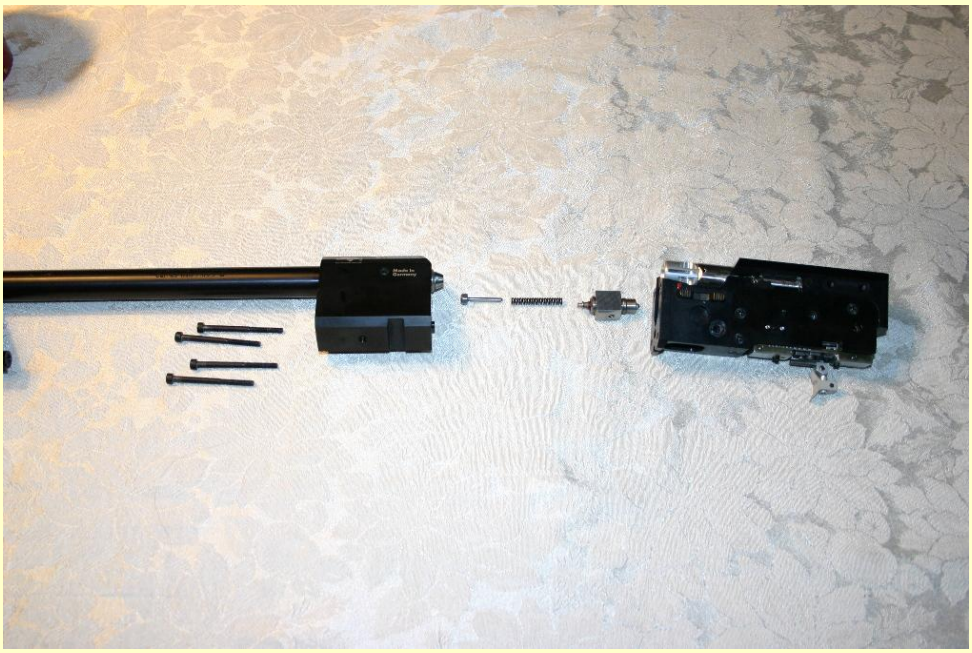
9003 Lubrication Procedure

Tackle this procedure at your own peril: (a) it might void your warranty and (b) if you don't do it properly you will have a $2000 paperweight on your hands. Our suggestion is that you read through these directions at least twice before you attempt lubing it. Once you have it in your mind's eye, then tackle it. Here is the exploded diagram of the 9003, it is big [5 meg] on download. Print it out to understand the location of various bits and pieces as you read and do this procedure. The drawing for the much easier to lubricate 2002 Air Rifle (500K 8 pages) is found here. The figure numbers listed below in parenthesis come from the exploded diagram noted above.

Firstly you have to remove the rifle from the stock. That is effected by removing the two flat head screws (108c) from the sides of the stock and also loosening the two set screws (5) on the front support for the air cylinder. The trick to getting the rifle out of the stock it to slide it forward a bit to disengage the front rubber shocks (108) from the mounting pins (109).

Once removed the next step is to remove the barrel/regulator from the breach/trigger mechanism.

There are four screws (49) that hold the two parts together. They may be very tight and the key is to have a proper tool to access them as they can be under very high torque. However, they may not. We have seen both conditions.

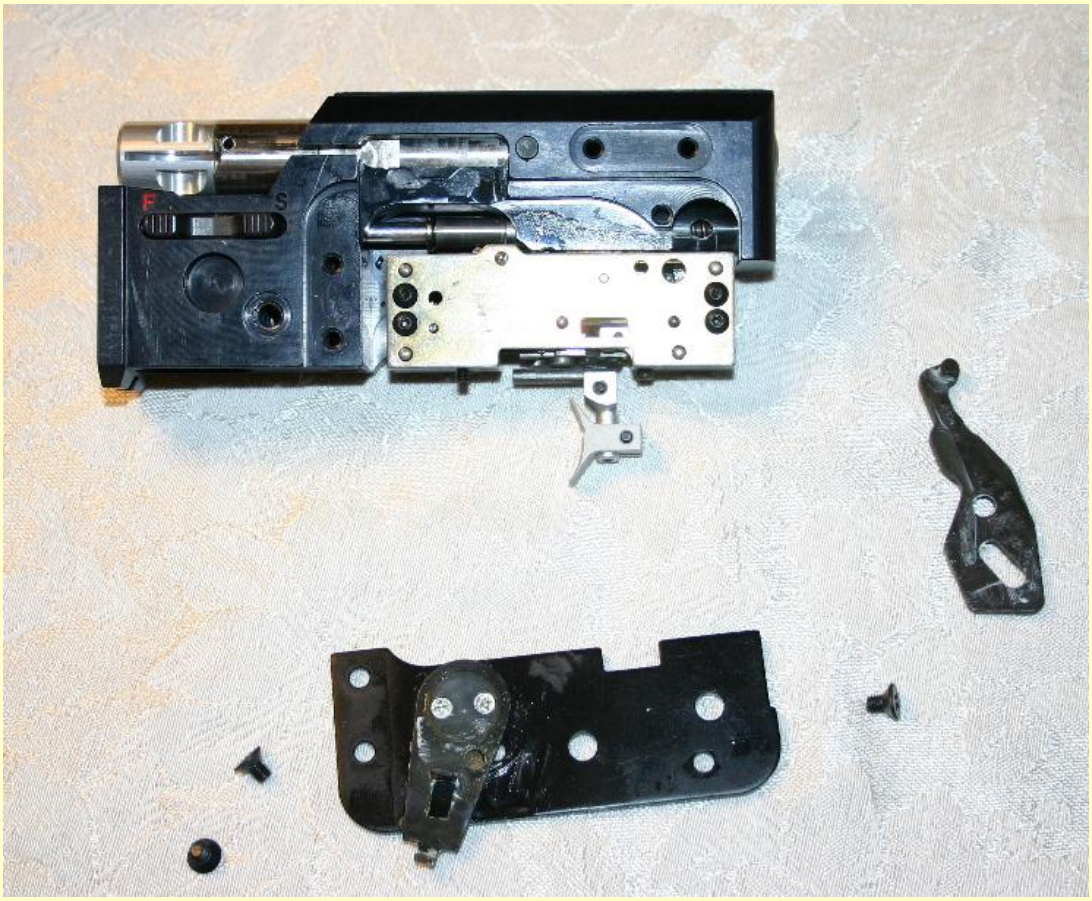


Notice the direction of the parts in the middle(53,54,55,56,57), the order is critical

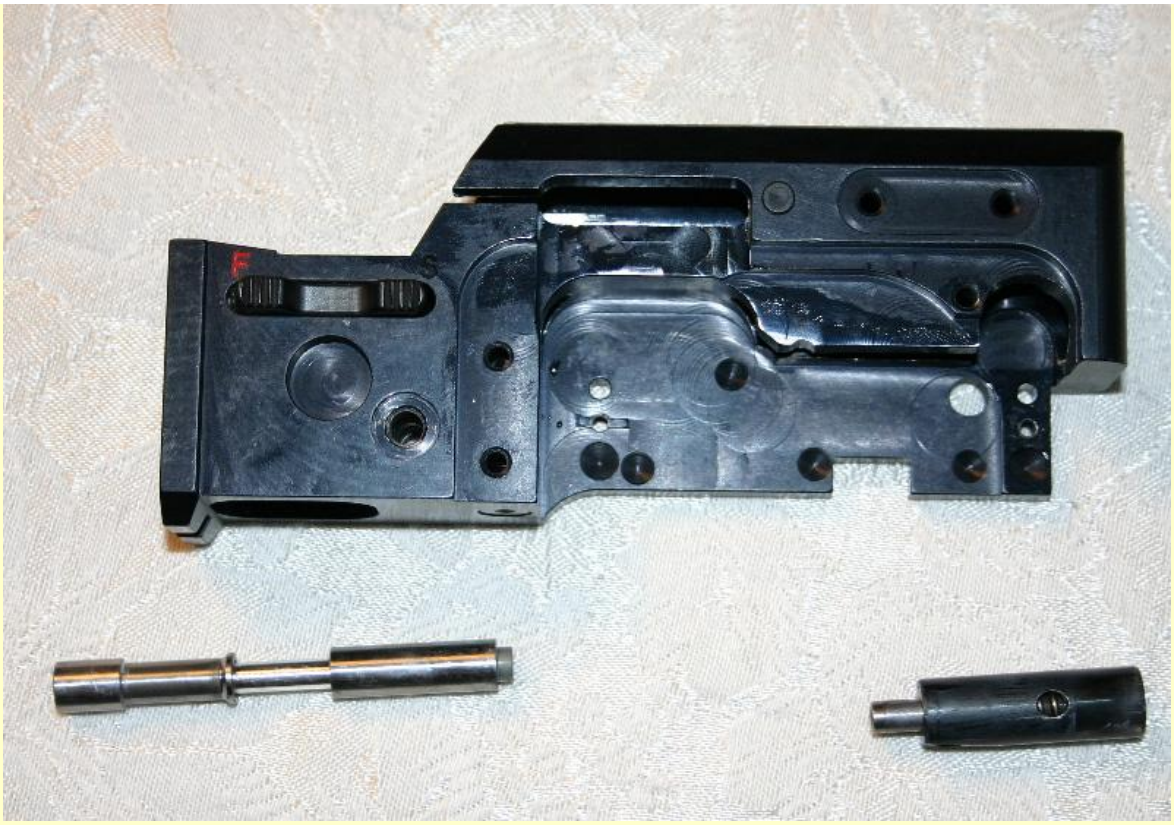
Then you remove the rubber block (130) on the rear of the breach and remove the two screws (65) the hold the cocking mechanism (61, 62, 63,64) to the breach. It will now slide forward.

Now you want to remove the trigger housing from the breach. Firstly there is a cocking plate (133) that has to come off. Try and pay attention to how it comes out, as there is a trick to getting it back together and it all rests in that piece. There are 3 screws (65) that need to removed to lift this plate out.

There are two of 4 screws (102) that you remove to lift the #5065 trigger housing out. They are the two black hex ones on the top of the trigger case that you remove and lift the trigger out.



The next step is to remove the bolt (92) from the breach. The bolt is chrome and there is a stabilizer [spring loaded cylinder] (200, 201, 202, 203, 204, 205) behind it. It is critical to note the orientation of the bolt so that its holes line up with the sear and lever cocking plate (106) and bolt (103) later.

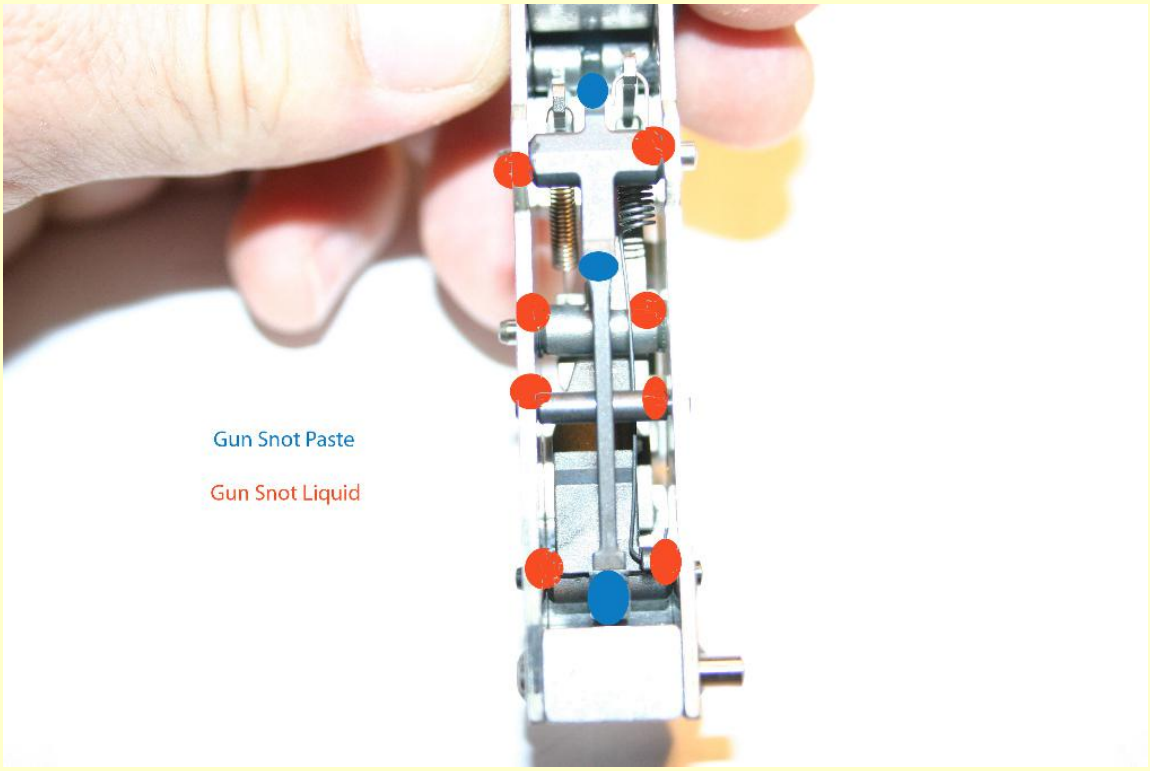


Now you need to deeply clean all the parts in a good solvent. 3M's Novec HFE-72DE is wonderful but you might not have access to it. A good second choice is the environmentally unfriendly Brake Cleaner that you can buy in NAPA for about $2.00 a can [the red label usually]. Clean, blow dry and clean and dry again. Wipe all parts off very well with a lint free cloth.

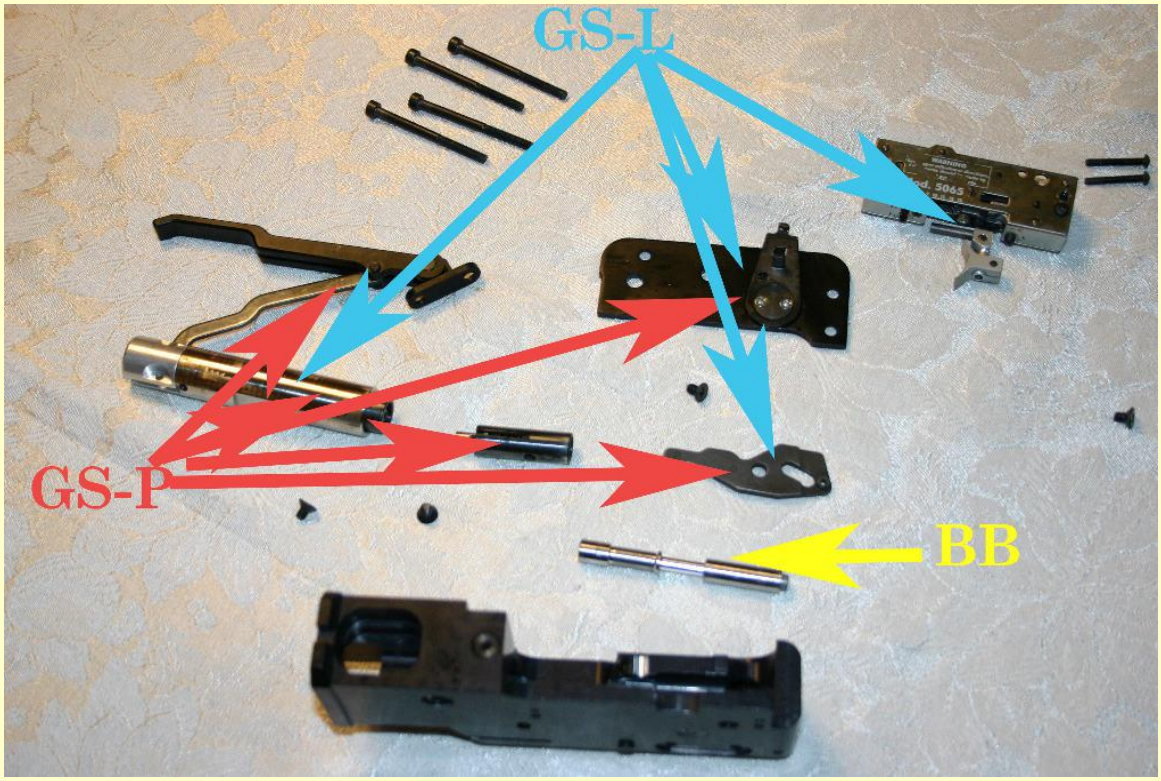
Now look at the trigger and ALL parts for any signs of abuse or high wear etc. There shouldn't be any but always a good idea to look.

Clean the trigger mechanism with the same Bake Cleaner and air dry VERY WELL. Repeat. <u>You can not dry it too much</u>.

Time To re-lube and re-assemble the unit. Trigger lube points are as follows



Notice that we use way more Gun Snot™ Liquid Lube than Gun Snot Paste Lube. There are 8 Gun Snot Liquid Lube points on top and 3 Gun Snot Paste Lube points. The 'stiction' of the Gun Snot Paste Lube is too high for most parts in the trigger, but they are supreb for high load points. We do add Gun Snot Paste Lube to the sear and contact points. Basically you lubricate anything that moves or is shiny. From the bottom look for points of movement or shine and use Gun Snot Liquid Lube only.



Now the comes the fun part; to lube and reassemble. Notice the areas where we use Gun Snot Paste Lube versus Gun Snot Liquid Lube. Notice that some parts use a combination of Gun Snot Liquid Lube and Gun Snot Paste Lube to thin the Gun Snot Paste Lube out. No time now for too much lubrication friction. Also notice that we use Booger Buster on the bolt. We have seen failures of TW-25 when used here and the stiction of Gun Snot Paste Lube is too high for this application. Gun Snot Paste Lube will not dry out here like TW25, but has too much stiction to

work well. Booger Buster is perfect and it's anti corrosion properties are perfect for the raw machined metal in there. Remember LESS LUBRICATION IS BETTER THAN MORE. ANY LUBRICATION NOT USED FOR LUBRICATION IS A DIRT MAGNET!

Now you do the following:

1. **Insert the bolt into the breach (remember the direction it goes from disassembly, lightly lubed with Booger Buster).**
2. **Insert the stabilizer in behind it (lightly lubed with Gun Snot Liquid Lube and Gun Snot Paste Lube). Pay attention to the safety position to the bolt so that it moves as designed once the bolt and stabilizer are inserted. [*For the record, we hate the safety on this rifle as it fails to the safe mode on vibration alone, we tape it into the fire mode so that it does not accidentally go 'safe' during finals*].**
3. **Lightly Gun Snot Paste Lube lube the bolt and insert it into the lightly Gun Snot Liquid Lube lubed bore guide, replace the two cocking mount screws.**
4. **Move the action back and forth in the bore to make sure that there is no binding anywhere and use Gun Snot Liquid Lube as needed to get the "feel" in the action that you like.**
5. **Replace the rubber plug in the back of the breach behind the bore in the hole making sure that no dirt has sneaked in there.**
6. **Replace the trigger back into the Aluminum Breach plate and make sure that the bolt and the sear are lined up. Torque the trigger case back into place.**
7. **NOW THE TRICKY PART: Remember the plate you took off at the start that we told you to pay attention to? Well here is where we find out how closely you watched it come out. Lay the plate (103) in so that the little tab on the right hand end mates up with the hole on the stabilizer. Put the tab into the hole on the stabilizer and the hole in the plate onto the breech pin.**
8. **Take the overall cover plate (the one with the 4 flat screws holding it on) and align the sliding tab (106) on the top into the slot on the bolt, simultaneous to aligning the small hole in the plate (103) with the overall plate and the hole in the plate from step #7. When all three are perfectly lined up, the 3 hole cover plate (133) will lay flat on the breach; not before. DO NOT FORCE IT. The first time we did this it took a 50 plus year gunsmith 2.5 hours using blue prints to figure it out! Now it takes like 3 mins.**
9. **Once the breach assembly is back together gently try to cock the assembly and make sure that all is well. It should dry fire easily and smoothly. If it does not go back and check your work. and repeat the steps until it does.**
10. **Now use a goodly amount of Gun Snot Paste Lube Lube in the slot on the left hand side of the bolt where the cocking lever (106) engages it in the slot. This is a very high wear area on this rifle and it needs to be lubed regularly with Gun Snot Paste Lube.**
11. **Reassemble the rifle assembly to the Breach and tightly torque the 4 long bolts (49).**
12. **Use a liberal amount of Gun Snot Paste Lube on the small O-Ring (85) at the end of the bolt (88).**
13. **Use the Gun Snot Paste Lube on the rubber shock mounts (108, 109) to; (a) hold them into place during stock reassembly (b) allow the rifle to slide into the stock easily.**
14. **Get it all lined up and then snug the two flat bolts on the sides (108c) first then tighten the two set screws (5) at the front. It is not critical how torqued these bolts are, rather it is more critical that they be the same torque and of course snug.**

Now the rest of the story. At the end of the regulator is a very small tiny Green Colored O-Ring (59a). Use a TINY amount of Gun Snot Paste Lube on the O-Ring. Then get your air cylinder (23) and use the Gun Snot Liquid Lube on the Female part of the cylinder. Again you don't need a lot, but it must be lubed. TW25 dries out in here and if you store a back up cylinder be sure to lube it before you store it. Only use the Gun Snot Liquid Lube here. If you do insert a dry cylinder can rip the O-ring out of there after like 2-3 insertions [ask us how we know]. Then on the threads of the air cylinder and the female threads of the receiver (50), use a tiny amount of Booger Buster. This step applies to the 2002 Anschutz air rifle as well. Then take a small amount of Booger Buster on the external parts to protect them and make the bluing really shine. Use a lint free cloth and again, only a very, very fine coat is needed.

Now the age old question, *how often do I have to do this*? Good question and there is not a tried and true answer. However, the barrel needs to be wire brushed after about 500 rounds [per Matt Emmons], then run a felt pellet down the barrel with Booger Buster on it twice to protect the raw steel until the next use. As for the bolt, use the Gun Snot Liquid Lube between deep cleanings like we just described to keep the feel that you like. Deep cleaning is a function of time and use. If you are not using Gun Snot lubes, then no longer then 4 months between re-lubrication. However if you shoot 3-5 times a week, then once a month deep clean will keep it consistent. Pedestrian dirt is your enemy. The more meticulous you can be in reducing exposure of your rifle to dirt and grit the better off you will be.

Happy Shooting.

Last Updated: Mar.27.2008 Last Updated: Jul.23.2005