

# VM68, VM68 MAG and EXC-68

Sheridan Semi-Automatic  
Single Action Paintball Gun

## Owners Manual

**CAUTION: NOT A TOY. Adult supervision required. Misuse or careless use may cause serious injury - especially to the eyes. May be dangerous up to 100 yards (91 meters). Do not insert fingers inside action when gun is cocked or gas supply is attached.**

**Users must wear face and eye protection.**

**Whenever gun is not in actual use, it is recommended that the gun barrel be covered, such as by a sock, or that an industry approved barrel plug be inserted in the barrel.**

This gun is powered by CO2 gas under very high pressure. Extreme care should be taken when any gas source is attached to the gun.

**Recommended ammunition:** Only paintballs of .68" caliber should be used with this gun.

**Safety:** The VM68 is not a toy, and should not be operated by anyone under eighteen years of age without adult supervision. The user assumes full responsibility for the use of this gun. Sheridan shall not be liable for any personal injury or property loss resulting from use of handling of this gun under any circumstances. Full responsibility lies with the possessor.

**Warning:** When removing the gun from storage or when handing it to or receiving from another person, always check to be sure the gun is not loaded.

**Warning:** **When removing the CO2 cylinder at any time** be certain that the tank valve turns and stays with the cylinder, and does not stay with the gun. **THIS WARNING IS EXTREMELY IMPORTANT!**

### Operating Instructions:

#### 1. Safety

To put the gun on "safe", push the safety handle up into the safety slot when the cocking handle is pulled completely to the rear, starting the loading procedure. When ready to safely fire, push the safety handle down. The gun will now fire, if charged, just by pulling the trigger. **BE CAREFUL!**

## 2. CO2 Charging

The charging of your CO2 gun is accomplished by screwing the CO2 cylinder into the gas adapter. Tighten the cylinder until there is a solid stop. During use the cylinder should be checked occasionally to be sure it is not working loose.

## 3. Loading

With paintballs in the ball feed fitting and cocking handle forward, depress the trigger and pull the cocking handle towards the rear of the gun until sear engagement is made. (A distinct "click" will be heard and felt when the sear is engaged.) Release the trigger, then release the cocking handle. The cocking handle (and bolt) should remain in the retracted position. A paintball will fall into the ball chamber, and the gun is ready to fire.

**ENGAGE THE SAFETY NOW IF FIRING IS NOT IMMEDIATE!**

## 4. Firing

Move the safety handle to the fire position, sight the target and aim, and gently pull the trigger. The gun will fire and the bolt will return to the fire position, requiring only the pull of the trigger to fire another ball.

**CAUTION- Never point the paint gun, charged or uncharged, loaded or unloaded, with the safety on or off, at or near anything you do not intend to shoot at immediately.**

## 5. Low CO2 Charge

When the charge in the CO2 cylinder is almost exhausted, velocity will decrease noticeably. ("Runoff" may occur- the rapid cycling of the bolt without engaging the trigger sear or having paintballs fall into the ball chamber. Should this happen, release the trigger immediately and wait for the runoff to stop.) To replace the depleted cylinder with a fully charged fresh cylinder, slowly and carefully unscrew the old cylinder, allowing any gas to safely escape to the atmosphere. Then follow the steps under paragraph 2 above. **Do not attempt to measure gun efficiency without the actual firing of paintballs. The gun is not designed for efficient dry firing.**

## 6. Cleaning

When putting the gun away- even for just a short period- remove the CO2 cylinder and any paintballs from the gun. Be sure the barrel is clean and free of any debris. In many instances cleaning can be done simply by bolt retraction and use of a cleaning rod made for .68" caliber paint guns. If ball breakage occurs internally, all paint and gelatin fragments must be removed from the gun action. This can only be done by complete disassembly of the action receiver.

## 7. Disassembly:

**GAS SYSTEM:** Prior to any maintenance, REMOVAL OF GAS SYSTEM, is critical to prevent accidents. Slowly twist gas system in a counterclockwise direction allowing for gradual receiver depressurization. **Note:** removal of bulk gas adapter from receiver is not recommended, and should a leak occur in this region, the receiver should be returned for repair or replacement.

**BUTT SYSTEM:** Tools required: 1/8" allen wrench, 3/16" allen wrench

Remove gas system. With 1/8" allen wrench, remove both butt fasteners and lock washers on sides of receiver. With 3/16" wrench remove 1/4" bolt from top of receiver. Be very careful that butt plugs do not eject when vertical bolt is removed. Be prepared to catch the plugs. Butt assembly is now accessible from receiver.

**BOLT SYSTEM:** Tools required: 3/8" open end wrench, 9/64" allen wrench.

Remove gas system, then butt system. Move bolt to retracted position, forcing spring out of receiver. With 3/8" wrench remove bolt cocking handle. With 9/64" allen wrench remove safety handle. Tilting the receiver back should allow the bolt system to slide from the receiver. Be careful the bolt system is caught and does not fall onto hard surface.

**GAS TRANSFER SYSTEM:** Tools required: 1/8" allen wrench, Air Chamber Tool (available from factory or PMI).

Remove gas system, then butt and bolt systems. The gas transfer system contains the chamber, valve, and spring. **To service these parts you must be absolutely certain that the receiver is depressurized by removal of the gas system.** Insert air chamber tool. Depress trigger to allow tool guide to pass sear engagement. Insert tool into air chamber threads, turning with a clockwise movement until tool is seated firmly in chamber. Using 1/8" allen wrench remove both air chamber fasteners and lock washers from receiver. With repeated clockwise turns of the air chamber tool, chamber is free for removal from receiver. Care must be taken during retraction to prevent air chamber and air chamber gasket damage.

With air chamber removed, tilt the receiver back, catching valve and spring in free hand. Inspect valve seat and air chamber gaskets for debris, wear or tears that can cause leakage. Replace with factory approved parts only. Reassemble in reverse order, taking special care not to damage valve, valve seat, spring, or gaskets.

Thread the air chamber tool (furnished with original purchase) onto air chamber. Put petroleum jelly (or equivalent) on O-rings. With the spring in the valve, insert the valve assembly through the air chamber into the air chamber tool. With gun in vertical position, carefully insert air chamber tool with components into the receiver. (If trigger group is installed, the trigger will have to be depressed.) Once the air chamber is seated into the receiver, locate the securing holes found on both sides of the receiver (see accompanying paragraph labeled "VARIABLE GAS TRANSFER SYSTEM" for further details.) Using 1/8" allen wrench, secure fasteners - with lock washers - into the air chamber through the receiver. Carefully examine the reassembly of the receiver before installing the gas system.

#### SEMI-AUTOMATIC TRIGGERING SYSTEM

Tools required: 1/8", 5/32", 3/16" allen wrenches

Remove gas system. The semi-automatic triggering system contains the trigger pack, grip lug retention, grip, and associated fasteners. The trigger pack may be removed for cleaning purposes, but may not be further disassembled by the user. This assembly contains no user serviceable parts and if wear or damage occurs should be returned to factory for repair or replacement. To remove trigger pack, open grip trap door located on the bottom of the grip. Using 3/16" allen wrench remove grip fastener and grip from grip lug fasteners. Remove monopod fasteners using 1/8" allen wrench. Trigger pack may now be removed from receiver. Do not attempt to further disassemble the trigger pack; no user serviceable parts of this assembly are available from the factory.

**BALL FEED SYSTEM:** Tools required: 3/32", 1/8" allen wrenches.

Remove gas system. The ball feed system contains the ball indexing mechanism. This part may need to be replaced from time to time. To remove the ball feed system use the 1/8" allen wrench and remove the two ball feed system fasteners and washers. The ball feed system can now be completely removed from the receiver. To further disassemble to replace the ball indexing mechanism 3/32" allen wrench and remove the two fasteners holding down the securing plate. Indexing mechanism can now be removed. Take care not to lose the two metal bushings which are critical to indexing mechanism location.

## **VARIABLE GAS TRANSFER SYSTEM (VELOCITY ADJUSTMENT)**

Tools required: 1/8" allen wrench, air chamber tool.

Remove gas system so that the receiver is depressurized. Insert air chamber tool. Depress trigger to allow tool guide to pass sear engagement. Insert tool into air chamber treads turning with a clock-wise movement until tool is seated firmly in chamber. Using 1/8" allen wrench, remove both air chamber fasteners and lock washers from receiver. With repeated clockwise turns of the air chamber tool, chamber is free to turn in receiver. By turning air chamber clockwise to the next set of threaded holes visible through receiver, air flow to the upper bolt can be adjusted. Changing the air flow rate will change paint ball velocity. There are four different port hole diameters in the air chamber, largest to smallest in counter clockwise direction. The back of the air chamber is marked showing the largest of these diameters in the 12:00 o'clock position. By moving this mark to the 3:00 o'clock position gas flow will be reduced, and also the velocity. Continued movement to the 6:00 or 9:00 o'clock positions will again reduce paint ball velocity. Returning the greatest diameter mark to the vertical position - 12:00 o'clock - returns the gun to the highest velocity. **VELOCITY SHOULD ALWAYS BE CHECKED BY USING AN APPROVED CALIBRATED CHRONOGRAPH DEVICE.**

## **VARIABLE VELOCITY BOLT**

The VM68 and the VM68 Magnum has a variable velocity bolt. Remove the barrel to use the adjusting tool (5/32 allen). Insert the tool down the center of the bolt into the velocity screw. Turn the screw clockwise to increase the velocity, and counter clockwise to decrease the velocity. The velocity screw has detent locking positions every 180° these positions are easily felt when turning the adjustor. The adjustor must be in a detent position for the bolt to work properly.

## **8. MAINTENANCE:**

A. General care. The receiver is made of a non-ferrous alloy, and requires no special treatment. Other internal and external metal surfaces should be cleaned, inspected for any damage, and lubricated with a lightly oiled cloth before and after each use.

B. Dry firing. While occasional firing of the unloaded gun is not harmful, repeated dry firing will cause wear to the valves, valve seats, bolt subassembly, and receiver. IT IS NOT RECOMMENDED.

C. Storage. For maximum safety, your gun should always be stored uncharged, uncocked, and unloaded. Removal of the gravity feed subassembly is also recommended. Store in a clean, dry place, and well out of the way of, or discovery by children.

D. Lubrication. For best performance and longer life, especially in cold weather Teflon grease is recommended for the lower bolt and teflon oil is recommended for the upper bolt.

Your gun should be inspected periodically for any changes in functional characteristics. In particular, changes in trigger pull force or trigger travel are indicative of possible wear. Also, if your gun is ever dropped or otherwise subjected to severe impact, it should be carefully inspected to ensure that its proper functioning has not been affected.

All repairs should be performed only by factory personnel. If your gun is in need of service, package it carefully, insure it for full value, and send it back to the manufacturer. Enclose a note describing the problem and desired service, and, of course, where you want the gun returned. An estimate or repair costs will be furnished upon request prior to beginning repair work; otherwise repairs will be made and you will be billed for the

work done. Payment must be made before the gun is shipped back to you. NOTE: non-powder guns do not come under the provisions of the federal shipping restrictions as long as they are shipped uncharged via US Parcel Post, UPS, or Federal Express.

**WARNING:** Any attempted modification, service, or tampering by non factory personnel will void the warranty, and may cause the gun to malfunction or render it unsafe. **ALL REPAIRS SHOULD BE MADE ONLY BY FACTORY PERSONNEL.** For information on use and service, please write Benjamin & Sheridan RTS 5 & 20, E. Bloomfield, N.Y. 14443, 1-800-7AIRGUN.

**STATEMENT OF LIABILITY:** This gun is delivered with the express understanding that neither Sheridan Products, nor Benjamin Air Rifle assumes any liability for its safe use, or responsibility for physical injury or property damage caused by this gun. It should be considered a dangerous weapon, and if mishandled, abused, instructions are ignored, or factory adjustments tampered with, may cause serious injury.

Sheridan Products, and Benjamin Air Rifle will honor no claims for damage to the gun resulting from careless handling, unauthorized adjustments, modifications, or alterations, installation of after market accessories, disregard of instructions, use of improper ammunition, neglect, or tampering or altering any parts.

### **TRANSFER THIS HANDBOOK UPON CHANGE OF POSSESSION**

**LIMITED WARRANTY:** Sheridan Products, a Division of Benjamin Air Rifle, warrants to the original consumer/purchaser that such guns are free from defects in material and workmanship for a period of 1 year from the date of purchase. Any and all implied warranties arising under and by virtue of state law shall similarly be limited to 1 year from date of purchase. Sheridan will repair or replace, without charge to the original purchaser/consumer any of its guns that fail through defect in material or workmanship during the warranty period. The defective gun must be returned, postage or shipping prepaid to:

Sheridan Products  
RTS 5 & 20  
E. Bloomfield, NY 14443  
1-800-7AIRGUN

### **SPECIAL FEATURES FOR VM68 MAGNUM**

Your VM68 Magnum has special features which separate it from regular VM68's. The main feature is dual tank capability. A 20 oz. tank (optional) on the back of the receiver will be your main CO2 supply. The 3.5 CO2 tank will then become your back-up supply and fore-end grip. For maximum performance both tanks should be equipped with on/off valves.

If you are selecting to use a single tank a factory furnished bottle adapter plug must be installed in place of the second bottle. Prior to installing Bottle Plug Adapter the on/off valve should be in the off position, and gun should be totally depressurized.

The ball feed adapter can be switched from left handed to right handed use depending on the operator. This procedure is accomplished by removing the knurled thumb screws and reversing the ball feed adapter and cover plate.

This gun is also equipped with a sight rail with 3/8" and 3/4" dove tails.

[Back](#)