



# SEMI-AUTO RIFLE

## Instruction Manual

22 LR, 22 WMR, & 17 HMR Semi-Auto Rifles



## EXCELLENCE IS ESSENTIAL

Warning: Read entire manual before using firearm.

©2022 Volquartsen Firearms. All rights reserved.



## WELCOME!

Congratulations on your purchase of one of the finest firearms available — the Volquartsen Semi-Auto Rifle. Volquartsen Firearms takes great pride in each and every firearm that we produce. Each rifle is meticulously machined using the latest machining technology to ensure that you are completely satisfied with each and every rifle that we manufacture.

If you have any questions or encounter a problem, please be sure to contact us by either phone or email, and we will take care of it immediately. Your Volquartsen Semi-Auto Rifle comes with a limited lifetime warranty.

**712-792-4238**  
**[info@volquartsen.com](mailto:info@volquartsen.com)**

This instruction manual is designed to assist you in learning the proper use and care for your Volquartsen Semi-Auto Rifle. However, in no way should this manual be a substitute for proper firearm training.



For warranty details visit  
**[Volquartsen.com/warranty](https://Volquartsen.com/warranty)**

# 22 LR • 22 WMR • 17 HMR

## TABLE OF CONTENTS

Warnings . . . . .	4
Basic Rules of Firearm Safety . . . . .	5
General Information . . . . .	6
Loading . . . . .	7
Unloading . . . . .	8
Disassembly . . . . .	8
Bolt Removal . . . . .	10
Firing . . . . .	11
Clearing a Malfunction . . . . .	12
Barrel Cleaning . . . . .	13
Ammunition . . . . .	14
Additional Information . . . . .	15

## **WARNINGS**

Read the instructions and warnings in the manual before operating this firearm.

This instruction manual contains operating, care, and maintenance instructions. Failure to follow the instructions and warnings in this manual can void the warranty. Failure to follow the instructions and warnings can also lead to accidents resulting in injury or death.

This instruction manual should be kept with this firearm at all times. This instruction manual should be transferred with it upon change of ownership.

There is no such thing as a foolproof firearm!

**FIREARM SAFETY  
IS YOUR  
RESPONSIBILITY!**



## BASIC RULES OF FIREARM SAFETY

1. Before using any firearm, learn the mechanical and handling characteristics of your firearm.
2. Never point the muzzle in an unsafe direction.
3. Be sure to unload the firearm when not in use.
4. Check the barrel before shooting. Take care to make sure there are no obstructions.
5. Check your target thoroughly before shooting. Take note of anything or anyone close by.
6. Wear protective shooting glasses and hearing protection when shooting.
7. Never climb a tree, fence, or other structure with a loaded firearm.
8. Never shoot at any hard surface or at water.
9. Never transport a loaded firearm.
10. Never use any firearm when under the influence of alcohol or drugs.

## GENERAL INFORMATION

Before disassembling or working with your Volquartsen Semi-Auto Rifle, be sure it is unloaded.

### Alterations

Your Volquartsen Semi-Auto Rifle is designed to operate and function properly when it left the factory. Any alterations can cause the firearm to become unsafe.

**DO NOT** substitute any part or accessory that is not produced by Volquartsen Firearms. If a repair becomes necessary for any reason, please contact us so we can repair your firearm properly. Any alterations of this pistol by anyone other than Volquartsen Firearms will void the warranty and any subsequent work needed will be charged at our full shop rate.

### Trigger Mechanism

Your Volquartsen Semi-Auto Rifle features a target trigger that has been preset for trigger pull weight and optimal performance. It features internal parts made to exacting tolerances. Any modifications to this unit or its parts can cause the firearm to malfunction and/or become unsafe. Any alterations to the trigger mechanism by anyone other than Volquartsen Firearms will void the warranty.

## Manual Safety

The safety locks the sear when it is in the safe “S” position. You can only engage the safety after your Volquartsen Semi-Auto Rifle Pistol is cocked. The safety should always be in the safe “S” position unless the firearm is being fired. Never rely on a safety mechanism to justify careless handling or allowing the gun to be pointed in an unsafe direction. The only way to ensure safety is when the bolt is open, the chamber is empty, and there is no magazine in the firearm.

## Handling

The firearm may fire if it is mishandled, dropped, or struck with the safety in the fire “F” position. Always make sure the chamber is empty and the magazine is removed when the firearm is not being used.

## LOADING

First, insert the loaded rotary magazine into the Volquartsen Semi-Auto Rifle. Load a cartridge into the chamber by fully retracting the bolt handle. Release the bolt handle and let the bolt go forward. **DO NOT RIDE THE BOLT HANDLE AS IT GOES FORWARD.**

Be sure the rifle’s safety is in the safe “S” position during this process and be sure your finger is off the trigger. The rifle is now fully loaded, and it should remain in the safe “S” position until it is ready to be fired.

## UNLOADING

Your Volquartsen Semi-Auto Rifle can also be fired as a single shot rifle. **THE RIFLE SHOULD NOT BE CONSIDERED UNLOADED IF THE MAGAZINE IS NOT IN THE RIFLE.** To properly unload your firearm, first, make sure the safety is in the safe “S” position, remove the magazine, pull the bolt to the rear, and eject the chambered cartridge. Your final step is to visually inspect the chamber.

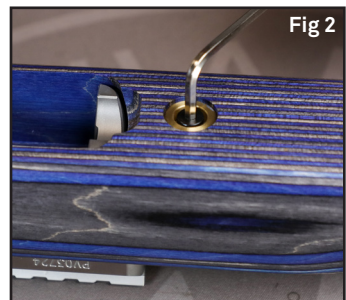
## DISASSEMBLY

The firearm must be unloaded during disassembly. Safety glasses should be worn at all times when working with any firearm. Follow the steps below to disassemble your Volquartsen Semi-Auto Rifle:

- 1 Remove the magazine from the receiver and visually inspect the chamber to ensure that there is not a cartridge in the chamber. (Fig 1)



- 2 Remove the takedown action screw, located at the bottom of the rifle using a  $\frac{1}{8}$ " hex key wrench. (Fig 2)



# 22 LR • 22 WMR • 17 HMR



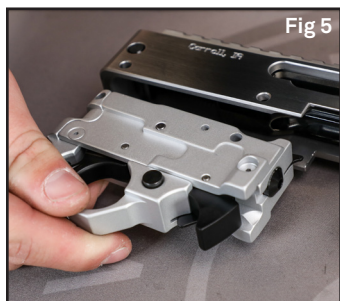
**3** Remove the barreled action from the chassis. (**Fig 3**)

**4** Before removing the bolt, you will first need to remove the trigger guard. Use a  $\frac{1}{8}$ " punch to remove the two  $\frac{3}{16}$ " cross pins located at the bottom of the receiver (**Fig 4**). The trigger guard should slide out (**Fig 5**).



**5** It is not recommended to disassemble the trigger guard any further. The inside of the trigger guard should be cleaned periodically. When cleaning the trigger guard, use an aerosol gun cleaner that leaves no residue.

**DO NOT** spray any oil onto the hammer/sear engagement area. Be sure to remove any excess over spray with a cotton swab.



**6** In order to remove the bolt, use a  $\frac{1}{4}$ " punch and drift out the  $\frac{5}{16}$ " cross pin located in the top rear of

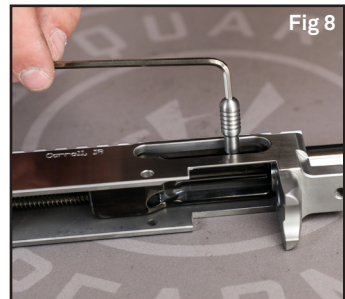
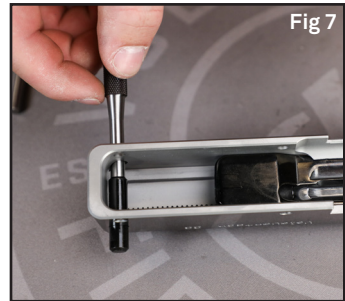


the receiver. Lay the barreled action upside down on a flat, padded surface. (**Fig 6 & 7**)

- 7 The bolt handle must be removed before attempting to remove the bolt from the receiver. To remove the bolt handle, use  $\frac{1}{8}$ " hex key wrench into the end of the bolt handle and turn counterclockwise. (**Fig 8**)

## BOLT REMOVAL

- 1 Next, pull the bolt all the way rearward (**Fig 9 & 10**) and it can be removed by lifting upward (**Fig 11**). The bolt is under spring tension so proceed with caution.
- 2 **DO NOT** disassemble the bolt any further. The inside of the receiver should be cleaned and minimally lubricated on a regular basis using any quality gun oil.



# 22 LR • 22 WMR • 17 HMR



## FIRING

Once the safety is switched to the “fire” position, the rifle will fire with each pull of the trigger. Firing will automatically reload the rifle. Be sure to switch the safety back to the “safe” position if subsequent shots are not going to be immediately fired. The bolt does NOT remain open after the last shot has been fired, nor does the bolt automatically lock open when the magazine is empty. The bolt automatically opens and closes while firing.



Be sure to keep face and hands away from the ejection port. Hot brass and powder are ejected as each round is fired.



Note the location of the ejection port. Volquartsen Firearms designed your Volquartsen Semi-Auto Rifle to be fired from the right shoulder. Firing from the

left shoulder would put your face in the path of spent cartridges.

## **CLEARING A MALFUNCTION**

Any firearm may malfunction or jam. One of the easiest ways to prevent this is to keep the chamber clean. If a cartridge jams, **DO NOT FORCE IT**. A hard impact on the rim can ignite the ammunition. If a jam or malfunction should occur, follow these steps in order to clear the malfunction:

- 1 Point the muzzle in a safe direction.
- 2 If possible, remove the magazine before proceeding to the next step.
- 3 Pull the bolt handle rearward and lock the bolt open with the bolt hold open latch before attempting to clear the jam or malfunction. The jammed cartridge may clear itself when you retract the bolt, so keep your face away from the ejection port during this operation.
- 4 If the cartridge did not eject on its own when you retracted the bolt, be sure to use only wood “tools” to remove the jam. This will help prevent a live cartridge from being ignited. A wooden dowel with a pointed end is recommended. The use of metal tools or objects may damage the chamber as you attempt to clear the jam.

- 5 Before resuming firing, visually check and make sure the firearm is cleared of any cartridge(s) that were involved in the malfunction incident.
- 6 If there are ANY questions or problems regarding a malfunction, be sure to contact us at Volquartsen Firearms.

## BARREL CLEANING

The barrel should be cleaned only from breech to muzzle using a pull-through cleaning system. Lock the bolt open via the bolt hold open feature of your rifle. Any use of a cleaning rod from the muzzle end will void the warranty and greatly affect accuracy.

**22 LR** – We recommend that you clean the barrel approximately every 500 - 600 rounds.

**17 HMR** – We recommend that you clean the barrel approximately every 200 - 250 rounds.

**22 WMR** – We recommend that you clean the barrel approximately every 200 - 250 rounds.

It may be necessary to clean the chamber area on a more frequent basis using only a cotton swab.

## AMMUNITION

Always wear protective shooting glasses and hearing protection when firing your Volquartsen Semi-Auto Rifle.

**22 LR** – This firearm is designed to function with 22 Long Rifle (22 LR) ammunition. CCI® Stinger ammo is **NOT** recommended in this rifle due to the oversized cartridge. Use of CCI® Stinger ammo can cause a bore obstruction and will void the warranty. Due to the tight bore tolerances, certain ammo may not be able to be manually extracted. Volquartsen will rechamber your barrel for manual extraction if needed.

**22 WMR** – This firearm is designed to function with 22 Winchester® Magnum Rimfire (22 WMR) cartridges. Do not attempt to alter this firearm to function with any other cartridge. We **DO NOT** recommend shooting Hornady® 45 grain Critical Defense ammo through this rifle. Alterations will void the warranty.

**17 HMR** – This rifle is designed with the 17 Hornady® Magnum Rimfire (17 HMR) ammunition only. Volquartsen recommends Winchester® .17 gr or CCI® A17 ammo. Ammo older than 3 years may develop split necks prior to firing. We recommend routinely inspecting your ammo.



# 22 LR • 22 WMR • 17 HMR

## ADDITIONAL INFORMATION



To learn more about cleaning and operating your Volquartsen Semi-Auto Rifle, visit our videos page at: [volquartsen.com/videos](http://volquartsen.com/videos)

If you have any problems or questions concerning your Volquartsen Semi-Auto Rifle, please do not hesitate to contact us at:

**Volquartsen Firearms**  
PO Box 397  
24276 240<sup>th</sup> Street  
Carroll, IA 51401

**712-792-4238**  
**[Volquartsen.com](http://Volquartsen.com)**



## GREAT ACCESSORIES FOR YOUR SEMI-AUTO RIFLE

[VOLQUARTSEN.COM](http://VOLQUARTSEN.COM)

### **BREAKTHROUGH® BATTLE ROPE™**

The perfect on-the-go cleaning option for those needing a quick and efficient clean on the range. The integrated bronze brush scrubs away stubborn carbon, while the extra-thick rope wipes up residue. Available for 22 LR and 17 HMR calibers.

### **DELUXE RIFLE BAG**

This bag features internal adjustable magazine pouches, dense foam padding, and heavy duty zippers. It has a heavy duty nylon exterior with an outside zippered pocket for additional magazines or gear.







@volquartsen\_firearms



@volquartsen



@volquartsencustom



@volquartsenguns