

Catalina

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MAINSHEET

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New C470 Technical Notes Editor

I am excited to announce that Jim Wohlbeber, our C470 Association Vice Commodore, has agreed to take over the Tech Editor Position for our Association. I have filled in as a long term "temporary" after Tom Garrett sold his boat and have been hoping for a replacement ever since. Jim has devoted much interest and effort to the C470 list on Sailnet and has been a great asset to our association. I look forward to him adding energy and improvement to our Tech Notes section. This is the last Tech Notes column I will edit. Please contact Jim at the above addresses with any

submissions for the next issue. —Glen McIntosh, #13, Latitude Adjustment.

The C470 list on Sailnet.com has become a very active site for discussion among owners about maintaining and equipping a Catalina 470. I encourage everyone to join the list and take a look. There is no charge for participation. Go to www.sailnet.com, and look at the site index on the left side. Click "Join E-mail List" under the Member's Center section of the index. Then click "Display All Active Lists", then click the "C470 Discussion List" and fill out the brief form to join. You will from then on receive copies of all mail sent to the list by C470 owners and will also be given instructions on how to submit mail to the list.

An Alternative Anchor Washdown System

While back I got to thinking about installing a washdown pump for those times I haul up the anchor and it's coated with icky sticky mud. So I got

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out my entire heap of marine catalogs and went washdown pump surfing. What I found out was all the pumps average about 40–45psi and pump about 3.5 to 4.5 gallons per minute at their optimum and cost about \$100.00 to \$200.00 plus parts. I also looked at another 470 that had one of these pumps installed and tried it out to see what 45 psi was like. I must be somewhat spoiled by the 100 psi I have at my dock 'cause 45 psi ain't very much pressure when you have primordial ooze attached to your anchor.

I also went and found some articles on how to install one of these washdown pump/systems and decided there must be a better way of going about this. All of these systems use saltwater or at best saltwater or fresh water. I don't know about you but if I wish to wash down the deck with salt water I have a bucket with a rope on it. Using fresh water with a pump outputting 3.5 gallons per minute would suck my fresh water tanks dry fairly quickly if I had 150 feet of chain and an anchor to clean. Finally

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1300psi - 110 volt Pressure Washer with Ground Fault Switch



Optional 25' Extension Hose



Washing Wand with 19' Hose Uses only 1.3 gpm



FIGURE 1

what came to mind was how about using a High Pressure washer designed for home use? A little research at the local home building supply store provided the following information. I could get a small compact 1300 psi pressure washer that used only 1.3 gallons per minute. To power it I would have to provide it with 13 amps of 110-volt power (see Fig 1). Not a problem, I have a 2000 watt inverter, and always have the engine running when I retrieve the anchor. The icing on the cake was it only cost \$90.00. If you wish you can purchase a 25-foot extension hose for \$25.00. This particular unit is available at www.hdpowerwasher.com.

One of the nice things about this particular unit is that the fresh water

supply hose fitting is a quick connect valve, which means when you disconnect it your system is still pressurized. By purchasing an additional quick connect you could install the additional quick connect elsewhere on the boat and move the washer there for occasional use. Liking backups though, I would still add a shut off valve in front of that quick connect just for peace of mind if I decided to go that route.

I had previously removed the factory-supplied cabinet at the forward bulkhead separating the shower and anchor well, disassembled part of it and retained the doors to make a storage area for three scuba tanks (Fig 2).

In Figure 3 you can see the mounted washer pump. I made a shelf

for it to sit on, then ran screws through the shelf into the bottom of the washer. I also installed screw eyes into the top of the shelf and ran two bungee cords crisscrossed through the handle for extra security. I ran the supply hose from under the forward lavatory to the pressure washer. I had to drill a hole in the base my scuba tanks sit on for the supply hose to come through.

I connected the 110 volt supply plug to the outlet provided for the washer/dryer. The supply plug has a ground fault protection built in for added safety. I drilled a hole through the watertight anchor locker bulkhead for the Hi-Pressure hose and made a waterproof cover for it. (Figure 4)

Now in Figure 5 you can see the business end of the whole setup stowed away. I made a holster out of a piece of 2" ABS drain pipe to keep the wand secure. For the hose I attached two plastic fittings made for securing lines with a piece of bungee cord. The unit has both an on/off switch and the ground fault switch but I didn't want to have to go below to turn either on so I mounted a waterproof switch in the anchor locker. I leave the switches below on all the time and control it from this anchor locker switch.

One really nice thing about this particular unit is the motor only functions when you squeeze the handle on the washing wand and it senses a drop in pressure. The nozzle is adjustable from a wide spray to stream. Remember this is putting out 1300psi and could damage the gel coat, other finishes or your feet if you are not careful and keep the nozzle a safe distance away when cleaning.

When standing on deck you can send a stream of water about three feet

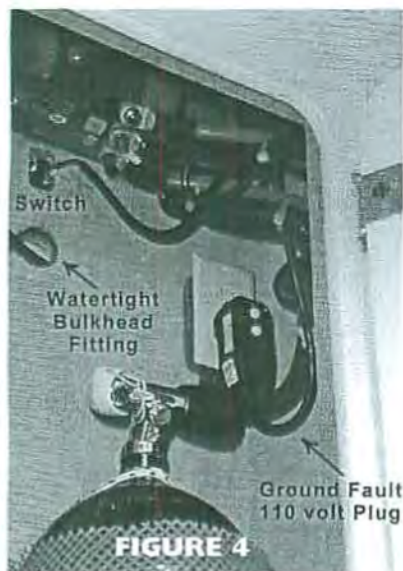
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FIGURE 2



FIGURE 3



below the waters surface. Can't wait to anchor at some muddy place with a lot of other boats around! —Bill Martinelli, C470 #11, Voyager

Situational Awareness For The Cruising Sailor

This conversation was “easily” overheard on a neighboring deep-keel sloop in a quiet mooring on the Chesapeake Bay in the summer of 2002: “When is high tide?” “How would I know, why?” “Because the keel is stuck in the mud and we can't leave” “Well, you're the Captain, you're supposed to be aware of that, not me! I just cook and do what you tell me”.

Prelude to a divorce? Possibly. Lack of communication? Perhaps. Loss of Situational Awareness? Most definitely!!

The loss of SITUATIONAL AWARENESS (SA) has been acknowledged to be a major contributing factor in many transportation related accidents and incidents. Indeed, the United States Coast Guard attributes 40% of their shipboard navigational mishaps to loss of SA. A former U.S. Navy destroyer Captain told me of entering the bridge of his ship at night and, realizing that the ship was not where the bridge crew thought it was, ordered All Back EMERGENCY and Right Full Rudder. The destroyer was steaming at 25 knots. The ship came to a stop one mile from hitting a massive reef. Eastern Airlines flight 401 crashed into the Everglades because the crew was preoccupied with an inoperative cockpit landing gear indicator light. All these examples illustrate a loss of SA. What exactly is SA and what can cause its loss? Better yet, what can we, as cruising sailboat skippers and crews do to preclude loss of SA and thus enhance



our margins of operating safety?

“Situational Awareness is the ability to identify, process, and comprehend the critical elements of information about what is happening to the team with regards to the mission. More simply it's knowing what is going on around you”.

The above definition from the U.S. Coast Guard sounds simple. It may be! Maintaining SA is not that simple. Let's explore what obstructions we may encounter to maintaining SA and what the signs might be which indicate we are losing SA, and how to recover.

MAINTAIN THY SITUATIONAL AWARENESS...LEST THE SEA RISE UP AND SMITE THEE....

SA requires that we be able to mentally picture ourselves in relation to the terrain and, due to the unique nature of sailboats (deep into the water, tall above it and moving through it), our mental picture must be three dimensional and dynamic. Being at anchor does not, as the personally observed incident on the Chesapeake cited above illustrates, relieve the skipper or those on watch of the responsibilities of being at sea. Computer screens, although we cannot see it, “refresh” themselves, i.e. update their information, many times per second. As skippers of cruising sailboats, we avoid loss of SA by refreshing our nautical mental picture on a regular basis. What can cause loss of this “refresh” rate? Let's look at two of the most common barriers to maintaining SA.

Cruising successfully in the same areas, in the same boat with the same crew over a long period of time builds confidence. The downside of that is complacency. Have any of us ever suddenly realized that, after an hour of perfect beam reach sailing, we have not

“checked six” (looked behind us) and, upon doing so, are surprised by a boat sitting in our “six?” The route and currents of the final few miles into our marinas are well known to all of us and we have accomplished that task routinely dozens of times. Has anyone ever been surprised by a much stronger than normal current upon entering the marina? A tidal flow of surprising proportions causes some anxious moments when passing a busy fuel dock or attempting to elegantly slide into our slip. A quick check of the tide tables or Coastal Pilot would have prepared us for the atypical tidal event. Complacency is one of the easiest windows to pass through en-route to loss of SA.

It's a summer weekend. The wind is perfect, the sun is shining, and the boats around us are filled with friends, good food and drink. Sunday afternoon generates joyous hours of tacking, gybing, and an impromptu race with all hands turning winches, handling sheets and sails. It's SAILING! Finally, late in the day, you set course for your marina and home. You select a homeward waypoint in the GPS, engage the autopilot and relax. A little while later the boat slides easily into the mud and you are aground. How did this happen? Your “refresh” rate has gone to zero due to the brain's degraded ability to function. You were not where you thought you were when turning for home and checking the course just did not happen. Fatigue had set in. With fatigue comes loss of SA. What signs could the crews of the boats in the above situations have looked for to trigger suspicions that they were losing SA?

Some obvious signs of impending or actual SA loss are: requiring two (or more) attempts to elicit a response from a crewmember; failure of crew to “call traffic” as previously briefed and executed; fixation on minor tasks by the skipper/helmsman to the exclusion of operating the boat; not hearing/responding to radio calls from other boaters. We have all seen crewmembers, skippers and ourselves lose the “big picture” from time to time. Knowing that SA loss can be devastating in its consequences, what can we do to regain SA once we realize loss has occurred?

Stress reduction positively affects our ability to maintain/regain SA. By delegating numerous non-critical tasks with which you may have been engaged, you free up your mind to look around. Selecting a battery bank for charging, engaging in idle chatter on the radio, and filling out the ships logbook for a previ-

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ous trip are some examples of non-critical tasks. Stress reduction can take another form. Take a break from the helm! Just stepping away from the helm will instantly provide a different perspective. Another very positive recovery methodology when underway is to state the current heading, speed, depth and relative position from a waypoint or buoy to another crewmember and ask if they concur with your assessment. Proceed then to state distance to destination, boat speed versus ground speed, engine rpm and oil pressure, wind speed and direction, and note the boat traffic in your area. Ask for concurrence. This technique enhances your confidence in your assessment of the situation, pulls another crewmember into the SA bubble and actively moves you back into SA.

Situational Awareness...easy to talk about but hard to do. The acquisition and regular practice of SA skills can contribute greatly to maximizing safe and rewarding sailing. Our Catalina 470s are large, well-equipped, stable and comfortable cruising boats with exceptional capabilities. Our Situational Awareness should be just as exceptional.

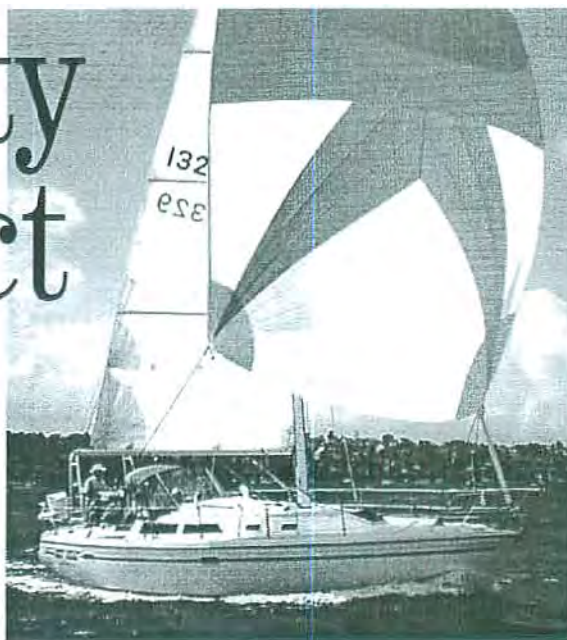
-Jim Wohlleber, Beckoning, C470 #76

2003 EAST COAST CATALINA RENDEZVOUS



The 2003 East Coast Catalina Rendezvous will be based at the Mystic Seaport from mid-afternoon Friday August 8 through late morning Sunday August 10. The event itself will include two dinners, several seminars, plus other events to be defined later by the event organizers, but the Mystic area has a number of attractions that make this an ideal location for a gathering of this type. Further information on Mystic Seaport and the surrounding area is available at www.mysticseaport.org, www.visitmystic.com, www.mysticaquarium.org, and www.mystic.ct.us. Details for event schedules, event registration, local attractions, hotels, and restaurants can be found on the Catalina and LISCA websites (www.catalinayachts.com and www.saillisca.com).

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