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MOVING TOWARD THE TOP OF THE FLEET

By Len Flock

Jack Kyger wrote an article last year and suggested that I might write some thoughts on 'go-fasts' and racing. It flattered me so much that I did it.

The best I can do is to attempt to make some observations on things I think I have learned about how to move into the top 10-20% of the fleet. From there on things get tougher! Others must divulge how to win the big one.

First there has to be the real desire to win that motivates one to start in December-January to look at pictures of last summer's racing sails and conclude that something must be done--or to turn the boat over and start the tedious process of producing a smooth bottom--or to order those new fittings that will give the desired settings of the sails--or just plan how you're going to get it all done the first week of spring! Certainly reading what recognized experts have to say can be of tremendous help, both on go fasts and tactics. Stuart Walker and Elvstrom books have been of the most help to me. The Racing Clinic series in One Design* have had some excellent articles in recent years on sails, centerboards, rudders, and tuning. Just thumbing through the monthly periodicals looking at what the "hot shots" sails look like can help, particularly when you are trying to formulate a mental picture of what good sails should look like.

To have a competitive Day Sailer I believe that: 1) the sails must be full and fitted to the type of mast; 2) the boat be fitted with tuning adjustments other than just sheet tension; 3) the underwater surfaces as fair and smooth as can be obtained and the centerboard and rudder shaped; 4) both the centerboard and rudder shimmed to eliminate all sloppiness.

Cross section profiles of the centerboard and rudder should conform to one of the NASA symmetrical profiles with blunt elliptical leading edges and squared-off trailing edges not more than 1/8" thick. The centerboards and rudders should have surfaces that are as true (no waviness) vertically and horizontally and as smooth as can be obtained. The leading 1/3 of the surface should be especially smooth, as should the first 1/3 of the hull. An increasing degree of surface roughness can be tolerated as one progresses to the stern of the boat. This is because the boundary layer becomes increasingly thicker and surface roughness can increase proportionately.

My hull is wet sanded to 600, rubbed with heavy duty rubbing compound and waxed (Yes, Ruth, with Turtle wax!) Wet sanded with 600 is probably good enough but this surface condition tends to get dirty fast and is difficult to clean. As for the wetted vs. non-wetted surface buffs, every place I sail these days, there's oil on the water from power boats that makes it a non-wetted surface as soon as the boat is launched. The polished and waxed surface is much easier to keep clean. There are differences of opinion on wetted vs. non-wetted surface - one well-known Palo Alto competitor uses a secret substance he gets from the disposal plant to obtain the desired surface condition.

As for sails, a full main and jib appear to be superior in all but heavy wind conditions, particularly with the options permitted for main sheet travelers and jib fairlead adjustment. A means for adjusting the main luff tension (cunningham) is a must.

The jib can be carried in quite close (about 12° is the minimum I use) but don't oversheet! I find that yarn telltales on the jib luff are indispensable both for beating and reaching. I also have telltales near the leach of the main. They mostly distract me because I can never get the top ones to behave properly. I pay a lot of attention to the leach of the main to be sure it does not hook to windward. Generally, it should parallel the center line of the boat when beating in moderate winds. Both the skipper and the crew should check the jib leach for the best setting of the slot. We try to set up a uniform-looking slot before the race.

The main and jib that I have used for the past two years are made by Hank Jotz in San Francisco. Hank is a successful small boat competitor (5-0-5, El Toro & FJ) and has spent considerable time working with sail development for small boats, including the Day Sailer. He fulfills my requirements of being interested and willing to give advice and close enough to take the boat to and set up for first hand observations.

The spinnaker is a 5-year-old Baxter & Cicero - not as full in the shoulders as some later ones but still seems to do a good job. The main and jib are full but I must confess I have

* Now Yacht Racing

never measured the draft (thickness) to cord ratio or where the maximum draft occurs. I would guess about 12-13% at about 50%. I have just had the top luff (above the hounds) of the main recut slightly so this part of the sail will develop a little more twist (fall off to leeward) - I hope it works!

Mast rake is something I haven't been able to formulate too much opinion about. Mine is raked slightly, mostly to accommodate the cuddy-mounted jib fairlead with the correct jib setting. Rake does affect the boat balance and weather helm. I am a believer in having as much weather helm as is consistent with good speed since the rudder provides lift to windward as well as the centerboard. (Don't use more than about 4° to 6° of tiller position). Boat balance is important and how it is achieved depends on the wind and water conditions. Except for drifting-type conditions, I try to sail it level or with just a little heel.

On reaching, balance is all important - no weather helm here. Fore and aft balance is determined by feel, speed relative to other boats and by sound. If I hear too much bow wave, I move back - too much stern gurgling, move forward. The harder the wind blows (and faster the boat speed) the farther back we move and the harder we hike until we are both on the stern corner hanging on by our toes. With heavy seas, the crew continually plays the jib or spinnaker and I the main and tiller if necessary. Try to steer the boat by balance and/or main adjustment.

The checklist on rounding the weather mark runs something like this: "Centerboard up (the amount depends on the boat speed). boom vang down, cunningham loose, outhaul loose, barber hauler out, jib luff loose, traveler out - GET THE HELL BACK!!"

All this is for planing, of course. To get the most out of the boat on reaches requires more concentration and technique than any other point of sailing. With planing conditions, more distance can be gained or lost than any other point of sailing.

Tactics or 'head-up' sailing wins far more races than the rest. A good compass is essential as is a crew that's knowledgeable on wind patterns on the water and can tell within a few boat lengths after splitting tacks if you are gaining or losing. I don't have any hard and fast rules for tacking on wind shifts - just tack when headed and for clean air.

Free of any tactical situations, we will generally tack on oscillating shifts of 5-8 , a little more in ocean sailing where working the waves is the same order of magnitude. Allan Watts' book Winds was a lot of help in understanding the magnitude and period of shifts. With a feel for the duration of each shift, one can plan in anticipation of the next shift.

Tactics can be improved by complete knowledge of the rules. A set of the NAYRU [now US Sailing] appeals decisions is extremely interesting and helps considerably to establish one as a sea lawyer. My copy generally has the place of honor on top of the tank!

Last and most important is the amount and variety of competitive sailing experience, even if it's just tuning up with another boat. Be sure the other boat is the 2nd fastest in your area! To develop the feel for getting the most out of the boat takes hours of concentrated sailing effort for which there is no substitute. Tactics can be studied, but only vividly remembered when you are DSQ'd or lose first place to some sharpie.

Go get 'em tiger!

Last, but not least, I expect a sequel to this expose from Wagoner, Gorgen, Haines, Moore and Lamson, to name a few.