



# SAVAGE<sup>®</sup> ARMS

THE DEFINITION OF ACCURACY

Safe ownership is your responsibility.  
Please thoroughly read and understand this  
manual before loading your firearm.

Keep firearms and ammunition away from  
children. Lock unloaded firearms and  
ammunition securely in separate locations.

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OWNER'S MANUAL

## MODEL 10ML MUZZLELOADER

IMPORTANT! DO NOT ATTEMPT TO LOAD AND SHOOT YOUR RIFLE UNTIL YOU HAVE THOROUGHLY  
READ THIS INSTRUCTION MANUAL AND ARE FULLY FAMILIAR WITH ITS CONTENTS

For your convenience, this OWNER'S MANUAL has been divided into 8 sections:

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This manual should always accompany your firearm and be transferred with it upon change of ownership.

## SECTION 1

### 10 COMMANDMENTS OF SHOOTING SAFETY

*(The following excerpts are from SAAMI bulletin #081 1MM 7/97 BP. The entire booklet can be obtained by calling: NATIONAL SHOOTING SPORTS FOUNDATION, 11 MILE HILL ROAD, NEWINGTON, CT 06470; 203-426-4358.)*

#### Firearms Safety Depends on You

From the time you pick up a firearm, you become part of a system over which you have complete control. You are the only part of the system that can make a gun safe - or unsafe.

You can help meet this responsibility by enrolling in hunter safety or shooter safety courses. You must constantly stress safety when handling firearms, especially to children and non-shooters. Develop safe shooting habits, and remember, firearm safety is up to you. Make no mistake about it.

### ALCOHOL, DRUGS AND GUNS DON'T MIX

#### ❶ ALWAYS KEEP THE MUZZLE POINTED IN A SAFE DIRECTION

This is the most basic safety rule. If everyone handled a firearm so carefully that the muzzle never pointed at something they didn't intend to shoot, there would be virtually no firearm accidents. It's as simple as that, and it's up to you.

Never point your gun at anything you do not intend to shoot. A safe direction means a direction in which a bullet cannot possibly strike anyone, taking into account possible ricochets and the fact that bullets can penetrate walls and ceilings. Even when "dry firing" with an unloaded gun, you should never point the gun at an unsafe target.

This is your responsibility, and only you can control it.

#### ❷ FIREARMS SHOULD BE UNLOADED WHEN NOT ACTUALLY IN USE

Firearms should be loaded only when you are in the field or on the target range or shooting area, ready to shoot. When not in use, firearms and ammunition should be secured in a safe place, separate from each other. It is your responsibility to prevent children and careless adults from gaining access to firearms or ammunition. A loaded gun has no place in or near a car, truck or building.

#### ❸ DON'T RELY ON YOUR GUN'S "SAFETY"

Treat every gun as though it can fire at any time, regardless of pressure on the trigger. The "safety" on any gun is a mechanical device, which like any such device, can become inoperable at the worst possible time. The safety serves as a supplement

to proper gun handling, but cannot possibly serve as a substitute for common sense.

Never touch the trigger on a firearm until you actually intend to shoot.

Regardless of the position of the safety, any blow or jar strong enough to actuate the firing mechanism of a gun can cause it to fire. The only time you can be absolutely certain that a gun cannot fire is when the action is open and it is completely empty. You and the safe gun handling procedures you have learned are your gun's primary safeties.

#### ❹ BE SURE OF YOUR TARGET AND WHAT'S BEYOND IT

No one can call a shot back. Don't shoot unless you know exactly what your shot is going to strike. Be sure that your bullet will not injure anyone or anything beyond your target. You should keep in mind how far a bullet will travel if it misses your intended target or ricochets in another direction.

Be aware that even a .22 short bullet can travel over 1-1/4 miles and a high velocity cartridge, such as a 30/06, can send its bullet more than 3 miles. Shotgun pellets can travel 500 yards, and shotgun slugs have a range of over half a mile.

#### ❺ USE CORRECT AMMUNITION

You must assume the serious responsibility of using only the correct ammunition for your firearm. Read and heed all warnings, including those that appear in the gun's instruction manual and on ammunition boxes. Using improper or incorrect ammunition can destroy a gun and cause serious personal injury. It only takes one cartridge of improper caliber or gauge to wreck your gun, and only a second to check each one as you load it.

Be absolutely certain that the ammunition you are using matches the specifications that are contained within the gun's instruction manual and the manufacturer's markings on the firearm.

Handloaded or reloaded ammunition deviating from pressures generated by factory loads or from competent recommendations specified in reputable handloading manuals can be dangerous, and can cause severe damage to guns and serious injury to the shooter.

Ammunition that has become very wet or has been submerged in water should be discarded in a safe manner. Do not spray oil or solvents on ammunition, or place ammunition in excessively lubricated firearms.

Form the habit of examining every cartridge you put in your gun. Never use damaged or substandard ammunition - the money you save is not worth the risk of possible injury or a ruined gun.

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*Discharging firearms in poorly ventilated areas, cleaning firearms or handling ammunition may result in exposure to lead and other substances known to cause birth defects, reproductive harm and other serious physical injury. Have adequate ventilation at all times. Wash hands thoroughly after exposure.*

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**ⓐ IF YOUR GUN FAILS TO FIRE WHEN THE TRIGGER IS PULLED, HANDLE WITH CARE!**

Occasionally, a cartridge may not fire when the trigger is pulled. If this occurs, keep the muzzle pointed in a safe direction. Keep your face away from the breech. Then, carefully open the action, unload the firearm and dispose cartridge in a safe way.

Anytime there is a cartridge in the chamber, your gun is loaded and ready to fire - even if you've tried to shoot and it did not go off. It could go off at any time, so you must always remember RULE #1 and WATCH THAT MUZZLE!

**ⓑ ALWAYS WEAR EYE AND EAR PROTECTION WHEN SHOOTING**

All shooters should wear protective shooting glasses and some form of hearing protectors while shooting. Exposure to shooting noise can damage hearing, and adequate vision protection is essential. Wearing eye protection when disassembling and cleaning any gun will also help prevent the possibility of springs, spring tensioned parts, solvents or other agents from contacting your eyes. No target shooter, plinker or hunter should ever be without them.

**ⓒ BE SURE THE BARREL IS CLEAR OF OBSTRUCTIONS BEFORE SHOOTING**

Before you load your firearm, open the action and be certain that no ammunition is in the chamber of the magazine. Then *glance* through the barrel to be sure it is clear of any obstruction. Even a small bit of mud, snow, excess lubricating oil or grease in the bore can cause dangerously increased pressure, causing the barrel to bulge or even burst when firing, which can cause injury to the shooter and bystanders. Make it a habit to clean the bore with a cleaning rod and patch to wipe away anti-rust compounds in the gun each time immediately before you shoot it. If the noise or recoil on firing seems weak or doesn't seem quite "right," cease firing immediately and be sure to check that no obstruction or projectile has become lodged in the barrel.

**ⓓ DON'T ALTER OR MODIFY YOUR GUN, AND HAVE GUNS SERVICED REGULARLY**

Firearms are complicated mechanisms that are designed by experts to function properly in their original condition. Any alteration or change made to a firearm after manufacture can make the gun dangerous and will usually void any factory warranties. Do not jeopardize your safety or the safety of others by altering the trigger, safety or other mechanism of any firearm or allowing unqualified person's to repair or modify a gun.

Your gun is a mechanical device that will not last forever and is subject to wear. As such, it requires periodic inspection, adjustment and service.

**ⓔ LEARN THE MECHANISM AND HANDLING CHARACTERISTIC OF THE FIREARM YOU ARE USING**

Not all firearms are the same. Since all guns can be so different, never handle any firearm without first having thoroughly familiarized yourself with the particular type of firearm you are using, the safe gun handling rules for loading, unloading, carrying and handling that firearm, and the rules of safe gun handling in general.

You should always read and refer to the instruction manual you received with your gun, or if you have misplaced the manual, simply contact the manufacturer for a free copy. Having a gun in your possession is a full-time job. You cannot guess; you cannot forget. You must know how to use, handle and store your firearm safely. Do not use any firearm without having a complete understanding of its particular characteristics and safe use. There is no such thing as a foolproof gun.

## SECTION 2

### MUZZLELOADER SAFETY

Loading and shooting a muzzleloading rifle is not difficult, but does require procedures that are different than loading and shooting a cartridge firearm. To avoid possible damage to the rifle or injury to the shooter and bystanders, practice and follow the Ten Commandments of Muzzleloader Safety. Always use common sense when handling, loading and shooting any firearm.

#### Ten Commandments of Muzzleloader Safety

① The beginning muzzleloading shooter can receive instruction and information from the National Muzzleloading Rifle Association, local muzzleloading clubs, the National Rifle Association and state hunter education programs.

② The Savage Model 10ML has been designed and built to shoot prescribed smokeless powder loads. This rifle will also give outstanding performance with black powder or Pyrodex<sup>®</sup> propellants. Do not use smokeless powder in any other muzzleloading firearm.

③ Always keep the muzzle of the rifle pointed in a safe direction, especially during loading. With any muzzleloader there is always the possibility of an accidental discharge while loading. It is imperative that the barrel be vertical and angled away from the face and body when pouring in a measured powder charge and while seating the projectile over the powder.

④ NEVER chamber a primed ignition module in the rifle before loading powder and projectile in the barrel. Once the module is chambered, the rifle is ready to fire.

⑤ Remain focused during loading to insure that you use the proper sequence of components. NEVER hand a loaded muzzleloader to another shooter. NEVER fire a muzzleloader someone else has loaded (without knowing how and with what it was loaded). NEVER attempt to jump across a ditch, climb across a fence or log, or hoist a muzzleloader into an elevated tree stand while it is primed and ready to fire. ALWAYS know if your rifle is loaded or unloaded, primed or unprimed. NEVER let yourself become distracted while handling a loaded and primed muzzleloader.

⑥ ALWAYS seat the projectile firmly over the powder charge. Any projectile that sits off of the powder charge will usually produce poor accuracy, and could result in pressures high enough to burst the barrel and cause injury.

⑦ The best accuracy with smokeless loads in your Savage Model 10ML will be achieved with powder charges that have been carefully weighed on a balance beam scale and carried in small, capped plastic tubes. When loading with loose grain black powder or Pyrodex<sup>®</sup>, always use a separate adjustable measure to pour the powder into the bore. NEVER pour black powder or Pyrodex<sup>®</sup> directly from the can, powder flask or powder horn. A burning ember from the last shot left in the barrel could ignite the powder and result in the explosion of the container. ALWAYS keep your face and hands away from the

muzzle when loading, and immediately close any black powder or Pyrodex<sup>®</sup> container after use.

⑧ DO NOT smoke while loading or handling a loaded muzzleloader, or when handling propellants.

⑨ Keep powder and primers away from where firearms are being discharged. Sparks, intense heat or a sharp impact can detonate powders and primers. Check with manufacturer's instructions for details on safe handling and storage.

⑩ Thoroughly check all functions of mechanical parts before loading your Savage Model 10ML rifle. Take precautions against overcharging the rifle, and always make sure that the projectile is properly seated over the powder before chambering a primed percussion module. Accidental double powder charges, improperly seating bullets, or an obstruction in the bore could result in damage to the rifle and serious injury or death to the shooter.

## SECTION 3

### OPERATING INSTRUCTIONS

PRIOR TO LOADING, FAMILIARIZE YOURSELF THOROUGHLY WITH THESE OPERATING INSTRUCTIONS AND THE MAIN PARTS OF YOUR FIREARM.

FAILURE TO OBEY A SAFETY WARNING MAY RESULT IN INJURY TO YOU OR OTHERS.

KNOW HOW TO LOCATE AND OPERATE THE SAFETY.

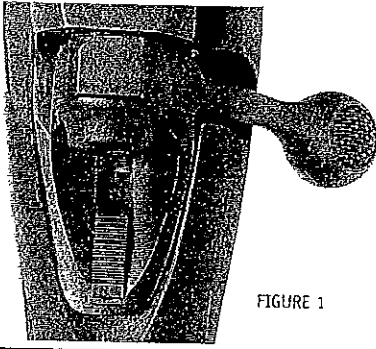


FIGURE 1

### SAFETY

The safety on your Savage Arms bolt-action firearm has 3 positions:

- 1 - FULL SAFE
- 2 - MID SAFE POSITION
- 3 - SAFETY OFF - READY TO FIRE

#### 1: FULL SAFE

A) The safety is in the FULL SAFE position when it has been moved fully rearward, covering the red "F" (see FIGURE 1).

B) The safety can only be moved into the FULL SAFE position when the bolt has been closed and the firearm is ready to fire.

When carrying a loaded firearm, the safety must always be in the FULL SAFE position.

C) In the FULL SAFE position, the trigger is blocked from moving and the bolt cannot be opened.

The only time you can be absolutely certain that a gun cannot fire is when the action is open and the chamber is completely empty.

#### 2: MID SAFE POSITION

A) MID SAFE POSITION allows the bolt to be opened and cycled while still blocking the trigger.

B) The safety will move to the MID SAFE POSITION when the following sequence is performed:

- lift the bolt handle
- move the safety to the FULL SAFE position
- close the bolt handle

C) MID SAFE POSITION must be used to extract modules from the chamber.

#### 3: SAFETY OFF - READY TO FIRE

A) The safety is in the OFF position when moved fully forward, exposing the red "F".

Never carry a loaded firearm with the safety off.

### PRIMING AND REPRIMING THE MODULE

1. REMOVE SPENT PRIMERS using decapper pin and breech plug wrench to hold module (see FIGURE 2).

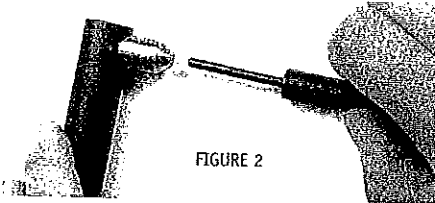


FIGURE 2

2. CLEAN MODULE INSIDE by scraping with decapper pin to remove carbon.

3. PRESS PRIMER INTO REAR OF CLEANED MODULE.

### LOADING

Before loading and firing, remove, clean and lubricate breech plug and vent liner. Wipe bore clean. **WARNING:** Failure to lightly lube plug and liner may cause parts to seize after firing.

1. MAKE SURE THE RIFLE IS UNLOADED AND BOLT IS OPEN. The ramrod is approximately the same length as the bore of the rifle. When dropped into an unloaded barrel, one end should sit nearly flush with the muzzle. If it protrudes an inch or more, the rifle is either loaded or has a barrel obstruction. See instructions for disassembly to remove load or obstruction.

2. Before pouring in the powder charge, make sure that there is no primed module in the chamber of the breech plug. FOR SAFETY, LEAVE BOLT OPEN.

3. WIPE BORE FREE OF OIL. Using the cleaning jag on the end of the ramrod, run a clean, dry patch down the bore to wipe oil from the barrel, which is pointed in a safe direction. Fire a primed module through the breech plug to clear it of oil or cleaning solvents. The rifle is ready to be loaded.

4. POUR IN MEASURED OR WEIGHED POWDER CHARGE. Your Savage Model 10ML rifle can be loaded with charges of black powder, Pyrodex® or prescribed loads of certain smokeless powders (see chart in Section 4). For safety and consistent accuracy, all powder charges should be carefully measured. When loading with black powder or

Pyrodex<sup>®</sup>, use a volume type measure. Load Pyrodex<sup>®</sup> on a volume to volume basis with black powder. MAXIMUM PRACTICAL CHARGE WITH EITHER IS 150 GRAINS. Best accuracy with prescribed smokeless loads is obtained when charges are precisely weighed on a powder scale. NEVER CLOSE THE BOLT ON A PRIMED IGNITION MODULE WHILE LOADING...AND ALWAYS KEEP FACE AND HANDS CLEAR OF MUZZLE.

5. START AND SEAT THE PROJECTILE OVER THE POWDER CHARGE. Plastic sabot and bullet combinations must fit barrels tightly and require the use of a bullet starter to push through the muzzle. Once the bullet is past the muzzle, use the ramrod to firmly seat it over the powder charge. DO NOT CRUSH THE POWDER CHARGE. Simply push the projectile down the bore until it makes contact with the powder, then seat firmly. For best accuracy, always exert the same amount of pressure on the ramrod for every shot.

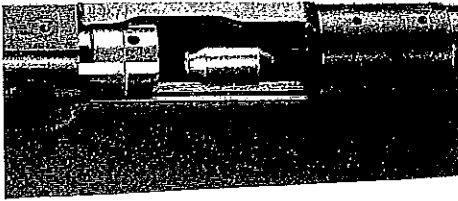


FIGURE 3

6. WITH THE SAFETY IN THE FULL-SAFE POSITION, CHAMBER A PRIMED PERCUSSION MODULE. Insert the tapered nose of an percussion module (see FIGURE 3) and close the bolt to chamber the module and No. 209 shotshell primer (see previous section). SINCE THE SAFETY WILL AUTOMATICALLY MOVE TO THE MID-

SAFE POSITION WHEN THE BOLT IS CLOSED, IMMEDIATELY RETURN THE SAFETY TO THE FULL-ON POSITION.

7. WHEN READY TO SHOOT, PLACE SAFETY INTO THE "OFF" POSITION AND FIRE...But only when the muzzle is pointed at the desired target and you've taken careful aim.

8. OPEN BOLT AND REMOVE FIRED PERCUSSION MODULE. To reload, run a patch dampened with solvent down the bore to remove fouling from the bore.

9. ALWAYS WEAR PROPER EYE AND HEARING PROTECTION WHEN LOADING AND SHOOTING YOUR NEW SAVAGE MODEL 10ML MUZZLELOADER.

**Warning:** Do not attempt to deprime a live primer from a percussion module. A sharp impact from the depriming pin to the front of the primer could cause detonation and injury to the shooter or bystanders. Fire the primer in an EMPTY rifle, then deprime the module.

#### UNLOADING YOUR RIFLE

To unload your Savage Model 10ML, you have three alternatives:

- 1) You can fire the rifle into a safe backstop.
- 2) You can remove the primed percussion module from the chamber and pull the charge.
- 3) Or you can remove the bolt and the removable breech plug (see "Disassembly") and dump out the powder charge through the receiver. Using a stiff, heavy-duty cleaning rod, push the projectile out through the breech end of the barrel.

One of the most significant features of the Savage Model 10ML is the removable breech plug. It

allows the shooter to easily unload the rifle without having to fire the load, plus makes cleaning this muzzleloader much easier than rifles without a removable breech plug. If you are shooting smokeless powder and have the luxury of shooting into a proper backstop, firing the rifle is the quickest and easiest way to unload any muzzleloader. However, if you are shooting loads of either black powder or Pyrodex<sup>®</sup>, a single shot means you'll have to thoroughly scrub the fouling from the bore and other metal parts before the rifle can be stored. Removing the breech plug allows your Savage Model 10ML to be unloaded without having to fire the rifle or to be faced with a lengthy and thorough cleaning job.

#### WHAT TO DO IN CASE OF A MISFIRE

The percussion module and #209 shotshell primer used in the Savage Model 10ML puts upwards of 15 times the amount of fire into the barrel as is possible with the very best No. 11 percussion cap used for ignition on most other muzzleloading rifles. When fresh quality primers are used, the chance of a misfire is indeed rare. However, primers are produced in mass quantities and it is possible to experience a faulty primer, which could result in a misfire.

If you should experience a misfire, follow this procedure:

1. Without opening the bolt, keep the muzzle of the rifle pointed downrange, or in a safe direction, for at least a minute. Should the rifle have a delayed or hang fire, others and property will not be in danger.
2. After the minute has passed, and with the muzzle still pointed in a safe direction, open the bolt and remove the percussion module from the chamber.

Always reseat the bullet onto the powder charge before attempting to fire with another primed module. The pressure created by a single No. 209 shotshell primer is enough to push bullet and powder charge up the barrel, where the projectile could create a dangerous situation, the same as a barrel obstruction.

Chamber a new primed module, take aim on your target or safe backstop, and attempt to fire the rifle once more.

3. If the rifle still fails to fire, wait one minute, then inspect module for buildup, clean module and reprime. There may be a good chance that you simply forgot to pour powder into the barrel before seating the projectile with the ramrod, or your powder charge may have gotten damp or contaminated with oil that may have been left in the bore from the last cleaning. Follow the instructions for "Disassembly" and remove the breech plug. Dump out any powder (through the receiver) and push the projectile from the barrel with a stiff, heavy-duty cleaning/loading rod. Thoroughly clean barrel, breech plug and receiver area. Clean or replace vent liner if worn (approximately 100-300 shots).

4. Reassemble rifle, making sure that the threads of the breech plug is lubed with a light coat of anti-seize compound.

#### DISASSEMBLY

1. **MAKE SURE A MODULE IS NOT IN THE CHAMBER AND THE RIFLE IS UNLOADED.** Before attempting to disassemble, insure that rifle is not loaded using method described in "Step 1" of "LOADING" procedure.

2. **REMOVE BOLT.** Raise bolt handle, pull rearward,

pull trigger and depress bolt release simultaneously, slide bolt out the rear of the receiver.

3. **REMOVE RAMROD.**

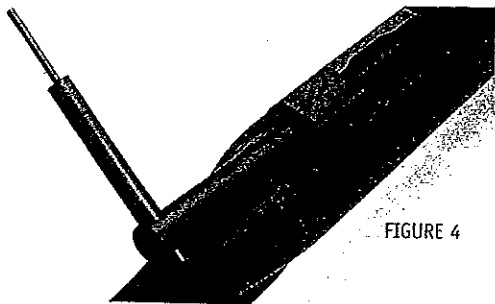


FIGURE 4

4. **REMOVE BREECH PLUG.** Use the special breech plug wrench shipped with your rifle (See FIGURE 4). Insert wrench from the rear of the receiver until it fits snugly into the notches at the rear of the breech plug. Unthread the breech plug from the barrel by turning counter clockwise. **YOUR RIFLE CAN NOW BE CLEANED FROM THE BREECH END OF THE BARREL.**

5. **REMOVE THE BREECH PLUG VENT LINER TO THOROUGHLY CLEAN BREECH PLUG.** Use a 3/32" allen wrench to remove the vent liner at the face of the breech plug. Depending on the powder being shot, this part should be replaced after approximately 100 to 300 shots to maintain optimum performance.

6. **NEVER POLISH THE TAPERED END OF THE MODULE.** This will remove the surface and destroy the seat of the percussion module (with the chamber of the breech plug) allowing gasses and pressure to escape.

#### REASSEMBLY

Simply reverse the procedures for "DISASSEMBLY." However, before reinstalling the breech plug vent liner and breech plug, first apply a light coat of anti-seize compound to the threads of each. This will ensure that these parts will unthread the next time the rifle is completely disassembled. Failure to apply anti-seize compound to these parts could result in shipping your muzzle loader back to Savage Arms Inc. for disassembly - for which you will be charged. Note: Failure to properly seat the breech plug during reassembly will prevent the bolt from closing on a chambered firing module. Excess anti-seize can result in misfires. Always wipe bore clean with a dry patch before attempting to reload and fire. Stock/receiver screws should be tightened securely.

#### CLEANING YOUR SAVAGE MODEL 10ML MUZZLELOADER

Savage Arms Inc. recommends the use of most popular smokeless powder cleaning solvents to clean the bore and breech plug following shooting this rifle with any of the prescribed loads of smokeless powder. If you have fired either black powder or Pyrodex\* through your rifle, use any good commercial black powder/Pyrodex\* cleaning solution. Follow these detailed cleaning instructions for proper maintenance of your rifle:

1. Make sure that the percussion module has been removed from the chamber of the breech plug and that the rifle is unloaded, then follow the instructions for "Disassembly."

2. To remove smokeless powder residue from the

bore, dampen patches with a quality nitro bore solvent and push them through from the breech end of the barrel using a stiff, heavy-duty cleaning/loading rod. When cleaning black powder or Pyrodex<sup>®</sup> fouling from the bore, use a full strength black powder/Pyrodex<sup>®</sup> solvent to saturate patches and push through the barrel from the breech end.

3. After every 100 or so shots, lightly scrub the bore with a bronze bore brush to ensure removal of light plastic residue left by plastic sabots.

4. Wipe the bore with dry, clean patches.

5. Lightly apply a good gun oil to a dry, clean patch and run through the bore several times.

6. Thoroughly clean the breech plug and removable vent liner of fouling with same solvent used to clean bore. Inspect the vent liner by looking through it and replace if necessary. Wipe dry and apply a light coat of anti-seize, compound to the threads of the vent liner and reinstall with 3/32" allen wrench. Apply a light coat of anti-seize to threads of breech plug and reinstall in barrel.

7. Wipe outside metal surfaces of barrel, receiver and bolt with lightly oiled cloth.

8. Reassemble rifle in reverse order of disassembly.

## SECTION 4

### RECOMMENDED SMOKELESS POWDERS LOADS

Your .50 caliber Savage Model 10ML muzzleloader has been designed and built specifically to shoot clean burning, non-corrosive, better performing and economical smokeless powder. We have found the system to be very compatible with loads made up of Winchester 571 ball powder, Alliant 2400 and both Hodgdon H-4227 and IMR Powder Co. IMR-4227.

#### WARNING!

**DO NOT ATTEMPT TO LOAD AND SHOOT THESE OR ANY OTHER SMOKELESS POWDER LOADS IN ANY OTHER MUZZLELOADER. ALL LOADS FOR THE SAVAGE MODEL 10ML SHOULD BE WEIGHED CAREFULLY ON AN ACCURATE SMOKELESS POWDER SCALE. NEVER USE A VOLUMETRIC MUZZLELOADER POWDER MEASURE.**

Powder	Bullet	Velocity	Energy
(w/black HMP Sabot)	(gr)	(f.p.s.)	(ft.lbs.)

#### Alliant 2400

34 gr.	Speer 260 gr. .451" JHP	2350 f.p.s.	3189 ft. lbs.
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#### IMR-4227

49 gr.	Homady .452" 240 gr., XTP-MAG	2340 f.p.s.	2918 ft. lbs.
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#### Alliant Reloder 7

48 gr.	Homady .452" 300 gr., XTP-MAG	2215 f.p.s.	3240 ft. lbs.
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#### Hodgdon H-4227

50 gr.	Homady .452" 300 gr., XTP-MAG	2280 f.p.s.	3462 ft. lbs.
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**NOTICE:** To determine the best load for your Savage Model 10 ML, try loading one or two grains more or less of these powders with sabot bullets of similar weights and diameters.

Use smokeless powder loads with sabot .45 caliber bullets only. When loading and shooting bore-sized lead conical bullets, Savage Arms Inc. recommends loading with Pyrodex "RS", "Select", or "Pyrodex Pellets". Maximum recommended load is 150 grains.

**NOTE:** THE SAVAGE MODEL 10ML IS DESIGNED, ENGINEERED AND BUILT TO WITHSTAND THE HIGHER PRESSURES OF MODERN SMOKELESS PROPELLANTS SUCH AS THOSE LISTED HERE. THE USE OF ANY SMOKELESS PROPELLANT (OTHER THAN PYRODEX) IN ANY OTHER MUZZLELOADER WILL DESTROY THESE GUNS AND COULD CAUSE INJURY TO THE SHOOTER AND BYSTANDERS.



**RECOMMENDED BLACK POWDER AND PYRODEX® LOADS**

Powder	Bullet (w/HP Sabot)	Velocity (f.p.s.)	Energy (ft. lbs.)
Black Powder			
100 gr. Ffg	Speer 260 gr. .451" JHP	1590 f.p.s.	1458 ft. lbs.
Pyrodex®			
100 gr. RS/Select	Speer 260 gr. .452" JHP	1625 f.p.s.	1523 ft. lbs.
100 gr. RS/Select	Homady 300 gr. .452" XTP-JHP	1575 f.p.s.	1650 ft. lbs.
Pyrodex® Pellets			
100 gr. (two 50-gr. Pellets)	Homady 300 gr. .452" XTP-JHP	1610 f.p.s.	1725 ft. lbs.
150 gr. (three 50-gr. Pellets)	Homady 300 gr. .452" XTP-JHP	1905 f.p.s.	2415 ft. lbs.

**SECTION 5**

**NECESSITIES AND ACCESSORIES**

\* Included with rifle

Necessary items for use of the 10ML

\* Owners manual – read and understand

\* Breech-plug wrench

\* Decapper (also used as wrench handle)

\* Modules

\* Anti-seize lube (Kleen-Bore® TW25B sample included)

3/32" allen wrench (for vent liner)

Powder scale

Plastic vials for charges

Vent liner pick (we suggest "Hoppe's Nipple Pick")

Proper cleaning solvents and equipment for type of powder used.

Proper prescribed loads (includes specific powder charge, bullets and sabots.)

Patch worm (to pull lost patches)

\* Ball starter

Powder measure (for smokeless powder)

NOTE: black powder measures are graduated for black powder/pyrodex loads only and should only be used for same.

**Accessories**

Range rod (heavier and longer than rifle rod which is intended for field use)

Cleaning rod with swab or mop for wiping between shots

Extra modules

Spare vent liner

**SECTION 6**

**STATEMENT OF LIMITED WARRANTY**

Please complete the WARRANTY REGISTRATION CARD attached to the tag hanging from the barrel and return it to Savage Arms, Inc. within ten (10) days from the date of purchase.

Savage Arms, Inc. must be notified within one (1) year from the date of purchase of any defect in materials or workmanship encountered during normal use.

**WHO IS COVERED?** (all conditions must be met)

- The original owner (with proof of purchase).
- Bought from a licensed dealer.
- Firearm/serial number legally registered.

**WHAT IS COVERED?**

- Any defect in materials or workmanship.
- The repair or replacement of the firearm at the sole discretion of Savage Arms, Inc. (in the event that Savage Arms, Inc. replaces a firearm, the defective one (in its entirety) will be retained at Savage Arms, Inc.)

**HOW LONG IS THE WARRANTY PERIOD?**

One (1) year from the date of purchase.

**WHAT IS NOT COVERED?**

PERSONAL INJURY, PROPERTY DAMAGE, AND/OR DAMAGE TO THE FIREARM CAUSED BY:

- Negligence to provide proper care and maintenance.
- Alterations/modifications performed by other than Savage Arms, Inc. Service Department.
- Reloaded/hot loaded/improperly loaded/non-standard ammunition.

- Normal wear, tear, and/or corrosion.
- Accidental discharge, careless handling, and/or misuse.
- Barrel obstructions.

#### EXCLUSIONS AND LIMITATIONS:

This WARRANTY and the remedies set forth herein are exclusive and takes the place of all other expressed or implied WARRANTIES (including any implied WARRANTY of merchantability or fitness for any particular purpose which are disclaimed). No other representations or claims of any nature shall be binding on or obligate Savage Arms, Inc.

Savage Arms, Inc. excludes any incidental and consequential damages under this warranty.

Some states do not allow exclusions or limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

This WARRANTY gives you specific legal rights. You may have other rights which will vary from state to state.

#### RETURNING A FIREARM:

For WARRANTY claims, proof of purchase must accompany the firearm.

It is a violation of Federal Law to ship a firearm with live ammunition either in the box or in the firearm itself. If received, The Bureau Of Alcohol, Tobacco, And Firearms must be notified!

Savage Arms, Inc. is not responsible for the loss or damage to any accessories shipped with the firearm.

If there is a question whether the firearm should be returned or parts could be purchased, please call 1-413-568-7001 between 9:00am and 3:30pm EST.

All firearms are to be sent to Savage Arms, Inc. prepaid. Warranty repairs will be returned to the owner at our expense.

① Pack the firearm in its original box if possible (or a similar suitable box), being careful to include any styrofoam support pieces.

② Enclose a brief note including:

- name and address of sender
- serial number
- description of the problem you are having
- bullet weight, bullet type, and manufacturer of the ammunition you are using
- any other information which you feel may be helpful.

③ Return to:

SAVAGE ARMS, INC.  
100 Springdale Road  
Westfield, MA 01085  
ATTN: Service Department

④ Upon receipt at Savage Arms, Inc. an acknowledgement will be sent within five (5) working days stating your firearm has been received.

⑤ If there will be a charge involved for the repair, a quote will be sent within seven (7) working days.

⑥ If there is no response from the quote within (30) days. A second quote will be sent.

⑦ If there is no response from the second quote, the firearm will be returned COD (\$15.00 Shipping/Handling).

⑧ Firearms will be repaired in a reasonable amount of time (typically 3 weeks after receipt of payment)

in the order they were received.

⑨ It is at the sole discretion of Savage Arms, Inc. to replace a WARRANTY firearm deemed uneconomical to repair.

## SECTION 7

### FREQUENTLY ASKED QUESTIONS

#### Why is bolt hard to close over module?

The module must make a gas tight seal with the breech plug. A proper fitting module will show a bright ring at the front of the taper that indicates a good seal. If soot shows on taper after firing, replace worn module. The modules are made to wear in order to protect the breech plug and headspacing system. A good seal is required for reliable ignition and accuracy.

#### Repriming module

When repriming the module, be sure to poke out carbon from the inside before replacing primer. Carbon build up will affect ignition, accuracy, and may result in misfires. Poke the carbon out with the small end of the decapper.

#### How often and why must I lube the vent liner and breech plug?

The rifle should have the breech plug and vent liner removed and cleaned before storage. In heavy use at the range, it may be necessary to clean them during the day. Black powder will require cleaning

about every 20 shots while smokeless will allow much more shooting between cleanings. The cleaned vent liner and breech plug threads should be lubed before assembly with a seizure preventing lube. Use it very sparingly or it will wick into chamber and wet powder causing misfires. (As a suggestion "Kleen-Bore" TW25 B) Before loading a rifle removed from storage, it is a good practice to fire a primed module only, checking for the muzzle blast on the ground. This will indicate that the ignition path is clear. Warning - check barrel, with ram rod to insure there is no charge in rifle first.

#### What is the purpose of the vent liner?

The vent liner is the last constriction in the path of the flame from the primer and concentrates the flame into the powder charge. This part should be replaced at 100/300 shots. The flame will wear the 3/16" hex drive and if it is not replaced, a hex wrench will not be able to remove it. The through hole should be cleaned with a short piece of music wire .029" diameter or smaller. (a "Hoppes Nipple Pick" works well.)

#### Information on sabots

Many sabots designed for use with black powder will not withstand the smokeless powder pressures. Sabots are also affected by ambient temperatures and will perform poorly in very hot weather. The best sabots for smokeless powder are those designed for high pressures and made of harder plastic, usually called "magnum sabots". The sabot must have a good grip on the bullet and will require a good effort to ram home. A loose fitting bullet

and sabot will be inaccurate and will have very low velocity. Be sure the bullets and sabots match and provide a tight seal. Too high a powder charge will blow by the sabot and reduce velocity, degrading accuracy. A good charge is one that shows a dull red flash at the muzzle, producing the highest velocity. A white or very bright flash indicates a "blow-out" of the sabot. Pick up your sabots when developing your load and examine the petals. Melted or torn petals are the sign of a "blow-out". The best load with the highest velocity will show the petals folded open but intact with the base. The best performance will be from loading and shooting .451" to .452" (.45) bullets with the proper sabot (usually black) and not .429" to .430" (.44) bullets with the appropriate sabot (usually green). You would think that the heavier plastic of the green sabot with the smaller diameter bullet in the .50 caliber bore would perform better. IT DOESN'T. In fact, the thicker plastic blows easier.

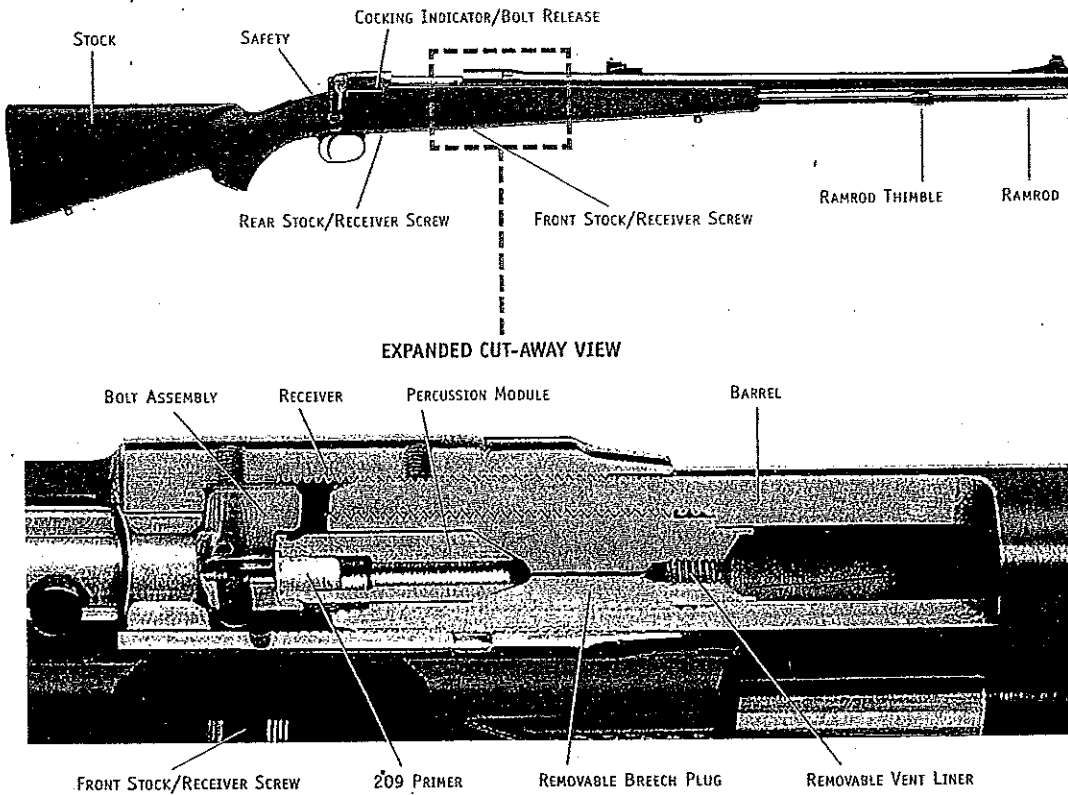
#### Loading powder

All charges of smokeless powder should be checked with a powder scale. A variation of 1/2 grain will be detrimental to accuracy and can triple group size. Black powder and bulk pyrodex can be loaded by volume but smokeless must be loaded by weight. Try to hold the barrel vertical, pouring the powder down the center (to prevent from clinging to the sides of the bore). The sabot will not clean powder from the bore, as it only seals when the rifle is fired. Powder on the sides of the bore will cause a "blow-by" of the sabot resulting in a poor shot. When shooting at the range, wiping between shots will increase accuracy. Preload charges in plastic

tubes for ease of loading in field or at range.  
**WARNING - DO NOT USE SMOKELESS POWDER IN RIFLES DESIGNED FOR BLACK POWDER.**

## SECTION 8

### SCHEMATICS/PARTS LIST



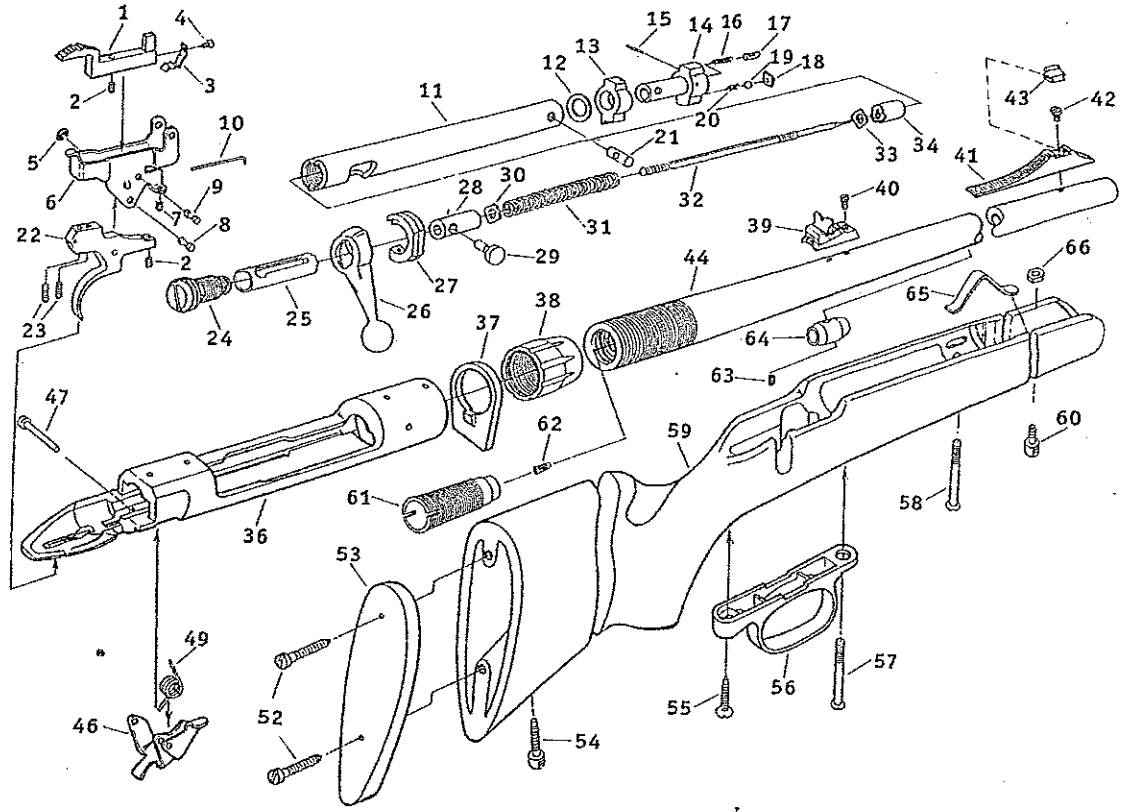
### SAVAGE BOLT ACTION MUZZLE LOADING RIFLES

When ordering parts, it is necessary to specify model number marked on barrel, caliber, serial number and left or right hand.

#### KEY # DESCRIPTION

- |    |                               |
|----|-------------------------------|
| 1  | ** SAFETY                     |
| 2  | ** SCREW, SOCKET 8/32" x 1/4" |
| 3  | ** SPRING, SAFETY DETENT      |
| 4  | ** SCREW, BREECH BOLT STOP    |
| 5  | ** RING, SAFETY RETAINING     |
| 6  | ** TRIGGER BRACKET            |
| 7  | ** SCREW, TRIGGER PULL ADJ.   |
| 8  | ** PIN, TRIGGER               |
| 9  | ** PIN, SAFETY BEARING        |
| 10 | ** SPRING, TRIGGER PULL ADJ.  |
| 11 | BOLT BODY                     |
| 12 | WASHER, FRONT BAFFLE FRIC.    |
| 13 | BAFFLE, FRONT                 |
| 14 | * BOLT HEAD                   |
| 15 | PIN, EJECTOR RETAINING        |
| 16 | SPRING, EJECTOR               |
| 17 | EJECTOR                       |
| 18 | EXTRACTOR                     |
| 19 | BALL, 1/8" STEEL              |
| 20 | SPRING, EXTRACTOR             |
| 21 | PIN, BOLT HEAD RETAINING      |
| 22 | ** TRIGGER                    |
| 23 | ** SCREW, SOCKET 8/32" x 3/8" |
| 24 | SCREW, BOLT ASSEMBLY          |
| 25 | SLEEVE, COCKING PIECE         |
| 26 | BOLT HANDLE                   |
| 27 | REAR BAFFLE ASSEMBLY          |
| 28 | COCKING PIECE                 |
| 29 | PIN, COCKING PIECE            |
| 30 | LOCK WASH, COCKING PIECE      |

- 31 MAINSPRING
- 32 \*\* FIRING PIN
- 33 WASH., FIRE PIN STOP NUT
- 34 NUT, FIRING PIN STOP
- 36 \* RECEIVER
- 37 \* RECOIL LUG
- 38 \* BARREL LOCK NUT
- 39 REAR SIGHT BASE ASSEMBLY
- 40 REAR SIGHT SCREW, LONG
- 41 FRONT SIGHT BASE
- 42 SCREW FRONT SIGHT
- 43 FRONT SIGHT 7/16" HIGH
- 44 \* BARREL
- 46 \*\* SEAR ASSEMBLY
- 47 PIN, SEAR
- 49 SPRING, SEAR
- 52 SCREW, BUTT PLATE
- 53 PAD, RECOIL
- 54 SWIVEL STUD, REAR
- 55 REAR TRIGGER GUARD SCREW
- 56 TRIGGER GUARD
- 57 SCREW, REAR ACTION
- 58 SCREW, FRONT ACTION
- 59 STOCK ASSEMBLY
- 60 SWIVEL STUD, FRONT
- 61 BREECH PLUG
- 62 VENT LINER
- 63 SCREW, RAMROD THIMBLE
- 64 RAMROD THIMBLE
- 65 RAMROD SPRING
- 66 HEXNUT 8/32"
- 67 + RAMROD



- + ITEMS NOT ILLUSTRATED
- + ITEMS NOT WARRANTED BY SAVAGE.  
CONTACT MANUFACTURER.
- \* FACTORY INSTALLATION ONLY.
- \*\* SOLD TO FFL OR FACTORY INSTALLED.