



BEAR CREEK  
**ARSENAL**

**AR15/ BCA 10  
RIFLE OWNER'S  
MANUAL**





**THIS IS NOT A  
SAFETY MANUAL.**

**IF YOU NEED ASSISTANCE  
WITH THE SAFE  
HANDLING OF THIS, OR  
ANY FIREARM, PLEASE  
CONTACT A CERTIFIED  
FIREARMS INSTRUCTOR  
OR SCHOOL.**

# Fundamental Firearm Safety Rules

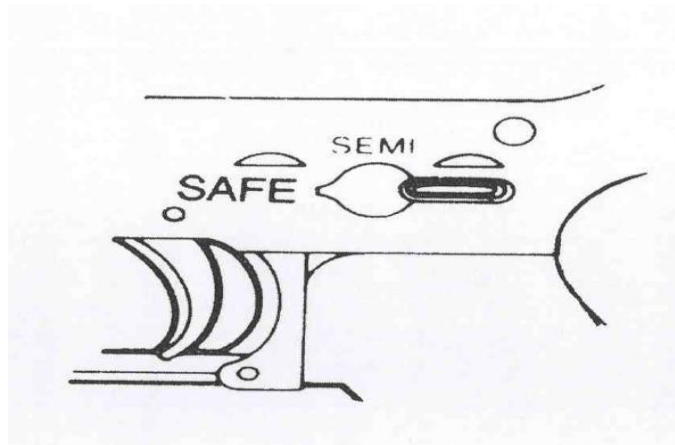
1. Always keep the firearm pointed in a safe direction.
2. Always keep your finger off the trigger until ready to shoot.
3. Always keep the firearm unloaded until ready to use.
4. Be sure the firearm is safe to operate.
5. Know how to use the firearm safely.
6. Use only the correct ammunition for the firearm.
7. Know the target and what is beyond
8. Wear appropriate eye and ear protection
9. Never use alcohol or drugs before or while shooting.
10. Store firearms so that they are not accessible to unauthorized persons.
11. Be aware that certain types of firearms and many shooting activities require additional safety precautions.

**Failure to follow these rules can result in damage to property, injury or death. Always follow these instructions and carefully read and refer to this manual before loading firearm.**

# Unloading and Clearing Your Rifle

## To unload your rifle:

1. Keep your rifle pointed in a safe direction for the duration of this procedure
2. Place your selector on "SAFE". You cannot select "SAFE" unless the hammer is cocked.

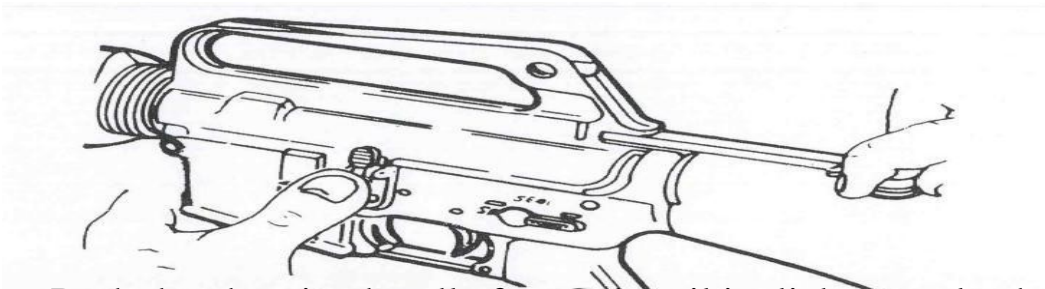


3. Depress the magazine catch button and remove the magazine.
4. Eject the chambered cartridge by retracting the charging handle until it stops. Let the ejected cartridge fall to the ground.

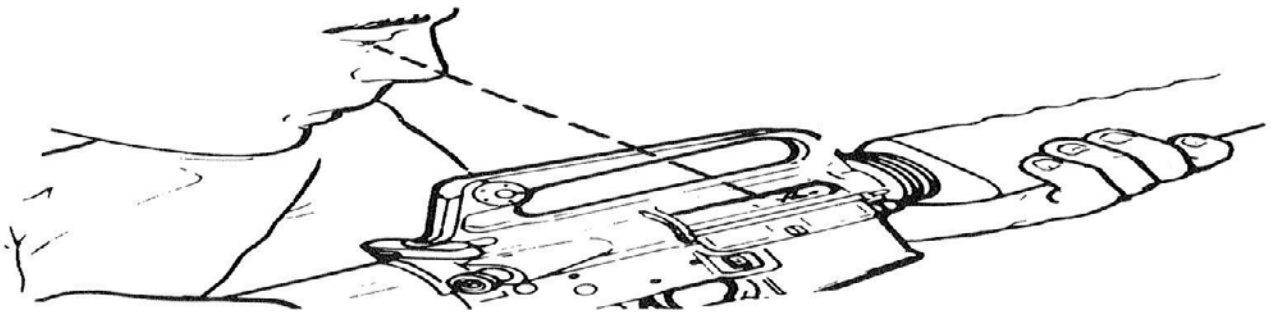
# Unloading and Clearing Your Rifle

## Continued

5. Lock the bolt open by depressing the bottom of the bolt catch. If you cannot manipulate the charging handle and the bolt catch at the same time, you can use an empty magazine, which will activate the bolt catch for you.



6. Push the charging handle forward until it clicks to re-latch the charging handle.
7. Inspect the chamber and receiver to ensure you have removed all cartridges from the action.



**Your rifle is now unloaded and Clear.**

**It may now be loaded or prepped for transportation or storage.**

# **Loading and Firing Your Rifle**

To Load and fire your rifle: Begin with a rifle that has been verified to be unloaded using the preceding directions.

1. Keep your rifle pointed in a safe direction for the duration of the procedure.
2. Load your magazine with .223 Remington, 5.56x45 NATO (or 308 for BCA 10) cartridges. Place cartridge between the magazines feed lips and push down to seat.
3. Using firm and steady pressure insert the loaded magazine into the magazine well until the magazine catch locks the magazine in place. Do not slam the magazine into position; it will damage your magazine and rifle. Pull the magazine down to verify that it is locked in place.
4. Get into the shooting position you plan to use. Grasp the pistol grip in one hand and the hand guard in the opposite hand with the butt stock to your shoulder.
5. To chamber a cartridge you may depress the bolt catch or retract the charging handle until the bolt is no longer being held by the bolt catch. Release the charging handle. Do not maintain control of the charging handle while chambering a cartridge; this will cause the rifle to jam.

**Your Rifle is now Loaded**

# Loading and Firing Your Rifle

## Continued

The following is a description of the sequence for one complete firing cycle; beginning after a cartridge is chambered. Knowing the correct function of your rifle will help you with the diagnosis of any malfunctions or failures to fire.

The trigger is pulled releasing the hammer; which strikes the firing pin. The firing pin impact the primer in the chambered cartridge igniting the primer which ignites the powder. As the powder is burned it creates a high volume of gas, which propels the bullet down the bore of the barrel. The exhaust gas is also vented out of the bore through the gas tube and into the carrier key on the bolt carrier. The gas pushed the bolt carrier back unlocking your bolt from the barrel extension allowing the bolt carrier to recoil completely. The underside of the bolt will push the hammer down where it is caught and held by the disconnecter. The bolt will pull the spent cartridge out of the chamber and eject it from the rifle.

At full recoil the carrier has pushed the buffer and buffer spring back into the receiver extension. The magazine will present a new cartridge, which will be stripped from the magazine by the bolt as the recoil spring pushes the bolt carrier group back into battery. The new cartridge is now chambered. The fire control group will reset once you have released the trigger allowing the disconnecter to release the hammer and re-engage the trigger's sear. The rifle is ready to be fired again or put on "SAFE" and unloaded.



# Basic Care and Maintenance

Proper maintenance will ensure you get the best performance from your firearm. High quality cleaning products will ensure that you get your rifle clean quickly and without damage to your firearm. The Mil-Spec cleaning kit is great for field use, but a good set of cleaning tools and a one-piece cleaning rod will make your task easier at home. There are also many excellent cleaning products available to shooters today. We do not recommend any specific brand, so use what you like.

Just make sure that it is safe to use on the parts you are cleaning.

## Upper Maintenance

1. Use cleaning fluid on the bore and chamber, the gas tube, the upper receiver, barrel assembly, locking lugs, and all areas of powder fouling, corrosion, dirt or dust.
2. Install the chamber brush on the cleaning rod, dip the brush in cleaning fluid and insert it into the chamber and locking lugs. Clean by pushing and twisting the cleaning rod.
3. Install the bore brush on the complete cleaning rod. Dip the brush in cleaning fluid. Run the rod through the chamber and flash suppressor or muzzle brake several times.
4. Take the bore brush off the rod and install a swab holder and a swab. Apply cleaning fluid to the swab; then run it through the chamber and out the flash suppressor (if applicable). To remove carbon build up, let the solvent sit, then wipe clean. Wipe the bore dry by running clean swabs all the way through from the chamber to the flash suppressor.
5. Once the patches come out dry they should be clean. If not repeat steps 3 & 4.
6. Use a worn out bore brush to clean the outside surface of the protruding gas tube.  
NOTE: Heat will discolor your gas tube; do not try to remove this discoloration.
7. Wipe the charging handle with a patch dipped in solvent; wipe off solvent with a dry cloth.
8. Inspect the upper assembly for any worn, broken or damaged parts.
9. Lightly lubricate the bore and chamber, outer surface of the barrel, front sight, under the hand guards, and the charging handle.
10. With a lubricated swab, run the rod from the receiver to the flash suppressor or muzzle brake. Do not over lubricate.
11. Lubricate the locking lugs
12. Drip lubricant onto the front sight detent. Then depress the detent to work the lubricant in.
13. Reassemble Upper.

# Bolt and Carrier Maintenance

**WARNING: Never interchange bolts between rifles.**

1. Clean all parts and outer surfaces of the bolt carrier assembly with a swab saturated with cleaning fluid.
2. Clean the bolt carrier key with a wornbore brush dipped in cleaning fluid and dry with a pipe cleaner.
3. Remove carbon deposits and dirt from the locking lugs with a cleaning brush dipped in cleaning fluid.
4. Clean the areas behind the bolt rings and under the lip if the extractor.
5. Press the ejector in repeatedly to remove accumulated brass shavings from the ejector hole and assure the ejector moves freely.
6. Inspect the bolt assembly for cracks or fractures, especially in the cam pin hole area. Inspect the firing pin retaining pin for bends, breaks or dents. Inspect the bolt cam pin for cracks or chips. Inspect the firing pin for bends, cracks, or a sharp, chipped or blunted tip.
7. Lubricate the bolt carrier, bolt, cam pin, firing pin and firing pin retaining pin. Be sure to coat the inner and outer surfaces and the cam pin area of the bolt carrier. Place one drop of lubricant inside the key. Flush the ejector with lubricant and cycle the plunger enough to ensure the ejector spring is well lubricated.

## Lower Maintenance

1. Remove any dirt or debris from the trigger group with a cleaning brush and/or cotton swab dipped in cleaning fluid.
2. Remove powder fouling, corrosion and dirt from the lower receiver with a cleaning brush and/ or cotton swab dipped in cleaning fluid.
3. Use a pipe cleaner to clean the butt-stock screw vent hole.
4. Clean the buffer, recoil spring and inside of the lower receiver with a cleaning brush and/or cotton swab dipped in cleaning fluid.
5. Examine the lower receiver assembly for any worn, broken or damaged parts.
6. Lightly lubricate the lower receiver and the internal parts of the lower receiver assembly.

# Ammunition Warning

With the growing popularity of the AR-15/M16/ AR10 family of rifles the demand for ammunition has risen sharply. Unfortunately, this has made quality ammunition hard to find.

When purchasing domestically produced ammunition, questions can be answered by contacting the manufacturer directly. They will have the most accurate information about their products. If you have a problem with any ammunition be sure to have the lot number from the packaging that the ammunition in question came from; the manufacturer will need this information.

When purchasing surplus ammunition, it is not likely that the manufacturer is known or can be contacted. Most surplus ammunition is not from questionable sources, but some surplus ammunition is from rejected lots that did not meet a required specification. Find out as much as you can or purchase a small sample of the surplus ammunition before purchasing larger quantities. AR-15.com has the Ammo Oracle, located at <http://ammo.ar15.com/ammo/> and can answer most questions on ammunition. Many message boards will also have posts with reviews on ammunition by members. While these resources do not represent the final authority in ammunition related issues, they serve as a helpful guide for general information concerning various types of ammunition.

Before Firing Any Ammunition, inspect each cartridge for defects.

Dispose of cartridges that exhibit any of the following defects:

- Deformed brass. Including burrs, cracks, dents, scratches, bent or bowed cases.
- Deformed bullet. Including burrs, dents and scratches.
- Improperly seated bullets. The case neck should be uniform with no deformations and the bullet should be seated tightly in the case. Check overall length to ensure the bullet is not seated too deeply or has been pushed in from an impact. Some ammunition may have a colored sealant around the case neck.
- 
- Improperly seated primers. The primer should be flush with the base of the case with no visible damage to the primer cup. Some ammunition may have a colored sealant around the primer.
- Corroded cartridges. Any amount of metal that is corroded and eaten away.
- Do not fire cartridges exposed to extreme heat (135 F°) until they have cooled.

# Ammunition Warning

Not all defective ammunition has visible traits to distinguish it from good ammunition. If any cartridge from a lot of ammunition exhibits any of the following characteristics, discontinue the use of the entire lot and contact the manufacturer or dispose of the ammunition properly.

1. Inconsistent function. This can also be a firearm related malfunction. Clean and test the rifle with another source of ammunition. If proper function is restored discontinue the use of the suspect ammunition immediately.

2. Blown primers. This is an indication of improper powder charge.

Discontinue the use of the suspect ammunition immediately.

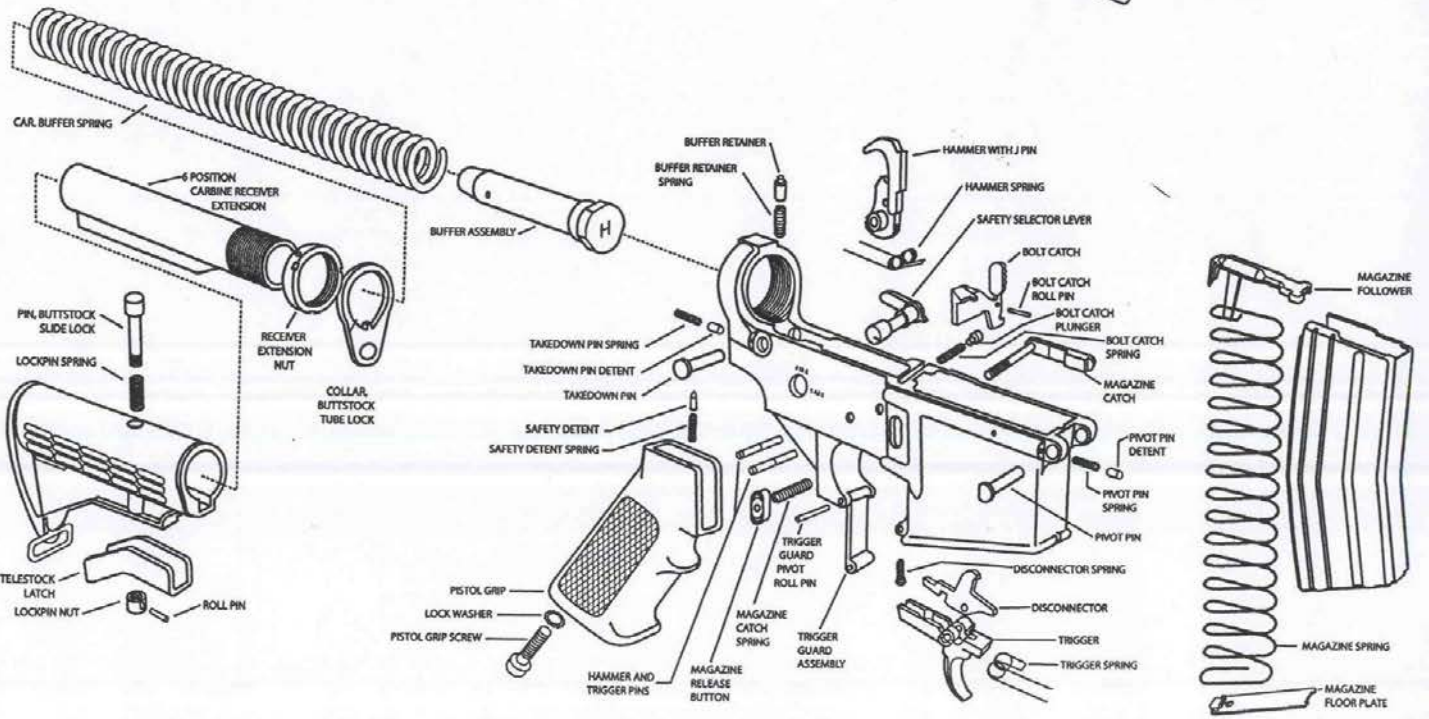
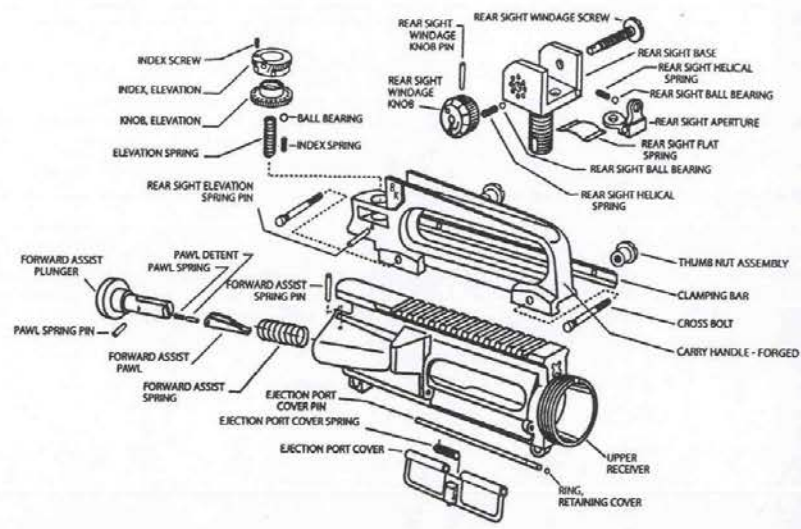
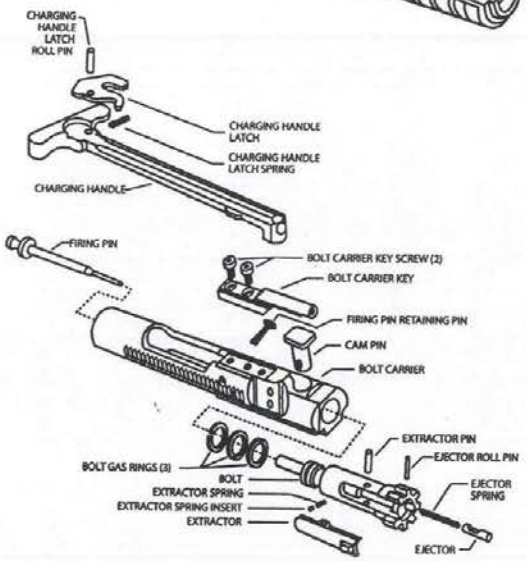
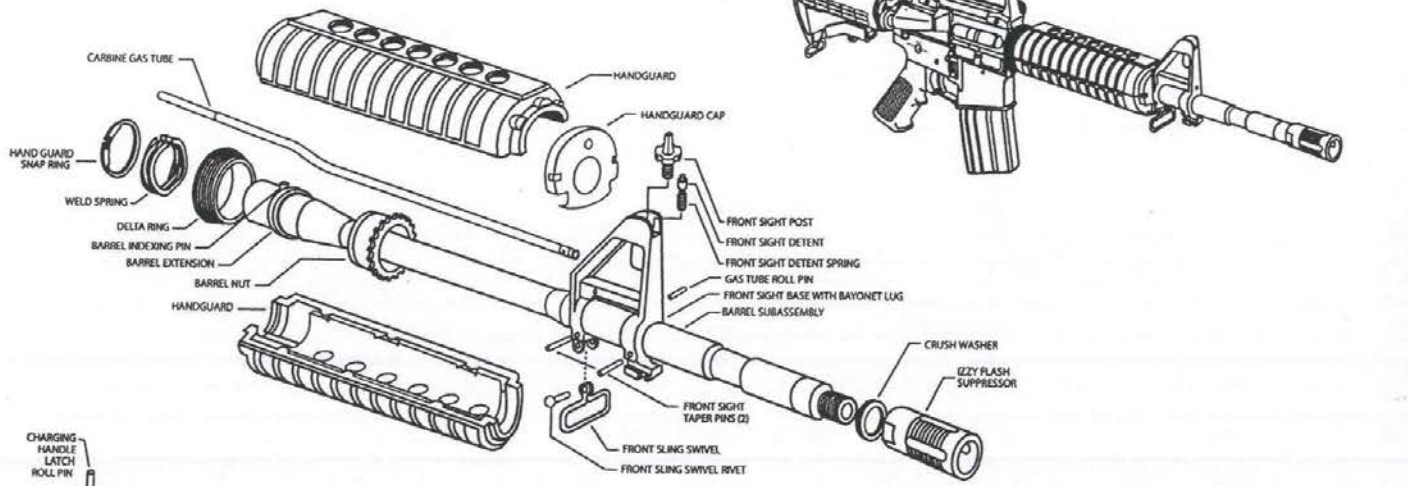
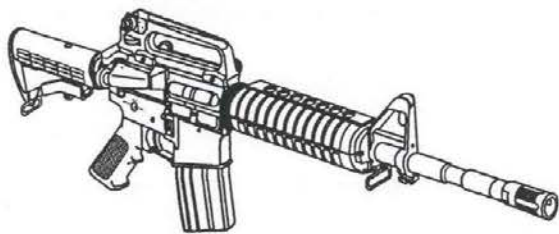
3. Inconsistent sound. Noticeably louder or quieter reports indicate improper powder charge. Discontinue the use of the suspect ammunition immediately.

4. Cartridge fails to chamber. This can also be a firearm related malfunction. Clean and test the rifle with another source of ammunition. If proper function is restored discontinue the use of the suspect ammunition immediately.

Other ammunition related problems can occur. If you believe that ammunition you are using is performing in an inconsistent manner, do not take any chances that you are experiencing a one-off occurrence.

Discontinue the use of the suspect ammunition and contact the manufacturer.

Your rifle is a sizable investment. Make every effort to use quality ammunition, to ensure your safety and prolong the life of your firearm for years of enjoyment.



| <b>TROUBLESHOOTING</b>                                     |   |
|--|---|
| <b>Selector will not engage "SAFE"</b>                     |   |
| UNLOAD Rifle First   |   |
| <b>INSPECT FOR</b>   | <b>RESOLUTION</b>                                     |
| Fire control group is not cocked.                          | Fire control must be cocked.                          |
| Primer in fire control group.                              | Remove and Discard.                                   |
| Selector frozen on "FIRE".                                 | Disassemble, Clean, Lubricate and assemble correctly. |
| Too many cartridges in magazine.                           | Remove excess cartridges.                             |
| <b>Magazine fails to lock into magazine well</b>           |   |
| <b>INSPECT FOR</b>   | <b>RESOLUTION</b>                                     |
| Dirty or corroded magazine catch.                          | Disassemble, Clean, Lubricate and assemble correctly. |
| Worn or broken magazine catch.                             | Replace magazine catch.                               |
| Defective magazine   | Replace magazine catch.                               |
| Defective magazine catch spring.                           | Replace magazine catch spring.                        |
| <b>Ammunition will not feed into chamber.</b>              |   |
| <b>INSPECT FOR</b>   | <b>RESOLUTION</b>                                     |
| Magazine not fully seated.                                 | Seat magazine with firm pressure.                     |
| Too many cartridges in magazine.                           | Remove excess cartridges.                             |
| Incorrect caliber cartridges.                              | Replace with correct caliber cartridges.              |
| Carbon in chamber, carrier key or on gas tube.             | Clean.  |
| Dirt, corrosion, or carbon buildup in barrel locking lugs. | Clean locking lugs on barrel and bolt.                |
| Dirty or defective magazine.                               | Clean and lubricate or replace.                       |
| Dirty or corroded ammo.                                    | Clean,  |
| Damaged ammo.  | Replace.  |
| Action of buffer assembly is restricted.                   | Take out buffer and spring and clean.                 |
| Ejector or extractor is frozen.                            | Clean and oil or replace.                             |

| TROUBLESHOOTING   |   |
|---|---|
| <b>Failure to FIRE</b>  |   |
| UNLOAD Rifle First  |   |
| Inspect For   | Resolution  |
| Selector on "Safe"  | Move Selector to "Fire"   |
| Selector frozen on "Safe"                                       | Disassemble, Clean, Lubricate and assemble correctly  |
| Excess fouling or carbon on firing pin or in firing pin recess. | Disassemble, Clean, Lubricate and assemble correctly  |
| Excess oil in firing pin recess.                                | Remove excess oil with pipe cleaner   |
| Improper assembly of firing pin.                                | Assemble Correctly  |
| Hammer spring installed incorrectly.                            | Assemble Correctly  |
| Weak or broken hammer spring                                    | Replace   |
| Broken Firing Pin or Hammer                                     | Replace   |
| Defective Ammunition  | Remove and Discard  |
| Bolt not locked in battery                                      | Extract Cartridge, clean area   |
| <b>Failure to Extract</b>                                       |   |
| Inspect For   | Resolution  |
| Fouling or carbon in chamber                                    | Clean   |
| Fouling or carbon in extractor tip or recess.                   | Clean   |
| Damaged or missing extractor spring.                            | Replace   |
| Damaged or missing extractor spring insert.                     | Replace   |
| Dirty or corroded ammunition.                                   | Remove and Discard  |
| Frozen or worn extractor  | Dissemble and Clean or Replace  |
| Restricted buffer assembly                                      | Dissemble and Clean   |
| Restricted movement of bolt carrier group                       | Remove, Clean, and Lube. When reinstalling the bolt carrier group check to insure it moves freely in the upper receiver |
| Clogged gas tube  | Replace   |
| Gas system is short stroking                                    | See section for short stroking  |

| <b>TROUBLESHOOTING</b>                                    |  |
|---|--|
| <b>Bolt Fails to Lock Open on Last Round</b>              |  |
| <b>Inspect For</b>  | <b>Resolution</b>  |
| Dirt, Corrosion, or Carbon Buildup in Bolt and Carrier    | Clean  |
| Dirt, Corrosion, or Carbon Buildup in barrel locking lugs | Clean  |
| Ejector Frozen  | Clean and Oil  |
| Defective Magazine  | Replace  |
| Dirty or corroded Bolt Catch                              | Clean or Replace   |
| Burred or Broken Bolt                                     | Contact Warranty Consultant  |
| Rifle recoil spring in carbine stock                      | Install correct spring. Carbine spring should be 36 coils versus 44 for the A1 or A2 Rifle |
| Gas System is short stroking                              | See section on short stroking.   |
| <b>Short Stroking</b>                                     |  |
| <b>Inspect For</b>  | <b>Resolution</b>  |
| Gaps in gas rings (not staggered)                         | Stagger gas rings  |
| Gas rings worn  | Replace gas rings  |
| Carbon or dirt in carrier or on outside of gas tube       | Clean  |
| Obstruction inside of carrier key                         | Remove obstruction and clean   |
| Weak or reloaded ammunition                               | Replace with factory fresh ammunition  |
| Dirty Rifle   | Clean  |
| Improper Lubrication                                      | Lubricate generously   |
| Loss of gas power   | Check and Clean entire gas path  |
| Defective Magazine  | Procedure for immediate action on next page  |



| <b>TROUBLESHOOTING</b>   |                   |
|--|-------------------|
| <b>Cartridge Jammed in Action</b>  |                   |
| <b>Inspect For</b>   | <b>Resolution</b> |
| <b>Cartridge jammed between bolt and magazine or feed ramps.</b>   |                   |
| <b>Double Feed.</b>  |                   |
| 1. Remove Magazine   |                   |
| 2. Pull back and hold charging handle  |                   |
| 3. With the rifle positioned muzzle up; strike the butt stock on the ground.   |                   |
| 4. When the bolt is free of the cartridge lock the bolt open with the bolt catch.                                      |                   |
| 5. Remove and discard damaged casings or cartridges.   |                   |
| 6. Inspect the rifle for damage  |                   |
| <b>Spent casings lodged between bolt and charging handle.</b>  |                   |
| 1. Remove Magazine   |                   |
| 2. Push in on bottom of bolt   |                   |
| 3. With the rifle positioned muzzle up strike the buttstock on the ground.   |                   |
| 4. The impact should dislodge the bolt from the casing and lock open.  |                   |
| 5. Remove and discard damaged casings if they did not fall out of the action on their own.                             |                   |
| 6. Inspect the rifle for damage.   |                   |
| Warning: If either of these procedures fail, do not attempt to disassemble the rifle and consult a qualified gunsmith. |                   |

## Limited Lifetime Warranty

Bear Creek Arsenal firearms are warranted to be free from defect in materials and workmanship. Any such defect of which Bear Creek Arsenal is given written notice, as provided below will be remedied by Bear Creek Arsenal.

This warranty is granted by Bear Creek Arsenal (BCA), 310 McNeill Road, Sanford NC 27330.

To initiate a Warranty claim, call BCA Customer Service Monday thru Friday 8am-5pm to get a Return Merchandise Authorization (RMA) number. Warranty claims should state (in writing) the model and serial number of the firearm concerned, a description of the difficulty experienced, and the date of purchase.

The firearm concerned should be shipped to the Warranty Service Department, Bear Creek Arsenal, 310 McNeill Road, Sanford NC 27330.

BCA will accept no responsibility for loss or damage in transit.

Under no circumstance shall BCA be responsible for incidental or consequential damages with respect to economic loss or injury to property, whether as a result of express or implied warranty, negligence or otherwise. Altering or modifying parts is dangerous and will void the warranty. The BCA rifle was manufactured to perform properly with 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 replacements nor original parts are altered or changed.

Contact Information:  
Bear Creek Arsenal  
310 McNeill Road  
Sanford NC 27330  
(919) 777-6063

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.



BEAR CREEK  
**ARSENAL**







**MADE IN USA**