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PRECISION ARMS WORKSHOP

AND THE AMERICAN GUNSMITH ARCHIVE

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06

ARCHIVE ISSUE NUMBER

INSIDE THE ARCHIVE

COMPETITIVE 504 REMINGTON

LONE WOLF DISTRIBUTORS • STEVENS MODEL 301 • 2020 DALLAS SAFARI CLUB EXPO • HOPKINS & ALLEN REVITALIZED

ORIGINAL METHODS. MODERN ACCESS.

ARCHIVE EDITION 198

DIGITAL ARCHIVE EDITION

Preserved for the bench.

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MACHINING

Lone Wolf Distributors

BY AMERICAN GUNSMITH EDITORS JUNE 2020

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Founded in 1998, Lone Wolf Distributors established itself as a leading Glock accessory supplier. Their production starts with mill run quantities of raw materials with in-house engineers utilizing CAD design exploiting exacting CNC tolerance control during manufacturing. The company's production is tied to their website, which displays real time, accurate inventory control and allowing the vast majority of orders to process and ship the same day.

For frames, Lone Wolf Distributors offers their Timber Wolf line, revamped to be available in 9mm, .40 S&W, and .357 SIG chamberings in Full Size, Full Size Hybrid, and Compact with several variations. The TWF-F and TWF-C accepts Gen3 and Gen4 Glock 17, 17L, 22, 24, 31, 34, 35, and 37 slides, and TWC-C accepts Gen3 and Gen4 Glock 19, 23, 32, and 38. The TWF-Fuses Glock 17, 22, 31, and 37 magazines, and the TWC-C and TWF-Cuses Glock 19, 23, 32, and 38 magazines.

With a Gen4 slide, remove the installed adapter in the dust cover area of the frame. With Gen3 slides, leave the adapter in place to fill the gap between the slide and dust cover. The TWF and TWC include a dust cover adapter, removable magazine well, and interchangeable backstraps. Custom laser engraved textures are also an option. Lone Wolf Distributors also offers custom slides.

Start with a Signature Series pattern (the configurator has six different base options) or start with a blank and order a Custom Slide with 11 different Model/Generation options. This leads to top transition, rear and front serrations, slide rail bevel, slide melt/blend, front and rear nose profile, and front sight options. The full configurator and options is at LoneWolfDist.com/slideconfig. Alpha Wolf Stainless Steel Billet Extractors offer a more robust replacement to factory MIM extractors.

The granular crystalline structure of MIM extractors are inherently brittle. A machined billet extractor has directional grain that resists failure. A strong linear grain in the crystalline structure of a machined billet part is more malleable. Alpha Wolf extractors are machined from certified 17-4 stainless steel billet, have a black matte finish, and are now black Flash Nitride coated, providing smoother extraction, less friction, and increased durability.

For more information on these custom parts, contact Lone Wolf Distributors directly (LoneWolfDist.com).

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RIFLES

Stevens Model 301

A break-action shotgun designed to take advantage of new Tungsten Super Shot turkey loads.

BY DAVID W. MANNEY JUNE 2020

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First reviewed in the July 2017 issue of *American Rifleman*, the Stevens Model 310 shotgun first debuted with a black synthetic stock and is now available in several Mossy Oak patterns. This model was designed for Federal Premium's Heavyweight Tungsten Super Shot .410 3" ammunition for turkeys. I read a review online by someone using .410 handgun loads and complaining about the bad performance.

Right from the Savage website, this shotgun was optimized for the TSS payload and it should have been apparent that putting a slug through a non-rifled barrel with a choke is a recipe for disaster. The 301 ships standard with a modified choke and is threaded for Win-Choke tubes. When the gun first came out there were no chokes available from Savage but now there are five available from

their online store. The gun is made in China by Sun City Machinery Co. and imported by Savage under the Stevens brand.

The Stevens 320 pump shotgun is also made in the same factory. In addition to .410, the Model 301 is also available in 12 and 20 gauge. The gun used in this article is a .410 with Mossy Oak Bottomland draping. The action is very similar to Brazilian-made break-action shotguns from Rossi and Brazitech as well as the H&R Topper. There is a safety lever on the left side of the receiver just like the Rossi guns.

My first experience with this gun was from having a customer who dropped off a "box of gun." The receiver had all the pins out with loose parts in a plastic bag. The barrel assembly had not been messed with, making things a little easier to figure out. The safety lever was still in the receiver, as was the trigger extension. After looking through my library and

online, I could not find any drawings of this gun. I did figure out the main parts but had a spring that didn't make sense.

The closest gun I found was the H&R Topper. Using its drawing, all of the parts seemed to be there plus this spring. The parts list and diagram shown here is not from the factory; if they ever publish one, it probably won't match this. What follows is how I learned to disassemble this gun properly and put it back together without all the drama of where each part goes. Disassembly always starts with making sure the firearm is unloaded.

Remove the forend by pushing the release lever and pulling it away from the barrel. Once the forend is off, the barrel assembly is released by opening the action and lifting out of the receiver. This will be good enough for general cleaning. Continuing on, the stock is removed by unscrewing the two

STEVENS MODEL 301 CONTINUED

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screws in the buttplate. Using a 13mm socket on a 9" or longer extension, unscrew the stock bolt. It is metric, however, a 1/2" socket will also work. The receiver is disassembled by starting with the safety lever. The first step is to unscrew the safety lever screw from the top of the receiver. Once this small screw is out, the safety lever can be twisted off the safety lever spring and pulled out of the receiver. All pins are pushed out right to left. There are serrations on the pins.

Look closely and you'll see them on the left side of the receiver. Push out the two This will prevent it from interfering with the release lever. pins holding the trigger and trigger guard, then pull them down and out of the receiver. There will be a spring for the trigger and another for the locking block. The trigger extension can also be removed. If the safety lever has not been removed, the trigger extension cannot be pulled out. The pin for the hammer is next.

This will release the hammer spring when the pin is pulled free. The next pin is the one that holds the locking latch and hammer block. Once this is pulled, the hammer, safety lever spring, locking latch, hammer block spring, and ham- Far Polish these as needed. Above center: Frame pins after smoothing. 185" diameter by 0.600" long. mer block will come out the bottom. The last pin is the one for the release lever and firing pin. Once pushed out, the firing pin can be pulled out and the firing pin spring removed.

This leaves the receiver completely stripped. The barrel assembly is disassembled by removing the ejector spring stop pin in the front of the barrel block. The spring is under heavy pressure; be sure to contain it when removing the pin. Remove the ejector spring from the front. The ejector latch pin can then be removed, allowing removal of the ejector latch spring and ejector latch as well. The ejector stop pin has a collar and has to be pushed out from the right side. This gun,



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however, had it installed from the right. When the ejector latch is removed the ejector can be pulled out the rear of the barrel lug. The barrel reassembly goes back together in the reverse of the disassembly. Be sure to drive the ejector stop pin in from the correct (left) side. Forend disassembly is fairly easy. Remove the nut on the sling swivel. Once this is removed, all the parts can be pulled out. The forend reassembles in reverse order as well.

The pins that came with the gun were very rough and still had machining marks and ridges where the parts rotated on. If you have this same problem, chuck them in a drill and sand them smooth with 320, 400, and 600 grit paper, just enough to remove the ridges left in the pins. Lightly grease the pins before reinstalling.

Reassembly of the receiver starts by reinstalling the barrel latch and hammer striker. This will require a slave pin of 0.185" diameter and 0.600" long.

Two of these are nice as the trigger group uses the same one. If you already have slave pins for the H&R Topper, these are the same size. Make sure the spring is properly located and the assembly held together with the slave pin. Also make sure of the relationship of the release lever, striker, and block lever. When inserting back into the receiver, keep it horizontal so that the pin doesn't slip out and jam in the receiver. Once in place, use the pin to push out the slave pin and secure in the receiver.

Pins go in from the left side of the receiver. Do not drive into place until all other pins are in.

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Now the fun part, the safety lever spring. Pay attention to the orientation of the spring once it is in the receiver. Using a small needle nose pliers, hook the spring on the pin inside the receiver. Push down on the spring with a finger 1 Receiver 2 Hammer 3 Hammer Spring 4, 5, 6 Frame Pins 7 Release Lever 8 Lifter Spring 9 Firing Pin Spring 10 Firing Pin 11 Barrel Latch and insert the safety lever.

When doing this, keep your hand over the receiver opening to trap the spring if it slips out before the lever is in place. I personally launched this spring 10 feet away and into a curtain, not finding it until two days later, so be careful to hold it in place. Install the hammer and hammer spring.

Once in place, the hammer spring is pushed 12 Striker Lifter 13 Safety Lever Spring 14 Safety Lever 15 Safety Lever Stop Screw 16 Trigger Guard 17 Trigger 18 Trigger Extension 19 Trigger Spring 20 Barrel Latch Spring Stevens Model 301 (Speci ications subject to change without

notice) 21, 22 Trigger Guard Pins 23 Barrel 24 Ejector 25 Ejector Spring 26 Ejector Latch 27 Ejector Latch Spring 28 Ejector Stop Pin 29, 30 Ejector Pins Far Left Trigger group reassembled with slave pin, ready to install. down and to one side to clear the back of the receiver, securing it in place.

Rotate the safety lever so that it is pointing up and remove from the receiver. This has to be out in order to install the trigger group. The spring is held in place by the hammer pin and the spring can be seen through the safety lever hole in the side of receiver. Put in the firing pin and firing pin spring, push in a pin to hold them in place, then install the release lever. When installing, make sure the orientation is correct. Reassemble the trigger group with a slave pin.

When reinstalling, take care to put back the barrel latch spring without catching in the receiver and bending it. Pull the release lever up and install the trigger group. The

trigger extension has to clear the safety lever spring and hold it against the receiver. Push in both pins and secure the trigger group. Reinstall the safety lever and then install the safety lever screw.

The safety lever screw was not secured in the receiver on this gun so I used a small screwdriver tip and put a drop of blue thread lock in the receiver before reinstalling the screw. Cycle the hammer and dry fire to ensure all is correctly installed. The safety can only be put on when the hammer is cocked. If the trigger is pulled with the hammer cocked and safety is on, it will drop to a halfway position. It must be recocked again to put the safety to the off position.

Once satisfied all is working correctly, drive all the pins in. Test fire the gun before returning to the customer. AG

FROM THE ARCHIVE

2020 Dallas Safari Club Expo

Like the SHOT Show, the annual Dallas Safari Club convention is a good show for gunsmiths, hunters, and shooters.

BY ROBERT KOLESAR JUNE 2020

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A gorgeous, lightweight doublegun, built to be used and hunted. 've I been going to the annual SHOT Show (Shooting, Hunting, Outdoor Trade) in Las Vegas religiously for several years now. Lots of stuff and lots of people. This year, I was looking for something different... a large show, but maybe not so large or crowded as SHOT. I decided on going to the Dallas Safari Club's annual convention in Dallas, Texas and I'm glad I did. The DSC Expo is smaller but not "small".

It's also family-friendly and open to the public. The 2020 show filled 800,000 square feet with 965 exhibitors and 1,835 booths featuring outfitted hunts,

guns, gear, and vendors. Lots of famous gun makers like SIG SAUER, James Purdey & Sons, and E. J. Churchill, plus dozens of smaller custom outfits fill the scene. A great place if you like fine walnut and blued steel—black rifles and tactical gear weren't on too many tables. It's a different firearms crowd that's attracted to the DSC.

Quite a few vendors were advertising expensive safaris to well-heeled clients willing to pay for a first-class hunting trip. In another part of the convention center, hand-made custom rifles and shotguns were displayed that someone on a high-end hunt Far

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.410 hammer gun that will be fitted, engraved, and finished upon return to England. Small gauges and hammer guns are very popular, and Purdey is selling as many as they can build. Nicely finished, a great trigger, and superbly accurate, the new gun is a credit to the original Swiss P210. would need to take a trophy with. Even though I'm not on a Bentley budget, I was a happy guy. I got to fondle one-of-a-kind firearms and discuss their building process with factory reps that shared my enthusiasm.

Here's a very small sampling of the vendors I chatted with and their wares. Stay tuned for future in-depth articles on several DSC exhibitors. E. J. Churchill I love double-guns, especially side-by-sides. There were plenty of them at the Dallas show. I stopped by the Churchill booth and spoke with Sean Scott, International Sporting Manager of Churchill (EJChurchill.com, contact information omitted in this digital edition). Churchill specializes in hand-made double shotguns, both over-under and side-by-side.

Churchill also builds bolt action and double rifles. All rifles are "bespoke" (hand-made), like their shotguns, in Churchill's shop in High Wycombe, Buckinghamshire, England. I handled a gorgeous little 28 gauge double shotgun that Churchill was displaying; my only regret was having to hand it back to Sean. Churchill also offers shooting lessons for both clays and game at their own company-owned estate north of London.

While I probably won't ever own a Churchill double, I could see myself taking a lesson or two at the Churchill shooting grounds during an English vacation. James Purdey & Sons Probably the most famous of English doublegun makers, Purdey (Purdey.com, contact information omitted in this digital edition) had a great display of their shotguns. One that caught my eye was a .410 hammer gun that was still under construction.

Final fitting, engraving, and finish hadn't been completed; a shotgun in this stage of completion gives the shooter/buyer an idea of how much work goes into one of these hand-made doubles—this one costs over \$250,000 and is already sold, along with nine others just like it. A lovely little gun it will be—and according to the reps, it'll be shot and hunted. Purdey sales staff said that they're selling every small gauge gun they can build; delivery, if you order now, is a couple of years.

In addition to their iconic Beesley-actioned sidelock doublegun, Purdey also builds be-spoke bolt-action sporting rifles and overunder shotguns. SIG SAUER I stopped by the SIG (SigSauer.com, booth to see what's up and to speak with my old shooting buddy, Sammy Reese, who's a trainer and rep with SIG. Too many things were on display to mention them all, but I did get to handle and photo SIG's American-made P210 and the current-issue M17 pistol.

I've been really interested in the P210 American version, having shot several older Swiss and German P210s. Trigger on the sample was superb, fitting and finish was first class, and the price won't cost you a couple of mortgage payments. It's nice to see a legendary pistol that's been brought back, better than ever, with a price tag that's affordable to a serious shooter (\$1,300 for the new carry model). Three versions are offered: target, standard, and carry.

Considered the most accurate service pistol ever made, the new US-produced SIG P210 will have a storied history to live up to. A few minor upgrades have been added, but the original 210 design is intact. Fit and finish is the equal of the originals I've shot. SIG has the contract for building the recently-adopted M17 9mm service pistol; M17 production is ahead of schedule and the Army is very satisfied with their new handgun.

Some minor issues were dealt with in pre-production testing and the military is on-target to re-equip most US forces with M17s. I liked the one I handled at the SIG booth; sights and trigger were what an experienced shooter would want, grip is comfortable (and user-adaptable), unlike the Beretta M9. No, it's not a 1911, but I think it'll turn out to be a great pistol in the coming years. Striker-fired, polymer pistols are the future; this is a good one.

2020 DALLAS SAFARI CLUB EXPO CONTINUED

ORIGINAL PAGE 9

Some very cool guns are coming out of Jesse's shop in Austin, including several stunning 1911s that do what a legendary combat pistol should: function flawlessly. 338 Lapua rifles. HCR builds awesome custom rifles from .22s to African big game cannons. All will shoot tiny groups, tested and guaranteed by Hill Country Rifles.

Jesse James Firearms Unlimited After a couple of hours of looking at classics, I went in a different direction for a change of pace: Jesse James (yes, that Jesse James, the West Coast Choppers guy) had a REALLY neat booth with custom guns and choppers stuffed inside. Jesse was also there, having a great time taking selfies with fans and answering questions about his guns and bikes. Several 1911s were on display; beautiful, hand-made pistols that will shoot like a target gun.

Jesse's shop (JJFU.com), is building some very interesting firearms that push the limit on what's possible in the shooting world. If you're looking for something different, Jesse James will build it for you. It might take awhile (nothing is fast in the custom gun world) but you'll get a hand-made firearm that'll be unique. Hill Country Rifles HCR (HillCountryRifles.com), has been around since 1996, producing exceptionally accurate bolt rifles that are handsome and 100% reliable.

HCR made their reputation on accuracy, guaranteeing three-shot groups of 1/2" at 100 yards with their rifles and factory ammo. That still holds true today; HCR spends a large chunk of their budget on premium factory ammo that's used in testing. Every rifle is fired for accuracy and meets Hill Country standards or it doesn't get out the door. They have their own underground 100 meter test range on-site and it's in use daily.

Under the leadership of Matt Betterworth, the HCR people are building some superb (and very accurate) rifles. You can have your factory rifle tuned for accuracy or order something new. HCR uses a variety of actions and will be glad to work with you on what you want.

Matt and his gunsmiths have new, completed rifles ready to ship, as well as being able to build a one-of-a-kind rifle for you.

Super-accurate .22 caliber rifles are popular now, and HCR is crafting highly modified .22s that are fun, incredibly accurate and cheap to shoot. The best thing about HCR, though, is the people—my first visit to Hill Country Rifles was as an active-duty Soldier needing anew trigger on a 700 Remington. I was treated royally, even though I didn't order a rifle. A great company that is passionate about rifles, accuracy, and customer service. Chris J.

Batha I spent a little time with Chris Batha (Chris-BathaShooting.com, who is one of the best shotgun instructors in the UK or US. He can also hook you up with a gorgeous Charles Boswell doublegun, hand-made to your specifications in England. What's neat is that you can do the fitting here in the States (Chris is based in South Carolina) by a master instructor who happens to own the company. Mr.

Botha bought the rights and "good name" of the Charles Boswell brand; Boswell specializes in custom competition shotguns and small-bore game guns. Only six or seven guns a year are made, starting at \$40,000. After getting your gun, you can have Chris teach you how to use it, using the British style of instinctive shooting. The website is a great read on British guns and shooting. If you're looking for a really neat, short vacation, a trip to next year's DSC convention in Dallas might be the trick.

It's a great place to bring the spouse, too... it's not all guns, shooting, and hunting. Clothes, jewelry, and other carriage trade items were also on display and for sale. Plus, you're in downtown Dallas; lots of excellent restaurants and stuff to see. The 2021 DSC Expo is scheduled January 7-10 at the Kay Bailey Hutchinson Convention Center in Dallas. I'll see you there next year. AG

PEOPLE & COMPANIES

Competitive 504 Remington

More than ever before, today's gunsmith is faced with both the need and ability to improve and to demonstrate the accuracy potential of the guns being worked on. Here's how I set up a Remington Model 504 .22 LR to compete with the best.

BY NORMAN E. JOHNSON JUNE 2020

ORIGINAL PP. 10-13

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As a staff writer for Precision Shooting Magazine, I had authored an article on the Model 504 Remington .22 caliber target rifle in their September 2006 issue where I concentrated on the merits of precision bedding this rifle. Following in December 2006 I wrote an article for American Gunsmith on rebarreling the 504. The outcome of these works generated a good deal of response.

A devoted rimfire shooter in California urged me to build a Model 504 rifle for his special needs with expectation that I could replicate the fine performance I had demonstrated in my previous editorial coverage. Based on the inherent qualities of the Model 504 this was accomplished, resulting in two very pleased individuals.

Remington Model 504 Synopsis Remington produced the Model 504 rimfire in different models: 504-T heavy barrel varmint rifle in .22 Long Rifle and .17 Hornady Magnum Rifle, and the 504 Sporter in .17 Mach 2, and .22LR. It was also offered in a pricey custom grade in .22 LR. Here I shall expand on the rifle's makeup and function and things I did as a rifleman/gunsmith in wringing out the utmost performance of this rifle. The Model 504 Remington was manufactured from 2004-2007.

A very heavy walled, one-piece cylindrical action is two-point bedded into a bottom cutout for a six-shot magazine that fits flush with the bottom of the stock. The round bolt is manipulated in normal fashion for cartridge feed, extraction, and ejection. The bolt is fully closed by means of a square lug at the rear of the bolt handle and at the rear of the receiver ring. A sort of dual locking lug enters a shallow mortice at the left receiver wall.

Two of the three models 504 have a cocking indicator at the rear bolt shroud center. The bolt is released by means of a button located at the left side of the receiver and is easily withdrawn. Cartridges are pushed forward by the lower margin of the front of the bolt and grasped by dual springloaded extractors on full closure of the bolt. As I shoot for ultimate precision, I don't always use the magazine. Any soft-tip bullet deformation is avoided in this way and it has proved to be a good move.

The adjustable safety is located at the right side of the receiver—forward to fire and safe to the rear. The Leupold 3-10X scope is mounted with Redfield Jr. rings and base. The Model 504 Remington becomes a convenient switch-barrel rifle capable of extreme accuracy.

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The Allen-head bolt is shown at the bottom of the receiver used to solidly clamp the receiver to the barrel. They form a solid and precision fit when locked together. I will cover this in more detail as I discuss trigger function. The rifle is drilled and tapped at the top of the receiver ring for standard scope mounting using a variety of base and ring styles. Barrel Removal and Changing Those whom have read much of my writing know I am very devoted to the switch-barrel rifle.

This includes a number of rimfires now inclusive of the Remington Model 504. The shank of the 504 barrel is turned down to 0.673" diameter and 0.896" in length. This fits into the receiver, allowing the axial face of the barrel to mate with the receiver. A hardened, 10/32" Allen head angularly posi-

tioned screw tightens the split receiver to the barrel. When fitting the 504 barrels I machine the barrel shank about 0.002" larger than the 0.671" factory diameter for a better fit.

This eliminates some of the draw-down pressure required of the rather small screw which is torqued to about 45 inch-pounds. In the chambering and headspacing process the two extractor slots are formed exactly like the factory barrel. There also is an alignment slot that aligns barrel rotation, matching a pin within the barrel channel. Moderate hand pressure is applied to the receiver as torque is applied to the barrel lock screw.

A good test for barrel shank lock up and precision involves shooting a group, followed by barrel removal and replacement, and another group to test for both accuracy and group placement repeatability. The Remington 504 rifles I have worked with all passed this test. As a perfect example of this test, I was demonstrating a Model 504 Remington equipped with a Broughton 1:17 twist barrel using Lapua Midas bullets at 50 yards. Five-shot groups were consistently within 0.166" and 0.235".

The barrel was removed and replaced with essentially no measurable changes in accuracy or point of impact. Sure does wonders in promoting a rifle and its ammunition. Far In the rearward position the safety totally locks trigger movement.

COMPETITIVE 504 REMINGTON CONTINUED

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Trigger is locked solidly to receiver with two screws front and rear. 25 pounds on the Model 504 Remington rifle. Though fully adjustable, Remington recommends factory adjustment of this trigger by a competent gunsmith. While on the barrel I will give some attention to the chamber. The original factory barrels on all three rifles were replaced with premium target weight barrels. The two that remained in my test rifle inventory were replaced with Broughton and Green Mountain 1-17 twist barrels.

I chose Dave Manson Precision Reamers (MansonReamers.com), to form the chambers. It was apparent that the Bentz chamber allowed chambering and extraction of most unfired rounds more easily than chambers cut with the .22 match chamber. Chamber length difference was 0.150" in these two

chambers. Lead bullet tip land engagement accounts for most of this difference. I did install a bit stronger extractor spring on both bolts to aid in better extraction.

I have often gone to great lengths in improving rifle accuracy, and installation of match grade barrels has invariably improved factory rifle accuracy, including the rimfire rifles. The original factory barrels were retained for future use, if desired, interchangeable on each rifle. Bedding I've always regarded the barrel, the bedding, and the bullet as the keys to best accuracy in a rifle and the Model 504 was no exception.

On close inspection of my first 504 Remington Target stock there was a two-point bedding system. I saw where there could be some major changes here to good

advantage. As the illustration will show, I installed three milled brass pillars on the 504 wood stock. The forward Some of the tests resulted in noticeably improved accuracy. The rear pillar was added by the author to draw down the tang to the added brass pillar. one is positioned at the front of the receiver ring directly beneath a through screw hole.

The central recoil lug is a short, internally threaded bolt attached directly to the bottom of the receiver. This allows a short bolt to draw the action down into the stock. This actually serves as the primary recoil lug. I then added a third pillar on the flat surface of the rear tang just behind the trigger housing. Here I drilled and tapped a screw hole in the tang for a 1.540" length 10-32 screw. This served as the final link in a most precise three-point bedding system.

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The barrel used was a 1-in-17 twist Broughton, along with ammo by Lapua Midas+ and Wolf Match Extra. This barrel was chambered with a Bentz reamer by Dave Manson Precision Reamers. All-Important Trigger The benefits of a quality trigger in delivering best accuracy in a rifle cannot be over emphasized. Benchrest performance is in no small way augmented by a really good trigger.

In my overall evaluation of the Model 504 Remington Target rifle, the trigger immediate rifle has a well finished Sporter walnut stock and Sightron 3 1/2-10X scope. Quality checkering adorns this stock. Bottom rifle is the Remington Target version with laminated stock. This rifle wears a 3-12X Leupold scope. Both have one-piece bases with cut-out at the loading port. Barrels below are original issue in standard and target weight.

As switch-barrel rifles they are top quality, superbly accurate arms. ately caught my attention. As the pictures show, the 504 trigger is very compact and neat looking in appearance. It has a square sear to mate with the square bolt cocking piece. Two screws attach the trigger body to the action located at each bottom end of the trigger. The trigger has a safety lever attached at the right side, extending well upward—forward to fire and rearward for safe. The safety is adjustable for engagement.

While the trigger is adjustable for sear engagement, pull weight, and over-travel, Remington strongly suggests such adjustments be performed by an authorized Remington repair center. The triggers on the three Models 504 that I worked with arrived with about a 3.5-4.5 pound pull. I'll not discuss this further here save to say this is a

most excellent adjustable trigger which should only be worked on by a competent gunsmith. Be that as it may, the trigger can be safely adjusted for precision target work.

As sighting equipment, I used the Redfield Jr. mounting system which kept the rather short loading port open with the recessed base. Redfield medium height, horizontal, split rings provided a solid, fully-adjustable mounting system. Scope choices included Sightron and Leupold with fine reticles and adjustable objective lens. At 10X I could easily see well enough to bisect a bullet hole. Rimfire recoil is less likely to upset scope stability as some of the high power rifles do and scopes remained solidly sighted-in.

Those Remington Model 504s that I worked with all get a very solid recommendation. With a few changes they will shoot with the best of them. AG

PEOPLE & COMPANIES

Hopkins & Allen Revitalized

A design from the Civil War era, here's how I restored a Hopkins & Allen 922 falling block .22 rifle.

BY PAUL MAZAN JUNE 2020

ORIGINAL PP. 14-16

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Hopkins & Allen Arms Company was founded in the wake of the Civil War in Norwich, Connecticut in 1868 and went out of business in 1916. In the 48 years they operated they were responsible for making many of the unfamiliar brands of firearms we find on gun show tables to this day. Probably the most common product they made for other gun “manufacturers” were the Merwin & Hulbert revolvers. In fact, H&A had a separate dedicated space just for manufacturing Merwin & Hulbert revolvers.

When you look at spur trigger revolvers—or suicide specials, as some call them—it was usually Hopkins & Allen that was busy turning them out for various customers under names like Acme, American Eagle, Blue Jacket, Chichester, Defender, Dictator, Imperial Arms, Monarch, Mountain Eagle, Ranger, Universal, and several others. They also made rifles and shotguns for many retailers under whatever name the customer wanted.

Hopkins & Allen closed their doors for the last time in 1916 so any firearm we find today made by them is over 100 years old.

That, of course, suggests many will be in heavily used condition and that was certainly the case with the Model 922 falling block .22 rifle that recently came into my shop.

In one of my videos for my 45 Alpha Charlie Papa channel on YouTube I discuss why gunsmithing is so expensive and that it can be really impractical to take grandpa's old .22 in for restoration unless it has sentimental value far in excess of its resale value. This was exactly the case with this old H&A 922 rifle. The owner wanted it put back into shooting condition despite the reality of its resale value.

It was a pretty typical barn find in that it was covered with moderate pitting, the finish was gone, and the buttstock had been replaced with one from another rifle that didn't fit correctly. The rifle didn't have a buttplate and had a piece broken off at the comb. To keep the restoration cost something close to reasonable, the customer wanted it cleaned up, repaired, and put back into shooting condition using only the components on the gun or that could be repaired or made inexpensively.

Beginning Restoration The first step was to disassemble the gun and check it over mechanically. Inspection revealed the hammer wouldn't stay cocked. This required cleaning up the notch on the hammer because the original had been damaged. Removing the pitting from the receiver was basic gunsmithing. The receiver was draw filed until the pitting was gone. Working on this part of refinishing also pointed out once again how receiver sides on these old guns are never really flat.

As the photos here show, the edges of the receiver cleaned up long before the middle did. Once finished, the receiver was as flat as I could expect it to be. The barrel was stripped of its sights and placed in a Clymer Barrel Spinner (Brownells # 184-020-000AQ, about \$150). I then started with 80 grit abrasive on my Lyman Sanding Drum (Brownells # 539-000-016AQ, about \$110). Working with the barrel held at about a 30-

HOPKINS & ALLEN REVITALIZED CONTINUED

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degree angle to the drum, I sanded the worst of the pits out. This left a very rough surface. By working down to finer and finer grits it was possible to polish the barrel to a mirror finish. In this case I only took it down through 120 and ended with a 220-grit finish. The receiver was polished down by hand. I similarly worked the lever down from its as-cast finish to a 220 finish to match the barrel and receiver. The metal was then blued, oiled, and set aside to await the refinished gunstock. On to the woodwork.

The first step was to completely strip all the old finish from the stock and get it down to bare wood. Any of the commercial paint

strippers work well on these old guns as most of this old wood seems to have been stained and painted with varnish. Once you use this setup you will never shoeshine a barrel again. This tool makes the old shoeshine method of taking the pits out of a barrel a much easier and faster task.

As mentioned, the stock was not original to the gun and the inletting for the upper and lower tangs was too short to allow it to seat properly against the receiver. That was easily remedied by simply elongating the inletting. The piece that has been split off the comb of the stock at the butt was a bit more of a challenge. The procedure for fitting anew piece to

the stock without leaving an obvious glue line required the new piece to fit closely to the butt.

I save old broken stocks and bits of walnut from other projects and can normally find apiece with a similar grain pattern and structure to match closely to the stock. In this case I took a rasp and flattened the top of the comb where the piece had been split off. Once all traces of the broken wood was removed,

HOPKINS & ALLEN REVITALIZED CONTINUED

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Original caption: Bottom: Refinished, the repaired stock fits and the repair is nearly invisible. The buttplate is in place and the pits are gone. A young man has the same family heirloom to learn to shoot with that his dad did. proudly handed his son the gun grandpa had bought long before either of them had been born and had taught him and his brothers to shoot with.

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I sanded it with 120 grit sandpaper using a hard backer and checked the fit between the stock and the piece I was going to glue in place as I went. When the two matched up with no gaps showing I glued the new piece in place and held it in place for 24 hours with a strip of latex to be sure the wood glue was totally cured. From there it was relatively easy to blend the two pieces together to form a properly configured stock.

I used the rasp to blend the new wood to the old, making two flutes in the nose of the comb and reducing the width of the stock to

eliminate the initials someone had carved into the wood. I then decided to make anew steel buttplate using an old Mauser plate from a military rifle I had in my parts bin. I simply coated the old Mauser plate with Dykem, used the lower screw hole to hold it to the stock, and scribed a line around the inside of the buttplate using the stock itself as my guide.

A hacksaw took off the bulk of the material of the oversized military buttplate. I finished off by grinding until I had a good fit. In this case the stock had a bit of a curve for the

original buttplate so I heated the steel replacement with my torch and bent it to match the curve of the stock. Then it was a simple matter of sanding, staining, and finishing the stock before reassembling the rifle.

The payoff, of course, was when my customer came in with his son, paid the agreed upon price, and

Now the gun was his son's and they were headed to the range to use it to teach yet another generation the fundamentals of marksmanship and how to make old empty cans dance. AG

PISTOLS

10mm 1911 Troubleshooting

1911 handguns chambered in 10mm have earned a reputation of unreliability. Here's how to correct that.

BY ROBERT K. CAMPBELL JUNE 2020

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I have worked 1911 handguns for many years, usually chambered in .45 ACP and occasionally .38 ACP Super and 9mm. 1911s are sometimes chambered in the 10mm cartridge, which has proven more challenging in many ways. Introducing greater power and momentum into a firearm originally intended for a low pressure number simply cannot be done without trade-offs. After dealing with the first 10mm 1911 handguns up through modern variants, I have discovered most of the quirks.

Some are the same as high-wear .45s, while others are unique to the 10mm. While most failures seem to be related to the magazine in the .45, there are other factors with the 10mm. Recoil springs are one problem. Some makes seem to have a spring too weak for the 10mm, resulting in excess recoil. Others have a spring that is too strong and the last cartridge in the magazine fails to feed. Ammunition Wilson Combat magazines pictured. is always a suspect as makers rush to make the cheapest ammo.

The extractor remains a problem. Hamhanded and ten-thumbed home gunsmiths are another. As an example of the problems encountered, I recently went over a custom grade 10mm brought in because it did not go into battery. The owner had told me it wasn't feeding. He was wrong. The pistol never failed to feed the bullet nose into the chamber. Feeding and failure to go into battery are very different problems. The slide was not

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completely closing on the cartridge in the chamber. Sometimes the bullet nose was pointing straight up in the slide window. The slide flipped the round down, catching it on the rim and the nose flipped up. This seemed to be a magazine spring issue, however, adding extra power W. C. Wolff magazine springs did not help. The magazines were more difficult to load but the problem persisted. I took a recoil spring from a functioning SIG 1911 .45 and replaced the 10mm recoil spring.

Function became perfect, recoil was a bit more but not excessive. The pistol, a 10mm Commander, had been over-sprung. A lighter weight recoil spring worked just fine. Sometimes the slide outruns the magazine to the point the slide actually slams forward on an empty chamber; this is more rare but it occurs. Sometimes the bullet rams the feed ramp and ties things up.

Fairly often I have seen another malfunction occurring with modern magazines that have eliminated the original metal follower design of the 1911. 10mm recoil actually jars the cartridge when it is still in the magazine. Sometimes the round fails to feed. A

shorter follower of the conventional type is about as bad. Sometimes magazines simply do not have the correct tension. Another thing to look for is the extractor is too close to the center of the breechface. Be certain to use dummy rounds and check for clearance.

The extractor may be adjusted if this situation is present. Another problem that I have encountered more often with the 10mm 1911 than other calibers is the bullet nose hitting the slide lock and locking the slide open. For some reason it is more common on round seven, eight, or nine, depending on the magazine. The first stick of cartridges feeds just fine most of the time. I suppose as the pistol feeds with spring tension at a given point but that tension lessens with less rounds in the magazine.

The answer in this case was to file and polish the slide stop extension. I had to remove Be certain each is properly tuned. more metal than I liked but the pistol functioned correctly. However, the shortened slide lock may not completely engage the polymer/plastic follower of some modern magazines. It is a tough call but the bottom

line is the pistol functioned after this work and with both factory-issued followers and Mec-Gar magazines.

After going through several Rock Island Armory 10mm handguns, mostly full size but also the Rock Island Armory Commander and a Fusion Firearms version, I think I have a handle on the proper springs. I have also had similar experience with both Ruger and Kimber 10mm pistols. It is a sign of the times that I have not seen a Colt in the shop in awhile as there are more 1911 10mm handguns from other makers than Colt. The 18.5 pound recoil spring and a #25 hammer spring seems the best spot.

The heavier springs sometimes cause short cycles. I have gone as far as a 20 pound recoil spring and #26 hammer spring in a Commander 10mm set up for Buffalo Bore loads. When it comes to the 10mm battering is a concern but modern slides and frames, even the cast ones, are pretty tough. I have not seen a cracked or broken a slide or frame in some time. I have seen early model Colt 10mm guns, before the improved frame cut in the Delta

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Far Elite, that did have broken frames after only a few thousand cartridges. The slide lock, link, and link pin do get beat up and battered, however, and should be checked periodically. Every five hundred rounds of full power ammunition is a good spot to check and certainly every 1,000 rounds. If the spent cartridge cases seem to be taking a beating, the end of the ejector may need to be cut and polished. I think that the flat bottom firing pin stop is a good idea.

Quite a bit of the slide's velocity is used in cocking the hammer. If the hammer spring is heavier, it helps slow recoil. The flat bottom firing pin stop increases slide leverage and force is moved nearer the fulcrum. As an aside, at Gun Tests magazine it has become necessary to measure the pressure needed to rack the slide. Readers, particularly older readers, asked for this information. An ability to rack the slide or not is far from inconsequential.

Some slides are much more difficult to rack, with a heavily-sprung 10mm being the worst and the new S&W 380 Shield EZ being easiest. The Bond Arms Bullpup 9 with its rotating barrel is also very easy to

rack and use well. I have constructed a gauge that measures the slide force. Using a standard fisherman's scale with a line, a strong vise clamp, and leather pads in the clamp to protect the slide, practice racking the slide to simulate loading the pistol measures the force needed.

This setup requires being careful of the vector of the force, which needs to be kept straight down and consistent. While the racking force may not be the actual weight of the recoil spring, it is close and a close correlation should exist. The main point is the test is valid, repeatable, and useful in comparing one handgun to the other in terms of slide racking force. The 10mm requires a stronger racking force than the .45, 9mm, or .38 Super and this may be excessive for many shooters.

The 10mm may not be the ideal handgun for older shooters and using This firing pin and extractor are fitted well. lighter springs and soft loads with it essentially makes it a .40 S&W. Extractor and Firing Stop Fitting Since I mentioned the extractor and firing pin stop I would be remiss not to go into detail on how they are fitted. The 10mm

1911 needs more preventive maintenance than the 9mm, .38 Super, or .45 ACP pistols.

A sports car need more care and a heavy truck needs more maintenance and so it is with the 10mm due to the higher pressure and momentum of the cartridge. When testing the 1911 10mm the first chore is to field strip the pistol with the slide off the frame. Remove the barrel and barrel bushing. Force the cartridge case rim of a fully loaded cartridge (a heavy dummy round with actual bullet but no powder or primer) under the extractor hook. Be certain the cartridge case is in the normal feeding position.

Move the slide; not vigorously shaken but enough to put some force into the action. The cartridge should not loosen from the extractor. If the cartridge case falls loose from the extractor it is time to adjust the tension. As long as the extractor hook is good and sharp then adjusting tension is OK compared to fitting an extractor. If the extractor tension isn't sufficient to hold the cartridge case, the extractor must be (Continued on page 23)

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tuned. First, press the firing pin inward to release tension on the firing pin stop. Press the firing pin stop out, being careful to capture the firing pin and firing pin spring as they are under pressure. The extractor may need a bump from a screwdriver to get out; just give it a tug. Remove the extractor and then reinsert the extractor into the extractor groove or channel. Only about a half inch of the extractor—the front—should be inserted into the channel. Bend the extractor very slightly. Try it again.

Don't get the extractor too tight. The raised section on the extractor is called a locator pad and sets the point the extractor groove contacts the cartridge case rim. Pressure is largely controlled by this locator pad and the case needs to be pulled about 0.75" toward the firing pin channel.

If the cartridge case is too far from the firing pin this is controlled by incrementally and slowly removing a portion of the extractor pad while filing while ensuring the original specifications of the other dimensions of the extractor pad are maintained. When working

with the 10mm 1911, and any other 1911, the firing pin stop must be correctly fitted in order for the extractor to work properly. If the firing pin stop does not simply slide into place with modest pressure, it may be too tight.

This is checked with the firing pin stop installed. Of course, if the fit is too sloppy then replace with anew stop, possibly an oversize firing pin stop, and fit it instead. The procedure is the same. Keep the right and left sides matching the other at all times and do not allow them to become eccentric. The right side of the firing pin stop where the firing pin stop contacts the extractor is filed carefully until the firing pin stop is a good press fit.

This type of press fit does not make it too difficult to remove the firing pin stop for normal maintenance and also serves to prevent the extractor from moving in its channel. The 10mm 1911 operates in the same manner as the .45 ACP and other 1911 calibers. Maintenance demands as far as changing springs is higher in my experience and the

10mm cartridge results in greater wear on the pistol and its parts. The 10mm 1911 will be in the shop more often. I hope these tips help in dealing with the piece.

Accuracy Notes The 10mm has a well-earned reputation for indifferent accuracy. Much of the problem lies with the ammunition. Bulk ammunition, shooter's grade, intended to sell at a certain price point at the big chain stores is part of the puzzle. Generally speaking, 10mm 1911s were not as accurate as the .45 ACP but there are certain types of ammunition that exhibit greater accuracy. Fiocchi delivers good accuracy and the new Steiner brand is also proven accurate.

A custom grade handgun such as the Fusion will prove more accurate than most, but then the Kimber 10mm is pretty accurate as well. While a 10mm 1911 may respond well to an improved trigger action or a fitted barrel bushing it would be wise to explore the ammunition angle as well. If the owner uses less expensive or bargain grade ammunition then there is little point in tightening the piece up. AG

PEOPLE & COMPANIES

Adaptive Tactical 10/22

Adaptive Tactical makes numerous aftermarket parts. Here's a project based on Ruger's 10/22.

BY ROBERT K. CAMPBELL JUNE 2020

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Among the most enduring, reliable, and generally useful rimfire rifles ever introduced is the Ruger 10/22. It is so popular, I have customers who purchased another rifle “just to be different.” Some obtain cheaper rifles and others pay more, but the Ruger 10/22 is by far the most popular .22 rimfire rifle in America. There is quite an industry surrounding the 10/22. While Ruger offers several interesting variations on the 10/22, the aftermarket offers many more options.

A recent project involved building a rifle up from a standard stainless receiver using parts from Adaptive Tactical (AdaptiveTactical.com). While the upgrade seems simple enough, attention to detail is important. Reliability and accuracy potential must be maintained. The goal was to build an exceptional 10/22 for

hunting and target use, but the primary function would be fun shooting and marksmanship training. After a bit of discussion the parts were ordered. The rifle is a Ruger 10/22 stainless.

The rifle was obtained at a fair price at the local pawn shop for less than two hundred dollars and seemed in decent working condition. The walnut stock was a good fit with no barrel band and a stainless rail attached to receiver. A Bushnell 4x10 scope was mounted. On close examination the bell of the scope was actually touching the barrel! For this price it didn't matter but I wondered about the accuracy potential.

Anyone wishing to duplicate these efforts might be well served with the new, less expensive Ruger 10/22 supplied with a plastic

stock and without sights. While used 10/22 rifles are common, the new Ruger 10/22 inexpensive version can be obtained for less than the price of the average used rifle. Since you will be adding optics, it doesn't matter if sights are not delivered with the rifle. Prior to any modification it's important to test the rifle's accuracy and reliability.

Using CCI Mini Mag ammunition at 25 yards, the rifle functioned fine and a five-shot group went into 1.32", typical for the Ruger 10/22. A good, tight 10/22 with a decent optic should group five shots into 2-2.5" at 50 yards. The parts ordered included the Adaptive Tactical RM4, pistol grip type with an adjustable length of pull. The stock features two hold-

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ers in the butt for Ruger ten-round magazines and a removable plate in the forend for bull barrels, allowing a standard tapered barrel if the plate isn't removed. A stow-away accessory rail in the stock can be reversed for use with a bipod. The length of pull is easily adjusted and the storage compartments are ambidextrous.

There would be some improvement simply by adding the stock but I went a bit further, adding a Tac-Hammer barrel and Tac TRED monopod which fits into the pistol grip after a covering pad is removed. The Tac-Hammer is made of P4140 chromoly steel with a heat and rust resistant coating. The shroud is 6061 aluminum and coated with Cerakote.

Twist rate is 1:16, the end threaded (1/2 x 28) for common compensators or suppressors, outside diameter 0.920", 16" long (17.25" with compensator), Bentz chamber, and 30.68 ounces (870 grams) of weight. This setup isn't too heavy from offhand and very stable from a bipod or the Tac TRED

monopod. Installation To install the stock, disassemble the rifle by turning the single stock screw until completely loose.

Adaptive Tactical also makes a stock for the 10/22 Takedown although the sequence for assembling differs slightly. Since I elected to also install the Tac-Hammer barrel, I also removed the factory tube. Adaptive Tactical has several options and I ordered a Barrel/Rail Combo for \$329.99 as the rigid rail and barrel interface made a great deal of sense in this application. The barrel features a match grade Bentz chamber and a nicely done compensator.

While the shooter may not need a compensator in a .22 rifle, the overall effect is pleasant and the rifle certainly is quite accurate. The barrel is threaded for a suppressor, a good option for those that enjoy using "cans", and is advertised as a rigid core stepped barrel design with an aluminum shroud. While it isn't a true bull barrel, the design provides similar accuracy with Far

This invites custom modifications. less weight. My evaluation shows that goal was met.

To remove the Ruger barrel, loosen the two screws securing the barrel retainer (V-block) into the receiver. This simple set up was designed for manufacturing ease, works well, and makes barrel changing easy. When I first disassembled the rifle and removed the barrel I noted that the barrel was slightly loose. Even though initial shooting demonstrated good function and accuracy, it's worth checking tightness from time to time. The Tac-Hammer was a good, tight fit.

It was necessary to remove the original flat sight rail from the receiver to accommodate the higher and more complex rail. Considerable effort was needed to mate the new barrel to the receiver; a good thing that ensures a tight fit. In order to fit the barrel and keep it perfectly lined with the receiver, I put the receiver in a padded vise

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This liner is removed for use with bull barrels or extra diameter barrels, and carefully tapped the barrel into place. I don't know if every barrel and receiver combination will need this effort but the effort required was modest for the results to be had. Next up was fitting the barreled receiver to the RM4 stock. This is a tight fit but not particularly difficult. Simply apply pressure to seat the action in the stock and then tighten it down.

The receiver is placed in the stock with the barrel tilted upward and the receiver angled into the rear of the stock. Next, the barrel is pressed downward. A bit of pressure is needed to fit the barrel into the stock as it fits tightly. After the receiver and barrel are pressed into the stock, the stock screw is

tightened into place. The Bushnell scope that was included with my used 10/22 was fitted to the new railed barrel.

As it turns out the stainless Ruger was a good buy as the Bushnell scope provided an excellent optic for use with the custom rifle. A few adjustments at 25 yards and the scope was perfectly sighted with .22 Mini Mag. While I had to make a few adjustments in the original setting of the rings and fit the bases onto it, this rail is far superior to the original and the Bushnell now rides properly above the barrel.

Rifle scopes with a bell of fifty millimeters will not be difficult to mount or have any problem clearing the Tac-Hammer barrel. The overall look is nice, even racy, and the rifle remains light and fast handling. The final

step was firing for accuracy. I used the CCI Mini Mag in most of this work, firing at ranges of up to 100 yards. The Tac-Hammer and RM4 combination turned in groups of two inches at 50 yards for excellent accuracy.

Firing at 100 yards, accuracy seems about as good as at fifty yards, unusual for the 10/22. The rifle could use a better trigger action but that is another story. Since the initial work, the rifle has turned in groups of 1.5 inches with several types of ammunition at 25 yards, qualifying the improvement. The rifle has also proven reliable. Pay attention to detail in assembling the 10/22 and good results are assured. Adaptive Tactical parts are first class.

AG Top The stainless steel 10/22 was a good choice and the Bushnell rifle scope was luck! Center



The compensator performed well in testing. Above center: The Tac Hammer barrel's integral scope rail is an excellent design.

MAINTENANCE & REPAIR

Reader Forum

BY AMERICAN GUNSMITH EDITORS JUNE 2020

ORIGINAL PP. 24

Volley Fire I enjoyed Brian R.

Smith's "Ishapore 2A1 Enfield Repair" (May 2020) but noted a misconception I once made. "The 2A1 rear sight was graduated to a more realistic 800 meters as opposed to the overly optimistic 2,000+ yards of the 2A and No. 1 Mk III* rear sight." The seemingly "overly optimistic" elevation graduations weren't intended to hit individual point targets, rather, to engage far-off formations and target areas via coordinated volley fire, rather like a beaten zone fired from machine guns or a sheaf from an artillery battery.

This was a common tactic taught at various Schools of Musketry (notably the Small Arms School Corps at Hythe) in the days before machine guns were common. AR-15 Extension Fix I've read many of the comments on the number of articles on building match grade AR-15s by Joe Carlos. After 12 years of using the AR-15 in High Power as a Service Rifle and Match Rifle, I think I tried just about every trick there is. I like Joe's work a lot and had the opportunity to meet him at Camp Perry a few years ago.

However, the last two rifles I've built for myself were built without any customization of the fits and tolerances at all aside from using a BAT Machine Company extension, which I ground on the lathe for a good fit. Nothing else was done, not even facing the upper. The once tightly-bedded upper to lower fit has eroded and has tons of slop, too. I put this last barrel on with the intention of getting anew upper receiver but never did. No need to, this rifle shoots just as well as the ones I painstakingly accurized.

I think that the two biggest things to make accurate match ARs area good barrel and a good fit between that barrel and upper. Granted, I'm not doing a lot of testing with a scope and machine rest but my prone groups and groups from the bench are very good and I see few fliers. Just my experience. If it makes you feel better or

just enjoy tinkering, go ahead and work them. Bill Smith As Joe Carlos will point out himself, he doesn't consider his research or methods to be the final word.

As you point out, the "Pareto principle" of accurate AR-15 building (good barrel, good barrel/upper fit) eliminates many issues. Continued tinkering is scratching for an ever diminishing rate of return. Vintage 1911A1 My 1911A1 Remington Rand has become problematic. The hammer has ceased to fall all the way and it stops at what appears to be half cock. Any advice to fix this? Also, I am trying to find pin gauges for chamber/bore measuring for the big bores and .38s.

JB Meyer We haven't seen "Remington Rand" stamped on products since typewriters became relics of the past. The brand did appear on a large number of M1911A1 pistols in a mad U. S. Government effort to restock arsenals sorely lacking in guns some suddenly-aware legislators realized would be needed in the rapidly approaching WWII. Remington was not alone in the rush. Singer, known for their sewing machines, was enlisted.

Skilled at the manufacture of cars and trucks, Chrysler, GMC, and Ford re-engineered their production lines to turn out tanks, the venerable 2 1/2 ton "six by" and massive fleets of jeeps. And, lest we forget, there was Rockola of jukebox fame, now credited with turning out batches of the best M1 Carbines ever made. All this being said, we are pretty safe in assuming your M1911A1 isn't new and has had a sizable number of rounds put through it. Don't reach for a schematic or parts list just yet.

First, read the article beginning on page 12 of our July 2013 issue. Second, purchase Jerry Kuhnhausen's shop manuals on the M1911. You can probably get a lead on securing the books from the techs at Brownells as well as lessen your task of locating the aforementioned pin gauges. AG Bernie Lomax

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