so could not be relied upon, and an oil leak that we were told to mop up daily.

All the yachts had lines and blocks that were stiff as boards and warps with chunks missing. One had aft safety wires that didn't clasp properly.



PHOTO: GRAHAM-SNOOK.COM

No boat is perfect, we've all got a list of jobs, but some take precedence

PHOTO: COLIN WORK/VM



The chafe and friction from worn or cracked sheaves on turning blocks or sheet cars can make a misery of any charter

You may say - why don't you check out the boat when you first arrive and refuse her? It's not that simple. The problem with the chart plotter stuck on the homeport became obvious only when we sailed away. The rest slowly becomes apparent as you sail and familiarise yourself with the vessel.'

How the pros check

These complaints sounded familiar, and when the YM team started kicking them around, we realised that an hour spent on board a strange boat - or our own yachts for that matter - considering the essentials, could be time well spent. For a normal take on the question, we contacted PYD (Professional Yacht Deliveries) to see if they run a list for their skippers. They do. It reads like hard-nosed common sense, so here, broken down into areas I've noted for failure myself, is a systematic approach to ensuring a boat has a fair chance of staying afloat, self-sufficient and more or less fully operational.

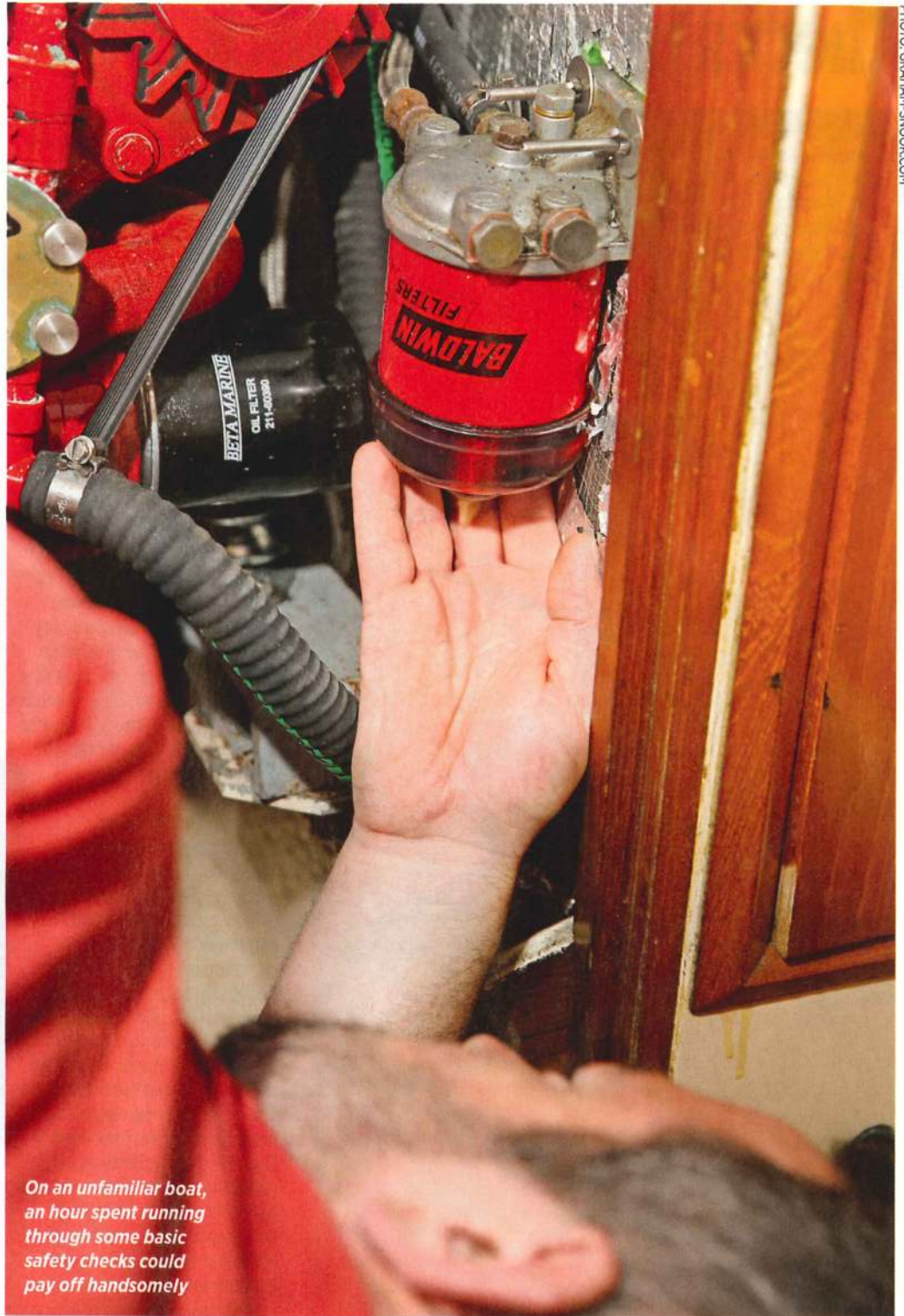


PHOTO: GRAHAM-SNOOK.COM

On an unfamiliar boat, an hour spent running through some basic safety checks could pay off handsomely



PHOTO: GRAHAM-SNOOK.COM

A sailing boat with dud sails or dodgy hardware can wreck a charter



PHOTO: GRAHAM-SNOOK.COM

Check 'Serviced' or 'Replace by' dates, on liferafts, flares, gas hoses

Checks to make on deck

PHOTO: GRAHAM-SNOOK.COM

Charter binocs are invariably awful so bring your own and check the masthead rigging, to see if there's anything obviously awry



For some reason I have never fathomed, men will usually put up with the odd deck leak for a few days. In my family at least, the female element is less willing to shrug it off. These are ladies who have faced the full fury of North Atlantic storms, yet if a hatch leaks over their bunks, the threat of violent death for the skipper can be very real.

There's one simple method for testing hatches, lights and companionways. Grab the dock hose and give them the works. If it comes through, imagine how it's going to be hacking to windward with green water on the deck, then do some hard thinking. Can I live with this or not? If not, try some silicone grease on the rubbers and any screw-downs. Now re-tighten the scuttles evenly and carefully. There's not a lot more you can do without major surgery. If they're tight, be grateful to a merciful god and move on.

Mast, spars and standing rigging

Take a quick, hard look for cracks, especially in way of goosenecks, boom ends coming adrift, too much corrosion around a mast heel fitting and seized sheaves. Do booming-out pole tracks work smoothly, and so on.

I was interested to note that the PYD list asked how long since the standing rigging was replaced or at least serviced. This can only be there as a result of dire experience. Advice varies, but I'm replacing my 1x19 standing rigging this year, complete with rigging screws and everything else because



PHOTO: GRAHAM-SNOOK.COM

Enduring a damp bunk for a week is no joke. Grab the hose or fill a bucket and dump it on a hatch. You'll soon find any leaks



PHOTO: GRAHAM-SNOOK.COM

Apply silicone grease to leaking rubber seals and you may fend off a salty pillow for the week

I don't know how old it is. It's certainly ten years, and that's reckoned to be enough by most authorities. I appreciate we aren't all going to cross-examine every charter operator about this one, but we can at least take a look round at everything we can readily see. Wires generally let go at or near the swage fitting. Run your eye over all these and see how things are. Sometimes you can see a strand parted. More often, you won't, but you may note some degree of 'spiralling' in the wire at the fitting. In either case, a single strand is 'on the way'. Condemn the rig and go no further.

Unless you're planning a long trip it's unlikely that anyone's going to go aloft to check every union. However, things tend to let go at deck level first because of the salt, so if all looks well

Check all the swages for any 'spiralling' as it's a sure sign the standing rigging is well past it



PHOTO: GRAHAM-SNOOK.COM



ABOVE/LEFT PHOTO: GRAHAM SNOOK/VM

If the pole track car won't move, you'll struggle to pole out the genoa



PHOTO: GRAHAM-SNOOK.COM

Check the furling gear has a decent lead, a healthy furling line and that the drum runs freely

down there you're in with a good chance things are OK further up. If there's any doubt, it's surprising what you can see with a good pair of binoculars. I take my own. The ones supplied on charter boats are almost invariably useless.

Sails and running rigging

These don't usually come into the category of 'unsafe', but on boats where nobody really cares about maintenance beyond the basics, they often don't work too well. Stiff ropes that are too big for the sheaves are typical on mainsheets. Turning blocks that don't turn, organiser manifolds on coachroofs that are all stiff with ancient salt, mast-foot blocks that have long since given up the ghost all add up to a wretched sailing experience. On a charter boat, all you can really do about this is complain, unless the culprits are in a really outrageous position such as the boom-end sheaves for reefing pennants or the outhaul of an in-mast mainsail. I've known these seized solid on a charter boat. It made the main all but unusable, so something had to be done.

If the yacht has an owner who hopes things might improve, much can be done, but it takes time. Dig out some back copies of *YM* and read about killing the dragon of friction. In the short term, try a kettle of hot water!

It isn't always easy to be sure about winches until you try them under serious load, but if you give them a good rattle round you can get an impression of how happy they are. They ought to spin easily and grab instantly as you reverse the turn. If there's any hesitation, have them stripped. If a pawl lets go under load, particularly if the operator is inexperienced, it can lead to a broken arm, or worse.

Whizz the main up and down to check the battens. These are often broken or missing on charter boats. Don't accept it. You can't sail without battens. While you're at it, check the reefing gear works.

Boats come out of factories with a minimum of working rope. It is never enough, but not all skippers and owners seem to realise this. Any boat must have at least two extra warps 1½ times her own length. We'd like more, of course, but this article is about realism in an imperfect world.



PHOTO: COLIN WORKYIM

Using an in-mast furling main with a cracked outhaul block will drive you stark-staring mad



PHOTO: GRAHAM-SNOOK.COM

Give the winches a spin. It looks like tyre-kicking but if something's wrong, you'll hear it



PHOTO: GRAHAM-SNOOK.COM

Run the main up the track. If a car sticks or fails, that's trouble

Checks to make below

PHOTO: GRAHAM-SNOOK.COM



Locate all your seacocks and check that each of them is sturdy and turns smoothly

PHOTO: JAMES DUNCAN



A reassuring sight. At least locate the softwood bungs and put a big lump hammer in with them

It's a few years now since I heaved hard on a ball valve and suffered the ultimate dénouement as it came off in my hand, but it does concentrate the mind most wonderfully.

Modern yachts have a lot more plumbing. All my boats until the 1990s had just two seacocks for the loo plus one for the engine inlet, maybe another for a sink. My vessel today has more through-hull outlets and inlets than I'd care to admit, and they aren't backed by the good old Blake's seacocks that were so easy to maintain. Every year the expensive ball valves stiffen up and I have to kick myself firmly in the aft quarters to remember that there can be no compromise on maintenance. If I feel like this, it's a safe bet that plenty of owners, both corporate and private, take less trouble.

When I board a strange boat I nip round the bilge and check them all. If they look corroded, I grab the offending pipes and award them a serious heave. It's

not very scientific, and if it's my own boat I'll investigate more thoroughly, but if time is short a really good 'test-to-destruction' yank is better than nothing. If they feel solid, it's probably safe to carry on - for a modest trip at any rate. If it breaks, grab a lifejacket and a softwood bung, then see if the pumps are any good.

Skin fittings, including the stern tube and the rudder stock, being what they are, going to sea without a comprehensive set of softwood bungs and a proper hammer is madness. Every boat should have a lump hammer - or, as my old bosun used to call it, 'the Liverpool Screwdriver' - and you'll need one if you have to drive in a bung in an awkward place in the bilge. There isn't the space to develop the inertia demanded by a smaller hammer. It's reassuring to see every skin fitting with its own bung secured alongside it, but you may feel it's enough to know where they are so you can grab them in a hurry.

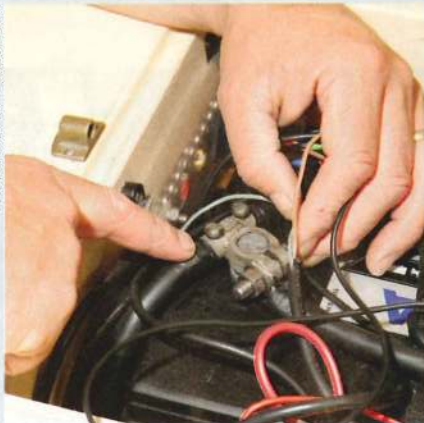


PHOTO: VYV COX

YM's Vyv Cox has a high volume manual bilge pump that bolts onto the companionway steps

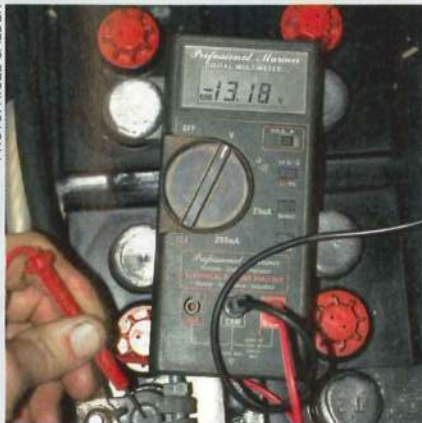
My pal Don Street, who has crossed the Atlantic without an engine countless times, recommends that all boats going offshore ship a large-capacity manual bilge pump, one that will shift 25 gallons or so per minute. Ten minutes then gives you 250 gallons in an hour and more than 45 minutes to rest for the next session. Most boats' bilge pumps are unlikely to be enough in a serious emergency but you simply must ensure that the pumps supplied work.

PHOTO: GRAHAM-SNOOK.COM



Look for clean terminals, lightly greased, secure cables and straps or bolted battery locker lids to hold the batteries in situ

PHOTO: NIGEL CALDER



A quick check with a multimeter will tell you if your batteries are charging properly. If they're not, you've a tedious week ahead

PHOTO: GRAHAM-SNOOK.COM



Consider unplugging the shore power for the first night, while you're still alongside. Can the batteries cope with the load?

Check your battery bank is up to it

I once delivered a new yacht to La Rochelle boat show. The wind died in the Chenal du Four and we discovered that the batteries were flat. We weren't over-concerned as the engine could be decompressed in those days and it had a starting handle. Imagine our rage to discover that the handle could not be swung without ripping out half the galley furniture. How we loved that manufacturer.

A quick check list:

- **VISUAL** How do they look? Nice and clean? Good. Terminals clean and lightly greased? Lovely. Well strapped down? Excellent. Crud on the earth terminals is a sign of trouble to come.
- **VOLTAGE** With the engine or generator running for 15 minutes or so, the voltage should rise to 14 or more. If it hangs sullenly at 12.5,

they aren't charging properly and your trip will be dogged by this. If the boat has no inbuilt meter, whip out your own 'cheap-o' version and clap it across the terminals. They only cost a tenner and every boat should have one.

- **CABLING** It doesn't take a minute to check the terminals on the main cables - the really big ones. Are they tight? Take a look at the starter motor and the main earth connection too.

- **THE BOTTOM LINE** On a charter, if you're spending the night alongside before leaving, unplug the shore power, then check batteries and fridges in the morning. If the voltage is less than 12.3 or so, complain. Charging systems are often dysfunctional on tropical charter boats with big fridges. Shore power can mask many a dark secret. You won't be plugged in every night, so check it works while you can.



PHOTO: GRAHAM-SNOOK.COM

Check for any water leaks. Nip up the impeller's cover plate bolts if you feel any dampness



PHOTO: GRAHAM-SNOOK.COM

Salt encrustation can hint at corrosion. If you see any, deploy the 'heave-ho' test



PHOTO: GRAHAM-SNOOK.COM

Check for any diesel leaks, and if you find any, grab a spanner and tighten up the unions



PHOTO: GRAHAM-SNOOK.COM

Be sure to check the state of the fuel filter, there shouldn't be anything in there but pure, clean diesel



PHOTO: GRAHAM-SNOOK.COM

'Mayonnaise' around the oil filler cap is a sure sign of oil and water mixing where they most definitely should not

Check your engine won't let you down

Modern yachts sail so well that if an engine packs up it's rarely an emergency as, in anything but a flat calm, you can sail yourself to safety. It is, however, a complete pain and it's usually unnecessary. Just make a few basic checks.

A quick check list:

■ **VISUAL** Any signs of water leaking? If so, find out why and rectify if need be. Any obvious

diesel leaks? Tighten up the offending unions now before air gets in. If it's a high-pressure pipe that's gone porous, find the owner, give him hell and get it fixed.

■ **PHYSICAL** Do any pipes have salt encrustations at unions? If so, give them the 'heave-ho' test recommended above. Better they fall off in the marina than halfway across the North Sea.

■ **FLUIDS** Check oil, coolant, etc. Note the quality as well as the level. If the coolant has any oil in it, ask about the cylinder head gasket. If there's 'mayonnaise' in the oil or around the inside of the filler cap, reject the boat and demand your money back.

■ **FUEL FILTERS** If the boat has pre-filters, use a torch to peer into the glass bowl, if fitted. If it's full of crud, demand a new element and a clean-out. Make sure

there are spare elements in the kit. While you're in the spares box, check for a cooling-water impeller and gaskets.

■ **OIL LEAKS** If you spot a substantial oil leak, check the oil filter, which may not be properly screwed down. If this isn't the problem, complain and find out what's going on. You don't want to hear the death rattle of a main bearing on a lee shore at midnight.

Final safety checks

If it's a private boat, what you carry and its condition is between you and your conscience. On a charter boat, the operator has a duty to look after you. Outside the influence of the EU Codes of Practice for small commercial vessels, all manner of horrors may be served up in way of so-called safety equipment. In US-influenced waters such as the Eastern Caribbean, you'll be horrified to discover huge kapok lifejackets of the sort not seen here since the 1970s. Liferrafts are

rarely issued, while jackstays and harnesses are often unheard of. If these things bother you, take your own, and add a roll of webbing to your hand baggage to make up some jackstays.

Probably the most important safety feature on the average charter boat outside the UK is its VHF radio. I have shipped out with these, resplendent with DSC emergency buttons, only to discover that they are not hooked up to the GPS. When questioned, the operator looked at me as though I were a moon man. Don't take anything for granted.

Ground tackle

If you're joining a strange boat and it's a pal from down the road looking for advice, tell him straight if the anchor looks like a fish-hook and the chain would be better utilised on one of Thomas Crapper's 'high-level' models. Maybe he'll spring for something decent and keep you safe when the engine fails and the stick goes over the side. If it's a charter boat, you're probably going to have to live with what you find, but you



PHOTO: GRAHAM-SNOOK.COM

Check that the DSC VHF is hooked up to the GPS, and that it's reading out a sensible position



PHOTO: GRAHAM-SNOOK.COM



PHOTO: GRAHAM-SNOOK.COM

TOP: Flush pins on this Kong swivel - no need for any seizing here ABOVE: A cable tie should let you see the week out

Check electronics and navigation instruments are working and accurate

These days, the best answer to the question of potentially dubious navigation instruments is to pack your own iPad - as you probably will for music, emails etc - and make sure you've downloaded the right chart pack and plotter App.

I've given up on those stupid chart plotters mounted at ankle level between the two gigantic wheels on many a charter boat. They are unreadable in the sunlight, if they work at all. The iPad is fine in the sun and the Apps are so cheap you'd be mad not to take one as back-up. Don't rely on it though. Riffle through the paper charts and confirm that the basic protractors etc are in the table waiting.

Regarding the echo sounder, first, make sure it works.

Secondly, ask politely how it is calibrated. If you're told 'depth below keel, plus a little for safety,' insist they tell you what that 'little' is, because it isn't safety at all. A sounder is a navigational instrument. You need to know what it is telling you, accurately.



PHOTO: GRAHAM-SNOOK.COM

Check the plotter works and is hooked up to the GPS. Bring your own back-up device to pre-empt any problem with it



PHOTO: GRAHAM-SNOOK.COM

It's simple enough to check how the sounder has been set up: use a shackle and some line to make a leadline

One-hour safety check

Though inspired by a torrid tale of chartering, this 60-minute safety check works on any boat - indeed even your own!

- Walk round the deck and take a really good look at the shroud-end fittings to check their integrity
- Observe all critical sheaves and blocks within reach. Do they work well?
- If wind permits, run the main up and down, or in and out. Check battens, and reefing gear. Ditto genoa
- Spin the winches and form an opinion about their condition so far as you can
- Check all seacocks for functionality and see if they look sound. Not a popular job this, but you'll feel a lot better if you've done it. Note stowage of softwood bungs and buy some if there aren't any
- Make sure the bilge pumps have handles and work well
- Take a careful look into the engine box and make the checks I've suggested
- Ditto for the battery box - get out the meter, and be cynical about it
- Go over the ground tackle, including the windlass. Make sure the bitter end of the cable is secure and that all shackles are wired or at least cable-tied



PHOTO: GRAHAM-SNOOK.COM

Check the first aid kit, and get to know the safety kit. Make sure it's set up properly

- Find the lifejackets and decide whether they're any good or not
- See if the chart pack stacks up with your passage plan, then try the chart plotter etc. If they don't work, decide if it matters or not, then take action accordingly. See if you can find a 2B pencil, dividers and a chart protractor
- Find out how the echo sounder is calibrated
- Get out the tools, add your own, then decide if anything needs to be bought or borrowed from the charter people. If they won't give you any tools and say, 'Call us if anything goes wrong,' make a fuss. It's a dangerous policy that people have tried to foist on me before now



PHOTO: GRAHAM-SNOOK.COM

Check the windlass does what it should before you leave by dropping and raising the lot. Any problems will quickly reveal themselves

can at least ensure everything works and make good if the shackles are not wired or cable-tied. Drop the hook right there in the marina and see if it comes up again. It's not much, but it's a start. Charter boat windlasses often have trick connections, perhaps it only drives with the engine running, and so on. Next, find out how much cable there is. It probably won't be enough, but it might just about do. Ask if it's marked near the bitter end, and make sure that this is secured to the boat so that it can't come undone. Always useful to know...

Tools and spares

A lifetime of disappointment has led me to take a basic tool kit along when I'm joining a strange boat I have any reason to

believe may not be well found. A good start is a couple of quality adjustable spanners, screw drivers (flat and cross-headed), a small mole wrench, a set of metric Allen keys and either a Leatherman or Gerber multi-tool plus a top-of-the-line Swiss Army knife with an illegal locking blade (all in hold baggage).

As for spares, there's no end to this, but engine spares as discussed above are vital. A few winch spares can save the day, insulating tape is axiomatic, a multimeter, a couple of feet of seizing wire and a bent metal coat hanger. If you have to ask what the last item is for, you'd better forsake the sea and take up golf. I note my local club is advertising for new members with a deal on the joining fee. ▲

You can save yourself no end of bother if you take a few basic tools and spares with you



PHOTO LEFT: COLIN WORKY/IM



PHOTO: GRAHAM-SNOOK.COM

Check you've got the right paper charts for the area, relevant pilot guides and that the basic navigational tools are in the chart table