

Hunting etc.

everything hunting and firearms ...

ABOUT ME



View my complete profile

BLOG ARCHIVE

▼ 2010 (7)

▼ October (7)

[How to Store Taxidermy](#)

[Reinforcing Your Big Bore Rifle's Stock](#)

[My Favorite Recipe for Wild Boar](#)

[The CZ 550 - First Step to a Safari](#)

[The Tools of the Trade](#)

[The Animals](#)

[An Introduction](#)

FOLLOWERS

Followers (0)

Follow

TUESDAY, OCTOBER 12, 2010

Reinforcing Your Big Bore Rifle's Stock

I have a special passion for the big bore rifles. They make the recoil on a 300 Winchester Magnum seem like nothing and leave me with one heck of a headache after shooting them. Despite all the abuse they can dish out, their intertwined nature with African safaris, ivory hunters, and dangerous game makes them uniquely attractive to me and many other shooters.

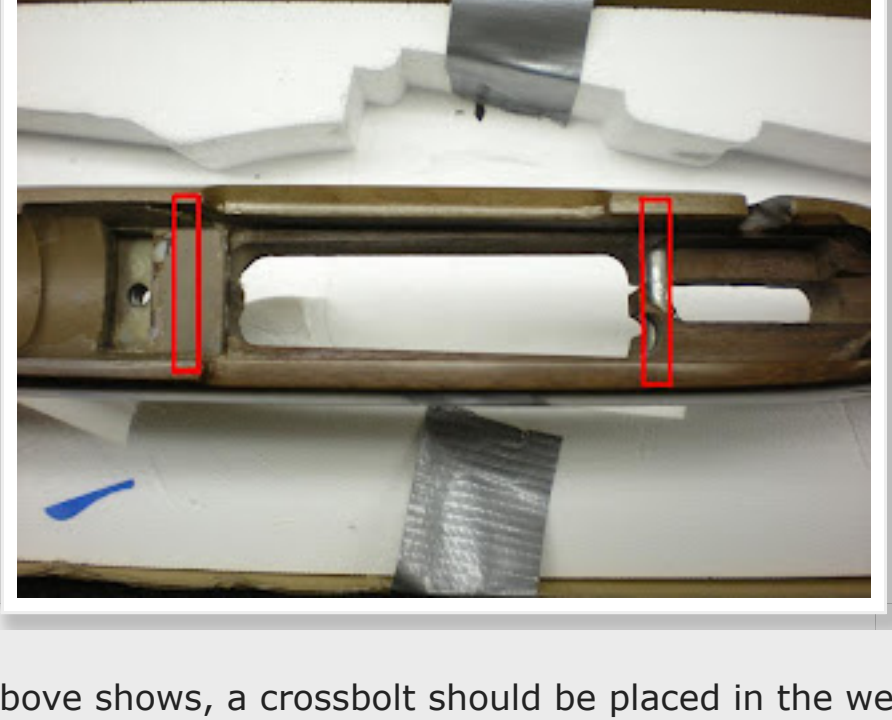
Something to keep in mind when you buy a big bore rifle is that not only are you going to experience more recoil, but the stock is going to experience more force as well. You often times see a big bore African rifle equipped with crossbolts, which look like two black dots in the middle of either side of the stock. Although this is often the only visible reinforcement to the stock, there is usually a lot more hiding inside. Everyone has their own method to reinforcing their stock, but the basics are the same. In this installment, I will leave out things that could not be accomplished by an average guy without the help of a gunsmith, like adding a barrel mounted recoil lug for example. What I will focus on is things you can do to reinforce your stock using basic tools and products found at your local hardware store and/or gun shop.

When a rifle recoils, it sends all that force through the stock and then into your shoulder. There are recoil lugs on a rifles action and, sometimes, barrel that help disperse some of the force into the stock. When this energy is dispersed it causes the rifle's stock to flex and wave, especially around the action where the sides of the stock are the thinnest. Adding reinforcements, like crossbolts and glass bedding, decrease the amount of flex in the stock during recoil and hold the rifle more snug. Having a proper grain layout on a wooden stock can greatly help with the dispersion of recoil, but, since most factory stocks are not made with consideration to wood cut and grain layout, I will ignore this at the moment.

Unless you're lucky and live near a Cabela's with a nice "Gun Library," you probably are like me and had to have your elephant gun ordered by your local gun store and, thus, did not have the luxury to look over the stock beforehand.

When I first get a rifle, I like to shoot it a few times to make sure everything is functioning as it should. I highly recommend you do this with your new big bore as, in the event there is some issue, you can send it back for repair under warranty. Once you begin to modify the stock, the factory from which your gun came is unlikely to do any warranty work since you modified the stock. You shouldn't have too much to worry about on lighter calibers like a 9.3x62 or 375 H&H, but this can get a little risky when you have something like a 458 Lott or 500 Jeffery you're preparing to sight in. If the stock does crack or break as you're testing it out, just send it back, tell them what happened, and they should get you a new stock. Far better to break a stock under warranty and have the factory replace it then find out your rifle has a bad barrel after you have voided the warranty by tinkering with the stock. Once you've made certain your rifle groups well and has no flaws that need factory attention, let's begin reinforcing the stock.

Let's start with the crossbolts. Most big bore rifles come equipped with crossbolts. If they do, you can simply leave them alone and move on to the next step or you can pull the crossbolts out, degrease the section running between the stock, put a little epoxy on them and reinsert them. Adding some epoxy will just further help to hold everything in place and will eliminate any gaps between the wood and crossbolts. I really like the [Devcon](#) brand epoxies, but any slow curing two ton epoxy should work. The key is to use a slow curing epoxy as it will have a stronger bond than the 5 minute epoxies. If you do choose to epoxy your crossbolts in remember that they will be permanently stuck into the stock. Also, do not use too much epoxy as it will squish out. I recommend you cover the stock with some painters tape to protect it in case there is any run off. I would also recommend putting some paste wax over the tape as this will prevent a barrier for the epoxy and make clean up easier. If you are intending to refinish the stock, you may think about sinking the crossbolts into the stock a little further and covering them with ebony plugs (or black epoxy). I will leave the aesthetic options up to you, just make sure you thoroughly think through what you are going to do and have a plan of action. Once you start putting in epoxy, you are fairly committed. Below is a picture of the interior of a stock showing, in red, where the crossbolts should go.

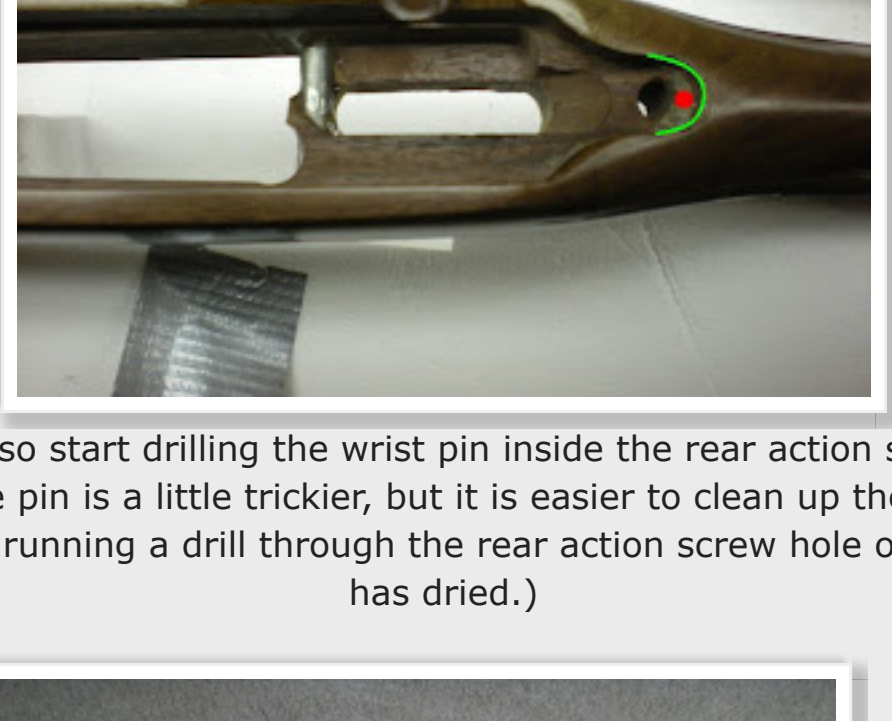


As the picture above shows, a crossbolt should be placed in the webbing behind the magazine box and behind the recoil lug on the action (in front of the magazine box basically). Each action is slightly different in regards to the placement of their recoil lug. On Mausers and CZ-550's the recoil lug is also where the front action screw connects to the action. On Winchester M70's and Remington 700's, the recoil lug is forward of the front action screw. Make sure you familiarize yourself with where the recoil lug is on your rifle so, if you do need to make your own crossbolts, you know where to put them.

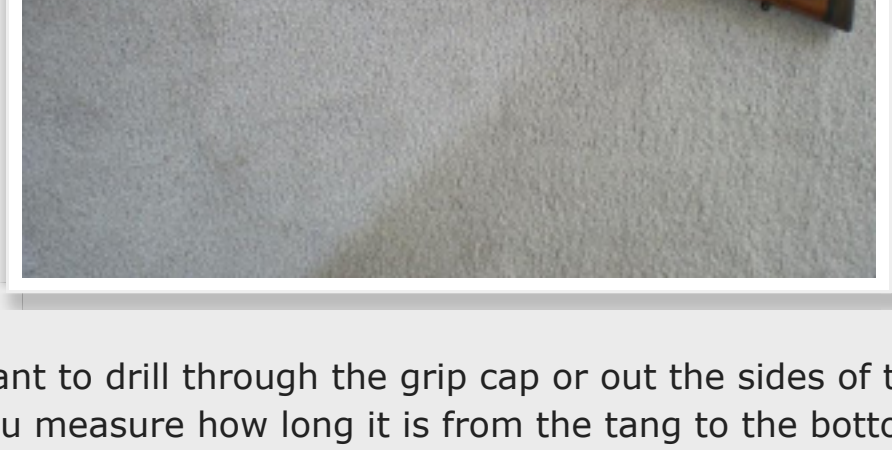
If your rifle does not have any crossbolts, you have two crossbolt options, internal and external. The external crossbolts are ones which you can see from the side of the rifle. This is a fairly common setup on most factory rifles like the CZ550 and Winchester M70. You can buy crossbolts from places like Brownells or you can make some using a piece of 3/16" (or larger if you want) threaded rod and nuts. Either way you will need to buy a crossbolt drilling jig so the holes are straight. If you elect to use the threaded rod to make your own crossbolts, you will need to sink the crossbolts and cover them with a wood plug or colored epoxy to make them look appealing. I would only recommend making your own crossbolts if you intend to refinish your stock. If you don't want to buy a jig, but still want crossbolts, you can use what are called internal crossbolts.

Internal crossbolts are made from a piece of threaded rod, but are hidden within the stock and secured with glass bedding epoxy. Since they do not break the exterior surface of the stock, they give the appearance the stock does not have any crossbolts. The placement of the crossbolts is the same as mentioned above, but you will want to make a relief groove on the inside of the stock where you can place the threaded rod without it contacting the action. A hand held Dremmel sander works well on hollowing out a groove. Cut the threaded rod to fit the relief groove, degrease the rod, and install it while you are bedding the rifle. (You should put a little bedding compound in the groove in the stock first, place the internal crossbolts, then continue filling the stock with bedding compound, then insert the barreled action same as you would any bedding job. The internal crossbolts will be hidden within the bedding compound.) Internal crossbolt function with the same intent as external crossbolts as they don't flex under recoil, thus helping prevent the stock from flexing. They are a great way to reinforce a stock if you do not want to see the crossbolts. I have one on my 9.3x64.

Now that your crossbolts are installed you will want to move on to making a wrist pin. The wrist pin runs internally from the tang of the stock towards the grip cap. The idea behind the wrist pin is to prevent the stock splitting at the wrist. With poor grain layout on a stock, this can happen. (A quick side note, you also want to make sure there is a slight gap between your stock and action in the tang. This little gap will provide some running room and prevent cracking of your stock in the tang. If you can not slide a couple pieces of paper between the action and stock in the tang, now would be a good time to wrap some sandpaper around a pen and shave off a little of the stock until there is a little relief gap. This is shown in green in the picture below. Back to the wrist pin!) You will need some epoxy and a piece of threaded rod. You can use the left over threaded rod if you made your own crossbolts or you can go a little thicker with a 1/4" piece of threaded rod. Using a drill, drill a hole starting from inside the stock in the tang going towards the grip cap. The two pictures below will show you in red where to start drilling and where the wrist pin will be positioned.

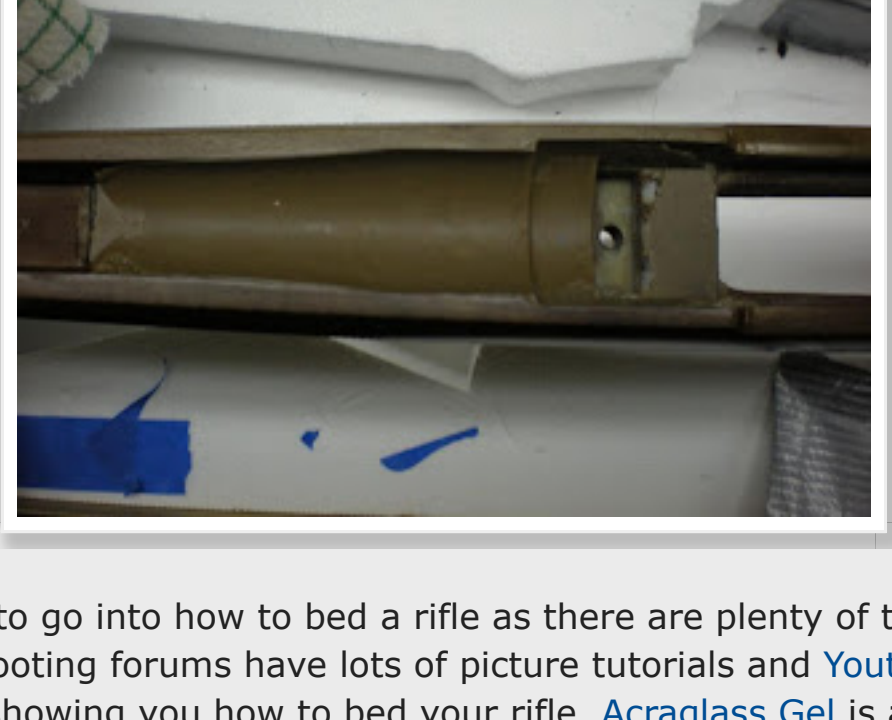


(You can also start drilling the wrist pin inside the rear action screw hole. Inserting the pin is a little trickier, but it is easier to clean up the epoxy that overflowed by running a drill through the rear action screw hole once the epoxy has dried.)



You do not want to drill through the grip cap or out the sides of the wrist, so make sure you measure how long it is from the tang to the bottom of grip cap and drill straight. A piece of tape placed at the appropriate measurement on the drill bit can help to act as a guide for when to stop drilling. When you have finished drilling, use a brush or compressed air to blow out the sawdust. You want to be able to get around 3" - 4" of threaded rod into the hole, so test fit that the threaded rod is long enough and will fit. You will want to make sure the rod is slightly shorter than the hole so you can sink the head of the rod below the wood line. Cut and fit the rod to size and degrease it. Next, I use a syringe to insert some epoxy deep into the hole I just drilled. Again, I like to use a slow curing two-ton epoxy for this. I like to fill the hole 3/4 or more full since I want to minimize any air bubbles. I then insert the threaded rod into the hole turning it as I push it in. Epoxy is going to goop out, as long as you covered everything you don't want epoxy on, you'll be fine. (If you do not have a syringe, you can always stick some epoxy into the hole with a skewer and liberally coat the rod in epoxy.) Make sure the rod is inserted well below the top of the hole so it won't push on the action when the rifle is assembled (hence why you cut it a little short). Once you're sure the rod is inserted deep enough, clean off the epoxy that has oozed out. I find Q-tips are excellent for this application. If you get some epoxy down the rear action screw hole, just let that dry and run the drill through it later to clean the epoxy out. Your big concern is to make sure the surface where the action rests is flat and clear of epoxy. Once dry, you have successfully installed a wrist pin.

The last major item you will want to do now is glass bed the action. I've bedded several rifles before using various types of products. Below is a picture of my first attempt at glass bedding. This is not the prettiest glass bedding job I have done, but it functions just the same.



I am not going to go into how to bed a rifle as there are plenty of tutorials online. Hunting and shooting forums have lots of picture tutorials and [Youtube](#) also has several videos showing you how to bed your rifle. [Acraglass Gel](#) is a great product to use if you have never done bedding before as it comes with very detailed instructions covering several different methods for various rifles.

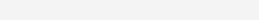
There are several types of products that you can use to bed your rifle. Glass bedding is essentially just a type of two part epoxy resin that is designed to help hold your rifle's action in place. By keeping your action nice and snug, accuracy increases in the rifle. Since bedding compounds are also a type of epoxy, they do help reinforce the stock a bit as well. If you are not careful, they may even glue your barreled action into your stock, so it is very important to use a good release agent. Acraglas comes with a release agent that some people like and some don't. I have never tried it, so I can't speak to it's properties. Some use Pam cooking spray while others use Kiwi natural shoe polish, but the product I have always used is paste wax. Paste wax is used by many shooters and is the most commonly mentioned release agent. I figured I'd go straight to the top and use that. An added advantage of past wax is it's great at protecting both the metal parts and the stock from moisture while out hunting. I have used both the [Johnson's Paste Wax](#) (by SC Johnson) and the [Minwax Paste Finishing Wax](#) (by Minwax). The Minwax product I got at [Home Depot](#), while the Johnson's variety I had to find at a mom-and-pop type hardware store. Both worked equally well though.

When it comes to bedding a rifle, I tend to go with whatever product is easily accessible to me. I've heard of people using various types of products, but aside from Acraglas, there are only two other products I've heard recommended over and over, [Marine Tex Grey](#) and [Devcon Steel Epoxy Putty](#). I have used both those products and have found them to be equally effective at bedding a rifle as well as no more difficult to use than Acraglas. Just follow the recommend ratios on the directions so the epoxy sets up correctly. I can not say that any one of the bedding compounds is better than the other. I do like the Devcon and Marine Tex products better as I found it easier to get a consistent mixture. Acraglas has the advantage of you can dye it colors, where the other two are a gray type color. This isn't really that big of a concern since you will barely be able to see any of the bedding when the rifle is assembled.

If you follow the directions for bedding found online and in Acraglas you should be set to do a great job bedding your rifle. I will offer you a few tips and tricks I've learned along the way. When applying your release agent, putting a glob of wax in several layers of cheese cloth makes for a great applicator (and make sure you use 2-3 coats of wax too, leaving time in-between to let the wax dry). Wax everything! After you have applied the bedding compound, go back in an hour or two (or both) and turn the screws back a half turn, then forward a half turn. This will allow you to make sure the screws are not glued in place. (This happened to me once and, since the epoxy wasn't fully cured, I was able to wrap the gun with duct-tape, remove the screw and clean it off. No ill effects came of this and the rifle assembled just fine and shoots great too.) When you think you have put in enough glass bedding, add some more. It is easier to clean off extra bedding than have to re-bed because you didn't use enough (that's what happened the first time I bedded a rifle). Lastly, rough up the stock with some sandpaper, this will give the epoxy something to bond too. This is especially important on an injected molded stock (since epoxy and plastic don't bond well). Drilling some small, but random holes where the bedding will go can also benefit an injection molded stock as is provides some mechanical locks for the epoxy to grip into (you may need to use a toothpick to push the bedding compound into the holes). Wiping the areas you do want bedding compound to stick with a degreaser is also a good idea, again, especially on injection molded stocks.

The above is my method on reinforcing a stock. Everyone is going to have their own opinion on what products to use and way to do something. These are the methods I use and they have worked for me. It is important, whatever you do, that you reinforce your big bore rifle as you don't want your stock to break. It's one thing if it breaks at home, but far worse if it you shatter your stock in two as a cape buffalo is charging straight towards you.

Posted by A.C. at 12:40PM



7 comments:

Unknown April 17, 2014 at 8:06AM

Thank you for sharing your tips and tricks! I feel much more confident in reinforcing my CZ 550 375 H&H after reading your blog.

[Reply](#)

Steve Erick October 7, 2015 at 11:12PM

I'd be trampled if all sites gave articles like these awesome articles.[Gun Mann](#)

[Reply](#)

Unknown September 10, 2016 at 12:27AM

Thanks for the post, people who are really concerned about their safety and safety of their loved ones may take help from the [MA Gun License](#) also to get licensing and training. But one thing must be remembered before firing a bullet a training is must.

[Reply](#)

Akseosolutions January 19, 2019 at 1:03AM

Positive site, where did u come up with the information on this posting?I have read a few of the articles on your website now, and I really like your style. Thanks a million and please keep up the effective work. [best base layer for hunting](#)

[Reply](#)

huntingspro May 6, 2019 at 10:50PM

today's topic is really amazing, i really love this place, thanks [Get here hunting instrument idea](#)

[Reply](#)

Remington 870 Shooter November 29, 2020 at 9:06AM

Very good article, thank you! Visit my website if you need info about [best Remington 700 Triggers](#)

[Reply](#)

Nitibha Kapoor February 10, 2021 at 9:52PM

Simply wish to say your article is as astonishing. The clarity in your post is simply great, and I could assume you are an expert on this subject. Same as your blog i found another one [Sohman Epoxy](#) Actually I was looking for the same information on internet for

[Epoxy solvent](#) and came across your blog. I am impressed by the information that you have on this blog. Thanks a million and please keep up the gratifying work.

[Reply](#)

To leave a comment, click the button below to sign in with Google.

SIGN IN WITH GOOGLE

Newer Post

Home

Older Post

Subscribe to: [Post Comments \(Atom\)](#)

TOTAL PAGEVIEWS

33521