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TANKTALK

THE MAGAZINE OF THE 505 CLASS, AMERICAN SECTION

IT'S NOT JUST HOW YOU USE IT

A Summer of Findings on the
Long Luff Spinnaker

Jesse Falsone and Macy Nelson
work the big spinnaker in 18-20
knots on the West River in
Galesville, MD

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Strengthen Your Abs and Back

JOHN POTTER

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American Section

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For more information on the
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Message from the President

“I GOT ELECTED TO WHAT?”

I must not have been drunk enough.

Cutting straight to the point, at the 2002 505 AGM, I was nominated to become the American Section President, and I humbly accepted the nomination. After a brief pre-election speech by Bruce Edwards (thanks Bruce), Lame Duck President Jesse Falsone opened the floor to other nominations. Andy Zinn and Tyler Moore were both nominated. After two pretty sorry speeches and not a single campaign button, Jesse held the election. Guess who won?

Besides my appointment, Jesse gave his state of the union address, and a farewell speech. Class Vice President Ted Ferrarone covered some finance and demographics of the class. We also heard proposals for the 2003 North Americans by Ali Meller representing Chuck Millican and the Royal Hamilton Amateur Dinghy Club in Bermuda, and Ted Ferrarone representing Geoff Hurwich and the Falmouth Yacht Club in Massachusetts. The class then debated and voted. The decision was in favor of Falmouth in August, for reasons that include the summer time date and expected turnout. Both clubs presented excellent bids, and I personally hope we get to hold a major 505 regatta in Bermuda in the near future. The 2003 505 North Americans will be hosted by Falmouth Yacht Club. Mark your calendar.

So now a quick note from me, your new Class President.

I had actually thought of volunteering for the position earlier this year. But then I decided that someone else would probably volunteer. Well, no one did. Jesse made it clear that he would step down at the end of the AGM, with or without a new President. Maybe someone had an agenda (conspiracy?) to elect me, but it doesn't matter. This is a job I am fully willing and able to do, and I plan to do my best. With the 2004 505 Worlds to be held at the Santa Cruz Yacht Club, I have the ability to monitor the planning progress for the next two years, from my house, a stone's throw away from the club. SCYC already has a 12-member organizing committee in place. I'm sure they'll be monitoring me more than vice versa.

I've been racing the 505 for a little over 4 years, and am going to Fremantle in December for my first Worlds. I have 5 weeks left before the boats get shipped, and I'm a little pre-occupied right now. But, I encourage all constructive ideas for the class, how we can grow, how I can better serve the class, and anything else. Send ideas to american505@driveworks.com. Of course, emails harassing the President from paid class members will get preferential treatment over non-paid members, but I welcome all ideas.

I am looking forward to the next two years serving the class, and hope I can follow Jesse's "Idiot's Guide to Running the 505 American Section" well enough to not screw up everyone's leisure time.

Fair Sailing,



Aaron Ross

President, American Section

International 505 YRA



SAIL RESULTS 2001

- 2nd, 3rd Worlds
- 1st, 2nd, 3rd British Nationals
- 1st, 2nd French Nationals
- 2nd Europa Cup
- 1st, 2nd Newport



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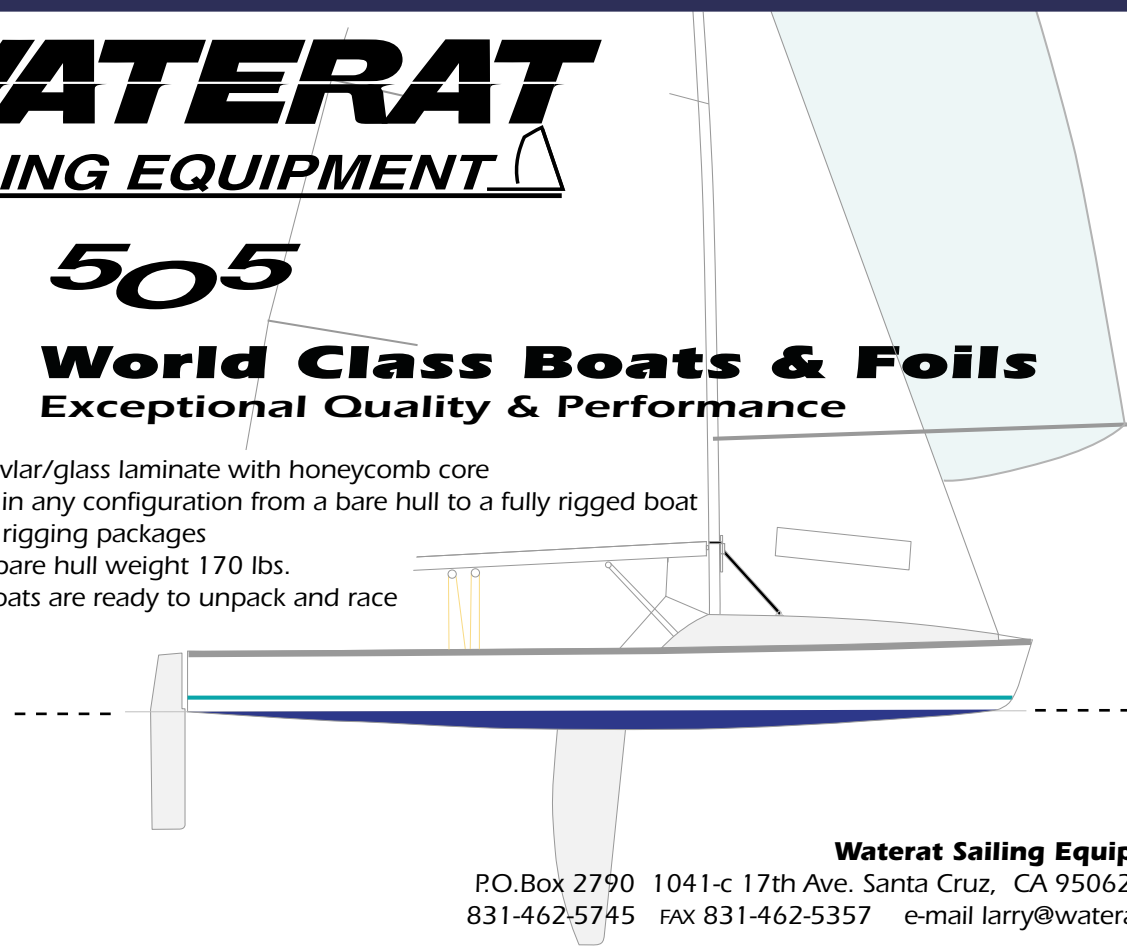
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OUTGOING 505 AMERICAN SECTION PRESIDENT'S REPORT

AGM, 2002

By Jesse Falsone

With terms as American Section Secretary/Treasurer and President, and a stint as Tank Talk Editor now in my rear view mirror, I feel uniquely qualified to comment on the state of the class here in the US. I'm sure you would expect nothing less from me anyway!

I'm going to give you the good news and the bad news as I see it:

MEMBERSHIP

The Good News: Membership is up slightly from last year to over 215 members, including family members so the total is actually a bit higher. I believe that we should always have at least 200 members if the class officers are doing their job, if we are collecting dues for big regattas, and we are recruiting regularly.

More Good News: We have a new fleet in Oklahoma City (Fleet 39) with 5 new members.

The Bad News: We continue to age. I compared survey results from 1998 and 2002. A quarter of our members were under 30 in 1998. Now, in 2002, only 15% are under 30. I'll let Ted address this issue in his report. Less than 50% of our members responded to the survey.

More Bad News: We are not doing a good job collecting dues at major events. I agree it's a real pain in the ass to collect dues, or do anything outside of racing at an event, but it must be done. If everyone would just pay their dues on time, this wouldn't be a big issue. Regional Coordinators and Fleet Captains need to assure that sailors are members of the association. There must be some accountability here for the responsibility of making sure dues get paid at championships.

REGATTA ATTENDANCE

The Good News: Our major regatta attendance is adequate, but not stellar. The ECCs had 27, the PCCs had 24, and lots of local events on both coasts are getting in the middle and high teens. Participation has increased in the Pacific Northwest with new and old faces getting in, and new boats being imported. The

turnout at this regatta is not bad, but under the 45 we had in 2000 in Santa Cruz.

More Good News: The US will send about 23 teams to the Worlds, and I predict as a country we will dominate.

The Bad News: The Midwest attendance is not great, and the Texas fleet has folded completely.

THE NEW SPINNAKER

The Good News: We have a better, faster, more exciting boat. The switch was easier than most people expected. The boat is not more difficult to handle.

The Bad News: Big crews still rule in the breeze. Some people have experienced mast problems with the Proctor D. A few people have decided to leave the class because of the change.

MEASUREMENT

The Good News: For the first time in three years we affected some form of measurement at the North American's.

The Bad News: It's been three years since we measured boats. This is horrible for a one-design class. People frequently make changes to their boats that can effect it's weight, sometime significantly. If you make changes to your boat that can affect it's weight, you should ask your local measurer for a re-weigh. This is the ethical thing to do.

Because we have not placed an emphasis on measurement in so long, the rules of the game have not been passed down to new local and national officers. I take some blame for this. One of the major functions of the regional coordinator is to act as a regional measurer. The regional coordinator can appoint a regional measurer if they do not wish to act in that capacity, but must notify the national measurer they are doing so. All regional coordinators are responsible for making sure that the 505 class rules are being followed at major championships in their region. This means that the regional coordinators need to verify that the organizing committee knows and understands that measurement is an

integral part of running a 505 event, and should provide the necessary equipment and facilities for performing measurement.

Measurement at the NA's need not be a major affair! I believe that it is satisfactory to weigh all boats merely as a check that they are on weight. The boats do not have to be dry for 2 weeks—this is only necessary for an official re-weighing for a change to your certificate. However, the boats should be reasonably dry (no water in tanks), with all sailing gear aboard and no extra gear in the boat. Sails, at least if bought from Ullman or North, should all come with a measurement stamp already on them, and need not be re-measured at the NA's. Only sails without stamps should be measured.

These are not drastic measures, but they will assure that all members conform to the rules and that we have fair sailing.

CLASS OFFICERS

The Good News: I'm getting out! Your remaining officers (Ted, Fred, Macy, etc) are doing a great job. Some of the regional coordinators are doing a fantastic job. I have written a great guide for the person taking my place.

The Bad News: After a year of searching, nobody is interested in taking my job. What does this say about us?

THE WEB SITE

The Good News: Doug Hagan has been filling in as a temporary webmaster and has been posting regular updates to the "What's New" Section. Since then, Randy Watler has volunteered to be a new permanent webmaster. Thank you, Randy.

TANK TALK

The Good News: We published a few excellent issues during my tenure. Our advertising revenue has increased thanks to Ted's work. People love the magazine, and it's a great promotional tool. Sue Athmann has done an incredible job as art director and publisher, and she works

Outgoing CONTINUED

for free saving us literally thousands of dollars. In our latest survey, two-thirds of you said they would contribute to the magazine. There were similar statistics in 1998.

The Bad News: Only 5% of our membership regularly contributes to *Tank Talk*. We have a very difficult time getting pictures. Despite this, people have made comments to me about *Tank Talk* not being published enough. We can't publish without quality content.

AWARDS

The Good News: We have two new awards.

The Bad News: It took us nearly 50 years to institute these awards. It's important that the 505 NA's not only celebrate our champions but also celebrate the people that make this class tick. It's also really important to recognize the many talented women that sail in this class.

THE FUTURE

The Good News: The 505 is still the best high-performance dinghy in the world. A few years ago we were worried that the new skiff classes would put us out of business. That hasn't happened. The 49er has exactly one fleet in the US that I know about, and most non-Olympic types don't stay with the class for long. We still greatly outnumber the I-14 in the US. The FD is basically dead in the US (the best US FD sailor just bought a 505). Other manufacturer skiffs like the Vanguard Vector are going nowhere.

More Good News: There are new boat builders in the US and abroad building great products at modest prices. WitchCraft will be turning out their first boat built on the upgraded Lindsay tooling. A few new Australian builders are making high-tech pre-preg carbon boats.

The Bad News: There is increased competition for leisure time, especially

among the younger generation of sailors. Few kids these days aspire to the 505 because it isn't the "baddest" boat on the planet anymore. Many people see the 505 as being too difficult to sail, and the learning curve too steep. Unfortunately, many kids want instant success.

Unless we make a conscious effort to reverse the aging trend in our class, the 505 will certainly end with the generation of sailors now in their 30's.

Remember, the best and cheapest recruiting tool is to take people for rides. Have you done this lately? **505**



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THE 2002 NORTH AMERICANS

By Aaron Ross and Mike Martin

Mike—The competition at this year's North American's was the toughest that I can remember in a long time. There were tight battles for every position in every race. The class is getting faster. The speed of the fleet is way up from a few years ago. This is true from top to bottom. There are just more fast guys on the race course than there used to be. In past North American's there were just a few teams with the speed to take the top places in each race. In contrast, the 2002 North American championship saw 6 different teams winning at least one of the 10 races, and 12 different teams placed at least 3rd or better in at least one race. Another indicator of class depth are the throwout races. Every team at the regatta had a double-digit throwout race. Howie and I dropped a 15th. We sailed entire World Championships never placing worse than that 15th. What all this means is that the competition in North America is better

than it has been in years. The bottom line is the 2002 NA's were a super competitive event with tight racing for every position. For anyone who did not sail they missed some of the best 505 racing that has taken place in the U.S. in a long time.

Aaron—Cabrillo Beach Yacht Club hosted a fantastic regatta on all points. The race committee led by Andy's father, Don Zinn, did a great job in wind that "wasn't normal," and they never started a race too soon, instead waiting for the breeze that we had to establish itself. We got two or three practice starts and a practice race in on Tuesday. They also reset several marks during the 10 races. This regatta was run by racers for racers. Andy's mom made sure that everyone

got a gate key for the week. These keys were like gold, they got you into the fenced dinghy park, the excellent yacht club restrooms, and onto the docks, where several competitors were housed on CBYC members' sailboats. Other volunteers set up a huge build-your-own sandwich bar complete with a wheelbarrow of bottled water every morning, and a limited amount of beer and finger food every afternoon at the top of the launch ramp. Very cool. And the final results will show how tough of a regatta it was. I think 21 of the 31 teams at the NA's are going to Fremantle this December for the Worlds. **505**



Upwind on the Columbia during the 2002 Pacific Coast Championships



Race 7 gate at the 2002 New England Championships, Larchmont YC



2002 North Americans, Cabrillo Beach, California



"The Canadian Gorge"—At the foot of the Coastal Range, Squamish, B.C.

SHORT TACKS

WitchCraft Update

The future of WitchCraft Boats, Inc. lies in the development of the new moulds based extensively on the Lindsay tooling. This new boat which Tom and I call the WitchCraft ML (Mark Lindsay) will be unveiled shortly though many know what it will look like as it is being developed in large part by active members of the 505 class. Barney Harris, having placed his deposit down for one, has been instrumental in adding his many years of specific class knowledge to the design along with a number of others, too many to mention.

This boat utilizes the Lindsay hull shape, proven fast in numerous World Championships in the early eighties and is continually admired for its speed. The deck will be roughly 50% Lindsay as the foredeck and tank shape will be maintained but an all new composite centerboard cap, trunk and bulkhead are being developed. This boat, following in the WitchCraft theory of lower cost and maintenance for high performance 505 sailors will minimize the amount of wood used

thereby prolonging the life of the boat and reducing maintenance. Also taken into consideration is the new long luff spinnaker, the spinnaker chute has been maximized to allow for the larger volume of the sail.

These two pictures show the beginning of the new plug deck while still sitting in the original Lindsay moulds. The multiple part mould will be made into a one-piece deck which can be baked in an oven allowing WitchCraft Boats to build out of the latest in boat-building materials like Carbon Fiber Pre-Preg. We are looking forward to utilizing this technology in our boats as well as other materials which we have researched and tested extensively. Some of the preparation of these new boats includes stress testing many different laminates with new cores that have not been used in the class before. We test for stiffness/flex as well as a final breaking point and a point at which the laminate would shear, in order to rule out certain lay-up schedules and to provide our customers with the longest lasting, most high performance boats.

Look for a new WitchCraft ML at upcoming regattas as we prepare for the 2004 Worlds in Santa Cruz. Feel free to contact me with any questions about our new hulls.

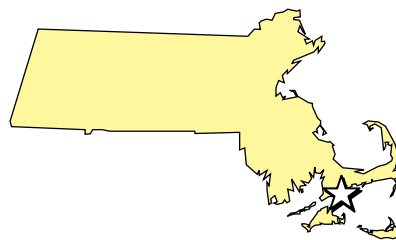
Geoff Hurwitch WitchCraft Boats, Inc.



ADVANCED NOTICE

2003 North Americans

Falmouth Yacht Club in Falmouth, Massachusetts has been awarded the 2003 North Americans. Cape Cod in August should not be missed.



Caught in the Web

Hello to Randy Watler. He has stepped up to take over as the new webmaster of the American Section site. Please send submissions to watler@quest.net

Get Connected

While we have over 200 members, most are subscribed to local email lists rather than the nationwide USA list. You should consider signing up for the USA list to get nationwide information.

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BENEFACTORS

The American Section has created a new "Benefactor" membership category. This category is reserved for those members wishing to contribute extra funds to the American Section, with the baseline membership starting at \$100. All Benefactors will have their name prominently displayed in each issue of *Tank Talk* for that year, and will earn the adoration of the American Section.



UPCOMING 505 EVENTS

We've passed the official end of summer but sailing is still going on across the country. For teams heading "Down Under" container loading for the **Worlds** on the Atlantic side is at WRSC the end of September (29th or 30th) and the Pacific side packs up boats after the **RYC Totally Dinghy** event on September 28 and 29.

Get in a 5-oh and attend the **Carl Miller Regatta**, September 28-29 or the **"Pumpkin Smash"** mid-October at West River. **Spookfest**, October 26-27 should be a good time and the **Mid-Atlantic Championships** are November 9-10.

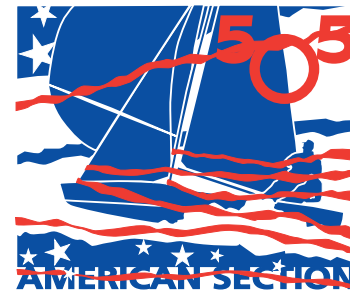
California has the **SCYC Fall Open**, October 12-13, St. Francis is hosting a **Fall Dinghy** regatta October 26-27 and ABYC has scheduled a **Halloween** (October 26) and a **Turkey Day** (November 16-17) regatta.

The upper reaches of the West Coast see the **Fleet Championships**, October 12-13 with the **Bluenose** at Kitsilano on November 9th and 10th with the **Turkey Bowl** on November 23.

For more information about these and other events go to: www.int505.org/usa/events/regs.htm.

Go Sailing!

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The American Section has updated its look. A membership gets you one of these 4-inch stickers, copies of *Tank Talk* and enables you to compete in National and World events.

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They Did It Again

The 18-foot Skiff circuit finished its 2002 season with the International Championship Regatta on San Francisco Bay September 2nd thru the 7th. Skipper Howard Hamiln with crew Mike Martin and Andy Zinn walked away with the trophy, again.



The International 18-foot skiff Championships on San Francisco Bay

Recognition Well Deserved

The Dave Cahn Trophy, The Dennis Surtees Service Award, and The Top Female Sailor at the North Americans. The last two are new awards, spearheaded by Jesse Falsone. Thank you Jesse for officially recognizing the great people, efforts and spirit we have in our class. The full explanation of each award can be read on the website.

Dave Cahn Trophy - for the sailor who is always there to compete and have a good time regardless of final results, always smiling, enjoying the camaraderie of fellow competitors, awarded to **Stuart Park**.

Dennis Surtees Service Award - this is a no-brainer, and the recognition is WAY overdue for the winner, **Ali Meller**. I personally thank Ali for helping me develop in the 505 over the last 4 years, and I'm sure I am only one of many who have benefited from Ali's huge generosity of his own time.

Top Female Sailor at the North Americans - awarded to previous North American Champion **Carol Buchan**, who finished second overall this year, dragging husband Carl around the course. Only a couple months back in the boat after over a 12-year hiatus from the 505. Impressive indeed!

Also, Dave Stetson nominated **Graham Alexander** for an **honorary life membership** in the class. The class recognizes Graham Alexander for his decades of work in the class since 1967, and awarded him lifetime membership in the 505 American Section.

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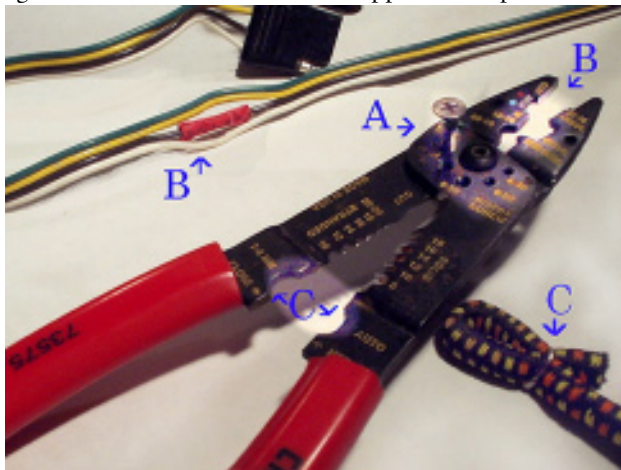
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“Uh-oh” –When The Inevitable Happens... What Should Be In Your Tool Kit

By Mark Angliss

It never seems to fail. You heft a toolbox stuffed with everything imaginable to a regatta. Now you need a “what-ever” and you either have 30 of the wrong size or none at all. Now you are among the “drifters” that seemingly wander aimlessly querying others in the dinghy park in search of “one lousy ...xyz”. There are those that pack lightweight relying solely on a Leatherman™ or Gerber™ type tool. These are OK for setting up or a very simple repair, however it is a physical impossibility to hold a nut with the pliers and tighten a fastener with the screwdriver on the same tool. The flip-side is the expansive 2,984 piece tool assortment packaged in it’s own compartmentalized carrying case. Of all those tools, you will probably only use one-half dozen. The rest provide ballast or idle amusement. You can kill hours by dumping the contents then trying to figure out where everything fits in the case. The other problem is most of those tools kits are very poor quality. Some try to combine tools for car, home & boat repair into one kit. Have you ever tried to push one of those red NASCAR steel tool chests on casters through the sand? It’s best to have a kit just for boat work that covers your requirements without feeling you invested the equivalent of a major stock purchase in Snap On™.

A sailing tool kit should be more than just tools. It should contain fasteners, hardware, adhesives, tapes and other “goodies”. The kit should be “application specific” for



(A) Number 4 thru Number 10 bolts are easily cut to the required length without requirement to file ends for proper threading. (B) Trailer wiring repairs are correctly performed using Stake-on™ terminals. (C) The automotive spark plug crimp area puts a nice snag-free finish on hog rings.

your boat where you only bring what you need to accommodate a repair or minor change. If you are going to do a major change or repair, it’s probably easier to bring the boat to the tools in the shop rather than trying to anticipate everything you need to bring to the boat. The majority of fasteners on a 505 are sizes #8 & #10. There is no reason to bring a full size nut/bolt/screw assortment with you. The same goes for shackles, clevis pins, cotter pins/rings etc. Only pack what is usable. Machine screws can be reduced to just a handful of sizes by only packing the longest length you will ever need and cutting them to the required length for the task at hand. The best way to cut small bolts is with a pair of electrician’s “stake-on” pliers. These are extremely useful for boats. They can cut electrical wire, rope, bolts, tubing and all kinds of other stuff. There are some versions with jaws like pliers. The ability to crimp “stake-on” butt splices is great for trailer wiring repairs.

These come in two varieties. The best kind for boats is the one that crimps Stake-on™ series connectors. The crimping positions have red, blue & yellow colored dots. The other (less desirable) kind is for Molex™ automotive connectors with “V” shaped crimping positions. Either will cut bolts. If your tool is equipped to crimp spark plug wire connectors, you will find this works very well to put a nice snag-free finish on hog rings crimped initially with common pliers.

The “Basics”:

- 4-inch Crescent wrench
- #2 6-inch Phillips screw driver
- 3/16" 6-inch flat head screw driver
- 4-inch angled tip needle nose pliers
- Pocket rigging knife w/Marlin spike
- Duct tape
- Vinyl electrician’s tape
- 20’ Rip-stop sail tape
- Indelible marker
- 10’ 1/8" Spectra™ or similar PBO type line
- Hefty sewing needle
- Waxed whipping cord
- Spare cotter rings
- Fishing weight
- Small butane torch

Tool quality and functionality is important. There is nothing more frazzling than trying to make it to the starting line while fighting to tighten a fastener with a worn screwdriver and rusty pliers. Many common hand tools are available in stainless steel. These are quite



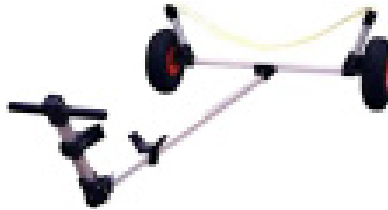
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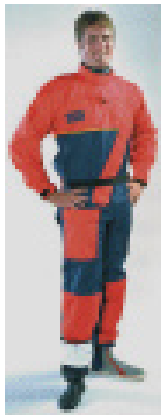
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Tool Kit CONTINUED



It is impossible to bold a nut & screw a bolt with one "multi-tool". A small collection of good quality tools that work correctly for their application is less expensive than a "multi-tool" plus the work is faster with less frustration.

expensive in comparison to the rust sensitive generic counterparts. Stainless steel that is truly rust proof does not make good tools. It is either too soft (300 series) where the tool wears out rapidly, or too hard where the tool is brittle—Type 411 "knife blade grade" stainless is very hard and produces a screwdriver that is susceptible to breakage. There are various grades of stainless that make good tools, however this grade of stainless is not truly rust proof. Why pay extra for something that will eventually rust anyway? On the other hand, low quality tools are not a bargain. Their life is short and often the tools

just don't work correctly right-out-of-the-box. Black oxide tool coating is very susceptible to rusting. Don't consider beryllium or aluminum hand tools. True they won't rust, but they have a very short usable life and are really for applications where creating sparks cannot be tolerated (like an oil refinery). Look for reputable brand common tools that have a Vanadium or heavy chrome finish.

What you need to bring depends greatly on the type of regatta you are attending. If you are sailing an afternoon local event, there simply will not be enough time to perform a major repair. So why pack all that stuff "just in case"? To the contraire, if you are traveling a long distance to attend a multi-day venue, being prepared for possible big-trouble is probably a wise decision. Some of us 505ers are notorious for making rigging changes on-the-fly at racing events. Many make changes before an event. In either case, it's a good idea to have the old stuff on-hand just in case the new "improvement" does not work as planned. I have several "kits" that I bring depending on the venue. I have a basic kit that takes care of minor repairs and setting up. This is only what I need to bring to short local regattas. If something major happens, the boat can be brought back to the shop or the necessary items brought to the boat at another time. There simply isn't enough time for a repair to justify hauling anything else. Next is a more comprehensive enhancement that covers possible problems at 2-day regattas where some travel is involved. For major events I have another level of goodies that I pack to cover potential serious problems. If possible, coordinate with sailing friends to bring specialty tools to major events that will cover several boats.

Moderate Repairs & Rigging Changes:

Heavy Duty "Pop" rivet gun (3/16" capacity)
Electrician's "stake-on" pliers
6" x 1/4" 6-inch flat blade screw driver
#1 6-inch Phillips screw driver
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12 oz. Ball Peen hammer
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Single ended hacksaw
1/4-inch round file (uniform diameter chain saw sharpening style)
6-inch triangular file (Mill bastard grade)
Hog ring pliers
10-32 (or 10-24) threading tap
8-32 threading tap
Tap wrench
3/8-inch "keyless" Cordless drill
Drill bit assortment
Heavy Duty scissor type shears

1/8 & 3/16-inch "Pop" Rivets (stainless is best)
Hog Rings
2-inch #10-32 or #10-24 stainless steel machine screws, round & flat head
2-inch #8-32 Stainless steel machine screws, round & flat head
#10 "fender" (large diameter) washers
#10-32 & #10-24 "poly lock" nuts (self locking w/ plastic insert)
#8 & #10 stainless wood/sheet metal screws
Stake-on™ butt connectors (red, 16 gauge-20 gauge size)
Assorted heat-shrink tubing
5-minute epoxy
Super glue
Microfibers
2-inch wide Fiberglass cloth tape
Masking tape
#1157 or #1034 light bulbs (interchangeable)

Tool Kit CONTINUED

Chances are, when setting up your 505, the only things you will use are the flat head screw driver and needle nose pliers. The rest is for quick “tighten up” or fast emergencies. All of this is easily tossed into a “ditty bag”. The bag serves as a scratch protector for your tanks or deck to spread tools on. Chances are, no matter how big an event you are sailing, this is what you will grab the most. Some people like the multi-tools or the Ronstan™ rigging tools. We carry a *small* multi-tool on the water for emergencies, but don’t like the compromised ergonomics for general use. All of the individual tools combined cost less than a decent quality multi-tool and work far better for their application. The cotter rings can be kept together if strung like a key chain ring. The whipping cord is indispensable for not only line-end dressing, but also sail repairs, line splicing and works well with a fishing weighted end if you lose a halyard. The Kevlar type single braid line is easy to splice and will cover all kinds of emergency repairs without regard to strength. We have even used it when a trailer tie-down broke. The electrical tape covers quick clean-up for chafe spots. I need not describe the uses for duct tape, though I hate the stuff as it leaves a sticky-stringy mess. There are several palm sized butane torches marketed that pack easy and last a long time between refills. They are far hotter than disposable lighters. Look for a nice clean blue flame as lighters leave soot when used to seal line ends.

Then there are the supplements to the basics. As mentioned earlier, carry only long machine screws and cut them with the Stake-on™ pliers. The extra screw drivers/vice grips and crescent wrench should cover all fasteners and provide the means to shape/straighten hardware. A common carpenter’s claw hammer is 50% worthless for boats. When did you last need to pull a nail from your hull? The ball peen is smaller and provides better versatility for shaping and bending. The single



Small butane torches operate hotter (faster) and cleaner than disposable lighters to seal line ends without a sooty mess. The compact 90 degree drill gets into really tight places. If you are going to buy a cordless drill, go for something “different” in shape than your plug-in drills for more versatility. A common claw hammer is 50% useless. When was the last time you needed to pull a nail from your 505? The ball peen is usefull for shaping metal parts. Select cutters for the job. “Pinch”/“Dyke” type wire cutters will not correctly cut rigging cable or high-tech line like these “shear” style cutters.

ended hacksaw is small for the toolbox and can get into tight places. For the cordless drill, you don’t need something with enough power to torque-off your lug nuts. Smaller/lighter is better for getting into tight places & drilling the typical small diameter holes. I have found that several manufacturers make a 90-degree right angle drive model that works very well for power and carrying convenience. Drill bits are an exception to carrying only the sizes needed. If you break or lose the exact size, the next size will usually get you by. An assortment of 10-14 bits covering 1/16” to 1/2” is just about right.

The best “universal” washers are the over-sized fender types. They provide greater surface area to minimize “pull-outs” and are easier to handle if you are reaching inside a tank. The same goes for nylon lock nuts as universal replacements for conventional lock washers & plain nuts. There is less to carry and manipulate when reaching into tight places. The #10 machine screws come in 2 different thread sizes being 24 threads-per-inch (SAE) and 32 threads-per-inch (USS). Using the thread cutter gauges on the “stake-on” pliers, check your boat’s predominant thread pitch and pack that size for spares. I’m a heat-shrink tubing fanatic and use it everywhere from rope whipping to trap handle covers. Some of you may feel you can do without it. If you do, opt for a roll of high quality vinyl tape. Good vinyl tape is a pain-in-the-a\$\$ to find the end and peel away. The cheap stuff unravels in the sun by itself.

The five-minute epoxy, microfibers and glass tape will fix small holes etc. Don’t buy the epoxy packaged as twin syringes unless you want a sticky mess in your toolbox. Buy it in individual “toothpaste” tubes or squeeze bottles. Repackage the microfibers in a small Tupperware™ type container rather than dragging around the big canister. The butt splices and bulbs are cheap travel insurance. I check trailer lights at gas stops and replace bulbs if needed to be sure my trailer has the best visibility possible. If you are traveling long distances, a spare trailer wheel hub with bearings, seals, cotter pin, washer that is pre-grease packed could save hours if not days if something goes wrong. I package all “little stuff” in plastic

Major Event Items:

- 2-inch disk sanding backing pad (for drill)
- Sanding disks (60 & 120 grit)
- Spare drill battery
- Large vice grips
- Spare trailer hub assembly w/ bearings & seal
- Old wooden handled carbon steel knife
- 16 penny nail
- 1/4-inch round file
- 6-inch mill bastard flat file
- Utility “box” knife
- Cable cutters
- Nicopress crimping tool
- Spare Hardware, line & fasteners (uhhhh, “whatever”)
- Disposable plastic “cocktail” cups for mixing epoxy
- Stir sticks..... Or start plucking trees for “clean” twigs

Tool Kit CONTINUED

compartmentalized containers used for fishing lures. There are some toolboxes that have storage containers attached to the outside top. Be careful if you get one of these. It's really easy to forget to close the container and open the toolbox thus spilling small parts everywhere. Plastic toolboxes are far better than metal. They don't rust, the bottoms don't leak if placed on a wet surface and are less likely to ding something that is accidentally bumped. I keep hardware & tools in different boxes. "Supplies" like tape and glue is packed with tools.

Imagine that you are far from your shop and you have a debilitating breakdown at a major regatta. You may miss a race, but you can make a repair to get back in the competition if you have the "right stuff". You should not depend on others for items since they are probably on the water and their cars are locked. (Pre-arrangements for sharing tools and materials among friends really helps out here.) It's fast, sloppy and furious, but you can make-do fix a hole in a hull, tank or deck by grinding the rough edges of the injury with sanding disks and slapping on a 5-minute epoxy/glass repair. In this case, too much is better than not enough. It's better for the boat wright or yourself to clear the mess later than dealing with a repair that explodes causing you to miss another race. On this subject, there is nothing wrong with decent fast-cure hardware store grade epoxies. (Loctite™ & Devcon™ are highly reputable brands.) They are great for small fast repairs and have a quality equal to

slower cure grades. You just can't use fast-cure epoxy to build a whole boat in less than 5 minutes. Don't confuse time with quality. The key to a repair is to get a good solid clean edge to bond to. Sanding, grinding and "tapering" the repair edge is far more important than the glop you stick on it.

What's with the nail and old knife? Sail repair, heat style. Would you take a flaming torch to your sail to heat-seal a sewn edge or grommet hole? Heat the nail or knife for the occasion instead.

Sharing "stuff" is a big deal. Among friends, pack all your goodies in a common location. Leave the keys to the treasures in a secure location. If someone breaks down, they can have access to "the shop" and deal with it. It's no fun to beat a boat that's DNS because he was in the dinghy park looking for a Nicopress™ tool to do a 10-minute repair on a side-stay.

Breaking down sucks stagnant pond water. But if you do, get up and go as fast as you can without messing around with poor quality TV commercial tool kits or not being prepared for what you CAN deal with at the time. Good tools for the specified purpose save time. It's about sailing, not fixing boats.

505



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Learning From The Past

Fremantle Moves Ahead

By Matt Hanson

The Fremantle 505 has been developed over the last three years by co-operation between a number of long-term West Australian 505 devotees and Brett Burvill of Windrush Yachts.

Why bother with making yet another set of moulds in Australia? What is wrong with existing designs? What extra expertise can be brought to bear on such a well-established and well thought-out craft? I hope to give some insight in to all this and to offer up our interpretation of the 505.

In Western Australia we sail in tough conditions. Strong sea breezes of 20-30 knots and choppy open water off Fremantle means the boats sustain a lot of wear and strain. The new long luffed kite, as well as the trend toward high aspect foils has increased the loads sustained by the rig and hull and particularly by the centercase. The demanding conditions also require that the ergonomics of the internal layout of the boat must be optimal to allow the skipper and crew to get round the course and make rig adjustments as easily and as quickly as possible. These conditions are fantastic for ocean dinghy racing as many of you will discover in December 2002.

When I started sailing 505s 15 years ago nearly all the boats in Australia were Kyrwoods. These were simple but sturdy and easy to rig. The Aussies were dominant and the Kyrwood brothers themselves were a substantial part of the reason for that prowess. I have owned 3 Kyrwoods over the years and initially thought that there was little that could be improved on. Certainly the end grain balsa floors have remained stiff and secure over that time despite our tough conditions. There were, however, problems with flexibility of the side tanks and case which tended to break free of the forward thwart and compress under load. As we departed from the floppy rig to the higher tensions now used the problems became more pronounced. The side tanks are also prone to splitting from the hull due to a poor bond. The later Kyrwoods used better layups but the fundamentals of the design remained the same. Kyrwood no longer makes 505s but in their wake has come three other Australian manufacturers before us with modifications and improvements in layup and layout. I was most impressed with the improvements that the Van Munsters made particularly in the internal layout and support of the



centercase as well as hull shape and have owned two of these craft. The ergonomics of the Van Munster cockpit made sailing the boat easier and definitely gave the boat a more modern look, though fitting out the hull was more difficult. The mast step was a weak point and needed modification to tolerate the compressive loads and lateral forces and the use of foam in the floor made the hull much more prone to denting from impact with jinkers, kneecaps and trapeze hooks. In the meantime we had a chance to look at the overseas manufacturers offerings at world championships we attended. The longevity of the Waterats was astonishing, clearly the Nomex Honeycomb/epoxy layup was more durable than anything else. Further enquiry indicated that these materials were difficult to use well and Australian manufacturers of 505s at that time were understandably cautious about trying. We needed to have a builder with plenty of experience with epoxy layups—preferably pre-preg carbon composites that had the best strength and stiffness to weight ratio. The Rondars had improved on the spinnaker chute design thereby lowering the friction in the system and using the chute itself to stiffen the foredeck. We saw great ideas on other designs (Maders and Duvoisins) and were left with the thought that we could adopt and adapt the best features of all these to create something new and hopefully better .

The principles we adopted in developing the new Fremantle 505 were generated from this history and include the following:

Fremantle CONTINUED

- ▶ Optimal hull shape. Continuing the trend set by the latest Van Munster hulls with finer entry, more chine and flatter aft sections
- ▶ Improve the engineering of the supports of the hull decks and casing by

1 Minimising the number and extent of joins between the components. All joins are potential points of weakness. By reducing the hull, decks, case cap, thwarts, bulkheads maststep chute and transom to just 3 interlocking moulded components the potential for failure at joints is minimised. Furthermore, the moulds themselves interlock precisely guaranteeing precise alignment of the components. Fewer joins also mean less adhesive and quicker build times therefore less weight and lower labour cost.

2 Triangulating the for'ard thwart to lock the principal load bearing part of the case cap to the floor as well as supporting the compression loads from the side tank. A similar arrangement to the latest 470s.

3 Triangulating the mast step by converting it to a flat topped hollow pyramid. The sidewalls of the mast step share the vertical compression loads and dissipate them over a broad area of the hull. They also resist the lateral forces far more effectively than a single vertical strut and as they lock inside the aft bulkhead they are both further supported and not dependent on the join for stability.



4 Triangulating the support for the case cap at the aft end of the case to resist the lateral loads of the mainsheet on the case. The aft thwart also is a moulded component continuous with the casecap and sidetank (one piece—no joins). It runs low and is attached to the floor thereby stiffening it in a similar fashion to the aft thwart on the Van Munster but without the need for a join at the sidetank.

5 Using the moulded for'ard bulkhead and chute as structural supports for the foredeck and to resist compression loads from the rig on the hull. The monocoque concept.

6 The transom meets the trailing edge of the hull at a cleanly moulded seam without intervening core material giving a cleaner sharper and harder edge with less risk of water seepage into the core.



7 Shifting the opening of the centercase through the hull to take better account of where the leading edge of the board is located and to facilitate use of the latest high aspect foils.

8 Longitudinal bulkheads between hull and sidetanks further reinforce the structure creating an 'internal honeycomb' effect. This greatly adds to the rigidity of the sidetank and hull around the area of maximum compression from the sidestays and maximum impact from the crew.

- ▶ Improve the layout

1 Using the latest and best materials. We are fortunate to have boat builder Brett Burvill and his company Windrush Yachts who have extensive experience in the construction of a variety of high performance dinghies including International Moths, 14s, Cherubs, lightweight Sharpies, Javelins, as well as high performance super catamarans such as the hydrofoil "Spitfire". Brett is both very experienced and comfortable with working with pre-preg epoxy layups with Nomex as well as the more conventional materials. One of his craftsmen had just returned from working with the McLaren F1 racing team where the "dark arts" of using this material are at the most advanced stages of development and refinement. Pre-preg layups are not without technical difficulties including such things as porosity and therefore potential water uptake into the core plus distortion in the mould if the correct tooling is not used. Windrush had used over 800kg of the material (enough for nearly 20 505s!) in the year prior to our first pre-preg hull.

2 Careful reinforcement of load areas. In both the prepreg and vinyl ester/carbon layups a lot of thought has gone into reinforcement of specific areas by increasing skin thickness and careful use of different types/weaves of cloth. As well as the areas subject to rig tension and foil loadings there are other sites where impact loads are high and frequent such as tank tops and cockpit floor.

3 The conventional carbon/vinyl ester boats have 10mm end grain balsa in the floors which has much better impact resistance than foam. (The kyrwoods had 6mm balsa). Divinycell™ foam is used in the decks of these boats in non-impact areas. High-density foam or marine ply is used

Fremantle CONTINUED

as a core material at fitting attachment points in the conventional layup boats. In the pre-preg epoxy boats Nomex honeycomb core material is used everywhere except the mast step and case cap.

► Improve the ergonomics

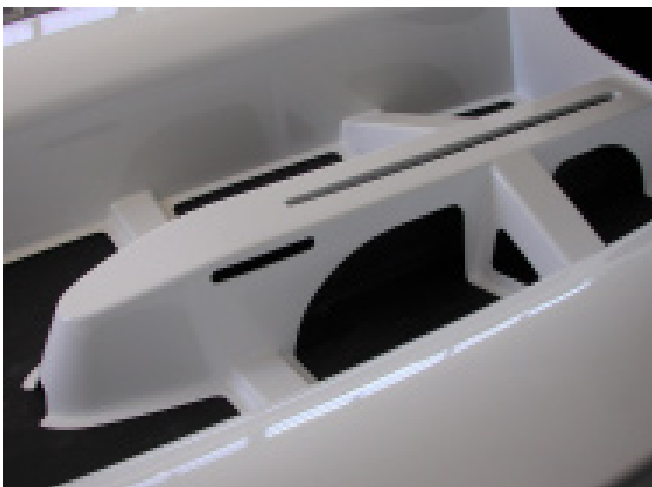
- 1 The low aft thwart and down sloping for'ard thwart open up the cockpit making crew movements easier and the cockpit less cluttered. The angle and position of the front thwart is ideal for cleating and releasing the jib from the wire without interfering with the plate



- 2 The Rondar-like chute entry, which has been further widened to ease handling of the new kites, has greatly reduced the friction in the system and therefore wear and tear of both the crew and kite!

► Make fit-out easier and cleaner.

- 1 The hollow pyramid mast step has an open aft end that lines up with the sides of the centercase giving a continuous cavity along the centerline from the for'ard bulkhead to the aft end of the case. This opens up all sorts of possibilities for rigging control systems and elastic takeups.



- 2 The hollow aft thwart can be used as a conduit for control lines to the side tanks

- 3 A simple removable aluminium plate serves as a mounting for turning blocks at the side of the casing at the level of the aft thwart. It is locked in position by its shape (which forms a key-lock with the inside of the aft thwart and a single bolt rising up from the floor. It, and all its associated blocks and lines can be released and removed in less than a minute and replaced just as easily.

- 4 A new forestay tang has been designed to facilitate tensioning of the forestay from below or fitting a furler if required.

- 5 A moulded rebate in the foredeck for the standard Z-spar mast ram fitting that locates and stabilises the fitting precisely.



- 6 Other fit-out options are available.

SUMMARY

As most Aussies know the Australian dollar has been plummeting in value from virtual parity with the US dollar 20 years ago to only 54 cents today. This means our exports are cheap, as labour costs are relatively low in US dollar terms despite similar technology and educational levels. We are a cheap and very safe place to visit and are nuts about watersports. All this adds up to the fact that Australia is a great place to build, use and export boats. Which is probably why we have four active 505 builders. The other guys make great boats too.

The Fremantle 505 has resulted directly from the enthusiasm and interest of fanatical 505 enthusiasts combined with the efforts of expert boatbuilder and dinghy sailor, Brett Burvill. Five boats have now been completed including two pre-preg hulls and a 3rd pre-preg boat is under construction with another to follow. We have had advice and input from various other sources including the "By Design" engineering/naval architect group. Most importantly this boat is a distillation of what we believe to be the best ideas of all the other manufacturers of 505s plus many other high performance dinghies both in Australia and overseas. No doubt someone will improve on these ideas, we certainly plan to. **505**

BIGGER and STIFFER—Size DOES Matter

The Longer Luff Spinnaker Update

By Jesse Falsone

Six months have elapsed since I last reported on Long Luff Spinnaker developments (“Does Size Really Matter”, *Tank Talk*, Spring, 2002). Within that time I’ve personally logged over 30 days of sailing, most of them windy, with various new spinnaker designs. It’s funny because the “big spinnaker” doesn’t seem *that* big anymore. Experience breeds familiarity I suppose, but the speeds, now greater than before, seem normal, and the forces seem not so extreme. It’s just regular 505 sailing again, but a heck of a lot more fun.

To be sure, figuring out the new kite does take some time, so if you’ve been wasting precious windy afternoons mowing your lawn, you’ll be taking some transoms come the fall regattas. Fret not, however, because I’m going to clue you happy homeowners into a few of the idiosyncrasies of LLS and its accompanying rigging. You can buy me a beer at the next regatta!

Like most experienced crews, I’m biased and opinionated, and I think that my way is the right way. So, I’m going to give you *my* take on what’s fast. I spent a lot of time chasing second opinions in the previous article, and besides, *nobody* wanted to give me any data this time around! I was surprised at all the unreturned email and phone calls from various rock stars around the word (yeah, you know who you are). There are never any secrets in the 505 class until you start asking the right questions I guess. Need I digress.

A STIFFER RIG

Macy and I use a Proctor Cumulus section with a near-maximum spinnaker halyard height and I like it. Our theory for choosing the Cumulus was that we wanted a rig that could better handle the greater forces and accelerations that we would see at the 2002 Worlds in Australia. Is it faster than the D? No, not really as far as we can see unless you count a broken stick as being slow. My point is that the Cumulus just



Jesse Falsone and Macy Nelson working the big spinnaker in 18-20 knots on the West River in Galesville, Maryland

JOHN POTTER

doesn’t distort as much as the D going downwind, so the peace of mind that I get when I look up and see a reasonably shaped spar is worth it. In contrast, I’ve seen some unsupported D’s that look downright ugly on a windy spinnaker reach with either a large amount of side bend and/or inversion. I can only think that it’s only a matter of time before catastrophic failures occur sailing in heavy wind and waves. This may be all in my head, but we’ll see what happens in Australia. Five of the top 10 teams at this year’s North American’s now use a Cumulus, including the winners. The Cumulus is quickly becoming the predominant mast in Europe as reported in a recent issue of *Yachts and Yachting Magazine*.

You don’t need to go running to your local spar dealer if you

sail in light and moderate winds with a D. However, if you plan on competing with a D in heavy air, I think it’s prudent to stiffen up your rig. I outlined the current systems for stiffening the D in my first article. A few boats at the North American’s this year used these systems to good effect. I have heard that some boats in Northern



Size Matters CONTINUED

California were seeing some cracks developing in their spars despite the added stiffening, but they may have retrofitted older rigs.

We have not tried any additional stiffening with the Cumulus-like trap line twings or double spreaders because we don't think it's necessary. However, I'm not ruling anything out just yet! Lots of top sailors in the UK and Europe are using trap twings with all section types—even the Superspar M2. As previously reported, some Aussies are big on double spreaders.

Hamlin and Martin are using trapeze line twings on their Cumulus, but not for downwind sailing. They have actually installed the twing about 18 inches down from the hounds and shortened their spreaders to promote additional side bend for heavy air upwind sailing. It may be that they prefer more side bend to de-power when the breeze is on.

PRE-BEND – IT'S NOT JUST FOR LIGHT AIR ANYMORE

We have been very aggressive with our use of the pre-bender downwind, and I think this is an important adjustment for the LLS. I have found that substantial pre-bend on the downwind legs is critical to preserving a nice curve in the mast all the way from top to bottom. I've actually modified my pre-bender to allow for additional travel, and we can now pre-bend to approximately 2" above the zero setting on the standard Ullman tuning grid. Additional pre-bend does a few things downwind:

1. it really keeps the mast from inverting due to excessive pole compression;
2. when the mast is pre-bent down low and there is ample tension on the shrouds, the top of the mast is far less likely to take on extreme forward bend;
3. pre-bend keeps the mainsail shape smooth, a bit flatter, and the leech open;
4. pre-bend helps keep the pole off the headstay.

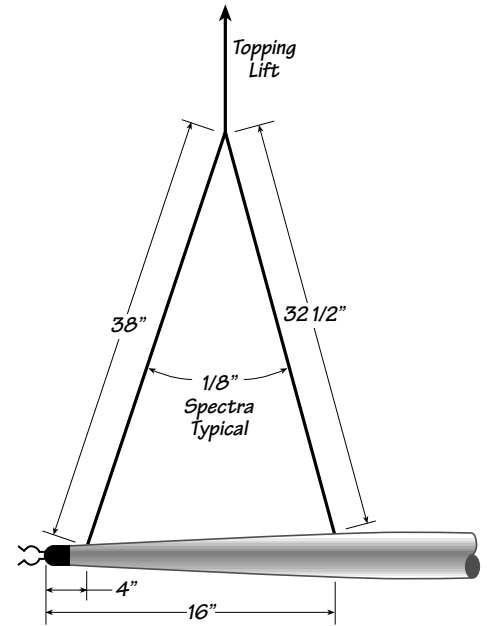
I'm a big believer in pre-bend downwind now. OK, Mike and Howie still don't use one perhaps because they prefer using a very short ram track that doesn't extend

above the boom band, but I don't see the downside to having it. You might want to add about a 6:1 or 8:1 purchase because it can be tough to raise downwind with the pole launched. The pin system is not very effective for this application because you really need to go to maximum pre-bend to get the desired effect. Our ram car is located 1-inch above the boom band at maximum pre-bend.

In conjunction with pre-bend, I recommend you use plenty of shroud tension while heavy air reaching. Like running backstays on a big boat, shroud tension helps keep the middle of the mast from inverting by inducing more bend.

TOPPING LIFT SOLUTIONS

I've tried a number of different topping lift rigging ideas to keep the pole at the correct height both when launched and stowed. I prefer to have my pole a few inches lower than most people because the 6-meter spinnaker flies a bit lower than the old one. My original jury-rig of simply attaching a piece of shock cord to the pole and the other end to the topping lift a few feet up worked, but was not very elegant. When the pole was stowed, the shock cord pulled the pole up and created a bunch of slack in the topping lift that would then get caught in the pole forks or around the pole. I then tried rigging an internal topping lift system that I thought was real slick. I installed a 16mm Harken Thru-Deck block on the outboard end of the pole where the upper eyestay is normally installed. I ran the topping lift through this block and inside the pole. I attached a stopper at the correct location, and attached a piece of shock cord with one end on the topping lift and the other tied to the bitter end of the pole launcher line which resides inside the pole too. The goal was to keep it clean and not disrupt the operation of my pole retractor shock cord that slides along the pole as it's launched. This rigging idea certainly represented an improvement, but it too created a problem. Since the topping lift now ran internally, the pole was more apt to rotate on its longitudinal axis (twist). This problem manifested itself in the pole launcher line occasionally jumping the Spiro sheave. I therefore had to compromise by running the topping lift externally along the pole to a length of



shock cord like Ethan's system pictured in the first article. With my system, I rigged the block high enough so that the pole retractor shock cord would not interfere. To prevent the pole from twisting I taped the shackles to the block on top of the pole. This essentially immobilizes the block and works quite nicely.

Barney Harris developed a nice system that uses a split topping lift. The longer forward line takes up the tension when the pole is launched while the aft line takes up the tension when the pole is stowed. If you like using a pole retractor shock cord, you will have to modify it to be fixed because it won't be able to slide along the pole. Check out the diagram.

FORK THE POLE

Ultimately, it would be nice if we had a slightly longer pole with this new spinnaker, but that probably won't happen because it hasn't been a big issue. I have found that when it's windy or in dead downwind sailing mode, the LLS flies a bit further out in front of the boat than the old spinnaker. Instead of the guy compressing into the forks, it can sometimes pull out when re-



Size Matters CONTINUED

launching the pole or simply blow out in a puff. This is a real pain in the ass, and certainly isn't fast. A longer pole would prevent this from happening. I have found that in moderate air sailing DDW, you need to keep a bit more compression on the spinnaker sheet to hold it in the forks when the pole is aft, or when the boat rolls to weather.

When it's windy, it's a good idea to tighten up your forks. Mike Martin says you can do this on the water by bending the forks in against the mast, then shove your 5/16" jib sheet (yes, jib sheet) into the forks, and rip out again. The act of rapidly pulling them out opens up the forks just enough so that a 3/16" spinnaker sheet tail will fit snug. Note that this only works for these size sheets.



Jesse's custom pole forks

In my quest to make a better pole fork, I fabricated my own that use larger diameter stainless rod and a slightly longer body. I've found that the larger rod doesn't bend open as easily and the guy stays in the forks a bit better as long as the spacing is correct. My rod bends back 180 degrees so that there are is nothing for the jib sheets to hook on and no sharp ends to poke through a sail. The longer body provides a better angle for the guy to slide back along the pole allowing for the pole to shoot forward when launching instead of coming aft (which is very annoying and slow). I also used some high-quality black Delrin. Black Delrin is better than white because it is opaque and much more resistant to UV degradation.

You might also want to consider using a pole with a Fico fitting on the end. This fitting has jaws that hold the sheet in the pole. You don't need to open the jaws when inserting the guy, but you need to open

them for removal, and that slows your jibe down a bit. It's a nice fitting for the 505 if you want a captive end, but it is a bit heavy and long (you will have to cut your pole down to make it legal—99 inches total length).

FOREGUY

I prefer the foreguy a bit further forward to stop the pole from bouncing. Note here that my pole is lowered about 6 inches from the old standard when launched. Relocating the foreguy exit helps eliminate bounce by preserving the original geometry. The downside is that the foreguy will be effectively shorter on one side because it has to bend around the ram strut. This doesn't seem to be a major problem as long as you have some low stretch sheets and you don't mind the guy being a little bit off the headstay on one jibe.

Some people have rigged an adjustable foreguy to regulate pole height—tighter for a lower pole and looser for a higher one. The advantage to an adjustable foreguy is it lets you regulate the luff tension which can be effective for promoting a more asymmetrical spinnaker shape. It's no secret that the fastest spinnaker shapes for apparent wind sailing are asymmetric (like on skiffs). Anything you can do to induce this more efficient shape the faster you will be. Since I don't use an adjustable topping lift, I rigged a simple foreguy tensioner to the existing topping lift cleat on the centerboard cap. It's extremely easy to rig with a small piece of line and a floating block that floats on the foreguy between the mast step and the foredeck.

LLS DESIGN

How big can you go with the LLS is certainly the question everyone is trying to answer, albeit secretly for now. According to Ethan Bixby, the theoretical maximum dimension is about 241 ft², but I don't think anyone is having

much success with kites that big because they start interfering with the other sails, and can't reach very well. Most of the monster kites seem to be settling in around the 210 ft², but with different foot and mid-girth dimensions. I don't know what designs will ultimately prove to be the fastest yet. My hunch is that the fastest spinnakers will be over 200 ft² and will prove to be quick in wire running conditions up to when it starts really nuking and control starts to be a major factor—say 23 knots. I'm assuming this for a Worlds course where there are two runs, with the first run on the second leg, and the reaches are 90 degrees eliminating the need for a tight reaching design. I also think that the smaller LLS, say around 175 square feet, will be best for lighter air when we're going DDW and flying shape becomes important, or if the race committee decides to tighten up the reaches to keep us on the wire. It's all speculation right now backed by limited data and testing, so take it with a grain of salt. The top 2 boats at this year's ECCs were using big kites—one North and one



Size Matters CONTINUED

Ullman. The fastest boats at the North American's were also using relatively large spinnakers. The current Ullman design (the one Howie and Mike used) is much larger on the foot than the current large North Design—4.4 vs. 4.0 meters. However, the Ullman is much more triangular and has less area higher up in the sail than the North. I think the overall size differences are negligible. The big Pinnell & Bax design is similar to the North in basic dimensions. Other sailmakers in Australia seem to also be going towards designs with more parallel leeches up through the midgirth.

What about shape and cut you ask? I'm a proponent of relatively full spinnakers that are powerful and forgiving. I prefer to look around on the wire and not limit my focus to spinnaker trim, and that is why I detest overly flat shapes that collapse the second you take your eye off them. I also got tired of our crosscut heads getting all distorted at the seams halfway into the season. The crosscut, or horizontal seams, allow the spinnaker to take on a somewhat asymmetric shape on the reaches and provide more stability. Ethan wanted to preserve this feature while also prolonging the competitive life of the sail. He has developed a nice design that achieves these goals by incorporating a radial head design.

The first meter or so has radial panels (vertical seams), a crosscut middle, and radial clews. An additional benefit is that the radial head seems to reduce the awful "elephant's ass" (long, vertical crease) that crosscut sails are prone to. Some designers abroad have gone to a full tri-radial. There were a number of Canadian Quantum tri-radial spinnakers in Kingston, and they proved to be fast in light air.

SHOULD YOU RE-CUT?

I think it's been proven that re-cutting a good 5-meter spinnaker is not a bad option. Our tests seem to indicate that a re-cut 5-meter medium spinnaker provides enough area to be competitive. This spinnaker is probably up around the 190 square foot range and has never been slow against the new North AP designs. The re-cut North and Ullman chickens also seem to go well in light air when flying shape is more important than sheer size. So, if you have a recent 5m luff medium or chicken that's in good shape, I would advocate doing the conversion if you're on a tight budget, or if you want a reasonable practice sail.

INTANGIBLES

I prefer a deeper rudder with the LLS as a safety against loosing grip on those windy reaches. The new high-aspect rudders are

about 5 inches longer than the standard rudders of old, and they definitely give you a higher degree of confidence when the boat is heeled over. I'm finding it's beneficial to keep my weight further back on tighter windy reaches. This technique pushes the transom a bit deeper and prevents air from getting under the hull and ventilating the rudder. I also think having a flattening reef is a must to keep the boom out of the water on the reaches. If you don't have one—get one!

THE VERDICT (THUS FAR)

Top competitors want to be bigger and stiffer, but we're not sure just how big and stiff we can be and still be a stud on the water. There's less emphasis on the high road now with the new course, so going to a spinnaker that is less of a compromise between a runner and a reacher is good logic. My recommendation for those of you wanting to buy only one chute is to re-cut a good 5-meter chicken chute for light air conditions, and buy a new, larger kite for that 10-22 knot range where your looking for power.

Finally, none of this advice will make much of a difference unless you apply it. Get out there and go sailing! **505**

Another Solution for the D - From the mind of Team SPOT

We loathed the idea of hanging more spreaders and shrouds on the 505 mast. More windage, more weight aloft, and additional tuning complexity to a system that we had invested 5 years developing. So, we started last fall with an old mast and attached four spinnaker halyard hoist points spaced at six-inch intervals below max height.

During practice sessions that commenced in Florida in January, we sailed with the spinnaker hoisted to heights at and below the maximum allowable by class rules. We reviewed feedback from fellow 505ers who sailed in the Australian Nationals and observed Macy and Jesse who switched from the Proctor D to a Cumulus mast section. We also watched the rig—our initial guess was that we would have global stability issues—spreader attachments failing allowing the mast to invert and fail catastrophically. This never happened no matter how much wind we sailed in.

We watched the main sail shape - and noted that the vast majority of the effect on the main was due to the flexure of the tip and not the middle of the mast itself. Middle mast flex could be reduced with ram and shroud tension, but there was no way to reduce the tip flex.

Finally, we did some analysis and found that by lowering the hoist point 12.4cm on the D we would have the same material stress as the Cumulus. By lowering 5cm we would get the same deflection above the hounds as a Cumulus. Our testing had shown that lowering the halyard height more than 20cm was noticeably detrimental to the spinnaker and our performance. We selected our halyard height to be around 15cm below the maximum allowable.

We then installed a lift to bring the halyard up to max height for light to moderate wind sailing. This consists of 7/64ths Spectra and a small block lead to a cleat on the centerboard trunk. Class rules state that the halyard must be pulled at right angles to the mast for measurement, so we located the halyard lift fittings just above the maximum legal limit so that the halyard is dead on when hoisted.

In operation we will sail with the halyard at maximum height in any breeze up to 18 or so knots. Above this we will simply release the lift and allow it to function from the lower hoist height. Our D mast is less stressed and less flexed than the Cumulus masts others use, and we have not had to add extra spreaders or shrouds. Our upwind set up remains unchanged.

Carol and Carl Buchan — An Interview

By Bailey White



DR. BOB WOELFEL

Carl and Carol Buchan at the Gorge in their Rondar.

Carol and Carl, I think your activity in the 505 class is outstanding and really good for the fleet. You are showing that a boat that is not a Waterat or Hamlin can compete very effectively on the West Coast and in the North Americans. You are also showing how a talented husband and wife team can compete at the top level.

Q: When did you first start sailing 505s? How long of a respite from 505 racing did you take before rejoining the fleet recently?

A: (Carol) We started sailing the 505 in 1976. We sailed our first North Americans in 1977 in Port Townsend and the Worlds in Denmark in 1978. The last regatta we sailed during that time was in 1990, the NA's in San Francisco and then sold the boat the following year to Robin Brown.

Q: What interested you in coming back? Why the 505? Do you actively sail other boats besides the 505?

A: (Carol) Last fall Morgan Larson offered to let us sail his boat while he was in New Zealand, and that got the wheels turning in our heads. Shortly afterwards, Carl was staying at Howard Hamlin's house with our daughter while she was sailing a college regatta. The photos on the wall and the boat in the garage got him thinking even more. Paul Von Grey got us out sailing during the winter and a planing spinnaker reach did the final convincing. We still race the Tasar and Carl sails the Laser over the winter.

Q: Everyone was really impressed by the results the two of you achieved at both the PCCs in the Gorge and the North Americans in LA. How were you able to get up to top speed so quickly after being away from the boat

for so long? Have things changed much since you last sailed the 505?

A: (Carl) It really helps that there is so much info available about setting up and tuning the 505 on the internet and from the sailors directly. Also we went with pretty proven stuff in terms of sails, spars and hull. There are some different things that would be fun to try but we felt like we didn't want to be out in left field to start with. The biggest changes since we were in the class before are the smaller, higher aspect blades (although we experimented with a rudder in the late 70's that we called the "popsicle stick", the foil was too thin and you couldn't even steer the boat if the jib wasn't pulled in) and the bigger kite, along with the way it changes the tactics off the wind. I think the tactics with the bigger kite was the hardest

thing for us, especially since you need to sail a bit in big fleets to get used to it. The other thing that was difficult was getting my body used to sailing the 505 and trapezing again.

Q: Are you calibrated to Howard's tuning matrix or do you use a different set of numbers?

A: (Carl) We use Howard's rake numbers as a guide. I also think our ram, outhaul, and CB pin are pretty similar. We seem to carry our shrouds a little tighter than he is currently, this may be partly due to the fact that our jib leads are further inboard due to the width of the Rondar side tanks, also because we are a little lighter. As a result of the tighter shrouds, we carry our spreaders a little further forward. You change one thing and everything goes to pieces. From that point we experiment with the vang and cunningham to see what works for the conditions.

Q: Carl, I'm very impressed you made your own set of foils for the boat. Bruce Edwards told me he asked you how much you charge if you made a set for him and you replied, "You couldn't afford it." J How long did it take you to build them? Are you happy with the results? Have you built a lot of foils in the past?

A: (Carl) I think I worked pretty hard for a weekend plus the next evening getting the blades shaped and glassed (we used a vacuum bag for the first time and that was cool), then 4 or 5 evenings on fairing and making the gudgeons/tillerhead. They still are not painted except for a light coat on the rudder for weed control. I also had some help from Carol and from Jaime Mack, a Europe sailor who is a composites engineer. I have built my own 505 blades in the past except one time we borrowed a set of Lindsay's for a regatta. I am happy with the current blades from a speed standpoint. The most important thing however, is that they not break and

that the rudder steers the boat. On those scores, I am watching them since I used cedar for the cores. Cedar has given me some trouble in past rudders (I am hoping that the greater use of carbon will help here). It is hard for me to get great spruce in sufficient quantities to select the pieces I want now without going to a lot of trouble and cost. Another issue is that the rudder did stall once, hopefully just from a weed or the fact that the aft bailer was open. We have pushed it harder in more wind at other times, and it has been ok. The profiles are based on patterns provided by Peter Alarie at Guck that are based on Mike Martin shapes modified to fit the Rondar. I made the rudder a little deeper for the big kite, and I made the board a little smaller (I tried for 505 square inches). For the sections I use the eyeball method. I tried making templates and using a router once but I couldn't hack it and I threw the board in the garbage before I even glassed it. I guess I am used to doing it this way.

Q: A lot of people are planning on buying a Van Munster. Will you stick with your Rondar?

A: (Carl) There are a lot of good looking 505's being built now, both in this country and abroad. We are happy with the Rondar. I like the way it feels, although it could be that after being away for a while any 505 would feel good. I do have some CB cap/thwart modifications in mind for this winter; hopefully I won't screw the boat up. There is a Van Munster coming to Seattle, and I hope to get a chance to compare.

Q: Both of you have a tremendous number of sailing accomplishments. Can you provide a summary of some of the awards you have won?

A: (Carol) Together we won the 505 NA's in 1985. We won the Tasar Worlds in England last summer. Carl has won the Youth Worlds '75, FD Worlds '83, Olympic Gold '84, Star Worlds '92. He also has won a Laser Nationals in three different decades, '78,'80,'00. I've won

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Adams Cup in '87 and '88. The Women's Doublehanded Nationals in '89 and the Canadian Women's Match Race Champs in '94.

Q: How often are you out on the water sailing each year?

A: (Carol) We sail about every other weekend from April through October and a couple nights during the week. It is sporadic during the winter. We pick two or three big regattas a year.

Q: What do you do when you aren't sailing?

A: (Carol) Carl works for his dad developing property and building houses. I am a freelance graphic designer. Most of our free time is spent with our children Lindsay, 20 and Jamie, 18. Our family summer cruise is a priority as well as spending time together in the San Juan Islands.

Q: Do you get along well when the two of you are racing together? Does racing cause arguments or frustrations?

A: (Carol) We have been working it out for 25 years now. The secret of success seems to be mutual respect and keeping criticism to a minimum. Last year we put a lot of pressure on ourselves training for the Tasar Worlds and at times things got a little testy. We try to keep it fun and put things in perspective.

Q: I'm guessing that the two of you are very light compared to most of the top teams. Was that a problem in the big breeze of the Gorge

A: (Carol) We have never felt that our combined weight by itself was a disadvantage. The reality is that the 505 is a lot of boat for someone weighing 120 pounds. No matter how great a shape I am in, there is a limit to my strength due to my size. On the other hand, Carl has the height advantage on the wire. In the past when we sailed, Carl could wear weight.

Q: You seem to bring a lot of independent thinking to the 505. Do you think the almost pure one design nature of the 505 West Coast fleet has led to any oversights in the boat setup, boat handling, or racing style?

A: (Carl) One of the things that I like about the 505 is the chance to be creative which is not possible in some other classes. I think the similar set-ups of the

boats on the West Coast is good because it gives a benchmark to help get up to a competitive speed. Then you need to keep experimenting from there. I know from talking to Howard/Mike that even though they have great speed and sail the boat very well they are always thinking about better ways to do things. I can remember sailing the Star in 1990: we were very fast all year, knew the settings that worked, and used them all the time. When we (I didn't sail with Carol at this one) got to the Worlds we encountered some conditions that we were not used to. Not only did we not know the settings to use, we didn't know enough about the way things worked together to be able to start making the changes we needed. Sailing in 100 boat fleets also requires some changes in the way you sail the boat. Now we will make a conscious effort to try different stuff if the right situations. Even if it doesn't work sometimes you learn as much from your failures as your successes. Another example is in the

Tasar, we point high and have a good VMG, so to develop another gear, we have gone sailing a few times with the goal of being the fastest through the water, lowest pointing boat on the course even though it may not be the best for the short term. The time will come when we may get a condition or tactical situation where it will be nice to have that gear. This type of testing builds small refinements. On a larger scale, development seems to go in leaps. In 12 meters, spade rudders or winged keels would be an example, in 505's the high aspect blades or the use of large amounts of rake come to mind.

Q: I know it is a long drive for many events, but hope you will be racing in the full West Coast series next year. What are your plans? Are you going to the Worlds this year or next?

A: (Carol) We are looking for some opportunities to sail in warmer climates in the winter and are hoping to get to the North Americans next summer. **505**



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SAILING STRONG

Abdominal and Back Strength - The Core Of Your Training Program

by: Kristin Strellis, BS and AFAA CPT Certified Personal Trainer

We all know sailing a 505 is a physically demanding sport, and now people are saying more and more that the skipper hiking hardest is fastest upwind. In the very heavy air regatta at Treasure Island in San Francisco Bay this summer, the top boat was hiking the hardest. While hiking or moving about the boat it is imperative to have strong abdominal and back muscles to support your spine.

I have been a personal trainer for four years and have always been interested in fitness. After starting to drive our boat with my husband on the wire, I developed six sailing specific exercises and two stretches that will challenge your core muscles and prepare them for the rigors of sailing. These are just recommendations and I suggest consulting with your physician prior to the start of any formal exercise program.

THE BICYCLE (FIG.1)

Lying on your back, engage the lower abs by pulling them towards your spine (hold this throughout). Bring your knees up to about a 45-degree angle; place your thumbs on your temples and your hands behind your head. Slowly cross your right elbow towards your left knee. Bring your left knee in towards your right elbow as you extend your left leg. Then switch. Keep breath relaxed and consistent throughout and keep low back flush to the mat.



FIG. 1 The Bicycle

SIT BACK (FIG. 2)

Start in a sitting position, extend your arms forward and relax your shoulders. Pull your abdominal muscles in towards your spine as you round your lower back—maintain this position throughout. Slowly lower yourself back as you keep your feet flat on the floor. Feel your abdominals lower you to the floor. Roll to your side and use your arms to push yourself back to a sitting position.



FIG. 2 Sit Back

ABDOMINAL REACH AND EXTEND (FIG.3A, FIG.3B, FIG. 3C)

Start on your back. Draw your abdominals in to support the spine and raise your legs to 90 degrees with your knees directly above your hips. Do not let your back arch off the floor during the exercise—maintain this position throughout. Slowly reach your arms forward to place a ball on your shins. Leave the ball on your shins and reach your arms back over your head. Slowly reach forward again, take the ball off the shins and lower the ball over your head (arms are extended) and repeat. This exercise can be performed with a medicine ball, soccer ball, bocce ball etc.

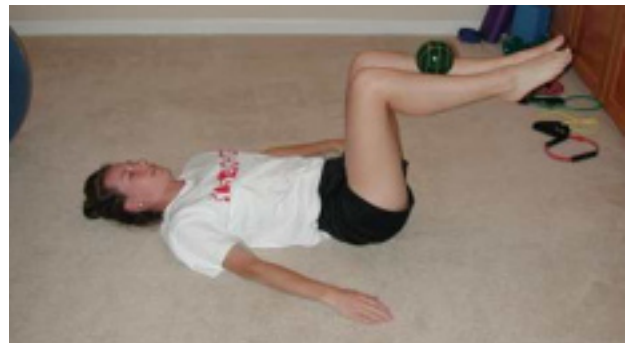


FIG. 3A Abdominal Reach and Extend

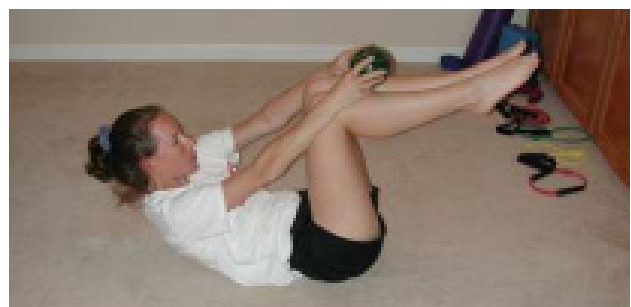


FIG. 3B Abdominal Reach and Extend



FIG. 3C *Abdominal Reach and Extend*

THE SIDE AND HIP STRENGTHENER (FIG. 4A, FIG. 4B)

Start on your side with your bottom arm under your head and your top hand on the floor for support. Keep your hips stacked (top hip on top of your bottom hip) and your legs extended. Lift your top leg up to hip height, lift your bottom leg to your top leg, then lift your top leg up again, then lower both legs slowly to the floor.

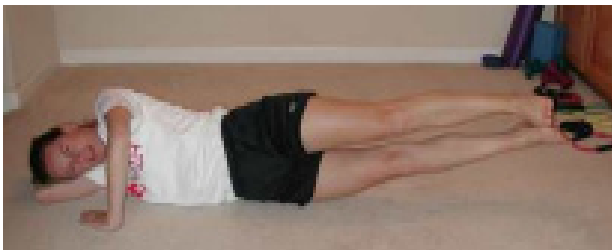


FIG. 4A *Abdominal Reach and Extend*



FIG. 4B *Side and Hip Strengtbener*

BACK EXTENSION (FIG. 5)

Lie face down with your hands placed under your forehead and your elbows lifted off the floor. Keeping your toes down, slowly lift your chest off the floor a few inches. Keep your eyes down on the floor to keep your head in line with your spine. Exhale as your extend and lift, inhale as you slowly lower. Be careful not to hyper extend your back by lifting to high.



FIG. 5 *Back Extension*

OPPOSITE ARM AND LEG RAISE (FIG 6A, FIG. 6B)

Lying on your stomach extend your arms out and your legs out. Slowly lift and extend your right arm and left leg off the floor a few inches, then lower and switch. Progress this exercise by performing it on an exercise ball to improve balance and coordination.



FIG. 6A *Opposite Arm and Leg Raise*

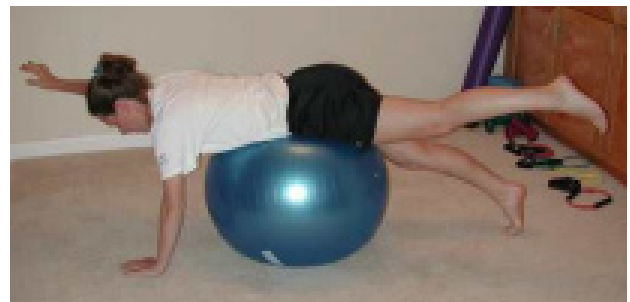


FIG. 6B *Opposite Arm and Leg Raise*

MODIFIED COBRA (FIG. 7)

Start lying on your stomach; draw your legs in together. Place your forearms on the floor so your elbows are directly under your shoulders. Slowly press your chest forward, keeping your hips on the floor. Take 5 deep breaths.



FIG. 7 *Modified Cobra*

SPINAL TWIST (FIG. 8)

Start lying on your back with the soles of your feet on the floor and your arms extended perpendicular to your torso. Take a deep breath in and then slowly lower your knees to one side as you exhale. Maintain shoulder contact with the floor at all time.



FIG. 8 Spinal Twist

THE PROGRAM

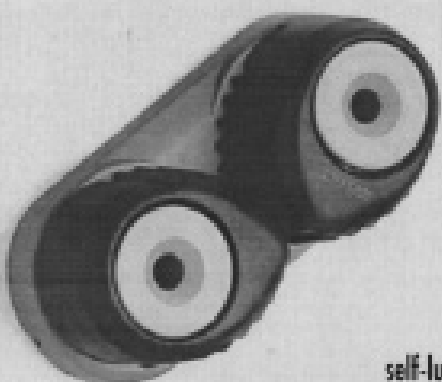
Start with 1 set of 10-12 repetitions. Progress to 2 and then 3 sets of 10-12 repetitions with a 40-60 second rest between sets. Perform exercises every other day.

I hope this program helps you increase your abdominal endurance so you can hike stronger and longer. See you on the water!

This was the first article in a series dedicated to tuning the sailor. Please send future Sailing Strong topic requests to Kristin at strellis@yahoo.com **505**

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Cabrillo Yacht Club/August 14-18
Light to Moderate Winds

PLACE / TEAM	POINTS
1 Hamlin/Martin	25
2 Buchan/Buchan	33
3 Thompson/Zinn	38
4 Beckman/Benjamin	46
5 Moore/Alarie	50
6 Edwards/Shelton	57
7 Hagan/Park	63
8 Cox/Nelson	66
9 Adamson/Byron	73
10 Nelson/Falsone	81
11 Holt/Kuncl	87
12 Harris/James,	92
13 Jenkins/Merino	117
14 Harris-Adamson/Hall	128
15 Meller/Sparkman	135
16 Lieb/Smit	137
17 Cragg/Cross	146
18 Wheeler/Mais	151
19 Chatham/Schelster	154
20 Brown/Waterman	154
21 White/Woelfel	162
22 Ferrarone/Ferrarone	169
23 Meyer/Oswald	204
24 Ross/Engebretson	208
25 Staley/VanGrey	218
26 Jeangirard/Buzianii	219
27 Anderes/Hamelin	243
28 Strellis,/Strellis	248
29 Lieberman/Lieberman	254
30 Trainer/St. John	262
31 Ryhn/Watler	276

PACIFIC COAST CHAMPIONSHIPS

The Gorge/July 13-14
Heavy Winds

PLACE / TEAM	POINTS
1 Hamlin /Martin	14
2 Adamson/Alarie	18
3 Edwards/Shelton	21
4 Cox/Nelson	33
5 Brown/Johnson	38
6 Holt/Kuncl	47
7 Hagan/Park	60
8 Buchan/Buchan	62
9 Meade/Byron	65
10 Cragg/Cross	66
11 Lieb/Smith	70
12 Meyer/Hanke	76
13 Chatham/Schelster	90
14 White/Woelfel	98
15 McMinn/VonGrey	113
16 Asper/Pedlow	116
17 Henderson/Braden	123
18 Guy/Jeangirard	142
19 Ross/Engebretson	152
20 DesBrisay/Hansen	156
21 Plumbly/Corfu	164
22 Sinclair/Filley	174
23 Poe/Tuck	180
24 Pihl/Cammock	184
25 Trainor/St. James	190
26 DeVita/Crew	196
26 Hayley/Cummins	196

EAST COAST CHAMPIONSHIPS

Hyannis Yacht Club/July 27-28
Light to Heavy Winds

PLACE / TEAM	POINTS
1 Moore/Alarie	12
2 Nelson/Falsone	16
3 Boyd/TenHove	22
4 Harris/James	30
5 Collins/Butner	40
6 Fowler/Mills	43
7 Amthor/Amthor	47
8 Meller/Sparkman	60
9 Lovshin/Lovshin	64
10 Kivney/Smith	66
11 Hauser/Coe	74
12 Romey/Tihansky	86
13 Wyles/Beardsley	94
14 Fowler/Hobbs	103
15 Ashby/Adams	104
16 DeCouto/Mevay	106
17 Ferrarone/Ferrarone	114
18 Marini/Breslin	120
19 Breton/Breton	141
20 Dietz/Hurwitch	143
21 Long/Long	144
22 Jansen/Brady	149
23 Yindra/	158
24 Stetson/Stetson	159
25 Patterson/Raston	183
26 Maldari/Perez	187

NEW ENGLAND CHAMPIONSHIPS

Larchmont YC/September 22-23
Light Winds

1 Meller/Lockwood	7
2 Harris/Clayton	15
3 Boyd/ten Hove	17
4 Moss Lovshin/Lovshin	21
5 Collins/Andrew	28
6 Ferrarone/Ezra	35
7 Wyles/Beardsley	38
8 DeCouto/Mevay	45
9 Hauser/Mehaffey	48
10 Heintz/Vogel	60
11 Mignerey/Hanson	63
12 Cardoza/Gesing	74
13 Paterson/Temple-Raston	78
14 Shewan/Shewan	81
15 Leisegang/Anderson	82
16 Maldari/Maldari	93

Put it in Print!

Got an idea? An opinion that everyone is entitled to? Tactical or rigging tip?

Submit it to Tank Talk

PACIFIC NORTHWEST

Charles Hansen

While *Tank Talk* is the American Section's magazine, Nick Adamson coordinated with the Canadian Fleet to schedule the PCCs at the Gorge and the Canadian Championships at Squamish back to back to encourage boats from all over the West Coast to attend. For this reason, below is the coverage of the Canadian Championships at Squamish. For those that made the trip, it was well worth it. Plus Cynthia bought a keg for the regatta, even though there were only 10 boats attending!

This year, **Fleet One**, based out of **Kitsilano Yacht Club** in Vancouver BC, hosted the 2002 505 Canadian Championships. With a careful study of our options, we borrowed deep water (190m) anchoring equipment from **West Vancouver Yacht Club** and race management equipment from **Kitsilano Yacht Club** and headed for Squamish, BC on July 20 and 21 with its more predictable and stronger winds. We were not disappointed.

10 boats, mostly local boats, plus three from the US North West and one from the US Southwest (Northern California which is South to us!) registered and sailed in this sunny and breezy event. Can you imagine tacking 1 boat length away from 500 metre cliffs where the closer you get the more advantage you gain... can you imagine off wind work where the limit of how high you can sail is how close you want your Spin Pole to come to a cliff face and you actually have to bare off before gibing to keep the boom from hitting the cliffs... this and a sandbar and a river outflow current made for some interesting close quarters situations during the 9 one hour races this weekend.

On Saturday, the fleet was dominated by **Phil Cragg** and his crew **David Cross** on the flat water in the 15-18 knots of inflow wind. The race for second was closely contended by 5 boats for the first three races and then by 4 boats for race 4 and 5 after **Paul Von Grey's** boat suffered a catastrophic steering failure when **Cynthia Des Brisay** slipped and snapped off the tiller forcing them to miss races 4 & 5. At the end of Saturday's racing we saw **Phil Cragg** firmly in first place with 9 points. **Ian Plumbley**, with crew **Reto Corfu** sailed into second place by one point ahead of third place **John Hayley** and crew **Winston Cummins** and visiting Californians **Bailey White** and crew **Rob**

Woelfel. The Seattle team of **John Henderson** and **Ben Braden** were still within striking distance if they could sail well on Sunday.

Sunday brought a weather report of Northerly wind further out on the coast. This delayed the scheduled start of the sixth race as it effected the development of the usual 11 AM inflow... this came in at 11:30... as forecast! Sunday's racing was completely dominated by team **Cynthia Des Brisay** and **Paul Von Grey** (with a modified and shorter tiller). It makes one wonder what might have happened if **Cynthia** could have kept her feet firmly on the deck on Saturday. Despite this superb performance on Sunday of two firsts, a second and a third, it was not nearly enough to challenge the top three who again sailed consistently well in the lighter 12-15 knots inflow wind on Sunday. **Phil Cragg** and **David Cross** also earned two firsts on Sunday, showing, beyond a doubt, that they are this year's Canadian Champions in the 505.

The trophies for this event happened to be residing in the trophy case of **Jeff Boyd** in Kingston, Ontario on this particular day, so the honours of the Canadian Championships had to be bestowed upon **Phil Cragg** and **David Cross** symbolically.

Many volunteers helped to bring this event off successfully. Special mention needs to go to **Francis Cross**, our Principle Race officer, who was heading up the Race Committee. The only whining that was heard was the abandonment of race four

owing to the departure of a 30,000 tonne bulk carrier that was backing over the finish line. Irrespective of that, it was a job well done by **Francis** and her team.

Running a regatta from a box at an unfamiliar venue is difficult and expensive. Many supporters came forward to contribute to defraying the cost of running this event:

David and Francis Cross Quantum Sail Design contributed funding, door prizes and one employee to help with mark set

Phil Cragg (2002 Canadian 505 Champion) **Pacific Yacht Sales** supplied the race Committee boat and fuel

Greg Johnson Pacificage helped with the production of T-shirts

Sue Athmann PNW graphic artist who designed the T-shirts

Andy Allen Seaspan International donated door prizes

Rich Mundell West Marine sponsored the Saturday evening Tech talk by donating draw prizes

Kevin Black West Vancouver Yacht Club loaned deep water anchoring equipment and trained volunteers in anchoring techniques

Kitsilano Yacht Club Loaned mark boats, marks, race management equipment and boat operators

Squamish Yacht Club Provided a race headquarters

505



The Cliffs at the 2002 505 Canadian Championships, Squamish, British Columbia

DR. BOB WOELFEL

WEST COAST

Bailey White

THE 70 MILE DELTA DITCH RUN

Rob Woelfel and I competed this year in the 70 mile from Richmond in San Francisco Bay east to Stockton on the San Joaquin river, one of the two major rivers that feeds the bay. The annual race, called the Delta Ditch Run, is a fixture for ULDBs and many classes. The breeze mostly follows the winding route dead down wind with a few legs that require reaching. It's the only race I know of in Northern California that you don't have to wear a wetsuit for since the water shifts to warm, fresh water less than 20 miles into the race. Bruce Edwards and Eric Willis did the race a couple of years ago. Nick Adamson put the race on the fleet calendar as optional for Northern California. Rob and I were the only ones to make it out though this year. I hope we have a bigger turn out next year because this race is a blast.



The Delta Ditch Route from Richmond to Stockton
(We started at Treasure Island)

We started at Treasure Island. It took a lot longer to get ready for the race than a regular race because we were loading the boat up like a mini-ocean race. With spare gear, charts, lights, food, lots of water, and wetsuits stored at the mast, we definitely were not at minimum weight. We started in the last start with the multihulls and kept up with them quite well in the light air until holes hit different parts of the fleet. We pretty quickly caught up to the Santa Cruz 27s and other small ULDBs and Wylie Wabbits. The breeze stayed light for the first several hours. It was 2 PM, we had 60 miles to go, and we had been racing for 4 hours! A couple of boats turned around, and I wondered if we should.

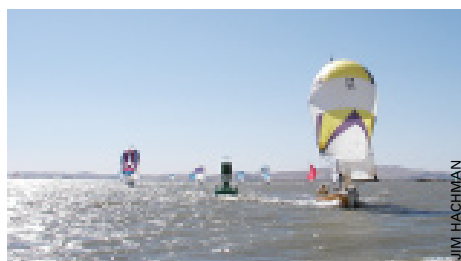
Thankfully the breeze picked up and we were into the white caps we expected. Sailing the boat dead down wind with the board back past the numbers, we were surprised to see that we weren't that much faster than the ULDBs. Boats like the Express 27s and Olson 30

planned well and went fast downwind. The Wabbit, with almost 24 feet of waterline and a shape like a pencil, showed itself to be a good little sled. Rob said he wanted to work to win, and we started wire running, reaching up away from the fleet around us. We were singing "American Woman" as we jammed over the water and crossed well ahead of boats that we had been sailing with.



The wind filled in and wire running started to pay. Pumped, we started wire running continuously and sometimes got stuck with some really unfavorable shifts and other times had awesome speed made good, only to give it back on another bad shift or unfavorable jibe. We ended up probably sailing 30-40 miles wire running and 20-30 miles dead down wind. We found that the boat seemed much easier to sail wire running because of the way it responds to shifts and gusts while wire running versus going dead down, but sometimes the risk of running aground in a narrow channel outweighed the benefits of being on the wire. Big boats on port pole didn't know what to make of us blazing towards them on starboard. Several times we had to jibe and get out of there. Rob told them to take their kites down and do circles, but for some crazy reason, they just kept going. Maybe it had to do with the fact that a couple of children were on the bow and sandwiches were being passed around. Rob, I guess you need to read up on the rules.

The times we were strongest were the reaching legs. We could carry the kite when no one else could, and with the breeze as big as it was, there wasn't much boat in the water. It's pretty thrilling to be gobbling up boats



A few of the many boats competing in the great Ditch Run. Notice this picture is sharper because the boats are going slower.

with PHRFs of 45 or lower like they are standing still on the reaches. It's also pretty thrilling to be screaming towards a rock levee with the kite up, wishing you could check the chart on page 33 for water depth!

While sailing through a few spots that were very breezy with heavy gusts, I noticed that the pole would deflect when the gusts hit. I was really surprised to see this. The pole wasn't touching the headstay, but would buckle as the puff hit and then spring back quickly. We had the topping lift up pretty high as that seems to help us go lower. Maybe it was too high. It was also really breezy though because we have never seen the pole buckle since and that includes the Gorge and San Francisco Bay. Each of these puffs would send us lower and lower until it seemed like we were wire running almost straight downwind. Ask Mike Holt, it was windy!

As we got closer to the finish around 8:00 PM, the breeze lightened and we could talk more easily to boats as we passed them. People kept asking us where we started. They were pretty amazed when we replied, "Treasure Island." At the end an IMS 50 boat tailgated us to steal our wind before finally going below us rather than above us. Otherwise, we were stoked to get in at 9:00 PM, making for an 11 hour day sailing, starting several miles away from Richmond at Treasure Island.

A bunch of 505 sailors did very well in other classes. Mike Holt and Jay Kunch had a very strong finish in Mike's Melges 24. They hauled out on the crane right before us. You should have seen Jay's face when we sailed up to the dock behind them. He looked pretty surprised to see our smiling faces and my Hamlin come in. Craig Perez won his class on his Express 34.

We got comments from almost everyone that we crossed paths with saying how impressed they were with the boat and the fact we did this race. One guy said as we passed he could see me with a big grin on my face the whole time. One Santa Cruz 27 crew I ate dinner with told me how excited they are to host the worlds in 2004. They love watching the 505s race in Santa Cruz. This race is an excellent way to advertise the fleet.

I recommend this race to anyone. Our jibes definitely improved through the long practice. It was a lot of fun and a great experience for Rob and I as we continue to develop as a team. The class definitely benefited from the exposure, and we didn't break a thing. I hope others can make the race next year.

THE ROCKIES

Mark Angliss

Good wind at Lake McConaughy (Big Mac) on June 14th and 15th provided sailing and swimming opportunities for four teams from Colorado Fleet 36 participating in a well-organized coaching session with American Section President, Jesse Falsone.

We set up our camp in the trees at Arthur Bay, which is protected from the main lake. There was lots of white sandy beach to set up on and the channel to the lake was still navigable. Mark Angliss and Troy Vance arrived Thursday noon. Others arrived up until Friday night. Jesse arrived via Angliss "shuttle service" from Denver around 8 P.M. Friday. He immediately went to the beach to view the awaiting 505s and began giving frank advice on rigs to everyone until dark. 8014 & 5859 were rigged to carry the North Sails "re-cut" LLS spinnakers without any other standing rigging modifications to their Proctor D masts. We then returned to camp for more conversation.

Saturday morning dawned sunny with an 8-10 knot breeze blowing. Our plan for having a coach's motorboat fell through due to a steering breakdown. Jesse hopped into 8014 (*Mariab*), the first boat ready to go out. Jesse and Steve Z. sailed out through the channel which was only two boat lengths wide, but still deep enough to keep the board down. Fortunately, the wind was such that tacking through a 30-foot space between the banks was not necessary.

Jesse had a lot of advice on teamwork, tuning and boat handling. He ran Steve through tacking drills, reaching and running gybes. Steve learned how to sit still in the boat and let the crew do the balancing! He learned that if the crew is out, and the main is out, it's time to depower! Less hiking for the helmsman is a good thing! (Now he gets to tell his wife that she has to work harder when she's crewing! Oh yeah, that'll be fun to watch.)

Jesse and Steve returned to the beach to exchange people as a large storm with tornado watches approached the area from the North. The storm skirted the lake to the East and we delayed launching other

boats for an hour. Winds diminished and several boats launched in 15-20 knots. The wind was great and there were short surfing opportunities, which we don't see very often in Colorado or Nebraska! Jesse spent a significant amount of time sailing with each participant. He also had lots of information to share during on the beach sessions.

Jesse continued sailing with people through the day, and on Sunday in lighter winds, occasionally calling some rabbit starts with other boats. Many Fleet 36 sailors were seen returning to camp grinning from ear to ear after their session with Jesse.

Some of our newer sailors got a good feel for the potential of the boat in real wind! Jerr Dunlap and crew Joerg in 6632 (*Blow Me*), ripped across the lake with half their boat out of the water. This was Joerg's first time in a 505.

Mark Angliss, 5859 (*Heckler*), really liked working with the Long Luff Spinnaker (LLS) and learning advanced "real time" tuning techniques. Troy, Mark's crew on 5859 with Jesse at the helm, did a lot of wire time with the LLS and got pumped to go out and sail more.

Steve Peck, crew on 7318 (*Dumptruck*), learned to be a more effective crew by moving in the boat more, allowing the helm to concentrate on driving. Dick Peck, the driver on 7318, said, "This (wind) is what

we come here for!" Dick felt that the most important things that he got from the weekend clinic were the extended time sailing with Jesse when he got some valuable pointers on steering technique and some suggestions for small improvements on the impressive Peter Alarie rigged 7318!

Erik Cockburn, 6136 (*Procrastinator*) the temporary crew on 8014, enjoyed the opportunity to mix up teams that resulted when one half of a team was out with Jesse and the other could go sailing. This weekend was his first sail with the LLS and he really liked it. Erik learned a lot about tuning upwind and that he needed to get out and practice!

Everyone had a great time and learned a lot. Jesse Falsone is a great coach, both knowledgeable and friendly! A camping style coaching weekend like this provided a great time for people to swap stories and questions about their boats. This was an excellent sailing weekend on some of the best water in our area. **YeeeeHaaw**—we don't have wind and water like that in Colorado!

We think that Jesse really preferred being hosed down by the fresh water, and he certainly got his share with non-stop directive wire rides at Big Mac! For information about sailing at Lake McConaughy check out <http://www.ngpc.state.ne.us/parks/bigmac.html>.

505

**Hot shots
needed**



Tank Talk is always looking for photos. Exercise your shutter-finger.



My 505 - Sailing USA 7886 *By Dan Strellis*



Our 505, USA 7886, is a 1986 Krywood with most of the bells and whistles you'll find on other modern boats (minus new sails but rigged with a big spinnaker for the 2002 North Americans). She sails typically a faster VMG by footing instead of pointing but that may be a consequence of her driver's preference or the lack of weight in her crew. She has been called "The Sweet Taste of Joy" and "Pink Panthers" by previous owners. Now she is named "Fasterin Fog" a.k.a. Team Strellis. We could spend hours writing about all the rigging changes we have made to the boat, but that would make for dull reading when you have Mike Martin, Barney Harris, and Ali Mueller's expert rigging articles to read. Instead, we wanted to write about what we love best about the 505 class.

The story starts around Memorial Day 2000. We've been sailing our 505 about 5 months when we decided to take a 2 week trip south from Berkeley for back-to-back regatta weekends in Long Beach and San Diego. We had such a great time meeting many of the Bay Area 505 sailors including

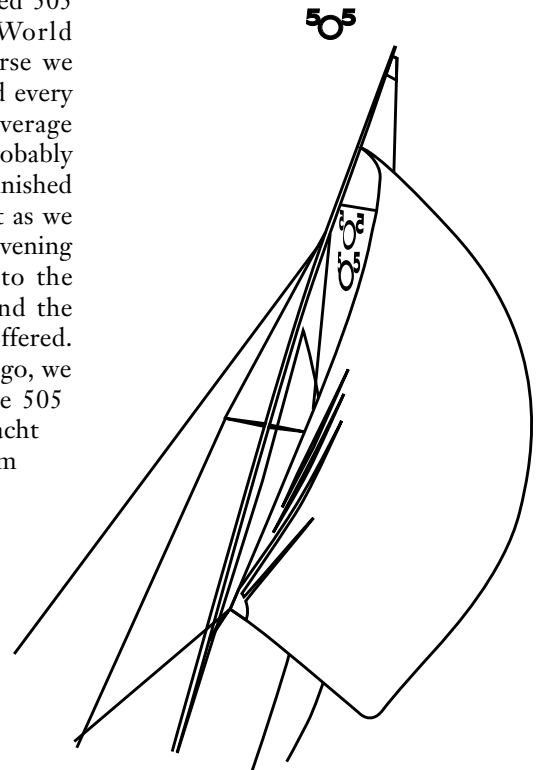
wonderful hospitality and more wonderful people. Mike let stay at his place overnight in the shadow of modestly displayed 505 trophies, including the 1999 World Championships. On the racecourse we duelled with Gary and Gina around every mark the entire weekend. The average delta of our finishing times was probably about 10 seconds over 5 races. We finished back in the fleet that weekend, but as we drove away from ABYC on Sunday evening we knew we were hooked—not to the winning, but to the competing and the camaraderie that the 505 sailors offered. With one regatta down and one to go, we headed towards San Diego for the 505 Invitational out of Mission Bay Yacht Club home of Team Weasel, Team Bob, Team School Bus, and Team Fever Pitch. Welcomes abounded as we reached the club. We were there only 5 minutes when Bob and Meg invited us to stay at their home for the weekend. How could we refuse... there was a hot tub and stories of mango margaritas. Dan and Bill invited us

Dave, Bruce, Doug, Aaron, Wendy, Eric, Grant, and Ian, that we wanted to meet some other folks in different fleets. We decided that a road trip with the boat would give us new opportunities to meet others on their home waters. We arrived in Long Beach for the Memorial Day regatta to find

to race on Thursday night in the TNT race. Again, we finished mid-fleet but still received a handsome MBYC mug from our hosts. The weekend was highlighted by more close racing and by being shot with beer projectiles at the final race finish line each day. If you have never raced with the San Diego fleet, you're missing a great time. Fleet 3 rocks!

So thanks Mike, Gary, Gina, Rob, Howie, Dan, Bill, Chris, Bob, and Meg for giving us a better welcome to 505 road tripping than anyone could expect. To us, the things that make the 505 class and our boat so great are the people that we meet sailing her. On the racecourse, we love to sail well like most everyone else. The 505 offer us this challenge. But it is the companionship that we have truly come to love.

Get your "My 505!" article in the next *Tank Talk*.... submit to strellis@yahoo.com.



The Spin On Circles

By Jesse Falsone

It's often said that the 505 class can go for years without a competitor lodging a protest. Since I've been in the class, I don't think a Protest Committee has ever convened at major US event, including the last 6 North Americans. As a class we take pride in the fact that protests are a rarity, and that we spend our time off the water next to the keg rather than in the protest room. It goes without saying that it's far better to aspire to drinking amongst the jovial faces of our fellow competitors and friends than recounting our tales of woe to a smug faced jury.

This is all good, except for one small problem – teams routinely foul each other and hit marks while racing 505's, and it's the rare team that actually spins a 720. I hear a lot of "Protest!" calls on the water, but see very few circles. I guess the teams making the infraction know that we'd rather drink beers than actually go forward with a hearing, so why spin? Maybe it's human nature—no consequences, no fear of reprisal.

The lure of the post-race cold ones (or perhaps the fear of missing out on those cold ones) is enough to thwart some people from filing despite the vocal exchange at the time of the incident. However, I found beer fear is not the only reason for this reluctance. Yes indeed, there are other reasons, and we as a class have cultivated a rather unhealthy culture of protest aversion that has resulted in some questionable sailing ethics.

Here are some common reasons for not protesting.

Increasingly, I've noticed the trend towards what I call "owesies" on the water. This is the way it works—I foul you, I owe you one. Go ahead and slam one on me anytime—I'll dip you hard on starboard or give you plenty of room on the port tack layline inside two lengths. Hey, I owe you one! Owesies are great because we often spend much of our time



Tight quarters at the 2002 Pacific Coast Championships, Columbia River

sailing next to the same people in this class, so it's not unreasonable to think that I'll pay you back later.

Then there's the "you beat me anyway!" clause. The theory can be explained as follows: "Yeah, I know I fouled you pretty bad in that race, and I know I shoulda done some circles, but you beat me across the finish line and our score has been settled." Someone pinch me here because I didn't know 505 sailing is merely a match race. I thought I was racing everybody in the fleet, and your foul might have caused me to lose more than just one boat.

One of the more unique ones I heard recently was the "I can't protest one of our suppliers" rule. We're a tight-knit bunch in the 505 class, and we do things for each other because it's part and parcel to this fraternity and to the genuine friendships we have forged. We don't want to protest someone that helps us out, especially where our wallets are concerned. This is a tough one, but do you let these same people pass you as a matter of course? No, you try and stay in front when you're beating them, and try and grind them down when you're not. Why then would you give them a free pass

to allow them to gas you off after a blatant foul?

I heard this one last year in a different fleet, but it was so good I had to include it. It's the unwritten rule that "Cool people don't protest". Apparently, the fact that I protested this person was totally uncool, and in fact, I'm not a cool person for *actually* going through with it. Boohoo. Well, in my bizarro-cool world, the cool people do their circles.

Now, I'm not advocating that every little infraction be protested or that we go out looking to cause an infraction like they do in the America's Cup (it's actually part of the game in the AC) just to screw someone. I am saying that people are getting away with some sloppy sailing at best, and some serious infractions at worst. Until we as a class assert that protests are just part of this complex game, that protests are nothing personal, and that the norm is to go forward with a protest rather than blow it off, we must be prepared to accept that this trend will continue to worsen. **505**

BackTime

This 1978 photo shows US 5686, a Rondar, in light air at Kitsilano Yacht Club, Vancouver, British Columbia. Joel and Craig McMinn bought it new in 1975 and rigged from a bare hull. The two campaigned the left coast from BC to CA between 1975-1981. Their home port was Willamette Sailing Club in the Portland area. At the time the fleet in Portland numbered 15 boats, their northern rivals (Seattle) had 25 active boats, and Vancouver, BC in the neighborhood of 20.



Brothers McMinn in US 5686

TANK TALK

The Magazine of the 505 Class
American Section

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