

Vertex Vertex Pro Vertex Carbon

.22 Nosler, .223 Wylde, 6 ARC, 6.5 Grendel



OWNER'S MANUAL:

OPERATION, HANDLING, DISASSEMBLY / REASSEMBLY

- DO NOT DISCARD THIS MANUAL - READ THIS MANUAL CAREFULLY, PAYING CLOSE ATTENTION TO THE INSTRUCTIONS AND WARNINGS BEFORE USING THIS FIREARM.

This manual should stay with this firearm at all times. If the firearm is given, transferred or sold to another person, this manual should go with it

**Before loading, using, or disassembling this firearm, please
Read, Understand, and Follow all of the instructions and
warnings in this manual.**

Caution: If you are unfamiliar with firearms, seek further advice through a NRA Approved Instructor, Firearm Safety Training Organization, or similar qualified organizations prior to using the firearm.

Warning: Like any firearm, if this firearm is carelessly or improperly handled, unintentional discharge can result and can cause damage to property, severe injury or even death.

Warning: If this firearm is jarred or dropped with the bolt carrier assembly locked to the rear with a loaded magazine in place **a round could be chambered.**

Caution: Only clean, dry, high quality commercially manufactured ammunition should be used in this firearm. Only use ammunition that is appropriate for the caliber and design of your firearm.

IMPORTANT NOTICE: Any modifications of many kind, including any addition or removal of components or disassembly beyond what is detailed in the owner's manual could completely **VOID YOUR WARRANTY!**

Thank You for Your Purchase

Please follow all instructions in this manual before operating your new firearm.

The instructions and safety warnings in this manual are very important. By taking precautions and understanding the dangers associated with the use of any firearm you can enjoy the use of your BRD Gun Works LLC firearm for years to come. Failure to take precautions and follow instructions may result in severe damage to property and/or the firearm as well as serious injury or even death to you or others. Always follow these instructions and carefully read and refer to this manual before loading firearm.

Note: For information or details not covered in this manual, contact BRD Gun Works LLC at:
jarrod@brdgunworks.com

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.

Safety First

Fundamental Firearm Safety Rules.

Always treat every firearm as if it were loaded.

Always keep the firearm pointed in a safe direction.

Never point any gun at anything you do not intend to destroy, whether it is loaded or unloaded.

Always keep your finger off the trigger until ready to shoot.

Always be sure of your target and what's beyond it.

Always keep the firearm unloaded until ready to use.

Be sure the firearm is safe to operate.

Always be sure the barrel is clear of obstructions before shooting.

Know how to use the firearm safely.

Use only the correct ammunition for the firearm.

Wear appropriate eye and ear protection.

Never leave a firearm unattended.

Never use alcohol or drugs before or while shooting.

Store firearms and ammunition so that they are not accessible to unauthorized persons.

Never touch the barrel after firing, more than likely it will be very hot.

Be aware that certain types of firearms and many shooting activities require additional safety precautions.

Keep your finger off the trigger and leave the safety on until you are ready to shoot!

If your firearm fails to fire with a live round still in the chamber (a misfire), remove the round quickly, keeping your face clear of the ejection port. If you are unable to remove the round within 10 seconds, remove the magazine, point the firearm in a safe direction and wait 15 minutes. With the live round still in the chamber, the firearm may still fire the round.

Do not fire the firearm if there is water in the barrel.

If there is a noticeable difference in sound or recoil; stop firing immediately! This could indicate there was an incomplete powder burn and/or there is a bullet stuck in the bore.

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Please familiarize yourself with this manual and the operation of your particular firearm. To ensure that you get the best performance and reliability from your new BRD Gun Works LLC firearm, please read through all of the procedures listed in this manual before attempting to perform any of the described actions. If any part of this manual is unclear to you, please contact us before attempting the procedure.

All complete firearms and uppers are headspaced and test fired before shipping.

Clean your firearm before using for the first time.

Unloading and Clearing Your Rifle

To unload and clear your rifle:

Keep your rifle pointed in a safe direction for the duration of the procedure.

Place your selector on "SAFE". You cannot select "SAFE" unless the hammer is cocked.

Depress the magazine catch button and remove the magazine.

Eject the chambered cartridge by retracting the charging handle until it stops. Let the ejected cartridge fall to the ground.

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.

Push the charging handle forward until it clicks to re-latch the charging handle.

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.

Keep your rifle pointed in a safe direction for the duration of the procedure.

Load your magazine with the proper cartridges. Place cartridge between the magazines feed lips and push down to seat.

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.

Get into the shooting position you plan to use. Grasp the pistol grip in one hand and the handguard in the opposite hand with the buttstock to your shoulder.

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 miss feed.

NOTE: If you have a Vertex AR with a side charge upper receiver, the charging handle is non-reciprocating. Meaning that it will not move each time the firearm is fired. The non-reciprocating charging handle is equipped with a detent that retains the handle in the forward position after chambering a round using the charging handle. Some effort is required to move the charging handle from the detent position. This is **NORMAL**.

Your rifle is now loaded.

Align your sights on your target.

Place the selector on "FIRE"; Your rifle is now ready to shoot.

Squeeze the trigger until the hammer is released.

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 impacts 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 barrel's gas port, into the gas block and through the gas tube and into the carrier key on the bolt carrier. The gas pushes the bolt carrier back unlocking your bolt from the barrel extension allowing the bolt carrier to recoil completely. The underside of the carrier 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.

NOTE: The Vertex models feature an SLR adjustable gas block that can be adjusted to fine tune your rifle for the specific load you are shooting, as well as for required changes due to elevation and other environmental conditions. Turning the adjustment screw clockwise will reduce the amount of gas used to operate the system and reduce recoil on higher powered cartridges. Turning the screw counterclockwise will increase the amount of gas to improve the reliability of lower powered cartridges. Reducing the gas too far can create improper function and operational concerns. Increasing the gas beyond what is needed will result in an excessive amount of recoil as well as increased wear on critical bolt carrier group components and fire control group components.

NOTE: The Vertex Pro and Vertex Carbon models have the option of a TriggerTech adjustable two stage trigger. For best performance it is recommended that the trigger not be adjusted to its lowest pull weight, but instead just above it. With a two stage trigger there will be a little bit of pre-travel before the trigger hits the "wall" and becomes solid, allowing for the further pressing of the trigger to break the shot. This is **NORMAL** operation for a two stage trigger.

Immediate Action in Case of Trouble

If your firearm stops firing
perform the following immediate actions...

Remove the magazine from the magazine well.

Pull charging handle all the way back.

Inspect the chamber and look for any obstruction or unfired round. If the chamber is clear and there is **not** an un-fired round present, proceed to step 4. If the chamber is not clear or if there is an un-fired round in the chamber, **stop now** and seek assistance from qualified individuals.

Re-insert the magazine and make sure it seats properly.

Pull the charging handle all the way back and **RELEASE** to feed a new round. Don't ride the charging handle forward.

Pull trigger to fire. If the firearm still will not fire, look for trouble, repeat steps 1-5, and if the firearm still will not fire **stop now** and seek assistance from qualified individuals.

Bullet Stuck In the Bore

WARNING:

If you hear an audible “POP” or experience reduced recoil during firing, **IMMEDIATELY CEASE FIRE**, then:

Remove the magazine from the firearm.

Lock the bolt to the rear.

Place the selector lever on “SAFE”.

Check for a bullet stuck in the bore.

If there is a bullet stuck in the bore **DO NOT APPLY** the “Immediate Actions” previously described.

If a bullet is stuck in the barrel of the firearm, **do not try to remove it**. Take the firearm to a qualified gunsmith for repair.

Disassembly Instructions

Before disassembling your rifle please unload and clear your rifle as described in the unloading directions.

Re-verify your rifle is unloaded and return the bolt and carrier into battery.

ATTENTION: Look into the chamber from the ejection port and visually confirm that there is NOT a round in the chamber.

Partially push the rear take down pin and the front pivot pin from left so they are not captured by the detents that retain them in the receiver in the closed position. Use a delrin take down pin punch if needed.

Pull the rear take down pin the rest of the way to the right side of the lower receiver until it engages the detent that holds the pin in the open position.

Pivot the lower receiver away from the upper receiver.

Pull the front pivot pin the rest of the way to the right side of lower receiver until it engages the detent that holds the pin in the open position.

The upper and lower receivers are now separated; set the upper receiver aside.

ATTENTION: Do not dry fire the firearm (cock hammer and pull trigger) without the upper receiver assembly installed. Doing so could seriously damage the fire control group.

Remove the buffer and buffer spring from the lower receiver by depressing the buffer detent. Maintain tension on the buffer face while removing; it is under pressure from the recoil spring. You may need to hold the hammer down to allow the buffer and spring to be removed from receiver extension.

Set the lower receiver, buffer and recoil spring aside and pick the upper receiver back up.

Pull the charging handle to rear and remove bolt and carrier assembly. Set the bolt and carrier assembly aside.

Remove the charging handle by pulling it backwards until it is aligned with the key way. The charging handle may now be lifted from the upper receiver.

Set the upper receiver and the charging handle aside and pick the bolt carrier assembly back up.

Disassembly Instructions

Continued

Remove the firing pin retaining pin from the left side of the bolt carrier group. You may use a small screwdriver or punch to hook the loop the end of the firing pin retaining pin makes.

Tilt the bolt face up and remove firing pin from the rear of the bolt carrier.

Push bolt into the carrier until it rotates and comes to a stop (in battery position).

Turn cam pin 90° and lift it out from bolt and carrier.

Pull bolt forward out of carrier. Set the carrier aside.

With a punch, remove the extractor pin from the bolt assembly. Slight pressure applied to the extractor will ease removal of the extractor pin.

Remove the extractor. The extractor spring and elastomer insert should be captured in the extractor; do not remove the spring and elastomer from the extractor.

Your rifle is now field stripped for cleaning.

Do not disassemble your firearm any further than described. Any maintenance that requires further disassembly should be performed by BRD Gun Works LLC or a qualified gunsmith.

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.

Basic Recommended Cleaning Items

One piece coated cleaning rod of appropriate length
Cleaning jag of appropriate caliber
Nylon bore brush of appropriate caliber
Barrel extension cleaning kit with nylon brush and mop
Bore guide
Cotton cleaning patches of appropriate caliber
Quality cleaning solvent
Quality copper remover
Quality gun oil lubricant

Upper Maintenance

Always clean from chamber to muzzle in the direction the bullet travels.

Failure to do this could result in muzzle crown damage.

BRD Gun Works LLC does not recommend the use of bore brushes for routine bore cleaning. We reserve the use of bore brushes for barrels that have been severely neglected, rusted or pitted, or that have a copper build up that will not remove with the use of patches. When bore brushes are required, only nylon brushes are used.

If a firearm is equipped with a suppressor, we recommend removal of the suppressor from the barrel prior to cleaning the bore of the barrel.

NOTICE: The Vertex Series of AR rifles are equipped with an adjustable gas block. It is recommended that you turn the adjustment screw fully closed prior to cleaning the bore of the barrel.

Use cleaning solvent on the bore and chamber, the gas tube, the upper receiver and barrel assembly, locking lugs and all areas of powder fouling, corrosion, dirt or dust.

Install the nylon chamber brush on the cleaning rod, wet the brush in cleaning solvent and insert it into the chamber and locking lugs. Clean by pushing and twisting the cleaning rod.

Remove the chamber brush and install the chamber mop. Insert the chamber mop into the chamber and locking lugs. Clean by pushing and gently twisting the cleaning rod.

Insert the bore guide into the upper receiver and seat it in the chamber of the barrel.

Install the cleaning jag on the complete cleaning rod. Dip the cleaning patch in cleaning solvent. Following the directions on the cleaning solvent, run the rod through the chamber and flash suppressor or muzzle brake.

ATTENTION: Follow the directions for the cleaning solvent that you're using. Some cleaning solvents, and most copper solvents work best when left to sit in the barrel for a period of time. **BEWARE,** copper solvents that are ammonia based will pit and corrode barrels if left in the barrel for too long (this can be a matter of minutes), or if any residual solvent is left in the barrel bore. Follow the manufacturer's direction closely.

Upper Maintenance

Continued

Take a clean cleaning patch and 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 patches all the way through from the chamber to the flash suppressor.

Once the patches come out dry they should be clean. If not repeat steps 3 and 4.

Turn the adjustment screw on the adjustable gas block out 12 turns. Apply a drop of gun lubricant (Kroil is recommended) to the adjustment screw. Then turn the screw all the way to the closed position, and back out to position 12. Repeat two or three times.

Return the gas block adjustment screw to its normal position for proper operation of your rifle.

Use a worn out tooth 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. **DO NOT** insert a pipe cleaner or any other type of cleaning material inside of the gas tube. The inside of the gas tube does not require cleaning.

Wipe the charging handle with a patch dipped in solvent; wipe off solvent with a dry cloth. **NOTE:** If you have a side charge upper, you will not perform this.

Apply a very thin coating of gun lubricating oil to the charging handle surfaces. **NOTE:** For a side charge upper receiver, apply two or three drops along the top of the charge rail. Give it a moment to seep in between the charge rail and the upper receiver housing. Cycle the charge three or four times to distribute the lubrication.

Inspect the upper assembly for any worn, broken or damaged parts. Replace any faulty parts with quality replacement parts.

Lightly lubricate the bore and chamber, outer surface of the barrel, or gas block, under the handguard and the charging handle.

With a lubricated swab, run the rod from the receiver to the flash suppressor or muzzle brake. Do not over lubricate.

Lubricate the locking lugs.

Reassemble upper.

Bolt and Carrier Maintenance

WARNING: Never interchange bolts between rifles.

The Vertex Series of AR rifles use barrels that have the bolt headspaced to the barrel.

The Vertex AR uses a bolt carrier that is DLC coated. The Vertex Pro and Vertex Carbon AR's use a polished JP low mass bolt carrier. **DO NOT** use a scraper of any kind to remove carbon from the bolt or bolt carrier.

Clean all parts and outer surfaces of the bolt carrier assembly with a swab saturated with cleaning solvent.

Clean the bolt carrier key with a worn bore brush dipped in cleaning solvent.

Remove carbon deposits and dirt from the locking lugs with a cleaning brush dipped in cleaning solvent.

Clean the areas behind the bolt rings and under the lip of the extractor.

Use a punch to press the ejector in repeatedly to remove accumulated brass shavings from the ejector hole and assure the ejector moves freely. Be careful not to damage the bolt, ejector, or extractor with the punch.

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. **NOTE:** If any defects are found, replace the defective part(s).

Inspect the extractor and extractor spring. **NOTE:** If the extractor is chipped, or has broken edges in the area of the lip that engages the cartridge rim, it should be replaced.

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. Flush the ejector with lubricant and cycle the plunger enough to ensure the ejector spring is well lubricated.

Re-assembly is the reverse of disassembly.

Bolt and Carrier Maintenance

Continued

Insert extractor and spring assembly into bolt by pushing extractor assembly down and aligning the pivot hole in the extractor with the hole in bolt and insert extractor pin. If the spring comes loose, seat the large end of spring in the extractor.

Slide bolt assembly into bolt carrier assembly with extractor claw on the carrier's right side.

Align the bolt's cam pin hole with the carrier's cam pin slot. Insert bolt cam pin and rotate it 90°. **Note:** The cam pin will only go into the bolt one way, if the pin will not go in, rotate the bolt 180 degrees and it should slide in freely. On all Vertex Series AR's the cam pin is dimpled and the dimple should face **FORWARD**.

Insert firing pin in opening at the rear of the bolt carrier and seat. You may need to rotate the cam pin into alignment to allow the firing pin to seat.

Pull bolt assembly forward and replace firing pin retaining pin. When correctly installed the firing pin will not fall from the bolt carrier assembly and cannot be removed.

CAUTION: Failure to install the firing pin correctly may cause the gun to fire with the bolt open and could cause serious injury or death. **NEVER** use a "Cotter Pin" as a replacement for a real firing pin retaining pin. Cotter pins are not made of suitable materials, and the round head shape will cause damage.

Install charging handle assembly into upper receiver. Leave the charging handle halfway out of the receiver. **NOTE:** This is not performed on side charge models.

Install the bolt carrier assembly. The bolt must be extended from bolt carrier so the cam pin will not prevent the bolt carrier group installation.

Push charging handle assembly and bolt carrier assembly together into upper receiver.

With the bolt carrier in battery, close ejection port cover if equipped.

The hammer must be cocked and the selector lever must be on SAFE before installing the upper onto the lower.

Align the pivot pin holes and push pivot pin in.

Pivot the lower receiver towards the upper receiver. When aligned push in take down pin. **NOTE:** On side charge models make sure that the rear bolt retainer is pushed down.

Perform the function check on your rifle.

Lower Maintenance

Remove any dirt or debris from the trigger group with a cleaning brush and/or cotton swab dipped in cleaning solvent.

Remove powder fouling, corrosion and dirt from the lower receiver with a cleaning brush and/or cotton swab dipped in cleaning solvent.

Remove the buffer and buffer recoil spring from the receiver extension.

Clean the buffer, recoil spring and inside of the lower receiver with a cleaning brush and/or cotton swab dipped in cleaning solvent.

Examine the lower receiver assembly for any worn, broken or damaged parts. Replace any faulty parts with quality replacement parts.

Lightly lubricate the lower receiver and the internal parts of the lower receiver assembly.

On the Vertex model, using your finger put a light coat of lubricating oil on the spring and body of the buffer prior to installation.

Reassemble the lower receiver.

NOTE: The Vertex Series of rifles use drop-in style cassette triggers that utilize anti-walk trigger and hammer pins, and also use set screws to tension the trigger assembly in the lower receiver for proper operation. BRD Gun Works LLC **DOES NOT** recommend removal of the trigger assembly for routine maintenance.

NOTE: The Vertex Pro and Vertex Carbon Series of AR's use a JP Silent Captured Spring (SCS) for the buffer system. When performing maintenance on this system verify that the top retaining screw is tight. Inspect the o-rings on the SCS for cracks, tears, or missing pieces. If damage to the o-rings is found the o-rings must be replaced. JP Enterprise sells SCS maintenance kits. **CAUTION:** Failure to replace damaged o-rings could result in catastrophic failure of the SCS. Lightly lubricate the o-rings, weights, spring, and shaft.

Function Check

**TO AVOID ACCIDENTAL FIRING, BE SURE MAGAZINE IS REMOVED
AND CHAMBER IS EMPTY**

Pull charging handle assembly to rear and release.

Place selector lever on "SAFE". Squeeze trigger. Hammer should not fall.

Place selector lever on "FIRE". Squeeze trigger. Hammer should fall.

Hold trigger to the rear. Cycle the action. **SLOWLY** release the trigger. You should hear a click as you release the trigger as the disconnecter hands the hammer off to the trigger. Repeat this two or three times.

Hold trigger to the rear. Cycle the action. Release trigger. You should hear a click as you release the trigger as the disconnecter hands the hammer off to the trigger. Repeat this two or three times.

Hold trigger to the rear. Cycle the action. **QUICKLY** release trigger. You should hear a click as you release the trigger as the disconnecter hands the hammer off to the trigger. Repeat this two or three times.

Squeeze trigger again. Hammer should fall.

If your rifle fails any of these tests check your assembly. If the rifle will not pass these checks and it has been assembled properly, contact BRD Gun Works LLC or a qualified gunsmith for assistance.

SLR Sentry Adjustable Gas Block

Basic Operation

At the front of the gas block is a 15- position adjustment screw.

- Turning it clockwise to Position 0 will close it to zero gas flow
- Turning it counter-clockwise to Position 15 will open it to max gas flow
- Positions between 0 and 15 will regulate gas flow accordingly
 - Either increasing or decreasing gas flow

Cleaning & Maintenance

When cleaning the rifle, turn the adjustment screw to Position 0 before using bore cleaner.

- After cleaning is complete, return the screw to the preferred position
- This will aid in clearing any carbon buildup that has occurred

To aid in keeping the adjustment screw from seizing we recommend the following procedure.

- Clean and lubricate the adjustment screw and leaf spring frequently
 - Cartridge, barrel length, gas system length, dwell time, suppressor use and other factors will influence how much and what types of gas and fouling the gas block is subjected to
 - We recommend doing it every time the gun is cleaned
 - Depending on round count, we may go every other to every third range trip before cleaning the gun which also includes cleaning and lubricating the adjustment screw
- Use contact cleaner such as Brake Kleen (Non-Chlorinated Preferred) and compressed air to clean the individual parts
- My preferred lubricant is Kroil
- I do not remove the adjustment screw
 - Turn the screw out to Position 12
- Spray the adjustment screw with contact cleaner
 - If the adjustment screw is accessible (I.E. outside of the rail), I will take a plastic bristled brush and make a couple of passes over it in each direction
 - I then spray the adjustment screw again with contact cleaner
- Use compressed air to dry the adjustment screw

SLR Sentry Adjustable Gas Block *Continued*

- Apply a light oiling to the adjustment screw
 - Do not over-oil the adjustment screw
 - With Kroil, I use a needle oiling bottle and apply a couple of drops to the adjustment screw
 - If using a “regular” gun lubricant, lightly oil the adjustment screw followed by a wipe-down
- With Kroil, I will apply a drop on the top of the leaf spring and allow it to seep in
 - I do not apply regular gun lubricant to it
- Screw the adjustment screw in to Position 0 and then back out Position 12
 - Repeat this 2 or 3 times
- Return the adjustment screw to the preferred position
- If excessive lubricant was used, wipe the excess away

Initial Setting of Gas Block

If for some reason you need to set the initial setting of the gas block, use the following procedure.

- Turn the gas block adjustment screw clockwise to Position 0
- Back the adjustment screw out to Position 2
 - On most guns this will not be enough gas to properly cycle the gun
 - This is what we want
- Load 1 round in a magazine and fire it
 - If the gun does not lock back on the bolt face with an empty magazine, turn the adjustment screw counter clockwise 1 turn
- Load 1 round in a magazine and fire it
 - If the gun does not lock back on the bolt face with an empty magazine, turn the adjustment screw counter clockwise 1 turn
- Repeat the loading and firing of 1 round as needed until the bolt will properly and consistently lock back on the bolt face with an empty magazine
 - Once this occurs, turn the adjustment screw counter clockwise 2 more turns
 - The gas block is now properly set for the ammunition and the gun setup as it currently is

SLR Sentry Adjustable Gas Block

Continued

Adjustment of Gas Block

Under certain conditions the adjustable gas block may need to be adjusted.

- Changes in brands of ammunition
- Changes in bullet weight
- Installation or removal of a suppressor
 - Change suppressor brands or type
- Changes in environmental conditions
 - Elevation and pressure are common conditions
 - Usually experienced when traveling to different states where big elevation changes can be a factor

If you experience cycling conditions such as short stroking (not locking back on an empty mag or not properly feeding) after a change such as those listed above, you may need to increase your gas flow through the gas block.

- Open up your gas block by turning the adjustment screw counter clockwise

Adjusting your gas block can be done in two ways.

- You can check your setting by loading 1 round in a magazine and firing it
 - If it consistently locks back on the bolt face of an empty magazine then it is most likely properly adjusted
 - If needing to adjust the gas block, see the following two procedures
- You can perform the initial procedure of the **Initial Setting of Gas Block** as listed above
- If the bolt does not properly lock back on the bolt face of an empty magazine
 - Turn the adjustment screw out counter clockwise 1 turn
 - Load and fire 1 round
 - Repeat the above two steps until the bolt locks back consistently on the bolt face of an empty magazine
 - Then turn the adjustment screw two more turns counter clockwise

Troubleshooting

Selector will not engage “SAFE”.

UNLOAD Rifle First.

Inspect For	Resolution
Fire control group is not cocked	Fire control must be cocked
Primer in fire control group	Remove and discard
Selector frozen on “Fire”	Disassembly, clean, lubricate, and assemble correctly

Magazine fails to lock into magazine well.

CLEAR chamber first.

Inspect For	Resolution
Dirty or corroded magazine catch	Disassembly, clean, lubricate, and assemble correctly
Worn or broken magazine catch	Replace magazine catch
Defective magazine	Replace magazine
Defective magazine catch spring	Replace magazine catch spring
Magazine release button improperly installed	Properly install magazine release button

Ammunition will not feed into chamber.

UNLOAD Rifle First.

Inspect For	Resolution
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 or replace
Dirty or corroded ammunition	Replace ammunition
Damaged ammunition	Replace ammunition

Troubleshooting *Continued*

Failure to “FIRE”.

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 hammer spring
Broken Firing pin or hammer	Replace firing pin or hammer
Defective ammunition	Remove discard, and replace
Bolt not locked in battery	Extract cartridge, clean rifle

Failure to Extract

UNLOAD Rifle First.

Inspect For	Resolution
Fouling or carbon in chamber	Clean the rifle
Fouling or carbon in extractor tip or recess	Clean the rifle
Damaged or missing extractor spring	Replace spring
Damaged or missing extractor spring insert	Replace insert
Dirty or corroded ammunition	Remove, discard, and replace
Frozen or worn extractor	Dissemble and clean or replace.
Restricted buffer assembly	Dissemble and clean
Restricted movement of bolt carrier group	When reinstalling the bolt carrier group check to insure it moves freely in the upper receiver.

Troubleshooting *Continued*

Bolt Fails to Lock Open on Last Round.

UNLOAD Rifle First.

Inspect For	Resolution
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 or replace ejector spring and ejector
Defective magazine	Replace
Dirty or corroded bolt catch	Clean or replace
Damaged or bent bolt catch	Replace bolt catch
Burred or broken bolt	Contact a qualified gunsmith
Rifle recoil spring in carbine stock	Carbine spring should be 38 coils versus 43 for the A1 or A2 rifle
Gas system is short stroking	See section on short stroking

Short Stroking

UNLOAD Rifle First.

Inspect For	Resolution
Gas rings worn	Replace gas rings
Carbon or dirt in carrier or on outside of gas tube	Clean rifle
Obstruction inside carrier key	Remove obstruction and clean
Weak or reloaded ammunition	Use new factory ammunition
Dirty rifle	Clean rifle
Improper lubrication	Lubricate generously
Loss of gas power	Clean entire gas path
Defective magazine	Replace magazine

Troubleshooting *Continued*

Cartridge Jammed in Action.

REMOVE magazine first if possible.

Inspect For	Resolution
Cartridge jammed between bolt and magazine or feed ramps	<ol style="list-style-type: none">1. Remove magazine2. Pull back and hold charging to the rear3. With the rifle positioned muzzle up and your head clear of the muzzle; strike the buttstock on the ground4. The impact should dislodge the bolt and allow it to be locked open with the bolt catch5. Remove and discard damaged casings and/or cartridges6. Inspect the rifle for damage
Bolt Over Base Failure	
Double feed	
Spent casing lodged between bolt and charging handle	

WARNING: If this procedure fails to resolve the jam, do not attempt to disassemble the rifle. Consult a qualified gunsmith.

Please Practice Safe Firearms Handling

This Owner's Manual should always accompany this firearm. When you lend, give, or sell this firearm, be sure this manual goes with it.



IMPORTANT NOTICE: Any modifications of any kind, including any addition or removal of components or disassembly beyond what is detailed in the owner's manual could completely **VOID YOUR WARRANTY!**

CAUTION: Because BRD Gun Works LLC manufactures AR platform firearms in a variety of calibers always be sure to use the proper ammunition and magazines for the bolt and barrel combination installed on your firearm.

LIFETIME QUALITY GUARANTEE

BRD Gun Works LLC will guarantee its products against defects in material or workmanship. BRD Gun Works LLC will repair, replace or substitute part(s) (at BRD Gun Works LLC discretion) at no charge to the customer if a defect in material or workmanship is found. All service work must be carried out by BRD Gun Works LLC. Please provide a copy of the Invoice or Proof of Purchase when requesting service or repair work.

All warranty claims should state the model and serial number of the gun, a description of the difficulty experienced, and the date of purchase. It is recommended that shipment be insured by the owner, since BRD Gun Works LLC will not accept responsibility for loss or damage in transit. Shipping and insurance costs for return of firearm or components to owner will be paid by BRD Gun Works LLC if the work being completed is covered under this warranty.

NOTICE: All BRD Gun Works LLC firearms are designed to function with a wide variety of factory loaded ammunition and undergo rigorous testing prior to release to ensure reliability and durability. Because BRD Gun Works LLC relies on factory ammunition for testing, we cannot guarantee reliable function with handloads or reloads.



BRD Gun Works LLC
401 E 14th Place
Indianola, IA 50125

515-442-0294
sales@brdgunworks.com
techinfo@brdgunworks.com

WARNING! This product can expose you to chemicals including Cadmium, Lead, Cyanide Salts, or Nickel which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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