

THE MAUSER MONTHLY
The newsletter for fans of Mauser rifles - the REAL "Riflemen's Rifle!"
Edition 9, Volume 2 October 1997
Editor/Publisher - Ward M. Clark, Aurora, Colorado, USA

Contents:

- 1. Reader's comments
- 2. Some Mauser Web Sites
By: Ward M. Clark (wclark1046@aol.com)
- 3. More Debate on Pre-98 Action Strength
By: Larry Ellis (kyrieellis@aol.com)
- 4. Publisher's comments
By: Ward M. Clark (wclark1046@aol.com)

Reader's comments

Just a short message regarding NEW 6.5 x 55 Swede barrels from Sarco.

Received 4 barrel's from Sarco. For the M96 but can be cut to fit the M38. The rifling twist is the same in both rifles and the only thing that must be done is machine first inch to refit the front sight. All the parts fit and there is only one step in the barrel.

I had one done for the M38 and had a target crown put on it. The threads are tight and my gunsmith thinks that the Swede's heated the receiver and cooled the barrel. At least that is what he did for me. The headspace was perfect.

These barrels are \$39.95 each, blued and well cosmoed. Wrapped in the familiar brown wax type paper. Sarco should get an attaboy for offering these. Any Swede collector or shooter should have a few on hand for future use.

A second matter is that I have found a product from Sentry Solutions called TUF-CLOTH. It is a Multi purpose DRY protectant, which I have found to be better than any other external application for the metal parts of the guns you own.

It cleans, Prevents rust and lubricates with out Oils or Silicones.

Sentry also offers a product called Smooth-Coat for the rifling of the bore. I have been using these products for about 7 months now and have found that cleaning the bore after a match is much faster as the Smooth-Coat retards fouling, both lead and copper.

Sentry Solutions
111 Sugar Hill Road
P. O. Box 130
Contoocook, NH 03229
(603) 746-5687

I am in no way connected with this company. Just a satisfied customer.

John (k9bnf@aol.com)

Hi - does anyone know anyplace that sells and delivers military weapons books cheaper than I can get them at Barnes and Nobel, like that hardcover Mauser one, about a year old, pictures of every country's Mausers? Anyplace that sell used definitive books - thanks
Tony (Pfowlera@binary.net)

ED9VOL2

Mr. Clark:

I have an 1893 (1904) Spanish Mauser that has been drilled and tapped for scope mounts (as there are no provisions for iron sights), and I think, some "urban freedom fighter" took a hacksaw to the barrel as it is 17.5 inches long. It is mounted in a ho-hum Birch stock (with recoil pad) but the action and trigger are very good.

I collect and shoot Trapdoor Springfields, and have one that is documented for service on Luzon during the Spanish/American War, so what I'm thinking is: If the Mauser is not of great value (as is), convert/restore it to SAW military configuration to be a "gun of the other side" with my TD - of course, it must function.

If I am not totally off-base, do you have a source of 1893 barrels and stocks?

Don Ballard (sailordb@AOL.COM)

In regard to your curiosity on the M94 barrel, I went out to my shop and measured both a brand new M94 barrel and an M38/41 barrel and came up with the following:

M94 17 5/8 length overall --16 5/16 from breech face to nose cap step--9 3/16 from breech face to 1st contour

M38/41 barrel, same order: 23 9/16--22 5/8--13 7/16

I think you have a shortened M38/41 barrel on your carbine. A couple of years ago I ordered 2 short rifles with 2 extra barrels plus 2 extra M94 carbine barrels. Paid about \$12.00 each for them and wish that I had ordered more-along with a carload of ammo. Also found out that some cheap M95 carbine stocks will take a Swede action with a little bit of fitting in the magazine area. Looks a bit odd but what are you going to do when you discover that some @\$% has sawn off 1 1/2 inches from the butt to make his kid a deer rifle. Had to rebarrel the thing as the chamber had been worked on with a roto-rooter. For barrels you might try that place in Miami that advertises in the Shotgun News.

Leyteno@aol.com

Hi Ward,

Excellent work on the newsletter, I always look forward to seeing it in my mailbox.

I wonder if you could possibly give me some advice.

A friend of mine is a firearms dealer here in Ireland (through a strange quirk in the severe firearms laws here, it is possible to hold a Swedish Mauser (6.65mm calibre, I think - not sure on the exact calibre). This was excellent news for me, so I may finally be able to (legally) obtain a Mauser rifle. Anyway, he was wondering where it would be possible to get bayonets for these rifles. (The rifle is described as a M96 Swedish Mauser rifle, made by Karl Gustav). He's looking for 3 bayonets. Do you have any ideas on this? (Note - I haven't been able to turn up any Swede bayonets, if anyone has a line on any, please drop Paul a line? - Ward)

Regards,
Paul Darcy (paul.dar@microsoft.com)

Dublin, Ireland

Al Castle to Bob Taylor (Sept Mauser Monthly) From the details that you have provided about your so called M94 Carbine I am almost 99% sure that what you have is a cut down M96 rifle. The date and serial number are correct for the rifle. The step on the barrel is also correct for a rifle. The placement of the finger grooves is for a rifle. There is no marking disk, because this is a replacement stock, which was fitted when it was rebuilt in the late 40's early 50's. The strangest thing is someone went to a lot of work to cut the hole for the carbine type sling. The buckle should have two screws not four. One last bit of data on the marking disk. There were both brass and steel round ones one the right side. The Navy M94 carbines have an oval brass disk on the top rear of the stock. As far as the 91 Argentine carbine stock is concerned, you might be lucky if you contact JLD Enterprises, PO Box 562, Unionville, CT 06085. 860-673-0575. Bob just imported a bunch of 91 carbines and there is a chance that there may be a junker in the lot that he would sell you the stock from. Never hurts to ask. Hope this is of help.

Al Castle (Maxeyglass@aol.com)

Some Mauser Web Sites

By: Ward M. Clark (wclark1046@aol.com)

Using the World Wide Web as a resource has certainly proved useful for me; it ranks right after my copies of Olsen's "Mauser Bolt Rifles" and Ball's "Mauser Military Rifles of the World" as my most commonly used Mauser info source.

Accordingly, I've compiled and described a few of my favorite Mauser Web sites for your review:

Mauser-Werke, Oberndorf Germany - <http://www.mauser-werke.de>

The name speaks for itself. This is the home page for Mauser-Werke. The page is well illustrated, contains some general company information and links to some of the current bolt rifles produced at the plant, to include the new Models 94 and 96, and a blurb on the Model 98 sporters that are, regrettably, unavailable in the US. Another link gives you the name and address of Mausers' US importer. (Incidentally, it's GSI Inc., 108 Morrow Avenue P.O. Box 129 Trussville AL 35173 Phone 205-655-8299, Fax 205-655-7078)

"Pedro's Gun Rack" at http://zeno.chs.du.edu/Gun_Rack/mausconv.html maintains another interesting site. The link to "A Dialogue Concerning Mauser Conversions" gives some very graphic illustrations of a totally destroyed '96 Swede action, which is relevant right now given the ongoing discussion of relative strengths of pre-98 actions. You all might recognize the commentary that goes with the illustrations as the work of Larry Ellis, (kyrieellis@aol.com) a frequent contributor to these pages. Pedro also offers other sections concerning marksmanship, a glossary of firearms terms, some humor, and a gun FAQ page. Very colorful and worth checking out.

At <http://www.baysidec.com/jb/firearms/rifles/xchart1.html>, John Forrest Brown offers a chart representing the various steps of development of military rifles. This chart contrasts developments in the US with developments by Mauser in Europe - a very well-compiled look at the timeline of the two Continent's progress in the field of military arms. At <http://www.baysidec.com/jb/firearms/rifles/smbutt.html>, John has a very good graphic explaining the buttstock marking disks used on Swedish Mausers. Links back to John's other shooting pages contain lots of handy non-Mauser data as well.

Bill Poole's "Comment on Mauser Rifles" at <http://www.terrestrial.com/~wpoolejr/mauser.html> deserves a look as well - the page

ED9VOL2

includes a couple of very nice graphics of a 94 Swede carbine and a 91 Argentine engineer carbine - neither of which are easy to find these days. His page contains a link to <http://www.terrestrial.com/~wpooler/mauserapart.html>, "Taking a Mauser Apart," which is a pretty decent step-by-step for those who haven't disassembled one yet.

David Basiji maintains the "Swedish mauser FAQ" page at <http://weber.u.washington.edu/~basiji/swedeFAQ.html>. This page includes some good graphics and detailed descriptions to aid in the identification of those Swedish pieces. Also includes detailed disassembly instructions.

The Gun Parts Corporation maintains a site at <http://www2.gunpartscorp.com/gunparts/specials/index.html>. The Gun Parts Corporation carries an inventory of parts for almost any 20th century gun imaginable, to include a variety of Mauser parts.

Last but not least, of course, is the National Rifle Association at <http://www.nra.org>. This site, while not really a Mauser site, nevertheless contains links to many sites concerning hunting, shooting sports, political info, and related data.

Of course these pages all contain links I haven't mentioned here, so any one of them will lead you on an evening-long quest for Mauser trivia! Happy surfing...

More Debate on Pre-98 Action Strength
By: Larry Ellis (kyrieellis@aol.com)

When it comes to the relative strengths and weaknesses of Mauser and Mauser type actions, I generally try to say my piece, let the other fellow say his piece, and then just let folks make up their own minds. But the response of the Editor of "Rifle" magazine to the question of the strength of M96 Mauser actions is a rare bird. I don't think I've ever seen so many myths, misconceptions, and range rumors presented as fact in any one place. So I'm going to respond, and I'm not going to be gentle...

Here are that editor's comments, and my response.
Another Take on Pre-98 Strength
reproduced from "Rifle" magazine

<<...One common misstatement is that the 96 is only designed to withstand around 45,000 copper units of pressure (CUP). No. The Model 96 was designed to withstand proof loads of much higher pressure,>>

This statement is absurd on the face of it. No rifle is "designed to withstand proof loads." Rifles are designed to withstand the pressures of the issue cartridge, and then tested for manufacturing flaws by proof firing. The entire purpose of a proof load is to stress the barreled action beyond its design intention. That the editor of "Rifle" magazine would make this kind of bizarre statement indicates he has little knowledge of either arms manufacturing or proof testing.

For those interested, a good source on the manufacturing of the M98 rifle may be found in Law's "Backbone of the Wehrmacht" and information on proof testing may be found in "The Standard Directory of Proof Marks" by Gerhard Wirnsberger.

<<...but the original service ammunition was only loaded to approximately 45,000 CUP, mostly because of the limitations of early smokeless powders.>>

Balderdash. The original service loading of the 8x57 Mauser (the M88 cartridge) and the 7x57 Mauser (the M93 cartridge) were determined by several factors, including poor cartridge case manufacturing capability, the effect of high velocity, jacketed bullets on barrels, and the uncertainty of how strong an action had to be to

withstand the (then) unheard of chamber pressures produced by the new smokeless propellants. The "limitations of early smokeless powders" was the only factor, which did not play a significant roll in determining the upper limits of safe cartridge pressure.

Those interested in this subject will find solid information (as opposed to rumor, myth, and speculation presented as fact) in Olson's "Mauser Bolt Rifles" (especially the appendices) and Kent's "German 7,9 Military Ammunition".

<<In fact, all of the pre-98 Mausers with staggered-round magazines, from the Model 93 to 96, are capable of handling higher-pressure cartridges such as the .308 Winchester and 8x57 Mauser, and have often been rebarreled to those cartridges for military use.>>

This is so completely false it is hard to even know where to begin. First, the 8x57 Mauser is not even in the same class as the .308 Winchester. Normal loading of the military, model M88, 8x57 Mauser cartridge had a top pressure of only 31,284 psi. The .308 Winchester has a SAAMI maximum pressure of 60,000 psi. A pressure of 60,000 psi is close to proof pressure for a Kar 98 Mauser, much less a M93-M96 Mauser! M93-M96 Mausers have indeed been rebarreled from cartridges like the 7.65 Belgium Mauser cartridge (the Turks come immediately to mind) to 8x57 Mauser. But what the editor of "Rifle" magazine seem to unaware of is the intent to use these rifles with M88 8x57 cartridges, and not M05 8x57 Mauser cartridges (which can produce pressures of almost 47,000 psi.) Charitably, the editor seems to unaware that there exists more than one 8x57 Mauser cartridge. Mauser turnbolt rifles have never, to the best of my knowledge, been rebarreled to .308 Winchester for "for military use". The editor appears to have confused the commercial .308 Winchester cartridge with the military 7.62x51 NATO cartridge. Aside from the very real chamber specification differences of these two cartridges, they also have very different maximum chamber pressures; U. S. Army specification 7.62x51 NATO is loaded to a maximum chamber pressure of only 50,000 psi (as opposed to the 60,000 psi of the .308 Winchester cartridge.) Other countries load to 7.62x51 NATO to even lower pressures.

For those interested in the subject of maximum allowable pressures for military and commercial cartridges, I can recommend TM 43-0001-27 (Army Ammunition Data Sheets) and contacting SAAMI at: Sporting Arms and Ammunition Manufacturers' Institute, Inc. P. O. Box 218 Wallingford, CT 0649

<<(Most other countries load the 8x57 to 50,000+ CUP, unlike the anemic factory stuff produced in North America.)>>

While this is true, what the editor seems to have lost sight of is the fact these cartridges are commercial cartridges intended for use in modern sporting rifles. Even then, their pressures are limited to less than 50,000 psi. I know of no military issue 8x57 Mauser ammunition which was manufactured to pressures in excess of about 47,000 psi, and that ammunition was intended for use in M98 rifles. Again, additional information may be found in Olson and Kent.

<<The absolute strength of any 93-98 Mauser is mostly decided by the steel and heat treatment. A good pre-World War 1 96 action from Germany or Sweden is made with the best metallurgy of the time and is just as capable of withstanding pressure as a German 98 from the same era. The same could be said of a good 93, 94 or 95 action.>>

This is a half truth, at best. The case hardening heat treatment given to Mauser actions is intended to help prevent abrasion, and correctly done has little or no effect on the ability of the action to withstand pressure. While the quality of the steel does have an effect on the ability of the action to withstand pressure, this is not what gives the M98 the strength advantage over earlier models. What provides

ED9VOL2

that advantage is the much greater thickness of the M98 action. More metal means more strength - it is just that simple. Kuhnhausen's excellent shop manual on Mauser bolt actions has an revealing photograph of sectioned M98 and M96 actions which shows this difference quite clearly. He also has a very pithy warning concerning the conversion of M91-M96 actions (and Swede Mauser explicitly) to .308 Winchester. Here is a portion of that warning, taken verbatim:

"... a 7.62 NATO or .308 Winchester cartridge can generate pressures of about 55,200 CUP. THIS PRESSURE RANGE IS DANGEROUS EVEN IN A WELL HEAT TREATED GERMAN OR SWEDISH MADE SMALL RING M91-M96 MAUSER ACTION... "

<<... such highly revered actions as the 1903 Springfield and pre-64 Model 70 don't handle escaping gas any better than the 93-96 Mausers (certainly not nearly as well as the 98), and nobody complains about them.>>

This kind of statement should be a red flag in any discussion of Mauser rifles or actions. Anyone who compares a Mauser action to either a Springfield or current production sporting rifle has demonstrated that he is either unaware of the fundamental metallurgical differences between Mauser actions and current production commercial actions (and the '03 Springfield), or has disregarded the significance of these differences. In short, the man who makes such a comparison literally doesn't know what he is talking about. A reasonably good source on these differences is Ackley, Vol II. I use the word "reasonably" because while Ackley describes the differences, he does not detail the significance of the differences.

<<The third locking lug on the 98 is designed as back-up in case the front lugs give way, not as additional strength, and some of the earlier actions (notably the Chilean version of the 95) also have a third lug.>>

Again, a half truth. The safety lug is, in fact, a safety measure and does not contribute to overall action strength during normal operation. It is there to save the shooter's bacon when things go badly wrong. But the editor is simply wrong in his assertion that "some of the earlier actions (notably the Chilean version of the 95) also have a third lug". They do not, and the Chilean M95 in particular does not have a third lug. If he had ever even handled a Chilean, he would know that.

<<A lot of the bad reputation of pre-98 Mausers arose from soft Latin American-made rifles; many developed excess headspace from locking-lug setback, even with standard military ammunition. Some of these stories rubbed off on the Model 96, even though all 96s are of uniformly high quality, both in workmanship and materials.>>

This is utter nonsense. If we trace this assertion far enough I think we will find he is talking about German made South American contract Mausers which are marked in either Spanish or Portuguese. Increasing head space is a sign of age in a Mauser. These rifles have developed excessive head space because they have seen almost 100 years of use and abuse!

<<With today's high-quality ammunition and brass, I'd be happy to rebarrel a German or Swedish action in good condition to any factory cartridge that fits the magazine and bolt face. In fact, my own 6.5x55 is a rebarreled German 95 (a Chilean made by Loewe of Berlin). I had the action checked for hardness before rebarreling - it's just as tough as any 98 from the same period - and I regularly use modern, higher-pressure hand loading data and have never had a problem. Headspace is exactly the same as before I fired the first shot, and accuracy is superlative. Any good 96 should be capable of holding the .22-250 - or any other suitable modern cartridge - quite handily.>>

This, gentlemen, is just what the drunk driver said after running his car through a children's play ground; "Every thing was fine up until those children ran out in front of me". It's also a perfect example of evolution in action...

If anyone feels they can take anything the editor has written seriously, they may do

ED9VOL2

so with my best wishes. And I can only hope they will understand why I decline to shoot at the bench next to theirs, or hunt with them under any circumstances. I've had to haul one body out of the woods, and that was enough to last me a lifetime.

Ah... I feel much better now :-)
Best regards,

Kyrie

Publisher's Comments

By: Ward M. Clark (wclark1046@aol.com)

October is here and hunting seasons are opening! The hunters among us will be going afield, Mausers in hand, to pursue deer, elk, etc., and there's a hundred or so great Mauser stories in the making in the next few weeks - don't forget to share some of your adventures afield with all of us! My pursuit of black bears in September, Mk X Mauser in hand, proved fruitless - I hope all of you have better luck.

My thanks to Larry Ellis for his contribution in the continuing saga of the pre-98 action strength debate. My thanks also to Al Castle and Bob Taylor for sharing the answers to Bob's Swede questions from last month's issue. I really have very little idea how many of you are getting your questions answered from the Monthly, by other readers - if all of you would, CC me on the reply if you respond to someone's question, and I'll try at least to summarize responses in a later issue.

My big find for the month gone by - actually wasn't MY find at all. My wife called me at work from an estate sale and said they had a "pretty nice Swede" in the sale for \$100. I said, "Buy it." She did, and when I got home and looked at it, it turned out to be not a M38 like I had thought from her description, but rather a M94 carbine with a somewhat oddly modified stock and a Redfield peep sight attached. Modified to be sure, but still an M94. I have a nice piece of dark American black walnut, I just need to find someone who can turn out an original-pattern M94 stock out of my wood, and I'm in business. Love them Swedes!

Until next month - Good Shooting!

Ward