



*JP ENGINEERING*

**OWNER'S MANUAL**

W W W . D A N G E R O U S P O W E R . C O M



## **A WORD FROM OUR ENGINEERS AND DESIGN TEAM**

OUR CHALLENGE WAS TO BLEND THE ART OF METAL SCULPTURE WITH MASTERFUL ELECTRONICS IN A PACKAGE THAT SYMBOLIZES STRENGTH, POWER, AND DEXTERITY.

BUILT WITH PASSION, THE DP FX WAS UNLEASHED.

**CONGRATULATIONS ON OWNING THE MOST  
ADVANCED PAINTBALL MARKER ON THE PLANET.**

## WARNING

### IMPORTANT SAFETY INSTRUCTIONS AND GUIDELINES!

1. The DP G4 is NOT A TOY. Treat it with the same respect and care you would a firearm.
2. Carelessness, Misuse, and failure to adhere to the warning and guidelines printed in this Owner's Manual may result in property damage, injury, or death. User assumes all risks associated with use of the DP G4.
3. Always ensure that proper safety gear - eyes, face, ear, and head protection - conforming to ASTM standard F1776 (USA) or CE (Europe) are worn at all times when paintballs are within range.
4. Persons under the age of 18 must have adult supervision at all times during use of the G4, or any paintball firing device.
5. Observe all local and national laws regarding rules and regulations.
6. The G4 should only be used on a permitted and regulated paintball field where safety rules and guidelines are strictly enforced.
7. Only use compressed air or nitrogen. DO NOT USE CO2!
8. Only use high quality, .68 caliber paintballs.
9. Never point your G4 at an unintended target.
10. Always treat your G4 as if it were loaded.
11. Keep your G4 turned OFF until ready to use.
12. Always measure the velocity of paintballs from your G4 with a suitable chronograph device before play.
13. Never look down the barrel or breech area of the G4 without first ensuring that the marker is switched to the OFF position, with NO AIR in the marker.

NOTE- SEE NOTE ON PAGE 3 FOR DIRECTIONS ON REMOVING RESIDUAL AIR FROM A POWERED 'OFF' MARKER.

## WARNING

### IMPORTANT SAFETY INSTRUCTIONS AND GUIDELINES!

14. Never put any body parts or foreign objects into the breech or feed tube.
15. Always use the supplied barrel cover when your G4 is not in use at the field. Doing so will help secure the safety of yourself and those around you.
16. Never allow pressurized gas to come into contact with your body. Serious harm, injury, or death may occur.
17. When not in use, always turn your G4 to the OFF position.
18. Promptly remove any paintballs from your G4 when not in use.
19. Always remember to remove residual air from your G4 before attempting maintenance or service.
20. Always remember to remove residual air from your G4 before storage or transportation.

NOTE- POWERING ' OFF' THE MARKER WILL NOT AUTOMATICALLY REMOVE RESIDUAL AIR. TO SAFELY REMOVE RESIDUAL AIR, PLEASE DO THE FOLLOWING:

- A. Remove loader and paintballs from marker.
  - B. Turn Eye Sensors to the OFF position.
  - C. Point marker in a safe direction.
  - D. Fire marker until all residual gas is removed.
21. Always store your G4 in a safe place.
  22. Do not discard the Owner's Manual. In the event of transfer or resale, this guide must accompany the marker.
  23. When in doubt, ALWAYS seek expert advice by contacting a reputable airsmith familiar with paintball markers, or by contacting DP Engineering's Customer Service Staff.

# CONTENTS

- 07 FEATURES
- 08 KNOW YOUR G4
- 09 G4 PARTS LIST
- 10 INLINE REGULATOR
- 11 OPR PARTS LIST
- 12 G4 BOLT SYSTEM
- 13 EVERYTHING YOU NEED TO GET STARTED
- 13 BARREL COVER
- 14 INSTALLING THE BATTERY
- 15 ATTACHING A PAINTBALL LOADER
- 16 CONNECTING MACRO-LINE TO HIGH PRESSURE REGULATOR AND QUICK RELEASE FLIP LEVER ASA (RAPSTM)
- 17 ATTACHING AIR TANK TO RAPSTM FLIP LEVER ASA
- 18 VELOCITY ADJUSTMENT
- 19 TRIGGER ADJUSTMENT
- 21 BOARD
- 22 PROGRAMMING YOUR G4
  - 22 1.POWER
  - 23 2.TOURNAMENT LOCK
  - 23 3.CONFIGURATION MODE
  - 26 4.EXAMPLE SETTING FROM SEMI TO MILLENNIUM
- 27 CARE AND MAINTENANCE
  - 27 DEGASSING THE G4
- 29 CLEANING THE EYE-SENSOR BREAK
- 31 CLEANING THE BALL DETENTS
- 33 OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE
- 36 DISASSEMBLY AND MAINTENANCE OF DUMP VALVE BOLT AND DUMP VALVE PLUG
- 38 SEPARATING G4 BODY FROM TRIGGER FRAME
- 40 SOLENOID MAINTENANCE
- 42 REMOVING SWITCHBLADE™ TRIGGER FROM FRAME
- 43 RAPSTM FLIP LEVER ASA REMOVAL AND MAINTENANCE
- 46 TROUBLESHOOTING
- 48 PARTS DIAGRAM AND TABLE
- 50 STATEMENT OF LIABILITY
- 50 DISCLAIMER
- 51 LIMITED LIFETIME WARRANTY





## FEATURES

1. Innovative and highly efficient o-ring-less bolt system.
2. Extremely light weight body (1.79lbs with barrel, patented RAPS ASA, clamping feedneck and battery).
3. Increased air efficiency.
4. High precision light weight 3-D milled aluminum alloy body and accents.
5. Stocked fully programmable micro-switch board.
6. 4 way adjustable magnetic trigger.
7. Patented low profile clamping feedneck.
8. Patented flip lever Rapid Air Pressurizing System (RAPS) ASA.

## KNOW YOUR G4

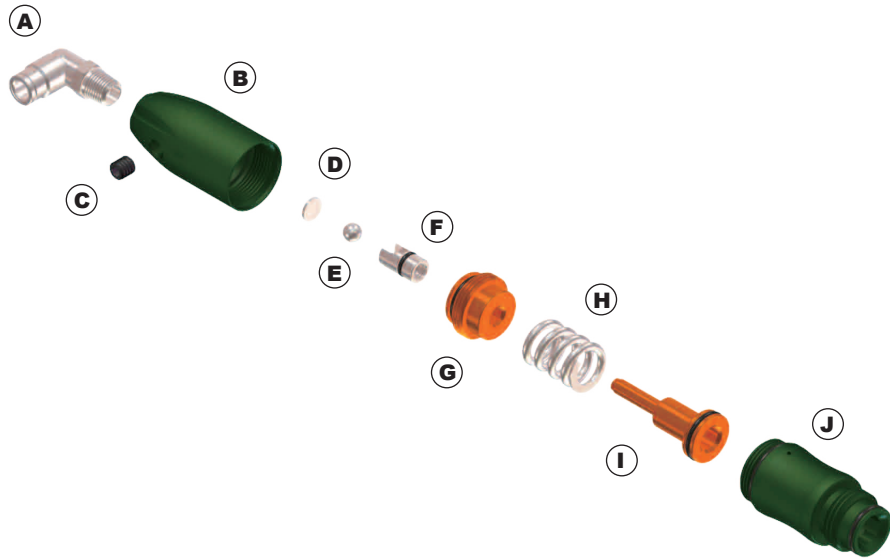
Your G4 is a sophisticated piece of machinery, designed for superior performance along with ease of use and maintenance. For maximum enjoyment and safety while using your G4, please take the time to acquaint yourself with its operation, controls, programmable features, and care and maintenance instructions found in this Owner's Manual.



## G4 PARTS LIST

- A. Low-Rise Clamping Feedneck
- B. G4 Body
- C. Dump Valve Bolt
- D. Dump Valve Plug
- E. Two-Way Solenoid
- F. OPR (Operating Pressure Regulator)
- G. Macro-line Elbow Fitting
- H. G4 Trigger Frame
- I. Trigger Removal Screw
- J. Trigger Adjustment Screws
- K. Trigger
- L. Trigger Guard
- M. Power Button
- N. Butterfly Grip Panel
- O. Grip Screws
- P. RAPS™ (Rapid Air Pressurizing System) ASA
- Q. Body / Frame Connector Screw #1
- R. Body / Frame Connector Screw #2

## INLINE REGULATOR

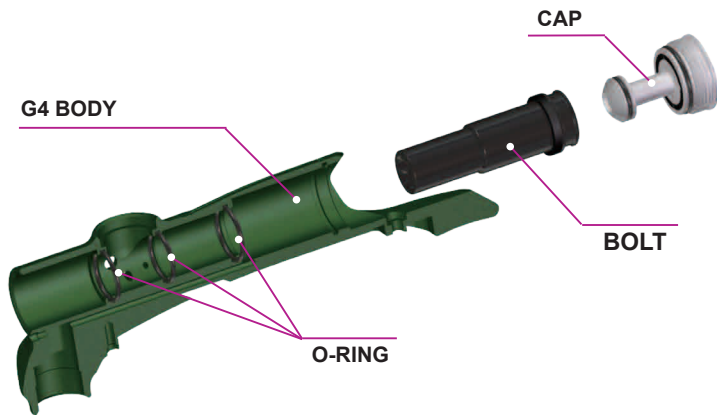


## OPR PARTS LIST

- A. Macro-line Elbow Fitting
- B. OPR Bottom Housing
- C. Regulator Adjustment Screw
- D. Ball Gasket
- E. Steel Ball
- F. Pressure Seal
- G. Piston Seal
- H. Regulator Spring
- I. Regulator Piston
- J. Operating Pressure Regulator Body



## G4 BOLT SYSTEM



### DVB (DUMP VALVE BOLT)



BACK POSITION



FORWARD POSITION

## EVERYTHING YOU NEED TO GET STARTED

Prepare the following items in order to begin using your G4:

- One 9V battery. Be sure that the battery is fresh and from a reputable manufacturer.
- Paintball loading device. (Recommended minimum load rate of 25 BPS)
- .68 caliber paintballs. Always use fresh, high-quality paint with proper bore size for best results.
- Approved air tank utilizing COMPRESSED AIR or NITROGEN ONLY.

## BARREL COVER

- Place the barrel cover over the tip of the barrel and pull the elastic band over the feedneck or back of marker before attaching paintball loader. (SEE PIC A)

### WARNING

ALWAYS USE THE SUPPLIED BARREL COVER BEFORE AIR UP YOUR G4 WHEN IT IS NOT IN USE AT THE FIELD. DOING SO WILL HELP SECURE THE SAFETY OF YOURSELF AND THOSE AROUND YOU.





## INSTALLING THE BATTERY

- Carefully remove the 2 hexagonal screws (3/32") holding the left panel in place. (SEE PIC A)
- Locate battery harness and attach 9V battery to the connector pad. Do not use force! (SEE PIC B)
- Replace battery in grip frame as shown in illustration C.
- Replace grip frame and screws. Do not over tighten screws!

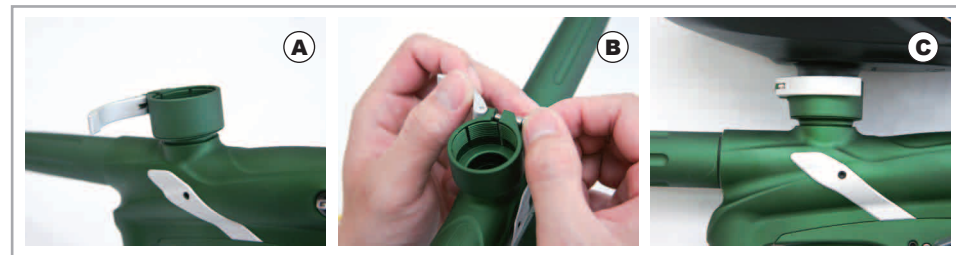


## ATTACHING A PAINTBALL LOADER

- Release clamp on feedneck. (SEE PIC A)
- Loosen thumbscrew counterclockwise by hand. (SEE PIC B)
- Insert feed tube of loader unit.
- Close clamp securely. Loader should fit snug within feedneck. (SEE PIC C)
- If loader is loose, remove and adjust thumbscrew clockwise.

### WARNING

EXCESSIVE FORCE MAY CAUSE DAMAGE TO LOADER OR THE G4!

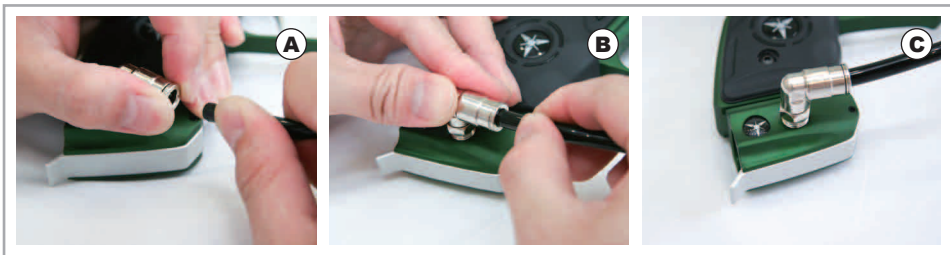


## CONNECTING MACRO-LINE TO HIGH PRESSURE REGULATOR AND QUICK RELEASE FLIP LEVER ASA (RAPSTM)

- Pull back the collet section of the macro-line elbow located on your RAPSTM ASA. (SEE PIC A)
- Keeping the collet back, insert macro-line hose firmly into the fitting and release the collet. Be sure that the hose is seated all the way into the end of elbow fitting. (SEE PIC B . C)
- Repeat the same process on the macro-line elbow located on your OPR to connect the RAPSTM ASA.

### WARNING

IMPROPER FITMENT WILL CAUSE PHYSICAL INJURY. ALWAYS INSPECT MACRO-LINE HOSE SEATED ALL THE WAY INTO THE END OF THE ELBOW.

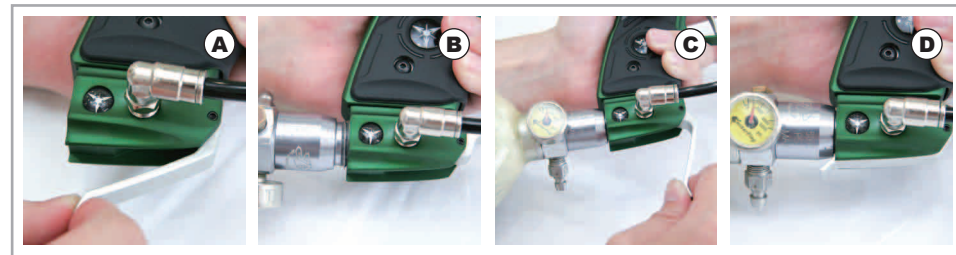


## ATTACHING AIR TANK TO RAPSTM FLIP LEVER ASA

- Swing flip lever to the 'release' position. (SEE PIC A)
- Attach air tank by carefully screwing it into the threaded portion of the RAPSTM ASA. Make sure tank fitment is tight and all the way in. (SEE PIC B)
- Return flip lever of the RAPSTM ASA to the 'close' position. (SEE PIC C)
- A brief sound of air entering the system is normal. The G4 is now pressurized. (SEE PIC D)

### WARNING

NITROGEN OR COMPRESSED AIR TANKS ONLY! NEVER USE CO2.

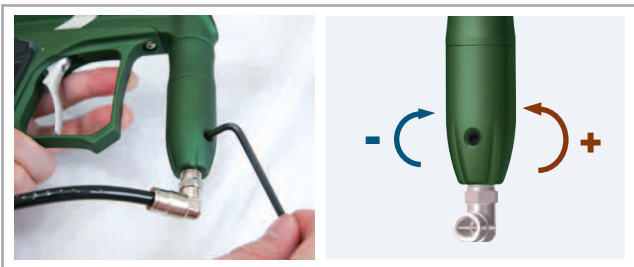


## VELOCITY ADJUSTMENT

- Locate the (1/8") allen key wrench included with your G4.
- Adjust screw located at the side of the Operating Pressure Regulator (OPR) to increase or decrease velocity.
- Turn screw counterclockwise to increase velocity.
- Turn screw clockwise to decrease velocity.

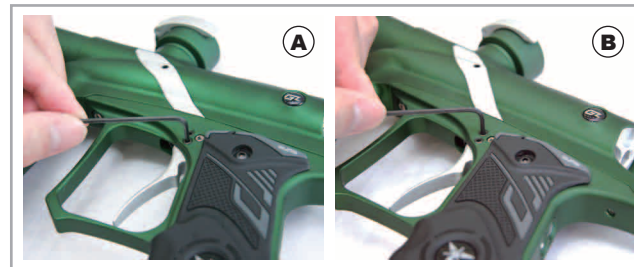
### WARNING

DP ENGINEERING RECOMMENDS THAT THE VELOCITY NEVER EXCEED 300 FPS. FAILURE TO FOLLOW REGULATIONS REGARDING MAXIMUM ALLOWABLE VELOCITY, CALCULATED IN FEET PER SECOND (FPS), MAY RESULT IN DAMAGE OF PAINTBALL MARKER, SERIOUS INJURY OR DEATH. BE RESPONSIBLE AND ALWAYS USE A CHRONOGRAPH TO DETERMINE ACCURATE VELOCITY BEFORE PLAY.



## TRIGGER ADJUSTMENT

- There are four adjustment screws (marked A, B, C and D) to adjust the trigger on the G4.
- Screw A (5/64") adjusts the amount of trigger travel prior to the marker firing. Turning this screw clockwise will reduce the amount of trigger travel. Turning this screw counterclockwise will increase the amount of trigger travel. **(SEE PIC A)**
- Screw B (5/64") sets the amount of trigger travel after the marker has been fired. Turning the screw clockwise will reduce the amount of trigger travel. Turning the screw counterclockwise will increase the amount of trigger travel. **(SEE PIC B)**

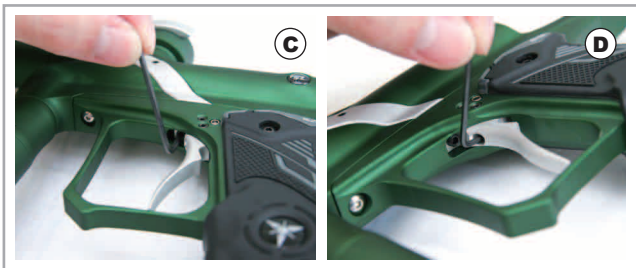


## TRIGGER ADJUSTMENT (CONTINUED)

- Screw C (3/32") adjusts the strength of the trigger's return to rest by either reducing or increasing the magnetic pull. Turning this screw counterclockwise will decrease the strength. Turning this screw clockwise will increase the strength. Do not turn the screw too far - doing so may weaken the magnetic pull and prevent the trigger from being able to fully return to rest. (SEE PIC C)
- Screw D (5/64") adjusts the length of the trigger's touch the micro switch. Turning this screw counterclockwise will decrease the length. Turning this screw clockwise will increase the length. Do not turn the screw too far - because can be damage the micro switch. (SEE PIC D)

### NOTE

BE CAREFUL NOT TO TURN THE SCREW TOO FAR IN EITHER DIRECTION, AS DOING SO MAY PUSH THE TRIGGER PAST THE FIRING POINT AND CAUSE OPERATIONAL FAILURE.



## BOARD

### TRIGGER

Fires the marker.

### FIRING MODE OPERATION

Firing mode Invokes program-  
ming mode at power up.

### PROGRAMING MODE OPERATION

Programming mode cycles  
through setpoints and enters  
setpoint values via pulls.

### LED

#### POWER ON

Green light indicate battery level  
ok, Red light indicate battery  
level low.

### POWER BUTTON

#### POWER ON

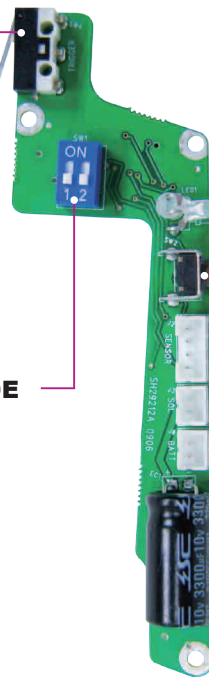
Press and hold until illuminates.  
Release and marker is ready to  
fire.

#### POWER OFF

Press and hold 2 seconds until  
board turns off. Release and  
marker is off.

### EYE CONTROL

Tap to toggle eye sensor on/off.

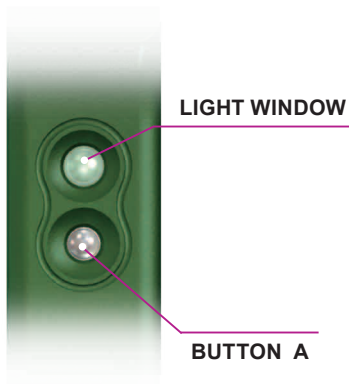


# PROGRAMMING YOUR G4

## 1. POWER

### POWER ON

- Press and hold down Button A to turn on the marker with eye sensors on.
- When battery voltage is lower than 7.2V, the indicator light will flash red. When battery voltage is over 7.2V then the indicator light will flash green.
- When the G4 eye sensors are on the indicator will blink a slow green light (1 blink/0.5 seconds). The indicator light will remain solid green when paintball is in the breach.
- To turn the eye sensors off, press and release Button A. When the G4 eye sensors are off the indicator light will blink a quick green light (1 blink/0.2 seconds)



### POWER OFF

- Press and hold down Button A for 2 seconds before indicator light turns off.
- The marker will shut down automatically after being idle for 20 minutes. The marker will retain the last adjusted set points whether it shutdown automatically, manually or by removing the battery.

# PROGRAMMING YOUR G4 (CONTINUED)

## 2. TOURNAMENT LOCK

- Dip Switch 1 set to "ON". Modes cannot be set without unlocking tournament lock.
- Dip Switch 2 is non functional.



## 3. CONFIGURATION MODE

- To enter programming mode, marker must first be turned off and dip Switch 1 must be set to OFF position.
- Pull and hold down trigger then press Button A for 2 seconds. Release Button A and then trigger and the indicator light will flash multiple colors and stop at solid red which indicates programming mode.



## PROGRAMMING YOUR G4 (CONTINUED)

### 3. CONFIGURATION MODE

- Setting Options as below:

Functionality Mode	LED	Factory Default	Min/Max
Rate Of Fire	Red	13	5/35
Firing Mode	Green	1	1/4
Ramp Point	Yellow	3	1/10
Trigger Debounce	Red Flash	10	1/20
Solenoid Dwell	Green Flash	12	5/25
ABS Dwell	Yellow Flash	4	1/4

## PROGRAMMING YOUR G4 (CONTINUED)

### FIRING MODE

Mode	Description
Semi	Fire 1 shot per trigger pull.
PSP3	Three semi shots then transitions to 3 Rounds Burst. Returns to semi mode after 1 second of no activity.
NXL	Semi for the first 3 shots, then full automatic on the 4 <sup>th</sup> pull and hold. Rests to semi after 1 second of no activity.
Millennium	When triggering pull speed up to 7.5 BPS ramping will turn on at the 6 <sup>th</sup> trigger pull, when trigger pull speed lower than 7.5 BPS then the fire mode will be back to semi fire mode.

### SOLENOID DWELL

This value controls the allotted time (in milliseconds) the solenoid is open. If too low, the marker will not cycle. If the value is too high, the solenoid will remain open too long therefore wasting decreasing battery and air efficiency.

### ABS DWELL

Adds an additional 1-3 milliseconds of dwell time to the programmed solenoid dwell setpoint on the first shot of any string of shots after a fixed 20 seconds of shooting inactivity. A value of 4 disables the ABS Dwell feature.

## PROGRAMMING YOUR G4 (CONTINUED)

### RESET

To reset the marker to manufacturing default settings, press and hold down the trigger then press and hold down the on/off button. Release the on/off button and hold on to the trigger for 10 seconds until yellow light appears.

### 4. EXAMPLE SETTING FROM SEMI TO MILLENNIUM

1. Turn off the marker before entering the setting mode and switch dip 1 to the OFF position
2. Pull and hold the trigger then press power button to turn on the marker. Release the power button then trigger, the LED will be Red which indicates the Rate of Fire setpoint.
3. Pull trigger once to proceed to the next function selection mode, when the LED turns green then the functional model will be at the Firing Mode. Press the POWER button once to enter the observation model which will display the last setting. The LED will be flash the value that previous set.
  - If pull the trigger at the observation mode then will be skip to the next function.
  - If the original setting is at 4 then green LED 4 times, so on and so forth.
4. Follow-up to Step (3), then press POWER button once (LED will blink red green and yellow in a second indicating of access to adjustable settings mode.
5. Following steps (4), in accordance with pulling the trigger 4 times (it will set the value to 4 [Millennium Mode]. Press the power button one time to indicate the set and to leave the adjustment mode back to Step 3 observation mode. The last settings well be reflected in the blinking of the indicator light.
6. Then look at the other function whether or not to continue to choose or turned off board to leave the set mode.

## CARE AND MAINTENANCE

Routine care and maintenance for your Dangerous Power G4 will ensure many years of high performance and enjoyment. When in doubt, always seek the assistance of a certified technician from a reputable pro shop, or contact Dangerous Power Customer Service.

### DEGASSING the G4

Always be sure to completely de-gas your marker before performing maintenance or service repair. Carefully follow the instructions below in sequence to ensure that all remaining air has been removed from the entire marker:

1. Flip the RAPS™ ASA to the 'Off' position. This disconnects the air system from the marker.
2. Remove the paintball loading device and check to make sure there are no paintballs within the breech.
3. Unscrew the air system from the RAPS™ ASA.
4. Point the marker in a safe direction, and then fire 1-2 shots to remove air from the OPR. Be aware that the marker may still fire without any an air system attached.
5. Power OFF the marker.

### IMPORTANT NOTES BEFORE SERVICING YOUR MARKER :

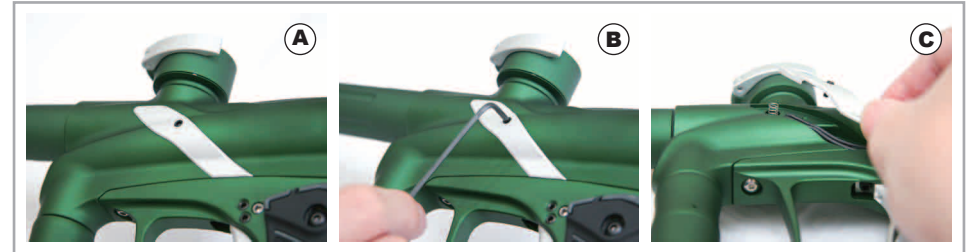
- DP ENGINEER SUGGEST YOU ALWAYS USE DP-40 LUBE TO SERVICE YOUR MARKER.
- DO NOT APPLY EXCESSIVE LUBRICANT.
- ALWAYS INSPECT AND CLEAN YOUR MARKER AFTER EACH USE.
- NEVER APPLY EXCESSIVE FORCE WHEN REMOVING OR REPLACING SCREWS. DOING SO MAY STRIP THE SCREW HEADS OR DAMAGE THREADS.
- ALWAYS USE THE CORRECT SIZE AND THE APPROPRIATE TOOLS.
- REFRAIN FROM SUBMERSING ENTIRE MARKER IN LIQUID. KEEP SENSITIVE ELECTRONICS SUCH AS SOLENOID AND CIRCUIT BOARD FREE FROM MOISTURE.
- NEVER ALLOW SOMEONE WHO IS UNFAMILIAR WITH YOUR MARKER TO PERFORM MAINTENANCE OR REPAIR WORK. WHEN IN DOUBT, CONTACT DP ENGINEERING CUSTOMER SERVICE.

## CLEANING THE EYE-SENSOR BREAK BEAM SYSTEM

The function of the break beam sensor eyes is to allow the firing circuit to 'time' the activation of the solenoid. This prevents 'chopping' of paint, which is caused by the bolt cycling within the breech without the paintball being actually seated in the proper firing position. When the eye sensors are ON, the gun will not fire if the beam does not sense a paintball. To ensure proper function, the eye sensors should be cleaned after every other use, or when paintballs have been broken within the marker. More frequent cleaning may be necessary when using paintballs that have 'oily residue' on the surface of the shell. To avoid malfunction, always use fresh and clean paint from a reliable manufacturer.

To clean the eyes:

1. Locate the eye cover plates on either side of your G4 body. (SEE PIC A)
2. Using provided allen key wrench (5/64"), carefully remove the eye cover screw on one side by inserting ball point tip and turning wrench handle counterclockwise. (SEE PIC B)
3. Lift eye cover plate, exposing eye wires, spring, and ball detent. (SEE PIC C)





## CLEANING THE EYE-SENSOR BREAK BEAM SYSTEM (CONTINUED)

- Carefully lift eye wires and pull out the eye sensors from the socket. Be careful not to lose the spring and the ball detent. **(SEE PIC D)**
- With a cotton swab, gently wipe the back and front side of the eye sensor and the eye socket to remove any debris or residue. **(SEE PIC E)**
- Replace eye sensors back to original position. Be sure the eyes are aligned correctly and facing the direction of the breech.
- Replace eye cover plate in original position and gently tighten eye cover screws clockwise. **DO NOT OVERTIGHTEN! (SEE PIC F)**
- Repeat the same procedure on the other side.

### HELPFUL HINT

DO NOT PULL ON THE EYE WIRES. USE A SMALL PICK OR SCREW DRIVER TO GENTLY LIFT THE WIRES UP. THIS WILL LIFT THE EYE SENSORS OUT OF THE EYE SOCKET.



## CLEANING THE BALL DETENTS

The ball detents and spring should be inspected during the cleaning of the eye sensors. Replace these parts should you notice any damage, no matter how slight.

- Locate the eye cover plates on either side of your G4 body.
- Using provided allen key wrench (5/64"), carefully remove the eye cover screw on one side by inserting ball point tip and turning wrench handle counterclockwise. **(SEE PIC A)**
- Lift eye cover plate, exposing eye wires, spring, and ball detent. **(SEE PIC B)**
- Remove spring by carefully lifting it up by hand or with the aid of small tweezers. **(SEE PIC C)**



## CLEANING THE BALL DETENTS (CONTINUED)

5. Place finger within breech, and gently push on the detent from the inside of marker body. Remove ball detent. (SEE PIC D)
6. Check the spring for proper tension and the ball detent for any damage. Replace with new part(s) if necessary.
7. With a cotton swab, clean the spring, ball detent, and detent groove. (SEE PIC E)
8. Replace detent back to original position, with the circular side down towards the breech.
9. Replace spring over the detent in the original position.
10. Replace eye cover plate in original position and gently tighten eye cover screws clockwise. DO NOT OVERTIGHTEN! (SEE PIC F)
11. Repeat the same procedure on the other side.



## OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE

The OPR regulates the amount of air-flow, which determines paintball velocity. Regular inspection and cleaning of your OPR is an essential part of keeping your G4 running in top condition. Follow the easy steps outlined below to ensure that your OPR remains trouble-free.

1. Before disassembly of your regulator, be sure to disconnect the macro-line hose from the elbow fitting attached to your regulator. This is accomplished by pulling back on the collet of the elbow fitting, while simultaneously pulling the macro-line out to remove.
2. With a firm hold on the OPR body, unscrew by hand the entire unit in a counterclockwise direction. If the OPR unit is difficult to turn by hand, a rubber strap wrench available in most hardware stores may be used. (SEE PIC A)



### NOTE

DO NOT UNSCREW BY USING WRENCH OR PLIERS, AS DOING SO MAY SCRATCH AND DAMAGE THE ANODIZED SURFACE.



## OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE (CONTINUED)

3. By hand or with the assistance of a strap wrench, unscrew the Operating Pressure Regulator Body from the OPR Bottom Housing. (SEE PIC B)
4. Take out Regulator Piston and remove Regulator Spring . (SEE PIC C)
5. Remove all visible debris and dirt with a lightly dampened and clean cotton cloth. Take care not to scratch the surface of any regulator parts.
6. Lightly apply a small amount of DP-40 lubricant to the tip of a cotton swab. (SEE PIC D)



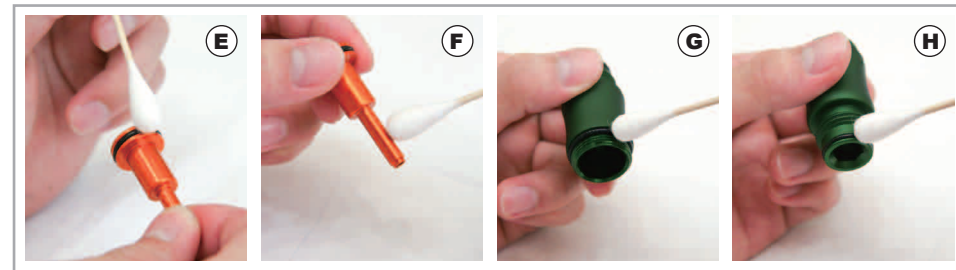
## OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE (CONTINUED)

7. Apply lubricant to the o-ring located on the base of the OPR Piston. (SEE PIC E)
8. Apply lubricant on the stem of OPR Piston. (SEE PIC F)
9. Apply lubricant to the 2 o-rings located on the OPR Top Housing Ring. (SEE PIC G . H)

Be careful not to apply excess pressure, as doing so may damage sensitive parts and/or strip delicate threads.

### NOTE

CAREFULLY INSPECT O-RING PRIOR TO APPLYING LUBRICANT. REPLACE IF O-RING APPEARS WORN, CRACKED, TORN, OR DAMAGED.



## DISASSEMBLY AND MAINTENANCE OF DUMP VALVE BOLT AND DUMP VALVE PLUG

1. Unscrew front of barrel from G4 body.
2. Use supplied allen key wrench (1/4") on the back of marker and unscrew back cap. (SEE PIC A)
3. Remove Dump Valve Plug from marker body. (SEE PIC B)
4. Remove Dump Valve Bolt from marker body. It may be necessary to use your finger to pull it or push it out, as illustrated. (SEE PIC C)
5. Wipe off all visible debris and grime from the Dump Valve Bolt, Dump Valve Plug and internal of G4 body with a soft dampened cotton cloth and cotton swab.



## DISASSEMBLY AND MAINTENANCE OF DUMP VALVE BOLT AND DUMP VALVE PLUG (CONTINUED)

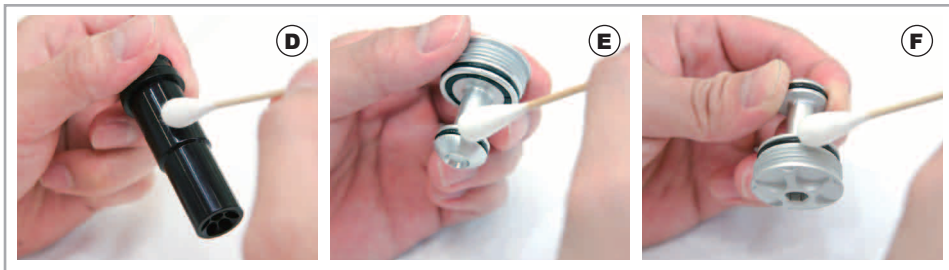
4. Lightly apply DP-40 lubricant to the tip of a cotton swab.
5. Apply lubricant directly onto the Dump Valve Bolt. (SEE PIC D)
6. Apply lubricant to the two o-rings located on the Dump Valve Plug. (SEE PIC E . F)

### NOTE

THE ABOVE STEPS ARE ALL THAT ARE REQUIRED FOR NORMAL BOLT MAINTENANCE. PROCEED FURTHER TO ACCESS SOLENOID AND TRIGGER.

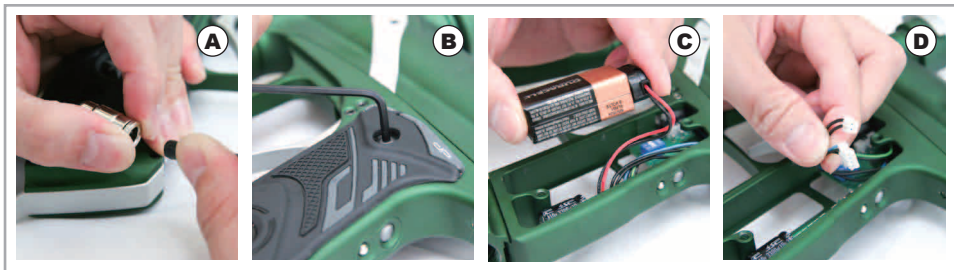
### WARNING

NEVER USE FORCE DURING DISASSEMBLY OR REASSEMBLY. ALWAYS SEEK ASSISTANCE FROM A QUALIFIED AIRSMITH OR CONTACT DP ENGINEERING CUSTOMER SERVICE IF YOU ARE UNCERTAIN OF ANY INSTRUCTIONS DESCRIBED IN THIS MANUAL.



## SEPARATING G4 BODY FROM TRIGGER FRAME

1. Remove macro-line from RAPS™ ASA. (SEE PIC A)
2. Carefully remove the 2 hexagonal screws (3/32") holding the left panel in place. (SEE PIC B)
3. Gently secure the base of the connectors and pull up to remove the plugs. DO SO ONE AT A TIME. It may be helpful to use needle nose pliers. Note the location and direction of the connectors on the circuit board for reassembly. (SEE PIC C . D)



## SEPARATING G4 BODY FROM TRIGGER FRAME (CONTINUED)

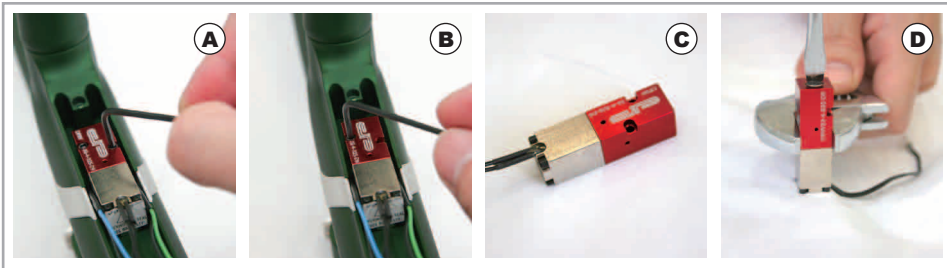
4. Locate screw #1 underneath G4 body between OPR and Trigger Guard and screw #2 behind the trigger frame. Using (3/32") allen key wrench, loosen Connector Screw by turning it counterclockwise. (SEE PIC E . F)
5. Separate the G4 body from the trigger frame. (SEE PIC G)



## SOLENOID MAINTENANCE

The G4 solenoid is a delicate electronic component that requires minimal maintenance or service. DP Engineering does not recommend frequent cleaning of this part, or its internals. The following instructions are provided for reference and for expert airsmiths only.

1. Follow Page 38 continued operation next step.
2. Using (5/64") allen wrench key, locate and remove both screws securing the solenoid to the marker body. **(SEE PIC A . B)**
3. Once both screws are removed, gently lift and remove the solenoid. **(SEE PIC C)**
4. Place solenoid on a flat surface, with the wiring harness side facing down and solenoid disassembly screw facing up.
5. Secure base of solenoid casing with an adjustable wrench (not provided). Using a slotted (flathead) screwdriver, remove screw carefully by turning it counterclockwise. Be extremely careful not to strip the screw. **(SEE PIC D)**

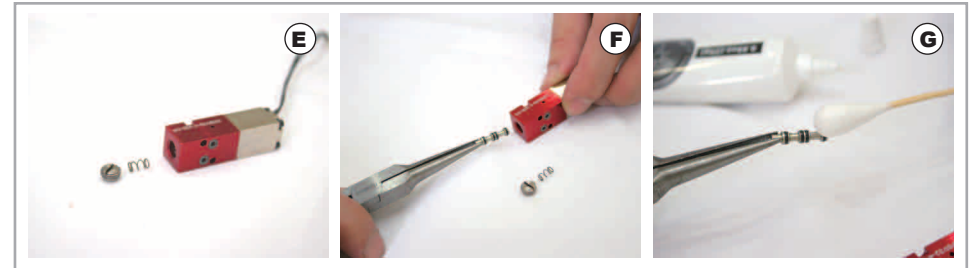


## SOLENOID MAINTENANCE (CONTINUED)

6. Remove solenoid spring. **(SEE PIC E)**
7. With thin tweezers or needle nose pliers, carefully remove the solenoid piston by gently securing the tip and pulling it out. **(SEE PIC F)**
8. Carefully inspect and clean solenoid piston o-rings. Make sure the o-rings are not cracked, broken, or show signs of wear. Replace parts if necessary.
9. With a cotton swab, lightly apply a small amount of DP-40 lube to the solenoid piston assembly. **(SEE PIC G)**
10. Replace in reverse order.

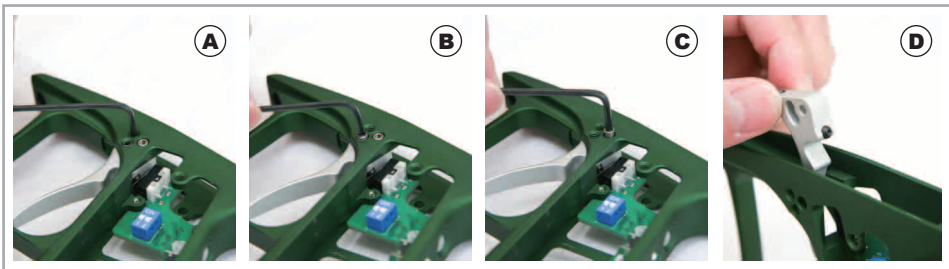
### WARNING

NEVER USE FORCE WHEN REMOVING OR REINSTALLING THE SOLENOID AND ITS SENSITIVE INTERNALS. BE CAREFUL NOT TO BEND, TWIST, OR BREAK DELICATE WIRES, AS DOING SO MAY RENDER THE UNIT INOPERATIVE OR CAUSE IT TO MALFUNCTION.



## REMOVING TRIGGER FROM FRAME

1. Locate the two trigger adjustment screws. Use (5/64") allen key wrench to loosen and remove both screws by turning them counterclockwise. Be careful not to misplace the screws. **(SEE PIC A . B)**
2. Locate trigger removal screw. Use (3/32") allen key wrench to loosen and remove screw by turning it counterclockwise. Carefully pull out screw. Note that the latter part of the screw is a bolt, which the trigger hinges upon. **(SEE PIC C)**
3. Remove trigger assembly by lifting it up and out of G4 trigger frame. **(SEE PIC D)**



## RAPS™ FLIP LEVER ASA REMOVAL AND MAINTENANCE

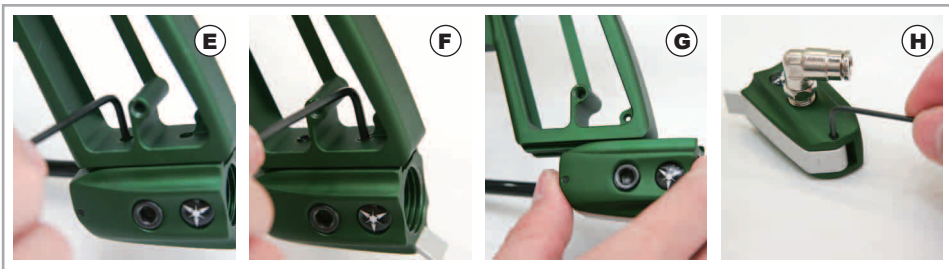
The RAPS™ ASA was designed to be virtually maintenance free. However, it may be necessary to occasionally clean and inspect for debris or damage, as either may cause malfunction or leaking of air.

1. Remove macro-line from RAPS™ ASA. **(SEE PIC A)**
2. Remove butterfly grip panels from trigger frame. **(SEE PIC B)**
3. Disconnect solenoid wiring harness and eye wiring harness from circuit board. **(SEE PIC C)**
4. Locate the three screws securing circuit board to trigger frame and unscrew using a crosshead (Phillips) screwdriver. Carefully remove the circuit board from the trigger frame. **(SEE PIC D)**



## RAPS™ FLIP LEVER ASA REMOVAL AND MAINTENANCE (CONTINUED)

5. Locate front and back screws within grip frame as illustrated, and unscrew with (3/32") allen key wrench. (SEE PIC E . F)
6. Slide RAPS™ ASA forward on rail to remove from frame. (SEE PIC G)
7. Locate hex screw on RAPS™ ASA casing.
8. Using (5/64") allen key wrench, loosen and remove screw by turning it counterclockwise. (SEE PIC H)
9. Remove RAPS™ lever and piston from RAPS™ casing as shown.
10. Check spring for proper tension. Replace if worn or damaged.

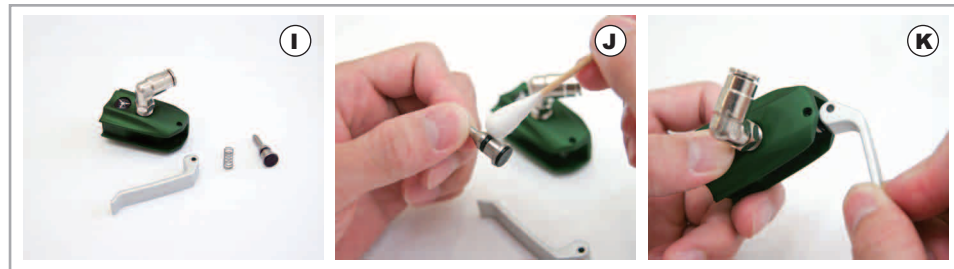


## RAPS™ FLIP LEVER ASA REMOVAL AND MAINTENANCE (CONTINUED)

11. Use a lightly dampened cloth and/or cotton swab to remove debris or grime from all RAPS™ ASA components, including the piston, spring, lever, and casing. (SEE PIC I)
12. Clean and inspect o-ring located on the base of the piston. Replace o-ring if it appears worn, cracked, or damaged. Using a cotton swab, apply a small amount of DP-40 lubricant on the o-ring. (SEE PIC J)
13. Make sure the spring is properly seated on the piston, then reassemble the RAPS™ ASA in the reverse order of assembly. (SEE PIC K)

### WARNING

REMEMBER TO DE-GAS THE G4 BEFORE SERVICING THE RAPS™ ASA. FOLLOW INSTRUCTIONS PREVIOUSLY OUTLINED ON PAGE 27 TO SAFELY AND PROPERLY REMOVE EXCESS AIR FROM THE MARKER.





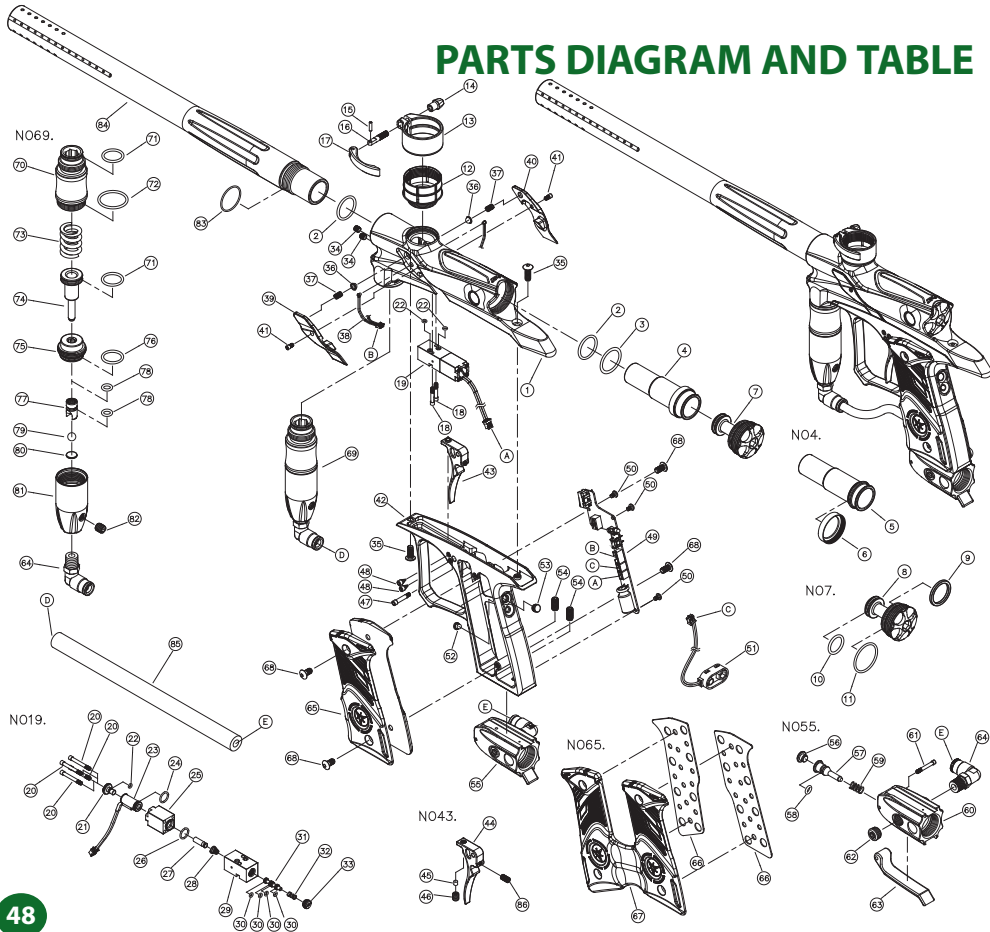
# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
<b>G4 will not turn on</b>	Not activated	Hold down operating button for more than 4 seconds
	Low battery power	Replace with fresh battery
	Battery is connected incorrectly to the PC board	Check to see if the battery cable is connected correctly to the terminal
<b>G4 will not fire</b>	Low battery power	Replace with fresh battery
	Low air pressure	Refill the air system
	Solenoid may be out of place	Open grip and press solenoid forward
	OPR pressure is too low	Adjust OPR pressure without paintball present

PROBLEM	POSSIBLE CAUSE	SOLUTION
<b>G4 will not fire with sensor system on</b>	No paintball present	Turn on the loader
	Sensor system is unclean	Remove and clean sensor eye
	Broken paintball inside	Refer to bolt maintenance
	Ball detent is damaged	Change ball detent
<b>G4 will not cycle completely</b>	Air pressure is too low	Adjust the operating pressure to 150 to 200 psi
	Dwell time is too short	See "dwell adjust system"
	Low battery power	Change battery
	Bolt o-ring is worn	Change o-ring
	Bolt o-ring lubricant is exhaust	Lubricate the o-ring with Dow-55 lubricant

PROBLEM	POSSIBLE CAUSE	SOLUTION
<b>Air leaking from barrel area</b>	Bolt cap o-ring is worn	Change o-ring
	Internal o-ring is worn or damaged	Change o-ring
<b>Paintball breaking out of the barrel</b>	Barrel size does not match paintball's	The stock barrel size is 0.690, change if necessary
<b>Paintball chopping internally</b>	Ball detent is worn	Change ball detent
	Sensor system is not on	Switch it to ON
	Low battery power	Replace with fresh battery

# PARTS DIAGRAM AND TABLE



NO	ITEM NUMBER	O'ty	NOTE
1	20-B01285-401-PG400B	1	
2	20-F01730-000-PTHR7A	2	Ø17.17 * Ø1.78
3	20-F01800-000-PSPE0B	1	Ø19 * Ø2
4	20-A40130-301-PSPE0B	1	
5	20-B10332-301-PSPE0B	1	
6	20-F05050-000-PSPE0B	1	
7	20-A40160-400-PG400B	1	
8	20-B10423-400-PG400B	1	
9	20-E10170-000-PT00	1	
10	20-F01810-000-PSPE0B	1	Ø13 * Ø2
11	20-F01550-000-PFUS0A	2	Ø21.95 * Ø1.78
12	20-B25642-401-PG300B	1	
13	20-B16133-401-PG300B	1	
14	20-H03150-000-PG300B	1	
15	20-H05560-000-PFUS0A	1	
16	20-C25030-104-PG300B	1	
17	20-B30674-401-PG300B	1	
18	20-W10790-000-PFUS0A	2	#3-56UNF-13.3L
19	20-A06192-305-PIQ00L	1	
20	20-W10780-000-PFUS0A	4	#3-56UNF-19.8L
21	20-C20040-104-PFUS0A	1	
22	20-F01780-000-PG300B	3	Ø2 * Ø1
23	20-A06170-000-PSPI0B	1	
24	20-F01480-000-PFUS0A	1	Ø6 * Ø1
25	20-C01042-104-PFUS0A	1	
26	20-F01470-000-PFUS0A	1	Ø7.5 * Ø1
27	20-C20053-104-PTHR7A	1	
28	20-G10230-000-PFUS0A	1	
29	20-B20242-305-PTHR7A	1	
30	20-F01700-000-PFUS0A	4	Ø2 * Ø1
31	20-H05480-000-PTHR7A	1	
32	20-G10220-000-PFUS0A	1	
33	20-H03110-000-PFUS0A	1	
34	20-W10930-000-PTHR7A	2	#5-40UNC-3/16"L
35	20-H03190-000-PREV0B	2	#8-32UNC-12L
36	20-E01150-000-PSPI0B	2	
37	20-G10300-000-PSPI0B	2	
38	20-W23600-000-PSPI0B	1	
39	20-B30914-101-PG400B	1	
40	20-B30924-101-PG400B	1	
41	20-W11020-000-PSPI0B	2	#3-56UNF-4L
42	20-B05305-401-PG400B	1	
43	20-A60290-101-PG400B	1	

NO	ITEM NUMBER	O'ty	NOTE
44	20-B30934-101-PG400B	1	
45	20-W63020-000-PREV0B	1	Ø3 * T3
46	20-W11042-000-PREV0B	1	#10-32UNF-6L
47	20-H03210-000-PSPE0B	1	#3-56UNF-15L
48	20-W11012-000-PFUS0A	2	#8-32UNC
49	20-W23670-000-PSPE0B	1	
50	20-W10840-000-PFUS0A	3	#3-56UNF-5/32"L
51	20-W23510-000-PFUS0A	1	
52	20-B10392-300-PFX00B	1	
53	20-F10170-000-PG400B	1	
54	20-W11040-000-PSPI0B	2	#10-32UNF-5/16"L
55	20-A01290-401-PG300B	1	
56	20-E01130-000-PFUS0A	1	
57	20-H05540-000-PG300B	1	
58	20-F01590-000-PFUS0A	1	Ø3.69 * Ø1.78
59	20-G10250-000-PFUS0A	1	
60	20-B25635-401-PG300B	1	
61	20-W10810-000-PFUS0A	1	#3-56UNF-17.3L
62	20-W10560-000-PM31	1	1/8"-27NPT-6.5L
63	20-B30684-400-PG300B	1	
64	20-A01130-104-PT00	2	1/8"NPT
65	20-A13890-610-PSPE0B	1	
66	20-C10122-000-PG300B	2	
67	20-E05250-610-PSPE0B	1	
68	20-W10730-000-PFUS0A	4	#8-32UNC-5/16"L
69	20-A20310-371-PG400B	1	
70	20-B25703-401-PG400B	1	
71	20-F01510-000-PFUS0A	2	Ø14 * Ø1.78
72	20-F01870-000-PG400B	1	Ø20.35 * Ø1.78
73	20-G10330-000-PFX00B	1	
74	20-B10382-307-PFX00B	1	
75	20-B20282-307-PG400B	1	
76	20-F01760-000-PTHR7A	1	Ø15.6 * Ø1.78
77	20-H03233-000-PG400B	1	
78	20-F01520-000-PFUS0A	2	Ø5.29 * Ø1.78
79	20-W01050-000-PXMT0A	1	Ø1/4"
80	20-H01040-000-PG400B	1	
81	20-B16283-401-PG400B	1	
82	20-W10870-000-PG400B	1	1/4"-28UNF-6.35L
83	20-F01820-000-PSPE0B	1	Ø12.42 * Ø1.78
84	20-B16292-401-PG400B	1	
85	20-E02092-000-P031	1	Ø1/4" * 130L
86	20-W11010-000-PFUS0A	1	#8-32UNC-3/8"L

## STATEMENT OF LIABILITY

The manufacturer assumes no responsibility for this product's safe operation upon sale or distribution. PROPERTY DAMAGE, BODILY INJURY, OR DEATH could occur due to misuse, abuse or failure to follow the manufacturer's instructions stated in this manual. The manufacturer will assume no responsibility for physical injury or property damage resulting from the use of this marker. The information in this document is subject to change without prior notice. The manufacturer assumes no responsibility for any errors that may appear in this document.

## DISCLAIMER

Notice is hereby given that this owner's manual is part of the article owned in whole by the manufacturer, known as indicated by this disclaimer and all illustrations within the manual. All rights for manufacturing and reproducing of such articles or any part thereof are reserved by the manufacturer. Neither said article nor any part thereof may be manufactured or reproduced in any way except by the written authorization of the manufacturer. All proprietary truths and information are the sole property of the manufacturer.

## LIMITED WARRANTY

DANGEROUS POWER™ warrants this G4 paintball marker, to the initial retail purchaser, to be free from defect in original materials and/or workmanship for twelve (12) months from the original date of purchase, with the following exceptions:

1. Disposable parts (batteries, o-rings, seals, micro switch, air pressure hose, rubber and/or plastic material parts, etc.) are not included in this limited lifetime warranty.
2. Electronic parts on this marker are fully warranted for 30 days from the original date of purchase.
3. Bolt and striker systems of this marker are fully warranted for 6 months from the original date of purchase.
4. Surface damages (scratches and nicks) or operation failure due to accident, neglect, modification, normal wear, operator error, maintenance by anyone other than an authorized dealer or agent, misuse, improper disassembly and reassembly, are expressly not covered under this warranty.

PURCHASER IS RESPONSIBLE FOR ALL RENDERED SERVICES NOT COVERED UNDER THIS LIMITED WARRANTY, INCLUDING ANY APPLICABLE SHIPPING COSTS, LABOR, AND/OR INSTALLATION.

DANGEROUS POWER™ reserves the right to determine the legitimacy of claimed defective original parts and their eligibility for coverage under the terms of this warranty. DANGEROUS POWER™, its authorized dealers, affiliates, and/or agents, will not be held liable under this warranty, state, federal, or common law for any product failure, personal injury, or property damage resulting from improper use and/or alteration of this product. Any attempt to alter the trigger assembly will instantly void your warranty and may result in serious injury. Any attempt to alter basic marker parts without prior written consent from the manufacturer will result in automatic default of all expressed warranties.

This limited warranty is non-transferable and is valid only upon presentation of a completed warranty registration card and original proof of purchase. There are no other warranties or guarantees, expressed or implied, made by the manufacturer on this paintball marker.

**PAINTBALL MARKERS ARE NON-REFUNDABLE AND ARE NOT SUBJECT TO EXCHANGE FROM MANUFACTURER.**



**DANGEROUS POWER ENGINEERING**

## Product Registration Card

Fill out all of the information below completely. To activate your warranty, visit [www.dangerouspower.com](http://www.dangerouspower.com) and click on "SUPPORT" to register your product within 7 days of purchase. Keep this card and your receipt or proof of purchase - you will be asked to include both when sending in your product for warranty service.

Name \_\_\_\_\_

Address \_\_\_\_\_ Apt/Suite # \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Province \_\_\_\_\_

Zip/Postal Code \_\_\_\_\_ County \_\_\_\_\_ Country \_\_\_\_\_

Phone (\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_) \_\_\_\_\_

Email \_\_\_\_\_

Name of Product Purchased \_\_\_\_\_

Date of Purchase \_\_\_\_\_ (dd/mm/yy) Product Color \_\_\_\_\_

Place of Purchase \_\_\_\_\_

Product Serial Number (if applicable) \_\_\_\_\_

I guarantee all of the information completed above to be true and correct to the best of my knowledge.

Signature \_\_\_\_\_

Date \_\_\_\_\_

Visit [www.dangerouspower.com](http://www.dangerouspower.com) for more information on how to claim warranty.





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