



# EVVO

## GENERAL USAGE GUIDE



**IMPORTANT** - INFORMATION CONTAINED IN THIS MANUAL IS CONSIDERED TO BE VITAL TO THE SAFE OPERATION OF YOUR AIR RIFLE. FAILURE TO FOLLOW THE PROCEDURES WITHIN THIS MANUAL MAY RESULT IN INJURY, DEATH, EQUIPMENT DAMAGE AND/OR THE VOID OF ALL FACTORY WARRANTY TERMS.

V 1.1

# IMPORTANT SAFETY INFORMATION

**\*THESE GUIDES ARE PROVIDED IN ADDITION TO ANY LOCAL LAWS OR REGULATIONS**

- > Familiarize yourself with and follow applicable national, local and regional laws for compressed air and airgun use and transport. Do not load or fire this airgun until you have completely read this manual and are familiar with its safety features.
- > Handle this and any other airgun as if it were loaded and ready to fire.
- > Do not look down the barrel of any airgun. Accidental discharge could cause blindness, or other serious injury or death.
- > Keep the airgun in a safe condition until ready to shoot. Never point the airgun at anything you do not intend to shoot.
- > Always keep the muzzle pointed in a safe direction.
- > Always verify that the compressed air cylinder is fully seated before pressurizing the EVO®.
- > Always verify that the barrel is fully seated and locked in place before firing the EVO®.
- > Pressurize and load the airgun only when it will be immediately used.
- > Never field strip or disassemble the airgun while it is pressurized.
- > Do not brandish or display this product in public as it may cause confusion and can be considered a crime in most countries.

**KEEP AIRGUNS OUT OF REACH OF CHILDREN**

**MUST BE AT LEAST 18 YEARS+ TO PURCHASE OR OPERATE AN AIRGUN**

**ALWAYS WEAR EYE PROTECTION**

**DESIGNED FOR SHOOTING SPORTS WHEN OPERATING A PRESSURIZED AIRGUN.**

**ELECTRONIC TRIGGER WARNING:**

The EVO®'s match grade air rifle trigger is extremely sensitive to shock or impact, extreme care must be taken to avoid accidental discharge.

**COMPONENT MODIFICATION WARNING:**

Never manipulate, adjust or change any of the internal components of your airgun unless specifically directed to do so in this manual. Improper manipulation of any internal component may affect the safety and reliability of your airgun and may cause serious injury or death.

**LUBRICATION WARNING:**

Use only **SL33K HPS** silicone lubricant (included with the EVO®) to lubricate seals or components where specified. Use of other lubricants may reduce the safety and performance of your air-gun. Damage caused by improper lubrication is not covered under warranty.

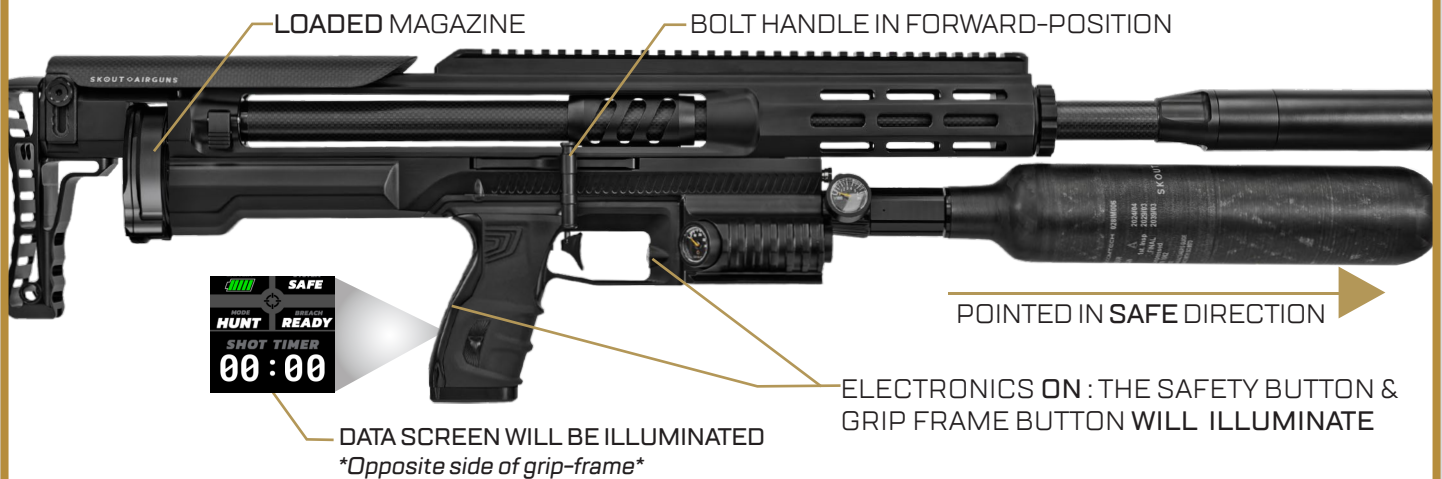
## SAFE CONDITION EXAMPLE



The EVO<sup>®</sup> is considered to be in the “**SAFE CONDITION**” when:

- The air rifle is **UNLOADED**, with no magazine installed.
- Electronics are powered “**OFF**”, the OLED screen and Safety Button are not illuminated.
- The breach is in the open position- **COCKING HANDLE REARWARD**

## READY CONDITION EXAMPLE



The EVO<sup>®</sup> is considered to be in the “**READY CONDITION**” when :

- The air rifle is **LOADED**, with a magazine installed.
- Electronics are powered “**ON**”, the LCD screen is illuminated
- The “**Safety Button**” will illuminate *when pressed*.
- The breach is in the closed position - **COCKING HANDLE FORWARD**

# BASIC ELECTRONICS



## SAFETY BUTTON

- > PRESS TO START/END SHOT TIMER
- > ILLUMINATES RED WHEN READY TO FIRE

## POWER BUTTON

- > DOUBLE PRESS TO TURN ON
- > PRESS AND HOLD FOR TO TURN OFF

## BACK STRAP LATCH

- > GRAB AT BASE & PULL TO REMOVE
- > INSERT TOP FIRST AND PRESS TO INSTALL



## BATTERY LATCH

- > LIFT TO REMOVE
- > LOCK DOWN AFTER BATTERY INSTALL

# SCREEN SYMBOLS

## To enter into "Programing Mode"

- > Start with the rifle completely off & unloaded
- > Move the cocking handle to its rear most position.
- > Press and hold the "Forward Safety Button" and the "Power Button".
- > Hold these buttons until the boot sequence starts, then release.
- > Your screen will confirm you are now in "Programing Mode"

HOME SCREEN

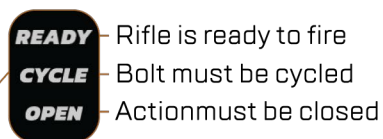
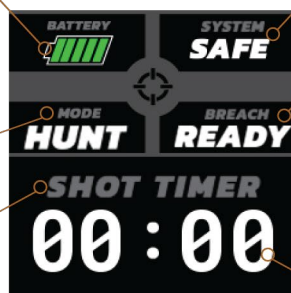
Each battery bar represents 20%.

SKOUT® recomendes 60%+ prior to a competition outing, or a full day of shooting.

Label will change to **FIRE** when ready to cycle.

Chosen firing mode will be displayed here.

Shot timer indicates time remaining before the EVO® will return itself to safe mode.\*



Shot timer length can be adjusted within the boards parameters.\*

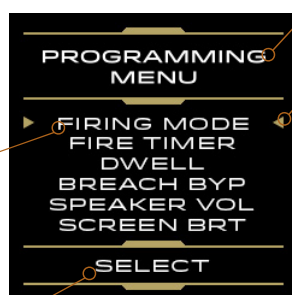
*\*The timer function and duration may depend upon chosen firing mode.*

PROGRAMMING

Title bar shows displays "PROGRAMMING MENU"

Parameters that can be adjusted.

"Safety Button" moves the selection arrows through parameters.



The "Power Button" is used to selet a parameter, and the value of the parameter once selected.

# BATTERY CHARGING

The EVO<sup>®</sup> airgun uses a lithium ion battery as the power source for its electronics. When used correctly, lithium ion batteries provide a safe and dependable source of portable power. However, misuse or abuse may result in leakage, fire, or explosion.

**KEEP BATTERIES AWAY FROM CHILDREN.**

**THERE IS A CHEMICAL BURN HAZARD ASSOCIATED WITH ALL BATTERIES.**

**USE ONLY SKOUT AIRGUNS BATTERY PACKS WITH THE EVO<sup>®</sup> AIR RIFLE.**

**USE ONLY SKOUT AIRGUNS' CHARGING SYSTEM TO CHARGE YOUR EVO<sup>®</sup>'S BATTERY PACK.**

**DO NOT ATTEMPT TO DISASSEMBLE OR MODIFY THE EVO<sup>®</sup> BATTERY OR ELECTRONIC CONTROL BOARD.**

**DISCONTINUE USE IMMEDIATELY IF BATTERY SWELLS, EMITS FUMES, SMOKE OR BECOMES PERCEIVABLY HOT WHILE CHARGING.**



To access the charging port and battery compartment of the EVO<sup>®</sup>, simply remove the backstrap of the grip frame.

Gripping at the finger grooves at the base of the back strap, pull backwards away from the grip frame.

The backstrap will pivot, on a post at the top of the backstrap.

When reinstalling, be sure to insert this post and pivot the backstrap into place in the same way it was removed.

## BATTERY CONT'D



You will now have access to the USB-C charging port & battery compartment.

Charge the battery of the EVO® without removing it from the airgun, through the USB-C slot **(A)**.

You can swap your battery or remove it completely, for long term storage, by lifting the battery tab **(B)** and jostling the battery out of location.

Lifting the battery slightly and tapping the rear of the grip frame to pop the battery out of place maybe needed.



The LED power button will display 3 colors based upon status:

**BLUE** = On/Normal Use

**RED** = Plugged in Charging

**GREEN** = Fully Charged



Observe the markings on the battery pack during installation of the battery.

Make sure the arrows on the battery are oriented forward into the battery compartment.

Looking into the compartment **before** installation, one can see the connectors and confirm orientation before install as a recommended cautionary step to prevent damage to the board or battery.

# PROGRAMMING NAVIGATION

## **ENTERING PROGRAMMING MODE:**

With the EVO® in the OFF and safe condition, press and hold the safety button and the power button simultaneously for at least 3 seconds. The EVO® will boot into the main settings menu, indicated by voice (if enabled) and by text “MENU” at the top of the screen.

## **SCROLLING:**

With “PROGRAMMING MENU” displayed at the top of the LCD screen, cycle through parameters in the main menu by pressing the safety button. Current settings will be displayed on the LCD screen while the voice (if enabled) announces the name of the parameter. Arrows on either side of the LCD display indicate the selected parameter setting.

## **ADJUST A SETTING:**

Select a parameter to adjust by pressing the power button. The EVO® will respond by switching from the programming menu screen to a screen showing the selected parameter and its current value or setting.

## **CHANGE A PARAMETER:**

The value for the currently selected parameter can be changed by pressing the safety button to cycle through the available options. When adjusting a numeric setting, the value will increase with each press of the safety button. To go to set a lower value continue pressing the safety button to cycle past the maximum value, then through to the lowest value and keep increasing until the desired value is reached.

## **SAVING CHANGED PARAMETER(S):**

Once the desired value is selected, press the power button to return to the main programming menu, then advance to the next setting with the safety button in order to save the changed value into non-volatile memory. Power the rifle off, the settings will be saved and become active during the next power cycle.



# FIRING MODES EXPLAINED

## *LIMIT MODE:*

In this general use mode, switching into Fire Condition by pressing the Safety Button will begin a Fire Countdown on the LCD display. Every time the airgun is fired, or the timer reaches zero, the EVO®'s digital safety will automatically re-engage.

The EVO® leaves the factory in Limit Mode by default, in order to ensure the customer can familiarize themselves with the EVO® with all available safety measures in place. If the control board of the EVO® is "Factory Reset," the airgun will default back to "Limit Mode."

## *MATCH MODE:*

In this bench rest competition mode, the digital safety must be disengaged with the safety button to enter Fire Condition, but the digital safety will not re-engage until the Fire Timer has expired or it is re-engaged manually. Multiple shots may be fired without leaving Fire Condition.

## *RELEASE MODE:*

In this bench rest competition mode, the EVO® will fire upon RELEASE of the trigger. The shooter can cancel this function by pressing the safety button during the trigger pull, which will engage the safety.

Like MATCH mode the digital safety must be disengaged with the safety button to enter Fire Condition, HOWEVER the digital safety will not re-engage until the Fire Timer has expired or it is re-engaged manually. Multiple shots may be fired without leaving Fire Condition.

## *HUNT MODE:*

This mode is focused on minimal noise when in use, otherwise the order of operations are identical to the Limit Mode. Voice feedback will be silenced by default, and the digital safety will re-engage after every shot, requiring the shooter to press the Safety Button to enter into Fire Condition for the next shot.

Because this mode uses the least number of sound outputs, Hunt Mode is also the most battery efficient mode of fire.

## **NOTE:**

The customizable Shot Timer is active in **all modes** and will re-engage the safety after the timer expires. Each mode's order of operation and function may change with software version update, refer to the patch notes on the most current version of SKOUT® Airguns software to confirm the above information is the most up to date available before using your SKOUT® Airgun.

# IMPORTANT AIR SYSTEM SAFETY

## //////////⚠️WARNING

Improper use, filling, or storage of an air cylinder may result in property damage, serious injury, or death. Do not put any lubricants in the air adapter or fill fittings, as this may cause an explosion when high pressure increases the amount of oxygen in direct contact with the lubricant, lowering its ignition temperature.

### READ AND UNDERSTAND BEFORE PROCEEDING

Fill the EVO® with compressed air only. It's valve system and design are centered around the energy and expansion characteristics of atmospheric air.

Fill the EVO® with dry air, low-cost compressors operating in humid environments with poor drying capability may deliver both compressed air and moisture condensed from that air.

Condensed moisture inside the EVO®'s valve and air chambers will reduce consistency.

Do not overfill the air cylinder – see maximum fill pressure on cylinder, never exceed 4500psi with any cylinder.

Do not modify the air cylinder in any way.


If an air cylinder that has been exposed to fire or heated to a temperature above 250°F (121°C) it must be destroyed by properly trained personnel.

Inspect the air cylinder for any cracks or physical damage before filling. If any cracks or physical damage are noticed, the air cylinder should not be filled, and it should be checked by a professional technician before use or replaced altogether.

Inspect the air cylinder to verify that it is within its service life and the inspection duration, whether based on its date of manufacture or the most recent rectification. If the cylinder is outside of its inspection duration, have it professionally tested and re-certified before filling.

MAX PRESSURE.

MFG. DATE

		Liaoning Alsafe Technology Co., Ltd		CE 1282	
Composite Cylinder for Breathing Apparatus					
MODEL:	CRP111-55-0.5-30-T	SERIAL NO.:	WJ58044	INSPECTION DURATION:	5 YEARS
TEST PRESSURE:	450 BAR	VOLUME:	0.5L	MFG. STANDARD:	ISO11119-3
SERVICE PRESSURE:	300 BAR	MFG. DATE:	2022.08	EMPTY WEIGHT:	0.55KG
SERVICE LIFE:	15 YEARS	CONTENT:	COMPRESSED AIR	REE:	6
WEBSITE:	WWW.ALSAFECYLINDERS.COM			THREAD:	M18*1.5

SERVICE LIFE

INSPECTION INTERVAL

# AIR FILL - PREPARATION

The EVO® air system consists of several parts, each must be properly installed prior to charging your EVO® with compressed air.

The air adapter body (EVO135) passes through the air adapter collar (EVO139) and screws into the main body of the air rifle.

The air cylinders valve (EVO113) remains attached to the cylinder at all times, these threads screws into the air adapter.

The gaps between these components should be inspected prior to each time the air cylinder is filled.



## Prior to attaching to a fill station:

Before filling your EVO® air rifle, you will want to make sure that the rifle is completely unloaded, electronics are off and the cocking lever is in the rear position.

Ensure that your air bottle valve (EVO113) is screwed snugly into your air adapter (EVO135).

Insert a 3/16 allen key into the brass tool face located on the side of your air system adapter (EVO135).

Turn in the direction of the “OPEN” arrow engraved on the air adapter (EVO135). *\*Note: Any remaining air in the cylinder will now be measurable on your source gauge, shown in the above diagram.*

The source gauge will also act as your “gas gauge” while the air adapter is engaged with the bottle and the flow valve is open.

# GAUGES ON YOUR EVO



**This is your High Pressure Regulator (HPR) gauge**, setting this pressure will directly effect your velocity.

The gauge located on the left hand side of the rifle, with its gauge face towards the shooter, indicates your operating pressure **AFTER** regulation.

**This gauge's range is 0-3000psi**



**This is your High Pressure Source (HPS) gauge.** When your tank valve is open, this gauge indicates the air cylinder pressure before regulation.

The gauge located on the left hand side of the rifle, with its gauge face towards to the left of the shooter, indicates your operating pressure before regulation.

**This gauge's range is 0-6000psi**



**This is your Low Pressure Regulator (LPR) reading.** This pressure represents the force used to open and close the valve.

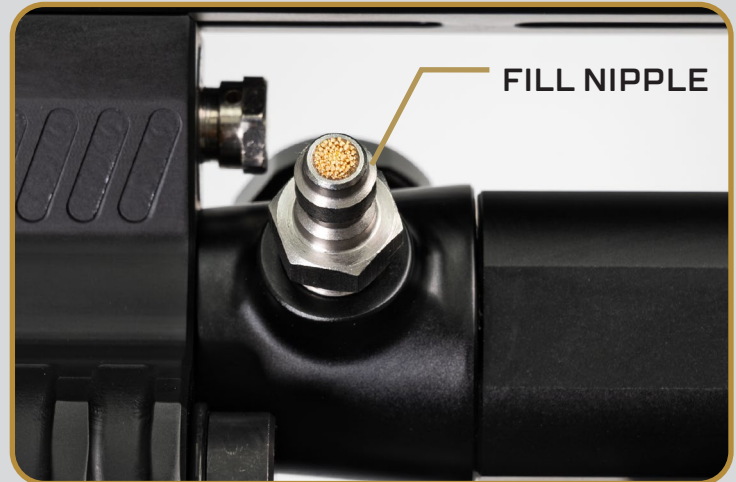
The gauge located on the right hand side of your rifle indicates the low pressure setting for your EVO®.

**This gauge's range is 0-300psi**

# FILLING YOUR AIR CYLINDER

## STEP 1:

Connect a 1/8-inch female disconnect fitting to the fill nipple from the compressed air filling system, located on the bottle adapter collar.



## STEP 2:

Ensure the air adapter "On/OFF" has been turned to the "ON" position

## STEP 3:

Ensure the female connection fitting from the air fill system is fully engaged.

## STEP 4:

Fill the EVO<sup>®</sup> until it reaches a maximum of 4500 psi or the service pressure of the air cylinder. This value is found on the label of the air cylinder.



This value can be read on your HPS gauge on the air cylinder adapter.

## STEP 5:

Once the maximum fill pressure is reached and the compressed air supply from the fill system has been shut off, depressurize the fill hose and fittings by opening the filling system's bleeder valve.



## STEP 6:

After depressurizing the fill hose, remove the fill station fitting from the EVO<sup>®</sup>'s fill nipple.

# REMOVING AIR CYLINDER

## //////////⚠️WARNING

The air cylinder should only be removed when necessary. Unscrewing the air cylinder from the air adapter repeatedly will cause wear on the air adapter and may shorten its usage life. If the threads feel loose, or the pin valve does not thread in easily, discontinue use of the air cylinder and have the components examined by a qualified professional.

**IF YOU HEAR AIR ESCAPING AT ANY POINT DURING THIS PROCESS, STOP AND ALLOW ALL AIR TO VENT BEFORE PROCEEDING WITH TANK AND/OR TANK ADAPTER REMOVAL.**

Once all gauges read zero, the air cylinder should be able to be unscrewed from the air rifle.

While unscrewing the air adapter from the air rifle, if you hear or feel any air flow, **STOP** and allow all air to vent before removing the air cylinder.

Unscrew the air cylinder in a counter clockwise direction. from the tank.

Removing the bottle adapter from the cylinder is only necessary if switching air cylinders or to allow for air transport of your airgun.



# REGULATOR ADJUSTMENT



The EVO® has two regulators that control its cycling pressure and its chamber pressure. These are located on the front of the airgun, under the air tank adapter.

**HP - HIGH PRESSURE**

**LP = LOW PRESSURE**

The **HP** regulator controls the pressure used to propel the projectile.

The **LP** regulator controls the pressure of the pneumatic cycling operations of the airgun.

The **High Pressure** regulator of the EVO® will be increased or decreased depending upon the projectile & required velocity.

This velocity:pressure ratio will remain relatively consistent, but will change based upon projectile related and environmental factors. A chronograph should be used to confirm desired velocity and required pressure for the highest level of accuracy.

The **Low Pressure** regulator of the EVO® will be increased or decreased as a function of the High Pressure regulator setting. The Low Pressure regulator has a standard minimum pressure to cycle, however, this pressure will increase in direct relation to increasing High Pressure settings, adverse environmental factors and maintenance levels.

# BASE REGULATOR SETTINGS

These charts provide an approximate range of pressures based upon calibers and barrel lengths. Keep in mind these values will change drastically based upon shooting conditions and caliber. *This is a base guide, not a dedicated ballistics document.*

## 0.177 caliber

JSB EXACT DIABLO : 8.44gr

25" (635mm) barrel

LP psi(bar)	HP psi(bar)	TQ ft/lbs	FPS
57 (3.93)	411 (28.34)	9.7	719
66 (4.55)	519 (35.78)	11.8	793
85 (5.86)	732 (50.47)	15.2	900
106 (7.31)	978 (67.43)	18.7	1000
131 (9.03)	1279 (88.18)	22.9	1104

## 0.22 caliber

JSB EXACT JUMBO MONSTER : 25.39gr

25" (635mm) barrel

LP psi(bar)	HP psi(bar)	TQ ft/lbs	FPS
86 (5.93)	662 (45.64)	27.7	701
105 (7.24)	885 (61.02)	35.3	791
125 (8.62)	1265 (87.22)	45.4	898
150 (10.34)	1765 (121.69)	57.2	1007
178 (12.27)	2316 (159.68)	67.3	1093

## 0.25 caliber

JSB EXACT KING HEAVY: 33.95gr

25" (635mm) barrel

LP psi(bar)	HP psi(bar)	TQ ft/lbs	FPS
93 (6.41)	719 (49.57)	37.5	705
117 (8.07)	982 (67.71)	48.6	803
121 (8.34)	1387 (95.63)	61.4	902
158 (10.89)	1915 (132.04)	76.1	1004
165 (11.38)	2410 (168.16)	88.9	1096

## 0.30 caliber

JSB EXACT DIABOLO : 44.75gr

25" (635mm) barrel

LP psi(bar)	HP psi(bar)	TQ ft/lbs	FPS
81 (5.59)	700 (48.26)	48.1	696
107 (7.38)	989 (68.19)	64	803
127 (8.76)	1376 (94.87)	82.2	909
160 (11.03)	1969 (135.76)	102.1	1014
193 (13.31)	2517 (173.54)	118.7	1093

## 0.35 caliber

JSB EXACT DIABOLO : 81.02gr

35" (889mm) barrel

LP psi(bar)	HP psi(bar)	TQ ft/lbs	FPS
104 (7.17)	978 (67.43)	86.6	694
134 (9.24)	1333 (91.91)	115.9	803
160 (11.03)	1922 (132.52)	148	907
180 (12.41)	2452 (169.06)	175.7	988



# BARREL SECUREMENT

**FAILURE TO PROPERLY SECURE YOUR BARREL WILL RESULT IN DAMAGE TO YOUR AIR RIFLE.**

The barrel chamber MUST be fully seated in the base of the barrel lock prior to locking the barrel into place.

With all locks open, and the probe retracted, one should be able to install the barrel from the front. Entering the rear lock should provide little to no resistance.

The barrel chamber (shown in red) should protrude into the magazine area, slightly.

The rear barrel lock should be in the upward position when installing the barrel.

Once proper insertion depth has been confirmed, the user can push this knob down ratcheting & locking the barrel into place.



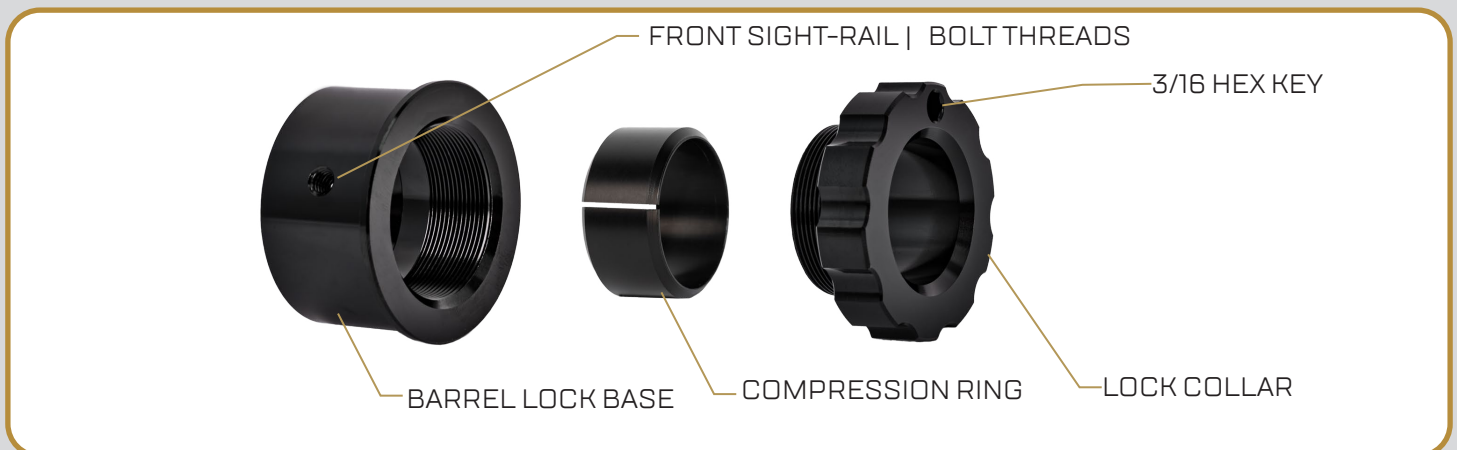
**CONTACT SUPPORT IF YOU HAVE ANY ISSUES LOCKING IN YOUR BARREL. IMPROPER INSTALLATION WILL RESULT IN DAMAGE TO YOUR RIFLE.**

# BARREL SECUREMENT CONT'D

The EVO<sup>®</sup> comes equipped with a barrel lock collar assembly located at the front of the chassis, where the barrel exits the body. This lock allows the user to add additional securement of the barrel at a second location, reducing barrel flex of the outer barrel sleeve.

This collar is secured by the most forward screw that passes through the sight-rail & chassis and into the barrel lock collar base. The compression ring goes inside of the barrel lock collar base & its tapered edge mates with a tapered surface inside the base. Other than a small slot for compression the ring should be undamaged, and smooth. Replace the collar if any damage or cracks are visible.

The locking collar threads into the lock base and compresses the delrin internal ring creating compression on the exterior barrel sleeve. This collar should be hand snug prior to shooting, and checked for tightness after transport or storage prior to shooting.



After inserting the barrel and assuring that the rear barrel latch is properly snug, with the barrel orientated correctly, one can move onto securing the barrel lock collar.

The barrel lock collar will be the last component to be tightened when securing the barrel. The lock collar should be hand tight, without threads showing.

This barrel lock is **NOT** a substitute for a properly secured barrel latch, see the previous section to assure that your barrel latch is properly secured and that your barrel is at its correct depth and orientation before tightening the barrel lock assembly.

There is a 3/16 hex key tool face machined into the lock collar, this is intended to help a user REMOVE the lock collar, and should never be used to tighten the barrel lock. **DO NOT** use tools to tighten the lock collar, as you may damage the outer barrel sleeve or barrel lock.

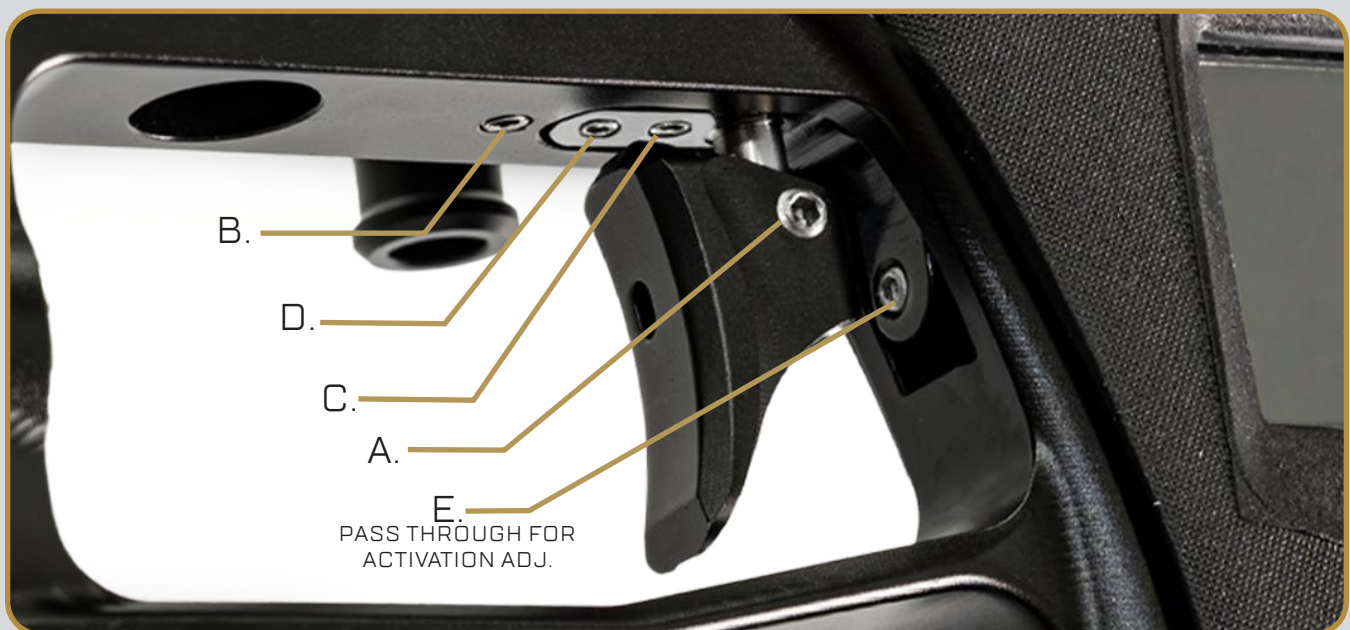
**CONTACT SUPPORT IF YOU HAVE ANY ISSUES LOCKING IN YOUR BARREL. IMPROPER INSTALLATION WILL RESULT IN DAMAGE TO YOUR RIFLE.**

# TRIGGER ADJUSTMENT

The EVO<sup>®</sup> has an extremely short and lightweight competition trigger pull which should always be handled with care. Any bumps or impacts while the gun is in the Fire Condition may result in an accidental discharge. The airgun should only be put into Fire Condition when it is ready to be fired in a safe direction. Care must be taken when configuring the EVO<sup>®</sup>'s trigger, as improper adjustment may result in unintended discharge.

Anytime the trigger is adjusted for a shorter or lighter trigger pull the chance of an accidental discharge from bump or impact is increased.

**Do not adjust the trigger from factory settings when the EVO<sup>®</sup> is used for hunting purposes.**



**A.** Trigger Shoe - Height & Angle

**D.** Magnetic Return - Resistance

**B.** Post Travel - Rear Travel Limit

**E.** Trigger Point - Switch Actuation\*

\*Access through hole in trigger shoe

**C.** Pre-Travel - Forward Travel Limit

All adjustments made with a 1/16" hex key

# TRIGGER CONT'D

## **TRIGGER SHOE:**

A lock screw in the side of the trigger shoe secures it to the trigger. The trigger shoe may be adjusted up or down along the trigger and biased with a twist to the left or right, before being locked into place with its set screw. The trigger shoe may need to be re-centered to access some of the other trigger adjustment points.

## **POST TRAVEL:**

Post-travel adjusts the rear limit of the trigger's swing. Ideally, the trigger should stop just after the trigger break (activation of the electronic micro-switch) is felt. Turning the adjuster clockwise brings the post-travel limit forward, while counterclockwise moves it back.

## **PRE-TRAVEL:**

Pre-travel adjusts the forward limit of the trigger's swing. Turning the adjuster clockwise moves the pre-travel limit back, while turning counter-clockwise moves it forward. The pre-travel limit must be set far enough forward that the trigger can reset after each shot.

## **MAGNETIC RETURN FORCE:**

Turning this adjuster clockwise brings it closer to the trigger return magnet, increasing the weight of the trigger pull, while turning it counter-clockwise makes the trigger pull lighter.

**IMPORTANT!** – The trigger must be adjusted with enough swing to both activate the trigger's micro-switch when the trigger is pulled and allow the micro-switch to reset when the trigger is released.