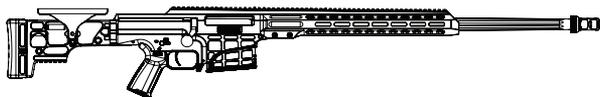


BARRETT



# MRAD

## OPERATOR'S MANUAL

READ THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL CAREFULLY BEFORE OPERATING THIS FIREARM; DO NOT DISCARD THIS MANUAL.



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## MANUFACTURER'S DISCLAIMER

Barrett Firearms Manufacturing Inc. (BFMI) will not be responsible for injury, death, or damage to property resulting from either intentional or accidental discharge of this firearm or from its function when used for purposes or subjected to treatment for which it was not designed.

### WARRANTY AND SERVICE

For one year from date of purchase, or per contract requirements, Barrett Firearms Manufacturing Inc. (BFMI), warrants to the original owner, that this product was manufactured free of defects in materials and workmanship. BFMI will correct any defect covered under the warranty by repair or replacement with the same or comparable model. BFMI will not honor claims involving this product which result from careless or improper handling, unauthorized adjustment or parts replacement, corrosion, neglect, the use of the wrong caliber ammunition, or the use of ammunition not in good condition, or any combination thereof. Please visit **barrett.net** for any additional information.

If you need factory service, whether covered under warranty or not, please contact BFMI for instructions on how to have your rifle repaired.

**Barrett Firearms Manufacturing Inc.**  
**P.O. Box 1077**  
**Murfreesboro, TN 37133-1077**  
**615-896-2938**

## USE OF THIS MANUAL

Read this manual before you use or manipulate your Barrett product. It is important that you understand the principles of safe gun handling in general and the features of this product. This manual is not a substitute for training from a qualified instructor. Important safety topics are discussed in this chapter and throughout this manual. This manual should remain with the product and it should be transferred with the product to subsequent owners. Additional manuals can be ordered from Barrett Firearms Manufacturing Inc. or can be downloaded from the company website, **barrett.net**. Technical specifications are subject to change without notice.

## SAFETY GUIDELINES



**FAILURE TO FOLLOW SAFETY GUIDELINES MAY CAUSE INJURY OR DEATH .**

### MUZZLE CONTROL

Always keep the muzzle pointed in a safe direction. Never allow your muzzle to point at anything that you do not intend to shoot. Upon firing, the muzzle device releases high-pressure gas from its ports that can damage objects or cause injuries. Keep everything away from the vicinity of the muzzle.

### KEEP YOUR FINGER OFF THE TRIGGER

Keep your finger off the trigger and out of the trigger guard until your sights are aligned on your target and you intend to fire.

### ASSUME EVERY FIREARM IS LOADED

Always treat every firearm as if it were loaded. Look and feel for an empty chamber. Do not trust the extractor to provide an empty chamber.

### KEEP YOUR SAFETY ON

Keep your safety on until your sights are aligned on your target and you intend to fire.

### AMMUNITION

Do not use hand loaded, re-manufactured, or surplus ammunition. Always use new, clean, dry, properly stored, and correct caliber ammunition from reputable manufacturers.

### FAILURE TO FIRE

If your rifle fails to fire when you pull the trigger, do not open the action. Keep the rifle pointed toward a safe area and wait 2 minutes. If a hang-fire (slow ignition) has occurred, the round will probably fire within two minutes. If the round does not fire, remove and inspect the cartridge. If the primer is indented properly, discard it in a safe manner.

### BEWARE OF BARREL OBSTRUCTIONS

Ensure the barrel's bore and chamber are free of obstructions before you fire your rifle. Even the smallest obstruction such as a stuck patch or grease will cause increased pressures that can rupture the barrel.

## MAINTAIN YOUR RIFLE PROPERLY

Performing proper maintenance, as outlined in this manual, ensures that your rifle will be safe to shoot and will perform to design specification for many years. Alterations, modifications or adjustments may damage your rifle, make it unsafe to fire and will void warranty claims.

## SAFETY DISTANCE

Bullets fired from this rifle may travel as far as 4 miles. Make certain that you have an adequate backstop.

## HEARING PROTECTION

Always wear adequate hearing protection when the rifle is firing; wear both earplugs and shooting muffs together for maximum protection. This includes observers. Observers should always be behind the shooter.

## EYE PROTECTION

Appropriate eye protection should be worn when both shooting and maintaining your rifle. It is normal for firing to generate airborne dust and debris. Protect your eyes from solvents and parts under spring pressure while performing maintenance on your rifle.

## STORE YOUR RIFLE SAFELY

It is your responsibility to take reasonable precaution to secure your rifle, keep it properly secured and prevent unauthorized use.

## ALCOHOL, MEDICATIONS AND DRUGS

Do not handle or operate your rifle under the influence of alcohol, medication or drugs.

## LEAD EXPOSURE

Discharging firearms in poorly ventilated areas, cleaning firearms, or handling ammunition may result to exposure to lead and other substances. Maintain adequate ventilation at all times. Thoroughly wash hands after exposure.

### **⚠ WARNING**

**THIS PRODUCT CAN EXPOSE YOU TO CHEMICALS, INCLUDING LEAD, WHICH IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION GO TO [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**

## DESCRIPTION OF FIREARM

The MRAD is a manually operated, bolt-action rifle fed from a 10 round, detachable magazine. Designed to be a rugged, accurate, and modular rifle system, the MRAD is offered in several configurations to best fit the operators needs. Depending on configuration, the upper receiver features a fixed or interchangeable barrel that can quickly be converted to multiple calibers or barrel lengths. Additional configuration options include lower receivers with fixed or folding stocks and adjustable length of pull. With M-LOK mounting slots at 3, 6, and 9 o'clock, its handguard offers a rigid, highly adaptable interface for attachment of rails, electro-optics, and other accessories.

## CONFIGURATIONS

### MRAD - FIGURE 1

- A. Upper Receiver - Interchangeable Barrels
- B. Barrel - Interchangeable; See **BARREL CONVERSION KITS**
- C. Lower Receiver - Hinged for Folding Stock
- D. Stock - Folding
- E. Recoil Pad - Extendable and Vertically Adjustable
- F. Cheek Piece - Adjustable Height

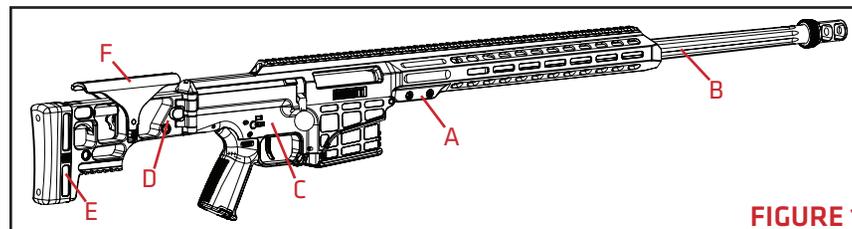


FIGURE 1

### MRAD SINGLE MISSION RIFLE (SMR) - FIGURE 2

- A. Upper Receiver - Non-interchangeable Barrel
- B. Barrel - Non-interchangeable
- C. Stock/Lower Receiver - Fixed
- D. Recoil Pad - Fixed
- E. Cheek Piece - Adjustable Height

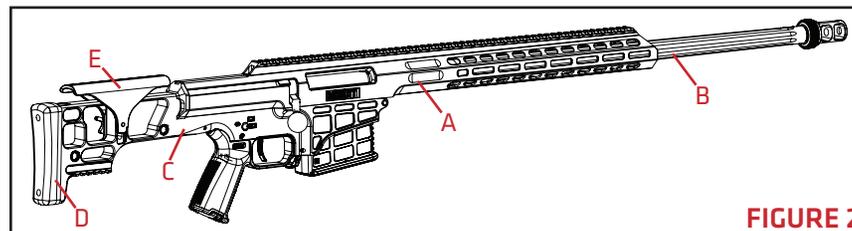


FIGURE 2

## SPECIFICATIONS

CONFIGURATION	CALIBER	BARREL LENGTH	TWIST RATE	OVERALL LENGTH	FOLDED LENGTH
MRAD	338 LM	26" (660 mm)	1 in 9.4" (239 mm)	49.5" (1257 mm)	41.6" (1057 mm)
MRAD	338 NM	26" (660 mm)	1 in 9.4" (239 mm)	49.5" (1257 mm)	41.6" (1057 mm)
MRAD	300 NM	26" (660 mm)	1 in 8" (203 mm)	49.5" (1257 mm)	41.6" (1057 mm)
MRAD	300 WM	26" (660 mm)	1 in 8" (203 mm)	49.5" (1257 mm)	41.6" (1057 mm)
MRAD	300 PRC	26" (660 mm)	1 in 8" (203 mm)	49.5" (1257 mm)	41.6" (1057 mm)
MRAD	308 WIN	24" (610 mm)	1 in 8" (203 mm)	47.5" (1207 mm)	39.6" (1006 mm)
MRAD	308 WIN	17" (432mm)	1 in 8" (203 mm)	40.5" (1029 mm)	32.6" (828 mm)
MRAD	6.5 CREED	24" (610 mm)	1 in 8" (203 mm)	47.5" (1207 mm)	39.6" (1006 mm)
MRAD SMR	338 LM	26" (660 mm)	1 in 9.4" (239 mm)	48.7" (1237 mm)	-
MRAD SMR	338 NM	26" (660 mm)	1 in 9.4" (239 mm)	48.7" (1237 mm)	-
MRAD SMR	300 NM	26" (660 mm)	1 in 8" (203 mm)	48.7" (1237 mm)	-
MRAD SMR	300 WM	26" (660 mm)	1 in 8" (203 mm)	48.7" (1237 mm)	-
MRAD SMR	300 PRC	26" (660 mm)	1 in 8" (203 mm)	48.7" (1237 mm)	-
MRAD SMR	308 WIN	24" (610 mm)	1 in 8" (203 mm)	46.7" (1186 mm)	-
MRAD SMR	308 WIN	17" (432 mm)	1 in 8" (203 mm)	39.7" (1008 mm)	-
MRAD SMR	6.5 CREED	24" (610 mm)	1 in 8" (203 mm)	46.7" (1186 mm)	-

**Trigger:** 2 Stage, Adjustable

**Magazine:** Removable, 10 Round Capacity

**NOTE: INDIVIDUAL RIFLE SPECIFICATIONS MAY VARY PER ORDER AND CONFIGURATION.**

## MAJOR COMPONENTS - FIGURE 3

1. Upper Receiver Assembly
2. Bolt Assembly
3. Rear Bolt Guide
4. Front Bolt Guide
5. Lower Receiver Assembly
6. Magazine Assembly

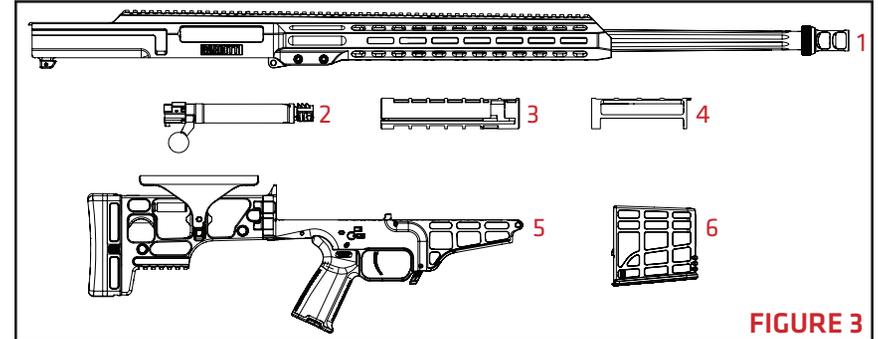


FIGURE 3

## SAFETY MECHANISM

The safety mechanism is located above the grip on the side of the lower receiver. Near the safety lever there will be engravings with a  (fire) and  (safe) (FIGURE 4). The reversible safety lever can be inserted from either side of the rifle to accommodate shooter's preference.

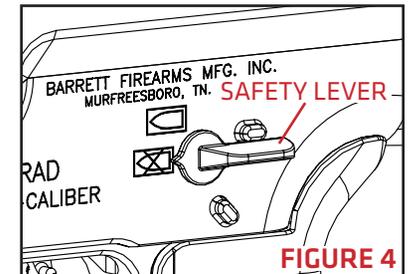


FIGURE 4

## LOADING & FIRING

### ⚠ WARNING

**BEFORE LOADING THE RIFLE, ENSURE YOU ARE FAMILIAR WITH ALL SAFETY AND OPERATIONAL PROCEDURES OUTLINED IN THIS MANUAL.**

1. Rotate the safety lever to the  (safe) position.

2. Load no more than 10 cartridges into the magazine by pushing the round straight down against the magazine follower (FIGURE 5).

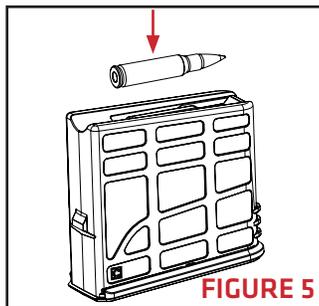


FIGURE 5

3. With the rifle pointed in a safe direction, lift the bolt handle (FIGURE 6-A) then pull it to the rear of the rifle (FIGURE 6-B).

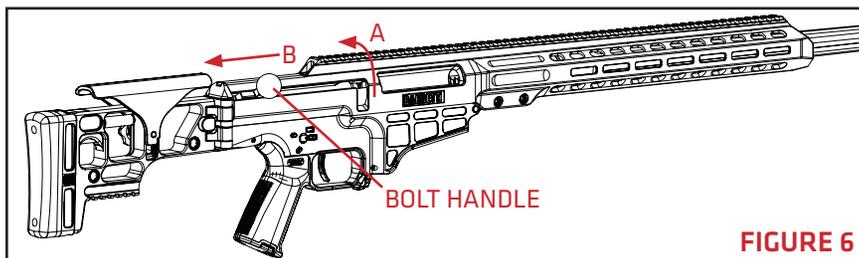


FIGURE 6

4. Insert the loaded magazine into the rifle (FIGURE 7). The magazine inserts into the rifle straight in without hinging or tilting.

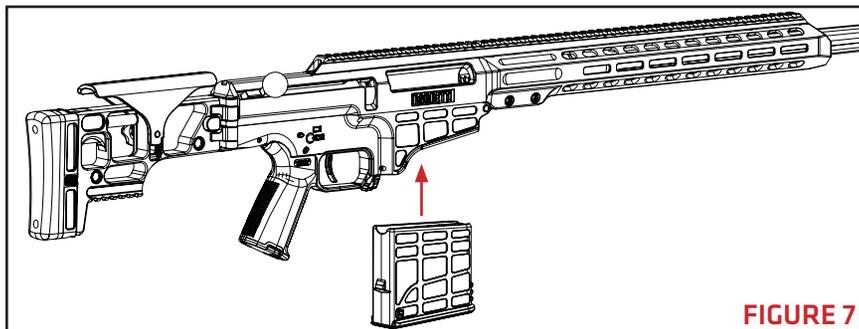


FIGURE 7

5. Push the bolt handle forward (FIGURE 8-A), then down (FIGURE 8-B). This will strip a cartridge from the magazine, and load the cartridge into the chamber.

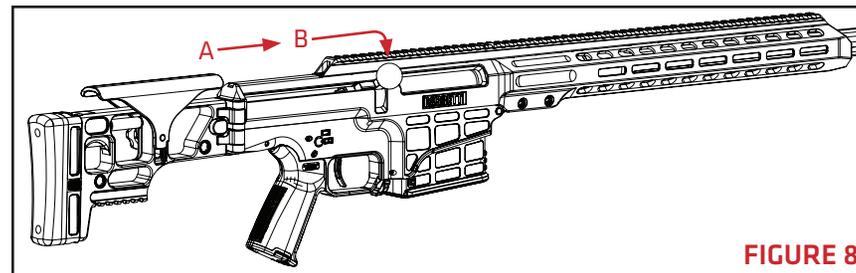


FIGURE 8

### ⚠ WARNING

**DO NOT ATTEMPT TO FORCE A CARTRIDGE INTO THE CHAMBER BY FORCING THE BOLT CLOSED. IF THE BOLT WILL NOT CLOSE EASILY, REMOVE THE CARTRIDGE AND EXAMINE IT FOR DAMAGE OR DEFECT. CHECK THE CHAMBER FOR OBSTRUCTIONS.**

6. Rotate the safety lever to the  (fire) position. The rifle is now able to fire.

### ⚠ WARNING

**THE SHOOTER MUST BE POSITIONED DIRECTLY BEHIND THE RIFLE WITH THE RECOIL PAD HELD FIRMLY AGAINST THE SHOULDER. FIRING THE RIFLE IN ANY OTHER POSITION COULD RESULT IN INJURY BY CONTACT WITH THE RIFLE OR RIFLE SCOPE.**

7. Pulling the trigger will result in the rifle firing once.

## CYCLING THE ACTION

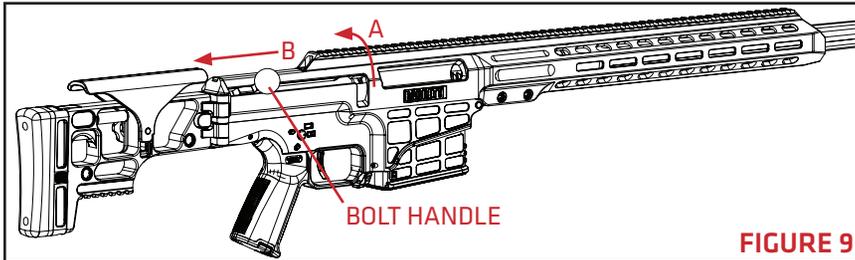
To cycle the action, lift the bolt handle up, then pull it fully to the rear of the action. This will extract the spent cartridge casing from the chamber and eject it from the rifle.

You may repeat operations beginning at number 5 until ammunition from the magazine is empty or rotate the safety lever to  (safe) position until ready to fire again.

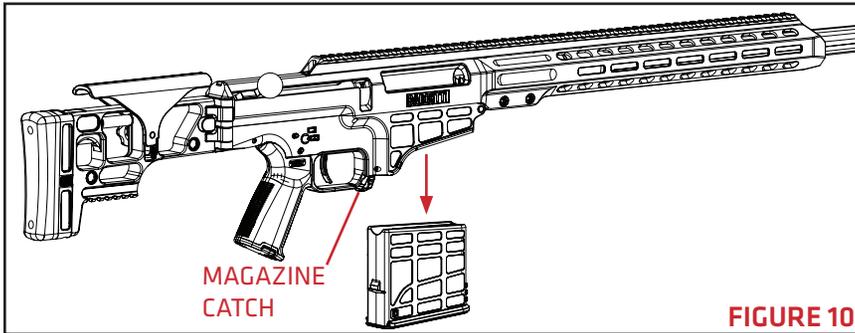
**NOTE: THE RIFLE MAY BE FIRED WITH OR WITHOUT AN EMPTY MAGAZINE. A SINGLE CARTRIDGE MAY BE LOADED DIRECTLY INTO THE CHAMBER FROM THE EJECTION PORT. AFTER INSERTION, CLOSE AND LOCK THE BOLT TO FIRE AS DESCRIBED IN LOADING & FIRING, STEP 5.**

## UNLOADING

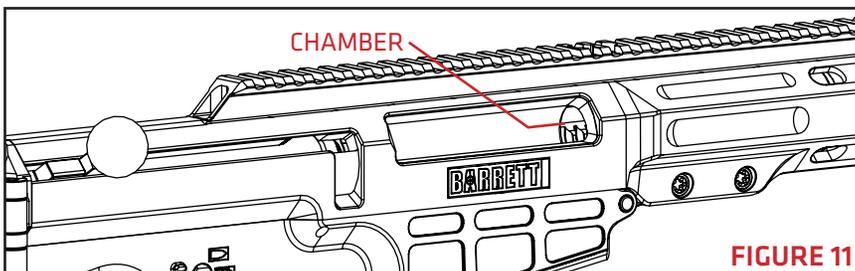
1. Ensure the safety lever is in the  (safe) position.
2. Lift the bolt handle upward (**FIGURE 9-A**), and pull it to the rear (**FIGURE 9-B**). This will eject any live or fired ammunition.



3. Remove the magazine from the rifle by pushing the magazine catch forward and remove the magazine from the rifle (**FIGURE 10**).



4. With the bolt fully to the rear and magazine removed, inspect the chamber (**FIGURE 11**). Ensure it is empty of any ammunition.



### WARNING

**DO NOT STORE OR TRANSPORT A LOADED RIFLE. ALWAYS REMOVE THE MAGAZINE AND CHECK THE CHAMBER TO ENSURE THE RIFLE IS UNLOADED.**

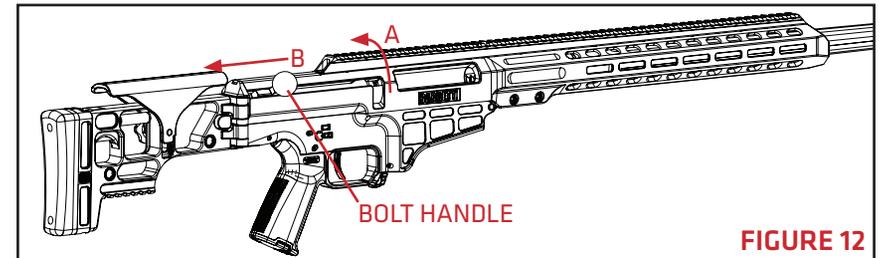
## FIELDSTRIP

### WARNING

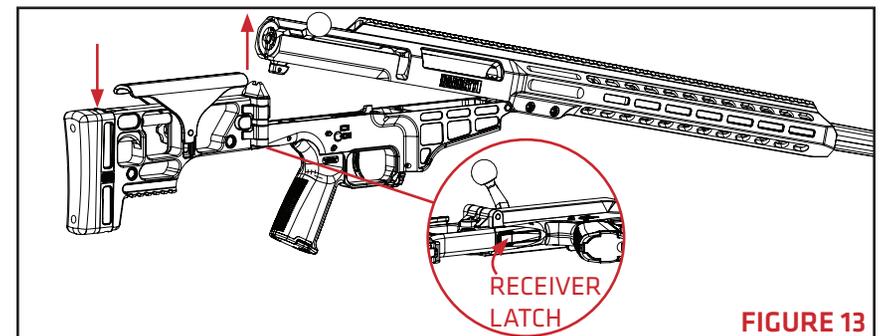
**UNLOAD THE RIFLE BEFORE DISASSEMBLY. ENSURE THAT LIVE AMMUNITION IS NOT PRESENT DURING THE DISASSEMBLY OR ASSEMBLY PROCESS.**

The rifle can be fieldstripped without tools into the major components (**FIGURE 3**).

1. Remove the magazine and ensure the rifle is unloaded.
2. Rotate the bolt handle up (**FIGURE 12-A**) and pull to the rear (**FIGURE 12-B**).



3. Locate the receiver latch on the underside of the lower receiver just behind the pistol grip. Depress and hold the receiver latch while lifting and separating the upper receiver from the lower (**FIGURE 13**). The receiver latch will not depress unless bolt handle is raised.



- Withdraw the bolt assembly, rear bolt guide, and the front bolt guide from the rear of the upper receiver. Take note of the orientation of the bolt guides while removing. The front bolt guide has a tab that protrudes forward. This tab orients at twelve o'clock position in a slot in the barrel extension (FIGURE 14).

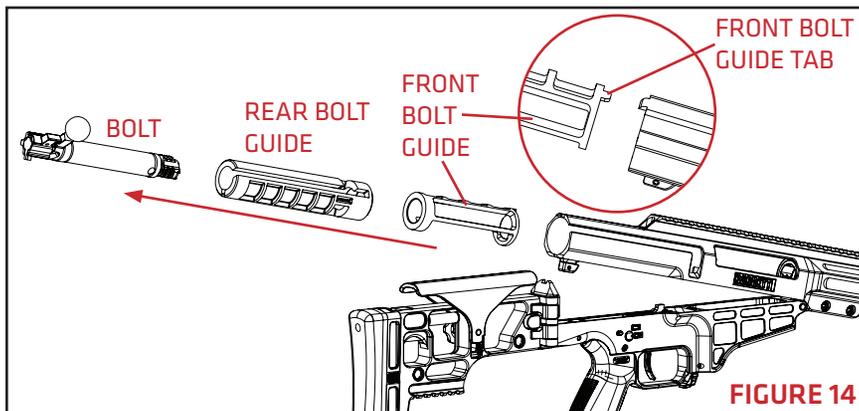


FIGURE 14

**CAUTION**

**FORCING THE RECEIVERS CLOSED WITH THE FRONT BOLT GUIDE ORIENTATED INCORRECTLY CAN CAUSE DAMAGE TO THE BOLT GUIDES AND INTERFERE WITH THE RIFLE'S OPERATION.**

- Push the assembly pin to the left to separate the receivers. The pin is captured in the lower receiver. DO NOT attempt to remove the pin from the receiver (FIGURE 15).

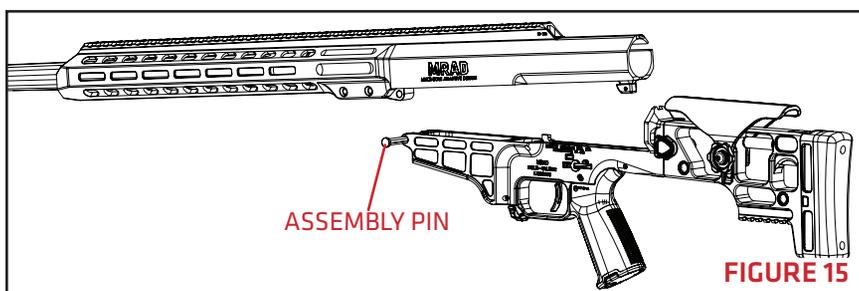


FIGURE 15

**NOTE: NO FURTHER DISASSEMBLY OF THE RECEIVERS IS RECOMMENDED OR NECESSARY FOR OPERATOR LEVEL MAINTENANCE.**

## ADVANCED DISASSEMBLY

### DISASSEMBLY OF THE BOLT

**NOTE: DISASSEMBLY OF THE BOLT IS NOT REQUIRED FOR ROUTINE MAINTENANCE AND CLEANING.**

- With the bolt removed from the rifle, ensure that the cocking piece shroud is rotated to the cocked position (FIGURE 16).

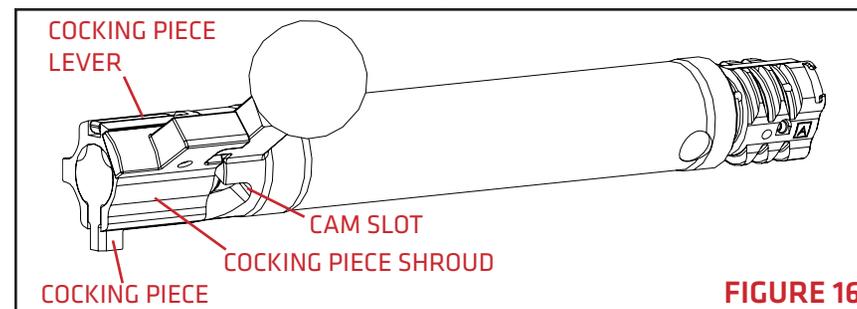


FIGURE 16

- Rotate the cocking piece lever forward until it rests against the cocking piece shroud (FIGURE 17).

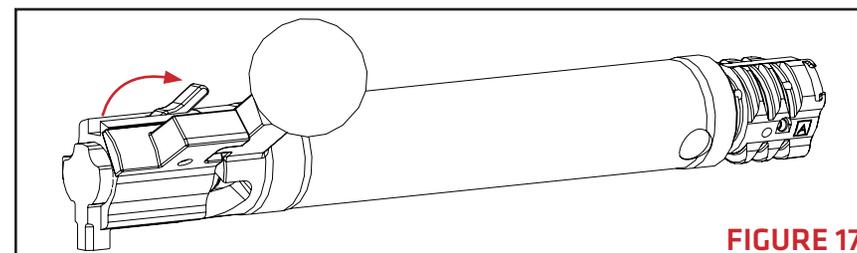


FIGURE 17

- Rotate the cocking piece shroud counter clockwise 120 degrees (FIGURE 18-A) and withdraw from the bolt tube (FIGURE 18-B). DO NOT DECOCK THE LEVER WITH THE FIRING PIN ASSEMBLY REMOVED FROM THE BOLT TUBE.

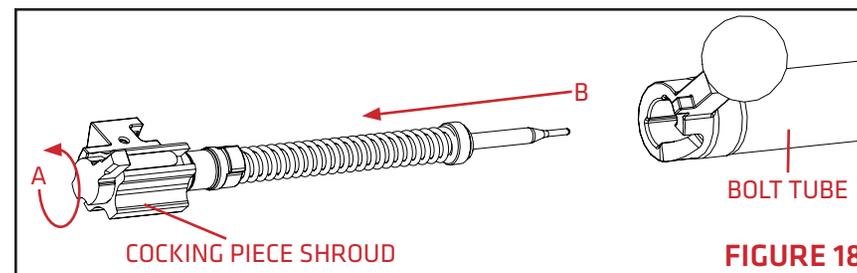


FIGURE 18

**NOTE: IF THE COCKING PIECE LEVER BECOMES DECOCKED WHILE REMOVED FROM THE BOLT BODY, INSERT THE FIRING PIN ASSEMBLY BACK INTO THE BOLT TUBE (FIGURE 19-A). MANUALLY COMPRESS THE FIRING PIN SPRING AND ROTATE THE COCKING PIECE SHROUD BACK INTO THE ASSEMBLED/COCKED POSITION (FIGURE 19-B).**

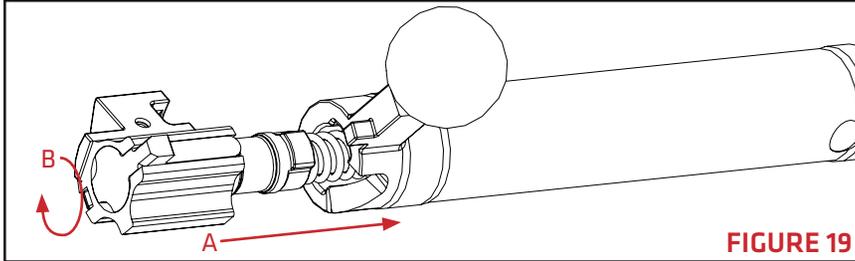


FIGURE 19

4. Push the bolt pin (FIGURE 20-A) to the side of the bolt assembly. Note that the bolt pin is retained in the bolt body and does not need to be completely removed.
5. Remove the bolt from the bolt tube (FIGURE 20-B).

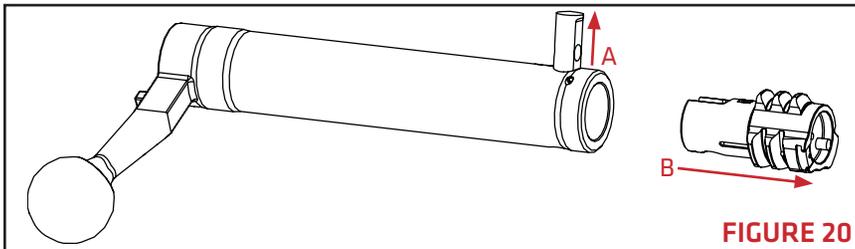


FIGURE 20

**NOTE: NO FURTHER DISASSEMBLY OF THE BOLT ASSEMBLY IS RECOMMENDED OR NECESSARY FOR MAINTENANCE.**

## REMOVAL OF THE SAFETY LEVER

1. Rotate the safety lever half way between the stops on the receiver (FIGURE 21-A).
2. From the opposite side of the safety lever, push the safety lever while slightly rotating the safety and remove it from the receiver (FIGURE 21-B).

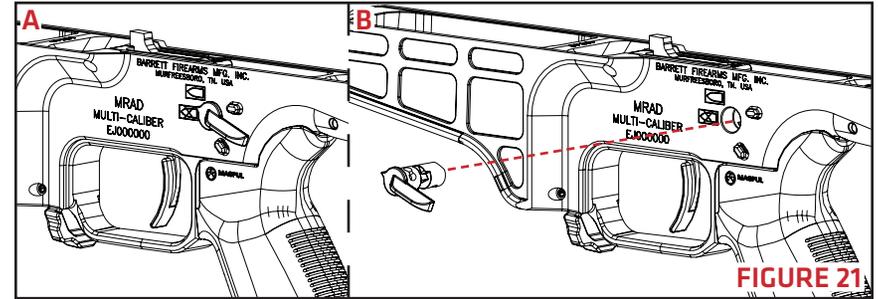


FIGURE 21

## REMOVAL OF THE TRIGGER

With the safety lever removed from the lower receiver, slide the trigger rearward to disengage the trigger retaining pin, then lift the trigger out of the receiver (FIGURE 22).

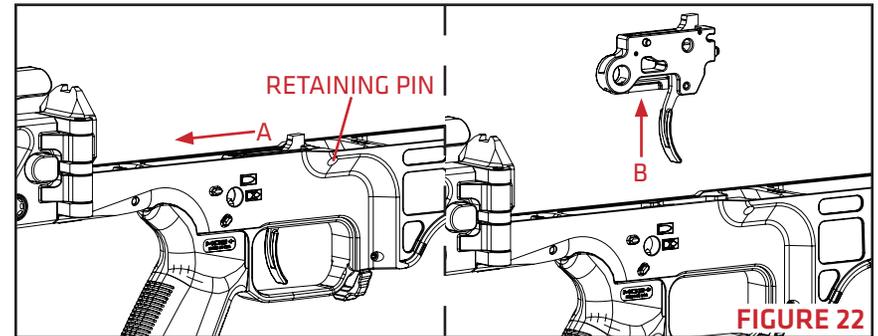


FIGURE 22

## DISASSEMBLY OF THE MAGAZINE - FIGURE 23

1. Locate the floor plate tab hole on the bottom of the magazine.
2. Using a punch or other appropriately sized tool, depress and hold the floor plate retainer tab through the hole in the floor plate.
3. Firmly press the sides of magazine body with thumb and finger near secondary retainer tabs and slide the floor plate forward and remove it from the magazine body. Note: the floor plate fit to the body is intentionally tight. Be sure to maintain control of the floor plate retainer as the magazine spring is under tension.
4. After removing the floor plate, slowly release the magazine spring tension and remove the follower assembly.

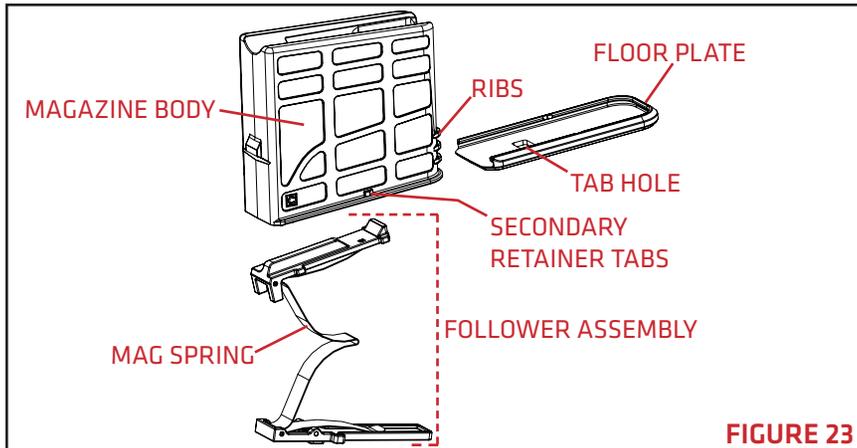


FIGURE 23

**NOTE: DISASSEMBLY OF THE MAGAZINE IS ONLY REQUIRED FOR CLEANING**

## ASSEMBLY

### INSTALLATION OF THE TRIGGER

Installation of the trigger is performed in the reverse order of the disassembly (**FIGURE 22**).

### INSTALLATION OF THE SAFETY LEVER

Align the safety lever in the safe position and push into position.

**NOTE: THE REVERSIBLE SAFETY CAN BE INSERTED FROM EITHER SIDE TO ACCOMMODATE LEFT OR RIGHT HANDED SHOOTERS.**

### ASSEMBLY OF THE BOLT

Assembly of the bolt is performed in reverse order of disassembly (**FIGURES 16-20**).

### ASSEMBLY OF THE MAGAZINE

Assembly of the magazine is performed in reverse order of disassembly (**FIGURE 23**). The MRAD has multiple magazines for different calibers identified by a letter at the bottom rear-side of the magazine. Do not mix parts from other magazines.

### REASSEMBLY OF MAJOR COMPONENTS

Major components are assembled in reverse order of disassembly.

## SAFETY/FUNCTION CHECK

### ⚠ WARNING

**PRIOR TO STARTING SAFETY/FUNCTION CHECK, ENSURE RIFLE IS UNLOADED AND NO LIVE AMMUNITION IS PRESENT.**

Perform the following check in order to ensure the rifle can be handled, stored, and/or transported without risk.

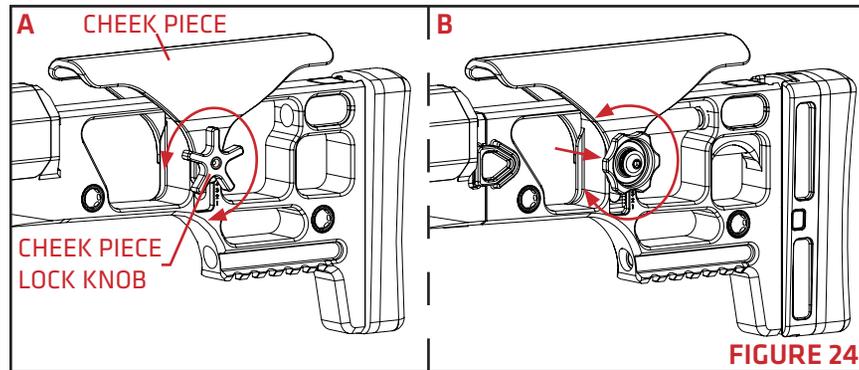
1. Remove magazine
2. Rotate bolt handle upward and pull bolt to the rear
3. Visually and physically check chamber and ensure there are no cartridges present in rifle.
4. Place safety lever in the  (fire) position
5. Close the bolt quickly
6. Attempt to pull the trigger release and listen for the audible click of the firing pin releasing. The firing pin must release\*
7. Repeat step 2 through step 6 five times.
8. Rotate the bolt handle upward and pull bolt to the rear
9. Push the bolt forward and rotate the bolt handle down and closed.
10. Position the safety lever in the  (safe) position.
11. Attempt to pull the trigger; the firing pin must not release.\*

\*If rifle fails safety/function checks ensure all components are installed/reinstalled correctly, refer to the **TROUBLESHOOTING** section, and/or contact BFMI.

## RIFLE ADJUSTMENTS

### CHEEK PIECE ADJUSTMENTS

The MRAD stock features an adjustable cheek piece to allow the operator to consistently position themselves behind any optic. To adjust the height of the cheek piece, first loosen the cheek piece knob to allow the cheek piece to slide freely (**FIGURE 24-A**). If equipped with a positive locking mechanism (**FIGURE 24-B**), pull the lock knob away from the stock while rotating to loosen and tighten. Once you set the cheek piece to the desirable height hand tighten the lock knob to prevent the cheek piece from moving during shooting.

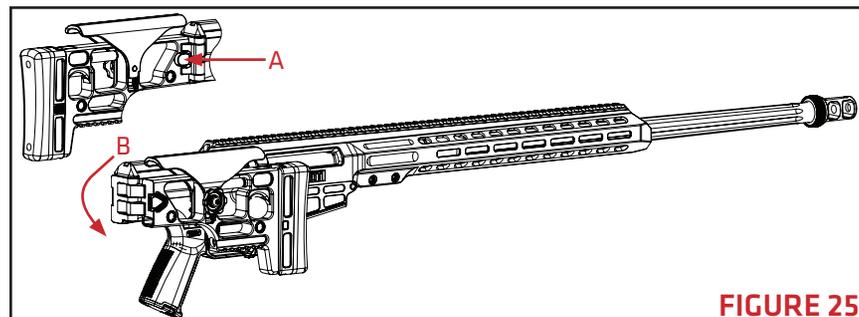


**FIGURE 24**

**NOTE: THE CHEEK PIECE AND KNOB CAN BE REVERSED FOR LATERAL ADJUSTMENT.**

### FOLDING STOCK - OPTIONAL

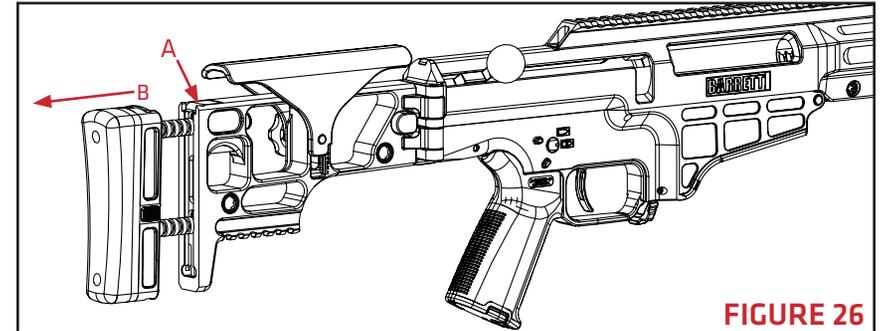
The MRAD has an optional folding stock for ease of transport. To fold the stock, first close the bolt assembly, then press the folding stock button (**FIGURE 25-A**) and swing the buttstock to the ejection port side (**FIGURE 25-B**), locking it firmly into place. To extend the folding stock pull the stock away from the rifle until it rotates completely and locks into place.



**FIGURE 25**

### LENGTH OF PULL ADJUSTMENTS - OPTIONAL

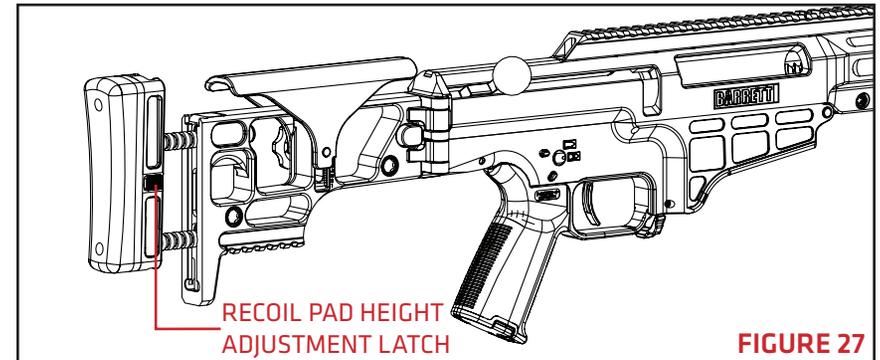
The MRAD stock, if equipped, features adjustable length of pull. With the length of pull correctly set, the operator will experience faster sight acquisition and better rifle control, comfort, and accuracy. To adjust the length of pull, depress button (**FIGURE 26-A**) and extend the recoil pad (**FIGURE 26-B**). Spacer kits are available for rifle configurations without length of pull adjustments.



**FIGURE 26**

### VERTICALLY ADJUSTABLE RECOIL PAD - OPTIONAL

If equipped, the recoil pad is able to be adjusted vertically for operator preference and comfort. To adjust the recoil pad vertically, depress the latch located on the right side of the buttstock and slide the recoil pad assembly upward (**FIGURE 27**).



**FIGURE 27**

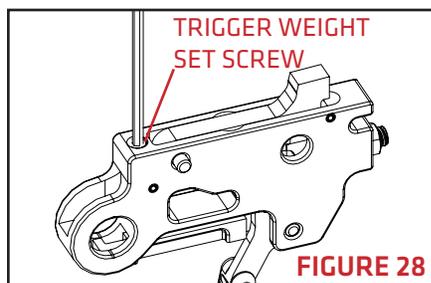
## TRIGGER ADJUSTMENTS

The MRAD is equipped with a two-stage trigger set from the factory to a trigger weight of  $3 \pm 0.5$  lbs. The trigger does not require adjustments however if you wish to alter the trigger pull weight or over travel follow the instructions below. Additional trigger modules are available at [barrett.net](http://barrett.net).

Fieldstrip the rifle and remove the trigger from the lower receiver in accordance with the procedures outlined in **FIELDSTRIP** and **ADVANCED DISASSEMBLY**. Once adjustments are complete reinstall the trigger in accordance with the procedures outlined in **ASSEMBLY** and perform a function check as outlined in **SAFETY/FUNCTION CHECK**.

### ADJUSTING THE TRIGGER WEIGHT

To modify trigger weight use a  $5/64$ " hex wrench to adjust the trigger weight set screw (**FIGURE 28**). The further the set screw is recessed into the trigger housing the heavier the trigger pull will be. Ensure the set screw does not extend above flush with the trigger housing after adjusting.



#### **⚠ WARNING**

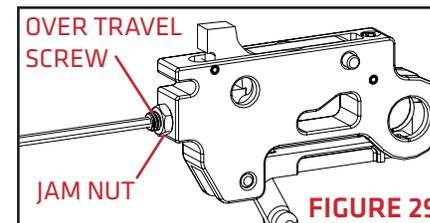
**DO NOT ADJUST THE TRIGGER WEIGHT BELOW 2.125 LBS. ADJUSTING THE TRIGGER WEIGHT TOO LOW CAN CAUSE THE TRIGGER TO NOT RESET AND INCREASES THE CHANCES OF AN ACCIDENTAL DISCHARGE OCCURRING.**

#### **⚠ CAUTION**

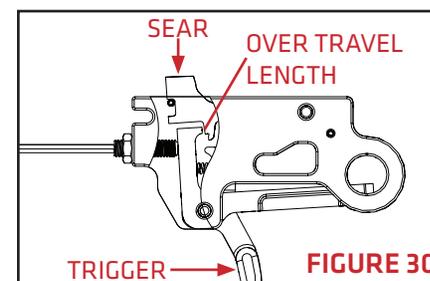
**DO NOT ADJUST THE TRIGGER WEIGHT SET SCREW ABOVE FLUSH TO THE TRIGGER HOUSING. THE RAISED SET SCREW COULD CAUSE INTERFERENCE WITH THE UPPER RECEIVER AND DAMAGE THE TRIGGER ASSEMBLY**

### ADJUSTING THE TRIGGER OVER TRAVEL

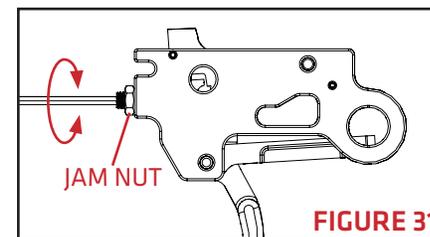
1. Loosen the brass jam nut using a  $1/4$ " wrench and insert a  $5/64$ " hex wrench into the over travel screw (**FIGURE 29**).



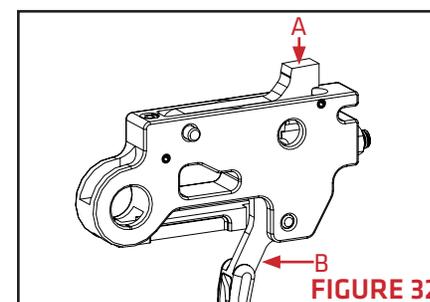
2. Pull the trigger to the rear and press the sear down. Look through the hole in the side of the trigger housing and observe the gap between the front of the sear and the back of the trigger (**FIGURE 30**).



3. Turn the screw until the desired over travel length is reached and lock into place by holding the hex wrench still and turning the  $1/4$ " brass jam nut clockwise until tight against the trigger housing (**FIGURE 31**). Turning the screw clockwise will reduce the over travel and counterclockwise will increase the over travel.

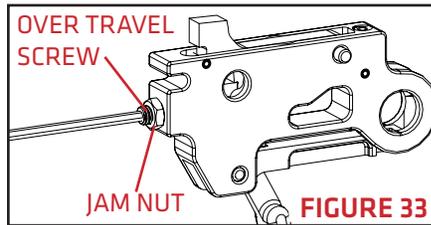


4. Test the setting by depressing the sear and pulling the trigger. Release the trigger then slowly release the sear (**FIGURE 32**). Ensure the trigger has enough clearance to reset.

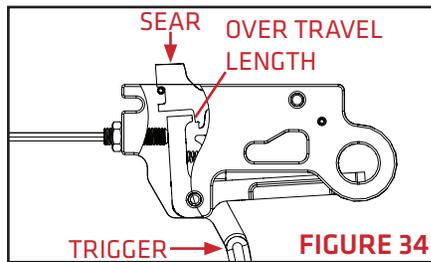


### RETURNING THE TRIGGER OVER TRAVEL TO FACTORY SETTINGS

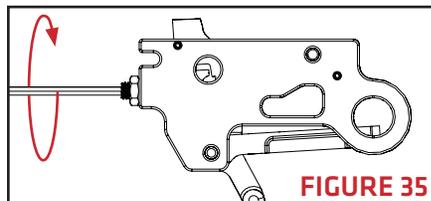
1. Loosen the brass jam nut using a 1/4" wrench and insert a 5/64" hex wrench into the over travel screw (**FIGURE 33**).



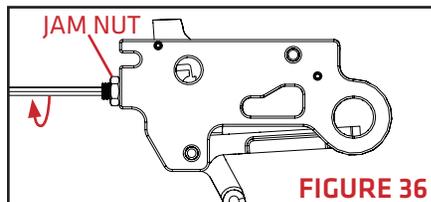
2. Pull the trigger to the rear and press the sear down. Look through the hole in the side of the trigger housing and observe the gap between the front of the sear and the back of the trigger (**FIGURE 34**).



3. Turn the over travel screw clockwise until it locks up the trigger against the sear (**FIGURE 35**).



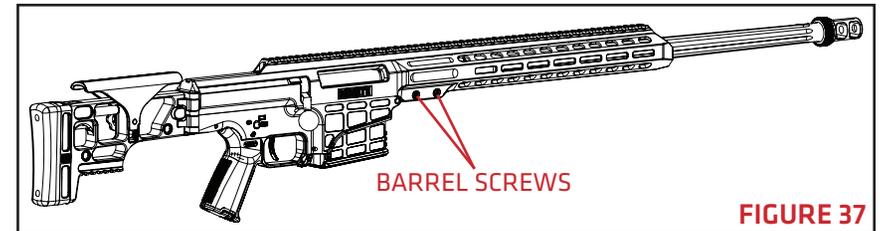
4. Turn the over travel screw counter clockwise one quarter of a turn and lock into place by turning the brass jam nut until it is tight against the trigger housing (**FIGURE 36**).



5. Test the over travel setting by pulling the trigger and depressing the sear.
6. Release the trigger. Slowly release the sear and ensure the trigger has enough clearance to reset.

### BARREL CONVERSION KITS - OPTIONAL

Caliber/barrel conversions are completed by exchanging the barrel, magazine, and bolt. If your rifle configuration is capable of converting calibers it will have two barrel screws located on the upper receiver (**FIGURE 37**). MRAD SMR configurations are not compatible with barrel conversion kits. Barrels and bolts are all designated by caliber however magazines are designated by letter markings (A,B,C,D). Magazines also have a different number of ribs for easy differentiation between the different letter designations (**FIGURE 23**). Ensure the calibers/letters on these components match the table below:



CALIBER	MAGAZINE DESIGNATION	BARREL/BOLT DESIGNATION	MAGAZINE RIBS
338 LM	A	A/.338 LM	6
338 NM	D	A/338 NM	6
300 NM	D	A/300 NM	6
300 WM	B	B/300 WM	4
308 WIN	C	C/308 WIN	3
6.5 CREED	C	C/6.5 CREED	3
300 PRC	B	B/300 PRC	4

#### **⚠ WARNING**

**DO NOT INTERCHANGE BOLTS BETWEEN MRAD BARRELS. MRAD BARRELS ARE PROPERLY HEADSPACED WITH THEIR CORRESPONDING BOLT AT THE FACTORY.**

## CHANGING BOLTS

### REMOVING THE BOLT

Refer to the **DISASSEMBLY OF THE BOLT** section for detailed instructions on how to remove the bolt.

### INSTALLING THE BOLT

1. Refer to the **BARREL CONVERSION KITS** section table above to verify the bolt being installed matches the caliber of the barrel installed or being installed.
2. Insert the bolt into the bolt tube (**FIGURE 38-A**) and retain it by pushing the bolt pin into the bolt tube (**FIGURE 38-B**).

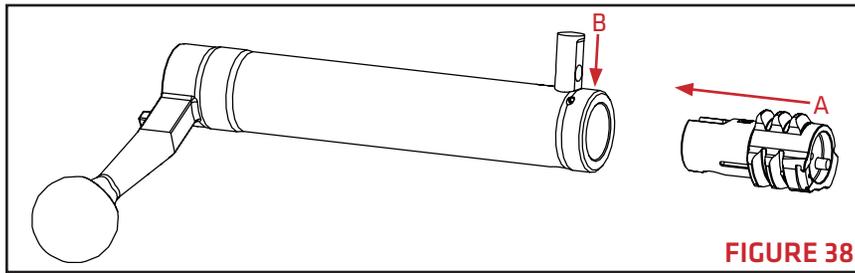


FIGURE 38

3. Insert the firing pin assembly into the bolt tube (**FIGURE 39-A**) and rotate clockwise to lock the firing pin assembly into the cocked position (**FIGURE 39-B**).

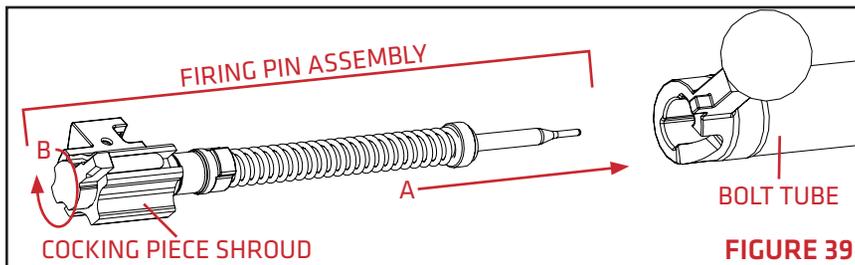


FIGURE 39

4. Rotate the cocking piece lever until it sits flush with the cocking piece shroud (**FIGURE 40**).

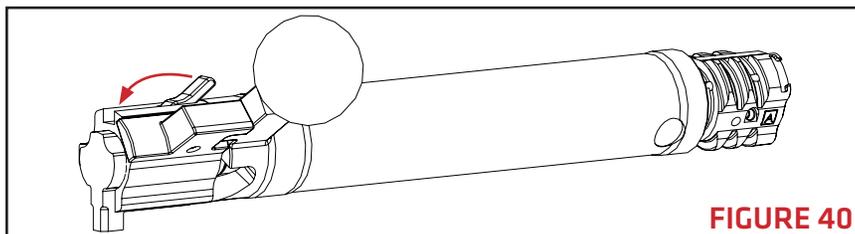


FIGURE 40

## CHANGING BARRELS - FIGURE 41

### REMOVING THE BARREL

1. Raise the bolt handle and pull to the rear. Ensure the rifle is unloaded and the magazine is removed (**FIGURE 41-A**).
2. Loosen, but do not remove, the two barrel screws using a T-30 Torx Plus wrench (**FIGURE 41-B**).
3. Remove the barrel from the receiver (**FIGURE 41-C**).

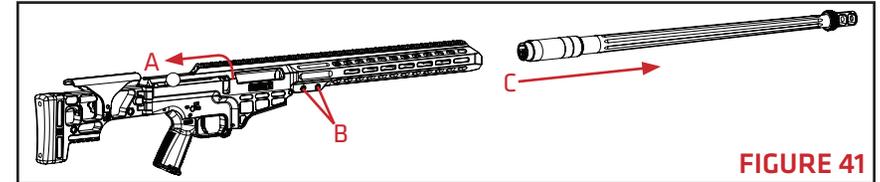


FIGURE 41

### INSTALLING THE BARREL

1. Insert the barrel into the upper receiver with indexing slot oriented in the 12 o'clock position ensuring the indexing slot engages the indexing pin in the upper receiver as the barrel is fully seated (**FIGURE 42-A**).
2. Slide the bolt handle forward until the bolt enters the barrel extension and lower the bolt handle to lock the bolt (**FIGURE 42-B**).
3. Torque the two barrel screws to 140 in/lbs. Tighten the rear barrel screw before the front one. Double check the torque is set at 140 in/lbs prior to shooting (**FIGURE 42-C**).
4. Cycle the bolt fully closed and fully open to ensure function and proper assembly.

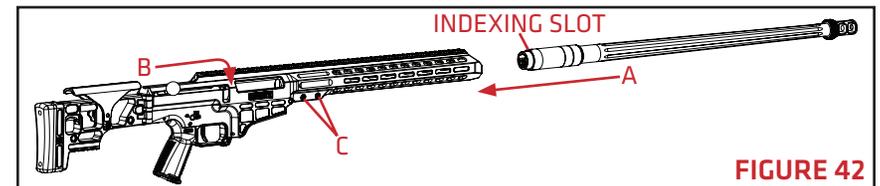


FIGURE 42

## CHANGING MAGAZINES

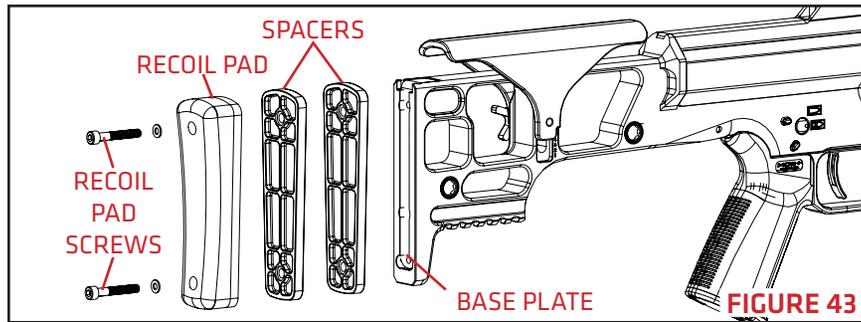
Once the bolt and barrel have been changed, ensure that you select the magazines for use that correspond to the caliber being utilized in the rifle.

### LENGTH OF PULL SPACERS - FIGURE 43

Spacers are available to allow the operator to increase the length of pull of the fixed stock MRAD or further increase the length of pull adjustment range on the folding stock MRAD. Length of pull spacers are available at [barrett.net](http://barrett.net).

**NOTE: SPECIFIC SPACER KITS ARE REQUIRED FOR THE MRAD AND MRAD SMR CONFIGURATIONS DUE TO A DIFFERENT SCREW THREAD PITCH IN THE STOCKS. SEE BARRETT.NET FOR DETAILS.**

1. Remove the recoil pad by unscrewing the two recoil pad screws.
2. Add the desired amount of spacers between the recoil pad and base plate. Each spacer increases length of pull by 0.25".
3. Secure the recoil pad and spacers to the base plate using supplied recoil pad screws and washers. The length of screw needed depends on how many spacers are present; see table below and **FIGURE 44**.

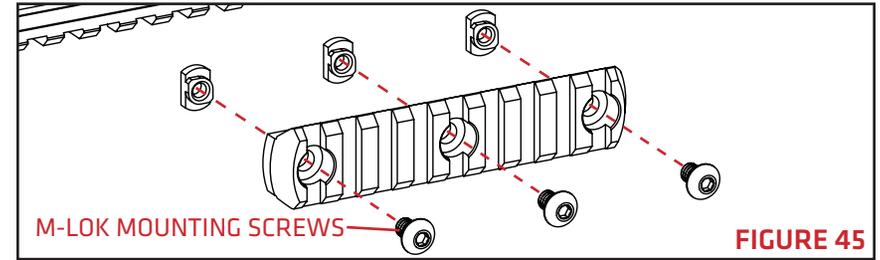


SPACERS EQUIPPED	SCREW LENGTH NEEDED
0	0.625"
1	1"
2	1.25"
3	1.5"
4	1.75"

**NOTE: USING THE WRONG LENGTH RECOIL PAD SCREWS WITH SPACERS COULD CAUSE INTERFERENCE WITH THE STOCK.**

### M-LOK ATTACHMENTS

M-LOK accessories may interfere with the MRAD barrel removal due to longer mounting screws or rail tolerances. M-LOK rails and accessories provided from BFMI have been modified to have #10-24 x 0.3125" mounting screws instead of the standard #10-24 x 0.4375" screws to ensure they do not interfere with barrel removal (**FIGURE 45**). Additional MLOK rails are available at [barrett.net](http://barrett.net).



### MAINTENANCE GUIDE

**⚠ WARNING**  
**THE RIFLE MUST BE UNLOADED AND ALL AMMUNITION REMOVED FROM AREA BEFORE CLEANING.**

### CLEANING AND LUBRICATING PROCEDURE

1. The rifle should be cleaned and lightly lubricated after each shooting session. Regular cleaning and lubrication prevents the corrosive effects of moisture
2. After use, wipe down all surfaces of the muzzle brake with a rifle bore cleaner and a rag. Remove any carbon build-up from the threads, exterior diameter, and internal port areas with a brush or rag.

**⚠ CAUTION**  
**A BORE GUIDE SHOULD BE USED WHEN CLEANING THE MRAD.**

3. Remove the bolt and rear bolt guide (**FIGURE 46-A**) and insert the bore guide into the rear of the upper receiver (**FIGURE 46-B**). With the bore guide inserted, perform the following tasks to clean the bore:
  - Wet a cleaning patch with rifle bore cleaner and push the patch through the bore from breech to muzzle using a cleaning rod. Several patches may be used if bore is especially dirty.

- While the bore is wet from the patches, scrub the bore with a bore cleaning brush attached to the cleaning rod.
- Apply a small amount of rifle bore cleaner to a chamber brush and clean the chamber
- Push dry cleaning patches through the bore from breech to muzzle until the patches come out of the bore clean.

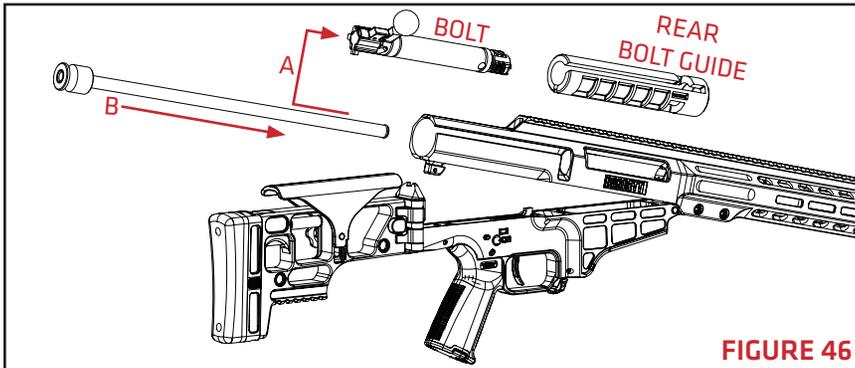


FIGURE 46

**CAUTION**

**ALWAYS USE A ONE-PIECE COATED CLEANING ROD WHEN POSSIBLE. ONLY INSERT CLEANING RODS THROUGH THE BORE FROM BREECH TO MUZZLE**

4. Use a stiff plastic brush to remove carbon from both the extractor and the ejector. Depress the ejector and extractor by hand to ensure their smooth function.
5. Clean the remainder of the rifle with cotton-tipped swabs, general purpose brushes and rags. Make sure all mechanical metal surfaces are coated with preservative oil. Do not lubricate the bolt face or chamber/bore.
6. Lightly lubricate the cam slot on the bolt tube (FIGURE 47).

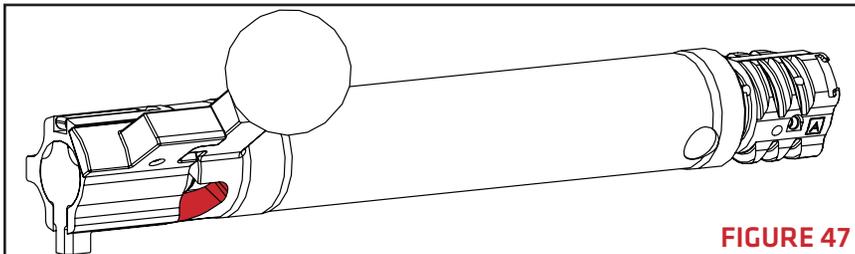


FIGURE 47

7. With the firing pin assembly removed, lubricate the critical surfaces highlighted in red (FIGURE 48).

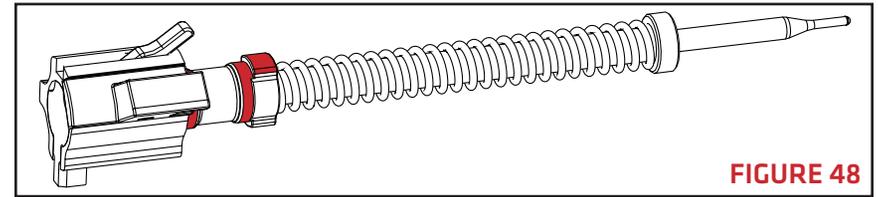


FIGURE 48

**CAUTION**

**EXCESS LUBRICANT OR GREASE CAN CAUSE FAILURES IN THE FUNCTION OF THE RIFLE.**

### CLEANING OF THE MAGAZINE

Clean the entire magazine of debris paying special attention to the interior. DO NOT apply oil or lubrication to the inside the magazine body. Lightly lubricate the surfaces of the magazine spring to prevent corrosion.

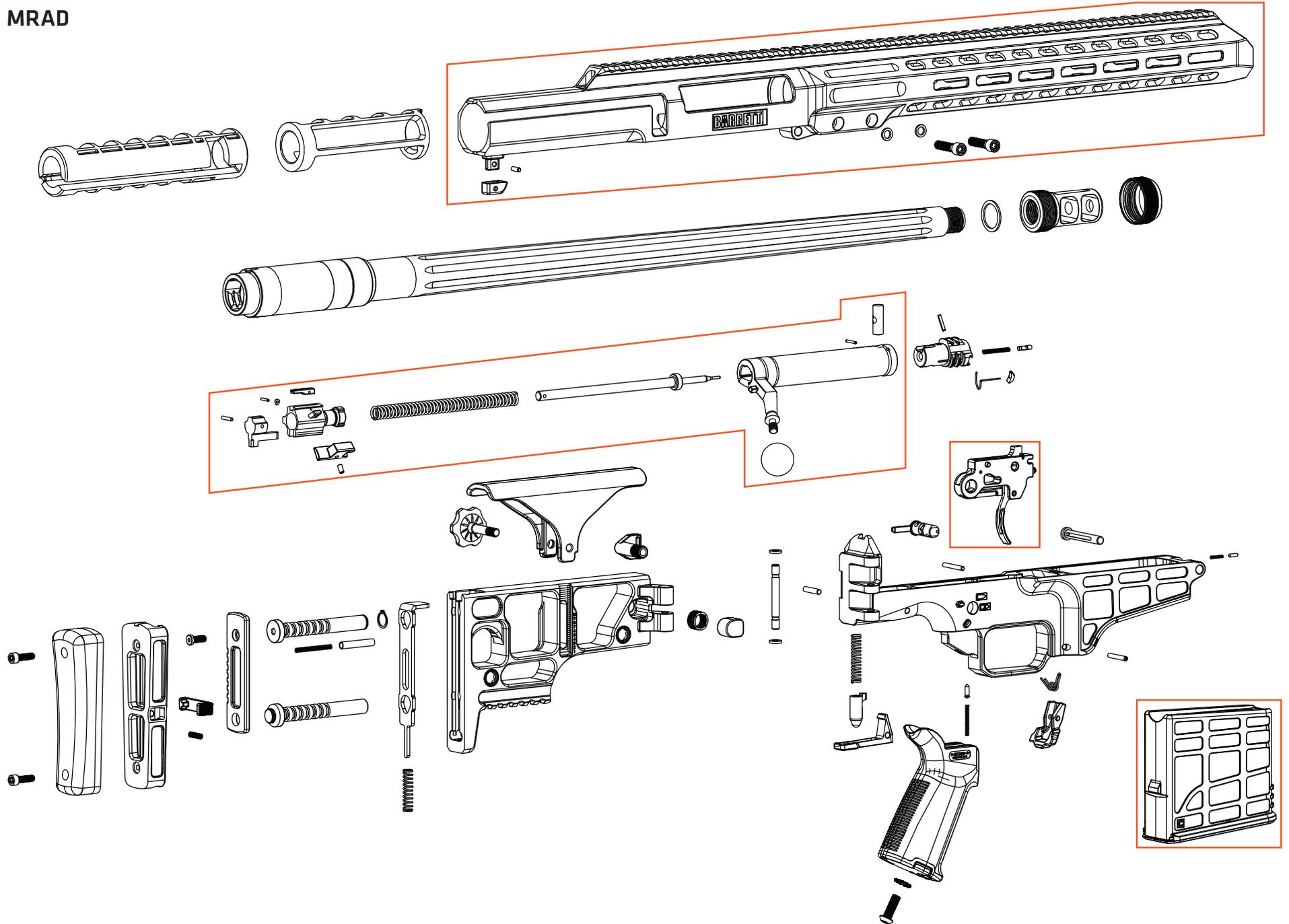
## TROUBLESHOOTING GUIDE

MALFUNCTION	CAUSE	CORRECTIVE ACTION
FAILURE TO FEED	Check Magazine: a. Proper Installation b. Dirt/Debris c. Damage	a. Reinstall magazine into the receiver b. Clean magazine c. Replace magazine
FAILURE TO CHAMBER	Check cartridge for damage	Remove damaged round
	Check for dirty chamber	Clear and clean chamber
FAILURE TO FIRE	Faulty ammunition	Replace ammunition
	Cocking piece is dragging	Clean and lubricate cocking piece
	Firing pin or firing pin spring is broken or damaged	Replace firing pin and firing pin spring
FAILURE TO EJECT	Broken or worn ejector	Replace ejector
	Broken or worn ejector spring	Replace ejector spring
	Ejector not moving freely	Clean ejector, ejector spring, and recess
FAILURE TO EXTRACT	Broken or worn extractor	Replace extractor
	Broken or worn extractor spring	Replace extractor spring
	Extractor not moving freely	Clean extractor, extractor spring, and recess
	Dirty ammunition or chamber	Clean chamber and ensure ammunition is clean
	Broken case rim	Clear with cleaning rod
EXCESSIVE RECOIL	Check for faulty/hot ammunition	Replace or cool ammunition
	Improper shooting position	Firmly shoulder the buttstock
	Check for loose, missing, damaged/clogged muzzle brake	Clean or replace muzzle brake

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# EXPLODED VIEWS AND PART LISTS

## MRAD

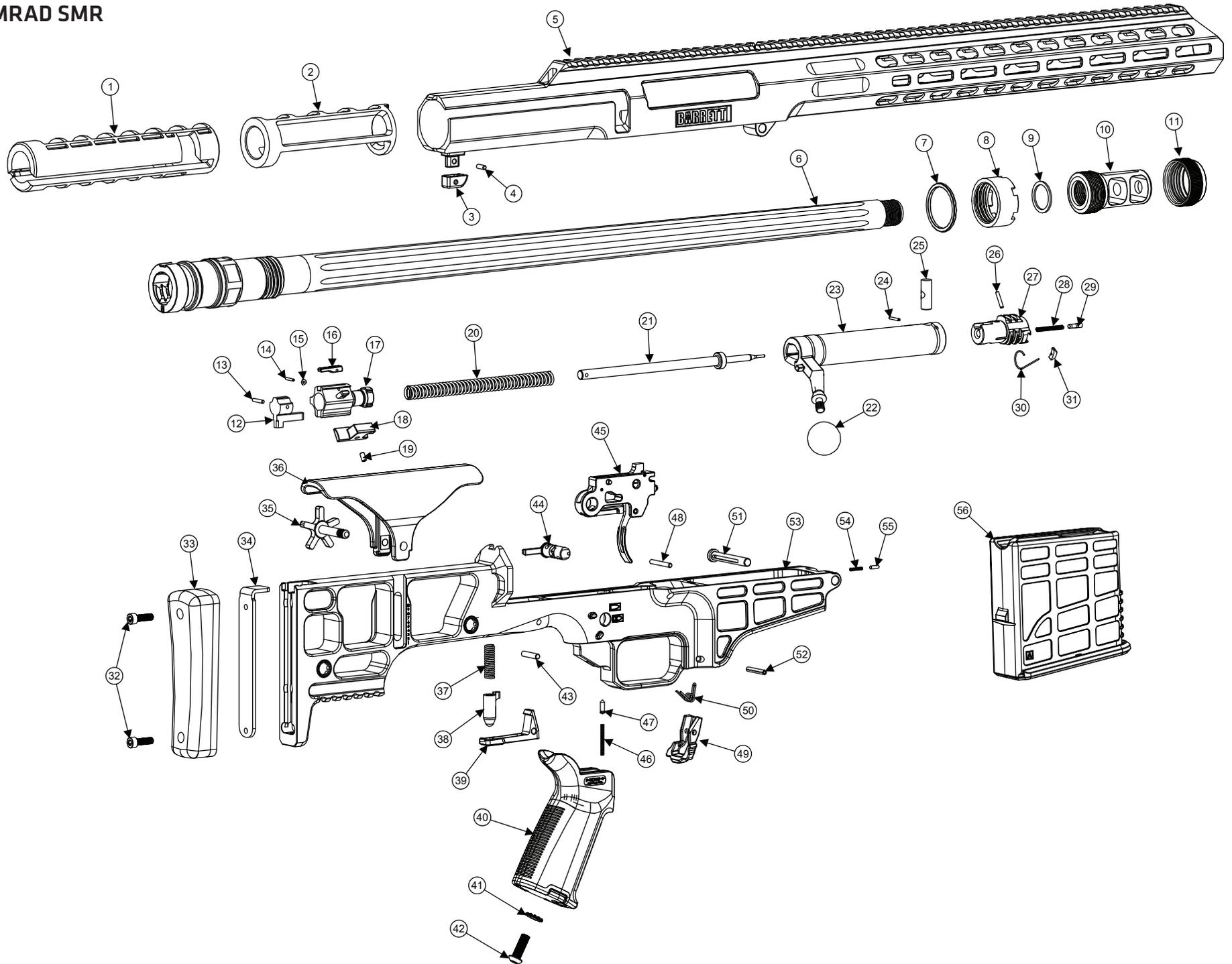


ITEM	DESCRIPTION	QTY
1	REAR BOLT GUIDE	1
2	FRONT BOLT GUIDE	1
3	RECEIVER LATCH SEAT	1
4	DP .125 x .365"	1
5	UPPER RECEIVER	1
6	BARREL SCREW WASHER	2
7	BARREL SCREW	2
8	BARREL COMPLETE	1
9	SHIM KIT	1
10	MUZZLE BRAKE	1
11	THREAD PROTECTOR	1
12	COCKING PIECE	1
13	DP .093 x .500"	1
14	RP .062 x .375"	1
15	WAVE WASHER	1
16	COCKING PIECE LEVER	1
17	COCKING PIECE SHROUD	1
18	BOLT STOP	1
19	RP .125 x .250"	1
20	FIRING PIN SPRING	1
21	FIRING PIN	1
22	BOLT HANDLE KNOB	1
23	BOLT TUBE	1
24	RP .0625 x .500"	1
25	BOLT RETAINER PIN	1
26	BOLT	1
27	RP .093 x .500"	1
28	EJECTOR SPRING	1
29	EJECTOR	1
30	EXTRACTOR SPRING	1
31	EXTRACTOR	1
32	SHCS 10-24 x .625"	2
33	RECOIL PAD	1
34	RECOIL PAD BASE PLATE	1
35	SHCS 10-24 x .50 " (LP)	1
36	FINGER LATCH	1
37	FINGER LATCH SPRING	1

ITEM	DESCRIPTION	QTY
38	BASE PLATE VERTICAL SLIDER	1
39	UPPER LOCK ROD	1
40	BOLT HANDLE LATCH SPRING	1
41	BOLT HANDLE LATCH	1
42	LOWER LOCK ROD	1
43	LATCH SPRING	1
44	RETAINING RING	1
45	LATCH	1
46	CHEEK PIECE KNOB SPRING	1
47	CHEEK PIECE KNOB	1
48	CHEEK PIECE	1
49	FOLDING STOCK	1
50	FOLDING STOCK LATCH	1
51	FOLDING STOCK SPRING	1
52	FOLDING STOCK BUTTON	1
53	FOLDING STOCK BUSHING	2
54	FOLDING STOCK ASSEMBLY PIN	1
55	BHCS .250-28 x .750"	1
56	ETLW .25 x .023"	1
57	GRIP	1
58	RECEIVER LATCH	1
59	RECEIVER SAFETY LATCH	1
60	RECEIVER LATCH SPRING	1
61	DP .156 x .750"	1
62	REVERSIBLE SAFETY	1
63	DP .125 x 1"	1
64	TRIGGER ASSEMBLY	1
65	RECEIVER ASSEMBLY PIN	1
66	LOWER RECEIVER	1
67	ASSEMBLY PIN SPRING	1
68	ASSEMBLY PIN DETENT	1
69	SAFETY SPRING	1
70	SAFETY DETENT	1
71	MAGAZINE CATCH	1
72	MAGAZINE CATCH SPRING	1
73	RP .125 x .875"	1
74	MAGAZINE	1

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MRAD SMR









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