



RIDGE RUNNER MUZZLELOADING RIFLE



INSTRUCTION AND SAFETY MANUAL

Warning! Muzzleloading firearms are dangerous weapons. You must read and understand the warnings and instructions in this manual before attempting to load or use your muzzleloading rifle.



CLEANING AND MAINTENANCE

Black Powder and Pyrodex are very corrosive and leave considerable residue in the barrel. For proper shooting, accuracy and protection against misfire, your gun must be cleaned frequently during shooting and must be cleaned thoroughly prior to any storage period.

A. Cleaning during firing:

After every three or four shots, or at any time it becomes difficult to load a projectile the bore needs to be cleaned.

- 1 With the gun unloaded, unprimed, and "S" safety position on, place a cleaning patch on the ramrod cleaning jag and soak it in a black powder solvent, commercial window cleaner, or just plain water.
- 2 Vigorously run the cleaning patch through the barrel to remove and loosen any fouling.
- 3 Follow the procedure by running a few dry cleaning patches down the barrel to remove any moisture of remaining residue and fire several primers to be sure the adapter is free of residue and moisture.
- 4 Reload and resume your shooting.

B. Cleaning for storage:

As soon as you finish firing, return to camp or home, the rifle must be thoroughly cleaned. Failure to clean, even overnight, can cause damaging corrosion. (Note: See disassembly instructions).

- 1 Remove the barrel from the stock. Remove the bolt assembly and the adapter.
- 2 Place the barrel, breech and first into a bucket of hot soapy water. Attach a cleaning patch to the ramrod and create a flushing action by pumping the ramrod up and down in the barrel.
- 3 Rinse the barrel with hot water and immediately dry it.
- 4 All metal surfaces should be treated with a light coating of rust preventative oil.
- 5 Reassemble the barrel to the stock, replace the adapter, reassemble the bolt, and prepare the gun for storage. Do not store guns in gun cases.

DISASSEMBLY/ASSEMBLY

The rifle is shipped from the factory as a completely assembled unit. Thoroughly study the parts diagram and read the disassembly instructions before attempting to disassemble or reassemble. The rifle can be fully disassembled with four tools; pliers, a small slotted screwdriver, a Hex or Allen Key size 5/32 and a combo tool available apart. Note: The barrel may need to be locked in a padded vise when removing the breech plug.

1. Disassemble the Bolt:

Remove plug screw (L), unscrew bolt handle (X); unscrew and remove receiver plug (G). Note: Bolt spring (Y) may be under pressure and removes at same time as receiver plug (G); hold the trigger fully to the rear and pull bolt body (H) from the receiver.

2. Disassembly of Stock from Barrel:

Remove ramrod; remove stock screw (P). Barrel and stock can now be separated.

3. Removal of Trigger Group:

Trigger group (M) can be removed by unscrewing trigger mounting screw (N). On re-assembly be sure the trigger group housing fits in the indented part of the receiver.

4. Adapter and Breech Plug

Can be removed using the appropriate combo tool separately supplied; the combo tool is drilled so a screwdriver can be inserted for extra force; carefully remove the adapter (J); then remove the breech plug (K). Visually note the breech plug seating before removal. The breech plug must be fully resealed on reassembly. Shooting this rifle with a partially seated breech plug is extremely dangerous!

The rifle is now fully disassembled for cleaning and/or parts inspection. To re-assemble, reverse the process.

LOADING DATA

17:43

projectiles: Pure lead conical bullets and/or sabots should be used in the same caliber as marked on your rifle, i.e. a .50 caliber barrel uses .50 caliber conical bullets and/or .50 caliber sabots. (Do not use patches with conicals or sabots)

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round balls must be used with patches. The actual size of the round ball projectile will be slightly smaller than the listed bore of your rifle, i.e. a .50 caliber barrel bore uses a .490" diameter round ball lead ball, and a .54 caliber bore uses a .530" diameter round lead ball. Patches are sold commercially. See your dealer for the proper patch size. Patches are prepackaged and designated by caliber. Patches must be lubricated for ease of loading and creating a complete gas seal between the projectile and powder charge.

powder: USE ONLY Black Powder "FFG" also referred to as 2F or Double F, or Pyrodex-RS powder in loading your rifle.

NEVER USE MODERN SMOKELESS POWDER IN ANY MUZZLELOADING FIREARMS; NEVER EXCEED

Loading Ranges (Powder by Volume)		
	Start Load	Maximum Load
.50 caliber		
Conical or Sabots	80 Gr.	110 Gr.(max)
Patch and Balls	60 Gr.	110 Gr.(max)
.54 caliber		
Conical or Sabots	90 Gr.	120 Gr.(max)
Patch and Balls	60 Gr.	120 Gr.(max)

WARNING

The powder charges listed above are rated by volume. Black Powder and Pyrodex are nearly equal in chamber pressure and velocities when measured by volume. If you weigh your actual powder charges, the Pyrodex charge must be reduced by 20% from the stated Black Powder charge.

Primers: The rifle uses # 208 primers. Primers are explosive-handle and store them with care.

SIGHT/SIGHT ADJUSTMENT/SCOPE MOUNTING

The rear sight is adjustable for windage and elevation. The front sight should not be adjusted.

- A Windage - turn the side mounted screw clockwise to move point of impact to right; turn the screw counter clockwise to move the point of impact left
- B Elevation - the large top center screw should be turned clockwise to raise the point of impact and counter clockwise to lower the point of impact.
- C The receiver has been drilled and tapped for scope mounting. Weaver type 61 bases for the Ridge Runner. The tapping screws must be removed before the bases can be installed.

PART LIST

Reference	Description	Reference	Description
A - 20850	Receiver*	M - 20864	Trigger assembly
B - 20851	Barrel, Blued .50"	N - 20865	Trigger mounting screw
- 20852	Barrel, blued .54"	O - 20866	Ramrod spring
C - 20853	Ramrod assembly	P - 20867	Stock screw
D - 20854	Front Sight	Q - 20868	Stock
E - 20855	Rear Sight assembly	T - 20869	Bolt plate screw(2)
F - 20856	Mount screws(4)	U - 20870	Bolt plate
G - 20857	Receiver Plug	V - 20860	Trigger Guard
H - 20874	Stock	W - 20871	Trigger guard screw(2)
I - 20858	Bolt	X - 20861	Bolt Handle
J - 20859	208 Adapter	Y - 20872	Bolt spring
K - 20862	Breach Plug	Z - 20873	Adapter spring
L - 20863	Plug screw		

*Indicates part must be Factory Installed

PARTS DIAGRAM/PARTS REFERENCE GUIDE

PREPARING FOR USE AND LOADING

1. US
- A unprick if new, or uncase if used
 - B Place the safety lever, located on right side above trigger guard, in the rearward "S" position and cock the bolt by pulling the bolt handle to the rear until it clicks and locks open.
 - C check to see if the barrel is frayed or obstructed by:
 - 1 Placing a cleaning jag on the ramrod and inserting the ramrod in the barrel, jag first, until it bottoms out on the breech.
 - 2 Place a reference mark on the ramrod where it extends from the bore.
 - 3 Remove the ramrod and lay it along side the barrel indexing the reference mark on the ramrod even with the muzzle. The other end of the ram rod should be even with the breech end of the adapter
 - 4 If this test indicates an obstruction or load may be present - STOP! And contact your dealer or a competent gunsmith for assistance.
 - D Check to be sure all parts and working components are in good working order.
 - E Check the breech plug and primer to be sure they are firmly seated; if not, re-tighten with a proper tool, separately supplied.
 - F Thoroughly clean all packing grease, oils and packing residue from the gun and barrel bore.
 - G Check to be sure the flash hole is clean and clear of obstruction. Do this by placing a 209 primer on the adapter; then place a patch or leaf over the muzzle, move the safety to "F" position and fire the primer. If the flash hole is clear, the pressure from the fired primer will move the patch or leaf away from the muzzle.
 - H Fire two or three additional primers to be sure all oil and/or residues is cleared, then cock the bolt open and engage the safety, you are now ready to load

LOADING COMPONENTS AND TOOLS

- A Tools required - ramrod, bullet starter, powder measure, muzzle protector ramrod guide, funnel for loading powder measure and patch/bullet lubricant
- B Black Powder - There are four granulation grades of black powder and three granulation grades of Pyrodax. The Ridge Runner uses black powder grade "FFG" or Pyrodax grade "RS" - ONLY! Powder can be carried and stored in the original container, a powder horn or powder flask.
- C Projectiles - Three types of black powder muzzleloading projectiles can be used in the Ridge Runner rifle as follows: traditional patch and balls, pure lead conical bullets, sabots with jacketed pistol bullets.

NOTE: The barrel has a fast 1 in 28" twist and will function with all three types of projectiles; however, due to the fast twist, conical bullets and sabot bullets will provide the best accuracy.

LOADING PROCEDURE AND PREPARATION TO FIRE

- 1 Powder charge - loading
 - 1 Be sure the safety is always in the "S" safety position.
 - 2 Place butt on ground or solid rest with muzzle pointing up, but away from you.
 - 3 Select the powder grain volume charge from the recommended loads listed on page 12 of this manual, for the type of projectile and caliber. **NEVER EXCEED the maximum listed powder charge.**
 - 4 Set your powder measure to the recommended volume charge.
 - 5 Fill the powder measure until full, then close the measure and pour the measured powder charge into the muzzle.
 - 6 Tap the barrel with your hands to be sure all of the powder falls to the bolster and primer area.

CAUTION: Do not pour any powder charge directly into the barrel from a powder horn, flask or bulk container.

- 7 The powder charge is now loaded - Proceed to projectile loading instructions.

Projectiles - Loading

- 1 The caliber of your rifle is clearly marked on the side of the barrel near the breech
- 2 Use projectiles of the same caliber as your rifle (see recommended loading chart on page 12).
- 3 Three types of muzzleloading projectiles can be used in loading the Ridge Runner rifle.
 - a Saboted Bullets, plastic sabots in same caliber as the rifle bore, and the jacket bullet in .44 or .45 caliber are combined to produce the sabot bullet projectile. The bullet is seated flush inside the sabot cup to produce the sabot bullet.
(Note: Read instructions included with each box of sabots)
 - b Pure lead conical bullet (maxi or mini balls). Most conical type bullets come pre-lubricated from the manufacturer. If not, the grooves must be lubricated before loading.
(Note: Read instructions furnished with each box of bullets)
 - c Patched Balls - Reload pure lead balls can be used with patches. The patch material seals the bore as the patch and bullet are forced down the barrel.

- 4 Loading the selected projectile: Saboted bullets and conical type bullets do not require any added patching material. Round balls require patches to be used to seal the bore. Patch material should be 100% cotton or linen.
- Starting projectiles in the barrel. Place the sabot or bullets in the mouth of the rifle bore. With the round ball and patch, place a lubricated patch securely over the bore and place ball on top so the "Sprue" faces up.
 - The projectile should then be started down the barrel by using the bullet starter tool and should be firmly seated 4" to 6" down the barrel.
 - When started, take the ramrod (concave end) and continue to drive the projectile down the barrel until it is firmly seated against the powder charge.
 - The ramrod should be grasped about 6" to 8" above the muzzle. This allows adequate ramming pressure, and protects the ramrod from potential breakage or bending. Drive the projectile down the barrel then re-adjust your grasp, and continue until the projectile is firmly seated on the powder charge.
 - With the ramrod down the barrel, resting firmly on the charge, index the ramrod at the muzzle. This index mark will serve as a quick reference for proper charge seating during future loading, and also provides a quick check to see if the barrel is obstructed for future use.

CAUTION: Make sure the bullets firmly seated on the powder charge using firm solid pressure - DO NOT use sharp hammering blows

- The projectile must be firmly seated with the barrels lands and grooves in order to have a good gas seal and keep the bullet from falling out of the holster seating or out of the barrel. There should be measurable resistance when seating, starting and ramming the projectile down the barrel. If there is little or no resistance, you may be using the wrong caliber or the projectile is not seated. STOP! Do not attempt to shoot the firearm and see "Pulling the charge" instructions.

FIRING PROCEDURE

- With the rifle now loaded and the ramrod removed from the barrel and stowed away under the barrel, you are now ready to fire.
- Be sure the bolt is fully cocked in the locked position, and the safety is engaged in the "S" position.
- Place a 209 primer on the adapter. By doing so the rifle is fully loaded, primed and ready to fire.
- When a shot is imminent, take aim, release the safety to "F" fire position, ready to fire and pull the trigger.
- After firing wait at least a full minute before reloading to be sure no sparks remain in the barrel.

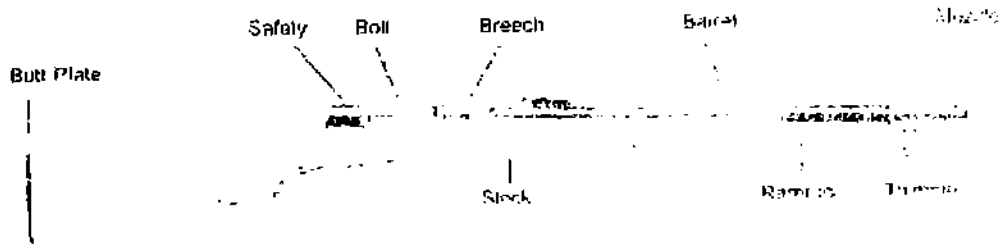
GUN FAILS TO FIRE

Misfire or hang fire are a fairly common occurrence with muzzleloading firearms, and even more so for beginning or novice black powder shooters.

- If the gun fails to fire, keep the barrel pointed in a safe direction and wait for one minute. To be sure you do not get a "hang fire" (delayed ignition).
- Recock the bolt, install another primer and fire the gun again.
- If the gun again fails to fire, follow procedure "A" above, and take a paper charge or wire wad and insert it into the adapter hole to be sure the adapter is not blocked. Stop the breach, wipe a few grains of black powder into the adapter area. Place another primer on the adapter and fire again.
- If the gun fails to fire, the powder and bullet charge must be removed from the barrel. This is referred to as "Pulling the charge" and the procedure for pulling a charge follows (See disassembly instructions).
- "Pulling the Charge" instructions:
 - With the barrel pointed in a safe direction, the safety "S" or used as primer inside the adapter, remove the barrel from the stock.
 - Disassemble the bolt, remove the adapter with an appropriate tool, and submerge the muzzle end of the barrel in about 10" to 12" of water for 20 minutes.
 - Attach a bullet puller to the ramrod, insert the bullet puller down the barrel and pull the bullet, and carefully pull the ramrod and bullet out of the barrel.
 - Dump the old powder charge out of the barrel and flush and clean the barrel (see cleaning instructions).
 - Replace the adapter checking to see it is not blocked, dry the gun and bore completely, re-assemble the bolt and remount the action on the stock.
 - Fire 2 or 3 primers to be sure the adapter and holster are free of moisture, and the adapter is open.
 - You are now ready to reload.



NOMENCLATURE



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