President: BOB FREEMAN

71 Longleaze, Wootton Bassett

Wiltshire, SN4 8AS

e-mail: BOBatLongleaze@aol.com



Founder: MARY LACK

Treasurer: RICK HARVEY 44 Southway Carshalton Beeches. Surrey. SM5 4HW.

e-mail: june.rick@btopenworld.com

196 Harewood Avenue. Queens Park, Bournemouth, Dorset, BH7 7BO

e-mail: PeterGimson@bcca.fsworld.co.uk

www.bobcatandcatalac.btinternet.co.uk

Secretary PETER GIMSON Tel: 01202 773749



October 2003

Hello fellow Bobcat and Catalac sailors every where.



Dear Peter

Your readers forum goes from strength to strength and provides much food for thought! May I offer the following as a result:

Anchors & windlasses: Our seven kilo Bruce anchor has served us well and is now connected to 30 metres of six mm chain and a 'Quick' 300 watt electric windlass. (£300 from Compass). The chain is tested to 1.75 tonnes and is ideal for lunchtime anchoring. The windlass is mounted abaft the hand windlass, which we have retained for serious anchoring. There is ample space in the chain locker for both lengths of chain.

Deckhead lining: We got round the problem of sagging linings and disintegrating foam by screwing hardwood battens through the linings to pick up reinforced deckhead areas. Headroom has improved dramatically and the varnished battens are pleasing to the eye.

Navigation: The Garmin GPS 130 plotter is small enough to mount above the saloon hatch and provides world map cover plus cartridges for detailed local charts. This has been interfaced to a Yeoman Plotter which fits nicely on the 9m Catalac chart table. A Garmin fishfinder, also mounted above the main hatch, costs circa £100 and includes depth, voltage, and even water temperature on its display! Finally a JRC 1500 radar, mounted between the fishfinder and GPS allows waypoints to be shown from the latter on the screen Since all this equipment is solid state, battery drain is negligible and our 30 watt solar panel appears to be coping with the load – at least during the summer. We shall see!

Batteries: 'Echo' has a dedicated battery for each engine with two more for ship systems and a further dedicated battery for the anchor windlass. Both engines can charge either or both banks of batteries using switches and charge splitters/blocking diodes. The solar panel also charges the two ship system batteries.

Heads: Your verdict on the SL Loo and its suggested replacement is heartily endorsed. The compact Jabsco is easy to fit and simple – and silent – in use.

Yours ever, Martin Minter-Kemp

Thanks, Martin it's the member's articles and info that make it so interesting. Keep them coming, thanks again ED.

>Subject: catalac oil pipes.

Hi Peter. You mentioned in a previous email that you knew where to get plastic pipes to replace the rusty ones which lurk underneath yanmars. I've just spent a hellish day on Norma Ann replacing my 3 year old genuine Yanmar oil pipes which both had holes in and had sprayed the whole compartment with sump oil. (I was out on a charter at the time, and outwardly calmly carried on - 2 engines are so useful!) I used stainless steel which I had previously had made up as spares, but even these may corrode in the hot salt water from my leaky water pumps. Can you tell me where to get the plastic ones, or what is their spec please. Interestingly, one of the yanmar pipes, the short one, appears to be made of bronze, whereas the long one is steel. They both have pin holes in, so getting bronze made up, as suggested by some workshops when I enquired, won't help it seems. Anyone know how to stop the water pumps leaking every few years? or maybe at least diverting the drips away from the engine? I suspect that the wear and leaks are due to the silty water on the east coast grinding down the pump shaft where the water seal rubs against it. Do south coast yanmars suffer as much?

Replacing the pipes is bad enough if all goes well, but one of the union bolts was seized and took me 2 hours to free, gradually taking off more bits to get a better purchase on it. In future I will not overtighten them.

I just read the latest newsletter. It's very interesting to hear people's tips and opinions. I bought a Vetus alloy anchor of the recommended size for a catalac as a kedge and picnic anchor, mainly to use when fishing to avoid hauling up the KLI when offshore. It is completely useless as it will not dig in despite having 2 fathoms of chain. If you drag it across a sandy beach by hand, it just bounces along. I wrapped 8 lbs of lead sheet around the stock and it still won't work. The only problem is I'm too honest to sell it or even give it away to some poor soul who might rely on it. The 22lb original KLI is the best anchor I've ever used. Much better than a genuine CQR.

Keep up the good work. Regards. Terry Secretan. "secret charters".

Thanks for the info on anchor. The Yanmar metal oil pipes do suffer from corrosion and yes I did replace the pipes with Plastic and to my knowledge they have not given any trouble for the last 5 years. (The mod is one I found successful however the risk is yours.) I took the old pipes to a firm that deal in high pressure pipe and fittings ie. brake pipes and hydraulic pipe for earth moving equipment etc.. Look in your local yellow pages. The oil pressure from Yanmar diesel is at most 100 lbs. The pipe I used was good for 2000 lbs. Quite a safety margin. The cost was half the price of the Yanmar replacements. Owners have cured the droop... can they now cure the drip. ED.

Hi

I am Philip Moore of Koorangi (8m) and a member.

can someone be so kind as to tell me where I can obtain the black nylon cokpit locker hinges.

by the way my boat is now on a permanent berth at Gruissan(near Narbonne France) if any one is passing by they would be more than welcome to a tot of something.

maybull@globalnet.co.uk

P J Moore

Yes Phillip, the hinges are available from John Lack Tel. 01202 483191 Mob: 07721 899299. Many thanks for the invite.

>>>>>>e.mail reply ref: Battery problems—September newsletter.>>>>>>>>>>

Adrian

You can tear your hair out with worry caused by advice over batteries. The issue as to whether you should have cranking (Car) batteries to start the engies or Leisure batteries to run the fridge whilst you are going nowhere. In short there is only one sensible way out of this dilemma that being to have enough power. If you try to start an engine using only one battery you need to be able to draw down

something in excess of 200 amps which for a leisure battery might be harmful. If you have a bank of four leisure batteries all wired in parrallel the load on each is reduced to only 50 amps. Equally when charging up the batteries each of them will only have discharged a quarter of the power of that which one would have used if used alone. With a bank of four all of your batteries are kept in a better state of charge than one might be otherwise. Batteries last longer if they are not excessively worked and are kept fully charged.

Batteries can only be expected to last 4 - 5 years. It is our experience that a bank of four batteries all purchased at the same time and treated to the same charging and loading conditions will all give life in excess of this time scale. We do however have the benefit of a rather efficient wind generator.

Aleck & Chris (Minou Chaud)

To Gordon & Morag

Having experienced a similar problem in our 8 metre "Minou Chaud" we came to a very satisfying solution.

We removed all the old head lining, cut and glued with wall panel adhesive small pieces of 4mm ply wood to the supporting ribs of the roof which left us with a smooth curved surface to work with. It was necessary to fix the ply with the odd screw in order to maintain the curves required. Having covered the whole area of the boat roof, we then stuck carpet to the ply wood with unibond, holding the carpet in place with staples fired through the carpet into the wood. Of course we had to spend hours removing the staples after the glue had set as they would have rusted if left in place.

The end result is that we now have a solid roof that is well insulated and to date has given us nothing but satisfaction.

The carpet cost about £100 and the rest of the materials about £70.

Caution! make sure you have made all the alterations you are likely to want to make to the wiring first as any later alteration will be far more difficult and avoid the use of foam backed carpet or you will be faced with a repeat of the problem you are trying to solve.

Aleck & Chris (Minou Chaud)

>>>>>>e.mail reply ref: Headlining problems—September newsletter.>>>>>>>>

Peter,

Thanks for the latest newsletter - the best by far. I particularly like the problem/answer section, and not just because you put my bow piece in. However, you have got my email address (and my name) wrong - you missed out the Y (mblaydes@ntlworld.com). I have had a great response to my request for data on sugar scoops, and Alain Oheix has sent me some good pics of his scoops.

My 9m Catalac - Hi Jude suffered from the same problem (droopy headlining). I investigated this at length. The same material that was used originally is still available, but the foam is now fire retardent and is not expected to last more than 10 years.

Many lining specialists advocate replacing the lining in squares (approx. 2' square) which are individually secured to the ceiling. The main advantage is that if you need to resecure anything on the deck above (e.g. winches, genoa track etc) then it is easy. The main disadvantage with this method is that it lowers the ceiling, and it is already slightly too low for me (6'2").

I was unwilling to use the vinyl/foam product because of the cost/expected replacement period.

I then thought about using carpet. The foam carpet would probably suffer from the same problem as the existing headlining, however, there is a new (relatively) carpet which is felt backed. I thought this might be suitable and it is also pretty cheap for a lightweight carpet. I then looked at glue. A specialist warned me that most glues used by the lining companies are fine in this climate, but would start to melt if the boat was taken further south. They recommended that the best glue would be that used in the car trade. I then managed to twist the arm of my friendly carpet fitter and his mate to agree to do it. I decided to remove the old lining and the residual glue myself - this is a very messy job, best done with the inside of the boat totally cleared of everything else. I really recommend the dyson for this task! I then (with a lot of help from my son!!) removed

the old glue back to clean fibreglass. You can get a flap wheel designed for this from the headlining people, but I used a brass cup wire brush mounted in a small angle grinder - but it must be brass, and the grinder should be running at a slower speed than single speed grinders can otherwise it is very easy to grind down the fibreglass - word of caution wear full overalls and dust mask/glasses. You are then ready to let the fitters do their thing, again it is easier if you remove the windows completely - it also lets you reseal them again afterwards!

To make the task possible, the main saloon headlining should be done in four sections, with a piece of wood used to cover the joins (fore and aft). I made the task much simpler by taking the old headlining out carefully and using that as a template for the cuts

Apart from the minor problem of the car glue being so strong that it softened the bond between the felt and the carpet itself, this job went very well. The cost of the carpet was less than the glue and about the same as that charged for the fitting. I also purchased new screws for the windows of the next size up to make certain that I had a good fixing - this entailed some small amount of drilling, and a lot of screw cutting as I could not get the right length at the time.

The end result is excellent and at a major saving over that quoted by headlining specialists. It is a better insulator, looks better, and should last for a very long time.

See pic. Next page.

Mark Blaydes



Sorry about the "Y"
We all know the
praise was because
we featured your
bulbous bot.

The headlining looks good Mark,

but
"Y Y Y Y Y"
is the
glass
empty?

ED.

PENNYROYAL OF WESSEX

PENNYROYAL (9 metre) was made in 1987 and I sailed away with my wife and two girls for two years to show my children how other people in the world lived. I had almost missed them growing up whilst I was running my company in London and whilst we were living in a rather splendid middle-class ghetto on Kingston Hill - that I hardly saw in daylight.

Living with one's family in what is essentially a large wardrobe (OK, with Catalacs two wardrobes joined by a shelf) is a sure way to get to know each other and, perhaps surprisingly, we now love each other all the more. Living in the Eastern Med. in sometimes ferocious temperatures caused PENNYROYAL'S roof lining to begin the inexorable droop some three years ago. I did not want to accept the huge cost of stripping the whole lot off and starting again so I made up thin teak lathes(mahogany would look smarter but was not available), varnished them and fitted them holding up the lining against the cabin top with stainless self-tapping screws. The wood is thin enough to curve flexibly around most of the curves but it was a bit fiddly in the two forward cabins. On the larger areas such as the saloon, I fitted cross pieces across the width of the cabin and fitting between the longitudinal strips; these as much for the appearance as any actual need. The finished effect is

really very acceptable and if I had been doing it in this country with decent timber available, it would have been even better. Call me on 0797 3752173 if I need to be more specific.

We still have the boat in Greece and I have read the anchoring notes with interest. At the risk of boring, may I say that our bower anchor is a hefty Bruce which self-stows on the central double bow roller with a stainless plate under to protect against the thing swinging against the fibreglass. My 'kedge' is a Danforth the same weight as the main anchor – and I have another in the locker just 5lbs lighter! My rode used to be 30metres of 9mm chain onto 50metres of warp but I thought this was overkill so it is currently 5metres of 9mm chain and 50metres of warp. But I have another 50metres of warp in another locker!

I suppose I am just not the stuff heroes are made of but with a wife and two children on board, I do like to try and get some sleep when at anchor. And yes, we drop 20 metres running slow astern until it snubs – and then lay out another twenty metres or so and snub that before shutting down and stowing sails. If leaving the boat for any time, it pays to dive with a mask and flippers and see if it is set. I wouldn't want to do that in the Solent, and it probably wouldn't be possible to see it through the murk anyway, but I would point out that we have been in situations where the wind has gone from nothing to Force 8 (on instruments) in half an hour out of a clear blue sky and no change in the barometer. We have also dragged in the Agean with three anchors down and the wind blowing offshore. Personally, I would never use a scope of only 3 x depth, even for a lunch stop. 5 x depth is my absolute minimum and as I cannot recall having swung into another boat I can only imagine others share my views and have a similar amount of gear down. I suppose if you've paid for it, you might as well use it? I used a Simpson Lawrence manual winch that has recently died and been replaced with a more powerful Lofrans job.

May I take the opportunity to congratulate you on the active newsletter? I know there will be some members who are not online but this production method certainly makes us feel closer and more involved.

Thank you. Kind regards,

Martin Turper

Subject: Ahoy from "sunny" Bermuda...

From: Kathleen A. Faries [mailto:kaf@ibl.bm] **To:** 'PeterGimson@bcca.fsworld.co.uk'

Hi Peter,

hope your summer season of sailing was safe and fun. Until 2 days ago mine was. As you may have heard on the news hurricane Fabian smashed into us here in Bermuda and messed things up a bit. The Sunbeam (Catalac 8m #157) dragged its mooring around a bit and finally broke the harness. She ended up rear first on the rocks damaging the rudders. The rest of the boat seems ok. At any rate, I'm going to be doing some repairs/mods whether I want to or not.

If you still have the details for the sugar scoops I'd appreciate the information to add to my decision making.

Also, if you have any other suggestions for rudder improvements I'd appreciate that as well. Now would be the time to do anything like that.

Thanks in advance,

- Jeremiah

Can anyone help with rudder options. ED.



No cats in sight the sea looks "slight".

I haven't a
picture of
"Fabian"
but this is
Hurricane
"Isabel"
glad I am not out.
Picture courtesy.

Tim.
Owner of
C'est Tout
He is doing
sugarscoops
this winter.

>>e.mail reply from "Sea Spirits" ref: Anchors and Headlining problems—September newsletter.>

We have just received the latest Newsletter, something we look forward to each month. We appreciate all the hard work which must go into producing such a varied and entertaining read each month.

On the subject of anchors we also use a Delta, of the same size as Gordon on his Catalac. Based in Poole harbour with its mainly soft bottom we have only ever had one problem and that is breaking the damn thing out! We take Sea Spirits, Cl 8.07 (or should that be she takes us) on cruises around the area most week-ends and for a couple of weeks each summer, and the only time the Delta has not held is over weed. Like Gordon we find it stows very easily into the bow fitting and have also added a stainless plate below this to protect the gel coat. We do not as yet have the luxury of a winch, so in order to break the anchor out we sometimes use the well trusted method of positioning our bow over the anchor, taking a turn of cable around the substantial foredeck cleat and giving the iron topsail plenty of welly. Never fails!

Last week-end as I was single-handing for the day on Sunday I thought I would deploy a small Danforth of about 3Kg, attached to 3m of chain and then warp. The bottom was soft, I used what I consider to be the most reliable method of setting the hook i.e. lower it to the bottom, reverse slowly back until at least 5 times depth is out as scope, make the cable off and then reverse gently until the anchor bites, then give it one good tug in reverse to set it. I felt confident that the anchor was holding - indeed it did hold, against an ebb tide with the wind behind it whilst I had lunch. When the time came to raise said anchor, oh what joy! No heaving on chain, no breaking of back, just a steady pull on the warp and when I was almost over the hook it broke free (only slightly reluctantly) to appear above the surface, and as if to say "hey, I set well - use me again" it came up well caked in harbour mud. I shall use this anchor again.

We have owned Sea Spirits for some 4 years now and when we purchased her the headlining in the saloon was very droopy. Not wishing to go to the time and expense of replacing the headlining we decided to try and re-fix it. I came up with the idea that since it was only hanging down across the middle and seemed fairly well stuck at the outboard edges we could fit battens across the span of the saloon, running athwartships. If we did this in two halves - from the centreline

to port and to starboard - it would keep the length of the battens more manageable. We used softwood battens of a flat 'D' section, suitably painted, but I have since found a local plastic extrusion supplier who sells material of the same section but in expanded uPVC. Much lighter, more durable and easier to work. Once the battens were prepared it was then just a matter of holding them against the outboard edge of the saloon, forcing them up hard against the headlining, marking off the centreline of the saloon on the batten, cutting it to length and fixing it in place. This we did by feeling across the headlining until we found a longitudinal stiffener in the cabin top and then fixing the batten into place with 12mm stainless self tappers. In total we put up 3 battens across the full width of the saloon plus short sections around the edges in a number of places. It took my brother-in-law and I one afternoon to complete and 4 years on it still looks as good as the day we stood back and admired the finished product.

By all means pass my e-mail address onto others if they request it. We will gladly offer any assistance we can.

Keep up the excellent work, cheers,

Nigel Jones Nigel.v.jones@baesystems.com

>>>>Reply<

Thanks for your note.

The Delta anchor does have good burying properties and may sometimes appear to be difficult to recover when fully buried. The technique is quite simple even without an electric windlass. Haul short without great effort and then WAIT. Nature then allows the Delta to rotate out of the seabed in an oozing motion and frees itself quite readily. Catamarans are particularly suitable for anchoring as clearing off attached mud can be achieved by forward motion with the anchor just below the surface (look for the amazing vortices from the tip of a Delta when just below the water surface). Be wary, however, most other types of anchors whirl about or "waterski" and can damage the gel coat on the hulls. This demonstrates the stability of the Delta, an attribute exhibited by only one other proprietary anchor. It was established in 1890's that stockless anchors always, repeat always, turn over when dragged through a seabed and then progress tips upwards and will not re-bury. The solution of the time was to specified much heavier anchor chain and this was incorporated in the Anchor and Cable Chain Act of 1897. Apart from metrication, the Act is virtually unchanged today. Now this was for "big" ships but it is equally correct for small craft. When Bob Ogg designed the Danforth in the 1930's the major benefit was the thin blades for penetration and the method of ensuring that the shank remained in perfect square alignment with the flukes. A large number of copies and indeed those now carrying the Danforh name are nowhere as good as the original some to the extent that they are un-setable. An original Danforth does have a very high holding power (there is no real definition of this term!) but is less successful in hard sand bottoms and in weed conditions.

The 3kg Danforth you describe is what the Americans would call a lunch hook and is useful as such but the ease of recovery may indicate that it did not bury particularly well on that occasion even with harbour mud when recovered. As a testing person you will appreciate that repeatability is paramount in drawing conclusions from tests. In the development programme for the Delta we had some un-explained bending of the shank (which incidentally was similar to shank bending of the Danforth type) and it was discovered that the bending was due to recovery by motoring forward over a well buried anchor thus pulling the shank in the entirely wrong direction. We solved that problem by alteration of the shank profile and stronger material. To the best of my knowledge there has been no bending of Delta shanks after these alterations!

Thanks for your experience with headlining. I fear that your solution would not work on a 9m as the topside to deck profile is a fairly large radius whereas on the 8m it is angled enabling your battens to be wedged.

When we get around to sorting the problem in the winter I will let you know how we got on.

Gordon and Morag.



>>>>>> For Sale <<<<<<<

Offered for sale 8 metre Catalac (Minou Chaud) Details



This is probably the best up and together 8 metre on the water. The current owners seek a new challenge with a larger boat.

Minou Chaud Built Christchurch 1983 No. 115

Refitted 1999

- 25 hp 4 stroke Mercury engine with Electric Start and Tilt
- **Fully Battened Main Sail**
- Bi-radial 150% Genoa on Roller Reefing
- **Full width GRP Spray Hood**
- Rear Gantry with Radar & Wind Generator
- Cockpit Tent covering whole area
- Hydraulic Steering & new Design Rudders
- Autohelm 4000 Pilot
- **Yeoman Chart Plotter**
- **Electric Anchor Windlass**
- 4 x 100 amp-hour Leisure Batteries
- **Battery Charger wired into Shore Power**
- Carpeted roof, walls & floors
- **Full size Sprung Mattress**
- **Hot & Cold pressurised Water System**
- **Heating System**
- 2 Gas Burner + Grill + Oven Cooker
- Central Winch
- **Stainless Steel Bowsprit**
- **New Windows**

Wanted Cash or part-exchange for: - 10, 11 or 12 metre Catalac. Telephone: - +44(0)1202 661164 or e-mail aleck@mq-sales.fsnet.co.uk

FOR SALE

2 x 8m lifting rudders complete with stainless steel blades plus a pair of davits) Contact: Tim e.mail: timjaf@aol.com

Dear Peter,

Basically I feel that Catalacs are underrated and offer value for money especially in terms of build quality (cannot comment on the 900!) Gallivanter my 8m had various mods including a double quarter berth extended wheelhouse and bowsprit, the bowsprit moved the centre of effort forward and lessened the weather helm, fixed rudders and skegs (whoever moulded these was obviously an inmate of St Dunstans! awful is not the word i could even uses)

C'est Tout through Colin Rogers at DellOuav marine who is an artist with Glassfibre, now has the bulbous bows which have proved a success, plus steering position outside resulting in a bigger saloon and easier sailing. It is my intention to fit a bowsprit this winter and consider a cutter rig to help performance to windward.

However the principal mod will be a new stern configuration, I have much wear in my steering gear and now is the time for a change so Colin will make a mould for some sugar scoop sterns and I will fit a new rudder configuration, this mould will be available for hire should others feel the need for speed (or at least better looks.

Any members with any experience of sailing in Portugal? i would ideally like to keep C'est Tout in Portugal and would appreciate any information,

As it is close to lay up here let me wish everyone a good winter!

Brgds

Tim

Hi Peter,

2 reasons for writing the first is that we seem to be having a problem receiving the newsletters, probably because we are using the laptop-mobile phone combination. It usually takes on average about 10 minutes to download because the mobile only works at one speed - SLOW! It's actually quite painful to watch and because we use Outlook Express, we don't know in advance what is to be downloaded. So for the past few months we have used an internet cafe to receive the newsletters, usually with no problem, but last month for some reason when we tried to read it from the floppy disc we had saved it on, it screamed at us saying it has caused a "serious error" Ooh err!!

The other reason for writing is that we agreed a sale on Squib yesterday with a flexible completion date and are quite keen to know **if any 10 metre Catalacs are for sale** as we have been more than happy with Squib but just need a larger boat, perhaps if you know of any you could let us know.

We're on the island of Levkas in Greece, where we are planning on spending the winter. We're enjoying the cuisine and colourful culture and of course the ouzo, only criticism we have is there is not enough wind to sail most of the time, so the engines have been on quite a bit. Sod's law when we have had some wind it's always on the nose! Hope the progress on your boat has been good.

Yiamas ,,,,,Judy and Paul Thompson

Yiamas et ouzo to you. ED.

FITTING A BOWTHRUSTER PART 2 BY PETER DENNING

After checking the marked out area a few times and the former that was used to mark it, the jig saw was bought in with a metal cutting blade and the holes cut. The first one was cut and the tunnel pushed into place confirming the hole was the correct size! The second hole was then cut and only a small amount of trimming was required to allow the tube to be pushed into place. The tube was marked with a permament marker pen, removed and then cut outside the line using the B&D multi tool. The jig saw was considered but cutting a tube with a wavy line on it following the hull contour would have been impossible. With the tube out the hull inside was ground back to a clean surface for 6" or 180mm and on the outside for 2" or 50mm. The tube was refitted and held in place with epoxy resin thickened with fibres and additives. Once dry the tube was bonded in place using epoxy resin with mat and chopped strand fibre. I had spent time trying to find out how much to apply but received no definitive answer from any quarter. The best was to lay up to the same as the hull thickness and if in doubt add some more layers and it was this that I followed. Once done, I then concentrated on the outside and decided that fairings were required on the leading edge. These I created, again using epoxy with fillers that gave strength with easy sanding. If I had thought ahead on this I could of allowed the tunnel to form the inside edge.

The thruster it self was aligned up and all the necessary holes marked and drilled, the areas (including the ground back hull) in contact with water were then coated in VC Tar. The thruster was then installed with all fittings sealed in place. All areas covered with the VC Tar were then primed and antifouled with hard paint. This only now left the electrics to install. The control switch was fitted on the steering bulkhead with the help of a spacer to give room for the wiring to be taken down the back and led all over the place to bow thruster. This route involved liberal use of plastic trunking to protect the wiring where exposed in the lockers. The battery was installed under the starboard bunk. I did think of putting it in the forward hanging locker but a 105 amphour battery is very awkward to lift when you can not get over it. This meant though, that I had to use 80mm square cable for the run which is 4 metres there and back as the current is around 250 amps! Everything involved on the electrical side is heavy duty and 3 times the size of normal items. My only concern left was how to charge the battery. PBO in the April 2002 (no. 424) issue had a question and answer article about electric windlasses and how to do the electrics. One way was a separate battery like me and then to use a 12 to 12 volt charger linking the two battery's together. This means that as I charge the main battery bank and it reaches full charge the 3 stage smart charger cuts in and takes power to the thruster battery automatically. Once charged the smart charger then floats the battery at the correct voltage whilst it senses enough voltage (14 volts) at the main battery's. again like all the other wiring done it has involved a lot of fiddly work to get the wiring in place.

Now that the bow thruster is being used we are starting to wonder how we did without it. It allows the bows to be kept over a mooring buoy whilst the first lines are put in place and the boat can turn in it's own length. The other day it even started to push the bows against 20 knots plus of wind. The fact that it is mounted only in one hull (starboard) does not seem to have affected it's performance when pushing the bows to starboard and the 'jet' coming out in between the hulls

Many Thanks Peter. ED