

## SIG 550/551 BARREL CHANGE OUT PROCEDURE

All reference numbers below refer to reference numbers found on the exploded schematic found in your SIG 550/551 owner's manual.

Tools you will need are basically simply, a 12 - 16" adjustable crescent wrench (with a "cheater handle made from a piece of strong pipe that will slip over the wrench and extend it to a length of 20 - 24", some small drill bits in the 2 - 3MM range, a couple of pieces of straight square steel rod (not wood) 1/4" x 1/4" up to 1/2" X 1/2" square and 7 - 8" in length - plastic rod is acceptable if you know it is straight, appropriate loctite (#242 is fine) and access to a **stable bench with a strong vise** - you don't want a vise & bench that's going to wobble when you pull on that handle to either loosen or tighten the bbl.

Remove front push/pull hinge pin (ref part #591-594 on attached schematic) Then slide lower forend handguard rearward 1/4 to 1/2" inch and remove from barrel. Likewise remove upper forend handguard.

Remove gas valve (ref #241) by depressing spring loaded lock pin (#223) with your finger and turning valve 1/4 turn until it lines up to be pulled out.

Next, holding receiver so receiver top is down (as if barrel/receiver was resting on a table with the receiver top in contact with the table) remove bolt charge handle and then tipping barrel muzzle upward, catch bolt as it slides out the rear of receiver. (Special note: if you let bolt fall out of receiver and hit the floor, your wife will not be very happy that night).

After removing bolt, again depress lock pin (#223) and turn gas valve body (#251) until it clears the pin and can be pulled forward and removed through the front of the front sight mount body (#212). Gas piston and spring should come out with the tube.

Next first remove front sight hood assembly (#231). Then using a brass drift punch (2 to 3MM diameter) drive roll pins (ref #213) out of the front sight mount body (#212). A medium size screwdriver handle is all the hammer force you will need to tap the roll pins out. Front sight mount body should now slide forward and off of barrel. If it doesn't, don't force it. SIG quality controls the dimensions and tolerances of the 550/551's components very strictly. If it's stiff, first take a small block of wood and laying it against the backside of the front sight mount body (the backside being the side facing the receiver), tap on the block of wood with a light 8 to 10 ounce hammer (light taps) - first tap on the top (backside) a few times and then rotate to the bottom of the sight mount body and back and forth. You should be able to walk it off the boss area of the rifle in this manner. If it still refuses to move, another trick is to wrap the barrel (both behind and in front of the sight mount body) with aluminum foil, asbestos or any other suitable heat insulating material and heat the front sight body with your wife's hair dryer (she'll be proud to lend it to you for a worthwhile purpose like this). Heating the sight mount body will cause it to expand slightly and should help free it. One in twenty might have to go to this extreme!

Next, mount the front sight mount body onto the barrel going on the gun. After sliding it onto the boss area, using a drill bit approximately the size of the gas port vent on the top side of the barrel (remember the recoil gas passes through the sight mount to the gas tube/piston assembly). You can test your drill bit for size by dropping the heel (or back end) of the bit into the vent opening on the top of the barrel until you've got a drill bit that is a fairly snug fit. With the front sight mount on the barrel boss in approximate position, drop the heel end of the drill bit through the hole in the flat area where the front sight hood assembly goes, through the sight mount and moving the sight mount back and forth until the bit drops into the gas vent port in the barrel. Leave the bit in to keep the sight mount body positioned properly until you have driven the two roll pins (#213) in to lock the sight mount body onto the barrel. The front sight mount body is now in proper alignment (this is important for a number of reasons as you will soon see - do not take short cuts on this step!!! the finer the drill bit fits, the better your alignment).

Okay, with all of that done, using a set of nylon pads machined to approximate the configuration (or shape) of the two sides of the receiver at the front end of the receiver, clamp the receiver in a vise. Clamp it firmly but don't over do it **AND DON'T CLAMP OVER THE CENTER OF THE RECEIVER** - pretend the receiver is made of aluminum (it's not much stronger in the center section) and the barrel isn't pressed into the receiver or torqued with two tons of force. If you look inside the receiver, you'll see the front trunion that the barrel is threaded into, that's where you want to clamp - you can't collapse the receiver there and that is also where you want to hold the receiver from moving) - I made a set of fiberglass pads with a velvet surface - you can also make yourself a set of pads out of hard nylon.



With the receiver clamped in a vise, using a 24 MM open end wrench (actually an adjustable crescent wrench works better because the wrench flats are wider, ie more contact area with barrel) find a suitable piece of pipe or other material to extend that wrench out to a working length where your hand grip will be approximately 20 to 24 inches from the barrel and unscrew the barrel counter clockwise. The first eighth of an inch of turn will be stiff and then it will get progressively easier. (Note - before you turn it out notice the alignment marks on the top barrel flat and the front of the receiver. They are only meant to be coarse alignment marks).

With that barrel removed, start screwing in the new barrel. When it's still a few turns out, you may want to use a little Permatex loctite or other thread locking compound (the Swiss army uses loctite - check the permatex charts - they've got different formulas of loctite for fine thread, coarse thread etc).

When the barrel is about 1/8 of a turn from being all the way in it will start to stiffen - turn until the alignment marks are in alignment. (Remember, SIG quality controls VERY TIGHTLY the length of the threaded portion of the barrel - headspace gauges will not be needed. If you do want a set - my cost on them is 743 Swiss francs (about 700 dollars). I'll be glad to order you a set on a paid in advance basis. The Swiss army does not use them - it was a Swiss army armorer who demonstrated this changeout procedure for me and he did not have a set - his words "SIG is crazy - they want 743 francs for three feeler gauges".

If your barrel did not have alignment marks don't worry some were shipped without them. They are only a coarse adjustment indication and do not affect the accuracy of the final assembly.

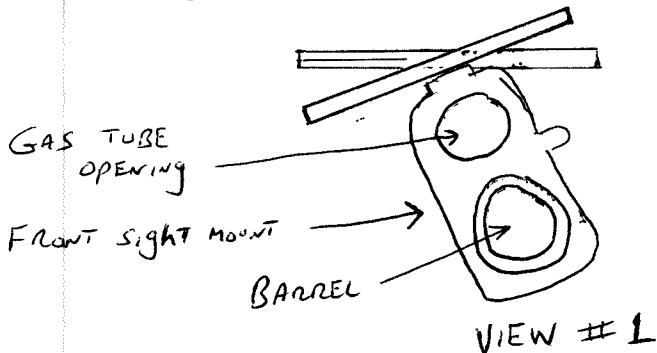
Next - obtain two seven to eight inch lengths of 1/4" to 5/16" square rod that are perfectly straight. Lay one on the scope mount boss at the front of the receiver (on top of the receiver). Lay it perpendicular to the axial line of the receiver (i.e., so one end extends over one side of the receiver and the other end extends over the other side of the receiver).

Then lay the other square rod on the flat area in the dovetail on the top of the front sight mount body (where the front sight hood assembly mounts). Lay it similar to the one on the receiver so that one end extends over each side of the sight mount.

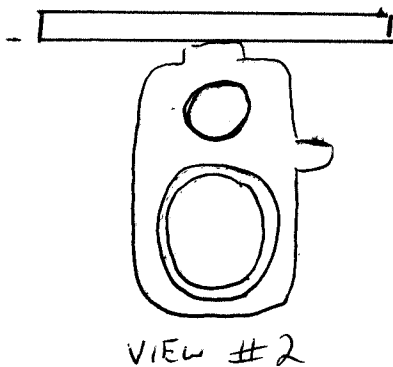
Stepping out to the front of the barrel, (with your head three to four feet from the end of the barrel, sight down the top of the barrel looking toward the receiver. The idea is for the two rods to be in alignment with each other. If not, tighten or loosen the barrel until they are. (the longer rod lengths you use, the more perceptible any misalignment will be. 12" rods would be better, but again the Swiss army technician was using six to seven inch rods when he demonstrated this changeout).

I apologize for the roughness of my sketches below - but I never claimed to be an artist or draftsman.

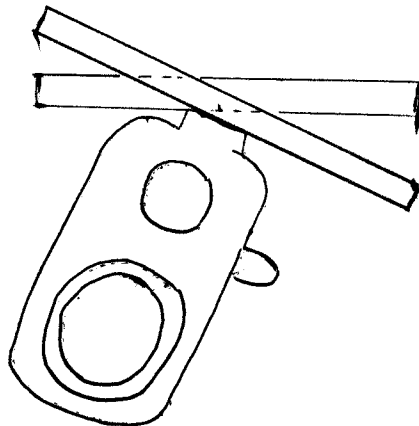
LEGEND: Red outlined rod = rod on front sight mount  
 Blue outlined rod = rod on front scope boss on receiver top  
 All views depicted below are from muzzle end looking toward receiver/butt end  
 RECEIVER OUTLINE IS NOT DEPICTED,



View #1 - barrel needs to be tightened more in this view



View #2 - barrel is in proper alignment with receiver AS FRONT ROD BLOCKS ALL VIEW OF REAR ROD.  
 (hint - painting rod to be placed on receiver boss orange or white will help in viewing misalignment)



View #3 - Barrel has been turned too far and needs to be turned counterclockwise to correct alignment

# SIB ASSAULT RIFLE SU 530

