



Chesapeake Tartan 30 Association

GROUND TACKLE FOR EXTENDED CRUISING

Brad Armendt, T-30 #282, *Emprise*, October 2000

The first time we took our T-30 down the Intracoastal Waterway (ICW) to Florida we carried three Danforth Hi-Tensile anchors: a 12-lb hung on the bow pulpit ready to drop, a 5-lb lunch hook in the starboard lazarette, and a 20-lb storm anchor, also in the lazarette. Obviously, I like Danforths (but only the classic Hi-Tensile version, not the Standard nor the Deepset versions), and I've had very good performance from them in the Chesapeake mud for 29 years. But based on our ICW experiences, we decided that we needed somewhat bigger and more convenient-to-use ground tackle before taking that trip again.

During the winter of 1997-98 we had our boat at Hartge Yacht Yard in Galesville, Maryland for some major work. There it received an all-over AwlGrip paint job and some other things, including installation of a new stem plate with anchor roller and an electric windlass.

Regarding the anchor system, after some research I decided on the Bruce 22 pounder. To stow it, I think the best mount for a Bruce 22 is the Windline Marine BRM-4 Stainless Steel Anchor Roller (illustrated in the West Marine catalog). So I bought one. Now the problem was how to install it on the bow of a T-30.

There isn't much room up there, what with the toerails, pulpit stanchions, bow chocks and the stem plate casting that secures the forestay. It probably could be done, if I was willing to sacrifice one bow chock, but it didn't look attractive, nor very strong, and I really didn't want to lose a chock. I finally decided the only solution was to replace the stem plate with a new one which incorporated an anchor roller. Well, "in for a penny, in for a pound!" as the song goes. If one roller works well there, why not put on two, with the forestay attachment welded between them? It has to go somewhere. Two rollers make it easier to use two anchors (off the bow in a "V") when that's necessary to prevent the boat from sailing around in a heavy blow. Also, I wanted to use chain (to reduce the possibility of getting the anchor rode wrapped around the keel) which made me want an electric windlass to handle it. I chose a Maxwell Freedom 500 RC windlass and Acco 1/4" G-4 High Test chain (working load 2,600 lb., breaking strength 7,750 lb.).

Now when you anchor with chain and a windlass such as this, you never want to leave the rode attached only to the windlass for very long, because these small windlasses are not designed to take such heavy loads. Thus, a typical procedure is to use the windlass to let the anchor down, and to reel out chain as you back the boat down. Then, using a chain hook on a short rope, the anchor chain is grabbed just forward of the bow and attached to your strongest cleat, slacking the chain between the windlass and the chain hook. So the heavy load that occurs when you back down to set the anchor, and later, whatever loads occur while you are anchored, go to the cleat, not the windlass. Similarly, when you up-anchor, you don't use the windlass to pull the boat up to the anchor and then break it out of the bottom. Instead, you use the boat engine to go forward slowly, while the windlass reels in the slack chain. When over the anchor, the short rope with chain hook is again used to grab the chain and attach it to the strong cleat, and then the boat is driven over the anchor, breaking it out of the bottom. Once it's loose, the windlass is used to haul it aboard. So, when using the short rope with chain hook, where do you run it? Through a bow chock, which is off the centerline? No, through the second anchor roller, which is also right up next to the forestay.

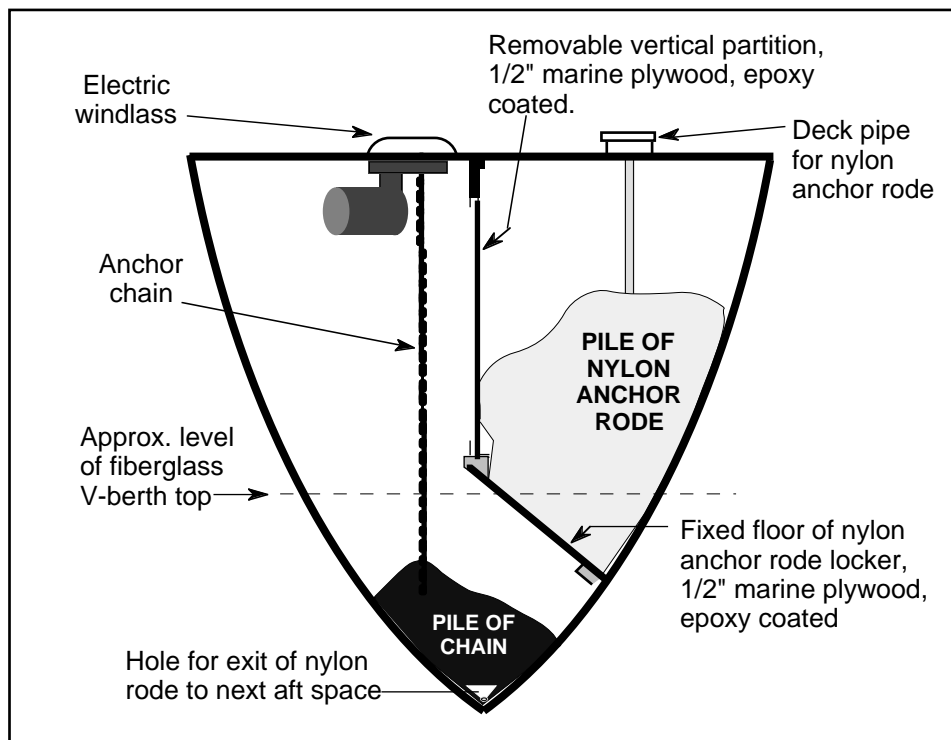
Joe Palmer (who until recently ran The Customer Service Co.) had custom stainless steel stem plates in his catalog, with either one or two anchor rollers, but not with a Windline BRM-4 type roller. He could have worked up a design, but I decided to do it myself. Joe faxed me a drawing of his design, which I used as a starting point. The original cast aluminum stem plate was removed from the boat, so I could use its dimensions to assure the new stem plate would fit. The roller for chain and Bruce 22 is pretty similar to the BRM-4 that I bought, but shorter, to keep it all on the top of the new stem plate. I drew the stem plate up on my computer, printed 8.5" x 11" scaled-down copies, and sent them out to three places, asking for quotations. Joe Palmer was low bidder, but his fabricator couldn't build it in time to meet our construction schedule. So, I printed out full-scale drawings of the stem plate and had it made by Hartge's, who did an excellent job. I had it electropolished at a place just north of Baltimore, and took it back to Hartge's. They installed it, using a large plate of 1/4" 6061-T6 aluminum underneath the deck as a backing plate. The forward end of the stem plate is bolted to the original heavy stainless steel strap that runs down the front of the bow.

Hartge's also installed the windlass, again using a 1/4" 6061-T6 aluminum backing plate underneath. But I did all the necessary electrical wiring myself. I opted for a hand-held up/down control for the windlass. There

just wasn't room on the bow for the foot switches that are commonly used. And I much prefer a hand control (on a stretch cord), so I can move around, even lean over the bow to watch, or to wash mud off the chain. Cruisers who put in foot switches and washdown systems sometimes have trouble operating the windlass and washing at the same time. The control I used was purchased from West Marine (their #289399), and it's still available from them. It's waterproof, and is normally left outside overnight, snapped securely onto a lifeline.

There is a second windlass control panel just inside the companionway. Theoretically, this could be used to drop or raise the anchor without anyone having to go forward to the bow, but I doubt if it would ever be used that way, if nothing else because the Bruce is normally secured in its roller by an Avibank Fast Pin (and in bad conditions by an added lashing). So someone must go forward anyway, to release the anchor. My real reasons for installing this aft control panel are (a) it is a backup in case the handheld control is lost or broken, and (b) if I somehow get myself caught in the anchor/chain/windlass on the bow, the person back at the helm can operate the windlass to help me get free.

Stowing the anchor rodes was a problem. For many years we have had a rope/chain deck pipe on the foredeck, through which we ran the 1/2" nylon rode and 6 ft of chain from the 12-lb Danforth. Now the new Maxwell windlass feeds the chain from the Bruce down into the forepeak, too. Not wanting these two rodes to mix and foul up, I built a partition down the center of the forepeak to keep them apart. A sketch of the configuration is shown in the figure below.



Rough sketch of interior of forepeak anchor locker, looking forward from V-berth, showing partitioning to keep two anchor rodes separate (not to scale).

A vertical partition is attached solidly to the under side of the deck down the centerline of the forepeak. The partition extends downward, then angles off to starboard at about a 45 degree angle, to where it is glassed to the inside of the hull. This makes an odd-shaped volume on the starboard side of the forepeak where the 200-ft nylon rode from the Danforth lives, under its rope/chain deck pipe. The center portion of the vertical partition is removable, to permit access to the rear of the navigation lights for bulb-changes or other maintenance.

The chain from the Bruce falls straight to the deepest part of the forepeak, where it piles up. It seems to run out free and clear, and it hasn't fouled yet. There is 100 ft. of 1/4" chain, attached to 150 ft. more of nylon rode. The nylon is fairly bulky, and there isn't room for it under the chain. Plus, piling chain all over

a loose pile of 1/2" rope is just asking for a horrible foul-up. But I found that I could pull all but a foot or two of the nylon rope back through a triangular hole at the very bottom of this space, into the next aft space which is under the foot of the V-berth. Then, a carved wooden plug fits loosely into the triangular hole to keep the chain from following the rope. The idea is that I hope I never have to use the rope rode, but if I needed it, it would pull out freely (pushing the wooden plug aside) and following the chain out through the windlass. It would be a bother putting all the rope back where it belongs when we up-anchored, but I'd rather have it available than not.

The original bow chocks had been installed on the aft corners of the original cast aluminum stem plate, but they were lost when I changed to the new stem plate. I purchased two new stainless steel bow chocks from Joe Palmer. Hartge's inset them in the forward ends of the toerails, so their tops are level with the top of the toerails. They are a little further aft than the original chocks, but are much stronger. (On three occasions I've witnessed original bow chocks on T-30s rafted up to me break or severely deform under heavy load.) I liked the new bow chocks so much that I bought two more similar ones to use as midships chocks. Hartge's also inset these into the toerail on each side.

While traveling the ICW we anchored out perhaps two-thirds of the time and stopped at marinas the rest. We found that the original single bow cleat on the T-30 just was not adequate. So while at Hartge's, we had them install two more large Wilcox Crittenden cleats on the bow (near the toe rails) with substantial aluminum backing plates.

As mentioned earlier, when anchoring on the ICW there is a danger of getting the anchor rode wrapped around the fin keel. This happens sometimes because you have to anchor in places where the tidal range is six to eight feet, and the associated tidal currents past the boat can be up to three knots. And of course there is wind. We found that the boat usually is blown away from the anchor by the wind (just like up in Chesapeake Bay), but wherever the boat ends up at the end of its rode, it weathercocks into the current. When the wind and current are in opposite directions (which happens often), you can have the boat facing into the current, but with the anchor rode passing directly underneath to the anchor astern. As the wind gusts and varies in direction, sometimes it catches the stern of the boat and blows it around so that a rope anchor rode is on the wrong side. Before long you end up caught *sideways* by the wind in a three-knot current with the rode leading from the anchor to the aft edge of the fin keel! This sounds (and looks) ludicrous, but it is very uncomfortable and it's *dangerous* because with the loads involved and the constant movement, the nylon rode and the soft lead keel try to saw each other apart. This situation can be tough to get out of. Once it took us 45 minutes of very hard labor to extricate ourselves. A chain anchor rode can help to prevent such a keel wrap; it is so heavy (compared to nylon) that it tends to sink down below the tip of the keel.



But sometimes there is no alternative but to anchor bow and stern. Even with bow and stern anchors the boat can get rather cockeyed in opposing wind and current (because you *can't* set up the rodes *tightly* — you must allow for the large tidal range!), but at least it doesn't spin around and wrap the rode around the keel. O.K., so we need to anchor bow and stern. Now where's the best place to run the rode off the stern? On our first ICW trip we improvised, but before we went the second time, we added a Locking Line Chock (West Marine, #190785) on each corner of the stern. The stern rode was brought in through the chock and then led to a spinnaker sheet winch, which was a great help in adjusting the rode, and later, retrieving it. These locking line chocks also turned out to be quite valuable in tying up at some marinas.

I was thinking about adding a salt water washdown pump and bow hose to spray mud off the incoming chain (on Chesapeake Bay the bottom is almost always sticky mud). But first I tried one of those \$17 Davis Gunkbuster chain scrubbers. I attached a piece of 1/4" line (with tight half hitches about every two feet to improve the grip), and an eye spliced into the other end (to drop over a cleat, preventing loss if I get clumsy). Attached to the bottom of the Gunkbuster, is a 4-lb. vinyl-coated fishing weight to pull it down the chain when I slack the line.

This rig works so well that I forgot all about the washdown system, thus saving significant money, plus the space it would have consumed. All things considered, the hassle of up-anchoring with the Gunkbuster is about the same as it would be with a washdown system, which is not completely effective at mud-removal unless you spray the chain pretty thoroughly from all sides. (But of course, a washdown system has other uses besides chain cleaning, so some people might prefer to install one.)



After all this renovation, we took *Emprise* back down the ICW to Florida in September 1998, staying a second winter at Daytona Beach (living aboard, except for side trips by car). On the trip there and back, the new ground tackle system worked like a charm under all conditions. We used the Bruce 22 every time we anchored; we added the 12-lb Danforth once for a second bow "V" anchor in a blow, and we used the 5-lb Danforth several times off the stern when it was necessary to anchor bow-and-stern in the Georgia marshes. I was very pleased with the performance of the Bruce, and its great convenience. So far I have not thought of anything about our ground tackle system that needs to be changed.