SIG SAUER®



SIG MCX-SPEAR LT®

OPERATOR'S MANUAL: HANDLING & SAFETY INSTRUCTIONS

READ THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL CAREFULLY BEFORE USING THIS FIREARM.

SIG SAUER

WARNING

BEFORE OPERATING THE FIREARM, REVIEW THE SAFETY WARNINGS MANUAL THAT WAS PROVIDED WITH THE FIREARM. ALTERNATIVELY, REFER TO SIGSAUER.COM FOR THE LATEST SAFETY WARNING INFORMATION.

For more information, scan the QR code below to visit sigsauer.com.

1.0 SAFETY WARNINGS

READ THIS ENTIRE MANUAL THOROUGHLY AND CAREFULLY PRIOR TO USING THIS FIREARM. SIG SAUER INC.® firearms are designed to function reliably with proper care and knowledgeable use. Operators must understand the safe operation and use of any SIG SAUER firearm. Read and follow these instructions carefully. Do not use the firearm without understanding the instructions outlined in this manual and the safe operation of the firearm. Failure to follow the instructions outlined in this manual may result in serious injury or death to the operator and/or others. Damage to the firearm and other property may also occur.

The warnings in this Operator's Manual are extremely important. By understanding the dangers inherent in the use of any firearm, and by taking the precautions described in this manual, you can experience a high level of safety in the use of your firearm. Failure to heed any of these warnings may result in serious injury or death to you or others, as well as severe damage to the firearm or other property.

WARNINGS

WARNINGS in this manual identify a clear danger to the person performing that procedure. Warnings are identified by a red banner with the word **WARNING** in white, bold, uppercase letters and a **WARNING** icon. Failure to comply with a **WARNING** can result in serious injury or death to you or a bystander.

WARNING

CAUTIONS in this manual identify a risk of damage to the firearm being maintained. **CAUTIONS** are identified by a yellow banner with the word **CAUTION** in bold, uppercase letters.

CAUTION

2.0 HANDLING

Your firearm comes equipped with effective, well-designed safety features. However, never rely completely on any safety mechanism. Safety mechanisms are designed to augment, not replace safe handling practices. Careless and improper handling of any firearm can result in an unintentional discharge.

Proper and applied training in safe firearm handling will ensure the safe use of your firearm. Like all mechanical devices, the safety mechanisms are subject to breakage or malfunction and can be negatively affected by wear, abuse, dirt, corrosion, incorrect assembly, improper adjustment or repair, or lack of maintenance. Moreover, there is no such thing as a safety mechanism that is "childproof" or that can completely prevent accidental discharge from improper usage, carelessness, "horseplay", or abusive handling.

Always handle your firearm as though you expect the safeties not to work.

THE MOST EFFECTIVE SAFETY IS TO CARRY FIREARM WITHOUT A ROUND IN THE CHAMBER, AND TO LOAD A ROUND IN THE CHAMBER ONLY WHEN READY TO FIRE.

Do not load a cartridge into the chamber until you are ready to use the firearm. Keep the firearm on SAFE until you are actually ready to use the firearm. Always move the selector fully to its engaged position and visually check it. The selector is not on SAFE unless it is completely on SAFE.

WARNINGS

Basic Rules of Safe Firearms Handling

- ALWAYS treat every firearm as if it were loaded.
- ONLY load a round in the chamber when ready to fire.
- NEVER pull the trigger or place fingers on the trigger or in the trigger guard until ready to fire.
- NEVER allow clothing or other foreign objects to interfere or come in contact with the trigger.
- ALWAYS carry a pistol in a holster specifically designed for that pistol. It is the responsibility of the customer to ensure the holster is compatible with their specific pistol and any installed accessories.
- ALWAYS be sure the barrel is clear of any obstruction.
- ALWAYS be aware of the surroundings, and the safety of bystanders, before shooting. Know the target and what is in front of and beyond it.
- ALWAYS use clean, dry, original factory-made ammunition of the proper type and caliber for the firearm.
- ALWAYS wear ear protection and safety glasses when shooting.
- ALWAYS carry a firearm so that control of the muzzle can be maintained in the event of a fall or stumble.
- NEVER shoot at a flat surface or water.

- DO NOT leave a loaded firearm unattended. Only store a firearm that is unloaded, cleared of all ammunition, and locked in a secure place inaccessible to children or unauthorized persons.
- NEVER allow the firearm to be used by anyone who has not read and understood the Operator's Manual.
- ALWAYS unload and clear a firearm according to the instructions in the Operator's Manual before handing it to another person.
- DO NOT point any firearm, loaded or unloaded, at any undesignated or unsafe target.
- NEVER discharge a firearm near an animal unless the animal is trained to accept the noise. An animal's startled reaction could injure it or cause an accident.
- NEVER drink alcoholic beverages or use drugs before or during shooting, as vision and judgment could be seriously impaired, making firearm handling unsafe.
- ALWAYS seek a doctor's advice before using a firearm if using medication that would impair judgment or usage.

2.1 ABUSIVE HANDLING

SIG SAUER firearms incorporate effective mechanical safeties. However, like any mechanical device, exposure to abusive conditions may harm these safety mechanisms and cause them to fail to work as designed. Do not subject the SIG SAUER firearm to any abusive handling. This includes the firearm being dropped, impact to the firearm, or the firearm being struck by another object. Always maintain control of the firearm. If the firearm suffers an abusive event such as previously described, or experiences a malfunction, do not attempt to use the firearm. Keep the firearm pointed in a safe direction, unload and clear the firearm of all ammunition immediately, and have it inspected by a certified SIG SAUER armorer before using the firearm.

ALWAYS keep the firearm pointed in a safe direction. A safe direction is defined as an area where, if the firearm were to discharge, no property damage would occur, and no personal injury would result.

As previously noted, if the SIG SAUER firearm suffers an abusive event, unload it immediately and have it inspected by a certified SIG SAUER Armorer prior to using the firearm. If the firearm suffers an abusive event during a life-threatening/self-defense situation, follow the steps below immediately:

1. Pull the charging handle to the rear to eject the chambered cartridge.
2. Release the bolt forward to chamber a new cartridge and reset the trigger mechanism.
3. The firearm should now be returned to proper operational condition.

Intentional or repetitive abusive handling of any SIG SAUER firearm will void the manufacturer's warranty and could render the firearm unsafe.

3.0 ALTERATIONS AND REPLACEMENT PARTS

Do not attempt to disassemble a SIG SAUER firearm beyond the point explained in the Operator's Manual. Disassembly beyond the instructions in the Operator's Manual is restricted to a certified SIG SAUER Armorer. Failure to comply with these restrictions will void the warranty.

This SIG SAUER firearm was designed to function properly in its original condition. Unauthorized alterations can make it unsafe. Do not alter or substitute any parts in this firearm with unauthorized parts or accessories. Warnings and instructions about the use of SIG SAUER replacement parts, assemblies, and accessories may be described in instructions accompanying the specific products. Read and carefully follow those instructions. Failure to comply may result in serious injury or death to the operator and/or others. The use of aftermarket replacement parts is unauthorized and, in some instances, could alter the function of the firearm.

3.1 ACCESSORIES

It is the responsibility of the operator to ensure all accessories are compatible with the firearm and do not interfere with the safe operation and handling of the firearm.

WARNINGS

3.2 TRANSPORTING

When transporting a firearm, be sure the firearm is unloaded and cleared of all ammunition. It is the responsibility of the operator to know the laws of different states and jurisdictions when traveling with a firearm.

3.3 STORAGE

Safe and secure storage is an important responsibility. The only safe way to store a firearm is unloaded, cleared of all ammunition, and locked in a secure place inaccessible to children or unauthorized persons.

3.4 CHAMBER SAFETY FLAG

Every SIG SAUER firearm is shipped with a chamber safety flag. When installed, the chamber safety flag prevents the chambering of a round and provides a readily visible indication that the firearm's chamber is empty. The chamber safety flag is to be placed in the firearm's chamber at all times when the firearm is not in use. Many public ranges require chamber safety flags be installed when the firing line is cold.

3.5 LIABILITY

This product is classified as a FIREARM and is sold by SIG SAUER with the specific understanding that we shall not be responsible in any manner whatsoever for malfunctioning of the firearm, physical injury, or property damage resulting in whole or in part from:

- **Criminal or negligent discharge**
- **Improper, careless, or abusive handling**
- **Unauthorized modifications or parts replacement**
- **Defective, improper, hand-loaded, or reloaded ammunition**
- **Corrosion**
- **Neglect**
- **Other influences beyond our direct and immediate control**

This limitation applies regardless of whether liability is asserted on the basis of contract, negligence, or strict liability (including any failure to warn). Under no circumstance shall SIG SAUER Inc. be liable for incidental or consequential damages such as loss of use of property, commercial loss, and loss of earnings or profits.

WARNINGS

4.0 EYE AND EAR PROTECTION



Always wear safety glasses that meet the requirements of American National Standards Institute (ANSI) z87.1 or European Standard (EN)166:2001 and ear plugs and "earmuff" type protectors whenever shooting. Always make certain that persons close are similarly protected. Unprotected eyes may be injured by powder, gas, carbon residue, lubricant, metallic particles, or similar debris that may emanate occasionally from any firearm in normal use. Without ear protection, repeated exposure to shooting noise may lead to cumulative, permanent hearing loss.

5.0 AMMUNITION

Use only high-quality, original, factory-manufactured ammunition. Do not use cartridges that are dirty, wet, corroded, bent, or damaged. A damaged or deformed cartridge may impede chambering or cause the cartridge case to burst upon firing. Do not oil cartridges. Lubricant or other foreign matter on cartridges can potentially cause dangerous ammunition malfunctions. Some highly penetrative lubricants can also migrate inside cartridge cases and cause deterioration of the propellant powder; on firing, the powder might not ignite. If only the primer ignites, there is danger that the bullet may become lodged in the barrel. Only use ammunition of the caliber for which the firearm is chambered.

The proper caliber is permanently engraved on the firearm's barrel.

The use of reloaded, hand-loaded (re-manufactured), or other nonstandard ammunition voids all warranties. Reloading is a science, and improperly loaded ammunition can cause severe damage to the firearm and may result in serious injury or death to the operator and/or others.

Always use ammunition that complies with the industry performance standards established by the Sporting Arms and Ammunition Manufacturers' Institute, Inc. (SAAMI) or ammunition manufactured to U.S. military specifications.

SIG SAUER specifically disclaims responsibility for any damage or injury whatsoever occurring in connection with, or as a result of, the use of any SIG SAUER firearm of faulty, nonstandard, hand-loaded (reloaded) ammunition, or cartridges other than those for which the firearm was originally chambered. Excessive pressure inside the chamber or barrel while firing a firearm may cause severe damage and serious injury or death to the shooter or to others may occur.

WARNING: CANCER AND REPRODUCTIVE HARM—www.P65warnings.ca.gov



DISCHARGING FIREARMS IN POORLY VENTILATED AREAS, CLEANING FIREARMS, OR HANDLING AMMUNITION MAY RESULT IN EXPOSURE TO LEAD AND OTHER SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS, REPRODUCTIVE HARM, AND OTHER SERIOUS PHYSICAL INJURY. MAINTAIN ADEQUATE VENTILATION AT ALL TIMES. WASH HANDS THOROUGHLY AFTER EXPOSURE. SHOOTING OR CLEANING FIREARMS MAY EXPOSE OPERATORS TO LEAD.

WARNINGS

6.0 LOCKING DEVICES



All SIG SAUER firearms are shipped with a key-operated locking device or a lockable case.

Never install the locking device inside the trigger guard or in any way that makes it possible to pull the trigger! Do not leave the keys in the lock.

All firearm owners are responsible for secure storage of any firearm.

ALWAYS refer to the locking device's manufacturer directions for installation and removal of the device.



7.0 SAFETY INFORMATION

This operator's manual is designed to assist you in learning how to use and care for your SIG SAUER® firearm properly.

Only when you are certain that you fully understand this manual and can properly carry out its instructions should you practice loading and firing your firearm with live ammunition. Having a firearm in your possession is a full-time job; you cannot guess and you cannot forget. You must know how to use your firearm safely.

If you have any doubts about your ability to handle or use this firearm safely, you should seek supervised instruction.

The SIG SAUER Academy provides all levels of firearms safety and skill training, from beginner to expert.

For more information contact:

SIG SAUER ACADEMY

sigsaueracademy.com • (603) 610-3400
Epping, New Hampshire

SAFETY MUST BE THE FIRST AND CONSTANT CONSIDERATION OF EVERY PERSON WHO HANDLES FIREARMS AND AMMUNITION.

For more information about safety, responsible firearms ownership, and shooting sports, contact:
National Rifle Association (NRA) of America
11250 Waples Mill Road, Fairfax, VA 22030-7400 • 1-800-672-3888
nra.com

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8.0 MECHANICAL CHARACTERISTICS AND RIFLE THEORY

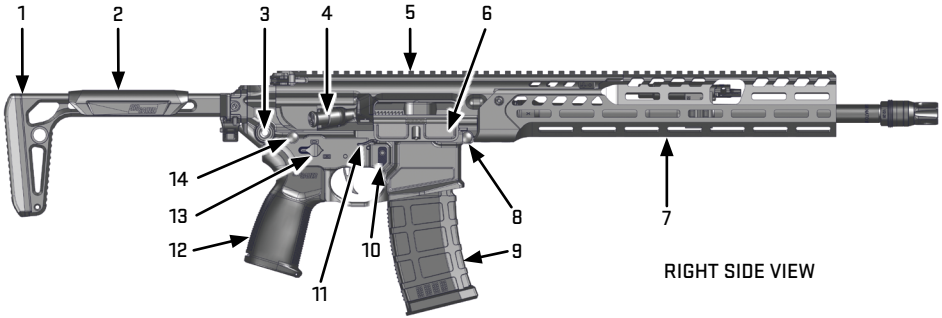
8.1 RIFLE DESCRIPTION

The SIG MCX-SPEAR LT is a magazine-fed, gas-operated rifle available in 5.56x45 mm NATO, 7.62x35 mm (.300 AAC Blackout), and 7.62x39 mm calibers. The SIG MCX-SPEAR LT fires from a rotating locking closed bolt. The SIG MCX-SPEAR LT is available in semi-automatic and select fire rifle variants, as well as a pistol version. The short stroke piston operating system enables optimum function under adverse conditions.

The MCX-SPEAR LT is fitted with an aluminum handguard which provides a MIL-STD 1913 rail at the 12 o'clock position. There are multiple M-LOK™ mounting interfaces for accessories at the 3, 6, and 9 o'clock positions and has several sling attachment points. SIG offers the MCX-SPEAR LT with a lightweight folding stock and the MCX-SPEAR LT pistol variants.

Scan the QR code to visit sigsauer.com. There you will find additional information about SIG SAUER products, SIG SAUER Academy and Experience Center, special programs, and additional support.

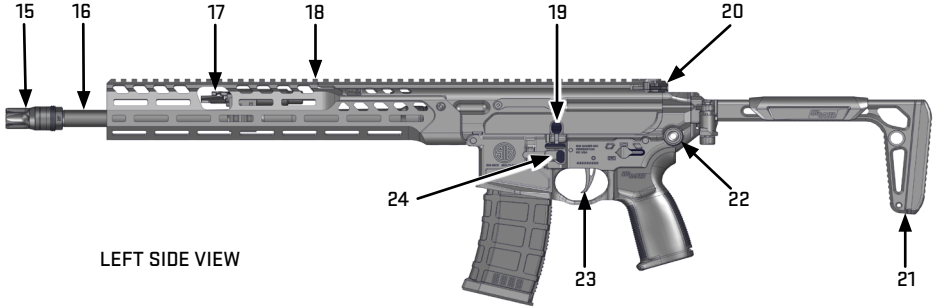
8.2 CONTROLS AND FEATURES



RIGHT SIDE VIEW

NUMBER	NOMENCLATURE
1	Buttstock
2	Cheek Rest
3	QD Sling Cup
4	Deflector with Forward Assist
5	Upper Receiver
6	Ejection Port Cover
7	M-LOK Handguard

NUMBER	NOMENCLATURE
8	Pivot Pin
9	Magazine
10	Ambidextrous Magazine Catch
11	Ambidextrous Bolt Catch
12	Grip
13	Ambidextrous Selector
14	Takedown Pin



LEFT SIDE VIEW

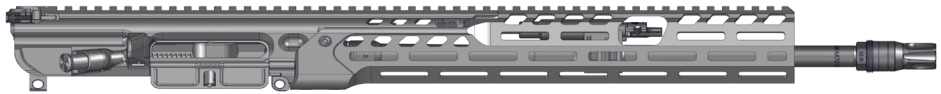
NUMBER	NOMENCLATURE
15	Muzzle Device
16	Barrel
17	Gas Valve
18	MIL-STD 1913 Rail
19	Ambidextrous Bolt Catch

NUMBER	NOMENCLATURE
20	Ambidextrous Charging Handle
21	Buttstock
22	QD Sling Cup
23	Trigger
24	Ambidextrous Magazine Catch

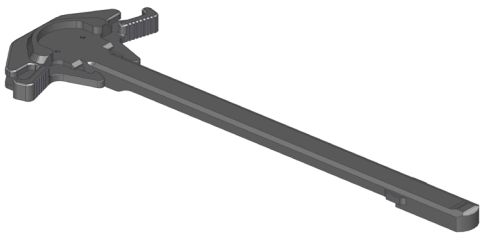
8.3 GROUPS AND ASSEMBLIES

UPPER RECEIVER GROUP

The upper receiver group consists of the following:



A. Ambidextrous Charging Handle Assembly



B. Operating Group

The SIG MCX-SPEAR LT uses a unique operating system that eliminates the traditional buffer and receiver extension found in M16/M4 platforms. This allows for the use of folding and collapsible stocks.



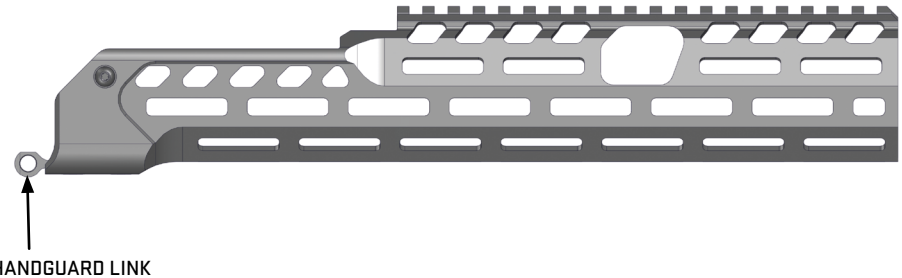
C. Barrel Assembly

The SIG MCX-SPEAR LT barrel assembly includes the barrel extension, barrel, gas block, gas valve, gas piston, and the flash hider base. The image below depicts a 16-inch 5.56 NATO barrel assembly. Other calibers and configurations may have parts that are different in appearance.



D. Handguard Assembly

The SIG MCX-SPEAR LT handguard assembly is composed of the handguard and the handguard link. The handguard features multiple M-LOK points for mounting M-LOK accessories.



LOWER RECEIVER GROUP

The lower receiver group consists of the following assemblies: lower receiver assembly with fire control components, buttstock assembly, cheek rest, and grip assembly.

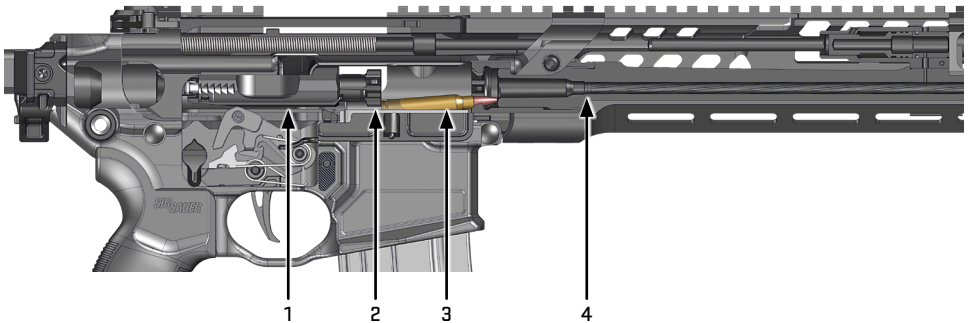


8.4 CYCLE OF FUNCTION

There are eight steps in the cycle of function of the SIG MCX-SPEAR LT that begin after a loaded magazine is inserted into the firearm.

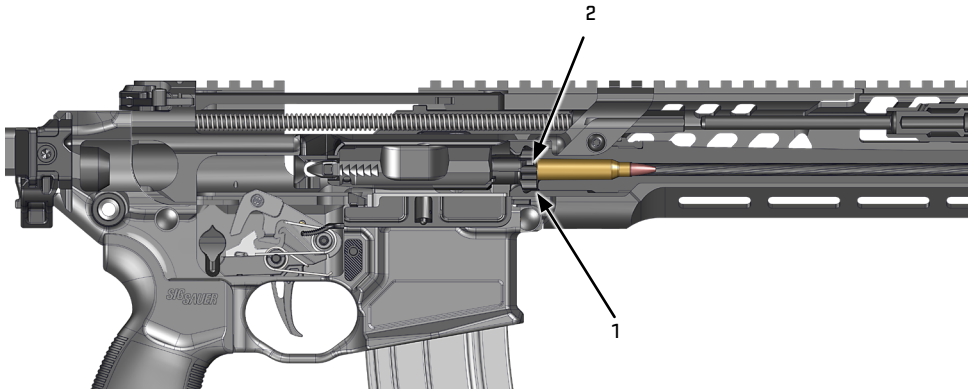
Feeding:

As the bolt carrier (1) is released from its rearward position, it moves forward and the lower lugs of the bolt (2) catch the rear of the cartridge (3) in the magazine. The cartridge is stripped from the magazine and moves toward the chamber (4).



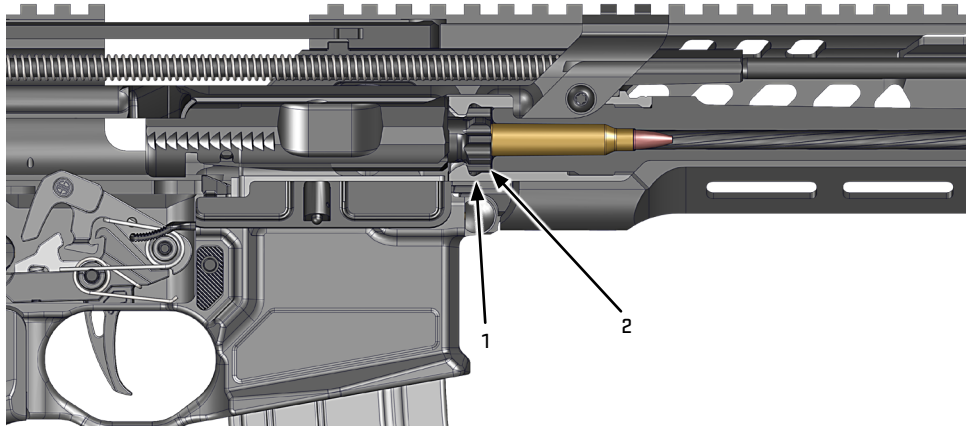
Chambering:

The cartridge is guided into the chamber as the bolt-locking lugs move into the barrel extension (1). The ejector is then compressed against the left side of the cartridge head. The extractor (2) snaps over the rim of the cartridge case.



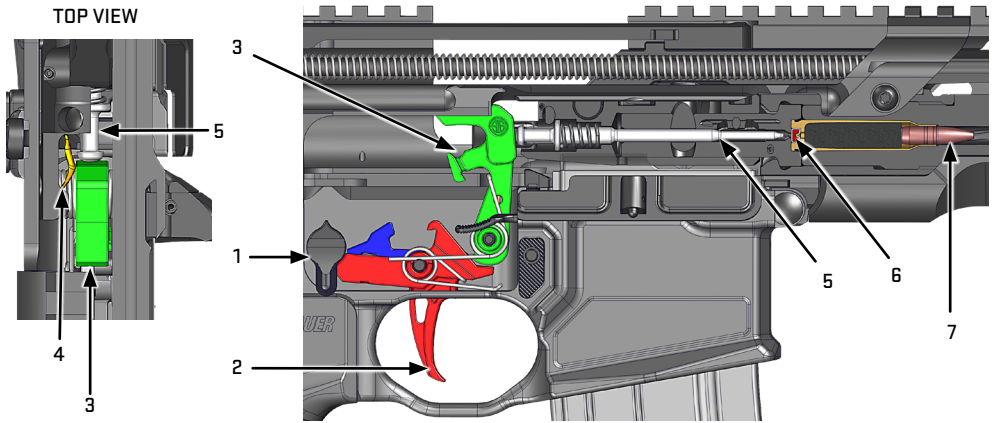
Locking:

The forward movement of the bolt and the cartridge is stopped by the chamber. As the carrier goes through the last portion of the movement, the bolt is rotated counterclockwise through the action of the cam pin in the bolt and bolt carrier. The bolt lugs (1) engage the barrel extension (2) to lock the bolt into the barrel extension.



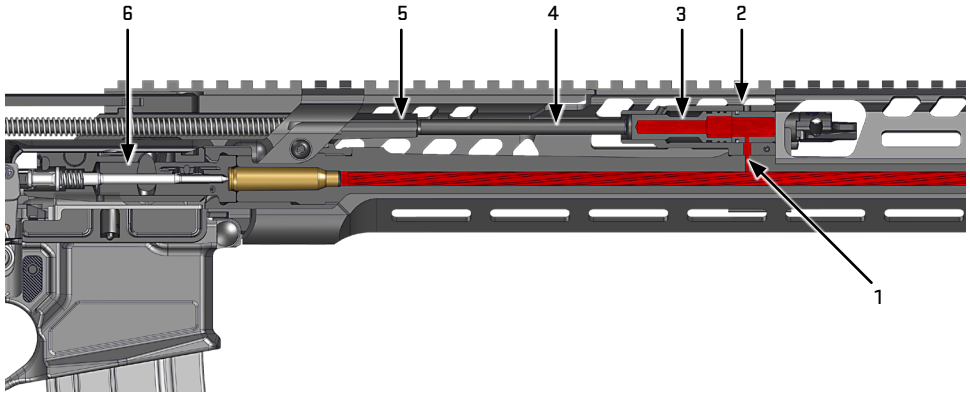
Firing:

The selector lever (1) is set to SEMI. The trigger (2) is pulled. The hammer (3) disengages the firing pin lock (4) and hits the firing pin (5). The firing pin then strikes the cartridge primer (6), causing detonation and accelerating the projectile (7) down the barrel.

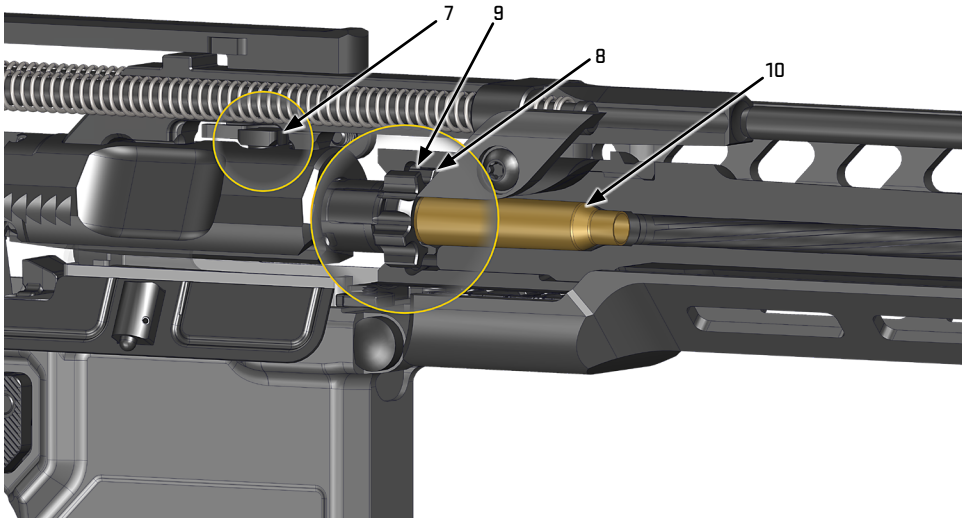


Unlocking:

As the projectile passes the gas port (1) in the barrel, a small amount of gas is bled off. This gas travels up into the gas block (2), through the gas valve (3) where it drives the piston (4) and op rod (5) to the rear. In turn, the op rod pushes on the bolt carrier (6). As the bolt carrier moves rearward, it shifts the cam pin (7), rotating the bolt to the right and unlocking the bolt lugs (8) from the barrel extension (9). The bolt slightly twists the spent case (10), aiding in release from the chamber.

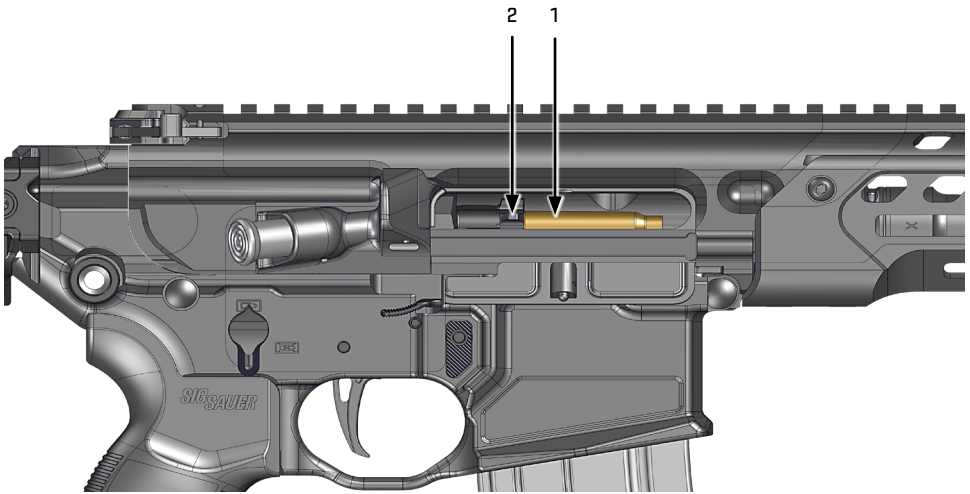


Unlocking Continued:



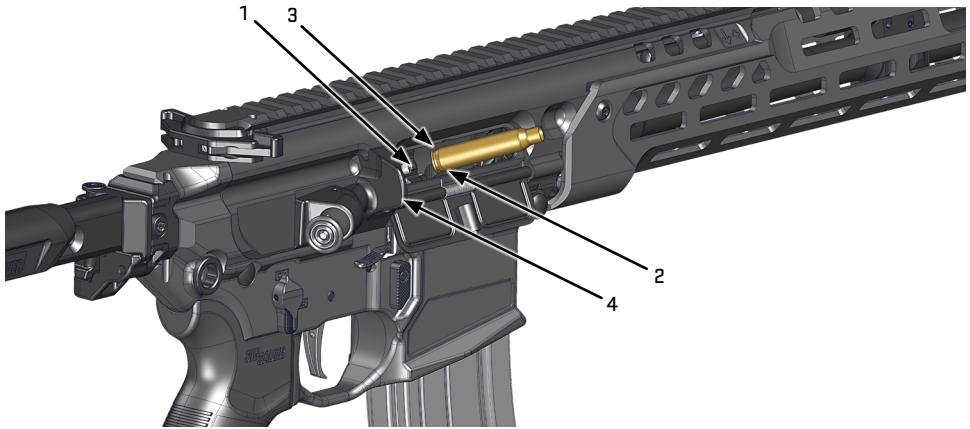
Extraction:

As the carriage assembly continues rearward, the spent case (1) is pulled from the chamber by the extractor (2).



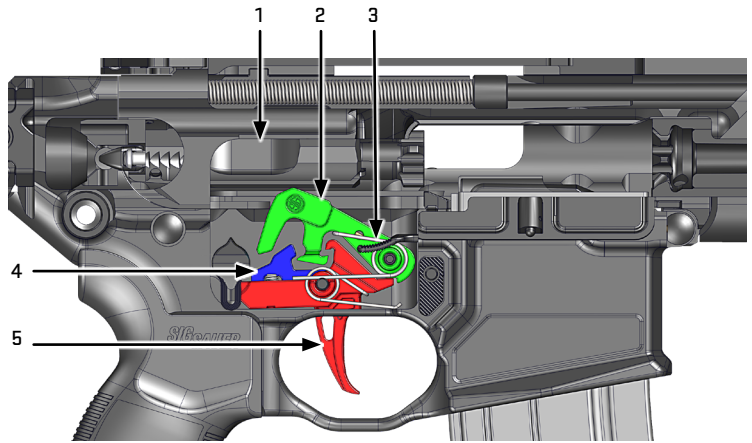
Ejection:

The extractor (1) continues to grip the rim of the spent case (2) on the right side. The ejector applies forward pressure to the left side of the case. As the case clears the chamber, it is flipped out through the ejector port (3) on the right side of the receiver. The ejection port deflector (4) deflects the spent case and away from the operator's face if firing left-handed.



Cocking:

The rearward movement of the bolt carrier (1) overrides the hammer (2), forcing it down into the receiver and compressing the hammer spring (3). The hammer is now held in the cocked position by the disconnector (4) until the trigger (5) is released by either the shooter (semi-auto) or the auto sear (auto), depending on the position of the fire control selector.



9.0 OPERATING THE SIG MCX-SPEAR LT

9.1 PREPARATION BEFORE USING THE FIREARM

WARNING

PRIOR TO PERFORMING ANY MAINTENANCE ON THE FIREARM, READ AND UNDERSTAND THE OPERATOR'S MANUAL. ENSURE THAT THE FIREARM IS UNLOADED, CLEARED, AND THE MAGAZINE IS REMOVED. SAFETY GLASSES SHOULD BE WORN WHENEVER DISASSEMBLING, CLEANING, INSPECTING, OR ASSEMBLING A FIREARM.

Prior to using the firearm, the operator must read, understand, and follow all safety warnings in the Safety Warnings Manual included with the firearm.

- Field strip the firearm. *See 10.1 Field Strip the SIG MCX-SPEAR LT on page 57.*
- Clean any fouling that might have occurred during factory testing. *See Cleaning on page 68.*
- Inspect, lubricate, and reassemble the firearm. *See 10.3 Assembly on page 77.*
- After reassembly and prior to firing the rifle, conduct a function check. *See 11.0 Function Check on page 85.*

Any maintenance beyond the user level described in this manual must be performed by a certified SIG SAUER Armorer specifically trained on the maintenance of the MCX-SPEAR LT.

9.2 SAFETY SELECTOR

The SIG MCX-SPEAR LT features an ambidextrous safety selector. Rotating either safety selector 90 degrees changes the firing mode.

- The SAFE position prevents the firearm from firing by blocking the action of the trigger. The safety selector can only be rotated to SAFE when the hammer is cocked.
- The SEMI position is for the semi-automatic mode and allows the firing of one round each time the trigger is pressed rearward.
- The AUTO position, if equipped, allows for a continuous rate of fire until the trigger is released by the operator or the magazine is depleted of ammunition.



SAFE



SEMI



AUTO

9.3 UNLOAD AND CLEAR THE RIFLE

WARNING UNLOAD/CLEAR

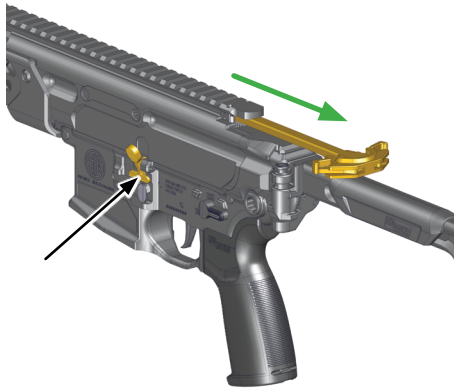
PRIOR TO PERFORMING ANY MAINTENANCE ON THE FIREARM, READ AND UNDERSTAND THE OPERATOR'S MANUAL. ENSURE THAT THE FIREARM IS UNLOADED, CLEARED, AND THE MAGAZINE IS REMOVED. SAFETY GLASSES SHOULD BE WORN WHENEVER DISASSEMBLING, CLEANING, INSPECTING, OR ASSEMBLING A FIREARM.

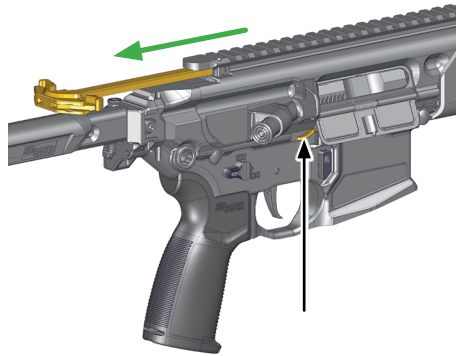
1. Ensure the safety selector lever is rotated to SAFE and the muzzle of the rifle is pointed in a safe direction at all times while unloading and clearing the firearm.
2. Press the magazine catch on either side to remove the magazine from the rifle.





3. Fully retract the charging handle and lock the operating group to the rear by either:
   a. Pressing and holding the lower section of the bolt catch lever on the left side.
   b. Pressing up on the right side of the bolt catch lever.





4. Watch the ejection port on the right side for the ejection of a cartridge case or a live cartridge.



5. Ensure the operating group remains locked to the rear and return the charging handle to its forward and locked position.

WARNING INSPECTION

THE OPERATING GROUP IS UNDER SPRING TENSION AND WILL SPRING FORWARD IF THE BOLT CATCH IS PRESSED. WHILE THE BOLT CATCH IS LOCKED IN PLACE. DO NOT ALLOW THE BOLT CATCH TO BE RELEASED WHILE INSPECTING THE RIFLE. AFTER FIRING, THE CHAMBER OF THE RIFLE COULD POTENTIALLY BE HOT. WHEN PHYSICALLY INSPECTING THE CHAMBER, USE A PEN OR SIMILAR OBJECT IF THE CHAMBER IS HOT. FAILURE TO COMPLY MAY RESULT IN INJURY.

6. Visually and physically inspect the chamber, bolt face, and magazine well to ensure that the rifle is clear of live rounds, spent cartridges, and debris.
7. If passing the rifle to another person, ensure the safety selector lever is on SAFE and the bolt is locked to the rear. Allow them to inspect the chamber before handing over the firearm.

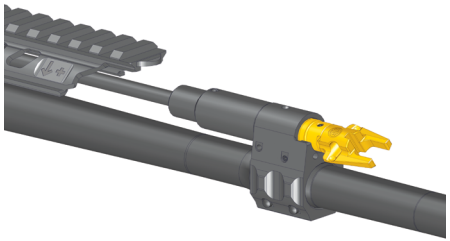


9.4 TWO-POSITION GAS VALVE

The SIG MCX-SPEAR LT is equipped with a two-position gas valve. This assembly regulates the rifle's cycling by metering the amount of gas directed to the operating system. The valve provides settings for normal and adverse or suppressed and unsuppressed depending on caliber as indicated in the table on the following page. The adjustment is made by rotating the lever either to the left or right.

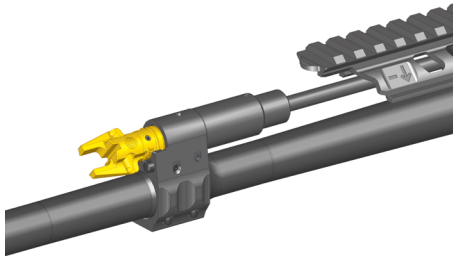
CAUTION

300 BLK MODELS ARE NOT DESIGNED TO FUNCTION RELIABLY WITH SUB-SONIC AMMUNITION WHEN FIRED WITHOUT A SUPPRESSOR. IT IS POSSIBLE FOR SOME MODELS TO FUNCTION WITH SUB-SONIC AMMUNITION, HOWEVER THE POTENTIAL FOR STOPPAGES IN THE CYCLE OF OPERATION IS SIGNIFICANTLY INCREASED. FIRING THE RIFLE WITH THE GAS VALVE IN THE (+) POSITION WILL NOT GUARANTEE RELIABLE FUNCTION. THIS SETTING MAY INCREASE THE BOLT CARRIER SPEED RESULTING IN REDUCED PARTS LIFE, FAILURES TO FEED, AND FAILURES TO EJECT.



+

(TURNED TOWARD OPERATOR'S RIGHT SIDE)



-

(TURNED TOWARD OPERATOR'S LEFT SIDE)

GAS VALVE SETTINGS: 5.56 NATO AND 7.62X39MM	
+ SETTING (RIGHT SIDE DOWN)	**– SETTING (LEFT SIDE DOWN)**
ADVERSE CONDITIONS AND LOW FUNCTION AMMUNITION	STANDARD AMMUNITION SUPPRESSED AND UNSUPPRESSED
GAS VALVE SETTINGS: .300BLK	
SUBSONIC AMMUNITION SUPPRESSED AND ADVERSE CONDITIONS	**SUPERSONIC AMMUNITION SUPPRESSED AND UNSUPPRESSED**



9.5 ADVERSE/SPECIAL ENVIRONMENTAL CONDITIONS

Arctic (Extreme Cold/Sub Freezing)

- When operating in sub-freezing temperatures, use a lubricant designed for this climate. Do not use CLP in temperatures below -10°F (-23°C) as it can prevent the firearm from firing. Ensure all existing lubricants are thoroughly removed prior to applying cold-weather lubricant.
- Remove O-ring from the extractor spring when in temperatures below -20°F (-29°C).
- Avoid bringing firearm into heated shelters or buildings to prevent condensation from forming on moving parts which will freeze when the firearm is brought back outdoors.
- If you must bring the firearm indoors, allow it to warm to room temperature and then disassemble and clean thoroughly. Ensure that all moisture is removed from the firearm and relubricate the firearm.
- When operating in snowy environments, conduct frequent inspections of the firearm to ensure that snow has not gotten into operating parts. Work the action periodically to ensure that it is not frozen. Use muzzle covers if available.
- If the operating group freezes from snow or moisture, DO NOT discharge the firearm to free the carriage. Warm the firearm using body heat or bring indoors until free movement is restored, and then clean and re-lubricate the firearm.

Desert (Hot/Dry)

- Apply light lubrication to internal metal-on-metal moving parts only. If available, use dry graphite lubricant.
- Because of blowing dust and sand, increase frequency of inspection and cleaning of firearm. Pay particular attention to the bolt assembly.
- Use muzzle covers if available.
- Unload and clean ammunition and inside of magazines daily. Do not lubricate magazine.
- Cover the firearm and close the ejection port when not in use.

Jungle (Hot/Humid)

- Inspect and clean the firearm frequently to prevent rust and corrosion.
- Apply a thin coat of lubricant on steel parts frequently.
- Inspect all surfaces of the operating group, upper receiver, chamber, and barrel extension for corrosion.
- Inspect the lower receiver and fire control components for corrosion.
- Inspect and lubricate the spring-loaded detents of the firearm.
- Unload the magazine, clean ammunition, and inspect the inside of magazines daily for corrosion.
- Wipe the ammunition dry before reloading the magazine.



Heavy Rain, Freshwater Exposure (Any Conditions)

- Always attempt to keep rifle dry. When rifle is exposed to water, dry it as soon as possible.
- Drain water from barrel before firing
- Appy CLP/LSA to metal inernal and external surfaces of the rifle before and after exposure.
- Keep ammunition dry, and do not lubricate ammunition.

Saltwater (Any Conditions)

- If rifle is submerged in saltwater, rinse entire rifle in fresh water as soon as possible, dry the rifle, and then lubricate.
- Notify an armorer of exposure to saltwater.

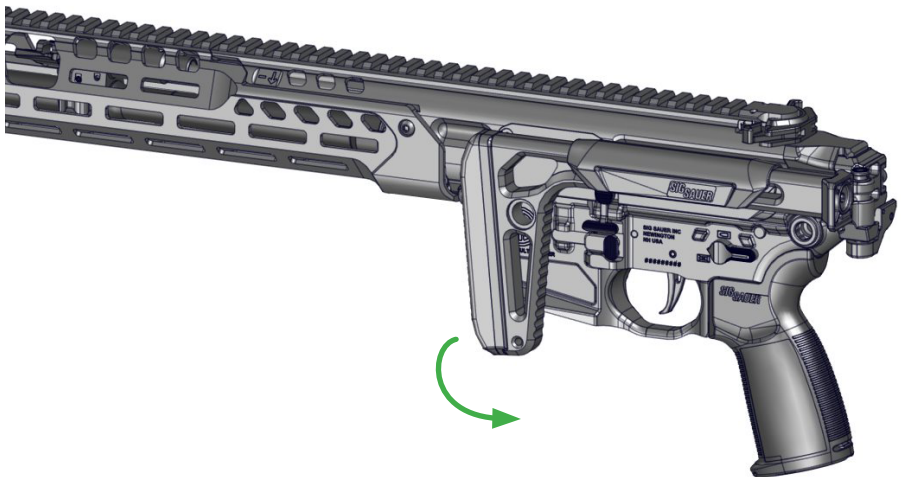
9.6 FOLDING STOCK

The MCX-SPEAR LT rifle utilizes a MIL-STD 1913 interface to accommodate multiple stock options.
To fold the stock:

a. Push lock button and lift up on the stock to disengage the locking mechanism and rotate stock.



b. To deploy the stock, pull the stock outward and rotate until it locks in place.



9.7 LOADING/RELOADING

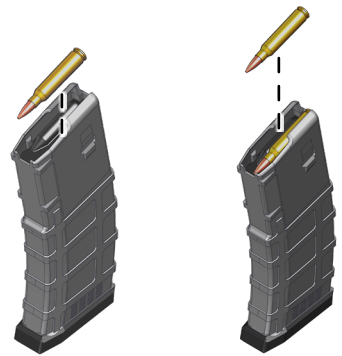
LOADING THE MAGAZINE

CAUTION

ENSURE THE MAGAZINE IS THE PROPER TYPE AND CALIBER FOR THE RIFLE.

NOTE: Do not overload the magazine.

1. Place a cartridge between the feed lips and press down. Ensure the projectile is facing the front of the magazine and the cartridge is fully seated to the rear.
2. Place the next cartridge between the previous one and the feed lips then press down.
3. Repeat until the magazine is full or the desired number of rounds has been loaded.





LOADING RIFLE (BOLT LOCKED TO THE REAR)

WARNING BARREL

BEFORE LOADING, ALWAYS CLEAN ALL GREASE AND OIL FROM THE BORE AND CHAMBER AND VERIFY THAT NO OBSTRUCTION IS IN THE BARREL. ANY FOREIGN MATTER IN THE BARREL COULD RESULT IN A BULGED OR BURST BARREL OR OTHER DAMAGE TO THE FIREARM AND COULD CAUSE SERIOUS INJURY.

1. Ensure the safety selector is rotated to SAFE and the muzzle is pointed in a safe direction.
2. Lock the bolt to the rear.
3. Return the charging handle to the forward locked position.
4. Visually and physically inspect the chamber, bolt face, and magazine well to ensure it is clear of ammunition.
5. Insert a loaded magazine until it engages with the magazine catch. There should be a light click. Pull down to ensure the magazine is seated properly.
6. Press the top of the left side bolt catch inward or press down on the right side bolt catch to release the operating group.

WARNING LOADED FIREARM

THE RIFLE IS NOW LOADED AND READY TO FIRE

7. If the firearm is not to be fired immediately, close the ejection port cover.

LOADING RIFLE (BOLT FORWARD)

1. Ensure the safety selector is rotated to SAFE.
2. Insert a loaded magazine until it engages the magazine catch. There should be a light click. Pull down to ensure the magazine is locked in place.
3. Pull the charging handle completely to the rear.
4. Release the charging handle. Allow it to go forward under full spring pressure. Do not ride the charging handle forward. Failure to do so may cause a stoppage.

RELOADING RIFLE (EXPENDED MAGAZINE, BOLT LOCKED TO THE REAR)

1. Rotate the safety selector lever to SAFE.
2. Press the magazine catch from either the left or right side. The empty magazine should fall from the magazine well.
3. Insert a loaded magazine until it engages the magazine catch. There should be a light click. Pull down to ensure the magazine is locked in place.
4. Press the top of the left side bolt catch inward or press down on the right side bolt catch to release the operating group. The bolt will strip a live cartridge from the magazine and chamber it.



RELOADING RIFLE (PARTIAL MAGAZINE, BOLT FORWARD, ROUND CHAMBERED)

1. Rotate the fire control selector to SAFE.
2. Grasp the magazine with the support hand and press the magazine catch from either the left or right side.
3. Remove the partially loaded magazine.
4. Insert a loaded magazine until it engages the magazine catch. There should be a light click. Pull down to ensure the magazine is seated properly.

9.8 FIRING

WARNING LOADED FIREARM

KEEP FINGERS OUT OF TRIGGER GUARD AND OFF THE TRIGGER UNTIL READY TO FIRE. ALWAYS ENSURE FIREARM IS POINTED IN A SAFE DIRECTION. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING BARREL

BEFORE LOADING, ALWAYS CLEAN ALL GREASE AND OIL FROM THE BORE AND CHAMBER AND VERIFY THAT NO OBSTRUCTION IS IN THE BARREL. ANY FOREIGN MATTER IN THE BARREL COULD RESULT IN A BULGED OR BURST BARREL OR OTHER DAMAGE TO THE FIREARM AND COULD CAUSE SERIOUS INJURY.

WARNING SAFETY

THE BOLT OPENS AND SHUTS QUICKLY WHILE FIRING. KEEP FACE AND HANDS AWAY FROM IT. HOT BRASS AND POWDER GAS IS EJECTED QUICKLY AND CAN BURN THE USER OR OTHERS NEARBY. ALWAYS WEAR SAFETY GLASSES AND HEARING PROTECTION TO PREVENT INJURY. NEVER ALLOW OTHERS TO STAND WHERE THEY MAY BE STRUCK BY AN EJECTED CARTIDGE CASE.

1. Ensure that the safety selector is rotated to SAFE.
2. Adjust the buttstock if not already done. *See 9.6 Folding STOCK on page 49.*
3. Keep the rifle aimed at the target or downrange.
4. Follow steps 1 through 6 of *Loading Rifle (Bolt Locked to the Rear) on page 52.*
5. Rotate the safety selector lever to FIRE.
6. Pull the trigger to fire.
7. To fire another round, release the trigger. After the trigger resets, pull to fire again.
8. When finished, place on SAFE, and unload and clear the rifle. *See 9.3 Unload and Clear the Rifle on page 40.*

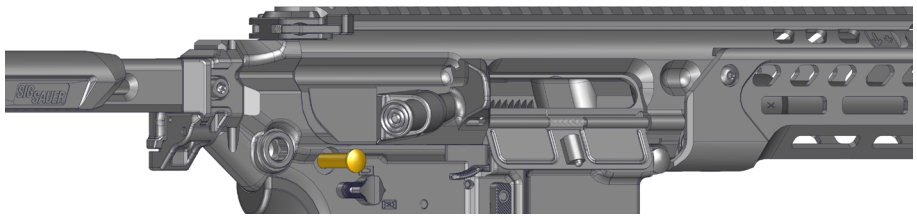
10.0 OPERATOR LEVEL AUTHORIZED PREVENTIVE MAINTENANCE

10.1 FIELD STRIP THE SIG MCX-SPEAR LT

WARNING UNLOAD/CLEAR

PRIOR TO PERFORMING ANY MAINTENANCE ON THE FIREARM, READ AND UNDERSTAND THE OPERATOR'S MANUAL. ENSURE THAT THE FIREARM IS UNLOADED, CLEARED, AND THE MAGAZINE IS REMOVED. SAFETY GLASSES SHOULD BE WORN WHENEVER DISASSEMBLING, CLEANING, INSPECTING, OR ASSEMBLING A FIREARM.

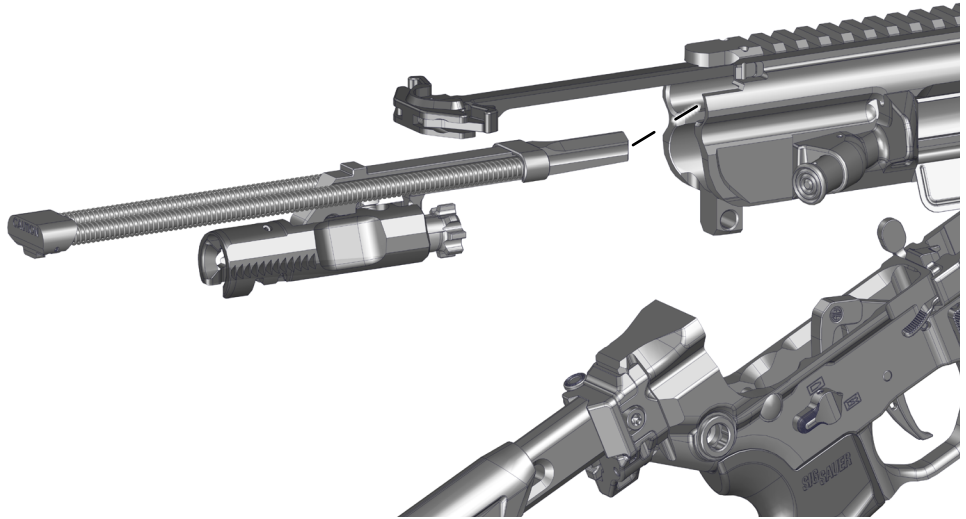
1. Unload and clear the rifle. *See 9.3 Unload and Clear the Rifle on page 40.*
2. Press either side of the bolt catch to release the operating group forward.
3. Push out the takedown pin from left to right.



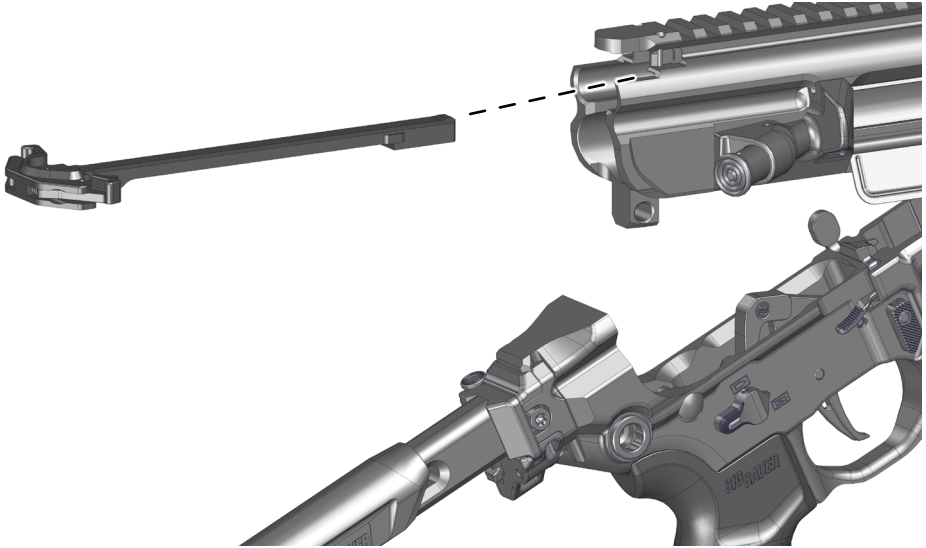
4. Pivot the receivers apart.
5. Pull the charging handle out until it stops.



6. Hold the recoil spring plate and pull the operating group from the upper receiver. It will come out as a complete unit.



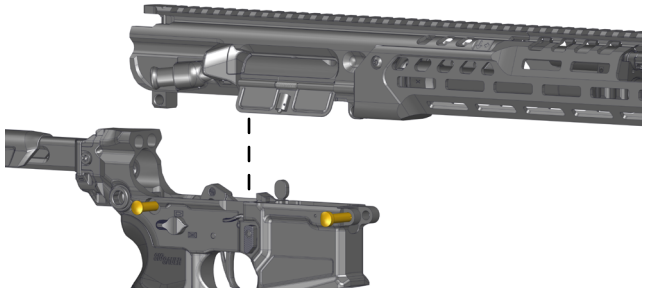
7. Remove the charging handle.



8. Close the receivers and push out the pivot pin from left to right.



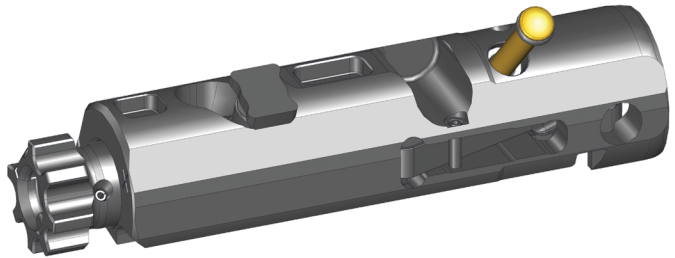
9. Separate the receivers.



10. Rotate the recoil assembly upward and slide it out from the left side of the bolt carrier.

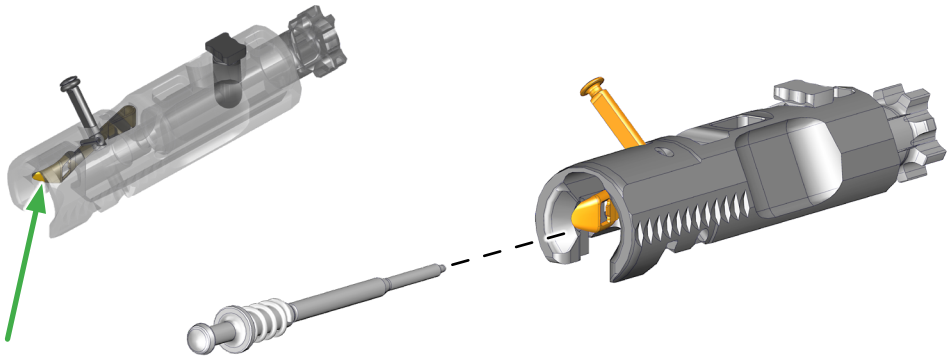


11. Pull the firing pin retaining pin out until it stops.

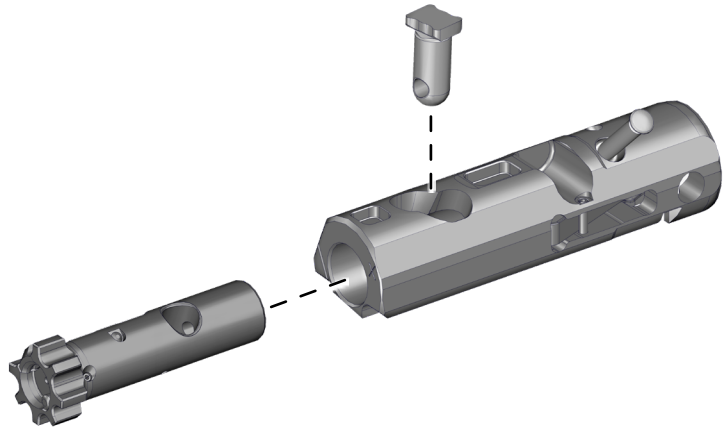


NOTE: Using a 1/16 in pin punch can assist in the removal of the firing pin.

12. Press the firing pin lock outward past the large flange of firing pin. Remove the firing pin and spring out of the carrier.



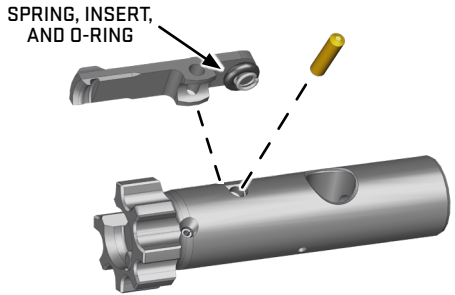
13. Pull the cam pin from the bolt and remove the bolt from the front of the carrier.



CAUTION

DO NOT REMOVE SPRING OR INSERT UNLESS DAMAGED. ONLY REMOVE O-RING IF OPERATING BELOW -20°F (-29°C).

14. Push the extractor pin out and remove the extractor from the bolt.



CAUTION

THIS LEVEL OF DISASSEMBLY IS SUFFICIENT TO ALLOW FOR A THOROUGH CLEANING AFTER FIRING. FURTHER DISASSEMBLY AT THE OPERATOR LEVEL IS NOT AUTHORIZED.

10.2 CLEANING AND LUBRICATION

WARNING CLEANING

READ AND FOLLOW THE MANUFACTURER'S WARNINGS BEFORE USING SOLVENTS OR CLEANERS. USE IN A WELL-VENTILATED AREA. WEAR EYE PROTECTION.

- Always ensure the firearm is unloaded and cleared of all ammunition.
- Use only cleaning and lubrication products specifically designed for use on firearms.
- Do not use wire brushes on aluminum surfaces such as the receiver; this can scratch the finish.
- Follow all manufacturer instructions and cautions when using cleaning and lubricating products.
- Wherever the term "CLP" (Cleaner-Lubricant-Preservative) or the word "lubrication" appear, they are used to mean any cleaner, lubricant, and preservative designed for use on a firearm. SIG SAUER recommends only using products designed for firearms.

CAUTION

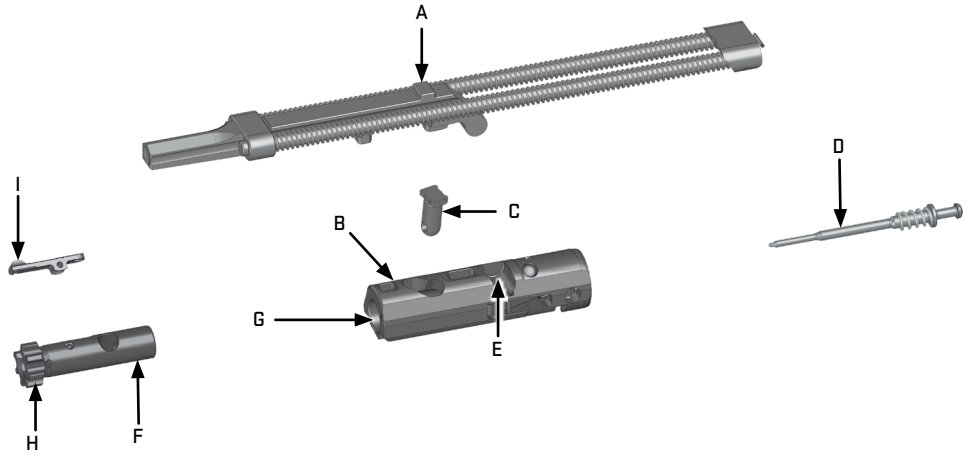
USE A WELL-FITTING BORE GUIDE, DESIGNED TO ALIGN THE CLEANING ROD WITH THE BORE, TO PREVENT IT FROM DIRECTLY CONTACTING THE CHAMBER AND / OR RIFLING THROAT. FAILURE TO COMPLY CAN DAMAGE THE BORE AND CHAMBER.

CLEANING

Cleaning The Operating System

A. Clean the recoil assembly.
B. Wipe down the bolt carrier body.
C. Clean the cam pin of carbon buildup.
D. Wipe down the firing pin and spring.
E. Clean the recoil assembly interface of the bolt carrier.
F. Clean the bolt body with solvent.
G. Clean the bolt channel of any carbon buildup.
H. Clean any carbon from bolt lugs.
I. Clean the hood and hook of extractor.

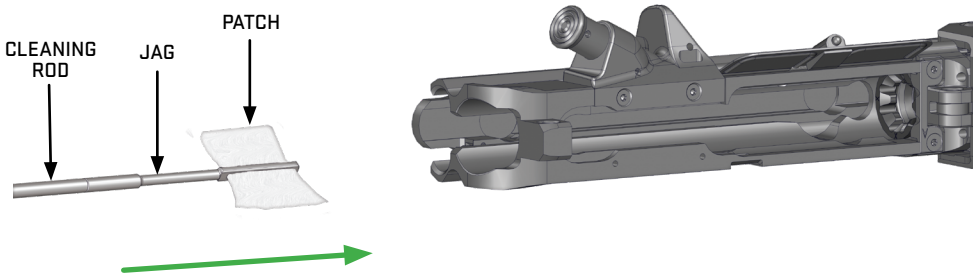
NOTE: Under normal operating conditions, the MCX-SPEAR LT bolt does not require as much cleaning as an M4 bolt. However, when used with a suppressor attached, the back pressure will produce more residue, which will require more frequent cleaning.



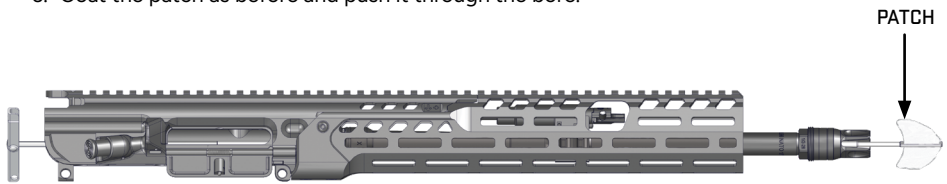
Cleaning The Bore And Chamber

Do not run patches through the bore with a suppressor attached.

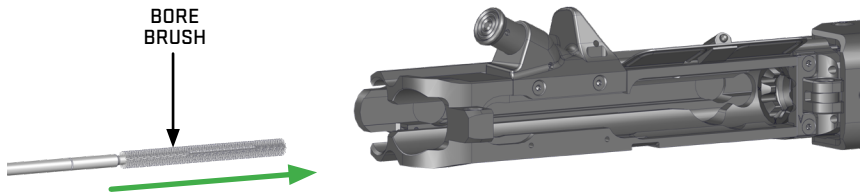
1. Attach a jag to the cleaning rod.
2. Attach a clean patch to the jag.
3. Moisten the patch with CLP and slowly push it through the bore toward the muzzle end.



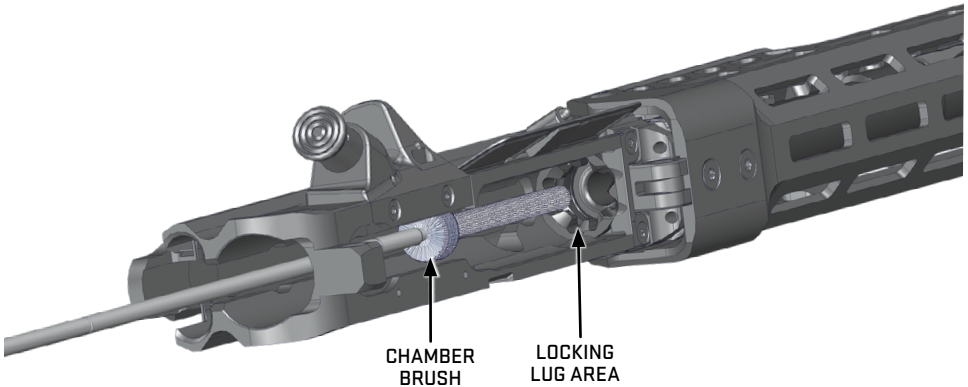
4. Allow the CLP to stay in the barrel for several minutes to loosen any fouling.
5. Attach a new clean patch to the cleaning rod.
6. Coat the patch as before and push it through the bore.



7. If there is heavy fouling, use a bore brush to scrub the bore.



8. Push a patch with CLP through the bore to remove any residue loosened by the bore brush.
9. Push new patches through the bore until they come out clean.
10. Remove the bore prush and replace with a chamber brush. Coat the chamber brush with CLP.
11. Keep the muzzle elevated so the CLP does not run into the freshly cleaned bore.
12. Make several plunging strokes followed by several 360-degree rotations in the barrel extension to clean the locking lug area.



LUBRICATION

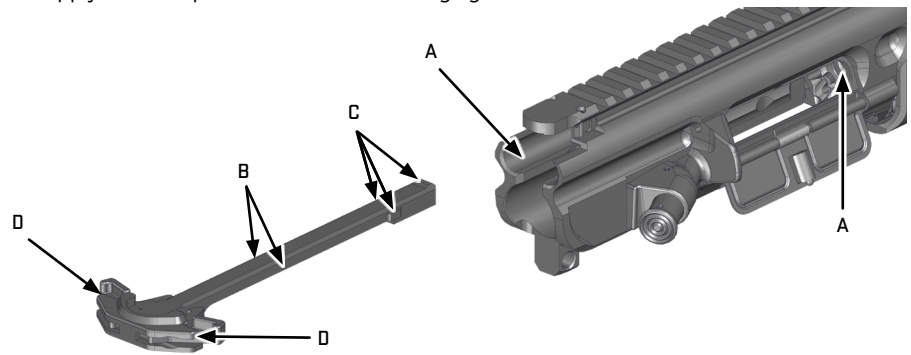
Upper Receiver

A. Apply a thin film of lubricant to the inside of the upper receiver to the surfaces where the operating group makes contact and in the bore.

B. Apply a thin film of lubricant to the sides of the charging handle.

C. Apply a thin film of lubricant to the tabs and front raised boss of the charging handle

D. Apply 1 to 2 drops of lubricant to the charging handle latches.



Operating Group And Gas Block

CAUTION

DO NOT APPLY LUBRICANT IN THE FACE OF THE BOLT OR FIRING PIN CHANNEL OF THE BOLT. DO NOT APPLY LUBRICANT TO THE EXTRACTOR SLOT. FAILURE TO COMPLY MAY RESULT IN A STOPPAGE.

A. Apply 1 to 2 drops of lubricant to the front of the recoil assembly and to the spring guide, the recoil plate, and bolt carrier.

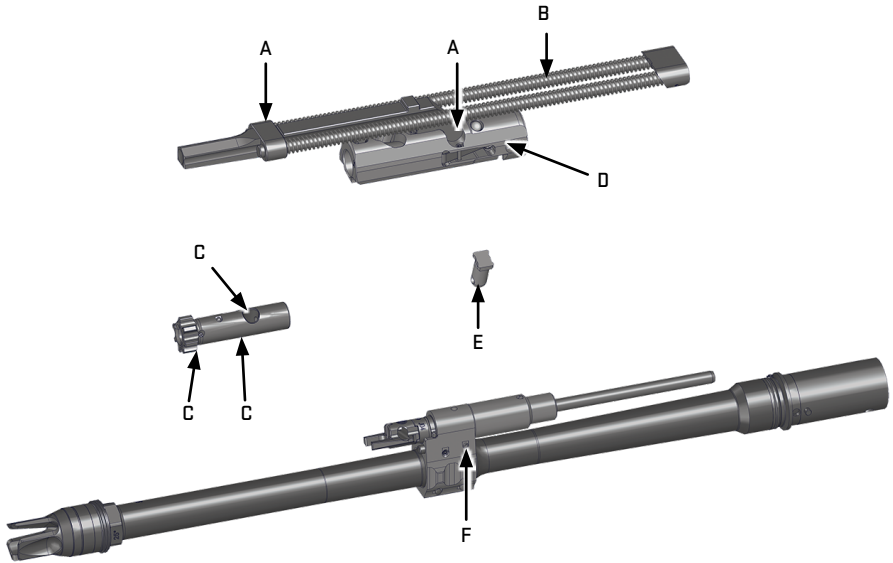
B. Apply a light coat of lubricant to the spring guide rods and recoil springs.

C. Apply a light coat of lubricant to the back of bolt lugs, bolt body, and cam pin hole.

D. Apply a light coat of lubricant to the bolt carrier contact surfaces.

E. Apply 1 to 2 drops of lubricant to the cam pin.

F. Apply 1 to 2 drops of lubricant to drain hole for the detent spring in the gas block.

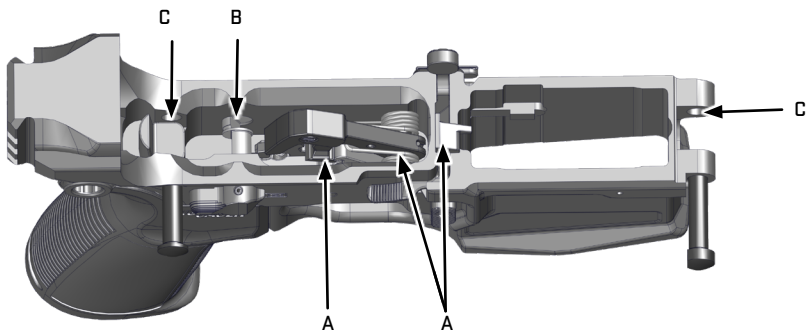


Lower Receiver

A. Apply 1 to 2 drops of lubricant to the hammer, trigger, and bolt catch where these parts contact their respective pins.

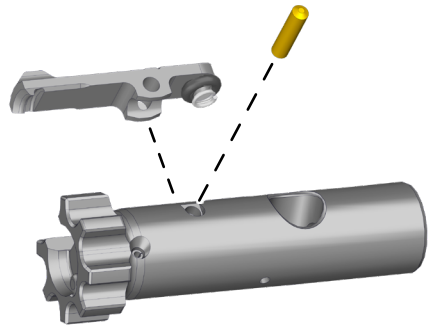
B. Apply 1 to 2 drops of lubricant to the selector where it contacts the lower receiver.

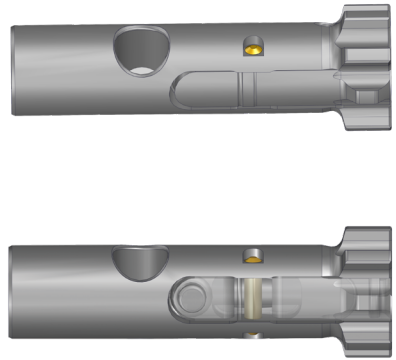
C. Apply 1 to 2 drops of lubricant to pivot and takedown pins.



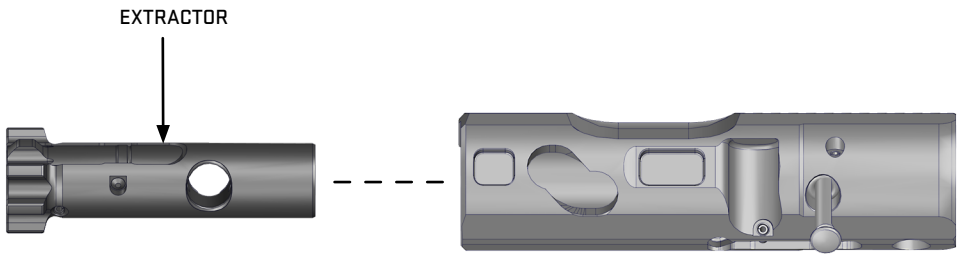
10.3 ASSEMBLY

1. Assemble the extractor to the bolt and hold it in place.
2. Install the extractor pin. The extractor pin should be flush with the bolt.





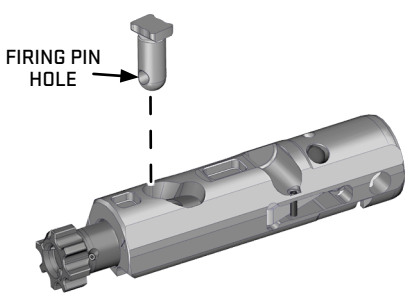
3. Insert the bolt into the bolt carrier with the extractor facing out following the orientation below.

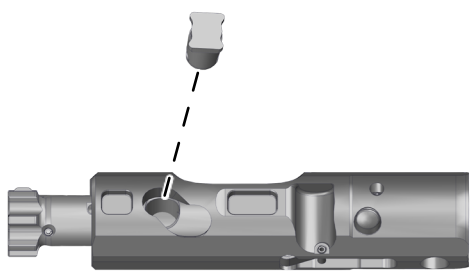


WARNING CAM PIN

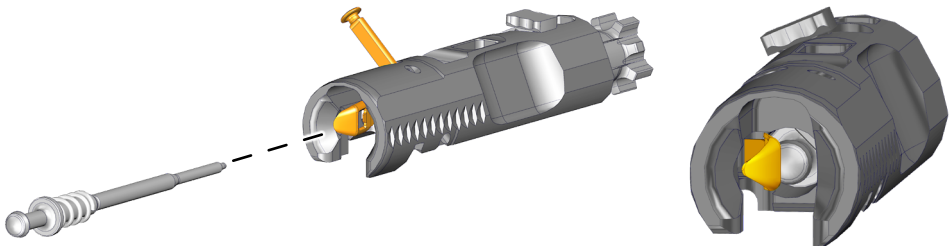
FAILURE TO INSTALL CAM PIN MAY RESULT IN SERIOUS INJURY OR DEATH TO OPERATOR AND DAMAGE TO FIREARM.

4. Adjust the bolt forward so the bolt's cam pin hole aligns with the bolt carrier's cam path.
5. Install the cam pin through the bolt carrier and into the bolt. Ensure the firing pin can travel through the firing pin hole in the cam pin.

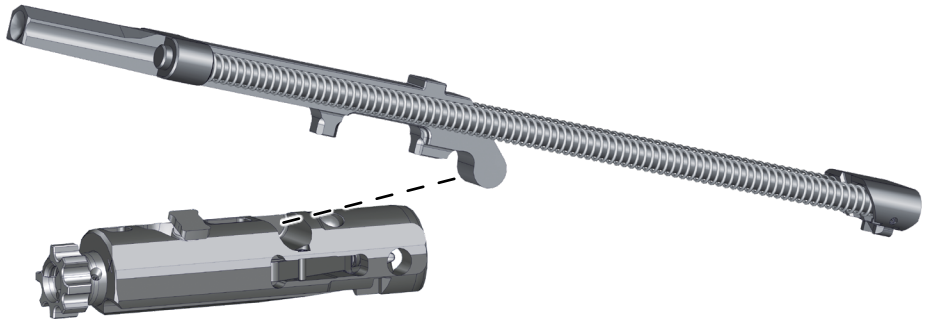




6. Pull the bolt out to its unlocked, extended, position.
7. Pull out the firing pin retaining pin. Retaining pin is captive and cannot be removed.
8. While pressing on the firing pin lock, insert the firing pin through the rear of the bolt carrier, seating it completely forward against the bolt. Release pressure on the firing pin lock and ensure that it captures the head of the firing pin.
9. While applying pressure on the firing pin, push in the firing pin retaining pin from the left side of the bolt carrier. Ensure the retaining pin is positioned between the head of the firing pin and the large flange.



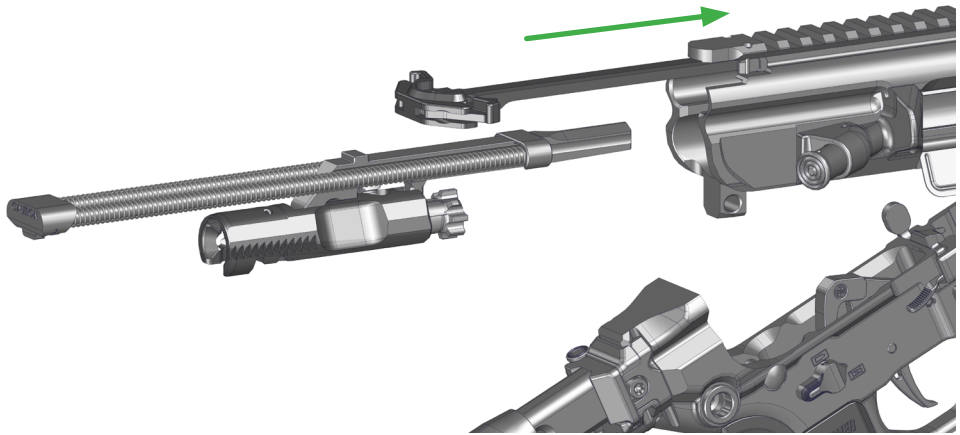
10. Slide the recoil assembly into the bolt carrier from the left side.



11. Align the upper receiver with the lower receiver, and fully press in the pivot pin from right to left until it locks into place.



12. With the upper receiver pivoted upward, insert the charging handle and operating group into the upper receiver.
13. Push the operating group and charging handle completely forward until they lock into place. Ensure the rear of the recoil assembly is pressed inside the upper receiver.



14. Ensure that the takedown pin is pulled out and rotate the receivers together.
15. Push in the takedown pin from right to left until it locks into place.



11.0 FUNCTION CHECK

A function check should be performed after any repair, cleaning, or reassembly to ensure the firearm operates properly.

WARNING UNLOAD/CLEAR

PRIOR TO PERFORMING ANY MAINTENANCE ON THE FIREARM, READ AND UNDERSTAND THE OPERATOR'S MANUAL. ENSURE THAT THE FIREARM IS UNLOADED, CLEARED, AND THE MAGAZINE IS REMOVED. SAFETY GLASSES SHOULD BE WORN WHENEVER DISASSEMBLING, CLEANING, INSPECTING, OR ASSEMBLING A FIREARM.

WARNING FUNCTION CHECK

KEEP THE FIREARM POINTED IN A SAFE DIRECTION DURING THE ENTIRE FUNCTION CHECK.

IF THE FIREARM FAILS TO COMPLETE THE FUNCTION CHECK, DO NOT USE THE FIREARM. CONTACT CUSTOMER SERVICE.

1. Ensure the firearm is unloaded and clear of ammunition. *See 9.3 Unload and Clear the Rifle on page 40.*
2. Ensure the fire control selector is rotated to SAFE.



3. Insert an unloaded magazine into the magazine well and pull down to ensure it is fully seated.
4. Pull the charging handle to the rear until the bolt locks open. Lock the charging handle forward.
5. Press the magazine catch. The magazine should fall from the magazine well.
6. Pull the charging handle to the rear and release. After releasing, the bolt catch must drop while the bolt moves forward.
7. With the muzzle pointed in a safe direction and with the safety selector on SAFE, pull the trigger to rear. Nothing should happen. Release the trigger.
8. Rotate the safety selector lever to SEMI.
9. Press and hold the trigger. Hammer should fall with a loud click. Do not release the trigger.
10. While continuing to hold the trigger, fully retract the charging handle to cock the firearm. Lock the charging handle forward.
11. Slowly release the trigger. The trigger should reset with a light click.
12. If equipped, rotate the selector to AUTO (if not applicable, skip to step 17).
13. Press the trigger and hold it to the rear. You should hear a loud click as the hammer falls.

14. With the trigger pressed to the rear, pull the charging handle to the rear and ease it fully forward. A loud click should be heard at the end of the travel.
15. Release the trigger. No click should be heard as the hammer is the upward, decocked position.
16. Rotate selector from AUTO to SEMI and pull the charging handle to the rear. The hammer should now be cocked.
17. Retest SAFE by rotating the safety selector to SAFE and pulling the trigger. Nothing should happen.
18. Retract the charging handle and press up on the bolt catch lever to lock the bolt to the rear. Lock the charging handle forward.

CAUTION

NEVER USE A FIREARM OR MAGAZINE THAT SHOWS SIGNS OF DAMAGE OR FAILS A FUNCTION CHECK. VERIFY THE MAGAZINE IS THE CORRECT MODEL AND CALIBER FOR THE RIFLE. IF THE CONDITION OR FUNCTION OF THE RIFLE OR MAGAZINE IS SUSPECT, RETURN THE RIFLE OR MAGAZINE TO SIG SAUER FOR EVALUATION. ALWAYS VERIFY THE CONDITION AND FUNCTION OF THE EQUIPMENT BEFORE USE.

12.0 MAGAZINE MAINTENANCE

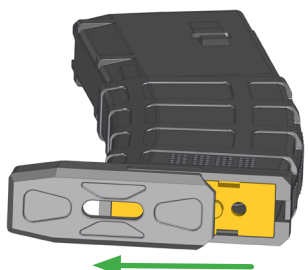
WARNING PARTS UNDER SPRING TENSION

MAGAZINES CONTAIN SEVERAL SPRING-LOADED PARTS. WEAR EYE PROTECTION AND MAINTAIN CONTROL DURING MAINTENANCE. FAILURE TO COMPLY MAY RESULT IN INJURY.

12.1 DISASSEMBLE MAGAZINE

1. Push in on the magazine insert through the opening in the baseplate and slide the baseplate off of the magazine tube. While pressing down on the insert, to control the magazine spring, remove the baseplate.

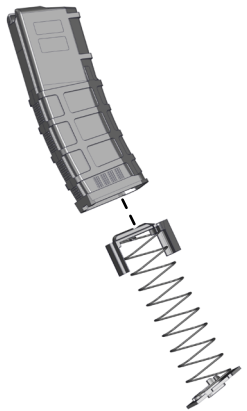




NOTE: The magazine spring will be attached to the insert and follower. Do NOT remove these components from the spring during operator level maintenance.

2. Remove the insert, magazine spring, and follower from the magazine tube.



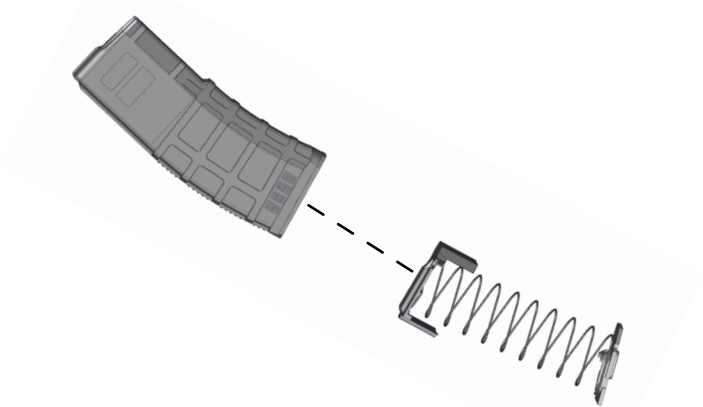


12.2 CLEANING

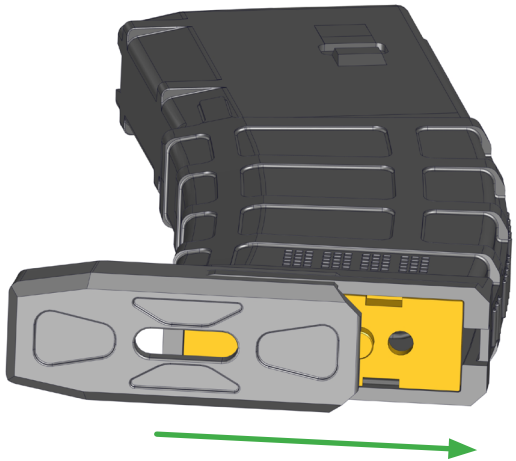
Wipe all parts with a cloth moistened with CLP to remove any buildup or debris then wipe dry.

12.3 ASSEMBLY

1. Install the magazine follower, spring, and insert into the magazine tube.



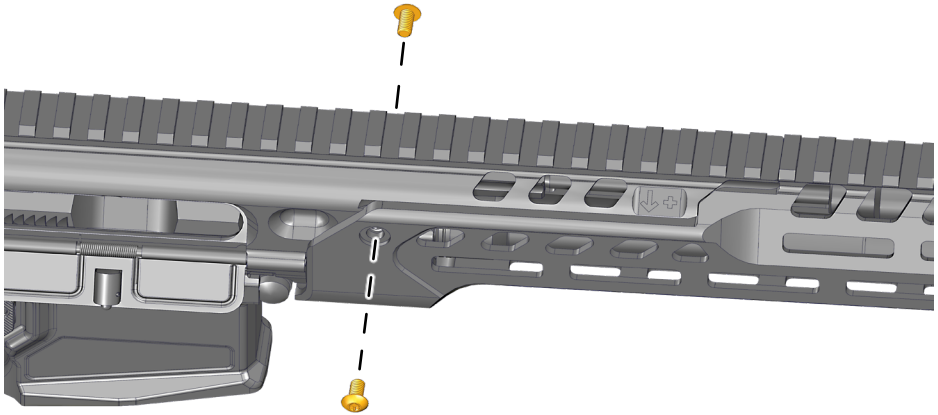
2. Compress the spring by pushing the insert into the magazine tube.
3. Slide the base plate onto the magazine tube until the insert snaps into place.



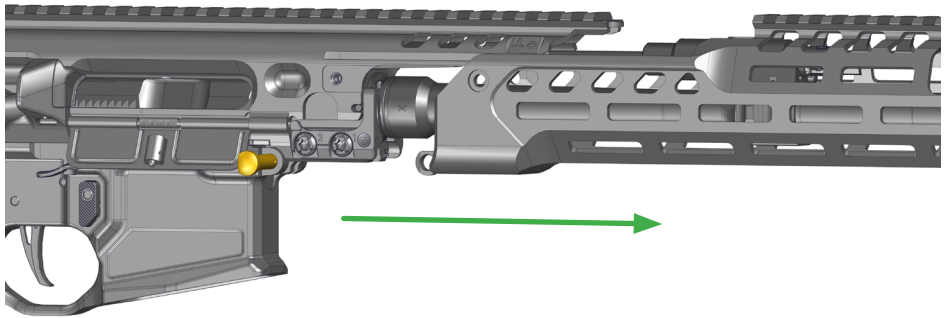
13.0 HANDGUARD

13.1 HANDGUARD REMOVAL

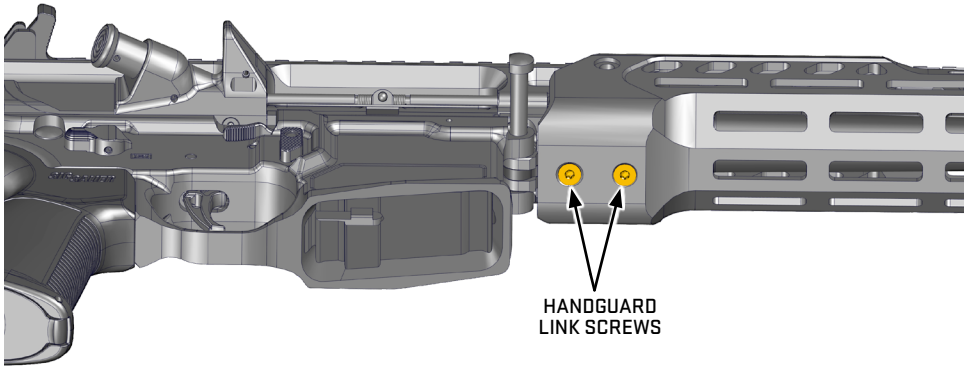
1. Use a T15IP® drive bit to remove the screws from the rear of the handguard.



2. Pull pivot pin out until it stops.
3. Slide the handguard forward and off of the upper receiver and barrel.



NOTE: Removing handguard link screws is not necessary to remove the handguard.

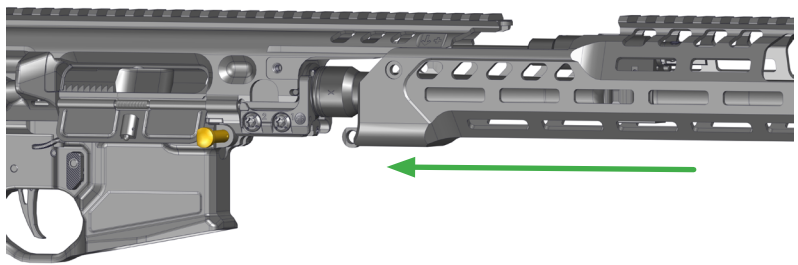


13.2 HANDGUARD INSTALLATION

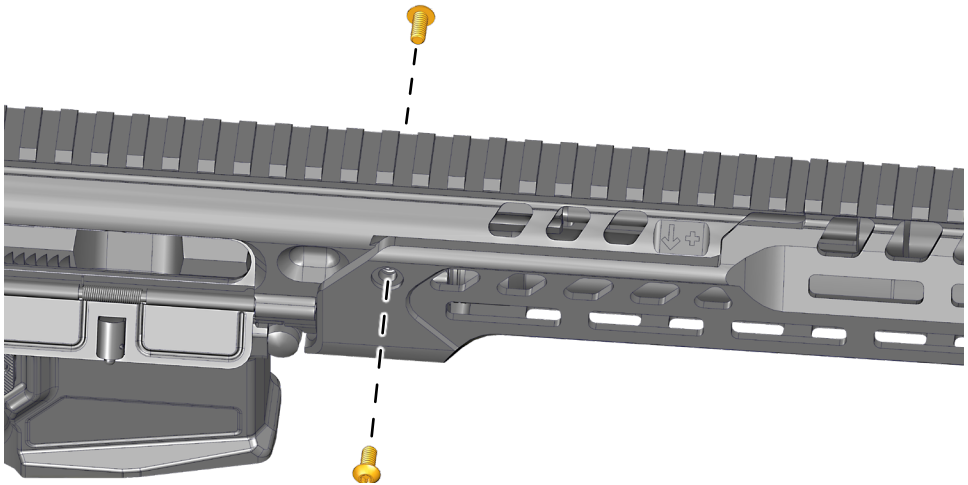
WARNING HANDGUARD

WHEN CHANGING BARREL AND HANDGUARDS, ALWAYS ENSURE THAT THE FLASH HIDER, MUZZLE BRAKE, OR SUPPRESSOR ARE EXPOSED FROM THE END OF THE HANDGUARD. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY AND/OR DAMAGE TO THE FIREARM.

1. Slide the handguard onto rails of upper receiver.
2. Push in pivot pin from right to left into lower receiver and handguard link until it stops.



3. Use a T15IP® drive bit to install handguard screws into upper receiver. Torque both screws to 45 in-lbf.



14.0 SUPPRESSOR COMPLIANT HANDGUARD

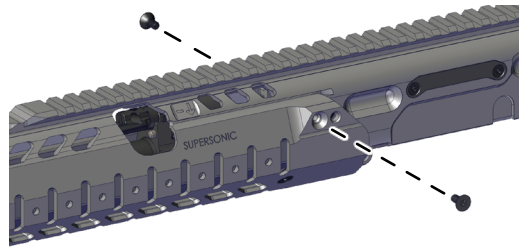
A suppressor compliant handguard is available for the MCX-SPEAR LT. This wider handguard is used for shorter barrel length rifles where the suppressor sits inside the handguard.

14.1 REMOVAL

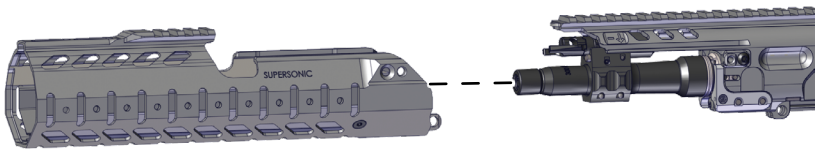
WARNING UNLOAD/CLEAR

PRIOR TO PERFORMING ANY MAINTENANCE ON THE FIREARM, READ AND UNDERSTAND THE OPERATOR'S MANUAL. ENSURE THAT THE FIREARM IS UNLOADED, CLEARED, AND THE MAGAZINE IS REMOVED. SAFETY GLASSES SHOULD BE WORN WHENEVER DISASSEMBLING, CLEANING, INSPECTING, OR ASSEMBLING A FIREARM.

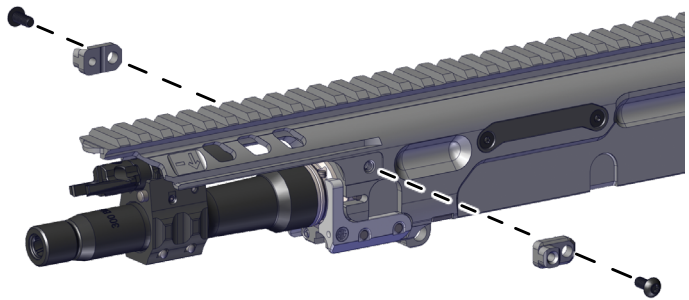
1. Field strip the rifle. See *10.1 Field Strip the SIG MCX-SPEAR LT on page 57*.
2. Using a T15IP drive bit, remove the the flat head screws from the handguard.



3. Remove the handguard.



4. Using a T15IP drive bit, remove the button head screws and the mounting blocks.

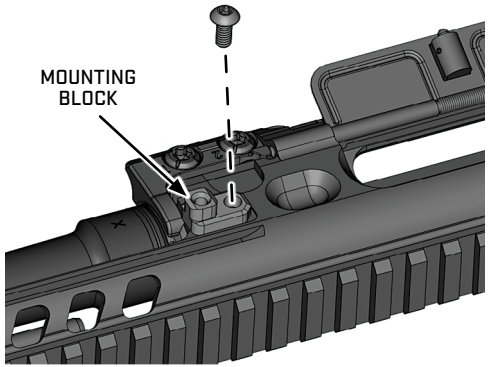


14.2 INSTALLATION

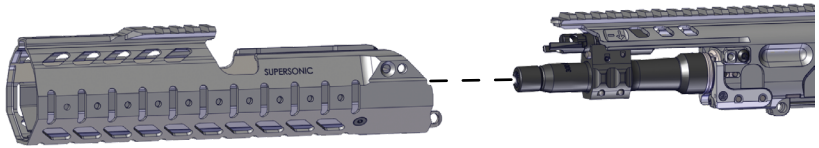
WARNING HANDGUARD

WHEN CHANGING BARREL AND HANDGUARDS, ALWAYS ENSURE THAT THE FLASH HIDER, MUZZLE BRAKE, OR SUPPRESSOR ARE EXPOSED FROM THE END OF THE HANDGUARD. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY AND/OR DAMAGE TO THE FIREARM.

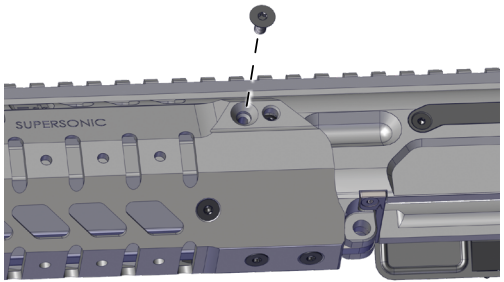
1. Field strip MCX. See *10.1 Field Strip the SIG MCX-SPEAR LT on page 57*.
2. Remove the current handguard. See *13.1 Handguard Removal on page 92*.
3. Position mounting block in recess on upper receiver.
4. Using a T15IP drive bit, install the button head screw but do not completely tighten.
5. Repeat for opposite side.



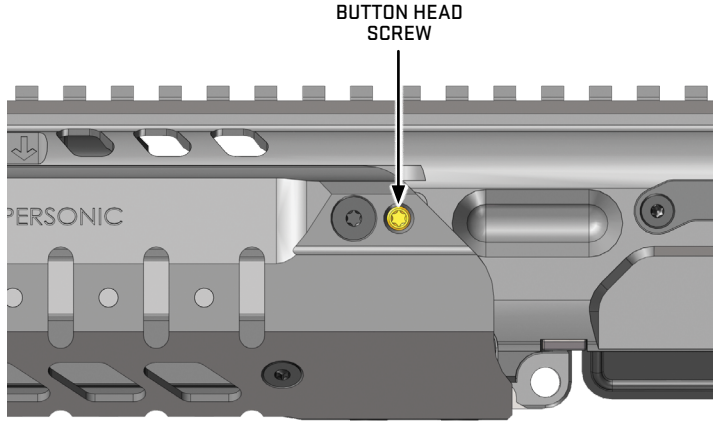
6. Install the suppressor handguard to the upper receiver from the front.



7. Align the holes of handguard with the hole of mounting block.
8. Install the flat head screw and use a T15IP drive bit to tighten to 45 in-lbf.
9. Repeat for opposite side.



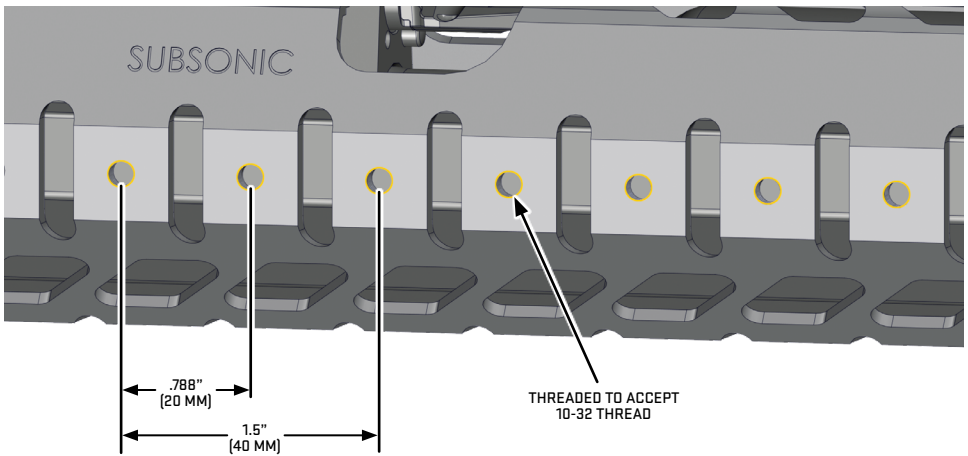
10. Complete the installation by using a T15IP drive bit to tighten the button head screw to 45 in-lbf. Access the screw through the hole in the handguard.



14.3 HANDGUARD ACCESSORIES

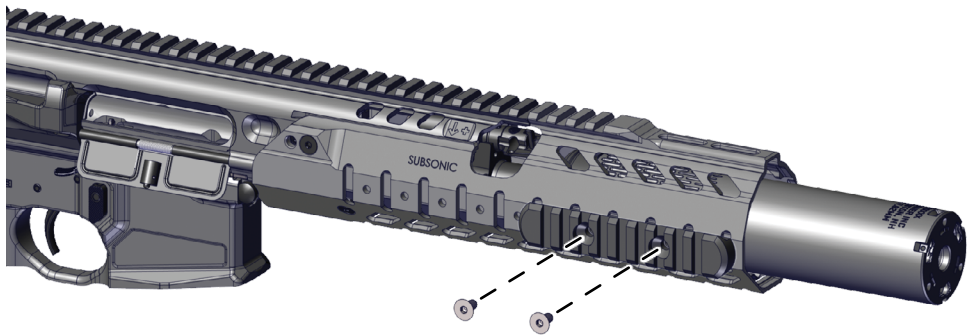
SPECIFICATIONS

NOTE: Standard MLOK screws use #10-24 threads, and are NOT compatible.



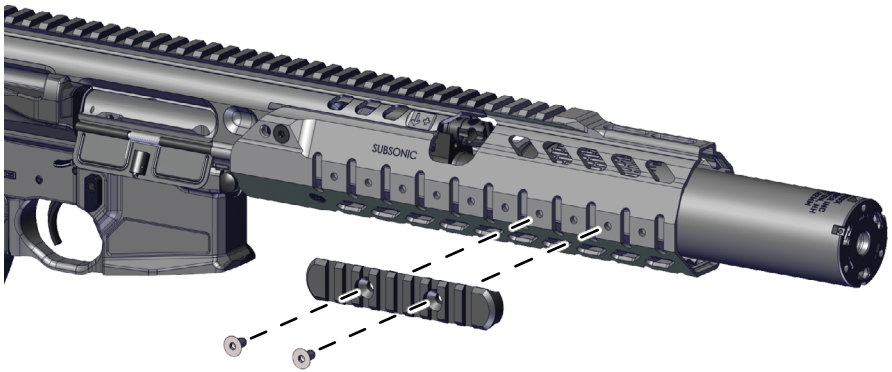
INSTALLATION

1. Place the accessory on the handguard and align the screw holes.
2. Using a 5/32 in. hex drive bit, install #10-32 accesory screws and tighten to 20 in-lbf.



REMOVAL

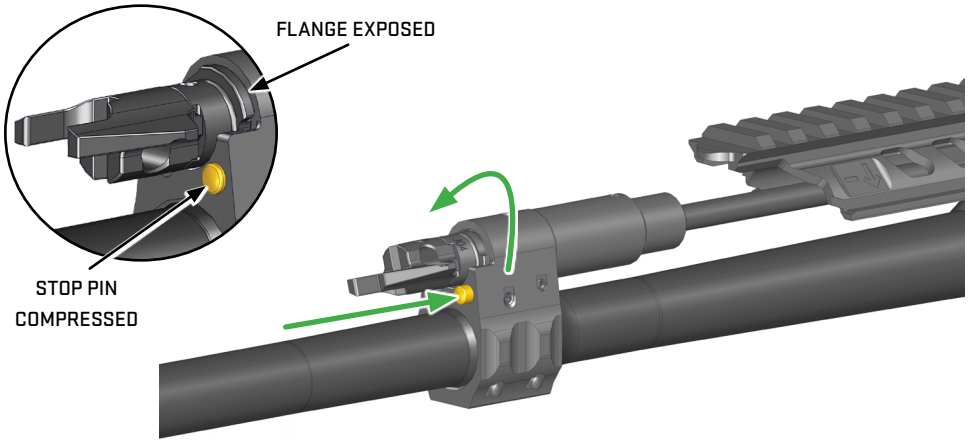
1. Using a 5/32 in. hex drive bit, remove the #10-32 accessory screws.
2. Remove the accessory from the handguard.



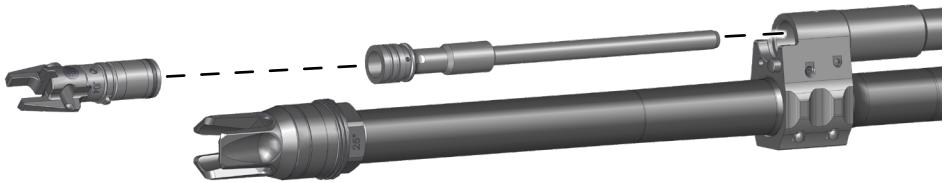
15.0 GAS VALVE AND PISTON

15.1 GAS VALVE AND PISTON REMOVAL

1. Compress the stop pin and rotate the gas valve until the flange on the valve is fully exposed.



2. Remove the gas valve and piston.

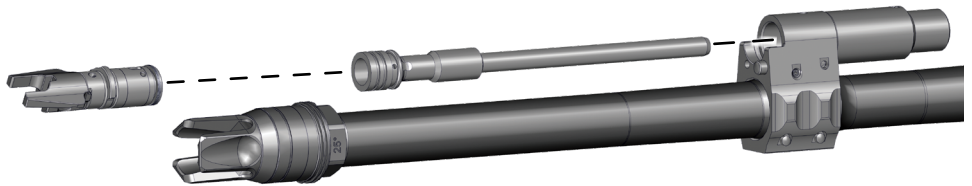


15.2 CLEANING

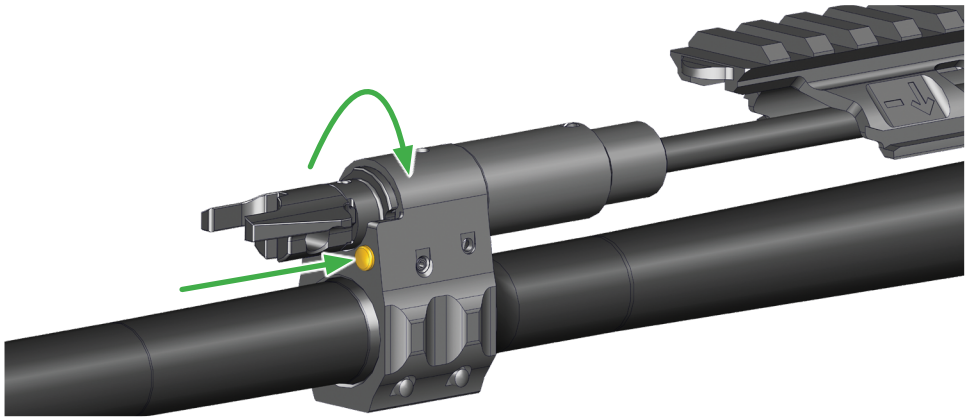
- Remove carbon buildup from piston.
- Clean and remove carbon and residue from the gas valve.

15.3 GAS VALVE AND PISTON INSTALLATION

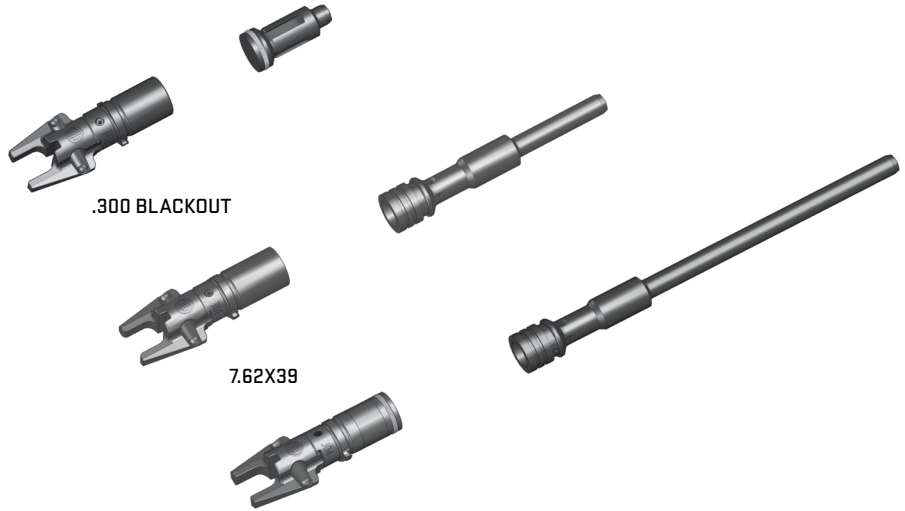
1. Insert the piston into the front opening of the gas block until it is fully seated.
2. Align the flange of the gas valve upward and insert the gas valve into the front opening of the gas block until the flange is seated.



3. Press stop pin and turn gas valve until retained by stop pin.



15.4 GAS VALVE CALIBER VARIATIONS

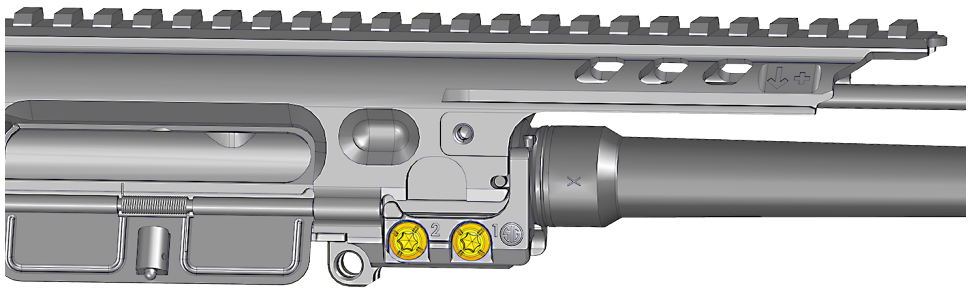


16.0 BARREL

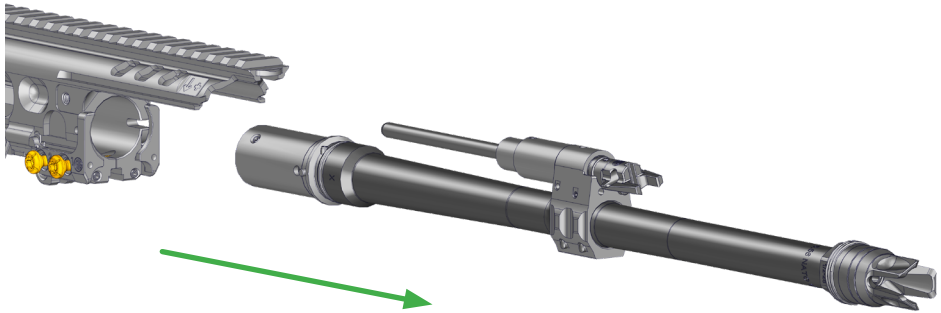
16.1 BARREL REMOVAL

NOTE: The operating group must be removed prior to removing the barrel. *See section 10.1 Field Strip the SIG MCX-SPEAR LT on page 57.*The barrel clamping screws are captive to the upper receiver and only need to be loosened to remove the barrel..

1. Use a T27™ drive bit to loosen the two barrel clamping screws from the right side of the upper receiver. The two screws are captive and will not be removed from the receiver.



2. Pull the barrel straight out of the upper receiver.

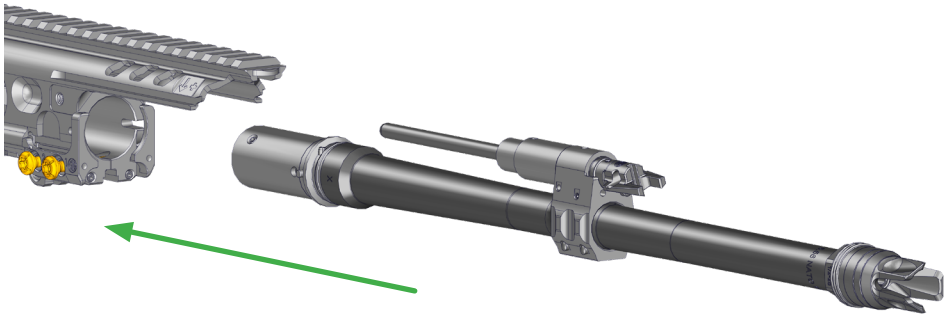


CAUTION

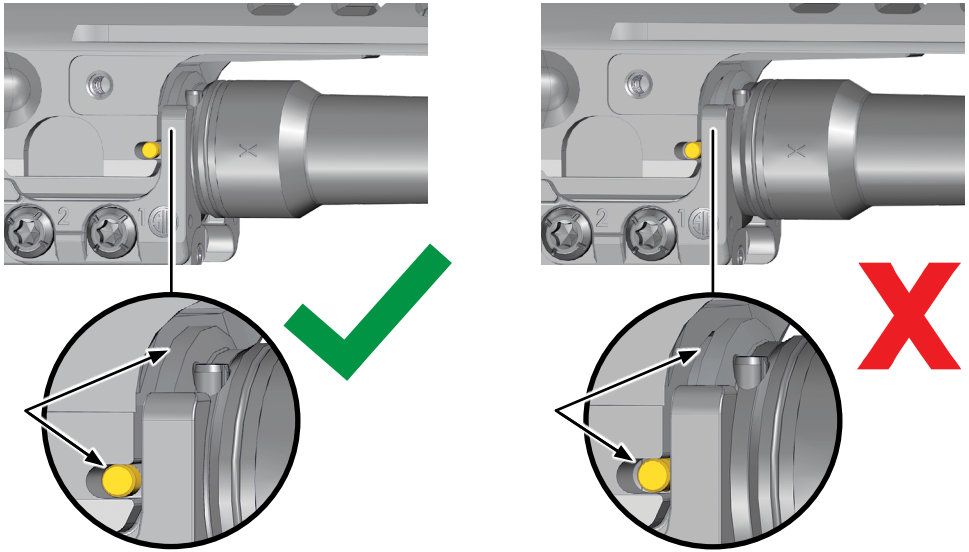
DO NOT WIGGLE THE BARREL BACK AND FORTH AS THIS CAN DAMAGE THE UPPER RECEIVER. IF THE BARREL WILL NOT PULL FREE, USE A 1-INCH WOODEN DOWEL INSERTED IN THROUGH THE REAR OF THE UPPER RECEIVER AND THEN TAP OUT THE BARREL.

16.2 BARREL INSTALLATION

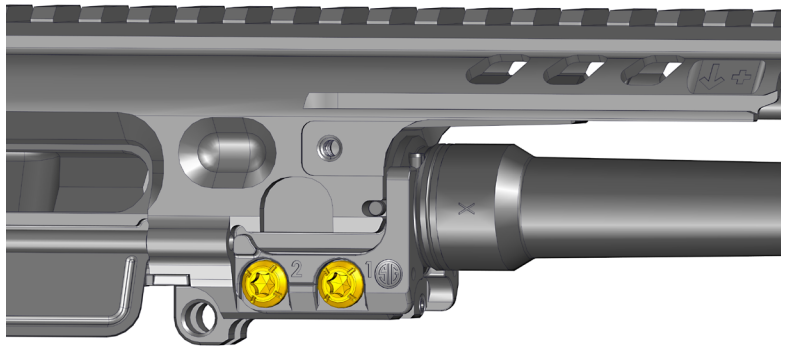
1. Ensure that all mating surfaces are clean.
2. Check the barrel index pins for damage or looseness.
3. Slide the barrel assembly into the upper receiver.



4. Ensure both left and right index pins are seated completely into the upper receiver.



5. Squeeze the left and right clamp together until they contact the upper receiver. Using a T27 torque wrench, tighten screw #1 and then screw #2. Alternate back and forth between screw #1 and screw #2 until they are hand tight. Starting again with screw #1, apply a torque of 65 lbf-in. Move to screw #2 and apply torque of 65 lbf-in. Return to screw #1 and tighten again to ensure that the screw is at 65 lbf-in.

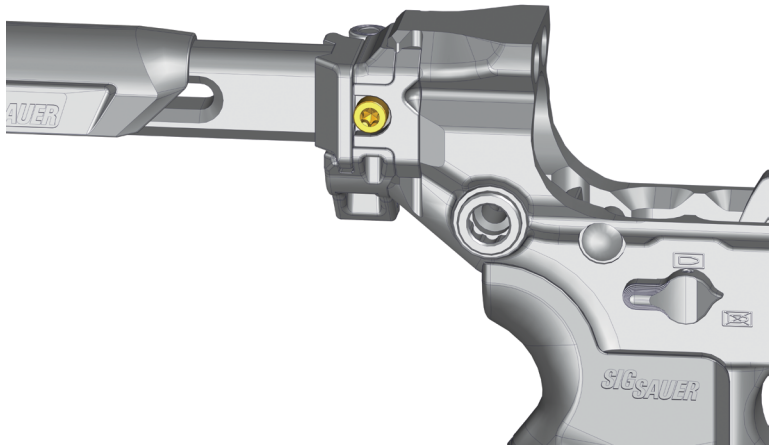


6. Reinsert the bolt carrier assembly and ensure that the bolt locks properly.

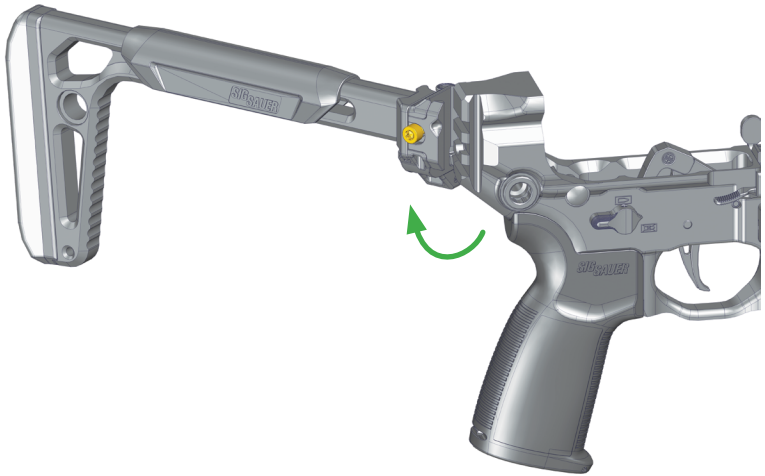
17.0 FOLDING STOCK

17.1 FOLDING STOCK REMOVAL

1. Use a T27 drive bit to loosen the clamp screw.

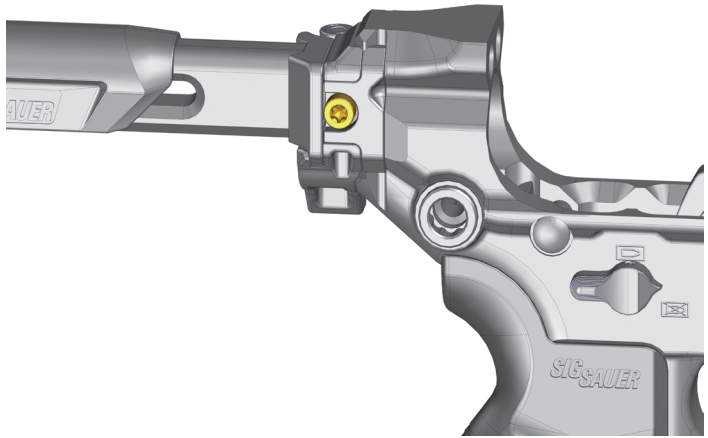


2. Remove the stock from the receiver.



17.2 FOLDING STOCK INSTALLATION

1. Position the stock on the rear of the receiver.
2. Using a T27 drive bit, tighten the clamp screw until snug plus 1/4 turn.

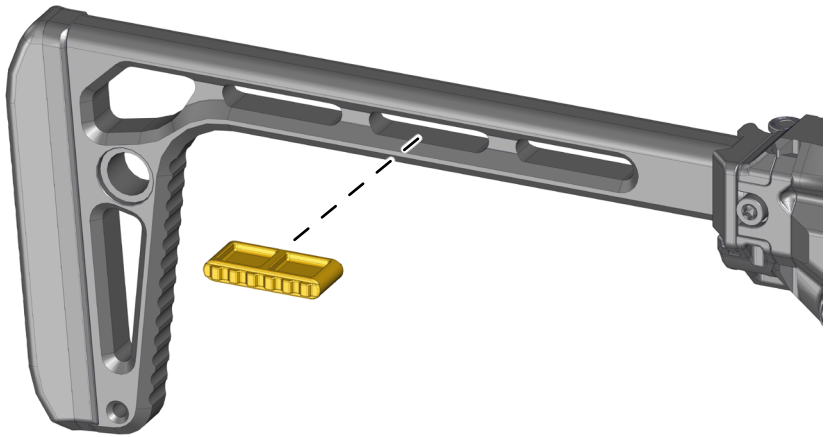


17.3 CHEEK REST REMOVAL

1. Slide cheek rest up and off of stock assembly.

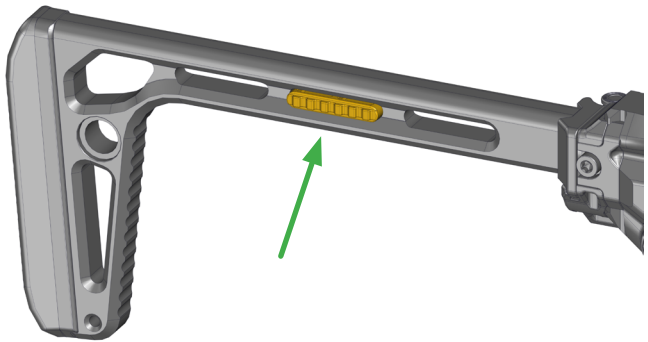


2. Remove cheek rest locking insert from stock assembly.



17.4 CHEEK REST INSTALLATION

1. Install cheek rest locking insert into slot in stock assembly.

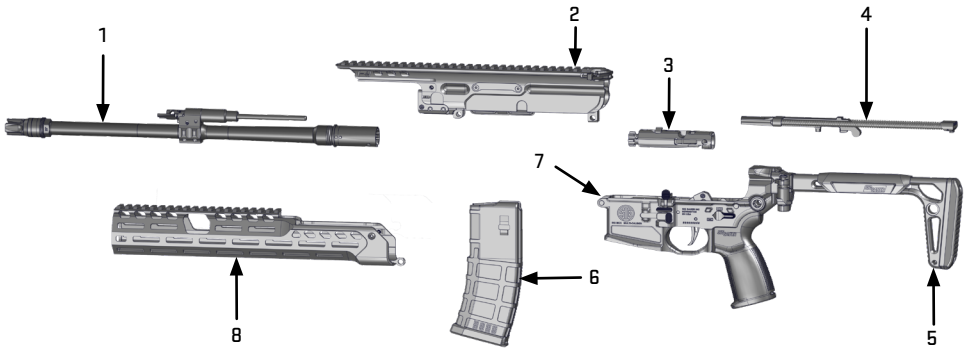


2. Slide cheek rest down onto stock assembly until it is retained by the locking insert.



18.0 SIG MCX-SPEAR LT PARTS DIAGRAMS

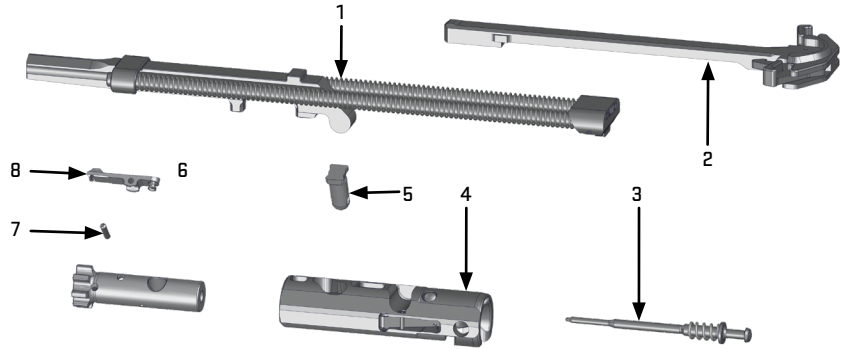
18.1 RIFLE PARTS DIAGRAM



NUMBER	NOMENCLATURE
1	Barrel Assembly
2	Upper Receiver
3	Bolt Carrier Group
4	Recoil Assembly

NUMBER	NOMENCLATURE
5	Buttstock
6	Magazine
7	Lower Receiver
8	Handguard

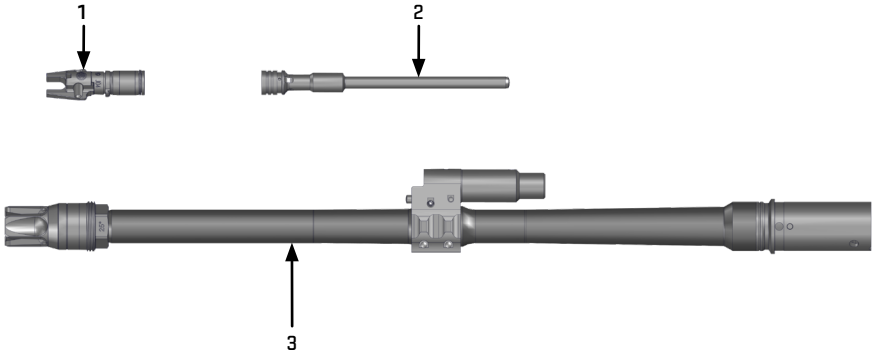
18.2 OPERATING GROUP PARTS DIAGRAM



NUMBER	NOMENCLATURE
1	Recoil Assembly
2	Ambidextrous Charging Handle
3	Firing Pin and Spring
4	Bolt Carrier

NUMBER	NOMENCLATURE
5	Cam Pin
6	Bolt
7	Extractor Pin
8	Extractor

18.3 BARREL ASSEMBLY—5.56 NATO, 16-INCH BARREL (OTHER MODELS VARY)



NUMBER	NOMENCLATURE
1	Gas Valve
2	Piston
3	Barrel and Gas Block

6.75 INCH MCX-SPEAR LT



11.5 INCH MCX-SPEAR LT





16 INCH MCX-SPEAR LT



6 INCH MCX-SPEAR LTAW
(WITH SQX SUPPRESOR AND SUPPRESSOR COMPLIANT HANDGUARD)



19.0 STORAGE AND TRANSPORTATION

WARNING STORAGE

NEVER PLACE OR STORE ANY FIREARM IN SUCH A MANNER THAT IT MAY BE DISLODGED. FIREARMS SHOULD ALWAYS BE STORED, LOCKED, UNLOADED, SEPARATE FROM THEIR AMMUNITION, AND INACCESSIBLE TO CHILDREN AND ANY OTHER UNAUTHORIZED PERSON. THE USE OF A LOCKING DEVICE OR SAFETY LOCK IS ONLY ONE ASPECT OF RESPONSIBLE FIREARMS STORAGE. FAILURE TO PROPERLY STORE FIREARMS MAY CAUSE SERIOUS INJURY OR DEATH TO SELF OR OTHERS, OR PROPERTY DAMAGE.

Short Term Storage (90 days or less)

1. Ensure the chamber and magazine do not contain live ammunition.
2. Clean the bore and chamber.
3. Apply a generous coat of CLP to the chamber and bore.
4. Apply a light coat of CLP to all other metal surfaces for corrosion protection.



Long Term Storage (90 days or longer)

1. Ensure the firearm is thoroughly cleaned.
2. Apply a medium coat of CLP to the chamber and bore.
3. Apply a light coat of CLP to all other metal surfaces for corrosion protection.
4. Wrap the firearm with a waterproof material.
5. Place the firearm in a corrosion resistant barrier bag.

Environmental Storage Recommendations (Armory)

Provide humidity control to limit the relative humidity (RH) to no greater than 40% at 80°F (26.7°C). If personnel will be working in these areas, design to 68°F (20.0°C) dry bulb and 40% RH for indoor design heating conditions, and 75°F (23.9°C) dry bulb and 40% RH for indoor design cooling conditions.

19.1 TRANSPORTATION

IT IS THE OWNER'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE LAWS OF ANY JURISDICTION(S) THEY ARE PLANNING TO TRAVEL TO AND THROUGH WITH THE FIREARM.

When transporting the firearm to and from shooting activities, keep it unloaded for safety purposes. When storing the firearm for transportation, keep it separated from ammunition, under lock and key, and out of the reach of children and other unauthorized persons. If transporting the firearm in a vehicle, ensure that it is secured within the confines of the vehicle. Should the vehicle become involved in an accident, the firearm could become dislodged and move about the interior of the vehicle or be ejected from the vehicle.

20.0 TROUBLESHOOTING GUIDE

WARNING STOPPAGE

STOP FIRING IMMEDIATELY. UNLOAD AND CLEAR THE FIREARM.

A stoppage is an interruption in the rifle's cycle of function that can be cleared by the operator taking immediate action. Immediate action consists of steps taken by the operator to place the rifle back in service without investigating the cause of the stoppage. Use caution when attempting to remove cartridges or rounds from the chamber or the interior of the upper receiver as these areas may be hot after firing.

Immediate action:

1. Keep the firearm pointed in a safe direction.
2. Unload and clear the firearm immediately by removing the magazine, locking the slide to the rear, and clearing any ammunition from the firearm.
3. Visually and physically check the chamber, breech face, and magazine well.

With the firearm unloaded and cleared, perform an additional visual inspection of the firearm and the ammunition. If a bore obstruction exists, refer to the following page: *20.1 Obstructed Bore on page 130.* If damage to the firearm is found, the stoppage persists, or a malfunction is suspected, take the firearm to a certified SIG SAUER Armorer for service.

20.1 OBSTRUCTED BORE

WARNING OBSTRUCTED BORE

STOP FIRING IMMEDIATELY AND KEEP THE FIREARM POINTED IN A SAFE DIRECTION. UNLOAD AND CLEAR THE FIREARM. DO NOT FIRE ANOTHER ROUND UNTIL THE OBSTRUCTION IS CLEARED. FAILURE TO COMPLY CAN RESULT IN SERIOUS INJURY OR DEATH TO THE OPERATOR AND/OR OTHERS AND CATASTROPHIC DAMAGE TO THE FIREARM.

Immediately stop shooting and keep the firearm pointed in a safe direction whenever:

- There is difficulty or unusual resistance in chambering a cartridge;
- A cartridge misfires (does not go off);
- The rifle fails to extract a fired cartridge case;
- Unburned grains of propellant powder are discovered;
- A shot sounds weak or abnormal.

It is possible that a bullet is lodged partway down the barrel. If a bullet is in the bore, do not attempt to shoot it out with another cartridge, a blank, or a case without a bullet. Bullets can become lodged in the barrel when the cartridge has been improperly loaded without propellant powder, the powder fails to ignite, or the bullet was not properly seated in the cartridge case.

Immediately unload and clear the firearm. Field strip the firearm and look through from the rear of the receiver. It is not sufficient to merely look in the chamber as a bullet may be lodged some distance down the barrel where it cannot easily be seen. Attempt to remove the bullet by tapping it out with a cleaning rod from the chamber end of the rifle. If the bullet can be removed, clean any unburned powder grains from the bore, chamber, and mechanism before resuming shooting. If the bullet cannot be dislodged, take the firearm to a certified SIG SAUER Armorer.

20.2 COOK-OFF

WARNING COOK-OFF

COOK-OFF IS DEFINED AS A CHAMBERED CARTRIDGE DETONATING DUE TO THE HEAT OF THE BARREL. FAILURE TO COMPLY WITH THE BELOW LISTED STEPS COULD RESULT IN DEATH, SERIOUS INJURY, OR PROPERTY DAMAGE.

If the rifle stops firing with a cartridge in the chamber of a hot barrel due to a misfire or stoppage, do the following:

1. Keep the rifle pointed in a safe direction.
2. Immediately remove the magazine and chambered cartridge.
3. If the cartridge cannot be removed within 10 seconds, keep rifle pointed in a safe direction. Wait at least 15 minutes for the chamber and the barrel to cool and then remove the cartridge.



20.3 GENERAL STOPPAGES

STOPPAGE	TEST/INSPECTION	CORRECTIVE ACTION
Failure to Fire	Safety selector lever on SAFE	Rotate to FIRE position
	Firing pin improperly installed	Reassemble correctly
	Excessive lubricant in firing pin hole of bolt	Clean out excess lubricant and reassemble
	Damaged ammunition	Replace ammunition
Failure to Feed	Overloaded magazine	Remove excess cartridges
	Dirty magazine	Clean magazine
	Damaged magazine	Replace magazine
	Poor lubrication or dirty firearm	Field strip, clean, and lubricate the firearm
	Dirty, corroded, or damaged ammunition	Replace ammunition
Failure to Chamber	Dirty, corroded, or damaged ammunition	Replace ammunition
	Dirty chamber or feed ramps	Clean chamber and feed ramps
	Poor lubrication/Dirty firearm	Field strip, clean, and lubricate the firearm
	Weak action spring	Replace recoil assembly

STOPPAGE	TEST/INSPECTION	CORRECTIVE ACTION
Double Feed	Damaged magazine	Replace magazine
Bolt Fails to Lock	Dirty or poorly lubricated bolt or firearm	Field strip, clean, and lubricate the firearm, paying special attention to the bolt
	Ammunition not to specification	Use only the correct ammunition
	Damaged bolt lugs	Contact SIG Sauer Customer Service
Failure to Extract	Dirty, corroded, or damaged ammunition	Replace ammunition
	Dirty or poorly lubricated chamber, extractor, or firearm	Field strip, clean, and lubricate the firearm, paying special attention to the chamber
	Damaged extractor or extractor spring	Contact SIG Sauer Customer Service
Bolt Fails to Lock After Last Round is Fired	Damaged magazine	Replace magazine
	Damaged bolt catch	Contact SIG Sauer Customer Service
	Gas valve not in the proper setting	Set gas valve to applicable setting
Under Function	Gas valve not in the proper setting	Set gas valve to applicable setting



STOPPAGE	TEST/INSPECTION	CORRECTIVE ACTION
Frozen Fire Control Selector	Lack of lubricant	Lubricate selector
	Dirt or residue buildup beneath selector	Clean fire control selector

20.4 MINIMIZING STOPPAGES

- Most stoppages can be minimized by cleaning and lubricating the firearm. *See 10.2 Cleaning and Lubrication on page 67.*
- Cleaning and lubricating the firearm after each range session will reduce the chances of a stoppage due to dirt and residue buildup.
- Perform maintenance if the firearm is exposed to extreme environmental conditions (rain, snow, freezing temperatures, etc.).
- Periodically inspect the firearm if it is to be stored for extended periods of time without use.
- Most stoppages are directly related to the magazine. Perform maintenance on the magazines as well as the firearm. See *12.0 Magazine Maintenance on page 88.*
- Mark the magazines so the operator can note which ones are more commonly involved in stoppages and malfunctions.

21.0 REPLACEMENT PARTS POLICY

WARNING PARTS REPLACEMENT

IT IS THE PURCHASER'S RESPONSIBILITY TO BE ABSOLUTELY CERTAIN THAT ANY PARTS ORDERED FROM THE FACTORY ARE CORRECTLY FITTED AND INSTALLED. FIREARMS ARE COMPLICATED MECHANISMS AND IMPROPER FITTING OF PARTS MAY RESULT IN A DANGEROUS MALFUNCTION, DAMAGE TO THE FIREARM, AND SERIOUS INJURY TO THE SHOOTER AND OTHER PERSONS. THE PURCHASER AND INSTALLER OF PARTS MUST ACCEPT FULL RESPONSIBILITY FOR THE CORRECT ADJUSTMENT AND FUNCTIONING OF THE FIREARM AFTER SUCH INSTALLATION.

Parts Policy

Our Service Department maintains a full complement of replacement parts. Even though most gunsmiths have the knowledge, training, and the ability to make necessary repairs to the firearm, the skill and workmanship of any particular third-party gunsmith is totally beyond our control.

Should the firearm ever require service, it is strongly recommended that it be returned to SIG SAUER Inc. A firearm is a precision instrument and some replacement parts will require individual fitting to ensure correct operation. A wrong part, improper fitting, or incorrect mechanical adjustment may result in an unsafe condition or dangerous malfunction, damage to the firearm, or cause possible serious injury to the shooter or others.



IF ANY PART IS ORDERED WITHOUT RETURNING THE FIREARM TO SIG SAUER, the owner bears full responsibility for ensuring that the part supplied is correct for their particular firearm and is properly installed and fitted by a qualified smith.

SIG SAUER IS NOT RESPONSIBLE FOR THE FUNCTIONING OF ANY FIREARM IN WHICH REPLACEMENT PARTS ARE INSTALLED BY OTHERS. THE USE OF UNAPPROVED AFTERMARKET PARTS WILL VOID THE WARRANTY OF THIS FIREARM. THE REPLACEMENT OF ORIGINAL EQUIPMENT MANUFACTURER (OEM) SIG SAUER PARTS WITH AFTERMARKET PARTS IS UNAUTHORIZED AND IN SOME INSTANCES COULD ALTER THE FUNCTION OF THE FIREARM, CREATING A DANGER TO THE OPERATOR.

Scan the QR code below to visit the Small Parts Shopper page at sigsauer.com:

22.0 FACTORY REPAIR OF THE FIREARM

Contact SIG SAUER Customer Service for questions or concerns regarding the performance or serviceability of the firearm. There are three ways to contact SIG SAUER Customer Service:

Have the firearm's serial number readily available before contacting SIG SAUER Customer Service.

1. Call (603) 610-3000, choose option 1.
2. Email CustomerService@sigsauer.com.
3. Go to https://www.sigsauer.com/customer-support to message customer service electronically. Scan the QR code below to visit the Customer Support page at sigsauer.com.



22.1 RETURNING FIREARMS FOR REPAIR

Do not ship a firearm without an RMA number provided by Customer Service.

WARNING DO NOT SHIP AMMUNITION

BEFORE SHIPPING ANY FIREARM, BE ABSOLUTELY CERTAIN THAT THE FIREARM AND MAGAZINES ARE UNLOADED. DO NOT SHIP AMMUNITION WITH A FIREARM.

1. The RMA number allows SIG SAUER to track the status of the return from the time SIG SAUER receives the firearm until it is returned.
2. Package the firearm securely to prevent damage.
3. Do not include any accessories such as scopes or mounts unless directed to do so.
4. Some states and localities, require firearms to be shipped and returned to SIG SAUER using a federally licensed firearms dealer.
5. Federal law prohibits persons who do not possess a Federal Firearms License (FFL) from shipping a firearm via the U.S. Postal Service.
6. Any shipment of firearms outside U.S. borders is subject to the export laws of the United States and to the valid laws of the specific country.
7. SIG SAUER is not responsible for any damage to a firearm during shipping until it is received.
8. Firearms must be insured and prepaid prior to shipment (SIG SAUER does not accept collect shipments) to the address provided by Customer Service.

SIG SAUER INFINITE GUARANTEE™

For warranty information on new SIG SAUER firearms, scan the QR code below to visit the SIG SAUER Warranty Information and Registration page. New firearms can also be registered and warranty information can be found on the website.



sigsauer.com

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