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INSIDE THE ARCHIVE

DISASSEMBLY AND REASSEMBLY OF THE SIG SAUER P250 PISTOL

FIREARM INDUSTRY SHOWS SUSTAINED GROWTH IN 2009 • ACCURIZING AR-TYPE RIFLES AND CARBINES, PART 1 • CO...

ORIGINAL METHODS. MODERN ACCESS.

ARCHIVE EDITION 071

DIGITAL ARCHIVE EDITION

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FROM THE ARCHIVE

Firearm Industry Shows Sustained Growth in 2009

BY AMERICAN GUNSMITH EDITORS NOVEMBER 2009

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Federal Reserve Chairman Ben Bernanke announced just as this issue went to press that the recent recession, the worst in 30 years, is “likely over.” I’m not sure what he means by “likely”—it ain’t over if you’re out of work or if a close relative is facing foreclosure—but I do know that the firearms business is as healthy as it’s been in my lifetime (and that, I hate to admit, goes back to the administration of Harry S. Truman).

Yes, my friends, according to data recently released by NSSF, firearm sales figures are up for three years in a row and for the tenth straight month. The 30- to 40-percent monthly increases we saw last fall represented a surge due to fears over last November’s

election, but the 12- to 18-percent monthly increases we’ve seen lately represent real and sustainable growth in our industry.

Backing up NSSF’s figures, data released by the FBI’s National Instant Criminal Background Check System (NICS) reported 1,074,757 checks in August 2009, which is a 12.3-percent increase from the 956,872 reported in August 2008.

Other federal-government data comes from the most recent Firearms and Ammunition Excise Tax Collection Report, released in August, which showed that firearm and ammunition manufacturers paid more than \$109.8 million in the first quarter of 2009, up 43-percent over the same time period reported in 2008. This dramatic increase follows a 31.3-percent increase in excise taxes from the fourth quarter of 2008.

This shows that Americans are not only buying more guns, but it suggests that they’re investing in better-quality, more expensive guns. All of this, of course, is very good news for the gunsmith. It says to me that, if you’ve been holding off on the purchase of that new mill or other expensive tool, the next year may be the time to go ahead and make the investment. Oh, and there was one more interesting figure released recently by the federal government.

Want to guess how many background checks have been conducted by NICS in the decade since the system was instituted? As of last August, 105,060,213. Is America a great country, or what? Land of the free; home of the brave. Editor Keith Lawrence Technical

PISTOLS

Disassembly and Reassembly Of the Sig Sauer P250 Pistol

An elegantly simple steel receiver and interchangeable grip frames combine to make this new pistol incredibly versatile.

BY CHICK BLOOD NOVEMBER 2009

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What happens when a car gets designed by a committee? Answer: The Edsel. So does it follow that a gun-design committee would produce a pistol with innards resembling a Rube Goldberg mouse-trap? It might, except that the P250 was designed by a committee consisting of Messrs. Thomela, Metzger, and Mayerl of J. P. Sauer & Sohn of Germany, assisted by Ethan Lessard, lead designer for Sig Sauer, Inc., of Exeter, New Hampshire, where the P250 is manufactured.

And I can assure you, this collaboration definitely did not result in a handgun like the ill-fated Ford. On the contrary, the pistol design they produced may one day be considered as significant as John M. Browning's design of the immortal M1911. Like other Sig pistols, the P250 is a short-recoil, locked-breech semi-auto with a cam-operated barrel that locks into the slide's ejection port. And like other Sig pistols, the P250 also has a polymer grip frame. But that's where the similarities end.

The grip frame of the P250 serves merely as a "dust cover" for the gun's steel receiver unit. And the receiver unit (where the serial number of the gun is located) is the big breakthrough. This unit fits inside the grip frame, includes the rails on which the slide rides and

the entire firing mechanism, and the receiver unit is secured to the frame by the takedown lever's axis pin. This frame-within-a-frame idea has shown up on more than one pistol of overseas design.

As regular readers of this publication may recall, I've written articles on the disassembly and reassembly of a few other examples, causing me to arrive at this conclusion: The sole reason for placing a frame-within-a-frame is to make a gunsmith's job 100 times more difficult. And the complex manufacture of these pistols ensures that the prices will be high. But, again, the P250 is different. This frame-within-a-frame design—while not exactly inexpensive—is definitely not complex.

The Sig P250's steel receiver is like the chassis of a GM concept car I read about in a magazine a few years ago. With that concept car, a number of different body styles and sizes could be bolted onto the same chassis. As I understood it, a young couple could begin their married life with a compact or convertible body, and later have a full-size sedan or even a station wagon body dropped onto the chassis as their family grew.

The steel receiver of the P250 is much like that automobile chassis, and it's the key element that results in this handgun's amazing versatility. The polymer grip frame (or "dust cover") comes in full, compact, and

DISASSEMBLY AND REASSEMBLY OF THE SIG SAUER P250 PISTOL CONTINUED

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sub-compact sizes. Each of these overall sizes are available in wide, medium or slim models to accommodate different hand sizes. Grip frames for the 9mm, .357 Sig, and .40 S&W versions are interchangeable. (Due to the size of the .45 ACP cartridge, it requires a separate grip frame that will not interchange with the smaller-caliber frames.) As you might expect, a proper slide/barrel assembly and magazine are required when changing calibers, but the same steel receiver serves all.

For example, a 9mm slide/barrel assembly can be slipped out of the grip frame and into a .357 Sig, .40 S&W or .45 ACP grip frame and secured with the takedown lever. It takes less than a minute to make the switch, with no tools required. Are you beginning to see

what I mean about the versatility of the P250? Well, hold on; there's more to come. Suppose the 9mm P250 was originally purchased for concealed carry in its sub-compact, slim configuration.

Then some day down the road the owner decides he needs more "punch." All he has to do is buy a slide/barrel assembly and magazine in, say, .357 Sig or .40 S&W, field strip the pistol, and reassemble it with the new components. Conversely, if the same owner decides he'd feel safer with the stopping power of the .45 ACP, he doesn't have to purchase a whole new Sig P250. By buying a full-size grip frame, a .45-caliber slide/barrel assembly, and a magazine, his yearning for greater stopping power has been achieved.

Yet, he still hasn't given up the gun's concealability. The smaller-caliber sub-compact components are still intact. It will take less than 60 seconds to put them back into their concealcarry mode. Another example of the clear and thorough thinking by the gun's design team was their concern for shooters with small hands and/or short fingers. To that end, the team designed two triggers for the steel receiver.

One is for the majority of shooters, while the second sets the trigger farther to the rear in the guard—in effect shortening the length of pull. Combine this second trigger with the narrow grip frame and any problems of proper feel or comfort in small



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Sig Sauer Model P250 Semi-Automatic Pistol (Specifications subject to change without notice) 1 Polymer Grip Frame 2 Magazine Catch 3 Magazine Catch Stop 4 Magazine Catch Spring 5 Takedown Lever 6 O-Ring 7 Steel Receiver (frame) 8 Slide Catch Lever hands are likely to vanish. Field Stripping Plus Remove the magazine, put on your eye protection, and lock the slide open with the slide-catch lever. Then inspect the chamber for the presence of alive round.

Rotate the take-down lever clockwise until it's brought to a halt by the stop incorporated in the 9 Slide Catch Lever Spring 10 Slide Catch Lever Pin 11 Trigger Bar Spring 12 Trigger Bar 13 Trigger 14 Hammer 15 Hammer Pivot Pin 16 Hammer Strut Pin grip frame. Retract the slide a little to disengage the catch lever. Control the slide movement forward and off the grip frame. Next, invert the slide.

Push the recoil-spring guide forward slightly, lift its rear, and remove it along with the spring to the back end of the slide.

Then lift the rear of the barrel and remove it to the rear. 18 Small Mainspring 19 Large Mainspring 20 Safety Lever 21 Barrel 22 Recoil Spring Guide 23 Recoil Spring 24 Slide 25 Front Sight 26 Rear Sight 27 Safety Lock 28 Rear Extractor Spring Guide 29 Extractor 30 Firing Pin 31 Firing Pin Spring 32 Safety Lock Spring 33 Spring Pin 34 Extractor Spring 35 Front Extractor Spring Guide 36 Magazine Tube 37 Magazine Follower 38 Magazine Spring 39 Magazine Insert 40 Magazine Floorplate Remove the take-down lever by turning and pulling on it simultaneously.

Push the steel receiver assembly forward to clear its locking tab from its mating slot in the grip frame. Pull up on the receiver rails while drawing the hammer partially to the rear, and rotate the receiver upward and out. This is a bit farther than the P250

DISASSEMBLY AND REASSEMBLY OF THE SIG SAUER P250 PISTOL CONTINUED

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Modify a pin punch (per instructions in the text) in order to drift it upwards from the slide. owner's manual says to go, but getting the receiver separated from the polymer frame lessens the chance of damaging the finish of the pistol with a harsh solvent, while giving ample access to the receiver for a good scrubbing away of fouling with something like good old Hoppes #9. Don't overlubricate the P250, and wipe off any excess lubricant before reassembly. Detailed Disassembly Begin by inverting the slide.

About an inch from its rear you'll find what looks like half a pin (see photo). It's actually a whole roll pin. The only way to get it out is to grind or file a flat on one side of a punch, and then use the punch to drift the pin out to the top of the slide. Press down on the safety lock (#27) to remove the firing pin (#30) and spring (#31). I've noticed something previously with Sig Sauer schematics. The drawings lead you to believe that the firing-pin assembly seats in the barrel chamber. No way.

It's inside the slide. (I wish the manufacturer would have the drawing corrected.) Press in on the rear extractor-spring guide (#28) to release the rear-sight assembly (#26). Withdraw the guide. The extractor spring (#34) and front spring guide (#35) usually come out with it. If not, you can fish them out with a dental pick. The extractor (#29) gets lifted away with tweezers. Sometimes it will depart the slide on its own if the slide is turned right-side up and tapped upon a bench top.

Give the steel receiver (#7) a closer The unidentified pin is the trigger stud, which is drifted left to right. look. You were expecting it to be complicated? So was I. Instead, it looks as if there aren't enough parts to it to make it work. But work it does, and very well. I found this to be a pleasant surprise, especially after having examined a few other foreigndesigned frame-within-a-frame pistols. I suspect that lead designer Lassard of Exeter, New Hampshire, had much to do with the simplicity of this design.

As you hold the unit between the fingers of both hands, with the serial number facing away from you, there's no missing the four pins on the left side. Three of these are headed (#16, #15, and #10). Drifting is done from right to left. The pin you see under #10 isn't a pin. It's a stud permanently attached to the trigger (#13). Turn the unit to its opposite side. The other end of the stud I just mentioned is also a permanent part of the trigger in the form of a tab.

This tab has a small stud of its own that snaps into the front end of the trigger bar (#12). While on the subject of #12, a few minutes spent examining how its spring (#11) is attached to the safety lever (#20) and the back of the bar are in order. The hook end of the spring engages the lever, the opposite end is inserted in the bar, and the coil is supposed to ride beneath the 90-degree bend at the

DISASSEMBLY AND REASSEMBLY OF THE SIG SAUER P250 PISTOL CONTINUED

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rear of the bar. To see how the trigger/bar/spring combination works, press in lightly on the bar above its rear spring hole, pull the trigger a little to the rear, and release it a few times. Now turn the unit hammer-side down, grab a magnifying glass, and focus on what you see under pin #16. This pin is identified as the hammer-strut pin. How odd. There is no hammer strut in the P250. What you're looking at inside the hammer under the pin are the small and large mainsprings (#18 and 19).

If you're wondering why I haven't mentioned drifting any pins out by now, the mainsprings are why. You don't want to do any drifting until you've ground or filed a notch in a blade screwdriver that spans leaves enough meat on the blade to reach and depress the combined mainsprings. This takes all the pressure off the pin and allows you to remove it. These springs are strong, however, and will come flying out of the hammer if you forget to keep control of the springs with your forked driver blade.

Okay, drift out the hammer pin far enough to free the safety lever. Follow that with removal of the catch-lever pin. Both pins move right to left. Use the previously modified punch to get the catch-lever pin moving to avoid any interference from the tab connecting the trigger to the trigger bar. Be careful about the lever pin. It's all that holds the lever (#8) and lever spring (#9) to the receiver. This brings me to the trigger and its close relatives.

Unlike the other pins you've encountered in the P250, the trigger stud is drifted left to right. Before you start on it, squeeze the front of the trigger bar tightly against the side of the receiver. This avoids the danger of bending the bar when you drift the stud. The tab will get detached from the bar in this process. A special tool must be made to depress the springs before removing or re-installing the pin, and the trigger can be removed.

Since you previously removed the safety lever when you partially withdrew the hammer pin, pull the pin all out and remove the

hammer. Hopefully, the lever will have remained attached to the trigger bar. This reduces the risk of damage to the spring when separating it from the lever and bar. Reassembly Tip I started the reassembly with the hammer and safety lever.

After inverting the receiver, the twin mainsprings are placed in the hammer and depressed with the homemade tool until the hammer-strut pin can be pushed through to retain them. Doing this first stabilizes the back end of the receiver, making the balance of reassembly simply a "reverse order" operation. Oh, and don't forget to pull the hammer back when returning the receiver to the polymer frame. This moves the trigger to the rear and allows it to enter the guard. There you have it, ladies and gentlemen.

I haven't seen a firearm as simple or more versatile as this one since I got my first look at the inner workings of a Benelli semi-auto shotgun. Enjoy the experience. ■

PEOPLE & COMPANIES

Accurizing AR-Type Rifles and Carbines, Part 1

With some basic steps and aftermarket parts, you can easily convert an out-of-the-box AR rifle or carbine into a respectable group shooter.

BY STEVE ADELMANN NOVEMBER 2009

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Whether you're a gunsmith taking in a customer's new AR or constructing your own project rifle, the accurizing of an AR doesn't have to be farmed out to one of the high-end custom shops. An unmodified or "out-of-the box" AR rifle and carbine in .223 Remington/5.56 NATO will tend to shoot in the 1.5 to 2.5 minute of angle (MOA) range with factory ammunition at 100 yards.

Since 1 MOA equals 1.0472 inches at 100 yards, that means that most outof-the-box ARs will group somewhere between 1-1/2 and 2-1/2 inches at 100 yards. While some shooters relegate these guns to general-purpose duty and will settle for this degree of accuracy, in reality, ARs are capable of sub-MOA accuracy in most common configurations and even 1/2 MOA or better in match configurations.

Of course, a tight-shooting gem can occasionally be had off the rack, but unless the manufacturer built it that way intentionally,

finding one is usually a product of blind luck. Until I laid my hands on an accurate AR, I was just as skeptical about their grouping ability as anyone else. I used many different ARs in both 5.56x45mm and .308 Win/7.62x51 while on active duty as a career soldier. Standard-issue guns from the M16 family have never been known as tack drivers, even with match ammunition.

Conversely, those ARs I was issued that had been accurized for special purposes or those built as sniper rifles shot very well, sometimes holding a steady .5-minute of angle with match ammunition at moderate ranges and subto 1 MOA at extreme-for-caliber distances. Tool Time A gunsmith with a few basic specialty tools can easily fine tune these very versatile and popular long arms.

First of all, a bench-mounted vise is a must, coupled with an upper receiver block used to hold the upper firmly while all manner of services are performed. The next item is

a lower-receiver block, which locks into the magazine well. This stabilizes the lower so you can do things like changing the trigger, receiver extension, or pistol grip without needing a third hand.

An old, unserviceable 20- or 30-round magazine will also work reasonably well for this purpose; just be sure it's no good before placing it in a vise. It's important to get the right size upper and lower receiver blocks for large AR10-sized or small AR15-sized platforms. A good barrel-nut wrench is also indispensable, and these are large or small-receiver specific. Since each type has its pros and cons, I own several barrel-nut wrenches.

All can be attached to a 3/8-inch-drive torque wrench, which is helpful for setting Assembled lowers lock into the block using the magazine release, whereas stripped lowers like this rely on friction to stay in place.

ACCURIZING AR-TYPE RIFLES AND CARBINES, PART 1 CONTINUED

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the proper torque on barrel nuts, muzzle brakes, and optics mounts. I have several because I'm constantly switching barrels and parts, but one good torque wrench will suffice for someone interested in accurizing only a rifle or two. Some combination barrel-nut wrenches will also work on flash suppressors/muzzle brakes and free-float tube-lock rings as well. Lastly, a brass, polymer, or rawhide hammer and an assortment of punches—roll pin, steel, brass and nylon—will make life easier.

Having some extra 1/16-inch punches on hand is a good idea. As I've gone further down the custom-AR road, I've bought or made additional specialized tools for different accouterments and functions, but they're generally unnecessary for accurizing just one gun. Instructional resources for constructing ARs from scratch can be found on the web at and Both sites are comprehensive, so I'm not going to get into the basics of AR building here.

Rather, I'll cover a few simple steps specifically geared towards making an AR shoot more accurately. The stock AR configuration has several accuracy weak points that can be addressed without making drastic structural changes. These will all be covered in this multi-part series of articles, starting in this installment with trigger replacement.

It's All In the Pull While stock triggers are designed to provide reliable sear engagement and adequate hammer-fall force to ensure primer ignition, this comes at the cost of a light pull and a clean break. While it's possible to clean up the engagement sur-

faces of a stock trigger assembly to gain a slight reduction in creep, in my opinion, the effort required to do it safely is much greater than the resulting benefit.

Fortunately, there are a large number of aftermarket triggers available for drop-in, ranging in price from less than \$100 to almost \$300. The installation procedure is essentially the same for all of these, except that the setup for some is more elaborate than for others.

Always re- Above left and Geissele Automatics' two-stage Hi Speed National Match (left) and JP Enterprises' single-stage Fire Control trigger (right, shown with stock hammer) are near the top of their respective games. fer to the manufacturers' instructions for each trigger type. I've installed several makes of twostage match triggers, but my customers seem to prefer those from Geissele Automatics over all the others.

These very well-made trigger assemblies provide three adjustments: first-stage weight, second-stage weight, and overtravel. Some other brands allow for adjustment, often through the use of replacement springs. Geissele's triggers have individual hex-key adjustments, and if you follow their instructions, they're easy to set up. For single-stage triggers, I've had the best luck with JP Enterprises trigger assemblies. These are highquality units with some adjustability and a range of weights to choose from.

While the Geissele triggers all come standard with anew hammer, JP gives the buyer the option of purchasing the trigger unit

only and using the stock hammer, or buying their "Speed Hammer," too. To install anew trigger once you've ensured the rifle is unloaded and cleared, remove the upper receiver and set it aside. It helps to have a lower-receiver block to hold the lower in a vise while performing the next steps.

Remove the pistol grip using either the appropriate hex or slotted driver, taking care not to lose the selector-pin spring (inserted into the blind hole drilled in the top edge of the grip) or selector pin, which will fall free from the bottom side of the lower receiver once the grip and spring are removed. You'll save time later if you remove the safety selector at this point. To do so, the hammer should be in the cocked position with the selector in the "fire" position.

With one hand, push the hammer to its full-down position (past any engagement points), which will allow the selector to slide out from right to left. While controlling the hammer (or with the aid of a dry-fire block inserted in the magazine well), pull the trigger to release the sear engagement and allow the hammer to travel forward, thus preventing it from slamming against the receiver wall. Next, use a dummy pin or punch to carefully drive the hammer pin out. There are two common hammer and trigger-pin sizes.

Most manufacturers are now using .154-inch pins, but late-model Colts and some others use .172-inch pins. On stock units, the hammer pin will go out in either direction. It helps to place a hand on the

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opposite side to receive it as it comes out. With the dummy pin or punch still in place, grasp the hammer and apply a slight pressure to contain the spring tension as you remove the dummy pin or punch. Then carefully remove the hammer assembly and set it and the hammer pin aside. Repeat the process of pin removal on the trigger pin.

After the trigger pin is out and the punch has been withdrawn, you can ease the trigger assembly out by pushing up on the trigger from the bottom with one hand and removing the unit with the other.

The trigger is under somewhat less spring tension than the hammer, but care must be taken on stock units to retain the disconnect and spring, which will be loose. Removing too much metal will result in a safety malfunction and an unsafe gun, so file in small increments and test fit periodically. Once the trigger pin is removed. Generally speaking, the installation of the new trigger is simply a reversal of the removal process.

Nevertheless, if you're not familiar with the process, paying attention to the orientation of the hammer and trigger springs as they came out will help you when it comes time for the new ones to go in. Both will be under tension when fully aligned with their respective pin holes. Normally the toughest part is aligning the trigger, disconnect,

and lower receiver holes at the same time, as both trigger and disconnect are under separate tensions.

Some designs—Geissele's, for example—are easier to install than stock triggers. Adjustments vary by manufacturers, so the ability to follow instructions (or the willingness to call customer service) can be useful. Often, in order for the safety selector to function properly, some metal must be removed from the slotted portion of the selector lever's underbody. Some trigger designs also allow fitting by filing the tang that extends under the safety. Regardless, file slowly, evenly, and a little at a time.

It's much better to remove a small amount of metal (continued on page 14) and go to the trouble of test fitting repeatedly (which requires installation and removal of the trigger assembly each time) than to buy anew premium trigger. Once the safety selector, trigger, and hammer function as designed, the selector pin, spring, and pistol grip can be reinstalled. A small dab of high-lubricity oil on the tip of the selector pin before it's installed will keep the safety functioning smoothly.

Ensure that the selector-detent spring's hole and the corresponding hole in the lower receiver line up correctly. If the spring is pinched off through misalignment, it can reduce tension on the selector and allow

the safety to be taken off too easily. After completing the reassembly, check the sear engagement using the trigger manufacturer's instructions. Ensure that the engagement is adequate for safe operation.

Finally, assemble the upper and lower receiver together and perform a function check using the following steps: 1. Point the rifle in a safe direction and make certain it's clear. Do this by ensuring there's no magazine inserted in the magazine well, and then retracting the charging handle and checking to ensure the chamber is empty. 2.

Charge the rifle by pulling the charging handle fully to the rear and controlling its forward movement until it's fully forward and into battery. (Never allow the bolt to slam shut on an empty chamber.) 3. Place the safety selector on "safe" and attempt to pull the trigger. The hammer should not fall, and trigger movement should be slight or nonexistent. 4. Place the safety on "fire" and pull the trigger. The hammer should fall. Do not release the trigger. 5.

While holding the trigger to the rear, cycle the action fully using the charging handle. 6. Release the trigger. The sear should reset with a distinct "click." 7. Pull the trigger again, and the hammer should fall. Repeat steps 4 through 6 several



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times, cycling multiple times after each trigger pull to ensure the rifle is functioning in semi-auto mode only. If at any time the hammer rides the bolt carrier forward—indicated by no reset of disconnecter when the trigger is released after cycling the action and no hammer fall when pulling the trigger again—the rifle is operating as if fully automatic. Do not attempt to fire the rifle in this condition, as the sear engagement is not properly set.

Repeat the adjustments as per the manufacturer's instructions as necessary until proper sear engagement is attained and the rifle passes the function check. **Conclusions/Recommendations** Once the new trigger is installed and passes the function check, a trip to the range with some known-quality ammunition will tell

the tale of improvement. Hopefully, you've pretested the AR with this same lot of ammunition, so you can make a proper before-and-after comparison.

While firing, keep an eye on the hammer and trigger pins to ensure they don't drift out. If they do, you either need to replace them with over-sized pins (Geissele Automatics includes them with all commercial triggers) or use captive pins, designed to stay in place. Of all the accurization techniques possible with the AR-type rifle, installing a good trigger is probably the best first step.

Though a noticeable decrease in group size should be observed, other steps are still necessary to bring the AR up to its full accuracy potential. In Part 2 next month, I'll cover a method for free-floating the barrel and lapping the upper receiver, both of which can greatly enhance the rifle's performance. ■

FINISHING

Cold Bluing: Another Approach

Try this simple method of cold bluing to get a deep blue/ black finish, with only a little more time and effort than it takes to do a thorough cleaning job.

BY STU GRELL NOVEMBER 2009

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Those of us in the gun-repair business get lots of inquiries about rebluing firearms. What do you tell a customer who wants to rejuvenate an older gun that has been neglected for many years? Well, as you well know, there can be more than one answer.

If the gun is a collectible firearm, of course, you'll advise against bluing it or refinishing the stock. (You don't want to be beaten silly or burned at the stake by a collector who may find you out some day.) But what about that "family heirloom" that's been kicking around the family for years, has been "rode hard and put up wet," and really needs a major cleanup job? In the latter case, hot bluing will often cost more than an owner is willing to spend—or more than the firearm is actually worth.

In these cases, cold bluing just might be the answer to getting the job and keeping the customer happy. A couple of months ago in the September 09 issue, Leslie Jonsson detail his method in an article titled "Cold Bluing: Restoring 'Family Heirlooms' on the Cheap." His method certainly seems to give good results, but we all have different ways of doing things, so I'm going to tell you about my method here and give you another alternative.

First off, when you get an old gun with the blue or brown patina worn off in some places and scratched in others, that gun probably needs to be field stripped, thoroughly cleaned, inspected, lubed, reassembled, and test fired—before you do anything else. And the time involved is the first thing you'll write down on the estimate you give the customer. Then, assuming the customer is willing and the firearm proves to be worth the investment, you can proceed with a complete disassembly of the major components.

A number of years ago I discovered a cold-bluing method that produces a very deep and dark finish that amazes my customers. It will make any older gun look better and resist rust better. Although it's less expensive than hotbluing, I'm still well paid for doing the job. And what's most important is the money stays in my shop rather than being sent to an outside hotbluing firm. To give you the details, I'm going to use an actual job I did recently for a real-life customer.

The customer brought in an 1894 Winchester .30-30 carbine that was issued to his grandfather, who was a cavalryman in the Nebraska National Guard in the early 1920s. The rifle was manufactured in 1916. From my initial inspection, I doubt that the

carbine was ever disassembled since it was new. It probably spent untold hours in a rifle scabbard outdoors under the stars in all kinds of weather.

I wasn't too surprised when my customer made this comment: "My family made it a habit to never ever clean a gun." They were used and put aside until needed again. This rifle undoubtedly had some care while in the service, but that was along time ago. There was a fair amount of fine surface rust but no really deep pitting. It showed wear but there were no big dents or gouges in the metal. There was rust inside, but nothing that I could not get at with a stiff wire brush.

My customer was concerned about the appearance of the rifle, and wanted the rust removed. I told him that once the rust was gone, there would be very little finish left. I told him about the options of hot bluing, cold bluing, and other coatings. He said he would never sell the gun, wanted to use it, and didn't want to spend the money to hot blue it. He wanted to keep it as original as possible, but wanted a finish that would look good and resist rust in the future.

THIS IS A GOOD EXAMPLE OF A CASE WHERE YOU CAN SELL YOUR SERVICES FOR

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doing a complete cleaning up of the gun, and then simply do the three extra steps needed to get this great cold-blue finish that will make the old metal look like it was taken care of better over the years. In this case, the customer also agreed to ante up the additional cost of redoing the stock with a satin finish. Okay. Let's get started with the cold-bluing process. As always, make sure the rifle is unloaded, and then completely disassemble it. I clean all of the parts with Birchwood Casey Gunscrubber.

I then use a power wirewheel unit with a soft stainless-steel brush (available from Brownells) to buff off all of the rust and dirt that remains after hand cleaning. After using the wire wheel and any hand brushes needed, I once again wipe the parts with a rag soaked with Gunscrubber to get the metal as clean as possible. The nice thing about the product I use—Brownells Oxpho-Blue—is that it will work even through a little grease and oil, so no boiling of the parts is necessary.

I then take a cleaning pad, soak it with Oxpho-Blue Creme, and liberally coat each part. Be sure to wear rubber gloves. Wipe it on thick once or twice and let the bluing-covered parts sit for at least 15 minutes. Again, I'll stress to use plenty of the creme to get the parts coated. You'll start to see the parts get dark as you wipe on the bluing, but it will get even darker in the next step.

After sitting 15 minutes to an hour (or even longer if need be), grab your can of Tri-Flow and spray down all of the parts (without removing the Oxpho-Blue). Spray them down liberally. I then take each wet part and rub the bluing and Tri-Flow around with my gloved fingers. Just make sure everything is very "smeary." Then I take a couple of the blue paper shop towels and wipe off the solution. You'll notice that, as you are rubbing the parts, the Tri-Flow seems to drive the bluing into the metal and make it darker.

Use compressed air to blow all of the solution out of the screw holes, nooks, and crannies. After I have wiped all of the bluing and Tri-Flow solution off of the parts, I recoat them all with more Tri-Flow and reassemble the gun. Once again, I use compressed air to blow the Tri-Flow into every nook and cranny. That's all there is to it.

You've just completed three extra steps to a complete cleaning job—the wipe with Gunscrubber, the bluing application, and the Tri-Flow setting of the blue—and you've got a pretty darn nice blue/black finish on the metal. And you can charge accordingly. You can easily increase your shop's profit by offering this service. But don't take my word for it; dig up an old gun and try this method for yourself. When you're finished, you'll have a showpiece to use as an example of your cold-bluing services.

Show it off and you'll be amazed how many jobs you'll get and how much the service can improve your bottom line. ■

METALWORKING

Steel-Coat Bedding Enhancement: A Step Beyond Pillar Bedding

This simple extra step to the bedding process can help bring a wood-stocked rifle up to the same accuracy standard as one stocked with the best of the synthetic stocks.

BY NORMAN E. JOHNSON NOVEMBER 2009

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Original caption: Right top: A pair of High-Score Pillars have been installed in the walnut stock on this Remington Model 40X target rifle. Right bottom: The completed steel-coat bedding-enhancement job is shown here on the same rifle stock.

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Many modern-day gun stocks are made of carbon fiber or other synthetic material. Some of these have integral aluminum bedding blocks for improved action bedding and stiffness. A few benchrest shooters even go so far as to glue the action into the stock, forming a virtual one-piece unit. This begs the question: Can a conventional walnut target stock be bedded to parallel the accuracy of these newer synthetic stocks? The answer is yes, if the bedding is properly applied.

There are many good target stocks made by such manufacturers as Remington, Winchester, Ruger, Sako, Savage, and others. With carefully applied bedding, these wood stocks can come very close to performing equally to their synthetic counterparts. Over many years, my testing has borne this out.

In this article, I'll detail what I've done to improve the accuracy of the Remington Model 40X wood target stock, although this method of stock

The bottom of the receiver now fits this bed with microscopic precision, resulting in improved accuracy. bedding can be applied to most other wood target stocks as well. Remington Arms has offered the Model 40X target/benchrest rifle equipped with a walnut stock for more than a half century. This is a heavy stock, bedded at the receiver ring and with the rear action tang bearing directly on the wood.

Although they're precisely inletted, these rifles come out of the box without any bedding material interfacing the metal and the wood. As received, the Model 40X target rifles per-

form admirably with test targets accompanying each rifle. Under normal conditions, these rifles can continue to deliver fine accuracy for years, but the metal-to-wood stresses will often affect accuracy, leaving the shooter at a loss for the cause.

In working with more than three dozen Model 40X rifles, I have been able to improve, restore or maintain the original accuracy performance of all those I've worked with. This has included conventional glass bedding, pillar bedding, and a unique combination of pillar bedding and what I call "steel-coat bedding enhancement." I've covered pillar bedding in previous articles, so in this one I concentrate on my steel-coat bedding-enhancement method. I'll begin here with a stock that has

STEEL-COAT BEDDING ENHANCEMENT: A STEP BEYOND PILLAR BEDDING CONTINUED

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been properly bedded using a reliable pillar-bedding system or one of the better stock-bedding compounds like Brownells Steel-Bed or the like. What I call the “steel coat” is then applied over the existing bedding at the receiver ring and rear tang surfaces, or in some cases in areas where other major bedding surfaces exist. With the Remington Model 40X’s two-point bedding system, it involves only the receiver ring and rear tang.

The steel coat I use is made of common .002-inch shim stock, which can be easily formed to fit the curved surface of the stock area to be covered. I cut it with scissors and make the screw hole in the center guard with a high-speed burr in a Dremel tool. This is then bonded in place with J-B Industro Weld, which is a non-shrinking epoxy formulation with an extremely high tensile strength. To make the patterns, I use tracing paper marked with a fine-point marking pen.

The outlines are transferred to the shim stock and carefully cut to size. Be sure to mark the screw hole as well. The pieces of shim stock are easily formed to fit the stock curves by rolling them on around rod of slightly smaller diameter than the bedding surface.

Then, after the pieces are cut Below left and Once the part is coated with adhesive, the screw hole must be aligned perfectly to avoid displacement of the shim as the action is lowered into the bed. and formed, I abrade the underside of each with 220-grit paper while holding them on a curved surface similar in size to the receiver ring. At this time, I also roughen the surface of the stock at the rear tang support and the receiver ring.

Removing a couple thousandths of stock material at the sides of the receiver area provides some space for the steel coat and the bonding material. In doing this, I’m careful to avoid removing so much material that the radial dimensions are changed. The next step is to try the parts a final time to ensure that they fit perfectly and the curves are properly shaped.

Then I apply a thin coat of release agent to the action receiver ring and the tang, and clean the mating surfaces and the steel shims with lacquer thinner or acetone. Once a small amount of J-B Cold Weld has been mixed, everything is set to go back together. It takes only a thin coat of the epoxy to do the job. Excess epoxy will be forced out as the action is drawn down with the two action screws.

The stock should be placed horizontally in a padded vise so the action can be lowered squarely into the stock without the steel-coat parts shifting. The guard screws are then torqued down to just short of normal tightness. The J-B epoxy will cure to steel-like hardness in roughly eight hours. I leave the unused portion of the epoxy on my bench, and when it gets firm to the touch, I remove the action from the stock.

Any excess material can easily be removed at this time; but, beware, it becomes harder to remove as it cures fully. Then I place the action back into the stock and moderately tighten the guard screws. The rifle will be ready to use in 10 to 15 hours. It’s a good idea to keep the rifle in a warm place until the epoxy fully cures. Combined with pillar bedding, my “steel-coat bedding enhancement” forms what I feel is the best receiver support possible on a wood stock.

A virtually air-tight action-bearing surface is formed in this way over nearly four square inches of surface. Accuracy is bound to be improved. ■

PEOPLE & COMPANIES

Working the Great Western Single Action Army

Thousands of these Colt clones were produced in the 1950s during a period when Colt had suspended production of the "Peacemaker."

BY DAVID R. CHICOINE NOVEMBER 2009

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Due to slow sales and a need to produce more appropriate firearms for World War II, Colt Both before and after the war, Colt's SAA was a great favorite in Hollywood's western movies, and with the war over anew demand began to appear for the old single action that Colt did not chose to immediately fill. Thus, it happened that, in 1953, a man named Bill Wilson formed the Great Western Company in Los Angeles, California, with the intention of producing a modernized copy of the old workhorse SAA.

I have no verification of this, but the story I was told is that Wilson asked Colt if they were going to resume production of the Single Action Army because he was interested in producing a modern, shootable copy. The answer he got was reportedly "No, we're not going to make that gun again. So go right ahead with your plans." I believe this was probably true, because—

years ago—I seem to recall an announcement from Colt that they would not be producing the Peacemaker again.

The new Great Western Single Action was a near clone of the Colt in almost every way. In fact, the takedown instructions I'm going to give you here are nearly identical. After examining quite a few, it's apparent that the Great Western Company was never concerned about putting out a revolver with the wonderful fit and finish of the original Colt. The Great Western revolvers I've seen are full of tool marks and the quality of polish, fit, and finish work leaves something to be desired.

The Great Western revolvers have a frame-mounted, rebounding firing pin in place of the big "canine tooth" that was mounted on the Colt's hammer face.

This odd hammer configuration gives the Great Western a strange profile when cocked; the cutout made to clear the firing pin results in sort of an "upside-down L-

shape." These new hoglegs were cataloged in the same barrel lengths that Colt had produced—4-3/4, 5-1/2, and 7- 1/2 inches, plus Great Western offered a "Buntline" version with a 12- 1/2-inch barrel as well as a 4-inch "Deputy" model that sported a fulllength barrel rib.

A few were made in flat-top configuration and equipped Although they were not produced with the same degree of quality as Colt's, the Great Western revolver filled a niche for a short while. with Micro-adjustable rear sights. With .45 Colt and .22 Long Rifle as the standard chamberings, Great Western also offered versions in .38 Special, .357 Magnum, .357 Atomic, .44 Special, 44-40, and .44 Magnum. I've never seen one, but I understand that the "Atomic" was simply a hot-loaded .357 Magnum.

A few examples have also been seen chambered in .22 Hornet, .30 Carbine, 32-20, and .22 Magnum. The standard GW grips were imitation staghorn, although from what

WORKING THE GREAT WESTERN SINGLE ACTION ARMY CONTINUED

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22 Single Action being checked for loaded cartridges. The hammer is at half-cock and the loading gate is open. The guy holding this gun should have been warned to keep his finger away from the trigger. Place the hammer at halfcock, open the loading gate, then depress the base-pin lock and withdraw the base pin out the front. I've seen they were offered with a great variety of other optional grips.

The Great Western company advertised that its revolvers were manufactured of the highest-quality materials, with frames made of 4130 and cylinders of heat-treated 4140 chrome-moly steels. Great Western produced their single-action revolvers from 1953 to 1961, although the company was plagued by quality-control and management issues along the way. While some Great Western revolvers I've examined were reasonably well fitted and functioned perfectly, many others were crudely machined and poorly fitted.

I can recall taking several early manufacture Great Western Single Actions apart and, after examining the poor quality of the parts inside, simply tossing out the bolt, the hand, and all the springs, and replacing them with good-quality Colt parts in order to rebuild the guns into acceptable shooters. The company did make quality improvements in later years but, sadly, they had already developed a reputation for suspect quality.

On top of this, as you may know, the folks at Colt changed their minds and reintroduced the Single Action in 1955. As many collectors now refer to it, this new Colt became the "2nd Generation Colt SAA." This reintroduced Colt revolver spelled the beginning of the end for Great Western, and a mere six years later the company closed its doors for good after producing about 22,000 single actions in all.

The Great Western revolvers made in California from 1953 to 1961 should not be confused with the modern Great Western II revolvers being marketed by EMF. The original GWs were made entirely in the U. S., in Los Angeles, while EMF's GW II revolvers are manufactured in Italy by Pietta. The modern Pietta version is, by and large, a very well-made high-quality replica of the original Colt.

If you're interested in learning more about Great Western arms, I recommend you find a copy of the September/October 02 issue of Shoot! magazine, and read the excellent article by John Taffin. Disassembly Instructions 1. First, make certain the weapon is unloaded by holding the revolver around its grip with your left hand, being careful to keep your finger away from the trigger (#43) and keeping the revolver pointed in a safe direction.

Roll open the loading gate (#23) with your right hand, and then cautiously pull the hammer (#27) slowly to the rear until you hear two audible clicks. This should place the hammer in the half-cock or loading position, where the cylinder (#12) will spin freely in a clockwise direction. Slowly rotate the cylinder by hand while examining the chambers through the opened loading gate at the rear of the frame (#20), making certain the cylinder chambers have no cartridges in them.

If there are cartridges in the chambers, then assume you have a loaded gun. What you see could also be fired cartridge cases or dummy rounds, but treat this situation as if it were live ammo. Leave the hammer right where it is, in the half-cock or loading position, and leave the loading gate open. Continue to hold the revolver in your left hand by its grip and, keeping your fingers away from the trigger, tilt the revolver so the barrel muzzle is facing upwards (and away from you and anyone else).

Use your right hand to rotate the cylinder slowly, one chamber at a time, stopping as you hear each audible click and allow each cartridge to fall out of the chamber onto the bench. If a cartridge doesn't fall out of the chamber of its own accord, manually operate the ejector by pushing the ejector-rod head (#13) to the rear with your right hand until the cartridge falls out of the chamber.

WORKING THE GREAT WESTERN SINGLE ACTION ARMY CONTINUED

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The backstrap can then be lifted away from the frame. This exposes the action components. When you're sure there are no more cartridges left in the chambers, you can proceed with the disassembly. I like to remove any live cartridges to a secure location before moving on to the next step. 2. To remove the cylinder, leave the hammer resting in the loading or halfcocked position and keep the loading gate open.

Single Action Army cylinders rotate on the base pin (#5), and this must be removed out through the front of the frame before the cylinder can be removed. The base pin is

locked in by a sliding, spring-powered cross-bolt. To remove the base pin, you have to depress this cross bolt, called the base pin screw (#7), and then you can pull the base pin straight out the front of the frame. The cylinder is now loose and can be carefully rolled out to the right (the loading-gate side) of the frame.

This may be done either before or after removing the trigger and bolt parts, although it may be preferable to remove the hammer first. Be sure to take note of which of these very similar screws goes with which part. (Hint: If they get mixed up, the trigger uses a

slightly longer screw than the bolt.) 3. Next, remove the grips and grip straps. If the revolver is equipped with two-piece grips, as most of these are, unscrew and remove the grip screw (#42) from the center of the grip and then lift off both grips.

In some cases, you will find these revolvers equipped with one-piece grips, which are disassembled like this: Unscrew and remove the two back-strap screws (#2) which are located at the top-rear of the back-strap (#1). Unscrew and remove the single screw (#22) from the bottom-front of the back strap. The back strap, along with the one-

WORKING THE GREAT WESTERN SINGLE ACTION ARMY CONTINUED

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Great Western SAA Single-Action Revolver 1 Backstrap 2 Backstrap Screw, Upper (2) 4 Barrel 5 Base Pin 6 Base Pin Bushing 7 Base Pin Lock Screw 8 Base Pin Lock Nut 9 Base Pin Lock Spring 10 Bolt 11 Bolt Screw 12 Cylinder 13 Ejector Rod Head 14 Ejector Rod 15 Ejector Spring 16 Ejector Housing piece grip, can now be removed by pulling them down and toward the rear as a unit. After they're off the frame, the grip itself can be pulled forward and off the back strap.

Regardless of which type of grip the Great Western is equipped with, your next step is to unscrew and remove the mainspring screw (#33) from the lower area of the trigger guard (#44). Then the mainspring (#32) is lifted off. Unscrew and remove the two rear guard screws (#34), which face straight up, and then remove the front trigger-guard screw (#21).

The trigger guard is now loose and will pull down and off to the bottom. 17 Ejector Housing Screw 18 Firing Pin 18a Firing Pin

Spring 18b Firing Pin Cup 18c Firing Pin Nut 20 Frame 21 Trigger Guard Screw, Front 22 Backstrap Screw, Lower 23 Loading Gate 24 Loading Gate Detent 25 Loading Gate Detent Screw 26 Loading Gate Detent Spring 27 Hammer 27a Hammer Cam (not shown) 28 Hammer Roll 4. Disassembling the action begins with unscrewing and removing the sear and bolt-spring screw (#37).

This screw faces straight up and is located inside the frame, just forward of the trigger. The sear and bolt spring (#36) will now fall out the bottom of the frame. Make careful note of the bolt spring's position for correct reassembly later. The hammer screw (#30) can be unscrewed and removed so the hammer can be rotated slightly to the rear, then pulled down and out of the frame.

Note that the hand assembly (#31 and 31a) is connected to the hammer, and will come out of the gun with the 29 Hammer Roll Pin 30 Hammer Screw 31(a) Hand Assembly 32 Mainspring 33 Mainspring

Screw 34 Trigger Guard Screw, Rear (2) 36 Sear and Bolt Spring 37 Sear and Bolt Spring Screw 39 Grip, Left 40 Grip, Right (not shown) 41 Grip Locating Pin 42 Grip Screw 43 Trigger 44 Trigger Guard 45 Trigger Screw hammer.

Once the hammer is out, the hand assembly is removed by simply lifting it out of its pivot hole on the left side of the hammer. Next, unscrew and remove the trigger screw (#45). This is the center screw of the three screws passing through from the left side of the frame. The trigger (#43) will now be loose. Unscrew and remove the front screw of the three screws passing through from the left side of the frame. This is the bolt screw (#11), and it holds the bolt (#10) in place.

The bolt can now be dropped out the bottom of the frame. Be sure to keep the bolt screw with the bolt and the trigger screw

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It can be made quickly and inexpensively by altering a Magna-Tip screwdriver bit. Simply use a carbide cutoff wheel to remove an area from the center, allowing the bit to clear the firing pin and enter the spanner slots. with the trigger while they are out of the gun, since these two screws are easily mistaken for one another. (Hint: the bolt screw is the slightly shorter one.) 5. Now let's disassemble the peripherals. The ejector-tube screw (#17) is unscrewed and removed from the front of the ejector tube (#16).

Now the ejector-tube assembly is pulled to the side by its front to move it slightly away from the barrel. While in this position the entire assembly is drawn forward and off the barrel. The ejector rod (#14), the ejector head (#13), and the ejector-head spring (#15) are removed next by pulling them straight back and out of the ejector tube. Look on the underside of the frame in the right-side frame rail. There you will notice a small headless screw that faces up. This is the loading-gate catch screw (#25).

Unscrew and remove this screw so that its plunger and the gate spring (#26) can be removed out through the screw hole. The loading gate can now be pulled out into

the cylinder opening toward the front of the frame. The firing pin is held captive in the frame by what are basically a hollow bolt (#18b) and nut (#18c). Look inside the frame from the rear and you'll note the two spanner cuts on the nut surrounding the pin.

I've included a drawing (above) of a quick, shop-made spanner tool that uses a Brownells #270-4 Magna-Tip screwdriver bit as its base. I used a rotary tool equipped with a heavy-duty cutoff wheel to shape the cutout that forms the spanner "arms" and to make the clearance cut for the firing pin to the dimensions shown. (This entire operation took me less than five minutes.) Once the tool is made, insert it in the nut and turn it off in a counterclockwise direction.

This frees the firing pin (#18) and its spring (#18a) for removal. The firing-pin cup (#18b) is now free and can be pushed forward and out of the frame. Note how the flat area on the firing-pin cup's face fits the frame to be sure you align it correctly during later reassembly. That completes the disassembly of the Great Western revolver. To reassemble, simply reverse the order of the process outlined above. ■

PEOPLE & COMPANIES

Reader Forum

BY AMERICAN GUNSMITH EDITORS NOVEMBER 2009

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Rechambering the Stalker A customer brought me a Browning Stalker in .300 Win Mag. He wants it trued and rebarreled, and also wants to change the chambering. Will he have to stay with the .300 H&H family of belted mag cartridges or will his bolt accommodate any other chambering? (He wants .240 Weatherby, which has a .060-inch-smaller casehead diameter.) How specific are bolt faces? I've opened them for larger cartridges, but don't know what will happen with smaller.

Will this bolt accept a non-belted cartridge of the same casehead diameter? Thanks. Terry Smotherman Due to the rather significant casehead disparity, the .240 Weatherby will probably not extract despite the fact that the existing bolt is able to accept a non-belted cartridge. The advice offered to us by a Browning engineer is to buy a bolt head for a standard cartridge with the same casehead diameter as the .240. Non-Extracting Brownings I need some advice regarding a problem with my three Browning Hi-Powers.

I have removed the magazine disconnecter from all three, but have retained the parts for reinstallation should I ever sell any of them. The first pistol is the same as it left the factory except for this modification.

The second pistol has a set of Pachmayr grips and a Cylinder & Slide extended safety. Both these pistols have pivoted extractors. The third pistol, an old FN with a 1911-style extractor, has been extensively modified.

It has Pachmayr grips, Bomar sights, a Browning factory spur hammer (1972 vintage), a new Browning factory sear, and a Cylinder & Slide extended safety. My problem is that, after firing the last round in the magazine, all of these pistols leave the empty in the ejection port sitting atop the magazine. This does not cause jams since the empty drops out of the pistol when the magazine is released, but it seems "inelegant" in the extreme.

This does not seem to be ammunition related, and it happens with a variety of factory and aftermarket magazines. Any ideas what might be causing this or how to fix it? Thanks for your help. John Collins We wish, as you probably do, that it was only one of your Brownings that was acting up. Since all three have been altered, and since we can't examine those alterations or refer you to someone specializing in the Hi-Power for a checkup, we can only make an educated guess as to the source of the problem.

READER FORUM CONTINUED

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We suspect that the recoil springs in the pistols may be too heavy and are interfering with lockup of the slide stop. So try some lighter recoil springs. Also, we suggest you install Wolff Extra Power springs in your factory magazines to ensure the follower is rising high enough to activate the slide stop. Old Stevens Firing Pin I need to replace the “firing pin” on an old Stevens 15-A rimfire rifle and need some instructions on disassembly and reassembly. I can’t find anything in back copies of American Gunsmith.

Am I just overlooking the subject? If you have done something on this gun, could you tell me what issue to look in? Or if not, can you let me know where else I should look? Jimmy Thompson Bucklin, Missouri You may have a pretty rare rifle—the Stevens Maynard Jr. Despite the fact that its action is considered flimsy, it’s a rifle without which no serious Stevens collection is complete.

No article has been published here on it, but there is a book titled Single Shot Rifles and Actions which has a good sectional drawing and enough information to help you with disassembly. The book is available from De Haas Barrels in Ridgeway, Missouri. If you have enough of the old firing pin to serve as a pattern, you can turn anew one on a lathe or have it done by a local machine shop.

Lacking the old pin, send an email to the editor of the Single Shot Rifle Journal (Journal and ask him about a source for a replacement. Dry-Firing the Glock Trigger I recently purchased a trigger-reset kit for my Glock 35 from the Glock store.com. It allows you to practice pulling the trigger and return to the reset point without having to re-rack the slide. I wanted to do some dry-fire practicing in my home. After installing it, I was not too impressed; it’s not a true reset.

So I got to thinking: Is there away to take an old trigger assembly from my Glock and modify it to reset and get more of a real actiontype feel from dry-firing? Ralph Oliver In speaking with Glock regarding your query, we discovered that the reset kit is not a factory-made product. And we were not surprised when we were told that modifying a Glock factory trigger voided the warranty, while placing full responsibility upon the individual doing the work.

If you want to dry fire your pistol frequently, use a snap cap of the proper caliber. This will avoid the risk of punching a hole in the breechface. Enlarged Marlin Chamber? I have a Marlin 1894 in .44 Magnum. I didn’t notice a problem while shooting this rifle, but in preparing the cases for reloading I discovered something I wanted to ask about.

FROM THE ORIGINAL PAGE

Shooting new off-the-shelf Winchester 240grain flat-point jacketed cartridges, I found the primer is formed back into the firing pin hole so it is a depression with a ridge ring around it. I thought that was a sign of high overpressure. The pin depression is about half that of my Ruger Blackhawk with the same ammo. One rifle-fired cartridge had split down the side, and another split about one third of its length in the middle, and all of them have a mark resembling a crack forming down their

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(continued from previous page) side. All of the fired casings also show a bulge about 3/16-inch ahead of the rim, as though the chamber does not fully support the cartridge. Do you think I have a damaged rifle that needs anew barrel or serious repair work? Would a chamber casting tell me anything useful? I've never used Cerrosafe, but I've read about using it. Thank you for any suggestions or help you may be able to provide.

Steven Douglas address You are correct about primer set-back being an indicator of excessive pressure. The splitting, cracking, and bulging can appear with any pressure and indicate an enlarged chamber. We suggest you make a chamber cast with Cerrosafe (Brownells) and measure it against SAAMI chamber standards for the .44 Magnum. Instructions come with the product and are very easy to follow.

Then get ready to call Marlin to inquire about anew barrel, and don't forget to ask the turnaround time they'll need to install it. IJ Pistol Problems I have an Iver Johnson Model TP22 pistol with several problems. First, it occasionally "stove pipes." And second, at the top of the magazine, it fails to extract the fired casing. When it does so, it doesn't feed a second round, although when cycled by hand, it does.

The gun cocks and fires after a failure but, of course, the pin is falling on an already-fired cartridge. It appears that the cartridges at the top of the magazine are lying flat rather than at an upward-tilted angle until four of the seven cartridges are removed from the magazine. Then the pistol functions as it should until the magazine is empty. Any ideas? I intend to disassemble the gun and give it a thorough cleaning before ordering (or attempting to order) any parts (if they are available).

Any idea where parts and/or magazines for this weapon can be obtained? I know that Iver Johnson has been a non-entity for some years. Thank you. Don D. Strickland To say you have "problems" with this pistol may be something of an understatement. This pistol model, a PPK look-alike, went out of production in 1989. If you're using high-velocity ammunition, the gun may not have been designed to cope with it.

This can result in the action functioning too rapidly or "short cycling" and frequently trapping a spent shell between the bolt and breech faces before it can exit the ejection port. This condition can usually be resolved by or post a letter to American Gunsmith Reader Forum, Merritt Island, FL 32954. switching to standard-velocity ammunition. As for the apparent condition of the magazine, it sounds like it's a wreck from lips downward, and the spring has weakened too much to be serviceable.

We doubt you'll find a magazine from the usual sources, Gun Parts and Jack First, for example. Brownells publishes a parts-source list for out-of-production guns that's available at no charge. You might also try Firearms International, Inc. High Standard Sight Removal Please help. A customer wants me to scope a High Standard Supermatic Trophy with the bridge rear sight. What's the secret of getting the rear sight off? Thanks in advance.

James Parker Hartford, Wisconsin If you have the schematic, you have the secret. On each side near the bottom of each slide support there are one large and two small holes. The small holes are for pins that engage matching holes in the frame. These pins are not to be driven inward until and unless you establish they can be drifted inward without damage to internal parts. This is determined by removing the slide.

If the latter will not pass between the supporting legs of the rear sight, you have to tackle the two-piece pin that fits the large hole. The pin's head on the left side of the sight unscrews to free the pin on the left side. On occasion, the left pin can be pulled from the right because someone forgot to thread both pin's shafts. It depends on where the pistol was made. We've been told that this was not uncommon with pistols made in the Hartford facility.

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