



WAR SPORT

INDUSTRIES, LLC



LVOA-B LVOA-SP LVOA-C GPR-B GPR

FIREARM OWNER'S MANUAL



Practice Safe Firearms Handling

WARNING: If this firearm is carelessly or improperly handled, unintentional discharge could result and could cause injury, death, or damage to property. Read this instruction manual prior to loading and firing this firearm. Follow all instructions on the proper handling and safe use of the firearm. Your life and others around you will depend on it.

Safety Rules

1. **Always keep your muzzle pointed in a safe direction and never intentionally cross anything you are not prepared to shoot.**

- a. A Safe Direction is one where **NO** injury and no property damage could occur if an unintentional round is fired.
- b. "Laser Rule" - Imagine your firearm has a laser beam extending from the muzzle and whatever it touches could be shot.

WARNING

Children are attracted to and can operate firearms that can cause injuries or death. Prevent child access by always keeping guns locked away and unloaded when not in use. If you keep a loaded firearm where a child obtains and improperly uses it, you may be criminally charged.

2. **Treat All Firearms as Loaded at All Times**

3. **Always keep your finger off the trigger until you are ready to shoot:** The trigger finger is only placed into the trigger guard and on the trigger when coming on target just before firing. When not firing, place your trigger finger straight on the receiver. If the trigger finger is held just outside the trigger guard, rather than on the receiver, a Convulsive Hand Grip could cause the trigger finger to fire the gun.

4. **Be Sure of your Target, the Surroundings, and Beyond.**

Range Safety Rules:

- 1. It is everyone's responsibility to keep yourself, and everyone else, safe. Safety must be a personal commitment by everyone at all times. Do not assume the safety of any firearm will prevent accidents from happening, only proper mindset and due diligence of the shooter will prevent accidents.
- 2. Cease Fire: This is a critical command and must be taken with the utmost seriousness.
- 3. Alcohol, Drugs, & Firearms Do Not Mix: Persons under the influence of alcohol or drugs will not be allowed to participate in any shooting exercises. Even non-prescription drugs can impair the shooter's ability to safely handle or shoot a firearm.
- 4. No Ammunition Allowed in the Cleaning Area: If a designated cleaning area is used, all firearms and magazines will be unloaded in the designated loading or unloading area. All firearms must be checked to make sure they are clear of any ammunition before entering the cleaning area and the muzzle will always be pointed in the safest direction.



The Town of Robbins and War Sport Industries

From the start in 1795 to 1943 the town of Robbins has changed names many times to reflect its history of the town and the influences of many people. From Mechanics Hill, then Elise, then Hemp, to Robbins. Each phase of Robbins NC is reflected in War Sport Industries. The spirit of Mechanics Hill for building rifles, the period of Elise and the rapid growth of the company, Hemp for textiles, Robbins for modernization. War Sport Industries is proud to be from “Small Town” U.S.A. and to bring all the elements of a great place to live to a quality products for you.

The LVOA History

The LVOA AR design fills the gap in SBR requirements (...keep it short) and eliminates the need for a suppressor for flash reduction purposes. The LVOA AR is a “GO LOUD, GO FAST” SBR.

In late 2010 War Sport Industries spent time on the range and the lab studying the philosophy behind the SBR and its intended purpose before we took the plunge to invest time and expense in the LVOA AR R&D effort. After some study we found that in order to tackle the inherent issues of a SBR we had to provide a “full” muzzle brake to control muzzle climb and thanks to the Battlecomp Enterprises BC 2.0 we did. Secondly, we had to encompass a “flash” hider that would surround the gasses from the muzzle brake report. This is where the LVOA Rail was born.

After developing the rail for testing that provided good results, further testing found there was more to be done to better manage the unspent gasses at the muzzle without having to design around specific ammunition. The need was to be able to get results from any round fired from the LVOA AR. In 2012 a completed and repeatable solution was nailed down that reduced flash to almost nothing, regardless of the ammo type. During the ammo testing phase there was ammo that produced flash due to low cost powder and air density, but the LVOA Rail managed to re-shape the flash, keeping it away from the sight plane.

After finding the 12.0” LVOA –S (SBR) solution, the demand for a non-NFA version quickly emerged from customers. The original release was pushed out to accommodate a 14.5” version (LVOA –C) with a pinned and welded BC 1.5 muzzle brake with an over-all length of 16.25” Although the dwell-time is longer than the LVOA –S it performs like the LVOA –S model. Both models feature the “Boyette” Wire Cutter, “Crossbow” muzzle suspension/support system and the Rail Bungee.

The LVOA you have ordered now is a rifle that is an ongoing advance in parts and uses the latest components and is always evolving. WSI started with premium parts in the industry to build a premium rifle. Now War Sport Industries is designing our own parts and incorporating them into the new line of LVOA systems. Stay tuned, the LVOA never stops evolving.



Keep a copy of this operations manual and your proof of purchase/sales records. Maintain these items in a secure safe or fireproof container. These materials will be necessary if the firearm is damaged, stolen or returned to War Sport Industries LLC for warranty or repair.

(Attach receipt here for future reference)

SERIAL NUMBER INFORMATION

Serial number of my FIREARM

Type of Optic: _____

Optic Serial Number: _____

Accessory Serial Number: _____

Accessory Serial Number: _____

Accessory Serial Number: _____



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LVOA Basic Information:



War Sport Industries LVOA-C		War Sport Industries LVOA-SP / S	
Basic Information		Basic Information	
Caliber	.223 Wylde	Caliber	.223 Wylde
Weight with 30rnd mag	4.2 kg (9.3 lbs)	Weight with 30rnd mag	4.0 kg (9.0 lbs)
Weight Carbine	3.8 kg (8.5 lbs)	Weight SBR	3.7 kg (8.25 lbs)
Length Open	90.1 cm (35.5 in)	Length Open	83.1 cm (32.75 in)
Length Closed	81.9 cm (32.75 in)	Length Closed	74.9 cm (29.5 in)
Mechanical Features		Mechanical Features	
Rifling:	1/8 RH QPQ Melonite	Rifling:	1/8 RH QPQ Melonite
Barrel length	41.91 CM (16.25 inch) with WSI Muzzle Break	Barrel length	34.29 CM (13.5 inch) with WSI Muzzle Break

GPR Basic Information:



War Sport Industries GPR		War Sport Industries GPR-E	
Basic Information		Basic Information	
Caliber	.223 REM / 5.56mm	Caliber	223 REM / 5.56mm
Weight with 30rnd mag	3.4 kg (7.5 lbs)	Weight with 30rnd mag	3.4 kg (7.5 lbs)
Weight Carbine	3.1 kg (7.0 lbs)	Weight SBR	3.1 kg (7.0 lbs)
Length Open	90.1 cm (35.5 in)	Length Open	90.1 cm (35.5 in)
Length Closed	81.9 cm (32.75 in)	Length Closed	81.9 cm (32.75 in)
Mechanical Features		Mechanical Features	
Rifling:	1/8 RH / QPQ Melonite	Rifling:	1/8 RH / QPQ Melonite
Barrel length	41.91 CM (16.2 inch) with WSI Muzzle Break	Barrel length	41.91 CM (16.2 inch) with WSI Muzzle Break



ALTERATIONS & MODIFICATIONS WARNING



Altering or modifying parts is dangerous and will void the warranty. This WSI firearm 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, are installed correctly and that neither the replacements nor the originals are altered or changed. The WSI firearm is a complex precision tool with many parts that must work together to provide safe and proper operation. Putting a rifle together wrong or with incorrect or modified parts can result in a damaged firearm, serious personal injury or death to you and others. Always have a qualified gunsmith work on your firearm.

AUTHORIZED AMMUNITION

WSI recommends the use of only high quality, domestically manufactured commercial ammunition manufactured to SAAMI (Sporting Arms and Ammunition Manufacturers Institute) Specifications for the best reliability and highest accuracy.

PLEASE NOTE:

THE USE OF RE-LOADED /HANDLOADED / NON-SAAMI SPECIFICATION AMMUNITION VOIDS THE FACTORY WARRANTY.

AMMUNITION SHIPPING NOTICE: 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 please call WSI offices at (910) 948-3000.

Firearm Warranty Information

War Sport Industries warrants to you, the original retail purchaser of a new War Sport Industries firearm; that from one year from the date of shipment, your War Sport Industries firearm will be free from defects in material and workmanship. Some limitations apply.

What is not covered by this warranty?

We will not cover damage of your firearm caused by:

- Failure to provide proper care and maintenance.
- Accidents, abuse or misuse.
- Barrel obstruction.
- Hand loaded, reloaded or improper ammunition.
- Unauthorized adjustments, repairs or modifications.
- Normal wear and tear.

What will War Sport Industries do if you discover a defect?



If you make a claim within the warranty period following the instructions given in this model's owner's manual, we will, at our option, repair the defective parts, or replace the firearm at no cost to you. If we send you a new firearm, we will keep the defective one.

What is excluded from this warranty?

War Sport Industries excludes and will not pay incidental or consequential damages under this warranty. By this we mean any loss, expense or damages other than to repair the defects in the firearm or replace the firearm. No implied warranties extend beyond the term of this written warranty. PLEASE NOTE: Some jurisdictions do not allow exclusion of incidental or consequential damages, or limitation on how long an implied warranty lasts, so the above exclusion and limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights.



Disassembly of a War Sport Industries firearm

Remove magazine



1R-1L: press the magazine release button

2R-2L: Remove the magazine



3. Hold the bottom of the bolt catch down
- 4-5. While holding the bolt catch down, fully pull the charging handle to the rear
6. Place the charging handle back in battery

7. INSPECT CHAMBER for NO AMMUNITION





8. Press the top of the bolt catch to release the bolt.

9. Squeeze the upper and lower together to release pressure on the take down pin, press the take down pin through

10. Pull the take down pin

11. Press the pivot pin

12. Pull the pivot pin

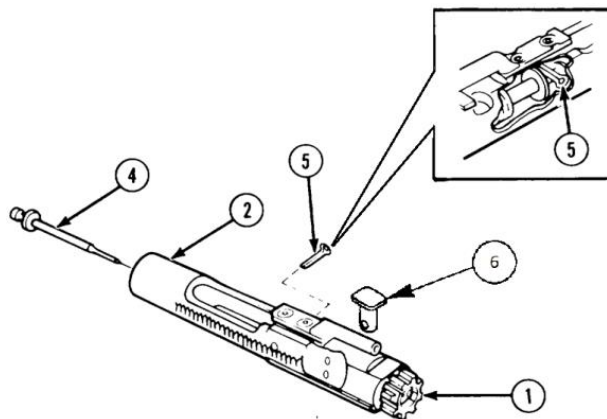




- 13. Separate receiver groups
- 14. Pull Charging handle to the rear
- 15. Remove Bolt Carrier Group



Bolt Carrier Group



DISASSEMBLY:

Do not interchange bolt assemblies from one firearm or Ar-15 rifle to another. Doing so may result in injury or death of personnel.

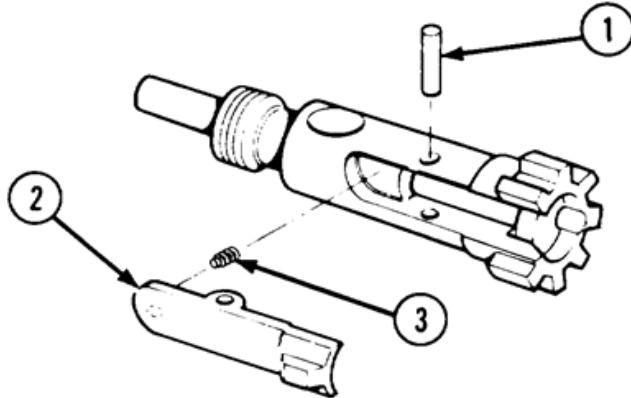
a. CAUTION

Do not spread or close legs of firing pin retaining pin (5).

- 16. Remove firing pin retaining pin (5). Tilt key and bolt carrier assembly up (2) and catch firing pin (4) as it drops out.

- 17. Rotate bolt cam pin (6) one quarter turn and lift straight up to remove.

- 18. Remove bolt assembly (1) from key and bolt carrier assembly (2).



Do not separate cartridge extractor and extractor spring assembly unless replacement of either or both is required. Do not remove the rubber insert from the extractor spring assembly

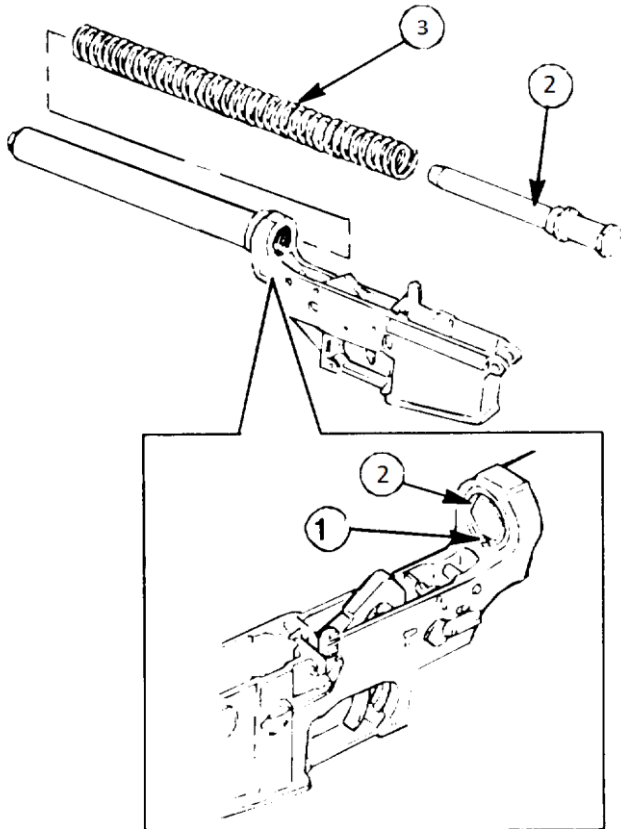
19. Push out extractor pin (1) and remove cartridge extractor (2) and extractor spring assembly (3) as a unit

20. If required, twist extractor spring assembly (3) counterclockwise to remove from cartridge extractor (2).

Press buffer assembly (2) in about 1/4 inch (0.635cm).

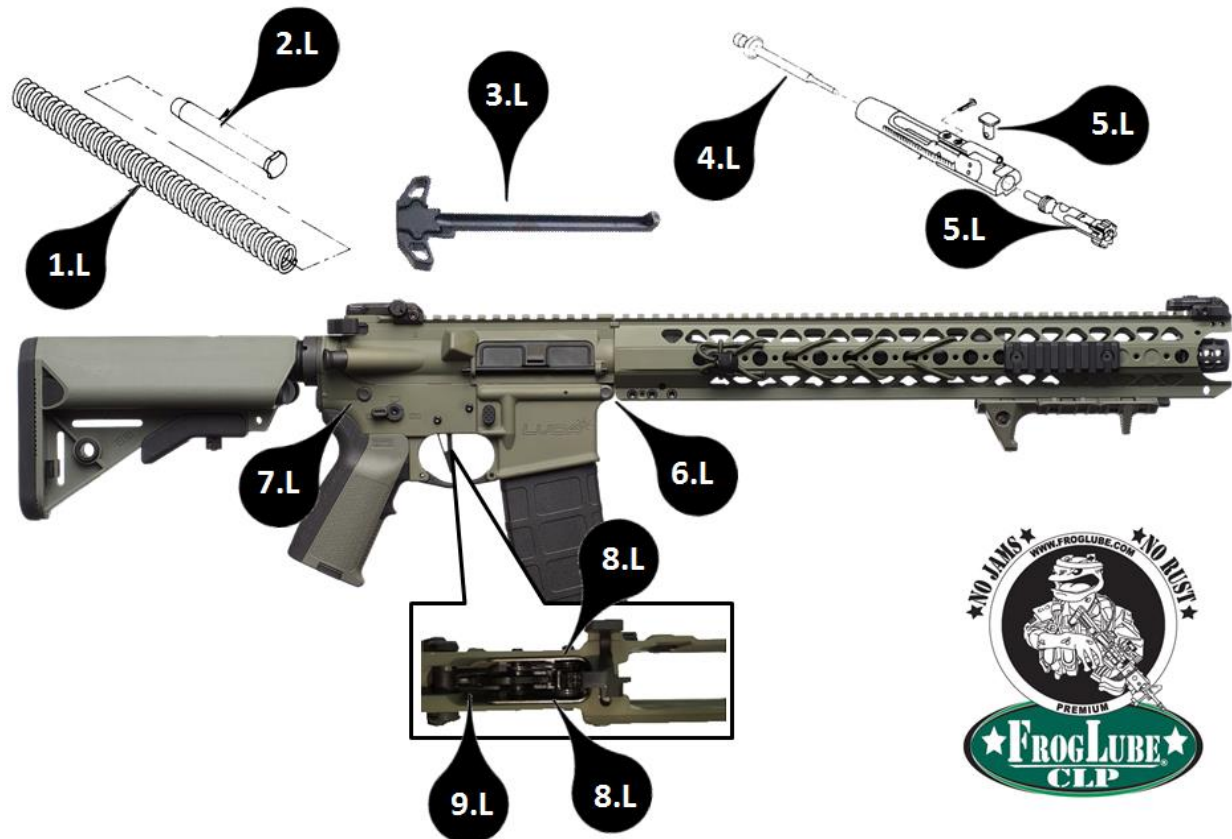
21. Depress buffer retainer (1) and release buffer assembly (2) and action spring (3).

22. CAREFULLY remove buffer assembly; Caution: Buffer assembly is under spring tension. DO NOT remove it toward your body (2) and action spring (3) from receiver while depressing buffer retainer (1).





Lubrication Locations



FROGLUBE branded products are the preferred lube / CLP for any War Sport Industries firearm. Always start with very modest amounts of FROGLUBE paste / liquid. Remember, less is best! Migration of lubrication during operation of the system will happen.

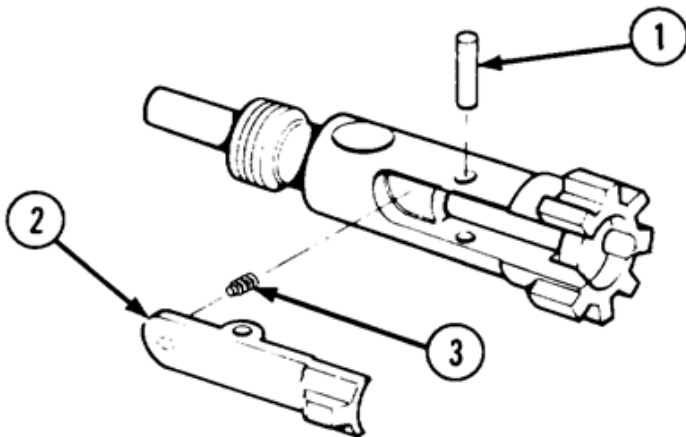
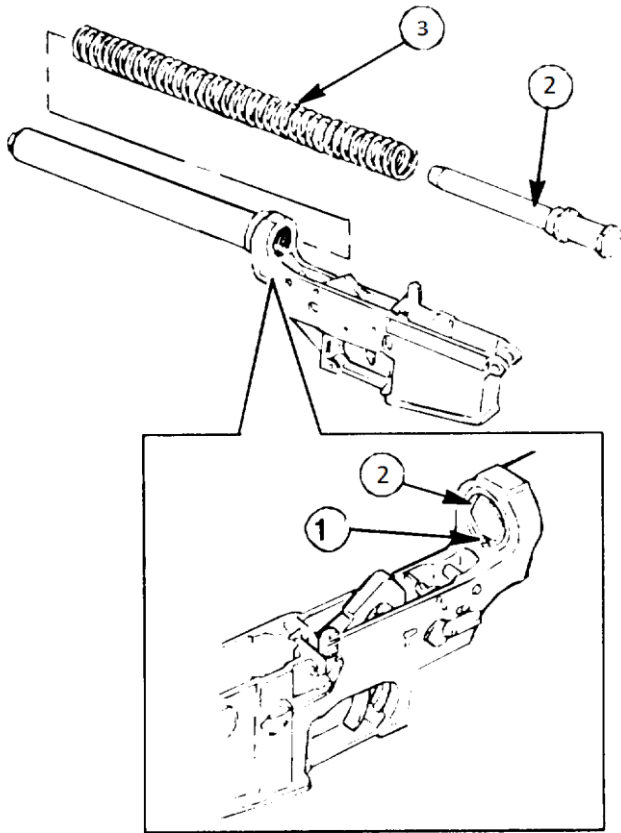
- 1.L **Buffer spring:** a light coat of Froglube paste
- 2.L **Buffer:** a light coat of Froglube paste
- 3.L **The inside track of the charging handle:** a light coat of Froglube paste
- 4.L **Firing Pin:** a light coat of Froglube paste
- 5.L **Cam Pin:** a strong coat of Froglube paste
- 6.L **Pivot Pin:** a light coat of Froglube paste every 6 months
- 7.L **Take Down Pin:** a light coat of Froglube paste every 6 months
- 8.L **Hammer Spring:** a light coat of Froglube paste
- 9.L **Selector Lever (inside):** a light coat of Froglube paste

With the coating of Froglube paste on the inside track of the charging handle and the areas pointed out on the bolt carrier group you will have no need for lube on the bolt carrier body.



Assembly of the FIREARM Reverse order of pages 6 to 10

1. Insert Buffer Assembly
(pointing away from your body)
(2) in the action spring (3)
2. Depress buffer retainer (1)
(pointing away from your body)
insert the action spring and
buffer assembly (2) into the
buffer tube
3. Let the buffer retainer (1) lock
in place to retain the buffer
Assembly (2) in the action
spring (3)



Do not separate cartridge
extractor and extractor spring
assembly unless replacement
of either or both is required

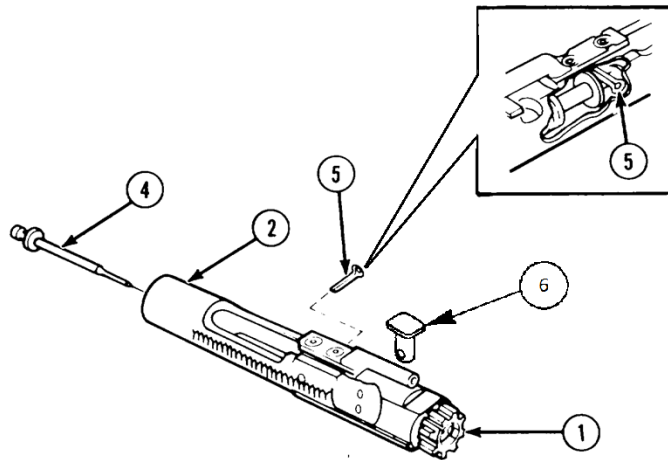
Do not remove the rubber
Insert from the extractor spring
assembly



4. If required, twist extractor spring assembly (3) counterclockwise to re install to the cartridge extractor (2).

5. Insert the cartridge extractor (2) and extractor spring assembly (3) as a unit with rearward pressure on the spring

6. Push in the extractor pin (1)



a. CAUTION

Do not spread or close legs of firing pin retaining pin (5)

7. Insert bolt assembly (1)

8. Insert bolt cam pin (6) Rotate one quarter turn

9. Tilt bolt carrier assembly down

10. Insert firing pin

11. Install firing pin retaining pin (5)

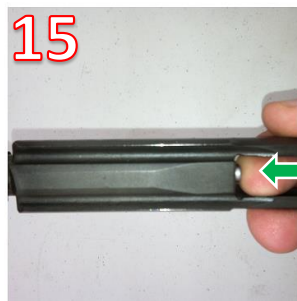
12. Place the bolt in the locked position

13. Inspect the firing pin retainer Pin properly installed

14. Bounce the bolt carrier group lightly on a hard surface to see if firing pin falls out

15. Place finger on firing pin and press

16. Check bolt face for firing pin protrusion





17. Mate receiver groups

18. Set the pivot pin

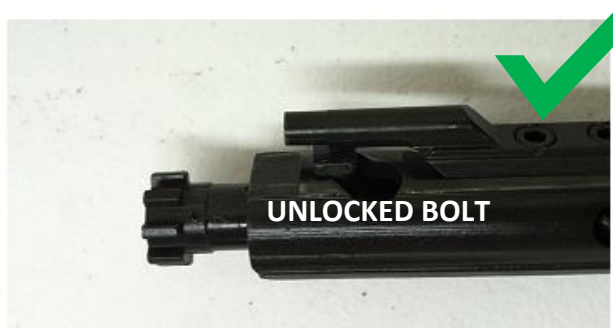
19. Install charging handle

20. Install Bolt carrier group

21. Squeeze receivers to
set the take down pin



20a. The bolt must be unlocked to be placed in the upper receiver





Function Check.

After assembly the next step is a function check of the system.

22. Check chamber is empty Page 7, steps 3 to 7.



23. Place the firearm on SAFE attempt to FIRE

24. Place the firearm on SEMI pull the trigger and hold it to the rear

25. While holding the trigger back, pull the charging handle fully and let go

26. Let off the trigger slowly to hear the trigger reset.





TROUBLE SHOOTING

As the owner of the War Sport Industries .LLC firearm you are responsible for keeping the firearm system clean and operational at all times! One of the major mistakes owners of the AR-15 platform is over lubrication the rifle / carbine. Over lubrication will cause hydra locks, this is a situation when lubrication is between the cartridge and the chamber. Since a liquid cannot compress, this can cause failure to extract in any high pressured rifle. The excessive lubricant will migrate to the magazine and overcoat the ammunition.

To properly trouble shoot any AR-15 platform you need an understanding of the eight steps of operation. Knowing these steps will aid you in deciphering the malfunction.

EIGHT STEPS OF OPERATION

1. Feeding
2. Chambering
3. Locking
4. Firing
5. Unlocking
6. Extracting
7. Ejecting
8. Cocking



MALFUNCTIONS

Malfunctions are caused by procedural or mechanical failures of the rifle, magazine or ammunition. Pre-firing checks and serviceability inspections identify potential problems before they become malfunctions. This section describes the primary categories of malfunctions. If at any time you feel the headspacing of the barrel is not correct, STOP use and contact WSI at support@warsport-barrels.com

STOPPAGES A stoppage is a failure of an automatic or semiautomatic firearm to complete the cycle of operation. The shooter can apply immediate or remedial action to clear the stoppage. Some stoppages cannot be cleared by immediate or remedial action and may require weapon repair to correct the problem. A complete understanding of how the weapon functions is an integral part of applying immediate action procedures.

IMMEDIATE ACTION

Immediate action involves quickly applying a possible correction to reduce a stoppage without performing troubleshooting procedures to determine the actual cause. Apply immediate action only once for a stoppage. If the rifle fails to fire a second time for the same malfunction, inspect the firearm to determine the cause of the stoppage or malfunction and take the appropriate



remedial action. The key word **SPORTS** will help the shooter remember the steps for immediate action:

(1) **(S)lap** gently upward on the magazine to ensure that it is fully seated and that the magazine follower is not jammed.

NOTE: When slapping up on the magazine, be careful not to knock a round out of the magazine into the line of the bolt carrier, causing more problems. Slap only hard enough to ensure that the magazine is fully seated. Ensure that the magazine is locked into place by quickly pulling down on the magazine.

(2) **(P)ull** the charging handle fully to the rear

(3) **(O)bserve** the ejection of a live round or expended cartridge

NOTE: If the FIREARM fails to eject a cartridge, perform remedial action

(4) **(R)elease** the charging handle; do not ride it forward

(5) **(T)ap** the forward assist assembly to ensure that the bolt is closed

(6) **(S)queeze** the trigger and try to fire the rifle

REMEDIAL ACTION

Remedial action is the continuing effort to determine the cause of a stoppage or malfunction and attempt to clear the stoppage once it has been identified. To apply the corrective steps for remedial action—

(1) Point the firearm down range or in a safe direction

(2) Try to place the weapon on SAFE

NOTE: A bolt override may not allow the weapon to be placed on SAFE

(3) Remove the magazine

(4) Lock the bolt to the rear

(5) Place the weapon on SAFE (if not already done)

FAILURE TO FEED, CHAMBER, OR LOCK

This malfunction can occur when loading the rifle or during the cycle of operation. Once the magazine has been loaded into the rifle, the forward movement of the bolt carrier group could lack enough force (generated by the expansion of the action spring) to feed, chamber or lock the bolt.

Probable Causes

- The malfunction could be the result of one or more of the following:





- Excess accumulation of dirt or fouling in and around the bolt and bolt carrier
- Defective magazine (dented, bulged, or a weak magazine spring)
- Improperly loaded magazine
- Defective round (projectile forced back into the cartridge case, which could result in a stubbed round, or the base of the previous cartridge could be separated, leaving the remainder in the chamber)
- Damaged or broken action spring
- Exterior accumulation of dirt in the lower receiver extension
- Fouled gas tube (resulting in short recoil)
- A magazine resting on the ground or pushed forward (causing an improper lock)

Corrective Action Applying immediate action usually corrects the malfunction. To avoid the risk of further jamming, watch for ejection of a cartridge and ensure that the upper receiver is free of loose rounds. If immediate action fails to clear the malfunction, take remedial action.

NOTE: Do not force the bolt carrier.

If resistance is encountered (which can occur with an unserviceable round)—

- (1) Lock the bolt to the rear
- (2) Remove the magazine
- (3) Clear the malfunction

(For example, to correct a bolt override (a cartridge has wedged itself between the bolt and charging handle)—

- (1) Ensure that the charging handle is pushed forward and locked into place
- (2) Attempt to place the weapon on SAFE
- (3) Secure the firearm, and pull the bolt to the rear until the bolt seats completely into the buffer well
- (4) Turn the rifle upright and allow the overridden cartridge to fall out

FAILURE TO FIRE CARTRIDGE Despite the fact that a round has been chambered, the trigger has

been pulled, and the sear has released the hammer, a cartridge may fail to fire. This occurs when the firing pin fails to strike the primer with enough force or when the ammunition is defective. The shooter must follow safety guidelines: Stay in your firing position. Keep the muzzle of the firearm pointed in a safe direction. Wait at least one minute to see if the

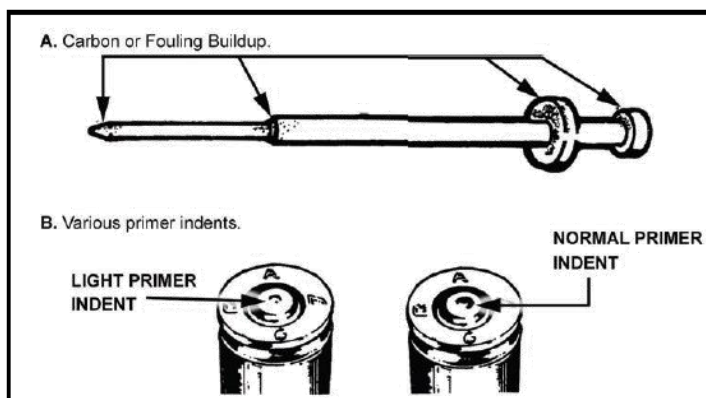


Figure 1-2. Excessive carbon buildup on the firing pin.



round will fire. If not, eject the round and remove it to a safe location. Dispose of properly.

Probable Causes

Excessive carbon buildup on the firing pin (Figure 1-2, A) is often the cause, because the full forward travel of the firing pin is restricted. A defective or worn firing pin can give the same results.

Inspection of the ammunition could reveal a shallow indentation or no mark on the primer, indicating a firing pin malfunction (Figure 1-2, B). Cartridges that show a normal indentation on the primer (but did not fire) indicate faulty ammunition or failure of the cartridge to fully seat in the chamber.

Corrective Action

If the malfunction continues—

- (1) Inspect the firing pin, bolt, bolt carrier and locking lug recesses of the barrel extension.
- (2) Remove any accumulation of excessive carbon or fouling.
- (3) Inspect the firing pin for damage.

If the round is suspected to be faulty, dispose of it and ensure that you record the lot number and report the issue to the ammunition manufacture.

WARNING

If an audible pop or reduced recoil occurs during firing, immediately cease fire. This could be the result of a round being fired without enough force to send the projectile out of the barrel. Do not apply immediate action. Instead perform the following actions:

1. Remove the magazine.
2. Lock the bolt to the rear.
3. Place the selector level in the SAFE position.
4. Visually inspect the bore to ensure that a projectile is not lodged in the barrel.
5. If a projectile is lodged in the barrel, do not try to remove it. Use a competent gunsmith.

FAILURE TO EXTRACT

A failure to extract results when the cartridge case remains in the chamber of the rifle. The bolt and bolt carrier might move rearward only a short distance, but more commonly, the bolt and bolt carrier recoil fully to the rear, leaving the cartridge case in the chamber. A live round is then forced into the base of the cartridge case as the bolt returns in the next feed cycle.



WARNING

A failure to extract is an extremely serious malfunction, requiring the use of tools to clear. A live round could be left in the chamber and accidentally discharged. If a second live round is fed into the primer of the chambered live round, the rifle could explode and cause personal injury. This malfunction must be properly identified and fixed by a competent gunsmith. Ejection failures should not be classified as extraction failures.

Probable Cause

Short recoil cycles and fouled or corroded rifle chambers are the most common causes of failures to extract. A damaged extractor or a weak or broken extractor spring can also cause this malfunction.

Corrective Action

This malfunction is one of the hardest to clear; the severity of the failure determines the corrective action procedures.

NOTE: If the bolt has moved rearward far enough to strip a live round from the magazine in its forward motion, the bolt and bolt carrier must be locked to the rear.

With the bolt locked to the rear and the weapon on SAFE, perform the following actions:

- (1) Remove the magazine and all loose rounds
- (2) With your thumb holding the bolt catch in place, tap the weapon's buttstock on a hard surface to cause the cartridge to fall out of the chamber

However, if the cartridge case is ruptured, it can be seized. When this occurs, perform the following actions:

- (1) Insert a cleaning rod into the bore from the muzzle end
- (2) Force the cartridge case from the chamber by tapping the cleaning rod against the inside base of the fired cartridge

If cleaning and inspecting the mechanism and chamber reveals no defects but failures to extract persist, the extractor and extractor spring should be replaced. If the chamber surface is damaged, the entire barrel must be replaced.

FAILURE TO EJECT

Ejection of a cartridge is an element in the rifle's cycle of functioning, regardless of the mode of fire. This malfunction occurs when the cartridge is not ejected through the ejection port and either remains partly in the chamber or becomes jammed in the upper receiver as the bolt closes. When the shooter initially clears the rifle, the cartridge could strike an inside surface of the receiver and bounce back into the path of the bolt.



Probable Cause

The cartridge must be extracted before it can eject. Failures to eject can also be caused by a buildup of carbon or fouling on the extractor or by short recoil. Short recoil is usually due to a buildup of fouling in the bolt carrier mechanism or gas tube. Resistance caused by a carbon-coated or corroded chamber can impede the extraction and ejection of a cartridge.

Corrective Action While retraction of the charging handle usually frees the cartridge and permits removal, the charging handle must not be released until the position of the next live round is determined. If another live round has been sufficiently stripped from the magazine or remains in the chamber, remove the magazine and all live rounds before releasing the charging handle. If several malfunctions occur and are not corrected by cleaning and lubricating, replace the ejector spring, extractor spring, and extractor.

OTHER MALFUNCTIONS

The below table describes other malfunctions that can occur and the appropriate corrective actions.

<u>Situation</u>	<u>Possible fix</u>
The bolt fails to lock in the rearward position after the last round in the magazine is fired	Check for a bad magazine or ammunition is not loaded to SAAMI specifications
The bolt fails to lock in the rearward position when the bolt catch has been engaged	Check the bolt catch; contact WSI for replacement parts
The FIREARM fires two or more rounds when the trigger is pulled and the selector lever is in the SEMI position.	This indicates a worn trigger group; contact WSI for replacement parts
The magazine fails to lock in the magazine well	Check the magazine and magazine catch for damage or debris
Any part of the bolt carrier group fails to function	Check for incorrectly assembly of components. Correctly clean and assemble the bolt carrier group, or replace damaged parts
The ammunition fails to feed from the magazine	Check for a damaged magazine. A damaged magazine could cause repeated feeding issues and should be destroyed.



Zeroing: Zeroing is the process of adjusting the rifle's sights so that the bullet's Point Of Impact coincides with the shooter's Point of Aim.

A bullet's path is referred to as trajectory. A bullet does not travel in a perfectly straight line; as soon as it exits the muzzle, Earth's gravity pulls it towards the ground. If the shooter were to line the sights on a target with a rifle whose barrel was parallel to the line of sight, the bullet's path would be as shown in the below diagram:



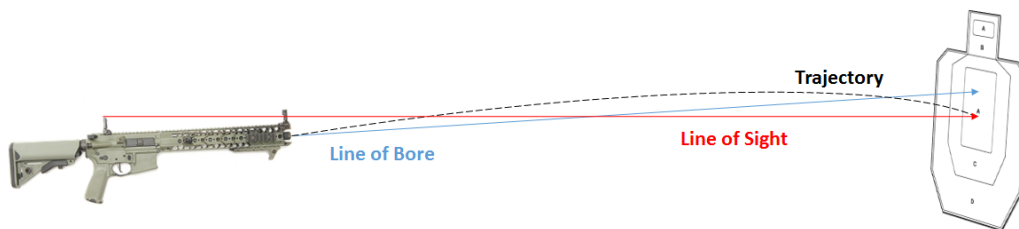
Since a shooter's Line of Sight through the sights is a straight line, the bullet's path and Line of Sight will never coincide unless the sights are adjusted. Adjusting the sights will move the rifle in a known value. This value is repeatable and is referenced in units of measure in the below chart. This process, known as Zeroing, allows the shooter to reliably know where to aim to consistently have the Point of Aim match the bullet's Point of Impact at a known distance.

Sight adjustment: The below sight adjustment value chart is accurate for the factory settings of the FIREARM BUIS. Due to the longer sight radius of the FIREARM system.

- MOA: Minute Of Angle, a unit of measure that is $1/60^{\text{th}}$ of a degree. Value is 1.047" At 100yds
- IPHY: Inches Per-Hundred Yards, a unit of measure also known as Shooter MOA. Value is 1.0" At 100yds.
- MILRAD: Milliradian, a unit of measure that is based in 1/1000 ratio. Value is 3.6" at 100yds.

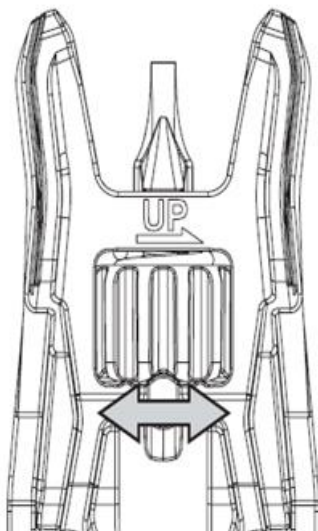
	LVOA-S			LVOA-C		
	MOA	IPHY	MILRAD	MOA	IPHY	MILRAD
Front Sight	0.66	0.69	0.19	0.57	0.60	0.17
Rear Sight	0.37	0.39	0.11	0.32	0.34	0.09

By adjusting the sights you can have the bullet's Point Of Impact at your Point Of Aim by following the fundamentals of rifle marksmanship.





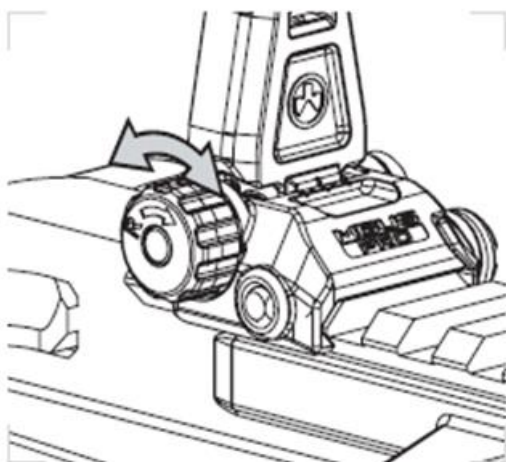
ELEVATION ADJUSTMENT



To adjust up-down point of impact (POI), use the *Elevation Adjustment Knob* in the middle of the *Sight Arm*. Turn *knob* in the direction indicated to move the POI up. Turn *knob* in the reverse direction to move POI down. Make sure *knob* is fully seated and not in-between positions.

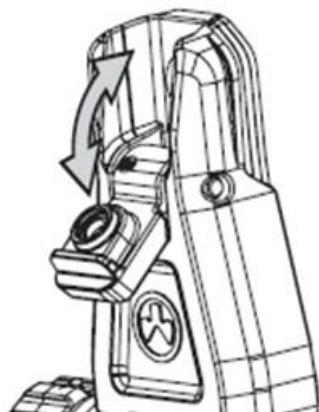
MBUS Pro Front_ISRT_v01

WINDAGE ADJUSTMENT



To adjust left-right point of impact (POI), use the *Windage Adjustment Knob* on the right side of the rear *MBUS Pro sight*. Turn *knob* in the direction indicated to move the POI to the right. Turn *knob* in the reverse direction to move POI to the left.

APERTURE TOGGLE



For low light or close-range target engagement, use the large aperture by placing thumb nail behind the *Aperture Flip Tab* and pushing forward. To return to using the small aperture, flip back into place.

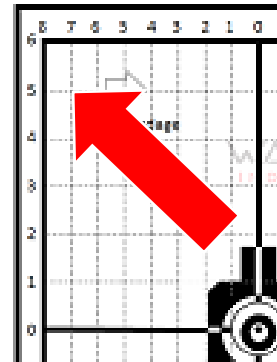
MBUS Pro Rear_ISRT_v01



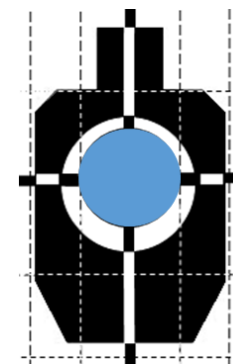
ZERO Target: The War Sport short range ZERO targets will aid you in getting the Point Of Impact near the Point Of Aim at 200yds or 300yds. The short range ZERO target is a guide only! Shooting at distance is the only way to gain a correct ZERO.

War Sport Short Range ZERO description:

Grid Chart: Is designed to work with the MPRO BUIS at factory settings on our system only. The number value is the approximant click adjustment for the sights. The grid chart is offset with a Projectile Impact area to allow you to aim center of mass of the USPSA simulated target and group shots with the correct offset.



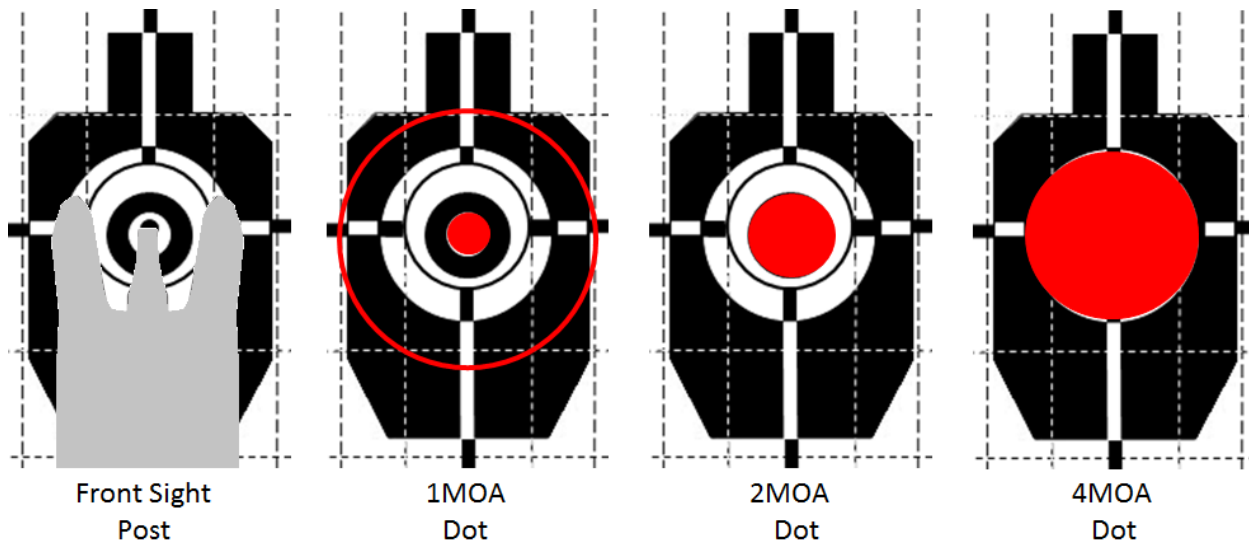
Projectile Impact area: The War Sport short range ZERO targets has a three MOA area with correct offset for you to place the 3-5 round shot group within. If all rounds fired are within this area using the 25 yard War Sport short range ZERO target 200 yard offset or the 25 yard War Sport short range ZERO target 300 yard offset far zero will be closer to the Point Of Aim / Point Of Impact.



3MOA
Impact Area

Always remember, a true ZERO is shot at the real distance you select, a short range zero will get your Point Of Aim / Point Of Impact close but not exact due to how fine the unit of measure is at close range.

Reticle Aiming Points: The War Sport short range ZERO target has four aiming points, three are for reflex type optics and one is for the iron sights.

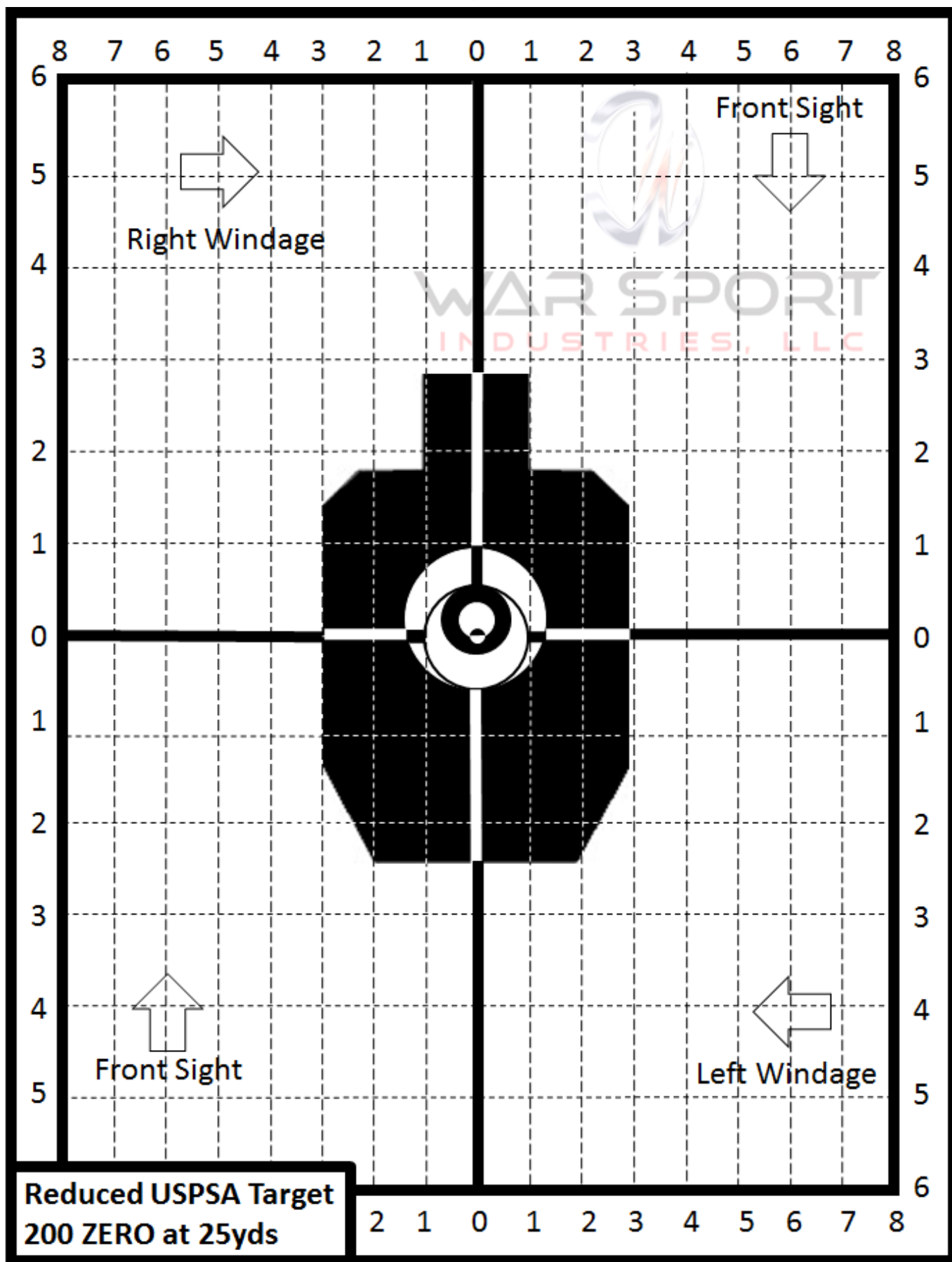


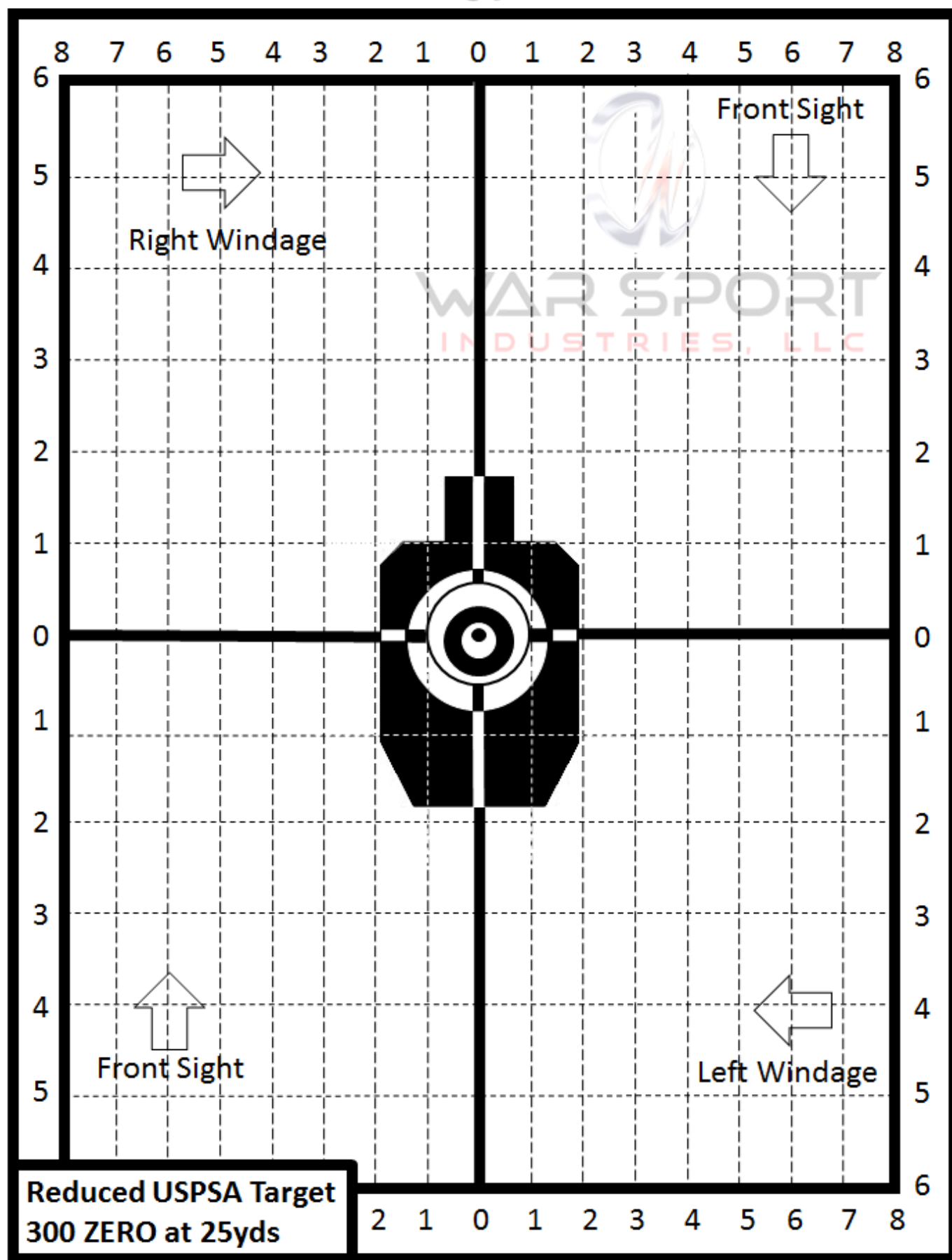
Front Sight
Post

1MOA
Dot

2MOA
Dot

4MOA
Dot







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