

## CHAPTER 9:

# MUZZLELOADERS



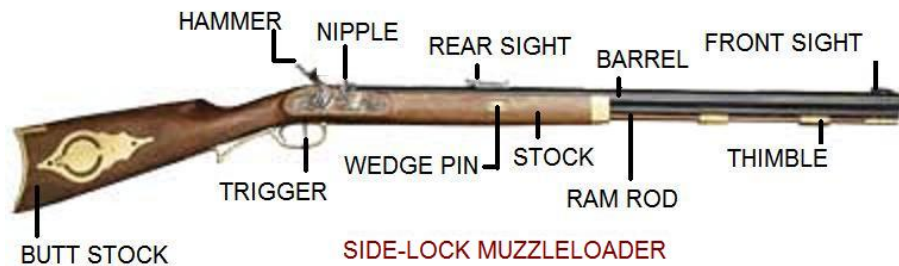
### Objectives:

- Identify the major parts of a muzzleloader
- Learn the different powder granulations and their specific uses
- Learn the steps of loading a muzzleloader
- Learn the difference between a hangfire and misfire
- Learn how to remove a stuck projectile

Muzzleloaders are defined as firearms that are loaded through the muzzle. There are three basic components used when loading a muzzleloading rifle. In loading order they are powder, patch, and ball. If you are shooting a muzzleloading shotgun the components are powder, cardboard over powder patch, lubed fiber compression wad, shot, and cardboard wad to retain shot.

Muzzleloader hunting has been gaining popularity over the past few years for many reasons. For the traditionalist, it offers the opportunity to go a field with a primitive firearm. Others like the challenge of only having a single shot. The old adage, one shot one kill, comes into play here. Most importantly it gives the hunter more time to hone their skills and extend their season allowing more time in the field. Many hunters like using in-lines, as they have excellent downrange accuracy, even better than most slug-guns. The excellent accuracy is due to the rifling in the barrel. Rifling causes the bullet to spin increasing accuracy

## Major Parts and Accessories



## Muzzleloader Accessories



## Powder Types and Granulations

There are many different types of powder available to the hunter these days, the most popular being black powder. Alternatives to black powder are Pyrodex®



and triple-7. These two alternatives burn cleaner and make cleaning the gun easier. Black powder is made up of a combination of sulfur, saltpeter, and charcoal. Powder of any kind should be stored in a cool dry area in a safe or lock box.

Black powder can be found in granular form or in pellets. Granular black

powder must be measured, using a powder measurer prior to pouring it into the muzzleloader. **Never load directly from a can or powder horn into the firearm!** A powder measurer insures that the load will be consistent each and every time.

Black powder comes in different grain sizes. The size of the grains dictates the caliber and type of gun it can be safely fired from. The different sizes are Fg, FFg, FFFg, and FFFFg. The more F's the smaller the grains.

**Fg-** used in cannons

**FFg-** used in .45 caliber or larger

**FFFg-** used in .45 caliber or smaller

**FFFFg-** only used to prime flintlocks

**Never use FFFFg in a rifle, it may cause the gun to explode**

Pyrodex® is a propellant designed for use in muzzleloading and black powder firearms and is sized differently than black powder.

**Pyrodex P - Pistol Powder** –used in all pistols and in smaller bore rifles, 45 caliber and down

**Pyrodex RS - Rifle/Shotgun Powder** - used in all calibers of percussion muzzleloading rifles and shotguns

**Pyrodex Select - Select Rifle/Shotgun Powder** - select is an enhancement of RS grade of Pyrodex

Both black powder and Pyrodex® come in pellet form. These pellets come in pre-measured in 30 or 50 grain increments. They make loading much easier for the shooter but limits the shooter who would like to fine tune their powder charge.

Smokeless powder used in shotgun shells and rifle cartridges should never be used in a muzzleloader not made to shoot such powders. Using smokeless powders, in firearms not designed for them, can cause the barrel to explode.

# Loading

For a complete video display of how to load a muzzleloader please view chapter 13 of the DVD.

The first thing that should be determined before handling any firearm is whether or not it is loaded and that the safety is on. Unlike a shotgun or rifle you can't just open an action on a muzzleloader. To see if your muzzleloader is loaded, you must spring-a-rod or check the unloaded mark on your ramrod.

To **spring-a-rod**, simply drop the ramrod down the barrel, watch and listen. If the ramrod bounces and makes a metal on metal pinging noise the firearm is unloaded. However, if the ramrod doesn't bounce and makes a dull thud there is a projectile or obstruction in the firearm.

To check the loaded mark on your ramrod, you must first place one on the ramrod. The first time you check to see if your



muzzleloader is loaded is the best time to make this mark. Once the ramrod is in the barrel, using a piece of tape or file, put your mark on the ramrod right where the ramrod sticks out of the top of the barrel.

Most ramrods, that come with the gun, do not stick out of the barrel when the firearm is unloaded. There are a few solutions to this problem. You can either use a range rod or put an extended jag at the end of your ramrod. Realize that in hunting situations, range rods and jags can not be used. They will get in the way of the muzzle when the ramrod is put back into the thimbles.

The next step, is **snapping caps**. The reason for snapping caps is to dry out any residual moisture or oil left over from previous cleanings.

It is also used to determine if there are any obstructions in the barrel or nipple.

This is important because if the powder gets wet or the nipple is obstructed the primer can not ignite the powder.



Always snap the first cap down-range. This is a safety precaution just in case the firearm is loaded. The second cap should be snapped while holding the barrel a few inches (4-6) away from a blade of grass. Watch for the grass to move. If it moves



you know the nipple is clear.

It is important to have both hands free when loading a muzzleloader. An easy way to do this is by placing the butt of the gun between your heels, with the trigger guard pointing in the direction you are facing. Now, move your heels together until they lock onto either side of the butt of the gun. By slightly bending at the knees and placing the forearm between them, you now have both hands free for loading your firearm.

The next step is to measure powder. It is best to read your owners manual to determine the size of the charge you can use in your firearm. The general rule of thumb is one grain of powder per caliber. Meaning, if you have a 50 caliber gun it is safe





to shoot 50 grains of powder. Never load directly from a powder flask or can. Only load your muzzleloader from

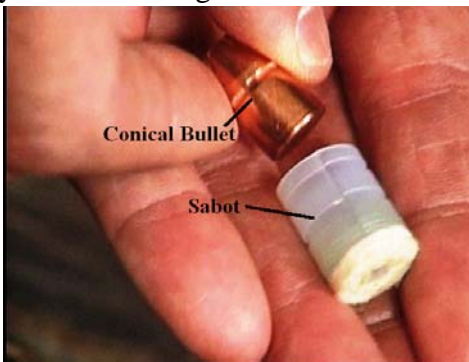
a powder measurer or from a pre-measured speed loader. By using your hand, as an improvised funnel, you can avoid spilling powder when loading. Always replace the lid on a powder flask or can after the desired amount is measured out. This will keep any sparks given off by the primer from falling into an open container. Another way to protect against this is to load the muzzleloader away from the firing line. Pyrodex pellets can be used in place of loose powder. Pellets come pre-measured, typically in loads of 30 and 50 grains. To load pellets, drop them down the muzzle with the dark black side down.

Now that the charge is in place, the next step is to load a projectile. If you will be using a round ball you must first center a lubed shooting patch over the muzzle. Make sure that it is a single patch. They are very thin and if more than one is used the ball will get stuck halfway down the barrel. Place a round ball on top of this patch.



Round ball and patch

If you are shooting a conical bullet with a

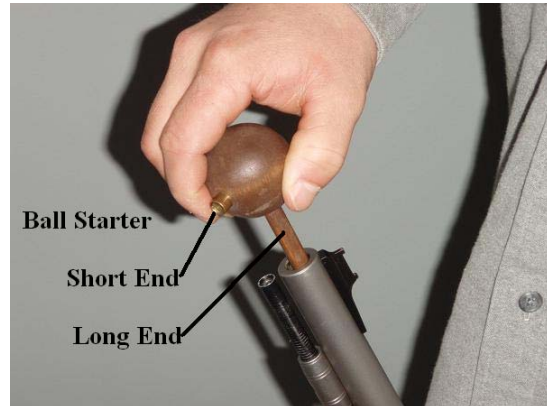


Conical Bullet

Sabot

plastic jacket (sabot) there is no need to use a patch as the sabot around the projectile is used in place of the lubed patch.

Next you will need to start the projectile down the barrel. To do this you must use a ball starter. First, you must use the short end of the ball starter to start either projectile into the barrel. Next use the longer end to push the projectile further down the barrel.



Next, you will use a range or ram rod to finish seating the projectile on the charge.



This is done by using short strokes, one hand over the other until the round is seated firmly. It is important to make sure that the round is seated properly or it will act like an obstruction in the barrel causing damage to it and maybe harming you. At this point you can put a loaded mark (where the rod leaves the end of the muzzle) on your ram rod or range rod, keep in mind that this mark

will change with the type of projectile and amount of powder you use.

Finally, you are ready to fire. Walk up to the firing line (always keeping the firearm pointed in a safe direction), place a primer on the nipple,



cock the hammer, take aim, and squeeze the trigger. Be aware that a hang-fire or misfire may occur. A hang-fire is when the primer fires, but there is a short delay before the main charge ignites.

A misfire on the other hand is when the primer fires, but the main charge does not. For this reason, when a muzzleloader charge does not ignite keep the muzzle pointed downrange for two minutes. After the two minutes, reseal the projectile as the misfire may have caused it to move up the barrel (creating an obstruction), re-prime and fire again (repeat this process 3-4 times).

If the charge will not go off you must now remove the projectile. This is a potentially dangerous situation, but there are three methods that will keep everyone safe.

- A CO2 or silent ball discharger
- Using a nipple wrench, remove the nipple and work a few grains of powder in behind the main charge. Clear the threads of any powder and replace the nipple. Reseat projectile, prime firearm, and fire.
- Remove the nipple with a nipple wrench. Remove the barrel from the stock and submerge the breech end of the barrel in water to saturate the charge for 1-2 hours. While

submerged, pour water down the barrel. Once the charge is saturated a ball puller can be used to remove the projectile and the powder can be washed out.

These steps can be confusing for a first time shooter. Become familiar with your firearm by reading the manufacturers' instructions. Go to the range with someone who is responsible and experienced with muzzleloaders. Use the knowledge of your hunter education instructor, ask them any questions you may have.

## Cleaning

Always be sure that your muzzleloader is unloaded before attempting to clean it. For a complete video demonstration on muzzleloader cleaning please watch chapter thirteen of the DVD.

Gun manufacturers come up with new innovations each year, to make their guns more user friendly. However, they have yet to produce a muzzleloader that cleans itself. Many hunters choose not to use muzzleloaders because they do not want to take the time to clean the gun. It is actually quite easy to do and only takes about ½ an hour.

Depending on the make and model of the muzzleloader, there will be different ways to clean the gun. Always refer to the manufacturer's instructions on how to properly care for your muzzleloader. Make sure the gun is well lubed when storing for long periods of time, this will prolong the life of the muzzleloader. Store the muzzleloader in a cool dry place that is under lock and key. Check your muzzleloader periodically for rust that may be developing and thoroughly clean it before this rust has the opportunity to ruin your muzzleloader.