ASK THE EXPERTS

■ Your questions answered by our team of experts

SURVEY AND DESIGN

Is a compression post neccessary?

Q I have recently bought a Colvic Sailor 26, which I am generally pleased with. But slow as she is, I would still like to get the best sailing performance that I can from her.

To start off with I was hoping to get hold of a tension meter in order to load the rigging appropriately as it felt a bit slack. But while considering this I was struck by the apparent lack of a compression post beneath the mast to transfer the mast load from the coach roof down to the lower hull.

I believe that Colvic supplied some hulls for DIY enthusiasts to complete themselves and this got me wondering whether there is supposed to be a compression post in there or not. I am slightly worried that by raising the rig tension I may cause sagging in the coachroof.

Does anyone know whether the coachroof is designed to be strong enough on its own? Or is my boat missing an essential component?

Tony Smith, Keynsham, Somerset

A You are right about Colvic – they were basically glassfibre moulders who supplied the hulls and decks for others to complete. One professionally-built version of the Colvic 26 was marketed as the Atlanta 26 and, of course, quite a large number were home completed. The upshot of this somewhat erratic history is that there are wide variations in layout and build quality which – without further information – makes it impossible to judge whether your own mast is adequately supported or not.

There are some steps you can take that might help identify any problems, but first let's dispel the notion that you can damage a boat by over-tightening the standing rigging. Winding down the rigging screws with ordinary tools (say, an 8in spanner and screwdriver) will produce nothing like the maximum tensions and the consequent mast compression loads experienced when sailing hard pressed.

So, here's a simple way to tune a rig – and you won't need a tension gauge.

Start by tightening the cap shrouds, making sure the mast is perpendicular to the deck. Assuming the shrouds are of the same length, the extension of the rigging screws is a good guide. They should have the same number of turns on each side. Do the same with the forestay and backstay, adjusting to achieve the required rake – about 2-3° being typical. Finally, tighten the lower shrouds to remove any bow in the mast. In none of these operations should you be too heavy handed. Remember, you can always make further adjustments later.

The proof of this particular pudding is in the sailing. Beat to windward in a gentlemanly Force 3. If the mast remains straight and the leeward rigging starts to slacken at about 15-20° of heel, the rig tensions are about right. If it slackens at lesser angles, it needs to be tighter.

David Harding

▲ Colvic Sailor 26s were completed to varying degrees of fit and finish

▲ A rigging check can determine if the mast compression loads are depressing the deck

Attend to the shrouds in pairs and be careful to adjust them evenly. To remove any transverse bow, you should ignore the cap shrouds and pull the mast straight with the lowers.

Hopefully, an hour or so of gentle tweaking will get things sorted.

But here's the crunch (excuse the pun); if the leeward rigging continues to slacken at meagre angles of heel, then, in answer to your question, it's almost certain that the mast compression loads are depressing the deck and that you should devise some form of internal support.

ANDREW SIMPSON

GAS INSTALLATIONS

Replacing old gas hoses

Q As my gas installation is now over five years old my insurers are asking for renewal of the hoses.

When I contacted a large local caravan dealer they told me they could no longer supply the armoured hose I had originally used. They said it had been 'banned' as you could not see the use-by date nor could you visually inspect the rubber for ageing.

When I asked what the alternative was they said coiled copper tubing. This may well be OK in a caravan but no use on gimballed cooker.

What is the marine answer please?

Peter Foston, Newton Abbot, Devon

▲ The date of manufacture of this plastic hose is Oct 1990 – so it needs to be changed

▲ This new armoured hose is dated 05/06 – May 2006

A Your insurer is quite correct in asking you to change your hose if it is over five years old. Remember that flexible hose should be checked regularly and replaced if it shows signs of deterioration such as cracking, bleaching or becoming brittle.

However, I do feel your caravan dealer is getting confused with the standards. He is correct to say that a new installation on a boat must conform to standard (EN ISO 10239:2000 section 6.3.3), which requires hoses to be 'accessible for inspection over their entire length'.

But yours is not a new installation so a different code of practice (BS5482-3:1999) for the maintenance of gas systems on boats applies. The main requirements are that hose be made to BS3212-2:1991, be pre-assembled and not exceed one metre in length. It also requires that any flexible hose 'be protected from abrasion' so an armoured hose could be a wise choice to meet that requirement.

The standards for new and existing caravan installations make no suggestion as to the use of armoured hose and certainly do not ban it. There is just a reference to BS3212-2:1991 as an appropriate national standard.

The standard for existing installations (BS5482-3:1999) also says that flexible hose should be used to connect a gimballed cooker. Caravan cookers are fixed so flexible hoses are not generally used.

Boat owners should only use solid copper pipe when connecting a fixed appliance such as a heater. Solid pipe, coiled or otherwise should definitely not be used on a gimballed cooker.

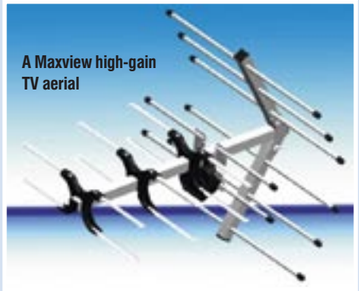
PETER SPREADBOROUGH

ELECTRONICS

Wanting a good reception

Q What type of TV aerial would you advise for a 12.2m (40ft) steel boat, which I live aboard in the marina at Carrickfergus, Northern Ireland?

Jim Rodgers, Carrickfergus, Northern Ireland



A According to the BBC website, Carrickfergus is fairly close to the main 500KW transmitter at Divis (grid ref J286740), which transmits analogue and digital signals. Looking at the map, it appears to be nearly line-of-sight between your boat and the transmitter. If you had a yacht, you could fit an omnidirectional Status aerial at the top of the mast, providing it is well in the clear of other masts in the marina which might otherwise cause odd reflections of the signal.

A better option, if you mostly watch TV at this particular marina, might be to fit a small Yagi aerial on to a pole, which can be rotated towards the transmitter. You are so close to the transmitter that – according to the BBC digital postcode search website – you should be able to get digital as well as analogue signals. You could try a wideband TV aerial, mounted horizontally to match the polarisation of the transmitter.

Freeview decoders that run on 12V are now available should you want to try to receive digital terrestrial as well as analogue signals. A suitable aerial would be the Maxview B200. It is a wideband, external, directional, compact, high-gain UHF TV aerial, with multi-elements and an anti-ghost reflector.

It should work in weaker signal areas and comes complete with 5m of coaxial cable and accessories.

It might be prudent to see if a local supplier will let you try one on a sale-or-return basis. And if you do buy one, protect it from saltwater corrosion with something like ignition sealer spray lacquer.

CHRIS ELLERY

SEND YOUR QUESTIONS TO Email: pbo@ipcmedia.com (please include your full postal address) or by post to: Ask the Experts, Practical Boat Owner, Westover House, West Quay Road, Poole, Dorset BH15 1JG

OUTBOARD ENGINES

Andy Clark has worked with outboards and inflatables since 1975, and repaired more than 15,000 engines. Through his company, Bosun's Mate, he services a wide variety of makes.

COMMUNICATION

Colin Jones has written a number of books about electronic systems, and owns a Colvic Watson motor-sailer, which he cruises in the Med and the French canals with his wife Rita.

BOAT BUYING

David Harding is PBO's Technical Editor and boat tester. His wide experience covers both sail and power, from RIBs and runabouts to dinghies and offshore yachts.

SAILS

Ian Brown of the Quantum Sail Design Group is an expert in both cruising and racing sails. He has over 20 years' experience in the industry and is a keen dinghy and keelboat racer.

MARINE ELECTRICS

James Hortop is technical manager and design engineer with Merlin Equipment, suppliers of marine electrics. A motorboater and sailor, he specialises in charging systems.

MASTS & RIGGING

Mike Coates has been making spars and rigging for all types of boats for more than 30 years. He is an ex-lifeboat coxswain, an MCA commercial skipper and owns a Hans Christian 43.

CORROSION

Nigel Warren is a naval architect, working mainly on fast ferries and small patrol boats. He is author of the definitive reference book *Metal Corrosion in Boats* used by builders and owners alike.

INBOARD ENGINES

Pat Manley is the author of *Simple Boat Maintenance* and is a regular PBO contributor. He also runs mobile diesel engine courses and is a technical consultant via 1 to 1 Navigation.

GAS INSTALLATION

Peter Spreadborough of Southampton Calor Gas Centre, works in marine equipment sales and has spent 20 years in the industry. A keen sailor, he also manages the Calor Marine Shop website.

PAINT/ANTIFOULING

Richard Jerram is International Paint's UK technical manager. He has spent 27 years with the company, specialising in the hands-on application of new products.

SURVEY & DESIGN

Andrew Simpson has been designing and building boats for over 35 years, specialising in fast cruising and racing yachts. He is PBO's consultant editor and also works as a yacht surveyor.

CRUISING

Stuart Carruthers is the RYA Cruising Manager and has sailed extensively in many parts of the world. His department serves the largest single proportion of the RYA membership.

LEGAL RCD

Tim Rowe is a YDSA surveyor and co-founder of CE Proof Ltd, an RCD consultancy. His long involvement with the RCD provides him with expert insight into the practical application of the Directive.

ELECTRONICS

Chris Ellery AFRIN, IEng MIET was a radio and electronics officer in the Merchant Navy for 11 years and is now senior manager at Greenham-Regis Marine Electronics in Poole, Dorset.

MASTS AND RIGGING

What goes up...

Q I have a spare sheave for a second halyard at the top of my Selden mast but there isn't a spare exit for the halyard at the bottom. Is it easy for me to cut another exit slot and are there any problems doing this?
Keith Shaw, Oxford

A **This is a job you can do yourself. Check the part number stamped on the existing genoa halyard exit slot liner so you can obtain a similar part. Selden slot liner part numbers and the mast slot dimensions are shown below (see www.selden.com, click on manuals)**

Part no	Halyard dia (approx)	Finished Slot size width	x length o/a	Holesaw Dia	Centred
505-017-01	10mm	13mm	109mm	13mm	96mm
505-014-01	14mm	17mm	137mm	17mm	120mm
505-021-01	18mm	22mm	142mm	22mm	120mm

The mast will require a slot cutting with rounded ends. When positioning any slot in the mast wall it is important to ensure structural integrity by placing the top of any new slot more than 300mm from the top of the next slot, even on opposing sides of the mast. Your new slot may end up being quite high to give the necessary clearance to any existing slots.

■ Make sure the position of the new slot on the circumference of the spar will allow the halyard tail to fall correctly to the winch/cleat without fouling any other halyard.

■ Avoid having the slot near the rear of the spar, as you may find that the jigsaw blade fouls the internal extrusion formed by the sail-track.

1. Mark out the centre line for the hole saw and drill pilot holes for the hole saw arbor.

2. Drill both holes then draw lines between the circumferences to mark the edges of the slot.

3. Use a jigsaw with a medium tooth wood cutting blade, or a course metal cutting blade, and apply some WD40 to the blade to act as a lubricant.

4. Carefully cut down each line but on the last line stop a couple of millimetres short of the end, as this will prevent the blank from dropping down inside the mast. The blank can then be easily removed with a pair of pliers.

Halyard slot liners need to be carefully positioned on the mast to avoid weakening it

5. Clean and de-burr the inside and outside edges of the slot with a file.

6. Offer the slot liner into the hole and tap upwards from the bottom to fully engage the retaining lug.

7. Drill a 5mm hole for the pop rivet, remove the liner and apply a liberal coating of chromate paste to prevent the stainless steel corroding the alloy mast.

8. Re-insert the liner and rivet it on to the mast wall.

MIKE COATES

CORROSION

Outdrive anodes

Q I moor my boat in Holes Bay (Cobbs Quay) in Poole. According to local contacts this is an area of high electrical activity in the water. I take my boat out for about three to four months each winter for routine maintenance and I find that the anodes are very corroded. Do I need larger ones?

I note that a number of other boats have additional anodes on the top surfaces of the trim tabs. My Acquador did not have these as new but I was wondering if they would provide additional protection and reduce the sacrificial corrosion on the existing trim-tab anodes?
Jeremy Hobbs,
Stratford upon Avon

A **Yes there are rumours of electrical activity around the Town Quay and upstream, but whether they have ever been substantiated or not, I don't know. It does seem your zinc anodes are working well, however – by which I mean they are supposed to erode away in preference to the items they are protecting. They are renewable and are usually sized to last one or two years.**

If the items they are protecting seem OK and the anodes have wasted away by about a quarter in a season then everything is fine. If you were to put on larger or extra anodes to protect the same items you might get into problems of overprotection (which can cause paint lifting, for example).

On the other hand, if the anodes are almost wasted away in a season then they are too small and extra anodes on the trim tabs electrically connected to the outdrive leg (check with a multimeter) should certainly improve the situation.

NIGEL WARREN

▲ Anodes will help protect the trim tabs

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