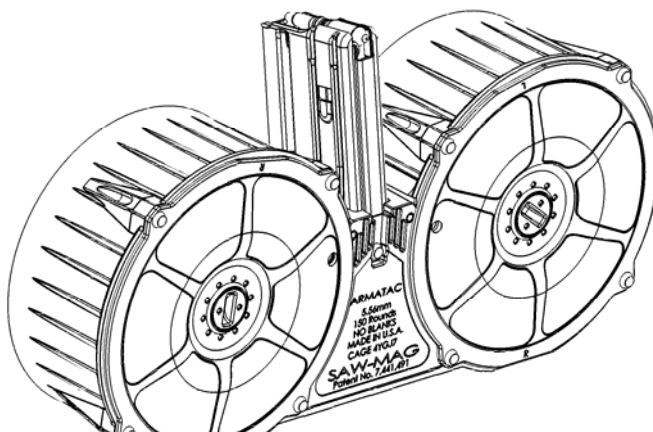


▶ **OPERATION MANUAL**

SAW-MAG™



!WARNING!

**!BEFORE USING THIS PRODUCT PLEASE READ
AND FOLLOW THESE INSTRUCTIONS!**

!DO NOT LUBRICATE!

!DO NOT USE BLANKS!

!DO NOT PUSH DUMMIES WITH FINGERS!

!PLEASE PRACTICE SAFE FIREARMS HANDLING!

V1.0

WARNING

!USE ONLY CLEAN, DRY, HIGH QUALITY COMMERCIALY MANUFACTURED AMMUNITION IN GOOD CONDITION WHICH IS APPROPRIATE TO THE .223 CAL. /5.56MM OF YOUR FIREARM. WE DO NOT RECOMMEND THE USE OF REMANUFACTURED OR HAND LOADED AMMUNITION.

***USE HEAVY BUFFER H2/H3**

***SHORT BARRELED RIFLES ARE SOMETIMES PROBLEMATIC WITH CYCLING**

***LONG RIFLE KITS ARE SOMETIMES PROBLEMATIC WITH CYCLING, SAW-MAG IS DESIGNED TO OPERATE WITH CARBINE LENGTH SPRING/STOCK AND H2 BUFFER.**

YOU SHOULD FOLLOW THE FIRING GUIDELINES IN YOUR FIREARMS MANUAL

YOU SHOULD ALWAYS INSERT THIS MAGAZINE ONLY AFTER THE RIFLE HAS HAD TIME TO COOL TO THE AMBIENT TEMPERATURE

DO NOT ATTEMPT TO USE BLANKS OR ANY OTHER TYPE OF AMMUNITION REPLACEMENTS TO THE STANDARD 5.56MM/.223IN. CARTRIDGE.

THE FOLLOWING U.S. STATES HAVE RESTRICTIONS ON HIGH-CAPACITY MAGAZINES: CALIFORNIA, MARYLAND, MASSACHUSETTS, NEW YORK, NEW JERSEY, AND WASHINGTON D.C.

PATENTED

WARRANTY-

The Magnuson-Moss Act (Public Law 93-637) does not require any seller or manufacturer of a consumer product to give a written warranty. It does provide that if a written warranty is given, it must be designated as "limited" or as "full" and sets minimum standards for a "full" warranty. Armatac Industries Inc. has elected not to provide any written warranty, either "limited" or "full," rather than to attempt to comply with the provisions of the Magnuson-Moss Act and the regulations issued there under. There are certain implied warranties under state law with respect to sales of consumer goods. As the extent and interpretation of these implied warranties vary from state to state you should refer to your state statutes.

ARMATAC INDUSTRIES INC. will repair or replace any defective components manufactured by ARMATAC INDUSTRIES INC. for a period of 1 year after purchase. Armatac Industries Inc. will repair or replace any defective unit at its sole and exclusive option within 7 business days of return to manufacturer. F.O.B. Lyndhurst, Va. Armatac Ind, Inc. offers no warranty express or implied on the Saw-Mag.



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Armatac Industries SAW-MAG™ 150 round dual drum.

The SAW-MAG™ was designed to comply to NATO 4179 STANAG.

It uses the NATO 5.56mm / 0.223 cal. Cartridge

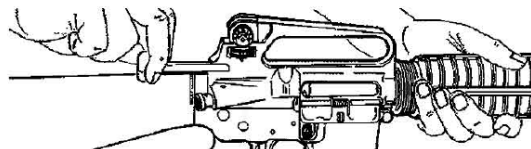
Approved by Armatac Industries for HK416, SCAR-L, M4,M16 and all true MIL-SPEC AR variants.

Loading the SAW-MAG™ into your rifle

Lock the Bolt Carrier

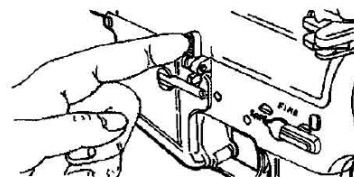
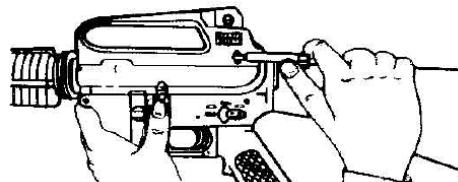
Group to the Rear

The purpose of locking the carrier group to the rear is so you do not have to fight the magazine springs while loading the magazine into the firearm. Pull the carrier rearward and press the bolt hold open button. Then slide magazine into rifle and shake to ensure that it is secured into the receiver.



Chamber first round

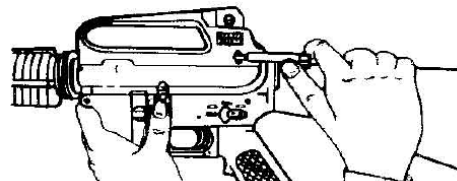
The first round should be chambered by releasing the bolt hold open feature. If the round does not successfully chamber then use the forward assist feature or a second try with the charging handle. If your system is having problems chambering the first round from the bolt catch then you will be required to use the charging handle to give it some additional travel. The magazine should break in and be easier but you should test this with your system to see how it behaves when completely full. Using the charging handle is better for a follow up tug if there were an issue.



Lock the Bolt Carrier

Group to the Rear

After you have emptied the magazine you will need to manually pull the bolt carrier group rearward and push the bolt hold open device to secure it rearward.



Break-In

It is suggested that you take your new unit and load approximately 30 rounds and shoot as a break-in.

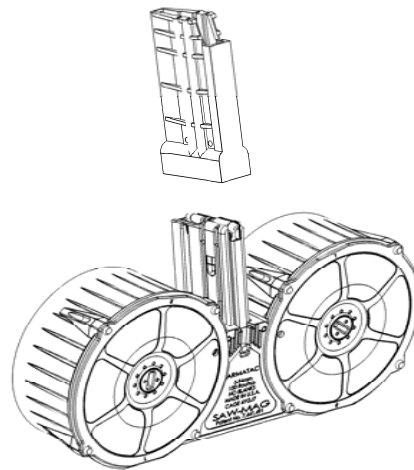
Loading

Several speed loaders are on the market. We have found the five round integral plunger (Personal Loader) for loose ammunition to be the most reliable and effective unit. You load 5 loose rounds in the side and use the integral plunger to push down the ammunition. The Stripper clip versions are faster but prone to breaking.

You should begin with having 150 rounds separated so you know when to stop loading. If you have the stripper clips and the loader, you drop the clip of 10 rounds in the loader facing the correct direction, and push the plunger down. Make sure you are applying pressure at the correct angle. Make sure the plunger doesn't tilt. If you're using the 5rd loose loader with the built in plunger then you have less worries, with both, you need to stop loading on the right number of 150 rounds.

If you load 151 rounds, remove the 151st cartridge by pushing it straight out of the magazine before installing in the weapon, otherwise you could damage the feed lip

*Reach past the 151st round and push down on the 150th round and simultaneously push forward on the 151st round to easily remove from magazine.



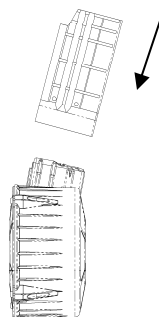
**Remember your top round should be on the side that your top dummy is after loading 150 rounds,

**If you have a round indicator your viewport will show full but cannot be relied upon for such precision as to tell 151 from 150 rounds.

Loading

You are now ready to begin loading the ammunition. The magazine requires down force so you must place it on a lower level, below waist level, so that when you apply force you will be able to do so properly and not break the speed-loader. The speed-loader can become offset and loading can become very difficult and harm your ammunition. If you hear a lot of noise while loading this is indicative of an offset loader.

Apply force at 10 degree angle



If you experience the front tips dragging during loading, remove the loader, inspect to make sure cartridges aren't damaged, depress the cartridges and let them snap back up to the feed lips, and resume loading with being sure the loading goes smoother.



Problematic feed due to loading drag on front of cartridge. If you see, push the tip of the cartridge into the tower, then depress the cartridges into the magazine channel with your thumb and release before continuing loading. Align loader correctly before resuming.



Assembly

!Warning!

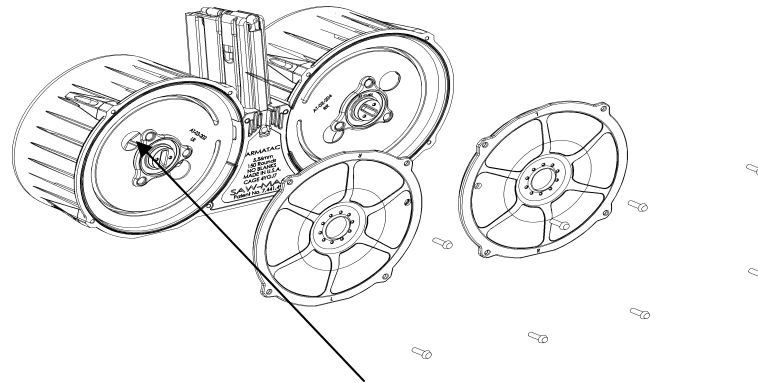
When removing the power knobs you must be careful to not let spindle spin freely and harm you.

FACEPLATE REMOVAL

You may remove the 8 screws holding on the faceplates.

You must align the spindle dots with the dots on the sprocket face for proper torque setting., the left side is turned CCW and the right is turn CW until the dots align, you must then drop the knobs in to lock them in this position.

The faceplates are now removed and the drums are no longer positively held in the drum. You are able to clear the magazine of debris at this point. You must support the spindle by pressing it to the rear of the drum, you may shake and lean forward to remove debris, you



should keep your hands holding the spindles to the rear of the magazine while doing this to prevent the internal part from falling out of the SAW-MAG case.

When you reinstall the faceplates, for the left side, orient the faceplate so the L is on the bottom flat side. If you have the round indicator the viewport is then above the name AR-MATAC on the center trap cover.

NOTICE: Removal of the face plates for the purpose of removing debris is the only step an operator should attempt.. Further disassembly should be done only by a trained armorer.

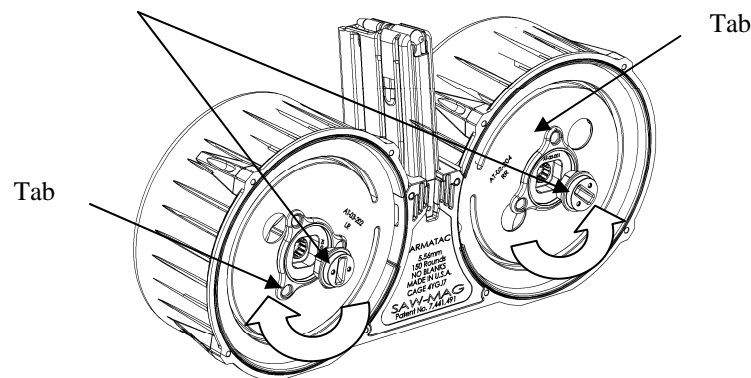
Over the past five years 99% of the problems experience by CL MAG owners were the direct result of operator efforts to disassemble and reassemble the magazine beyond the face plate removal stage. Armatac offers an armorer training class and video for disassembly.

Assembly

Inside Drum Assembly Removal

POWER KNOB REMOVAL-WHEN THE KNOBS ARE REMOVED THE SPINDLE WILL ROTATE AND COULD CAUSE INJURY.

1) The first step is to remove the knobs



*Before removing the power knobs, make sure the spindle has a marking corresponding to a reference point on the sprockets so you may restore the proper settings on rebuild.

*If you do not slow the spindle down while removing the power knobs, the dummy chain may separate and the spring may pop out of the inner sprocket under the jerk. You slow the spindle by holding the tabs at the time you remove the knobs. You must make sure to take the drums out and check for proper assembly after removal of the power knobs.

*The arrow indicates the direction the spindles are going to spin once you pull the knobs out.

**You must follow the directions for assembly on page 10 prior to setting the spindle torque. You must set the spindles to their exact setting.

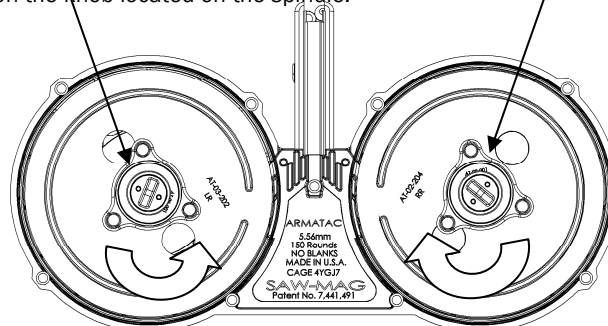
Turn the spindles *opposite* the direction of the arrows in the above figure, then install the knob when the marks are exactly aligned, this sometimes requires rotating the knob 1/4 turn and trying to push back in.



Assembly

POWER KNOB REMOVAL-WHEN THE KNOBS ARE REMOVED THE SPINDLE WILL ROTATE AND COULD CAUSE INJURY.

Remove the power knobs from one side at a time. To remove the power knob, take your hand and apply torque in the direction shown to the respective spindle side, it will relieve the tension on the knob located on the spindle.



When you apply the torque the power knob could potentially fall out, You will usually grip the sides with your fingers and lift out. It has a slight recess behind it so that you may wedge something behind it to help it out

*To prevent any complications on other parts you may now release the spindle slowly, the best way to do this is with your open palm on the face of the spindle and let the spindle rotate until it no longer contains force, on a unit with no ammunition this is less than one revolution, for a unit that is still loaded this will be a considerable amount of force and it may be dangerous to attempt to slow with your palm.

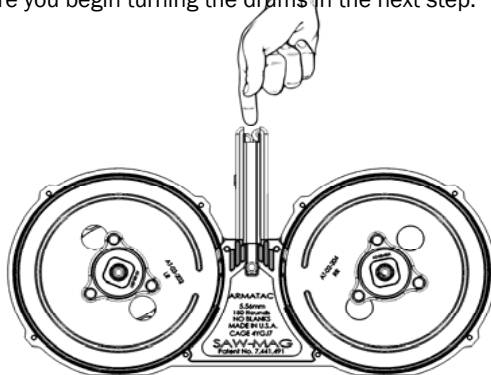
***Make sure there is a marking on the spindle that correlates with a location on the plastic sprocket to mark the torque setting.**



*Do not allow your fingers to go into the holes in the sprockets, the spindle may then harm your fingers.

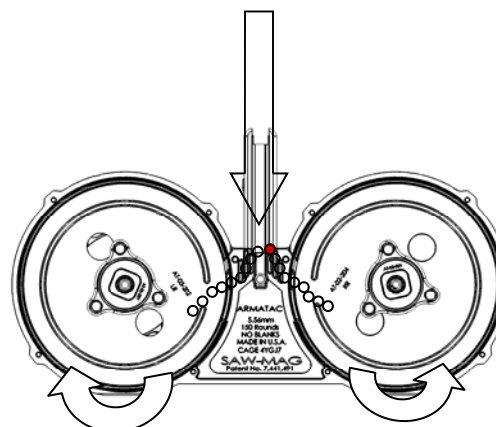
Assembly

Take your index finger and push the dummies as far down as you can reach. You want to get them to divide before you begin turning the drums in the next step.



Slowly jiggle the spindles in the direction shown to aid in the next step

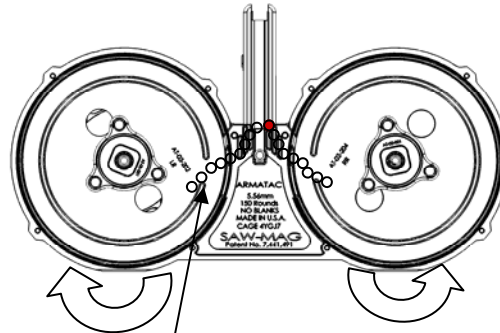
**When you reassemble, you will have a tough time here. you must first position the tapered dummy higher than the lead dummy of the left side at the meeting point at the tip of the arrow. You may have to jiggle, smack the magazine, and put your fingers down the column to intentionally stagger the dummies. Rotate the spindles *opposite* the direction of the arrows to get spring pressure to move the dummies up the column. If you can manage to put some spring pressure by the spindles on the drums and simultaneously push down the column, the dummies will relieve and rush up the channel. You must get the dummies up the channel with the right impact dummy.*



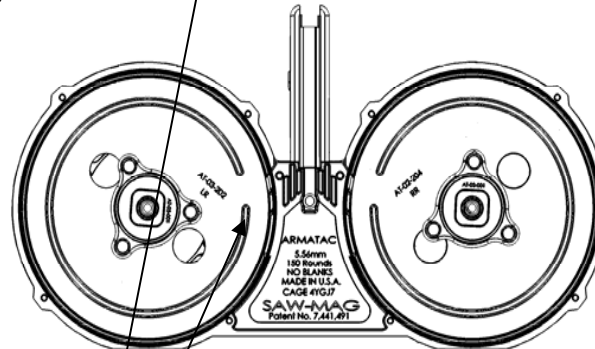


Assembly

You now need to rotate the spindles in the direction shown for approximately 2 complete rotations. The first rotation will pull the dummies down into the drums and the inside sprocket assembly will rotate only, at the end of that revolution you will feel a small resistance when the sears are reached. Back the spindle away from this point so you can develop inertia and easily overcome this resistance. The outside sprocket will unlock and remain free. You will continue turning for the next revolution until the outside sprocket stops.



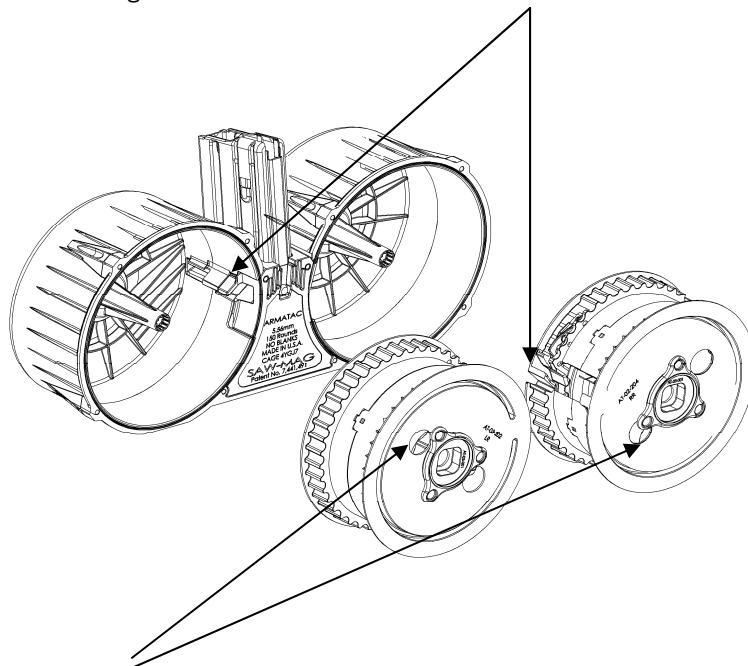
*When turning in the direction shown there is a possibility of popping the main spring out of the spindle, you will then not be turning anything when turning the spindle. To fix, continue to rotate for one revolution in the direction indicated slowly, it will pop back in, jiggle, and you may resume.



The drums are now rotated in a slightly different position almost a full turn from where they were. In the first case the circle feature ends level with the ARMATAC name in the center cover, in the second case it is above the name. You now have both drums unlocked and ready to be lifted out of their respective cavities.

Assembly

These are the areas that have been aligned for the removal of the drums, there is a little rib you need to clear or it will snag. Once you have it that far you can lift the opposite side out of the drum housing.



Use your fingers to lift out the inside sprockets. You may have to jiggle to get them out. When reinstalling you must align the channel with these arms and drop all the way into the back of the drum. You must press firmly on the spindle and twist back and forth to make sure the spindle is all the way through the sprocket assembly. (it can hang on an edge and make it seem like it is in place). There should be no space between the spindle and the sprocket.

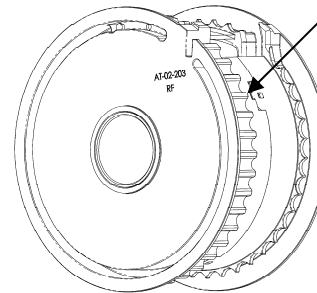




Assembly

You should not be required to further disassemble. If you do, be careful to not damage the parts. Use a sharp point, like a knife point, to help release the tabs. You will first unlock all 4 tabs before trying to separate the 2 halves. Start with the 2 tabs that are located on both sides of the feed opening.

*If you do not unlock the tabs and you forcefully remove the 2 halves you can break off the locking tips that hold the sprockets together and you will have a broken part.

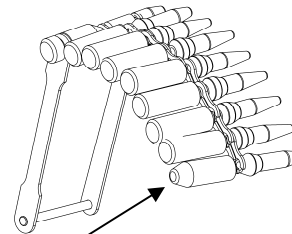


When joining the outer sprockets together again, make sure you assemble the RF with RR and the LF with the LR. Be very careful and make sure you have all of the perimeter started properly before popping the sprockets together, pay particular attention to the little area by the feed chute, this commonly gets overlooked and overlapped on the wrong side.

Make sure you have put the right inside sprocket assembly in the right outside sprocket assembly. (1) We suggest installing the spindle through the rear outside sprockets first, (2) feeding the spindle through the inside sprocket assembly, hooking into the power spring. (3) stretching the dummy chain outside the sprockets with the follower arms along the feed chute area, (4) begin to join the front outer sprockets. This must be done carefully, get all the areas started first then pop it together. (5) feed the dummy chain down into the inside sprockets. (6) make sure the spindle is protruding all the way through the front and rear sprocket assembly.

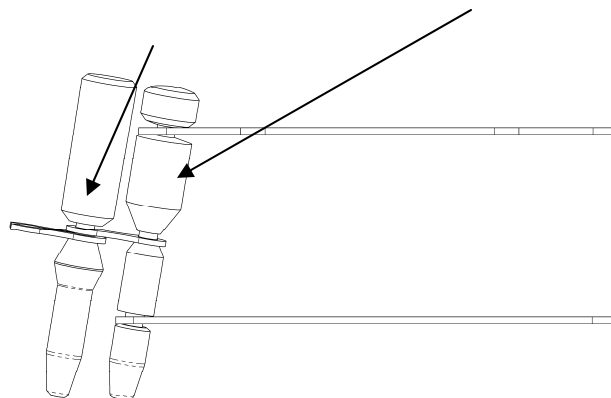
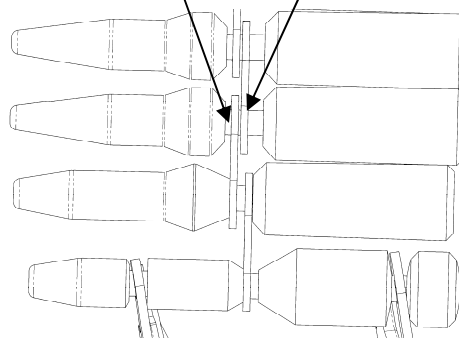
Left Follower Assembly
Right Follower Assembly

(Impact Dummy Assembly)



Assembly

The dummies when assembled alternate the chain link from side to side.



The beginning of both the left and the right follower chains have the same components; The actual follower dummy and its attached dummy sear. It is necessary to connect the follower assembly to its remaining chain links. Always alternate which side the chain links are on during assembly to avoid binding. If after re-assembly binding occurs it is because of issues with the follower assembly and which side the chain links are placed on.



Drum Cleaning/Maintenance

We have found that debris removal should be scheduled to 10-20k rounds fired. This requires removal of the face plates ONLY! Adverse conditions may require schedule variations.

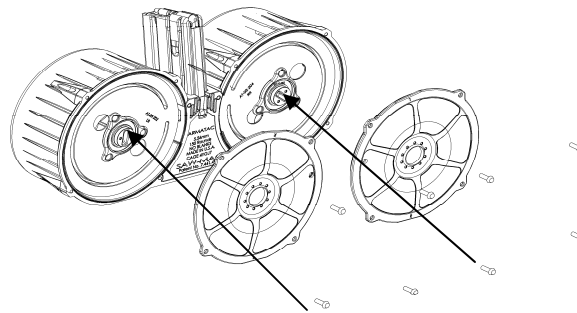
A simple cleaning can be done by just removing the faceplates, holding the spindles in with your hands while shaking with the open side pointing down so the debris may fall out the opening where the faceplates were.

A thorough cleaning will involve a total disassembly. This is a job for the trained armorer ! When the armorer has taken apart the magazine, he should pay attention to places that are discolored, these are the dirty areas. A rag with a little Break-Free will make the easiest cleanup. Be sure to get the inside ring of the major inside drum diameter, and the feed paths leading to the tower. The armorer will need to remove the tower and the center cover, this will expose a trap of debris that will need cleaning. The armorer may also inspect the sear area of the outside sprockets and make sure they don't have large debris preventing their function. If the dummies are heavily colored from rubbed in debris then the armorer will need to roll them in the rag and remove the outer fouling.

Examine the impact dummy and make sure it doesn't have any sharp surfaces that could create a drag.

!Do not lubricate with heavy oils like traditional gun lubricants, The magazine does not require lubrication to work.

*You must press against the spindles while the faceplates are removed.



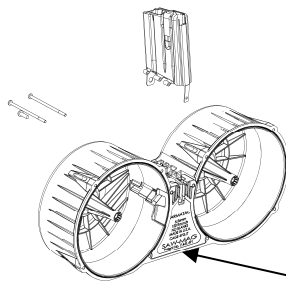
Part Replacement Life

The magazine doesn't have any major wear points. The spring motors are rated to perform for at least 2,000 cycles, which translates into 300,000 rounds before its life is over. They have an indefinite life when stored loaded or unloaded. Beyond the spring motor life, there are no wear or usage issues with the SAW-MAG internals.

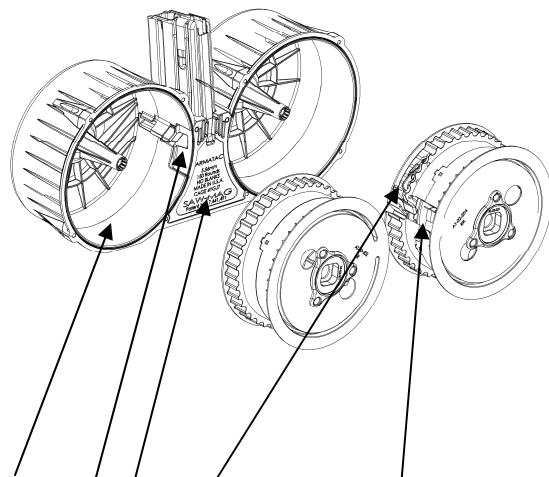
The impact dummy assembly should probably be replaced every 300,000 rounds.

You should really be focused on the preventative maintenance of your weapon because of the added use it is undertaking using the SAW-MAG

Drum Cleaning/Maintenance



To remove the tower you must unscrew all 4 attachment screws. The long screws are harder to come out, be careful to not bend, a claw hammer may help removal after they have been unscrewed. After the tower is removed you can remove the center cover to clear the debris trap.



The contact diameter that should be cleaned during maintenance.

The feed path that should be cleaned during maintenance.

Gear pocket to be examined for debris.

Debris trap to be cleared.

Function Check

- Each time you take apart your magazine you should give it a proper function check to assure it is working properly.
- To do this first load the magazine completely with 150 rounds.
- You will now take out each cartridge slowly and watch the magazine response time.
- Static friction is a little larger than kinetic friction so you will want each round to be taken out and then release the magazine to watch the cartridges move the pitch distance.
- To do this, position the magazine so that the cartridges against the feed lips are facing directly down to the ground. If nothing was holding it, it would fall and the tip would impact the ground. The test is to remove a cartridge and see how far it can fall before the remaining rounds have pushed it securely against the feed lips. The cartridges should not slide before locking up against the feed lips. If they slide down the lips at all there is an assembly problem.
- After you perform this test the magazine is ready to be re-loaded, live fire tested, and then stored loaded or un-loaded.

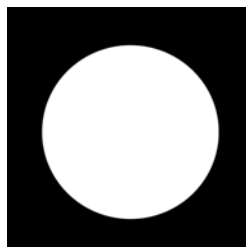
Round Indicator

This is the viewport for the round indicator for the left faceplate

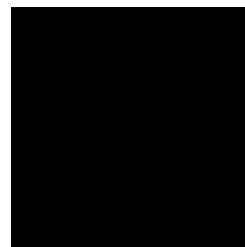
150-148

147-76

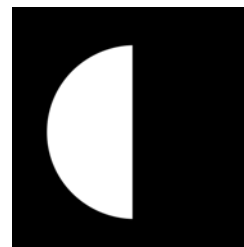
76-0



Full



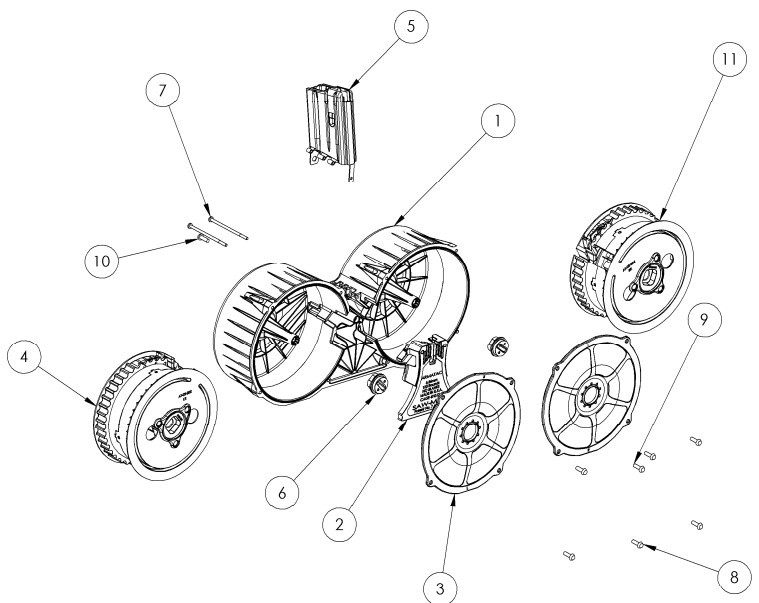
Full-Half Full



Half Full-Empty

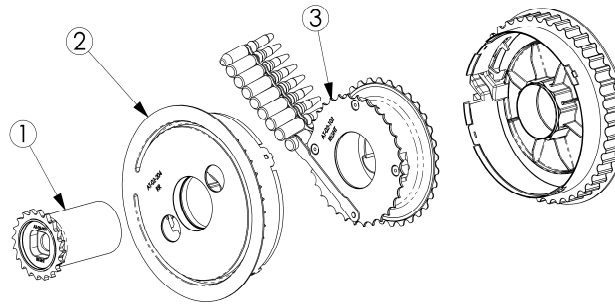
Part Diagram

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AT-00-001	SAW-MAG	1
2	AT-00-002	COVER	1
3	AT-02-301	FACE PLATE	2
4	AT-03-000	LEFT DRUM ASSEMBLY	1
5	AT-01-310	STAMPING	1
6	AT-02-303	KNOB, POWER	2
7	AT-00-003	SCREW, TOWER ATTACHMENT	2
8	8-HILO		8
9	5-HILO		1
10	QUARTER-HILO		1
11	AT-02-000	RIGHT DRUM ASSY	1

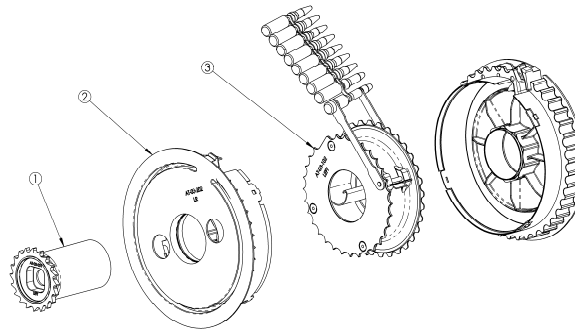




ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AT-02-001	SPINDLE, RIGHT	1
2	AT-02-200	OUTRIGHT ASSY	1
3	AT-02-100	INS RIGHT ASSY	1



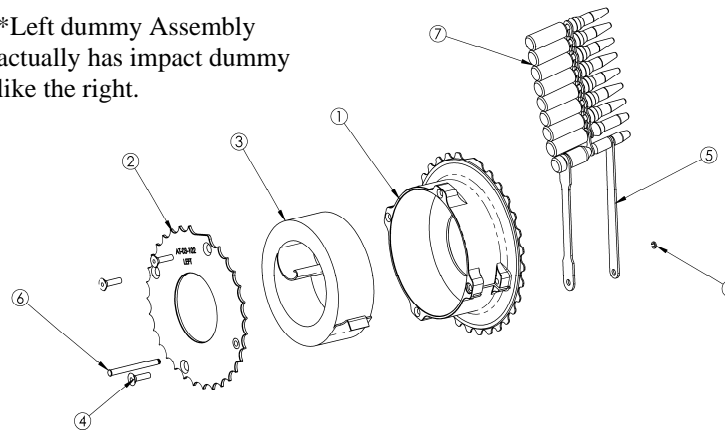
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AT-03-001	SPINDLE, LEFT	1
2	AT-03-200	LEFT OUTER ASSEMBLY	1
3	AT-03-100	SPROCKET, LEFT INNER ASSY	1



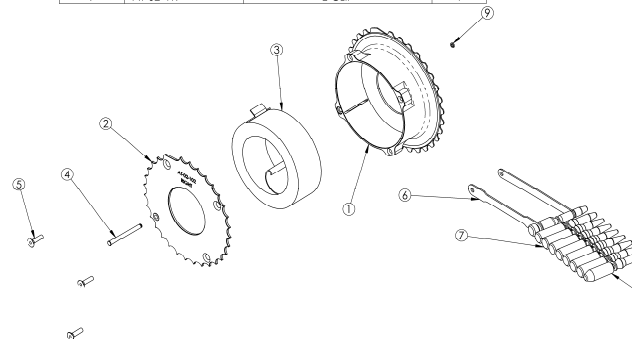
Part Diagram

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AT-03-101	SPROCKET, LEFT INNER	1
2	AT-03-102	SPROCKET, INNER LEFT	1
3	AT-02-103	POWER SPRING	1
4	AT-02-414	BOSS SCREW	3
5	AT-02-500	FOLLOWER ASSEMBLY	1
6	AT-02-411	PIN, FOLLOWER	1
7	AT-02-600	DUMMY	7
8	AT-02-417	E-CLIP	1

*Left dummy Assembly actually has impact dummy like the right.

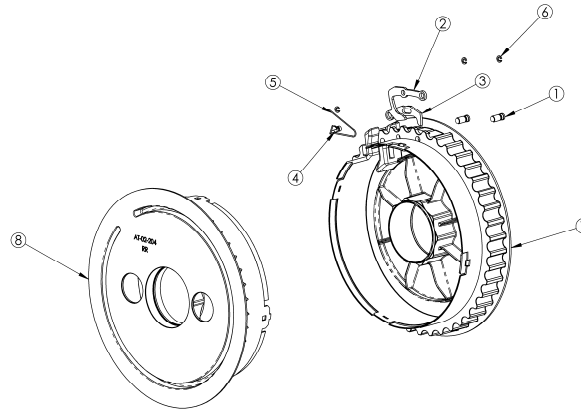


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AT-02-101	SPROCKET, RIGHT INNER	1
2	AT-02-102	SPROCKET, INNER RIGHT	1
3	AT-02-103	POWER SPRING	1
4	AT-02-411	PIN, FOLLOWER	1
5	AT-02-414	BOSS SCREW	3
6	AT-02-500	FOLLOWER ASSEMBLY	1
7	AT-02-600	DUMMY	6
8	AT-02-700	DUMMY TAPERED ASSEMBLY	1
9	AT-02-417	E-CLIP	1

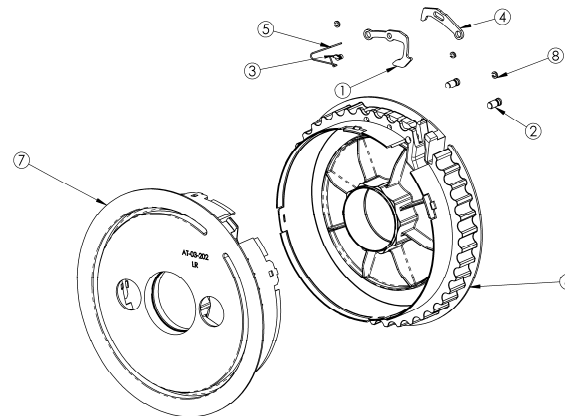




ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AT-02-202	PIN, SEAR	2
2	AT-02-206	SEAR, SECONDARY	1
3	AT-02-201	SEAR, MAIN	1
4	AT-02-205	PIN, SEAR	1
5	AT-02-207	SEAR SPRING	1
6	AT-02-417	E-CLIP	3
7	AT-02-203	SPROCKET, RIGHT FRONT	1
8	AT-02-204	SPROCKET, RIGHT OUTER	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AT-02-201	SEAR, MAIN	1
2	AT-02-202	PIN, SEAR	2
3	AT-02-205	PIN, SEAR	1
4	AT-02-206	SEAR, SECONDARY	1
5	AT-02-208	SEAR SPRING	1
6	AT-03-201	SPROCKET, LEFT FRONT	1
7	AT-03-202	SPROCKET, REAR LEFT	1
8	AT-02-417	E-CLIP	3



Frequently Asked Questions

1) Which rifles work with the SAW-MAG?

- The magazine was designed to feed the standard AR-15, M4/16 firearm.
- This is also a NATO standard, 4179 STANAG.
- The magazine can feed faster than any feed system developed so it is fast enough for any assault weapon but the weapon should have the same bolt carrier group mass and return spring stiffness as the AR family. The stiffer and heavier the mass of the bolt group, and more gas porting make this a better combination.
- Compatibility is the key, this is a highly effective system and when placed with your weapon can make some weapons behave differently. All high capacity devices that feed the amount of ammunition this does must work very fast to be reliable. We have the lowest friction high capacity design ever created for the AR platform. To move the inertial mass for the speed there must additional spring force. This spring force when fully loaded on the magazine puts barely cycling weapons closer to a failure mode. Basically, if your gun is barely cycling due to weak ammunition or etc. it might have a tough time with this magazine. If you look at the GDAEC (p.27) see where the areas to avoid it will help keep your shooting 100%.

2) Will firing all 150 cartridges from a SAW-MAG™ in one burst hurt my barrel?

- All 5.56mm mil-spec barrels can easily sustain 150 rounds of continuous use without bursting from ambient temperature.

3) Will firing all 150 cartridges from a SAW-MAG™ in one burst hurt my gas tube on my AR M4/16?

- If you have a mil-spec gas tube on an unmodified barrel over 14.5" then you are o.k.
- If the gun has lots of firing (>20k) then the gas port might have eroded and be large enough to dump excess hot gas into the tube.
- If you shortened the barrel and opened the gas port to help with cycling, the gas port might be large enough to dump excess hot gas into the tube.
- The cheaper gas tubes sold by some commercial vendors have a different grade of stainless steel and may experience issues.



- Piston operated guns do not have this particular issue.
 - If you are going to be using your rifle as a machine gun in an operational setting you should test your gas tube by firing a continuous 150 rd burst and then inspect the gas tube. If you are experiencing thermal issues your gas tube droop a l bit right after the front sight base. If you notice any drooping then replace. You could experience failure if you continue to get it that hot. If you have a half second pause mid-burst it would get rid of lots of thermal issues for civilian gas tubes.
- 4) **Will firing all 150 cartridges from a SAW-MAG™ at one time cause my rifle to “cook-off”.**
- Cook-off is caused when the chamber of a firearm is hot enough to cause the round to fire without pulling the trigger. It takes over 200 rounds of continuous full-auto fire from ambient temperature to reach this temperature range.
- 5) **What is the life of the SAW-MAG™ .**
- The SAW-MAG™ will handle 150,000 rounds of high quality, commercially manufactured, brass ammunition, before needing a routine spring maintenance check .
 - The ability to correctly line up the speed loader, or if you use the 5rd personal loader, it greatly extends the life of the magazine. This is due to the marks the cartridges leave on the front feed tower. This is done during loading and is not used during feeding so will never hurt the performance of the magazine.
 - The tapered dummy that pushes the last round into the chamber gets abused as well. It can withstand a substantial amount of abuse without causing a problem.
- 6) **Will the SAW-MAG™ hurt the rifle lower or the steel magazine catch that retains the magazine.**
- The magazine tower is steel and rigid so it will not buckle in and slide around the magazine latch like a plastic magazine.
 - To pull the magazine from the rifle lower, the tab on the side of the magazine would have to be sheared by the steel latch.
 - We have continually used the same lower as our test machine gun for most of our drums in and it has never shown a sign of fatigue.
- 7) **Will the SAW-MAG™ keep up with my super fast machine gun.**
- The SAW-MAG™ has an adjustable spring-rate as well as a low friction design, if your weapon needed more speed the SAW-MAG can be turned up.
- 8) **What if I have a problem and need some assistance.**
- You can contact us by email for the fastest response. We have a standard return policy and are motivated to have you up and running again in the quickest possible way.

9) My magazine jammed during testing.

With the magazine count being 0 on a fully loaded magazine and increasing the count to be 150 when empty the following guidelines will help diagnose the problem.

- 0-80 rounds - This is the outside sprocket system

Possible problems

Problem: You could have a longer bullet than is acceptable. The maximum acceptable length of cartridge is 2.260".

Fix: Try new ammunition

Problem: You could experience jams that look bad that are a result of a short stroke, how did your ejection pattern look before the jam. Please consult the GDEAC (Gun Diagnostic Ejection Chart)

Your torque settings could be too low, you must examine ejection patterns prior to.

- 80-110 -This is the inside sprocket

Problem: There could be long ammunition you are attempting to use. One of the dummies could be too long. If you are in a long burst you could be experiencing a thermal tolerance issue and your ejection pattern will become sporadic.

- 110-150 rounds

Problem: Generally, all the problems here are due to the dummy chain assembly. The chain assembly should resemble the picture from the video assembly.

If you get any stoppages other than the ones noted it could be because of either long ammunition or a problem with the shell of the assembly.

There could also have been the condition where the spring was improperly adjusted and lost some power but it still has enough force to work in the beginning but dies out before can release all of the ammunition.

10) I got the knobs off and I tried to push the ammunition down the magazine column but they seem stuck.

Fix: Sometimes when disassembling the magazine problems can occur. It usually happens from not following the disassembly technique. Be careful to not damage anything permanently. Using a tool, like a screwdriver, you can begin separating the dummy chains and taking the dummies one by one out of the top of the magazine. You may need to take a screwdriver and begin prying the outside edge of the outer sprocket. This will cause a flex and the tabs will release, try to pry near where the 4 tab locations are, you should hear each one release, then lift our rear sprocket assembly.

11) My dummies are hard to push down with my fingers.

This is a result of your dummies trying to pass each other in the tower column. Do not push down with your fingers, if you must, then push on the lower of the dummies while pushing on the top dummy evenly. If you think you have created a problem but the dummies are still linked together and you have the impact dummies at the top, load 15 rounds of ammunition in and unload and they will reset. If you have managed to pop the impact assembly out of the tower by getting one assembly 2 dummies ahead of the other, then you will need to disassemble and re-link the dummies.

12) **The SAW-MAG will not fit into the receiver of my firearm.** One of the requirements for a general magazine is to have a loose fit to allow the magazine to be released freely from the firearm when the magazine release button is depressed. The problem is that there are different firearms manufacturers and variance in production that make a rather large variation of firearms that are currently in circulation. Some magazine receivers are polymer while most are aluminum. If there is a mathematical interaction between the SAW-MAG and your firearm then it will not fit. It is much better to have a tight fitting SAW-MAG than a loose one. The tighter magazine won't wiggle while in operation and won't require you to have the enhanced feed ramps that have been added to the military improvement program for the M4. If you have a firearm that the magazine doesn't fit into but it fits in others you have then you have a lower with tolerance interaction. A tighter fitting magazine is also much better if you're using it as a base of support. The most important and problematic dimension in this fit is the front to back measurement that is 2.398 (-.015) in. Ultimately in the tolerance range magazine manufacturers are required to make magazines fit through a gage block and that is the standard by which our towers are manufactured and checked.

13) LIGHT PRIMER STRIKE

- This is only a problem during full-auto fire. The hammer is dropped and bounces against the bolt carrier and doesn't allow a direct hit on the firing pin so it doesn't pop (initiate) the primer to the cartridge. This is easily diagnosed by removing a live cartridge from the chamber with a dimple in the primer.
- Hydraulic buffers are a big help if you're having problems with light primer striking.
- Standard buffers sometimes are finicky with different spring combinations, with an H2 buffer your only problem is usually a weak main spring.
- You should be able to turn the selector lever to "SEMI-AUTO" and fire without problem.

14) FAIL TO GET INTO CHAMBER

* Full length rifle kits have weaker springs which sometimes are problematic
Depending on your ejection pattern the answer is going to be different. If you are close to short stroking then you have to make sure your torque settings are not maxed out. Otherwise you will have to run more porting on your weapon, run hotter ammunition, or maybe run a longer barrel in some cases.

The magazine could need a higher torque setting (Sometimes with suppressed or really high cycle rates), you will need to take the faceplates off the magazine when empty and rotate the left knob CCW into the next setting, the right side turn CW to the next setting. The first signs of being turned up too high is the inability to be able to load the first round from the bolt catch on a weapon.

15) The gun fired and when I pulled the trigger again nothing happened.

SHORT STROKE

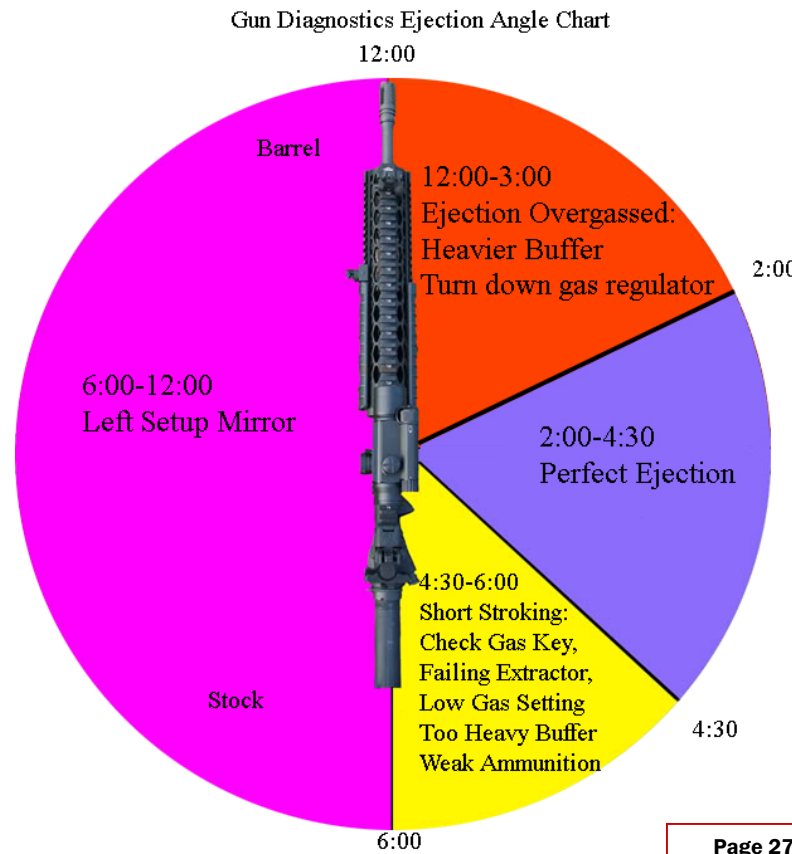
- Check and see if you can move your selector to the “SAFE” position. If you cannot move the selector to this position then the bolt carrier group has not travelled far enough rear ward to set the hammer. This is known as a “Short Stroke”.
- This is sometimes problematic when you have low pressure cartridges in conjunction with heavier buffer mass (or a low setting on your piston regulator). This is sometimes a dangerous area to be in because there is no time for a magazine device to feed when the gun just barely strokes enough to get behind the cartridge that it is going to feed into the chamber. Generally, your firearm will cycle with more pressure for the cycling after the first round has increased the chamber temperature a little.
- The fired shell casing can be in the chamber
- The fired shell casing could have been extracted and the bolt carrier went forward without chambering a round. (check to see if you can place on “SAFE”)
- This is more common on rifles with shorter barrels, It will sometimes look like a magazine failure to feed. Fixes:
 - 1)If you are running a hydraulic buffer it might be too heavy for the ammunition/gas settings.
 - 2)You may have underpowered ammunition for the system (If you have a regulator you would turn it to a larger setting)
 - 3)If you are running a shorter barrel then you have probably not opened the gas port large enough, drilling your gas port larger will allow more energy for the rearward stroke, a great test for this would be to add a suppressor and shoot, the short stroking should disappear.
 - 4)For the AR family you can occasionally have a bad extractor spring on the bolt that causes the extractor to try and slip off the cartridge while in the chamber and robbing rearward energy.
- Although your rifle may not short stroke on a standard magazine it may due to the additional force of this magazine, it can be adjusted by a larger diameter gas port, or a larger port setting on your regulator.

*A Short Barrel with inadequate port pressure will cause a failure to feed because the bolt group will just get behind the cartridge and begin travelling forward, not giving time for the loading of the round. This is aggravated by the strength of the magazine pushing up on the carrier retarding the rearward motion. These problems usually are only observable on the problematic combination in the first half of the drum load.



For support visit us at

<http://www.armatac.com/sawmag/>



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OPERATION MANUAL

SAW-MAG™