



TACTICAL SOLUTIONSTM
INSTRUCTION MANUAL
FOR THE
AR-22 RIFLE &
UPPER ASSEMBLY

Tactical Solutions AR-22 rifle & upper assembly

Thank you for buying a Tactical Solutions product. Please read the full owner's manual before use.

The following instructions are designed to help you through the process of installation, loading, disassembly, cleaning, lubrication and reassembly of your AR-22 rifle or AR-22 upper assembly.

The AR-22 upper assembly will work on any standard AR-15 small pin lower and is sold as a self-contained complete upper, consisting of an upper receiver, bolt assembly, and barrel.

This upper is designed to operate with "military spec" AR-15 triggers. Aftermarket triggers may or may not impact the performance of this conversion upper.

LOADED WEAPON WARNING

Always make sure your gun is unloaded before any work is started. Never clean, lubricate, disassemble, reassemble or work on any firearm while it is loaded. Keep all ammunition away from the work area. Eye protection is required when working on any firearm. Keep the muzzle pointed in a safe direction at all times while working on your firearm! When shooting your gun always wear shooting glasses and hearing protection!

LEAD EXPOSURE WARNING

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

HANDLING WARNING

If dropped or struck with the safety "off", the pistol may fire. Keep chamber empty unless actually firing! Keep safety "on" unless actually firing!

AMMUNITION WARNING

Death, serious injury, and damage can result from the use of wrong ammunition, bore obstructions, powder overloads, or incorrect cartridge components.

Operation of the AR-22

The AR-22 will fire if there is a cartridge in the chamber and the trigger is pulled, whether or not there is a magazine in place! Removing the magazine does not unload the rifle. Never assume the AR-22 is unloaded. Visually inspect the chamber and the magazine each time the rifle is handled to be certain there are no cartridges in either.

Safety

The Safety Selector Lever is located on the left side of the lower receiver and has two positions, "FIRE" and "SAFE." When set to "FIRE," the firearm will fire a single shot each time the trigger is pulled without manually reloading. When set to "SAFE," a cam bears upon the rear portion of the trigger, blocking the sear surface of the trigger and preventing the hammer from being released.

Magazine

The AR-22 was designed to function with the Black Dog Machine 10 round or 25 round X Form magazines.

Loading the Magazine

To load the magazine, press the rim of the cartridge against the magazine follower at the widest of the section of the steel feed lips until the cartridge enters far enough to be pushed to the rear of the magazine. Continue this process until all 10 or 25 cartridges are loaded into the magazine.

Loading the AR-22

Always keep the AR-22 pointed in a safe direction.

With the magazine facing forward, center the loaded magazine in the firearm's magazine well and push the magazine up until magazine catch engages and holds the magazine.

Press upwards on magazine bottom to ensure it is seated fully.

Pull down on the magazine bottom to verify it is securely engaged in the magazine well. If the magazine releases from the magazine well.

With a loaded magazine secured in the magazine well, pull the charging handle fully rearward and release it to allow the bolt to close and chamber a loaded cartridge.

Verify the safety selector is in the "Safe" position. If it is in the "Fire" position, rotate it fully to the "Safe" position.

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Firing the AR-22

Always keep the firearm pointed in a safe direction.

Point the muzzle at your intended target.

Rotate the safety selector lever fully to the “Fire” position.

With the target acquired and with the firearm securely held, pull the trigger. The firearm will discharge and continue to discharge each time the trigger is pulled, until the magazine and chamber are empty.

Installation of AR-22

Start with an unloaded rifle and keep the rifle pointed in a safe direction at all times.

Switch the rifle to “fire,” cock the hammer, then switch rifle to “safe”, turn the rifle on its right side and push out the two receiver pins holding the centerfire upper to the lower receiver.

Remove the upper from the lower receiver.

Carefully cut the plastic retaining strap on the new AR-22 upper, while pointing the muzzle towards the ground. Unlike the standard AR-15 centerfire upper, the AR-22 bolt assembly can slide completely out from the back of the upper.

With the bolt assembly pushed all the way forward, set the new AR-22 upper on the receiver and push the retaining pins back in place.

Gently pull the charging handle back and check the function of the upper. Remember that the bolt is only going to travel half the distance inside of the receiver. The charging handle should stop half way back. This is the standard distance of travel for the bolt.

Your AR-22 upper is ready to use.

Disassembly & Cleaning - General

Starting with an unloaded rifle, switch the rifle to “fire,” cock the hammer, then switch rifle to “safe”, turn the rifle on its right side and push out the two receiver pins holding the upper to the lower receiver.

Point the muzzle down and remove the AR-22 upper from the lower receiver, with your thumb holding pressure against the bolt assembly to prevent it from sliding out of the AR-22 upper.

With your hand at the rear of the AR-22 upper, invert the upper and gently slide out the bolt assembly. Then remove the charging handle.

The bolt assembly can be wiped off with a shop rag and scrubbed with a brush for basic maintenance.

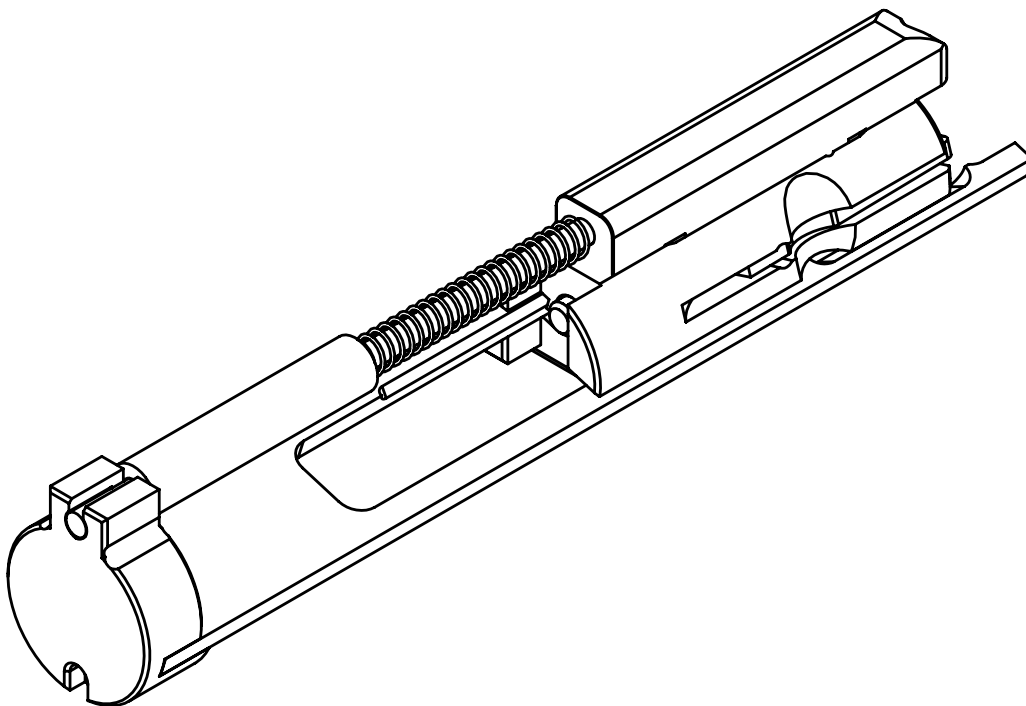
Wipe out the inside of the receiver.

With the AR-22 inverted in a cleaning rack, wipe off the face of the breech, taking care to remove any built-up carbon or copper plating fouling.

To clean the barrel, traditional cleaning methods should be used with this rifle, noting that keeping the chamber clean is important to maintain reliability and function in the AR-22. The upper should be cleaned from the rear, using a .22 caliber rimfire specific cleaning rod and solvents.

Disassembly – Bolt Assembly

With the bolt assembly pointed away from you, gently slide the top recoil spring assembly to the left, while holding the lower bolt and bolt carrier. Do not compress the recoil spring during this.



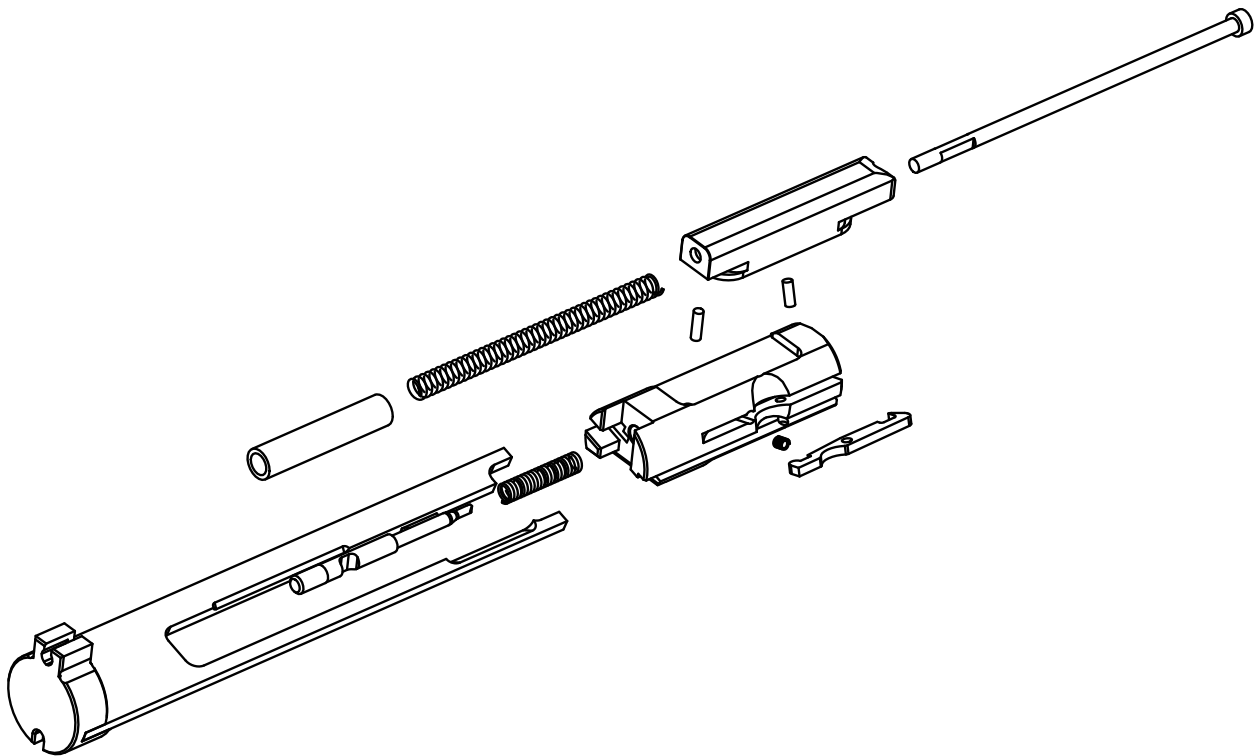
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Once the recoil spring assembly is clear from the bolt, the bolt will slide forward off the carrier.

To remove the firing pin from the bolt, gently tap the firing pin stop out from the bottom of the bolt, while holding pressure on the back of the firing pin. The firing pin stop can only be removed in one direction.

Remove firing pin and spring, and clean. Brush out the extractor slot and groove, and wipe out the inside of the firing pin hole inside the bolt. A cotton swab is good for this.



Reassembly

Lightly oil the firing pin and remove any excess oil. Reassemble the conversion in reverse order. Align the firing pin stop notch with the stop-pin hole in the bolt, and reinsert the stop pin from the top of the bolt, pushing it down into place.

Note: Over oiling the bolt components will cause premature carbon build up, which may decrease performance or increase the frequency in which the assembly must be cleaned.

Push the front part of the recoil assembly to the left, and slide the bolt onto the carrier. Once the bolt lines up with the recoil spring assembly, slide the recoil assembly to the right and connect it to the bolt.

Reinstall the charging handle and then slide the bolt assembly into the upper receiver.

With the bolt assembly pushed all the way forward, set the AR-22 upper on the lower receiver and push the retaining pins back in place.

Notes on Ammunition Selection & Cleaning Frequency

The AR-22 is designed to work best with most high-velocity rimfire ammunition. The units are tested at the factory with CCI Blazer.

Some low-grade bulk ammunition does not perform reliably in the AR-22, and like any semi automatic rimfire firearm, testing out different ammunition types is important.

Keeping your AR-22 clean is essential for proper functioning and service life. Through our experience with the AR-22, we have found some general round-count based cleaning cycles that will help keep the AR-22 running well.

For the Barrel and Bolt Assembly: Clean every 300 to 500 rounds.

GENERAL HANDLING CAUTIONS

- Always handle your firearm as if it were loaded.
- Never point your firearm at anything you do not intend to shoot.
- Always make sure your firearm is not loaded before working on it or handing it to another person.
- Firearms should be unloaded when not in use.
- Be sure the barrel is clear of obstructions before shooting.
- Be sure of your target before you shoot and always be sure your backstop is adequate.
- Wear shooting glasses and hearing protectors when you shoot.
- Never consume alcoholic beverages or take drugs before or during shooting.
- Never transport a loaded firearm.
- Don't shoot at a hard surface or at water.

TACTICAL SOLUTIONS IS NOT RESPONSIBLE FOR ANY PHYSICAL INJURY OR DEATH, PROPERTY DAMAGE, OR DAMAGE TO A FIREARM RESULTING IN WHOLE OR IN PART FROM:

- INTENTIONAL OR NEGLIGENT DISCHARGE OR FIRING OF THE FIREARM.
- IMPROPER OR CARELESS USE OR HANDLING OF THE FIREARM.
- UNAUTHORIZED MODIFICATIONS OR REPAIRS TO THE FIREARM.
- DEFECTIVE, IMPROPER, REMANUFACTURED OR RELOADED AMMUNITION.
- NEGLIGENCE OF THE FIREARM OR OTHER CAUSES BEYOND THE CONTROL OF THE COMPANY



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