



# ZF-5

»» Operator's Manual

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# Table of Contents

## PART 1: Description

- 01 02 Essential safety instructions**
  - 02 1.1 Outlining safety
  - 02 1.2 Safety instructions for handling the ZF-5
  - 03 1.3 Safety instructions for live fire
  - 03 1.4 Exclusion of liability and warranty
  
- 02 03 Description of the ZF-5**
  - 03 2.1 Designation
  - 03 2.2 Intended use
  - 04 2.3 Functional elements
  - 06 2.4 Assembly groups
  
- 03 07 Technical description**
  - 08 3.1 Safety features
  - 08 3.2 Functional elements
  - 08 3.3 Firing sequence
  
- 04 11 Ammunition recommendations**

## PART 2: Handling

- 05 12 Checks**
  - 12 5.1 Completing a safety check
  - 12 5.2 Completing a function check
  
- 06 13 Preparations**
  - 13 6.1 Using the sling
  - 14 6.2 Mounting the Picatinny optic rail
  - 15 6.3 Adjusting the rear sight
  - 19 6.4 Using the ZF-5 with a silencer
  - 20 6.5 Loading the magazine
  
- 07 21 Operation**
  - 21 7.1 Inserting the magazine
  - 21 7.2 Chambering a cartridge
  - 22 7.3 Firing position and aiming
  - 24 7.4 Firing
  - 24 7.5 Removing the magazine
  - 25 7.6 Reloading the ZF-5
  - 25 7.7 Unloading the ZF-5
  - 25 7.8 Emptying the magazine
  
- 08 26 Cleaning**
  - 26 8.1 General instructions for cleaning
  - 26 8.2 Disassembling the ZF-5
  - 31 8.3 Cleaning the ZF-5
  - 33 8.4 Assembling the ZF-5
  
- 09 36 Troubleshooting: problems and solutions**



## >> PART 1: Description

### 01 ESSENTIAL SAFETY INSTRUCTIONS

The ZF-5 is designed and manufactured to precise specifications and recognized safety standards. Nevertheless, using this firearm may result in injury or death of the user, third parties, or damage to the firearm or property.

- Follow all instructions in this operator's manual. Non-compliance may result in injury or death.
- Do not handle the firearm if you are tired, feel unwell, or have consumed alcohol, drugs, or medications.
- Do not use the firearm for criminal acts or in support of criminal activities.

#### 1.1 Outlining safety

This operator's manual is an integral component of safety.

- Do not use the firearm until you read and understand this operator's manual completely.
- Keep this operator's manual for the entire service life of the firearm.
- If you receive supplements or amendments, add them to this operator's manual.
- Pass this operator's manual to any subsequent operator or owner.
- Do not entrust the firearm to anyone who has not read and understands this operator's manual.

#### 1.2 Safety instructions for handling the ZF-5

- Take special care when handling firearms, because muzzle position and direction changes can easily occur.
- Only use the firearm when it is in good condition.
- Treat the firearm as if there is a round of ammunition in the chamber until you verify whether or not it is loaded.
- Keep the firearm unloaded when handling for purposes other than loading or firing.
- Only use the firearm for its intended purpose. Using the firearm for other than its intended purpose may result in damage and/or an accidental discharge of the firearm.
- Do not play with the firearm.
- Never point the firearm at people or property when handling or practicing with it.
- Do not touch the trigger when loading, unloading, aiming, or handling the firearm in any other way until you are ready to fire.
- Keep your trigger finger outside of the trigger guard until you are ready to fire.
- Do not use excessive force when handling, disassembling, cleaning, or assembling the firearm.
- Avoid unnecessary dry firing as it can lead to premature wear.
- Store the firearm and ammunition separately.
- Prevent access to the firearm and ammunition by unauthorized persons, especially children.
- Never give or take the firearm from another person unless it is unloaded and





the bolt is in the open position with the safety engaged.

- Immediately fix any issue that compromises the safe operation of the firearm.
- Exposure to exceptional stress such as banging or dropping may have a negative effect on the firearm's safe operation. If this occurs, have the firearm inspected by the manufacturer or a trained armorer.
- Do not rely on safety features of the firearm alone. Safety features are not a substitute for careful, correct handling of the firearm.
- When using accessories and ammunition, follow the instructions provided by the respective manufacturers and verify its compatibility.

### 1.3 Safety instructions for live fire

- Wear eye and ear protection when firing the ZF-5.
- Keep your hands out of the path of the bolt and the muzzle.
- Keep your muzzle area clear.
- Do not shoot at doors, panes of glass, walls, concrete, stone, or smooth surfaces (including water). Ammunition projectiles can penetrate these objects and/or deflect in an unsafe direction.
- Only pull the trigger when the firearm is pointing at the target and the area behind the target is free from other persons, structures, buildings, obstructions, or objects for as far as the projectile is able to travel. A 9mm ammunition projectile can travel approximately 1.4 miles.
- Only use factory-loaded ammunition of the correct caliber.
- Do not touch the barrel as it heats up during firing.

### 1.4 Exclusion of liability and warranty

Zenith Firearms accepts no liability and provides no warranty for incidents arising from:

- Non-compliance with this manual
- Incorrect handling of the firearm
- Negligence
- Improper use or unsafe practices
- Modifications, attachments to, or conversion of the firearm without the express written consent of Zenith Firearms, or
- Use of accessories or spare parts from other manufacturers without the express written consent of Zenith Firearms

## DESCRIPTION OF THE ZF-5

02

The ZF-5 is a full-sized roller-delayed blowback firearm that fires from steel 9mm magazines holding 10, 15, 20, or 30 cartridges.

### 2.1 Designation

Depending on the variant, the ZF-5 may be classified as a pistol, carbine, or submachine gun. Follow all BATFE and NFA regulations.

### 2.2 Intended use

The ZF-5 is effective against targets at ranges up to 100 meters. It is particularly suited for use at close quarters, or when a compact, but highly-capable firearm is required. The ZF-5 excels in many roles including, but not limited to, sporting use, self defense, or law enforcement and security use.

## 2.3 Functional elements



Figure 1: ZF-5 left side view



Figure 2: ZF-5 right side view

## 2.4 Assembly groups



Figure 3: ZF-5 assembly groups



## 03 TECHNICAL DESCRIPTION

The ZF-5 is a compact firearm chambered in 9mm, and capable of semi-automatic or full automatic firing, depending on the model. The ZF-5 utilizes a roller-delayed blowback operating system for exceptional reliability.

|  | <b>ZF-5 SPECIFICATIONS</b><br>Full-sized semi-automatic<br>roller-delayed blowback |
|---|--|
| caliber   | 9 x 19 mm Parabellum   |
| operating system  | gas-operated roller-delayed blowback   |
| mode of fire  | semi-automatic   |
| magazine  | 30-round steel   |
| trigger pull  | 6-8 lbs.   |
| safety  | manually actuated lever  |
| weight, firearm w/o magazine  | 5.5 lbs.   |
| weight, empty magazine  | 0.4 lbs.   |
| weight, full magazine   | 1.2 lbs.   |
| length  | 17.9 in.   |
| height  | 8.3 in.  |
| width   | 2.0 in.  |
| barrel length   | 8.9 in.  |
| barrel  | cold hammer forged 4150 CMV,<br>3-lug, ½ x 28 RH threaded                          |
| rifling   | 6 grooves, RH twist, 1:10 in.  |
| sights  | fixed hooded front; adjustable rear<br>with 4-aperture rotary drum                 |
| sight radius  | 13.4 in.   |
| handguard   | tropical wide  |
| warranty  | limited lifetime   |

Figure 4: ZF-5 specs





### 3.1 Safety features

The safety selector (see *Figure 5, page 8*) prevents accidental actuation of the trigger. In the safe position, the selector axle and trigger tail prevent rearward trigger movement. When the safety selector is rotated to the fire position, the trigger may be activated.



Figure 5: Safe position



Figure 6: Fire position

### 3.2 Functional elements

- The safety selector (see *Figure 5, page 8*) is used to make the firearm safe and to select the mode of fire.
- The paddle magazine release (see *Figure 1, page 4*) and push button magazine release (see *Figure 2, page 5*) allows removal of the magazine.
- The firearm can be equipped with an optic rail and handguard in order to attach optics, lasers, lights, and other accessories.
- A silencer can be attached to the ZF-5 either via the three lug attachment point or the 1/2x28 direct thread at the end of the barrel.
- The charging handle (see *Figure 1, page 4*) is used to open and close the bolt in order to load or clear the firearm.
- The buttstock, if attached, can be retracted or folded (depending on the variant, BATFE NFA restrictions may apply).
- The front and rear sling attachment points (see *Figure 1, page 4*) can be used to mount a sling.
- The rear diopter drum sight (see *Figure 2, page 5*) can be rotated to provide more or less field of view on target for rapid target acquisition or more precise aiming.

### 3.3 Firing sequence

**Initial state:** The bolt carrier group (see *Figure 3, page 6*) is pulled all the way back manually using the charging handle. This causes the bolt carrier group to cock the hammer.

The firearm has a loaded magazine inserted (see *Section 7, page 21*).



### 3.3.1 ZF-5 operational cycle

> **STEP ONE**

**Feeding: A cartridge is removed from the loaded magazine when the charging handle is released.**

The bolt group moves forward in the receiver as the recoil spring assembly decompresses. As it passes through the feed lips of the magazine, the top cartridge is stripped from the magazine and travels forward with the bolt to the chamber.

> **STEP TWO**

**Chambering: A cartridge is placed into the chamber of the barrel and secured.**

The bolt continues its forward progress and deposits the cartridge into the chamber until the front of the cartridge case contacts the end of the chamber.

> **STEP THREE**

**Locking: Before firing, the breech is completely closed and temporarily locked.**

The bolt completes its forward movement as the extractor secures the cartridge case and the front of the bolt contacts the face of the barrel. Even as the bolt head's forward progress is stopped, the locking piece and bolt carrier continue to move forward until the locking rollers have been pushed into position by the locking piece.

> **STEP FOUR**

**Firing: The primer of the cartridge is activated, igniting the powder.**

A trigger pull causes the sear to release the hammer, which forcefully contacts the firing pin. The firing pin is driven

forward into the primer of the unfired cartridge. Once activated, the primer detonates to ignite the powder contents of the cartridge for firing.

> **STEP FIVE**

**Unlocking: The locking piece is moved rearward away from the rollers, allowing the bolt assembly to unlock and open.**

Once fired, rearward pressure is applied to the bolt head assembly, locking rollers, and locking piece. The locking piece then moves to the rear, away from the rollers, causing the bolt to unlock.

> **STEP SIX**

**Extracting: The spent cartridge case is removed from the chamber.**

Gas expands from the inside of the cartridge case to the flutes of the chamber. Expanding gases surround the cartridge case in the flutes forcing the spent case to be removed. This prevents sticking in the chamber.

> **STEP SEVEN**

**Ejecting: The spent cartridge case is expelled from the firearm.**

The extractor assembly continues to secure the spent cartridge case to the face of the bolt head as it moves rearward. The channel at the bottom of the bolt head allows it to travel past the ejector until the spent case is impacted by the ejector, expelling it from the ejection port.



> **STEP EIGHT**

**Cocking: The trigger assembly is reset to allow follow-up shots.**

Semi-auto configuration: The bolt carrier group moves rearward under recoil and impacts the hammer, compressing it to the cocked position where it is retained by the sear.

Full-auto configuration: The bolt carrier group moves rearward under recoil and impacts the hammer, compressing it to the cocked position. As the bolt carrier moves forward, the hammer begins to follow the carrier until it is temporarily retained by the catch. The bolt carrier continues to move into battery, and the release lever is tripped, allowing the hammer to move to the sear for retention.



## 04 AMMUNITION RECOMMENDATIONS

The Zenith ZF-5 Series is designed to fire high-quality, new production factory-loaded ammunition that meets SAAMI or NATO specifications. It is imperative that ammunition of the correct caliber is used to prevent damaging the firearm and to avoid serious injury or death. While Zenith Firearms recommends using brass-case ammunition, there are types of steel-case ammunition that also function reliably. Zenith highly recommends inspecting each cartridge for damage, corrosion, or other abnormalities before loading a magazine for firing.

### Break-in period recommendations

During the 300-500 round break-in period of a brand-new firearm, Zenith recommends NATO-spec or other high-quality, high-pressure ammunition having a bullet weight of 124 grains.

### Post break-in period recommendations

- Factory new brass-case ammunition meeting NATO or SAAMI specs from 115 grains to 124 grains
- Some types of factory new steel-case ammunition meeting SAAMI specs from 115 grains to 124 grains
- Some types of factory new brass-case ammunition meeting SAAMI specs with a bullet weight of 147 grains depending on the profile/shape of the projectile

### DO NOT USE:

- Aluminum-case ammunition
- Ammunition with projectiles heavier than 147gr.
- Hand-loaded or remanufactured ammunition
- Ammunition of the wrong caliber
- Ammunition that has been damaged, corroded, or exposed to water, lubricants, grease, or other contaminants
- Exposed lead projectile ammunition
- Certain hollow point ammunition that impedes feeding reliability
- Low pressure ammunition intended for smaller handguns
- Outdated surplus ammunition
- Ammunition that has been exposed to extreme temperatures



## >> PART 2: Handling

### 05 CHECKS

#### 5.1 Completing a safety check

Successful completion of the safety check verifies there is no ammunition in the firearm. The safety check is especially important when giving or taking the firearm from someone or when the status of the firearm is unknown.

1. Point the firearm in a safe direction.
2. Move the selector lever to the safe position on the trigger group.
3. Remove the magazine from the firearm.
4. Move the charging handle to the rear and lock it in place.
5. Inspect the firearm's chamber visually and physically to make sure that it's clear.

#### 5.2 Completing a function check

Successful completion of the function check verifies that the firearm is operating correctly. The function check should be completed after reassembly of the firearm.

##### Semi-auto configuration:

1. Verify the firearm is unloaded (see section 5.1).
2. Remove the magazine (see Figure 21, page 24).
3. Move the charging handle (see Figure 1, page 4) completely backward and forward several times.
4. Release the charging handle and allow the bolt group to snap forward.
5. Move the safety selector (see Figure 1, page 4) to the safe position.

6. Pull the trigger (see Figure 1, page 4). The hammer should remain cocked.
7. Move the safety selector to the fire position.
8. Pull the trigger and hold it all the way to the rear. The hammer should release and impact the firing pin.
9. Continue to hold the trigger to the rear and pull the charging handle back and release it to simulate a round firing.
10. Release the trigger. The trigger should reset, and the hammer should not move forward to strike the firing pin.
11. Insert an empty magazine and verify that it seats correctly and locks. Try to remove it without manipulation of either magazine release.
12. After verification of magazine retention, remove it by activating the paddle magazine release or by pushing the button magazine release (see Figure 21, page 24).

##### Full-auto configuration:

1. Complete steps 1 through 10 from the semi-auto configuration.
2. Move the selector lever to the full-auto fire position.
3. Pull the trigger and hold it all the way to the rear. The hammer should release and impact the firing pin.
4. Continue to hold the trigger to the rear and pull the charging handle back and release it several times. Each time the charging handle completes its forward travel, the hammer should release and strike the firing pin.
5. Release the trigger and pull the charging handle to the rear and release. The trigger should reset, and the hammer should not move forward to strike the firing pin.
6. Complete steps 11 – 12 from the semi-auto configuration.



## 06 PREPARATIONS

### 6.1 Using the sling

#### 6.1.1 Mounting the sling to the ZF-5

1. Attach the rear sling clip to the rear sling mounting point of the firearm (see *Figure 1, page 4*).
2. Attach the front snap hook to the front sling mounting point of the firearm (see *Figure 1, page 4*).

#### 6.1.2 Adjusting the length of the carrying sling

Regardless of which type is used, the length of the sling is optimal if the firearm can be shouldered/extended without compromising the proper position for shooting and manipulation of the safety selector.

Attach the sling to the firearm (see *Section 6.1.1*). Loosen the sling to its maximum setting. Mount the sling to your body and extend the firearm out to a natural shooting position. Tighten the sling until it is the appropriate length and secure the loose end with a retention band.



Figure 7: Mounting the carrying sling to the ZF-5



Figure 8: User with ZF-5 and 2-point sling

## 6.2 Mounting the Picatinny optic rail

Required tools: 5/64 hexagonal Allen wrench

The ZF-5 can be equipped with optional optic mounts.

1. Place the optic rail on the receiver, aligning it over the mounting tabs to the front and rear of the ejection port (see *Figure 1, page 4*). Begin attaching the retainers at the base of the optic rail and secure each with the screws from the top. It is best to tighten each partially and then move to the next, ensuring the proper alignment over the mounting tabs before securing each screw completely. Maximum torque to be applied to each screw is 20-in./lbs. (A small amount of blue Loctite may be applied to each screw before assembly for additional retention to avoid loosening.)



Figure 9: Mounting the Picatinny optic rail

### 6.3 Adjusting the rear sight

#### Required tools: sight adjustment tool

Point of impact may be affected by the type of ammunition used. Different types of ammunition can change the elevation and windage of where the projectile strikes. Though the sights can be adjusted to correct this effect, it is recommended that you utilize the same type of ammunition for zero adjustment of the sights as you would in an operational setting.

There are two parts of the sight adjustment tool (sold separately):

1. Short Phillips head screwdriver
2. Spring cylinder tool

The tabs at the end of the spring cylinder tool are spring-loaded and will move outward at the tips. The insertion of the screwdriver tool into the spring cylinder tool will bring the tabs inward toward each other. This outward movement of the tabs will capture the detents holding the rear sight drum in place, allowing rear sight elevation adjustment.

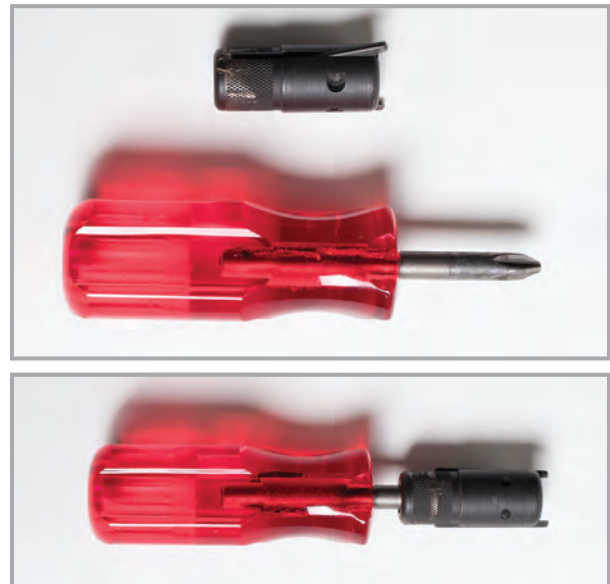


Figure 10: Sight adjustment tool (sold separately)

### 6.3.1 Sight adjustment

Lower elevation: clockwise  
Raise elevation: counterclockwise  
Left windage: clockwise  
Right windage: counterclockwise

Sight adjustments are only made to the rear sight assembly. Windage or elevation adjustments require the rear sight to be moved in the same direction the shooter wants the location of the projectile to impact. For example, if the impact is to the right of the intended target, then the sights should be moved to the left.

- **Elevation:** One full turn of the rear sight drum will move the impact of the projectile approximately 2 in. at 25 yards.
- **Windage:** One full turn of the windage screw will move the impact of the projectile approximately 2 in. at 25 yards.

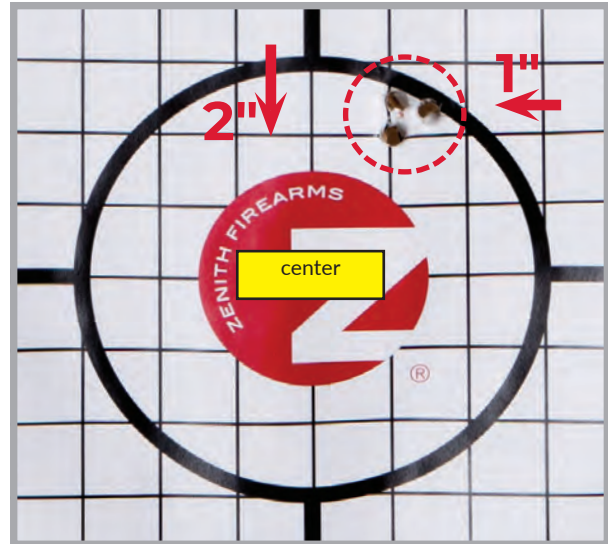


Figure 11: Sight adjustment example

- *Example: At 25 yards, the impacts are 2 in. high and 1 in. right of the target. Using the sight adjustment tool, you should make an elevation adjustment of one full turn of the rear sight drum in a clockwise direction to move the impact of the projectiles lower, and one half turn in a clockwise direction to move the impact of the projectiles to the left.*

### 6.3.2 Elevation adjustment

1. Insert the screwdriver portion of the rear sight adjustment tool into the spring cylinder tool. Insertion will bring the tabs towards the center.
2. Insert the complete sight adjustment tool assembly into the top of the rear sight drum, engaging the two notches at the base which have spring-loaded plungers.
3. With one hand pressing down on the spring cylinder tool portion of the rear sight adjustment tool assembly, remove the Phillips screwdriver. Then, carefully reinsert the Phillips screwdriver and press down. You should hear a “click” as the spring-loaded arms of the spring
4. cylinder tool engage against the outside of the spring-loaded plungers in the rear sight base, releasing the rear sight drum to rotate freely.
5. With continued downward pressure of the sight adjustment tool, you should be able to rotate the drum freely without the click/stop positions at each quarter turn. If the drum does not rotate freely, repeat steps 1 through 3.
6. Make the appropriate rotational adjustment to the rear sight drum and remove the tool when complete.

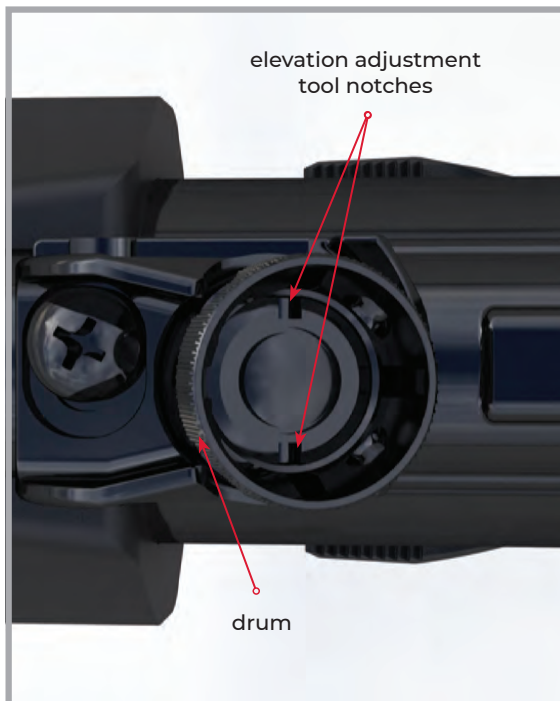


Figure 12: Elevation adjustment

- *Elevation: One full turn of the rear sight drum will move the impact of the round approximately 2 in. at 25 yards. Turn clockwise to lower elevation and turn counterclockwise to raise elevation.*





### 6.3.3 Windage adjustment

1. Using the Phillips head screwdriver, locate the locking screw (large Phillips head screw) on the top of the rear sight base and unscrew it a quarter turn. Loosen the screw, but do not remove it.
2. Insert the Phillips head screwdriver into the windage screw on the right side of the rear sight base.
3. Make the appropriate rotational adjustment to the windage screw and remove the tool.
4. Tighten the locking screw on the top of the rear sight base securely.

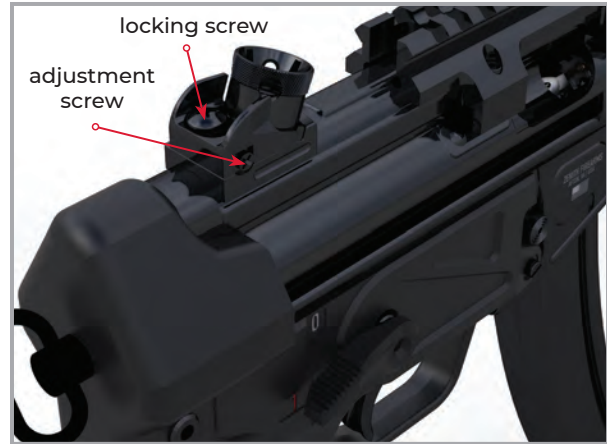


Figure 13: Windage adjustment

- *Windage: One full turn of the windage tool will move the impact of the round approximately 2 in. at 25 yards. Turn clockwise for left windage and turn counterclockwise for right windage.*

## 6.4 Using the ZF-5 with a silencer

Firing with a silencer places greater stress on the firearm and contributes to faster wear on internal components, as well as heavier fouling. If the firearm is used with a silencer, it is recommended that the firearm be cleaned every 500 rounds and lightly lubricated more frequently. Heavy lubrication will cause excessive smoking while firing, which may cause eye irritation or breathing difficulties.

Due to the change in velocity of a bullet being fired with a silencer, the point of impact will change. Readjusting the sights may be necessary.

1. Ensure the firearm is unloaded and place the safety selector in the safe position.
2. Verify that no obstructions are present in the silencer.
3. Choose which type of mounting interface will be used with the silencer (direct thread or 3-lug attachment).
4. Place the silencer on the barrel, utilizing the correct mounting type.
5. Ensure that the silencer is fully threaded or locked on the barrel.
6. Load the firearm and fire.
7. After firing has been completed and the silencer has cooled down adequately, remove the silencer.
8. Inspect the mounting point on the barrel and on the silencer, as cleaning will be necessary prior to mounting the silencer for follow-up use.



Figure 14: Direct thread installation



Figure 15: 3-lug installation



### **RISK OF BURN**

*The silencer becomes very hot during firing.*

*> Do not remove the silencer from the firearm until it has sufficiently cooled to avoid being burned and keep away from materials that may melt or catch fire.*



### **RISK OF DAMAGE**

*Sustained firing in the full-auto position can damage the silencer.*

*> Only fire with the silencer in semi-auto position or with short bursts in the full-auto position to avoid overheating the barrel and silencer.*

## 6.5 Loading the magazine



### **RISK OF FIREARM DAMAGE AND INJURY OR DEATH TO PERSON**

Damaged, dented, or fouled cartridges can damage the firearm and cause malfunctions, along with serious injury or death.

> Only use newly-manufactured factory-loaded ammunition that is in good condition.



### **RISK OF FIREARM MALFUNCTION AND DAMAGE**

An overfilled magazine can lead to malfunctions or damage the firearm.

> Only load the magazine with the number of rounds of ammunition indicated on the magazine.



### **RISK OF FIREARM MALFUNCTION AND MAGAZINE DAMAGE**

Keeping the magazine filled for long periods can result in damage to the magazine spring and cause malfunctions.

> Remove all of the ammunition from the magazine before placing it in long-term storage.

### 6.5.1 Magazine loading sequence

1. Grasp the magazine (see Figure 1, page 4).
2. Push the cartridge straight down under the magazine lips (see Figure 16, page 20).
3. Be sure the cartridge sits all the way to the rear of the magazine.
4. Repeat steps 2-3 until reaching the desired loading point and no further than the capacity indicated for the specific magazine.
5. Ammunition viewing windows are located at the back of the magazine. The 30-round ZF-5 magazine has three windows, each one representing 10 rounds. The bottom magazine window will indicate 30 rounds have been loaded when only the bottom half of the first loaded cartridge is visible.



Figure 16: Loading the magazine

Push one round of ammunition in at a time with the projectile facing forward, straight down onto the follower.

Allow each additional round to offset as they stagger to fill the magazine.

## 07 OPERATION

### 7.1 Inserting the magazine

1. Load the magazine (see Section 6.5.1, page 20).
2. Move the safety selector (see Figure 1, page 4) to the safe position.
3. Lock the charging handle to the rear.
4. Insert the magazine into the firearm until the magazine catch engages to secure it properly.
5. Pull down on the magazine to verify that it is locked properly in the magazine well.



Figure 17: Inserting the magazine

- > *Note: There will be resistance when properly seating a fully-loaded magazine with the bolt closed.*

### 7.2 Chambering a cartridge

**ACCIDENTAL OR NEGLIGENT DISCHARGES CAN CAUSE SERIOUS INJURY OR DEATH**

*A firearm with a round of ammunition in the chamber is a potential source of danger.*



- > *Only chamber a round of ammunition immediately before firing.*
- > *Unload the firearm immediately after firing.*

1. Pull the charging handle (see Figure 1, page 4) all the way back and lock it in place.
2. Insert the loaded magazine into the firearm (see Section 7.1).
3. Release the charging handle and let it travel forward under the full force of the recoil spring. Do not attempt to ease the charging handle forward. There is now a round of ammunition in the chamber.



## 7.3 Firing position and aiming

### 7.3.1 Firing position



Figure 18: ZF-5 used at sling length

#### **RISK OF INJURY**

*The firearm's recoil can cause injury.*

*> When firing, pull the firearm firmly into your shoulder if using a stock. If firing as a pistol, push out toward the target against a sling to provide a stable firing platform.*

*> Keep your eye at least 2 in. from the rear sight when firing.*

*> Keep your hands out of the path of the bolt when firing.*

*> Keep your hands away from the muzzle when firing.*





### 7.3.2 Aiming

Correct aiming: The rear sight has four apertures to allow a wider or narrower rear sight picture. The largest aperture is used for rapid target acquisitions at close ranges, whereas the smallest aperture is used for precise aiming.



Figure 19: Point of impact centered for the ZF-5



Figure 20: ZF-5 aiming errors



## 7.4 Firing

### 7.4.1 Firing in the semi-auto position

1. Prepare the firearm for firing.
2. Chamber a cartridge (see Section 7.2, page 21).
3. Using two hands, firmly grasp the pistol grip with one hand and the handguard with the other (not the magazine). Firing while holding the magazine may cause malfunctions.
4. Aim (see Section 7.3.2, page 23).
5. Move the safety selector (see Figure 6, page 8) to the fire position.

#### **RISK OF INJURY**

*The firearm's recoil can cause injury.*

- > *When firing, pull the firearm firmly into your shoulder if using a stock. If firing as a pistol, push out toward the target against a sling to provide a stable firing platform.*
- > *Keep your eye at least 2 in. from the rear sight when firing.*
- > *Keep your hands out of the path of the bolt when firing.*
- > *Keep your hands away from the muzzle when firing.*



6. Pulling the trigger fires a cartridge. Each successive trigger release and pull fires another cartridge until the magazine is empty.
7. After firing, or to reload, move the safety selector to the safe position.

## 7.5 Removing the magazine

1. Grasp the magazine (see Figure 1, page 4).
2. Press the paddle magazine release or push button magazine release (see Figure 21, page 24).
3. Remove the magazine by pulling it down and out of the magazine well.



Figure 21: Removing the magazine

## 7.6 Reloading the ZF-5



### **RISK OF INJURY**

A firearm with a cartridge in the chamber is a potential source of danger.

- > Chamber a round of ammunition only immediately before firing.
- > Unload the firearm immediately after firing.

There is no bolt hold open device on the ZF-5, so the bolt will remain forward when the last round in the firearm has been fired. However, there is a tactile trigger click after the last round is fired, indicating an empty magazine.

1. Pull the charging handle (see Figure 1, page 4) all the way back and lock it in place.
2. Remove the magazine (see Figure 21, page 24).
3. Insert a new loaded magazine into the firearm (see Figure 17, page 21).
4. Release the charging handle and let it travel forward under the full force of the recoil spring. Do not attempt to ease the charging handle forward. There is now a cartridge in the chamber.

## 7.7 Unloading the ZF-5

1. Move the selector to the safe position.
2. Remove the magazine (see Section 7.5, page 24).
3. Pull the charging handle (see Figure 1, page 4) all the way back and lock it to the rear position. If there was a round of ammunition in the chamber, it should be ejected.
4. Complete a safety check to verify the firearm is unloaded (see Section 5.1, page 12).

## 7.8 Emptying the magazine



### **RISK OF INJURY**

Impacts to the primer can ignite the cartridge.

- > Push each round of ammunition into your hand when you empty the magazine.
- > Prevent any impacts to the primer.
- > Prevent ammunition cartridges from falling.

1. Push cartridges forward and out of the magazine by hand. Using a sharp tool to remove a cartridge from the rear may detonate the primer.



Figure 22: Unloading the magazine

## 08 CLEANING

### 8.1 General instructions for cleaning

Frequent cleaning and lubrication provide several benefits:

- Allows the firearm to function more efficiently
- Prevents premature wear
- Maintains the highest level of reliability
- Makes the next cleaning easier and less time consuming

Clean the firearm each time it is fired and at intervals of 1000 rounds. Cleaning intervals should be every 500 rounds when using a silencer.

#### **RISK OF DAMAGE**

*The use of excessive force during disassembly, cleaning, and assembly can damage the firearm.*

*> Do not use excessive force when disassembling and reassembling the firearm.*

### 8.2 Disassembling the ZF-5

#### **RISK OF INJURY**

*Improper disassembly/reassembly may cause malfunctions and lead to injury.*

*> Limit the extent of disassembly to the instructions in this manual and no further.*

#### 8.2.1 Disassembling the ZF-5 into assembly groups

1. Complete a safety check (see Section 5.1, page 12).
2. Pull the charging handle (see Figure 1, page 4) all the way back. The hammer should be cocked during disassembly.
3. Let the charging handle travel forward. Do not attempt to disassemble the firearm with the charging handle and bolt group to the rear, as the bolt group is under spring tension.
4. Push the rear takedown pin into the receiver and out the other side (see Figure 24, page 28).
5. Place the takedown pin somewhere safe.
6. Remove the stock or butt cap from the receiver.
7. Push the trigger group takedown pin into the receiver and out the other side (see Figure 25, page 28).
8. Place the takedown pin somewhere safe.
9. Pull the trigger group down and away from the receiver to remove it (see Figure 25, page 28).
10. Pull the charging handle to the rear.
11. Remove the bolt group and recoil spring (see Figure 26, page 28) from the rear of the receiver.

12. Push the front takedown pin in the receiver and out the other side (see *Figure 27, page 28*).
13. Place the takedown pin somewhere safe.
14. Remove the handguard from the receiver (see *Figure 28, page 28*).
15. The firearm is now disassembled into its major assembly groups (see *Figure 23, page 27*).



**RISK OF INJURY**

If the charging handle and bolt group are locked to the rear, the recoil spring is under tension.

> Release the bolt group forward before disassembly.



Figure 23: ZF-5 assembly groups





Figure 24: Steps 4-6



Figure 25: Steps 7-10

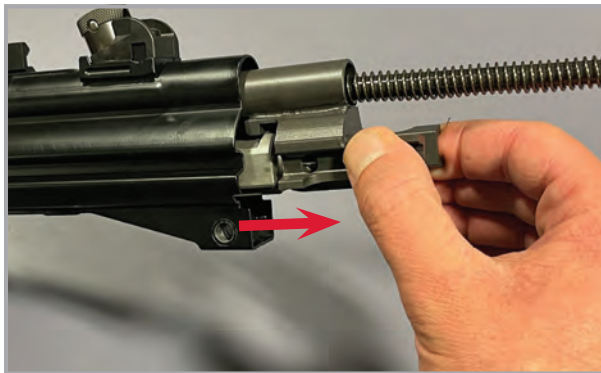


Figure 26: Step 11



Figure 27: Step 12



Figure 28: Steps 13-15



### 8.2.2 Disassembling the bolt group

1. Disassemble the firearm into assembly groups (see Section 8.2.1, page 26).
2. Remove the recoil spring assembly from the rear of the bolt carrier (see Figure 29, page 29).
3. Grasp the bolt head in one hand and the bolt carrier in the other, pull out slightly and rotate the bolt head 90 degrees to the right until it releases from the locking piece (see Figure 30, page 29).



Figure 29: Step 2



Figure 30: Step 3

4. The locking piece can be removed from the bolt carrier. Remove it, along with the firing pin and firing pin spring from the bolt carrier (see Figure 31, page 29).
5. The bolt group is now disassembled (see Figure 32, page 29).



Figure 31: Step 4

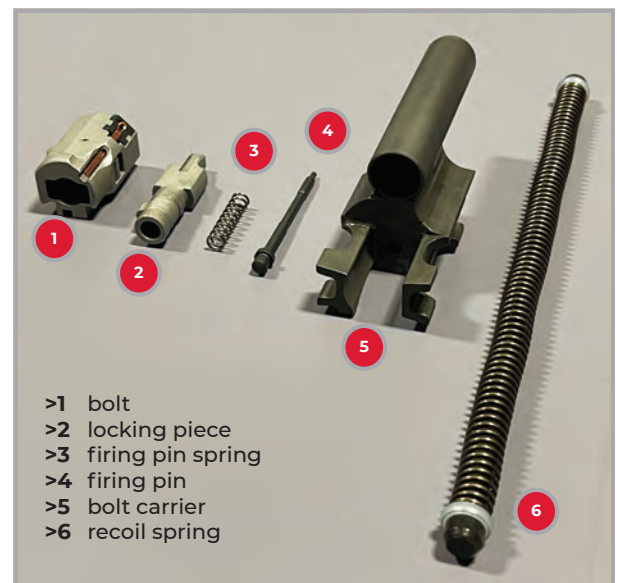


Figure 32: Step 5

### 8.2.3 Disassembling the trigger group

1. Disassemble the firearm into assembly groups (see Section 8.2.1, page 26).
2. In order to remove the trigger pack from the polymer trigger housing, pull the trigger and ease the hammer forward.
3. Remove the 3/32 Allen screw from the selector lever on the right side of the trigger group and remove the right selector lever (see Figure 33, page 30).
4. Rotate the left safety selector to the 12 o'clock position and remove it from the



Figure 33: Step 3



Figure 34: Step 4

5. Grasp the hammer and pull the trigger pack up while simultaneously pulling down on the polymer trigger housing, separating the trigger pack from the polymer trigger housing (see Figure 35, page 30).
6. The trigger group is now disassembled (see Figure 36, page 30).

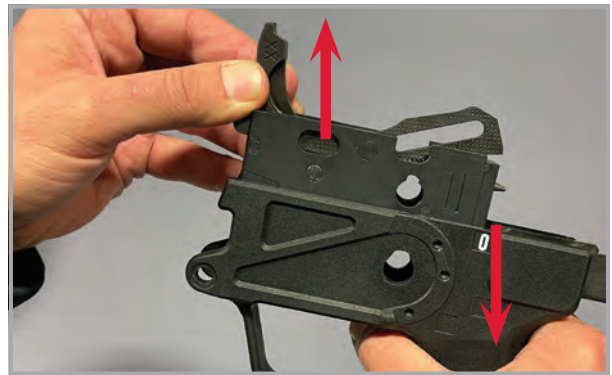


Figure 35: Step 5

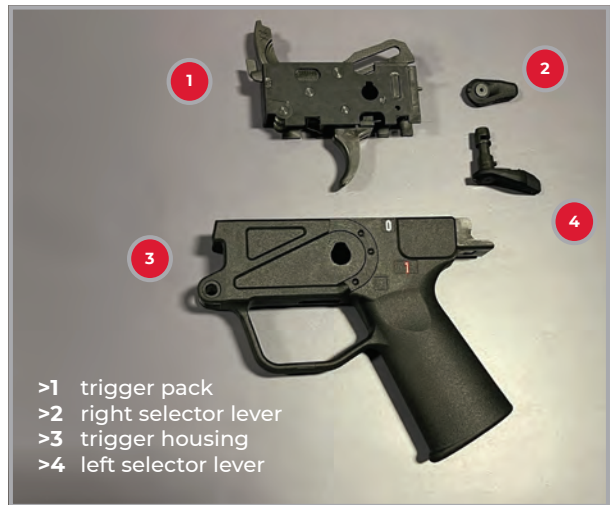


Figure 36: Step 6

### 8.3 Cleaning the ZF-5

Required materials: cleaning kit and oil



#### **RISK OF DAMAGE**

*Improper cleaning materials and products can damage the firearm.*

*> When cleaning the firearm, use products specified for firearm maintenance.*

*> Do not use any metallic objects, or harsh chemical agents to clean the firearm.*

*> Do not clean the firearm in an ultrasonic bath for long periods of time, or at high temperatures. Doing so may remove the finish or markings from the receiver or other components.*

1. Disassemble the firearm (see Section 8.2, page 26).
2. Visually check the firearm for damage.
3. Clean fouled parts and surfaces using cleaning cloths or brushes.
4. Assemble a barrel cleaning brush on the cleaning rod.
5. Clean the chamber using the brush.
6. Pull lubricated cleaning brush through the barrel several times from the inside of the receiver, not from the muzzle end.
7. Replace the barrel cleaning brush with a clean pull-through on the cleaning rod or use a bore snake.
8. Run a clean pull-through or bore snake through the barrel several times until it is free of oil and fouling.
9. Lightly lubricate a patch on a cleaning rod or use a bore snake.
10. Pull it through the barrel from the chamber.



#### **RISK OF DAMAGE**

*Lubricating the internal components of the magazine or rounds of ammunition may result in damage and malfunctions.*

*> Lightly oil only the outside of the magazine housing.*

*> Lubricating ammunition cartridges may result in deadening of the primer or damage to the firearm.*

11. Lubricate designated points on the firearm, as well as any other metal-to-metal bearing surfaces (see Figure 37, page 32).
12. Clean the magazine assembly (see Figure 1, page 4) using cleaning cloths, but do not lubricate internal components. Lightly oil the outside of the magazine housing, if desired.
13. Assemble the firearm (see Section 8.4, page 33).
14. Conduct a function check (see Section 5.2, page 12).



Figure 37: ZF-5 lubrication points



## 8.4 Assembling the ZF-5

### 8.4.1 Assembling the bolt group

1. Place the firing pin spring over the firing pin and place both inside the rear of the locking piece.
2. With the lug of the locking piece facing down, hold it with your left hand. With your right hand, hold the bolt carrier. Insert the locking piece into the bolt carrier and push inwards against the tension of the firing pin spring and rotate the locking piece 45 degrees to the left (see *Figure 38, page 33*).
3. With the bolt in your left hand and the bolt carrier in your right hand, slide the bolt over the locking piece, rotate the bolt 45 degrees to the left. The bolt will lock into position and you can now move it forward and back over the locking piece (see *Figures 39 & 40, page 33*).
4. Reinsert the recoil spring into the rear of the bolt carrier (see *Figure 41, page 33*).
5. The bolt group is now assembled.

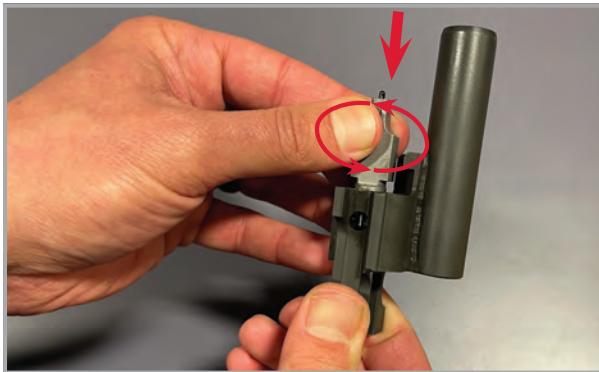


Figure 38: Step 2



Figure 39: Step 3 (rotation)



Figure 40: Step 3 (locked into position)



Figure 41: Step 4



### 8.4.2 Assembling the trigger group

1. Place the trigger pack into the trigger housing, ensuring that it seats flush and that the selector lever opening in the polymer housing aligns properly with the opening on the trigger pack for the selector lever (see *Figure 42, page 34*).
2. Reinstall the left safety selector at the 12 o'clock position from the left, pressing in and rotating it down to the safe position (see *Figure 43, page 34*).
3. Attach the right side selector lever onto the left selector lever axle and tighten the Allen screw (see *Figure 44, page 34*).
4. The trigger group is now assembled (see *Figure 45, page 34*).

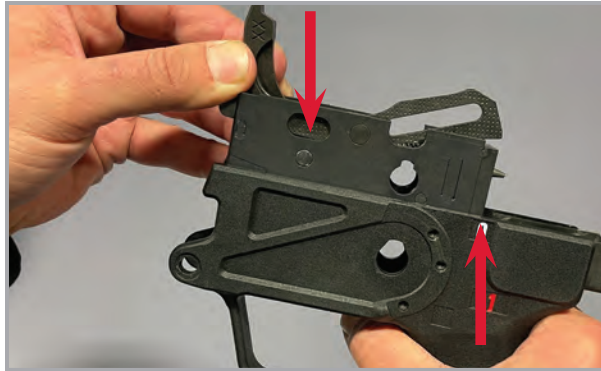


Figure 42: Step 1

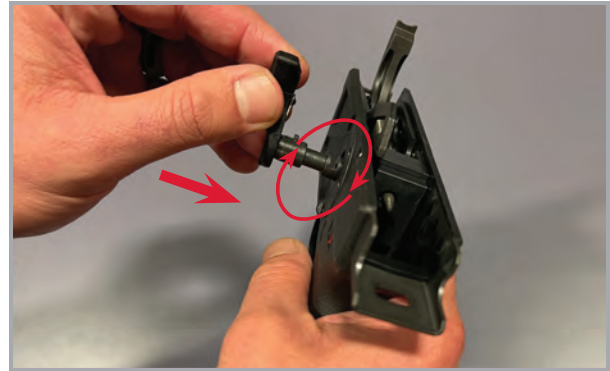


Figure 43: Step 2



Figure 44: Step 3



Figure 45: Step 4



### 8.4.3 Reassembly

1. Move the charging handle to the forward position.
2. Assemble the bolt group (see Section 8.4.1, page 33).
3. Insert the bolt group into the receiver (see Figure 46, page 35).
4. Ensure that the hammer is cocked, and reattach the trigger group to its mounting point on the rear of the magazine well, and reinsert the trigger group takedown pin (see Figure 47, page 35).
5. Align the trigger group with the rear of the receiver and replace the stock or end cap (see Figure 48, page 35).
6. Insert the takedown pin to secure the stock or end cap to the receiver (see Figure 48, page 35).
7. Replace the handguard and reinsert the front takedown pin (see Figure 49, page 35).
8. The ZF-5 is now assembled.
9. Complete a function check (see Section 5.2, page 12).



Figure 46: Step 3



Figure 47: Step 4



Figure 48: Steps 5-6



Figure 49: Step 7

# 09

## TROUBLESHOOTING: PROBLEMS AND SOLUTIONS

Troubleshooting malfunctions that exceed the scope of this manual will void the firearm's warranty. Only Zenith Firearms-authorized armorers may diagnose and address more serious malfunctions in the firearm.



**RISK OF INJURY OR DEATH**

*In the event of a malfunction, the firearm may be loaded even if you expect it to be unloaded.*

*> In the event of a malfunction, treat the firearm as if there is a round of ammunition in the chamber.*

*> In the event of a malfunction, verify whether the firearm is actually loaded or unloaded.*

*> Follow fundamental safety instructions (see Section 1, page 2) before attempting to resolve malfunctions.*



### TROUBLESHOOTING

| problem   | solution  |
|---|---|
| Cartridge does not fire                         | Wait a minimum of 1 minute and continue to point the firearm in a safe direction. Eject the defective cartridge and safely dispose of it.                       |
| Cartridge does not feed properly                | Verify the magazine is fully seated into the magazine well and locked by the magazine catch.  |
|   | Verify the ammunition used is compatible with the firearm and that the shape of the projectile is conducive to loading into the ZF-5 chamber.                   |
|   | Verify the cartridge is properly loaded in the magazine.  |
| Cartridge does not extract from the chamber     | Verify the firearm is clean and properly lubricated, particularly the chamber and its flutes.   |
|   | Verify the ammunition is not defective.   |
|   | Assess how many rounds have been fired since the extractor spring was last changed. Call the manufacturer for replacement intervals.                            |
| Cartridge does not eject from the receiver      | Verify there are no obstructions to the ejection port (such as an improperly installed optic rail).   |
|   | Assess how many rounds have been fired since the extractor spring was last changed. Call the manufacturer for replacement intervals.                            |
| Point of impact does not match point of aim     | Using the rear sight adjustment instructions (see pages 15-18), make the required changes to the elevation and windage until your desired accuracy is achieved. |
| Flash hider or silencer changes point of impact | Using the rear sight adjustment instructions (see pages 15-18), make the required changes to the elevation and windage until your desired accuracy is achieved. |

Figure 50: Problems and solutions



## ZENITH FIREARMS LIMITED LIFETIME WARRANTY

This express warranty is provided to the private, non-commercial, original owner of the firearm for his or her lifetime. The warranty covers Zenith's line of firearms, manufactured in the USA, and provides a remedy for manufacturer defects. Repair or replacement of the product is at the discretion of Zenith Firearms.

**REGISTER YOUR ZF-5 ONLINE: [WWW.ZENITHFIREARMS.COM/WARRANTY](http://WWW.ZENITHFIREARMS.COM/WARRANTY)**

### YOUR OBLIGATIONS:

1. You must provide proof of original ownership. This warranty is only to the original owner. It is void unless you establish proof of such ownership in one of the following ways:
  - a. Show that upon purchasing your Zenith firearm, you registered it at: [[zenithfirearms.com/warranty-registration-form](http://zenithfirearms.com/warranty-registration-form)]; OR
  - b. Produce a receipt or other record from the purchase of your firearm that includes your name, your dealer's name, your firearm's serial number, the purchase date, and the price you paid.
2. You must show that the original serial number is intact. Our warranty is void if your firearm's serial number is removed, altered, or illegible.

### WARRANTY LIMITATIONS:

1. Zenith does not extend this warranty to cover any defects or problems that neither Zenith nor its vendors caused. Therefore, if one or a combination of the following, in Zenith's view, contributed to the problem with your firearm, Zenith will not repair the problem under the provisions of this warranty:
  - a. Normal wear and tear relating to the age or usage of your firearm,
  - b. Improper break-in, use, maintenance, or storage of your firearm,
  - c. Failure to comply with instructions in the user manual (it is your duty to obtain your manual),
  - d. Alteration of internal or mechanical parts,
  - e. Accidents,
  - f. Improper installation of parts or accessories, or
  - g. Use of incompatible or suboptimal ammunition, parts, or accessories.
2. Zenith decides if a problem with your firearm constitutes a manufacturer defect or if it falls into one of the above limitations to this warranty. Zenith also has sole discretion to define the words above.

### WARRANTY CLAIM PROCEDURES:

1. You must follow these steps: If you encounter a problem with your firearm that you believe constitutes a manufacturer defect in materials or workmanship:
  - a. Complete and submit a warranty claim form through our website: [[zenithfirearms.com/warranty-registration-form](http://zenithfirearms.com/warranty-registration-form)]/
  - b. Within one business day, Zenith will contact you for a further discussion or advise you on next steps. Please call: 434-202-7790, if you are not contacted within this time frame.
  - c. DO NOT ship your firearm to us before receiving an invitation to do so from a member of our customer service team.
2. Costs for shipping: If our warranty department substantiates your claim, Zenith will cover the cost of return shipping.

### EXCLUSIVE WARRANTY AND LEGAL RIGHTS:

- > This is Zenith's only express warranty. In its scope it supersedes all other representations made by Zenith or Zenith staff members. The only remedy to which Zenith is obliged under this warranty is repair, provided all other conditions are met.
- > Zenith **DISCLAIMS ALL IMPLIED WARRANTIES FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.**
- > Zenith Firearms is **NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES** arising from or in connection with this express warranty or use of merchandise.
- > Your legal rights: Our warranty gives you specific legal rights, though you may also have other rights, which vary from state to state, as some jurisdictions do not allow limitations on certain damages and warranties.

QUESTIONS? Call (434) 202-7790 or send an email to [warranty@zenithfirearms.com](mailto:warranty@zenithfirearms.com)





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