

**2018 PWS Manual  
Shortened for  
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manual, please email  
customerservice@primaryweapons.com**

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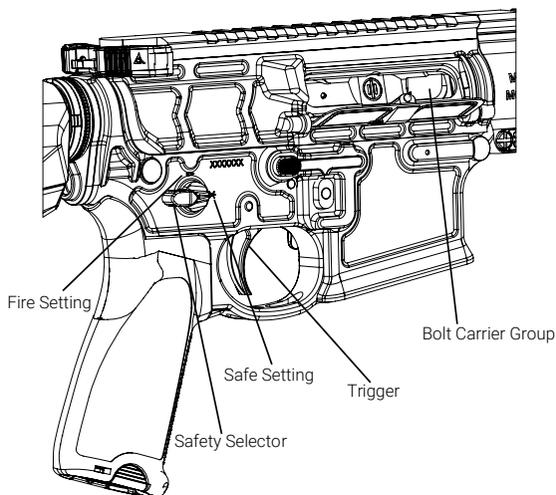
### **General Safety:**

1. Always keep the muzzle pointed in a safe direction.
2. Always keep your firearm unloaded until ready for use.
3. Never put your finger on the trigger until you are ready to shoot.
4. Know your target and what is beyond.
5. Always wear ear and eye protection while shooting to avoid damage due to hot brass, powder gas, loud percussion sound, etc.

**Spend time making yourself familiar with the rifle's controls and general function until handling the rifle in a safe manner is second nature.**

### **PWS Safety Precautions:**

Every PWS firearm has multiple safety precautions. Please make yourself familiar with these features before operating.

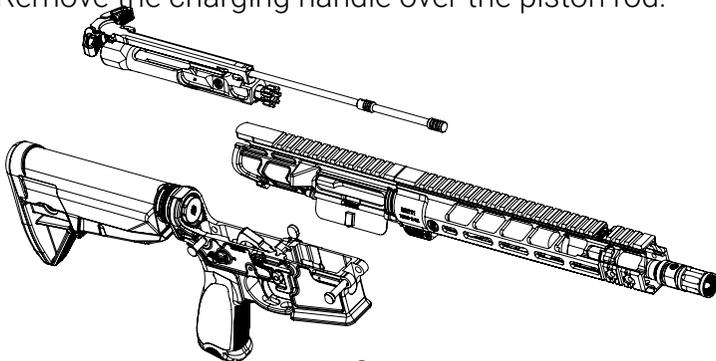


### **Disassembly, Cleaning and Maintenance:**

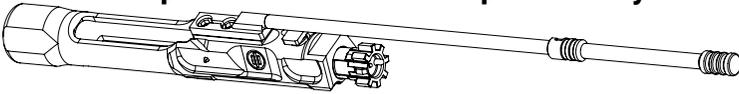
While the PWS piston system does require less maintenance and cleaning than a standard DI system, we do suggest regular cleaning and maintenance of your firearm. Please see cleaning and maintenance instructions on pg. 8 after disassembly. For PCC disassembly, cleaning/maintenance, please see pg. 14.

#### **Field Stripping:**

1. Unload and clear your firearm.
2. Ensure the bolt carrier group is forward and your firearm is on safety before proceeding.
3. Press the back takedown pin from left to right until it is stopped by the detent in the lower receiver.
4. Press the front takedown pin from left to right until it is stopped by the detent in the lower receiver.
5. At this time, the upper receiver and lower receiver will detach from each other.
6. Pull the charging handle from the back of the upper receiver until it stops. At this time, it is easiest to turn the upper 45-90 degrees so the charging handle is facing opposite of you.
7. Pull the bolt carrier group back until it catches on the charging handle.
8. Lift the bolt carrier group up (away from the charging handle). The bolt carrier group with charging handle will now be free to pull away from the upper receiver.
9. Turn the piston head until it can easily slip off (opening should be facing directly up or directly down).
10. Remove the charging handle over the piston rod.



## Complete Bolt Carrier Group Assembly



### Disassembly for routine maintenance:

Follow steps 1-10 on pages 6-7.

11. Remove firing pin retaining pin, which will release the firing pin.

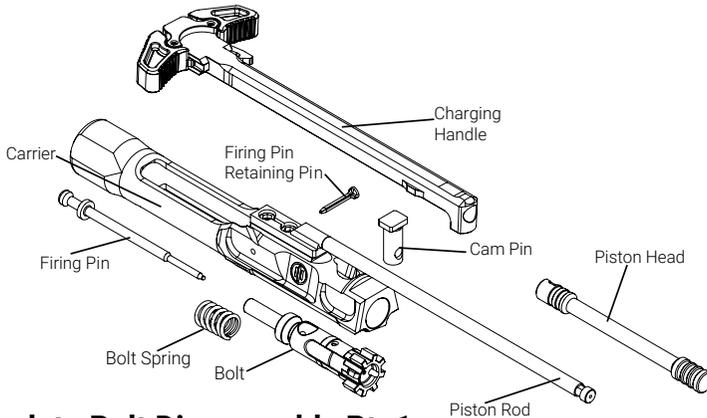
12. Depress bolt assembly group into carrier, turn cam pin 90 degrees and remove. **Caution: the bolt assembly is spring assisted and will easily separate at this time.**

13. Apply pressure where extractor meets bolt face to relieve pressure on extractor pin.

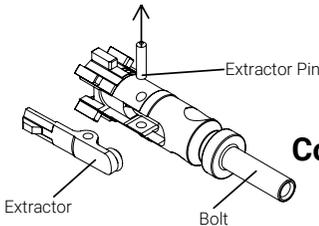
14. Using a punch, push the extractor pin from the bolt (direction does not matter)

15. Lift extractor from bolt

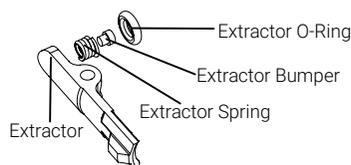
### Complete Bolt Carrier Group Disassembly



### Complete Bolt Disassembly Pt. 1



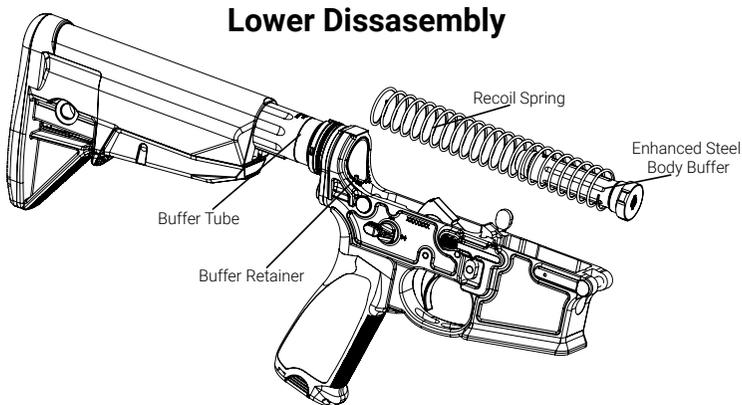
### Complete Bolt Disassembly Pt. 2



## Lubrication:

Regular lubrication intervals should occur every 500 rounds under normal operating conditions. Though the PWS long stroke piston system requires much less maintenance than a standard direct impingement system, we do suggest routine maintenance which includes lubrication. To lubricate your firearm, follow disassembly instructions #1-16 on pg. 7-8. MK1 and MK2 items require a .40 cal cleaning brush to clean the piston tube (located above the barrel). A Scotch Brite pad may be used to remove hardened on carbon on both the gas adjustment knob and the piston head. Re-assemble bolt carrier group and lubricate. Pay attention to ensure all contact points of carrier are lubricated well. **Wipe down piston rod and piston head prior to reassembly. No lubricant is needed on these parts.**

Once all field stripping steps have been completed and the lower has been detached from the upper, depress the buffer retainer and remove the buffer and recoil spring. Use a solvent to flush out debris from the buffer tube. Remove any excess solvent, apply an even layer of lubricant to the buffer tube, and reassemble.



## Gas System Maintenance Instructions:

Gas System Maintenance varies by line. Please review the instructions specific to your product line before proceeding.

### **MK1 MOD 2-M:**

1. Using your rifle service tool, turn the gas adjustment knob to setting 2. In setting 2, the rollpin should be facing down towards the barrel.
2. Using the cross head section of your rifle service tool (or a flathead screwdriver), unscrew the handguard screws on each side of the handguard until they come to a stop approximately 3 turns).
3. Push the handguard plate on the ejection port side in, towards the upper, then pull the handguard forward to remove. The handguard should remove with very little force. **This process requires very little force; please contact PWS Customer Service if you need assistance.**
4. Turn the gas adjustment knob 180 degrees or until roll pin is facing up and pull the knob out of the gas block.
5. Clean the piston tube and gas block with a .40 cal cleaning brush and the gas adjustment knob with a Scotch Brite pad and/or wire brush as needed, then reassemble.
6. After cleaning, please ensure your gas system is adjusted to your preferences. To review gas adjustment settings, please see pg. 4.
7. Reinstall handguard, ensuring that there is a slight air gap clearance between the gas block and the handguard interior rail. Failure to leave this gap can impact accuracy.

**Disassembly further than shown in this manual should ONLY be done by a PWS Armorer. As the PWS piston system is proprietary and requires tools manufactured specifically by PWS, we do not suggest further disassembly by owners or gunsmiths not certified as PWS Armorers.**

### **MK1 and MK2 MOD 1-M:**

Removal of handguard on these lines is **NOT** necessary, nor suggested at any time. Tinkering with the handguard can impact accuracy and will NOT be covered under the PWS warranty.

1. Using your rifle service tool, turn the gas adjustment knob to the X-setting.
2. Place a long cleaning rod in the back of the upper receiver into the piston tube located above the barrel.
3. Tap the back of the cleaning rod against the gas adjustment knob until the knob is knocked loose towards the muzzle device. Depending on carbon buildup, this can take some effort.
4. Clean the piston tube and gas block with a .40 cal cleaning brush and the gas adjustment knob with a wire brush as needed. A ScotchBrite pad can be used to remove carbon buildup on piston head and gas adjustment knob.
5. To reassemble, place the gas adjustment knob back into the gas block on the X-setting until it is fully seated against the gas block. Note: first generation MK1 and MK2s utilized a spring and detent to retain the gas adjustment knob index, and can be easily lost. Please contact PWS Customer Service if a replacement is needed.
6. After cleaning, please ensure your gas system is adjusted to your preferences. To review gas adjustment settings, please see pg. 4.

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### Ammo Selection:

Use only high quality, original, factory-manufactured ammunition. **The use of reloaded, remanufactured, hand-loaded, or other non-standard ammo is NOT suggested and voids all warranties.**

Yes, we have seen our rifles after they've taken rifle-cartridges with pistol powder and even the completely wrong caliber. Please pay attention to ammo selection.

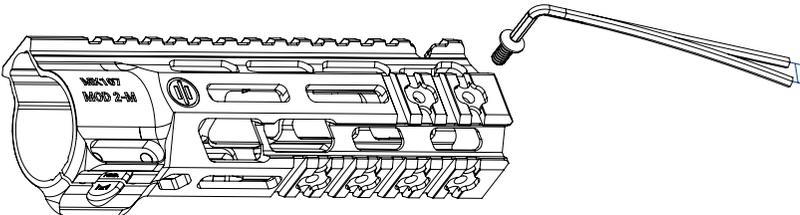
Velocity (feet per second)					
Barrel Length	.223 Wylde	.300 BLK	7.62x39	.308	6.5 Creedmoor
7.75"	2216		1944		
9.75"		2264			
11.85"	2741		2204		
14.5"	2921				
16.1"	2980	2481	2374	2488	
18"	3017				
20				2580	2624

Ammunition used for velocity testing is as follows:

.223 Wylde	Federal XM855BK150 62 grain
.300BLK	Hornady Black 110 grain Vmax
7.62x39	Wolf Polyformance 123 Grain FMJ
.308	Federal Gold Medal 168 SMK
6.5 Creedmoor	140 grain ELD

### PicLok Torque Specs:

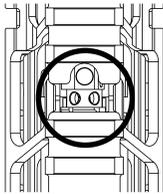
The torque value for M-LOK® screws in the PicLok feature is 11 in-lbf, or 1/4" to 3/8" inch deflection of the longer arm of a 1/8" hex key.



## Gas Adjustment Settings:

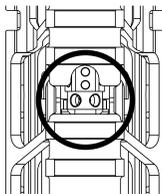
Please review these settings, and as you make changes such as ammo, suppressor use, etc. pay attention to your settings. To adjust your gas settings, insert the narrow end of your rifle service tool into the gas adjustment block, and turn.

*Setting 1*



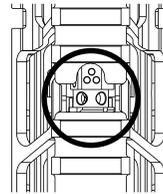
For Unsuppressed Use

*Setting 2*



For Suppressed Use with lighter loads and/or suppressors with low backpressure

*Setting 3*



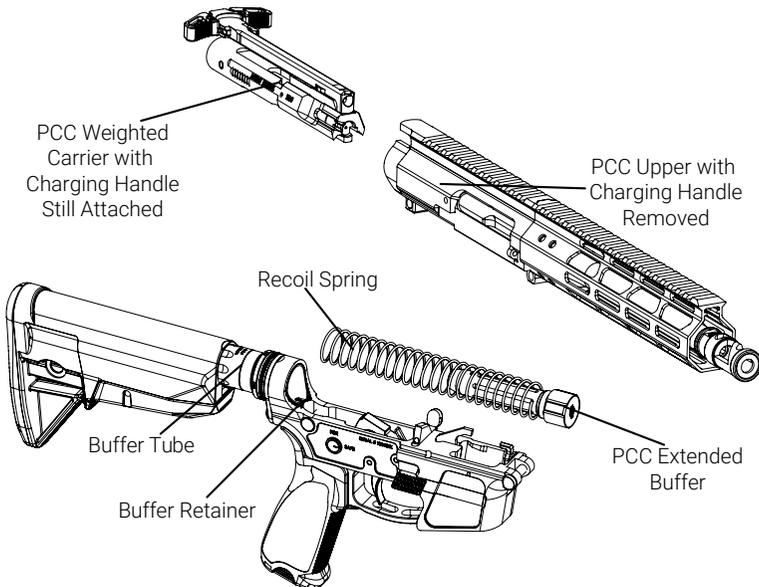
For Suppressed Use with heavier loads and/or suppressors with high backpressure

1. Even with the proper gas setting, suppressors add an entirely new dynamic to the function of a rifle. Additional cleaning and parts maintenance may be required if the rifle is used extensively with a suppressor.
2. The multiple handguard mounting systems PWS offers, allow a variety of accessories to be used. When using these accessories with your PWS firearm, please ensure you are using high-quality items and installation is correct.
3. All PWS firearms feature a free-float handguard by design. If using open sights on your firearm, please note that it may require adjustment.
4. When mounting optics, please mount to the upper receiver, not the handguard and not in the bridge between the upper/handguard.
5. Many parts of the PWS system are proprietary, including the bolt carrier group, the barrel, the handguard and upper receiver. Before switching parts, please contact PWS Customer Service.

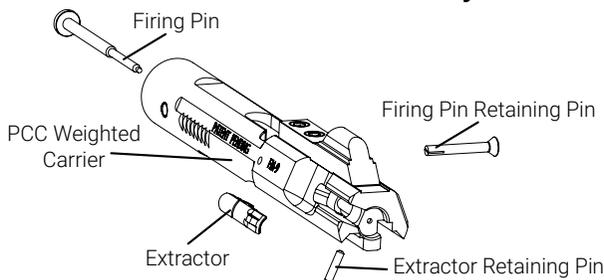
**For more information, please visit our website at [www.primaryweapons.com](http://www.primaryweapons.com)**

## PCC Disassembly, Cleaning & Maintenance:

To lubricate your firearm, follow disassembly instructions #1-8 on pg. 7. Use a solvent to flush debris from firing pin bore, extractor notch and all other surfaces of carrier. A Scotch Brite pad may be used to remove hardened on carbon/remaining debris. Remove and clean extractor retaining pin and extractor, firing pin and firing pin retaining pin. Re-assemble bolt carrier group and lubricate. Pay attention to ensure all contact points of carrier are lubricated well.



## PCC Carrier Disassembly:



**Disassembly further than shown in this manual should ONLY be done by a PWS Armorer. We do not suggest further disassembly by owners or gunsmiths not certified as PWS Armorers.**