

THIS IS A COLLECTION OF COMMENTS FROM INTERNET SITES

SOME ARE OBVIOUSLY TO SELL PRODUCT BUT MOST HAVE GOOD RECOMMENDATIONS

Check to make sure the rifle is unloaded and the magazine is empty.

THE MOST IMPORTANT RULE OF GUN CLEANING IS TO ALWAYS CLEAN FROM BREECH TO MUZZLE IN THE DIRECTION OF THE BULLET. THERE ARE NO EXCEPTIONS TO THIS RULE. If you go in the wrong direction ("muzzle to breech") you will bring powder residue and abrasive dirt from the barrel into the chamber and neck. This causes stuck cases and other malfunctions of the action. The next bullet down the barrel will drag this dirt and erode the bore.

Small Caliber Cleaning - from Otis site

It is absolutely essential to clean in the direction of the projectile.

Assemble the cleaning rod place "T" handle end into the receiver. Run the rod the length of the barrel in the direction of the bullet.

Place 2 to 4 drops of cleaner on the front end of the swab only.

Pull the rod and the patch will enter the chamber. On 22 rim-fire it is important to turn the rod and swab to scrub the chamber and shoulder.

Pull the rod and patch in the direction of the bullet. This pulls the powder residue, lead and airborne dirt out of the bore in the shortest distance away from the chamber and receiver.

Always use a new clean patch surface each time you go down the bore.

22 rim-fire semi autos require special chamber attention. The wax from the lead bullet mixes with the powder residue and causes most of the problems associated with extraction and loading. By keeping the shoulder clean and by always pulling the powder residue away from the chamber, semi-autos perform as well as bolt actions.

From: bartb@hpfcla.fc.hp.com (Bart Bobbitt)

Newsgroups: rec.guns

Subject: Cleaning .22 LR Rimfire Barrels

Date: 7 Mar 1994 18:32:52 -0500

There's a really neat thing on the market for removing lead from barrels. Sold by Kleen Bore, they're 1-in. square cotton patches impregnated with some chemicals. Sold in boxes of 25 for about \$2.40, I got a box and tried them.

My smallbore match rifle had been cleaned quite well with Hoppe's No. 9 solvent, then the bore wiped dry with patches. Leaving a film of No. 9 in the barrel for an hour did not dissolve any more lead that could be picked up by a cleaning patch. So, it appeared squeaky clean.

I usually run a benchrest bronze brush through the barrel from breach to muzzle direction only a couple of times about every 500 rounds. I had done this in the cleaning process used.

Then I takes one of these Kleen Bore lead removing patches, puts it on my nylon jag, and slowly pushes it through the bore.

To my surprise, it came out black! I reversed the lead removing patch on the jag, then pushed it through again. This time, it came out gray in color. It must have removed something that the standard procedures did not get. I then put another one through but it didn't show any discoloration indicating the bore was more or like the fuels most cars use these days; unleaded.

To verify the blackening was not due to chemical reaction with the blued bore, I took another lead removing patch and rubbed in on the barrel's outside; no color change. Seems to prove that the one that went through the bore did remove the last microinches of fouling.

I would guess these Kleen Bore lead removal patches would work in any barrel to remove all the lead.

BB

From: bartb@hpfcla.fc.hp.com (Bart Bobbitt)

Subject: Re: Cleaning .22 LR Rimfire Barrels

Organization: Hewlett-Packard Fort Collins Site

Mike Beck - Leeds University Rifle Coach (bmb5meb@bpxtal.leeds.ac.uk) wrote:

: We clean our .22 match rifles at the end of
: every term (3 times a year) so that they're
: clean when they're not being used
: over the holidays.

My smallbore rifle has about 2000 rounds of test-fired shots through it. In a local, 100-yard indoor range, many tests were done to determine the rounds to be fired to foul the bore enough to start opening up the groups. I used Tenex, Temp, Olimp-R and R50 ammo. With each ammo type after about 120 shots, 100-yard groups would start opening up about 1/4th to 3/8ths of an inch at 150 shots. Then the barrel was cleaned. About 3 to 5 fouling shots were needed before the groups would go back to their 5/10ths to 7/10ths inch size. 15-shot groups were used for each test. After this scenerio was repeated dozens of times, that convinced me that the barrel should be cleaned after about 100 shots if peak accuracy is desired.

In tests at 25 and 50 yards, increases in test group sizes were barely noticed. Groups at 50 yards would increase in size just enough to be seen. At 25 yards, I could not tell any difference after firing 300 shots. I would hazard a guess that at 50 feet (or less), accuracy degradation may never be noticed even after thousands of rounds are fired. Which makes sense to me as the bullet is in flight only about 1/8th as long as it is enroute to 100 yards; there's not enough time for an unbalanced bullet to move any significant amount at right angles to its flight path in only 50 feet.

At first, I would use a bronze bore brush after about every 500 shots. When I started using Kleen Bore lead removing patches after 500 shots or so, my test groups were a tad smaller than before. I stopped using these patches and went back to using bore brushes; test groups got about 1/8th of an inch bigger at 100 yards. After going back to using Kleen Bore patches, test groups got smaller again.

After talking with some of the top smallbore shooters in the USA, they told me my test data was very normal with what they have noticed. Frequent cleaning is more important at the longer ranges. At ranges less than 50 yards, it may take thousands of rounds test fired from machine rested rifles to note group sizes increasing after 100 to 150 shots are fired.

BB

Gun Cleaning

By Chuck Hawks

After the fun of shooting comes the drudgery of cleaning one's guns. For this purpose most shooters acquire a cleaning kit. If you are starting out, the basics can be acquired as a package deal, the kit from Outers being typical. Cleaning kits typically include a three section aluminum cleaning rod of appropriate diameter for the caliber purchased (one section if it is a pistol cleaning kit), two tips to hold patches, cloth cleaning patches, a bore brush, a bottle of liquid powder solvent, and a bottle of gun oil. Some kits include a small tube of gun grease, and if it is a shotgun cleaning kit it usually includes a bore swab. To use one of these kits, merely follow the directions that come with the cleaning kit.

After purchasing the basic kit, you will need to add patches, tips, and brushes in all the calibers for which you own guns. You may also need to purchase additional cleaning rods. Cleaning rods are generally available in diameters for .22 rifles (and pistols), centerfire rifles (and pistols), and shotguns. Some shooters prefer to purchase one-piece steel cleaning rods, which are better but more expensive and less portable than the jointed aluminum kind.

In addition to the basic cleaning kit I recommend the purchase of a silicone cloth. This is used to wipe fingerprints off the gun after handling and replaces the traditional oily rag. Silicon cloths are excellent protection against "rust prints."

There are also silicon-based sprays for external use on firearms (which are then wiped down). I have never used silicon sprays myself, but those that do report favorably on them.

Prolix total gun care product is a proprietary cleaner, lubricant, and preservative that can replace both traditional powder solvent and gun oil. It comes in 16 ounce plastic bottles with "trigger squeeze" tops, or bulk jugs. Prolix is a one step gun cleaner that will not harm wooden stocks, but you should test it on plastics before use. (It does not attack the polymer used in Glock pistols.) I first read about Prolix in Peter Kasler's book GLOCK: The new Wave in Combat Handguns. Prolix is the chosen cleaning product of Glock

armorers. It contains industrial grade solvents that penetrate and remove fouling.

I spray Prolix down the barrel to remove fouling, let it sit for a short time, and clean the barrel as I would if using a normal powder solvent. Prolix is the only cleaner/lubricant I will spray into an action. After cleaning, wipe off all the Prolix you can. Prolix has a dry solid lubricant/protectant base that leaves a residue at the molecular level on gun parts that is very long lasting. It completely eliminates the use of gun oil.

An accessory I use to clean my gun barrels is the "Bore Snake." This is a Hoppe's product that pretty much replaces the tiresome chore of running patch after patch through the bore. It is a synthetic cord several feet long and slightly larger than the bore size for which it is intended. At the front of the Bore Snake is the first floss area, designed to remove foreign particles prior to the scrubbing action of the brush. A bore brush is embedded in the next couple of inches of the cord to loosen hard deposits. The rest of the Bore Snake is the main floss, with 160 times more surface area than an ordinary patch. A length of small diameter cord, considerably smaller than the bore size, is attached to the leading end of the Bore Snake; it has a skinny brass weight at its tip.

When I use a Bore Snake I generally saturate the first floss area with Hoppe's #9 bore solvent. Then I drop the Bore Snake's brass weight into the breech of the gun and let it carry the small diameter cord through the barrel and out the muzzle. Next I grab the cord and slowly pull the body of the Bore Snake completely thorough the barrel. Just to make sure, I pull the Bore Snake through the barrel a second time (without adding Hoppe's). That's it, the barrel is cleaned. Bore Snakes are made for all common rifle, pistol, and shotgun calibers.

A handy accessory for quickly wiping a shotgun barrel is the Tico Tool from Silencio (the ear protector people). The Tico Tool looks like a very long, very skinny "duster" (of the sort your mother used to dust bookshelves) that mated with a shotgun cleaning rod. Like Bore Snakes, they are made to fit specific gauges. The Tico Tool is merely pushed back and forth through the shotgun's bore, exactly like a cleaning rod. Because it fits tightly, it removes the bulk

of the loose powder residue, just like a feather duster carries off dust. An accessory tip (supplied with the Tico Tool) is used to oil the shotgun barrel after the Tico Tool has done its work. A Tico Tool is a handy accessory at the range, but it cannot be said to actually clean the gun.

A good accessory to keep with your cleaning kit is a bore light. These are basically penlight flashlights with a light conducting plastic tip that is bent at an angle. The plastic tip can be inserted into the breech of a firearm so that the light shines down the bore. A bore light makes it easy to see the inside of a gun barrel.

While I am most likely to spend my money on products that speed-up gun cleaning, like Bore Snakes and Tico Tools, there are also products designed to do a better job than the ordinary cleaning kit. One of these, used by a good friend who praises it extravagantly, is the Outers Foul Out kit. This is an Electro-chemical process basically consisting of an electrode rod that goes in the bore, a liquid electrolyte, a bore plug, connecting wires, and an electronic "black box." When assembled per the instructions, the system is plugged in and cleans the bore Electro-chemically. An LED on the black box comes on to indicate when the core is clean. The length of time it takes for the LED to come on depends on the amount of fouling in the bore. Typically this process takes from 1/2 to several hours. Foul Out is the ultimate bore cleaner and works with handguns or rifles.

One thing worth noting on the subject of gun cleaning is to go very easy with the gun oil. Keep excessive oil out of the bore and action of any firearm. Very, very little oil is required to lubricate the action, and none is necessary in the bore unless the gun is to be stored for an extended period of time. Excess oil collects dust and dirt and accelerates wear. It can also gum up an action, and it will attack and soften a wooden stock. (Regular gun oil is completely different from the kind of oils used to finish stocks.) If you use Prolix to clean and lubricate, and a silicone cloth to wipe down, you can omit gun oil altogether and your guns will be better for it.

Rifle Cleaning from www.otisgun.com (Otis Products Inc.)

Check to make sure the rifle is unloaded and the magazine is empty.

The most important rule of gun cleaning is to always clean from breech to muzzle

in the direction of the bullet. There are no exceptions to this rule. If you go in the wrong direction ("muzzle to breech") you will bring powder residue and abrasive dirt from the barrel into the chamber and neck. This causes stuck cases and other malfunctions of the action. The next bullet down the barrel will drag this dirt and erode the bore.

Overview

Pull a patch with solvent through the bore to mop out any loose residue and dirt.

Pull a brush. Turn it to clean the neck and shoulder of the neck.

Pull a new swab to mop the residue the brush loosened.

Otis All-Caliber Swab

The All-Caliber swab will clean from 22 to 45 caliber rifles. The swab is a significant break through in gun cleaning. This one swab replaces five different size patches. Each swab can be used 6 times offering 6 new clean surfaces

Slot "A" is used with the smallest brass #2 tip. This cleans 22 to 30 caliber

Slot "B" is used with the middle size #3 tip to clean 30 to 45 caliber. Refer to Chart B for detailed pinch locations.

1. Take a pinch on the swab. Pinch the swab upward as illustrated.
2. Feed the tip of the fold through the slot in the brass tip.
3. Pull the fold through tightly to lock the swab on the tip. This will make a knot that will scrub deep into the rifling.

You have now created a cone that will give 360 degree coverage.

By pinching in different locations you can vary the size of the swab.

4. Apply 3 to 5 drops of solvent to the front end of the knot in the swab.

Do not dip the swab or brush into solvent. This will allow excess solvent to wash residue into the trigger group.

The solvent will be squeezed out of the swab when it enters the shoulder of the chamber. The solvent will flush ahead of the swab knot and lubricate any abrasive dirt in the bore.

It is not necessary to disassemble the rifle. Just open the action as if you were inserting a cartridge.

5. Run the cleaning rod down the bore in the natural direction of the bullet.

If the rifle has limited breech access (22 rim-fire semi automatics etc.), place the tip with swab into the chamber as you would insert a shell. Run the

rod into the barrel and turn to attach the tip. Pull the residue and dirt from the barrel in the direction of the bullet.

6. Turn the rod as you enter the locking lugs. This is the most important area of the rifle.

Use your finger to force the turning swab into the recess in front of the lugs.

Continue turning the swab as it enters the chamber. This will mop out the gummy buildup at the shoulder.

Continue to turn the swab as you enter the neck to clean and lubricate this area.

Now that you have cleaned the loose residue out of the receiver, locking lugs, chamber, shoulder, and neck, we will clean the bore. Do not worry about swivels, for the rod rotates within itself. Use the "T" handle if you desire. Pull the rod and swab in the direction of the bullet.

7. Turn the swab over and use a new surface for your next cleaning cycle.

Using Chamber and Bore Brushes

1. Attach the brush to the end of the flexible rod.

2. Turn the brush to first loosen the residue in the neck.

3. After scrubbing the neck pull the brush in the direction of the bullet "breech to muzzle"

4. Now run the swab as we described earlier. This will mop out residue you have loosened with the brush.

NOTE: The neck is critical to the accuracy of the rifle. When the new round is inserted the brass case is a few thousandths of an inch from the throat or start of the bore. The new bullet rests at the start of the throat. When the rifle is fired the case elongates to the shoulder of the neck. If dirt is present the bullet gets trapped and has a later release time. The bore brush is made oversize to scrub this critical area.

Obstructions

If the chamber is not maintained properly fired cases may get stuck in the chamber. This will also occur in cold weather situations.

To remove the case, run the flexible cleaning rod into the bore, and with rapid taps hit the base of the case. Eventually, the stuck case will be removed.

Cleaning Procedure For All Firearms

It is very important to understand and develop a comfortable and rewarding gun

cleaning program for your valuable firearms.

Many times people think that a collector firearm is your neighbor's engraved rifle or an expensive shotgun. This is very far from the real truth. A collector grade firearm is your dad's old shotgun or rifle; the one that he used when he taught you your first hunting or shooting skills. This firearm becomes more valuable as each day passes.

Those who do not clean and take care of their family heirlooms soon learn that they have nothing more than a wall hanger to pass on to their children. If you inherit your dad's or grandfather's rifle and have an excellent bore, hang onto it! Many people will want to buy your barrel or parts to repair their own rifles. Manufacturers no longer make many of these parts, and because they don't, they become more valuable every day.

So don't let the sun set on a dirty gun! You will pay a dear price for not maintaining your investment.

Some facts you may not be aware of:

Firearms are a better investment than money in the bank. When you sell a good firearm you will get a better return on your investment.

Firearms are the most stable commodity that you can invest in. Look at the ups and downs in the gold and metals markets. During economic chaos, he who has the guns has the gold! If you take care and clean correctly, your lever actions and auto loaders will outperform most single action firearms. This is especially true in 22 rim-fire semi-autos that are almost always cleaned incorrectly (muzzle to breech).

To clean, open the action as if you were going to insert a cartridge. Run the cleaning rod down the bore in the natural direction of the bullet. Pull the patch and the powder residue out of the barrel. It is this easy to clean any rifle in less than one minute. You can be assured that you are doing it properly to maintain the firearm.

When you clean, it is best to put an obstruction remover on one end of the rod this, facilitates cleaning and protects the threads of the rod. Using the proper size patch and the Otis method of attachment you can turn the rod in a clockwise direction in the receiver. The patch turns into a cone and cleans the entire circumference. Pull the turning patch into the chamber and clean the locking

lugs. It is best to invest a few seconds cleaning the chamber. This will prevent stuck cases and guarantee you a second shot. As you continue to turn you will clean the most important areas of your rifle, the shoulder and the neck. This is shell space. If you keep this clean you will prolong the life of your firearm, and the bullet will leave the shell at a constant velocity. Continue to turn until the patch is in the bore. The solvent has been squeezed out of the patch and flows ahead of the patch and down the bore. This solvent will lubricate and remove powder residue or abrasive dirt that is in the bore. Continue to pull the rod out of the barrel in the natural direction of the bullet.

It is very important to note that you never run a brush down the barrel first. This will always damage the firearm. If you have dirt or moisture in the barrel, it will get into the bristle on the brush. The next time the brush is in the neck, it will deposit some of the dirt. This is the exact equivalent of cleaning in the wrong direction.

It is important that if you have any dirt in the bore that you do not run the same patch surface down the barrel again. If you do, the dirt that was picked up on the patch may scratch the lead to the throat. Take advantage of the six position patch and use a clean surface each time you pull the patch down the barrel.

It is important to put the patch on correctly to give the tightest possible patch. This allows the patch to mold itself to the inside configuration of the bore and scrub deep into the corners of the rifling.

Run successive patches down the barrel until the patch comes out clean. For long term storage, run a loose patch and let the oil stay in the bore.

If you are going to use the firearm, run a tight dry patch. Target shooters have learned that this tight dry patch will eliminate a fouling shot. Their first shot will be close to every succeeding shot. Many people need a fouling shot because they left solvent or oil in the barrel. This oil causes increased pressure behind the bullet, thus it goes in a slightly different position. As a hunter or military sniper, you will appreciate this as you do not have a fouling shot. Your first shot is usually your only and most important shot.

After you run the first patch down the barrel, you can now use a brush. Remember: Only run the brush from breech to muzzle. Otis produces short, heavy,

brass bore brushes that can easily be inserted from the chamber to the muzzle. The brush of the proper size should always be used. You can consult the brush chart for a reference size. The Otis brushes are oversized. They clean the neck as you pull them down the barrel. It is recommended that when the brush is in the chamber that you turn the rod and brush in a clockwise direction. This will scrub the corner of the neck. This is important. If powder residue builds up in this corner, the case will pinch on the bullet and you will get random release times. Anyone who reloads knows this is the same problem if you do not trim the case length properly. The case will be too long for the neck and pinch the bullet.

It is recommended that you clean the rod and components with a used swab before putting them in the case

If you purchase a used firearm, pull one of the Otis brushes down the bore. The brush is so precise that any bore wear or rusty spots can be felt in the rod. The most important rust problem you will pick up is near the muzzle. Many rifles have rust deep in the corners of the rifling. This is caused by a rifle that had rain or moisture in the muzzle. Most people do not clean this moisture out of the bore. In a matter of hours, the raw fired barrel will start to rust. You can prevent this condition by always having your cleaning equipment with you in the field where you are using the firearm. When you are hunting in the wet weather, just run a tight patch with solvent down the barrel and get this moisture out. Obviously, you would want to go from breech to muzzle. Just think about going in the wrong direction and pushing all of this water into the chamber. The next day a stuck case is the result.

You will find that the Otis brushes will give you many if not at least 20 times the life of an ordinary brush. The main reason is you do not have the ability to reverse this brush in the bore. You can only pull the brush from breech to muzzle. Many people with solid rods have the tendency to go back and forth with the brush. This is equivalent to bending a wire back and forth until it breaks. Reversing a brush in the bore always damages the brush, and many times damages the bore. This must never be allowed to happen on any valuable firearm. You may notice that when you pull a brush out of the bore, the bristles throw the powder residue away from the firearm. Placing a patch over the rod and muzzle will illustrate how the brush catapults the dirt. This is necessary to clean the brush so that you do not drag this abrasive dirt back through the chamber and neck. Can you imagine someone going in the wrong direction? We have all done

this with the old conventional equipment. This catapults the dirt right into the chamber, locking lugs and receiver. In fact this is the number one cause of firearm malfunctions.

You may notice that each tool has a compartment in the soft-pak case. Professionals never work out of a bucket. If you throw your tools into a box the tool you need the most is back on the last job. With a tool compartment like the soft-pak all your equipment is in one place and accounted for.

The Otis bore solvent has a rust inhibitor and preservative added. It is also recommended for the outside of the barrel. Put a few drops on a patch and rub into the surface until dry.

HELPFUL HINTS

Limited Breech access

On some rifles (such as 22 rim-fire semi automatics and small frame revolvers) you may not be able to get the tip into the chamber because it is too long when assembled on the rod. Take the tip off and put the patch on as you normally would. Put the tip into the chamber just as if you were inserting a shell. Turn the cleaning rod in a clockwise direction and reattach the tip. Pull the powder residue and debris out of the barrel in the natural direction of the bullet. The same procedure will be needed for the brush. In some rare cases the brush cannot be used. Repeat this step each time until the firearm is clean. You may want to try the small caliber equipment on the 22 rim-fire.

Solvent

Otis produces a solvent, lubricant, and rust inhibitor in one product. The important rule is not to overuse any cleaning product. Only a few drops on the front of the patch is necessary. If you use too much solvent, it will wash dirt into the trigger mechanism. This is the cause of a sticky trigger. If you let the firearm stand with the muzzle up, the solvent will drip into the receiver and cause premature failure of the stock.

Fouling Shots

Some target shooters must take a fouling shot. One of the reasons for this is that they have left oil or solvent in the corners of the rifling. This will increase the pressure by causing an abnormal seal on the bullet. You can

increase the accuracy of your first shot by making sure no oils are left in the corners of the rifling. Simply run a dry tight patch through the bore before you intend to use the firearm. This is a must for hunters or snipers who are not afforded the luxury of a fouling shot

Rusted Bores

This is simply a condition that exists with many firearms. When you go to purchase a firearm clean the bore and run a brush from the breach to the muzzle.

Pull slowly and choke up on the cleaning rod. You will be able to feel the inside of the rifling as you pull. Sometimes the brush will start to pull with less resistance, and this is an indication of an oversized bore.

If this occurs at the throat, the firearm may have been fired many times. If the bore is oversized near the muzzle, someone allowed water to lay in the bore.

This is common occurrence and exists in over 1/3 of the used firearms. The above condition greatly effects the accuracy of the firearm and a new barrel is usually the only cure.

Barrel Condition

When you purchase a firearm, remember that all firearms record their history from the breech to the muzzle. Look down the barrel of the firearm. You can tell about how many shots have been fired, and the cleaning method (solid sectional rods leave marks in the muzzle and rifling). Shot out barrel and rusted barrels can sometimes be detected.

Aluminum Cleaning Rods

Aluminum rods will damage most firearms if they are allowed to rub extensively in the barrel. You may believe that aluminum is soft and will not damage the firearm. Aluminum creates an oxide on its outer surface. This oxide is similar if not identical to the aluminum oxide used in grinding wheels and knife sharpening equipment. This oxide will lap the bore and make it oversized and uneven. Any oversized condition allows gas to escape ahead of the bullet, thus random velocities occur.

Tight Patch

Many cleaning instructions recommended that you do not run a tight patch. This is because the rod is so cheap it will break or bend. Run as tight a patch as possible, as this will mold the patch into the corners of the rifling. One tight patch will do the work of 20 or more times with a loose patch
