

WLVRN

OWNER'S MANUAL



Welcome to the proud family of Desert Tech firearm owners. In acquiring your new WLVRN, you are the owner of the most versatile autoloading rifle in the world.

To get the most out of your WLVRN rifle, please read this manual from cover to cover before handling and operating the rifle for the first time.

CAREFULLY READ ALL OF THE OPERATING INSTRUCTIONS!

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WARNING!

KEEP OUT OF REACH OF CHILDREN!

IT IS DANGEROUS TO ALTER OR MODIFY THIS FIREARM IN ANY WAY. ANY ALTERATION OR MODIFICATION OF THE FIRING MECHANISM WILL RESULT IN THE FIREARM BECOMING UNSAFE. ANY ATTEMPT TO ALTER OR MODIFY THIS FIREARM WILL NULLIFY ALL WARRANTIES. THE USE OF REMANUFACTURED OR RELOADED AMMUNITION OF ANY KIND WILL ALSO VOID ALL WARRANTIES.

ALWAYS keep the firearm pointed in a safe direction. ALWAYS keep your finger off the trigger until you are ready to shoot.

ALWAYS be sure of your target and what is beyond it. ALWAYS keep the firearm unloaded until ready to use.

ALWAYS wear eye and ear protection. Know how to use the firearm safely.

Consult the owner's manual before use of the firearm.

Use only the correct ammunition for your firearm.

Never use alcohol, over-the-counter prescription drugs, or other drugs before or while shooting.

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

For more information on firearm safety, visit the NRA Education and Training website:

gunsafetyrules.nra.org

WARNING!

Follow all local, state, and federal laws regarding legal use of your Desert Tech WLVRN rifle.

This item may be regulated for export by the U.S. Department of State or the U.S. Department of Commerce. Please see our export policy at deserttech.com for details.

FIREARM SAFETY

CAREFULLY READ ALL OF THE OPERATING INSTRUCTIONS

Remember that even the safest firearm is potentially dangerous to you and others when it is not properly handled. Carefully read the operating instructions to learn how the rifle works and how it is to be handled.

WARNING: Carry out the following operations before any rifle configuration, cleaning, or disassembly: Move safety selector to “Safe” (page 17), remove the magazine, open the bolt and lock to the rear, and visually ensure the chamber is clear (page **Error! Bookmark not defined.**).

Ensure the rifle is unloaded and safe whenever:

- Receiving or handing-off the rifle.
- Transporting the rifle.
- Cleaning or disassembling.
- Optic mounting and rifle configuring (addressing any accessory).
- You have stopped firing.
- The rifle is not in use.

Before firing the rifle:

- Always wear eye and ear protection.
- Always be aware of the target and what lies beyond it.

Make sure that the barrel is fully seated, and barrel retention screws are tight before firing, as described on page 19.

Incorrect handling and/or lack of maintenance may lead to malfunctions and reduced safety of the firearm. Unauthorized modifications to the rifle or damage caused by the application of force will void the manufacturer’s warranty. Only a DT certified armorer is allowed to work on the rifle.

Do not use force when disassembling or assembling your rifle. A firearm can only be safe as long as it is in a flawless mechanical condition.

For more information on firearm safety, visit the NRA Education and Training website:
gunsafetyrules.nra.org

WARNING!

Follow all local, state, and federal laws regarding legal use of your Desert Tech WLVRN rifle.

REMEMBER:

**TREAT ALL FIREARMS AS ALWAYS
LOADED. LOOKING INTO THE END OF
THE BARREL (MUZZLE) IS NOT
RECOMMENDED AT ANY TIME.**

SPECIFICATIONS

Weight (Rifle weight with conversion)

11.5" Barrel

.223 Wylde 7.00 lb (3.18 kg)

16" Barrel

.223 Wylde 7.25 lb (0.11 kg)

.300 BLK 7.25 lb (0.11 kg)

.308 WIN 7.25 lb (0.11 kg)

20" Barrel

.223 Wylde 7.50 lb (3.40 kg)

.308 WIN 7.50 lb (3.40 kg)

6.5 CM 7.50 lb (3.40 kg)

Length (Rifle length with conversion)

11.5" Barrel

.223 Wylde 23.37" (59.36 cm)

16" Barrel

.223 Wylde 28.01" (71.15 cm)

.300 BLK 27.67" (70.28 cm)

.308 WIN 27.67" (70.28 cm)

20" Barrel

.223 Wylde 31.40" (79.76 cm)

.308 WIN 31.40" (79.76 cm)

6.5 CM 31.40" (79.76 cm)

Rate of Twist

11.5" Barrel

.223 Wylde 1 in 7

16" Barrel

20" Barrel

.223 Wylde 1 in 7

.300 BLK 1 in 7

.308 WIN 1 in 10

.223 Wylde 1 in 7

.308 WIN 1 in 10

6.5 CM 1 in 8

Muzzle Thread

.223 Wylde 1/2 x 28

.300 BLK 5/8 x 24

.308 WIN 5/8 x 24

6.5 CM 5/8 x 24

Torque Specs

Handguard Screws: 30 in/lb 3.38 nm

Barrel Retention Screws: 80 in/lb 9.04 nm

Mechanical Features

Method of Operation: Short Stroke Gas Piston

Method of Feeding: Detachable Box Magazine

Ejection: Right or left side ejection.

Sights

Picatinny Rail (no taper)

Barrel

Type: Melanite Coated Light Profile

Length: 16" (40.64 cm) & 20" (50.8 cm)

Firing Characteristics

Maximum Effective Range:

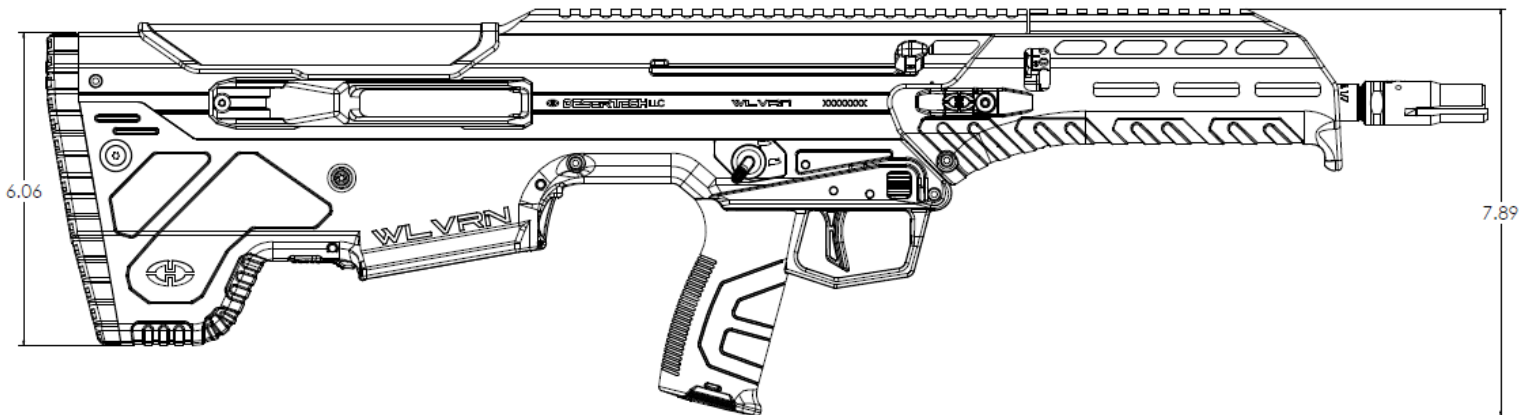
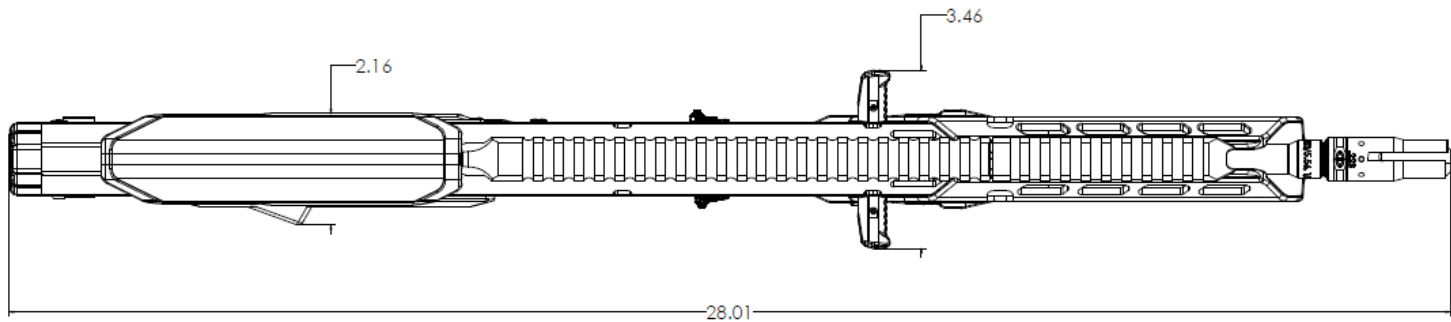
.223 Wylde	600 yards (550 m)
.300 BLK	500 yards (460 m)
.308 WIN	984 yards (900 m)
6.5 CM	1000 yards (915 m)

Safety Selector Switch: Ambidextrous, Safe and Fire

Magazine Releases: Ambidextrous, above trigger and forward
of magazine well

Bolt Catches: Charging handle lock-back, last round
hold-back, bolt release catch behind the
magazine well

Handguards: Standard
Reflex (for over-barrel suppression)
ALX Bipod – Aluminum with Integrated
Bipod



FACTS ABOUT THE WLVRN

The WLVRN is designed for future defense needs. Its compact size and superior ergonomics maximize its portability without sacrificing speed, power, or precision. The WLVRN allows mission-specific adaptability by changing the rifle's length, sound signature, and caliber. Its ambidextrous design allows seamless shoulder transitions. The WLVRN delivers dynamic firepower.

KEY FEATURES

Portable

The WLVRN has unrivaled portability because it is lightweight, compact, ergonomic, and balanced, with an overall length of 26.2" with a 16" barrel.

Adaptable

The WLVRN is quickly adaptable in both size and caliber. It can easily convert between multiple calibers, and its gas-block incorporates an adjustable gas valve for various configurations. The barrel is also truly free-floated by design, so barrel whip does not affect accuracy.

Ambidextrous

The WLVRN is ambidextrous by transitioning the Side-Eject Panel and the Bolt Head from one side to the other. Refer to the steps outlined in the section EJECTION SIDE SWAP / DISASSEMBLY / REASSEMBLY on

page 31. The intuitive controls set a new bullpup standard for speed and precision.

ERGONOMIC FEATURE LIST

- Ambidextrous charging handle.
- Ambidextrous magazine release above the trigger and central release forward of the magazine well, which facilitates rapid reloads.
- Ambidextrous Fire Selector.
- Last-round bolt catch/release for rapid reloads.
- Mil Spec Trigger.
- Rear flush cup sling attachment points.
- MLOK handguard slots for accessory and sling mounting options.
- Weapon balance point is just rear of the WLVRN grip, giving the rifle a stable, yet highly maneuverable, weight distribution.

FIREARM CONSTRUCTION

- The barrel is attached to the receiver by three-barrel retention screws and a barrel locking lug.
- The polymer handguard is attached securely to the upper receiver with a captured pin and two handguard reinforcement screws.
- A full-length, MIL-STD-1913 rail runs along the top of the receiver and handguard, facilitating optics, night vision, thermals, and other accessories. Rail segments attach to the sides for user-specified placement utilizing the MLOK attachment system.
- The WLVRN Receiver is hard coat anodized. Available in Black, Flat Dark Earth, or Tungsten.

RIFLE SETUP

WARNING: Carry out the following operations before dismantling: Move safety selector to “Safe” remove the magazine, open the bolt, and visually ensure the chamber is clear (page **Error! Bookmark not defined**)

a. Conversion Kit Installation / Initial Setup

1. Remove the WLVRN receiver, barrel assembly, handguard, magazine, and the multi-tool from the WLVRN case.
2. Place the WLVRN on “Safe” by rotating the safety selector switch clockwise into the “Safe” position. (Counter-clockwise for left side manipulation) (Figure 2)
3. On the WLVRN handguard, use the T25 side of the multi-tool, loosen by two turns, **DO NOT REMOVE** the two T25 torqueset handguard retention screws on the right and left side of the WLVRN Handguard. (Figure 3)

If removed, reinstall the handguard support backing plates to the inside of the WLVRN Handguard receiver with the raised portion facing to the outside of the handguard, and thread the handguard screws in from the outside of the handguard in until flush, then back them off two full turns.
See page 72 for parts breakdown.
4. Gripping the charging handle (right or left side), press down and pull to the rear of the charging channel, then lock it to the rear by lifting the charging handle upwards into the locking cutout

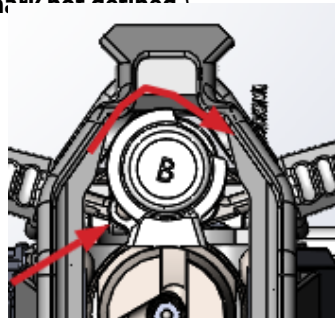


Figure 1: Adjust Gas Valve Setting

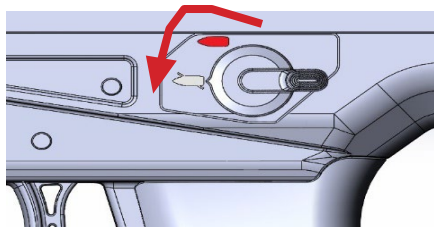


Figure 2: Adjust the Safety Selector to “Safe”

and releasing it. The charging handle should remain in the locking cutout. (Figure 5)

5. Ensure the barrel lock screw is in the "Unlocked" position, and the three barrel retention screws are loose. (Figure 4)

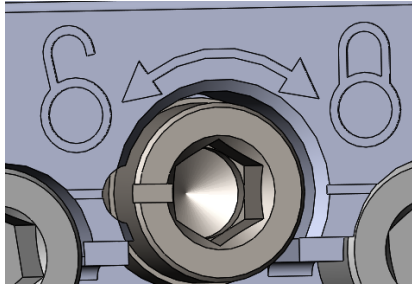


Figure 4: Locking Lug "Unlock" Position

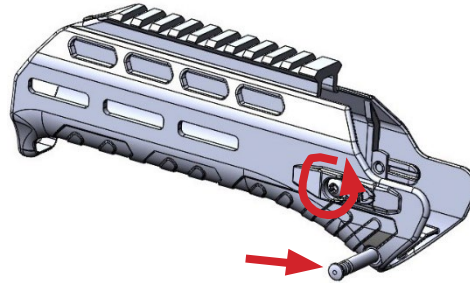


Figure 3: Remove Handguard

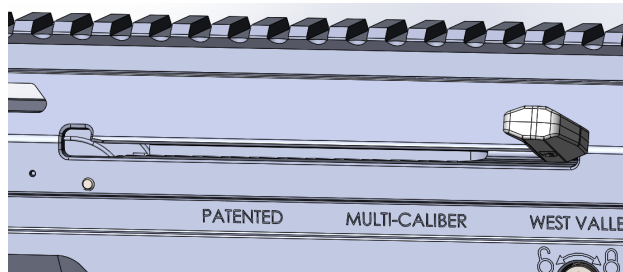


Figure 5: Lock Charging Handle Back

6. Ensure the bolt head matches the chambering of the barrel. (Figure 6)
7. Insert the barrel assembly into the WLVRN receiver, barrel extension end first with the gas valve at the 12 o'clock position. When properly seated in the receiver, the barrel extension should sit securely against the feed ramps. (Figure 7)
8. Release the bolt assembly by pressing the charging handle downward to disengage it from the locked-back position.
9. Rotate the rifle to the left side. Using the 5mm hex wrench side of the multi-tool, rotate the barrel lock screw to the "Locked" position. (Figure 8)
10. Tighten and torque the three 5mm barrel retention screws to 80 in/lb. (Figure 8)

WARNING: If any of the above listed steps for conversion kit Installation/Initial setup are missed, and/or performed incorrectly, an extremely dangerous condition can occur.

Note: Barrel lock should always be rotated while tension bolts are loose.



Figure 6: Extractor Label



Figure 7: Install Barrel Assembly

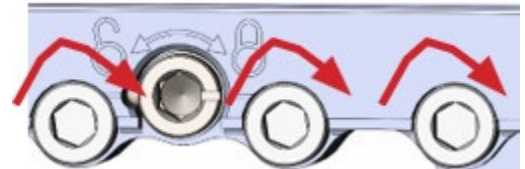


Figure 8: Tighten Barrel Retention Screws

b. Gas Adjustment

The WLVRN has six gas settings that range from smallest ("- -") to largest ("A"). "N" (Normal), for regular fire in generally good conditions and without a suppressor; "A" (Adverse), for fire in bad conditions (heavy dust, excess humidity, mud, etc.); "S" (Suppressed), for fire with a suppressor on the rifle; and three intermediate settings. Each caliber, barrel length, muzzle device, and type of ammunition will determine how much gas flows through the rifle after each shot is fired. Thus, proper gas adjustment is necessary for your specific configuration. **To properly adjust your gas valve for your setup, you should turn the gas valve to the lowest setting ("- -"), then fire your weapon. Continue to adjust your gas valve to the next biggest hole size (one setting at a time) until your rifle can fire multiple rounds reliably without malfunctions. This is the gas setting you should use for your current setup/configuration.**

WARNING: Shooting the rifle on the wrong gas setting for your rifle configuration may induce over gassing of the weapon and prematurely damage the rifle and its components.

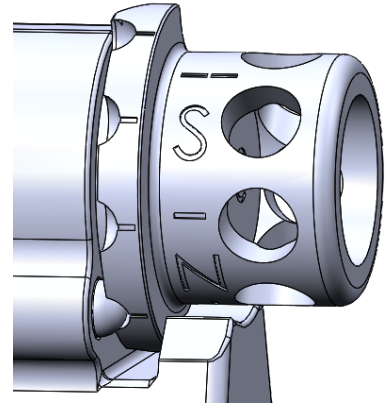


Figure 9: Gas Valve Markings

1. To set the gas setting to Normal, rotate the gas valve within the gas block until the "N" is centered over the detent and clicks into place. (Figure 9)
2. To set the gas setting to Adverse, rotate the gas valve within the gas block until the "A" is centered over the detent and the gas valve clicks into place. (Figure 9)
3. To set the gas setting to Suppressed, rotate the gas valve within the gas block until the "S" is centered over the detent and the gas valve clicks into place. (Figure 9)

CAUTION: The gas block and gas valve may be hot if adjusting during a shooting session. In which case, it's recommended you use the tip of a cartridge to rotate the gas valve, if no other tools are readily available.

c. Handguard Installation

1. Install the handguard on the WLVRN by sliding it over the barrel assembly, Desert Tech logo end first, with the rail at the 12 o'clock position. (Figure 10)
2. Push the captured handguard retention pin through the left side to the right side of the WLVRN receiver until it snaps into position, flush on each side. (Figure 10)
3. Tighten handguard retention screws with a torque wrench, using a T25 head, to 30 in/lb. (Figure 10)

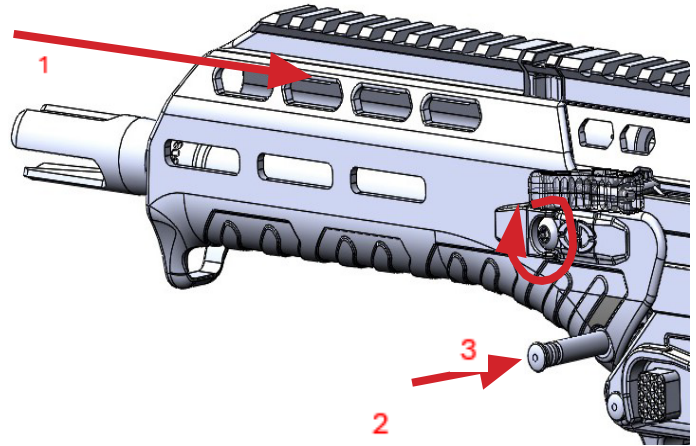


Figure 10: Handguard Installation

d. Ejection System

The WLVRN is ambidextrous in its factory configuration; all user controls can be operated on either side and spent casings eject outward, away from the shooter, on whatever side the Side-Eject Panel is located. However, depending on shooter preference, the ejection side can quickly be changed from right to left.

WARNING: The Upper Receiver MUST be separated from the Lower Receiver (Stock Panel) before installing the Side-Eject Panel and Side Port Cover (page 36). It is highly recommended to ensure the Charging Handles are in the forward position prior to separating the Upper and Lower Receivers to avoid injury.

1. To switch the ejection system to the other side, a few things must be done.

2. Follow the steps to swap the side-eject panel and the side port cover, on page 36.

Note: The WLVRN may also be fired without the Side-Eject Panel, in which case the empty cartridges will eject in the standard 90-degree fashion from the rifle. Be careful to note which side it ejects from in this configuration, as hot casings may potentially hit the shooter's face while firing if the ejection port is on the same side as the shooter's head.

3. Remove the Bolt Carrier Group from the Upper Receiver.

4. Remove the Bolt Head from the Bolt Carrier. Refer to the steps outlined on page 32.

5. Reinstall the Bolt Head into the Bolt Carrier with the Extractor on the side that matches the Side-Eject Panel.

WARNING: The spent casing will eject on the same side as the extractor. The Side-Eject Panel should be on the same side as the extractor to avoid malfunctions.

RIFLE OPERATION

Function Check, Loading, Reloading, Unloading, Firing

Before operating a firearm, ensure it is in a safe environment to do so, observing all the rules of firearm safety.

a. Function Check

1. Ensure the rifle is clear and safe by removing the magazine, placing the rifle safety selector on "Safe" and cycling the rifle multiple times to ensure a clear chamber, and visually inspecting the chamber to confirm, (Figure 13).
2. Point the rifle in a safe direction, charge the rifle, and squeeze the trigger. The trigger should not disengage from the hammer when the safety selector is in the "Safe" position.
3. Change the safety selector to "Fire", then squeeze the trigger and release. The trigger should disengage from the sear, the hammer should make an audible 'snap' sound as it hits the firing pin/bolt carrier group.
4. Charge the WLVRN again and squeeze the trigger, this time holding the trigger to the rear. Re-charge the rifle and release the trigger. There should be an audible "click" sound as the trigger resets. Repeat this multiple times to confirm functionality.
5. Insert an EMPTY magazine and charge the rifle. Pull the charging handle to the rear and the bolt carrier group should catch on the last round holdback catch. Lock the charging handle forward and

ensure the Bolt Carrier should be retained by the Bolt Catch. Then press the bolt catch release. The bolt carrier group should release and go into battery.

b. Loading

1. To load the WLVRN, first ensure it is in a safe environment to do so, observing all the rules of firearm safety, and the safety selector switch is in the "Safe" position (Figure 2) Ensure the cartridges loaded into the magazine match the chambering of the magazine. Ensure the caliber of the magazine also matches the chambering of the conversion kit.
2. Insert cartridges into the magazine by pressing the cartridge (parallel to the magazine) downwards into the magazine. Ensure the face of the cartridge is at the rear-most position inside the magazine. (Figure 11)
3. Repeat until the magazine is full, or less, if desired.

Note: For reliable functioning of the WLVRN, it is recommended to only use brass or nickel cased ammo. Do not use steel, aluminum, reloaded or other reduced quality ammunition.

4. Ensuring the WLVRN is on "Safe" and pointed in a safe direction, insert the loaded magazine (bullets forward, Figure 11) into the magazine well until it is seated with an audible

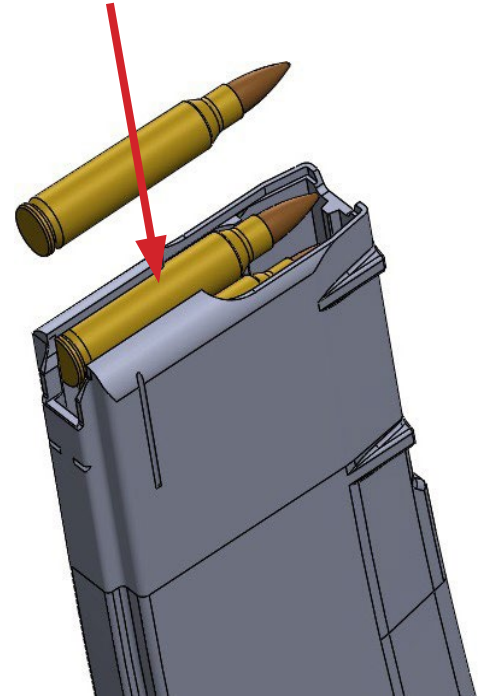


Figure 11: Loading Rounds Into Magazine

“click” sound. A quick tug down on the magazine is advisable to ensure it’s locked in position.

5. Grasp the charging handle, press down, and pull all the way to the rear of the charging handle channel, then release. Do not slowly release, or “walk”, the bolt forward, as it may not fully seat the cartridge in the chamber.
6. The WLVRN is now loaded.

c. Chamber Check

The Side-Eject Panel on the WLVRN allows for a chamber check without fully removing the panel.

1. Press down and slowly pull back part way on the charging handle, observing the chamber as you do so. As the bolt face comes back, it will either be pulling a cartridge with it, indicating the chamber is loaded (Figure 12), or it will have nothing (Figure 13), indicating an empty chamber.
2. Once satisfied, release the charging handle back into battery. It is advisable when clearing the rifle to do multiple chamber checks to ensure the rifle is absolutely clear of any cartridges.

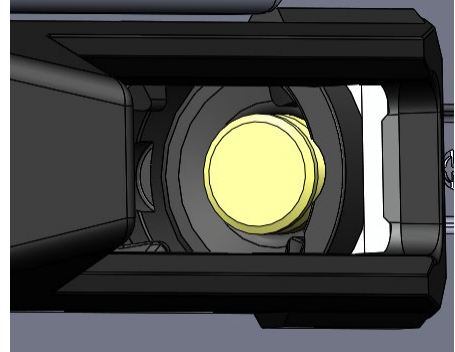
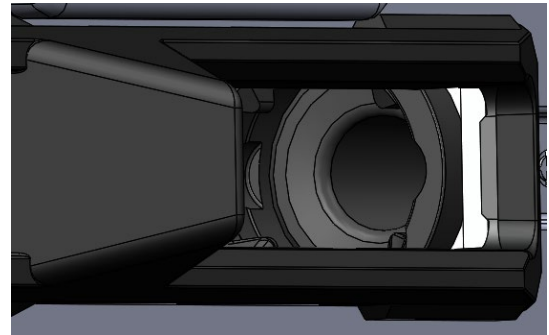


Figure 12: Loaded Chamber



d. Firing

Follow all firearm safety rules when firing a weapon. Eye protection and hearing protection is recommended when operating any firearm. Permanent hearing and vision damage can occur if ignored.

1. Shoulder the rifle by placing the buttpad into the pocket of your shoulder and resting your cheek on the WLVRN cheek rest.
2. Grip the WLVRN grip with your firing hand, and the handguard with your support hand. Use your support hand to keep the rifle pressed to your shoulder and keep your firing hand firm but not tight on the WLVRN grip.
3. When on target and ready to fire, rotate the safety selector switch to "Fire." (Figure 14)
4. Squeeze the trigger until the rifle fires. Release the trigger so it resets and repeat the process until the magazine is empty or until the desired firing is complete.

e. Reloading

The WLVRN comes with two ambidextrous options for releasing the magazine.

1. Primary Magazine Release:
Press the square magazine release button above the trigger and the magazine will release. (Figure 15)
2. Secondary Magazine Release:
Press the magazine release catch in front of the magazine well and the magazine will release. (Figure 16)

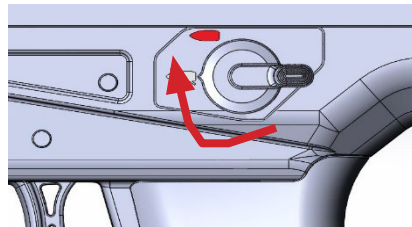


Figure 14: Adjusting the Safety Selector to "Fire"

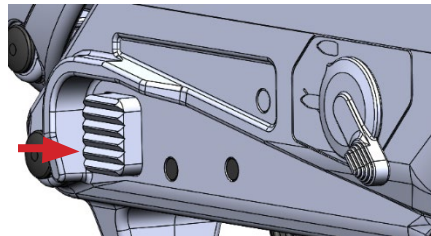
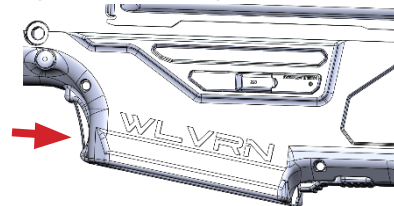


Figure 15: Front Mag Release Button



3. Magazine Empty Reload:
Upon firing the last round, the bolt will lock to the rear, enabling faster reloads than from a closed bolt. (Figure 16)
Press the Bolt Catch Release behind the magwell to release the Bolt. This is normal and not a malfunction.

f. Unloading / Clearing

1. To unload/clear the WLVRN, first rotate the fire selector switch to "Safe" (Figure 17)
2. Remove the magazine by pressing the magazine release button above the trigger or by pressing the magazine release down in front of the magazine well and pull the magazine downward until it clears the rifle. (Figure 18)
3. Pull the charging handle quickly to the rear and release multiple times to clear any remaining cartridge(s). Pull the charging handle rearward quickly to reliably eject non-fired cartridges from the rifle. Ejecting them slowly can cause malfunctions as they fumble inside the Bolt Carrier Group cavity. (Figure 19)
4. Pull the charging handle back slowly and view the chamber check window to ensure and confirm there's no cartridge still in the chamber.

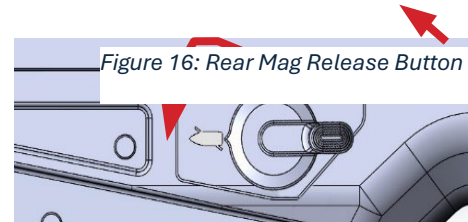


Figure 16: Rear Mag Release Button

Figure 17: Adjusting the Safety Selector to "Safe"

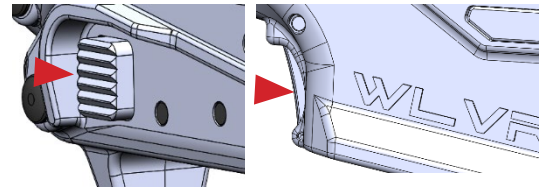
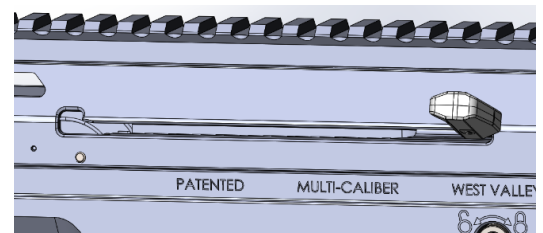


Figure 18: Mag Release Buttons



WARNING: This does not replace a full visual inspection inside of the chamber. (Figure 13)

EJECTION SIDE SWAP / DISASSEMBLY / R

Ensure the rifle is safe by following the Unloading/Clearing procedures on page 31.

a. Ejection Side Swap Disassembly

1. Ensure the Charging Handles are forward, and the Bolt Catch is not retaining the Bolt in the locked back position.
2. Press the captured rear and middle takedown pins out from the right to the left and tilt the rear of the upper receiver up. (Figure 20)
3. Pull down and rearward on the charging handle to bring the bolt carrier assembly rearward, then grasp the bolt carrier guide plate and pull the recoil spring support rearward and out of the rifle.
4. Place the WLVRN on its side. Using a T15 screwdriver remove the torx screw indicated in Figure 21. Lift and remove the side port cover. This is best done with the receiver open so the T-Nut on the backside can be held so it doesn't fall into the receiver.

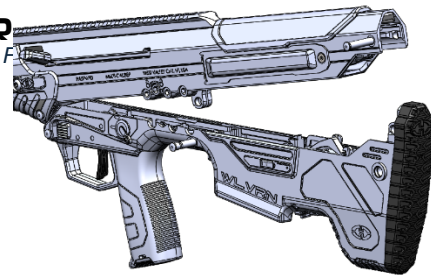


Figure 20: Separate Upper Receiver from Lower Receiver

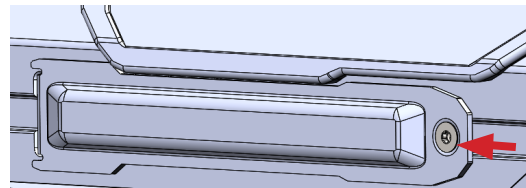
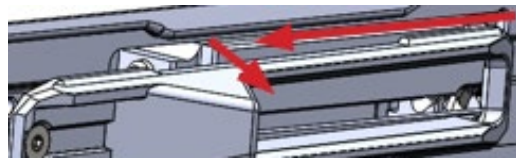


Figure 21: Removing Side Port Cover



5. Rotate the WLVRN to the opposite side and remove the torx screw with a T15 screwdriver and remove the side-eject panel by sliding rearward and then away from the rifle (Figure 22). This is best done with the receiver open so the T-Nut on the backside can be held so it doesn't fall into the receiver.

Figure 22: Removing Side-Eject Panel

b. Bolt Head Removal / Bolt Carrier Group Disassembly (Right-hand Ejection Shown)

1. Use the bullet tip, pen, or a 1/8" punch to press the firing pin retaining pin (FPRP) out of the bolt carrier group from the bottom to the top. Remove the FPRP from the bolt carrier group. (Figure 23)
Note: After 1000 rounds, during regular maintenance, or if the firearm begins malfunctioning, visually inspect individual components of the bolt carrier group to ensure they are serviceable and in working condition.
2. Tilt the bolt carrier group upwards and drop the firing pin out. You may need to move the bolt head back and forth to allow the firing pin to drop freely. (Figure 24)
3. Press and rotate the bolt head to the rear, then rotate the bolt guide pin 90-degrees to remove; pull it up and out. (Figure 25)
4. Pull the bolt head out from the bolt carrier.

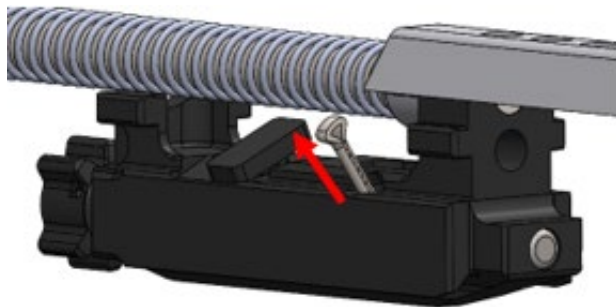


Figure 23: Removing Firing Pin Retainer



Figure 24: Removing the Firing Pin

Figure 25: Removing the Cam Pin

c. Ejection Side Swap

1. When swapping the ejection side, the bolt head needs to be rotated 180 degrees and reinstalled into the bolt carrier. The extractor should match the side of the rifle desired for case ejection. (Figure 27)
2. Follow the Bolt Head Installation / Bolt Carrier Group Reassembly steps on page 40 for bolt head installation instructions. For further bolt head disassembly, refer to Advanced Disassembly on page 46.

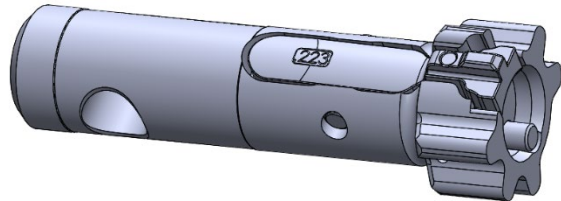


Figure 26: Bolt Head Assembly

d. Bolt Head Installation / Bolt Carrier Group Reassembly (Right-hand Ejection Shown)

1. Insert the bolt head into the bolt carrier, with the extractor on the same side that ejection is desired. Right-hand ejection shown (Figure 27).
Note: Ensure the caliber on the bolt head matches the barrel you have installed. (Page **Error! Bookmark not defined.**)
2. Rotate the bolt head to approximately the 1 o'clock position and insert the bolt guide pin, with the top plate of the pin parallel to the bolt carrier. (Figure 38)
3. Pull the bolt head forward and rotate the bolt guide pin 90 degrees, then insert the firing pin (small tip forward) into the

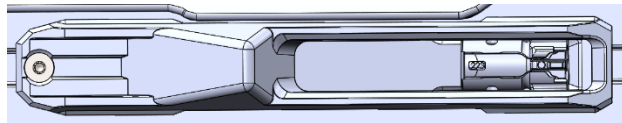


Figure 27: Bolt Head Extractor, Ejector Side

bolt carrier until it sits just below, flush with the back of the bolt carrier. (Figure 39)

4. Insert the firing pin retention pin in the bolt carrier from the top to the bottom. Press the pin until it sits below the surface of the bolt carrier.

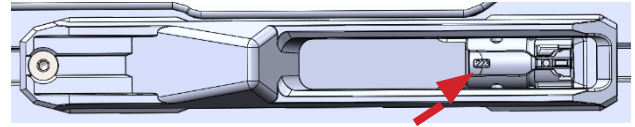


Figure 28: Bolt Head Extractor, Ejector Side

e. Ejection Side Change Assembly

1. Place the rifle on its side where the extractor on the bolt is visible. Insert the side-eject panel into the receiver ejection window and then slide it forward until the screw hole lines up with the T-Nut in the receiver and insert the screw and tighten to 10 in-lb using a T15 screwdriver.

DO NOT OVERTORQUE THE PLASTIC PANEL OR IT WILL CRACK!

2. Flip the rifle over and install the side port cover (Figure 31) by inserting the front lips to the inside of the receiver ejection window, then pressing the back of the cover flush with the receiver and line up screw hole with T-Nut in the receiver and insert the screw and tighten to 32 in-lb using a T15 screwdriver (Figure 31).

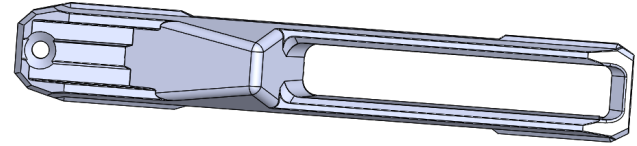


Figure 29: Side-Eject Panel

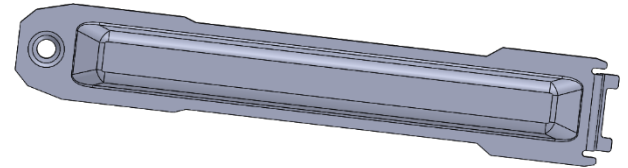
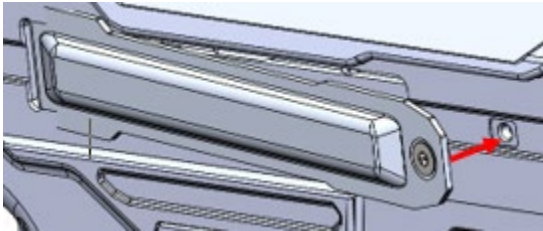


Figure 30: Side Port Cover

CALIBER CONVERSION / DIASSEMBLY / R

Ensure the rifle is safe by following the Unloading/Clearing procedures on page 31.

Follow steps a-h (pages **Error! Bookmark not defined.**-45) for caliber conversion process.

a. Conversion Kit Removal

1. Using the T25 side of the multi-tool, loosen the handguard retention screws. Press the captured handguard retention pin through from the right side to the left side of the WLVRN receiver until it snaps into position. (Figure 32)
2. Slide the handguard off the front of the WLVRN. (Figure 32)
3. Lock the charging handle to the rear of the charging channel.
4. Using the 5mm hex side of the multi-tool, loosen the three barrel retention screws one full turn each and rotate the barrel locking screw to the "Unlock" position. (Figure 33)
5. Remove the barrel assembly.
6. Slowly release the charging handle, allowing the bolt assembly to go to the forward-most position.
7. Press the captured rear and middle takedown pins out from the right to the left and tilt the rear of the upper receiver up.

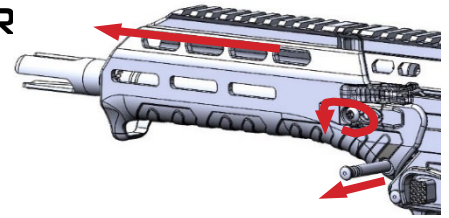


Figure 32: Removing Handguard

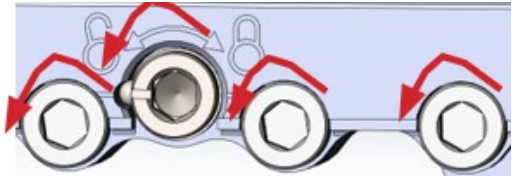
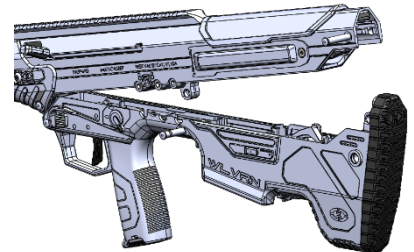


Figure 33: Loosen Barrel Retention Screws



8. Pull down and rearward on the charging handle to bring the bolt carrier assembly rearward, then grasp the Recoil Spring Support Bracket rearward and out of the rifle.

*Figure 34: Separate the Upper Receiver
from the Lower Receiver*

b. Bolt Head Removal / Bolt Carrier Group Disassembly

1. Follow the steps on page 32 to fully disassemble the Bolt Carrier Group (BCG) and separate the Bolt Head from the BCG.

c. Bolt Head Swap

1. When swapping the bolt head during a caliber conversion, ensure the bolt head caliber label on the extractor matches the chambering of the conversion kit being installed. (Figure 35)
2. Be sure to headspace the Bolt Head with its respective Barrel properly.
3. Follow the Bolt Head Installation / Bolt Carrier Group Reassembly steps on page 40 for bolt head installation instructions. For further bolt head disassembly, refer to Advanced Disassembly on page **Error! Bookmark not defined..**



Figure 35: Extractor Label



d. Bolt Head Installation / Bolt Carrier Group Reassembly

1. Insert the bolt head into the bolt carrier, with the extractor on the same side ejection as desired. Right-hand ejection is shown. (Figure 37)

Note: Ensure the caliber on the bolt head matches the barrel you have installed. (Page 39)

2. Rotate the bolt head to approximately the 1 o'clock position and insert the bolt guide pin, with the top plate of the pin parallel to the bolt carrier. (Figure 38)
3. Pull the bolt head forward and rotate the bolt guide pin 90 degrees, then insert the firing pin (small tip forward) into the bolt carrier until it sits just below, flush with the back of the bolt carrier. (Figure 39)
4. Insert the firing pin retention pin in the bolt carrier from the top and push until it rests below the surface of the bolt carrier. (Figure 39)

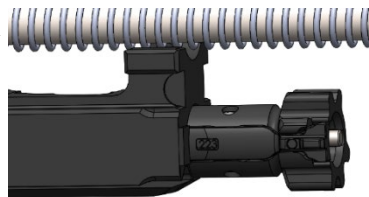


Figure 37: Extractor on Ejection Side

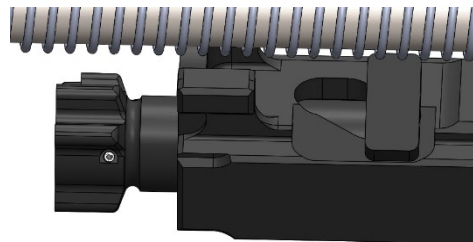


Figure 38: Bolt Head Closed

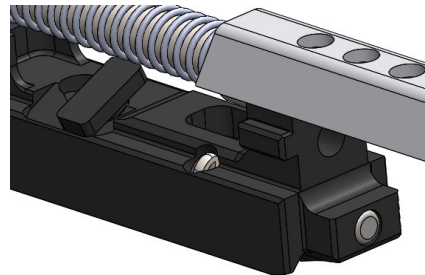


Figure 39: Inserting the Firing Pin Retainer

e. Magazine Spacer Installation (.223 and .300 BLK)

1. To install the magazine spacer for AR-15/M16 magazine compatibility, ensure the rifle is clear and the bolt is forward.
2. Press and hold the magazine release. (Figure 40)
3. Insert the magazine spacer into the magazine well in the stock panel from the bottom until it snaps into position. (Figure 40)
4. Release the magazine release.

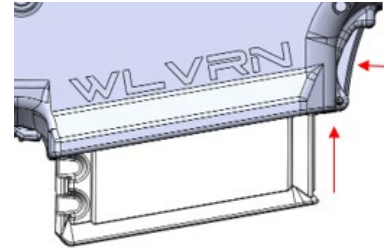


Figure 40: Installing 5.56 Conversion Block

f. Magazine Catch Installation / Conversion

1. Push inward on the magazine release rod.
2. Rotate the magazine catch down. (Figure 41)
3. Using a small flat tool, tap the back of the magazine conversion bar until it slides off. (Figure 41)
4. Press the .223/.300 BLK magazine conversion bar onto the magazine release main bar and rotate the magazine catch back into place.

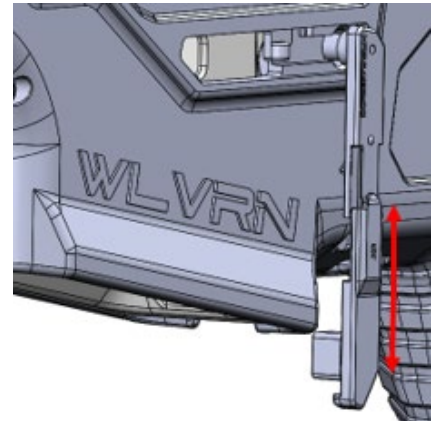


Figure 41: Changing Conversion Bar

g. Magazine Spacer Removal (.223 and .300 BLK)

1. Push the rear and middle takedown pins to their furthest outward position.
2. Lift the back of the upper receiver to expose the magazine conversion latch.
3. Push the magazine release while pushing the magazine conversion latch in and down. The magazine spacer should slide out the bottom of the magazine well. (Figure 42)

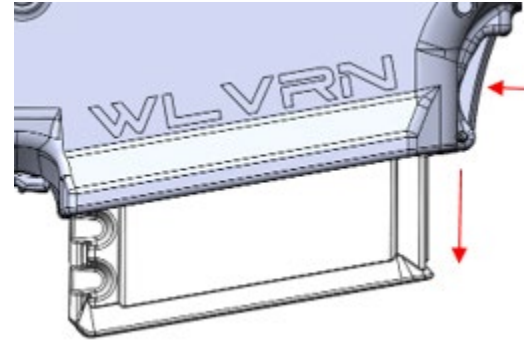


Figure 42: Removing 5.56 Conversion Block

h. Conversion Kit Installation

1. Insert the barrel assembly into the WLVRN receiver, barrel extension end first with the gas valve at the 12 o'clock position. When properly seated in the receiver, the barrel extension should sit securely against the feed ramps. (Figure 43)
2. Rotate the rifle to the left side. Using the 5mm hex wrench side of the multi-tool, rotate the barrel lock screw to the "Locked" position, and torque the barrel retention screws to 80 in / lb. (Figure 44)
3. Open the upper receiver by pressing the rear and center takedown pins to the outward most position and tilt the upper receiver up from the stock panel if it's not already open.

WARNING: If any of the above listed steps for conversion kit installation/initial setup are missed, and/or performed incorrectly, an extremely dangerous condition can occur.

4. Ensuring the bolt head is fully forward, install the bolt carrier assembly into the back of the WLVRN upper receiver first



Figure 43: Installing Barrel Assembly



Figure 44: Tighten the Barrel Retention Screws

ensuring the charging handle is forward. Next, align the slots of the operating rod guide with the WLVRN upper receiver operating guide rod channels and align the bolt carrier tabs the upper receiver rail channels just below the operating rod guide, then seat the bolt carrier group fully forward. (Figure 45, Figure 46)

5. Close the receiver and press the takedown pins into place.
6. On the WLVRN handguard, pop the captured handguard retention pin out to its open-most position.
7. Install the handguard on the WLVRN by sliding it over the barrel assembly, Desert Tech logo end first, with the rail at the 12 o'clock position.
8. Press the captured handguard retention pin through from the left side to the right side of the WLVRN receiver until it snaps into position, flush on each side.
9. Tighten handguard retention screws with a torque wrench, using a T25 head, to 30 in/lb.

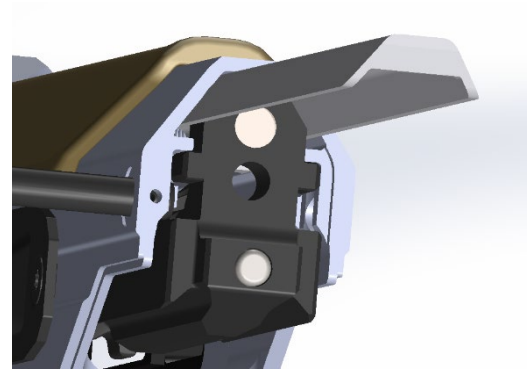


Figure 45: Installing Bolt Carrier Group into Receiver



ADVANCED DISASSEMBLY

a. Bolt Head Disassembly

1. Place the bolt body on a solid surface and press down on the extractor with your finger behind the rib, right above the extractor pin. Using a $3/32$ " punch and mallet or brass hammer, press the extractor pin out from the left to the right to remove the pin and release the extractor assembly from the bolt body. (Figure 47)
2. Separate the extractor spring assembly from the extractor by pulling it off the extractor. (Figure 48)
3. Separate the extractor bump stop by popping it out of the extractor spring with your finger or a small, pointed object if it's stuck. (Figure 49)
4. Using a $1/16$ " punch and mallet or brass hammer, press the ejector roll pin out to remove the ejector pin and spring from the bolt body. (Figure 50)

CAUTION: The ejector pin is highly loaded under spring tension. Eye protection is highly recommended to avoid eye injury



Figure 47: Removing Extractor Cross-Pin

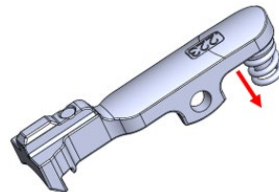


Figure 48: Separate Extractor From Bolt Head

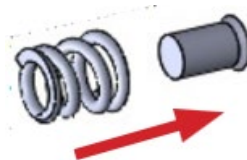


Figure 49: Separate Extractor Buffer & Spring



Figure 50: Installing Ejector Pin Coiled Spring Pin

b. Bolt Head Reassembly

CAUTION: Before reassembling the bolt carrier group, ensure you have the correctly chambered extractor for the conversion kit you intend to install (Figure 56). Failure to comply can cause malfunctions, internal damage, or a complete failure of the firing cycle.

1. Press the extractor buffer into the extractor spring. (Figure 52)
2. Press the extractor spring assembly onto the extractor spring catch point, until it snaps in position. (Figure 52)
3. Press the extractor assembly into the extractor slot on the bolt body, aligning the pin hole cutouts, then press the extractor pin through from right to left. It may be necessary to lightly tap the pin through the hole using a brass hammer. (Figure 52)
4. Place the ejector spring into the hole in the bolt body. Align the cutout in the side of the ejector pin with the cross hole in the bolt body and press the pin into the hole until the roll pin can be installed through the side (Figure 52).

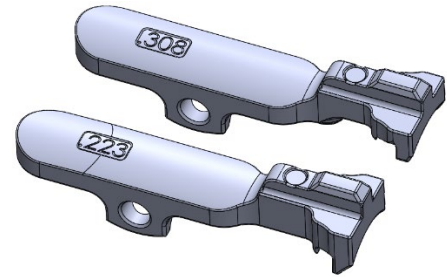


Figure 51: .223 & .308 Extractors

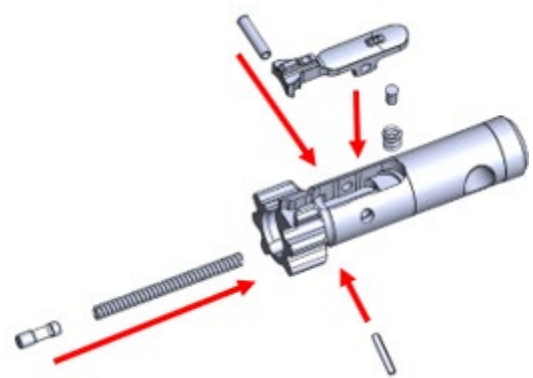


Figure 52: Bolt Head Assembly Exploded View

c. Gas Block Disassembly

1. Rotate the gas valve 180 degrees to where the "A" firing condition rib is at the 12 o'clock position, then pull the gas valve out of the gas block. It may be necessary to depress the detent to allow rotation. Use a punch tool if necessary. (Figure 53)
2. Using a 5/16" punch or similar object, push the piston out the front of the gas block from the back. (Figure 54)

WARNING: Do not remove the rings from the gas piston, it is unnecessary for maintenance or cleaning and will void the warranty if tampering is evident.

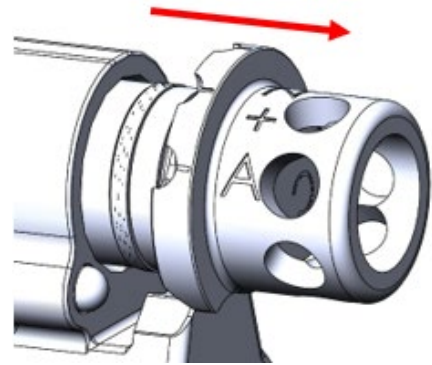


Figure 53: Removing the Gas Valve

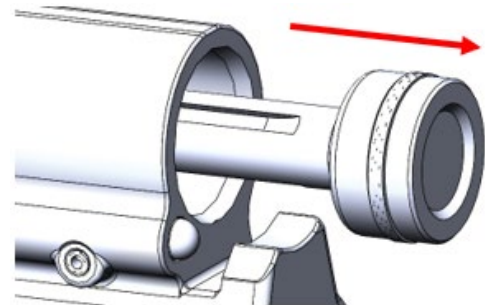


Figure 54: Removing the Gas Piston

d. Gas Block Reassembly

1. Install the piston into the gas block, pressing it to the rearmost position. (Figure 55)

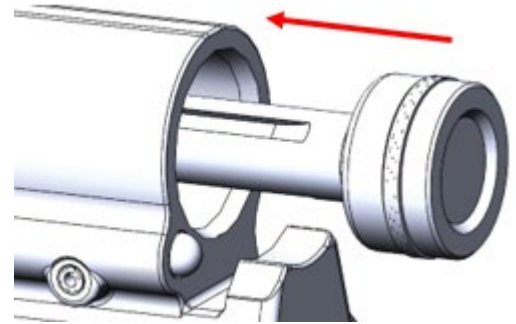


Figure 55: Installing the Gas Piston

2. Install the gas valve in the front of the gas block with the firing condition rib at the 12 o'clock position, then rotate it until the detent clicks into the desired firing condition setting. (Figure 56) Use a punch tool to depress the detent to allow initial rotation.

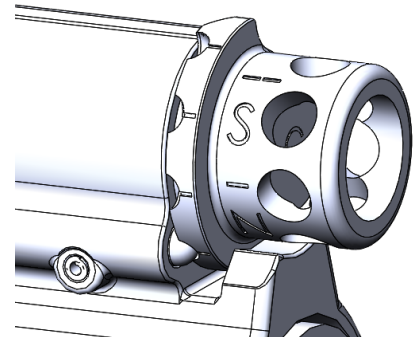


Figure 56: Gas Valve on Setting "N"

CLEANING AND MAINTENANCE

GENERAL

Comprehensive knowledge of how to service and handle firearms is of great importance. Experience has shown that most failures, which occur while operating a firearm, are due to negligence in maintenance. Special attention must be paid to cleaning, lubricating, and inspecting the rifle; this will determine whether or not the rifle will function properly. In order to maintain accuracy, the barrel must be maintained properly. The receivers, bolt carrier group, and other moving parts of the rifle must be kept clean and lightly lubricated to ensure proper operation of the rifle.

Your WLVRN ships from the factory ready to fire. Do not remove the grease used.

FIELD CLEANING

Ensure the rifle is clear and safe by removing the magazine, placing the rifle safety selector on “Safe” and cycling the rifle multiple times to ensure a clear chamber, visually inspecting the chamber to confirm.

Desert Tech recommends cleaning the barrel when accuracy begins to deteriorate, using bore cleaning foam and the properly sized bore snake. Follow cleaner product instructions when cleaning the barrel.

Desert Tech recommends cleaning the WLVRN every 1000 rounds in clean environments. Dependent upon environmental conditions, cleaning more often may become necessary.

a. Receivers

1. Separate the upper receiver from the stock panel by popping out the three (3) captured takedown pins.
2. Apply Lithium Grease to the Charging Handle Springs.
3. With a brush and CLP, scrub the magazine well, then wipe it clean with a rag.
4. If the hammer and sear mechanisms are dirty, scrub them lightly with a brush and wipe clean as best as possible.
(Figure 58)
5. Apply a drop of CLP to the trigger sear.
6. Using canned air or a low-PSI air compressor, blow out the stock panel if there are signs of excess dust or fouling buildup. Wipe clean with a rag and/or a soft brush.

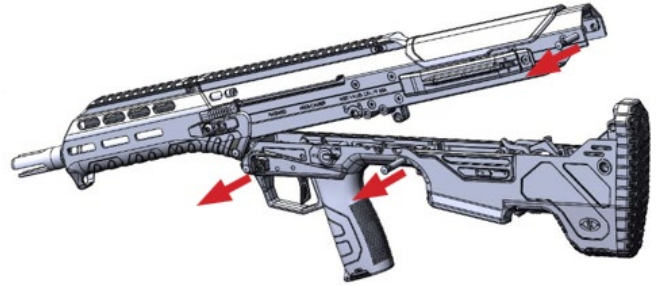
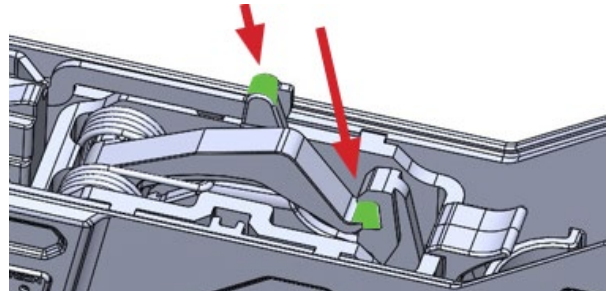


Figure 57: Separating Upper Receiver from Lower Receiver



b. Bolt Carrier Group (Assembled)

1. Remove the bolt carrier group from the upper receiver by following the steps on page **Error! Bookmark not defined..**
2. Apply CLP to the bolt carrier group, both sides (bolt lugs, extractor, bolt guide pin, bolt head, operation rod guide), and allow it to soak for a minute or so.

Note: The Operation Guide Rod should only be disassembled by Desert Tech or a qualified Gunsmith/Armorer.

3. With either a plastic or wire brush, scrub the bolt carrier and bolt head, removing any carbon or any fouling buildup.
4. Wipe down the bolt carrier group with a rag until all fouling is removed.
5. Apply CLP to the collar, bolt lugs, the extractor cutout, bolt guide pin, bottom bolt carrier guides, the operation rod, and spring guide.

(Figure 59, Figure 60, Figure 61)

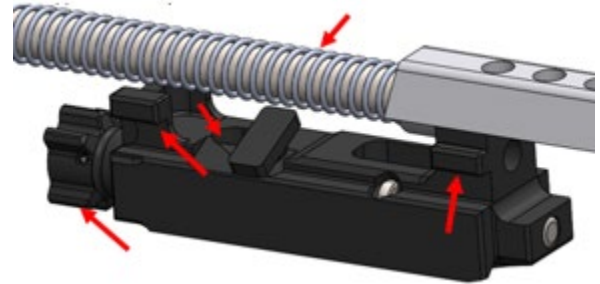


Figure 59: Grease Points on Bolt Carrier

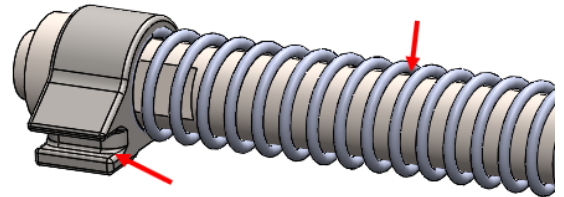


Figure 60: Grease Points on Op Rod & Op Rod Guide 53

c. Bolt Carrier Group (Disassembled)

1. Disassemble the bolt carrier group by following the steps on page **Error! Bookmark not defined..**
2. Apply CLP to the bolt carrier group (bolt head and bolt lugs, extractor, bolt guide pin, bolt carrier, firing pin, firing pin lock), and allow it to soak for a minute or so. (Figure 66)
3. With either a plastic or wire brush, scrub the bolt carrier, bolt body, bolt guide pin, firing pin, and firing pin retainer, removing any carbon or any fouling buildup.
4. Wipe down the bolt carrier group with a rag until all fouling is removed.
5. Re-apply CLP to the bolt carrier, bolt body, bolt guide pin, firing pin, and firing pin lock, extractor cutout, bottom bolt carrier guides, and spring guide. (Figure 66)
6. Reassemble the bolt carrier group following the steps on page 40.

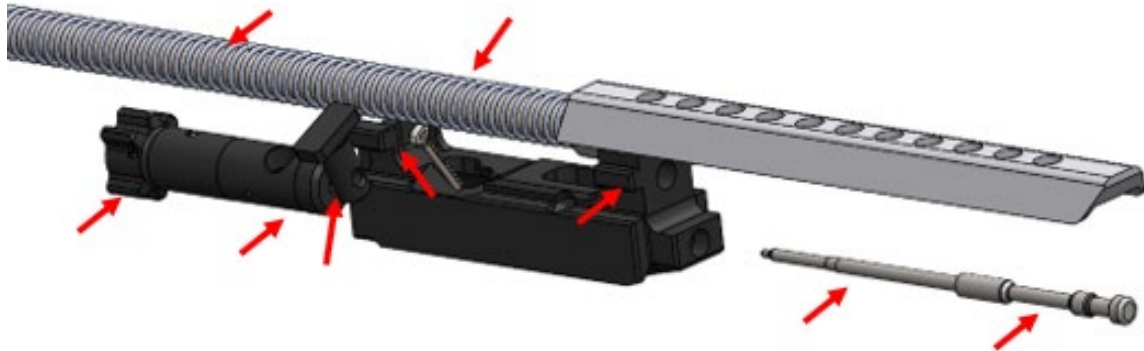


Figure 61: Grease Points on Bolt Carrier Group

d. Barrel Assembly

1. Using a caliber-appropriately sized bore snake with CLP, clean the bore of the rifle. It may take multiple passes to remove bore fouling.
2. Run cleaning patches with CLP applied through the rifle barrel until the patches come through clean. (Figure 62)
3. Scrub the chamber lugs and feed ramps with a wire brush and CLP.
4. Wipe the fouling out of the chamber lugs and off the feed ramps with a rag.
5. Clean out the gas block with a wire brush, wipe clean with a rag, and apply light CLP. (Figure 63)

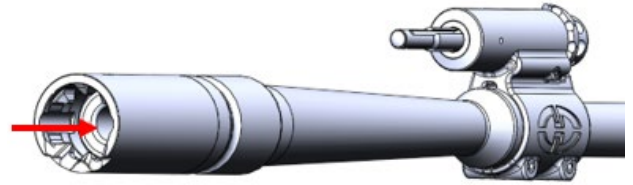
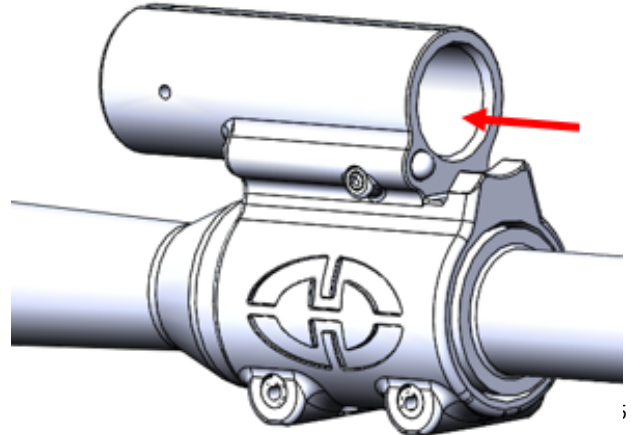


Figure 62: Barrel Chamber



e. Gas Valve

1. Remove the gas valve from the gas block by following the removal steps on page 49.

WARNING: Do not remove the rings from the gas piston, it is unnecessary for maintenance or cleaning, and will void the warranty if tampering is evident.

2. Scrub off and wipe away any carbon from the gas valve and gas piston.
3. Apply a light coating of CLP to the gas adjustment valve and the large gas ring on the gas piston. (Figure 64)

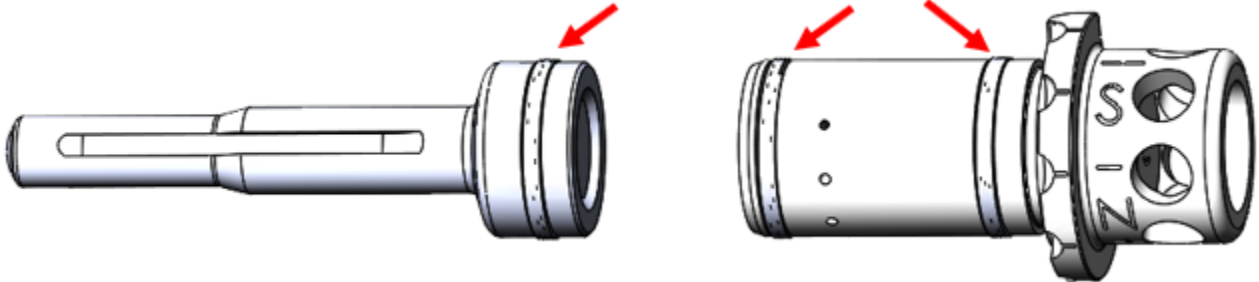


Figure 64: Gas Valve & Piston

f. Magazine Release

1. Apply lithium grease to the areas where the transfer bar contacts ramped surfaces.
2. Apply lithium grease to the area where the forward magazine release contacts the toggle arm.

(Figure 65)

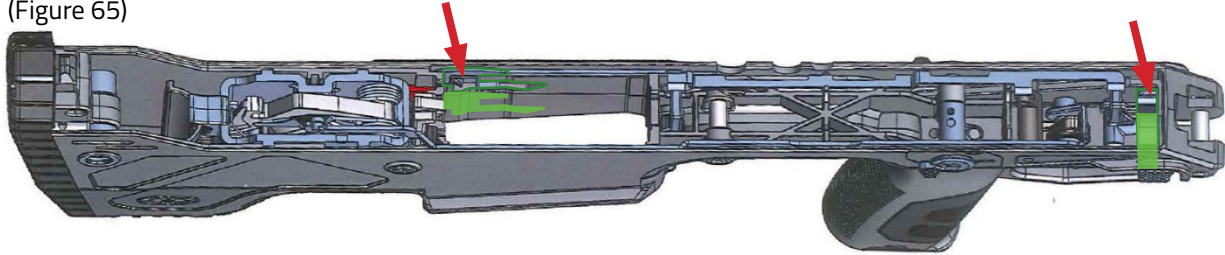


Figure 65: Stock Panel Grease Points

g. Storage

WARNING!

KEEP OUT OF REACH OF CHILDREN!

1. Ensure the rifle chamber is clear and the magazine is unloaded, and the rifle is in the "S" (Safe) position.
2. If possible, store rifle in a gun safe, with the butt of the stock resting on the ground and the muzzle pointed up.
3. If a safe is unavailable, store it in a secure location, ensuring it is out of reach of children.

TROUBLESHOOTING

a. Failure to Fire

WARNING: If the rifle fails to fire with a live round in the chamber of a hot barrel (a misfire or jam), keep the rifle pointed in a safe direction, place the safety slide on the "S" (Safe) position, and wait 30+ seconds before trying to remove the round. If you cannot remove the round, remove the magazine, and wait at least 15 minutes with the rifle pointed in a safe direction, then proceed form the following troubleshooting procedures to safely determine the cause of the malfunction and return the rifle to a safe condition.

Malfunction	Remedial Action
1. Empty Magazine	Reload WLVRN with a loaded magazine.

Malfunction	Remedial Action
2. Empty Chamber (loaded magazine)	<p>Ensure the magazine is fully inserted then charge the rifle. To ensure a round went into battery after charging the weapon, pull the Charging Handle back approximately 2" and observe the Chamber Check Window.</p> <p>Possible Causes:</p> <ul style="list-style-type: none">- Magazine improperly seated.- Charging handle not pulled back far enough when charging the WLVRN.- Rifle not charged properly (not pulling the charging handles all the way back or not releasing properly which won't allow the bolt to go into battery on its

	own), causing the round not to chamber fully.
3. Defective Cartridge.	Inspect primer. If fully indented, wait for 15 minutes then discard safely. If not fully indented, check the firing mechanism.
4. Bolt not fully closed.	<p>Pull the charging handles all the way to the rear and release, allowing them to slam forward on their own.</p> <p>Possible Causes:</p> <ul style="list-style-type: none"> - Dirty. - Poor ammunition - Ammunition out of spec. - Worn recoil spring. - Failure to charge the rifle properly.
5. Dirty firing mechanism, defective firing pin,	Check for sluggishness of operation. Follow cleaning procedures on page 51. If problem persists, contact

or defective striker assembly.	Desert Tech Warranty at 801.975.7272
6. Barrel not properly seated.	Make sure the barrel locking lug is in its locked position. Make sure the barrel extension is seated securely against the feed ramps. (Figure 7)

b. Failure to Feed from Magazine

*Rifle jams with an empty chamber

Malfunction	Remedial Action
1. Malfunctioning magazine.	Disassemble and clean the magazine. If the malfunction persists, replace the magazine.
2. Magazine improperly seated.	Remove magazine and reinstall until the magazine catch engages.
3. Magazine improperly loaded.	Check that the number of cartridges in the magazine is compliant with the magazine cartridge capacity, and cartridges seated to the back of the magazine.
4. Dirty magazine.	Disassemble the magazine and clean.
5. Damaged magazine.	Replace the magazine.
6. Double feeding of cartridge.	Inspect for stuck case or cartridge and check the extractor and ejector or check for broken magazine feed lips and replace if damaged.

c. Failure to Chamber

*Bolt does not fully close, and rifle will not fire

Malfunction	Remedial Action
1. Dirty Chamber	Clean chamber.
2. Defective Ammunition	Check for damaged cartridges.
3. Excessively Dirty Rifle.	Check for sluggishness in bolt and firing mechanism. Clean and oil as necessary (Page 51).
4. Double Feed	Remove the magazine, then cycle the bolt via the charging handle multiple times to ensure the malfunction has been cleared. Insert the magazine, charge the rifle, and resume firing. If the problem persists, replace the magazine. If the problem persists, remove the bolt head from the rifle

<p>4. Double Feed (continued)</p>	<p>and check the extractor claw and ejector pin of the bolt head to ensure they function properly. Ensure the rifle is in the 'Safe' position, remove the magazine, and keep the rifle pointed in a safe direction before removing the bolt head from the rifle.</p> <p>Possible Causes:</p> <ul style="list-style-type: none"> - Magazine improperly seated. - Underpowered ammunition. - Dirty Chamber. - Damaged/Worn magazine. - Short stroke upon charging. - Damaged extractor. - Damaged ejector and/or spring.
<p>5. Triple Feed</p>	<p>Remove the magazine, then pull, and lock the charging handle to the rear. Observe the chamber check window to confirm the chamber is clear. Cycle the bolt multiple times to ensure all</p>

<p>5. Triple Feed (continued)</p>	<p>rounds have been cleared, then insert the magazine, charge the rifle, and resume firing.</p> <p>If a round or multiple rounds continue to get hung up in the receiver, remove the bolt head from the rifle. Check the extractor claw and the ejector pin to ensure they function properly.</p> <p>Possible Causes:</p> <ul style="list-style-type: none"> - Magazine improperly seated. - Underpowered ammunition. - Dirty chamber. - Damaged/Worn magazine. - Charging rifle after a double feed. - Multiple short strokes upon attempted charging. - Damaged extractor claw. - Damaged ejector and/or spring.
---------------------------------------	--

d. Failure to Extract or Eject

*The fired case may not eject, or the rifle may jam (spent case left in chamber).

WARNING: The following procedure should be carried out only after following the WARNING on page 10. Ensure the rifle's safety selector is on the "S" (Safe) position!

Malfunction	Remedial Action
1. Stuck cartridge	<p>Remove the magazine, then pull, and lock the charging handle to the rear and release. If the stuck round is ejected, the malfunction is cleared, and you may insert the magazine, charge the rifle, and resume firing.</p> <p>If the malfunction persists point the rifle in a safe direction and ensure the rifle is on 'Safe', remove the magazine. Then attempt to eject the cartridge by pulling the charging handles backward.</p>

1. Stuck Cartridge (continued)

If the problem persists, lock the charging handles to the rear, and insert a cleaning rod or similar tool into the front of the barrel and try to tap the stuck cartridge out of the chamber.

If the malfunction persists, point the rifle in a safe direction, ensuring the rifle is on "Safe", and in a safe environment to address the malfunction, lock the charging handles to the rear, and remove the conversion kit. Be careful, as the barrel assembly may be hot. Bring the barrel assembly to a Desert Tech certified armorer for removal of the stuck cartridge.

	<p>Causes:</p> <ul style="list-style-type: none"> - Overpressured ammunition. - Underpowered ammunition. - Dirty Chamber. - Damaged/Worn bolt carrier group. - Damaged extractor claw.
2. Dirty or damaged chamber.	Check ammunition and change to a different brand of current commercially manufactured ammunition. Replace if necessary.
3. Fouled extractor.	Inspect, clean, replace extractor, if necessary.
4. Malfunctioning extractor.	Disassemble & Clean extractor (Page Error! Bookmark not

	defined.). Verify proper extractor for installed conversion kit.
5. Fouled ejector.	Inspect, clean, replace ejector, if necessary.
6. Malfunctioning ejector.	Disassemble & Clean ejector (Page Error! Bookmark not defined.). Verify ejector functions properly.
7. Improper gas valve setting causing the bolt to short stroke.	Rotate the gas valve to the proper position for shooting conditions.
8. Worn extractor or extractor spring.	Replace extractor or extractor spring.
9. Worn ejector or ejector spring.	Replace ejector or ejector spring.

PARTS EXPLODED VIEW

WLVRN Main Rifle Overview

1. Muzzle Device
2. Barrel
3. Handguard
4. Charging Handle (Right & Left Side)
5. Picatinny Rail
6. Receiver
7. Side Port Cover/Side-Eject Panel
8. Cheek Piece
9. Buttpad
10. Stock Panel
11. Bolt Catch/Release
12. Magazine Well
13. Magazine Release (2)
14. Barrel Retention Screws (3)
15. Barrel Locking Lug
16. WLVRN Grip

17. Safety Selector Switch (Right & Left)
18. Handguard Screws (Right & Left Side)
19. Takedown Pin (4)

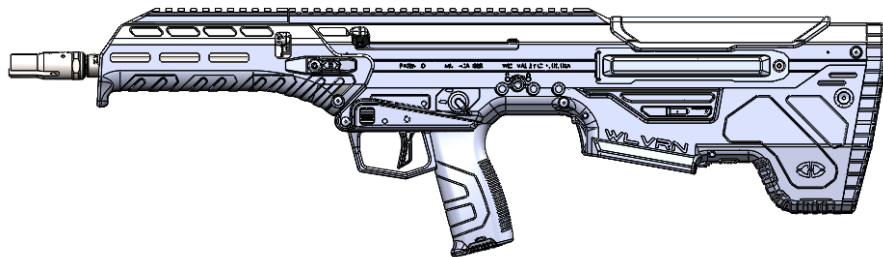
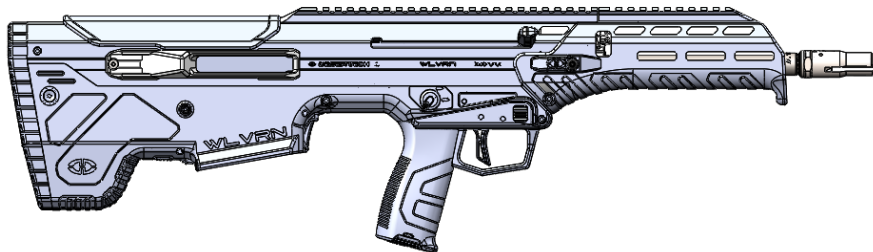


Figure 66: WLVRN Left Side



Receiver Assembly

	Description	Part #	Qty
1	WLV Receiver	WLV0001	1
2	Cheek Piece	MDR0027	1
3	Rear Takedown Pin	WLV0007	1
4	Rear Takedown Pin Spring	HDW0313	1
5	Rear Takedown Pin Detent	HDW0291	1
6	Left Charging Handle Spring	WLV0010	1
7	#6-32 x 3/16 Button Head Cap Screw	HDW0311	2
8	Barrel Locking Lug	WLV0003	1
9	Barrel Retention Screw	HDW0302	3
10	1/16 X 3/8 Coiled Spring Pin	HDW0301	2
11	Rail Steel Insert	WLV0008	1
12	Left Feed Ramp Insert	WLV0005	1
13	Right Feed Ramp Insert	WLV0006	1
14	T-Nut, Flange	WLV0004	2

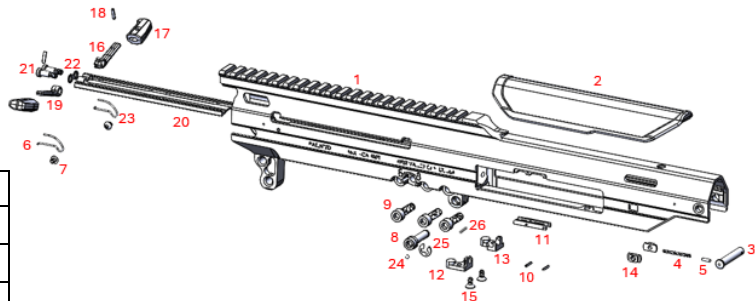


Figure 68: Upper Receiver Exploded View

	Description	Part #	Qty
15	#6-32 X 5/16 Screw, Flat Head, Torx	HDW0304	2
16	Right Charging Pivot	MDR0702	1
17	Charging Handle	MDR0696	2
18	3/32 X 3/8 Stainless Coiled Spring Pin	HDW0168	2
19	Left Charging Pivot	MDR0703	1
20	Charging Block	WLV0009	1
21	Ball Bearing	HDW0023	1
22	Locking Lug Spring	SRS0080	1
23	Right Charging Handle Spring	WLV0011	1
24	Pivot Link	MDR0404	1
25	7mm, E-Clip	HDW0300	1
26	Locking Lug Spring	SRS0080	1

Stock Panel Assembly

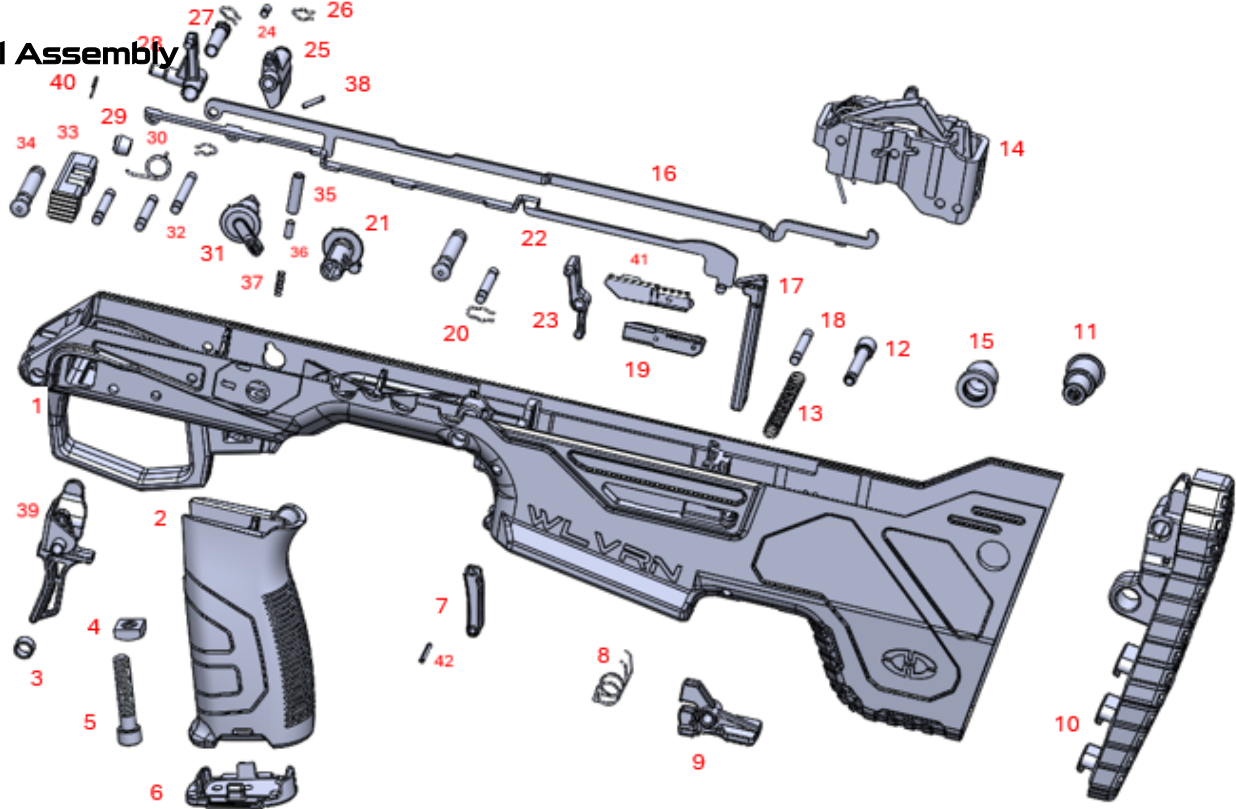
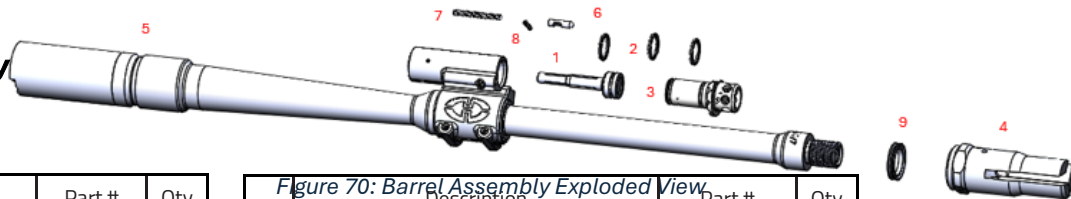


Figure 69: Lower Receiver Exploded View

	Description	Part #	Qty
1	Stock Assembly, Semi-Auto	WLV0013	1
2	Grip	MDR0249	1
3	Axle Spacer	MDR0245	1
4	.25-.20 Square Head Nut	HDW0016	1
5	.25-20 X 1.25 Socket Head Cap Screw	HDW0009	1
6	Grip Cap Assembly	MDR0379	1
7	Rear Magazine Button Arm	MDR0241	1
8	Bolt Catch Lever Spring	MDR0303	1
9	Bolt Catch Lever	MDR0235	1
10	Buttpad Assembly	MDR0291	1
11	Female Aft Sling Stud Buttpad Mount	MDR0293	1
12	Mag Release Spring Rod	WLV0075	1
13	Mag Release Spring Rod Spring	MDR0231	1
14	Semi-Auto Sear Housing Assembly	MDR02352	1
15	Male Aft Sling Stud Buttpad Mount	MDR0292	1
16	Trigger Bar	MDR0234	1
17	Bolt Catch	MDR0178	1
18	Axle Dowel Pin	MDR0247	4
19	Mag Release Main Bar	MDR0229	1
20	FN H Clip	MDR0023	2
21	Safety Selector Main	MDR0211	1
22	Mag Release Transfer Bar Assembly	MDR0226	1
23	Rear Mag Release Tie Arm	MDR0228	1
24	Pin, Counter Weight, .125 X .250	MDR0565	1

	Description	Part #	Qty
25	Counter Weight	MDR0457	1
26	Axle Pin Retaining Clip	MDR0458	3
27	Trigger Axle	MDR0222	1
28	Mag Button Toggle	MDR0206	1
29	Toggle Bushing	MDR0371	1
30	Magazine Toggle Spring	MDR0248	1
31	Semi Safety Selector End	MDR0318	1
32	Counter Weight Axle Pin	MDR0459	1
33	Mag Release Button	MDR0208	1
34	Takedown Pin	MDR0022	2
35	Safety Detent Sleeve	MDR0332	1
36	Safety Detent	MDR0110	1
37	Safety Detent Spring	MDR0111	1
38	.0078125 X .375 Coil Roll Pin	HDW0007	1
39	Trigger Assembly	MDR0217	1
40	Toggle Bushing Clip	MDR0372	1
41a	5.56 NATO/.223 REM/.300 BLK Mag Conversion Bar	MDR0232	1
41b	7.62 NATO/.308 WIN/6.5 CM Mag Conversion Bar	MDR0233	1
42	M2 X 16 Coiled Spring Pin	HDW0015	1

Barrel Assembly



	Description	Part #	Qty
1	Piston	WLV0076	1
2	Spiral Gas Ring	MDR0327	3
3a	5.56/.223 SE, 11.5" Gas Valve	WLV0065	1
3b	5.56/.223 SE, 16" Gas Valve	WLV0058	1
3c	5.56/.223 SE, 20" Gas Valve	WLV0064	1
3d	.300 BLK SE, 11.5" Gas Valve	WLV0067	1
3e	.300 BLK SE, 16" Gas Valve	WLV0068	1
3f	7.62/.308 SE, 16" Gas Valve	WLV0061	1
3g	6.5 CM SE, 20" Gas Valve	WLV0062	1
4a	.223" Raiden Flash Hider	MDR0691	1
4b	.223" Compensator	MDR0594	1
4c	.308/.300 Compensator	MDR0597	1
4d	6.5 CM Compensator	MDR0601	1

Figure 70: Barrel Assembly Exploded View

Description	Part #	Qty
5a 5.56/.223 Side-Eject, 11.5" Barrel Assembly	WLV-BR-B11	1
5b 5.56/.223 Side-Eject, 16" Barrel Assembly	WLV-BR-B16	1
5c 5.56/.223 Side-Eject, 20" Barrel Assembly	WLV-BR-B20	1
5e .300 BLK Side-Eject, 16" Barrel Assembly	WLV-BR-D16	1
5f 7.62/.308 Side-Eject, 16" Barrel Assembly	WLV-BR-A16	1
5g 7.62/.308 Side-Eject 20" Barrel Assembly	WLV-BR-A20	1
5h 6.5 CM Side-Eject, 20" Barrel Assembly	WLV-BR-C20	1
6 Gas Knob Detent	MDR0486	1
7 Gas Knob Detent Spring	MDR0090	1
8 .078125 X .375 Coil Roll Pin	HDW0007	1
9a Crush Washer, 1/2"	MDR0637	1
9b Crush Washer, 5/8"	MDR0638	1

Bolt Carrier Group

	Description	Part #	Qty
1	Bolt Carrier	WLV0021	1
2	Op Rod Guide	WLV0022	1
3	Bolt Guide Pin (Mod)	WLV0024	1
4	Operation Rod (Mod)	WLV0023	1
5	Recoil Spring	MDR0290	1
6	Recoil Spring Support Bracket	MDR0153	1
7	Firing Pin	MDR0425	1
8	Firing Pin Retaining Pin	HDW0314	1
9a	5.56/.223, Side-Eject Bolt Assembly	WLV0036	1
9c	7.62/.308, Side-Eject Bolt Assembly	WLV0043	1

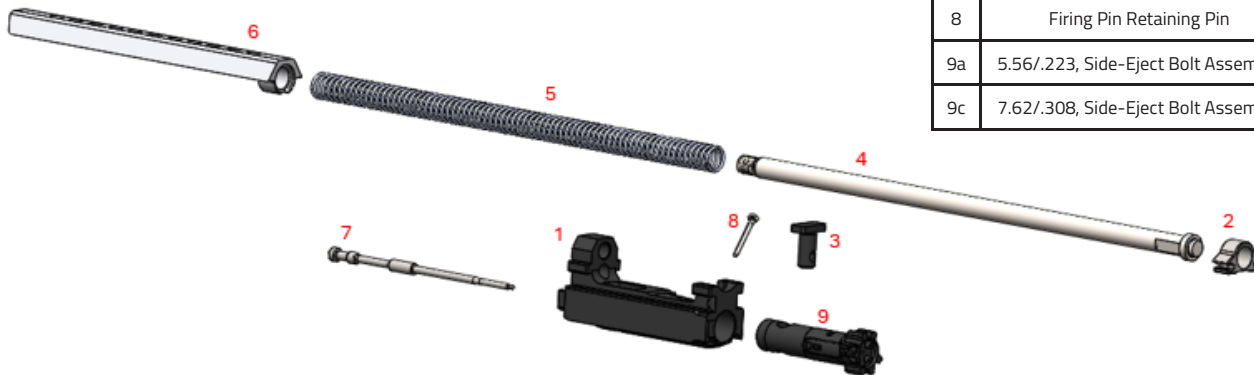


Figure 71: Bolt Carrier Group Exploded View

Bolt Assembly

	Description	Part #	Qty
1a	5.56 NATO/.223 REM/.300 BLK Bolt Head, Side-Eject	WLV0035	1
1b	7.62 NATO/.308 WIN/6.5 CM Bolt Head, Side-Eject	WLV0045	1
2a	5.56/.223 Extractor	WLV0034	1
2c	7.62/.308 Extractor	WLV0044	1
3	Extractor Cross Pin	MDR0574	1
4	Extractor Spring	MDR0558	1
5	Extractor Buffer	MDR0452	1
6	Ejector Spring	WLV0057	1
7a	5.56 NATO/.223 REM/.300 BLK Ejector Pin	MDR0602	1
7b	7.62 NATO/.308 WIN/6.5 CM Ejector	WLV0059	1
8	1/16" X 3/8" Coil Spring Pin	HDW0289	1

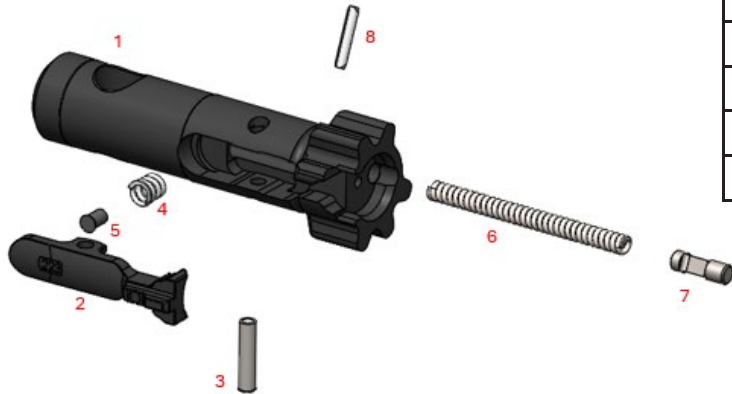


Figure 72: Bolt Assembly Exploded View

Side-Eject Panel & Side Port Cover

	Description	Part #	Qty
1	Side-Eject Panel, 5.56	MDR0636	1
2	Side Port Cover	MDR0630	1
3	8-32 X .25" Torx Flat Head Screw	HDW0001	2
4	Nut, Flange	WLV0004	2

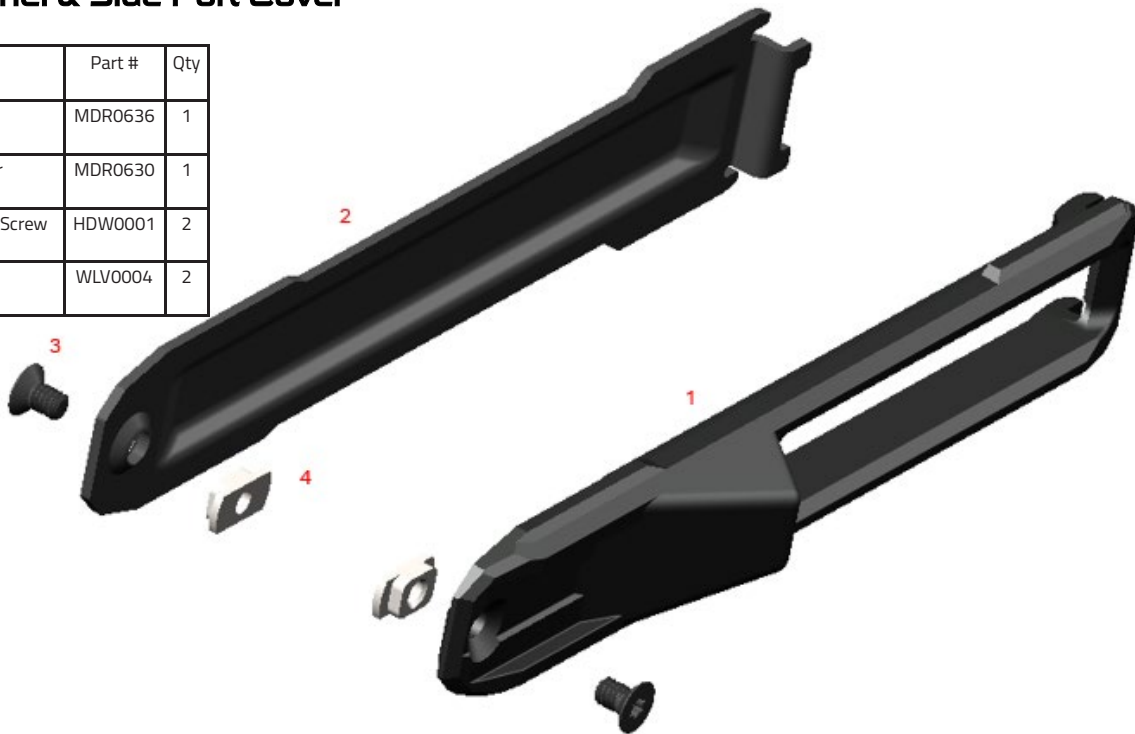


Figure 73: Side-Eject Panel & Side Port Cover Exploded View

Standard Handguard Assembly

	Description	Part #	Qty
1	Handguard	MDR0188	1
2	Takedown Pin	MDR0022	1
3	FN H Clip	MDR0023	1
4	10-32 X .3125, Torx Screw	HDW0143	2
5	Handguard Nut	MDR0455	2

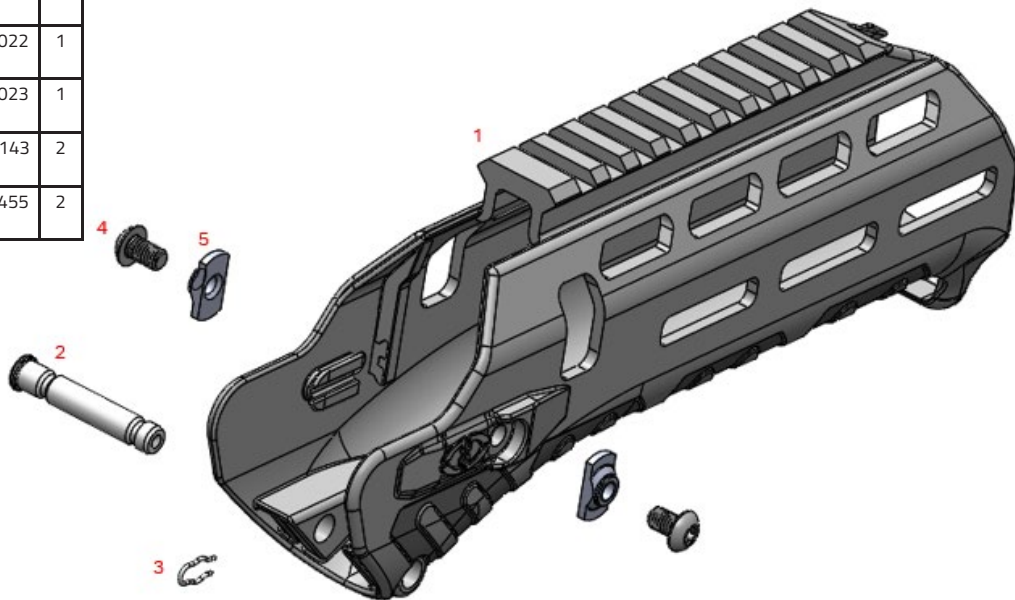


Figure 74: Handguard Assembly Exploded View

Assembly Groups

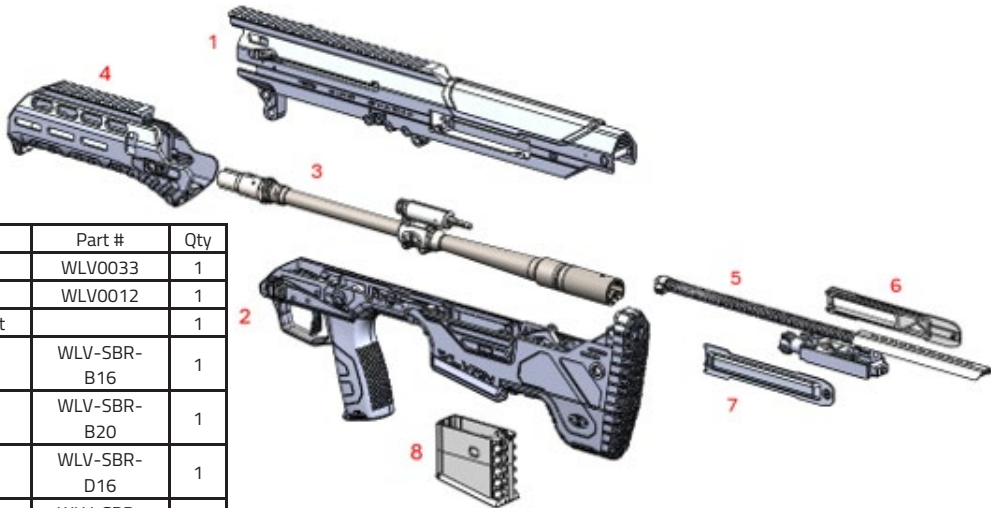
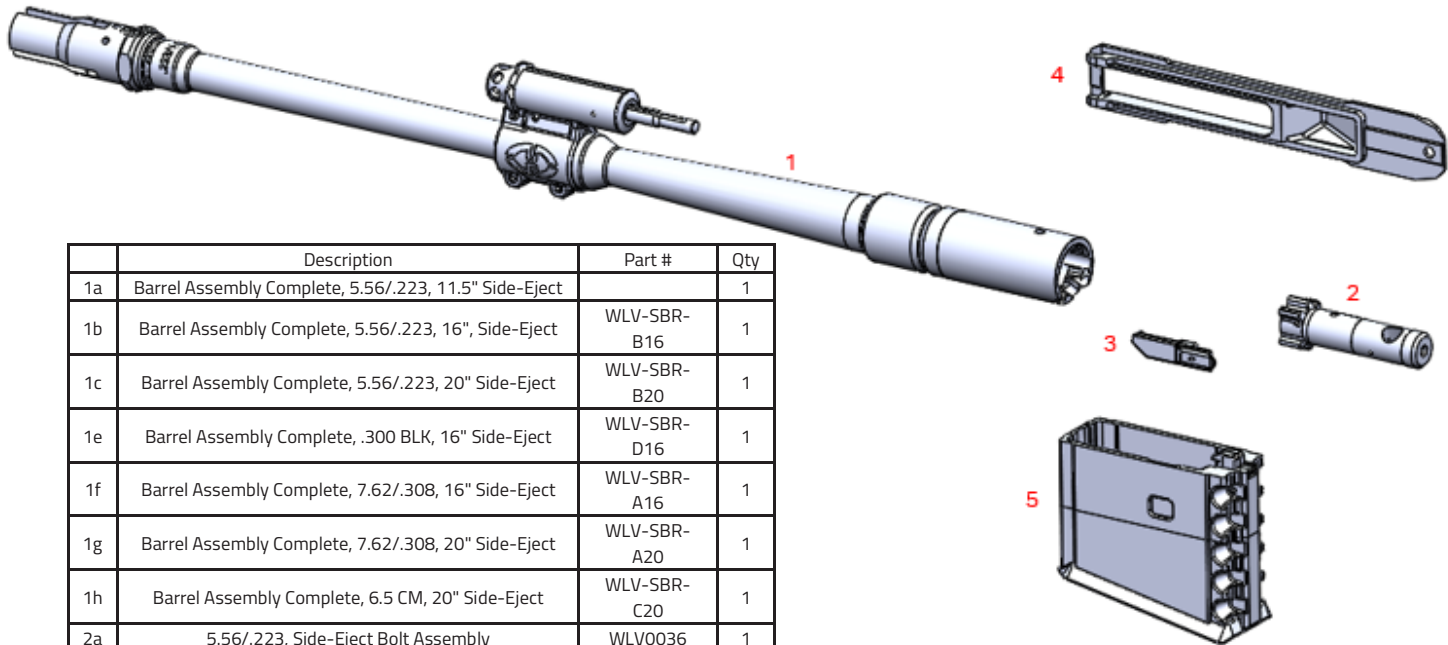


Figure 75: Rifle Exploded View

	Description	Part #	Qty
1	WLV Receiver Assembly, Semi-Auto, Side-Eject	WLV0033	1
2	Stock Assembly, Semi-Auto	WLV0012	1
3a	Barrel Assembly Complete, 5.56/.223, 11.5" Side-Eject		1
3b	Barrel Assembly Complete, 5.56/.223, 16", Side-Eject	WLV-SBR-B16	1
3c	Barrel Assembly Complete, 5.56/.223, 20" Side-Eject	WLV-SBR-B20	1
3e	Barrel Assembly Complete, .300 BLK, 16" Side-Eject	WLV-SBR-D16	1
3f	Barrel Assembly Complete, 7.62/.308, 16" Side-Eject	WLV-SBR-A16	1
3g	Barrel Assembly Complete, 7.62/.308, 20" Side-Eject	WLV-SBR-A20	1
3h	Barrel Assembly Complete, 6.5 CM, 20" Side-Eject	WLV-SBR-C20	1
4	Standard Handguard Assembly	MDR0256-B/F	1
5a	Bolt Carrier Assembly, 5.56/.223, Semi-Auto, Side-Eject		1
5b	Bolt Carrier Assembly, .300 BLK, Semi-Auto, Side-Eject		1
5c	Bolt Carrier Assembly, 7.62/.308, Semi-Auto, Side-Eject		1
6	Side-Eject Panel, 5.56	MDR0636	1
7	Side Port Cover	MDR0630	1
8	5.56 NATO/.223 REM/.300 BLK Magwell Assembly	MDR0311	1

Conversion Kit



	Description	Part #	Qty
1a	Barrel Assembly Complete, 5.56/.223, 11.5" Side-Eject		1
1b	Barrel Assembly Complete, 5.56/.223, 16", Side-Eject	WLV-SBR-B16	1
1c	Barrel Assembly Complete, 5.56/.223, 20" Side-Eject	WLV-SBR-B20	1
1e	Barrel Assembly Complete, .300 BLK, 16" Side-Eject	WLV-SBR-D16	1
1f	Barrel Assembly Complete, 7.62/.308, 16" Side-Eject	WLV-SBR-A16	1
1g	Barrel Assembly Complete, 7.62/.308, 20" Side-Eject	WLV-SBR-A20	1
1h	Barrel Assembly Complete, 6.5 CM, 20" Side-Eject	WLV-SBR-C20	1
2a	5.56/.223, Side-Eject Bolt Assembly	WLV0036	1
2c	7.62/.308, Side-Eject Bolt Assembly	WLV0043	1
3a	5.56 NATO/.223 REM/.300 BLK Mag Conversion Bar	MDR0232	1
3b	7.62 NATO/.308 WIN/6.5 CM Mag Conversion Bar	MDR0233	1
4	Side-Eject Panel, 5.56"	MDR0636	1
5	5.56 NATO/.223 REM/.300 BLK Magwell Assembly	MDR0311	1

Figure 76: Conversion Kit Exploded View

LIMITATION OF LIABILITY

The liability of Desert Tech LLC. for any and all losses and/or damage to the purchase shall in no event exceed the purchase price of the rifle. In no event shall Desert Tech LLC. be liable for incidental or consequential damage. User assumes all risks and liabilities arising from the use of this product.

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DESERT TECH WARRANTY POLICY

-Desert Tech warrants to the initial retail purchaser that for three (3) years from the date of purchase, your Desert Tech SRS A-1, SRS A-1 Covert, HTI, MDR, WLVRN, Trek-22, including the chassis, conversion kits, scope mounts, muzzle brakes and magazines will be free from manufacturing defects in workmanship and/or material.

-Desert Tech warrants to the initial retail purchaser that your Desert Tech Sound Suppressor will be free from defects in workmanship and/ or material for a LIMITED LIFETIME.

-This warranty is null and void if the firearm has been misused, damaged (by accident or otherwise), fired with hand loaded, reloaded or improper ammunition, fired with an obstruction in the barrel, damaged through failure to provide reasonable and necessary maintenance as described in the manual accompanying the firearm, or if unauthorized repair or any alteration, including of a cosmetic nature, has been performed on the firearm. This limited warranty does not apply to normal wear and tear of any parts.

-Desert Tech is not responsible for any required BATFE taxes or fees.

-Warranty does not cover third-party products. Third-party product warranties must be pursued directly through the product manufacturer.

-Product registration must be completed online by the original owner within 30 days of the purchase date in order to make a claim under this warranty. In the event of an incomplete registration, the owner must provide proof of purchase in the form of a Dealer Invoice.

-Any NFA item (I.E. Suppressor, Short-Barreled Rifle or Machine Gun) to be returned must be accompanied by a copy of its corresponding Form 3, 4, 5, or 9. The Form must be packaged inside the box with the NFA item. If the proper form is not included, the product will be returned to the sender.

-If a valid claim is made within the warranty period and is shipped to the Desert Tech service center, the product will be repaired or replaced (at our discretion) free of charge.

-Products sent back for testing that require a range time but are found to be working as intended will have a \$50.00 + ammo fee.

- To make a claim, you must first obtain a Return Merchandise Authorization number by either completing the online warranty form located at WWW.DESERTTECH.COM, calling (801)975-7272 ext. 132, or by emailing WARRANTYSERVICE@DESERTTECH.COM. Claims must be made directly through Desert Tech, not your local dealer.

-The cost of shipping to Desert Tech is the responsibility of the customer. Desert Tech will cover the cost of ground shipping back to the customer if it is a valid warranty claim. The customer is responsible for any expedited shipping charges.

-In no event shall Desert Tech be liable for any incidental or consequential damage arising from or in connection with this warranty.

-WARRANTY IS VALID IN THE UNITED STATES AND CANADA ONLY.

-This warranty gives you specific legal rights, and you may have other rights which vary from state to state. For international customers, contact your local service center.

-Shipping information:

Attn: Warranty Dept. RMA# ----
1995 W Alexander St
West Valley City, UT 84119

KEEP THIS CARD FOR YOUR RECORD

First Name _____ Last Name _____

Address _____ Phone _____

City _____ State _____ Zip _____

Model _____ Caliber _____

Date of Purchase _____ Serial Number _____

Purchased From _____

Dealers Address _____

City _____ State _____ Zip _____



WARRANTY REGISTRATION

This card must be mailed by the original owner within thirty (30) days of the purchase in order to make a claim under this warranty.

First Name _____ Last Name _____

Email _____

Address _____ Phone _____

City _____ State _____ Zip _____

Model _____ Caliber _____

Date of Purchase _____ Serial Number _____

Purchased From _____

Dealers Address _____

City _____ State _____ Zip _____

Signature of Owner _____

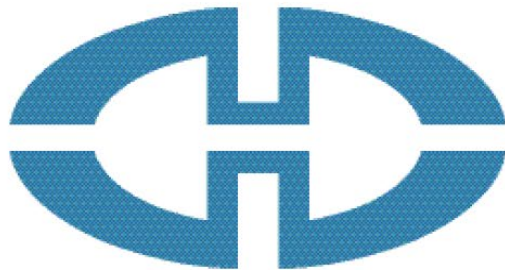
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WARRANTY CLAIM

**ANY CLAIM MADE UNDER THIS LIMITED WARRANTY
MUST BE ACCOMPANIED BY THIS CARD**

First Name _____ Last Name _____

Address _____ Phone _____

City _____ State _____ Zip _____

Model _____ Caliber _____

Date of Purchase _____ Serial Number _____

Purchased From _____

Dealers Address _____

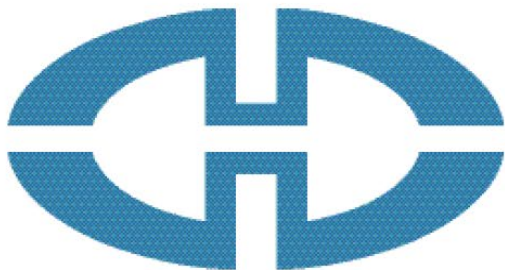
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Brief Description of Problem _____



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