

# MAKING AND REPLACING AN ANCHOR PLATFORM FOR A WATKINS 27

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Let me start off by saying I have a Watkins 27 and I don't know if other boat lengths have the same configuration as mine or not. But even if there are differences, I would suspect the process to be similar. Also, when removing the old platform, you will need to keep it as close to 100% intact as possible. After you have measured and recorded the critical dimensions, you can "cannibalize" the old platform; there will be some good wood. There are a couple of names for the Chainplate I will be discussing. Another common name is the Stemhead. For the simplicity of this guide, I will refer to it as a Chainplate. Another term used frequently in this guide is tang strap, tang, or tongue. This guide will refer to it as a strap or tang strap.

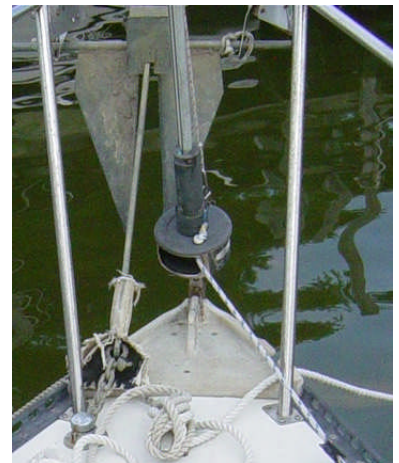
**The two most critical dimensions** that you need to record are the thickness of the existing platform and the location of the slotted hole where the tang strap of the chainplate passes through the platform and the foredeck. The reason these two dimensions are so critical is because there are two holes drilled through the tang strap of the chainplate that passes through the platform and the foredeck and has to line up with the two bolts that pass through the bow point. The thickness of platform will affect the height of the holes. You will see what I'm discussing, as you read further into this guide.

Some Watkins sailboats didn't come with a wooden anchor plate but instead, came with a large aluminum Stemhead, see pic below. Additional things you should beware of if you want to convert from the aluminum stemhead to a wooden anchor platform,

- The boards should run under the stemhead
- You will have to shorten your headstay if there are no turnbuckles
- You may want to get another bow rail

**NOTE:** I didn't think about the thickness of my platform and as a result to get the two holes on the tang strap to line up with the bolts, I had to make a 5/8" shim, out of teak, in the size and shape of the chainplate. Actually, I like the way it looks. You can see it in the 5<sup>th</sup> picture below.

**If your boat is not on the hard**, most of your work will be over the water. Therefore the risk of dropping tools or stainless steel hardware into the water is pretty good. To minimize that risk I hung a 4' X 6' tarp under the work area. I tied it to the bow rail and taped one edge to the hull.



**STEP 1. Remove the old platform** and take accurate measurements.

- Secure the jib halyard to the side of the bow rail. Remove the forestay from the chainplate and tape it to the halyard. During the process, the halyard will act as the forestay. (Don't connect the halyard to the front of the pulpit rail because later in the process the rail screws will be removed from the platform, the mast could pull the rail upwards and the halyard will slacken).



- Go into the vee berth or anchor rode locker and remove the two nuts & washers that fasten the chainplate tang strap to the bow. These bolts run fore and aft. (You'll need a helper for this so the bolts don't drop into the water... tarp or no tarp.)

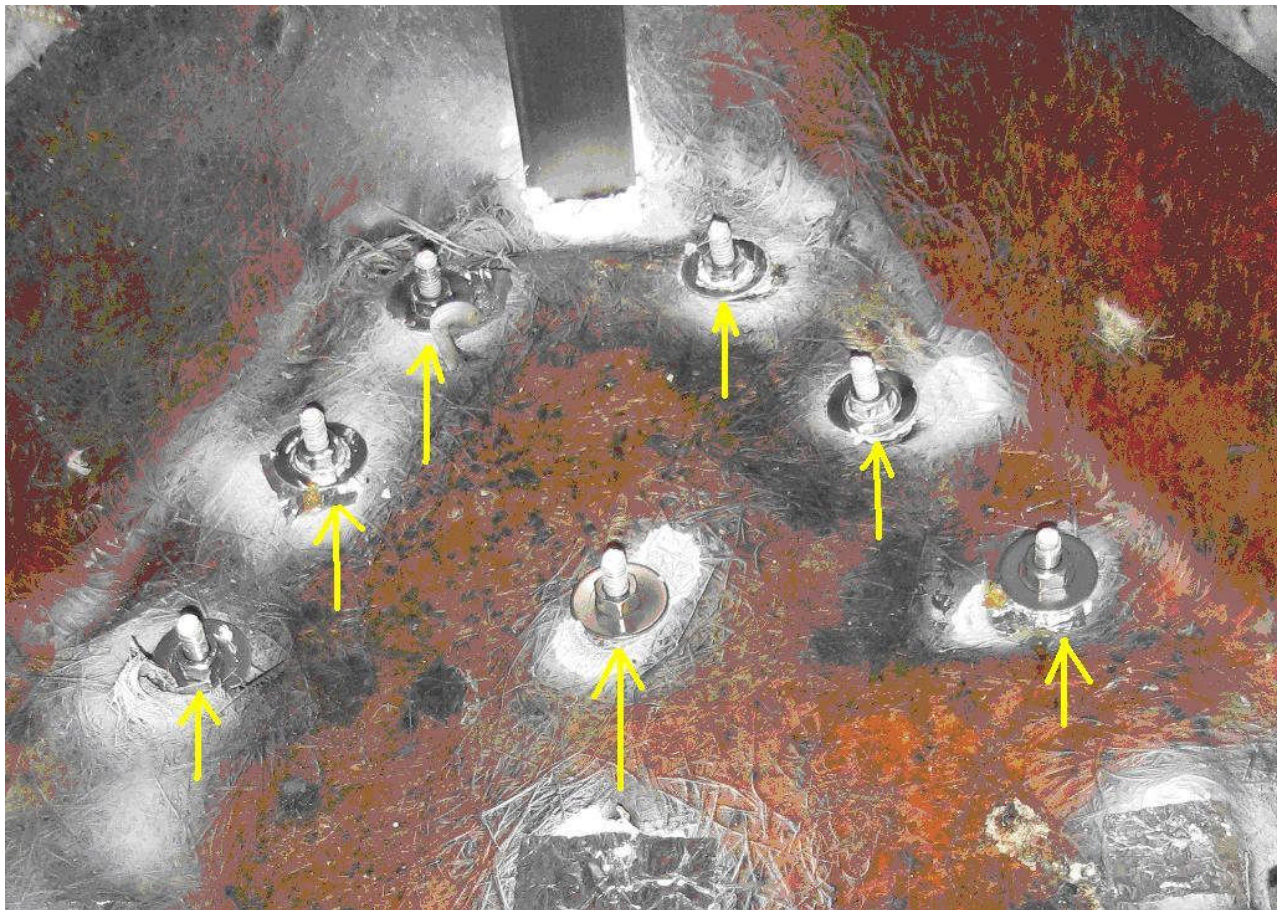
The photo below shows the strap or tang strap attached to the bolts from inside the anchor rode locker.



**Chain Plate Tang strap 1**



- Remove the 8 screws, (4 on each side), that fasten the bow pulpit rail to the platform. They're over water so keep an eye on them.
- Go back into the locker and remove the 7 nuts & washers that fasten the chain plate and the anchor platform through the foredeck. From below, give the screws a few taps with a hammer to extend the heads above the chain plate so they can be extracted from the topside. (On my boat there are 7). The photo below shows their placement inside the anchor rode locker. This pic is looking up... the surface you are looking at is the underside of the foredeck.



Underside of foredeck in Rode Locker 1



The above pic is the Chain plate or the Stemhead. Note the shim underneath the hardware.

- Lift out the chainplate. The tang passes through the platform and the foredeck. The tang extends about 14"-16" below deck.
- At this point, you can remove the platform. **However when removing the last two screws, remember** that the anchor platform is more than 50% beyond the bow and the disparity of weight distribution will cause the platform to fall into the water. Often the platform has cracks or splits and it will probably come off in more than one piece...so have a helper.

**Step 2. Making the new platform,** I used the following tools for this project. Table saw, chop or miter saw, saber saw, hand held router, drill press, hand drill, glue up clamps, surface planner, scraper blade and sanders, (belt and random orbital).

I acquired various lengths and widths of teak boards being **at least 1" inch thick**. I got most of the wood from advertising on Craig's list and calling local boatyards etc. I got "a piece here and a piece there" Some of the wood had screw holes and other repairable flaws.

- For my anchor platform I used 17 boards
- I set the fence on the table saw to 1 7/8" and I ripped all the boards to that width dimension. Next, I rotated the boards 90 degrees; reset the fence to 1" and passed each board through the table saw again. When completed, I had 17 boards that were 1 7/8" wide by 1" thick. The length was still random. **Note:** I selected 1 7/8" because that was the thickness of the platform I removed. Your board width will be whatever the thickness of your platform was.
- Next, cut each board to length, (I used a miter saw). I cut my lengths to 36" only because that was the size of the anchor platform that I took off. **Note: I wished I had cut the boards**



**to a longer length.** My old platform didn't have an anchor roller mounted on it. Had I cut my boards to 40"-42" I would have been able to mount a larger anchor roller than I actually did.

- 8 of the boards will require 2 additional cuts to the length dimension, to form the "wash panel". (See below photo).
- Note that every other board was cut short and added in again above the washout. The opening dimension of my panel is 10 inches.
- The size of your wash panel will determine the length cut out of each board.
- For the want of the correct word or term, I will call this section of the platform a "Wash Panel". I made up the name; I really don't know what it's called.



**Wash Panel 1**

- The purpose of the openings is to allow water to flow through the platform when the bow comes down heavy into a wave. This will reduce the pressure on the bottom side of the platform. Plus it looks nice.
- Assemble each board side by side so that dimensions are now 1" wide and 1 7/8" high with the edge grain being on the top and bottom. This increases the thickness of the platform without having to buy extra thick stock. It also adds to the strength and stiffness of each board. As best you can, match color and grain patterns, then number the boards at both ends and both sides.
- Based on your laying out of the boards side by side, determine which side of each board will be on the top and mark "T".
- Use at least 4 Glue up clamps, placing one just above and one just below the wash panel. I used and recommend five.
- I bought a fresh bottle of **Titebond III white wood glue**. It is excellent for outdoor applications, easy to clean etc, and it's available at Lowes, Home Depot and most hardware stores. Don't use old glue. New glue doesn't cost that much. **Note:** I've had wood working as

a hobby long before boat repair. I would suspect that most of you would use epoxy instead of white glue...I'm sure it doesn't make a difference. For me, it was a comfort level thing.

- Apply a thin coating of glue with a disposable brush to the side of the first two boards. On the Second and subsequent boards apply glue to both sides. But only glue one board at a time so the glue doesn't begin to set while you're fidgeting with the alignment.
- Place each board, one at a time, into the clamps, hand press the board to the previous board and check for alignment.
- The assembly should look like a breadboard. If you're satisfied with the alignment, begin to close the clamps making sure the applied pressure is even, along the length of the platform. Don't tighten one clamp at a time. Tighten each one a little and then a little more until you start to get "squeeze out". The chemical bond of **Titebond III** is stronger than the wood itself so don't over tighten the clamps and squeeze out too much glue.
- As quickly as possible, wipe away any "Squeeze Out" with a damp cloth. Don't worry about the other side at this time. Let the assembly sit in the clamps for at least 24 hours.
- After the clamps are removed, use a scraper blade to get rid of any "squeeze out" on the bottom side of the platform.
- Now it's time to repair the screw holes and other flaws in the used boards.
- I drilled out all the old screw holes and other imperfections with a 5/8" bit to about 1/2" deep. I had 1 hole which I had to use a 3/4" bit. If the screw hole(s) go through the board they should be drilled on both sides of the platform. **Don't drill all the way through the panel...**it will add to the risk of tearout and only weakens the board.
- I bought a 5/8" plug cutter at Ace Hardware and I cut several plugs on the drill press, from the old platform. The plugs were used to fill the holes drilled into the boards.
- I applied glue to the sides of the plug, and rotated the plug so that the grain direction was parallel to the board it was being inserted into. I left the tip of each plug about 1/16" above the board surface.
- When done with the first surface, I turned the board over and plugged the holes from the other side. I let the glue set for a day.
- Take a 3 pound coffee can, or equivalent, and trace a radius line at both forward corners of the platform.
- Cut the radius lines with a saber saw but keep the blade at least 1/16" outside the lines.
- Use a belt sander and sand almost to the line, then use a random orbital sander and get down to the line. Don't use a finer grit than 220.
- Below is a close up of the forward edge of mine.



**Rounded Corners 1**



- I then took a belt sander and sanded the high ends of the plugs until they were almost flush with the board surface. I then finish sanded the entire platform with a random orbital sander until flush.
- Don't spend a lot of time sanding; the platform should be coated with epoxy which will provide a smooth surface. In addition, if the surface is porous, more of the epoxy will migrate into the wood fibers.
- Use a router with a 3/4 " roundover bit and round over the three outside edges of the top surface; front, left and right, but not the back side. Also, do not rout the bottom surface of the platform.
- Change the router bit to a 3/8 roundover bit and rout all the edges within the "Wash Panel" ....do both the top and bottom surfaces.
- Below is what anchor platform looked like before the finishing started.

- **The most critical action** you will complete in this entire process is to cut the slotted hole for the tang strap on the chainplate to pass through. Refer to your old platform for the exact location. This is one measurement you can't be "just close", you have to be dead on, or you could be in for unscheduled overtime! It is better to cut the slot a little bigger than the strap. If it's a little bigger you'll have a little flexibility, and after the installation you can seal the hole with caulk. **NOTE:** The big hole you see above is not the hole I'm referring for the strap. During the finishing process, I filled that hole with epoxy and a West System filler.
- Scribe the size of the slotted hole to the correct location on the new platform. Remember the adage...measure twice, cut once!
- To begin cutting the slot use a 3/8" bradpoint wood drill bit. Drill a hole where the outside edge of the bit exceeds your end line by about 1/8" on both ends of the slot. After drilling, connect the two holes by cutting from one hole to the other with a saber saw. The slot can be cleaned up with a file, rasp or a wood chisel. The hole should be 3/8" front to back and about 1/4" wider than the tang strap. The back side of the slotted hole should be rounded over to match the curve on the inside of the chainplate tang strap. I used a 3/8" wood chisel and strip of sandpaper that I ran through the hole like a shoeshine "snap rag". Test and make sure the chainplate sits flat on the platform and the rounding of the hole matches the requirement of the chainplate.

**Step 3. The finishing process** Lightly sand all surfaces 1 more time. Teak oil commonly seeps out of the wood as is visible in the bottom left of the above picture. Wash down the entire platform including the openings in the wash panel with denatured alcohol. After a couple hours, wash it down a second time...be generous with the alcohol. (Remember about spontaneous combustion ...denatured alcohol is a flammable liquid. So manage your "wash rags" accordingly.)

- I found it much easier to apply my finish coats by using **painter's pyramids**. I got mine at Rockler.com. If you're not familiar with them go to the below link for a preview. They are especially helpful when applying finishing material to the sides of a project without getting it all over the work bench.
- [http://www.rockler.com/search\\_results.cfm?srch=usr&filter=pyramids&submit.x=13&submit.y=6](http://www.rockler.com/search_results.cfm?srch=usr&filter=pyramids&submit.x=13&submit.y=6)
- You may or may not want to apply a stain coat...I elected to go "*au natural*" because the spar varnish I used is a warm amber color.
- Mix your epoxy resin and hardener in a quantity that will enable you to do at least one side and follow the directions for about a 10 minute "pot time". I don't remember how much I mixed for the first coat but it was probably 6 or 7 fluid ounces.
- I didn't use the West System but I wished I had. I used a product from Ace Hardware. It didn't dry as hard as I would have like it to.
- I just poured mine on like a flood coat and spread it evenly with 1" & 3" disposable foam brushes. Be careful of the epoxy flowing over the side in "ripples" or drips because that's how they will dry...Sanding excess epoxy requires a lot of elbow grease!
- Instead of applying one flood coat, I chose to go with two coats about 3 days apart. I rubbed down the first coat with an abrasive material like Scotch Brite. I also used sandpaper for the few drips I didn't notice when I should have. That's another benefit for the pyramids...I took a 1' disposable foam brush and worked the sides and inside the wash panel...which is a real pain, but it's worth it.



- If necessary, after the 2<sup>nd</sup> coat of epoxy, sand any drips or runs you may find.
- The rest is up to you, your weather, sun and personal preferences...but I applied 13 coats of spar varnish, lightly rubbing the platform down between coats. Just remember, it's an anchor platform, not a piano for your living room! I say this because you can spend the rest of your life sanding. I applied thin coats of varnish and it only took me about 10-15 minutes to apply a coat. I didn't use a split tip bristle brush...just disposable foam brushes and rubber gloves, so when I was done, I was done! After a few hours, I could flip the platform and lay it back on the pyramids and do the other side.

#### **Step 4. The installation**

- It is my opinion that it is virtually impossible, for me, to line up the two holes in the bow, the slotted hole for the tang strap and the seven holes in the chainplate which have to match the seven holes in the foredeck. So, I cheated. I ground down the foredeck and filled it with West System epoxy filling in the seven holes all the way through the deck. **NOTE:** I ***DID NOT*** fill the slotted hole through the foredeck.
- After two days, I sanded the area flat and smooth and made sure the 7 holes were filled solid.
- Apply an ample amount of caulk on the foredeck to seal the platform and the fiberglass.
- Lay the platform face-up in place and line up the slotted hole in the platform with that in the foredeck. Slide the tang strap of the chainplate through the hole in the platform and the foredeck. Does the chainplate sit flat on the platform?
- Fill the two bolt holes in the bow point with caulk then Tap the two bolts through the hull and the two holes in the chainplate tang strap. (This really needs two people). One outside and one in the Vee-berth. Place the washer and nuts onto the bolts and tighten.
- This is your last opportunity for any adjustments. So go up on the bow and see how the platform lies on the foredeck. Is it flat, are there any gaps that need to be sealed etc. Is the front of the platform facing straight ahead? Estimate that the rail feet about equidistant from each edge of the new platform? If not, there is still time for a tweak here or there. Does the chainplate sit flat on the platform?
- **NOTE:** For this next step, make sure you have a drill bit that is long enough to drill through your platform and the foredeck. Once you get everything the way you want it, use the 7 holes in the chainplate ***as a template*** and drill a hole through the platform and foredeck. Fill the hole and the subsequent holes with caulk. Send the first screw through and have your "underneath person" apply the washer and nut and hand tighten. Drill the next 6 holes and follow the same steps.
- Drill 8 pilot holes and reattach the pulpit rail to the platform. You may have to draw the rail and platform together with a rope until you get a few screws in.
- The below picture shows the project to date





I also added some additional hardware; 2 cleats, 2 anchor rollers, anchor hold down and chocks.

