



Synergy™ Owners Manual

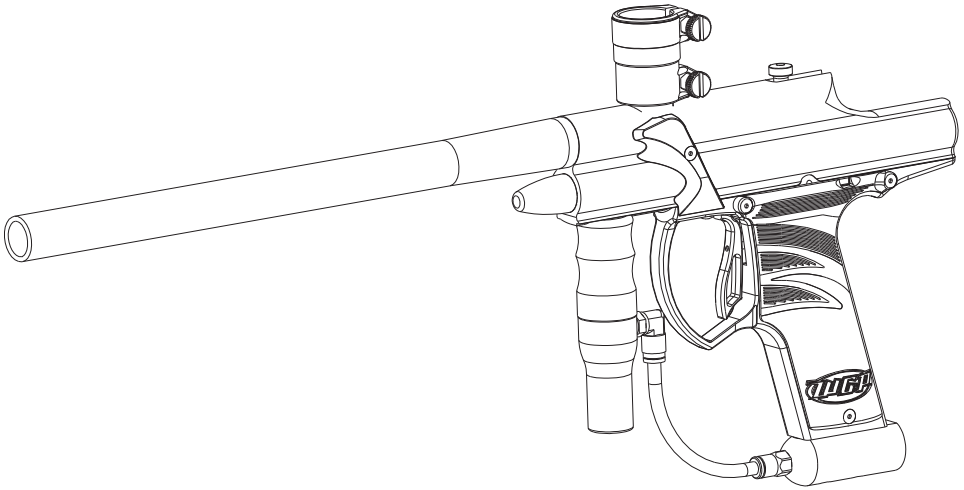


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⚠ WARNING: THIS IS NOT A TOY. MISUSE MAY CAUSE SERIOUS INJURY OR DEATH. EYE PROTECTION DESIGNED FOR PAINTBALL USE MUST BE WORN BY THE USER AND ANY PERSON WITHIN RANGE. RECOMMEND AT LEAST 18 YEARS OLD TO PURCHASE, 14 YEARS OLD TO USE WITH ADULT SUPERVISION, OR 10 YEARS OLD TO USE ON PAINTBALL FIELDS MEETING ASTM-STANDARD F1777-02. READ OPERATION MANUAL BEFORE USING.

⚠ WARNING: NEVER SHOOT AT ANYONE WITHOUT PROPER PROTECTIVE EQUIPMENT FOR EYES, EARS, THROAT AND HEAD, WHICH MUST BE WORN AT ALL TIMES. EYE PROTECTION MUST BE DESIGNED SPECIFICALLY FOR PAINTBALL USE. FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS MAY RESULT IN BODILY INJURY INCLUDING BLINDNESS AND DEAFNESS.



SAFETY GUIDELINES

⚠️ RULES OF SAFE PAINTBALL MARKER HANDLING ⚠️

1. Always wear proper eye, face and ear protection designed especially to stop paintballs.
2. Never shoot a person who is not wearing proper protection.
3. Treat every paintball marker as if it were loaded.
4. Never look down the barrel of the marker.
5. Never point the paintball marker at anything you don't wish to shoot.
6. Keep the paintball marker on safe until ready to shoot.
7. Keep the barrel plug in the paintball marker's muzzle when not shooting.
8. Always remove gas source before disassembly.
9. Store the paintball marker unloaded and degassed in a locked place.
10. Follow warnings listed on gas source for handling and storage.
11. Never use anything other than .68 caliber paintballs.
12. Do not shoot fragile objects such as windows.
13. Paintballs may cause staining of some porous surfaces such as brick, stucco and wood.
14. Always measure velocity before playing paintball.
15. Never shoot at velocities in excess of 300 feet per second.
16. Never engage in vandalism.
17. Do not use marker for drive-by shootings.
18. Do not modify your marker's pressurized air system or cylinder in any way.

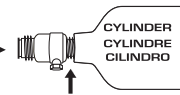
⚠️ PÉRIL

⚠️ DANGER

⚠️ PELIGRO

HIGH PRESSURE ALUMINUM ALLOY CYLINDER
BOUTEILLE À HAUTE PRESSION EN ALLIAGE D'ALUMINIUM
CILINDRO DE ALEACIÓN DE ALUMINIO PARA ALTA PRESIÓN

VALVE
CLAPET
VÁLVULA



The cylinder can fly off with enough force to kill if the valve unscrews from the cylinder.

- STOP if valve starts to unscrew from the cylinder. Screw it back on and take it to a trained person for repair.

EXPLOSION HAZARD: Improper use, filling, storage or disposal may result in property damage, serious personal injury, or death.

- This cylinder must be filled only by properly trained personnel in accordance with CGA Pamphlets P-1, C-6, G-6.3 and AV-7 available from the Compressed Gas Association, 4221 Walney Rd., Chantilly, Virginia 20151-2923
- Valves must be installed and removed only by trained personnel.
- Do not overfill cylinder. Do not exceed the pressurized rating stamped on your cylinder.
- Do not expose to temperatures exceeding 130°F when pressurized.
- Do not use caustic cleaners or strippers.
- Do not modify this cylinder or valve in any way.
- Cylinder will be destroyed if exposed to fire or heated to a temperature exceeding 350° F.
- Keep cylinder out of reach of children.

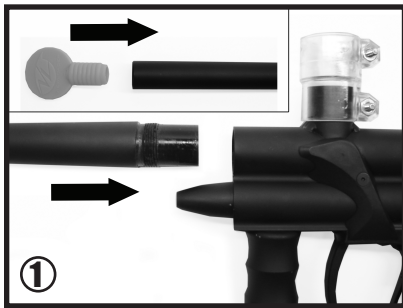
QUICKSTART GUIDE

⚠ Warning: Be sure the paintball marker is always pointed in a safe direction. Read the following operating instructions and **WITHOUT LOADING ANY PAINTBALLS AND MAKING SURE THE SAFETY IS IN THE "FIRE" POSITION** proceed several times through the operating steps with your paintball marker (dry fire the paintball marker at a safe target) so that you will be able to operate the marker properly and safely.

Eye Protection: make sure everyone within range (200 yards) is properly protected from paintball impacts.

Tools needed:

- **1/8th allen key for velocity adjustment**
- **Quarter or other like coin for removing velocity adjustment plug**
- **1/16th allen key for trigger adjustments**
- **5/64th allen key for grip panel / battery installation and ball stop cover removal**
- **Standard flat head screw driver for feed neck tightening**



Step 1. Screw in barrel and attach barrel blocking device and push the safety to the "safe" position.

Step 2. Using your 5/64th inch allen key hex wrench, remove the three screws and the right grip frame panel. Install a single 9 volt battery (not included) to the battery clip and install in the marker. Install the grip panel back on the grip frame.



PRO TIP: High performance (fast shooting) paintball markers work better with high quality batteries.

Step 3. To turn your marker ON: press the button on the back of the grip frame for 2-3 seconds or until the LED lights orange. Release the button and wait for the light to flash green to indicate the Fire mode. One flash is NPPL Semi Auto – Two flashes is PSP Ramp – Three flashes is NXL Full Auto – Four flashes is 3 shot burst.

Step 4. To turn your marker OFF:
Press the button on the back of the trigger/
grip frame for 3-4 seconds until the LED lights
red, then release the button.

Step 5. Practice, practice, practice, trigger
pulls in all 4 modes. First you must confirm
your markers SPEED DIAL™ Max Rate of Fire is
set at the highest level. Hold the on / off but-
ton on the back of the grip frame down for
2-3 seconds until it turns orange, release the
button and wait for it to start flashing green. It
should flash 15 times.

If it flashes less than 15 times you need to
reprogram the setting. Hold the button on the
back of the grip frame down for 2-3 seconds
until it turns orange and then release and
quickly start pushing the button 15 times (The
light will remain solid green during repro-
gramming) After that, wait 2 seconds and the
light will flash green 15 times to confirm that it
has accepted the new setting.

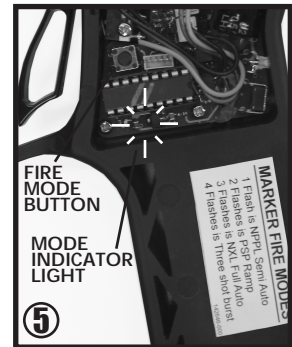
Once it confirms the SPEED DIAL™ Max Rate
of Fire setting the light will turn off and then
flash to indicate the Fire Mode.

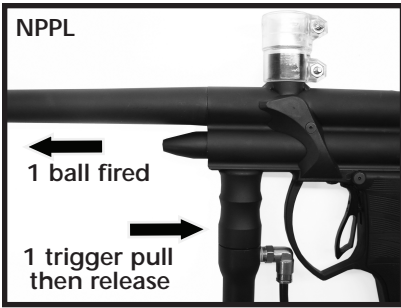
- One** flash is NPPL Semi Auto
- Two** flashes is PSP Ramp
- Three** flashes is NXL Full Auto
- Four** flashes is 3 shot burst.

To change the Fire Mode you must first re-
move the left grip frame by removing the
three screws to gain access to the Fire mode
change button.

NOTE: The fire mode change button is behind the grip panel and
requires the use of tools to access. Although this is not convenient,
it is designed this way so that this marker can be considered "Tour-
nament Legal". It is illegal to change the Fire Mode in a tourna-
ment.

Once you have removed the left grip panel push the Fire Mode but-
ton once for every mode change.

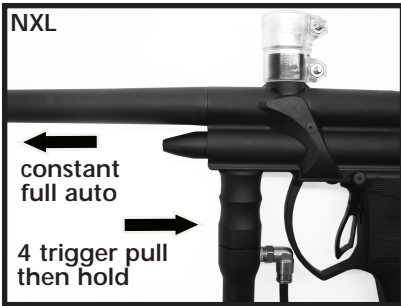




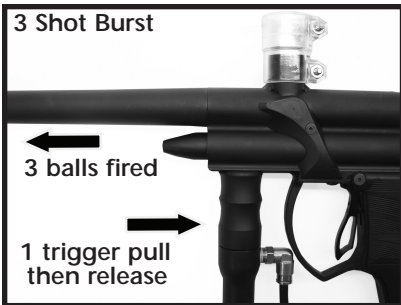
EXAMPLE: If you are in Fire mode 1 (NPPL Semi Auto) and you want to change to Fire Mode 4 (3 shot burst) push the button three times. If you push the button again it will cycle back around to mode 1. NPPL Semi Auto (Fire Mode 1) is a tournament legal mode where the marker will fire only one ball per trigger pull.



PSP Ramp (Fire Mode 2) is a tournament legal enhanced fire mode where the marker fire rate can be faster than your trigger pull rate as long as you are pulling the trigger faster than 5 pulls per second and the markers Max Rate of Fire is higher than 5 balls per second. Keep in mind that the first three trigger pulls are semi only.



NXL Full Auto (Fire Mode 3) is a tournament legal enhanced fire mode where the marker will fire full auto after you pull the trigger 3 times fast (Minimum trigger pull rate of 5 trigger pulls per second) and then hold the trigger down on the 4th trigger pull. The marker will remain in full auto until you release the trigger and then you will need to start over with the first three trigger pulls in semi auto and holding the trigger down on the 4th trigger pull.

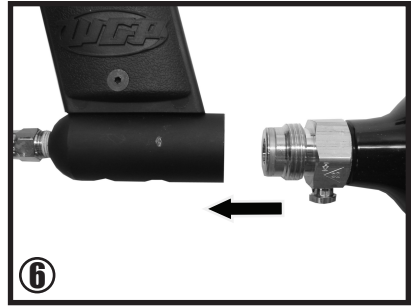


3 shot burst (Fire Mode 4) is NOT a tournament legal mode where the marker will fire 3 balls per trigger pull as long as you hold the trigger down for all 3 balls. To shoot again you need to release the trigger and pull again. If you tap the trigger quickly it will only shoot 1 ball per tap.

Once you are done practicing turn your marker off by pressing the button on the back of the grip frame for

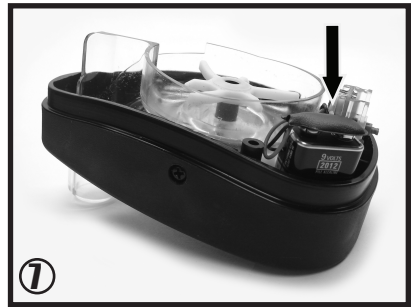
3-4 seconds until it turns red. Release the button and the marker will turn off. Now screw the left grip frame panel back on by installing the screws back in place.

Note: Cock marker before attaching air cylinder. Marker will not cock unless the safety is in the "fire" position. Once the marker is cocked, push the safety to the "safe" position.



Step 6.

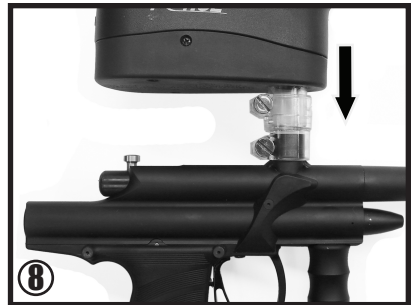
Once you have a full compressed gas cylinder (CO2 or High Pressure Compressed Air) attach the cylinder to the marker via the Air Source Adaptor (ASA) at the bottom of the grip frame. Screw the cylinder all the way into the ASA until you hear the compressed gas quietly "hiss" and flow into the marker.



Step 7.

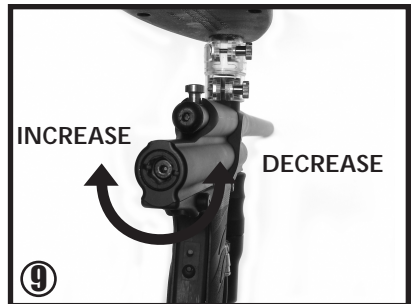
Install a single 9 volt battery in your VL Force™ Loader by removing the screw at the front and the two screws at the bottom of the loader. Attach the battery to the battery clip and place it inside the battery compartment. Reassemble the bottom to the top piece

Note: please make sure the on/off button is not stuck on the switch during assembly.



Tighten the screws down and then test it by pushing the on/off button and confirm the paddle / motor is turning. Once you confirm it is working turn the loader off.

Step 8. Now attach the loader to the marker via the clamping feed neck by first loosening the screw at the top of the feed neck and press fitting the loader neck down into the feed neck.



Note: make sure the loader is pushed all the way down.

Now tighten the screw on the feed neck so that the loader is held securely in place and also make sure the screw holding the feed neck to the marker is secure.

Step 9. Before testing/adjusting velocity you must put on your paintball goggle system, install paintballs in your loader, and push the safety to the "fire" position.

Adjust the velocity with an 1/8" allen key. Your marker is preset to under 300 feet per second. Organized paintball fields require markers to be chronographed to measure velocity.

Follow all rules specified by your organized paintball field. Never have your velocity above 300 feet per second. Velocity may be adjusted by turning the adjustment screw on the back of the marker. With a 1/8th allen key (included) turn the adjustment screw clockwise to increase velocity and counter-clockwise to decrease velocity. Additional info available in the owners manual section.

You are now ready for play. Always keep your marker pointed in a safe direction. Always keep your barrel plug in and your safety in the "safe" position until you are ready to fire.

BE SAFE and HAVE FUN!

OWNERS MANUAL

Adjusting SPEED DIAL™ (Adjustable Matched and Balanced)
This marker is equipped with advanced electronic programming that allows you to adjust the Max Rate of Fire (This is especially useful in the "enhanced" modes such as Full Auto and Ramp) from 18 BPS to 5 BPS in any mode quickly and easily from the outside of your marker, so that you can make quick "in game" adjustments to match marker fire rates to loader feeds rates.

Example: If you forget your VL Force™ loader at home and only have a non electronic gravity feed loader you can reduce the marker fire rates to match the loaders max feed rate of 6-8 BPS. (Note: the tournament Fire Modes are set to the tournament approved Max Rate of Fire which is 15 BPS max.)

Here is how: First you must determine what your current SPEED DIAL™ setting is, so push and hold the button on the back of the trigger/grip frame unit it turns orange and then release. The light will flash green the exact number of times as your Max Rate of Fire. For Example: If it flashes 15 times then your Max Rate of Fire is 15 balls per second. Now if you want to change the setting push and hold

the button down until it turns orange. Release and quickly push the button the number of times to match your new desired Max Rate of Fire. (The light will remain solid green during reprogram mode) For example: If you push the button 10 times you will change the Max Rate of Fire to 10 BPS. Once you are done setting the MAX ROF simply wait for a few seconds and the light will flash the number of times to match and confirm your new setting a few seconds later the marker will flash green to indicate your fire mode and now it will be ready to fire.

Note: Marker will not fire during the time it is confirming the new setting.

PRO TIP: If at any time you want to know what your SPEED DIAL™ Setting is you simply hold the button on the back of the trigger/grip frame until it turns orange release the button and wait for it to flash green. The number of flashes is the Max Rate of Fire. Note: It will flash between 5 and 18 times and the marker will NOT fire while it is confirming the Max Rate of Fire of the Speed Dial.

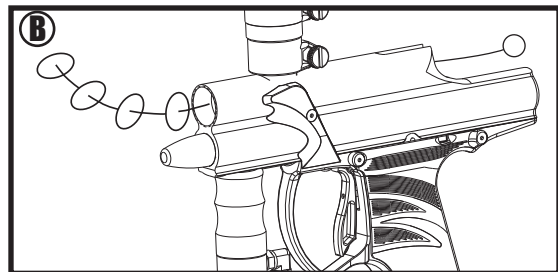
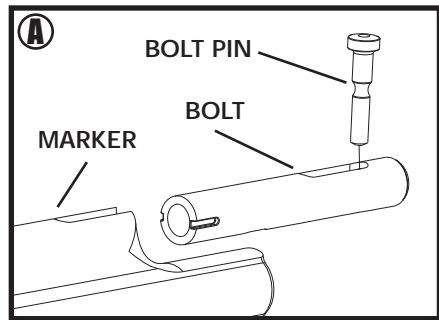
Compressed Air / Co2

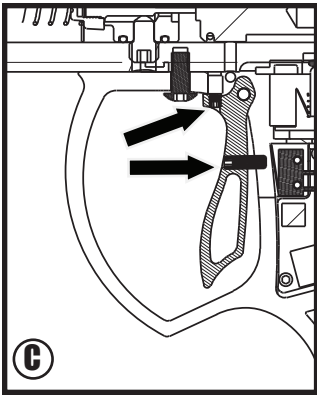
The SYNERGY™ marker is designed to work on either High Pressure compressed air/nitrogen OR CO2.

Note: On some models we provide a CO2 cylinder: This cylinder must be filled with CO2 before it will operate.

Once you have a filled compressed gas tank (either air or CO2) attach the tank to the marker via the Air Source Adaptor (ASA) at the bottom of the grip frame. Screw the tank all the way into the ASA until you hear the compressed gas flow into the marker.

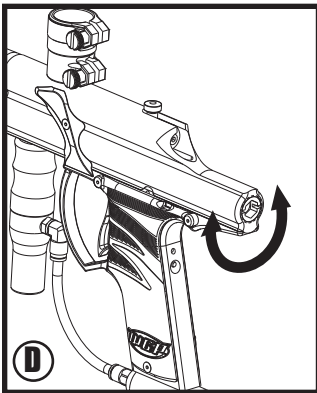
PRO TIP: The quickest way to keep your marker lubricated is to install several drops of marker oil in the ASA before attaching your compressed gas cylinder. Once you attach your cylinder the pressurized gas will drive the oil across all the moving parts of your marker.





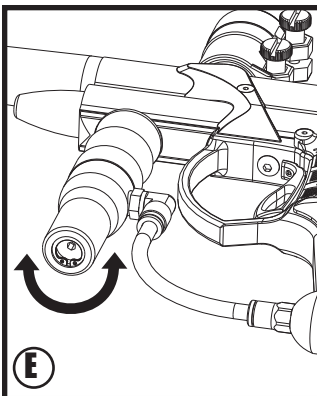
Anti-Chop Bolt

The Synergy™ marker is equipped with a spring loaded anti chop bolt that is quick and easy to remove. Although the anti chop spring will reduce the likelihood of the bolt chopping a ball in half, it is still possible that paint / dirt and other debris that will build up in the breech and barrel of your marker. The quick release bolt is designed to make it easy to clean. Pull the bolt pin up and out of the marker and bolt. (see **diagram A**) Then pull the bolt towards the rear of the marker to clean. We recommend the VL Pro-flex™ squeegee or Battle Swab squeegee. (see **diagram B**)



Trigger Adjustment

The Synergy™ marker is equipped with a magnet assisted, two way adjustable trigger. There are two very small allen screws in the trigger that can be adjusted to either shorten or lengthen the trigger pull. The adjustment at the top of the trigger (see **diagram C**) will adjust the length of the stroke of the trigger. The adjustment in the middle of the trigger adjusts the length of trigger pull before the micro switch will activate. (Also known as micro switch sensitivity adjustment)



PRO TIP: It is possible to move the adjustments too far and cause the marker to stop shooting. If this happens simply back the screws out until the marker fires again.

Velocity Adjustment

NOTE: NEVER EXCEED 300 FEET PER SECOND. The Synergy™ marker is equipped with a standard rear velocity adjustment screw. Turning it clockwise with an 1/8" allen key or inward will increase the velocity of your marker. Turning it counter clockwise or outward will reduce the velocity of your marker. We have also included a spacer inside the marker that can be removed to lower the velocity even further. (see **diagram D,H**) If you can not achieve your desired velocity

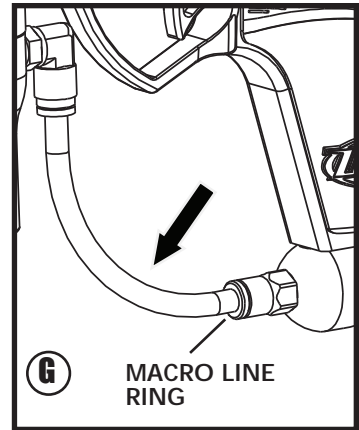
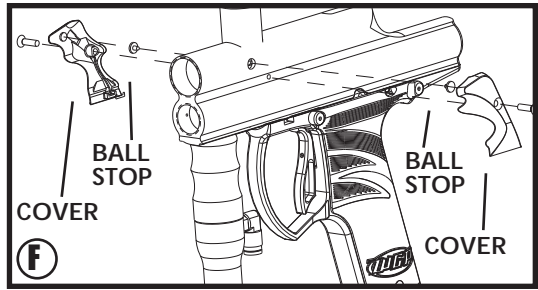
using this adjustment screw and spacer you can also use your adjustable regulator (see diagram E)

NOTE: Turning it clockwise or inward will increase the velocity of your marker. Turning it counter clockwise or outward will reduce the velocity of your marker.

PRO TIP: The regulator is very sensitive and adjustments should be made using small (8th of a turn) adjustments only.

Double Soft Rubber Ball Stops

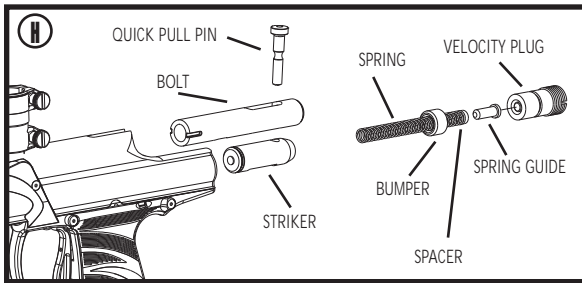
The Synergy™ marker is equipped with two soft rubber ball stops. These should be routinely cleaned to maintain the best performance. To clean remove the ball stop covers (see diagram F) and use paper towels to gently wipe all dirt / paint / oil from the ball stop and the body of the marker where the ball stop sits. Reinstall the ball stop covers when complete.



Macro Line Quick Disconnect hose

The Synergy™ marker is equipped with a Macro Line Quick Disconnect hose. (see diagram G) This hose can be easily disconnected when not under pressure (when no cylinder is attached) Simply push the macro line ring towards the fitting and pull on the hose at the same time. This feature is designed for quick and easy maintenance and upgradeability.

FIELD STRIP GUIDE



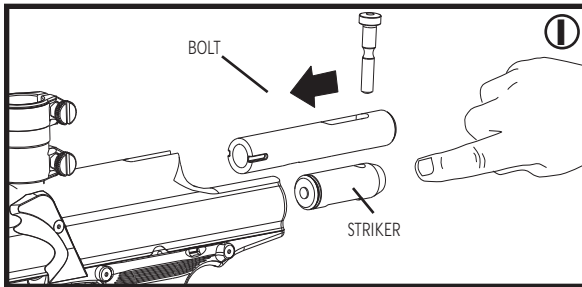
Bolt and Striker removal

STEP 1. EYE PROTECTION: Make sure everyone within range (200 yards) is properly protected from paintball impacts.

STEP 2. Remove gas supply from marker.

STEP 3. Make sure cocking bolt is in the forward position. Push safety to the "fire" position and pull the trigger to release if necessary.

STEP 4. Remove Quick Pull Pin and Remove Velocity Plug, Bumper, Spring Guide, Spacer, and Spring Striker and Bolt (**see diagram H**). **NOTE:** Use caution when removing as all parts are under spring tension.



FIELD STRIP REASSEMBLY

Follow the steps above in reverse order. Lubricate all wear points and O-rings with mineral oil only.

STEP 1. Follow Steps 1-5 of Field Strip Guide.

STEP 2. Pull trigger and tap rear of the receiver against towel on flat surface to remove striker.

STEP 3. Grasp striker with fingers and pull from receiver.

STEP 4. Clean with soft cloth or baby wipe. Re-lubricate with mineral oil and replace.

NOTE: Examine O-ring for any damage and replace if necessary.

STEP 5. Turn E-grip on, make sure safety is in the off position then follow step 6.

STEP 6. Replace striker bolt assembly into receiver with sear flat down.

NOTE: It is necessary to pull the trigger 3 or more times while applying pressure to striker bolt assembly with your finger in order to fully seat the striker. (see diagram I)

STEP 7. Reassemble per Field Strip Reassembly Section.

DO'S AND DON'TS

OF CARE AND MAINTENANCE

Note: Any cosmetic or mechanical changes to product will void warranty.

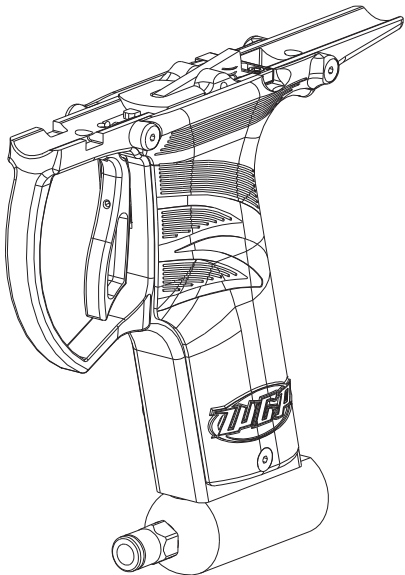
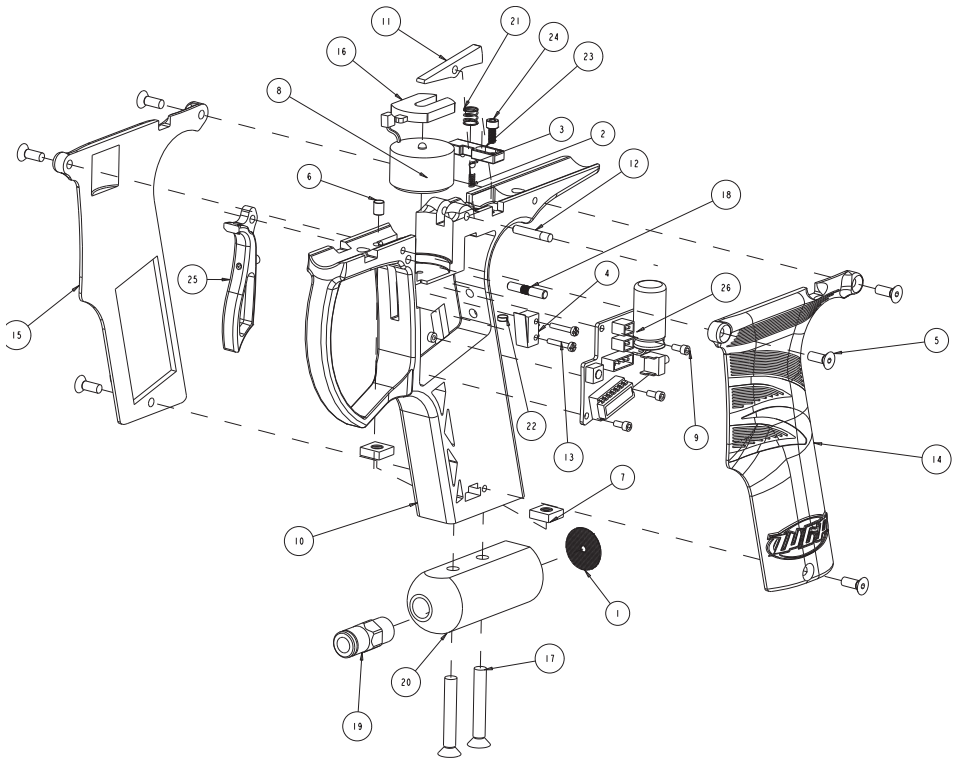
Follow these easy points to keep your marker in top shape for years to come.

DO'S

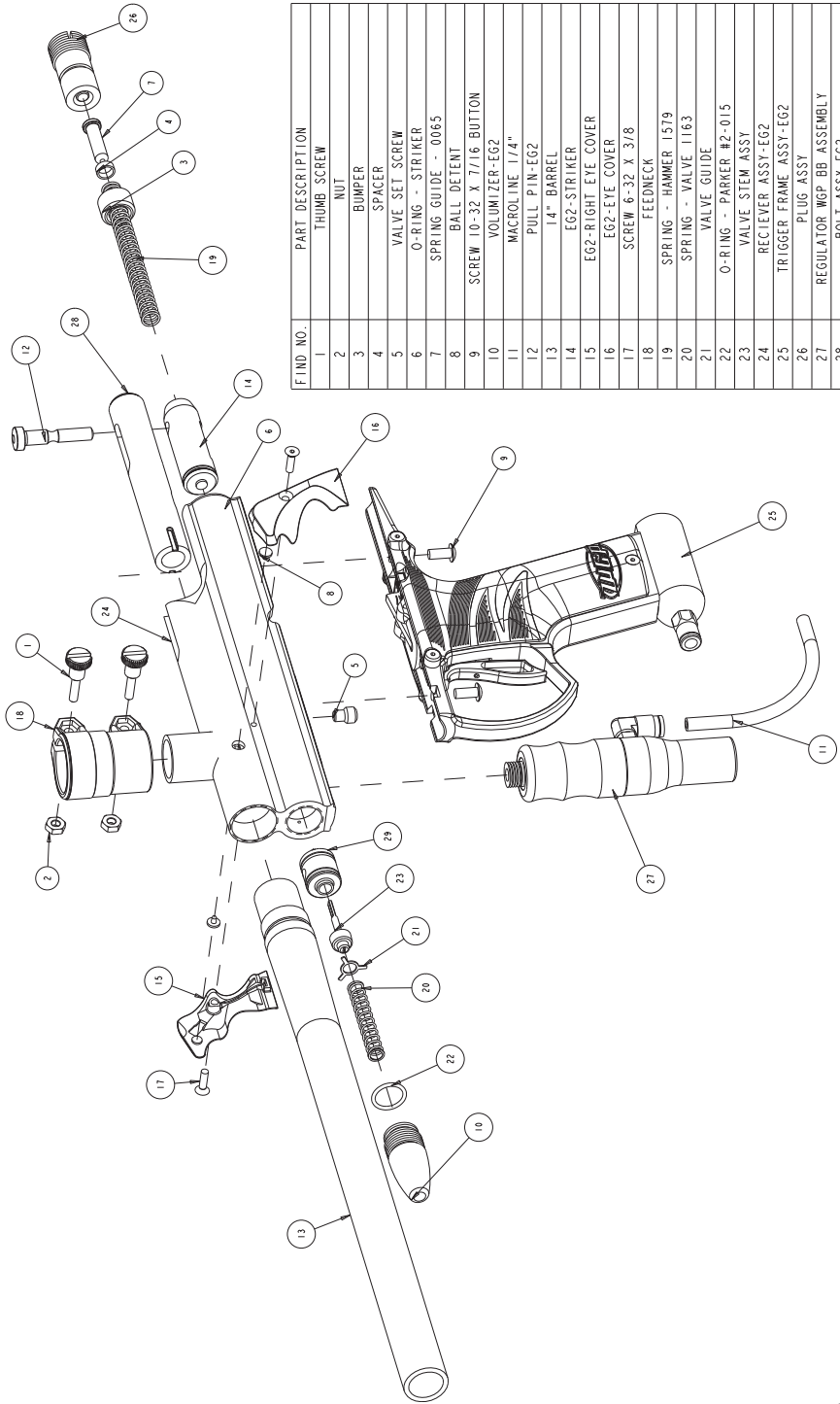
- DO read owners manual thoroughly before using marker and for complete disassembly and cleaning instructions.
- DO lubricate O-rings using 3 drops of mineral oil in the ASA adapter with each change of gas source (tank), or marker will dry out and cause it to not re-cock after the first shot or after rapid firing.
- DO familiarize yourself with the parts drawing prior to any disassembly.
- DO put marker parts on cloth to avoid losing parts or parts falling down onto dirt or sand when disassembling,
- DO lubricate O-rings with mineral oil immediately after cleaning. See backside for lubrication points.

DON'TS

- DON'T return this marker to retailer. Call 1.800.755.5061
- DON'T DISASSEMBLE marker if you are unfamiliar with marker maintenance. (Call customer service at 1.800.755.5061 or visit our website at www.worr.com for assistance).
- DON'T use lubricants other than mineral oil. (For questions about proper lubricants consult the web page or customer service at 1.800.755.5061
- DON'T immerse marker in water. (Marker parts may be cleaned by wiping with a soft cloth or paper towel).



FIND NO.	PART DESCRIPTION
1	SCREEN FILTER
2	BALL DETENT SPRING
3	BALL DETENT
4	SWITCH SNAP (MICROSWITCH)
5	GRIP SCREW 6-32 X 3/8
6	MAGNET .157X.197"
7	SQUARE NUT #10-32
8	DC LINEAR SOLENOID
9	PCBA BOARD-SCREW-#2-56 X 3/16"
10	TRIGGERFRAME-EG2
11	SEAR-EG2
12	SEAR PIN
13	MICROSWITCH SCREW
14	LEFT GRIP PANNEL-EG2
15	LEFT GRIP PANNEL-EG2
16	SOLENOID RETAINER
17	SCREW 10-32 X 1.25 FLAT
18	TRIGGER PIN
19	1/8" NPT STRAIGHT
20	ASA BOTTOM LINE
21	SPRING-SEAR ELECTRONIC 1579
22	MAGNET PLUNGER
23	SAFETY
24	SCREW HEX 4-40 X .250 L
25	TRIGGER ASSY-EG2
26	PCBA ASSY-EG2



FIND NO.	PART DESCRIPTION
1	THUMB SCREW
2	NUT
3	BUMPER
4	SPACER
5	VALVE SET SCREW
6	O-RING - STRIKER
7	SPRING GUIDE - 0065
8	BALL DETENT
9	SCREW 10-32 X 7/16 BUTTON
10	VOLUMIZER-EG2
11	MACROLINE 1/4"
12	PULL PIN-EG2
13	14" BARREL
14	EG2-STRIKER
15	EG2-RIGHT EYE COVER
16	EG2-EYE COVER
17	SCREW 6-32 X 3/8
18	FEEDNECK
19	SPRING - HAMMER 1579
20	SPRING - VALVE 1163
21	VALVE GUIDE
22	O-RING - PARKER #2-015
23	VALVE STEM ASSY
24	RECIEVER ASSY-EG2
25	TRIGGER FRAME ASSY-EG2
26	PLUG ASSY
27	REGULATOR WGP BB ASSEMBLY
28	BOLT ASSY-EG2
29	VALVE BODY ASSEMBLY - 1163

TROUBLESHOOTING GUIDE



MOST PROBLEMS CAN BE FIXED BY CLEANING AND OILING YOUR MARKER



PROBLEM	CAUSE	CURE
Gas leaks from cylinder connection	Damaged cylinder O-ring	Replace O-ring
Marker fails to discharge	Marker wasn't cocked	Cock marker before firing
	Lack of gas pressure	Refill cylinder
	Lack of lubricant or paintball debris	Refer to field strip guide section
	Gas source not fully engaged	Screw gas source into bottom line constant air adapter
Marker fails to recock	Damaged striker O-ring	Replace striker O-ring
	Lack of gas pressure	Refill cylinder
	Low quality or weak batteries	Replace batteries
sticks or hangs up	No lubrication	Lubricate bolt and striker
Broken paintballs	Excessive paint buildup in barrel	Squeeze out paintball particals from barrel
	Defective paintballs	Replace paintballs

International Service Center List

**List de Centre de Service Après-Vente International
Lista de Centros de Servicio Internacionales**

Canada:
Kolder Canada
905.a.9191
sales@koldercanada.com

Western Europe:
Sport Attitude
33.02.4348.5012
eric.paint@europarm.fr

Central and Eastern Europe:
CMC Sport GmbH
49.6031.73.75.0
techcenter@maxs-sport.com

Mexico & Central America:
Xtreme Planet
55.5290.8190
servicio@xtremeplanet.com

South Africa:
Paintball City
27.11.828.7583
tech@paintballcity.co.za

New Zealand:
Kilwell Sports
07.345.9094
sports@kilwell.co.nz

South America:
Mercenarios Brazil
11.3871.1468
mercenarios@mercenarios.com.br

WARRANTY INFORMATION

WARRANTY: LIMITED 90 DAY WARRANTY (ORIGINAL PURCHASE RECEIPT REQUIRED)

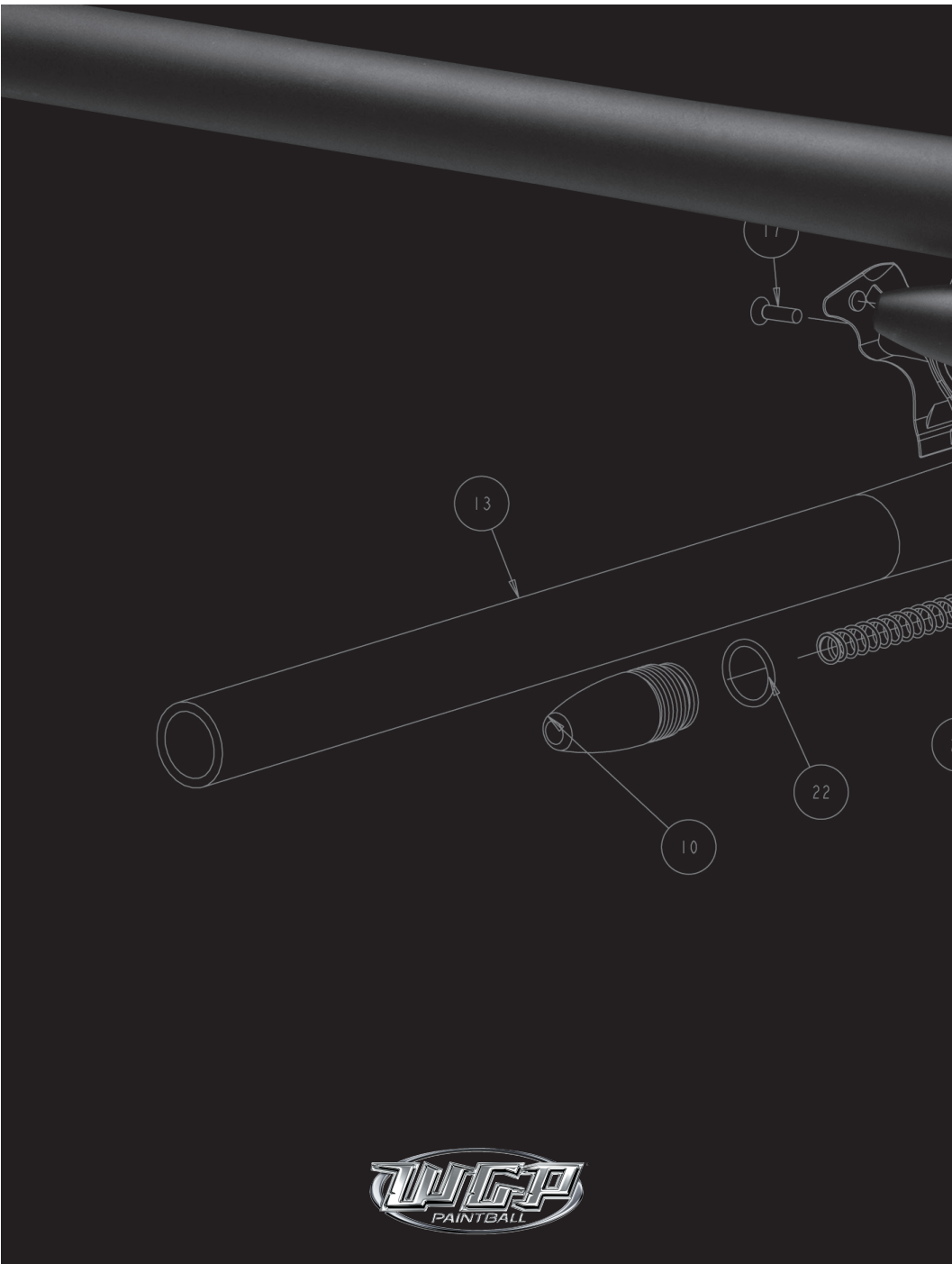
For 90 days from date of purchase, Worr Games® will repair or replace this marker free of charge if defective in material or workmanship. This warranty gives you specific legal rights. You may also have other rights which may vary from state to state. Service is available from authorized Worr Games® Service Centers. A list of these is available at Worr Games® website at www.worr.com or by calling Worr Games® at 1.800.755.5061. These Service Centers generally offer the quickest service.

If you would rather return your marker to Worr Games® please call customer service at 1.800.755.5061 for return authorization number and shipping address. (Authorization number must be visible on outside of shipping package to be accepted.)

Do not return any products via non-trackable services such as regular mail or parcel post. Such products may become lost and Worr Games® will not be responsible for replacement.

PAINTBALL MARKERS OUT-OF-WARRANTY

Authorized Service Centers will gladly repair any markers out of warranty for a nominal charge to cover parts and labor. Repairs made by Service Centers will usually be faster and less expensive than those sent back to the factory. Go to www.worr.com for service center locations near you. Prior to shipping out of warranty markers, you must first call customer service at 1.800.755.5061 for return authorization number and shipping address. (Authorization number must be visible on outside of shipping package to be accepted.) Any out of warranty Marker returned to Worr Games® must be shipped prepaid and include the repair fee. Please call the Customer Service number for current repair fees. Worr Games® will repair or replace the marker with a reconditioned unit of the same model. If payment is not included, you will be billed for the repair fee plus a \$4.00 invoicing fee. Upon receipt of payment, the marker or its replacement will be shipped to you. In the event that the marker includes no means of contacting the sender or no payment for repairs is received within 60 days of billing, the ownership of the marker will be forfeited and it will be disposed of at the discretion of Worr Games® Inc.



Worr Game Products® 5818 El Camino Real Carlsbad, CA 92008 www.worr.com

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