

Tools:



Wooden Handle Awl: Pictured on the bottom is a wooden handled awl; however, modern awls may be used as well. The awl is used for removing caked black powder from around the musket cone on the rear of the barrel and other hard to reach areas.

T-Handle Nipple/Cone Wrench:

Made of steel, these cone wrenches are for the removal and installation of the musket cone. Use the wooden handled or Musket wrench for cones that are difficult to remove.



Wooden Handled Cone Wrench:

Made by John Zimmerman, Master Gunsmith out of Harpers Ferry, WV, this solid tool is useful for removing the nipple/cone from most barrels. Ensure that the wrench seats COMPLETELY to prevent stripping the cone.



Tools (continued):



Wire Brush: The wire bristles are perfect for cleaning black powder and rust off of difficult to reach areas but do not use it on any blued surfaces or brass, as the bristles are made of steel and result in damage.

Rear Sight Screw Wrench: For use on the rear sight of the M1855/61/63 Springfield Muskets. As the two pins on the end are easily worn down or broken off, use ballistol beforehand if the screw is difficult to turn.



Revolver Wedge Punch: Made of Aluminum, this tool is typically used to remove the wedge from a revolver; however, it is also great to remove/knock loose your bands from the musket if they are rusted tight onto the barrel.

Mainspring Vise: Used to remove/install the mainspring from the lockplate. A must-have tool as the use of pliers or vise grips will mar the metal of the mainspring and potentially over stress the spring, causing it to break.



Tools (continued):



Toothbrush: Great for cleaning the small nooks and crannies of your musket, especially around the front and rear sight and on the internal mechanisms inside the lockplate.

Band Spring/Tumbler Punch:

Original punch set is perfectly sized to fit both original and reproduction muskets. Used to punch out the band spring pins, ramrod spring/trigger pins as well as separating the hammer from the tumbler.



Musket Wrench: Whether original or reproduction, this wrench is perfect to remove the musket cone as well as the screws of the musket. If reproduction, we recommend grinding down the 'leafs' with a sander for a solid fit into screw heads.

Tools (continued):



Cleaning Rod: Cheaper and more durable than a ramrod, used to run patches and brushes down the inside of the barrel to remove rust and black powder. Four sections used for most muskets, five sections for the Springfield M1842 barrel.

Brass Button Jag: Used to run cotton patches down the length of the barrel. Ridges along the side of the jag grip the cotton patch and ensure the patch comes out of the barrel. Ensure you use the proper size jag for your musket's caliber.



Brushes: Used to remove rust and black powder from the barrel. Recommend you spray the brushes with ballistol prior to chasing it down the barrel to prevent them from getting stuck inside. The cotton brush can be cleaned and reused multiple times.

Tools (continued):



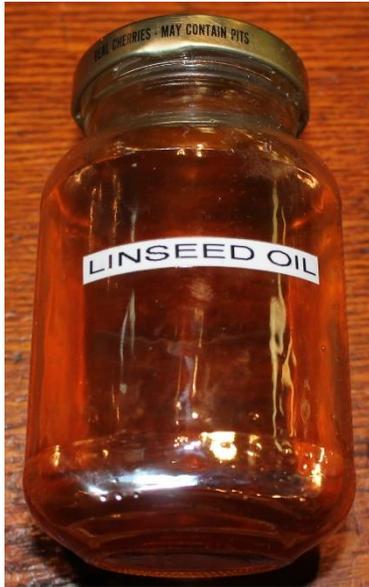
Hammer: A brass hammer is effective while, at the same time, made of a softer metal that will not mar/damage the steel of your musket.

Screwdriver: Flathead screwdriver made of steel. Screws on the muskets are easily damaged. Recommend using a screwdriver that fits snugly into screw heads or use a grinder to shape the screwdriver head for a perfect fit.



Ballistol: Ballistol cleans and removes all types of bore fouling, dissolves black powder and corrosive residue. Ballistol is fully compatible with all metals including aluminum. Recommended for use with original muskets as well as it is non-abrasive and will not damage the patina of original muskets.

Tools (continued):



Linseed Oil: Used to rejuvenate the wood of the stock and weather-proofing. Multiple coats may be needed as the wood will soak in the oil, preventing it from drying out and cracking.

Cone/Nipple Pick: Made of steel, the long or short pick is used to clear out the cone hole of debris and black powder. As noted to the right, the end may be formed to facilitate cleaning of the bolster's ignition hole into the barrel.



NEVR-DULL: Works wonders on all types of metals, a little wadding goes a very long way and will simplify cleaning your musket.

Tools (optional):



Steel Wool: Not for use on blued steel unless you wish to remove the bluing, or brass, as it will scratch the soft metal. Easily removes rust and corrosion from metal, but use sparingly and in conjunction with ballistol.

Scouring Pads: Cheap but effective, very useful if cut into smaller, more manageable squares. Use with ballistol to remove caked grime, black powder and/or rust. Will remove the bluing off of a blued barrel.



Dremel Tool: This versatile tool will allow you to quickly polish brass, grind down metal, and shape the stock as needed. Definitely a 'force multiplier' for your tool box. Cord and cordless models are available.

Disassembly

Often a musket will receive a quick cleaning in the field. Typically this is done by running hot water down the barrel to remove any black powder residue along with a quick wipe of the exterior. However, we recommend the owner disassemble the musket after use to remove any excess water from the inside of the lockplate and underneath the barrel bands which may result in significant rust and potential damage. Every 6-12 months the wood should receive a coat of linseed oil to ensure the wood does not dry out and begin forming cracks. We begin with our EuroArms M1861 Springfield:



STEP 1: Ramrod

This musket has seen little care in the past five years. Rust has formed underneath the barrel bands, inside the lockplate, and the wood is very dry. To begin, remove the ramrod and place it to the side. To clean the ramrod, use Ballistol and a couple of cotton patches to remove surface rust. If there is significant rust, spray the ramrod with Ballistol and wipe it down with wire wool or a wire brush.

STEP 2: Lockplate

Using a screwdriver or musket wrench, remove the lockplate screws from the stock opposite the lockplate. Once removed, carefully use your awl to remove the lockplate washers from the stock and set them aside with the lockplate screws. For our purposes, we are using an original M1842 musket wrench as we have found modern screw drivers tend to strip the heads. The screwdriver we use is over 40 years old and the head has been ground with our Dremel to ensure the screwdriver fits perfectly into the screw heads to prevent accidentally damaging the heads.

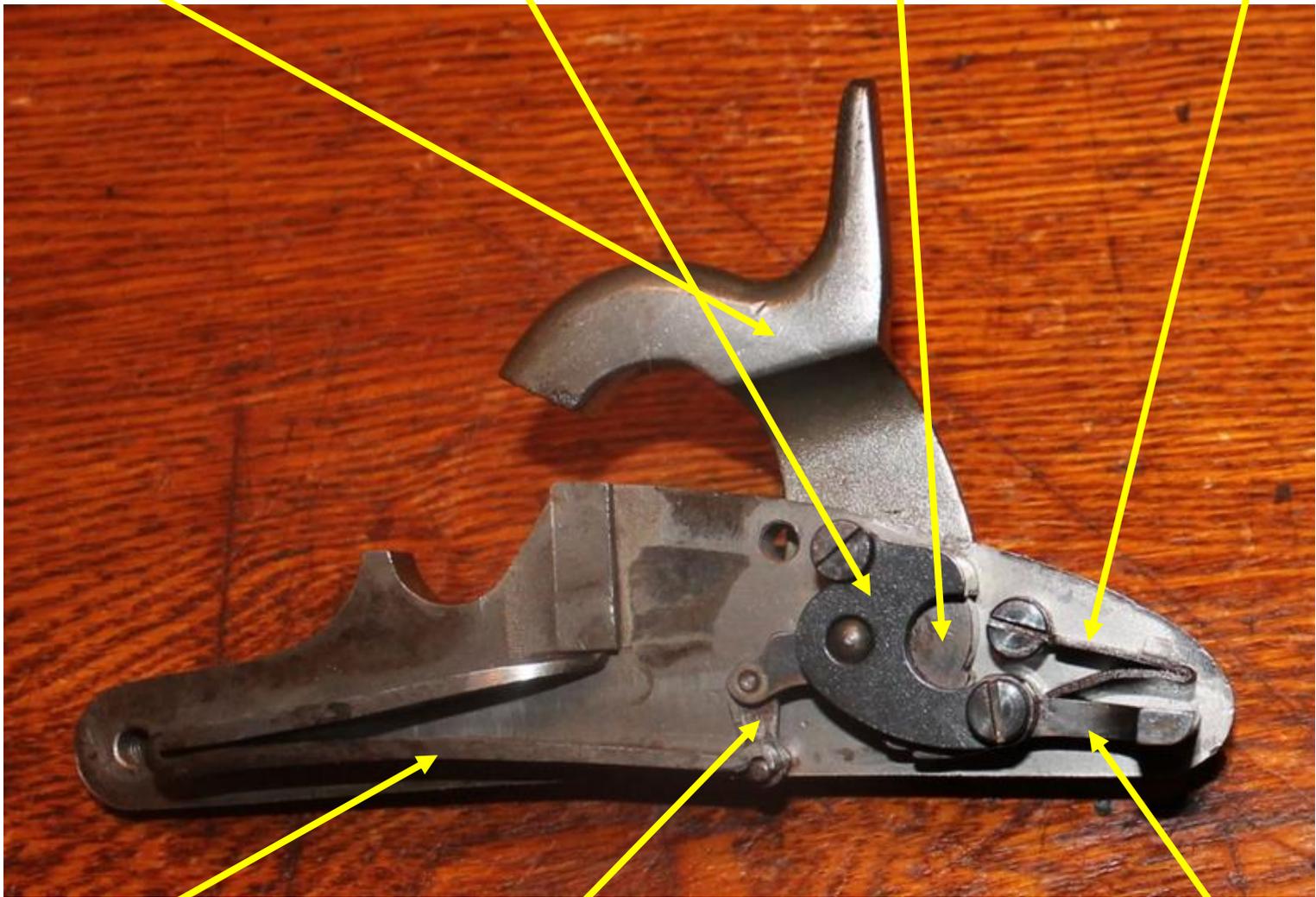
LOCKPLATE

Hammer

Bridle

Tumbler

Sear Spring



Mainspring

Stirrup (attached to tumbler)

Sear

STEP 2: Lockplate (continued)



'Hammer Down'



'Hammer Safe'



'Hammer Fire'

Pull the hammer back to 'safe' and carefully remove the lockplate and its components by sliding it out from the stock. If it is difficult to remove, reinsert the lockplate screws and lightly tap on the screw head with the brass hammer to push the lockplate out from its well. We recommend using a brass hammer as it is a lighter metal and will not damage or mar the metal components on the musket. Once removed, your components will look like this:



Note the significant rust found on the interior components of this lockplate. This is due to water running into the lockplate from the barrel as well as humidity. As the rust eats into the metal, screws will seize and the mainspring/sear spring will deteriorate to the point of requiring replacement. We highly recommend cleaning your lockplate components at least every 6 months.

STEP 3: Lockplate Internals

Hold the lockplate in your hand and with your thumb pushing up on the sear, let the hammer fall back to the 'down' position which will release tension on the mainspring. Using a mainspring vise, slide it over the mainspring and then tighten the vise until it comes off of the stirrup (which is attached to the tumbler). Using light pressure, gently remove the mainspring from the lockplate.



With the mainspring removed, use your screwdriver to first loosen the sear spring screw and then pop the sear spring off of the lockplate. (Note: If there is persistent rust, liberally spray the entire lockplate and its components with Ballistol. This will help remove the rust while preventing damage from seized screws and potentially having them break off). Continue to loosen the sear spring screw and remove. Remove the sear and sear screw and the bridle and bridle screw (ensuring you keep the screws with their corresponding parts). Turn the lockplate over and remove the hammer screw. If the hammer does not come off of the tumbler, insert the tumbler punch (large end) into the tumbler and loosen it with the brass head hammer. Once the hammer comes off the tumbler, place it to the side and then remove the tumbler from the lockplate. You are now ready to begin cleaning the components:



All components should be sprayed with Ballistol and scoured using the wire brush. Once all rust and/or black powder residue has been removed from the parts, wipe them down and reassemble in reverse order from above.

STEP 4: Band Springs and Bands

With the lockplate complete, set it aside along with the lockplate screws and washers.



Take your musket and locate the band springs. With your thumb, depress the band springs one at a time and remove the top, middle, and bottom band springs in that order. If the bands do not budge, use the revolver wedge punch and hammer to gently tap the band springs off of the barrel and stock. The revolver wedge punch is made of aluminum and thus will not damage or mar the steel barrel and bands.



STEP 5: Band Springs & Barrel (continued)

Once the bands are removed, locate the holes opposite the band springs and use the thin end of the band spring/tumbler punch to remove the springs. **Be very careful of where the pins attach to the springs as the pins can easily snap off and then have to be replaced.** Place the band springs with their corresponding bands as the pins' length determines their placement in the stock. Unscrew the tang screw from the back end of the barrel and remove the barrel carefully from the stock.



Wipe down all the band springs, bands and tang screw with Ballistol and cotton patches. Make sure the insides of the bands are cleaned well as the bands tend to rust where they meet with the barrel. Excessive rust could permanently mar the barrel and bands, potentially damaging them beyond repair. If necessary, rub down the rough/rust spots with Ballistol and steel wool.

STEP 6: Barrel and Rear Sight

With the barrel free from the stock, use the T-handle or musket/cone wrench to remove the cone. The cone should then be cleaned with Ballistol and a wire brush. Carefully remove the clean-out screw, located on the bolster underneath the cone. A nipple/cone pick will help in clearing the inside of the cone of black powder residue. Use the rear sight screw wrench and insert it into the two holes of the rear sight screw. **DO NOT FORCE THE SCREW OUT.** If the screw does not turn, soak the screw head in Ballistol and let it sit for 5 minutes before trying again. Once the sight is removed, remove the long screw from the side and remove the sight leaves.



Use cotton swabs and Ballistol to remove any dirt/grime/rust from the base of the rear sight and the leaf springs. A pipe cleaner should be used to clean the holes of the leaf springs and rear sight base. Once finished, reassemble the rear sight and place it to the side with the screw.

STEP 6: Barrel



To clean the interior of the barrel, use a simple mix of soap and hot water. **(NOTE: We do not recommend using rubbing alcohol or hydrogen peroxide in the barrel as it is very caustic and will result in pitting your barrel.)** Pour the hot water mixture down the barrel, plug the bolster hole and barrel end, and shake the barrel allowing the water to loosen up any black powder residue. Repeat several times until the water comes out clear. Once the water runs clear, assemble your cleaning rod, attach a nylon or brass brush, add water to the barrel and run the brush several times up and down the bore. This will remove any caked on powder or rust. Once done, remove the brush and pour out the water from the bore.



Remove the brush from the cleaning rod and replace it with a button jag. Apply some Ballistol to a cotton patch. Run the patch down the length of the barrel to remove any remaining black powder and rust. Repeat until the patch comes out clean.

With the interior complete, use a steel wool pad or steel wool with Ballistol to remove any rust and black powder from the exterior of the barrel. Continue cleaning the exterior of the barrel until all rust and black powder has been removed. Place the barrel to the side.

STEP 7: Nose Cap

Locate the nose cap and nose cap screw. Unscrew the nose cap screw and then slide the nose cap off of the stock. Clean the screw and nose cap with Ballistol and wire brush as needed. Set them aside.



STEP 8 Trigger Guard Assembly:

Turn the stock and locate the trigger guard assembly. Unscrew the two wood screws and then remove the assembly.



STEP 8: Trigger Guard Assembly (continued)

Additional Ballistol may be needed on the trigger screw and trigger guard nuts. Gently remove these as you do not want to strip these screws.



Once all parts have been removed, clean the metal with Ballistol and a wire brush/steel wool. Once complete, reassemble the trigger guard assembly (make sure that you put the trigger on BEFORE the trigger guard) and set it to the side.



STEP 9: Buttplate

The buttplate receives some of the worst wear as a musket often rests on the ground allowing moisture and dirt to get into the screws and between the butt plate and stock. Clean off the screw heads with water or Ballistol removing all debris from the heads themselves. Carefully unscrew and place the buttplate and screws to the side. Liberally apply Ballistol to both sides of the buttplate and remove all traces of rust. Clean the screws, particularly the undersides of the screw heads (where they meet the metal of the buttplate), and set them aside. Once completed, the wood stock is all that should remain.



STEP 10: Stock



The least cared for part on your musket is most likely the wood stock. Constructed from dark walnut, the wood is very susceptible to temperature and humidity causing it to dry out. The remedy for this is several liberal applications of Linseed Oil (natural is preferred, boiled is okay), which can be purchased from Lowe's, Home Depot, Walmart or even your local hardware store. However, linseed oil is VERY flammable and care must be taken when applying. All linseed soaked materials should be disposed of immediately after use. Using a cotton cloth or paper towels, soak your material and 'paint' the oil onto the stock. Treat both exposed areas as well as the barrel groove, ramrod trench, lockplate well, trigger guard well and the buttplate with linseed. Set the stock aside to dry in a well ventilated area, it may take several hours to be absorbed. Several applications may be required. Continue applying until the wood ceases to absorb the surface oil. Wipe down when complete. You are now ready to reassemble the musket.



Reassembly

STEP 11: Buttplate



Once the stock has been completely wiped down, locate your buttplate and wood screws and attach them to the stock. As these are wood screws it is important NOT to overtighten them as they will strip out the wood. However, if it is already stripped you can purchase stainable wood putty to remedy this. Please follow the instructions of the wood putty product!



STEP 12: Trigger Guard Assembly



Turn the stock over and locate the trigger guard assembly well. Gently insert your trigger guard assembly, sling swivel to the front, into the well. Then screw the wood screws into the stock. Again, if the wood has been stripped, you should use a wood putty so that the trigger guard plate is securely fastened to the stock. Do not overtighten the screws

STEP 13: Nose Cap



Collect the nose cap and nose cap screw and slide the nose cap gently onto the stock. Line up the hole in the stock with the nose cap and screw it into place.

STEP 14: Lockplate



At this point we accelerate the ‘reverse order’ reassembly by installing the lockplate BEFORE the barrel. As the linseed oil may have caused the stock to swell, it is simpler to install the lockplate before the barrel due to the tight tolerances found on most EuroArms and Pedersoli models. Locate the lockplate assembly, lockplate screws and lockplate washers (escutcheons). Gently insert the lockplate while, at the same time, pushing the trigger forward so that the lockplate is fully seated. Turn the stock over, insert the lockplate washers into the wood and then tighten down the lockplate screws. **DO NOT OVERTIGHTEN** the screws as the wood will expand and contract and overtightened screws will prevent it from doing so, leading to cracks in the wood around the lockplate washers. Once assembled, perform a functions check on your musket by pulling the hammer back to

the ‘safe’ position and then pull on the trigger. The hammer should not fall forward. Pull the hammer back to the ‘fire’ position and pull the trigger. The hammer should fall.

STEP 15: Barrel Band Springs



Take your barrel band springs and place them next to the corresponding positions of the stock. Make sure the longest pin is to the rear (due to the width of the stock) and then second longest in the middle and shortest to the front. Gently insert the barrel band springs into the holes until the band springs are flush with the wood of the stock.



STEP 16: Rear Sight and Cone



Place the rear sight into the groove of the barrel until the entire sight is flush with the barrel. Line up the holes and, using the rear sight wrench, tighten the rear sight screw onto the barrel. Then locate your cone and cone wrench and screw the cone into the barrel. Do not overtighten the cone as it is the most susceptible to corrosion due to the use of black powder. Then carefully screw in the clean-out screw.

STEP 17: Barrel & Barrel Bands



Place your barrel into the stock and line up the tang hole (located to the rear of the barrel) with the receiving hole of the stock. Screw the tang screw into the barrel until tight. Carefully slide the barrel bands (largest to smallest) onto the stock/barrel until each barrel band 'clicks' into place. If needed, bend the barrel band springs as mentioned previously to ensure a solid fit.



STEP 18 Ramrod:



Slide your ramrod into the musket. Your musket is now clean and ready for your next event!



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