

## Trigger Pull and the Truth About Sear

Trigger pull, as you may know, is a troublesome issue on the 1911, and coupled with the military need to have the pull weight at five pounds makes it even more so. Well, I think I have cured the problem - but first let's examine what we know and then get to the solution.

**The Setup:** The 1911 pistol was designed to go bang by John Browning. He shot at some rabbits in Utah and licensed it to Colt never to revisit the design again. The military in turn didn't like a few things and subsequently requested Colt to alter the gun calling the revision the 1911 A1. We go through various wars and nothing was ever really done again and some of the original mistakes are continued even today - specifically the Hammer - the topic being discussed here.

The trigger pull over the years remained the same and ranged from a minimum 5 pounds to a robust 6 ½. The sights were small to where you could hardly aim the pistols and firing it was a major problem with a trigger that had creep, a hard break over and frankly didn't want you to do it. So people started to; what's another word for dicking with it? Right, **"Customize"** the triggers and did **"Jobs"** on them. Here is what a 1911 A1 basic Hammer and Sear engagement looks like.



**This is an NCO A2 model Sear on a model A1 Hammer. Pivot Sear, Hammer falls. Mil-Spec to memory is a 0.026 to 0.030" Sear ledge notch above.**

The Sear shares much of the same size as the ledge but had some dubious specifications on how to make the trigger pull "better." Somebody was therefore always doing jobs on them; **"trigger jobs."** Here we find holes in the ceiling, guns going fully automatic, rounds through the leg and all manor of mayhem from jobs that just don't work. The

biggest job done to the Hammer was to reduce the *Sear Ledge depth* to something under 0.020” and it has long been considered anything **under 0.018 was dangerous**. But many gunmakers in the quest for a good trigger still do it and we see maker X in here all the time with **0.014”!!** Nice paint, pretty grips, outstanding detail but stone cold deadly in the hands of the proud customer who carries it.

So what then **CAN** be done and stay within the original specifications?

Well, you have to know what you are doing. The Sear edges can be radius as it says in the small print. The sharp edge of the Hammer ledge or notch can be touched to remove that. So far no harm. **But our trigger is STILL 7 pounds!!** And the pull begins in Georgia and doesn't quit until the **Communist Republic of California!!** What??

**Well that's the military specification and instruction of how to treat the parts.**

**Comes now the “Trigger Job” artist.** He weakens the Sear spring; he reduces the tension on the disconnecter, he cuts the Mains Spring, and he cuts the hammer ledge down to nothing. \$500.00 later you have an Arkansas tooth pick that is equally dangerous in your pants. Did I say we are now in 2011?

Well the first thing you need to do is put in a *Combat NCO A2 Hammer* that has a Sear Ledge of **0.022”**. You match that with an *A2 generation Sear made of S7 tool steel*; you measure your Disconnecter Spring tension of 1.5 to 2.0 pounds. You check the spring tension on the Hammer and see it is 2.5 pounds and if your surfaces are clean you are at 4 pounds in math but due to angles of compression it will likely be 3.2 to 3.5 pounds, and you can close the pistol up. **What did it save you ? \$450.00!!**

That is what **SHOULD BE DONE**, but not the **WAY** it is done today. You don't know and your pocket is being picked.

Now I have a 1.9 pound trigger pull on my *NCO*; I like it. I can shoot whatever is required however, but I am a tactical man that must be about his business and part of that requires some differences to the norm that is best discussed in the *\*Tactical Manual*. But you can train yourself to use a clean trigger from 4.0 to 5.0 pounds easily and it will not go off when you holster it. A pretty trigger is 3.5 to 3.75 pounds as it will wear down with age and go to 3.2 in time..... **But I just made a change in the Sear today.**

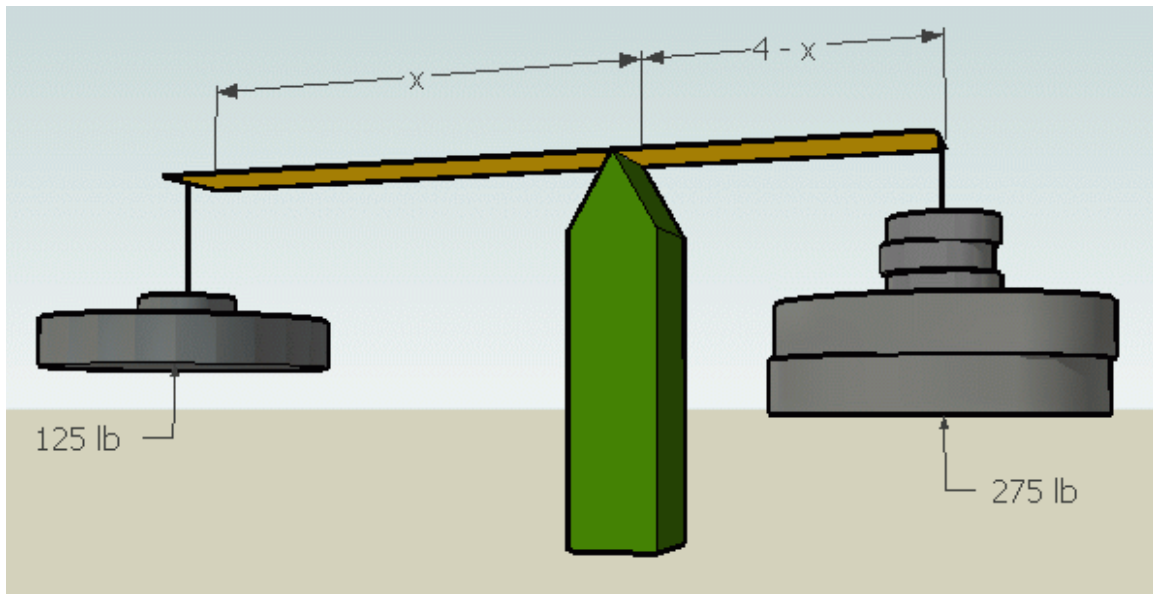
**Comes now the new A3 Sear.** It is from the *A3 model NCO* pistol. For those who want to jump technology to a safer and different feeling 4 pound trigger this is the one to buy. It does not fire like a conventional Sear design; **a design that began with the bow and arrow**. In fact the Sear and Hammer ledge no longer have a part **IN FIRING** the gun but rather become instead another form of Safety. This Sear fires from near its center of balance by the principle of Anvil and Fulcrum.

Let's view it here. Pretty isn't it?



**New patented A3 Sear and A3 Hammer. After 7000 years here they are!!**

Yes she is pretty this Sear; the Hammer too. As you compare it to the A2 picture further up the page there is some features on the Hammer that are different, and we speak to those "Swim" features in the **NCO & CQBP Manuals**, but note if you will the cleft at the bottom were a protrusion of the **Sear** seems to interface or engage the **Hammer** to a point; something not done before. The Sear and Hammer ledge seems the same as before and they are. So what is this business? What is happening here?



What you are seeing is a theory change in the firing a weapon or triggering a device. The 1911 Sear pivots on a center pin. An equal length provides equal travel and pressure on both ends. If we shorten one side the pressure required would be less but the travel required on the other side of the Anvil would be greater and visa versa.

Therefore rather than change to equal balance of present sear movement as it relates to hammer engagement or existing pressure of Hammer spring, or its diameter geometry - we simply “trick” the existing process to do something else. We introduce a new point of leverage further down on the Sear, produce a new radius for action on the Hammer, and change the way the Sear trips as a trigger device to a New Karl Lippard system called the A3; A new system design that can be applied to all such mechanism types without a material design change or added internal space requirement. This adds additional safety to the firearm as the Sear /Hammer ledge is rendered now as a point of rest, not a trip or firing ledge.

In doing this we also change the way a trigger feels when “pulled” in a way not experienced before. The drag of the sear face over the Hammer ledge is no longer present. We are momentarily elevating the Hammer by rotation of the Sear that when offered rest again it resides in air, thus falls without a body of support to rest on. Trigger pull length is not changed. The distance of leverage remains equal but the point of action has changed. Thus any firing mechanism of the future need not consider a trigger point as a point of equal force but rather where to place the action of force to release its point of connection.

We see the “trigger job” now has left the building. The 0.014” dangerous ledge reduction is gone. The danger presented by trigger tampering is gone too and the fine trigger we were looking for now is just a selection of **trigger pull weight engraved on its side**. This one shown in picture on the reverse side is a #4 or four pound trigger pull. In work now are 3, and 3 ½ pull weights for testing. You just read the weight on the Sear, drop it in, and close the pistol up. True you must have an **A3 NCO Hammer** for the **A3 Sear** to work; you must buy both. But the experience is not to be believed. You pull the trigger and there is no creep, no load up, no sharp fall; it’s a clean pull like a 4 pound pillow that feels like 3 ¼, and the Hammer...it just FALLS! You cannot tell you are pulling against anything. The gun just fires!!

**This design makes safe all firearms, machineguns, and devices with a trigger and a hammer ledge design down to bow and arrow set triggers; spinning reels and crane**



**cable releases. You can have a 20 pound trigger sear to hammer engagement and a release weight of choice. WOW!!!**

You have to **PULL THIS TRIGGER TO GO OFF!!! It will NOT JAR OFF!!!**

**So what does it take to Upgrade your 1911??**

Well you can **buy an A2 Sear to fit your A1 Hammer**. Fix that problem if someone has messed with that.

You can buy an A3 Hammer that is not made dangerous and with no assistance you can have a good safe trigger in the 4-5 pound range hands off.

**Or, you can step up to the new world of Safe Pistol improvement by installing a A3 Sear to match the A3 Hammer**, do nothing and with a #4 close the gun up without touching a thing but a swap of components.

The A3 Sear is the most significant change in design for the last 7,000 years. The safest Sear ever made by man.

Welcome to the world of **Karl Lippard Designs**. I hope this education proves useful to you.

**Karl Lippard**

**\*Tactical Manual is not available to the public for consumption.\***