

# CARMA TECH ENGINEERING



## Table of Contents

<b>I. Warnings</b> .....	<b>1</b>
<b>II. Barrel Blocking Device Installation Instructions</b> .....	<b>2</b>
<b>III. Message from Carmatech Engineering</b> .....	<b>3</b>
<b>IV. Warning/ Liability Statement / Safety</b> .....	<b>4</b>
Safety Guidelines .....	5
Safety Procedures.....	7
<b>1. Bolt Action and Semi Auto Engines</b> .....	<b>7</b>
<b>V. Warranty Information</b> .....	<b>8</b>
<b>VI. System Operation</b> .....	<b>9</b>
Unpacking the <b>SAR12</b> Marker Rifle .....	10
Product Examination .....	11
Product Familiarization.....	11
Air/ Nitrogen/ CO2 Cylinder Installation.....	12
Chambering the <b>SAR12</b> Marker Rifle.....	13
Firing the <b>SAR12</b> Marker Rifle .....	14
Adjusting Velocity on the <b>SAR12</b> Marker Rifle.....	16
Unloading the <b>SAR12</b> marker rifle .....	17
Air/CO2 Cylinder Warnings .....	18
Air/CO2 Cylinder Safety Tips .....	19
Air/Co2 Cylinder Removal and Oring Inspection .....	20
Cleaning and Maintenance.....	20
<b>SAR12</b> Engine Changeover.....	21
<b>VII. <b>SAR12</b> Disassembly Instructions</b> .....	<b>23</b>
Main Assembly Disassembly.....	23
Upper Receiver Disassembly (901001).....	26

**NOTE:** Carmatech Engineering's philosophy is to continually improve all of our products. As a result, engineering changes and improvements will possibly be made. If the features, operating characteristics or the appearance of your product differ from those described in this Instruction Manual, please contact us or a certified Carmatech dealer.

Manual Rev Date 2.30.13

## I. Warnings



# WARNING

This is not a toy! Misuse may cause serious injury or death to the products operator and others. Eye, face, and ear protection designed for paintball must be worn by the operator and any person(s) within range. Carmatech Engineering Inc. recommends that the purchaser of this product be at least 18 years of age. Operators of this product under the age of 18 must have adult supervision when handling.



# WARNING

**SAFETY IS THE OWNERS RESPONSIBILITY!**  
Before handling the SAR12 paintball rifle, read this manual in its entirety. Familiarize yourself and any other user of this product with the safety instructions in this manual. Follow the instructions when operating, working on, transporting, or storing this product. Always keep the product in safe mode unless firing as prescribed in detail on page 7. Always keep the barrel blocking device installed when not in a shooting situation.

## II. Barrel Blocking Device Installation Instructions

1. Slip the barrel blocking device onto the barrel (as you would apply a sock on your foot), and loop the cord under the chassis and position at the back of the magazine well.
2. Pinch the cord retainer while pulling the cord through the retainer. Stop pulling the cord, when it comes into tension and release the retainer.
3. After the length has been set, lock the retainer's position by tying a knot on the free side of the cord, being sure that the knot snugs up against the retainer.
4. After operating the marker rifle, inspect the barrel blocking device. Replace the device if damaged or if there is a loss of cord elasticity.
5. Clean the device with warm water and store in a dry area out of direct sunlight. Sunlight breaks down the sheathing material making it possible that a projectile could pass through.



### III. Message from Carmatech Engineering

Congratulations on your purchase of the **SARIZ** rifle marker. Your new rifle is the culmination of years of engineering, design, and development. We take absolute pride in our product, and the brand legacy. We take pride in our work, whether it be this rifles build quality, our customer service, or even this manuals technical information.

Many manufacturers claim superiority in either build quality or accuracy. We have tested this product to optimize air efficiency, shot velocity deviation, absolute shot spread, and military grade durability. This marker rifle is also packed with patent pending technology. The pending patent protects the modular firing system (bolt to semi auto), dual stack magazine system, and the modular chassis system. The **SARIZ** rifle marker will provide many years of dependability, as long as the operator cares for the product properly.

Please take time to read the operators manual thoroughly and become familiar with the **SARIZ** rifle marker's parts, operation, and safety precautions before loading, chambering, or charging the system with a gas source. If a part is missing or broken, or in need of assistance, please contact us for technical assistance at 260.820.0214. Enjoy!



## **IV. Warning/ Liability Statement / Safety**

This rifle marker is classified as a dangerous weapon and is surrendered by Carmatech Engineering Inc, with the understanding that the purchaser assumes all liability resulting from unsafe handling or any action that constitutes a violation of any applicable laws or regulations. Carmatech Engineering Inc is and shall not be liable for personal injury, loss of property or life resulting from the use of this weapon under any circumstances, including intentional, reckless, negligent or accidental discharges.

All information contained in this manual is subject to change without notice. Carmatech Engineering Inc reserves the right to make changes and improvements to the products without incurring any obligation to incorporate such improvements into products previously sold.

If the purchaser or the operator do not accept the liability, Carmatech Engineering Inc requests that a Carmatech Engineering Inc rifle marker not be used. By using this paintball marker you release Carmatech Engineering Inc of any and all liability associated with its use.



## ***Safety Guidelines***

The ownership of this weapon places upon the owner total responsibility for its safe and lawful use. The operator must observe the same safety precaution as he/she would any firearm to assure the safety of not only the operator but everyone around him/her.

Below is a list of bullet points with some general precautions to be taken. The operator should at all times use caution and common sense when using this rifle marker, and always remember that the sport of paintball can only survive and grow if players remain safe.

- 1. Do not load, chamber, attach an air source, or fire this marker rifle until the owner/ operator has completely read this manual, and you have established a familiarity with the rifle markers safety features, mechanical operation, and handling.**
- 2. Handle this marker rifle as if it were loaded at all times**
- 3. Do not make contact with the trigger until the operator is prepared to shoot**
- 4. Do not look down into the barrel of this or any other paintball marker. An error of this magnitude may cause permanent injury or death.**
- 5. Keep the marker rifle in safe mode (safety) until prepared to discharge the marker rifle**
- 6. Keep the barrel blocking device installed on the marker rifle when not shooting**
- 7. Never target (point) the marker rifle at an object you do not intend to shoot**
- 8. Never shoot at a fragile/ brittle objects such as windows**
- 9. Never fire the marker rifle at personal property of others, as the impact can damage from impact or stain the finishes of automotive paints and house siding.**
- 10. Always keep the barrel muzzle point toward the earth or in a safe direction.**

11. Following ASTM Specifications F 1776; eye, face, and ear protection designed specifically to stop paintballs must be worn by the user and any person within range.
12. Never shoot at a person who is not protected by eye, face, and ear protection designed for paintball
13. Attach an air source and load the marker rifle only when the marker rifle will be immediately used
14. Store the marker rifle unloaded, emptied breach, and the air source removed.
15. Do not field strip or disassemble the marker rifle while the air source is attached.
16. Only use .68 caliber paintballs. Never load or fire any foreign objects
17. Do not use this marker rifle in conjunction with alcoholic beverages or mind altering drugs. It is a criminal act to handle this and any other paintball marker under the influence of drugs or alcohol.
18. Avoid shooting opponents at point blank range. Do not engage an opponent at a distance less than 15 feet.
19. familiarize yourself with the instructions listed on the air supply cylinder. Contact the cylinder manufacturer with any questions.
20. Read the air/co2 cylinder warnings and safety tips on pages before proceeding with cylinder installation and or removal.
21. Always measure the marker rifles muzzle velocity before playing paintball. Never shoot the marker rifle in excess of 300 fps (feet per second)



## ***Safety Procedures***

### **1. Bolt Action and Semi Auto Engines**

Both action assemblies can be set to safe mode by simply pressing the cross bolt to the left hand side until movement is stopped as depicted in figure 1.

**Figure 1: Bolt Action Safety**

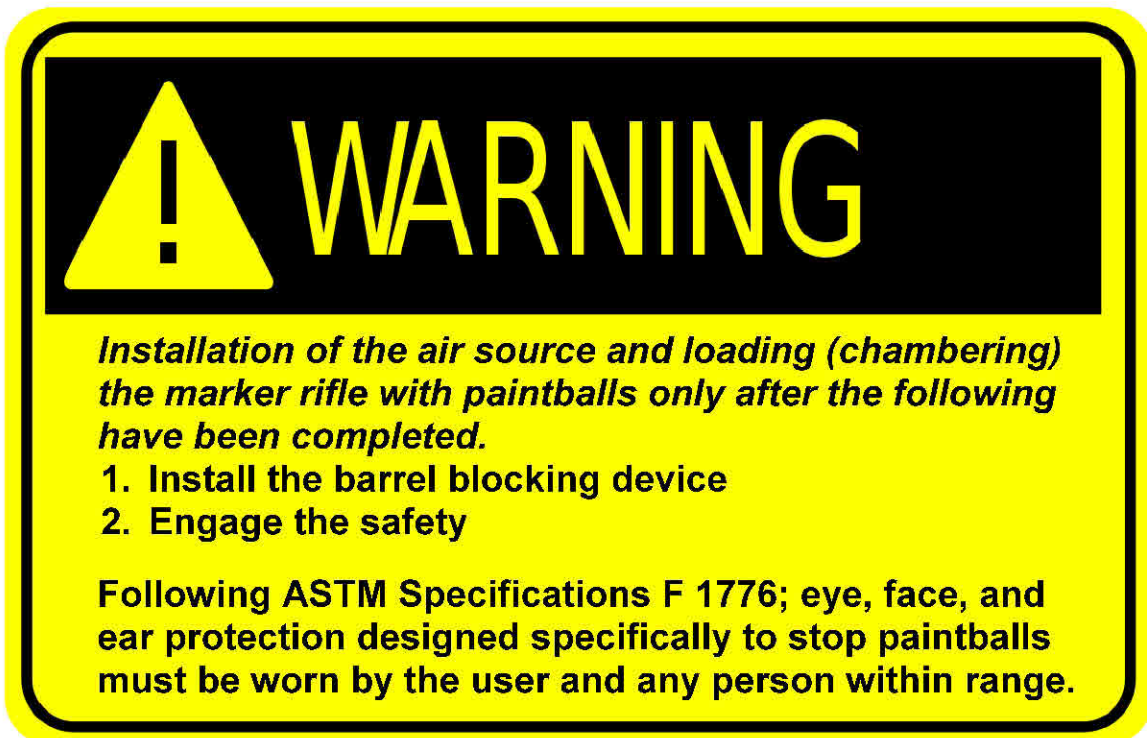


## V. Warranty Information

1. **Warranty:** Carmatech Engineering warrants to the initial purchaser that the products it sells will be free of defects in workmanship or material for 2 years from the date of purchase. If any failure to conform to this warranty becomes apparent during this period Carmatech shall with the return of defective product correct such non-conformity by repair or replacement, F.O.B. factory the defective part or parts. Correction in the manner provided above shall constitute a fulfillment of all liabilities of Carmatech with respect to the quality of the products. This warranty shall not cover any damage or condition determined by Carmatech to be caused is normal wear and tear, misuse, carelessness, negligence, or failure to properly maintain the product. This includes unauthorized repairs or modifications. The foregoing warranty is exclusive and in lieu of all other warranties of quality, whether written oral or implied (Including any warranty of merchantability of fitness for purpose).
2. **Disclaimer of Liability:** Carmatech Engineering and its owners assume no responsibility for damage and/or injury caused in whole or in part by use of its products. Under no circumstance shall Carmatech be held responsible for incidental or consequential damages with respect to economic loss or injury to property arising out of neglect use of its products including unsafe handling or unauthorized modifications to its products. Carmatech will not be responsible for the results of careless handling, unauthorized repairs and adjustments, corrosion, neglect, or unreasonable use (ordinary wear and tear excepted). Some states do not allow the exclusion of limitation of incidental or consequential damages, so the limitations above may not apply to you.

## VI. System Operation

1. Following ASTM Specifications F 1776; eye, face, and ear protection designed specifically to stop paintballs must be worn by the user and any person within range.
2. Do not field strip or disassemble the marker rifle while the air source is attached.
3. Do not attach any air source to a partially assembled marker rifle



## **Unpacking the *SAR12* Marker Rifle**

Your ***SAR12*** marker rifle includes the following items

- Rifle
- Bolt action assembly
- Magazine
- Operator's manual
- Barrel blocking device
- Tool kit
- Parts kit

Some accessories for the ***SAR12*** rifle that may have been purchased separately

- Carmatech Engineering Inc hard shell gun case
- Modular butt stock
- CQB Fore grip
- Magpul MOE fore grip rails
- Semi Auto firing system
- AR-15 45 sniper grip
- bipod
- Barrel (s)
- Magazine (s)
- Spare parts kit

## ***Product Examination***

We take great pride in delivering the highest quality product to your door. Take the necessary time required to completely unpack the rifle and contents. Use due diligence in inspecting the contents for both quantity and quality. All products have been inspected and tested before leaving our facility; however, issues can arise between our facility and the final shipping address.

## ***Product Familiarization***

Your new **SAR12** is a fully mechanical operating rifle. Mechanical operation does not require a power source other than the compressed gas in which propels the projectile. Below is a list of the major subassemblies.

Figure 2: Sub Assembly View



- Upper Receiver: Aluminum extrusion integrating scope rail, trigger, regulator, and fire control system for semi auto engine
- Bolt Action Engine: Self contained assembly
- Semi Auto Engine: Self contained assembly
- Modular Chassis System: Removable and replicable chassis allows for multiple chassis from the M4-M16 variant, bullpup, M14, M1 exc...



- Adjustable Sniper Stock: Remote only set up allows for length of pull adjustment along with cheek riser.
- Carbine Stock: Design allows for either 13 cubic inch 3000 psi compressed air/ nitrogen tank, 9 ounce co2 tank, or remote line.
- Magazine: Designed to simulate big bore rifle box magazines, the design incorporates two projectile stacks.
- Barrel: High quality precision barrel available in lengths between 8 to 20 inch

### ***Air/ Nitrogen/ CO2 Cylinder Installation***

Read the Air/CO2 cylinder manufacturers warning label before installing the cylinder. Do not install or attach an air source to your partially assembled marker rifle. See figure 3 along with these instructions listed below.

**Note: Never install gas source (Air/ Nitrogen/ CO2) that is outputting pressures higher than 500 psi**

1. Visually inspect that the marker rifle is in safe mode, as instructed on page 7.
2. Install the barrel blocking device as instructed on page 2
3. Lubricate the air/CO2 cylinder valve oring with silicone based grease (part #4)
4. Visually inspect that the stock retaining pin (part #1) is fully installed into the lower receiver, and securely locks the butt stock in position. To verify a solid connection try to separate the butt stock from the lower receiver.
5. Remove the quick pin (part #2) and slide the butt plate assembly (#3) back away from the marker rifle.
6. Insert the air/ CO2 cylinder (part #4) into the Air Supply Adapter (ASA) (part #5)
7. Rotate the Air/ CO2 cylinder clockwise into the ASA until it stops. Visually and audibly inspect that the oring seal is not leaking.
8. If you didn't hear the gas charge the system, **DO NOT PROCEED TO STEP #9!** Remove the cylinder per instructions found on page 16 and take your air/ CO2 cylinder to a C5 Certified Airsmith for inspection.
9. Slide the butt plate assembly (#3) back over the guide rod and air/CO2 cylinder (part #4)
10. Finally, replace the quick pin (part #2) back into the butt plate assembly (part #3).

Figure 3: Cylinder Installation Procedure



WARNING: Once the system has been pressurized, and the safety has been placed into the fire position, the marker rifle is then capable of firing.

### ***Chambering the SAR12 Marker Rifle***

The ***SAR12*** is capable of firing from three sources; magazine, hopper, or hand loading (breach loading). In order to load the rifle from the magazine:

1. Twist the barrel counterclockwise to align the breach feed port with the magazine feed path. The operator will feel the spring plunger click, indicating that the alignment is complete.
2. Load the magazine with paintball projectiles
3. Position the magazine at the entrance of the magazine well, and drive the magazine up into the lower receiver until the magazine is locked into place.
4. If the operator is using the Bolt Action engine, the rifle will only chamber when the bolt is in the farthest back position.
5. If the operator is using the Semi Auto engine, the rifle will automatically chamber a round.

## ***Firing the SAR12 Marker Rifle***

1. Point the **SAR12** marker rifle in a safe direction
2. Remove the barrel blocking device from the barrel
3. Regardless if the bolt action or the semi auto engine is installed, the trigger safety must be shifted to the right until solid stop (Figure 4)
4. If the Bolt Action engine is installed, (Figures 5-7)
  - 4.1. Lift the bolt handle in counter clockwise motion, till handle makes positive stop
  - 4.2. Pull the bolt back toward the operator to chamber the round, and lock the hammer.
  - 4.3. Slide the bolt hammer back forward
  - 4.4. Rotate bolt handle clockwise till the handle nests in the handle retaining groove.

**Figure 4: Semi Auto Safety**



Figure 5: Bolt Action Handle Rotation



Figure 6: Bolt Action Back/ Forward





Figure 7: Bolt Action Handle Locked



### ***Adjusting Velocity on the SAR12 Marker Rifle***

Every time you or any other operator plays paintball, the muzzle velocity must be checked with a chronograph to verify that the velocity is below 300 fps (feet per second). This is the maximum recommended velocity set by the paintball industry; however some fields will require lower velocities. **NOTE: FOLLOW ALL FIELD SAFTY GUIDLINES!**

To adjust the **SAR12** marker rifle muzzle velocity, regardless of which engine is installed (Bolt action or Semi auto):

3. Locate the regulator adjustment set screw, which is found directly below the back of the engine. (Figure 8, Bottom set screw)
4. Locate the 3/16 Allen wrench from the tool kit.
5. Rotating the set screw counterclockwise will increase pressure, whereas rotation of the set screw clockwise will decrease pressure.
6. When making regulator adjustments, make sure to always shoot a minimum of three shots to reset the low side of the pressure regulator.



**Figure 8: Regulator adjustment screw**



### ***Unloading the SAR12 marker rifle***

1. Eye protection designed for paintball, must be worn by the operator and any person (s) within range
2. Go to a designated firing area, remove the barrel blocking device, and un-safety the marker rifle.
3. If the operator is using a hopper, empty the hopper by opening the lid and inverting the marker rifle thus allowing the paintballs to fall into an open container.
4. If the operator is using a magazine, push the ambi- magazine latch in toward the magazine and pull said magazine down away from the marker rifle.
5. Point the marker rifle in a safe direction and fire a few times.
6. Twist the barrel to the hopper feed position, if not already in location. Visually inspect the breach for clearing.
7. Put the marker rifle back in safe mode (See pages 7)
8. Reinstall the barrel blocking device (See page 2).
9. Read the Air/ CO2 Cylinder Warnings and Safety Tips on page 18 before removing the air cylinder from the marker rifle.

## ***Air/CO2 Cylinder Warnings***



Incidents have been reported whereby operators are unknowingly unscrewing the cylinder from the cylinder valve. This occurs when the operator thinks the entire valve-cylinder assembly is being removed from the air source adapter (ASA) attached to the marker; however, in reality the operator was unscrewing the cylinder from the cylinder valve.

To avoid this danger, it is recommended that you paint alignment marks on the cylinder valve along with the cylinder. Be sure that the marks are placed in line of each other so that in the future, the operator can look for angular separation of these marks

Whenever the operator turns the cylinder during removal, they should pay careful attention to the mark alignment. In the event that these marks start to separate, **STOP!** Take the entire unit (marker and Air/CO2 cylinder) to a "C5" certified airsmith for safe removal and/or repair.

**NOTE:** The cylinder valve should unscrew from the marker rifle in about 3 to 4 full turns. If you finish the 4th full turn and the brass or nickel plated cylinder valve is not unscrewed from the marker rifles asa, **STOP!**

## ***Air/CO2 Cylinder Safety Tips***

1. Improper use, filling, storage, or disposal of air/CO2 cylinder may result in property damage, serious injury or death
2. Any and all maintenance or modifications to any air/CO2 cylinder is to be done by a qualified professional, such as a "C5" certified airsmith.
3. An Anti-siphon device is recommended for the **SAR12** marker rifle IF the owner wishes to use CO2. It is critical that your cylinder be checked by and the device installed by a qualified professional.
4. All air or CO2 cylinders must be filled only by properly trained personnel
5. Cylinder valves must be installed only by properly trained personnel
6. Never exceed the air/CO2 cylinder's capacity. **IE DON'T OVERFILL!**
7. Do not allow pressurized air/CO2 cylinder temperature to exceed 130 deg Fahrenheit
8. Do not use caustic cleaners or strippers on the air/CO2 cylinder or cylinder valve, as this may cause degradation of the materials.
9. Do not modify the air/CO2 cylinder in any way. Never disassemble the cylinder valve from the air/CO2 cylinder
10. Have a trained professional destroy any air/CO2 cylinder that has been exposed to fire or heated to a temperature of 250 degrees Fahrenheit.
11. Use the appropriate gas in your cylinder. CO2 in CO2 cylinders, and Air in Compressed air cylinder
12. All cylinders should be hydrostatically retested at least every 5 years by professionals
13. Keep all cylinders out of the reach of children.

## ***Air/Co2 Cylinder Removal and Oring Inspection***

- Unload the marker rifle per instructions found on page 20
- Remove Air/CO2 Cylinder by working down from step 10 to step 5 per instructions found on page 15.
- In the event that there is a leak between the ASA and the Cylinder continue
- Inspect the oring and groove located on the cylinder valve
- Visually inspect that the end of the cylinder valve is not bent or damaged
- Replace only with Polyurethane orings.
- NOTE: If a new valve oring doesn't resolve the leak between the asa and the cylinder valve, do not attempt to repair the Air/CO2 cylinder. Contact a "C5" Certified Airmith

## ***Cleaning and Maintenance***

- Eye protection must be worn
- Do not disassemble the **SAR12** marker rifle while it is pressurized with gas
- Do not pressurize a partially assembled marker rifle
- Follow warnings listed on the Air/CO2 cylinder label for handling and storage
- Do not use petroleum based products to clean the **SAR12**
- To clean the outside of the marker, either use a damp towel or rinse off with a hose. If using a hose, make sure that either the bolt action or the semi auto engine is installed. This will restrict water from entering the internals of the marker rifle.
- To clean the barrel bore and breach, either the barrel can be removed or the engine.
- Every 4,000- 6,0000 shots, use silicone based grease to lubricate specific orings as specified in the parts diagrams.

## ***SAR12*** Engine Changeover

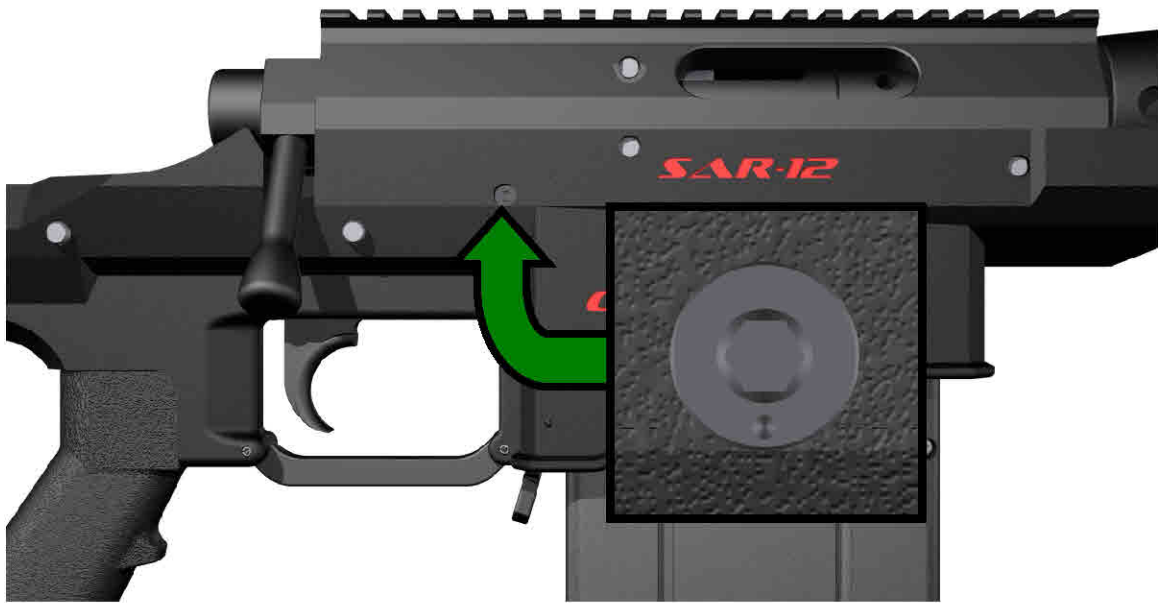
1. Unload the ***SAR12*** Marker Rifle per instructions found on page 20.
2. Remove Air/CO2 Cylinder by working down from step 10 to step 5 per instructions found on page 15.
3. With the barrel blocking device installed, cycle the marker rifle a few times by cocking (if bolt action engine is installed) and pulling the trigger. By doing this the operator is depressurizing the low pressure side of the regulator and engine.
4. As shown in Figure 9 remove the two quick pins to allow the engine assemblies to be removed.
5. **Pull the trigger, and hold in the back position**
6. While trigger is being held, use the 3/32 Allen Wrench to rotate the Switch Stroke Limiter (Figure 10). If the bolt action engine is to be used, the selector switch indicator should be at the 12 O'clock position. If semi auto engine is to be used, the selector switch indicator should be at the 6 O'clock position.
7. Install the corresponding engine assembly, and replace Quick Removal Pins
8. Install Air/CO2 cylinder per instructions found on page 12, Chamber the marker rifle per instructions on page 13, and adjust the velocity per page 16.

Figure 9: Engine Assembly Quick Removal Pins





Figure 10: Switch Stroke Limiter



## VII. **SAR12** Disassembly Instructions

### **Main Assembly Disassembly**

1. Set up a workbench with plenty of workspace to make sure none of the parts become lost or misplaced.
2. Always wear eye protection when disassembling or re-assembling the SAR12 marker rifle.
3. Refer to the Sub-assembly diagrams to better understand these instructions
4. Unload your marker per instructions found on page 17
5. Remove the air source per instructions on page 19
6. Remove the Butt Stock Retaining pin as shown in Figure 11 and slide the stock out of the way **NOTE: NEVER REMOVE THIS PIN UNLESS TANK HAS BEEN REMOVED!**
7. With the barrel blocking device installed, cycle the marker rifle a few times by cocking (if bolt action engine is installed) and pulling the trigger. By doing this the operator is depressurizing the low pressure side of the regulator and engine.

Figure 11: Butt Stock quick removal pin



8. Remove the barrel blocking device
9. Remove the barrel by unscrewing in a counterclockwise direction. Make sure that the barrel sizer stays attached to the barrel, as this will simplify disassembly.
10. Remove the upper receiver retaining pins as shown in figure 12
11. The upper receiver is now free to be separated from the chassis

Figure 12: Upper Receiver Quick Release Pins





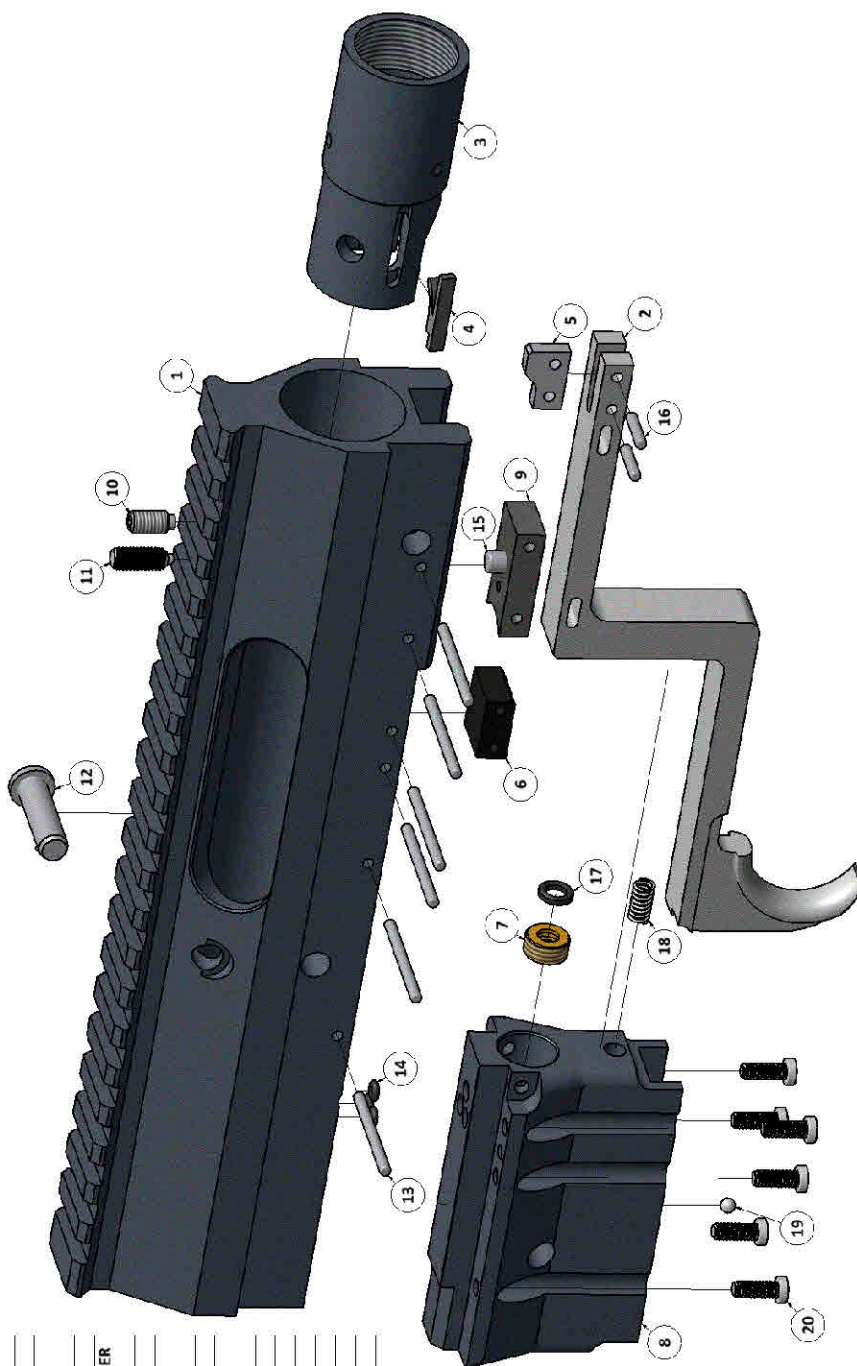
## ***Upper Receiver Disassembly (901001)***

Please see 901001 Parts Diagram

1. **Removal of the Engine:** Remove the push pull pin (12) and slide the engine out the back of the receiver.
2. Removal of the **Trigger (2)** and **Front Upper Receiver Insert (9)**: Push the retaining pins (13) out of the upper receiver. Note: The **Barrel Mount Retaining Pin (15)** will remain installed in the front upper receiver insert.
3. Removal of the **Barrel Mount/ Projectile Valve (3)**: With the completion of step two, the only resistance to removal of the valve is the force applied by the **Spring Plunger (11)**. It is recommended that a barrel be threaded into the valve, and pulling the barrel out away from the receiver will allow separation.
4. Removal of the **Switch Stroke Limiter (not shown)**: Rotate the switch stroke limiter so that the positional indicator is at the 9 O'clock position. The operator may have to press or pull slightly on the **Semi Auto I/O Valve Pin (not shown)**. Once completed the **Switch Stroke Limiter** may be pushed out by overcoming the spring plunger.
5. Removal of the **Semi Auto I/O Valve** may now be completed.
6. **Regulators Low Pressure Side Components (page 28)**: Completion of step 5 allows the operator to now remove.
7. Removal of the **Regulators High Pressure Side Components (page 28)**: Using a 3/16 Allen Wrench, remove the set screw via a counterclockwise revolution,
8. The **Upper Receiver (1)** and **Regulator Housing (8)** is attached with **Upper Receiver Body Screws (20)**. **DO NOT REMOVE THESE FASTENERS**, as they are torqued to 80 inch pound specifications at the factory.
9. The only component between the **Upper Receiver (1)** and **Regulator Housing (8)** are the static **Air Passage Orings (8)**, which will not require regular maintenance.



901001 PARTS LIST	
ITEM/STOCK NUMBER	DESCRIPTION
1	1 901001-01 UPPER RECEIVER FOR SAR
2	1 901001-02 SAR-12 MARKER TRIGGER ARM
3	1 901001-03-C BARREL MOUNT/ PROJECTILE VALVE
4	1 901001-04 BALL DETENT
5	1 901001-05 SAR MARKER TRIGGER INSERT
6	1 901001-06 UPPER RECEIVER BACK INSERT
7	1 901001-07 HIGH PRESSURE REGULATOR ORING RETAINER
8	1 901001-08 REGULATOR BLOCK FOR SAR
9	1 901001-09 FRONT UPPER RECEIVER INSERT
10	1 901001-10 BARREL ROTATION TENSIONER
11	1 901001-11 BARREL ROTATION LOCK
12	1 901001-12 PUSH PULL RETAINING PIN
13	6 901001-13 TRIGGER LOCATING PIN
14	3 901001-14 AIR PASSAGE ORINGS
15	1 901001-15 BARREL MOUNT RETAINING PIN
16	2 901001-16 TRIGGER SEAR RETAINING PIN
17	1 901001-17 HIGH PRESSURE REGULATOR SEAL
18	1 901001-18 TRIGGER SPRING
19	1 901001-19 PORT PLUG
20	6 901001-20 BODY SCREW

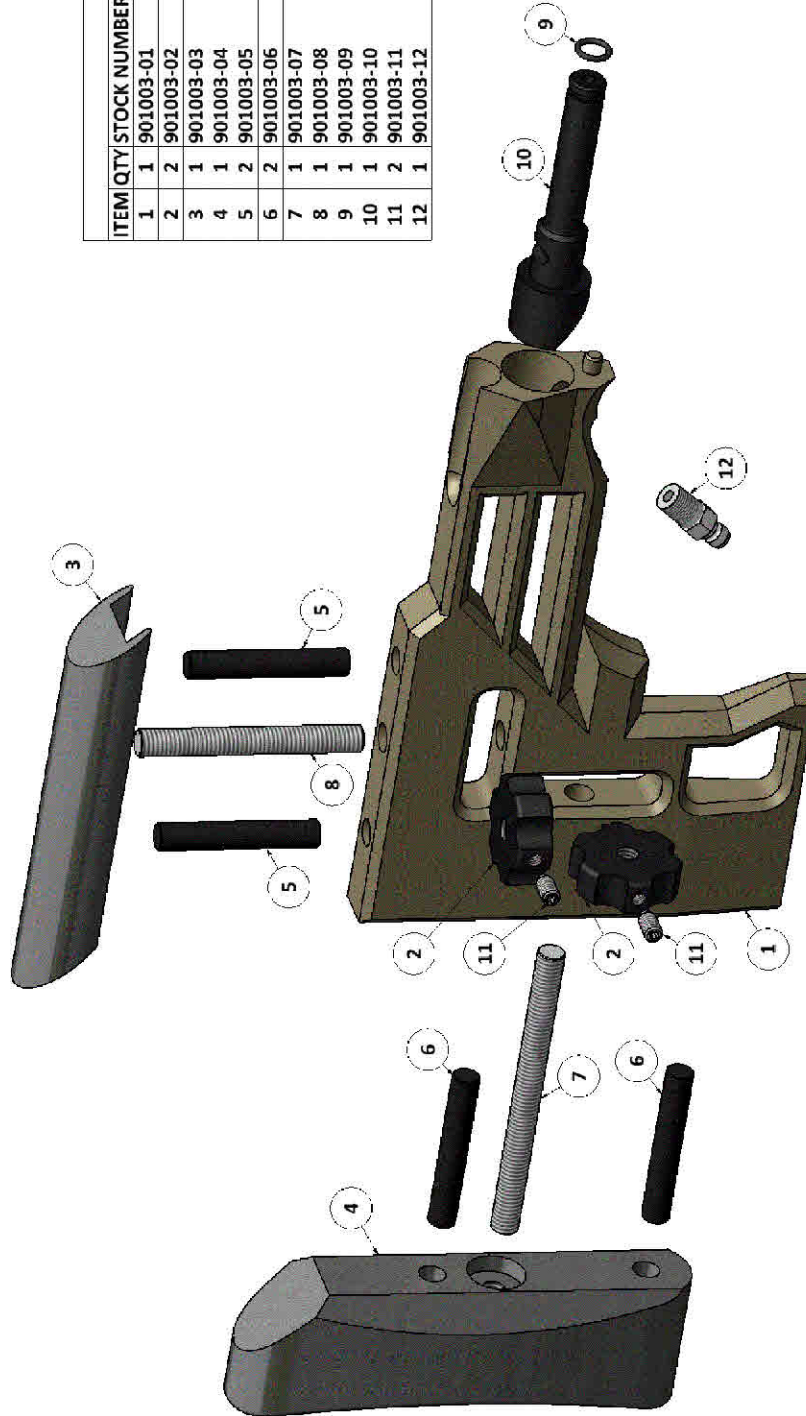


901002 PARTS LIST

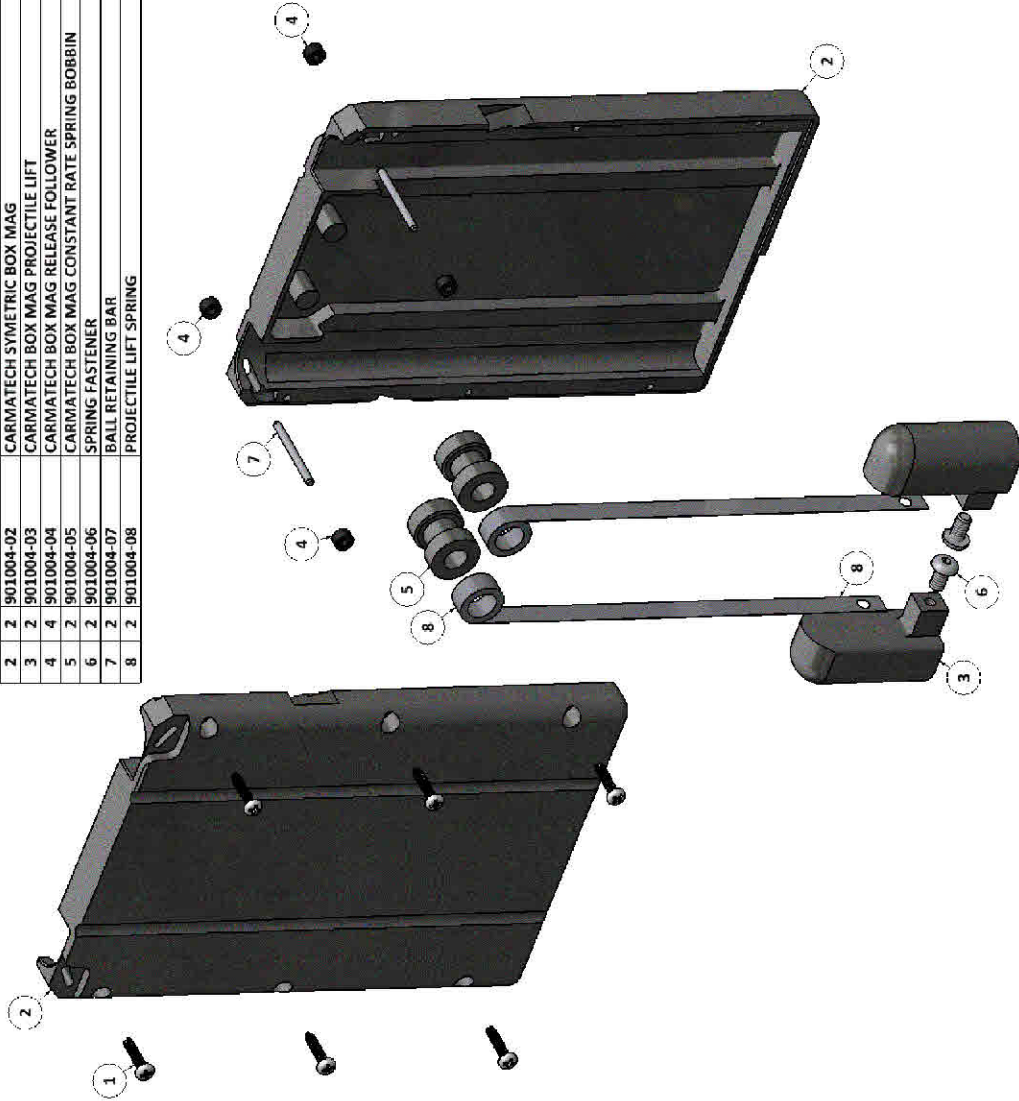
ITEM QTY / STOCK NUMBER	DESCRIPTION
1 1 901002-01	FREE FLOATING HAND GUARD
2 1 901002-02	LOWER RECEIVER
3 1 901002-03	FREE FLOATING HAND GUARD ADAPTER
4 1 901002-04	LOWER RECEIVER TRIGGER GUARD
5 1 901002-05	STANDARD ISSUE AR-15 45 GRIP
6 1 901002-06	AMBI MAG LATCH SPRING
7 4 901002-07	COTTERLESS CLEVIS PIN
8 1 901002-08	AMBI MAG LATCH RELEASE
9 6 901002-09	HAND GUARD RIVET
10 1 901002-10	FREE FLOATING HAND GUARD
11 1 901002-11	HAND GUARD MOUNTING FASTENER
12 1 901002-12	TRIGGER GUARD RETAINING PIN (MAG SIDE)
13 1 901002-13	TRIGGER GUARD RETAINING PIN (GRIP SIDE)
14 1 901002-14	AMBI MAG LATCH PIVOT PIN



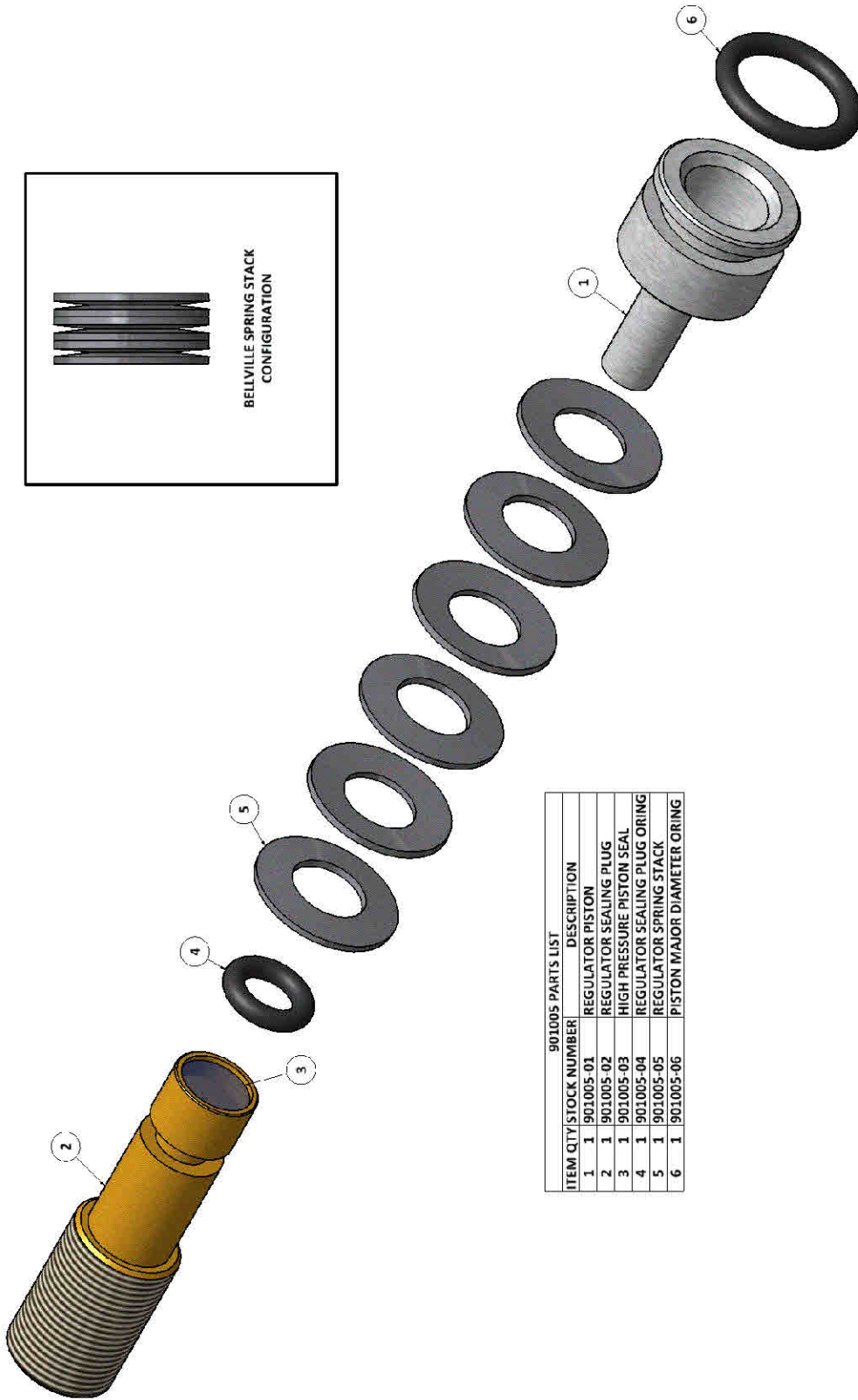
901003 PARTS LIST			
ITEM	QTY	STOCK NUMBER	DESCRIPTION
1	1	901003-01	SAR-12 MARKER BUTT STOCK
2	2	901003-02	BUTT STOCK ADJUSTMENT KNOB
3	1	901003-03	ADJUSTABLE REAR STOCK CHEEK RISER
4	1	901003-04	ADJUSTABLE BUTT STOCK REAR PLATE
5	2	901003-05	CHEEK WELD GUIDE ROD
6	2	901003-06	BUTT PLATE GUIDE ROD
7	1	901003-07	BUTT PLATE MICRO ADJUSTMENT SCREW
8	1	901003-08	CHEEK WELD MICRO ADJUSTMENT SCREW
9	1	901003-09	ORING
10	1	901003-10	AIR SOURCE ADAPTER
11	2	901003-11	SOCKET SET SCREW
12	1	901003-12	NPT TO QUICK DISCONNECT COUPLER



901004 PARTS LIST	
ITEM QTY	STOCK NUMBER DESCRIPTION
1	6 901004-01 BODY SCREWS
2	2 901004-02 CARMATECH SYMETRIC BOX MAG
3	2 901004-03 CARMATECH BOX MAG PROJECTILE LIFT
4	4 901004-04 CARMATECH BOX MAG RELEASE FOLLOWER
5	2 901004-05 CARMATECH BOX MAG CONSTANT RATE SPRING BOBBIN
6	2 901004-06 SPRING FASTENER
7	2 901004-07 BALL RETAINING BAR
8	2 901004-08 PROJECTILE LIFT SPRING

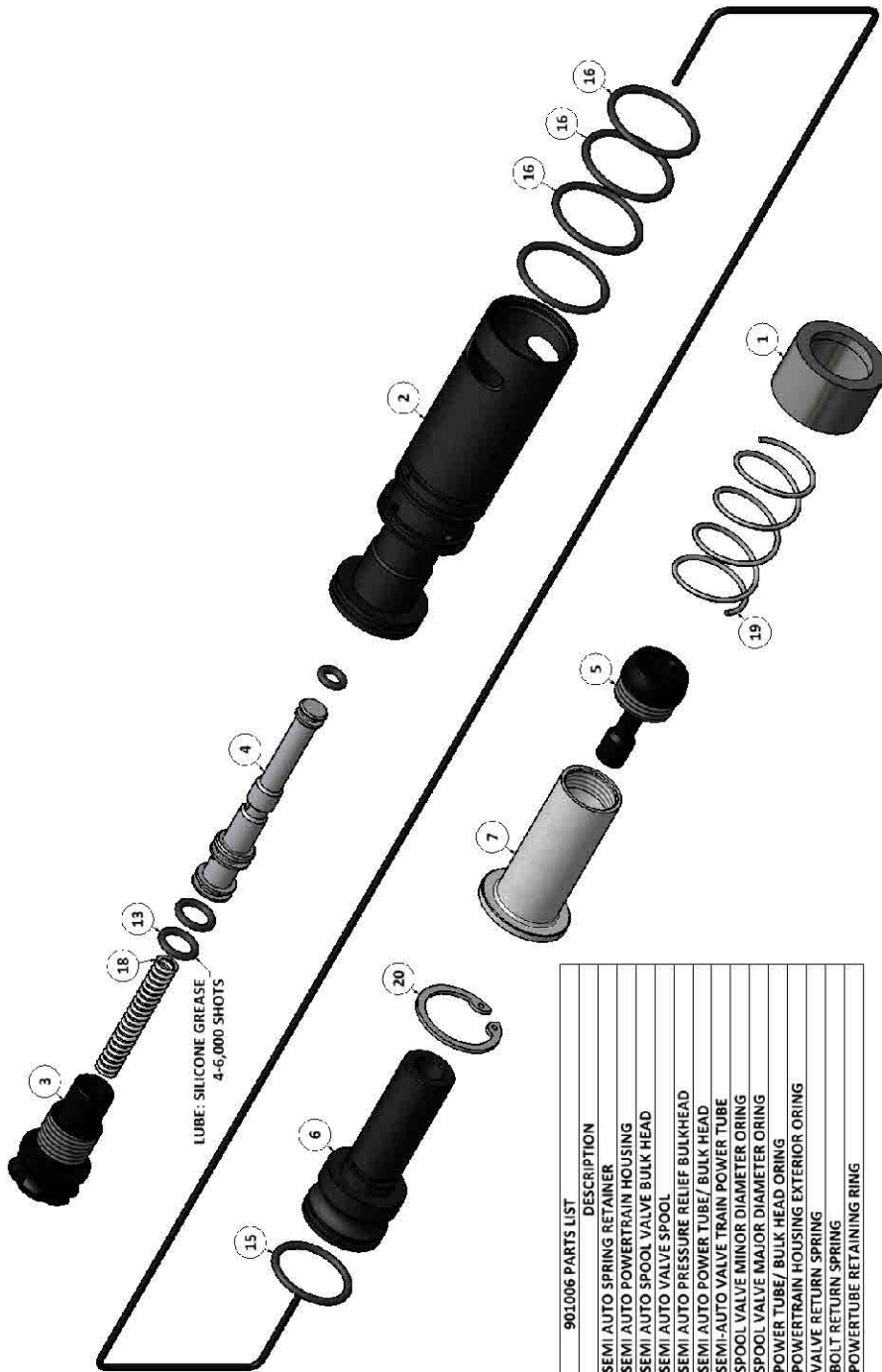






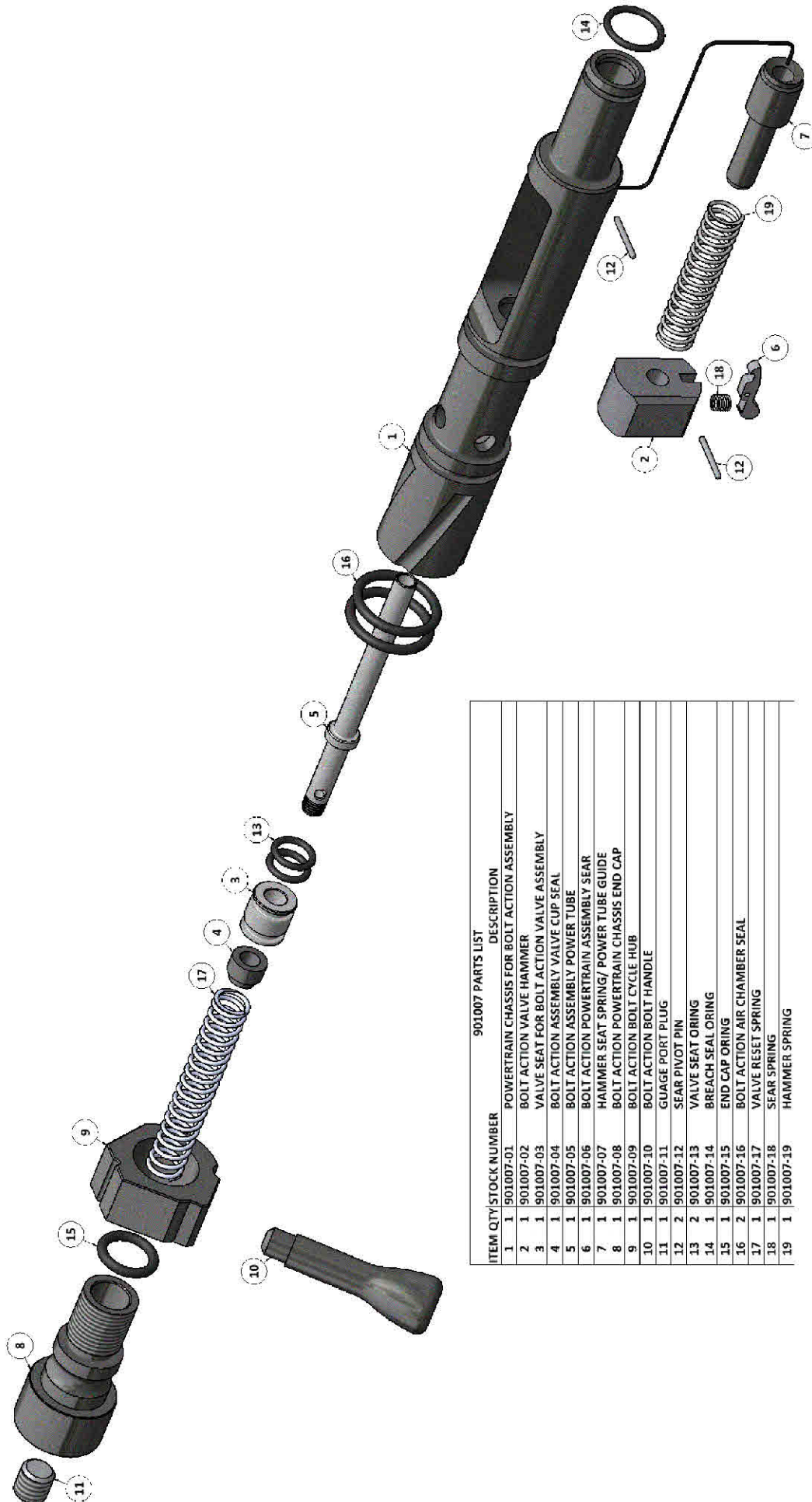
901005 PARTS LIST	
ITEM QTY	STOCK NUMBER DESCRIPTION
1	1 901005-01 REGULATOR PISTON
2	1 901005-02 REGULATOR SEALING PLUG
3	1 901005-03 HIGH PRESSURE PISTON SEAL
4	1 901005-04 REGULATOR SEALING PLUG ORING
5	1 901005-05 REGULATOR SPRING STACK
6	1 901005-06 PISTON MAJOR DIAMETER ORING





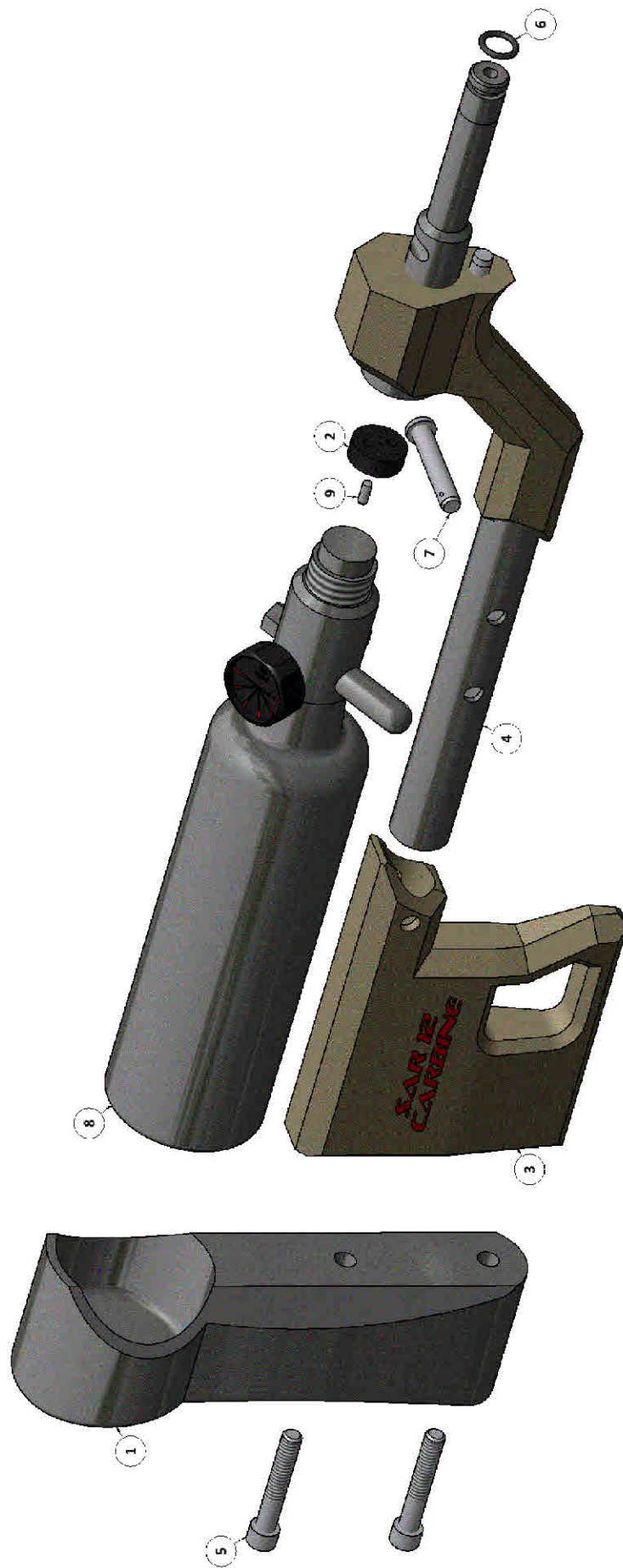
**901006 PARTS LIST**

ITEM QTY	STOCK NUMBER	DESCRIPTION
1	1 901006-01	SEMI AUTO SPRING RETAINER
2	1 901006-02	SEMI AUTO POWERTRAIN HOUSING
3	1 901006-03	SEMI AUTO SPOOL VALVE BULK HEAD
4	1 901006-04	SEMI AUTO VALVE SPOOL
5	1 901006-05	SEMI AUTO PRESSURE RELIEF BULKHEAD
6	1 901006-06	SEMI AUTO POWER TUBE/ BULK HEAD
7	1 901006-07	SEMI-AUTO VALVE TRAIN POWER TUBE
12	1 901006-12	SPOOL VALVE MINOR DIAMETER ORING
13	2 901006-13	SPOOL VALVE MAJOR DIAMETER ORING
15	1 901006-15	POWER TUBE/ BULK HEAD ORING
16	4 901006-16	POWERTRAIN HOUSING EXTERIOR ORING
18	1 901006-18	VALVE RETURN SPRING
19	1 901006-19	BOLT RETURN SPRING
20	1 901006-20	POWERTUBE RETAINING RING



**901007 PARTS LIST**

ITEM QTY/STOCK NUMBER	DESCRIPTION
1 1 901007-01	POWERTRAIN CHASSIS FOR BOLT ACTION ASSEMBLY
2 1 901007-02	BOLT ACTION VALVE HAMMER
3 1 901007-03	VALVE SEAT FOR BOLT ACTION VALVE ASSEMBLY
4 1 901007-04	BOLT ACTION ASSEMBLY VALVE CUP SEAL
5 1 901007-05	BOLT ACTION ASSEMBLY POWER TUBE
6 1 901007-06	HAMMER SEAT SPRING/ POWER TUBE GUIDE
7 1 901007-07	BOLT ACTION POWERTRAIN ASSEMBLY SEAR
8 1 901007-08	BOLT ACTION POWERTRAIN CHASSIS END CAP
9 1 901007-09	BOLT ACTION BOLT CYCLE HUB
10 1 901007-10	BOLT ACTION BOLT HANDLE
11 1 901007-11	GUAGE PORT PLUG
12 2 901007-12	SEAR PIVOT PIN
13 2 901007-13	VALVE SEAT ORING
14 1 901007-14	BREACH SEAL ORING
15 1 901007-15	END CAP ORING
16 2 901007-16	BOLT ACTION AIR CHAMBER SEAL
17 1 901007-17	VALVE RESET SPRING
18 1 901007-18	SEAR SPRING
19 1 901007-19	HAMMER SPRING



901008 PARTS LIST		DESCRIPTION
ITEM	QTY/STOCK NUMBER	
1	1 901008-01	ADJUSTABLE BUTT STOCK REAR PLATE
2	1 901008-02	ASA MALE FITTING
3	1 901008-03	SAR-10 MARKER BUTT STOCK
4	1 901008-04	CARBINE STOCK SUB ASSEMBLY
5	2 901008-05	BUTT PLATE FASTENERS
6	1 901008-05	ASA MALE FITTING SEAL
7	1 901008-06	RETAINING PIN
8	1 901008-06	13 OZ HPA TANK
9	1 901008-07	RETAINING PIN