

Bedding the CZ 457

So besides the pillars you will need to get a few items, some you may have already. At Lowes or Home Depot, you need to get some 5mmx.8mm nuts. These are what the action screws are threaded. I also piked up some 5mm washers. They turn out to be .045 thickness so they will be handy latter. You also need 1 inch blue painters tape, the epoxy devcon. You will need some modeling clay to plug holes, Minwax floor wax and last a small piece of shim material .025 inches.

What my thought is that we will build the bedding up from trigger guard and the magazine face plate. Because they are articulated (2 pieces) we need to establish the relationship of those plates to the actual pillar holes. Mine, at least, the stock pillars are right on for distances.

step 1) Take everything apart. Down to bare action, no trigger, no mag well, no scope. You can leave the scope rail.

Step 2) put the stock in a padded vice and put painters tape around the edges of the bottom cut out. Take the magazine face plate and the trigger guard and later them up with the Minx wax. Put the screws in their respective holes and wrap tape around the action screws thick enough so they fit snugly in the current pillars. This will help center them in the existing pillars. We will do this again for the real pillars. Mix up a little epoxy and put some at the back curved part and some in the front curved part. then insert the assembly into the holes and turn the whole thing over in the vise. Then put the washers and nuts on and screw them down reasonably tight. Then go back with q-tips and tip off all of the oozed epoxy both on the outside and inside of the wells.





That is it for the first gluing. It will be set up but not hardened (4-6) hours. This will allow me to trim any excess off if needed.

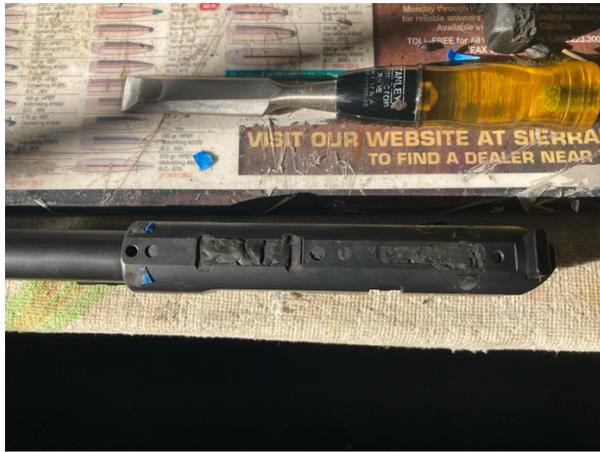
Also here is a picture of of what I am doing with the recoil lug. The hole machined into the stock is too loose for this to do anything. So we shim the back side to the front edge of the hole. We may have to trim the hole in the stock? but if not then when we epoxy the action into the stock the recoil lug will create a matching fit to allow it to actually work correctly. They did so many good things but this is just crazy. So it put the .025 brass shim behind the lug in the action with a force fit of the shim.



Step3) Put tape on the topside so that when you clean the epoxy that ones out you have a surface to clean down to and then strip it off after the glue has set so you have a nice clean line



Step 4) Strip the action of everything that is below the bottom surface of the action. Then use modeling clay (I get mine from Michaels). Fill all holes in the bottom surface, then use a chisel to cut the clay off smoothly. Note the front of the action where the set screws for the barrel are I put some blue painters tape over the allen head of the set screws and then held it in place with the modeling clay.

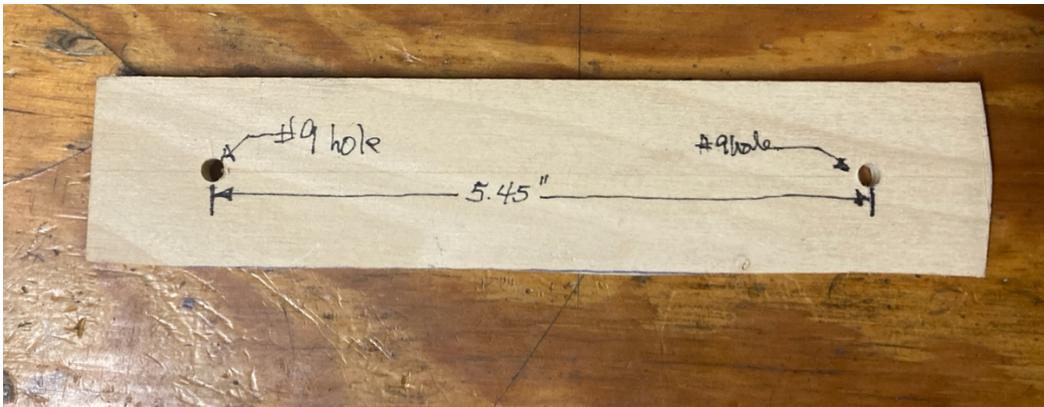


Step 5) Use a dremel drill to create little indentations for the epoxy to fill and bond better for the stock. I also used lacquer thinner to take some of the finish off of the inlet for the action and the front part of the barrel channel





Step 6) Last I made a jig to space the screws out in case the pillars are not perfectly square. That way they won't be tilting. The piece of wood would ideally be wide enough to sit on top of the stock. Then I am going to use #10-32 x 3" bevel head screws for the pillar gluing so they go through the pillars through this wood and then we will use these to pull everything tight while the epoxy sets. I don't show it but on the backside of this board I have taped down 2 #10 washers in 4 places. The stock is higher around the barrel by about .1 inches so to keep this board level the washers are used. I'll get a picture later.



This picture will be used later but here is what I did to make the board fit to the stock the stock at the barrel is higher than the stock at the action.



Step 7) The pillars as they arrived were basically 1.250 in length. They need to be 1.050 for the front and 1.080 for the rear. But you have to measure what your stock is. We can't do that till we drill out the existing pillars. I used my 1/2 Forsner bit. The pillars are .440 in diameter. I drilled them out but they were not quite centered so I then used a larger rat tail file to file the opening so they could be centered up in the holes with some space for the epoxy to fill in. The epoxy around the pillars can have a void here and there and sill be OK.

Here is drilling the holes



I used a clamp to clamp the stock to my drill press table. If you are doing this my hand just use vice.



Now that the holes are drilled you need to check centering. Put the bottom metal back in and stand the pillars on top of the bottom metal. Then measure with your calipers to the surface of the inlet next to the pillar. We want that value to be .030 when we have filed the bottom surface of the pillar, not the top that mates to the action. We want that to be perfectly flat because the bottom of the action is perfectly flat.

Here you can see that with the long screws coming out of the pillars they are pretty good for lining up to what would be the holes of the action.



Step 8) Before I move on a little explanation of determining the pillar length.

The front pillar measured full length of 1.250. The pillar was high by .215 above the inlet surface. Wanting to have only .030 we would subtract that .030 from the .215 making that we would need to remove $.215 - .030 = .185$ making the front pillar be $1.251 - .185 = 1.065$. The front height of the stock can be measured and it is 1.035 so as a double check of our measurements we are perfect. The rear cannot be measured as easily but I determined the same way that it would be 1.080

Not your stock may not have the same dimensions so measure twice file once.

I have a flat bastard file the is about 1.5 in x18 inches. The point is that it is easy to keep that file pretty level while filing. One pass with it takes off about .003 inches. It was slow but worth it to get them just right.

Step 9) Now we are ready to epoxy but we have work to do.

a) take the trigger guard and the magazine bezel and re wax them good.

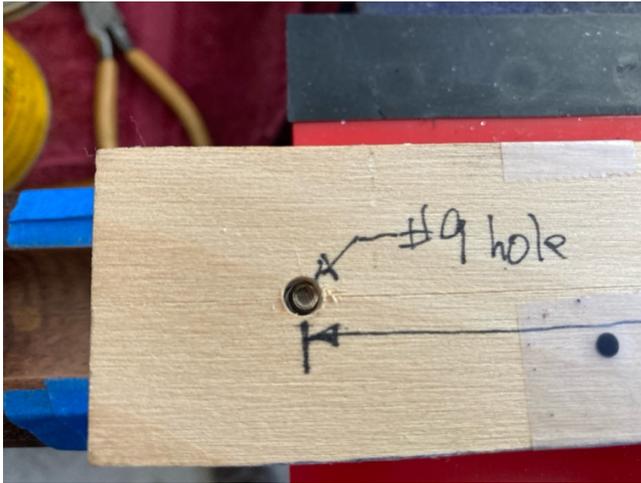
b) then assemble them together and put the 3" long #10x24 in the action screw holes. Take some 1" blue tape and wrap around the screws right next to the plates. This is going to center up the pillar inner holes to these plate holes. The wax the rolled tape and the inside of the pillars. Don't ask!!



c) now take the pillars and put them over the tape, Then put a #10 washer and thread a nut all the way down and tighten. This should make the pillar stand up hard and perpendicular to the plates inside edge. Careful not to get wax on the outside of the pillars,



d) you might want to try a dry fit, up to you. Here is what mine looked like. You can see how close mine came to being perfect. The action will never know.



e) Assuming all is well, we now mix the epoxy. Not a lot but I used a 3oz bathroom cup to mix about 3X what I did the first time. Then I took my small screwdriver and got some epoxy and applied a thin coat to the walls.

f) Then I coated the outside of the pillars and then turned the stock over. (in the picture above you can see the pillars with epoxy on them). I then inserted both pillars into their holes and pushed the trigger guard and magazine plate home. When I turned the stock back up, you could see the epoxy had squished up so I had clean all of that up with q-tips. Then i looked for voids at the top. There was one so I took the small screw driver and carefully added more epoxy to that void..



g). Now I took the spacing board and put it on, put on a washer on each screw and added a nut and then tightened slightly each screw so that the total assembly was solid against the bottom of the stock.



This is the full foundation that action is going to set on. Once this fully hardens we are ready to epoxy the action into the stock and once that hardens we are done.

Step 9)

Now we are going to bed the action into the stock on top of our foundation pillars. We now need to add painters tape on the walls of the wells so that is is easy for the oozed epoxy to be broken off. See below



Also put something in the front of the barrel channel to help keep the barrel centered. I used paper towels but wish now that I had used layers of painters tape on the barrel that would have done a little better job.

Now it is show time. Mix a LOT of epoxy up. You do not have to hurry here. We want to make sure that all the surfaces are generously covered. Even so you will have small voids that can easily be filled after the bedding has cured and the action/stock are parted. I also wanted a to limit the front epoxy pad under the first inch so I put some of the modeling clay to block it from flowing away from the barrel.



Note that I kept epoxy away from the pillars. the extra will fill this space and if it doesn't under a more controlled fill you can make everything smooth.



At this point I put the action screws back in and tightened them to about 10 lb-inches. If things went well you will have epoxy squishing out all around the action and the front inch of the barrel. Here is where you need a ton of q-tips to clean the break line all up. The cleaner you get this step the better things will be. I am not too worried here because it is after I get this bedded right I will refinish the stock. But...

Here you can see what squeezed out under the tang. I was sort of concerned at this point because I normally have all kinds of epoxy to deal with but not this time. I felt in my gut, something is wrong here but I had no idea.



Here you can see how the epoxy swished out in the wells. This is where I could test if it was set up.



This is a view of the tang area after I parted the action from the stock. I didn't dawn on me at midnight what I was looking at till I really looked at things yesterday afternoon.



You can see wood everywhere at the rear. This should have had a coat of epoxy about .030 thick.

Well we are almost to the end. There are a few voids that I will fill, I will fix the backend of the action to lift it and then rebed the back 3/4 of the action with a thin coat of epoxy so I get to 100% contact action to bedded stock. I also have to add a lot more epoxy under the barrel that gives the barrel a damper and supports the barrel in the action. (saddle to ride in).



So after the epoxy cured this is what we have



The few voids are no problem. Now to refinish the stock because I hated the finish CZ did on these rifles. I used lacquer thinner to strip what they had and then Minwax special walnut stain and 6 coats of Minwax satin polyurethane.