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Glas Bedding A Remington 700

By: Larry Weeks

Consistent accuracy is what all shooters are ultimately looking for when hunting or target shooting. In order to get perfect accuracy with every shot, it's necessary to glas bed your rifles to get an absolutely skin tight fit between the barrel, action, and stock. I've been building a Remington 700 and wanted to make sure that the rifle would be an absolute tack driver. Since all of the parts I've been using have come from Brownells, the bedding job on the H.S. Precision stock I bought would be done using our great [Acraglas Gel \(#081-014-004\)](#).

Yes, I know, the H.S. Precision stock has a bedding block. But, bedding blocks have manufacturing tolerances and so do Remington actions. Plus, the term "drop-in" means everything about the stock has to be left just a whisker loose so if there are manufacturing variations, the action will still actually drop in. For the price of a bedding kit, we thought it would be interesting to see if we could improve the accuracy, even a little bit, by removing that little bit of slop.

Here's a list of the products we took out of stock to do the job. We already had a small, [Ballpeen Hammer \(#956-100-002\)](#) to drive the pin punch, a [Pistol Bench Block \(#498-100-200\)](#) and a [Brownells Multi-Vise \(#080-000-019\)](#) with set of [Red, Super Hold Vise Jaws \(#852-002-100\)](#) modified to slip over the vise's moveable jaw bar. Any decent-sized vise will work; just pad the jaws to protect the stock. Of course, we like the Multi-Vise.

Other products you'll need are:

[Acraglas Gel Kit \(#081-014-004\)](#) - the two gun kit.
[Trigger Bedding Block \(#080-000-206\)](#) for Remington 700
[2" Wide Bedding/Masking tape \(#084-092-001\)](#)
[Type A Surgical Tubing \(#084-076-001\)](#)
[Replaceable Pin Punch Set \(#080-507-000\)](#)
[Inletting Guide Screws \(#319-415-070\)](#) - a tremendous help!
[TCE Cleaner/Degreaser \(#083-060-024\)](#) - a big aerosol can.
[500 Cotton Applicators \(#885-861-500\)](#) (big "Q-tips" with long, wood handles - do all sorts of things with them, you'll see)
[Red Shop Cloths \(#084-086-001\)](#), one dozen - white are available, we picked the red because they look great in pictures.

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Take everything apart; the scope and rings can come off as a unit, pull the bolt out of the action and take the barreled action out of the stock. If the magazine box isn't screwed to the action, wiggle it out of its recess. Taking the trigger out is easy, but, if you don't look at things carefully, putting it back in could require a look at the [schematics](#) on the Brownells web site. Thank goodness, for my sake, those are there.

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Driving out the front trigger group pin.

Lay the barreled action on the bench block, left side down. Start with the rear pin and line it up over one of the holes in the bench block. Drive it out from the right side, to the left side, with the .090" pin punch and the small hammer. Catch the little mousetrap bolt stop spring, and slip the bolt stop out. Put the stop, pin and spring in some sort of container. Line up the front pin over the bench block hole, and drive it out. Turn the action up and slip the trigger group out. Don't let the trigger group turn upside down. The sear is now loose and it, and its spring, can fall out. They're easy enough to put back; finding that spring on the shop floor is the problem. Put the trigger group and the front pin into your small parts container.



Position the Trigger Bedding Block.



Secure the Bedding Block.

Slide the Trigger Bedding Block into the trigger recess and lock it in place with the little steel plate and the socket head screw. Now, use the TCE to degrease the action and rear 4", or so, of the barrel. Grab the modeling clay and fill in the trigger group pin holes, the openings in front of and behind the **Trigger Bedding Block**, the bolt stop slot, and any other opening on the bottom side of the action. EXCEPT, don't fill in the front and rear action screw holes. Smooth it all out, nice and level with the metal surfaces of the action.



Fill all recesses and pin holes with modeling clay.

Next up, the recoil lug. The vinyl **Bedding Tape** really shines here. Cut an inch and half wide (roughly) by three-inch long strip and lay it across the front edge of the recoil lug and let it fold up, along the barrel. Use something square edged with a fairly sharp corner, like the back of a closed pocket knife, to push and stretch the vinyl tape to make it follow the curve of the barrel where it meets the recoil lug. Once the tape is shaped and stuck down tightly trim the excess off the recoil lug. You just want a layer on the front face to make it a bit easier to get the lug to slide out of the recess. Use the light, **ballpeen hammer** to tap along the edge where the tape meets the edges of the lug. Let the hammer kind of bounce lightly and work back and forth across each edge until the lug's edge cuts through the tape. Peel the extra off. Trim the tape along the joint between barrel and lug so all that's left is a perfect cover over the front of the recoil lug.



Stretch the vinyl tape across the lug and up the barrel.



Tapping with the hammer will cut the tape cleanly.

Open the Acraglas Gel kit and get out the small bottle of Release Agent. Grab one of the Cotton Applicators and dunk it in. Swab the bottom of the action, all of the Trigger Bedding Block and up, around the sides of the action, the magazine box opening, the entire top of the rear tang area, all sides of the lug (including the tape) plus the tape on the barrel. Run it up the sides farther than you think you need to; bedding compound seems to find its way onto everything – even Gel, which doesn't run. One of those facts of life that can't be explained.



Apply Release Agent liberally, even where you donâ€™t think you need it.

Set the barreled action aside so the Release Agent can dry and clamp the butt section of the stock, gently, in the Multi-Vise. Get the modeling clay out and fill in the bolt handle cut. Cover about four inches of barrel channel ahead of the lug recess with tape, and tape along the top edges of the stock and around the rear tang. Next, make a clay worm about two to three inches long and 1/8" in diameter. Lay it on top of the tape, right in front of the lug recess. Itâ€™ll act as a dam to keep the Gel that squishes out from working its way down the barrel channel.



Back to the barreled action. Hereâ€™s a neat trick Marc showed me. Wrap the Inletting Guide Screws with bedding tape. Two or three times around should do. This will make sure thereâ€™s clearance around the screws and that no bedding will get into the holes and create an extra recoil lug. Be careful, the first time I tried it, I got too much tape on and the screws wouldnâ€™t fit the holes at all. Marc took off a couple of layers, leaving a bit of clearance. Screw the Guide Screws into the action, give them, and their tape a thorough coating of Release Agent, along with adding a second coat to the rest of the action â€“ that means cover everything you did before, again. Get the Release Agent up, around the sides of the action and on top of the rear tang â€“ did I mention that bedding compound can find its way anyplace?

Itâ€™s time to mix the **Acraglas GelÂ®**. Have a bottle of vinegar close by to clean the measuring spoon, and your hands, during and after the mixing process. Dig a glob of the white resin out of the jar with the measuring spoon. Grab the tongue depressor and pack the resin into the spoon to eliminate any voids. Now, scrape the excess resin off the spoon with the tongue depressor. Return the extra to the resin jar. With your third hand, set the mixing cup on the bench, upside down. Scoop the measured resin out of the spoon and put it in the dish, outside, bottom of the cup. Mixing on the bottom makes it easier to get all the resin and hardener mixed together, plus itâ€™s really easy to pop the left over, setup Gel off the bottom before the next project.

Wet a paper towel with vinegar and clean the measuring spoon thoroughly. Dry it with another towel and dig into the Hardener jar. Do the same, pack, level, scrape and scoop routine.



Clean the scoop with vinegar.



Scooping the hardener out of the jar.



Scrape excess back into the jar.

Poke a pin hole in the black dye packet and add two or three drops to the unmixed Gel. Donâ€™t overdue the dye, add only a drop at a time. Use just enough to get the perfect color you want. Use the tongue depressor to stir, fold, and mix the dye and the Gel until it turns jet black and no resin or hardener remains unmixed.



Add a few drops of dye; go easy!

Take a deep breath and start spreading the Gel into the stock. One glop goes in the recoil lug recess. You donâ€™t have to fill the recoil lug area, thereâ€™s not that much space to take up. Put a layer along the inside of the stock where the sides of the action rest, and another coat where the rear tang sets.

If the butt of the stock isnâ€™t clamped into your bench vise, with a support under the forend, do that now. If you have a friend around you can skip the vise and make him/her hold the stock. Carefully slide the barreled action into place, and squeeze it down, into the stock with firm hands pressure, getting it all properly lined up.



Dropping the barreled action into the stock.

Grab the Surgical Tubing and thoroughly wrap the stock and action with it, stretching the tubing for each revolution. Set the gun aside, just make sure there's no stress on the barrel or action that could change their position.



Looks pretty ugly wrapped with surgical tubing.

Clean up the measuring cup with vinegar, pitch the tongue depressor, and clean up the area. Now, walk away and do something else for three to four hours.

While you're ignoring the temptation to mess with the gun, find a scrap of wood or plastic and make a sharp edged "knife" or scraper. Once the three to four hours, (okay, three hours and two minutes) is up, unwrap the surgical tubing. DON'T try to take the barreled action out of the stock! Use your plastic/wood knife to cut away the rubbery bedding material that has squeezed up out of the stock. What you're doing here is avoiding a mechanical lock. Cut along the top edges of the stock and especially around the rear tang. The tang can't set in the bedding, it should only rest on the bedding.

Once you've cleared away all the excess bedding, you'll know how much the Gel has set up. Depending upon the temperature and humidity, three hours may be fine for the next step; you might have to wait five hours if the room temperature is low and the humidity is high. The step we're talking about is taking the barreled action out of the stock for inside cleanup.

Flip the gun over, make sure there's something soft underneath, and start working the barreled action out of the stock. Since everything is at zero clearance, this isn't easy. Go slowly and kind of wiggle it out a bit at a time. Alternately pressing down on the barrel, then on the action (stick a wood dowel inside the bolt raceway) and, sometimes, even a thump on the inletting guide screws with a plastic hammer is necessary. Depending on how tightly those tape-

wrapped screws fit in their holes, it can help to unscrew them completely from the action.

Once the barreled action is out of the stock, start cutting away the Gel that has snuck into the magazine box recess, around the trigger bedding block, etc. If you cut down to the aluminum block, all the way a round, youâ€™ll be in good shape. If you wait until the bedding has set completely, youâ€™ll need to use something like a Dremel or Foreman tool, a die grinder or chisels and files. Peel the tape off the front of the recoil lug and put the barreled action back into the stock for at least another eight to twelve hours.

Gel reaches full strength in 24 hours, but you can pull the barreled action out again around 18 hours and finish the clean up. Take all the clay filler out of the action and the stock. The round, wood stems of the cotton swabs can help dig down into the recesses, and poke through the screw and pin holes; soak the cotton end with TCE and wipe the surfaces, peel the tape out of the barrel channel, and get all the release agent off the metal. If you havenâ€™t done it already, pull the Guide Screws out and take the **Trigger Bedding Block** off. Once everythingâ€™s clean, give the metal a light coat of oil and start putting it back together.



Start removing modeling clay, bedding tape and Compound that has oozed into various places.

When you start putting the trigger group back in, donâ€™t turn it upside down. The sear and its spring can fall out easily. Putting the bolt release and its spring back in is the trickiest part, I found. Get the trigger group in place and drive the front pin in, all the way. Clamp the action into the vise, otherwise youâ€™ll need at least three hands (four would be better).

Hook the short leg of the spring over the receiver, behind the trigger group. Hold the round loop in the recess, drop the bolt stop into its recess next to the trigger group and hook the long leg of the spring over the front of the bolt stop. Now, try to line up the rear pin through all the pieces and tap it into place. I messed around for quite a while, swearing, dropping pieces and getting more frustrated until I finally stopped, went to the tool box and used the middle size replaceable pin punch as a slave pin and followed it through with the pin. If you have access to the Brownells web site, find the [Remington 700 schematic](#) and youâ€™ll see how things fit.

Put the magazine box into its recess, add the follower and spring. The spring kind of gets a weird angle to it and can goof up your reassembly if you donâ€™t make sure the stock goes over it correctly. Get the action into the stock, or the stock onto the action, put the triggerguard on, the screws in and tighten them down, snugly.

Turn the gun back over, put the bolt in and check for correct function. I missed cutting out a bit

of Gel near the bolt stop lever and it was just enough to keep it from working. I took the barreled action back out of the stock, dropped the follower and magazine spring on the floor, and found out the bolt stop worked once it was free of the stock. All it took was the tip of my pocket knife to flick the piece of Gel away. Back together, flip the gun over and set the scope back on. Hereâ€™s another screw up.

I didnâ€™t have a socket wrench set handy to tighten the TPS rings, so I grabbed a small, adjustable (Crescent) wrench. Kind of had to work it in at an angle and twist. I heard something scrape and stopped. Of course that was too late to avoid the gouge the tip of the wrench jaws put in the ringâ€™s finish. **Take the time to get the right tool!**

Even though there was a lot of work involved with this project, Iâ€™m really glad that I decided to do it myself. I guess Iâ€™m like a lot of youâ€™, nothing beats the satisfaction of doing a good â€œhands onâ€• job yourself and then being able to enjoy the fruits of your labor. Since finishing up, Iâ€™ve completed the rifle and gone out the range. Itâ€™s performed flawlessly so far and the accuracy is simply amazing. Remember, you can do a bedding job yourself at home, all it takes is a little patience and a little desire and a few products from Brownells.



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