

Collecting and Shooting the Military Surplus Rifle



surplusrifle

DuraCoat®
Firearm Finishes
LAUER CUSTOM WEAPONRY

Impervious to Impact, scratching, solvents and climate! Easy to apply! No pre-heating, blasting or baking required. Available in over sixty colors and 15 Peel 'N Spray CamoPak

OUR SPONSORS

Please make certain to visit our new Showcase of Sponsors!
[More!](#)

Your one-stop source for profess

Kalinka Optics Warehouse <http://www.kalln>



Stone Axe Engineering Throat Erosion & Muzzle Wear Gauges

Article by Mike Conroy

[Adobe PDF Downloadable Version of Article](#)

I have now been into my addiction of collecting surplus rifles for about the last eight years. I love www.surplusrifle.com and I have always found the various articles here to be very helpful and informative. I can tell that there is a camaraderie amongst us all who collect C&R rifles. We are the types that would rather sit all day at a range, popping off hundreds of rounds of cheap 8mm with our old warhorse Turkish Mauser than be envious of the guy with a new Remington 700 bolt action.

Since I have started to collect C&R rifles, I, like many others, have developed great interest in collecting the U.S. issue battle rifles. I love the [M1 Garand](#), the [1903 Springfield](#), the [03A3](#), the [P-17](#), and the [M1 Carbine](#). I like them so much that I own them all. The main reason I am writing this article is to convey to my fellow collectors some information regarding a product that has been very helpful to me, and it's very economical to purchase.

When we speak of the average M1 Garand, a lot of us think of Saving Pvt. Ryan and the famous "ping" that we hear when the enbloc clip is ejected. There are many people that have purchased M1's over the years, whether it being from the [Civilian Marksmanship Program](#) (CMP), a private party or at a gun show. When trying to find that great deal on a 1903 Springfield everybody wants to start out collecting by buying a decent shooter. I am the type of guy that wants to be able to play with my new toy, and I want the best

shooter for a fair price. Aside from looking at the barrel and seeing if the stock looks nice, how does one really know the quality of what he is buying? How do you know if you're actually getting a really nice deal or buying an over glorified tomato stake? In my opinion, the barrel of the rifle is the most important feature. It is the heart and soul of the weapon. Looks can be very deceiving. I would rather have an ugly rifle with a decent barrel than a great looking rifle with one that is shot out. Solving this dilemma is easy and hopefully this little tool can prevent you from purchasing a real lemon of a rifle.

The tool that I am writing about is a gauge made by Stone Axe Engineering. It is a "2 in 1" combo deal. It measures the throat erosion and **also** the muzzle wear on a US issued, military surplus service rifle. To quote directly from Stone Axe's web site,

"Stone Axe Engineering offers to you the STONE AXE ENGINEERING ECONOMY GRADE THROAT EROSION AND MUZZLE WEAR COMBO GAUGES. These gauges are a lower cost alternative to the high cost precision ordnance gauges. This one stainless steel gauge measures Throat Erosion (TE) and Muzzle Wear (MW) both with one easy to use gauge. Gauges are available for the 30-06 M1 Garand rifles, M14/M1A 7.62 NATO/.308 Win rifles(will also work on M1 Garands converted to 7.62 NATO/.308 Win.) and 1903(03A3) Springfield rifles(30-06). One gauge is required to measure TE on each type of rifle but all will measure MW on any U.S. Military .30 cal. Rifle. The accuracy of these gauges is .0005"(one half thousandths inch). I have compared my gauges to CMP and Ara-mor gages and they measure practically the same (plus or minus ¼ to ½ TE or MW number - .0005 tolerance) so you get readings that are standardized. The accuracy of these gauges is more than adequate for the hobbyist gun collector."

All of the other gauges that are made by other competitors either measure only the throat erosion or the muzzle wear, not both. These gauges can be pricey to the average collector, so many decide not to purchase them. Ara-mor gauges cost about \$60 and they do not read the muzzle wear. So, one would have to spend more money to purchase a separate gauge that does.

Now let me tell you a personal story that happened to me about three months ago. I was at a local gun show. I am the type that specifically sets out to look for the various types of US issued battle rifles that I collect, the Garand, the M1 Carbine, the '03, the '03A3, and the P-17. While meandering about the various tables, I saw an M1 Garand that really caught my eye. I asked the dealer if I could look at it further, and with some hesitation, he let me. (*The hesitation sent up a red flag with me.*) I looked it over and found it had a Winchester receiver with a 1947 SA barrel. I asked the dealer what the muzzle wear and throat erosion measured. He looked at me as if I have three eyes. (*That sent up a second red flag.*) Then he answered that the barrel was in very good condition and "was a great shooter." He allowed me to handle the rifle and turned around to tend to another customer.

Without any delay, I proceeded to take out my Stone Axe gauge and I slid the tool into the chamber ever so lightly. The gauge read that the throat erosion was at a 7. On a scale of 1-10, with ten being the worst, a 7 in my opinion is not acceptable. (*Again, another red flag.*) Next, I placed the end of the gauge into the muzzle to see how much wear there was. It measured about 6.5. (*This drew a final red flag.*) The dealer at first didn't see me doing these measurements. As I mentioned, he was busy with another customer and his back was to me. When he turned around, he saw immediately what I was doing.

I could see that his face suddenly had some frustration to it. He came over and asked me, "Just what the hell are you doing?" I told him that I measured the muzzle wear and the throat erosion of the barrel that he claimed was in "very good condition and was a good shooter." As it turned out, the barrel on his "good shooter" had a muzzle wear of "6" and its throat erosion was at "7". I then told him that his asking price of \$850 was outrageous. He didn't like to hear that and with that, I walked away. On a scale of 1-10, with 10 being the worst, you can see where this barrel measured up to. It was basically a "shot-out" tomato stake.

My point? We all know that there are unscrupulous dealers out there. We also know that there are dealers and sellers who don't know what these measurements mean. Even if the guy was truthful and told me he didn't know what the wear on the barrel was, my Stone Axe gauge helped me to avoid buying a lemon of a rifle.

When I originally contacted Stone Axe Engineering, I looked at their web site and I was instantly sold on their product. I bought the gauge for the M1 Garand and for the 1903 Springfield. As stated above, one gauge is required to measure throat erosion on each type of rifle but all will measure muzzle wear on any U.S. Military .30 cal. Rifle. Having these gauges allows me to walk into a gun show, or even the CMP North Store, with a lot more confidence in knowing what I am buying. The cost of these gauges is priced very reasonably and will pay for themselves in a short while if you buy many rifles. Ordering and shipping information is very simple. Since each type of rifle requires a different gauge for measuring throat erosion, (*all will measure .30 cal. muzzle wear*) you must specify which gauge you want when ordering.

One other note; Are Stone Axe Gages hardened? No, they were made unhardened to protect your rifle's barrel. If a bolt accidentally slams shut on a gauge or a person forces a gauge into a barrel it's better to ruin a gauge than a \$200 rifle barrel. Stone Axe gages are hard enough for hundreds of tests if used properly.

Styles and prices are as follows:

30-06 M1 Garand \$47.50,

M14/M1A 7.62/.308 Win. (will also measure TE and MW on M1 Garands converted to 7.62/.308 Win.) \$48.50

1903 (03A3) Springfield Rifles \$49.50.

Prices include shipping by US mail.

The web site for Stone Axe Engineering is: <http://www.stoneaxeengineering.com/>



Pictured above are the three gauges made by Stone Axe Engineering. Note the "lines" at the end of each gauge. Those markings measure the muzzle wear.

**From top to bottom; Top- 1903 Springfield Gauge, Middle- M1 Garand Gauge (30.06),
Bottom- M1A/M14 or M1 Garand (7.66x51)**

[Adobe PDF Downloadable Version of Article](#)

[Site Disclaimer](#)

Article by Mike Conroy