# OPERATION AND SAFETY MANUAL



Calibers Featured Include: 5.56 NATO, .223 Rem., .308 Win, 224 Valkryie

www.sv-precision.com 253-301-7955

SERIAL NUMBER INFORMATION Record the serial number of your SV Precision firearm!				
<ul> <li>(When holding the firearm the serial number will be found on the left side of the firearm, stamped on the magazine well):</li> </ul>				
And a description of it:				
Make a copy of this operations manual and proof of purchase/sales record. Maintain these items in a secure safe or fireproof container. These materials will be necessary if the firearm is damaged, stolen or returned to SV Precision for warranty or repair.				
Attach proof of purchase here!				

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## WARNING

If this firearm is carelessly or improperly handled, unintentional discharge could result and could cause personal injury, death or damage to property.

FOR YOUR SAFETY AND THE SAFETY OF OTHERS, this Operations Manual contains important instructions, warnings and safety procedures that must be understood BEFORE using your SV Precision firearm. It is imperative that you read the ENTIRE MANUAL and if you do not understand any part of it or the operation of your SV Precision firearm, you should seek professional firearms instruction.



## NOTICE

SV PRECISION shall not be responsible for personal injury, death or damage to property resulting from either intentional or accidental discharge of this firearm, or from its function when used for purposes or subjected to treatment for which it was not designed. SV PRECISION will not honor claims involving this firearm which result from careless or improper handling, unauthorized adjustment or parts replacement, corrosion, neglect, or the use of wrong caliber ammunition, other than original high quality commercially manufactured ammunition in good condition, or any combination thereof. SV PRECISION will not honor claims involving this firearm for any reason or cause when the second or subsequent owner makes such claims.

Before the rifle left the factory, this firearm was tested, carefully inspected and packaged. SV PRECISION cannot control product handling after it leaves the factory; therefore please examine this firearm carefully at the time of purchase to ensure that it is unloaded and undamaged.

## **GENERAL HANDLING CAUTIONS**

- 1. Do NOT alter or modify your SV Precision firearm, and have it serviced regularly!
- 2. Always handle your firearm as if loaded.
- 3. Never point your firearm at anything you don't intend to shoot.
- 4. Always make sure your firearm is not loaded and the bolt is latched open and to the rear before laying it down or handing it to someone else.
- 5. Never leave a loaded firearm unattended.
- 6. Always be sure bore, muzzle, chamber and action are clear of obstruction.
- 7. Always check that ammunition is clean and undamaged.
- 8. Never drink alcoholic beverages or take drugs before or during shooting.
- 9. Always wear eye and ear protection when shooting.
- 10. Always keep safety on "SAFE" when firearm is loaded and a round is chambered until ready to shoot.
- 11. Never attempt to fire if water is in the bore.
- 12. Never indulge in "horseplay" when holding your firearm.

## DANGEROUS PROCEDURES

- 1. Be sure the cam pin is installed in the bolt group. If it isn't, your rifle can still fire but it could possibly explode, causing you, personal injury or harm. (Applies to all SV Precision AR style rifles and complete uppers)
- 2. DO NOT exchange or switch bolt assemblies from one rifle to another, it could cause personal injury to you and others and damages to your rifle.
- 3. If your firearm fails to fire, hold it, keep it pointed towards the target and wait 30 seconds. If a hangfire has occurred, the round will fire within 30 seconds. If the round does not fire, remove magazine, eject round and examine the primer. If firing pin indent is light, misaligned or non-existent, have your firearm examined by a competent gunsmith. If firing pin indent on primer appears normal (in comparison to previously fired rounds) assume faulty ammunition; appropriately dispose of misfired round from other live ammunition; reload and resume firing.

## **USE OF SAFETY SELECTOR**

A selector lever, located on the left of lower receiver, has two positions, "FIRE" and "SAFE". When set to "FIRE" the firearm will fire a single shot each time the trigger is squeezed. When set to "SAFE" a cam bears upon the rear of the trigger, blocking movements and preventing the hammer from being released.



*"SAFE"* Rifle will not fire. Selector lever cannot be on safe unless rifle is cocked. Always place on SAFE when loading and unloading.



*"FIRE"* Rifle will fire one round each time the trigger is pulled.

### **FUNCTION CHECK**

SAFE Note: Remove magazine and make sure your rifle is unloaded and there is no ammunition in the chamber. Point in safe direction. Pull charging handle to rear and release. Place on safe. Pull trigger. Hammer should not fall.

FIRE Note: Remove magazine and make sure your rifle is unloaded and there is no ammunition in the chamber. Point in safe direction. Place selector on fire. Pull trigger and hold to rear. Hammer should fall. Pull charging handle to rear and release. Release trigger and pull again. Hammer should fall.

### SAFETY FEATURES

#### Disconnector

The disconnector, a part of the firing mecha nism, prevents the firearm from firing full automatic. As the hammer is cocked after each shot the disconnector holds the hammer until the trigger is released. When the trigger is released, retention of hammer passes from disconnector to trigger ready for the next shot.

#### Firing Pin Collar

The bolt carrier assembly, located within the upper receiver, is designed to prevent the firing pin from striking a cartridge until the bolt is locked to the barrel.

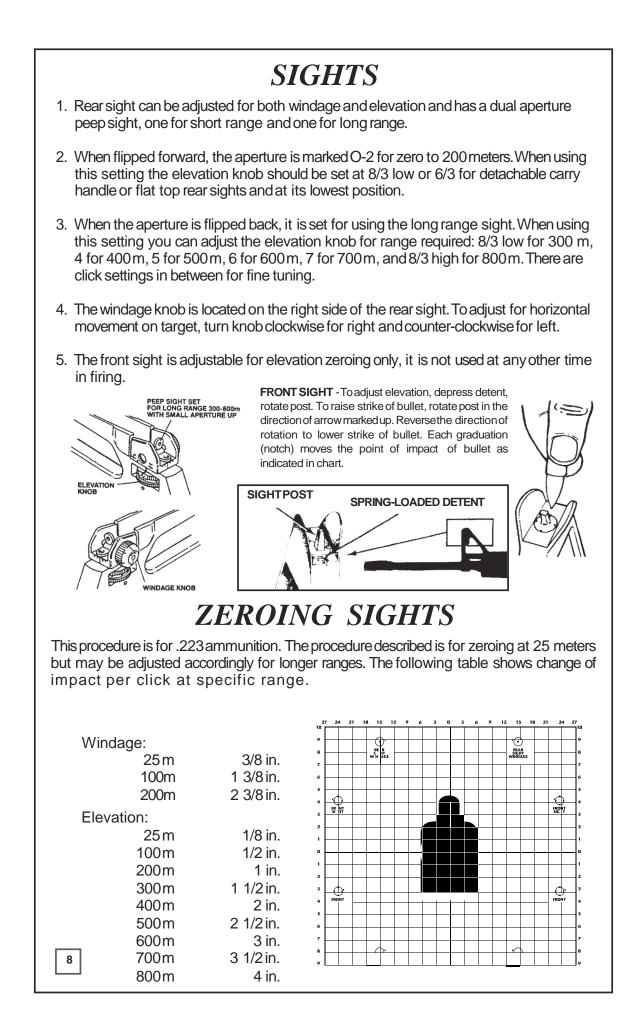
The following sections contain caliber specific information. Please open to the section relevant to your particular rifle's caliber. If you are unsure of the caliber of the rifle, the caliber marking can be found on the barrel of the rifle, immediately in front of the gas block on the bottom of the barrel.

*Everyone should read page 36 for additional information pertaining to the Lifetime Warranty and returns!* 

## 5.56 NATO, .223 Rem, .308 Win and .224 Valkryie

Includes the Following AR Style Rifles:

TPR-2 TPR-3

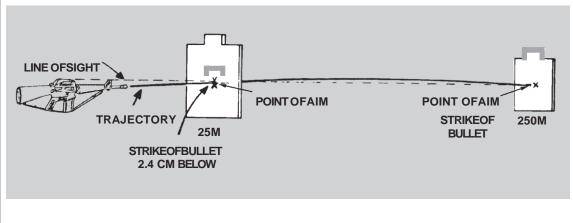


## ZEROING SIGHTS

- 1. Set elevation to 8/3 low or 6/3 for detachable carry handle and flat top rear sights, then raise it one click. No further adjustment should be made during zeroing.
- 2. Flip aperture to small long range sight.
- 3. Set aperture to mechanical zero by adjusting windage until sight is aligned with center line on scale under sight.
- 4. Carefully aim and fire at bull's-eye on target at 25 meters: Fire ten rounds to establish a group.
- 5. Compare group with bull's-eye, if they match, no further adjustment is necessary.
- 6. If group does not match bull's-eye, measure vertical and horizontal distance from bull's eye.
- 7. Calculate clicks of windage required to move impact appropriate distance. Turn windage knob accordingly. (see chart on page 8 for 25m windage clicks)
- 8. Calculate clicks of front sight required to raise or lower impact appropriate distance. (1 click = 3/8 in. at 25 m)
- 9. Depress plunger and front sight required number of clicks. Clockwise will lower sight and raise impact, and counter-clockwise will raise sight and lower impact.
- 10. Repeat steps 4 through 9 until impact matches bull's-eye. Your sight is now zeroed.
- 11. Set elevation knob back to 8/3 or 6/3 low and flip aperture back to 0-2 for ranges of 0-200 m.

## BATTLESIGHT ZERO

TO ZERO THE RIFLE, YOU MUST HAVE THE FRONT SIGHT (ELEVATION) AND THE REAR SIGHT (WINDAGE) ADJUSTED SO THAT IT CAN HIT YOUR POINT OF AIM AT A GIVEN RANGE.



#### NOTE:

To battle-sight zero your rifle, you adjust your sights so you can hit an aiming point at 250 meters. Zeroing can also be accomplished on a 25 meter range by adjusting the sights so that the bullet will strike 2.4 centimeters below the point of aim.

### MOUNTING OPTICS

SV Precision AR style rifles feature a Lo-Pro style upper receiver. These rifles have a Mil-Std-1913 Picatinny Rail on the top of the receiver.

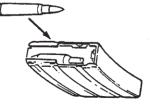
This will accept Weaver based rings and mounts. Standard size rings and mounts will be sufficient for scopes with objective diameters less than 58mm. Certain diameter scopes, depending on the size of the objective lens, may need either a riser, high rings, or mount.

## LOADING

**CAUTION:** Always check that ammunition is clean and undamaged before using the forward assist. Forcing damaged ammunition into the chamber could result in personal injury or death to you and others and damage your rifle and property. The use of reloaded, hand-loaded or high pressure ammunition can be dangerous and will void the warranty.

#### To load a magazine...

- 1. Use only ammunition for which your firearm is chambered.
- 2. With front of magazine forward, place a round between the lips of the magazine with the bullet forward. Press the round down until it is retained by the magazine lips. Place the next round on top of the last and repeat until desired number is loaded.



Make sure the rifle is pointed in a safe direction and the safety is engaged at all times while loading the rifle. **NEVER** allow your fingers or other objects to contact the trigger while loading or unloading the rifle.

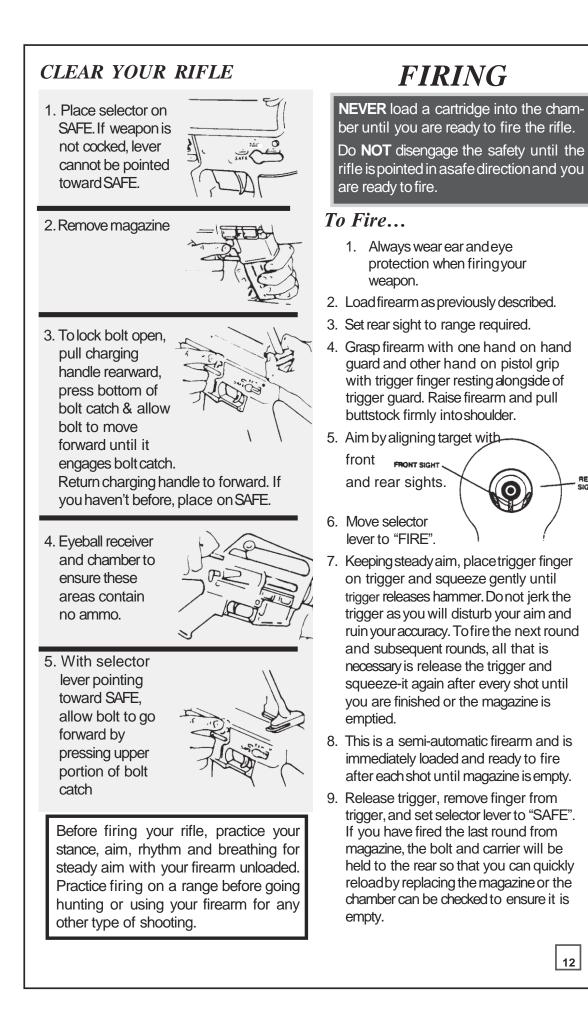
Do NOT disengage the safety until you are ready to fire and have the rifle pointed safely downrange.

#### To load the rifle...

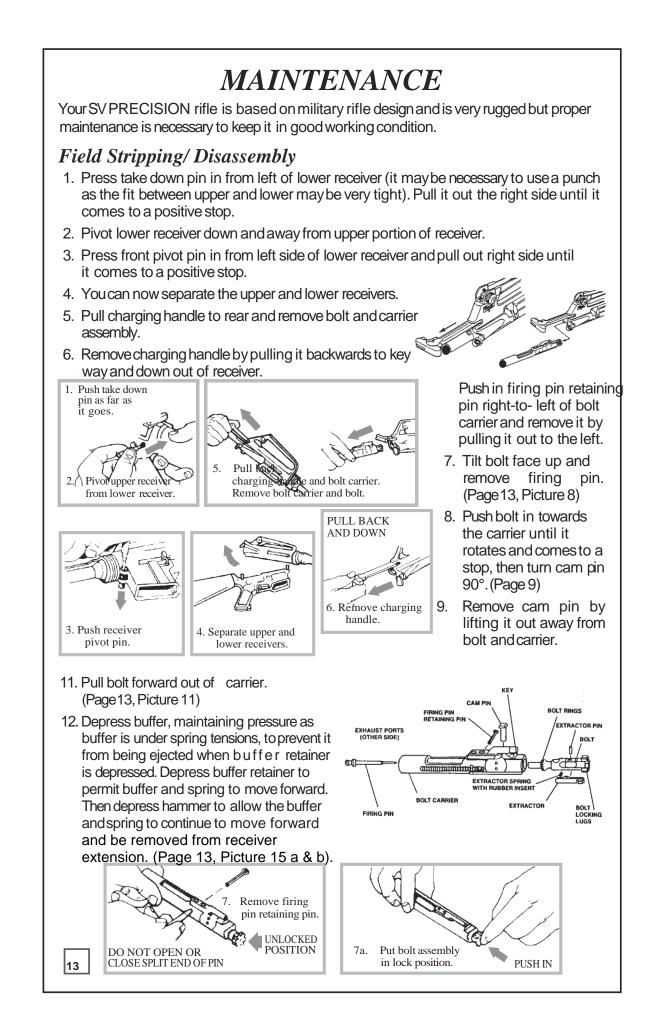
- 1. Press in on bottom of bolt catch while pulling back on charging handle, to cock the hammer and leave the bolt and carrier to the rear.
- 2. Return the charging handle to fully forward until it locks and remove finger from bolt catch.
- 3. Set selector to "SAFE" position.
- 4. With the bullets pointing forward, insert loaded magazine into magazine well and push it in until it stops and is retained by magazine catch.
- 5. With the rifle pointed in a safe direction press in on top of bolt catch. This will release the bolt and carrier and move a round into chamber. The rifle is now loaded with a round in the chamber and the hammer cocked.
- 6. You may now close the ejection port cover if you wish; it is located on the right side of the upper receiver and will open automatically when the first round is fired.

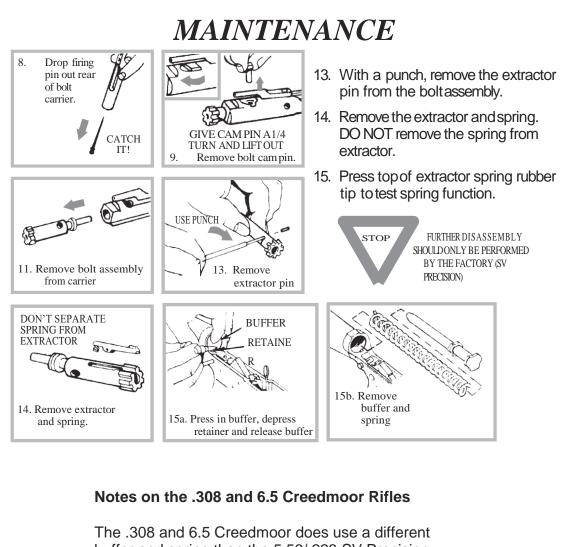
#### To Unload the Rifle...

- 1. Set selector to "SAFE" position.
- 2. Press magazine catch button and remove magazine.
- 3. Pull charging handle to rear and push in lower portion of bolt catch. If a round had been in the chamber it should have been ejected. If last round in magazine had been fired and if the magazine was in place, bolt and carrier should already be held to the rear.



REAR





buffer and spring than the 5.56/.223 SV Precision rifles even though it takes the same SVP Rifles A2 stock.

**NOTE:** Do not strip your firearm further than previously described. If additional maintenance in necessary consult a competent gunsmith.

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Your rifle is now field stripped for cleaning. To reassemble repeat procedure in reverse order.

### THOROUGH CLEANING

#### Upper receiver

Be sure to clean & inspect:

#### **CLEAN WITH RBC**

(Rifle Bore Cleaner)

- · All areas for powder fouling, corrosion, dirt and rust
- Bore & chamber
- Locking lugs
- Gas tube

Use a worn bore brush to get outside surface of protruding gas tube (get sides and bottom from bottom of receiver)



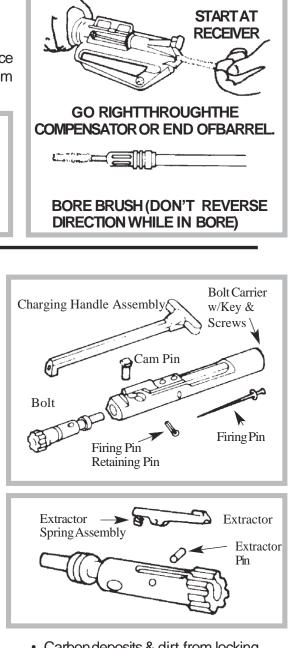
BARRELLOCKING LUGS AND GAS

#### Bolt carrier group

Be sure to include:

- Outer & inner surfaces of bolt carrier
- Carrier key
- Firing pin recess and firing pin
- Firing pin hole (Use pipe cleaner there)





- Carbon deposits & dirt from locking lugs
- Areas behind bolt ring and under lip
   of extractor

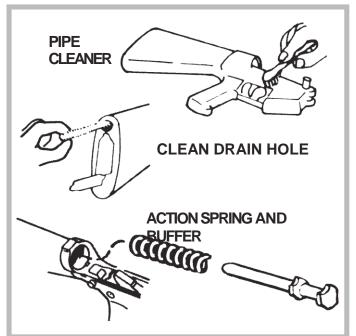
#### THOROUGH CLEANING

#### Lower receiver group

- Clean areas of powder fouling, corrosion and dirt
- Wipe dirt from trigger mechanism
- Clean buffer and inside lower receiver extension

#### CAUTION

Do not use wire brush or any type of abrasive material to clean aluminum surfaces.



## *1. CLEAN...*

## 2. INSPECT...

*3. LUBE...* 

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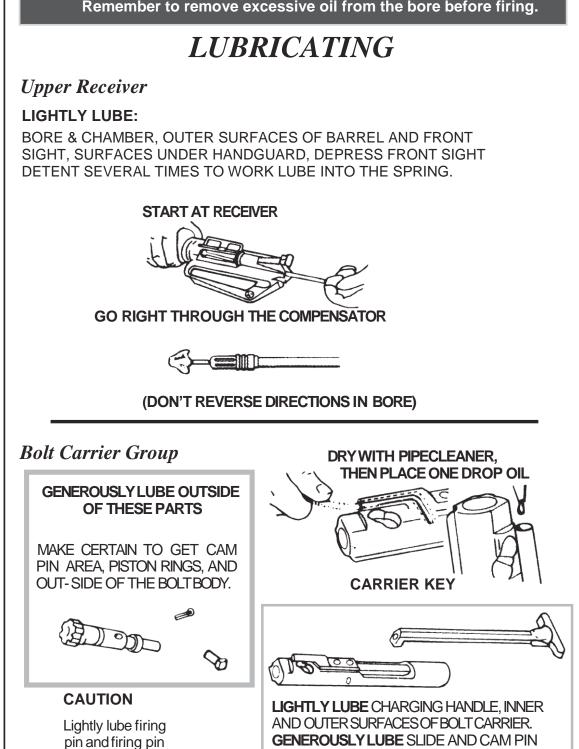
If any parts are missing or defective, contact SV PRECISION.

#### LUBRICATING GUIDE

Lightly Lube - A film of oil barely visible to the eye.

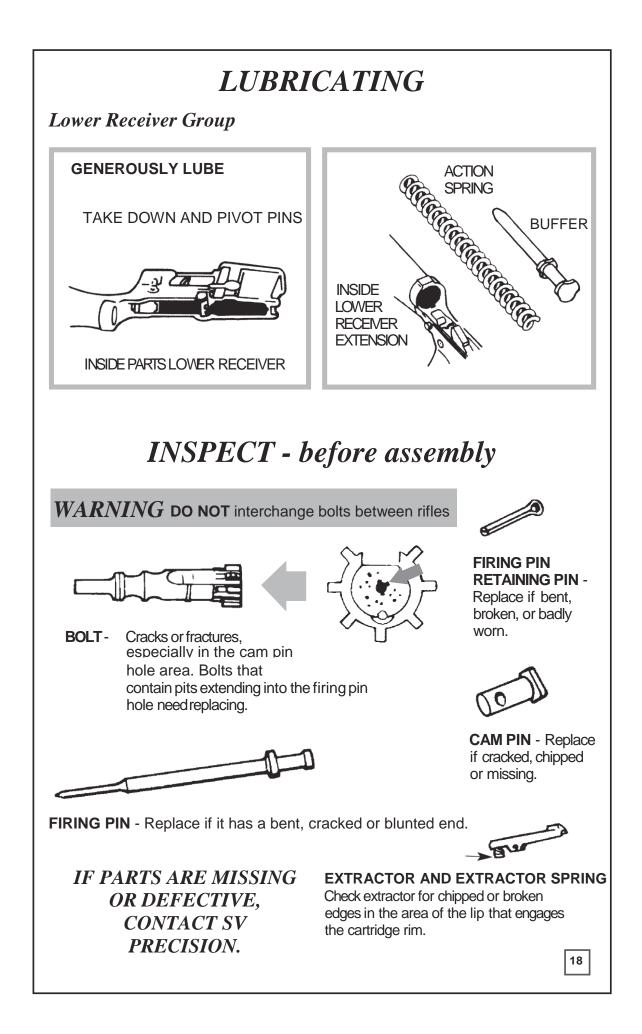
Generously Lube - Heavy enough so that it can be spread with the finger.

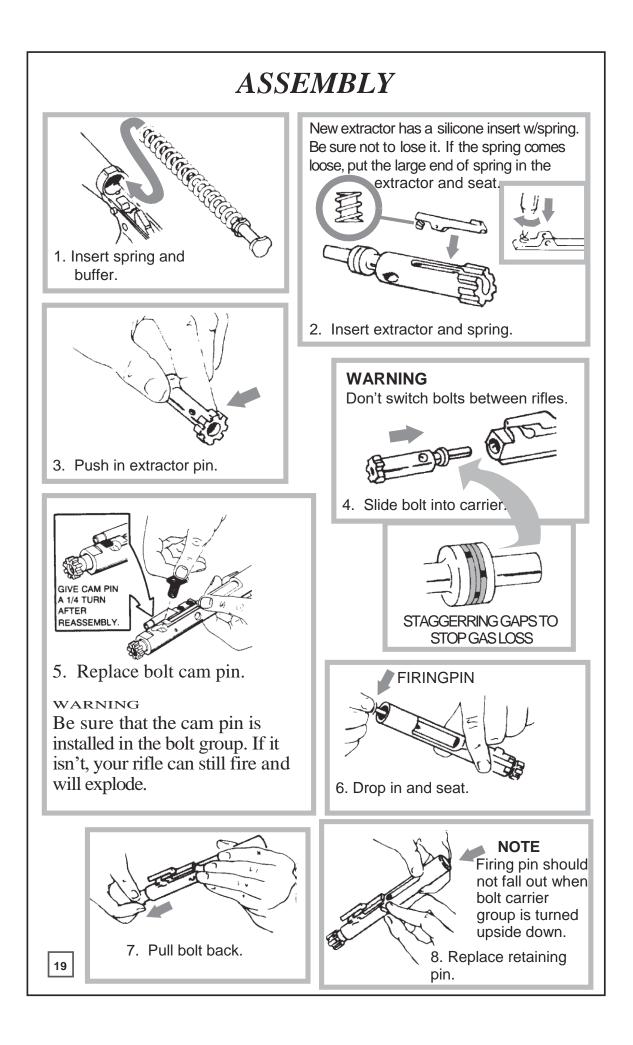
Remember to remove excessive oil from the bore before firing.

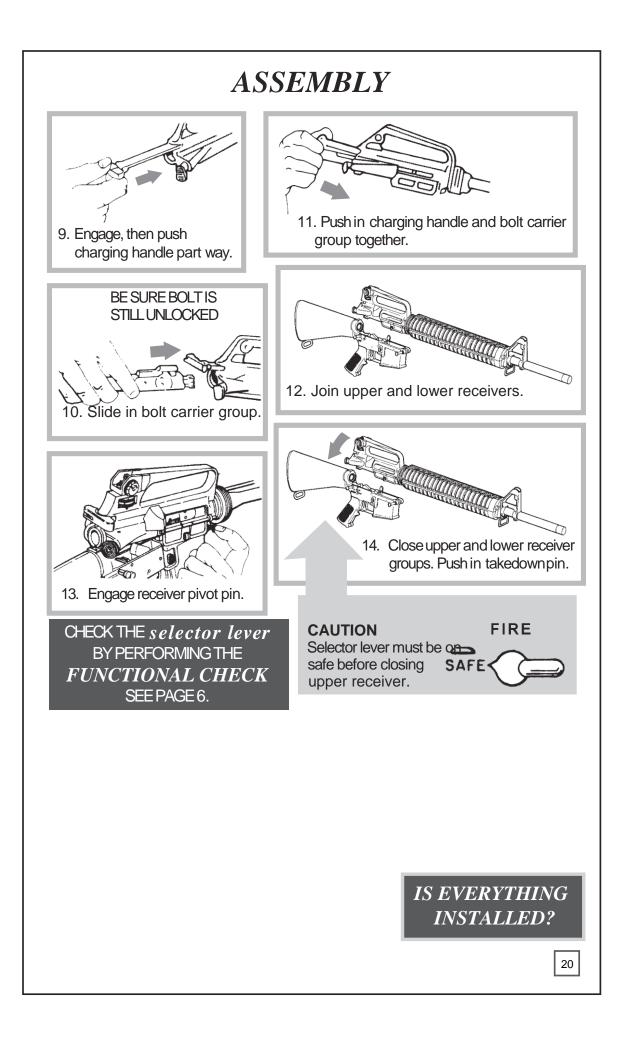


AREA OF BOLT.

recess in bolt.







### **PROJECTILE LODGED IN BORE**

#### WARNING

If an audible "POP" or reduced RECOIL is experienced during firing, immediately CEASE FIRE, remove the magazine (1), lock the bolt to the rear (2), and place the selector lever on the "SAFE" position (3). Visually inspect and/or insert a cleaning rod into the bore to ensure there is not a projectile lodged in the bore (4).

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#### DO NOT APPLY IMMEDIATE ACTION.



If a projectile is lodged in the barrel of the weapon, DO NOT attempt to remove it. Contact SV PRECISION.

TROUBLESHOOTING SECTION LOCATED ON PAGES 22-23

## **UNUSUAL CONDITIONS**

#### Extreme Cold-

- a. Clean and lubricate rifle using a gun lubricant. (FrogLube Extreme, Liberal Tears, etc.) Keep it moisture free.
- b. Operate controls through their entire range, at intervals, to keep them from freezing up.
- c. When your rifle is not being used and kept outside, protect it with a cover.

#### Hot Climates-

- a. Inspect rifle more frequently, especially the hidden surfaces of the bolt assembly, and lower receiver components. Make certain they are lubricated with a gun lubricant.
- b. When handling, make certain to wipe dry, as moisture could cause corrosion. After drying, lubricate with gun lubricant.

#### Hot, Dry Climates-

a. Clean and oil rifle more frequently with a gun lubricant.

#### **Dusty and Sandy Areas-**

- a. Clean and lubricate your rifle more frequently.
- b. Keep sand out of parts when inspecting, lubricating, or assembling rifle. Apply only a very light amount of lubrication on outside of rifle. Using too much lubricant can attract dust and sand.

### TROUBLESHOOTING

Problem	Check for	What to Do
Won't Fire	Selector lever on SAFE	Put on FIRE
	Improper assembly of firing pin	Assemble correctly
	Too much oil in firing pin recess	Wipeoff
	Defective ammo	Remove & discard
	Too much carbon on firing pin	Clean
Bolt Won't Unlock	Dirty	Clean
Won't Extract	Broken extractor spring	Contact SVPRECISION
	Dirty or corroded ammo	Remove. Pushstuck round with cleaning rod. Be careful not to damage rifling. If possible, use a plastic rod.
	Carbon in chamber -	Clean chamber
22	Fouling or carbon in extractor recess or lip.	

## TROUBLESHOOTING

Problem	Check For	What To Do	
Won't Feed	Dirty or corroded ammo Dirty magazine	Clean Clean	
	Defective magazine	Replace	
	Too manyrounds in magazine	Take out excess	
	Restricted buffer assembly action	Take out buffer and spring, clean	
(Press button on rigi	Magazine not fully seated ht side. Turn catch clockwise to tighten and	Adjust magazine catch. d counterclockwise to loosen.)	
Won't Chamber	Dirty or corroded ammo	Replace ammo	
	Damaged ammo	Replace	
	Carbon in chamber	Clean	
Won't Lock	Dirt, corrosion or carbon buildup in barrel locking lugs	Clean lugs	
	Frozen extractor	Remove and clean	
	Restricted buffer assembly	Remove and clean	
	Restricted movement of bolt	Remove, clean, lube carrier group.	
(When putting bolt bac	ck in, make sure gas tube fits into carrier key al	• •	
Double Feed	Defective magazine	Replace	
Short Recoil	Gaps in bolt rings (not staggered) Carbon or dirt in carrier key or on outside of gastube	Stagger ring gaps Clean	
Bolt Fails to Lock After Last Round	Dirty or corroded bolt catch	Clean	
	Faulty magazine	Replace	
Selector Lever Binds	Needs oil	Lubricate with a gun lubricant	
Bolt Carrier "Hung Up"	Roundjammed between bolt and chargin	ng handle	
<ol> <li>Remove magazine charging handle</li> <li>Hold charging handle back and bang rifle butt on ground. KEEPCLEAR OF MUZZLE! Caution: After round is removed, bolt is under tension.</li> <li>While bolt is held to rear, push charging handle forward. Round should fall through magazine well.</li> </ol>			
C C		23	

## LIFETIME WARRANTY

At SV Precision, we take pride in our craftsmanship and in our products. Because of these ideals, we offer a LIFETIME WARRANTY against manufacturing and product defects on all SV Precision custom rifles we offer. We will repair or replace your firearm if it becomes damaged or defective at no charge to you. If we cannot repair your product, we will replace it with a comparable current product. Our lifetime warranty is fully transferable, so even if you purchased the custom rifles second hand, we will still stand behind our product.

We do not warranty normal product wear from continuous use.

We do not cover cosmetic damage such as scratches, dents and/or color fading.

If the firearm has been modified by the user in a manner that causes failure, we may at our discretion, void warranty on that part of the rifle.

If at any time you have questions or concerns about your SV Precision custom rifle, please do not hesitate to contact us.

SV Precision

Melrose, FL 253-301-7955

#### WARNING -Alterations & Modifications

Altering or modifying parts is dangerous and may void the warranty. This SV Precision rifle was manufactured to perform properly with the original parts as designed. It is your duty to make sure any parts you buy are made for this rifle and are installed correctly and that neither the replacements nor originals are altered or changed. Your SV Precision rifle is a complex precision tool with many parts that must relate correctly to other parts in order for proper and safe operation. Putting a rifle together wrong or with incorrect or modified parts can result in a damaged rifle, serious personal injury or death to you and others through malfunction. Always have a qualified gunsmith work on your rifle or at least check any work not performed by a gunsmith.

**NOTE:** It is illegal to ship a firearm with ammunition in the firearm or in the same packaging. Firearms and ammunition must be shipped separately. For more information about shipping, call SV Precision at 253-301-7955.

## AMMUNITION

SV PRECISION recommends the use of high quality, domestically produced ammunition for best results and highest accuracy. For plinking and practice, we recommend only domestic, commercially manufactured ammunition or high quality surplus NATO specification ammunition. **Please note that the use of improperly re-loaded ammunition may void the factory warranty.** 

Your rifle is an investment and it only makes sense to choose quality ammunition for a quality rifle!

## **SV PRECISION offers a variety of AR Rifles, Parts, and Accessories**

Call for information or visit us online at www.sv-precision.com

## THANK YOU FOR CHOOSING SV PRECISION!

