

Collecting and Shooting the Military Surplus Rifle



surplusrifle

BOYDS' GUNSTOCK INDU

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



kivaari's match/target SK



*.308 WINCHESTER
VS. 7.62 NATO*
*The continuing discussion
of these two very different
cartridges, and their use in
Mil-Surp rifles*

Article written by: [Mark Trope](#)

[Adobe PDF Downloadable Version of Article](#)

No doubt about it, email is one of the many wonders of the digital age. It requires no file cabinet in my office, no paper, takes no holidays, is picked up and shipped 24/7, and *never* gets delivered to my next-door neighbor.

Keeping important messages in my inbox allows me to interpret trends and count reoccurring questions. The differences between the .308 Winchester and the 7.62 NATO continue to be the subject of emails from readers. Quite frankly, I'm not at all surprised at the volume of email we receive on the subject. The Mil-Surp bug bites more people every month, guns are acquired, and new readers are constantly adding surplusrifle.com to their favorites. The .308 Winchester vs. 7.62 NATO discussion is one of those subjects that just has to get re-clarified every now & then. So gentle reader, if you recall many of the points brought up in this article from an article you read a few years back; please remember, lots of new brethren have come to the Mil-Surp fold.

Discerning the differences between .308 Winchester and 7.62 NATO ammunition for use in military arms isn't made easy for the neophyte by Mil-Surp dealers who advertise in national publications.

A man considering the purchase of his first Mil-Surp rifle sees a large ad with a picture of

a desirable Mil-Surp arm in either a national publication or on the Internet. The ad copy proclaims in bold type: **CHAMBERED IN .308 WINCHESTER!** The neophyte may not be a reloader, and he may have heard most of the good surplus ammo in European calibers has dried up. He recalls reading, or one of his buddies telling him almost all imported surplus ammo is corrosive primed, requiring fast cleaning of the barrel after shooting, with the proper supplies to avoid problems with rust. Suddenly a Mil-Surp rifle chambered in **“.308 Winchester”** starts looking *very* attractive.

He thinks: “Hey, *I can get factory fresh, non-corrosive, .308 Winchester ammo almost anywhere, at rock-bottom prices too. Even the Mart-Mart Super Center, were we get clothes and groceries has a sporting goods section on the other side of the store, they sell ammunition. I’m gonna get one of these .308 Winchester Mil-Surp rifles.*”



**.308 Winchester & 7.62 NATO, They are not one and the same!
(Notice + stamp on top of 7.62 case, this is the NATO designation)**

When the fellow gets his Mil-Surp arm; he does not find **.308 Winchester** stamped on the rifle! It may have **7.62, Cal. 7.62, 7.62 NATO, NATO,** or **.30** stamped on it; perhaps *no* caliber designation is indicated.

He feels a bit perplexed; after all, the ad *did* say **“CHAMBERED IN .308 WINCHESTER”**. He has a box of commercial .308 Winchester. A careful check discloses the bullets *are* the correct diameter for the barrel. At the range he points the muzzle downrange and *gently* chambers a round. With a bit of apprehension he fires one round. As the bolt handle is raised the empty brass releases from the chamber without any fuss to speak of. A quick visual comparison of the empty cartridge case and a new round don’t reveal anything unusual ([Note.1](#)).

Our shooter thinks: “*Yep, the ad is correct, she’s a .308 Winchester all right.*”



Let's take a quick look at the history of the 7.62 NATO and .308 Winchester. In the early 50's, the US Government was working on a cartridge to replace the 30/06. The US was wedded to the .30 caliber bore diameter, or, in metric designation, 7.62 mm ([Note.2](#)). They wanted a round both shorter and lighter, but with the same power as the longer, heavier & bulkier 30/06. Research proceeded and the end result was the "T-65" cartridge (later renamed 7.62 NATO). So, how were the specifications achieved in a case 0.479-inch shorter than the 30/06? Newly designed ball powder and hotter primers account for the retention of velocity in the shorter case. The working pressure for the 30/06 and the 7.62 NATO are virtually identical.

The US lobbied hard with its NATO allies to adopt the new 7.62 cartridge as standard. Ammunition standardization makes sense, and in the end; NATO nations adopted the 7.62 NATO round ([Note.3](#)).

Winchester, recognizing that *any* round adopted in mass by a group of countries would almost automatically become very popular, adopted the T65 / 7.62 NATO round and called their version the .308 Winchester. However, they are not identical twins.

There are headspace differences between the two rounds. The .308 go-gauge is 1.6300, the .308 no go-gauge is 1.6340. The 7.62 go-gauge is 1.6350, the 7.62 no go-gauge is 1.6405. Since NATO military ammunition can come from any NATO country, and the goal is the ability to interchange ammunition, the military chamber is larger.

Provided we use common sense, headspace differences shouldn't cause us to quake in fear. If a person is using new, Mil-Surp ammunition; and not reloading it, then the headspace becomes a non-issue. The round is fired and expended.

However, what about reloaded ammunition? Provided the brass is *in good condition to start with, and properly resized for that chamber*, (the shoulder not pushed back excessively) nothing bad happens. It's a very good idea to match a group of brass cases to one rifle, and fire it in that rifle *only*. By resizing the brass not further than required to give a proper fit in the chamber, the brass should not weaken. A LEE Collet Die is great for maintaining that brass-to-chamber fit. The headspace differences between the 7.62

NATO and the .308 Winchester are not a critical issue for the Mil-Surp shooter that follows these guidelines. The two issues we do need to address are pressure and action design.

Let's discuss actions first. In the 50's, Spain rebarreled many type 93 rifles from 7X57 to 7.62 NATO. The 1893 action was fitted out for Spain as long rifles, short rifles and carbines. Although different model numbers may be assigned such as 1893, 1916, model 95 and Guardia Civil 1916 the action type is identical. Initial rifle production was carried out by Mauser and Ludwig Lowe in Germany, later the rifles were made under license in Spanish arsenals. While the German guns display better fit & finish, German and Spanish made guns are about equal in strength.

Recall we said earlier that Spain rebarreled many type 93 action guns to 7.62 in the 50's? The 7X57 has a pressure of 46,000 lbs cup. The 1893 action is designed within these parameters. However, all actions are "proofed" with a high-pressure cartridge, often called a "Blue Pill". That proof cartridge is far in excess of the 7X57's pressure of 46,000 lbs. All Mauser actions have a fair bit of insurance built into them, they have to. However, they are not meant to push the envelope all the time with high-pressure rounds. Is the 7.62 NATO excessive for a type 93 action? No it's not.

What is the pressure of the 7.62 NATO? Cartridges of the World, 5th Edition by Frank C. Barnes, DBI books, 1985, state the 7.62 NATO, M80 Ball, the standard rifle cartridge, has an average max pressure of 50,000 psi. The 50,000-psi of the 7.62 NATO is within the safety factor of a proper functioning type 93 action.



The Spanish FR-8, originally a 8X57 short rifle with a 98 type action, rebarreled in the 1950's to 7.62 NATO

As we said before, military rifles tend to have roomy chambers, usually crowding the high side of tolerance. Throats also tend to be on the long side. Both these factors translate into slightly reduced pressures. This brings the 7.62 NATO's 50,000 psi much closer to the 7X57's 46,000 psi. So, it seems that firing the 7.62 NATO round in an 1893 type (in good condition), that has been rebarreled and marked 7.62 NATO is safe.

No less of an authority than Frank de Haas, in his book *Bolt Action Rifles 4th Expanded Edition*, Krause Publications, 2003, states this about 1893 type actions: *"I advise limiting the cartridge choice to those originally used, or to other cartridges within the following limits: any cartridge developing less than 45,000 psi breech pressure...I consider all of these actions...as having **marginal strength and safety** for the .308 Winchester (7.62 NATO) cartridge."*

Notice de Haas states "marginal", not dangerous. Again, this seems an admonition to proceed with caution, not a condemnation of the 1893 type.

After WWII, Parker O. Ackley performed "blow up tests" on military actions. In his book, *Handbook for Shooters & Reloaders, Volume II*, Plaza Publishing, 1966 he states: *"It was found the Mauser actions to have a low carbon steel, and were heat treated by a carburizing process. This process is known to the layman as case hardening."*

The Mausers have a softer core to withstand the effects of impact, and case hardening on the outer surfaces to resist wear. Ackley had to put excessive overloads in the 1898 type to blow it up. However he did find excessive headspace began to develop before the action blew up. Ackley did not do a test on the 1893 type action, however, his comments about the way Mauser actions were built also applies to the 1893 types.

Spain, like most other European countries adopted an 1898 type action during WWII. The Spanish 1898 type was designated Model 43. Its original cartridge was the 8mm Mauser or 8 x 57 (actually 7.92mm). The 8mm Mauser cartridge has a long, fascinating history. This cartridge evolved with different bullets, and pressures increased as designers continued to work this cartridge out to its full potential. By WWII, some 8mm Mauser loads were in the 50,000-psi range. Suffice it to say that a serviceable M43 action, being an 1898 type, is safe with rounds developing 50,000 psi.

Using Model 43 actions, Spain developed the FR8 rifle. The FR8 is chambered in 7.62 NATO. As the Model 43 is an 1898 type a serviceable FR8 should be safe to shoot with ammunition developing NATO pressures. Once again, remember these rifles are not new production. The actions were made in WWII and later rebarreled. My FR8 is a joy to shoot and very accurate. I have fired NATO equivalent handloads with no problems. Many contract Mauser's, (both 93 & 98 types) sold to South American countries, were later rebarreled or rebored to 7.62 NATO. Israel acquired many 98-type rifles that had been picked up off the battlefields of Europe, or confiscated from the Axis Nations. These rifles were from quite a few manufacturers; all were later rebarreled to 7.62 NATO. OK, so much for action types and the 7.62 NATO round. Now, let's look at the .308 Winchester.

The .308 Winchester's maximum average pressure is 62,000 psi! Notice this is *maximum* average. Different manufacturers products may, or may not reach this pressure, however, they are still within manufacturing specifications if they do so.

In terms of pressure, there is a wide (very wide) gap between the 7.62 NATO and the .308 Winchester. Here at Surplusrifle.com, we recommend in *the strongest possible terms* that you do not fire factory .308 Winchester ammunition in *any* Mil-Surp rifle chambered for the 7.62 NATO round.

Keep in mind that old rifles should be **thoroughly** inspected before shooting, and that each rifle is unique as to what loads it will handle. A person that reloads using .308 brass; should stick to the bottom loads from their **current** loading manual. The bottom load has reduced pressures, and is usually more accurate anyway. That load should also be crosschecked against at least 2 other **current** loading manuals.

Boxer primed 7.62 NATO brass is usually thicker than commercial brass. A load developed in commercial brass will more pressure if simply loaded in NATO brass. Reduce such loads by ½ grain if you are switching from commercial to NATO brass.

Mil-Surp rifles chambered in 7.62 NATO are great fun to shoot! There is still plenty of clean, surplus 7.62 NATO ammunition on the market. Much of it is non-corrosive, some is even boxer primed. By sticking to 7.62 NATO ammunition, or NATO class handloads, your heirs will still be shooting your Mil-Surp 7.62 NATO rifle for a long, long time.

Note 1

The chambers of almost all Mil-Surp arms tend to be on the high side of tolerance. This is **normal**, and done for a couple of reasons.

1. Ammunition produced under the stress of war can often vary a bit in size. A larger chamber insures all ammunition of the correct caliber will chamber in the rifle.
2. A large chamber and roomy throat keep pressures down. Again, this goes to ammunition production. This also insures ammunition produced at one plant can be used in the searing desert heat, and frigid arctic cold without extremes in pressure.

Note 2

$$7.62 / 25.4 = .30$$

$$.30 \times 25.4 = 7.62$$

Note 3

After WWII, the British were working on a round (7x43) somewhat similar, though slightly less powerful than our to our present day 7mm08 Remington. Actually, the British had begun work on this round many years before. The war halted development work. After the war the project was revitalized. However, the US began pushing for adoption of the 7.62NATO. The US couldn't accept the idea of a smaller cartridge in the early 50's. Although, years later, the US adopted the 5.56 round!

In retrospect, the British round *may* have been the best compromise of power, portability and reduced recoil. Alas, we will never know.

[Adobe PDF Downloadable Version of Article](#)

Article written by: [Mark Trope](#)