A

Anodized Aluminum

Michael, I've seen Snowmobile parts re coated using a process called powder coating. From what I've seen the seems to be a very durable coating and is done by body or paint shops. I just now searched with Yahoo and found some categories specific to the process.

Antenna

I am about to replace the VHF cable in my mast. RG 8X is presently in the mast. I am thinking of replacing it with RG 8U or RG 213U or should I replachave several options: 1) replace the old cable with RG 8X. 2) replace with RG 8U 3) replace with RG 213UAny comments or recommendations? Thanks in advance. EdKittiwake, 1974 C&C 30

I replaced my RG-8X with RG 8U with 8 years ago after not being happy with my VHF performance 30+ miles offshore. I am very satisfied with the $ and effort required to pull that "monster" cable thru... Be sure you attach a very strong leader/line to the old cable when you pull it out of the mast AND out of the boat bowels - so you can pull this big stuff back thru.

Aurora Marine Industries

Hello Everyone:
I have been the proud owner of a C&C 30 ('77) for the past eighteen years. My stomping grounds are Georgian Bay and Lake Huron. I have had sailing experiences on both coasts and in the Caribbean. My home is now in Toronto, Canada where I have landed a dandy job in the industry. I am the Product Consultant for Aurora Marine Industries.

I have read some articles on teak, waxes, cleaners and the like on this list and have laid dormant. I don't want to bug everyone, but if you want to email me at work ami@auroramarine.com <mailto:ami@auroramarine.com> for maintenance related problems please do so. Also if you want to talk to me about my personal boating, get me at home macsam@echo-on.net. <mailto:macsam@echo-on.net>

Finally got around to trying/ using the Aurora Clear View for my (plexi, I think) port lights which are opaque with "fog" - boy, is it miraculous! Did two ports in 20 minutes or so and they sparkle! Found CV in West's; Mystic store didn't have it, as it apparently is classified hazardous, but Milford did. Great stuff.Bill

Awlgrip Paint

My Tartan 30 was awlgripped six or seven years before I bought it and the hull had become a little hazy. All of the conventional wisdom said not to do anything, but I found that MEK (methylethyl Ketone) was good to use as a wash and if you need to polish I believe that I used 3M finesse polish with a wheel to bring the shine out.

Awlgrip is so hard that it is hard to do anything to damage the paint. I even repainted my transom and blended it in successfully.

B

Barrient Winches

Since Barrient went out of business, how much of a problem is it getting parts?

I found the THE AUSTRALIAN YACHT WINCH CO. (www.arco-winches.com) sells parts for barrient winches. Are there any other sources?

I've had good luck with both Barrient and Barlow parts from M&E Marine. Their number is (800) 541-6501.
I used to shop at the store in Collingwood, NJ when my boat was on the Delaware River. Great store. Helpful staff, mostly sailors. And it was like an old hardware store full of boat stuff. The actually had overhaul kits for my Barrient 16 sheet winches... and real polished bronze clevises for the Merriman turnbuckles that had gotten bent by the previous owner.

Batteries

Easy. There are only two ways to tell how good a battery is:

First, charge the battery and then allow it to stand for a few hours, or place a load on it (like a headlamp) for two minutes to pull down any "float charge" on the battery. (This is a false higher voltage on the

surface of the plates, there is no real oomph behind it.)

Buy a good hydrometer (the 12" kind, not the 3" kind!) for about $6 in an auto parts store. Open the battery caps and test the specific gravity in each cell. On a brand new battery this would be 1.265 in each cell. As the cells go down to 50% the specific gravity will go down to 1.190 the hydrometer should have numbers, and a "good-fair-replace" scale in it.

Or buy a digital multimeter (INVALUABLE for reality testing) and test the battery voltage with it, using the 20v scale. You should read 12.75 on that same pristine battery, down to 11.75 on a useless one. 12.25 is a 50% battery.

You want to give the battery a good break before testing it. Make sure they are all fully charged, then top up with distilled water if any cells are low. If you add water, let it sit overnight to mix in and then recharge again. Then take off the float charge as above, and test by your choice.

The hydrometer can spot a single bad cell--which happens. But the hydrometer invariably means a drop of battery acid is going to splash on something that costs more to replace than the multimeter would have cost. (About $20 in Target, etc. for a great deal, about $40 in Home Depot, or Radio Shack on sale.)

Multimeters have a spec sheet with them that tells their accuracy: A real cheap one may have a DC accuracy of +-2% +-1LSD, which means they may be off by 2% of the measurement, plus the Least Significant Digit on the display may be off by one more.
i.e. if it says 10.00V, it could be off by 2% of that and the real voltage may be 10.2-9.8volts. But the 10.00 on the meter could also mean 10.01 or 9.999, since the last digit may also be off by one. So...if another ten bucks buys you a meter that is rated for 1/2% DC accuracy, go for it. You can work with either one, you just have to treat it like a navigation position and bear in mind it is never dead on.<G>

It's called a ZAP Stop Alternator Protector and is made by Heart. Heart # 84-6001-00. Gerry/Mintaka

>Jared,
>From what I've heard, and experienced(the hard way), is that switching the
>batteries while the engine is running, will fry the diodes in the alternator.
>There is a device that you can get to prevent this, but I don't recall what
>it's called. Maybe someone more knowledgeable could help us on this one.
>Joe

>
>Jared Sherman wrote:
>
>> > << Somewhere sometime I heard that it was bad to
>> > mix. >>
>>
>> > << the batteries (closest to the alternator?) comes up
>> > to full charge first, then the other one never gets a full charge.>>
>>
>> One solution would be to use an A/B switch with field protection. Start
>> on the starting battery only, give it a few minutes to charge, then
>> switch to Both and then to the house battery only. That way the starting
>> battery gets used only for starting, and held as a spare if needed.
>> Nothing needed except the switch and a flip of the wrist.
>>
>> Ideally, if you gang up batteries you want battery cables of identical
>> lengths (i.e. from the batteries to whatever junction point) but the
>> most-discharged battery will be acting more like a short and absorbing
>> the lion's share of the charge, so I'm not sure where the practical
>> reality of that approach will be. I'd be reluctant to be swapping
>> batteries--I hate going near them. Something always manages to get acid
>> eaten!<G>
****

<<Properly-charged batteries won't freeze >>Those first two words are the trick. Car batteries get charged pretty much daily, at least weekly.

Any lead-acid wet cell battery that is left alone for 30 days will form permanent sulfite deposits in the bottom of the battery and suffer a permanent loss of capacity. After 30 days the loss gets greater. Leave it alone for four months, and you may have a 10-20% loss of capacity. Of course, if you are used to changing batteries every 3 years this may not mean much--but it could add up to a real difference faster than that.

I'm not certain, but offhand I think the loss is 10% per month for a standing lead acid wet cell, so after 4 months you are down 40% of capacity, and the battery is very much more likely to freeze if you have a good February or March freeze.

Battery Voltage

Jared is right on the money with the relation between battery voltage and battery charge. I copied a chart from Practical Sailor a number of years ago and keep it on the boat.I use a digital volt meter to check when its time to charge my batteries. I wired 2 speaker jacks to a location in the cabin where i can plug the multi meter in and check

battery voltages. I use the battery switch to select the battery i want to check. When both batteries are around 50% i turn on the charger. I am able to get 5 or 6 years out of a battery. My refrigeration is Norcold. It runs off 120v or 12v. I don't have to worry about leaving the batteries on charge all of the time. Here is the chart.

Voltage	State of Charge	Hydrometer Reading
12.75	100%	1.265
12.70	95%	
12.65	90%	
12.55	80%	1.233
12.45	70%	
12.35	60%	1.204
12.25	50%	1.190
12.20	45%	1.184
12.00	25%	1.155
11.75	0	

When we talk about a battery being at 70% charge we are not talking about voltage but about remaining AMP-HOURS. A battery that can deliver 100 AMP-HOURS will have 70 AMP-HOURS left at 70% charge. That means, and this is a very rough and non-linear approximation, you can draw 7 AMPS for 10 hours or 10 AMPS for 7 hours. The voltage will still be very close to 12 volts, probably 12.45 volts as Jared suggests. When the battery voltage has dropped to 70% of 12.75 volts (8.93 volts), it's DEAD. Hope this helps.

Would you mind...load test the batteries (turn on the lights for one minute to kill the float charge) and then measure each one with a digital multimeter.

Before launching/charging in the spring, repeat the same load test, check the voltage again.

If they are fully charged now (12.75V) I'll be a picture of wide-eyed amazement if they show more than 12.45V (70% charge) in the spring. It may not seem like much--but that drop indicates you are taking months off the life of the battery. And the odds are it only comes back up to 90% of capacity after you do fully charge (and load test) the batteries again.

You may leave your batteries hooked up to a charger indefinitely as long as it is a unit designed specifically to do so. Your charger must be capable of maintaining a "precise float" voltage of 2.17 volts per cell (2.7 x 6 =13.02 for typical lead acid cells). It should be noted that float voltage is lower than charge voltage.

Chargers that posses the necessary flexibility to not only charge, but also to properly maintain batteries on "float" tend to be very expensive. Also batteries that are being floated

need regular periodic checks of electrolyte level, charge rate and overall state, i.e. no gassing or other problems. For most of us the couple of visits to the boat in the winter are not sufficient to safely leave batteries on charge. You may want to check with your marina the may , have rules against such a practice. _.rbt

---

The ignition switch should have three primary "legs". One is continuously hot. This leg is the battery feed. There is another leg that operates the starter selinoid. THis is the leg your hour meter is connected to. There is one other leg that operates with switch in the "on" position. This is the leg you can move your hour meter lead to. With a volt meter you can easily determine which leg is which. Good luck.

Bilge Pump

Dave- I've seen this done by taking the bilge pump to a 2-way switch on the breaker panel (one way for automatic, one for manual, sometimes centeroff as well) and an extra "master" switch on the panel, so thateverything can be off--if you hit the master. Or else you leave themaster switch on, turn off everything except the bilge pump (where "off"really is the automatic position, so the switch looks "off" likeeverything else) and the battery a/b switch is normally left ON in orderto supply power. I think it is a matter of convenience...but on a boat where gasoline orpropane is used, you really want to make sure that when the main batteryswitch is OFF everything is off, nothing bypasses it--because someoneelse may be minding that one day, and not knowing you have wired thebilge pump independently.

Boom Vang

Don Dickinson - I also have installed a Garhauer rigid vang on my C&C 30. It works quite well and has eliminated the topping lift - gives greater main control, etc. They advertise in all the major publications and go to most of the shows - it appears the Mr. Garhauer is the main salesperson for the company and I understand they make a lot of OEM stuff for Catalina. (Hope that doesn't scare you). Parts are chrome/stainless and need to be polished every so often. I got mine by calling them and sending profiles of the boom and mast which they used to make form fitting brackets. Came in the mail a couple of weeks later.

The thread of comments regarding Hunter, etc. reminds me of when I was boat shopping five years ago. Coming east from California I was not that familiar with C&C. One of the brokers I talked to put it this way: Hunter and Catalina are the Chevy's of the

field - C&C is the Buick/Olds..... I found when shopping that the fit and finish of my 1980 C&C was far better than of similar Hunters - the apparent strength of the rigging (standing and running) and the basic seaworthiness(such a word?) items like seacocks, hoses, etc. just seemed to be of greater quality. I paid about 25% more than I would have for one of the "lesser" boats.

As to the 110, a J-boat built by Tartan cannot be all bad.....wonder what the PHRF is.

Bottom Paint

Charlie - You've got the paint removal incorrect. You remove it with a random orbital sander (with dust pickup to protect the you and your world) using 100-150 grit sand paper, nothing finer as the new VC won't adhere well (see directions on can). As Gremellyn has had VC since new, we're in the same situation (no, other paints don't stick to vinyl), but I've pretty much sanded it all off each year. VC goes on so thin that it isn't that hard, but you've got years now so it may be a project. Just make sure to stop right when the VC is disappearign and gel coat is appearing...don't oversand at this point ...preserve the gel coat or barrier coat to prevent blisters.
After you spray on 3 coats of VC (let dry completely, ca. 16 hrs between each; Interlux recommends 3 coats if you're wet sanding) and it's set for several days to make sure its dry, you then wet sand with 400 and if you really want it smooth, 600. We then burnish the front 1/3 of the hull and all of the foils with bronze wool. Dave's idea with 1000 is good, but I'm not too keen on dry sanding new paint vis a vis toxic dust and taking a chance on removing too much. For wet sanding, we use dry wall sanders (plastic, one with a handle and one with an universal joint that screws into a broom handle extension..get them at Home Despot), and pizza and beer for the crew. Takes about 3 hours to do Gremellyn (30') with 5 people (Lynda is in charge of the hose!). The real key is the spray painting. If the bottom is really fair (your task..both foil shape, removing hollows, etc.) and they do a good (smooth)spray job, then you can go right to the 600, and presand with 400 any of the rough spots.
When she's back in the water, clean BEFORE EVERY RACE...no way around this. Give me a call if you want to go over all of the steps; we've done it so much to our last few boats that we're nearly pros.Cheers, Greg

C

Cabin sole

am sorry to go thru this again-but....

The cabin sole to 'Moondance' is in my garage. I plan to:

1 - sand the bottoms + sides + varnish.

2- remove the varnish from the tops by lightly sanding. How far down should I go? Someone once said they used varnish remover to do this first, then lightly sand.

3 - couple of coats polyeurathane with light sanding between.
Hi Gloss or semi Gloss? I was leaning towards Glossy because it should be harder (more slippery too?) with 4 kids and a dog

Any suggestions on particular product?
Someone once mentioned Varathane or epithane?

I dont plan on putting on 14 coats. Should 4-5 do?
15 deg F. (-9.5C) this morning so I guess I should wait til it warms up to about 40F.

I went through the process with my floor last winter. You need to be careful with the top surface. The teak and holly is the thickness of wallpaper. I removed my the varnish with a varnish remover, then used a teak cleaner and brightener. I did a second application of the cleaner and brightener to one spot I wanted to get better and rubbed through the veneer; be very careful. The polyurethane will raise the grain whether you sand or not. I do not recommend sanding until after you put on the first or second coat of polyurethane.

I chose West Marine's Admiral Varnish (glossy). I don't if it is better than other products. It has held well in its first year. I put 7 coats on the top and 2 coats on the bottom and sides. Keep in mind that most products are temperature sensitive. This may enter into your selection.

I second what Joe and James said vis a vis the thinness of the veneer and the need to be careful when sanding. Having just done all the floorboards on my 37 and having done them on my previous 34 I can perhaps make a few suggestions for you. After having cleaned and prepped the boards but before putting on the first coat of varnish I apply 3 coats of a good quality tung oil such as "Circa 1850". The first two coats are simply brushed on and allowed to dry. The 3rd coat is wet sanded in using 320 grit sandpaper. The wetsanding creates a thin paste of oil and teak sawdust. When you finish wetsanding an area take a lint-free cloth and lightly buff in a circular fashion. This will remove just the excess paste and you will have nicely filled the grain of the floors. This makes it easier to create a nice smooth finish as you build up your coats of varnish. I apply 6-7 coats of a good high gloss varnish [Interlux 95] and 2-3 coats of Interlux rubbed effect varnish to get a nice semi-gloss finish.It's a bit time-consuming to do all this but the results are well worth it.[Besides, what else have we got to do!!!] Have fun.
Peter Kisilenko

C&C 37 k/cb Fretless v>

High gloss is the most water resistant sheen. I would suggest using high gloss (or better yet Cetol, which is easier to do spot touch ups) and rub the gloss out w/ 0000 steel wool. Try a sample first it should set for a few days or a week before rubbing.
Mine dosent slip, looks great, wears well etc.

just refinished my floorboards and agree with Jackie that a natural finish is preferred. I am from the school that a natural teak finish has more 'feel', looks less artificial and is easier to maintain.

I chemically stripped the old finish and used brass wool to burnish the wood. With a well used 13 year old floor, I was afraid to use any sandpaper on the thin veneer of teak and holly. I used a couple of coats of Semco (a teak water repellant finish) instead of a varnish or polyurethane. I will oil the floor once the boat is in the water.

Anyone else use Semco? I am also considering using it on my exterior teak (the little I have).

If you're in Canada, the place to buy 1/4 inch teak/holly marine plywood is Noah's in Toronto. They are at 416-232-0522 or http:\\www.noahsmarine.com.

Wally Kowal

Candle Wax

My wife and I managed to drip candle wax all over a stone floor and the nearby carpet a couple of New Years Eves ago. A friend, who is a professional carpet guy, told us to lay a brown paper grocery bag over the drips, and then run a warm iron over the paper. The iron doesn't need to be very hot for the wax to melt, and capillary action sucks it right into the paper fibers. Sounded bogus to me, but it worked perfectly, absolutely perfectly. I'm guessing that the temp would be low enough to leave your deck intact, too.

C&C 30

The 30 is a great boat. We've had our '74 for 5 years and it's still solid. It's a well-built, powerful and flexible boat. Check out the review at the Canadian Yachting web sight.

We've endured 10-foot waves on Lake Ontario, sailed it in 35 knots with our

three-week-old son aboard, and passed other boats who were racing while we were just cruising (OK, maybe I tried a little harder to sail faster <g>).

Feel free to contact me directly if you want to chat off-list.

Things to watch out for:

#1) Rotting mast step stringers - Take off the mast and the wooden mast step and inspect the stringers that it rests on in the bilge. These were made of wood and have a habit of rotting from water running down the mast. Replacement is about $1,000 or several day's of your own time. I did mine and it wasn't fun.

#2) Deck leaks - C&C didn't properly seal deck penetrations when attaching hardware. The cabin-top handrail was particularly bothersome. Look for spider cracks around the handrail and stanchions. These will have to be drilled out with an oversized bit, filled with epoxy, and then re-drilled and the equipment re-mounted with sealant.

#3) Bulkhead delamination - the normal flexing of the boat over the years can cause the tabbing to loosen where the fore and aft bulheads meet the hull and particularly the deck. Most are accessible and can be ground off and replaced with fresh fiberglass and epoxy. After 25 years two of our bulkhead tabs have been re-glassed to the deck and two more need to be done.

#4) Wiring - after many years, particularly if this is a salt-water boat, the wiring needs replacing. I have an on-going work effort to replace the wiring as I replace electrical equipment. I replaced the fuse panel with a proper circuit breaker panel and use marine-grade wire and connectors. Check out the Anchor Marine web site because electical standards have changed remarkably in the last few years.

Don't forget to have a qualified marine surveyor do a thorough survey prior to purchase. It's worth the money and peace of mind.

Good luck.

Wally Kowal

To: Michael Facius
We have a C&C 30 - 1980 #593, so it was built about 40 boats after the one you are looking at. It is a great boat, except in the very lightest air. My wife and I have raced in 25-30 knots with the working jib and full main and the boat is stout. We've also had seven aboard in 20 knots with the 150 - still stout. I agree with the comments made by the owners of the earlier boats. The bulkheads under the mast step are just getting bad

on our boat. Make sure the drain hole from the mast step metal casting is clear to the bilge. I am putting an automatic bilge pump in the lowest part of the bilge under the mast to keep the whole area as dry as possible.

Our boat sails with nearly neutral helm in all but the heaviest conditions. We get great performance in heavy conditions by playing the main - as soon as weather helm gets too bothersome, we loosen the main - works great.

I think you will enjoy your new toy as much as we have ours for the last five years.

I was told when I joined the list that MkII's started in 1986 or 7. If you look at the picture gallery you will see the boats that have the single side window and single head window are all pre-'86.
If you have specific questions - gnylander@bluecrab.org

Chainplates
You commented that Bill Lapworth didn't appreciate modifications to his boats. If you've ever looked at the mast thickness and section on a Cal 40, you may understand his reluctance. My C&C 30 has about the same section and greater wall thickness. Cal 40 masts were not very stout and quite a few have failed.... A friend here on the Chesapeake has cut a couple inches off the spreaders on his Triton and gained some pointing ability. I am going to do the same on Penniless, my 30, as I'm always trying to stuff the spreaders through the genoa. Has anybody done this on a 30?

Also, has anyone else run into the problem of the **starboard chain plates** on a 30 being an inch further from the mast than the port ones? Mine are and I assume I will have to do a winter modification. They measure that way on deck and down below.

Thanks, Gary Nylander
"Penniless" C&C30 #593
ps. Were there really 593 30's built?

Gary We have had our 30 1974 ,since 84 and i never noticed a difference in chain plate location. A previous owner installed a forward set of lowers on ours that are anchored to the forward bulkhead.I was told it was to prevent mast inversion. Where did you take your measurements from? Mast? Toe rail? The boat is sitting in my backyard and will try to have a look over the holidays.
Brad
Magic Dragon
C&C 30 Hull #241

Brad, I measured the chainplates both from the mast to the plate inside the boat and from the plates to the toe rail outside. I was concerned that the mast may not be centered so I measured to the toe rail from each side of the mast using a level from the toe rail upward to 4' above deck. The mast is centered, but the plates are an inch and a quarter different. Weird.
Thanks for the reply.
Gary Nylander, C&C 30 593"Penniless"

Larry ; We had the same problems with the chain plates on our 30. Caulking usually lasted a couple of seasons then they leaked again. 3 years ago i picked all of the caulking out from where it goes through the deck and drilled out the screw holes that fasten the plate to the deck. Filled all with West System epoxy and their 406 colloidal filler. Sealed with 3M 4200 caulking. So far no leaks. That was my Starboard chain plate. I did the Port one last year. Try and get as much of the balsa core out as you can where it goes through the deck and around screw holes. That way if it leaks moisture won't get back into core.
Brad
C&C 30 Magic Dragon

Larry, I had also resealed the chainplates last year. Used 3M 5200 which was recommened at the time. Very messy stuff to deal with. Would not use it again.
Discovered butyl, comes on a roll in a light grey colour. Believe this is what was used originally for the hull/deck joint. Used it for the windows and would most definitely use it when it comes time to do the chainplates again. It could be used as a caulking/sealant under the deck plate and also packed around the chainplate at the deck. It feels like bubble gum. (Don't chew it!) This is the same stuff RV centres use to seal all the joints when building those road warriors.

You did it correctly. I did the same thing, only I made the mistake of using 3M 5200. It doesn't bond well to the stainless steel and it's already leaking.

Also, I did mine when the boat was on the hard and the mast removed. When I put the stick back in and tensioned the shrouds, the chainplate tilted inward and that's probably what broke the seal. I'm planning to gouge out the 5200 and replace it with something better. I haven't decided what yet - any suggestions out there? The joint between the chainplate and the deck is very active and the compound should be both tenacious and flexible.

My long-term to-do list includes sealing the core at every through-deck hole - only the stanchions are left.

Wally Kowal

Whistler II
C&C 30 '74 out of LSYC, Toronto

I used butyl tape for sealing my winches and the cabin-top handrail. I found that it creeped out from the joint and attracted dirt. I've switched to polysulfides like 5200 and 101.

Wally Kowal
Whistler II
C&C 30 '74 out of LSYC, Toronto

Chartering

Mike, I chartered with Footloose in BVI last March through Ed Hamilton. Footloose is part of Moorings (just older boats and less expensive). They require a sailing resume describing your experience with boats of similar sizeto what you will be chartering. If they suspect that your experience is insufficient, they will require you to take on a check-out captain for a couple of hours to show your skills (not as traumatic as it sounds). If everything is OK he asks you to drop him off and away you go (minus a fee for his services, of course). If he isn't satisfied, I guess, he stays on board for the week. Our check-out went well and the captain was a really interesting guy. We had an absolutely fantastic week. Footloose does a great job and I would recommend them to anyone. To answer your question, you leave the boat like you found it. Where do you plan to charter? Any other questions, let me know.Gary'Expresso"75 C&C 35 Mk II East Greenwich, RI, USA

I've chartered numerous times from Sunsail, Tropic Island, and Sun Yachts - all in the BVI. My experience has been similar to what Gary mentioned. You send them a sailing resume. If you have some experience and know how to handle a boat - it shouldn't be a problem. If they are not comfortable with you level of "boat handling ability", they will throw a captain on until the capt feels you can handle the boat yourself.
My best experiences have been with Sun Yachts in Tortola. I was not a boat owner the first few times I chartered, but I had a pretty experienced crew. I think that helps. Any other questions - let me know

CO Detectors

Hi all; I have been following the thread on CO detectors. I work for a Natural Gas Utility. Part of my job as a service rep is investigating calls where a CO alarm is going off. Co alarms can give false alarms in areas of high humidity. Such as bathrooms or those hot humid days in the summer. If i was going to purchase one for a boat i would try to find one with a digital read out.I'm not sure if they make one of these that

is battery powered. Most are 110 volt which would'nt be working when you need it the most.
Also re zinc's i have 2 on my shaft just before the strut.One 5 years old. The other 3 years old. They both appear to be still in good condition. I think it depends on your boat and the water.Fresh or salt as to how long they last. They tend to get eaten away as they get used up as i understand it. You can visually see if they are starting to deteriorate. My 2 cents.

Companionway dropboard

The companionway dropboard on my boat (1/2 inch thick plywood) has rotted at the base. I am replacing it this winter. As I see it I have three options; 1)teak faced plywood, 2)1/2 inch teak dropboards, and 3) lexan or plexiglass replacement hatchboard.
I am interested in opinions of the list as to the best option. I would be grateful for information about sources of teak stock and the acrylic sheet material.

The holes are 1/4" on 1" centers. Two rows of them , offset, horizontally in about the middle half of the hatch board. I don't have a clue what angle - I hand drilled them but I would guess they are about 45 degrees which, with the angle of the board in the companion way, makes them about 30 degrees. Probably doesn't matter as long as the angle is enough to keep the water from going uphill.
Regards,
Hank Evans

Why bother with wood trim around the lexan or plexi ? We just polished the edges and made it maintenance free. The 1/4 lexan is a little sloppy in the grooves but that has never bothered us. You can mount your hasp right through the lexan or plexi.

Computers

Even better than velcro or two sided tape is a 3M product called DualLok. Its an all-plastic velcro-like tape that has great holding power but can still be easily separated. I have used it to hold up battery powered lights in our 30II aft locker. The lights can easily be removed and suspended from the underside of our bimini top if needed or other locations where I have placed any pieces of the tape. Earl BlackSpyce 1

The Dual Lock Reclosable Fastener is a 3M product. I picked up some sample strips from a 3M rep last year and was hooked so to speak. Since then I have ordered a 15 foot roll (comes in 1" width) from an industrial tape products supplier for various work-

related excuses so Ishould be stocked for life. Any marine store will be able to supply you with a "mini-pack". My 97/98 3M Marine products catalog shows part number 051131-06463 for clear DUAL LOCK (MP-3560) with very high bond adhesive backing and measures 4.9 yards long. I don't see the sample packs listed which includes about 4 strips each about 3" long. Also comes without adhesive for sew-on applications and also in black. Youcan always try their 1-800 number and see if someone from a marine products group can set you up with a sample pack. Earl BlackSpyce 1

Core

I suspect that I also have some **wet core** around my **stanchion bases**. I'll be checking into it later this summer. From my experience with wet core around the mast step, and in a few other locations where deck hardware was attached, you will likely have to go through the following procedure:

1) Remove the stanchion base.
2) 2) Determine how far the wetness extends by drilling exploratory holes throughthe outer skin and core, but not through the inner skin. I used a 3/8" bit topull up enough core to inspect. Carefully examine the condition of the corethat you drill out - if it's black and mushy, it's rotten. If it's wet, butlight brown, then you are near the edge of the wetness. If it's dry and dusty,great, you're past the wet spot.
3) 3) cut away the outer skin of the fibreglass over the area of core that has beendamaged, and remove the wet core. I used a 2 1/2 hole saw, because that's whatI had at hand, for my work around the mast step, and removed 3 plugs of outerskin and core. I used some supplementary small holes, some picks and a vaccuumcleaner to get all of the wet core out. If you area is larger, consider usinga sabre saw or sawz-all with the blade adjusted to cut only the outer skin andnot the inner skin. You could then peel off the outer skin, to re-use afterthe core has been repaired.
4) 4) Replace the core with the material of your choice. Because I was workingwith a few relatively small areas, I used epoxy resin with 1/4" chopped glass fibers to make a mash that set up quite hard. I used colloidal silica fillers with epoxy resin for some even smaller areas. If you've got a big area, you could use marine plywood to form a new core.
5) 5) Put the old outer skin back on, or make a new one by laying in layers offiberglass and resin. I just put back the plugs that the hole saw had cut,while the epoxy/fiber mash was still wet.
6) 6) Smooth and re-finish the exposed expoxy / fiberglass to your own taste. Imostly covered up my work with deck hardware. There are increasingly effective cosmetic approaches to take, starting with just using off-the-shelf white gelcoat up to professionally matched gelcoat or even a complete paint job.
7) This is all explained in wonderful clarity, with tons of excellent illustrations in a book that you should geat before you start:Here's the book, as copied from http://www.nauticalmind.com/maintain.html,Sailboat Hull and Deck Repair Casey, Don Fibreglass is easy to repair and this volume tells you how to do it. Among the repairs covered are: rebedding deck hardware, replacing portlights, fixing leaky hull-

deck joints, and repairing cracks, holes, blisters, gouges, and the other ailments to which fibreglass is prone. 144pp. photos & illus. hc 1995 $28.95 CAN

8) Cheers,Jeff Cole

I offer the following info for those wishing to fill screw holes in a balsa deck and to stop leaks. I have recently been doing this on my 1976 33. The process goes something like this: 1. Put an allen wrench in a drill. 1/16 inch wrench should work, depending on bolt hole size in the deck. Angle the short side of the wrench into the hole and run the drill untill you have ripped out all the core. Have a good vacumn handy to suck out the debris. 2. Find some kind of clay like puddy at the hardware store to make a temporary plug for the underside of the hole. 3. West Marine sells their own brand of epoxy which is a good deal less than West. They have a specific product called a penetrating epoxy. I would recommend you put some of this into the hole to penetrate and seal the balsa. This is very thin and will find leaks very well. Don't put in so much that you completly fill the hole. Even if you do it will probably soak into the balsa and leave a void to be filled later with a regular epoxy. Wait 24 hours. 4. Finish filling the hole with regular epoxy.
This process creates a good seal and keeps the balsa from colapsing when you install a fitting.

Cushions

I'm also interested in where to purchase a spring mattress for the quarterberth. I didn't see a response to Greg's request for info about this. Thanks. Kate Mullins, Impulse; 35'Mk I >>

1. HMC Handcraft mattress co. 1800 Broadway #101
   San Francisco, Ca 94109 800-241-7751
2. Community mattress Co.
   1811 Broadway Concord, Ca. 94520 800-404-4114

Both of these companies specialize in boat mattresses in any shape or size and build foam or box spring types.

Cutlass Bearing

Ted - Here goes:
1. Cutlass bearing held in with set screws on strut.
2. Need to pull shaft out since it makes it much easier..can do with out, but....
3. Martec removal easy - remove 2 cotter pins that hold the prop pin, gently drive pin out with drift punch and hammer or plastic mallet,

take off blades (note there is a mark that matches with hub so it does back on the same way), pull 2 cotter pins locking the hub nut, remove hub nut with socket wrench and 3/8" drive extension (it might be a 1/4" or 1/2" drive depending on how old). If you're lucky, the hub will knock off with a couple of taps with a hammer and piece of wood, but otherwise use a gear puller with a long throw, ca. 10".

Easy eh? Careful driving the bearing out and reverse putting in...lube it well.
Cheers, Greg

Ted,
When I did mine last spring I got a great education on how not to do it. Then I did it this way. You will probably have to scrape off several layers of bottom paint to find the set screws on the bearing housing. The method I finally used was to get a long carriage bolt, maybe 1/2" by 8", put a washer exactly the same size as the diameter of the bearing (it needs to be exact because you are going to pull the washer through the housing and you don't want to score the inside of the housing). On the other end I used a long socket (it needs to be at least as long as the cutlass bearing - a length of pipe will do) the diameter of the bearing HOUSING (the bearing is going to be pulled through this socket). Then I put another washer and a nut on the bolt and just started turning the nut. To recap - the carriage bolt with the washer goes through the cutlass bearing and then through the socket with another washer (bigger than the diameter of the socket) then the nut. You can use this method to install the new bearing. Have fun.
Dennis,

Hello Ted .... Use a proper puller to remove the bearing an resist the temptation not to change it. Giving it a good soak with penetrating oil may help remove it . Above all don't do a lot of pounding on your strut. Place the new bearing in the freezer at home and keep it as cold as you possible can until you are ready to put it in. This will help, as it causes the bearing to contract a bit, again no heavy pounding on the bearing or the strut...
Good luck!! rbt ... Safari

The following response from Dennis is a good way of doing the cutless bearing however ask yourself why is the bearing worn as you might be doing this again real soon.
Like check the alignment of the shaft, motor mounts etc. is the engine moving when running?
Without correcting the root cause you might be doing the same again next year.
Been there done that! :-)

A great reference for inboard engines and mechanical systems (and most things on a boat) is Nigel Calder's "Boatowner's Mechanical and Electrical Manual - 2nd Edition". He has several different ways to remove a cutless bearing.

I tried several fancy ways to remove the bearing, many of which allow you to leave the prop shaft in place, but finally had to resort to brute force. Since I had the prop shaft out anyway, I simply used a hacksaw blade to cut through the bearing from the inside and then pliers to bend it inward until it gave.

Most cutless bearings are held in place with simple friction. Scrape around the outside of the strut - any set screws will become visible. Mine hadn't been touched for at least 10 years and was solidly painted and corroded into place.

My biggest problem was removing the warn and bent prop shaft from the nipple on the transmission end. This involved more brute force and extensive heating and cooling.

Rich,
You should find two set screws on the side of the strut. On my 32 they were on the port side.
Good Luck,
Tom Anderson

According to Nigel Calder, you should replace your cutless bearing if you have more than 1/16 of an inch of clearance for each inch of shaft diameter. You should have some play to allow water to lubricate it.

Regarding how do you know if a cutless bearing needs to be replaced, "This Old Boat" by Don Casey puts it this way.

"How do you, a mere novice in such matters, know if it needs replacing? The same way a pro knows; grab the prop and shake the shaft. A little play is fine, but if you can get it moving enough to rattle, it is time for a new cutless bearing."

Mine was pretty loose, probably 1/16" clearance around all sides of the shaft when it is centered in the cutless bearing. My surveyor recommended replacing it. The previous owner was using the boat the way it was so I would imagine there would have been a reasonable amount of vibration. I also noticed that some of the fairing compound used to flush the strut to the hull had cracked and come loose. Probably caused by the vibration. I examined a sistership and his prop shaft didn't have any movement in it at all.

The bearing measures ....3 and a half in. long, One and a quarter in. outside diameter, by seven/eighth in. shaft. C&C 29

Remove the prop and using a "pusher" ie old bearing with slightly smaller(sanded down) diameter and a bar clamp on the strut push the old cutlass up the shaft and then carefully hacksaw two cuts lengthwise and remove the old bearing. Maybe you can get a real bearing pusher with a machined steel pusher piece although the bar clamp will work but may require a few days of penetrating oil to loosen the old bearing. May be really stuck if original.
Freeze(shrink) and lube new bearing after cleaning the interior of the strut and place it on the outboard end of the shaft and "push" it in place. Carefully, hacksaw any excess protruding from the outboard end. Remember that on the 35 there are two(?) 1/4-20 set screws on the side of the strut which should be removed before all the pushing takes place.You may have to
dig out filler which is hiding the sockets before you can fit your Allen key into the set screw slots-maybe penetrating oil here too.
On the 35 you will want to avoid removing the shaft because it will not clear the rudder unless the bearing is out anyway.
Removing the shaft is often difficult in that time has seated it in the coupling and there is not a lot of room to work.Leave it alone and not create other problems. Removing a rudder is an even bigger headache and totally unnecessary.Keep it simple and don't forget to put the key back into your reinstalled prop. Good luck.

Cracks

About the Cracks: (stolen from 4/99 "Sail", with some opinion thrown in)
*Use a Dremel Tool or the tip of a can opener to dig a small channel along the suface of each crack.
*The bottom of the channel should just reach through the gelcoat to the laminate.
*Feather the edges with 100 grit sandpaper.
*Brush the crack and surrounds clean.
*Wet out the surface of the crack and surounding area with a coat of unthickened epoxy resin and hardener.
*Thicken this mixture up by adding high density filler (to a peanut butter consistency)
*Using a stick or plastic spreader, trowel it flush to the surrounding surface removing the excess epoxy. Let dry overnight.
*100 grit, then a wet-sand of 220. If your repair is lower than the surroundng surface, do it again to level it up.
*Once smooth, wipe down with water and a Scotchbrite of similar pad. (this removes amine blush (byproduct of curing process). Let dry.
*Apply 2-3 coats of unthickened epoxy w/ hardender to seal the repair. Carry the edge

of subsequent coats out just beyond the previous coat.
*After curing the final coat, sand w/ 220 grit.

It's not a difficult repair providing you can MATCH THE GEL COAT andhave the time and necessary tools and supplies it takes to sand and compound the repair. You've got to enlarge the cracks, bevel the edges in order to get a repair that looks O.K. Many of the stress cracks are the result of thicker gel coat being sprayed into the corners at the cabin/ deck joint during construction and the stress of the boat being sailed. Cracks where a glass panel changes plane is the result of a laminate that can not handle the flex loads or more reasonably, it is the gel coat that can't handle the stress. Some C&C's seem to have fairly thick gel coat which results in increased cracking as the boat is used. In my experience, it is seldom a problem with the glass but rather too thick a gel coat. If there is a "local" fiberglass repairman, ask for an estimate on the job. It just might be cheaper than your time and supplies might cost. Another issue is...will the crack reappear because the laminate is flexing?

D

Deck
I had some hairline cracks around the stanchions which are usually caused by everyone grabbing the lifelines when they are trying to help. and i had some around the deck as well.

if the hairline cracks are where you have balsa core you have to determine if the crack goes thru to the balsa. it is well worth it, in my estimation and painful experience that you dig a bit if you think the crack does go all the way to the balsa to ascertain that the balsa is dry, bone dry

i talked to the interlux guy just before opening up the cracks and he gave me the best advice; thin out the paint and keep applying it to the cracks until the cracks were filled. it was the best and easiest approach.

i have now painted my deck twice and have decided the next time i'm going to try one of the materials that you cut and apply with adhesive.

dan
fidget's retreat
boston, ma

Diesel Fuel Fittings

Rob, I would not recommend the use of teflon tape. Teflon paste would be OK. If you can find it there is a product called Grip. This is a black goo and very tenacious. Grip - Lite is not quite as good, but easier to use. I have used it, Grip, with great success where other sealants failed. I could be wrong but, I think the Racor threads are slightly different and this could be a problem. Is it possible that a fitting on the tank or the shut off valve is your problem? At this point I would be very tempted to replace all the fittings and hose between the tank and lift pump. Sometimes biting the bullet is the most cost effective way to go. If an oil burner is giving me a big problem and the fuel lines are above ground, I will replace everything including the copper. This way there are all new flares, nuts, etc. My customers may spend and extra$50, but they stay warm. Tom Duane

Hi Rob, I'm a sales engineer for NORTON Performance Plastics, a large producer of Teflon products. I can attest to the fact that TEFLON (the DuPont trade name for PTFE) does NOT react with diesel fuel. It very inert to nearly all chemicals except for a few aggressive ones. The Teflon tape you are considering using acts as both a lubricant and thread sealer. Suggestions:
1.) Don't try to re-use the tape after it's been connected.
2.) Is there any chance you can use brass fittings? .....these, usually don't require the Teflon tape.
3.) I'm not a proponent of Teflon tape in "sensitive applications" where tape fragments could travel downstream and clog critical components.
4.) A friend of mine installed an outboard motor priming bulb in his J35 fuel line to help re-fill the fuel system once it is run dry.

Diesel Fuel Tank

Ivan, There was a label on the tank for Mirax Corporation who are still in business at **(314) 752-1500**. I sent them my old **sending unit**, and they supplies me with a new one. It took 2 months though to get a new one from them after many phone calls. I also found out that these sending units are easily available at many marine supply houses. Tom Anderson Nonpareil

E

EDSON WHEEL

Sorry to hear about your misfortunes! Replacing the chain/wire (assuming>you have an Edson system) is very straight forward but also very messy>(grease, etc). Once you remove the compass it will be apparent. Simply>remove the cable clamps at the quandrant, attach a messenger line and then>remove the chain/cable at the pedestal (from the top). Keep the old>chain/wire so you'll know what size and length to order from Edson. They>sell them as kits already connected. Only trick is knowing whether or not>the cable is crossed within the pedestal. Might as well order a complete>rebuild kit (bearings, etc) and a brake rebuild kit while you're in there.>I did the whole job in about

3 hours last spring although my boat (34+) had>excellent access.> >Good luck!>>John>When my cable broke I just disconnected from end of chain, swaged a new fitting, which took about ten minutes and replaced- all of which took maybe90 minutes of limbo dancing stance and nominal cost- can't think why a complete kit would be needed. Yes- cables DO cross in the pedestal three times out of four which results in dyslexic steering- check before you tighten everything up!

F

Fuel guage

Drew, you can replace the or try to fix it. My only experience with this sort of problem was with my Kawasaki. The way most fuel gauges work is by way of a small coil of wire and contact that slides along the coil. As the gauge ages the this coil and contact bend apart due to the movement of the fuel. If you feel like trying, open the housing at the top of fuel gauge where float arm enters. It will either will have fasteners or bent metal tabs. After the the cover is removed you will see the small coil and sliding contact. By bending either the contact or the coil you will be able to keep them both touching thru the float swing up - down and the float movement side to side .replace cover. Test with light finger pressure in different directions. If you have a muilt meter use it to check for continuity. After testing OK replace the cover. and reinstall gauge in fuel tank. This should end the the craze readings you have getting from the fuel gauge.

Dear Drew: If you're getting any reading at all, your wiring is fine. The problem is either the fuel sender or the gauge. Both are easily replaceable (providing you have access to them) and either unit should cost in the $10.00 to $30.00 area. The sender is afloat device that drives a variable resistor in the 240-35 ohm range, at least that's the way most of the popular brands work.(Oil pressure gauges work the same way as the fuel gauges and if you have one, try switching the sender leads and see if you get a full linear reading on your oil pressure gauge. If you do, the culprit is the sender.) Gas and Diesel are the same. Another possibility is a sticky float. I would start the elimination process as above, first. Second I would check the resistance of the float sender. Do this with an ohm meter at the gauge. Disconnect the sender and read the resistance between the power and the sender. In order to activate the sender, remove it from the tank and have someone work it up and down while you read the resistance. Should be between 240 and 35. Replace the defective piece. Neither are worth repairing. Most fuel gauges should retrofit into your boat, even from power boats. We used to have a bunch of surplus gauges and cleared them out at $10.00. The senders are a little trickier because they come in different lengths or if they are universal, they need to be adjusted for the depth of your tank. When you remove the sender, try not to bend anything and that way you can use it as a template for adjusting your new sender. Before you go shopping, measure the depth of your tank. You will need this information to get a new one that will fit. Most of these devices are made to NMMA rules and the flange should have an asymmetrical screw pattern so the new one should fit the same way. Just be

careful that the float points the same way, otherwise it could jam against the side or against a baffle inside the tank. A new gasket would be an excellent investment at this point, usually under $1.00. After the sender is removed and replaced, double check for leaks and fumes. If you do not feel comfortable working safely with fuel tanks, then get professional help, otherwise it's an easy fix. The hard part is figuring out which end is letting you down. Some of the better brands are Teleflex, Medallion and Faria. These manufacturers make gauges and senders. The gauges all fit the same hole size and are connected with three wires - ground, sender, power. Senders are all a little different but work the same way. The better ones use a ceramic coil, but if one is not availabe the others work well. Stay away from the hi-teck capacitance senders and 86 the dip stick idea. Hope this is helpful. NOTE: I'm an employee of Aurora Marine Industries. We manufacture boat care products, not fuel sending devices. Hope no onegets P____ with the information. It's not intended as a commercial message. Richard

Fuel Guage (stuck)

Remove the gage panel and gently pull it out. Look for an inline fuse. Then replace the fuse. The gage should work. If there is no fuse or should it still not work then figure there should be a new fuel sending unit installed. The fuel sending unit is readily available at Boat US or West Marine. Look on the top of the tank. You should see a round plate with electrical connections connected to it.

1. Take off the electrical connections. Mark them right or left with masking tape.

2. Take a small screw driver or nut driver and gently back off the screws or hex nuts.

3. Pull the entire unit out. Cover the hole with a pie plate old piece of clean metal something and tape it down with duck tape. (Red Green will love you.)

4. Take the unit to the store and match it.

5. Coat the gasket between the tank and the plate with some form of gasket sealer then reverse the process. Gage should work.

Fuel Tank

Finally, removing a fuel tank on a C&C30 is possible. Just cut all hoses and wiring and remove stopcock then slide it out. After all if you're going tothis trouble you're going to replace all the hoses -- right? I then had minesteam cleaned by local car raiator shop for $40CAN. Many moons ago we had adebate about wire strengthened hoses having a bit of wire exposed and to beused as grounding. Wrong!! I finally found the real reason.

You can't clampwired hose and prevent fuel leaks. Use pliers to pull wire out of hose for2-4 inches where it goes on tank pipes. This leaves hose soft enough to be(double) clamped and the wire isn't needed since hose is supported againstcollapse by tank pipe. (Thanks to local chandlery expert for that gem).Applies to cockpit drain and other wired hoses too.

Deck Gear Installation

Hi Chris, since I have the same trouble (caused by genoa tracks) the SAMSS surveyor suggested working from the top, overdrilling, gouging out wet stuff, dry out the deck and then do the usual refill with epoxy, redrill routine. If your installation is anything like mine you can probably put a piece of tape underneath each hole prior to filling with expoxy.
Since the track will cover any repairs it shouldn't be ugly.
Regards
Jackie
C&C 25 MKII

Greg, the bent nail trick involves inserting a bent nail into a hole drilled in the deck and turning it with a drill to remove rotted core material. You can use different and increacing lengths bent nail to remove as much bad core as possible. I have even used an allen key instead of a bent nail when I found the nail was twisting off to much (allen(hex) key is stronger).

You seal a screw or thru deck bolt by overdrilling the hole (just the top skin of deck and core) filling with epoxy or fiberglass resin of choice, then re-drilling the appropriate size hole for the hardware. This prevents water from entering the core and provides a much stonger base for your hardware.

I don't know which brand of epoxy is best. I use West epoxy, it comes with a metering pump and has an extensive instruction book on how to make different types of repairs.

Hope this helps.

P.S. I am in the process of removing all deck fittings and remounting useing this method.

Frank Foote
C&C 25 Wings

I wanted to add to Frank's comments, Greg. When we re-did the deck hardware on our C&C 27, we performed the operation just as Frank did, with one exception. After drilling the final "oversize" holes, we flooded the hole with an epoxy ketchup, wetted the screws with epoxy, then spun the screws into the soft epoxy, and mounted the hardware onto the deck. Get the epoxy's consistency right, and the screws which hold the hardware to the deck will now bond AND be "threaded" into the deck's core. Need to remove them in the future? Heat the screws, and back them out. Need to replace them? Brush with epoxy, and screw them back in. It's a neat trick, called "hardware bonding" by Gougeon Bros. They describe the process in detail in their "methods" booklet. Easy to obtain.
We've put some heavy loads on some of these items for over eight years now, and no problems.
Good luck!
Richard H.

Dog Ladder

We have an aging golden retriever and faced 3 sharp stairs down thecompanionway for her. I screwed 2 strips of wood, one on either side,about 1 inch under the second step. We temporarily slide a board in under the steps large enough to make it easy for Cirrus to make her way into the cabin. As for getting in an out of the boat to the dingy (not the water) we built a step that bolts with wingnuts to the toerail and swings with a piano hinge half way down to the dingy. She can jump from the seat of the hard dingy to the step and onto the boat. I am in the middle of designing a new colapsable model that will store in 3 pieces without bolts or piano hinges. It is form fitted to the hull over the toe rail. It has 2 holes on the bottom for two pieces of dowelling made from a 2 * 2 piece of wood. The2*2 will have a board(step) inset into it and will swing up and down held in place by a pair of ropes clipped over the toe rail. Still working on this one.

Harvey Hall
Early Riser
C&C 27'

G

Gelcoat

Hi Martin!Are your topsides painted or gelcoat? If it's gelcoat, Aurora Boat Scrub workswell at deoxidizing. It contains Hypexine which helps to leach stains out andalso leaches color to the surface. Unless the gelcoat is shot, fiberglass specks showing through, this should do the job without cutting the surface any more than it already is. A

lot of dealers use this to detail used boats priorto reselling. I've had really good results just using it full strength with adry cloth and working in small areas, 2 sq. ft, and polishing it untill it isshiny and new looking again. I then apply a couple of coats of Aurora BoatShine to seal, protect and shine the surface. It usually lasts a full season.My boat is a 1991.Boat Scrub is one of the biggest selling fiberglass cleaners in Canada. It'salso excellent for cleaning Non Skid Decks, fenders, rub rails, rusty stantionsand getting hard to remove stains and scuffs out, even rust stains.If your surface is paint, it's probably Imron or Awlgrip. A quick fix for faded paint is Aurora Kwik Shine. Another popular product with dealers for detailing used boats. Another feature of Kwik Shine is that it can be sprayed directly on salt spots. It disolves the salt and converts into a cleaner. Kwik Shine leavesa polymeric, UV protected shiny coating and it can be used on all smoothsurfaces. If you decide to try these products, check out Aurora Sure Step for your decks. It's the worlds first (and only) polish for non skid decks. You will need the Boat Scrub to prep the decks first. Sure Step is pressure sensitive, meaningthat it is slippery to dirt and grime but your weight will create traction.When the decks are wet, the grip increases. It is shiny, contains UV inhibitorsand reseales the pores in the gel coat deck, helping to retard wear.The decksbecome super easy to keep clean. Sneaker prints just hose off. No morescrubbing.If you need more information, check out the Aurora Marine web site at"http://auroramarine.com"Hope this info helps.Richard. NOTICE: Richard Kittar is employed by Aurora Marine Industries. Thisinformation is given based on over 20 years of personal experience with boatmaintenance. This message is not intended as a commercial promotion. Pleasedisregard it if it offends.

Gelcoat scratches

The way we do it here is to use 3M Rubbing Compound (#05954) (liquid) with a soft-wet buffing wheel, followed by 3M finesse-it II (#05928), also with a med RPM wheel. Keep the wheel wet and keep moving. In an extreme situation, you may have to use a #600 and or #800 wet/dry paper (use it wet). This works on gelcoat, acrylic lacquer and Imron top coats.

Ross MacLennan wrote:

> I'd like to thank the folks who gave me the advise on how to handle scratches on gelcoat.On thinking about the advise, I realized that I had really described the problem wrongly.My boat has been repainted 3 years ago so the scratches are really on the new paint.The original gelcoat was red the new paint is a navy blue .Given that that scratched areas are in the new paint and not in the original gelcoat,does your advise to use a gentle rubbing compound still hold or do I run the risk of further scratching the paint???ROSSC&C 24

Glue Removal

Try Citra-solve. I used it to get the mastic up from the wood floor

underneath the linoleum floor in my 95 year old house, and it was the only thing that worked. You have to let it sit and soften for a bit though.

H

Halyards

Today, with low-stretch spectra line available, there's not much reason to use wire halyards, esp. for someone who primarily cruises and daysails.

You'll save on the cost of the rope/wire splice, and you won't have the unpleasant experience of being fishhooked by the inevitable deterioration of the wire portion.

The difference in stretch is too minimal to affect performance, and you'll have a more crew-friendly boat.

Regards, James Libby S/V Blithe Spirit

Replacing the wire/rope halyards with all rope should be easy - if your top of mast sheaves are of the type which can accomodate both. On the C&C 30, the sheaves have a small groove in the center for the wire and a larger one on outside for the rope. Thus, they can handle both. Your main concern would be stretch. The better line you buy, the less stretch. Some of the newest spectra lines have very little stretch, but if you buy Sta-Set or the equivalent, you may find yourself haveing to tighten your jib halyard during a race. I used Sta-Set X and was not satisfied - moved the jib halyard to T-900, which has about 1/10 the stretch. Some of the newer lines are even better.

Good luck.
Gary Nylander
C&C 30 Penniless

A word of caution: if you switch from wire to rope, you need to be sure that the wire has not left any burrs on the sheeves, otherwise they will cut into the rope (riggers suggestion). Also, you can replace the sheves with Drelin pullys and save a bit of weight aloft (for hte fanatics amongst us). Finally, you can switch the rope halyards end for end and distribute the wear points for longer life.
CW

To see if you need to replace the sheaves simply try to pull the rope halyard tail through them. If the line runs smoothly good to go. You may need to attach a small messenger line while doing this so that you don't loose your halyard.

Wouldn't worry too much about the weight issue. If the halyards are in good shape continue using them. When it's time to replace go with the all rope. Most people don't need the expense or short life of the exotic braids, I'd suggest a decent low stretch line such as Sta-Set X or equiv. An added benefit of the rope halyards is that they're much easier on painted masts.

Jerry
I would recommend using 5/16" spectra core line, to replace your rope/wire halyards. Breaking strength is about 5,000 lb., with very little stretch.
You could go to 3/8", but not needed.
Working on deck with line is much more comfortable than wire.
You can make up the splices and shackles at home. Then attach a small line to
your old rope tail, and pull it through the mast. Attach your new rope tail to the small
line, and pull it through the mast.
Use duct tape to make your joints, so the splice does not break in the mast when pulling.
When selecting the new line, review manufactures specification on stretch, go for
the absolute less amount of stretch you can find.
Larry

Jerry,
You can go with all rope without premature wear. I asked my local chandelery about doing that for my 32, and they said no problem. They were Marine Exchange, 800-888-8699. They also do lots of mail order and have competitive prices.
Tom Anderson
C&C 32 Nonpareil
Marblehead, MA
39 days to launch

I use 3/8 spectra cored line on a C&C36 with no problems for the last 4 years. Gerry/Mintaka

My two cents worth on this one - we have a 30 with 3/8 jib halyard out of T-900 and 7/16 on the main out of Sta-set X. The sheaves are unmodified and the lines are OK. The T-900 stretches less than the X even though it is smaller. I will replace the main
with T-900 or equivalent at 3/8 when needed. However if you are cruising, go with

the larger stuff to get a better "feel" - the T-900 is rather stiff as are all of the high-tech lines. They don't coil well, either. When we bought Penniless, she had the old wire to rope halyards aboard which had already been replaced with 7/16.

Gary Nylander----------

Jerry, the only way to know if your sheaves will damage a new rope halyard is to inspect them for wear. Does the rope part of your present halyard come in contact with the sheave, and if so has it been damaged?

As far as rope diameter and material, you have to be the judge of how you use the halyard. For example, do you cruise or race? When cruising on your 30, you may be able to hoist the main by hand rather than using a winch all the way. If so, trying to hoist with a small diameter line may be less comfortable than with slightly larger diameter, I would think that 3/8" would be the smallest and personally I would use 7/16" just for comfort.

As far as the head sail halyard, rope to wire may be the better solution on a cruising boat because we cruisers tend tend set things once and forget them. If you have roller furling, the wire will probably stay where you set it, without stretching, better that rope.

My $0.02

Joe Longtin
Moonlight C&C 35 MKIII
In Beautiful Downtown Bayfield

As regards a messenger line, a trick that I learned from the riggers on mymast rebuild: on the original line, use a sharp tool along the lines of afid or a small Phillips screwdriver and push it through the line so that theloosens up. Then, with the screwdriver end, push a loop of the (smalldiameter) messenger line through this opening and then tie a bowline. Strongand won't slip out from the tape if a snag occurs.

I accomplished the replacement of all my wire-to-rope halyards by overlappintthe new/old leads by 8" (this allows for some flex when rounding the masthead halyard pulley), and using a fine binding line at both ends. Use tape if you want...this would allow for some taper when the new lead enters the masthead. This is an easy and quite simple process when going from wire to 3/8 Sprectra.If your using 7/16 Sta-Set X I think you'd be fine by butting the new/old leadsand taping with 2"duct tape. Yes, it's tough to remove, but you won't loseyour old halyard. If your worried about it, sew some threads, then usin 2 " packing tape.* Your sheaves vary in diameter on the 32's with the largest sheaves appearingin boats vintage '84 (circa) and older....making this process easier.Chris V.Mariah - 32'

It depends on what you want to do with the boat. Our wire/rope halyards had already been replaced wiht 7/16" rope when we bought our 30. We found the genoa halyard would stretch over time while racing. I believe we had Sta-Setor equivalent on the boat and that stuff is pretty stretchy. It was OK for cruising, but was a pain to keep taut. We replaced it with 3/8" T-900 and itworks great. You pays your money and takes your choice..... Gary Nylander, 1980 C&C 30 Penniless

Handrails

I just removed the handrails on my 1977 26 last week, and perhaps you have a similar setup. Under the teak plugs on the inside handrails is a square-drive wood screw, which goes through the cabin top to the outside rail. After removing these, the inside rails come off. On either side of the first screws is another screw accessed through a hole in the headliner, which marries the outside rail to the cabin top. Make sure you have the right size bit. Removing took less than an hour, and I am assuming that remounting will be equally simple. I have now resolved several leaks, and I wish I had undertaken this project sooner.

I want to do the same on the starboard side of my 30 mk1 but one of the access screws for the outside grab rail is located on top of the bulkhead where it mates with the deck/cabin liner mold. It appears the factory must have assembled the grab rails on to the deck before they lowered the deck on to the hull c/w bulkheads. I was wondering how one would get access to those screw blocked by the bulkhead?

I want to do the same on the starboard side of my 30 mk1 but one of the access screws for the outside grab rail is located on top of the bulkhead where it mates with the deck/cabin liner mold. It appears the factory must have assembled the grab rails on to the deck before they lowered the deck on to the hull c/w bulkheads. I was wondering how one would get access to those screw blocked by the bulkhead?

On my '74 C&C 30 there were two screws on each side's grabrail that lined

up with the forward bulkhead. However, there were small holes drilled in the headliner at an angle and I found the screws in there. In fact, as I recall, there was a screw on each side of the bulkhead, and one of the access holes was drilled through the head door's track.

Taking off the grab rails and working on them in the basement allowed me to do a really great repair and Cetol job, and I was able to seal the coring around all the holes to avoid future leaks.

Wally Kowal

Hatch

Yes, my yard fixed a bar (angle bar) that has 2 hole at each end. A hole is drilled in each hatch handle. The holes match up and a wind nut and bolt slides through, thus the two handles are locked close.

My experience with Atkins and Hoyle is that they do not sell an actual gasket, but the will provide a strip of gasket material of appropriate length to fit your hatch. I remember thinking it was a bit pricey, (but when it comes to boats that is true of just about everything). I forget whether they provided the adhesive, but if not, they can tell you what to use. The information I have in my computerized note file follows: HATCH GASKETS - ATKINSON HOYLE - TOTONTO 416-596-1818 - ERIC ATKINS ; UNIROYAL SILAPRENE 13X18 22X22 ACRYLIC

I have found the name of the manufacturer if anyone is interested. Atkins & Hoyle (atkinshoyle.com). This is probably commond knowledge for you guys up 'Nuth.

CVolpe - Maria - 32'

Heaters

We did some research of this subject a year ago.
We were looking for an onboard auxiliary heater that used an existing fuel, was not going to break the bank, and would add to the decor of the boats interior.
All the installations I could find were Force 10 or Espar with Force 10 being the least expensive by far and the only one using a fuel that I had onboard

already, gas or propane. We thought that the Espar would be classified as a main heat source as opposed to auxiliary and was quite a few more boat bucks. We went for the Force 10. It has since been installed with a ceramic back plate and fits in well with the boats interior. We mounted it on the port side bulkhead with the flue going up to the molded in winch pad that the 30-Mk1 is known for. I haven't run the fuel to it yet but all the folks we talked to said they work great.
Steve Scott

isn't there a slight difference in price between the two ?
there is another called a fab all. i have the fab all 170 on my 36 and it really cooks. as i understand it there were some disgruntled force 10 people
that went off an founded the fab all line. if you look at the specs between comparable
systems, you can see the fab all is more efficient. it also can be plumbed into your
fuel line. after shopping around, although i live on the east coast i bought it from
doc freeman. they had the lowest price

We have the Force 10 on our 29 (also on Superior) and have been happy with it for the most part. The one thing I would point out about it is that it has a built-in oxygen sensor which automatically shuts the unit off if it senses too little oxygen in the cabin. This is good for obvious reasons, but it does mean that you need a source of fresh air coming into the cabin while it's running -- a minor annoyance depending on the outside temp. We usually just crack a hatch and that does the trick. Just something to consider...

Hiller Range

STOVE - HILLERANGE - made by Seaward - 818-968- 2117 - Seaward Products15600 Salt Lake AvenueCity of Industry, CA 91745Tom Schultz

Seaward ProductsP.O. Box 566La Puenta CA 91747tel(562) 699-7997 and fax (562) 699-0908Defender suggests requesting a "complete detailed catalog".

Hull Numbers

Here's how my surveyor says the hull numbering system works. It's a U.S. Coast Guard thing, so I don't know if it applied to all the C&C's that were built after 1972. The HIN is usually stamped into the stern somewhere above the water line. I have an older boat, so my hull number applies specifically to the model. It appears that linking the HIN to a particular model was abandoned after 1984. The stuff that follows was taken from my survey report.

"The hull identification number is required by the USCG to be displayed on all recreational boats built after October 31, 1972. The number consists of a combination of 12 letters and numbers identifying the builder, the model number, hull number, date of construction and model year.

Hull numbers used between October 31, 1972 and August 1, 1984 are as follows:
1 2 3 = Builder's Code
4 5 = Model Number
6 7 8 = Hull Number
9 10 11 12 = Date of Manufacture (9 10 Month, 11 12 Year)

Or
9 = M
10 11 = Model Year
12 = Month of Manufacture; A = August B = September

Example: TSP90014M83B

TSP = Tillotson/Pearson
90 = Model 90
014 = Hull #14
M83B = Model Year, Construction began 1982, Code B = September

Hull Numbers used after August 1, 1984 are as follows:
1 2 3 = Builder's Code
4 5 6 7 8 = Hull Number
9 10 = Date of Certification or Manufacture (9 is Letter for Month; A = January, 10 is Last Digit of Year)
11 12 = Model Year

Example: PYZ40012L586

PYZ = Present Yachts, Inc.
40012 = Hull Serial Number
L5 = December 1985 Date of Certification or Manufacture
86 = 1986 Model Year"

"Here's how my surveyor says the hull numbering system works. It's a U.S.

Coast Guard thing, so I don't know if it applied to all the C&C's that

were built after 1972. The HIN is usually stamped into the stern

somewhere above the water line. I have an older boat, so my hull number

applies specifically to the model. It appears that linking the HIN to a

particular model was abandoned after 1984. The stuff that follows was

taken from my survey report.

"The hull identification number is required by the USCG to be displayed

on all recreational boats built after October 31, 1972. The number

consists of a combination of 12 letters and numbers identifying the

builder, the model number, hull number, date of construction and model

year.

Hull numbers used between October 31, 1972 and August 1, 1984 are as

follows:

1 2 3 = Builder's Code

4 5 = Model Number

6 7 8 = Hull Number

9 10 11 12 = Date of Manufacture (9 10 Month, 11 12 Year)

Or

9 = M

10 11 = Model Year

12 = Month of Manufacture; A = August B = September

Example: TSP90014M83B

TSP = Tillotson/Pearson

90 = Model 90

014 = Hull #14

M83B = Model Year, Construction began 1982, Code B = September

Hull Numbers used after August 1, 1984 are as follows:

1 2 3 = Builder's Code

4 5 6 7 8 = Hull Number

9 10 = Date of Certification or Manufacture (9 is Letter for Month; A

= January, 10 is Last Digit of Year)

11 12 = Model Year

Example: PYZ40012L586

PYZ = Present Yachts, Inc.

40012 = Hull Serial Number

L5 = December 1985 Date of Certification or Manufacture

86 = 1986 Model Year"

I

Ice Box

You had some great comments on the C&C 30. I was particularly interested in your efforts to move the ice box back and free up storage space. How hard was it to get the countertop off? Could you remove the section above the box

without affecting the remaining countertop?

I too was considering this effort because it would also allow the addition of insulation around the box to improve performance when refrigeration is added.

Fair winds and clear skys.
Dave McMurry
C&C 30 - '81, #674 - "Cool Change"

HI Dave,

Yes you can remove the top with out affecting the remanding countertop.
Once I got the top off, it wasn't a big deal. Just making the first step was hard.

Here is the way that I went after the top.
Remove the 4 plugs and screws on the aft seat.
Remove the fid rail on the icebox and the one just aft of it. I removed the one just to the starboard of it, but that wasn't necessary.
Next starts the hard parts. Removing the aft storage bin. Most of the screws were epoxed over and had to be drilled out. There are a few that were installed from the inside out and they had to be hack sawed off.
The screws that hold the top from inside the cupboard were fun also. A couple had to be cut off also.
From that point the top is pretty much loose, except the ice box is screwed to the underside. Another job that C&C did before the deck was put on. But I was able to get them off.
At this point the top is in you hands. The ice box is also in your hands, but that was also installed before the deck went on.
The top and ice box will slide aft the 11" that the storage bin was in. The opening top is in a better spot now with a place to put items while loading the ice box.
I plan to use foiled sided insulated board and spray foam to fill the area between the ice box and the rest of the hull and inside of the boat, per the recommendations of a high tek (high price) insulation suppler.
The storage box will be relocated forward of the ice box were the opening top was. Will try to cut in some drawers or cupboard doors. That will all depend on how I can cut the front paneling while still in place on the boat. Probably use a pin router.

In remounting the ice box, I will make wood stringer to hold the ice box in place and then mount the top separate.
The only other problem will be hooking up the ice box water drain and make it acceptable to service at a latter date. I have installed a ice box 12v water pump that drains into the sink.
If all goes well, we'll be in the water by early May.

Dick Okopny
Moondance C&C 30
25 days to launch.

Peter
The name of the book you are looking for is THE PERFECT BOX: 39 WAYS TO IMPROVE YOUR BOATS ICE BOX written by Edgar J. Beyn published by Weems & Plath was written in 1982 has a lot of info about fixing existing ice boxes
I think
I found this one at west marine
Dennis
landfall39
Europa

For those who may have missed my earlier note.This is how I re insulated the ice box. I'm done with the insulation part of thejobnow. I used 2 4' x 8' x 3/4" double sided foil foam board and 3 cans of sprayfoam.I felt that this would do a better job than just squirting foam inside the hull.Just finishing up the wood working part. The new dry storage bin is 11" wide and9"deep. The door opening is under the storage bin. That door is 10" wide by 16"tall. Allof the opening doors and panels that C&C painted with gel coat have been sandeddownand I'm repainting with white expoy paint along with the new dry storgage andlockerbelow.The next job, starting this afternoon, is cutting the 6" x 24' hole in the backbulkhead for the new electrical panel that I'm building.

Please reread my note:
I used 2 sheets of 4' x 8' x 3/4" foam (r=5.8) double foil board. That was after removing the top of the ice box, the ice box shell, moving it aft 11" and rebuilding the dry locker forward the ice box and lining the hull and all bulkheads with the foam board. Plus 3 cans of foam spay. The next step is insulating the underside of the top and door with 1 1/2" or more r=5.8 foam.
All of this should improve the performance of the ice box. I also had the Alder Barber serviced this last winter and it is working just fine in the garage right now.

Insurance
I bought insurance from Defender Marine last year at a substantially lower price than Boat US (several hundred less!). They didn't jeopardize me for being a first time boat owner, and gave me a discount for taking the boating safety class. I carefully examined the two estimates and they offered identical insurance coverage. Defender has been good to work with; they requested I make some of the survey repairs(that they considered safety related) within six months of insuring the boat. West Marine would not sell me insurance, because of my lack of previous boat ownership. Defender is at 860-399-2027, Westbrook, CT.Kate Mullins Impulse, 35'-I

J
K

Keel Crack

Wayne - Is the crack located down the keel a ways (i.e., where the sump ends and the lead begins) or is it really at the hull? The crack at the lead-sump joint is very common with older C&C's, and you can: (1) patch it up with some fairing putty, sand, and paint, but expect it to return next haulout; (2) check the keel boats...tighten...and then #1; or (3) loosen the keel bolts, have the yard lift you put for the day, pry the keel from the sump a couple of inches, clean, rebed with 5200 or a less permanent caulk, retighten and #1, except it won't return. The newest C&C's had this joint wraped with fiberglass and don't have this problem. Now, if it's really at the sump/hull joint, and its large, then look for cause inside structurally. It's probably minor (e.g., got set down too fast on the stands) and the first thing I'd do is dig it out a bit, fair with epoxy and colloidal silica (very strong), seal it up with epoxy barrier coat, paint. If it's not severe (structural), it won't return.
Good luck, Greg

Keel Bolt Torque

Dave,
This thread usually comes around this time of year as everyone contemplates doing the needed work on their boats. This comes from previous threads and is a little more complete on the torque specifications for all the different keel bolt stud sizes.

KEEL TORQUE SPECIFICATIONS

MODEL/SIZE	BOLT DIAMETER	FOOT LBS.	SOCKET NUT
MEGA ONLY	3/4	90	1-1/8"
C&C 40	1-1/4	450	1-7/8"

ALL OTHER	1/2	80	3/4
MODELS	3/4	250	1-1/8
	1"	350	1-1/2"

Now, does anyone know what Stainless Steel (i.e. 13-8, 15-5, 17-4, 18-8/300 series) that the Keel Studs are made from? I will start trying to figure it out when I start going back to the boat if no one knows.

Oh well, its only a couple of months until work starts and the really good news is its only a week away from Strictly Sail in Chicago. We plan to go shopping at the show for a roller furler and new head sail. Look out world were ready for the nineties

Some years ago I replaced the ferrous steel plates under the keel bolt nuts on Impulse, a 1972 35 MK1 (now owned by Tom& Kate). I called the C&C Design group and was given the following torque specs.

3/4" bolt 200 ft lbs
1" bolt 350 ft lbs
1 1/4 bolt 450 ft lbs

I saved my notes just in case. Hope this is helpful. I believe these specs were good for other models, but don't know which ones.
Dave "Webfoot" 37K/cb 1983

L

Lazy Jacks

Hi Jeff, the set up on mine has two metal lines attached to the mast with atang and each ends in a small block.At the forward part of the boom a padeye is attached on port side and then abraided line is run up to the block on that side and down to another padeye onthe rear section of the boom; the line then goes under the boom and up the otherside to the block on that side and then down to the boom to a cheek block whichleads to a cleat.I intend to have a longer braided line which can be eased out so that it can bepulled back to a cleat that is on my mast and I will use a bungie cord to keepit in place when not needed. I do not use the lazy jacks as a topping lift eventhough it will temporarily act that way if not eased.I have the proper dimensions and if you forward me a fax number I can send you aset of instructions and measurements too.If I had a larger boat/sail I would agree that they are not the best things inthe world but they are easy to handle if you are paying attention when you raisethe main on a 25.RegardsJackie

M

Mast and Spars
TomMost C&C Spars came from Danny Klacko in Oakville Ontario.Danny can be reached at (905) 825-0015He has an amazing amount of older parts, if you require something.I am picking up a boom for a C&C 39 1972, today from him.LarryBHYC Oakville Ontario

Mast Noise
This is what I did.
1) Get a 2 pieces of strong string or line one and a half times the length of the mast.
2) Disconnect deck light half way up and tie string on
3) disconnect masthead light and VHF (had to cut connection, but was corroded and needed to be replaced anyway), and whatever other wires are up there.
4) Attach string to all wires at the top securely.
5) GENTLY pull all the wires out of the mast (helps to have friend guide strings).
6) Lay all wires on ground together and put four 10" zip ties on at with tails facing nine, twelve, three, and six o'clock every 12 inches. Leave the tails on
7) The next part definitely take s two people. With one person pulling the strings at the masthead, carefully feed all the wires back into the mast. It should go in easily. You might get hung up at the spreaders, but with a little wiggling, it should go by.
8) Reconnect all the wires and you are done. Total time for me was about three hours (including running to store for more ties).

You will not believe how quiet it will be.

Mast Step – Painting

Instead of zinc chromate and top coat, I might suggest that you look for some Polyimide epoxy primer (MIL-P-23377) and use just that. It is a two part primer that is used in the aerospace industry. The F-18 flight controls are painted with this paint and uses no top coat. The paint is manufactured by Courtalds, the same people who make Interlux. By the way, we also use this paint as a barrier coat between stainless steel and aluminum as well as use it as a locking compound on our threaded fasteners in lieu of loctite. I always try to keep just a little of it around the house for those odd repairs. Just my $.02 (US)worth (or $.20 for military advice).

Mast Step Stringers

We also own a 30' C&C ZCC30515M79C which we purchased in May, 1995. Luck for us
in that we know the last 3 of 4 owners since she was built. A lot history and knowledge came with the boat. She is well built, a great boat to sail and will be around long after we fall off.

She has the rotting mast step stringers and I would be interested in how you repair your stringers. I have somewhat repaired the aft stringer by sandwiching 2 1/4"aluminum plates to either side of the stringer and then drilling and filling that stringer with West system. The middle and forward ones are next, but still not sure what to do with them. The forward end of the wooden mast step sinks about 3/4 to 1 inch from when we step the mast in the spring to the end of the season when unstep her. That worries me, but I not sure what to do about it.

As far as water leaks, all C&C 30' leak. Its part of their charm. But we are slowing finding them and fixing them one by one.

Have not seen the bulkhead delamination yet, but that will be on my list for this spring.

Electrical, oh yes, how we have come to expect more and more out of our boats. Last year, up graded to 30 amp shore power and added 2 GFI's on the back bulkhead and properly installed 4 additional 110v plugs. 2 in the main cabin and 1 over the head sink and 1 behind the head door. That one was there before, but with no plug cover. This spring the main fuse panel will be replaced with a new panel (I was in the prototype business) with 6 110v circuit breakers and 18 12v circuit breakers. Will also upgrade the alternator from the 30 amp to a 55 amp. Need to keep our pop (beer) cold. Had the old Alder Barber rebuilt last fall. Still believe that the old feron 12 is better that the new stuff.

While I was in the area, I removed the counter top over the ice box and found a lot of room under the aft storage bin. So, I'm moving the ice box aft the 11" and rebuilding the storage bin forward of the old ice box spot. Will try to cut some doors or drawer in the front panel to match the ones next to the companion latter. Will also better insulate the area around the ice box and hull. There is a lot of dead space in there.

The boat was surveyed by a surveyer who also knew the boat and the last 2 owners. No secrets or surprises here.

2 years ago, we spent 2 months in the North Channel and are planing on do the same this summer. Had no real problems then (if you don't call the gears in the drive motor on the Autohelm 4000 wearing out a real problem) and I expect none

this time.

Looking forward to hearing and talking more about the 30's

Dick Okopny
Moondance
C&C 30 '79 out of FYC, Grosse Ile, Mich.

Things to watch out for:
>
> #1) Rotting mast step stringers - Take off the mast and the wooden mast
> step and inspect the stringers that it rests on in the bilge. These were
> made of wood and have a habit of rotting from water running down the mast.
> Replacement is about $1,000 or several day's of your own time. I did mine
> and it wasn't fun.
>
> #2) Deck leaks - C&C didn't properly seal deck penetrations when attaching
> hardware. The cabin-top handrail was particularly bothersome. Look for
> spider cracks around the handrail and stanchions. These will have to be
> drilled out with an oversized bit, filled with epoxy, and then re-drilled
> and the equipment re-mounted with sealant.
>
> #3) Bulkhead delamination - the normal flexing of the boat over the years
> can cause the tabbing to loosen where the fore and aft bulheads meet the
> hull and particularly the deck. Most are accessible and can be ground off
> and replaced with fresh fiberglass and epoxy. After 25 years two of our
> bulkhead tabs have been re-glassed to the deck and two more need to be done.
>
> #4) Wiring - after many years, particularly if this is a salt-water boat,
> the wiring needs replacing. I have an on-going work effort to replace the
> wiring as I replace electrical equipment. I replaced the fuse panel with a
> proper circuit breaker panel and use marine-grade wire and connectors.
> Check out the Anchor Marine web site because electical standards have
> changed remarkably in the last few years.
>
> Don't forget to have a qualified marine surveyor do a thorough survey prior
> to purchase. It's worth the money and peace of mind.
>
> Good luck.
>
> Wally Kowal
> Whistler II
> C&C 30 '74 out of LSYC, Toronto

Dick, concerning your mast step stringers, there are three stringers in the bilge under the mast step, all differently shaped, but they all conform to the hull shape. They are arched at the bottom to allow bilge water to flow freely fore and aft. It is the arch in each stringer that lead to the rotting, the arch was cut through the stringer and not epoxied afterward to protect from bilge water.

Due to the three unique shapes of the stringers, you will need a template for each one. If your cut each stringer out along the hull line, the piece you remove becomes the template for the replacement.

The new stringers should be built up from marine grade plywood for lateral strength and for resistance to rot. Each stringer should be covered with epoxy for protection ann then epoxied in place. Then a new mast step board can be installed as a bridge across the new stringers.

I watched a friend do this to his 30. I don't know if it was more painfull for me to watch or for him to do the work. It is a slow process, however not all that technical.

Good luck

Joe Longtin
Moonlight
45 days till launch

I did the step/rebuild thing just as joe explained. I made templates, laminated about 3/8" solid glass w/poplar sandwich, then glassed to hull. Remember, grind old surfaces. It took awhile to do, but damn well worth it.

Davey Stowers
Outlaw '74 30-1
Lake Erie

Joe, thanks for the info on the stringers. I understand how they are built. Just wasn't looking forward to trying to remove them. Especially the forward one that is in under the molded floor. Oh well, I'll just break out the "chain saw" and start cutting them out. That looked like the easy part. The hard part must be fitting the forward stringer back in and reglassing it in place. I did install a Par bilge pump that has a pick up tube under the middle stringer. That should help with the water problem. The original manual bilge pickup if farther aft in

the bilge and it leaves a lot water in the boat.

Dick
Moondance
25 days to launch in Sunny Grosse Ile

Dick; We have a 74 C&C 30. I think our stringers were 2 or 3 inch laminated plywood. Didn't seem like a very good set up. No matter how dry the bilge was it seemed that the wood was always wet. I filled the entire cavity between the stringers with epoxy. There is a keel bolt under there some where so you will have to leave access some how . I think i used a large plastic coke bottle trimmed to fit. I also ran some 1/2" plastic hose from the front of the bilge area towards the bow to the main bilge area for the water to drain through. I also found i had to drill a new hole through the mast shoe into the area where the keel bolt is. Water drains into the main bilge from the keel bolt area through the hose. The water that comes down the mast when it rains has to go somewhere. I did this 10 years ago and the mast step is still solid. A fellow boater in our harbor with a 35MK1 did the same thing with good success as well. Dick i am not sure but i think we may have met in Gore Bay last year. We have a Green C&C 30, Magic Dragon.
Brad Kolpin
Magic Dragon

Hi Brad,
Thanks for the info. I have talked to one other C&C 35 owner who did the same thing with concrete (I think). Putting the hoses and clearance hole for the keel bolt is not a big deal. I was worried about what kind of stress load the mast step board would transmit to the hall it everything is solid. But your idea will give me something to think about this spring. I'll let you know how I tackle the problem.

Yes we did meet you at Gore Bay 2 years ago. That was about half way through our 2 month trip. Looking forward in going back there again.

Brad Kolpin wrote:

I had the same problem on my 30. The small frames underneath the oak blockare made of relatively cheap plywood which delaminated due to the vicinityof the bilge water. First I took exact measurements of the maststeplocation. Now everything was removed and I made new frames out of marinegrade mahogany plywood. The new frames were completely covered with glassand epoxy and glued into place with epoxy and glass strips. The plywood of abetter grade is now completely shielded from water and I am

sure this repairwill last for the life of the boat. The oak block is screwed to the newframes as before. I have seen other 30s that needed this repair.Henry Fierz 1973 C&C30 CAMELOT III

Jim- I've heard of folks using **ultra-high density polyetheylene (UHDPE**) for this, it is similar to the white plastic "carving boards" you can find in many markets. It takes compression very well in the UHD form. Others have built up a shoe of welded stainless to raise the mast base. Sure, hardwood would to the job but UHDPE simply can't rot and is just as easy to obtain and work.

Brad-and Jim- There's a really simple trick you can pull with anything porous like wood, or leather. Take the new piece of oak, trim to size, and then put it in a ziplock bag filled with penetrating epoxy (highly thinned epoxy
with a slow cure time). Make sure the bag is sealed well and has no air bubbles in it. Now place the whole thing in another zip lock, water filled. And a thirdif you can. The second two bags are for safety, in case the first leaks. What you do is place the whole thing in a mesh basket, tie it to a
weight, and submerge it 30-60 feet underwater. The water pressure (2-3atmospheres) squeezes the incompressible fluid in the bags, and the only"air spaces" left are in the pores of the wood. So the penetrant (oil,epoxy, your choice) is forced into the wood under a good deal of pressure and impregnates it like a simple soaking never could. The
zip locks will hold better than you think, although a test with just water would certainly be reasonable.<G>If you use too much epoxy you may have to cut the excess off the oakblock...but even then, at least you'll have a stronger (& rot resistant)piece of wood to work with.

JimI replaced the mast step on my 1973, hull # 100 C&C 30 many years ago. The original wood plate mounted beneath the Aluminum cast box was made of white ash. After years of water coming down inside of the mast, and draining thru the Aluminum box and thru the ash wood block, I could detect some discoloration in the wood and noted a small amount of rot in the ash plate. I decided to replace it, and used a piece of oak the same size. I did not have ant deterioration of the underlying laminated ribs that the ash plate rested upon. Just as added protection, I epoxied the ribs. I also installed a plastic drain pipe that was threaded into the Aluminum, and sealed as it passed thru the new oak plate.
Since I felt the original rotted as a result of water wicking into the end grain of the ash, I thought the drain pipe and the seal would solve the problem. I varnished the new oak plate, and carefully monitored it for any discoloration, peeling or evidence of water damage. I kept the boat for another 10 years, and never noted any evidence of a problem. The entire task was pretty simple, and it only cost me the price of the oak plate (7.5" x19.5" x 1.75") ,a short piece of plastic pipe and a little bit of my time for trimming the wood, drilling the holes, epoxying the ribs, mounting the pipe, varnishing the final plate, an installing the new system.

I just realized, that I still have the original ash plate, having kept it as an example of what could happen. Actually, it's not bad, with only a little rot, emanating from the original drain hole. Looking at it now, I probably could have reinforced it with some epoxy, re sealed it and used it for another 10 years or more.

I fixed my step problem by making two sections similar to what was there but about twice as wide, formed a tunnel in the bottom for water to flow then filled with concrete , inserted two 1/4 x 6 SS bolts upside down in it to hold a piece of 1 1/2 teak in place. The perfect Job. Cost app. $20Vic:

Mildew Cleaners

Jared,Ideas about how to get the mildew off before I store them?? Woolite and a little bleach??? this is what's being recommended for dodgers/sunbrella... would it work for mildewed life preservers?? Do I dare do bleach???Kate

Kate- I think scrubbing with diluted bleach (not a long soak, since that could attack plastic straps and buckles as well) should be fine. Eventually it would make them a bit less bright orange, but it is a great mildecide. Probably the safest "sure cure" for mildew. Woolite or maybe my favorite--Liquid Tide. That stuff is strong enough to pull dye from some fabrics if used straight, but it does clean well. And you're not going to be using it very often, we hope.<G>

Muffler

The Vernay Muffler available thru Defender Marine page 187 in 99 catalogue, 800-628-8225 was installed in many C&C's. There are numerous choices, but the elongated, horizontal model works fine. The Vetus brand also isexcellent and is priced reasonably, long lasting and does what you expect.Get a model with a drain screw or be sure to winterize well because waterwill be trapped in exhaust system.

N

Name changing

Boat Denaming Ceremony by John Vigor Due to an overwhelming number of requests for copies of John Vigor's Interdenominational Boat Denaming Ceremony, we are rerunning it again. Now, take care to save this one! I once knew a man in Florida who told me he'd owned 24 different yachts and renamed every single one of them. "Did it bring you bad luck?" I asked. "Not that I'm aware of," he said. "You don't believe in those old superstitions, do you?" Well, yes. Matter of fact, I do. And I'm not alone. Actually, it'snot so much being superstitious as being v-e-r-y careful. It's an essentialpart of good seamanship. Some years ago, when I wanted to change the name of my newly purchased 31-foot sloop from Our Way to Freelance, I searched for a formal "denaming ceremony" to wipe the slate clean in preparation for therenaming. I read all the books, but I couldn't find one. What I did learn, though,was that such a ceremony should consist of five parts: an invocation, anexpression of gratitude, a supplication, a re-dedication and a libation. So I wrotemy own short ceremony. Vigor's inter-denominational denaming ceremony. Itworked perfectly. Freelance carried me and my family many thousands ofdeep-sea miles both north and south of the equator, and we enjoyed good luck allthe way. I used the same ceremony recently to change the name of my newly acquired Santana 22 from Zephyr to Tagati, a Zulu word that means"magic," or "bewitched." We're hoping she'll sail like a witch when I finallyget her in the water this summer after an extensive refit. I'll give you the exact wording of Vigor's denaming ceremony, butfirst you must remove all physical traces of the boat's old name. Take theold log book ashore, along with any other papers that bear the old name. Checkfor offending books and charts with the name inscribed. Be ruthless. Sandaway the old name from the lifebuoys, transom, top-side, dinghy, and oars.Yes, sand it away. Painting over is not good enough. You're dealing with godshere, you understand, not mere dumb mortals. If the old name is carved or etched,try to remove it or, at the very minimum, fill it with putty and then paintover. And don't place the new name anywhere on the boat before the denamingceremony is carried out. That's just tempting fate. How you conduct the ceremony depends entirely on you. If you'rethe theatrical type, and enjoy appearing in public in your yacht clubblazer and skipper's cap, you can read it with flair on the foredeck before agathering of distinguished guests. But if you find this whole business faintly sillyand embarrassing, and only go along with it because you're scared to deathof what might happen if you don't, you can skulk down below and mumble it onyour own. That's perfectly okay. The main thing is that you carry it out.The words must be spoken. I compromised by sitting in Tagati's cockpit with the written-out ceremony folded into a newspaper, so that any passerby would think Iwas just reading the news to my wife, sitting opposite. Enough people think I'mnuts already. Even my wife has doubts. The last part of the ceremony, thelibation, must be performed at the bow, just as it is in a naming ceremony. Thereare two things to watch out for here. Don't use cheap-cheap champagne, anddon't try to keep any for yourself. Buy a second bottle if you want some. Usea brew that's reasonably expensive, based on your ability to pay, and pour thewhole lot on the boat. One of the things the gods of the sea despise most ismeanness, so don't try to do this bit on the cheap. What sort of time period should

elapse between this denaming ceremony and a new naming ceremony? There's no fixed time. You can do the renaming right after the denaming, if you want, but I personally would prefer towait at least 24 hours to give any lingering demons a chance to clear out.(Scroll down for the wording of the ceremony.) Afterwards Now you can pop the cork, shake the bottle and spray the whole of thecontents on the bow. When that's done, you can quietly go below and enjoy theother bottle yourself. Incidentally, I had word from a friend last month thatthe Florida yachtsman I mentioned earlier had lost his latest boat, a22-foot trailer-sailer. Sailed her into an overhead power line. Fried her. Sheburned to the waterline. Bad luck? Not exactly. He and his crew escaped unhurt.He was just very careless. He renamed her, as usual, without bothering toperform Vigor's famous interdenominational denaming ceremony. And this time, atlong last, he got what he deserved. Vigor's Denaming Ceremony "In the name of all who have sailed aboard this ship in the past,and in the name of all who may sail aboard her in the future, weinvoke the ancient gods of the wind and the sea to favor us with their blessing today. "Mighty Neptune, king of all that moves in or on the waves; and mighty Aeolus (pronounced EE-oh-lus), guardian of the winds and all that blows before them: "We offer you our thanks for the protection you have afforded this vessel in the past. We voice our gratitude that she has alwaysfound shelter from tempest and storm and enjoyed safe passage to port. "Now, wherefore, we submit this supplication, that the name whereby this vessel has hitherto been known (_____), be struck and removed from your records. "Further, we ask that when she is again presented for blessingwith another name, she shall be recognized and shall be accorded once again the selfsame privileges she previously enjoyed. "In return for which, we rededicate this vessel to your domain infull knowledge that she shall be subject as always to the immutable laws of the gods of the wind and the sea. "In consequence whereof, and in good faith, we seal this pact witha libation offered according to the hallowed ritual of the sea." CLICK HERE for Printable Page of Vigor's Denaming Ceremony Christening Ceremony After a boat is denamed, you simply need to rename it using the traditional christening ceremony, preferably with Queen Elizabeth breaking a bottle of champagne on the bow, and saying the words: "I name this ship _____ and may she bring fair winds and good fortune to all who sail on her." John Vigor, an Oak Harbor resident, is a boating writer and editor. He is the author of The Practical Mariner's Book of Knowledge (International Marine) and Danger, Dolphins, and Ginger Beer (Simon and Schuster) a sailing adventure novel for 8 to 12 year-olds.Michael Clow"Desire" C&C 32 Lake St. Clair Metro Detroit

O

Oil

Ken, I realize that you posted this a few months ago, but I needed to check on a couple of items. I have installed a oil change system on our Yanmar 2QM15 that has significantly reduced the stress and strain of changing oil. Our boat is a C&C 32 with frontal access to the engine as well as space under the engine. Upon haul out, we removed the oil pan -

bottom plate - of the engine. There is a "dummy" plug in one of the corners which I had drilled out, threaded and a spring loaded L shaped nipple valve (this a description of the item - it may be called something else) screwed in. I then fitted a short piece of plastic tubing over the open end. When I want to change oil, I slide tubing into a milk carton, turn the valve to open and let the oil run. I usually leave it over night to let it drain, turn off the valve, cap the carton and recycle the oil. We have used this system for four season without any problems. The cost of the tool and die work was minimal - under $75 (Wisconsin prices - may be higher in the East) The value of the system doesn't have price. If you have any questions, please contact me.
Stephen
French Vanilla

P

Paint

Hi Martin, 3M makes a good polish for cleaning paint and gelcoat. I believe it'scalled 3M20095 but i'll get the exact name for you tomorrow. Meguiers also has some good stuff, you might try #7. Apply it with a rotary buffer not a random orbital buffer. Professional (good) products rely on the heatgenerated by the machine. Random orbitals generate little if any heat.Just be careful not to burn your finish. If after you buff your paintbegins to turn milky within a few hours then there is nothing more you cando and it's time for new paint. By all means use professional materials only. All these products likeStarBrite, rubbing or polishing compound, etc. are nothing but "sandpaperin a can". They will remove too much material and eventually ruin thefinish altogether.Cheers,Bob ToddLazybones, C&C 25 MkIPortsmouth, NH

I used fine badger hair brushes being careful to thin the paint very much, I wasn't difficult to work with. If you thin the awlgrip to a very thin con sistency, after you brush the paint on it will flow into a beautiful shine.

I just called West Marine, who called Spectrum, who has a "factory matched gelcoat" for 83-88 C&C's (Part no 9035).

Anyone used this before? I would think that it would

be somewhat close.

Thanks,
Rich
C&C 30 MkII

I haven't used the Spectrum gelcoats, but have been told by Rob Machlachlan at South Shore Yachts that theirs are factory matched, as promised, and are the preferred source of gelcoat. I will be using some ('94-'95 smoke white) this Spring to do a few small touchups. Of course, intervening years of oxidation, etc. will have resulted in significant color changes on your boat, so re-matching will be necessary.
Ken Hirsch

Hi Carol, in the "small world" department, I used Endura on my boat yesterday, and spoke to their lab today. I live in Edmonton where the paint is made. It is extremely rugged; I have used it on aircraft, it is used on corp. jets, and I know that it is also used on highway equipment. The finish is beautiful. The fumes
are deadly (I think literally); also the mixing requires great care, as it is slightly too thick to spray and therefore they supply a special thinning agent. Depending on the room temp. and the surface, the amount of thinning agent will vary slightly. The lab is very helpful, even over the phone. Last year I used it to cover some work I did on the deck. I didn`t use the primer but did carefully ruff-up and clean the surface. I took a panel from the boat to their lab and they matched the colour perfectly. They even de-gloss the paint so it has the same dullish lustre of the boat decks. I also had them match-up the boot stripe and the hull colour , to have on hand for touch ups. By the way I got some interesting looks when I took the transum mounted rudder in to have them match the hull and bootstripe. I used several disposable aerosol sprayers (you add your paint to a jar and go for it). Also, I used several "dabbers", which are like very large felt pens that you can add paint too, for some small applications. Great product; rots your lungs...take care.

I just painted my 1976 30ft deck with two coats of Endura and am very pleased with the product; no primer was needed over fibreglass or epoxy. I also painted aluminum parts, but needed to prep it first with an Endura primer. Again, I am very pleased, but as the boat has not hit the water since it's 2-month-that-became-10 month refit, I cannot vouch for it's performance under fire. However, I understand that B.C. Hydro did extensive testing of paints for toughness and longevity for structures that they could not access easily for maintenance, and Endura beat the competition hands down.

It is apparently almost exactly like Awlgrip, but much more forgiving in application and if you need to touch up or add etc later. As good (and convenient) as the one part polyurethanes are (eg Interlux Brightside), they are easily outclassed by the two-part types in terms of toughness, longevity and colour retention etc. Endura was recommended to me by several pros working in my boatyard. I plan on using Endura for painting my mast and boom - next time out.

Be warned that it contains isocyenates, which is nasty stuff. The pro's use positive air breathing apparatus if painting a lot, but apparently it is OK for occasional user in a well ventilated area to use a good quality cartridge type respirator; use organic vapour cartridges, gloves etc. Easy to mix, but be fairly exacting.

The Endura staff in Surrey, B.C., are very helpful and know their stuff, as they should do as it is very costly, but still much cheaper than Awlgrip. They will tint it and give you the right de-glossing as needed. It seems a very thin paint in application, but this is misleading as it covers really well and covers a lot of surface. While I sprayed most of mine, it went on really well by brush as well. I used good quality, dense foam brushes and the smear technique, and there were almost no streaks of sags at all. The thinner they give you is different for spraying as for brushing, the latter being so that it sets up much more slowly. If you do the job before the summer temps, it gives you a bit more time to do a nice job. Recoat as soon as the first coat is tack free, but within 20 hours, or you have to sand.

They seem really pleased to take a rookie and guide you through; they were very patient with me, but it will really test them be able to handle someone from Victoria! Talk to Vinny, the manager, at 1-800-667-8224. I would use Endura again in a second.

Yeah, just went through the keelbolt tango also. I now have 2" by 4" by 5/16" plates and have used coupling nuts that cover and protect all the remaining thread. Glad that you chose to not remove all the nuts at the same time with the boat in the water!
Best wishes,
Richard Britton

New rudder from C&C was Interprotect-2000 coated by C&C from factory upon my request. At end of first year it blistered (apparently the Interprotect captured some gelcoat solvent and it ate its way inward). Sandblasted, dried over winter and put on seven coats of West epoxy and then coated with VC17.Seems OK to this day and new owner reports no moisture problems. On current CC30: reported high moisture content

and signs of 'rusty' moisture weeping out when purchased. Last year I removed rudder to home, removed all gelcoat. Nice thing is you can see the stainless web inside andit is clean and shiny all round. Hm mmm. Drilled holes and the rudder drippedbrown water all winter long. Every time I moved it out came another half cupor so. On hot sunny days it would bubble out. Because no gelcoat you canalso see where the solid glass is and where the filler foam voids are (and they aren't all connected). Drill to hit the voids otherwise you are wastingyour time. And don't break drill bits in there!! In spring did usual sanding, fairing, filling holes and then coated with five coats of West epoxy then five of Interprotect 2000 (I was doing whole boat anyway) and then VC17. Also made quarter inch V-channel around rudder-to-stock joint and sealed it with Sika-flex. This is often claimed to be the point of water ingress due to sitting 4-5 inch below water. How does this happen? Possibly water pressure at 5 inch depth. More likely a constant 'pumping' cycle --rudder heats up (in air before launch or on hot days) and pushes air out ofminute cracks at rudder stock and elsewhere, then cools (in overnight coolerwater) so sucks water in. Water sinks to bottom of rudder, air rises to top, cycle repeates next day and rudder fills with water. CC 29-1 with rudder stock above water seems less prone to this if crack is only at rudder stock.I already know a weak spot has 'blown' in this cycle and will need attentionthis fall.Now all this is in fresh water. The cost of the 27 rudder was approx $2500CAN in 1993 plus $2000CAN for remove and replace. My yard will cut open a rudder, remove foam, rebuild with solid glass for $15-1700CAN - that was quote for my 27 and is alsoprice based on a 32 they are doing right now. Removing and installing is no big deal on a 27 or a 30 if you do it yourself.

Penetration Oil

I have discovered a "miracle" product for freeing frozen rusty parts It's called PB Blaster great stuff it dissolves paint so be careful spray it on and let it soak overnight. Heat is always the last resort. I buy the stuff at the auto parts store. Steve G. in Maine C&C 24 #223

Poetry

The Gift Of Chance.

To live one's life without the space,
To find what life's about,
Is like trying to win an ocean race
Without knowing how to sail a boat.

But, if the race is long and full
Of excitement known to be seen,
Then one could learn about one's boat
And find the knowledge through his dreams.

So, to win the race and know one's self
And to live a life that's full,
Sail a boat around the world (ed. note: or to Hawaii)
And live the stories few can tell.

This is the dream of many a boy
And still yet, of many a man.
What is missing is the heart of a sailor,
And an adventurer who knows he can...

Rise to the challenge of what's unknown,
To search for what he wants
-to live a life that he calls his own
And learn to take the chance.

.-abanico
15 Feb 1998

Here is a little poem I found in a C&C Yacht News dated 1977:

What better time of year is there
when the sun is bright and the sky is blue
to be out on the sea with the wind so fair
in a C&C, all 30 feet brand new.

Cruising through Canada and in the San Juans
for only a short journey of two weeks
you sleep like a log and wake up at dawn
to see the clear and peaceful mountain peaks.

When the winds are high and the sails are low
what more excitement could there ever be
than whipping through bays and down into coves
at a top notch speed of seven, by me.

Watching the waves roll up onto the key
riding free out upon the sea.

Stu -- stumurray@easyliving.comC&C Photo Album
http://members.spree.com/sports/cncpics/index.htm

Polar Diagrams

Hi Fred,These charts are theeeeee best thing since sliced bread!!!You get a circular chart(s) graphing boat speed vs apparent wind angle @optimum sail configurations (ie #1,#2, #3, spinnaker, boat-heel angle, etc.)graphed at various wind velocities.It takes all of your previous concepts of point-of-sail, sail selection,optimum boat speed and other psychotic disorders and throws them all out thewindow.Of course, these are calculated "theoretical" values..... but they willteach you a lot about your boat's potential..... they're truly amazing.Another interesting side-note is that they list the boats "righting moment"and stability.Basically, they calculate the degree of heel a specific boat can handle in aknockdown situation before it "turtles over".Give me a fax number and I'll send you a sample from my C&C34.You can call US Sailing for a list of boats they have on file.... I'm surethey have yours.Steven Stoll, swstoll@msn.com

Ross, please see below the Performance Predictions for my boat, a C&C 34+ (to all of you 34+ owners, it's my gift to you!). US Sailing should be able to calculate the same for any boat as long as they have all of the design criteria for the boat--I'm surprised they don't have it for the 24s. They use a very sophisticated and proven computer model. What I am showing here are just the targets--you also get several pages of printouts showing a lot of nautical engineering values that takes more of a naval architect than me to understand.
With the full polars you get a graph which allows you to determine the same data as shown in these summarized predictions, but at any speed, wind velocity, etc. I bought the full package for my previous boat, a C&C 29, and did not consider it worth the price. If racing a boat with a full time tactician and navigator in a very serious vein, then maybe. It give info for calling "wallys," which is the kind of stuff I am going to leave to Melges and Connors. The summarized targets are worth it, however, in my mind. Just acquiring optimal downwind angle can be a huge plus, and there are significant differences from boat to boat.

UPWIND TARGETS

VTW	BTW	VAW	BAW	V	HEEL
6	45.5	9.8	24.6	4.9	5
8	43.8	12.4	25.0	5.7	10
10	41.9	14.6	25.2	6.1	13
12	40.4	16.7	25.5	6.3	15
14	39.3	18.6	25.8	6.4	17
16	38.6	20.6	26.2	6.5	18
20	38.2	24.3	27.2	6.6	20

DOWNWIND TARGETS

6	172.6	2.6	163.8	3.2	0
8	172.6	3.6	164.0	4.2	0
10	172.6	4.6	164.3	5.1	0
12	172.6	5.7	164.7	6.0	0
14	172.9	6.9	166.4	6.7	.5

16	173.1	8.4	167.2	7.2	.5
20	173	11.4	168.1	8.0	.9

Ron UnderwoodSpero, C&C 34+

Polishing Portlights

Correction- Aurora web page is www.auroramarine.com. And it gives Canadian sources.
****

Hi Rich, re your fogged ports. We had the same problem ...extremely fogged windows, couldn`t see through them. We tried a number of cleaners , ie various Mirror Glaze products...no joy. When we had given up my wife noticed a product at our local marina called **Clear View**, it is manufactured by Aurora in Can (instructions in both official languages). It is a 2 bottle package, one is a cleaner and the other is a protector. The work was laborious, I`m told ( my wife took on the job) but the results are fantastic...looks like brand new plastic. My advice is, if your ports don`t leak, try to clean them before going to the trouble and potential leak generating activity of replacing them. jc.

Prop

Prop is 6x12x7/8" R.H.
Davey Stowers
Outlaw '74 30-1
Lake Erie

David Have the same power in my '82 32' with the standard 2-blade prop. Just after annual haulout (ie clean bottom and housecleaned boat – read lighter) will get 6.5 kts at 3200 rpm. By the end of the year, just before haul out (dirty bottom and too much junk on board) I'm lucky to squeeze 5 kts.It has been recommended to me by those in the know that the diesel should run as the factory recommended. For this engine it is 3400 rpm continuous and 3600 rpm max. At one point in time I had a Campbell 3blade sail prop on the boat and the most I could get out of the engine was 2400 rpm with no improvement in speed. I was advised that this was puting undue pressure on the engine by making it 'work too hard' and not allowing it to run at proper rpm and temperature. When I returned tousing the standard 2 blade prop, the engine also ran according to Yanmarspec.I normally cruise at 3000 to 3200 rpm at about 6 kts with a clean bottom .Frank Walczak'Felicity' C&C32David E. Homa wrote:> > I have a 1985 C&C 29 with a Yanmar 2GMF, 13HP. Can someone tell me what> recommended cruising RPM and what max throttle should be, and what kind of> flat water speed I should expect at each

of these engine speeds? I have a> standard 2 blade fixed prop.> > Thanks in advance.> > David E. Homa> C&C 29 '85

It sounds like someone put a left hand pitch prop on a right hand motor. Wehave a 1980- 30 with the Yanmar 2QM15. It had a 13 1/2 x 9 fixed prop on itwhen we bought it and would go 6 knts at 3500. I replaced it with a 15x10folding prop at the suggestion of a couple of prop "experts" and it boggeddown at just over 2000 and put out a lot of black smoke, at about 5 1/2knts. Since then I have had the prop cut down to about 14 diameter andslimmed down in blade area. Now 6knts at 3000, but still a little blacksmoke. This winter I am going to taper it a little more and make the bladesthinner, because of the cut down, they are rather fat. Should be a fewevenings with the grinder (and postal scale).

I had a talk with a prop vendor at the Annapolis show - apparently there were different transmission ratios for the Yanmar diesels. One has a reduction of around 2.5 to 1 , the other is about 2.1 to 1. In the discussion, we determined that I probably had the 2.1 ratio and the advice I received from the prop experts assumed the 2.5. Thus, on a Yanmar 2QM15, (2.05 or 2.1 to 1) the 13.5 or 14 X 9 prop would be about right, on the 2GM15 (with 2.5 to 1 ratio), the 15 X 10 would be about right. This clears up a lot of confusion I have had over the fiour years I have been playing with this boat. I hope it is helpful to those of you thinking about changing props. Your Yanmar book should have the ratios listed, and I think the ratio is stamped on the plaque on the transmission, if not you can turn the engine over by hand and watch the output shaft - count the turns.

Publications

Here is the address for the Soundings Nautical Tag. This site corresponds with the Soundings monthly publication. Good boat for sale site also.
Fred _/)
C&C34 WIND
http://www.soundingspub.com/search/tag/search.shtml

Q
R

Radar

I have a C&C '30 Mark II ('89) and installed the small Furuno (1621) on a specially made pole (Edson) affixed to the starboard aft end. Many dealers out here on the West Coast advise against installing the radome on the mast. Two reasons; it gets regularly hit by the jib and creates a perpetual blind spot (the mast). The cost of mounting/materials and

labor was just under a $1,000. I do a lot of night sailing and there's a fair amount of late night and early a.m. fog out here. The radar makes for a more relaxing voyage. Incidentally, I had the radar screen mounte on the helm. As far as I can tell, the rig hasn't noticeably affected my sailing.

I had a Furuno 1700 series CRT radar on my 35 MK1 Impulse(sold to Tom& Kate). It was excellent. I've only used about 10 radars, but I always felt this was the best I'd seen. My new boat came with an older Raytheon. There was such a big difference compared to the Furuno that I finally bought a new radar this past June. I took the advice of a local marine electronics dealer (Furuno & Raytheon dealer) and bought a JRC model 2000 CRT unit. He said that the Quality is equal to Furuno and Raytheon at about $1000 less. I am delighted with it. The picture is as clear and defined as I've ever seen on any unit. I recommend it without reservation.
The new LCD radars are good and less costly. They do not give as good definition ,etc ,but are thinner, lighter, can be seen better in sunlight, and draw less power. I installed mine in my nav station so this wasn't an issue. I wanted the best picture I could get for those foggy days we have in Maine.
JRC is an old radar manufacturer (made the Raytheon radars for years) They just started to sell under their own name and are pricing low to break into the market. If you want an LCD type their model 1000 is great at a very low price.I sent a copy of this reply to Santa.Dave " Webfoot " 37KCB

Thanks for the input. I'm intrigued by your experiences with the Furuno's. A friend in the boating industry suggested the Furuno 1621 as the unit for our boat. I had been automatically assuming that I would get a Raytheon SL70 series of some sort so that it would be a 'seamless' tie-in to our Raytheon/Autohelm instruments but I've been assured that I can display/repeat data the same with the Furuno. As far as mounting the radome, I'm planning on using a gimbaled unit at the backstay. I'll also look carefully at the JRC units. I've always assumed that they were new to themarket.
I agree that the CRT's are wonderful but I think that I'll need to spend the extra bucks on regular maintenance items.

Refinishing Cabin Sole

I used miniwax "spar" polyurethane with good results. It has a sunscreen in it.

Refrigeration

I am looking for information on installing a "Cold Machine" in a 1981 C&C 30ft. I want to install it in the existing Ice Box. Want to know what size "Cold Machine", horizontal or vertical evaporator, where to install compressor, where to install the evaporator in the ice box, and any other information that might be helpful.
Thanx,
John

Rig Tuning

Ross - Gelcoat: use ultrafine rubbing compound to get out the scratches. Mequiars has a good one at autoparts stores. Mast: ask local sailmaker who will have setting as lbs tension for uppers and lowers. In general, adjust uppers with lowers having no tension, tighten/loosen each side till mast is in center of boat (use main halyard to measure to same spot, say the chain plates, on both sides). Once in the center, tighten each side equally, say 3 turns of the turnbuckle (can deflect ca. 1-2 inches when you pull on the shroud when standing up); now tighten lowers to about the same point, but sight up main track to make sure its straight..adjust port or starboard lower to make straight. Go sailing in 12 - 15 kts breeze with full main and working jib on a close reach or beat. Is the leeward upper loose? If so, tighten until it isn't, but not much more; now tack and adjust the other side. Now sight up the mast and see if the middle of the mast is sagging or bowing to windward; adjust this with the lowers so the mast is perfectly straight in this breeze on both tacks (hint: always adjust the leeward side). Buy a Loos tension gauge and record the readings, sail around noting speed, pointing, etc.; adjust rigging (tighten or loosen), read tension, sail around...better or worse, etc. It's an empirical process actually, but the gauge will allow you to reproduce your settings when you take the stick down, etc.
Sorry I don't have the #'s for a 24 though.
Cheers, Greg

I'd hire a rigger to help you out on your first foray: Take copious notes, ask lots of questions, and then try it on your own.

If you're determined to try it on your own, here are some suggestions:
1) Good tensioning gauges cost lots and lots of money ($1,000-plus); cheap ones aren't worth the bother (and may not work on rod rigging).
2) Rig up a measuring device as follows:
* Get as large a sail slug as will work in your mast track
* Attach a ring and dog clip (the kind that clips a leash to a dog collar) to the sail slug
* Get a 50-foot measuring tape
* Insert the slug in the mast track, attach the main halyard to the ring, and attach the dog clip to the tape.

3) Run the slug with the tape attached up the the point where the lower shrouds attach to the mast.
4) Measure to the base of the shrouds and adjust the lowers until there is modest tension and the measurements are equal.
5) Put your face against the mast and sight up the mast track to see if the mast is straight from the deck to the point where the lowers attach; if it is curved athwartships, the shrouds are too tight.
6) Repeat the process with the uppers.
7) Continue adjusting on the water; if the leeward shrouds are loose when hard on the wind, tighten things up: Start with the lowers and add full or half turns (depending on how loose things are) to each turnbuckle, then repeat with the uppers. When back at the dock, sight up the mast to check for athwartships curvature.

Mike Fordyce
K. 361 (C&C 40)
Point Richmond, Calif.

Refridgeration

4/16/97 4/16/97 1860 664 49007 kenyon - adler barbour- electronics po box 925 clinton ct 06413 1860 664 4906 adler barbour cold machines , electronics 4/16/97
--
Joseph Palmer
Classic Sailboat
Customer Service
1800-486-7245
jopalmer@classicsailboat.com
www.classicsailboat.com

I got back the final word from Glacier Bay on refrigerants today. As to whether R134a was a better refrigerant (more cooling capacity) than R12, as indicated on their COPS charts, they said: "Jared,
...To your question, you are correct in you experience that a system "refilled" with R-134a will not perform as well. This is why all of the current marine refrigeration
manufactures have fought tooth and nail against the switch to R-134a despite the far better environmental qualities. "
So apparently R134a is somehow "better" when the entire system has been engineering from scratch for it--as GB's are. But it should be expected to underperform when used in a system originallly designed for R12.

Ribs under the mast

My C&C30 had the same problem. The job is not as simple as it looks. I cut out a piece of the fiber glass floor in order to properly glass in the new frames. I glued 2 pieces of 3/4" marine grade mahogany plywood together foreach frame to get a frame thickness

of 1 1/2". They were glued in place withepoxy resin and completely encapsulated with glass and epoxy. One must somehow mark the location of the oak block that supports the mast shoe tomake sure it ends up in the same place after you installed the new frames. Imust have done this job at least 10 years ago and the wood still looks asnew because it is completely rapped in fiberglass. I bolted a plywood doubleunderneath the floor to put the piece I cut out back into place. If doneright this repair will last as long as the boat. Good luck.H.C. Fierz hfierz@ home.com Kingston Ontario

There have been only two areas of concern on our 1980 C&C 30. The first is the mast step problem which you have seen documented. I did a quick fix on that after taking the oak block off and discovering that the top center of the cross ribs had crushed down a little which allowed the block to settle a little. I cut some stringers out of teak or oak (forget which) to cap the cross ribs with. They span the entire width of the stringer, spreading the load. They have solved the problem for this past year, the mast step is still where it was installed. At the same time, I put a small automatic bilge pump in the lowest part of the bilge - right under the mast step. It keeps that area dry and keeps the cross stringers from getting waterlogged. So far, so good. The best fix which has been posted to this thread is the fellow who just poured the whole area full of resin. He made a tunnel for the very bottom (to allow water from the bow area to get through) and a column for the forward keel bolt and filled the rest up..... I plan on doing the same if there are further problems.

RUB RAIL

Hi Mike:
Aurora Boat Scrub works great on rub rails. It's safe, won't make them sticky or brittle and will not damage any of the surrounding substrates, such as paint, aluminum, fiberglass etc. It can also be used for cleaning fenders, life lines, dorades, non skid decks, removing rust and rust stains from fiberglass plus more. It's environment friendly so you can use it on the water if you want and simply rinse the residue overboard. Since it is not acid or petrochemical based, it won't damage the vinyl or pull out the plasticizers.
It's easy to use. Just put a bit on a rag and rub away the dirt, grime, scuff marks and oxidation. To protect your newly cleaned rub rails and restore the original shine, apply a couple of coats of Aurora Vinyl Guard. For more information, visit our web site at http://www.auroramarine.com
Richard

Michael, the easiest and fastest was suggested by Dawn, Steve Scott's lady. The solution is acetone - works like a charm and no harm to the vinyl. I used it straight and took off years of accumulated grime extremely fast. If it feels sticky, rub it down again because once it's clean it has no stickiness.

I've tried acetone on the rub rail. It works but don't do it. Will soften and leave sticky if you get too much on and then seems to get dirty quicker. We've had good luck with soft scrub to clean and then treat with "new vinly. "regards, Hank Evans

I second Hank's comments. I use softscrub w/bleach and have had excellent results w/o acetone softening. Ken Hirsch Pukalani 36XL

Rudder – Shaft Fix

Sloppy rudder bearings can be fixed relatively easily by using the following method. It is a great fix for boats that are built with a rudder shaft that simply bears on the inside of the fiberglass housing in which the rudder shaft turns. This method will also work if the housing is fitted with a Delrin plastic or similar material inserted into the housing. It is not intended to be used for boats equipped with roller bearings.

This procedure is described in detail in the West System Fiberglass Boat Repair & Maintenance guide. This is just a summary of what you will need to do.

Remove the rudder from your boat. Clean and degrease the rudder shaft and remove any rough spots or burrs. Fill any deep scratches with epoxy/Colloidal Silica mixture, sand and polish it to a smooth finish. Wax the shaft with three coats of automotive paste wax to act as a release agent. Clean and sand the existing bearing surfaces. Drill three 3/16" diameter holes through the shaft housing at the level of the bearing surfaces. Install your rudder and center it in the housing. Now inject a mixture of epoxy and a blend of 50% 406 Colloidal Silica and 50% 423 Graphite Powder. It will have the consistency of mayonnaise to prevent running or sagging. Load the mixture into a syringe and inject enough of the material through the drilled holds to fill the gap all the way around the shaft to a height of about 2". Allow the mixture to cure thoroughly then break the shaft free by twisting the rudder blade. The epoxy mixture with graphite provides a hard, low friction bearing surface that will last a very long time as long as your shaft is smooth.

This is an easy project, with great results, low cost, and you'll have a much more precise sense of feel while steering. The most difficult part is removing the rudder. I had to dig a hole in the ground in order for the shaft to clear the bottom of the boat while I was removing it. Just don't forget to wax the shaft or you'll never be able move your rudder again.

If you need additional information don't hesitate to contact me.

Ted Drossos
C&C 29mkII

Running Rigging

I replaced all my running rigging last year with T 900, Sta-Set X and Sta-Set. The prices I got from Rigging Only beat everyone (although I didn't check Marine Exchange). The year before that I bought a Profurl from them and same thing they were less expensive than everyone even Defender! Plus - they are very knowledgeable and even nice guys. I just found their website - www.riggingonly.comDennis

Gerrit,
According to New England Ropes Guidelines (http://www.neropes.com/) T900 is rated excellent for main halyards. If you don't want to go to that expense, Stay Set X is also rated excellent is much less money and should fit over your existing sheaves. I replaced mine with 3/8" Stay Set X this summer.Tom Anderson

Gerrit, Ditto on the Sta-Set X. I replaced all my halyards with 7/16" last winter. So far no problems with excessive stretch. Given the amount of line that I needed I purchased the entire roll and gained some savings. I replaced my sheaves but that was because they were worn out. On the deck hardware that previously accepted wire/rope line the all-rope halyards ranfine.
Dave'82 37'"Ronin"

West Marine is having a sale on Stay Set X - selling for less than Stay Set.
65 cents per foot

S

Seacocks

Gary, Having done this job this past season, provided you can remove theseacock from the thru-hull threads, there are several ball valves that fitthose standard threads.....and for not big bucks.....The choice will beto use bronze ball valves wich usually have a stainless ball, or to use theMaralon type wich is non metallic...I chose the bronze ones which werecheaper than Maralon.....West, Marine Exchange, or others usually have astocking supply.....

Speed Potential numbers

Maybe I measured wrong. I always thought that
I = Vertical distance between Jib Foot to Jib Peak
J = Horizontal distance between Jib Luff & Mast
P = Vertical Distance between Main Sail Luff to Main Peak
E = Horizontal Distance between Main Luff to Main Clew

And that

Sail Area = (I*J*.5)+(P*E*.5)

Shaft

Victor- I haven't messed around too intimately with drive shafts, have no idea about the set screw that snapped on you. But when you snap a set screwon anything the normal "machinist's" procedure is to get a good carbideor cobalt bit (stronger than regular bits) and drill a hole down themiddle of the set screw, then insert an "EasyOut" (any auto partssupplier should have these) into the hole. It screws in with reversethreads and as you keep "screwing it in" it eventually brings the restof the set screw out. Soaking in penetrant oil beforehand will help. If you can't use an EasyOut you'll have to drill out the set screwcompletely, then use a tap to cut new threads and replace it with alarger one. The main bolts on the flange should be bigger and stronger, soak themwith penetrating oil, repeat daily until you're out of patience, try awrench until you think it is unreasonably hard. My last resort weapon for "stuck screws and bolts" is a CO2extinguisher. You freeze them down good instead of using a torch onthem, it works better and doesn't hurt the metal. If you can borrow a 5or 10lb. CO2 bottle they cost about $1-2 per pound to refill. Be carefulworking with it if you do: The CO2 in a confined space makes breathingimpossible. You're trying to freeze something, so beware freezing yourhands or eyeballs. And it is noisy as all hell, a bit scary to use thefirst time. But on the bright side you can't set the boat on fire, or de-temperanything metal! And you can always keep the CO2 bottle on the boat as anextra extinguisher.

VictorYou've had lots of good advice, but I might just add a bit. If you don't have access to the "slide hammer for extracting the shaft form the driveshaft flange, I have another technique that works very well. Loosen the flange bolts, and separate the flanges sufficiently to insert a socket inbetween the two flange parts, Choose a socket whose outside diameter is justa little smaller than your shaft diameter. Now as you tighten the flangebolts you will be pressing the shaft out of the flange. This works great,as I have used it many times on various boats. You might have to purchaseslightly longer bolts to accomodate the added length when you insert thesocket. If you don't want to use one of your sockets, any short shaftmaterial of the appropriate diameter will also do.Don Wagner

Victor,
Don's advice about the socket to push the shaft out is a good idea. I used that on my shaft last winter and it worked fine. Actually, I thought it was an original idea. And yes, I did wind up using longer bolts. It's a slow time consuming process, but it does work well. I would definitely recommend that you NOT use a slide hammer. You will be taking a significant chance of damaging the bearings in the output shaft of the transmission.Good luck,Gary 'Expresso'

On drilling out the set screw, I agree that the easy out method can be risky.

You are better off drilling the set screw out to the major thread diameter, i.e. 3/8" for a 3/8"-24UNF set screw, pull the shaft before undoing the coupling halves, then drill a new hole in the coupling and tap for the appropriate set screw. The added hole should be no problem, and I generally use two set screws set at 90 degrees anyway, as this is a much more secure arrangement.
On using a slide hammer to pull the shaft, don"t over due the pounding, as the transmission is not really designed to handle that type of in-line pounding. Better to make up a screw type puller, if possible, the heat the coupling and/or cool the shaft. If the worst case scenario develops and nothing comes loose, cut the shaft, use nut breakers on the coupling bolts, and buy new part.Rod

Steering Pedestal

I also had some corrosion on the steering pedestal on my C&C 41 CB after 10 yrs of sailing on the Chesapeake Bay. Two years ago, I carefully stripped it, in place, with various combinations of wire brushing, sanding and some applications of paint remover. After cleaning it up carefully, I applied 2 coats of zinc chromate primer, followed by 3 coats of a black epoxy paint. It looks terrific-- just as good as the original paint job, and it seems to be holding up quite well so far. It was cheap, easy to do and didn't require me to disassemble the pedestal. If I had to disassemble the pedestal, I'm sure some of the parts would be frozen and would have required drastic measures to remove. If this doesn't work out, I'll just have to face the inevidible someday.

I seriously considered doing that. I studied Edson's tech report on painting a pedestal that's available on their web site. I felt that in order to do the job right, I would eventually remove the pedestal anyway because I usually screw something up when I try that kind of project. It turns out that disassembling and removing it was not that hard (about 2 hours). The hardest part was crawling under the cockpit to loosen the steering cable. I will end up with a new pedestal, but it will cost a lot more bucks.

check out www.edsonintl.com as it is a good manufacturer's site.
instructions on how to paint your faded pedestal etc.

I notice in catalogs that Edson has a kit to redo the wheel lock. Try their website at http://www.sailnet.com/edson/ Phil Rousseau"Altrice" 1984 34

The repair itself is relatively easy. You essentially have to clean the twobreak arms of what's left of the old break pads and adhesive and to gluenew pads to the arms. The kit comes with all necessary parts and adhesive.You'll have to find a pipe or circular object which matches the insideradius of your arms. You use the pipe to apply inside clamping pressurewhile the adhesive cures. The kit comes with very good instructions. Theproblem may come when removing some of the pedistal parts to gain access tothe break assembly. I had problems with stainless screws seizing in themetal casting of the pedistal base on my 82 C+C 37. Otherwise its a simplejob.

You can also order the brake kit from Defender and save a few dollars. It's a pain in the *&^*& to install - helps if you have a long pair of tweezers to install the infamous cotter pin.John

I have replaced the pads on my Edson pedestal using their kit and I agree it is expensive for what you are getting. In my opinion the only items you may have a problem sourcing are the break pads and adhesive. Since it is strictly a friction break it would probably not be too difficult to find a suitable substitution for both but then again for 35 bucks is it worth the hassle? The repair itself is relatively easy. Remove the compass and its cradle which will expose a bracket re staining the tops of the break arms. You essentially have to clean the two break arms of what's left of the old break pads and adhesive and to glue new pads to the arms. The kit comes with all necessary parts and adhesive. You'll have to find a pipe or circular object which matches the inside radius of your arms. You use the pipe to apply inside clamping pressure while the adhesive cures. The kit comes with very good instructions. The problem may come when removing some of the pedistal parts to gain access to the break assembly. I had problems with stainless screws seizing in the metal casting of the pedistal base on my 82 C+C 37. Otherwise its a simple job.

Ron, a friend just relined his brakes with the Edson kit and the "brake shoe" material is preformed to fit the metal frames and the outside diameter of the steering shaft. I doubt that you could find this material anywhere but Edson.

Stuffing Box

I also replaced the original stuffing box with the PSS shaftseal. It's easy to install and works well with no drips in the bilge. To install, you should probably have the boat hauled and then:

1. Loosen the nuts on the flange, and slide the shaft backwards several inches. Sometimes this means inserting an appropriate sized socket between the flanges and using the flange bolts to force the shaft out.
2. Remove the old stuffing box, and clean up the tube and the shaft.
3. Install the new seal following their instructions that come with the new seal.
4. Relaunch the boat, and burp the tube by initially allowing a small amount ofwater to enter the tube for lubrication and cooling purposes.

I'm delighted with the installation and performance of the one (1 1/8 dia) shaft on mine.

Don Wagner
C&C 41 CB
Der Baron

T

Throttle Cable

The cable clamp solution will work just fine, however first check to see how the cable is connected at the engine end. Most "Morse" type cables ahve a connector at the engine end of the throttle cable (mine has) that consist of a small screw in a sleeve holding the outside cable in place. If you tighten this screw just ever so slightly it will increase pressure the same as the cable clamp on the inner cable thus providing the proper throttle resistance. Voila no more loose throttle.

Teak

Good morning Tom,

We used three coats of Sikkens last season, and plan on giving it another coat this season. It is relatively easy to apply, but be sure to mask off any adjacent areas. It is difficult to get it off fiberglass. It looks great and does not add an unnatural look to the teak. One quart goes along way. It seems to me that we used less than two quarts total to apply 3 coats on our 32 (we applied it to every interior wood surface).

Assuming the teak has thus far been left bare, you have a number of options depending on the "look" you're after.

For the areas around the sink, if you have black spots from water damage, I'd suggest first a good teak cleaner (Amazon is my preference) which is a mild bleach solution, followed by Amazon's Teak Prep, and then a good oil. If there is no water damage, a good cleaning with a product such as Murphy's and/or a light sanding should

give you a surface suitable for finishing.

As for finish, I prefer an oiled look to the interior -- nice looking and easy to maintain. Any good oil such as boiled linseed, polymerized tung, or teak oil will all give you a nice finish. Linseed will darken the wood a bit more than tung. If you use teak oil, keep in mind that most do not contain driers so you may want to add your own (such as Japan drier). Before you apply any oil however, make sure the wood is absolutely dry, otherwise black spots will occur.

Another nice option is Danish oil. I make my own with equal parts spar varnish, tung oil, and turpentine. Just wipe it on with a rag, let it sit 15 or 20 minutes, and wipe off the excess. Give it another wipe every hour or so until no more excess comes to the surface. Three coats of this stuff (with a very light sanding in between) will give you a beautiful finish and is more durable than oil alone.

Ross, the strips on the exterior are probably teak. The grey color is the result of weathering and the specks or streaks of black are mildew. Bleach is a good mildew eradicator and used with a cleaner will give good results. Some cleaners have bleach in them.

Any off the shelf cleaner will restore the golden color to the wood, then it's up to you to protect it.

As far as cleaning, I use 409 diluted 1 part to 4 parts water. any scrubbing on the teak will remove the soft portions of the wood and leave the hard ridges so don't scrub to hard.

Recently, most people on our dock have been using Sikkens finished with good success (Lake Superior water is very forgiving).

If your teak is "well worn" you can still save it for a while, even if not museum quality.
If it is very "stringy" looking from repeated acid cleanings, the best you can do is scrape it with a SHARP paint scraper to lower the raised grain, sand it, scrub it and treat it with a good 2-part teak cleaner (most are OK), and give it five or six coats of Armada gloss.

If it is still reasonably smooth, use the scraper more lightly and still sand to smoothness, scrub and treat and Armada. Armada is a super product that gives a varnish-like shine (if you use gloss) with virtual no buildup. A quick pass with the 180 grit sandpaper in the spring and fall and a cover coat or two and you're in business for the season.

With regard to interior teak, there are three possible ways the teak was

finished by the factory (I'm not familiar enough with C&C to know whether they used one, two, or all three of these methods over the years, so these comments are general).

First, and perhaps the most common approach, especially on bulkheads and cabinets, is a relatively light coating of a polyurethane. This coating is sprayed on and "polished" mechanically. The result is a flat finish which is not completely sealed (i.e. the grain of the wood is still evident at the surface and allows teak oil to penetrate the surface). Most Danish furniture is finished in this way and is designed to be teak oiled from time to time. The teak in my C&C 39 (1974) is finished in this way and I have seen it in many other boats.

Second, the teak is finished with a heavy coating (usually multiple coats) of a polyurethane or other type of varnish. The grain is completed sealed. This type of finish is usually satin, semi-gloss, or high gloss and is not intended to be oiled. Used frequently on cabin soles and sometimes on high traffic areas such as railings.

The third is an oil finish, another option for the cabin sole (mine is oil finished).

Finish #1 and #3 can be renewed with teak oil. I would recommend a furniture grade teak oil which is mostly a mixture of boiled linseed oil and turpentine, applying with paper towels or triple fine steel wool where needed (rubbing with the grain) and thoroughly wiped dry with paper towels or clean cloths. You must remove the excess or the surface will get sticky.

Finish #1 can be repaired or refinished by light sanding to remove any small scratches and spraying a new coat or two of polyurethane (available in cans, a flat or semi-gloss will probably match the best). Don't apply too thick, as you want to leave some of the grain exposed (see above). You can rub with triple fine steel wool and a little teak oil when you are done to help blend the repair into the surrounding area.

Finish #2 will not benefit from teak oil or any other oil-based product. It can be cleaned with mild cleaners (several have been mentioned in other emails) and, of course, refinished by removing the old finish and reapplying multiple coats of polyurethane or other type of varnish.

Hope this is of some use.

Nikos Singelis (former Scandinavian furniture salesman, and very happy to be "former")
C&C 39, 1974 "Hanau"

Practical Sailor for March has tests and discussion of Teak Treatments. They are biased towards long lasting treatments so oils didn't make the grade. They highly recommended Honey Teak and Smith & Co. gloss plus Cetol semi gloss and Armada.

Muphry's Oil Soap, then your favorite teak oil. I have a 1974 30. Have you rebuilt your maststep yet?

Davey Stowers
Outlaw '74 30-1
Lake Erie

I've used Murphy's Oil Soap for about 5 years now and have had great results. I also recommended it to other people on the dock and they have had the same results. It also removed some mildew that I had and for some reason that I am not sure of the mildew never returned.

Kate
I am not sure what C&C used from the factory on the teak.
But to take new teak and match the old teak.
Try Minwax Mahogany Stain, on a small sample piece.
You should find a close match.
Then oil with your favorite teak oil.
Larry

Howard,
I made a winter project of this a couple of years ago. Removed all the sole boards and took them home to do the work. Used a gel type varnish stripper to clean off the old stuff. Very light sanding. Then several (I think about 7) coats of marine varnish. Also coated the edges and back side. Has stood up very well. Cleans up now with just a damp cloth.
Frank Walczak
'Felicity' C&C32

I have a '76 C&C 33 and I am refinishing the cockpit step over the engine compartment. does anyone know what kind of finish the factory used on the teak? It doesent seem to be a varnish but it is hard to tell; and what was used on the teak bulk heads? >>I called the factory (pre-problem) and they told me they used Sickens CetolInterior Clear on the cockpit sole of my 1990 34+. I refinished it threeyears ago with the same material and I'm pleased with it. I also used it onthe interior table with very good results.Also, on the cockpit table, I've used three coats of Sickens Exterior, andthen three coats of Sickens Exterior Clear, and it has held up very well. Iam a former varnisher (?) using Captain's, and I am much happier with thelooks/work ratio of Sickens.Bob Rudarty Grand Slam

I'm doing the same to my interior but it had no coatings (ie. varnish)just oil. I wiped down the wood with acetone, then lightly sand (withthe grain) to even out the color, then re-coat with Behr Tung Oil. ThisUV enhanced product penetrates the wood vs coating the wood like Cetolor varnish. I apply up to 4 coats to give it that patina look. If youlike, you can stain with something like Zar to help match new wood tothe older, sun damaged wood. Staining also covers a multitude ofproblems around well worn areas like fiddles and also improves the lookof scratched or other surface blemishes.

I redid the interior of my boat with Interlux #60 Rubbed Effect Varnish about 10 years ago. Except for touching up a few wear spots , I haven't done anything else. It has the look of oiled teak. I'd do this again if I ever have to do an interior again. Cetol is also very good. Friends of ours did their Tartan 42 with Cetol. The Interlux looks better in my opinion,but I know that the Cetol will require little work to patch or add a coat.Dave " Webfoot "

The problem with this solution is that even if you get the color closeto the original wood (which I don't think I've ever managed to mysatisfaction) the resultant wood+epoxy composite doesn't absorb finishesthe way wood does. When you oil, varnish or whatever, the surroundingwood darkens but the plug stays the same lighter color, which makes itREALLY stand out. I've seen situations where this "fix" made the holesmore visible than they were before filling.My own preference is to drill out the old holes and insert plugs madefrom the same wood. You can buy a reasonably inexpensive device thatworks with a drill to cut a plug from a teak board from a woodworkers'supply shop or catalog (or a good hardware store). Make your plugs,drill out the old screws to fit the plug diameter, use just a touch ofglue to hold the plugs in place (don't get glue on the wood surface, orit will seal the surface and you'll have the same problem as the epoxytreatment). Leave the plug surfaces standing slightly "proud" above thewood surface. After the glue sets, carefully level the plugs with a sharp chisel and sand lightly to get them level. (Be very careful hereif you're working on veneered lumber.) I find that a slightly raisedplug will disappear and look fine as long as its "faired in" to thesurface, so you don't need to get nuts about getting everything perfect.The plugs will show, but they'll harmonize with the surface, and lookfine.

Sorry to hear that it took you so long to strip your teak. The process that Iuse is to apply Aurora Teak Shield, recently renamed Burma Teak Oil, to a pad comprised of fine bronze wool and a sponge. Each spring I rub down the interior teak with this combination. It removes the dirt and hand grime on the rails and hand holds and leave a soft shine, much like Danish Teak Furniture. The oil is synthetic and dosn't smell like linseed based oils. It penetrates into the wood and protects it all season. I have been using this system successfully on myboat for the last 6 years. It only takes me a couple of hours. For more info onthe oil, visit the Aurora web site: auroramarine.com Richard

Teak and Holly Floors

I too am replacing my sole with teak & holly marine ply. I drilled my screw holes and then filled them with WEST System Epoxy. I am overdrilling the holes in the stringers underneath, and filling them with epoxy as well. BTW, I varnished the topsides of the sole, and coated the undersides and edges with WEST. Next I redrilled the screw holes with the sole pieces in their proper places. Now when I screw down through the flooring into the stringers all the (what would be exposed) inner edges are actually sealed epoxy. I am hoping this will solve the delam and deterioration problems that the old boards exhibited (after 16 years).
Dave Bartels
"Quintessa" 29II

I also have had fun with those delaminating floors. I bought a 1981 C&C 32 a couple of years ago and part of the rebuild process was restoring the floors. They had completely deteriorated around the mast step, and had numerous scratches and stains elsewhere. Epoxy and filler repaired the delaminations and lots of sanding removed the scratches. Then six or seven coats of Epifanes Hand-Rubbed Varnish provided a great finish. After a season's use they still look good but I may add another two or three coats this spring.
ivan
C&C32 - Lady of Shalott

Toe Rail

There is a good reason to remove stanchions, IMHO. You can prevent damage due to water/snow buildup on your tarp during winter storage by removing the stanchions before draping the tarp . I broke 2 SS screws trying to back them out with a power screwdriver before I got wise. I hit the remaining screws with a fine-tipped propane torch , then gingerly backed them out. Some of them required a little back-and-forth, but they all came out without incident. I reinserted them after liberally coating with anti-siezing compund. Micheal Pegasus ('81 C&C25)

A few of you may have followed the toe-rail discussion and may have seen the pictures of the procedure that are on Stu's Photo-Album, sent in by Richard (aka Melissa).Since that's my boat, I thought you might be interested in the time frame to perform this task. The pictures make it look easy, and for the most part it is providing you have good access to the nuts underneath.My son and I spent most of one day just removing bolts, actually 4/5ths of them, leaving every fifth bolt in to keep the deck and hull attached. Second day we removed one of the four sections (the one in the picture).That took 1/2 hour to remove and 2 to 3 hours to clean both the toe-rail and the deck. I found scraping the old butyl tape off with a knife followed by liberal use of varsol remove all the tape from the rail. The varsol was then washed off with warm soapy water and rinsed. The deck was anotherstory. Here we carefully scraped off what we could and then using a damprag (with varsol on it) rubbed the remaining tape off the deck. We couldnot use a 'soaked' rag for fear of getting varsol down the holes. There is also butyl tape between the deck and hull flange which the varsol wouldaffect. Putting the new tape on the rail was easy enough, but what thepictures didn't show, was using an awl to open each hole and insert a boltinto it before putting the rail back on. Give about an hour for that.Finally, the rail is reattached and bolted down. All the bolts must betightened from the inside by the nut. The bolt should not be spun. As weare using either a wrench or socket (where space permits) this was a veryslow process, roughly 3 hours to tighten all 50 bolts. Each bolt wastightened until the butyl tape started to squease out. Then each wastightened some more, approx 3 turns of the nut. After the boats been in the water and used a bit, I'll retighten then all yet again.That works out to roughly 6 - 8 hours per section of toe-rail. C&C had used1" butyl tape when they built the boat. This had mostly squease down offthe ledge between deck and hull leaving very little on the inside of therail. The underside of the rail is 1 3/4", I used 2" butyl tape and rolledover the extra along the outside edge. This has given me a very good bondwith butyl tape squeasing out on both sides of the rail but mostly on thinside. The next day I trimmed off the excess tape and tightend each bolt(yet again) a turn so that the tape just started to squease out giving anice rounded bead.At this rate it will take a total of five days to complete. As long a theweather permits I plan on having another two sections done this weekend andthe last and final section done the following saturday. Ivan SheltonC&C 32Lady of Shalott

Traveller

Frank - I have done what you seem to want - but on a 30. Got tired of dealing with the traveler which came as a 2' unit across the footwell of the cockpit, just in front of the wheel. Had to stand on your head to use it. Moved to a windward sheeting traveler (from Harken) just behind the companionway. Works great in any weather. The only problem with the windward sheeting mechanism is
that in light air there is no force on the mainsheet to release the traveler. But, in light air you don't have the problem of trying to release it from the rail.
To address the force on the mainsheet, I bought a spare small vang assembly (4-1 set of blocks with 30 feet of line and a cam cleat attached to the blocks

at one end). I attached one end of this to the main sheet and the other to the main sheet block (lower end with the cam cleat). My 4-1 mainsheet still works normally and when you pull the line on the 4-1 vang, you get 16-1! Great for fine tuning. Similar assemblies are in the Harken catalog, but they are megabucks. I was able to use my old mainsheet assy and the inexpensive vang assy for a total outlay of about $100 US. If you want a further description I can fax it to you or try to scan a drawing into the system (I'm still learning to use the technology).

U
V

V-berth

I'm planning to insulate our V-berth with aluminum-covered flexible bubble-pack insulation. Home depot sells rolls of the stuff relatively cheaply. We'll cover it with a nice material and glue snaps to the headliner. I'm planning to install it under the shelf and wrap it slightly under the cushion. It isn't really a matter of insulation (we have warm blankets for cold nights) but if your blanket gets pulled up along the edge and you roll over, the sensation of you naked butt hitting that cold fiberglass is one that stays with you for a while. ;-)
Wally Kowal

We live aboard year round on a 30-1 in Port Credit, just outside of Toronto.
There is more to insulation than meets the eye (butt). We found that lining as much of the inside of the hull as we could reach, including the deck of the V-berth with 1/2" closed cell foam seemed to get us off to a good start. (The aluminum backed bubble wrap would be a good alternative but if you sat on it, the bubbles would pop.) There are, however, some areas that need a little more and the V-berth is one of those areas. The 30-1 has a 25 gallon water tank under the V-berth and it gets as cold as the water outside the boat. We have seen another boat that had the following cure and although we have not done this yet, here is the plan. Line the deck and sides of the V-berth with 1" Styrofoam SM covered with 1/4" teak marine plywood. We would start by epoxing 3/4 by 1" ribs to the V-berth deck and insides of the hull to hold the Styrofoam in place. The Styrofoam would be cut into strips to conform to the curve of the hull.

It would be covered with the teak plywood and varnished to match the rest of the interior. There would be hatches cut into the V-berth deck to allow access to storage and the water tank. We would carry this treatment right up to the underside of the deck and to the forward side of the bulkhead to the chain locker.
The boat we saw this done on was a Grampian 28 and it literally eliminated condensation in cold weather and kept the boat cooler in hot weather too.
Varnish on the interior teak instead of oil seems to go a long way in making the boat feel drier too.
If you are near to Toronto, come take a look.
Steve Scott
"Oyster Bay"

In the end we covered the whole area under the cushions, rolling up the sides somewhat, and cut it up a bit to allow axcess to compartments below. Did not attach. We vented all compartments with SS louvers (cutting a hole in a boat anywhere makes any owner get the shakes big time). Next fix was, solar vents. Cannot say enough. We now have had no mold, I mean no mold. Hope this helps, Don "RAINBOW"

W

Water Heater

We have used a Walter instant propane heater on our 35 for about 10 years. It is wonderful - hot showers whenever you want one! I have mine set up so the hot water heater tank (with heat exchanger and electric heater elements) preceeds the propane heater in the hot water line so if the engine heats the water I can use that instead of the propane. The only problem I've encountered is that you have to make sure to drain it carefully in the fall as it is more sensitive to freezing than the rest of the water system.

Marine Exchange in Peabody carries them - a short trip from Portsmouth!

Steve Purdy
C&C 35 - Trader

There are several out there. Bosch makes one as well as Poloma. Poloma says not yo use it in the boat. (Disclaimer)

George GUlden

Winches

I've been looking into replacing the non self-tailing genoa sheet winches on our 1982 C&C 32. Two new Lewmars would be on the order of $2500, and that's a bit stiff for this year's budget. So I'm looking for alternatives.

The Australian Yacht Winch Company, which I understand bought out a lot of Barient's tooling and spares, says that they will convert my current standard winches to self-tailing for about $400 per winch plus freight. Here's what's included (from their e-mail to me)

"a) modification of drum and gearbox to accept spring-loaded self-tailing
system
b) Top @ Bottom Jaw; Rope Guide
c) Refurbish drum: chrome plate or polish for bronze drums; polish stainless steel drums; re-anodize aluminium drums"

This process will take 5 working days, plus shipping time, and looks to come in well under $1000. The added benefit is that I won't have to change the mounting in any way; just un-bolt the "old" and re-bolt the "new." I'm intrigued.

Has anyone had any experience with this or similar conversions? Any dealings with The Australian Yacht Winch Company? Advice?

_____
Walter J. Dickie, Ph.D.

Don't do it! Just bought two remanufactured ST Lewmars from an outfit called the Winch Exchange for less than $1,000. Got a ST30 & ST40 (chrome). They look like new with a few minor dings here and there. They sere shipped directly from Lewmar. My guess is they were actually factory seconds.

There is one more point I would make about having a winch on the boom for reefing.In many situations, you will be trying to reef, after it has already started blowing. In that

case you may not be able to keep the boat on its feet with the boom centered. Therefore it is very risky to have someone standing up trying to use a winch on the boom when the boom is well off center and the boat is in heavy seas. It would be much safer, in my opinion, to have the reefing lines run from the boom to the goose neck and down to the cabin top. Someone sitting on the cabin top grinding on a winch is much better off in bad weather than standing up in the cockpit.

Windows

Hello Damon,
Welmax can ship you GOIOT product 501 (Acetoxy Silicone) ex stock again now.
Price is List $53.40 Net to Boatbuilder $42.72 plus F/H (UPS or FEDEX if
urgent)
Regards Maxwell G. (Max) Hazelwood
You can Fax order to: 561- 287-0508 C/Card Tel: 561-2859

Where do you get that "glue"? I took out one port and on the advice of the boat yard put it in with 5200.--Ugly and leaks. I placed four screws, one in each corner to hold itin place while setting. Bad mistake.
I was advised by South Shore Marine in Canada to use a two part glue which I was unable to obtain except in mass quantities with a short shelf life. I found a substitute made by Lord Chemical Company which also was unavailable, but a technician there had pitty on me and sent me a sample. My next window came out better.
Now the problem is how to get the first window out and where to get some more "glue."
This so called glue is an acrylic which does in fact seem to bond to both the boat and the window. Any suggestions?

Helped a friend reset windows on his C&C 25 and used the factory recommended 2 part acrylic adhesive. Could only buy it in small 2 part packs and was very expensive. It is adhesive and holds well, but dealer recommended using Sikaflex caulk to fill gaps and seal. When I did my 32 I asked a lot of questions and Sikaflex (caulk with aggressive adhesive) kept coming up. Tried it but didn't last. Last unsuccessful attempt was with 5200. I agree - it's messy.
To remove ports apply palm pressure from the inside. I stuck in popsicle sticks to hold the port out as I worked along. Takes patience. Clean old ports thoroughly. Had stainless frames made from 1" bar stock sized to

fit over the seam. Used butyl caulk tape (light grey colour) to set the port and rubber spacers to hold them in place. I believe butyl is what C&C used for the hull-deck joint. Had stainless bolts welded to the inside of the frames and drilled holes (hate that part) in appropriate places. Used more butyl tape to set the frames. Also imbedded rubber o-rings in the butyl as a spacer so I wouldn't sqeeze it all out. Result is a very clean look. Frame is through-bolted but there are no bolt heads showing. Gets lots of admirerers. I'm very happy with the look and no leaks.
Frank Walczak
Felicity C&C32

Here are a couple of snips I saved from one of the last times this thread went around. Hope they help:

"use: acid methacrylate adhesive...manuf. by Dexter..Hysol H4000 obtained from
Rudolph Bros. & Co. in Ohio 1-800-600-9508 www.rudolphbros.com
it lasts as long as a NEW piece of plexiglass ...about 8-10 years ...the system must be
ridgid and repairable...don't use epoxy....not all that difficult but takes time..bob on the lower Chesapeake"

"I replaced windows on my previous boat an Ericson 37. The process used unconventional at the
time but it worked very well.Ten years later ,I still believe in the system.I used automotive
urethane glue which is designed to add structure as well as seal windshields.
Contact Essex Chemical for more info."

My personal opinion is that whichever solution is used to repair windows of this type, it should be one that offers structural integrity as well as watertightness. If it doesn't, the result will be stress cracks, and the leaking will never end.

Neal

iLast year was my first year as an owner of a C&C ('81 C&C25). There were no leaks in the boatyard, but after the stresses of launching, one of the port lights popped out slightly. I conferred with the South Shore Yachts folks, and was told that after removing a port, they strongly recommended careful gelcoat repair before installing a new port. Also, they claimed that full removal of the port was likely to leave it damaged - a

replacement port was going to be needed. The cost of the replacement port ($US 200 each) from SS plus the fact the the boat was already in the water made me look for another solution.

I tried silicone caulking (bathroom stuff) and used duct tape to hold the port in place while the silicone set up (24 hrs). I then ran a bead of silicone around both ports. I have not had a leak all season and have no immediate plans to make a "permanent" repair.

Since I have a C&C 35, Mark I with frames, I haven't had the problems that this thread is talking about. But, I also work with a lot of adhesives in the Aerospace business. Loctite make a 2 part urethane adhesive that I think would work very well in this application. The actual product is Loctite 605 or Loctite 610. The down side of these adhesives is the pot life (5 minutes for 605 and 10 minutes for 610), the up side is that it is pretty easy to dispense and mix. If I remember correctly Ciba makes a similar adhesive but I'm a Loctite man myself. They have always been extremely helpful when I've needed them.

Hi Howard,
There is a new product under development that I saw on a TV show called Ship Shape TV. Check out their web site at www.shipshapetv.com under product info.

Anti-Bond 2015 - Anti-Bond 2015 was designed to loosen or debond adhesives such as 5200.
HOW TO GET IT: Call Anti-Bond @ 1-877-800-7971 or email them at abond2015@aol.com

Ed

Tom, I lucked out and had my brother make the frames. When I was looking for a fabricator, I ran across three welding shops making stainless frames for boats. Any good welding shop that works with stainless can do it. Not all welders do electro polishing to get that high gloss stainless finish. Get your flat bar polished first. Takes the polisher less time and hence less expensive. After the frames are cut and welded (be sure the welds are solid/continuous not spot) the polisher can clean up the heat spots. You'll never know they were welded. I also had bolts welded to the inside of the frame for a clean finished look on the outside. No bolt heads showing on the mounted frames. Looks great! On the inside of the boat I mounted teak rails full length above and below the windows. Cut notches to hide the bolts/nuts and remounted the curtain rails on top of the new teak rails.

Howard,

Do you have to use a plastics type material for your windows? It will scratch easily and look like hell, is expensive, and acrylic and the like will shatter, in spite of the legend of plastic being unbreakable. You would have to go to very expensive lexan for shatterproof panes. I recently had two panes (approx 1 sq. ft each) of 6mm laminated glass cut at a local glass shop for under $10 each, complete with radiused corners and sharp edges removed. I will install them in the frames I recently refurbished.
Incidentally, the recommendation I have heard repeatedly is to use butyl tape (often used for motorhomes etc, costing under $10 per 25 ft roll of 1/8 by 1" strip) for sealing your aluminum frames to the cabin sides. Six of my windows (that I did not repair yet) went on easily and seem to have sealed well, though they have not been in long. I have two more to do that I am completely rebuilding with the new panes.

After discussing the installation of the pane in the frame with a local company who build and repair marine windows of all kinds, they recommended what they almost always use - urethane sealant. Theirs is Fixmaster type 97183, made by Fel-Pro Chemical Products, phone no. 1-800-992-9799. Black when finished off looks really sharp. They warn, however, that it is really hard to take apart again if you should need; it is there for keeps, and I am a bit hesitant about that kind of finality!

Another option of which I have heard good results, is to use a 100% marine grade UV-resistant silicone, which is much more forgiving. I cannot vouch for these matters as I have not got around to installing mine, but it will have to be soon with the season about to start!

How nice to have had your boat since new, as you know all its history. Enjoy your teenager; you are probably the envy of every parent who has teenagers at home as you no doubt have the best behaved and agreeable teenager in the world!

Good luck,

Richard Britton,
"Friendly Dragon",
New Westminster, B.C.,
Canada.

I would have to totally agree that lexan is the best took out my lewmar hatch in my c&c 29 and replaced it with a Bomar offshore, liked it so much that i

took all my closed window's and installed bomar's opening window only had to cut the openings a 1/4" bigger i now have no more leaky windows plus the added benefit of a cross breeze, only side effect is if one leaves the window open on the windward side and you hit a wave that goes across the deck if you know what i mean.
Richard

I just replaced one of the windows on my 32 today. I got the window from south Shore yachts in Canada. It is acrylic, which is the original material. I know that there has been some discussion about poly carbonate, but since I was only replacing one, I wanted the color to match. The original windows were 3/8" plexi glass or any other brand acrylic, the color was bronze 2404. I hope to not find a crack tomorrow when I go to remove the masking tape. Hope this helps some. by the way, what did they glue them in with?.

If memory serves me correctly, the salon windows on the 41 are maybe5-6" tall and a thousand, ergh, three feet long? Common plexi has about 1/16" of thermal expansion per foot in normaltemperatures, so if my memory of the window size is correct they wouldtry to expand/contract by some 3/16" along the length, and if there isn't room for that they might pop or crack. I just can't help but wonder: If companies like Rohm & Haas(Plexiglass(R)) and GE (silicone sealants) all say that silicone is unsuitable as a bedding compound for plexi, why people keep trying to use it anyway...

I got my butyl tape from Richard <prego@trebnet.com> who is also on this e-mail list. It was $40 CDN for a 2" roll 40' long. He may still have some.

I just replaced a window on my LF 43. Major task - 6 ft long, 8 inches wide. I used Bronze plexi to match the other side. I drilled and tapped holes for 12 8-32 screws around the edge to hold it in place, and used white life seal to bed it. I used screws cause I don't like the idea of Life seal holding my windows in place in a blow offshore. I reaqlize that crazing or such could occur at teh screws - I had teh screw holes in the plexi drilled slightly larger than the screws to allow for some movement.Mine have been in since Thurs with no cracks yet (knock on wood). I believe your must either have been defectiive plexi, or the fit was too tight and they forced it in rather than sanding it to fit. In either case, they should replace it with no charge. Gary

I would recommend a two part polyurethane adhesive such as Loctite 605or Loctite 610. The only diference between them is the pot life, 605 isabout 5 minutes, 610 is 10 minutes. They come in a double sideddispensor so that the adhesive is metered out in the correct ratio.

Best article that I've seen on How To is in the March / April 1998 issue of Multihulls, "Installing Bulletproof Windows" George Phollips (author) really knows his stuff. Multi hulls e-mail is multimag@aol.com. Following his instructions, wet her for acrylic or poly

carbonate will give you good results and eliminate crazing and cracking that is common on C&C's.Richard

C&C currently uses stuff called **Plexus MA320 (methacrylate**). After months of screwing around with C&C, I decided to find the manufacturer and ask them directly (stock #32000). It is a two part epoxy that requires a special gun (around $100). it isn't cheap, but you don't want a cheap job, either. WARNING: 1) This stuff firms-up real fast, 2) there currently is no solvent, 3) which makes it tricky to work with. If you don't do it right..... sorry. This is probably why they are reluctant to provide it directly to owners .You may find more info and distributors (required) at the following URL:www.itwplexus.com.

One of the main problems with plastic windows is that a flat piece of plastic, either
acrylic or poly carbonate is bent to take the shape of the boat. Plastic has memory and
therefore is constantly trying to regain its original shape. This ongoing stress results in pulling away from the bedding compound and cracking. The problem is compounded by varying temperatures, since the plastic windows will expand and contract
at a different rate than the surrounding substrate. If the plastic is heated and bent
to the appropriate shape, trimmed a little smaller than the opening and imbedded with a
flexible bedding compound, it will maintain a seal, reduce cracking or grazing and float to allow for expansion or contraction.
For Do It Yourself instructions, get a copy of the March/April 1998 issue of MULTIHULLS
and follow the instructions in the article "Bulletproof Windows by George Phillips. He
even tells you how to make a form and bend the windows in a household oven. For longer
windows, you may have to be a bit creative or contract part of the job to a plastic
shop with a a larger oven. These windows will withstand the most severe storms anyone is likely to encounter and won't leak Hope this info is helpful.

Tom and Kate,
Leamington glass is located here in sunny southern Ontario. Just look for the southermost part of Canada and you will find leamington.
But seriously, their phone # is 326 5776, the mailing address is PO Box 156, Leamington.
I just got off the phone with them, they do hundreds of boat windows, mostly in plexiglass. You can mail them a template and they will quote you a price.Hope this helpsFrank

Hello Damon,

Welmax can ship you GOIOT product 501 (Acetoxy Silicone) ex stock again now.

Price is List $53.40 Net to Boatbuilder $42.72 plus F/H (UPS or FEDEX if
urgent)

Regards Maxwell G. (Max) Hazelwood

You can Fax order to: 561- 287-0508 C/Card Tel: 561-2859

Hello, I wish to thank all the list folks who contributed to the thread regarding port replacement. The information and experience has saved me from launching into many days and $ of unnecessary work. I learned:1. On older C&C's you don't need to remove or replace the frames unless they are leaking and you have to rebed them because they are difficult to remove without warping and because the port can be removed without theframe.2. If old fogged plexi ports are the problem like mine try refinishing it first. Someone on the list recommended Brasso which I tried last weekend. Wow, I don't recall a more dramatic result from any maintenance product. From almost opaque to completely clear. Now I don't even plan to replace the ports. I also refinished my old Lexan forward hatch and companion way hatch. Won't eliminate deep crazing but makes everything else look like new. Since I was on a roll I also found Brasso cleans dirty vinyl bumbers and deck vents. It's great to find a readily available, inexpensive cleaner/refinisher that works for many purposes. Thanks again and keep the advice coming.Bob

C&C currently uses stuff called Plexus MA320 (methacrylate). After months of screwing around with C&C, I decided to find the manufacturer and ask them directly (stock #32000). It is a two part epoxy that requires a special gun (around $100). it isn't cheap, but you don't want a cheap job, either. WARNING: 1) This stuff firms-up real fast, 2) there currently is no solvent, 3) which makes it tricky to work with. If you don't do it right..... sorry. This is probably why they are reluctant to provide it directly to owners. You may find more info and distributors (required) at the following URL:www.itwplexus.com.

The second problem is leaky windows. The 1980 has the glued in type andthey leak. I carefully cut around them and took them out and rebedded themand added oval head SS screws every eight inches or so. One has startedleaking again. I think I need some better bedding material.

X
Y

Yanmar

I just want to let the list know that we have several new Yanmar alternators/generators in stock. When we purchase an engine they come equipped even though we may remove it and install a Balmar alternator.

We have (4) 80 Amp Yanmar Part Number 129470-77200 $250 each
(4) 55 Amp Yanmar Part Number 129772-77200 $200 each

I know the 55 Amp one retails for well over $800 so I can only imagine the 80 Amp one is over $900.

Don't forget we have all the original rudder molds as well as a new rudder mold for the C&C 41 (Rob Ball Design).

George Gulden
C&C Yachts Customer Service
440-354-3111 ext. 159.

Z

I have a 1980 C&C 30, hull number 593. I assume it is a Mark I. Am I right?

We race the boat in some club races and I am interested in what kind of shroud tension is correct for the boat. We are on the Eastern Shore of Maryland and generally race in light air and sheltered (smooth) water. However, it does blow at times. We have a mylar Genoa, dacron main and run a spinnaker. We have added an adjustable backstay. Does anyone have experience in racing a similar boat?

I reset the windows by removing them - careful with the gelcoat, as they are molded in. Then set them in with silicon seal and added screws every 8 or so inches on the outside. It looks good and I don't have to worry about the silicon seal breaking loose.

RE: the comments on removing decals - I used a heat gun and a product called Bestine to get rid of the residue. It is a rubber cement remover and is available from art supply stores.

I have just joined the list and am enjoying the comments very much.

Gary Nylander
C&C 30 "Penniless"
gnylander@bluecrab.org

Mine are held in by #8-32 screws every 6in with self locking nuts on theinside. Went to Hawaii with no leaks!!!
Gerry/Mintaka/C&C36PS: Mines a 1980.

Wood Sealer

Hello, To seal wood without build up I use clear penetrating epoxy sealer. Available at hardware, paint and marine stores. Soaks into porous wood andseals it permanently. Can then coat with epoxy or any other finish asdesired or not. Will make rotted wood solid, etc. Fabulous stuff.Bob