

RDX XM203 BOSS OPERATIONS MANUAL



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Health and Safety

	 WARNING
	<p>Read and fully understand this operator's manual before using the device.</p> <p>Failure to follow operating instructions could result in serious injury.</p>

NOTE

This operator's manual provides you with easy to understand operating instructions. Before operating, please read the entire manual and follow all the instructions.

PRODUCT REFERENCES, ILLUSTRATIONS AND SPECIFICATIONS

All information, illustrations, and specifications in this manual are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.

- Read the instructions carefully. Be familiar with the controls and proper use of the unit.
- Do not operate this unit when tired, ill, or under the influence of alcohol, drugs, or medication.
- Inspect the unit before use. Replace damaged parts. Check for fuel leaks. Make sure all fasteners are in place and secure. Replace parts that are cracked, chipped, or damaged in any way. Do not operate the unit with loose or damaged parts.
- To reduce the risk of hearing loss associated with sound level(s) always wear ear/hearing protection when operating this unit.
- Never store the unit, with gas in the tank, inside a building where fumes may reach an open flame (pilot lights, etc.) or sparks (switches, electrical motors, etc.)
- Keep these instructions on hand at all times. Refer to them often and use them to instruct other users.



Safety Disclaimer

At RDX Technologies, we prioritize the safety and well-being of our users. While our products are designed with safety in mind, it's important to use them responsibly and in accordance with the provided guidelines. By using our products, you acknowledge and agree to the following safety precautions:

- Read and follow all instructions and warnings provided in the product manual before use.
- Ensure that the product is used only for its intended purpose and in the manner described in the manual.
- Keep the product and its accessories out of reach of children and pets.
- Do not attempt to modify or disassemble the product. Any modifications may compromise its safety and void the warranty.
- Use appropriate protective gear, such as safety goggles or gloves, when gas filling the product.
- Keep the product away from water, heat sources, and flammable materials to prevent fire hazards.
- Do not use the product if it appears damaged or malfunctioning. Contact RDX Technologies for assistance and refrain from using the product until it has been inspected and repaired by authorized personnel.
- Use the product in a well-ventilated area to prevent exposure to fumes or hazardous chemicals, if applicable.
- Store the product in a secure location when not in use to prevent accidents or unauthorized access.

By using our products, you accept responsibility for your safety and the safety of others around you. RDX Technologies shall not be liable for any injuries, damages, or accidents resulting from the improper use, misuse, or negligence of our products.

If you have any questions or concerns about the safe use of our products, please contact RDX Technologies for assistance.

Propane Handling for the RDX Boss Unit

- Introduction

This section provides users with essential guidelines on safely handling propane canisters when operating the RDX Boss unit. The RDX Boss unit, designed for realistic simulation experiences, requires careful attention to propane handling to ensure safety and optimal performance.

Propane Transfer Procedure to the RDX Boss Unit

- **Safety Check:** Begin with a safety inspection of the propane gas bottle, fill valve adapter, and RDX Boss unit. Look for any signs of damage or wear. Ensure the area is well-ventilated and free from ignition sources.
- **Personal Protective Equipment:** Wear protective gloves and safety glasses to protect against accidental propane exposure.
- **Attaching the Fill Valve Adapter**
Adapter Connection: Attach the fill valve adapter securely to the gas bottle's output valve. Make sure the connection is tight to prevent gas leaks, but avoid over-tightening which could damage the valve.
- **Transferring Propane to the RDX Boss Unit**
Initiating Transfer: With the adapter securely attached to the gas bottle, insert the other end of the adapter into the RDX Boss unit's fill valve.
- **Injection Duration:** Carefully transfer the propane into the RDX Boss unit. Inject the gas for 5 to 10 seconds, which should be sufficient to achieve 2000 plus rounds.
- **Final Leak Inspection:** Conduct a thorough inspection for leaks by attentively listening for the sound of escaping gas. Should there be any uncertainty, apply silicone oil to the areas of potential leakage and watch for the formation of air bubbles, indicating a leak.
- **Regular Inspections:** Regularly inspect the fill valve adapter, gas bottle, and the RDX Boss unit before and after each use for signs of wear or damage.
- **Proper Storage:** Store the gas bottle and RDX Boss unit in a cool, ventilated area away from direct sunlight and ignition sources.

Introduction

The RDX XM203 BOSS (Ballistic Ordinate Sound System).

The RDX Boss Unit emerges as a game-changer in the realm of airsoft, seamlessly blending realism with excitement to redefine the way players engage on the battlefield. With its innovative design and meticulous attention to detail, this device delivers an unparalleled level of authenticity to every skirmish.

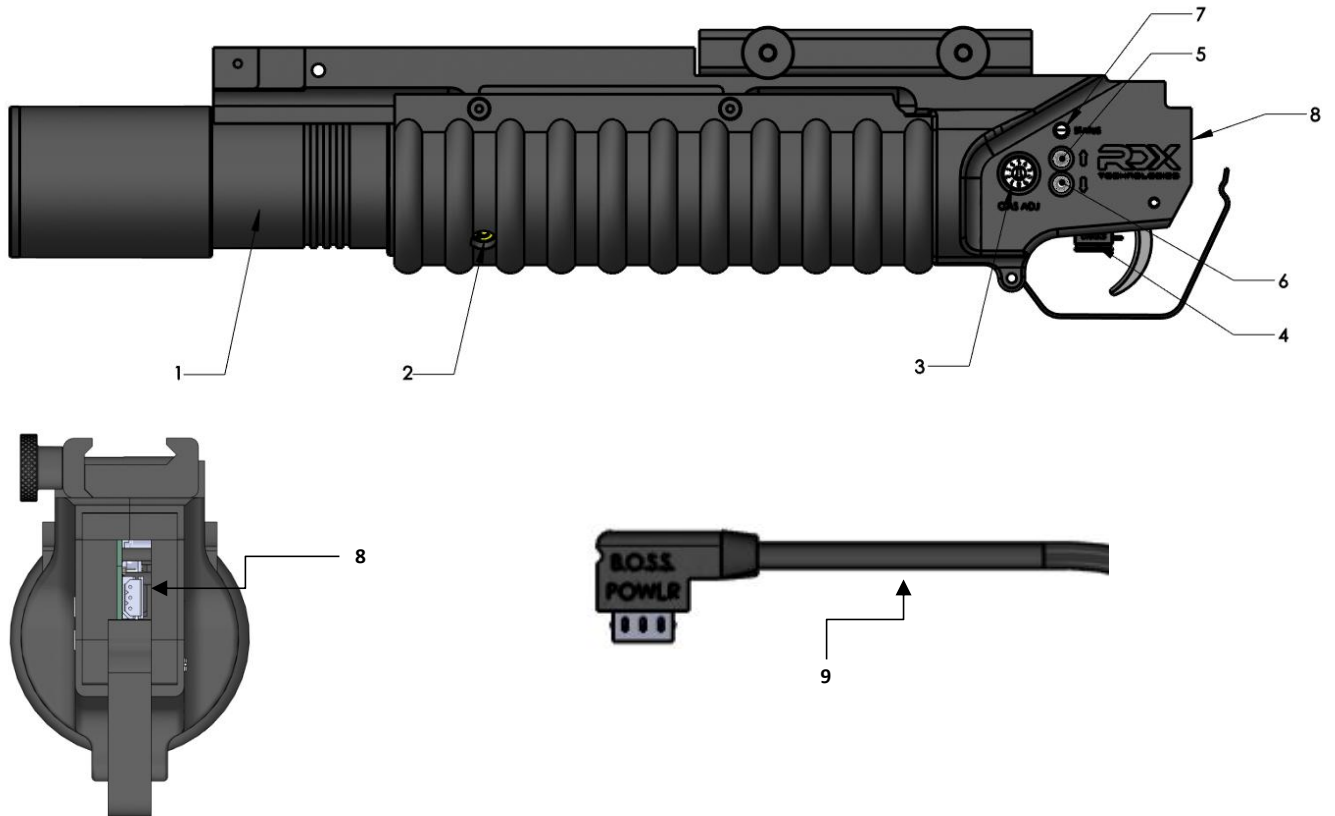
Taking cues from the iconic M203 grenade launcher, the RDX Boss Unit boasts a form factor that mirrors its real-world counterpart, ensuring a visually immersive experience for players. Beyond its aesthetic appeal, however, lies a sophisticated system that simulates gunfire with astonishing precision.

Powered by gas and engineered to perfection, the RDX Boss Unit replicates the firing mechanism of a genuine firearm, providing players with the tactile feedback and audio cues that elevate immersion to new heights. Whether unleashing a barrage of simulated rounds or delivering single shots, this device captures the essence of combat in vivid detail.

Despite its formidable appearance, the RDX Boss Unit prioritizes safety and user-friendliness, offering players a reliable and intuitive tool for enhancing their airsoft experience. With its robust construction and seamless integration into gameplay, it ensures a thrilling yet secure environment for all participants.

In a world where authenticity reigns supreme, the RDX Boss Unit stands as a testament to innovation and craftsmanship, inviting players to embark on a journey where every shot, every maneuver, brings them closer to the thrill of real combat. Prepare to revolutionize your airsoft experience with the RDX Boss Unit leading the charge

Features



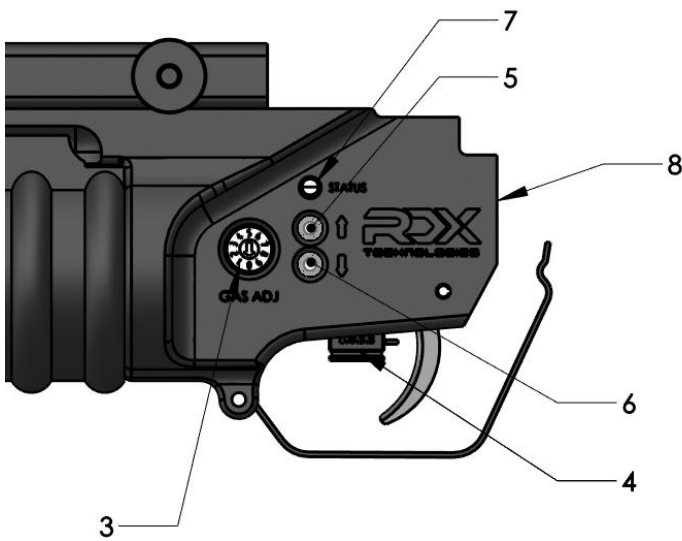
#	Name
1	Firing Sleeve
2	Gas Fill Valve
3	Gas Adjustment
4	USB C Dongle
5	Up Key
6	Down Key
7	LED Status
8	Power Input
9	Power / Signal Cable

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Function

Below is a description of each core function of the XM203 BOSS unit.

Panel System



Gas Setting Changes - (3) Make gas setting changes based on firing performance (*see the “performance” section for more information*),

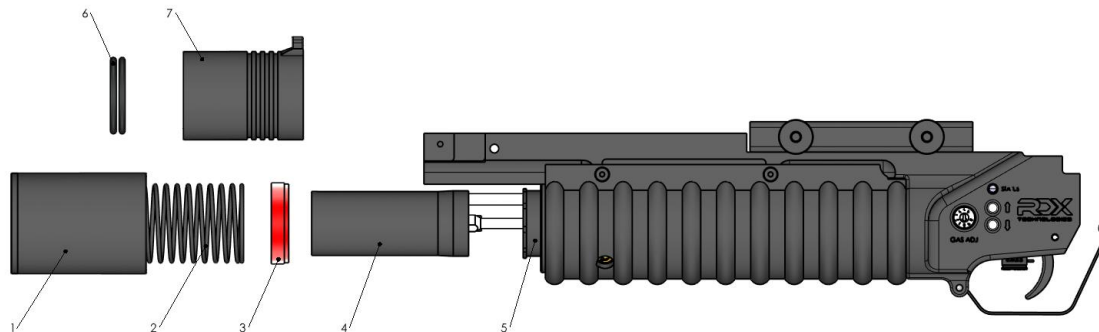
Changing the Fire Rate - (5-6) The unit has an adjustable fire rate depending on the user's requirements. The default firing rate is set to 800 RPM (rounds per minute). This can be changed by either pressing the up or down button. Each press adjusts shots by 10 RPM. For example, pressing the down key 10 times will now have the unit's firing rate set to 700 RPM."

Status Light - The status light gives the user feed back when certain functions are preformed on an error has occurred. More information is provided in the table below:

LED Status	Buzzer Status (Milliseconds)	Function	Remedy
ORANGE Pulse	BEEP every 80ms	Firing Sleeve is open	Close firing Sleeve completely
RED Pulse 100ms	BEEP every 100ms	Units is hot	Let unit cool down to normal temp
RED Pulse 200ms	BEEP every 200ms	Unit Cold	Use in a warmer environment
ORANGE Pulse	BEEP 1second	Power On	N/A

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Firing Section



The firing section includes:

1. Front Cap
2. Spring
3. Rear Sleeve Seal
4. Firing Cylinder
5. Gas Head
6. O'rings
7. Firing Sleeve

The firing section, aptly named for its role in generating noise upon firing, operates through pressure buildup, causing the sleeve to burst forward, creating a distinctive ballistic sound. It's important to note that the firing sleeve is the sole moving part, oscillating along the firing cylinder during operation. In auto mode, this motion can reach speeds of up to 1000 rounds per minute. Caution should be exercised to avoid placing hands or fingers near this section during firing.

As a safety mechanism, the unit will not fire if the sleeve has moved forward, exposing the firing chamber.

Gas Filling

Use the specified gas type only. Failure to NOT use the correct gas will result in poor performance or damage to the unit.

There are 3 common types of gas on the market which are:

- Butane: **DO NOT USE**
- Propane: OK to use. Note: Poor performance in cold
- MAPP (Methylacetylene-Propadiene Propane): Recommended for overall performance including climates below 10 degrees.

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1. Connect the filling adaptor
2. Turn the BOSS unit upside down to access the gas filling valve
3. Inject 5-10 seconds worth of gas as per the figures below



NOTE: Always fill the BOSS unit in the upside position. This allows liquid to flow into the unit giving more shot capacity.

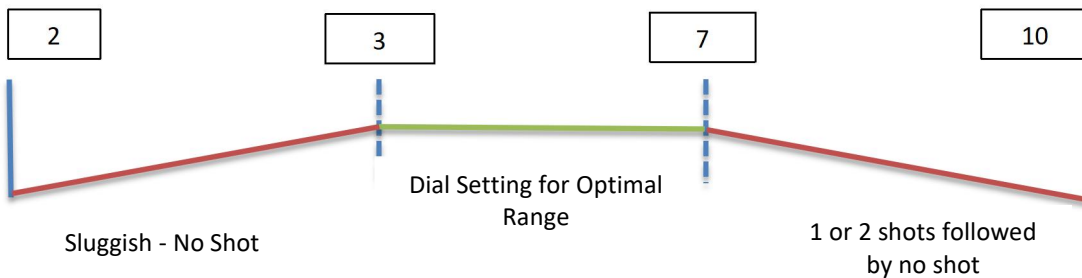
Field Operation

The RDX XM203 BOSS unit combines mechanical and software components crucial for optimal performance. Like a gas-operated gun, adjusting gas levels is essential for reliability. Insufficient gas can cause low, sluggish shots and misfires, while excessive gas may lead to either single shots or none at all. Proper gas balance ensures clean, crisp shots without sound variations.

Listen for the following:

Low, sluggish shots accompanied by variations in sound may occur. Eventually, the RDX BOSS unit may experience choking, halting firing operations, requiring clearance. To clear the unit, push the firing sleeve forward and maintain it in this position for 3–5 seconds to clear the chamber. Release the firing sleeve and proceed to adjust the gas settings.

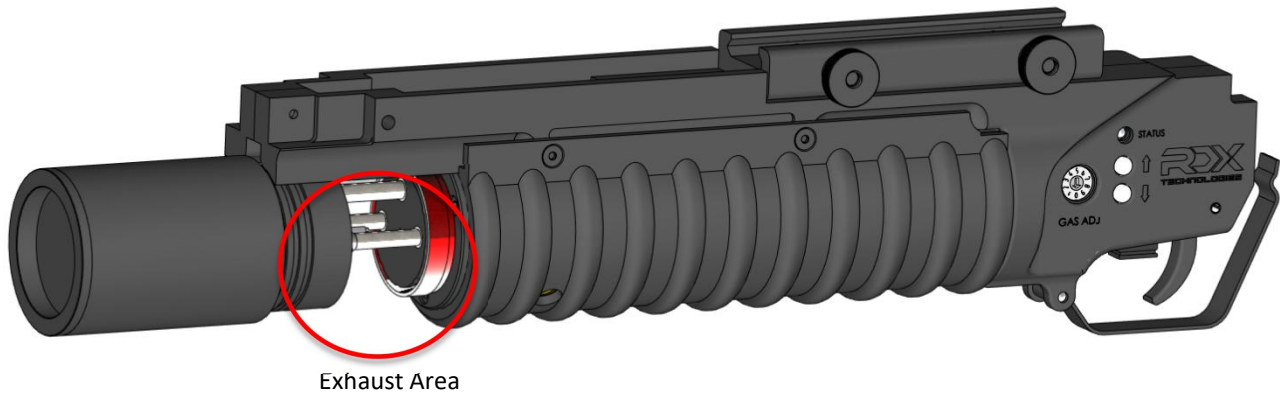
Best practice involves making one or two dial adjustments and then testing the unit by firing it in Automatic mode. If performance deteriorates, adjust the settings in the opposite direction and retest. Over time, the unit will begin to fire in Automatic mode for longer durations, indicating that the gas settings are within the optimal range



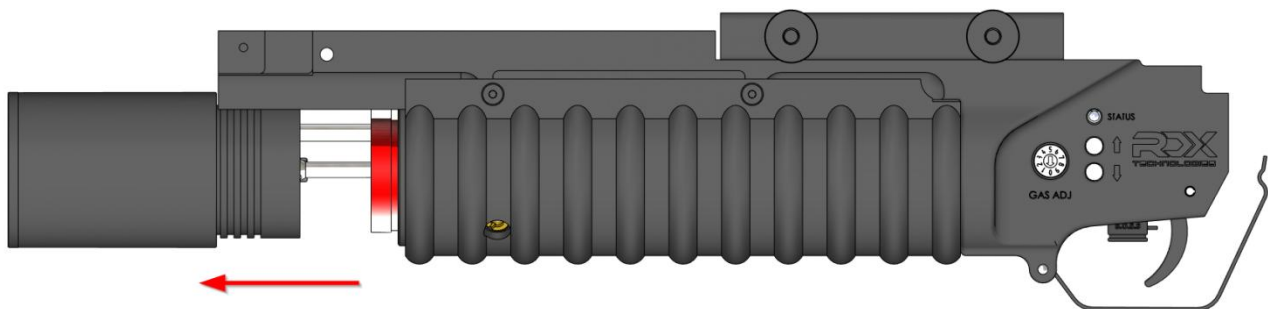
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Heat Exhaust

The BOSS unit uses combustion to create its sound signature. As a result, heat can build up around the combustion area and caution is required when operating the unit.



Do not fully enclose the exhaust ports as this will cause the unit to choke. To un-choke, push the firing sleeve forward and hold for 3 seconds. Release when completed.



WARNING

Avoid placing fingers near the firing sleeve while the unit is in operation. In the event of contact or jamming, you may experience discomfort, such as pinching or pressure. However, it's unlikely to result in serious harm. To ensure safe usage, maintain a safe distance from moving parts during firing.

Setup and Test Firing

1. Connect Battery

Connect battery to your air-soft gun.

2. Unit Powers on

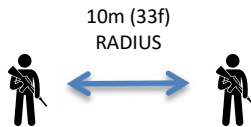
An audio beep should be heard when the battery is connected. Also note the USB Dongle acts as an On/OFF key. This needs to be inserted the correct way for the unit to power on.

3. Fill with Gas

Add gas as per the Gas filling section.

4. Check surroundings for safe testing

Before firing the unit, check your surroundings. Make sure personnel are outside the 10m blast radius unless wearing hearing protection.



5. Firing Gun

Fire 2 to 3 shots to check system is performing as expected. If not, refer to the troubleshooting section.

6. Make Gas Adjustments

Make any necessary gas setting changes as per the "Gas Setting" section.

7. Change Rate of Fire (ROF)

If required, change the rate of fire as per the "Changing Rate Of Fire" section.

8. Reset Default ROF

If the fire rate needs to return to its default settings, hold down the "UP" and "DOWN" button simultaneously for 3 seconds. An audio beep will be heard to confirm unit has been reset back to 800 rounds per minute.

9. GOD MODE

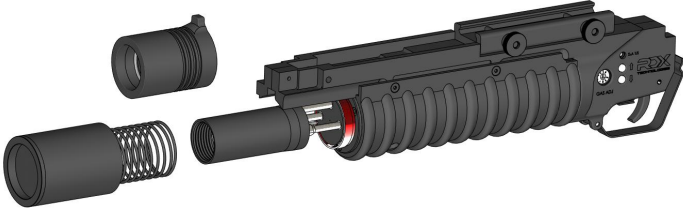
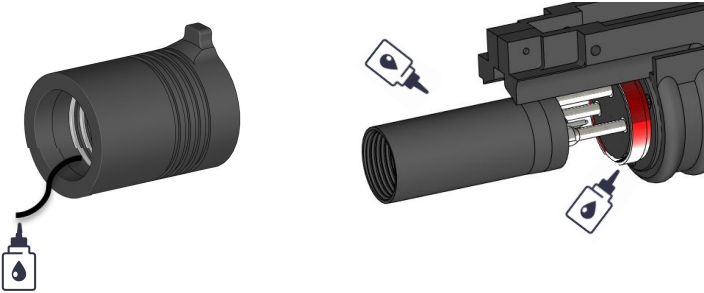
If available through a software upgrade, "God Mode" allow the unit to fire without having to use the trigger of the air-soft gun, it is attached too. Hold down the "UP" button for 3 seconds to enable. Any audio beep will be heard for 1 second and the status light will show "GREEN" for 1 second. Pressing the "DOWN" button will fire the unit until the button is released.

NOTE: Over doing this will eventually overheat the unit or cause the rear sleeve seal to break. A replacement seal will be required.

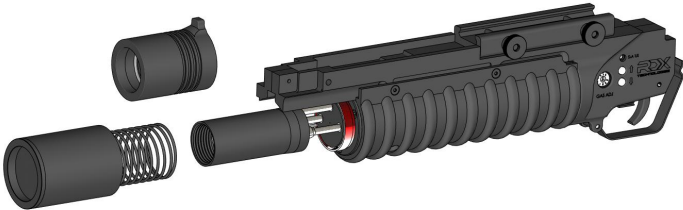
BOSS Maintenance

Lubrication on Sleeve and Seal

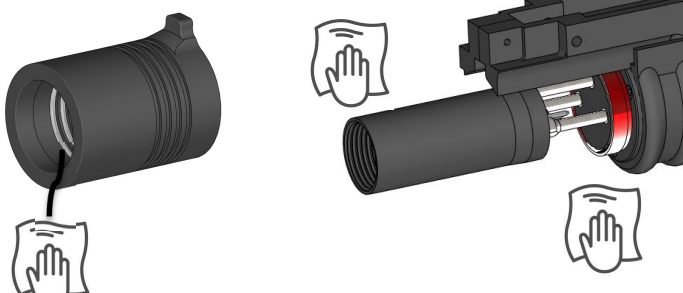
Over time the rear sleeve seal will become dry and will require oil. Use Gun Oil or Silicon oil in the places seen below. If you notice performance issue, it is recommended to oil as per below to see if improvements can be made.

	Function	Result
	<ol style="list-style-type: none"> 1. Remove Front Guard 2. Remove Spring 3. Remove Firing Sleeve 	
	<ol style="list-style-type: none"> 4. Apply Oil to indicated locations: 5. On the O’rings inside the firing sleeve. 6. On the rear sleeve seal. <p><i>NOTE: To lube just the rear sleeve seal, the firing sleeve does not required to be removed. Push forward and lube rear sleeve seal.</i></p>	

Cleaning the Firing Sleeve Section


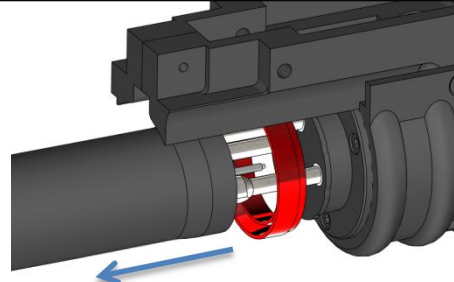

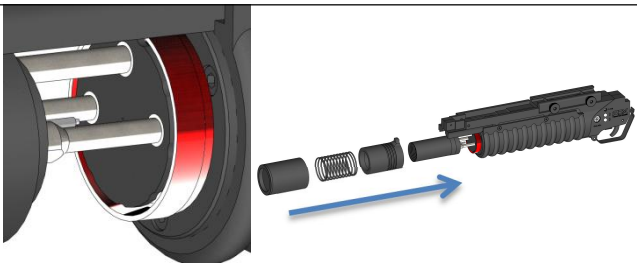
	Function	Result
	<ol style="list-style-type: none"> 7. Remove Front Guard 8. Remove Spring 9. Remove Firing Sleeve 	

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<ol style="list-style-type: none"> 10. Using a cloth, remove any dust or grime. 11. Remove O’Rings if required and clean. 12. Clean firing cylinder and seal. 13. Apply lube when finished. 	
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Changing the Rear Sleeve Seal

The BOSS unit employs a patented seal design crucial for generating its distinctive sound signature. However, with time, this seal may incur damage or breakage, resulting in noticeable performance degradation. To address this issue effectively, follow the outlined guidelines below.

<ol style="list-style-type: none"> 1. UN-screw front Cap. 2. Remove spring and firing sleeve. 	
<ol style="list-style-type: none"> 3. If not already broken, use tweezers or similar to pry off the existing seal. 	
<ol style="list-style-type: none"> 4. Take note of the orientation. Gently slide the rear seal over the cylinder then onto the gas head. 	
<ol style="list-style-type: none"> 5. Ensure the rear sleeve seal is sitting correctly. 6. Starting with the firing cylinder sleeve, slide back over the cylinder and check it is sitting correctly over the rear sleeve seal. If it is not able to fully close, re-check orientation. 7. Add spring and firing cylinder cap. 	

Spark Gap

Inside the firing chamber, there are spark probes that are pre-set prior to shipping. The probes will either need to be cleaned or realigned if moved.

To clean the probes, use either fine sandpaper (400 plus grade) or an equivalent file. Be sure not to remove or damage the surrounding sheath to prevent shorting.

To realign the spark probes, move the probes back to the following form:

Minimum Gap – 2mm

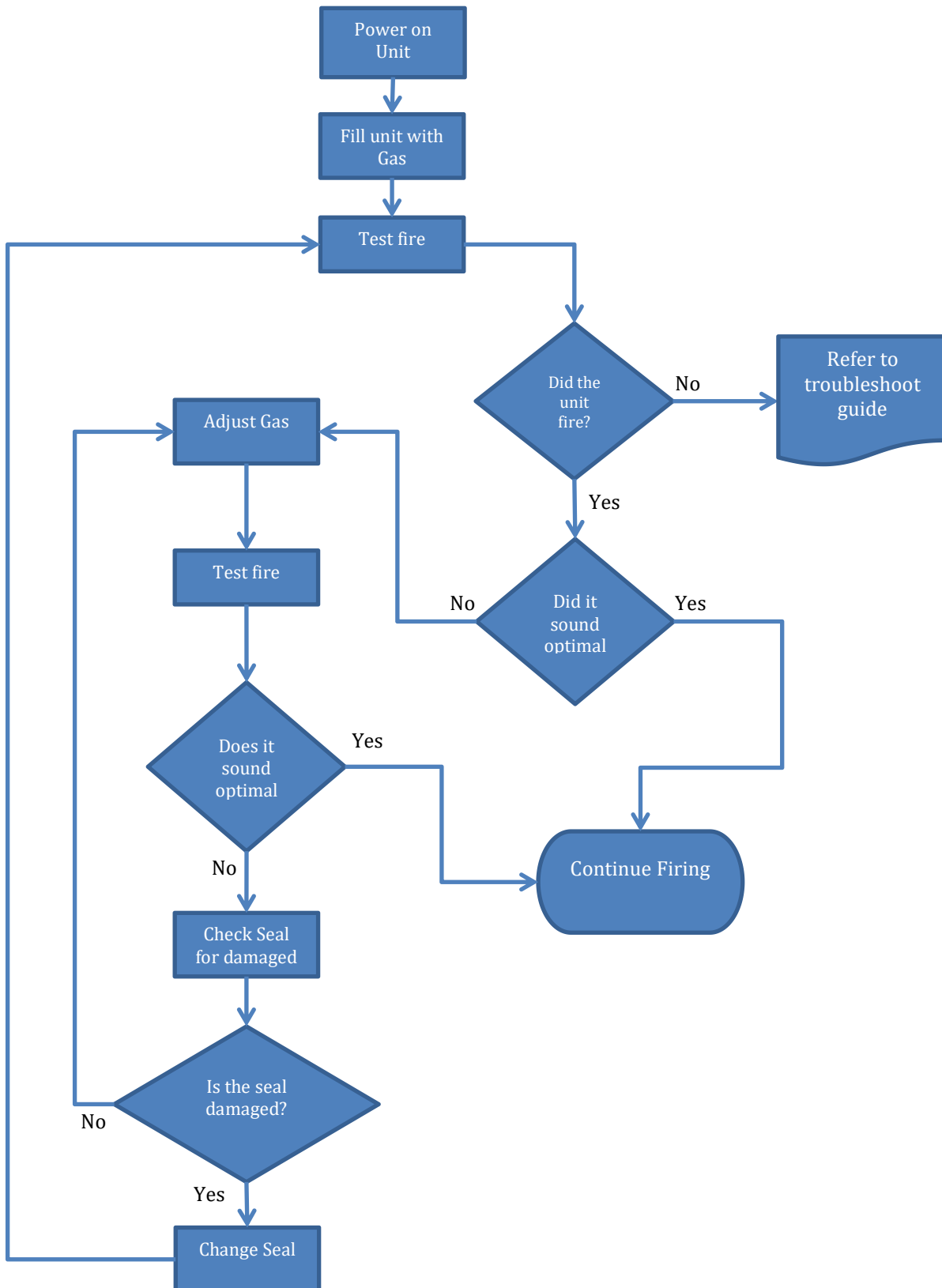
Maximum Gap – 4mm

Having a short gap will reduce the performance as with a larger gap outside the maximum requirement. DO NOT use sharp tools to reform its profile. Any bends or clamping can lead to shorts.

Troubleshoot

Fault	Cause	Remedy
No buzzer on unit when battery connected.	USB dongle not inserted	Insert USB dongle. Check orientation.
	Does the air-soft gun fire when trigger is pulled?	Check USB dongle is inserted correctly.
	Yes No	Check battery is connected correctly.
Power is connected correctly but unit does not fire	Check unit is filled with gas.	Fill unit with gas.
Shot is low / sluggish	Seal is damaged	Check seal for damage. Replace if needed.
	Gas setting is not optimal	Complete the gas setting procedure.
Units fires then stops. Can no longer get unit to fire.	Firing chamber is fill of gas and needs to reset.	Open firing sleeve fully to allow fresh air to enter. Hold open for 3 seconds. Test again. If problem persists, go through the gas setting procedure.

BOSS UNIT PROCEDURE FLOW CHART



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