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AND THE AMERICAN GUNSMITH ARCHIVE

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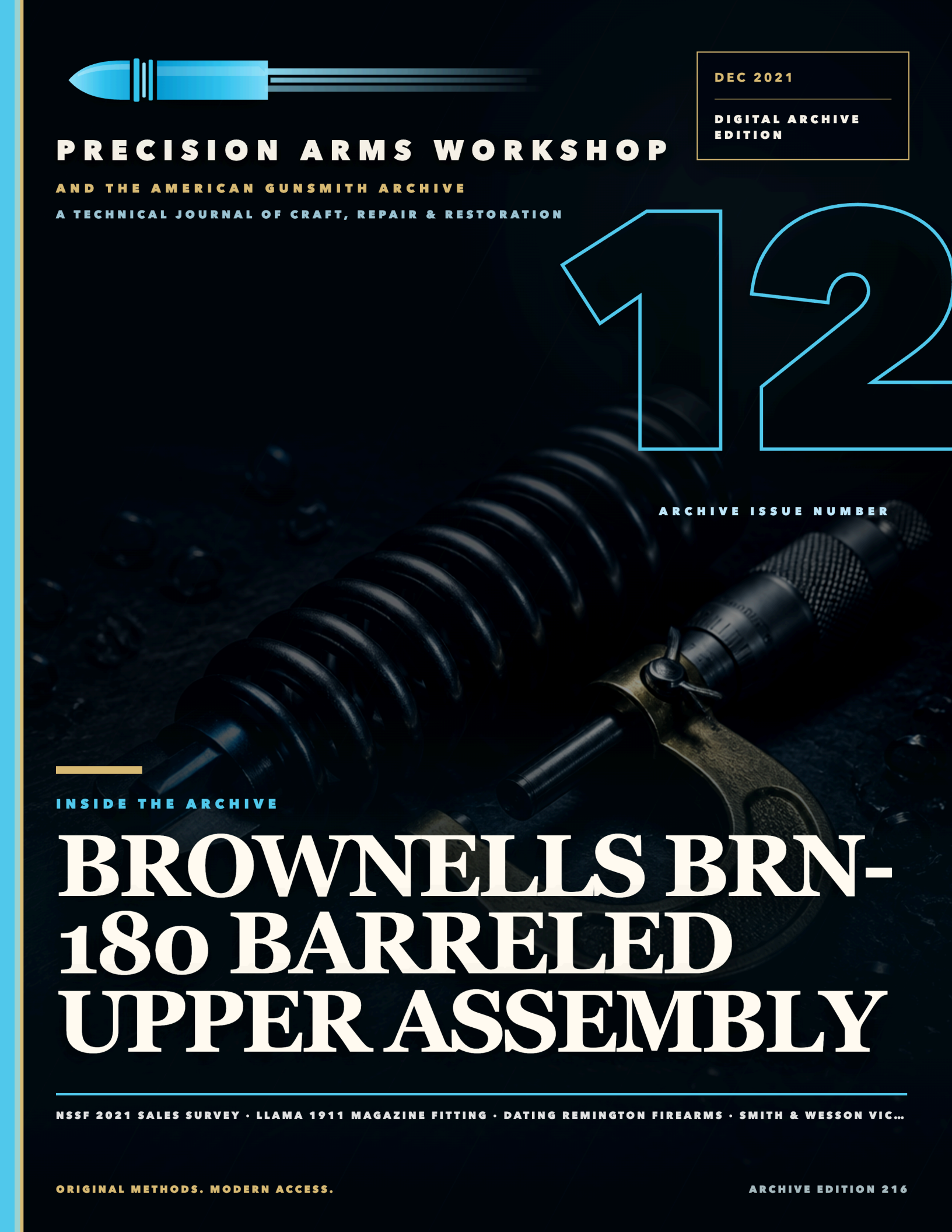

INSIDE THE ARCHIVE

BROWNELLS BRN-180 BARRELED UPPER ASSEMBLY

NSSF 2021 SALES SURVEY · LLAMA 1911 MAGAZINE FITTING · DATING REMINGTON FIREARMS · SMITH & WESSON VIC…

DIGITAL ARCHIVE EDITION

Preserved for the bench.

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A complete guide to the searchable editorial work preserved from December 2021.

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NSSF 2021 Sales Survey

BY AMERICAN GUNSMITH EDITORS DECEMBER 2021 ORIGINAL PP. 2

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Firearm industry trade association National Shooting Sports Foundation conducted a survey of firearm retailers and found a huge number of Americans became first-time gun owners in 2021. Based on their survey of retail data, over 3.2 Americans purchased a firearm for the first time during the first half of 2021. NSSF conducted the survey to learn the buying habits and factors of recent firearm purchasers during the first six months of 2021.

Retailers that responded indicated that 33.2 percent of their customers, or 3,247,351 of gun buyers, purchased a firearm for the first time, based on June's total of nearly 9.8 million background checks for a gun sale. "This survey shows that there is a continuing demand signal for firearms from the American public," said Joe Bartozzi, NSSF President and CEO. "We witnessed each month background check figures associated with a gun sale that are second only to those we saw in last year's record-breaking totals.

These survey results show not only is there a strong and healthy appetite from first-time gun buyers but that there is still room to grow.

We are encouraged by the sustained interest in lawful and responsible gun ownership as well as by the manufacturing base which has been challenged to meet this remarkable demand." Survey results showed that in the first six months of 2021 over 90 percent of retailers reported an increase of African American men purchasing firearms with nearly 87 percent of retailers reporting an increase of African American women purchasing firearms.

Nearly 84 percent of retailers reported an increase of Hispanic American men purchasing firearms with over 87 percent reporting an increase of Hispanic American women purchasing firearms. Similarly, over 76.5 percent of retailers reported an increase of Asian American men purchasing firearms with over 82 percent of them showing an increase of Asian American women purchasing firearms.

Survey results show 44.5 percent of the first-time gun buyers in 2021 were under 40. 45.7 percent of these new gun owners asked for information on safety training and 23.6 percent signed up for some form of training with their new firearm. 22.1 percent of customers purchased a second firearm since their initial purchase.

PEOPLE & COMPANIES

Brownells BRN-180 Barreled Upper Assembly

Brownells updates the Arma Lite AR-180 design and its historic short stroke piston with a product-improved upper assembly that is compatible with standard AR-15 lowers.

BY BRIAN R. SMITH DECEMBER 2021 ORIGINAL PP. 3-8

Top: The original ArmaLite AR-180 was lightweight, being fabricated from welded stampings, incorporating short-stroke external piston actuation, and a folding stock made possible by a bolt carrier riding on two guide rods within the upper receiver. A proprietary version of the AR-15 magazine was used. Above: In the early 2000s the ArmaLite AR-180B was introduced by Eagle Arms, the company that purchased the rights to the ArmaLite name. This version kept the short-stroke external piston and bolt carrier of the original AR-180 but featured a polymer lower receiver and a non-folding stock. The AR-180B uses conventional AR-15 magazines.

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Top: The original ArmaLite AR-180 was lightweight, being fabricated from welded stampings, incorporating short-stroke external piston actuation, and a folding stock made possible by a bolt carrier riding on two guide rods within the upper receiver. A proprietary version of the AR-15 magazine was used. Above: In the early 2000s the ArmaLite AR-180B was introduced by Eagle Arms, the company that purchased the rights to the ArmaLite name. This version kept the short-stroke external piston and bolt carrier of the original AR-180 but featured a polymer lower receiver and a non-folding stock. The AR-180B uses conventional AR-15 magazines.

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Original caption: Top: The original Arma Lite AR-180 was lightweight, being fabricated from welded stampings, incorporating short-stroke external piston actuation, and a folding stock made possible by a bolt carrier riding on two guide rods within the upper receiver.

Synonymous with Colt, the AR- 15/M16 was originally developed by Eugene Stoner at the Arma Lite division of Fairchild Industries. Arma Lite's facility was located in Costa Mesa, California and it licensed the AR-15/M16 design to Colt which won the original US government contract for production of the M16, notable for its widespread use of aluminum alloy construction and incorporating the patented internal piston gas operated bolt actuation system. That story has been told ad infinitum over the past 50+ years.

But in the early 1960s, with the licensing of the AR- 15/M16, the question for Arma Lite was, "What's next?" Led by designer Art Miller, a team at Arma Lite consisting of Eugene Stoner, Charles Dorchester, and George Sullivan then developed the AR-18, a next generation lower-cost select-fire rifle fabricated from stamped and welded steel and which employed a four-piece short stroke external piston-driven bolt actuation system very similar to that of the proven Soviet SVT rifle

A proprietary version of the AR-15 magazine was used. This version kept the short-stroke external piston and bolt carrier of the original AR-180 but featured a polymer lower receiver and a non-folding stock. The AR-180B uses conventional AR-15 magazines. of WWII. Besides the stamped and welded construction and the gas piston actuation, the AR-18 was notable due to its bolt carrier being supported on two guide rods and returned to battery with are- Photo courtesy Brownells. coil spring on each guide rod.

This mechanism was contained within the upper receiver, allowing for a folding butt stock which was another primary feature of the weapon. The lightweight AR-18's semi-auto version, the AR-180, was introduced to the civilian shooting market in 1969

BROWNELLS BRN-180 BARRELED UPPER ASSEMBLY CONTINUED ORIGINAL PAGE 4

Far left: The right side of the BRN-180 upper features a polymer dust cover to keep debris from entering the action through the operating handle slot. The 17 Design and Manufacturing 17DM-180 lower receiver incorporates a "dam" in front of the magazine release and a thoughtful recess in front of the trigger for resting one's finger. Above right: The left side of the 17DM-180 receiver has an AR-15-style magazine catch and bolt carrier latch, as well as a recess for left-hand shooters' trigger fingers.

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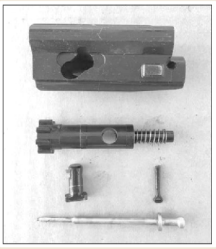

Below left: The circle indicates one of several gas vents from the gas cylinder. Because of the open area of the M-Lok hand guard and the potential for burns, it is not recommended to place one's weak hand in this area. Below right: The BRN-180's bolt carrier is shown disassembled. The bolt is similar to that of the AR-15 but has no gas rings and features a return spring on the tail. The bolt cam pin is different from that used in the AR-15, but the firing pin is identical.

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to lukewarm reception because the AR-15 had ahead start in the market and was seen on the evening news nearly every night.

Over the years, the AR-180 itself eventually developed a cult following, and design elements of the AR- 18/AR-180 were incorporated into a few self-loading military rifles around the world, including the British SA-80 and the Singaporean SAR-80 and SR-88, the Bushmaster / Remington / Magpul ACR, Because of the open area of the M-Lok hand guard and the potential for burns, it is not recommended to place one's weak hand in this area.

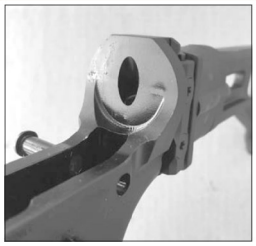
The bolt is similar to that of the AR-15 but has no gas rings and features a return spring on the tail. The bolt cam pin is different from that used in the AR-15, but the firing pin is identical. and others.

The AR-180's longerterm commercial success was also hampered by a relatively non-competitive price compared to the Colt AR-15 along with the AR-180's use of a proprietary version of the AR- 15/M16 magazine, with a narrow magazine catch notch on the right side as opposed to the AR-15's wide rectangular mag catch window on the left side.

Production of the AR-180 was outsourced by Arma Lite to Howa Far The 17 Design and Manufacturing 17DM-180 lower receiver incorporates a "dam" in front of the magazine release and a thoughtful recess in front of the trigger for resting one's finger. in Japan and soon after to Sterling Armament in the UK after anti-war protests in Japan caused political pressure on Howa. Sales were sluggish, with some small countries purchasing limited quantities of the weapon. Reception by law enforcement remained weak.

It's been claimed that the end user most associated with the AR- 180 is the Irish Republican Army, which obtained significant quantities and used them during the period known as "The Troubles" from the late 1960s to the late 1990s. Northern Ireland was and is apart of Great Britain (officially known as The United Kingdom of Great

BROWNELLS BRN-180 BARRELED UPPER ASSEMBLY CONTINUED ORIGINAL PAGE 5



Far left: The disassembled bolt carrier is shown fitted to the pair of guide rods which support both the carrier and the recoil springs. The pointed tips of the guide rods pass through twin holes in the front of the BRN-180 upper receiver. This design traces back to the original AR-180 of the 1960s. Above right: The 17DM-180 lower receiver used in this build has no threaded hole for a buffer tube because the BRN-180 doesn't use one. The boss at the rear of the 17DM-180 lower is mostly solid with a short length of M1913 rail machined into its rear side for stock or hinged adapter mounting.

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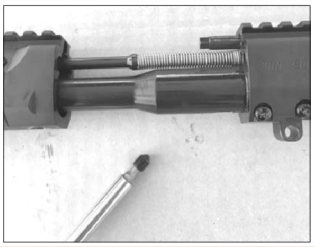

Below left: The BRN-180 Gen 2 hand guard is mounted to an adapter block using eight screws, and the adapter block is fixed to the chamber area of the barrel by a single cup-point setscrew. Below right: BRN-180 upper with M-Lok hand guard removed, showing the short-stroke piston mechanism atop the barrel.

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Below left: The BRN-180 Gen 2 hand guard is mounted to an adapter block using eight screws, and the adapter block is fixed to the chamber area of the barrel by a single cup-point setscrew. Below right: BRN-180 upper with M-Lok hand guard removed, showing the short-stroke piston mechanism atop the barrel.

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Britain and Northern Ireland), and the civil war there pitted Catholic against Protestant, and everyone against the British troops who were there to "keep the peace," but were largely used for target and IED bombing practice by the IRA. Not a good time. Fairchild/Arma Lite eventually closed up shop. In 1996 the rights to the name were purchased by Eagle Arms, a firearms component manufacturing enterprise that changed their name to Arma Lite and introduced a slightly upgraded version known as the AR-180B.

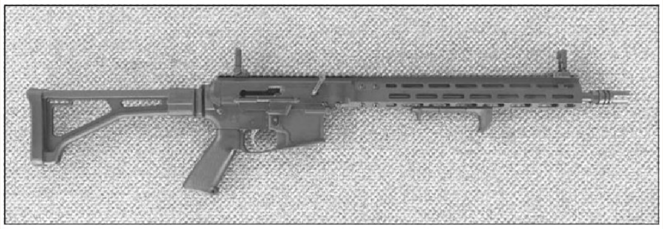
The most significant change was adoption of a polymer lower receiver and minor changes to the upper assembly. There was no operating handle slot cover, and an exterior bolt catch "button" or "lever" was omitted. The bolt carrier would latch to the rear on an empty magazine, and with a full magazine inserted the bolt and carrier would advance forward following a slight tug to the rear on the operating handle, much like "sling shotting" an open pistol slide.

The AR-180B barrel had an integrally-machined compensator at the business end to meet the requirements of the then-waning 1994-2004 Assault Weapons Ban. The AR-180B was introduced at serial number 200000 at a surprisingly low price point of $499 in the early 2000s. Many retailers charged MSRP or even added a premium because at the time the AWB drove high demand.

Arma Lite quickly increased their MSRP to match market pricing, but two short years later the AWB ended and the market flooded Far The pointed tips of the guide rods pass through twin holes in the front of the BRN-180 upper receiver. This design traces back to the original AR-180 of the 1960s.

The boss at the rear of the 17DM-180 lower is mostly solid with a short length of M1913 rail machined into its rear side for stock or hinged adapter mounting. with semi-auto rifles, including the first generation of the Kel Tec SU-16, another polymer-framed 223 Remington-chambered carbine that was a couple-few hundred dollars lower than the AR-180B. Production of the AR-180B ended sometime around 2007-2009.

They still sell on the secondary market for $800 and up, lately more "up" since the Covid19 and 2020 election events. But enough history! The AR-180 design refuses to ride off into the sunset. In 2019, Brownells partnered with Primary Weapons Systems and Foxtrot Mike Products to introduce the BRN-180 upper assembly, a further-improved take on the original



Far left: BRN-180 Gen 2 gas piston, showing the slot for gas selection in the horizontal or "unsuppressed" mode. Rotating the gas piston 90 degrees to vertical selects the "suppressed" position. The BRN-180 Gen 1 featured two different gas cylinders, one each for suppressed

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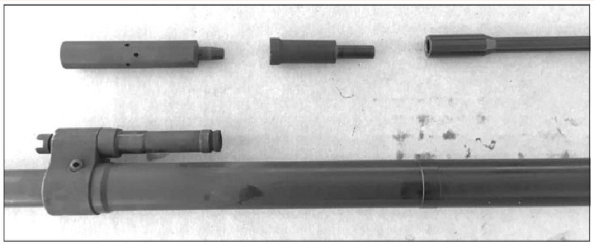

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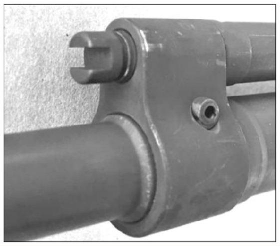

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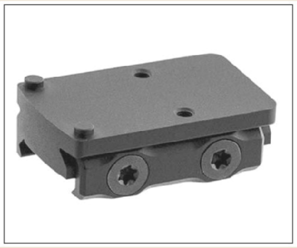

and unsuppressed operation. Left: The UTG Slim RTR optic mount was selected as the stock adapter for mounting the Lage composite stock to the M1913 rail section at the rear of the 17DM-180 receiver. All it took was layout, drilling, and tapping of two 10-32 holes, 5/8" apart.

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design and that of the AR-180B. Recently, Brownells released the BRN- 180 upper in a Gen 2 configuration offered in 300 Blackout or 223 Wylde, in 10" pistol and 16" carbine lengths, the latter of which is the version that this article deals with.

A customer recently brought in a 16" Gen 2 BRN-180 upper chambered in 223 Wylde, a Lage Manufacturing glass-reinforced polymer stock reminiscent of the metal folding stocks on a Para FAL or Galil, and ordered a 17 Design and Manufacturing 17DM-180 lower receiver with a short M1913 rail on the rear for mounting the stock and adapter. Some assembly was required, and that's where I entered the picture.

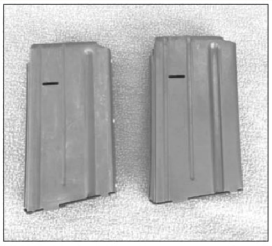
This customer is one of the most intelligent people I know, has an eidetic memory, and can perform complex arithmetical operations in his head, and quickly. But he is also intelligent in realizing his limitations, because hands-on practical skills were not issued to him at the factory. It's not much of an exaggeration to say that he wouldn't know which end of a Crescent wrench goes on the nut.

On the other hand, I am insanely jealous of his ability to multiply three random four-digit numbers in seconds using only the brains he was born with. The customer read this and approves this message.

The BRN-180 Gen 2 upper receiver assembly features an anod- The total package weighs 6.8 pounds. ized alloy upper receiver and freefloating Midwest Industries M-Lok hand guard that is mounted by eight screws to an anodized alloy adapter block which in turn slides on the mating cylindrical chamber section of the barrel. The hand guard is held fast to the receiver by a single cone-point setscrew with a 5/16" hex recess that engages a slanted surface in the underside of the barrel.

This makes for exceptionally quick removal of the handguard for access to the gas piston system beneath. The fit between the hand guard mounting block and its mating surface on the barrel is a close one, and separation required a few taps with a cloth-covered urethane- Far Rotating the gas piston 90 degrees to vertical selects the "suppressed" position. The BRN-180 Gen 1 featured two different gas cylinders, one each for suppressed and unsuppressed operation.

All it took was layout, drilling, and tapping of two 10-32 holes, 5/8" apart.



Left: The 17DM-180 lower receiver is machine to accept the ubiquitous AR-15/STANAG magazine, unlike the two original AR-180 magazines with their narrow mag catch slot on the right side of the magazine as shown.

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faced hammer. The first generation Brownells BRN-180 employed a Ushaped key for attachment of the free-floating hand guard, which was more involved for removal of hand guard, and required considerably more machining. The Gen 2 setup is a definite improvement. The bolt is enclosed in a short rectangular carrier block that rides on two guide rods each equipped with a recoil spring.

The bolt is very similar to that of an AR-15, but is of slightly different configuration in the body and does not incorporate gas seal rings because it does not need them. The firing pin appears to be dimensionally identical to that of an AR-15. The bolt carrier guide rods are molded into a polymer block that forms the rear cover of the BRN-180 receiver. The recoil guide rod/spring assembly is a friction fit in the end of the receiver and requires a good, firm grasp and tug for removal, but no tools are required.

The bolt carrier and bolt are pulled to the rear by a crank-shaped operating handle that is reminiscent of that on a child's jack-in the-box toy. It is said to have been specifically designed with the two 90 degree bends in the original AR- 18/AR-180 for left hand access for charging or clearing the weapon as well as acting as a cartridge case deflector to prevent ejected empties from impacting on the right side of the receiver, and to keep empties out of the face of a left-hand shooter.

It may look unconventional, but it works well for both intended purposes. Still, for some reason "Pop Goes the Weasel" passes through my mind when I look at the operating handle or grasp it to manipulate the bolt carrier.

Regarding disassembly, once the recoil guide rod/spring assembly is removed, the bolt carrier assembly is removed by first pushing the operating rod towards the rear until the operating handle reaches the end of its slot in the receiver, then withdrawing the handle from the bolt carrier, and allowing the bolt carrier to fall out the rear of the receiver in a controlled manner. Once the operating bits are out from inside the upper receiver, return focus to the front of the BRN- 180 Gen 2 assembly.

After sliding the hand guard off the front of the barreled upper as previously described, the gas system is readily accessed and consists of four main parts, from front to rear: Mounted to the barrel is the gas block with integral piston, then comes the cuplike cylinder with vent holes, the operating rod link which couples the piston to the operating rod and facilitates disassembly, and the operating rod/operating rod spring assembly.

To disassemble the gas system, grasp the operating rod at its front bell-shaped end and pull the operating rod to the rear, separating the operating rod link from the cylinder's tail. Push the operating rod to one side or the other so that the operating rod link clears the piston's tail, withdraw the operating rod link off the front of the operating rod, and then pull the piston cup from the gas block. Pull the operating rod and its return spring forward from its the hole in the front of the upper receiver.

At the front of the gas block is what appears to be a slotted screw head which is a two-position gas selector primarily intended for firing the BRN-180 upper assembly either suppressed or unsuppressed mode. The slot in the gas selector is positioned horizontally for unsuppressed operation, and rotated vertically when a suppressor is fitted. The selector is actually the gas piston, and can be removed by pushing the slotted screw end toward the rear of the weapon.

There's a tiny alignment tab and slot on the selector/piston body and gas block to ensure correct assembly. That's it for disassembly, and reassembly is of course the opposite procedure. The dual recoil springs of the BRN- 180 do away with the need for a buffer tube, and the 17DM-180 receiver has a solid rear boss into which a short M1913 rail is machined for accepting a stock adapter, either folding or fixed.

The original Arma Lite AR-180 featured a folding stock, whereas the Arma Lite AR-180B had a fixed solid polymer stock. Aftermarket sources offer anodized aluminum folding and fixed stock adapters for AR-180 type rifles and others using compact spring bolt return systems. The customer elected to go with a fixed Lage Manufacturing skeleton buttstock made from glass-reinforced polymer to save weight.

The 8-1/2" pull of the stock was going to be too short without the length of an extended folding adapter, and I recommended purchase of a Lage polymer stock spacer. The customer obtained that, but online sources for a fixed stock adapter for BRN-180 style lower receivers had dried up in the spring of 2021, so the suggestion was made to go with an M1913 optic adapter and just drill and tap two 10-32 machine screw holes on the proper 5/8" centerline.

Such optic mounts are available all over Amazon and e Bay, and a search turned up a UTG Super Slim RMR mount that looked fairly symmetrical and had

Top: The BRN-180 upper assembly and 17DM-180 lower receiver breaks open for field stripping just like the AR-15 by pushing out the rear receiver captive pin. The guide rod/recoil spring assembly is first removed from the upper, then the bolt carrier is slid to the rear so that the operating handle can be withdrawn from the carrier to the right side. It is then removed out of the rear of the upper receiver.

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Original caption: Top: The BRN-180 upper assembly and 17DM-180 lower receiver breaks open for field stripping just like the AR-15 by pushing out the rear receiver captive pin. The guide rod/recoil spring assembly is first removed from the upper, then the bolt carrier is slid to the rear so that the operating handle can be withdrawn from the carrier to the right side. It is then removed out of the rear of the upper receiver. At top, hand guard and hand guard setscrew.

Second row, operating handle, operating rod, operating rod link, gas cylinder, gas piston, and retaining clip. Third row, barreled upper receiver assembly. Fourth row, firing pin, bolt key, and firing pin retaining pin. Fifth row, bolt carrier guide rod and recoil spring assembly, bolt carrier, and bolt. Photo courtesy Brownells. sufficient thickness for tapping the two stock mount screw holes 0.625" on centerlines.

The assembled rifle and stock/spacer/adapter ended up with a comfortable and quick-toshoulder pull length of exactly 13 inches. During range testing after mating the BRN-180 upper to the assembled DM17-180 lower, 55 grain Federal XM-193 ammunition was fired with the gas selector in unsuppressed mode and there were no failures to feed, extract, or eject in 180 rounds. Some might say that was an expensive test considering Spring 2021 ammo prices, but that XM193 was in my inventory for 20+ years.

Besides, I was having fun. Cycling was robust if not actually forceful. Three-shot accuracy from a sandbag rest was a surprising and very respectable quarter-covering 0.7" at 75 yards. I also tried the suppressed gas selector position but without a suppressor mounted, and the bolt short cycled; empty cases ejected fine, but rearward bolt travel was not sufficient to pick up and feed the next round in the magazine.

The customer wanted a hand stop fitted to the BRN-180 assembly, but it could not be mounted as far forward as possible due to the double-row of gas vent holes drilled circumferentially in the gas cylinder. I didn't want to risk burns by holding the hand guard in the area of the gas vent holes, and I admit that I can't say if risk of burn injury is real or not.

But discretion being the better part of valor, a Magpul M-Lok hand stop kit was installed on the bottom face of the hand guard just behind the gas vent area of the upper. Another point about the gas vent ports: It doesn't take long for the alloy hand guard to warm up. At the risk of being taken for an operator operating operationally, it is recommended that the weak hand wears a glove when one shoots a BRN-180 equipped rifle for more than a couple-few 30 round magazines.

One criticism of Brownells—the instruction sheet packed with the BRN-180 had the appearance of being the product of a photocopy of a photocopy of a photocopy about 50 trillion times; it was practically unreadable. This is a little surprising in this litigious day and age. One would think that Brownells and its partners would want the instructions as clear and legible as possible. All together, the BRN-180 with stock and lower receiver tipped the scale at exactly 6.8 pounds without a magazine fitted.

That's remarkable for a piston-operated 223/5.56 rifle with the benefit of being an updated proven 50+ year old design. The assembled rifle has a perfect balance point at just in front of the magazine well with no magazine installed. The customer is extremely pleased with the outcome, and reports that he's enjoying depleting his own decadesold 223/5.56 ammo reserve.

This particular weapon as-assembled just works, and as a former owner of both a Sterling Armament-built AR- 180 and a Arma Lite AR-180B, I'm contemplating ordering a BRN-180 upper for a build of my own. AG

PISTOLS

Llama 1911 Magazine Fitting

Working with and fitting aftermarket magazines for the Spanish Llama-Gabilondo y Cia SA 1911 1XA pistol.

BY MARK R. HOLLENSEN DECEMBER 2021 ORIGINAL PP. 9-11

With the number of old and new semi-automatic handguns manufactured and/or on the market, along with increased sales continuing to climb, you'll without a doubt get pistols in with aftermarket magazines that just don't fit right or work properly. This is especially true of pistols that were made many years ago and no longer have factory magazines available to purchase when desired or needed. In many cases, aftermarket magazines will simply drop right in and work right out of the package.

But that is not true in all instances. And sometimes our customers just want that old pistol working again so they can take it out for a spin or for self-protection. I recently had a Llama 1911 1XA semi-automatic pistol in 45 ACP come in for just that. Seems the customer had one original magazine and it no longer worked reliably or efficiently. This often occurs when the owner fills the magazine and then the pistol sits for a number of years.

Doing this without rotating magazines every so often weakens the magazine spring to the point that it will take a hard set. So, after doing some online research, my customer found aftermarket magazines made specifically for his make and model pistol. A no brainer, right? He ordered in three new magazines and headed out to the local range with them to give the gun a whirl. However, when he tried to seat the filled magazines, none of them would latch into place.

He removed the ammo and tried each one again and had the same results. The magazines would not lock into place—at all. Brand new magazines don't work? Really? It happens. This issue really angered him and he almost threw all three magazines in the trash barrel. But, he thought better of it and brought the pistol, the original magazine, and the new aftermarket magazines to me to see if something could be done.

The magazines were not a cheap aftermarket, either; they were all steel, with a steel follower and solid aluminum floorplate. Once I had the pistol and offending magazines, I began by researching as to whether or not he had purchased the correct ones for his make and model pistol, as this can sometimes be the case. But he had ordered the correct units in. The packaging even listed the make and model they were made to fit.

I began by trying to insert one of the magazines into the magazine well and it did the same exact thing for me. It would not fully seat and lock into place when inserted. I noted that there was a small gap between the floorplate and the base of the receiver when pushing the magazine all the way in until it stopped. So knowing this, it appeared that some fitting was going to be required. I then inspected the other two magazines and found the exact same issue.

Although the following instructions cover fitting aftermarket magazines for this par- Three were purchased and all three required fitting. ticular make and model pistol, the same process can apply to other pistols with like issues. You just want to begin slowly and understand exactly what is not fitting or working properly as you begin. In other words, take some time to see what prevents the magazine(s) from locking into place. To start, I removed the slide assembly and then tried to seat them again.

They still would not lock into place. I removed the grip panels so I could see how much room I had between the floorplate and frame, and to ascertain if the floorplate aligned properly with the base of the receiver. In all three cases, the floorplate

was at an angle to the base of the receiver with the front of the floorplate "foot" closer to the frame than the rear. Next, I disassembled a magazine and inserted the gutted body with the floor plate removed into the magazine well. The magazine still would not latch into place. Looking inside of the frame I could see that the magazine, when pressed into place fully, would not go up far enough for the magazine release to lock into the magazine release notch in the magazine body.

I began by filing the notch in the magazine body, removing material from the notch until the magazine could finally be seated and locked into place. I then disassembled the other two magazines and performed the same task on them. Once all three would seat fully, I reinstalled the floorplate only (not the spring or follower) and then tried to seat the magazines again. With the floorplate the magazines would not lock into place.

Noting this, and the fact that the floorplate had ample material on it that could be relieved, I opted to use the belt sander to remove that material from the top of the floorplate. I recommend that you use a square block of wood and that you screw the floorplate upside down onto that piece of wood to secure it before heading to the sander, or you may be looking for a ricocheted floorplate in your shop!

With it secured to the wooden block, begin removing material from the floorplate top, keeping in mind the angle that you need to remove from it so that the floorplate will be in alignment (parallel) or the same angle as the bottom of the receiver when replaced onto the magazine body and inserted into the magazine well. Remove some material and then replace the floorplate back onto the body and test fit it. Keep doing this until you can seat and lock the magazine into place in the frame.

Then do the same to the remaining magazine floor plates so that they all seat into place. Take care not to remove too much material from the floorplate as the grooves that secure it to the base of the magazine needs to be beefy enough to hold it in place. At this point, it is best to reassemble the magazines fully and try them again. If they all lock into place correctly, reinstall the slide assembly and try them again.

In this case, all three magazines would no longer lock into place with the slide and barrel assembly reinstalled. And, when pulling the slide fully rearward, locking it open, the slide wouldn't release with the slide stop/ catch release.

Knowing that each The customer had verified with the magazine company that the magazines were the correct units to fit his pistol. fully assembled magazine would lock into place without the slide assembly installed, I went back to the notch in the magazine body and filed that area some more and disassembling the magazine fully. This is a methodical process that is necessary to avoid removing too much material off of any one spot on the magazine.

File the notch, re-test, and keep doing that until the fully assembled magazine can be inserted and locked into the fully assembled pistol. At that point, you have a fitted magazine. And, you will more than likely find that the slide will lock open like it should and that the slide catch functions properly, allowing release of the slide. If not, keep working each magazine until they work properly.

Since these magazines had steel bodies, I cold blued the notch where I had filed it (after cleaning it up with emery cloth) and then I polished the aluminum floor plates where they had been ground with the belt sander, coating them with Birchwood Casey Aluminum Black to restore them to their original black color. Now that the magazines fit in the pistol, test feed the magazine loaded fully with dummy ammo to make sure it feeds properly.

Work the slide on a full magazine, one at a time, and if you can slowly open and close the slide (not pull and release it rapidly) and all rounds feed, chamber, extract, and eject smoothly, you are pretty much there. If it hangs up at all, manipulate the feed lips until you get a nice, smooth feeding slide when moving the slide backward and forward. In most cases, being able to slowly work the slide and feed each round smoothly at the bench means it will feed just fine at the range.

YOU'LL WANT TO BE SURE, THOUGH, SO A RANGE TRIP IS DEFINITELY

The top side of the floorplate was reduced and reshaped with a belt sander to allow the magazine to seat into the magazine well better. The finished product produced an even gap between the top of the floorplate and the base of the frame. The notch on the new magazines was too low and therefore would not allow the magazine to be fully seated upon insertion. This area was relieved first. in order to ensure that you have a functioning pistol again. In many cases, aftermarket magazines work right out of the packaging.

Owning an older, out of production pistol can come with some challenges, such as a lack of factory parts and factory-made magazines. But there are some high quality aftermarket magazines out there to be had when you have run out of options of ever getting "Old Betsy" working again. As a rule, I recommend that customers purchase three or more brand new factory magazines when they purchase their new semi-automatic firearms and to keep at least one stored empty in case it is needed in the future.

This is important down the road if you decide to sell it or hand it down to a family member so that they get alive, working firearm; especially if factory magazines are long gone at that time. The guns aren't much good if they can't be fired semi-automatic.

I hesitated to list the name of the company that made these offending magazines, but I felt it was important to identify them so that you will know, and more importantly, that maybe they will read this and make some modifications to the offending magazines used in this article. Triple K Manufacturing Company (TripleK.com, was the producer of these magazines and they are probably the best aftermarket magazine manufacturers in the United States.

I have used many of their magazines for many years now, and in most cases, they worked right out of the package. In fact, this is the first time ever that The pistol worked really well with no jamming when fired. More importantly, the magazines lock into position now. I saw three brand new magazines coming from them that required so much fit work to make them operationally effective.

There are other companies out there that sell aftermarket magazines as well, but I don't believe they offer nearly the assortment and quality that Triple Kdoes. They stand behind their products. After re-working these magazines, I notified them of the issues experienced so they wouldn't be blind-sided. Although the fitting of these specific magazines were for a specific make and model pistol, the same procedures could and should be used when confronted with any aftermarket magazines that don't fit quite right.

The goal is to go slow, only remove as much material as needed, one step at a time, before moving on to the next step. This will help prevent ruining anew magazine. As aftermarket magazines go, I typically recommend spending the extra buck on magazines made of steel (the body, follower, floor plates, etc.) if available. Sometimes less expensive aftermarket magazines are not what the doctor ordered.

The good news here was that we were able to get this old pistol up and working again and the customer was very happy to learn that he didn't have to throw the magazines away after all. AG

HISTORY

Dating Remington Firearms

Remington Arms has a unique and thorough coding system for dating and identifying their firearms. Here's how to decipher it.

BY STEPHANIE A. MARTZ DECEMBER 2021 ORIGINAL PP. 12-13

Remington Arms Company, LLC came up with a clever way to mark which month a Remington firearm was manufactured. They've been using this code since 1921 and are pretty thorough when it comes to telling the customer the history of their rifle or shotgun. This includes the date manufactured, date repaired, testing marks, inspections, and other ways to tell what your firearm has gone through. For months of the year, the code is B–L–A–C–K–P–O–W–D–E–R–X. For example B=January, L= February, etc.

The markings on left side of the barrel show the month and year of any repairs that occurred on the firearm. Next to that, the month and year of actual production, including the assembly line number and final inspector marking. On the right side of the barrel the markings show any proof testing that has been done to the Remington firearm. On the Remington Society of America website (RemingtonSociety.org) you can find what each letter means as far as month and year produced and any testing.

Remington has also publicized their factory record book which shows how many firearms were sold in certain years and in total. For example, the Remington Model 121 Fieldmaster. In 1949, the year that the most Fieldmaster rifles were sold, sales topped at 18,692 rifles. In 1959, only eight were sold, bringing the total Fieldmasters sold to 199,891 in all. org) showing how to easily identify certain markings on your Remington firearm.

Beginning on 8/9/1999, Remington decided to stop stamping barrels with the date code and only mark the code on the end flap of the shipping box. Thankfully, on 10/1/2001 they decided to restart stamping the actual barrels with the date. Therefore, if your firearm falls within these two dates you may not see a stamped date code. I've included some photos of a friend's Remington 870 that he acquired directly after use in the Ohio National Guard.

This model has been used during National Guard activations in response to Hurricane Katrina and the reactions to the Lucasville Prison riot in 1993. From the markings it shows that this specific shotgun was produced in June 1971. The barrel is the manufacturer original so the Remington dating system show the firearm's manufacture history.

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This means that if the barrel has been with the receiver its whole life this firearm was made in June 1971. While these markings are accurate when it comes to rifles as Remington doesn't replace many barrels when rifles are sent in for repair, there may not beaway to know if a shotgun barrel is original to that gun. Of course, rifle barrels do get replaced, therefore, that barrel may not have been mated to that gun for its entire lifespan.

This information can be referenced at Remington Society. org/manufacturedates AG

PEOPLE & COMPANIES

Smith & Wesson Victory Fixes

Standard repair techniques only worked to a point after discovering off-spec bolts and an old trick learned from Colt Conversions was ideal for this Smith & Wesson Victory.

BY ROBERT K. CAMPBELL DECEMBER 2021 ORIGINAL PP. 14-16

Smith & Wesson introduced the SW22 Victory self-loading rimfire pistol a few years ago. This is a versatile, optics-ready, and quite useful firearm that has been successful for Smith & Wesson. An obvious competitor to Ruger's Standard Model, the SW22 Victory has proven successful and seems widely used. This is a huge market. Everyone needs a quality 22 Long Rifle handgun for stress reduction, plinking, target shooting, and small game hunting among other necessities of life that this pistol ably serves.

Such pistols are far from useless for emergency use as well. The Victory has been widely accepted and found its way into practically every niche a 22 Long Rifle handgun fits. The Smith & Wesson Victory is useful for pest control and also in introducing new shooters to the It is nagged by problems common to .22 caliber self-loading pistols. handgun. Smith & Wesson went after one of the few drawbacks of the Ruger Standard Model in the design of the Victory. The Standard Model is a bit difficult to disassemble.

While Ruger has addressed this issue in the newest generations, the SW22 Victory is simple to disassemble with an Allen wrench that comes with the gun. To disassemble, remove the magazine, rack the bolt, and check the chamber is empty. Turn the takedown screw out with the supplied Allen wrench. After the screw is turned out a few turns, the receiver can be lifted off the frame. The bolt can then be lifted out of the receiver. Nothing to it!

To go further, another screw at the base of the pistol barrel holds the barrel in place. Loosen this screw and the barrel may be lifted out, making barrel changes quite simple. There are fully adjustable rear sights, fiber optic sight inserts, and a rail for mounting optics. By removing the rear sight the supplied Picatinny rail may be installed to mount op-

Access and changing of the extractor is easy. tics. The grips, safety, and trigger action are well designed and well suited for all around utility. The pistol incorporates an adjustable trigger stop. Volquartsen (Volquartsen.com, offers not only barrels but other aftermarket parts for the pistol for modifications to better serve individual shooters. The pistol has proven accurate enough, however, some shooters have a nagging list of problems in maintaining reliability.

There are a couple of concerns that I have addressed. Some correspondents have noted that they were able to get reliability in the high ninety percentile but continued to experience nagging failures. A common occurrence with .22 caliber firearms is ammunition problems as rimfire ammunition is often dirty. A full powder burn isn't possible in a pistol barrel when most ammunition is designed to fully burn the powder in a rifle barrel. Some loads are much better than others.

In my experience CCI Mini Mag in all types (including Segmented, RNL, and Hollow Point) is a gold standard for convincing pistols to work. Winchester Super X 37 grain and Fiocchi's High Velocity loads are also useful. Many years ago my grandfather recommended Remington Golden Bullet, another good choice. Some types just don't make it. When I began this feature the work was simpler as we were not in the middle of an ammunition shortage. I obtained plenty and added more as the testing went along.

I found that the loads listed above gave good results as well as the Remington 40 grain Golden Bullet and plain old Remington Thunderbolt. Just the same, I never hit better reliability than anyone else in my initial assessment. Around ninety to ninety five per cent at best was the standard. As the ammunition supply dwindled I found the work more important. I had to get it right without unlimited ammunition. Here is the procedure. First, be certain the pistol is completely clean and degreased.

That is always a good start. Then be certain the pistol is properly tightened. This means a lot when you have a pistol with two screws that are keeping both the barrel and the frame-toreceiver fit locked in tight. Lubricate the bearing surfaces. Using first principles, simply look over the bolt and identify the parts that meet as the pistol operates. There should be a few wear marks or shiny spots. No need to use excess lubrication but use enough.

With good ammunition, a tight lock up and proper lubrication we are well on the way to reliable function. Another problem with the Victory is that occasionally the bolt will not fully lock up, stopping on the last 0.025-0.035 of travel. I was able to examine one such pistol (not mine, which did not have this problem). The owner sent it back to Smith & Wesson and after a three week stay (very reasonable in this time and times) the pistol was returned with anew bolt. So, a factory fix is there for some problems.

The pistol extractor is important. It does more than extract the spent cartridge case; it also leads the cartridge into the pistol chamber. Volquartsen offers the Exact Edge Extractor for the Victory. At only $18.50, the VCSWEE extractor is a fairly inexpensive addition to this pistol. When there is no apparent single fix, this extractor is well worth adding. Prior to this I cleaned the extractor, extractor plunger and spring, and all around the extractor area.

Filing a bit off the factory extractor to make it sharper may help. Also, look at a fired cartridge case as it is pulled from the chamber and try to see what is going on. It isn't difficult to plug a spent case back into the chamber and try this a few times. Bending the extractor in or out is darned hard on such a small part, so simply replacing the extractor may be the better bet. Replacing the extractor assembly is very easy. There is a retainer on the bolt assembly that will be pressed to the rear of the bolt.

This allows removing the extractor with a simple tool such as a small pick. Don't let the extractor spring fly loose; mine did not fly loose as it was not under pressure as the extractor was moved out. Changing this inexpensive part should aid function. A note on bending the extractor. The old rule is to bend out for less pressure, in for more pressure. You'll have to determine if an extractor is supplying too much tension or too little during the feed cycle.

This can work but may prove too difficult to get right with such a small part when you are able to order a replacement for very little change.

Fix List Cures for the SW22 were to clean the firearm properly and then degrease, inspect the chamber for burrs, be certain the barrel screw was tightened completely, check the frame-mounted takedown screw was properly tightened, The author stocked up before ammunition availability became problematic. changing the extractor assembly for an aftermarket upgrade, and only using top-grade ammunition proven to function well in other self-loading 22 LR pistols.

Ammo selection included CCI Mini Mag, Winchester Super X, Remington Golden Bullet, and Fiocchi High Speed have proven reliable. Bullet weight should be 37 to 40 grains. Properly lubricate the firearm. Here is a good trick. While at first it seems odd, I have tried this on several occasions with excellent results in numerous .22 caliber pistols. Some time ago I worked with the original Colt 22 cal. Conversion Unit. A problem with function was common.

For a fix, I carefully coated the floating chamber with STP Oil Treatment, an automobile engine additive. This worked perfectly. So, I took a leap and coated the bolt of the SW22 Victory with STP Oil Treatment as well. It is difficult to say which step did the most good or which solved the problem but I suspect the STP had a positive effect as it has done so on several other firearms. The addition of the high end Volquartsen extractor also had a positive effect.

The pistol has now went through a fast two hundred sixty rounds as quickly as I could load the three magazines on hand and fire. The individual steps were simple enough and inexpensive. The most expensive and difficult part, as it turned out, was obtaining all the ammunition used in testing. AG

PEOPLE & COMPANIES

Mean Arms

Makers of the MA Lock, MA Loader, and Endo Mag, here's how a small manufacturing business got its start.

BY DEAN MEIER DECEMBER 2021 ORIGINAL PP. 17-19

Mean, LLC (Mean Arms. com, is a small manufacturer specializing in custom firearm development and products developed in-house, engineering items ranging from complete firearms to custom-designed parts. The company's staff boasts over four decades of manufacturing experience as providers of custom injection molding services, mold design, and part fabrication for other companies worldwide.

Wanting to take their manufacturing experience and enter the firearms industry, the MEAN company name is an acronym of the initials of the company's founder, his wife, and their two children. The company specializes in magazine conversions, especially for those in less permissive legal environments where standard capacity and functioning magazines are restricted against peaceable, lawabiding citizens.

MA Lock The first product useful to shooters living in restrictive jurisdictions is the ability to convert banned firearms due to having detachable magazines to a fixed magazine without having to permanently modify or damage the normal workings of the firearm.

California states laws under Senate Bill No. 880 and Section 30515 of the Penal Code and the New York Safe Act defined certain so-called "assault" features and Firearms with fixed ten-round magazines aren't as restricted, even if they have other features labelled "assault" in the law. The MA Lock is an inexpensive, fast way to create a fixed magazine that does not damage or permanently modify the firearm. firearms having them are banned.

However, these features are allowed on firearms with a fixed magazine of a capacity of ten rounds or less. The Mean Arms MA Lock is a shear bolt mechanism designed to lock standard AR-15 and AR-10 magazines in place. This makes restricted firearms legal and compliant while retaining any other useful features and not needing to comply with any government registration scheme. Designed with the California law in mind, the Lock fixes a ten-round magazine in place by replacing the magazine release button and spring.

After removing the normal magazine release parts, the lock sleeve is secured in place with a hex-shaped bolt that is tightened until it shears off. The magazine is then inserted as normal but the MA Lock locks it in place with no magazine catch release provision. Once fixed in place, the magazine can be removed without removing the MA Lock but only after disassembly and with tools. This would normally only be done for repair, such as replacing a faulty

MEAN ARMS CONTINUED

ORIGINAL PAGE 18

This is not a magazine, it is a ten-round fixed magazine filling device. This rifle is pictured with the options MA Feed Ramp. magazine. Begin by clearing the rifle completely and disassembling the lower receiver from the upper. Disassemble the fixed magazine by removing the base plate and then the spring and follower. The magazine body and MA Lock taper in the insertion direction. Insert a thin tool as a wedge on the magazine catch side (left) of the magazine from the top of the lower receiver.

A polymer putty knife works well. Avoid using a metal tool for this. Gently squeeze the magazine just enough to slide it past the MA Lock and out of the magazine well. Once maintenance is complete, reassemble the magazine (or replace with anew one) and insert as normal to reset a fixed magazine. Because the MA Lock does not modify the receiver, it can be removed and the normal magazine release parts replaced without damage to the rifle when the owner moves to a jurisdiction with less ridiculous legal restrictions.

MA Loader The MA Loader is a California compliant, 10-round cartridge loading device that allows the efficient reloading of fixed magazines without the need to break down the firearm. The device harkens back to the 1880s when fixed magazines were the norm and rifles reloaded with chargers or stripper clips to hold and position the cartridges. Detachable box magazines that can be prefilled and swapped at will would later be patented and become the norm for their efficiency.

Being safe, common, reliable, and efficient, this century-old development has since caught the ire of elected representatives and have been placed under restriction. Unlike the elected officials that wrote this legislation, Mean Arms is actually aware of how firearms operate. They're also knowledgeable of their historical use. The MA Loader is essentially a throwback to a good idea from the 19th Century that overcomes overzealous legal restrictions in freedom-reduced jurisdictions.

First designed for compliant AR-15s, the MA Loader is a ten round charger device that fills a fixed magazine through the ejection port. With the cartridges held in place inside the MA Loader, the fixed magazine is filled with ten rounds with a press of the thumbring slider. While not required for operation, the Feed Ramp can aid in reloading with the MA Loader. The MA Loader does not require a special or modified upper receiver and works with any standard or mil spec pattern.

Using this charger with a fixed ten-round magazine installed in the rifle, owners are not required to register the rifle under California law. An unintended potential consequence of the California laws is safety. Unlike 19th Century rifles that were designed with fixed magazines and readily filled even with loose cartridges and could be cleared by with a release to open the bottom metal and clear the magazine, a fixed magazine AR-15 was not having been a product benefiting from a half century of later development.

Given this legal restriction is requiring rifle owners to fiddle loose cartridges through the ejection port, many may be tempted to leave the fixed magazine filled, which now has no provision to readily clear. A MA Loader can help prevent issues with this. Some particulars. Being designed for standard receivers, the MA Loader doesn't work with

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left-handed upper receivers, however, the company is planning anew mold for left hand MA Loaders if there is sufficient customer demand. The MA Loader does not automatically release the bolt upon removal after loading. The company recommends holding the bolt stop during loading to eliminate a chance of misloading and then releasing the bolt with the stop.

However, some customers have used an "auto advance" technique allowing the bolt to release immediately with success. 300 AAC Blackout was designed to fit standard receivers and magazines. Not surprisingly, MA Loader customers have reported mostly good results with it.

However, the profile of the bullets in these cartridges area little different and depending on ammo specifics cartridges may not fully retain when loading as the MA Loader was designed to retain a cartridge with a neck holding a .22 caliber instead of .30 caliber. Depending on customer demand, a specific version for the 300 AAC Blackout may be offered. The same is true for an AK-47 variant. One variant currently available is for the AR-10 for those interested in shooting "grown up" ammunition.

The MA Feed Ramp is an optional accessory for the MA Loader. Like a flared or extended magazine well popular in some practical shooting competitions to aid reloading speed, the Feed Ramp does the same thing for Loaders. The Feed Ramp uses the hinge 56 PMAG into a 9mm magazine. This allows putting a 9mm upper receiver using a Glock or Colt bolt carrier group on a standard AR-15 lower receiver with no mag well adapter. pin of the ejection port cover and mounts in place of the cover.

Other than swapping parts, no modification to the rifle is required. The Feed Ramp is currently only available for the AR-15 and does not fit AR-10 receivers, however, as with their other parts, Mean Arms will consider it if customer demand is there. Endo Mag The Endo Mag is a magazine insert that converts a Magpul Gen 2 or Gen 3 5.56 PMAG housing into a 9mm magazine to use with a standard AR-15 lower and 9mm upper that uses a Glock or Colt 9mm bolt carrier group variant.

The Endo- Mag allows PMAGs to be converted back to 5.56 or 9mm as needed. It functions as a normal fitting magazine so no magazine well adapter is needed. Reports on reliability have been very good. The Endo Mag handles all sorts of 9mm ammunition, including hollow points. A version specific to the CMMG Guard is offered as a package. Because of their experience working with accessories in restricted states, the Endo Mag is also offered to comply as well.

The Restricted State Endo Mag comes from the factory pre-installed in an already-compliant PMAG. Mean Arms offers a 30-day full refund policy and limited lifetime warranty and everything they make. While dealing with useless legislation is always a hassle, it's good that smart companies in our industry have stepped up to provide solutions for shooters. AG

FROM THE ARCHIVE

The Care and Feeding of Customers

Successful gunsmithing is a service business and demands good customer service. Here's how to effectively manage your customers.

BY BILL SMITH DECEMBER 2021 ORIGINAL PP. 20-22

Any service provided for paying customers requires thoughtful handling of their needs and concerns. Being good at the provided service—gunsmithing for us—must be a given. Good customer service goes beyond our skills and knowledge at the bench. Here are strategies for some of these concerns. Buyer Remorse A customer comes in, goes over his problem with you, and you provide an estimate of the requested work.

Always emphasize that this is an estimate for there is always the possibility for every job to run over your estimate and become a more substantial job due to yet unknown issues. He goes out and you set the gun aside in queue behind current projects because, as a good gunsmith with a good business, you are busy. Shortly thereafter before you've had a reasonable chance to get to the task, the customer is back in and picks up the gun. He has a bad case of buyer remorse and you've lost a job.

What preventative course can you take to ensure that this will not happen? This is handling customer service before you've even had a chance to provide your service. Well, I suppose you could loan your Teddy Bear and advise the customer to go home, warm up some milk, and hold Teddy real close while he drinks his milk until he feels better. Eh, probably not. The likely truth is the wife found out how much money he was going to spend and issued him his marching orders so there he is wanting his gun back.

I've found a great way to prevent this sort of buyer remorse is to start with a written order for the job requested. Then, make it shop policy to start on the job within minutes after he leaves, or at least that same day. One good reason for this, gunsmiths are notorious for being slow to return work.

This demonstrates to your customers, with buyer remorse or not, that you're the rare gem with great efficiency; when you say you'll return the job "no later than next month" they're confident you don't mean next month next year. "I'd return your gun but I already have it disassembled and have started on the job we agreed on" is both a good way to show your efficiency and to put insurance on the job. It also forces you to stay on top of your work load.

Also, the gun now qualifies for your minimum shop charge, which you included in the formal write up provided, if he insists you put it together anyway. More likely, he'll reaffirm the reason he wanted the job done in the first place, tell you to go ahead with what you've already started, and can now tell his wife you have done just that instead of wasting the shop charge that accomplished nothing. In the end, you'll both be happier for it.

This is a situation that will happen and you alone have to make up your mind as to how you want to handle it. My attitude is I can't afford to have my time wasted for nothing. If a customer doesn't want something looked at and fixed, don't bring it in. Explain and ensure your minimums. They count up. After all, the customer has a problem and should have the gun fixed. In the case where he might take it somewhere else where he can get it cheaper, you have locked onto the job. Buyers remorse is not unusual.

You have probably suffered from it at one time or another. The point that I keep bring up are ways that gunsmiths lose money and how you can avoid it. You only have so many hours in a day and to manage a successful business requires managing every minute. Have shop policy in place and explain this to your customer up front. "Can I Watch?" This question is often asked by both curious and would be do-it-yourselfers and can be as detrimental to you as you watching a post mortem.

The only sensible answer is a firm but polite, "No." First reason, related to the above, is this is certain to have the job to take more time than it should. Bad for business. Worse, it gives away your "secrets." Well, your hard-won knowledge and experience at least. It would make sense if you have good business reasons for mentoring an apprentice, otherwise you're just inadvertently providing someone a free education. This can also have a negative impact on your reputation.

If the job has problems, no matter how slight (not that you've ever experienced any problems at your bench…) the

watcher might think you are not so smart. Watching a craftsman work is like the story of the kid who wanted a watch for Christmas—so they let him. Not much mystery left. Gunsmiths area bit like the alchemist of old. You are in the gunsmith business, not the "how to" business. I use a simple answer to those wanting to watch. In fact I use several. Short of "Hell no! You think I want you looking over my shoulder?" I do use the following, some good and what I think is best tailored to the customer.

One is to gently(?) tell them that I don't have a license to teach. Another is that I might not get to the real work right away. Depending on work load, I might not be able to do more than the initial disassembly and inspection and won't be working on the gun immediately. This is especially true if any parts or supplies for the job need to be ordered in.

Probably the best one I've used is, "I wouldn't mind if you watch, however, my insurance was once almost canceled because I let someone in my work area during a job and a small spring flew out, catching him just below the eye. I paid the clinic visit through my insurance but they raised hell with me for having a customer in my work area because this needlessly increases my liability. You understand, don't you?" That usually does it with great finality and he moves on.

Of course, you will always have the dreamer who wants to be a gunsmith and be able to take grandpa's H&R break open apart who really would like to watch. Be gentle, but be firm. Warding off the "can I watch" customers does two important things: it keeps the "mystery" for without it they wouldn't need you and keeps your personal injury possibilities to a minimum. Both reasons are enough to say no! The old standard of "Does Macy's tell Gimbels?" applies as well.

One other situation that I get in to once in awhile is the would-be future gunsmith asking if I want an apprentice. My typical answer is, "Sure! You work for free for two years and pay me tuition to teach you." After all, that is the arrangement for attending a gunsmith trade school. That usually ends the conversation. Otherwise, I'd be paying someone to learn the trade and within a few years be able to start their own shop in my area trading on the fact that I taught them.

At best, I wouldn't be able to keep this apprentice on for more than a few years because no matter the odds or economic reality, he'll follow the American Dream and open a shop of his own based on what I taught. No thanks. If I were to hire anyone it would be someone who has worked for a gunsmith long enough and has qualifications that can add profitability to the shop for both of us but can't run his own shop for whatever reason. I find such a person unlikely to remain in my shop for more than a few years anyway.

I learned along time ago that it is best to work alone. I farm out to commercial barrel makers and stock makers, do my own pistol barrel work, and leave certain "critical heavy work" as I call it to others. I know what I'm good at, acknowledge what I'm not, and keep the money I make. Customer Pickup "Your gun is done!" You'd like to think a phone call, voice mail, or email with that message would bring your customer rushing back to your shop eager to retrieve (and pay for!) their newly-finished firearm.

Your gun is done, but not picked up happens often. Among any number of things that is a problem for gunsmiths doing business in a locale where your customers live—an issue that is certainly different from mail order work—is the guns that are done but not collected for. This is your on-shelf inventory of completed work that often times sits far too long and takes up your space, particularly in poorer economic times. Work that is done but not picked up does neither you nor you customer any good.

Let's look at this problem and examine the different and various ways to keep this "receivable" to a minimum. To begin with, the faster you turn your work out and collect for it is your cash flow. Slow it down and you are back to beans and rice, perhaps some coffee and bacon if you've saved your money right. Work not picked up does not pay the bills or build your profit. The bank won't lend you a dime on your receivables. What to do?

Let's assume you are well organized—not that all gunsmiths are— they just think they are, and if you really want to know if they are, just ask their wives. If you are truly organized then you are reviewing all the of completed tickets at the end of the day. Each of these jobs has all needed customer contact information with it that you carefully collected when getting the job particulars down in writing in agreement with the customer's service request.

If you're reviewing this before the typical end of the business day, sort out the office or work numbers, and start calling. If your customer is not there or is tied up, just leave a message to call you back. Never leave a "Your gun is ready" message because at this point he won't know what you want and it may make it easier to get a return call. Make a note on the ticket when you called. When receiving a call back, be friendly, say the gun is finished, and ask for an appointed pick up time.

Jot this information down on the ticket as well to keep a complete record. Now you have called all the new ones and have a record of it. This helps later on if the customer does not show. Once you start this you will step up your cash flow. However, not every customer will show up. Some customers might be short of money, others have other plans, such as a vacation, and still others

are simply not in a hurry. Seemingly in every case like this, none of them are up front about it. Make it a point to review your completed inventory regularly. Follow up with any still there after a week from your initial contact and call again to refresh their memory. People such as us that work on mechanical things like to be paid when the work is done. This does not always happen so we have to carefully go after it. Friendliness in calling is very important. "Hey, Charlie!

I know you are interested in getting your gun back so I thought I would make you happy and let you know it is done and you can pick it up." For the first calls, if 50% show up we have cash flow moving. The second 50% may take longer but it could be several thousand dollars so we better pay attention. After all, this "not picked up" inventory is not paying any bills. What do we do? Well, depending on how you feel about a certain customer (at this point) dictates the way you go.

A call with, "Hey Charlie did I call you and tell you your gun is ready?" sometimes works. Charlie might think you area little unorganized or forgetful but at least he knows he has been called twice and may get off his duff and come in. These second calls may get the short-of-cash to tell you they are short of cash and need a couple of weeks.

You naturally agree but continue to keep notes—you may need them later when Charlie goes over that "couple of weeks" and you need to talk a little harder to him for he didn't keep his word. I take this position and the older I get, the better I like it. First, you offer a fine service and did not ask the person to come into your shop. Second, you did the work you were contracted to do and now you simply want to be paid for it. Third, you're not a bank and not in a position to loan money.

Keep in mind that your sweat, tears, and money are tied up in his gun—what the hell, I sure am loaning money if I don't get paid for 60-90-120-ever for the work I did. I would rather not have done the job in these cases. Work that is done and not picked up becomes sour rather quickly.

When you stop and think about it, the customer who leaves his gun 60 days after you call him probably asked you at the time of dropping it off, "How long will it take?" Every shop should have, in full view, a sign clearly outlining your policy. This avoids arguments if there are to be any. A sign stating, "Customers will be advised when work is done. Payment and pickup is expected within seven business days of notice. Any gun not picked up within 30 days of notice will be charged $2.00 per day storage.

Unclaimed guns after 60 days will be considered abandoned and sold without further notice for the existing charges for repair and storage. Arrangements for delayed payment may be made subject to the acceptance of the management." Inform customers of this policy when work is initially contracted. This might seem severe, however, having such a policy and formally informing customers of it protects you legally.

I have thought for some time that Brownells should redo their work tickets or come up with anew one that contained such information on the receipt section along with a place for a signature authorizing the work covered on the ticket. I don't run Brownells and have my own tickets printed with this policy. This covers me both ways. However, it would be considerably cheaper to be able to buy such tickets from someone like Brownells as the mass printing would bring the price of these tickets down.

So we have advised everyone of our policy upon taking in a job, notify all customers that their gun is ready to be picked up as soon as it is complete, and follow up as needed. Now, let's consider the customer who is possibly a regular and that we want to continue to keep. He is short of money. After I have called them twice, I let it go by for a full 30 days and then send them an email restating my policy and suggesting that if they have a financial problem that I am willing to work with them as their business is appreciated. However, unless they show the courtesy of contacting to make specific arrangements, it leaves no choice but to invoke the unclaimed policy. Leave the door open.

If there still is no response or action, I follow up with a certified letter explaining that I've invoked the written policy and have taken possession of their unclaimed firearm to be sold for gunsmith work fees and storage charges. Using legitimate pressure as I have outlined will increase your cash flow. After all, you are not a loaning institution and you don't need the experience of working on his gun for nothing.

Most important, you are being up front from day one, communicative, fair, and invoking a legal right to be compensated for your time and expense that they contracted you for. Nobody can ask for more than that. The rare sorehead that you might lose as a customer you are better off without. He can't legitimately bad mouth you because your policy is immediately knowable and you have in writing that he agreed to it.

A good business person knows economic situations rise and fall so we have to be patient, flexible, and thankful for business. However, being thankful for business implies there is business to be had and that includes being fairly paid for our work. Know when enough is enough and that everyone appreciates being paid promptly. Just add up the done work that has sat for up to 30 days—it is not uncommon for me to have several thousand dollars of work waiting at any given time. That's fine if it moves within 30 days.

If not, then I get grumpy, drink too much coffee, and get my cash flow going again. AG

SAFETY & COMPLIANCE

Reader Forum

BY AMERICAN GUNSMITH EDITORS DECEMBER 2021 ORIGINAL PP. 24

BATFE Gunsmith Rules I appreciated "BATFE Gunsmith Rules" in the October 2021 issue. Although I was already aware of the ATF proposal regarding frames and receivers, there was some great information in the article that I was unaware of. Unfortunately for those that weren't already tracking this proposal, the BATFE comment submission program on this has since expired. I am an aspiring "hobby" gunsmith currently enrolled in the Sonoran Desert Institute Degree program.

After reading the article, it was clear to me that many gunsmiths and gunsmith hopefuls, as well as FFLs are surely unaware of how some of these proposals will impact them. A case in point AmericanGunsmith.info/writers-guidelines Snail mail: American Gunsmith or post a letter to Falls Church, VA 22041. For subscription questions or mailing problems contact American Gunsmith

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