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2½ lb. Trigger Pull

by: Jack Weigand

Early in my career as a pistolsmith, I worked hard to develop a process I could apply to all 1911 Auto Pistols that would produce a reliable 2½ pound trigger pull that broke clean and would not follow. After a lot of trial and error and experimentation, I came up with the following process that has served me very well over the years. It's the same process I now use during the Trigger Work portion of the NRA 1911 Auto Accurizing class that I teach each May at Montgomery Community College in Troy, North Carolina.

It seemed many of my customers that shot in the U.S.P.S.A. sanctioned matches wanted a very light trigger pull, usually around 2½ pounds. Using this method you can get trigger pulls that are lighter than 2½ pounds, but very few shooters really know how to properly use a trigger pull that light and I think it can get them into trouble. Handguns that I build for carry, duty or defensive work have a 4 to 4½ pound pull weight. What is most important with any trigger job is that you have a minimum of takeup, very little creep, so it breaks clean and no overtravel. Using the methods I've outlined here, you will be able to consistently produce trigger jobs that meet all those requirements.

One word about tools and replacement parts. I've included all of the tools that I use in my shop, but not the names of the individual components that I use. Other tools are available that are designed to do the same job and custom, replacement parts are very plentiful. Whichever tools you use, be sure to buy professional quality tools and don't waste your money on bargain basement or inferior parts.

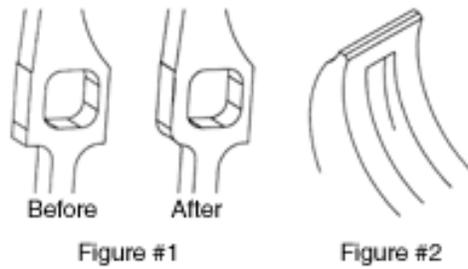
You can't guarantee your work if you use cheap parts. And, never experiment with your customers parts. Professional quality tools and parts will provide the results you're looking for with a minimum of hassle.

HAMMER PREP — I use the Power Custom Series I Stoning Fixture (#713-070-002) exclusively. It is very well made, fully adjustable and will last a lifetime. The only part that ever wears out is the roller guide, and it can be replaced for just a couple of dollars. Set the fixture on 20 clicks and cut the hammer hooks to .018" high with a Norton FF46 Fine India stone (#657-300-650). Remove the hammer from the fixture and carefully dress the hammer hooks to an exact 90° with a fine, sharp-edged India stone.

I have a stone that I use just for this job so the edges stay nice and sharp. Do the final polish on the hammer hooks with a sharp-edged Arkansas stone. At this point, closely inspect the hammer strut to see if it's been rubbing on the disconnect spring. If you see rub marks on the center leg of the spring, remove material from the strut until it clears the spring.

DISCONNECTOR PREP — I lightly polish the front surface that is touched by the trigger bow and the rear surface that is touched by the disconnect spring to insure free, up and down movement in the frame. The disconnecter must move freely, up and down for positive disconnection. I break the very bottom edge of the disconnecter with a slight radius to remove any sharp edge I may have made when I polished the two surfaces.

If you look into the magwell opening of a fully-assembled 1911 Auto with the slide locked back, you can see the next surface that I want to talk about. (See figure #1).



You will see the leading edge of the disconnector hangs slightly into the magazine well opening at the rear of the frame. When a loaded magazine is inserted into the frame, the edge of the top cartridge can come in contact with that bottom edge of the disconnector. This problem is more common with the large diameter rim on the .45 ACP cartridge. As we lighten the trigger pull and reduce trigger and sear movement, this contact between the cartridge rim and the disconnector can cause the hammer to fall and the pistol to fire. Remove material from the disconnector as shown in figure #1 to keep this from happening.

SEAR PREP — Deburr the sides of the sear with a fine India stone. Smooth up the radius on the bottom of the sear legs with the fine India stone. This is the surface that the disconnector rides on when it is pushed down by the slide.



Sear on Power Fixture ready to stone primary angle

Set the Power Fixture on 4 clicks, install the sear on the adapter as shown in the Fixture instructions and cut the primary angle with a fine India stone. Next, set the Power Fixture on 20 clicks and use the India stone to cut the secondary angle until the primary angle occupies approximately 60 percent of the sear face. Finish the surface of the secondary angle on 20 clicks with a hard Arkansas stone. Finish the primary angle with a hard Arkansas stone with the Power Fixture set on 4 clicks, be sure you maintain the 60 percent primary surface area. In my shop I have two Power Fixtures and leave one set up on 20 clicks and one set up on 4 clicks to save time.



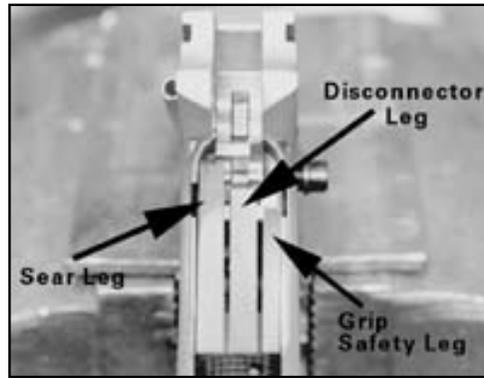
Sear on Power Fixture ready to stone secondary angle

SEAR SPRING PREP — The adjustments that I make to the sear spring are the only variables I use to determine final trigger pull weight. The lighter I set the sear spring, the lighter the final pull weight and vice versa.

The 1911 Auto sear spring is a flat spring that has three legs and it works as a return spring for the sear, disconnect and grip safety. When viewed from the rear, the leg on the left works the sear, the leg in the center works the disconnect and the leg on the right works the grip safety.

Install only the trigger, magazine catch, disconnector, disconnector/ sear pin, sear spring and mainspring housing into your

bare frame. Notice that when you pull on the trigger, you are feeling spring tension from the center or disconnector leg of the sear spring.



Clamp the frame in your bench vise with the frame rails level with the top edges of the jaws. Use an RCBS Trigger Pull Gauge (#747-094-500) to measure the disconnector spring tension. Adjust the tension of the center leg of the sear spring by bending the spring leaf above the pivot point at the mainspring housing. Bend the spring outward to create less spring pressure, bend it inward to create more spring pressure.



Combined sear and disconnector pull weight shows 16 oz.

Adjust the spring pressure until you get a reading of 8 oz. Pull rearward on the trigger with the Trigger Pull Gauge only enough to cause the disconnector leg to move. If you pull it too far, you will also engage the sear spring leg and that will cause you to get a false reading on the gauge.

Next, add in the sear to the limited assembly. Again, measure the spring pressure with the Trigger Pull Gauge. We now need a total of 16 oz. of spring pressure with both the disconnector and sear legs of the sear spring engaged. If you get a reading that is either more or less, bend the sear leg of the spring in or out until you get the 16 oz. reading. This is really the only variable I do to my trigger jobs. If I need a heavier weight trigger pull I adjust the tension of these two spring legs upward. Remember, both legs of the sear spring need to be adjusted equally. Here is an example for a 3½ pound trigger pull:

Disconnector Spring Weight - 16 oz.

Sear Spring Weight - 32 oz.

The only sear springs that I use are the Colt factory spring or the Wolff. I use the Wolff 18 lb. Mainspring (#969-262-180).

If after assembly the trigger seems to have a little creep, I use the old gunsmithing method of “boosting”. To boost the hammer, cock the hammer just as if you were going to fire the pistol. Apply moderate thumb pressure to the hammer so you are forcing it toward the slide and pull the trigger. If you do this approximately 10 times the creep is usually gone. If the creep remains, go through the entire trigger job process again and double check all of the operations to make sure they were all done correctly.

Here is a special note about certain “problem” jobs that can drive you nuts. Some brands of 1911 Auto frames are built to different specifications than the Colt. Exterior dimensional changes aren’t usually a problem, but pin hole locations that are not correct will always cause big headaches. Some brands of frames have greater dimensions between the hammer and sear pins than those shown on the Government print. You’ll know when you find one of these frames, because when you

install the hammer, there won't be even the slightest amount of sear pressure against the hammer as you align it with the hammer pin hole. If you attempt to do a trigger job on a pistol like this using components made to the Government print, the hammer is very prone to follow, even though your sear angles and hammer hooks are cut correctly.

The reason the hammer follows when the slide goes into battery is the sear never fully engages the hammer hooks because the distance between the pins is too long. The sear is simply too far away from the hammer. The only way to correct this problem is to find a sear with a long "nose", the dimension from the center of the pin hole to the sear face. Try to maintain that dimension, don't over stone the sear face and keep it as long as possible; it should do the trick. These frames are always a real problem and you usually put far more time and effort into them than they are ever worth.