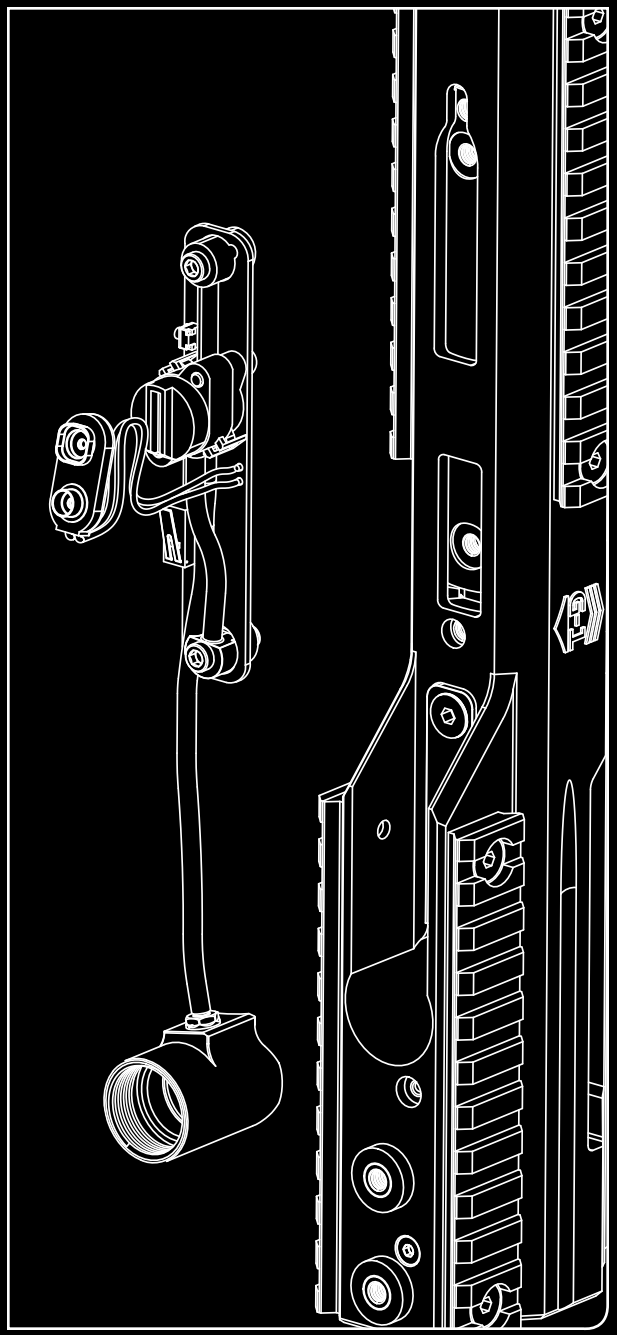
G-1™

GOG paintball

Operation and adjustment instructions

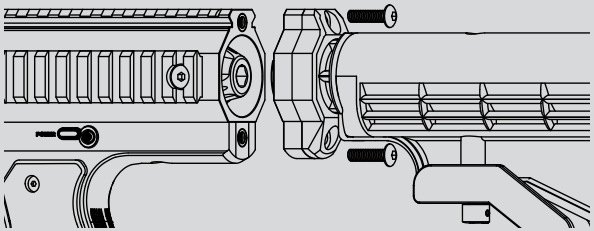




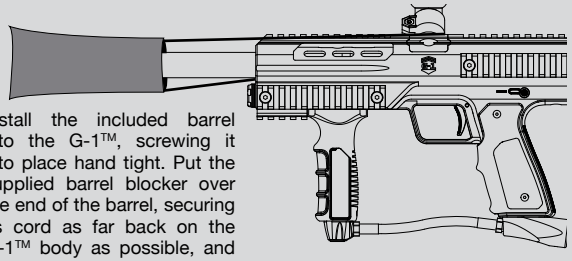
QUICK START

01 STOCK

Unpack the G-1™ and its stock. Using the included 1/8-inch allen wrench, attach the stock to the rear of the G-1 with the two included screws.

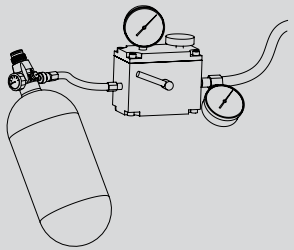


02 BARREL BLOCKER



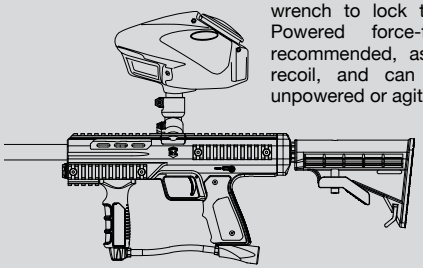
Install the included barrel into the G-1™, screwing it into place hand tight. Put the supplied barrel blocker over the end of the barrel, securing its cord as far back on the G-1™ body as possible, and cinching it tight.

03 FILL TANK



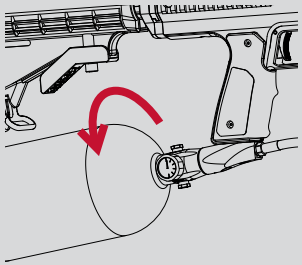
Have your compressed air (HPA) or CO_2 tank filled by a person who is properly trained to do so. If using an HPA system with an on/off valve, make sure it is in the OFF position. If using a CO_2 tank or screw-in style preset HPA system, fill it while it is removed from the marker.

04 LOADER



Fit a paintball loader into the feedbeck of the G-1™. Use a 7/64-inch allen wrench to lock the loader in place. Powered force-feed loaders are recommended, as the G-1 has little recoil, and can easily outpace an unpowered or agitating loader.

05 TURN ON GAS

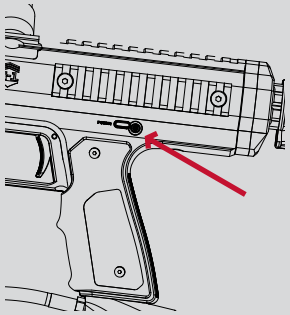


Gently gas up the G-1™ by slowly turning on the air system or screwing the CO_2 or screw-in style HPA system into the bottom-line ASA.

⚠WARNING

A gentle rise in pressure is important, as a sudden blast may reduce the service life of the G-1®'s internal components.

06 TURN ON THE G-1™

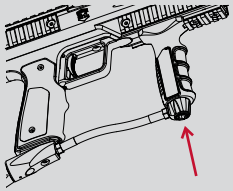


Turn on the G-1™ by pressing the power button momentarily.

⚠WARNING

Although the power button serves as the G-1™'s safety switch to prevent accidental firing, it should never be relied upon in place of a barrel blocker and proper eye protection.

07 ADJUST VELOCITY



Fill the loader with paintballs. If it is a powered loader, turn it on. While wearing ASTM compliant paintball goggles, in an area where all bystanders are protected, remove the barrel blocker and fire over a chronograph to measure the velocity. Using a 5/32-inch allen wrench on the adjuster in the bottom of the vertical regulator, turn clockwise to increase the velocity/pressure, and counter-clockwise to decrease. Take three or four shots after every adjustment to allow the gas pressure inside the G-1™ to stabilize. Adjust until the marker is firing consistently within the limits for the field where you are playing (for safety reasons, never adjust the G-1™ to fire at greater than 300 feet per second). Depending on what modes of fire are allowed at the field where you are playing (semi-automatic, rebound, etc.) you may need to adjust the G-1™'s firing mode. See the Electronic Adjustment section for more information.

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⚠WARNING

- THE G-1™ IS NOT A TOY.
- MISUSE OF THE G-1™ MAY RESULT IN SERIOUS INJURY OR DEATH.
- EYE PROTECTION DESIGNED FOR PAINTBALL USE MUST BE WORN BY THE USER AND ANY PERSON WITHIN RANGE OF THE G-1™.
- GOG PAINTBALL® RECOMMENDS THAT THE G-1™ ONLY BE SOLD TO PERSONS 18 AND OLDER.
- THOROUGHLY READ THE G-1™ OPERATION AND INSTRUCTION MANUAL BEFORE OPERATING.
- TREAT EVERY PAINTBALL MARKER AS IF IT WERE LOADED.
- NEVER LOOK DOWN THE BARREL OF A PAINTBALL MARKER.
- KEEP YOUR FINGER OFF THE TRIGGER UNTIL READY TO SHOOT. NEVER POINT THE G-1™ AT ANYTHING YOU DON'T INTEND TO SHOOT.
- KEEP THE G-1™ ON SAFE (POWER OFF) UNTIL READY TO SHOOT (SEE QUICK START).
- KEEP THE BARREL BLOCKING DEVICE ON THE G-1™'S MUZZLE WHEN NOT SHOOTING (SEE BARREL BLOCKER SECTION).
- ALWAYS REMOVE PAINTBALLS AND DE-GAS THE G-1™ BEFORE DISASSEMBLY (SEE DEGASSING SECTION).
- STORE AND TRANSPORT THE G-1™ UNLOADED AND DEGASSED IN A SECURE PLACE.
- FOLLOW ALL MANUFACTURER'S WARNINGS AND INSTRUCTIONS FOR PROPELLANT SOURCE HANDLING, STORAGE AND FILLING.
- DO NOT SHOOT FRAGILE OBJECTS SUCH AS WINDOWS.
- ALWAYS MEASURE THE VELOCITY OF PAINTBALLS FIRED BY THE G-1™ BEFORE USE, AND NEVER ADJUST TO FIRE ABOVE 300FPS (91.44M/S).

GETTING FAMILIAR

PLEASE READ CAREFULLY

STATISTICS

WEIGHT:	2.7 lbs. (Not Incl. Stock)
OPERATING PRESSURE:	160 psi
POWER SOURCE:	9-volt Alkaline Battery
PROPELLANT:	CO_2 or Nitrogen/Compressed air
RATE OF FIRE:	11 bps
OPERATION:	Low pressure electropneumatic
MODES OF FIRE:	Semi-Automatic, Billy-Ball™, PSP and Select Fire
ANTI CHOP SYSTEM:	Low-Force bolt
BARREL THREAD:	GOG®
LUBRICANT:	For proper and consistent operation, the G-1™ should only be lubricated with GR33SE™ lubricating grease.

REQUIRED ITEMS FOR USE

- 5/32-inch Allen Wrench (included) - Velocity Adjustment
- Chronograph (provided for use at commercial paintball field) - Velocity Adjustment
- Barrel Blocker (included)
- CO_2 or HPA tank (purchase seperately)
- ASTM Compliant Paintball Goggles with Mask (purchase seperately)
- 68 Caliber Paintballs
- Paintball Hopper/Loader (purchase seperately)
- 9-Volt Alkaline Battery

REQUIRED ITEMS FOR MAINTENANCE

- 5/64-inch Allen Wrench (included) - Battery Change
- 7/64-inch Allen Wrench (included)- Clamping Feedneck
- 1/8-inch Allen Wrench (included) - Stock/Backplate, Trigger Adjustment, ASA, Grip, Breech and Circuit Board Screws
- 5/32-inch Allen Wrench (included) - Velocity Adjustment
- 5/16-inch Allen Wrench (included) - Bolt Sleeve
- Snap-Ring Pliers (purchase seperately) - Regulator Disassembly (Advanced Maintenance)
- GR33SE™ (purchase seperately) - Paintball Marker Lubricant

MAINTENANCE

The G-1™ has been designed with simplicity in mind so that you can concentrate on your game instead of your marker. It has only one major moving part in its valve system, with a minimal number of seals. This DOES NOT mean that you should neglect your G-1™. If you take care of it off the field, your G-1™ will take care of you on the field. For best performance, clean and grease your G-1™ frequently. Many players disassemble and clean their G-1™ after every day of use. While this may seem a bit extreme, being vigilant in the upkeep of your G-1™ will extend its useful life considerably, and catch any problems when there is time to correct them before the next game. Playing in the rain will not damage your G-1™. In fact, the G-1™. has been tested and proven to function underwater. However, long-term exposure to moisture can cause rust damage to some of the G-1™'s screws, so if your G-1™ should become waterlogged, remove the barrel, stock and rubber grips and allow it to dry out, then follow the disassembly instructions for full cleaning. Clean out mud and paint with a damp cloth and alcohol. Lubricate the G-1™ ONLY with GR33SE™ pneumatic grease. Use fresh, high quality paintballs for best performance.

BARREL BLOCKER/HOPPER

PLEASE READ CAREFULLY

BARREL BLOCKER

The Barrel Blocking Device is a critical piece of paintball safety equipment - nearly as important as paintball goggles. The Barrel Blocker serves to protect against accidental discharge of a paintball by catching it before it can cause harm. A Barrel Blocker is included with the G-1™ and must be used every time it is handled in an area where people or property are not properly protected by paintball goggles or paintball field netting. To use the Barrel Blocker simply slip it over the end of the barrel and stretch its cord back over the back of the G-1™ or the rearmost part over which it can be securely looped. Use the strap's adjuster to cinch the strap tight, so that the Barrel Blocker can provide protection against accidental discharge of a paintball.

⚠WARNING

The Barrel Blocker should only be removed when the G-1™ is on a "live" paintball field and all persons involved are wearing proper paintball protection.

HOPPER

The G-1™ is a high performance tournament grade paintball marker. Its low-force bolt will often prevent paintballs from being chopped if the hopper is not able to load paintballs as fast as the G-1™ is being fired. If you want to realize the G-1™'s maximum firepower potential, especially if it is upgraded with a circuit board that utilizes an anti-chop eye for higher rates of fire, you will need to use a high performance loader. High performance loaders, especially those which provide force-feeding, will yield the best results with the G-1™.

The G-1™ is equipped with a clamping feedneck that allows it to adapt to the small size differences in hopper neck sizes, yet lock or release quickly. Using a 7/64-inch allen wrench, loosen the clamping feedneck before installing a hopper. If the hopper is a tight fit, a flat bladed screwdriver may be used to further spread the gap in the feedneck clamp, provided the clamp screw has been loosened enough.

The G-1™ may also be configured so that the hopper is located to the right, left, or directly above the center of the marker. See the Advanced Maintenance Section of this manual for instructions to change or reposition the feedneck.

FIG. 1 → BARREL BLOCKER IN USE

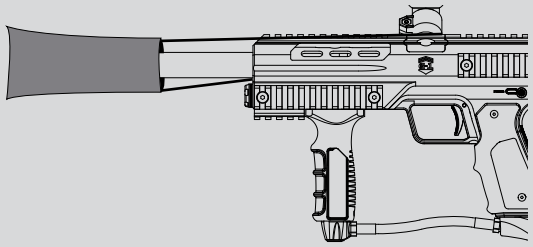
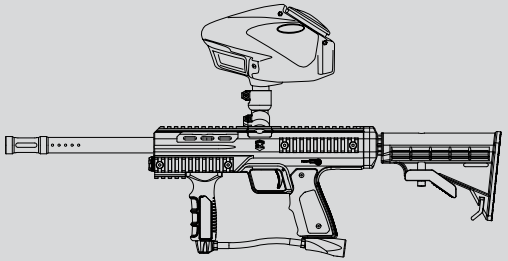


FIG. 2 → USE HIGH PERFORMANCE LOADER



GASES

GASES

The G-1™ is a low-pressure paintgun. It operates at approximately 160 psi, which means it is capable of functioning well with either high-pressure compressed air or CO_2 as a power source. Proper set up of your gas system will help you obtain the best possible performance from your G-1™.

Whether using compressed air or CO_2 it is important that the G-1™ is not exposed to sudden "pops" of pressure. Always turn-on or screw-in a compressed air system or CO_2 slowly, so that the valve opens slowly, and the gas pressure inside the marker is raised smoothly. Be gentle to the internals of your G-1™ and they will reward you with a long service life.

High Pressure Air systems (HPA) are the preferred power source used in paintball as they are unaffected by temperature fluctuations and do not have the potential for liquid problems. HPA systems consist of a tank and a regulator, and are typically rated to store air or nitrogen at pressures of 3,000 or 4,500 psi. Although pure nitrogen is almost never used in paintball, many players call compressed air "nitro" as air is made up of more than 70% nitrogen, allowing the two gasses to be used interchangeably in paintball equipment.

The G-1™ is configured for use with screw-in style HPA systems. Although HPA systems pre-set to deliver approximatly 400 psi (low output) will work with the G-1™, 800 psi (high output) systems are preferred, to reduce the risk of gas starvation under rapid fire.

⚠WARNING

Never use oil or any petroleum based cleaner or lubricant in a compressed air regulator or tank. Exposure to pressurized air increases oil's flammability and can cause a serious safety hazard. Only use manufacturer recommended lubricants with compressed air systems, and follow the manufacturer's maintenance and operation instructions explicitly.

If you are using your G-1™ with an adjustable output compressed air system, it should be set to deliver about 800 psi. The G-1™'s vertical regulator can accommodate a wide range of input pressures, so exact adjustment of the air system is not critical.

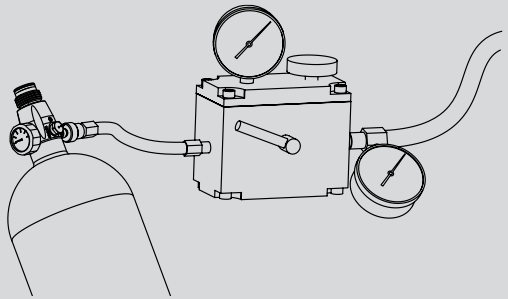
⚠NOTICE

Due to shipping restrictions, CO_2 and HPA tanks are sold empty. They must be filled before they can be used. Most paintball shops and fields are equipped to fill HPA tanks. Paintball shops, fields, many hardware stores and sporting goods stores will have the equipment and trained personnel to fill paintball CO_2 tanks.

⚠WARNING

NEVER PUT OIL IN A COMPRESSED AIR REGULATOR OR TANK - ONLY APPLY MANUFACTURER RECOMMENDED LUBRICANTS.

FIG. 3 → HPA TANK BEING FILLED



⚠NOTICE

The G-1™ is factory configured for use with CO_2. Its dwell setting must be changed to obtain optimum performance with HPA. See the Firing Modes / Dwell section of this manual to learn how.

⚠NOTICE

Although the G-1™ can be powered by compressed air, typical home, garage or industrial air compressors can not provide the high pressures required to fill a paintball HPA tank. Paintball HPA systems can be refilled by paintball fields and stores which use higher pressure compressors similar to those used in the SCUBA and firefighting industries.

GASES

PLEASE READ CAREFULLY

USING CO_2

CO_2 is usually not recommended for electronic paintball markers. This is not the case, however with the G-1™. As long as it is set up properly, the G-1™ can function extremely well with CO_2 as a power source. In fact, because of its extremely low operating pressure, the G-1™ has been shown to operate on CO_2 continuously under heavy fire conditions where older design blowback mechanical markers fail. The use of CO_2 will not damage the seals in the G-1™, freeze or cause damage to its circuit board.

The important thing to remember if using CO_2 is that best performance can be achieved when only gasseous CO_2 is fed to the G-1™, and liquid CO_2 remains in the tank.

Although the relief valve integrated into the G-1™'s vertical regulator provides the marker with protection from pressure spikes, those pressure fluctuations can cause poor performance, and temporary blockage of the G-1™'s solenoid valve.

The bottom-line ASA fitting on the G-1™ places the CO_2 tank at an angle. When the marker is held in typical firing positions, gravity will keep the liquid CO_2 away from the tank valve, preventing it from feeding into the marker.

Alternative CO_2 arrangements include placing the CO_2 tank vertically in a pack, and using a paintball CO_2 remote hose to feed CO_2 to the G-1™. This arrangement not only prevents liquid CO_2 from entering the marker, but also makes the marker assembly lighter weight.

Anti-siphon CO_2 tanks contain a J-shaped tube that draws gaseous CO_2 from the top of the tank when it is in a horizontal position. Anti-siphon tubes must be professionally installed, to ensure that critical safety checks are performed during valve installation. If using an anti-siphon tank, the G-1™'s stock bottom-line ASA fitting should be replaced with an ASA that will place the tank completely horizontal. Anti-siphon CO_2 tanks should not be used with remote hoses.

BOTTOM-LINE ASA

The bottom-line ASA fitting on the G-1™ can be removed by unscrewing the two industry-standard 10-32 mount screws holding it to the grip frame. If replacing the ASA, be sure the model chosen takes into account the type of gas system being used (horizontal for anti-siphon CO_2 tanks, angled for standard tanks).

FIG. 4 → ANGLED CO_2 [CUTAWAY VIEW]

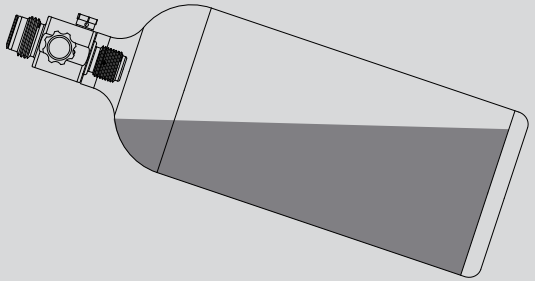
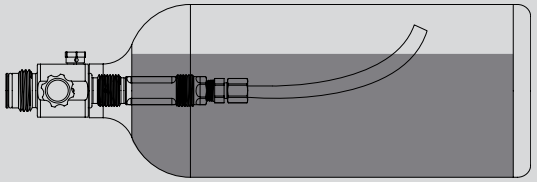


FIG. 5 → CO_2 WITH ANTI-SIPHON [CUTAWAY VIEW]



IMPORTANT

CO_2 may also be configured with a remote hose with-out Anti-Siphon. [Not Shown]

BATTERY

WARNING

OVER TIME BATTERIES MAY LEAK. ALWAYS REMOVE THE BATTERY FROM THE G-1™ WHEN STORING FOR FOR MORE THAN A MONTH.

BATTERY

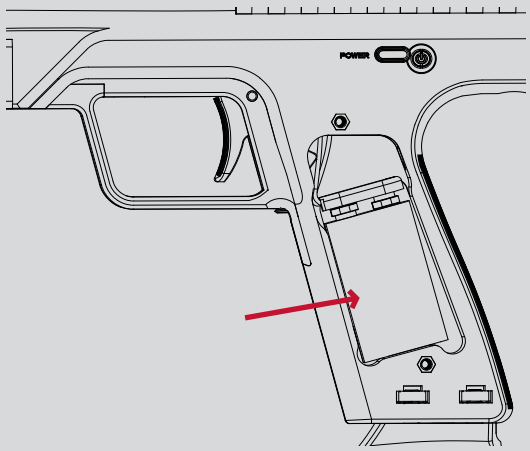
The G-1™ is powered by a standard 9-volt alkaline battery. Lower cost “heavy duty” batteries will not consistently deliver the amperage needed to operate the G-1™. Erratic performance, especially drops in velocity or skipped shots during rapid fire can result from a battery that is not delivering full power.

The G-1™ is also compatible with 9-volt rechargeable batteries. Because specifications of batteries vary widely from brand to brand, use of any rechargeable battery will require testing to determine if it can power the G-1™ reliably. Some NiCD “9v” rechargable batteries actually operate at 7.2 volts. These types of batteries will not work well with the G-1™.

Any time the G-1™ exhibits erratic performance, drops velocity or skips shots while rapid firing, does not shoot or does not turn on, the first step in troubleshooting should always be to replace the battery with a brand-new, name-brand alkaline battery.

To replace the G-1™ battery, use a 5/64-inch allen wrench to remove the two screws from the left side of the rubber grip, then open the grip. Remove the old battery, taking care not to bend, kink or strain its wires. Unsnap the battery from its connector by pulling on the connector, not the wires. Snap in a fresh battery, then place that in the grip frame, tucking the wires into place, before closing and re-securing the grip.

FIG. 6 → ALKALINE BATTERY



PAINT/VELOCITY

WARNING

NEVER ADJUST THE G-1™ TO FIRE ABOVE 300 FEET PER SECOND, AS SERIOUS INJURY MAY RESULT.

PAINT

Even the best quality paintballs will vary in size from one batch to the next and as weather conditions change. While your G-1™ will work well even with a poor paint to barrel fit, optimal performance will be achieved with a proper fit.

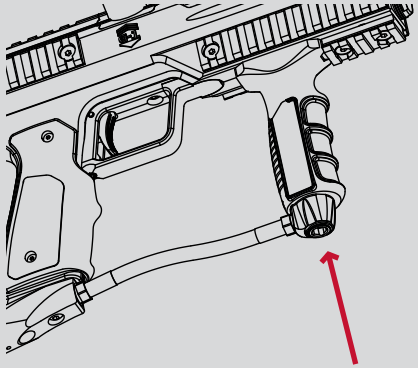
The ideal fit between the paintball and the barrel is when the ball is inserted in the bore (the end that screws into the G-1™) and does not slip or roll through to the muzzle (the business end) on its own. The ball should sit in place, even when the barrel is pointed straight down. If the paintball can roll out on its own, the fit is too loose. The ball should be able to be expelled from the barrel by blowing it out, like a blowgun, using a minimal amount of breath. If the ball is difficult to blow through, the fit is too tight, which can lead to ball breakage.

VELOCITY

The velocity, or speed at which a paintball is fired from the G-1™, must be measured and adjusted to below the paintball field's velocity limit immediately before each day of play (for player safety). If CO_2 is used, velocity should be checked and adjusted multiple times during the day. In an area where it is safe to fire paintballs, while wearing ASTM compliant eye and face protection for paintball, fire three or four shots over a chronograph to measure the velocity at which the paint is being fired.

If velocity adjustment is necessary, Use a 5/32-inch allen wrench on the adjuster in the bottom of the vertical regulator, turn clockwise to increase the velocity/pressure, and counter-clockwise to decrease. Take three or four shots after every adjustment to allow the gas pressure inside the G-1™ to stabilize. Adjust until the marker is firing consistently within the limits for the field where you are playing. For safety reasons, never adjust the G-1™ to fire at greater than 300 feet per second (91.44 meters per second).

FIG. 7 → VELOCITY ADJUSTMENT



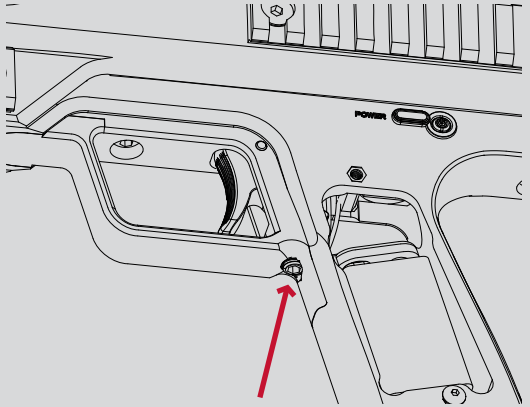
TRIGGER ADJUSTMENT

The length of the G-1™ trigger pull is adjustable with a 1/8-inch allen wrench. The trigger adjustment screw is located at the bottom of the trigger guard where it meets the grip frame. It may be helpful to remove the marker's rubber grips to provide easier access when making adjustments.

Turning this screw clockwise decreases how far forward the trigger can move, while turning counterclockwise increases it. If the trigger is not adjusted to swing far enough forward, the microswitch inside the G-1™ will not be able to reset, resulting in the marker not firing.

Always check the trigger after making adjustments. Be sure that the trigger switch clicks when the trigger is pulled, and again when it is released. Also make sure that when the trigger is pulled it is being stopped by the rear trigger limit screw, not by pressing up against the microswitch inside the marker.

FIG. 8 → TRIGGER ADJUSTMENT



FLASHLIGHT MOUNTING

In addition to accessories that can be mounted on its Picatiny tactical rails, the G-1™ features an integrated flashlight mount. Using this mount, a compatible 2-Cell AA Mini Maglite® flashlight can be used to perform the same night-game functions as a more expensive tactical flashlight.

Make sure the G-1™ is unloaded and use a 1/8-inch allen wrench to remove the two screws holding the lower front tactical rail in place.

Lift the rail, exposing the stainless steel flashlight pin. Remove the pin with a 5/64-inch allen wrench, then rotate the foregrip to expose the rear flashlight pin hole, or unmount the ASA (see air system adapter section) and completely unscrew the vertical foregrip and regulator as shown.

The flashlight mount plug may then be wiggled out of its position and stored for later use.

Slide the flashlight into the flashlight mount, making sure that the lanyard attachment hole at its rear is aligned with the rear flashlight pin hole.

Install the flashlight pin in the rear flashlight pin hole, then reinstall or rotate the foregrip back into position, reinstall the ASA if it was removed, and reinstall the lower accessory rail.

FIG. 9 → FLASHLIGHT PLUG

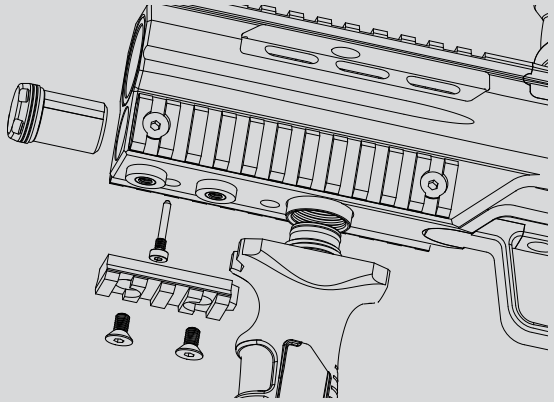
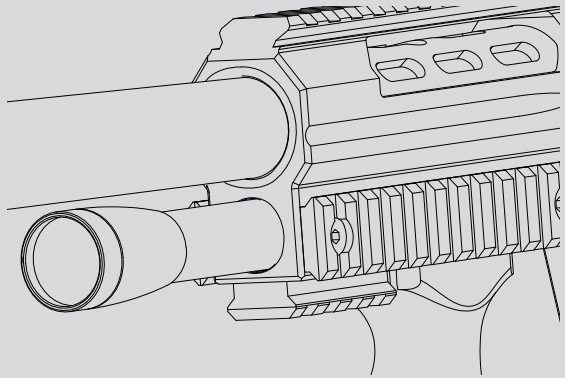


FIG. 10 → FLASHLIGHT INSTALLATION



Maglite® is a trademark of Mag Instruments, Inc., which is not affiliated with GOGPaintball, SA.

FIRING MODES / DWELL

NOTICE

G-1™ MARKERS MANUFACTURED FOR THE UNITED KINGDOM ARE LIMITED TO LOCKED SEMI-AUTOMATIC AND BILLY-BALL MODES IN ACCORDANCE WITH UK LAW.

CHANGING FIRING MODES

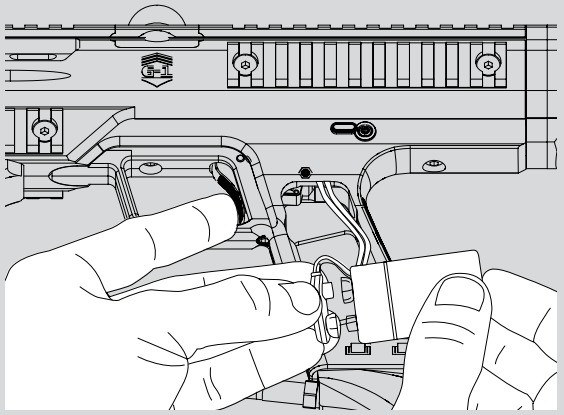
Changing between firing modes is simple. Use a 5/64-inch allen wrench to open the left side grip panel. Remove and unplug the battery, taking care to pull the battery clip away from the battery, rather than pulling on the battery wires. Hold down the trigger while re-attaching the battery, and the marker's microprocessor will switch to a new mode, indicating the change by blinking the power LED. The number of times the LED blinks will indicate the newly selected mode. Replace the battery in the grip frame, carefully tucking in the wires, and re-secure the left side grip with a 5/64-inch allen wrench.

- **Select Fire** (Single Flash) - In this mode, the player can choose between semi-automatic (one shot per trigger pull,) 3-round burst (3 shots in a row fired while the trigger is pulled and held) or full-automatic (fires repeatedly when the trigger is pulled and held.) Tapping the power button while the marker is live cycles through the firing modes, each indicated by the rate at which the power LED blinks.
- **PSP** (Double Flash) - The marker will fire one shot per trigger pull until the trigger is pulled 3 or more times rapidly in quick succession, at which point it will fire additional shots per trigger pull up to a maximum of 10 shots per second. If the trigger is inactive for a brief time, the marker will revert to the beginning of the sequence, firing one shot per trigger pull, in accordance with PSP tournament rules adopted in 2009.
- **Locked Semi-Automatic** (Triple Flash) - The marker will fire one shot per trigger pull, and cannot be changed without using tools to open the grip. This mode complies with tournaments, fields and scenario games that limit players to semi-automatic mode only.
- **Billy-Ball** (Quadruple Flash) - This is a limited rate semi-automatic mode, firing one shot per trigger pull, but only allowing players to fire once every two seconds. Billy-Ball games games focus on movement and strategy over heavy rate of fire, reducing paint costs.

DWELL

The G-1™'s dwell setting determines how long it opens its solenoid valve to fire a shot. Because CO_2 expands differently than HPA, the optimal pulse length is different for each gas. The G-1™ is configured from the factory to use CO_2. If you intend to use HPA, you must change your dwell mode in order to achieve best gas efficiency and battery life. With the marker unloaded and de-gassed, remove and unplug the 9-volt alkaline battery. Plug the battery back in while holding the power button down. The G-1™ will indicate that it has changed to HPA mode by double-blinking the power button LED and turning off. Reinstall the battery and grip panel. If you switch back to CO_2 as a power source, repeat the procedure, and the CO_2 dwell mode will be signified by a single blink pattern on the LED.

FIG. 11 CHANGING MODES



UNLOADING/DE-GASSING

PLEASE READ CAREFULLY

At the end of each day's use and before performing maintenance work on your G-1™, it will need to be de-gassed, and all paint removed.

In an area where it is safe to shoot (the chronograph area at a paintball field) and while wearing paintball goggles, remove the hopper from the G-1™. By turning the G-1™ upside down, you can empty any extra paintballs from the feedneck into your hand. Turn the G-1™ on.

Dry-fire 2 or 3 shots in a safe direction to ensure that no paintballs remain in the G-1™.

Continue to dry fire the G-1™ in a safe direction while turning off or unscrewing the HPA system or CO_2 tank, until all of the gas pressure inside has been released. At this point the only sound you should hear when you pull the trigger is the click of the solenoid valve. Turn off the G-1™.

If using a CO_2 tank or screw in HPA system, unscrew it the rest of the way.

⚠WARNING

EVEN WITH NO CO_2 OR COMPRESSED AIR SYSTEM ATTACHED, THE G-1™ MAY STILL HAVE ENOUGH GAS PRESSURE STORED IN THE REGULATOR AND FIRE CHAMBER TO FIRE 2 OR MORE SHOTS. YOU MUST DEGAS YOUR G-1™ BEFORE PERFORMING ANY MAINTENANCE PROCEDURES.

⚠WARNING

ALWAYS WATCH COMPRESSED GAS CYLINDERS TO MAKE SURE THAT THE CYLINDER AND VALVE ARE UNSCREWING FROM THE ASA, AND THAT THE CYLINDER IS NOT UNSCREWING FROM ITS VALVE. IF THE CYLINDER DOES BEGIN TO SEPARATE FROM ITS VALVE, STOP IMMEDIATELY, AND SEEK PROFESSIONAL ASSISTANCE.

FIELD STRIPPING

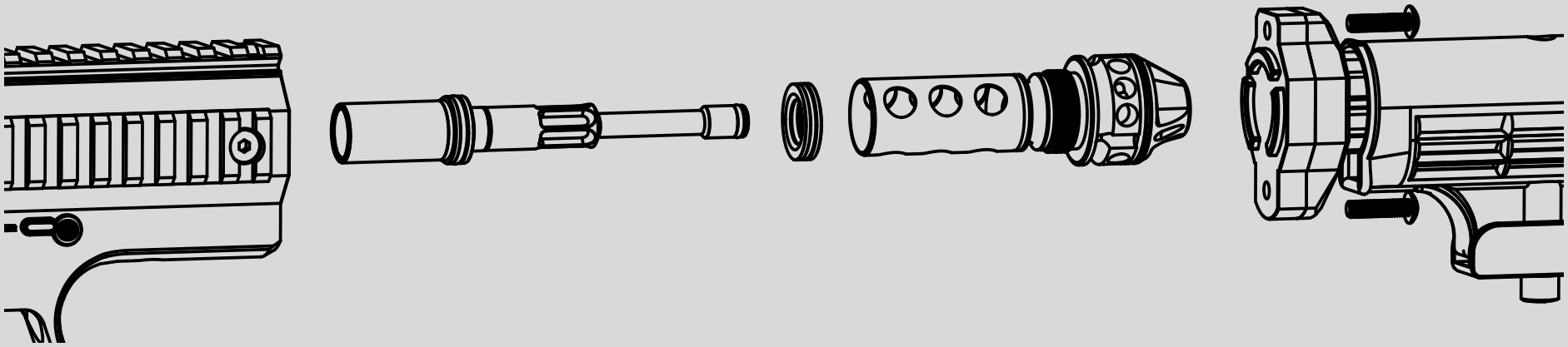
The valve system in the G-1™ has only one major moving part. Regular cleaning and lubrication is necessary to ensure accurate and consistent performance. The G-1™ should be field stripped, cleaned and lubricated any time it shows erratic performance, becomes contaminated with paint, dirt or other debris, or for general maintenance after 3 or 4 days of use.

Unload and de-gas the G-1™. Use a 1/8-inch allen wrench to remove the two stock mounting screws and remove the stock. Remove the barrel and use a 5/16-inch allen wrench to unscrew and remove the bolt sleeve from the back.

Using a soft, non-marring tool like a wooden chopstick or plastic toothbrush, push the bolt and bolt stop out the back of the G1™. Clean the interior of the receiver, the bolt sleeve, bolt and bolt stop with a clean cloth or paper towel. Inspect their o-rings for signs of damage such as cuts or rips, and replace if necessary. Lightly lubricate all o-rings with GR33SE™ paintgun grease. Use GR33SE™ sparingly, as over-lubrication can cause the G-1™ to operate inconsistently. Slide the bolt stop onto the bolt from the rear. Slide the rear of the bolt into the bolt sleeve. Hold this entire assembly vertically with the front of the bolt pointing upward, and insert it up into the back of the G-1™. Screw the bolt sleeve into the back of the G-1™ by hand, taking care not to cross-thread it into the receiver.

Use the long end of a 5/16-inch allen wrench to turn the bolt sleeve until it is snug. Reinstall the stock. As with the bolt sleeve, take care not to over-tighen these screws.

FIG. 12



ADVANVED MAINTENANCE

NOTE: Unload and degas the G-1™ before any cleaning or maintenance work.

The internal gas lines and electronic components of the G-1™ are well protected inside its body – however they are delicate and may be damaged by improper handling or re-installation. For this reason it is highly recommended that full disassembly of the G-1™ be performed by an airsmith with GOG Paintball™ factory training. Removal of internal hoses from their barbed fittings will stretch them to the point that they cannot be re-used without causing leaks.

Occasionally a more thorough cleaning of the G-1™ receiver is necessary to clean paint or debris that has worked deep into the breech, or to replace worn ball detents. Both are accessed through a complete disassembly of the receiver.

Unload and degas the G-1™, then field strip the valve system following the instructions in this manual. Remove the lower accessory rail as when installing a tactical flashlight.

Using a 1/8-inch allen wrench, remove the screws holding the ASA to the grip frame. Unscrew the vertical regulator from the receiver's vertical ASA. Take care not to lose the filter screen that is inside the vertical ASA.

Remove the rubber grip and battery, as when changing the battery. Use a 1/8-inch allen wrench to remove the front and rear grip frame screws. Carefully remove the grip frame from the receiver. Be aware that the clear power button fits loosely into its position in the side of the grip frame. Be careful not to drop or lose it. Watch to make sure the battery clip does not snag in the grip frame as the two parts are separated.

Reach the long end of a 1/8-inch allen wrench through the access hole in the top tactical rail, down into the head of the vertical ASA screw.

Unscrew the the two gas-through banjo bolts (indicated with arrows in Figure 15) using a 1/8-inch allen wrench. If the G-1™ has been upgraded with a circuit board featuring an anti-chop eye, unplug the wiring harness from the circuit board or anti-chop board (pull by the connector, not the wires) and lift the pneumatic control assembly off of the receiver.

FIG. 13 → GRIP FRAME REMOVAL

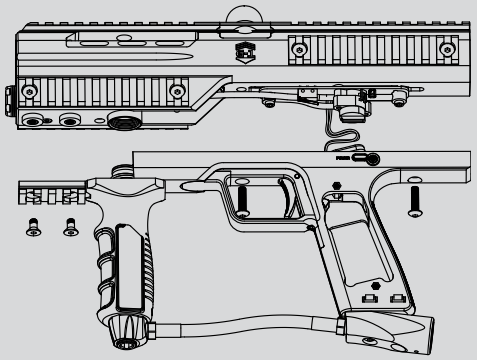


FIG.14 → BREECH SCREW REMOVAL

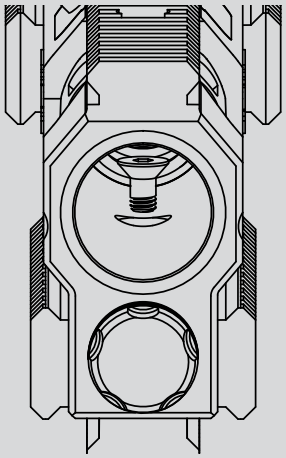
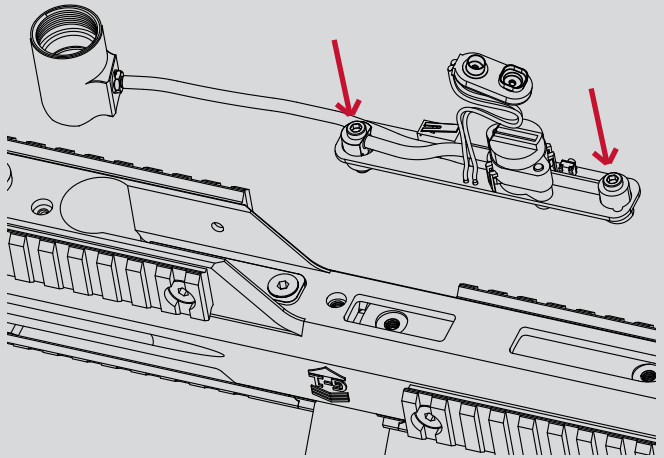


FIG. 15 → CIRCUIT BOARD REMOVAL



Remove the body block screw and body block, then slide the breech out the back of the receiver.

Both rubber ball detents should extend into the breech and show no rips or tears. If they must be replaced, they may be pried out with an o-ring pick, and pressed into place with a small allen wrench.

If the G-1™ has been upgraded with a circuit board featuring an anti-chop eye, holding the breech and receiver upside down will help the anti-chop circuit board remain seated while the parts are being reassembled.

When re-attaching the pneumatic control assembly to the receiver, take extreme care not to cross thread the fittings. Use the long end of the allen wrench to tighten the gas fittings and all screws, being careful to tighten them snug without over tightening.

⚠WARNING

Over-tightening or cross threading screws or fittings may result in permanent, nonrepairable damage to the breech.

Be sure to guide the battery clip down into the grip frame before re-joining the grip frame and receiver. Make sure the clear power button does not fall out of its place during reassembly.

Carefully tuck in all wires and hoses while rejoining the grip frame to the receiver.
If the grip frame does not fit snugly to the receiver, pull the grip frame back away and look for hoses, wire, or improperly placed parts blocking the fit.

FIG. 16 → BODY BLOCK REMOVAL

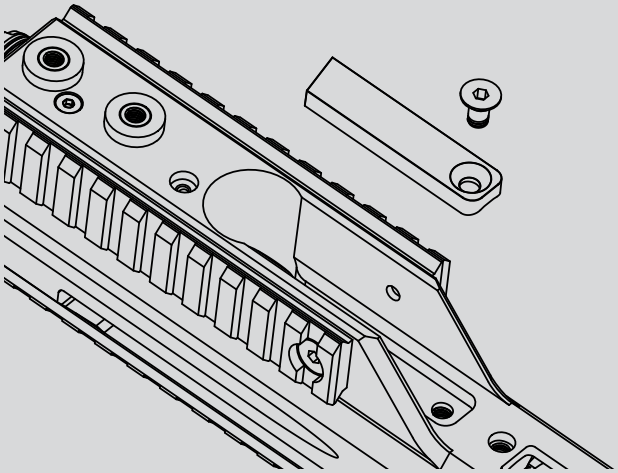
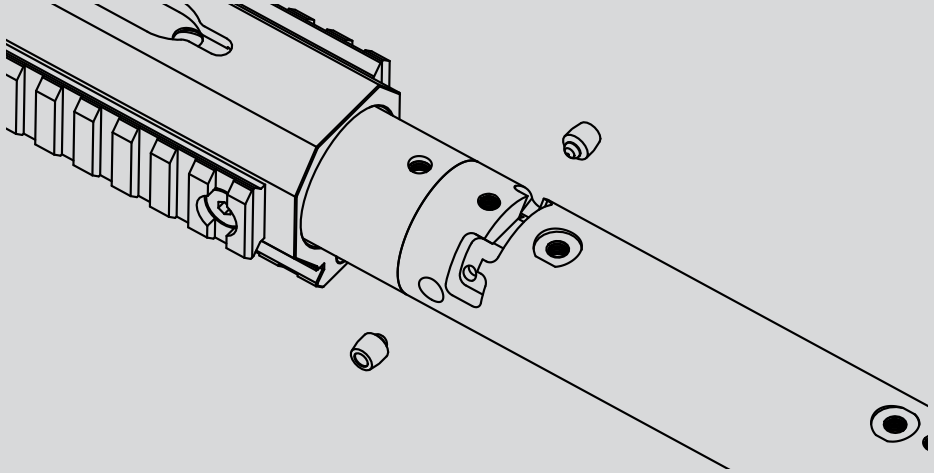


FIG. 17 BALL DETENT REMOVAL



FEEDNECK POSITION

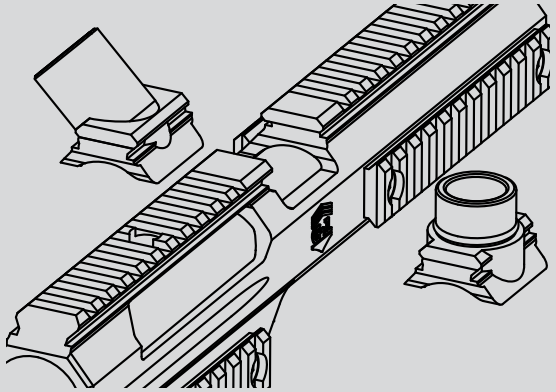
CHANGING HOPPER POSITION

The G-1™ is configured at the factory with an angled feed neck so that the upper tactical rail and any sights mounted on it have a clear view to the target. The angled feedneck and hopper can be configured to sit either to the left or right of center. Additionally, a vertical feedneck is included with the marker, allowing a centered hopper placement, and a straight feed path for the paintballs.

The optimal position for the hopper is a matter of player preference. Some right-handed players prefer to have the hopper on the right, so it obstructs less of their view. Most paintball rule sets stipulate that a paintball hitting and breaking on the player or anything they are carrying (including marker and hopper) takes them out of the game. For this reason some right handed players prefer a hopper-left arrangement. In this configuration the hopper is still protected by hard cover when the player leans out of a bunker or around a tree to the right, making them a smaller target. For left-handed players the benefits of these two hopper positions are reversed. Vertical feednecks became popular when most hoppers still relied on gravity, and their unobstructed vertical feed path provided more consistent feeding of painbtballs. Center placement of the hopper also keeps the marker balanced and is a good compromise of exposed target area for players who pop out to both the left and right side of cover.

To change the side from which the G-1™ feeds, the marker must be disassembled and the breech removed from the receiver, following the directions for advanced maintenance. The breech acts as a locking mechanism securing the feedneck into the receiver. Once the breech is removed, the feedneck may be slid out of the receiver to one side, reversed and slid back into place or replaced with the vertical feedneck. The fit of the feedneck to the receiver is quite snug, so it may need to be wiggled slowly and carefully in and out of place. The marker may then be reassembled, making sure the feedneck is properly centered, allowing the breech to slide into the receiver.

FIG.18 FEEDNECK REMOVAL



VERTICAL REGULATOR

WARNING

SERVICE AND ADJUSTMENT TO THE REGULATOR WILL CAUSE CHANGES IN VELOCITY. ALWAYS RE-CHRONOGRAPH THE MARKER FOLLOWING THE PROCEDURE IN THIS MANUAL AFTER WORKING WITH THE REGULATOR.

REGULATOR SERVICE

Although explained here, regulator service should only be performed by a GOG Paintball™ trained airsmith.

With the marker unloaded and de-gassed, remove the lower tactical rail as when installing a flashlight (see flashlight section of this manual). Unscrew the regulator from the marker and remove the grip frame following the instructions in this manual. Take care not to lose the filter screen that sits inside the vertical regulator's ASA connection. Locate the regulator cover lock screw at the bottom rear of the regulator cover and loosen it with a 3/32-inch allen wrench, then slide the regulator out of its cover.

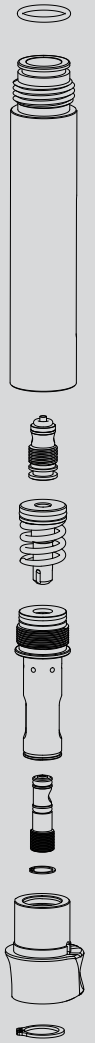
Using a pair of snap-ring pliers, remove the snap-ring from the bottom of the regulator and slide the regulator off the swivel. This is the preferred way to separate the regulator from the hose and bottomline ASA because it does not disturb the sealed hose fittings and is not likely to cause a leak.

Using a 7/16 open end or adjustable wrench, engange the wrench flats in the sides of the spring platform and remove it from the bottom of the regulator body. The regulator spring will now be free to fall out into your hand. The brass regulator piston may be removed by tapping the regulator body against a table top or solid, but soft surface such as a block of wood.

At this level of disassembly, the seal in the end of the piston and the regulator body may be inspected, cleaned with a soft cloth or cotton swab, and replaced if necessary. If the regulator seal shows signs of damage, it may be removed and flipped over so that its back side is used instead. If both sides of the seal are damaged, it must be replaced. Lightly lubricate all o-rings with GR33SE™ for reassembly.

Do not lubricate the regulator seal at the end of the piston.

FIG. 19 REGULATOR DISASSEMBLY



VERTICAL REGULATOR

[CONTINUED]

REGULATOR SERVICE, CONTINUED

The relief valve assembly should only be removed if it is constantly leaking. Occasional venting, especially if using CO2, is normal and does not indicate a leak. The relief valve assembly may be removed with a 9/64-inch allen wrench.

The velocity adjuster is located inside the lower end of the spring platform and similarly should only be removed if shown to be the source of a leak or clog. First the internal c-clip ring must be removed from inside the spring platform. This must be done with a pair of narrow snap-ring pliers. Some airsmiths have used bench grinders to re-shape standard snap-ring pliers for this task. The adjuster is equipped with left-hand threads and will need to be turned clockwise for removal. If regulator blockage is suspected, be sure to inspect, and if necessary, replace the inlet filter in the side of the velocity adjuster.

The vertical regulator is reassembled in the reverse order of disassembly. The piston slides into the regulator body wide end first, followed by the regulator spring. The spring platform should be tightened for a snug fit. Do not over-tighten. Re-attach the regulator swivel to the bottom end of the regulator and secure it in place with its snap-ring. Reinstall the assembled regulator into the marker. Re-adjust velocity after servicing the regulator.

NOTICE

THE RELIEF VALVE IN THE VERTICAL REGULATOR PROVIDES PROTECTION AGAINST PRESSURE SPIKES CAUSED BY SEAL FAILURE OR LIQUID CO2. REPLACING THE VERTICAL REGULATOR WITH ANY OTHER BRAND OR MODEL WILL BY-PASS AN IMPORTANT SAFETY FEATURE CREATING A RISK OF EQUIPMENT FAILURE OR INJURY AND INVALIDATING THE GOG PAINTBALL™ WARRANTY.

TROUBLESHOOTING

IMPORTANT

MARKER IS LEAKING INTERNALLY

• Liquid CO_2 may cause temporary venting from relief valve or solenoid valve. This is normal, and does not require repair. If CO_2 is venting frequently, make sure the marker is properly configured to prevent feeding of liquid CO_2.
• Pneumatic hoses may be loose, damaged or not fully connected. Replace hoses with genuine GOG Paintball™ hoses only.
• Hose has been disconnected and re-attached. Replace with a new GOG Paintball™ internal hose. Removing a hose streches it so that it cannot be re-used without leaking.

MARKER IS LEAKING DOWN THE BARREL

• One or more of the bolt or bolt stop o-rings are damaged or dirty. Inspect and replace if necessary, making sure to clean and lubricate the parts following the instructions in this manual.

MARKER IS LEAKING FROM BOTTOMLINE ASA

• Unload and de-gas the marker. Inspect the CO_2 or HPA tank o-ring. Clean, lightly lubricate with GR33SE™ and if necessary replace.

MARKER IS OCCASIONALLY LEAKING FROM THE VERTICAL REGULATOR

• Gas may occasionally vent near the top of the vertical regulator, especially when using CO_2. This is a normal function of the relief valve protecting the marker, and does not indicate a problem. If CO_2 is venting frequently, make sure the marker is properly configured to prevent feeding of liquid CO_2.

MARKER EXHIBITS FIRST SHOT DROP-OFF (FSDO)

• FSDO is a low velocity, or non-firing first shot, followed by normal shooting and is often caused by debris in the bolt or a poorly lubricated bolt. Clean the bolt, breech, bolt stop and bolt sleeve, and lubricate them with GR33SE™ as instructed in the Field Stripping section of this manual.

• FSDO can also be caused using the CO_2 dwell setting with compressed air. Follow the dwell selection instructions in this manual and ensure that the correct dwell setting has been set for the type of gas being used.

MARKER EXHIBITS INCONSISTENT VELOCITY OR DROPS OFF SIGNIFICANTLY DURING RAPID FIRING

• Check paint quality. Your marker is optimized for use with fresh, high-quality paintballs. Paintballs of inconsistent quality, or paintballs that have been exposed to humidity or temperature extremes may vary in size or roundness causing inconsistent operation.

• Gas could be low. Fill gas source and make sure gas supply is turned on.

• Battery may be low. This will be most noticeable with velocity dropping and then entire shots not firing during rapid fire. Replace battery with a new name brand alkaline battery.

• Regulator may be contaminated or damaged. Follow the instructions in this manual or see a GOG Paintball™ technician for service.

• Liquid CO_2 may be entering the regulator – see the gasses section of this manual for guidance in proper CO_2 set-up.

TROUBLESHOOTING

MARKER WILL TURN ON BUT WILL NOT FIRE

- Battery may be low or dead – replace with fresh name brand alkaline battery.
- The trigger adjustment screw may be set in too far, preventing the trigger from resetting. See the trigger adjustment section of this manual for guidance.
- Trigger switch may be damaged. Contact your dealer or GOG Paintball™ technical support.
- Regulator output pressure may be too high. Adjust the velocity to its lowest limit, then follow the velocity adjustment procedure in this manual.
- Liquid CO_2 may be entering the valve – see the gasses section of this manual for guidance in proper CO_2 set-up.

MARKER IS BREAKING PAINT

- Use only fresh, high-quality paintballs. Poor quality paint, or paint damaged by humidity or temperature extremes during shipping or storage, will nor perform well.
- Ball detents may be worn or damaged. Inspect, and if necessary, replace following the disassembly instructions in this manual.
- If the marker is equipped with an upgraded circuit board with anti-chop eye, the anti-chop function may be turned off. Turn anti-chop on, following the upgrade circuit board's instructions.

IMPORTANT

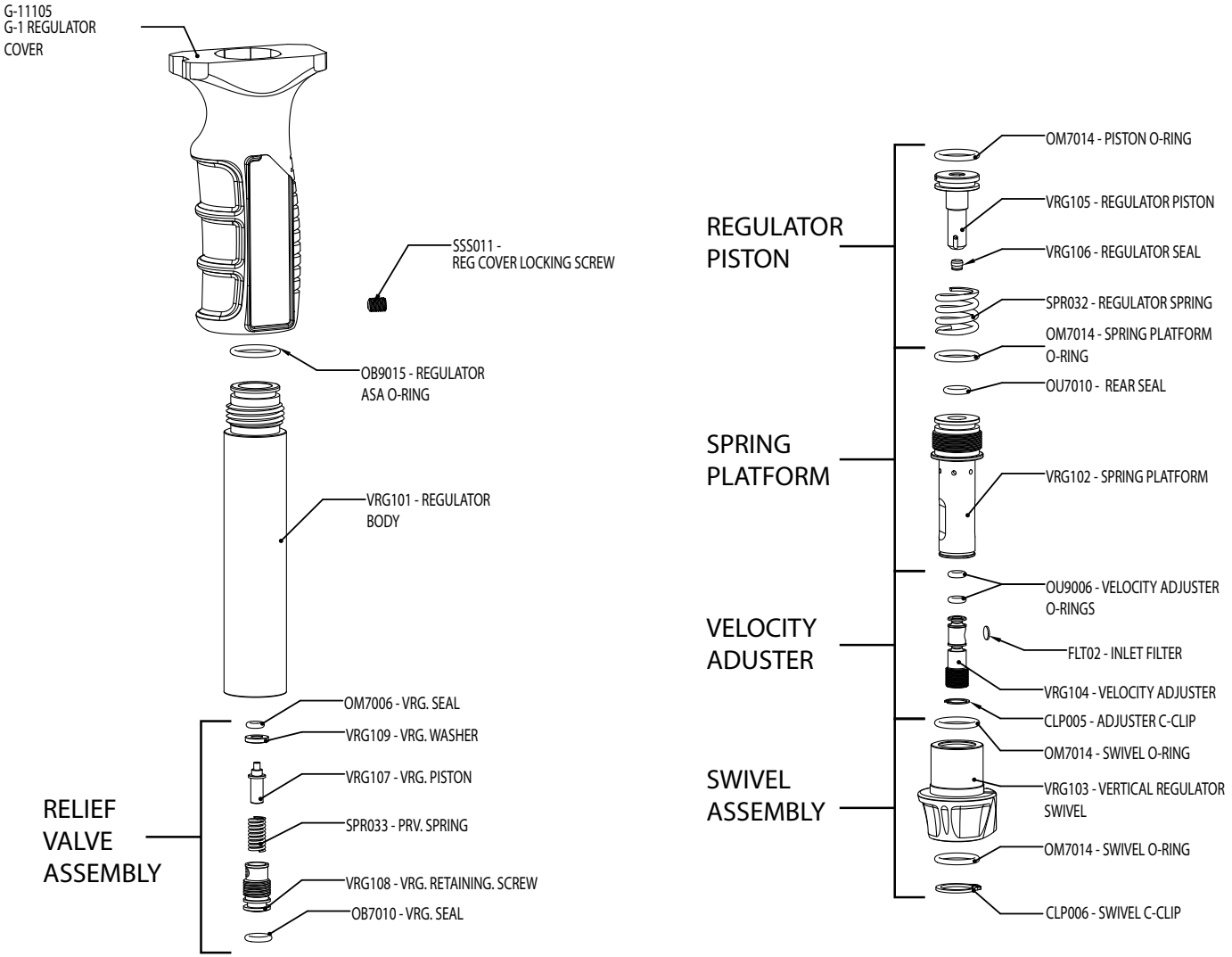
TECH SUPPORT

Our Technical Support Department can provide assistance via telephone. See our web site for phone number and tech support hours. Additional support and downloadable product manuals are available through our website at GOGPaintball.com

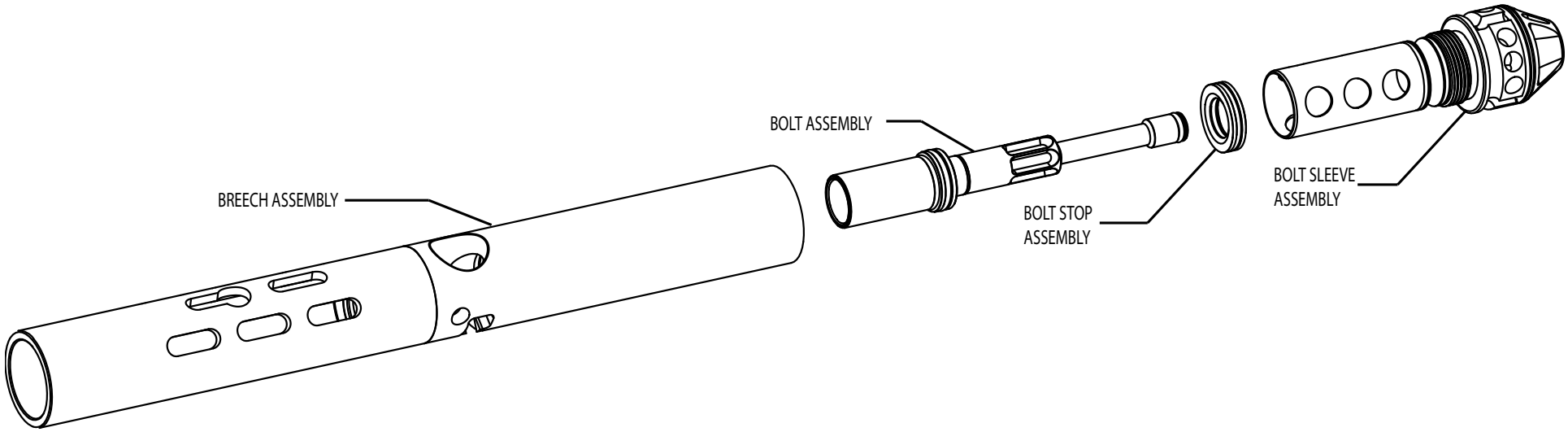
WARRANTY

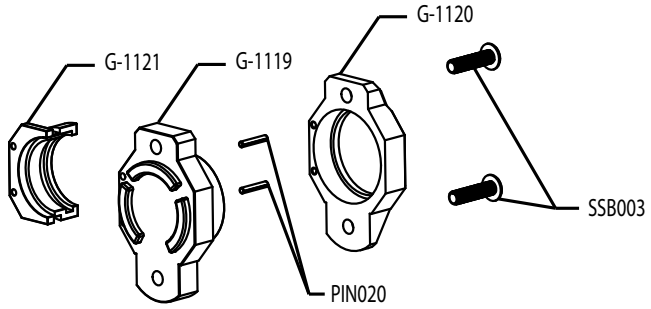
GOG Paintball SA warrants for (1) year to initial retail purchaser that the paintball marker and regulator are free from defects in materials and workmanship. Disposable parts (batteries, o-rings, springs, seals, etc.) are not warranted. The valve assembly, solenoid and electronics are warranted for 6 months. This warranty does not cover surface damages (scratches and nicks), misuse, improper disassembly and re-assembly, attempts made to drill holes or remove metal from the external surfaces which could degrade performance and reduce pressure safety factors of the marker. Do not make changes to the basic marker parts without written approval. The only authorized lubricant for the marker is DOW 33 lubricant. Use of any other lubricant could result in voiding your warranty. Paintball markers are non-refundable. This warranty is limited to the repair or replacement of defective parts with the customer to pay shipping costs. This warranty is effective only if the customer registers the product online @ gogpaintball.com within 30 days of the purchasing the marker. The warranty is non-transferrable. Do not attempt to alter the trigger assembly in any way, as this will void your GOG warranty. Trigger alteration of any kind may result in serious injury.

PARTS DIAGRAMS

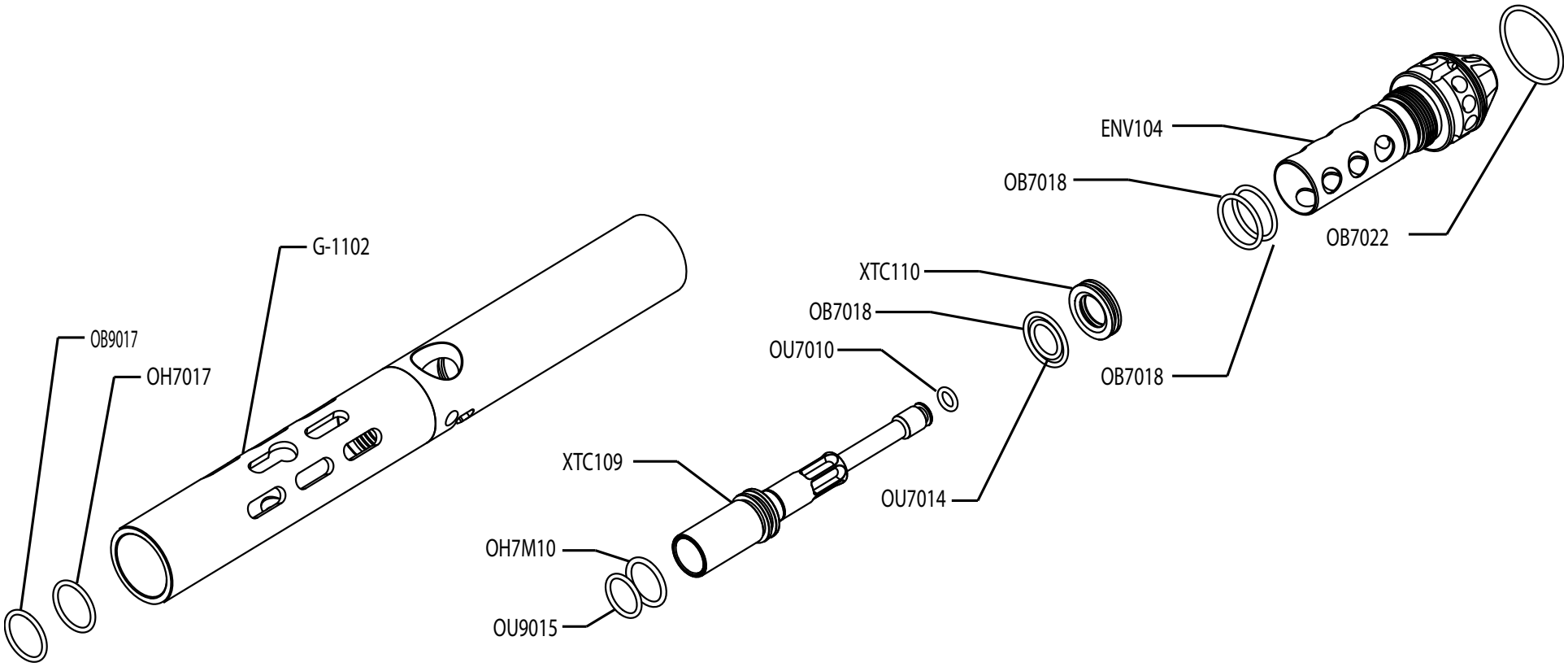


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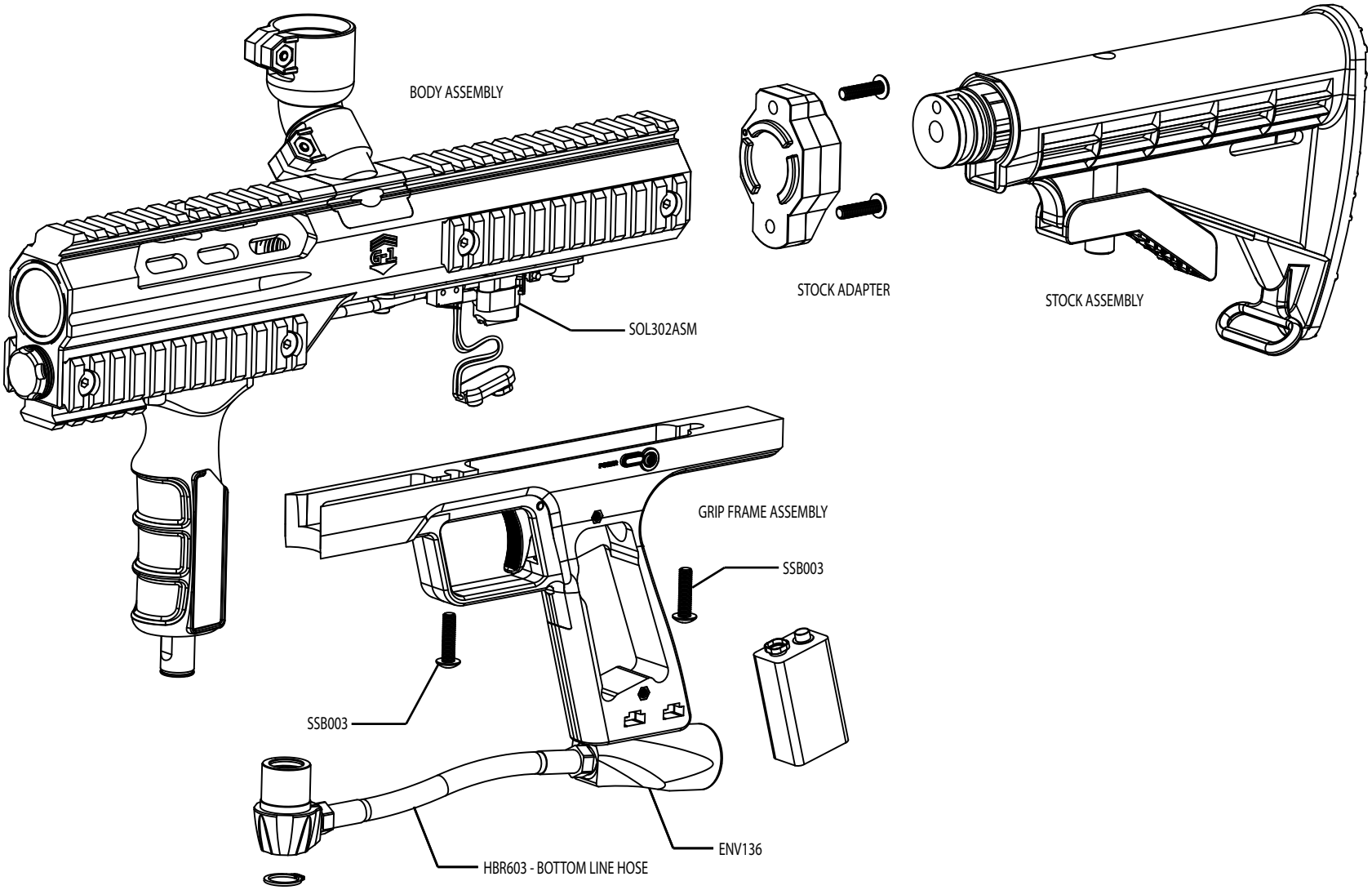




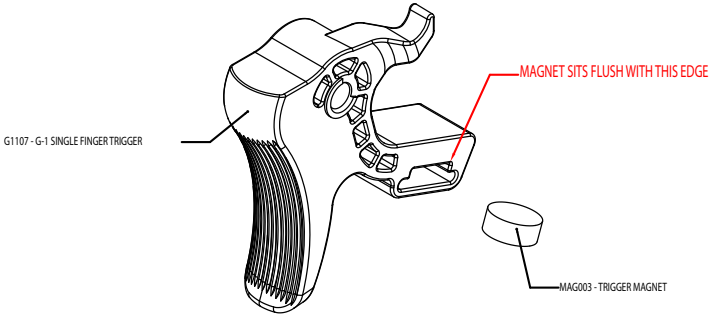
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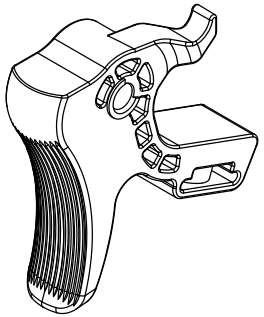


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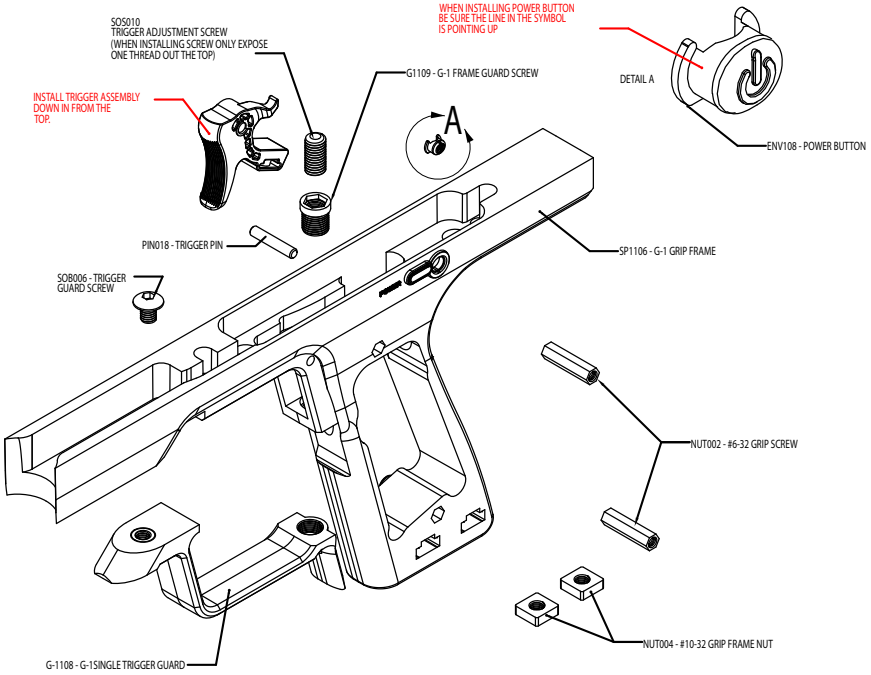


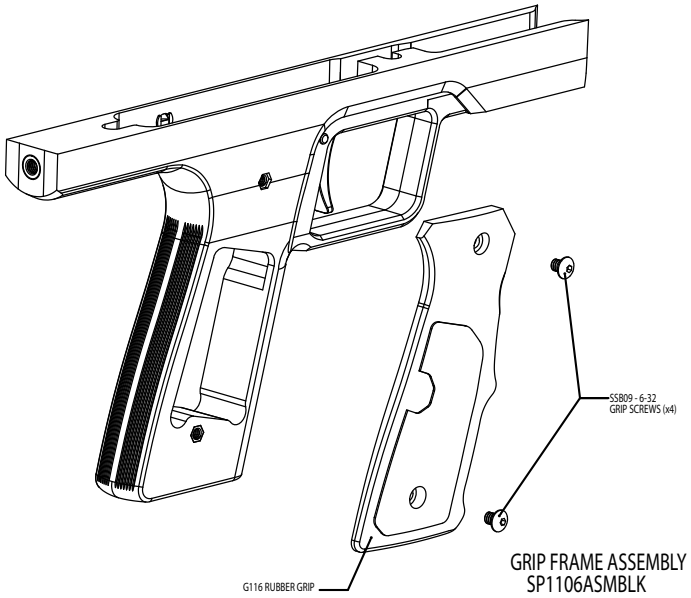
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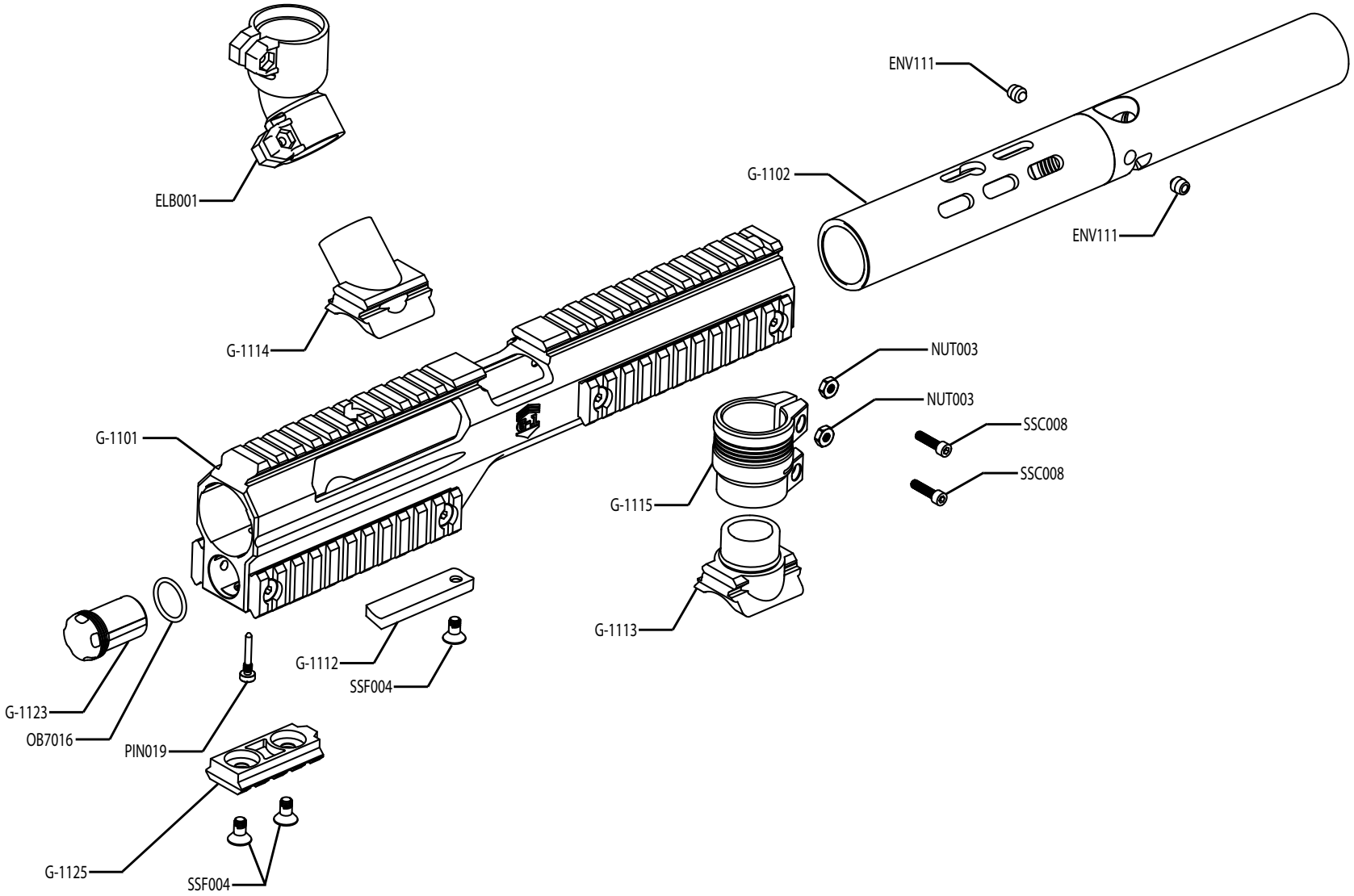
G-1 TRIGGER ASSEMBLY
SP1107ASMBLK





GRIP FRAME ASSEMBLY
SP1106ASMBLK

PARTS DIAGRAMS



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