OWNER'S MANUAL V2.0

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ENGINEERING

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 REV-i WAS UNLEASHED.

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

INNOVATIVE FEATURES

Ultra low-profile **Clamping Feedneck**. That's right - the clamping feedneck that is widely used throughout the paintball industry was originally designed by the folks at DP Engineering.
(U.S. Patent - US7252080B2)

RAPS™ (Rapid Air Pressurizing System) Flip Lever Style ASA. This revolutionary ASA makes standard twist-knob ASAs a thing of the past. Another DP Engineering original.
(U.S. Patent - US7156135)

Dump valve bolt and "**see-through**" **window**. With just five o-rings and one moving part in its entire operation, routine maintenance for the DP REV-i is no longer a chore! Inspired by DP Engineer's love for exotic sport cars and motorcycles, the option to view REV-i's flawless internal bolt system is a refined touch, dedicated to the mighty Ferrari Enzo.
(U.S. Patent - US7500478B2, Patent Publish Number - US2009/0064980A1)

SwitchBlade™ Trigger. Customize your game plan by flipping the trigger to the desired side, no tools necessary. Two amazing triggers in one - priceless.
(U.S. Patent - US7950380B2)

Grip frame OLED. Introducing the first ever, stock, "in the grip frame" OLED, for your viewing (and playing) pleasure.

Ultra sharp OLED display. The sharpest OLED display in its class, providing a high contrast (2000:1), high resolution (192 x 32), and extremely power efficient display screen.

Configurable modes. Rule change "immune" Tournament Modes that are fully user configurable. Flexible for all levels and modes of play.

WARNINGS
IMPORTANT SAFETY INSTRUCTIONS AND GUIDELINES!

The DP REV-i is NOT A TOY. Treat it with the same respect and care you would a firearm.

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 REV-i.

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.

Persons under the age of 18 must have adult supervision at all times during use of the REV-i, or any paintball firing device.

Observe all local and national laws regarding rules and regulations.

The REV-i 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 REV-i at an unintended target.

10. Always treat your REV-i as if it were loaded.

11. Keep your REV-i turned OFF until ready to use.

12. Always measure the velocity of paintballs from your REV-i with a suitable chronograph device before play.

13. Never look down the barrel or breech area of the REV-i without first ensuring that the marker is switched to the OFF position, with NO AIR in the marker.

    NOTE- SEE NOTE ON PAGE 5. 20 FOR DIRECTIONS ON REMOVING RESIDUAL AIR FROM A POWERED "OFF" MARKER.

WARNINGS
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 REV-i 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 REV-i to the OFF position.

18. Promptly remove any paintballs from your REV-i when not in use.

19. Always remember to remove residual air from your REV-i before attempting maintenance or service.

20. Always remember to remove residual air from your REV-i 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 REV-i 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 Dangerous Power authorized service dealer, or by contacting DP Engineering's Customer Service Staff.

CONTENTS

GETTING TO KNOW YOUR REV-i

Your REV-i 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 REV-i, please take the time to acquaint yourself with its operation, controls, programmable features, and care and maintenance instructions found in this Owner's Manual.

REV-i PARTS LIST

A. REV-i Body

B. Low-Rise Clamping Feedneck

C. REV-i Trigger Frame

D. Butterfly Grip Panel

E. OPR (Operating Pressure Regulator)

F. RAPS™ (Rapid Air Pressurizing System) ASA

G. SwitchBlade™ Trigger

H. Dump Valve Plug

I. Clear Bolt Tube (Anodized Aluminum Bolt Tube not shown)

J. Dump Valve Bolt

K. Button

L. OLED Display Window

M. Eye Cover

N. Trigger Adjustment Screws

O. Macro-line Elbow Fitting

P. Hose

INLINE REGULATOR

OPR PARTS LIST

A. OPR Top Housing Ring
B. OPR Main Body Housing
C. OPR Bottom Housing
D. OPR Piston
E. OPR Piston Washers x 8
F. Regulator Adjustment Screw
G. OPR Bottom Swivel Screw
H. C-clip

1. Ø14×Ø1.78
2. Ø21.95×Ø1.78
3. Ø18.77×Ø1.78
4. Ø4.47×Ø1.78
5. Ø15.6×Ø1.78
6. Ø9.25×Ø1.78

CONTENTS OF PACKAGE

Your REV-i package should include ALL of the following items:

- REV-i Marker Body
- 3 Barrel Backs (sizes .685, .689, and .693)
- 2 Barrel Tips (10.45 in. and 8.48 in.)
- 11 Piece Ball-Tip Allen Key Wrench Set
- T-Handle Allen Wrench (5/32")
- Color-matching Aluminum Sleeve
- Spare O-rings
- DP-40 Lubricant
- DP Key Chain
- Barrel Blocking Device
- Custom REV-i Carrying Case
- Owner's Manual
- Registration Card

EVERYTHING YOU NEED TO GET STARTED

Prepare the following items in order to begin using your REV-i:

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.

INSTALLING THE BATTERY

Carefully remove the 2 hexagonal screws (3/32") holding the left panel in place.

Locate battery harness and attach 9V battery to the connector pad. Do not use force!

Replace battery in grip frame as shown in illustration.

Replace grip frame and screws. Do not over tighten screws!

PIC 01

ATTACHING A PAINTBALL LOADER

Release clamp on feedneck. **(SEE PIC 02)**

Loosen thumbscrew counterclockwise by hand. **(SEE PIC 03)**

Insert feed tube of loader unit.

Close clamp securely. Loader should fit snug within feedneck. **(SEE PIC 04)**

If loader is too loose, remove and adjust thumbscrew.

WARNING
DO NOT USE EXCESSIVE FORCE TO THE CLAMP- DOING SO MAY CAUSE DAMAGE TO LOADER OR THE REV-i!

PIC 02

PIC 03

PIC 04

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

Insert macro-line hose firmly into the fitting and release the collet. Be sure that the hose is seated all the way to the end of elbow fitting. **(SEE PIC 05, 06)**

Repeat the same process on the macro-line elbow located on your HPR to connect the RAPS™ ASA.

WARNING
BE SURE TO REGULARLY INSPECT THE CONDITION OF YOUR MACRO-LINE HOSE TO ENSURE PROPER FITMENT. ALWAYS CHECK TO MAKE SURE THE MACRO-LINE HOSE IS SEATED ALL THE WAY TO THE END OF THE ELBOW.

PIC 05

PIC 06

ATTACHING AIR TANK TO RAPS™ FLIP LEVER ASA

Swing flip lever to the “release” position. **(SEE PIC 07)**

Attach air tank by carefully screwing it into the threaded portion of the RAPS™ ASA. Make sure tank fitment is tight and all the way in. **(SEE PIC 08)**

Return flip lever of the RAPS™ ASA to the “close” position. **(SEE PIC 09)**

A brief sound of air entering the system is normal. The REV-i is now pressurized.

WARNING
NITROGEN OR COMPRESSED AIR TANKS ONLY! NEVER USE CO2.

PIC 07

PIC 08

PIC 09

VELOCITY ADJUSTMENT

Locate the (1/4") allen key wrench included with your REV-i.

Adjust screw located at the bottom of Operating Pressure Regulator (OPR) to increase or decrease velocity. **(SEE PIC 11)**

Turn screw counterclockwise towards the (+) sign to increase velocity.

Turn screw clockwise towards the (-) sign to decrease velocity.

WARNING
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.
DP ENGINEERING RECOMMENDS THAT THE VELOCITY NEVER EXCEED 300 FPS.

PIC 10

PIC 11

TRIGGER ADJUSTMENT

Note the three adjustment screws (PIC 12, 13, and 14) in the vicinity of the SWITCHBLADE™ Trigger.

Screw (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 12)**

Screw (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 13)**

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.

PIC 12

PIC 13

Screw (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 14)**

PIC 14

REV-i’s SWITCHBLADE™ Trigger. This revolutionary trigger system allows the user to quickly switch between two trigger styles without the use of tools or disassembly. Simply flip the trigger and lock in place the desired trigger style.

PIC 15

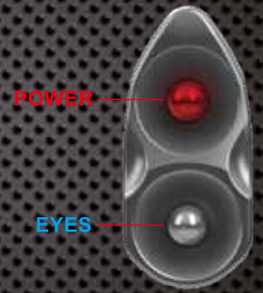
PIC 16

PIC 17

SWITCHING YOUR REV-i ON/OFF

- Press the Power Button to turn on the REV-i .
- To power OFF your REV-i, press the Power Button until your marker shuts off.

TURNING EYES ON/OFF



The REV-i uses a break beam eye sensor system to detect paintballs in the firing position. When the eye sensors are turned on, the circuit board will inhibit the firing of the bolt when no paintballs are detected.
This prevents unintended paintball breakage in the breech of the marker.
For optimum results during play, always leave the eyes in the “ON” position.
When “dry firing”, it will be necessary to switch the eye sensors to the “OFF” position.

Tap the Eye Button to toggle the eye function between ON or OFF.
Your marker will display the “EYES ON” icon on the OLED display when enabled and will fire at the “EYES ON” rate of fire.

When the eye function is disabled, the “EYES OFF” icon will appear on the OLED display and your marker will fire at the “EYES OFF” rate of fire.

SEVENTH ELEMENT DP REV-i BOARD

1. Product Features

Eight Firing Modes : SEMI AUTO
PSP THREE ROUND BURST
MILLENNIUM RAMPING
NXL
USER DEFINED RAMPING
AUTO RESPONSE
THREE ROUND BURST
TRAINING MODE

Sound Alert
Low Battery Alert
Eye Malfunction
One Second Force Shot
Auto Shut Down
Tournament Lock

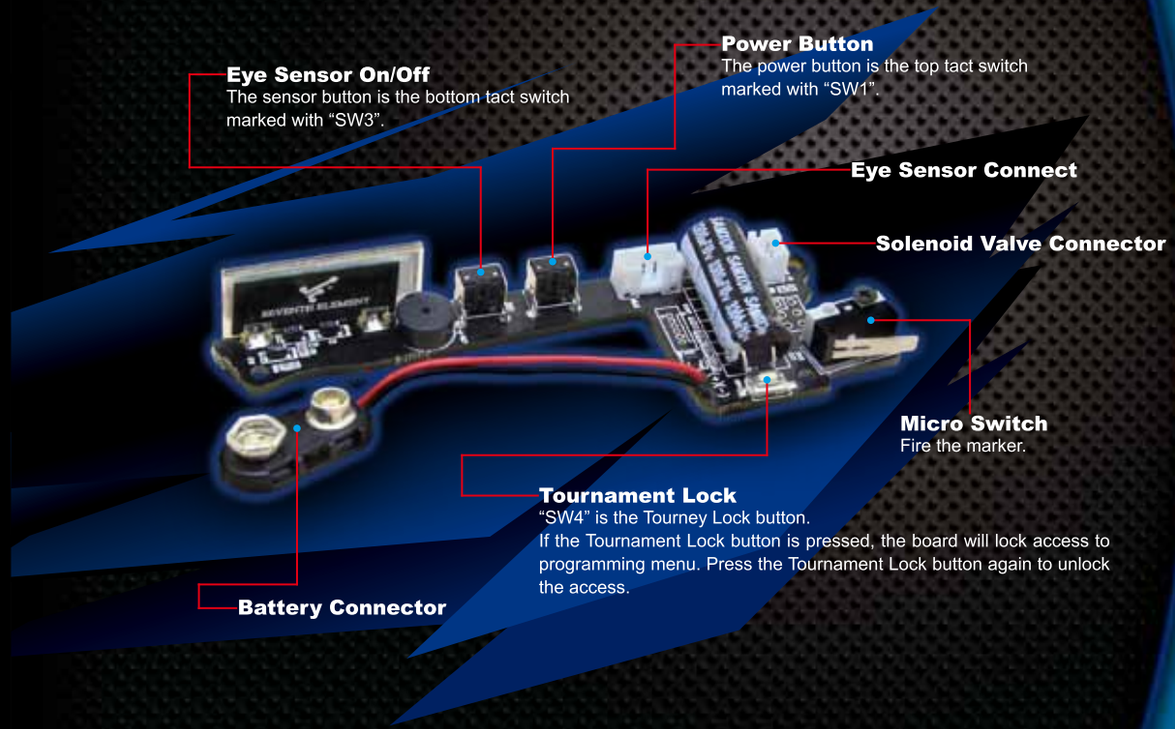
Debounce
Anti Mechanical Bounce
Adjustable Ramp Pull Number
Adjustable Ramp Activation Rate
Adjustable Ramp Sustain Rate
Adjustable Ramp Percentage
Maximum Rate Of Fire
Dwell
Eyesonsor Delay Time
Empty Breech Delay Time
Anti Bolt Stick
Factory Reset
Software Version

WARNING

FAILURE TO FOLLOW DIRECTIONS MAY RESULT IN DAMAGE TO THE BOARD.

- Do not pull the battery harness by the wire nor touch the harness with wet hands.
- Connect the battery harness firmly to the battery so that it does not become loose.
- Always use a fresh battery when replacing one. We recommend Alkaline or Lithium Ion type.
- Keep any flammable objects such as lighters, candles, cigarettes, and insecticides away from the board.
- Keep any heating devices away from the board.
- Keep the board away from places exposed to moisture or rain.
- Do not insert metal objects.

2. Buttons



3. OLED Indicator

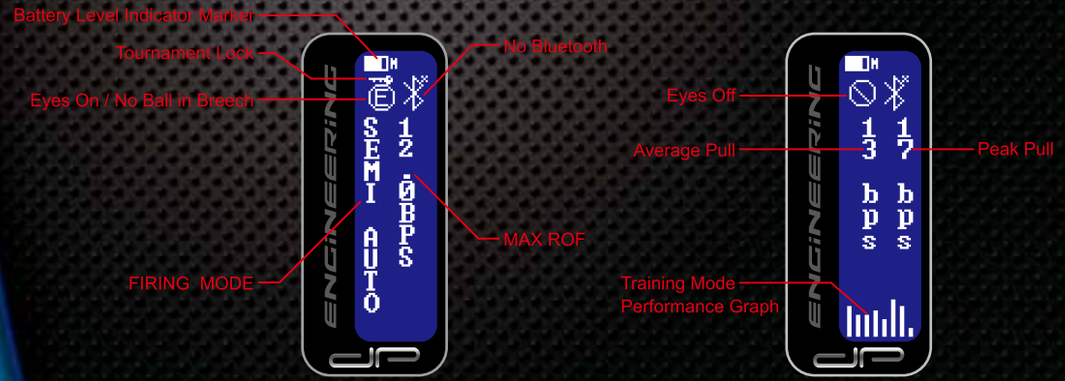
Press the Power Button to turn on the REV-i, the OLED screen will display the “Standard Mode”.

The entire firing operation can be programmed electronically for optimal results.

Depress the trigger to fire the REV-i.

ONE SECOND FORCE SHOT
WITH EYE SENSOR ON AND THE BREECH EMPTY, YOU CAN FORCE THE MARKER TO SHOOT A SINGLE SHOT BY HOLDING DOWN THE TRIGGER FOR ONE SECOND. THE PROCESS ENSURES YOU RECEIVE A CONTINUOUS BALL FEED.

"TRAINING MODE" please reference page 26.



4. Symbols

- Eyes On / Ball in Breech
- Eyes On / No Ball in Breech
- Eyes Off
- Eye Malfunction
- Eye Malfunction Indicator
  If your eye sensors are continuously blocked, the OLED will display “(E)” until the sensors are clear of paint or derbies. Your rate of fire will be reduced to10 bps to minimize any potential harm to your marker.
  Please check the sensors immediately.
- Tournament Lock
- No Bluetooth
- Battery Level Indicator Marker

5. Sound Indicator

During on/off Sequence

Low Battery Alert

Toggling Menu

Selecting New Settings

Confirming New Value

NOTE
WHEN THE BATTERY IS LOW ON POWER, THE OLED WILL DISPLAY THE LOW BATTERY LEVEL FOLLOWED BY A SINGLE CHIRP FROM THE BUZZER. THE LOW BATTERY ALERT WILL CONTINUE UNTIL YOU REPLACE WITH A NEW BATTERY. IF THE TRIGGER IS ACTIVE, THE SOUND ALERT WILL BE TEMPORARILY DISABLED AND WILL RESUME ONCE THE TRIGGER MOVEMENT STOPS.

6. REV-i Circuit Board Programming Flow-Chart

- **USER PROFILE**
  - ►ONE/ TWO/ THREE/ FOUR/ FIVE/ SIX/ SEVEN
    - **FIRING MODE** ►SEMI AUTO/ PSP 3ROUND/ MILLENNIUM/ NXL/ USER RAMP/ AUTO RESP/ 3RND BURST/ TRAINING
    - **DEBOUNCE** ►1.0~30.0 MS
    - **ANTI MECH BOUNCE** ►1.0~20.0 MS
    - **RAMP PULL NO** ►1~15 SHOT
    - **ACTIVATION RATE** ►4~15 BPS
    - **SUSTAIN RATE** ►4~15 BPS
    - **RAMP PERCENTAGE** ►10/ 20/ 30/ 40/ 50/ 60/ 70/ 80/ 90/ 100/ 150/ 200/ 250/ 300/ 350/ 400/ 450/ 500 %
    - **MAX ROF** ►5.0~30.0 BPS
    - **DWELL** ►4.0~30.0 MS
    - **ANTI BOLT STICK** ►0~20 MS
    - **BREECH DELAY** ►0.0~20.0 MS
    - **EYE DELAY** ►0.0~20.0 MS
    - **SENSIBILITY** ►MIDDLE/ HIGH/ LOW
    - **AUTO SHUT DOWN** ►1~30 MIN/ OFF
    - **SOUND ALERT** ►ON/ OFF
    - **FACTORY RESET** ►YES/ NO
    - **SOFTWARE VER** ►REV i 2.0

7. Programming Your REV-i

Please refer to REV-i Circuit Board Programming Flow-Chart for a complete overview.

To enter Programming Mode, POWER ON the REV-i while pulling the trigger down. Release the power button and trigger to continue.

NOTE
YOUR MARKER WILL NOT START IN PROGRAMMING MODE IF THE TOURNEY MODE LOCK SWITCH (SEE PAGE 21) IS IN THE “ON” POSITION.

The OLED screen will display the “User Setting” and followed by the “User Profile”.

Select the feature by toggling with the trigger.

Once you have reached the feature of your choice, hold down the trigger for two seconds.

The OLED display will begin to flash the current value. You will have FIVE seconds to enter a new value by pulling and releasing the trigger. If you wish to decrease the value or change the scrolling direction, press the eye sensor button each time.

Once the new value has been entered, the board will chirp once and the new value will be displayed on the OLED screen.

If you wish to leave the programming mode, press the power button once. The OLED will display “save and exit” seeking confirmation to save the new setting(s). Press the power button once more and the board will be turned off while saving the new setting(s).

8. REV-i Circuit Board Programming Navigation

- **USER PROFILES**
  You can select up to SEVEN personal profiles. Factory reset will only apply for the selected profile when resetting the board.

- **FIRING MODES :**
  SEMI AUTO — Your marker will shoot once per trigger pull up to your selected rate of fire.

  PAINTBALL SPORTS PROMOTION RAMPING — The first 3 shots are in semi automatic mode. Beginning with 4th shot, your marker will fire in three round burst mode. After one second of non action, the sequence will restart. You will need to set the MROF to the regulation rate.

  PAINTBALL SPORTS PROMOTION RAMPING — The first 3 shots are in semi automatic mode. Beginning with 4th shot, your marker will add artificially added shots up to your selected rate of fire. After one second of non action, the sequence will restart. You will need to set the MROF to the regulation rate.

  EUROPEAN MILLENNIUM SERIES RAMPING — The start/sustain ROF is 6bps with first 3 shots in semi auto mode. You can select your MROF. You will need to set the MROF to the regulation rate.
  National X-ball League Full Automatic. The first 3 shots are in semi automatic mode. Beginning with the 4th shot, as long as you hold down your trigger, your marker will shoot full automatic up to your selected rate of fire. After one second of non-action, the sequence will restart. You will need to set the MROF to the regulation rate.

  USER ADJUSTABLE RAMPING — Here you can adjust the required pull number, the activation shot speed, the sustain speed, and the ramp percentage to fine your ramping mode. Your marker will add artificially added shots up to your selected rate of fire. After one second of non-action, the sequence will restart.

  AUTOMATIC RESPONSE — At the pull of your trigger, the marker will fire a single shot. On the release of trigger, another single shot will be fired.

  THREE ROUND BURST — Three sequential shots will be fired on every pull and release of your trigger.

  TRAINING MODE — Enhance your trigger walking speed with this mode. With Semi Auto firing mode and the eye sensor off preselected, the board will indicate, in Balls per Second (bps), your trigger pulling speed in both Peak and Average.

- **DEBOUNCE**
  You can adjust the amount of time between trigger pull and release, further controlling the shot rate of your marker. If the setting is too low, you will run the risk of having your marker shooting uncontrolled shots.

- **ANTI BOUNCE**
  To prevent mechanical bounce, you can adjust your trigger setting to filter out undesired shots.

- **RAMP PULL NO**
  Required number of trigger pulls to start the ramping process. The required pull number must be pulled at the ramp activation rate. Only applies to User Adjustable Ramping and Full Auto/ Ramping.

- **ACTIVATION RATE**
  The trigger speed in which ramping will be activated. Ramping Activation Rate is only applied to User Adjustable Ramping and Full Automatic Ramping mode.

- **SUSTAIN RATE**
  Trigger speed in which to maintain the ramping. Ramp Sustain Rate is only applied to User Adjustable Ramping and Full Automatic Ramping mode.

- **RAMP PERCENTAGE**
  Ramp Percentage is multiplied by number of shots you shoot to create artificial shots. For example, if you select 50% as your ramp percentage, for every one trigger pull, 0.5 artificial shot is created, thus adding to shots you have actually made and resulting in greater rate of fire.

- **MAX ROF**
  This is your maximum rate of fire indicated in balls per second.

- **DWELL**

- **ANTI BOLT STICK**
  To prevent “first shot drop off” during play, dwell time is added to compensate for the bolt sticking.

- **BREECH DELAY**
  Empty breech delay time to be exact. Described in milliseconds, breech delay time allows how long the eye sensor stays connected before the breech is considered empty.

- **EYE DELAY**
  Described in milliseconds, Eye Delay Time defines how long a paintball must rest in the breech before it is considered ready to fire. Use the low settings for forced feed hoppers.

- **SENSIBILITY**

- **AUTO SHUT DOWN**

- **SOUND ALERT**
  The speaker can be turned on and off.

- **FACTORY RESET**
  When required, you may reset your board to the original factory setting.

- **SOFTWARE VER**
  Displays the current firmware version.

CARE AND MAINTENANCE

Your REV-i was designed to be reliable, easy to maintain, and easy to repair. Routine maintenance will ensure many years of performance and enjoyment. When in doubt, always seek the assistance of a certified technician from a reputable pro shop, or contact DP Engineering Customer Service.

Degassing the REV-i

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 operation:

Flip the RAPS™ ASA to the “OFF” position. This disconnects the air system from the marker.

Remove the paintball loading device and check to make sure there are no paintballs within the breech.

Unscrew the air system from the RAPS™ ASA.

Point the marker in a safe direction, then fire 1-2 shots to remove air from the OPR. Be aware that the marker may still fire without an air system attached!

POWER OFF the marker.

IMPORTANT NOTES BEFORE SERVICING YOUR MARKER :

USE OF HYDROCARBON BASED OILS, SUCH AS AUTOMOTIVE ENGINE OIL, WD-40, VASELINE, ETC. CAN SEVERELY DAMAGE INTERNAL SEALS AND ARE NOT RECOMMENDED.

ALWAYS USE A HIGH QUALITY LUBE OF CORRECT VISCOSITY, SPECIFICALLY DESIGNED FOR PAINTBALL MARKERS. ALWAYS USE DP-40 LUBE (SUPPLIED) OR ANOTHER HIGH QUALITY LUBE OF CORRECT VISCOSITY SPECIFICALLY DESIGNED FOR PAINTBALL MARKERS.

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 APPROPRIATE TOOLS AND THE CORRECT SIZE.

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:

Locate the eye cover plates on either side of your REV-i body. **(SEE PIC 18)**

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 19)**

Lift eye cover plate, exposing eye wires, spring, and ball detent. **(SEE PIC 20)**

PIC 18

PIC 19

PIC 20

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 21)**

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 22)**

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 23)**

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.

PIC 21

PIC 22

PIC 23

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 REV-i 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 24)**

Lift eye cover plate, exposing eye wires, spring, and ball detent. **(SEE PIC 25)**

Remove spring by carefully lifting it up by hand or with the aid of small tweezers. **(SEE PIC 26)**

PIC 24

PIC 25

PIC 26

Place finger within breech, and gently push on the detent from the inside of marker body. Remove ball detent. **(SEE PIC 27)**

Check the spring for proper tension and the ball detent for any damage. Replace withnew part(s) if necessary.

With a cotton swab, clean the spring, ball detent, and detent groove. **(SEE PIC 28)**

Replace detent back to original position, with the circular side down towards the breech.

Replace spring over the detent in the original position.

Replace eye cover plate in original position and gently tighten eye cover screws clockwise. DO NOT OVERTIGHTEN! **(SEE PIC 29)**

Repeat the same procedure on the other side.

PIC 27

PIC 28

PIC 29

OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE

As its name implies, 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 REV-i running in top condition. Follow the easy steps outlined below to ensure that your OPR remains trouble-free.

GENERAL DISASSEMBLY OF OPR

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 fitment, while simultaneously pulling the macro-line out to remove.

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 30)**

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

PIC 30

By hand or with the assistance of a strap wrench, unscrew the OPR Top Housing Ring from the OPR Main Body Housing. **(SEE PIC 31)**

Place finger inside OPR Piston, and lift to remove. **(SEE PIC 32)**

Carefully remove OPR Piston Washers from inside OPR Main Body Housing by turning it upside down on a flat surface. **(SEE PIC 33)**

NOTE
PLEASE NOTE THE PROPER STACKING ORDER AND DIRECTION OF THE SHIMS FOR CORRECT REASSEMBLY!

PIC 31

PIC 32

PIC 33

Using “C-clip” pliers (not supplied), remove the C-clips from the OPR Bottom Housing. Be careful not to scratch any anodized surfaces. **(SEE PIC 34 . 35)**

Using the supplied allen wrench key (1/4”), remove the Regulator Adjustment Screw. **(SEE PIC 36)**

PIC 34

PIC 35

PIC 36

CLEANING AND MAINTENANCE OF OPR

Remove all visible debris and dirt with a lightly dampened and clean cotton cloth. Be careful not to scratch the surface of any regulator parts.

Lightly apply a small amount of DP-40 lubricant to the tip of a cotton swab. **(SEE PIC 37)**

Apply lubricant to the o-ring located on the base of the Regulator Adjustment Screw. **(SEE PIC 38)**

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

PIC 37

PIC 38

Apply lubricant to the o-ring located on the base of the OPR Piston. **(SEE PIC 39)**

Apply lubricant to the o-ring located on the stem of OPR Piston. **(SEE PIC 40)**

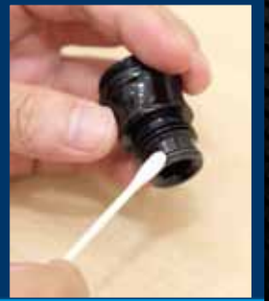
Apply lubricant to the 2 o-rings located on the OPR Top Housing Ring. **(SEE PIC 41 . 42)**

NOTE
BE CAREFUL NOT TO APPLY EXCESS PRESSURE, AS DOING SO MAY DAMAGE SENSITIVE PARTS AND/OR STRIP DELICATE THREADS.

PIC 39

PIC 40

PIC 41



PIC 42

DISASSEMBLY AND MAINTENANCE OF DUMP VALVE BOLT

Use supplied allen key Wrench (1/4") on the back of marker and unscrew back cap. **(SEE PIC 43 . 44)**

Remove Dump Valve Bolt from marker body. It may be necessary to use your finger to pull it out, as illustrated. **(SEE PIC 45)**

PIC 43

PIC 44

PIC 45

Remove Clear Bolt Sleeve. **(SEE PIC 46)**

Wipe off all visible debris and grime from the Dump Valve Bolt, Dump Valve Plug, and internal of REV-i body with a soft dampened cotton cloth and cotton swab. **(SEE PIC 47)**

Lightly apply DP-40 lubricant to the tip of a cotton swab. **(SEE PIC 48)**

PIC 46

PIC 47

PIC 48

Apply lubricant to the two o-rings located on the Dump Valve Bolt. **(SEE PIC 49 . 50)**

Apply lubricant to the two o-rings located on the Dump Valve Plug. **(SEE PIC 51 . 52)**

Reassemble Dump Valve Bolt and Plug in reverse order.

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 DP AUTHORIZED SERVICE DEALER, OR DP ENGINEERING CUSTOMER SERVICE IF YOU ARE UNCERTAIN OF ANY INSTRUCTIONS DESCRIBED IN THIS MANUAL.

PIC 49

PIC 50

PIC 51

PIC 52

SEPARATING REV-i BODY FROM TRIGGER FRAME

Locate screw underneath REV-i body, between OPR and Trigger Guard. Using (3/32") allen key wrench, loosen Connector Screw #1 by turning it counterclockwise. **(SEE PIC 53)**

Locate Connector Screw #2 within marker body by looking over top of REV-i body, through the bolt window. Using (5/32") allen key wrench, loosen screw by turning it counterclockwise. **(SEE PIC 54)**

Separate the REV-i body from the trigger frame. **(SEE PIC 55)**

PIC 53

PIC 54

PIC 55

REMOVING SWITCHBLADE™ TRIGGER FROM FRAME

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 56 . 57)**

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 58)**

Remove trigger assembly by lifting it up and out of REV-i trigger frame. **(SEE PIC 59)**

PIC 56

PIC 57

PIC 58

PIC 59

SOLENOID MAINTENANCE

The REV-i 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.

Once the REV-i body and trigger frame are separated, locate the solenoid within the marker body. Note the wiring harness connecting the solenoid to the main circuit board. **(SEE PIC 60)**

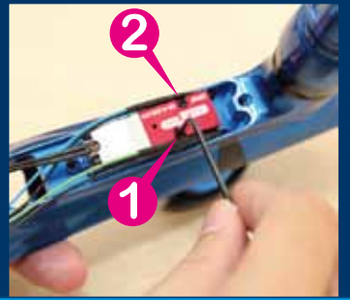
Gently secure the base of the connectors and pull up to remove the plugs. DO SO ONE AT A TIME. It may be helpful to use needle nose pliers. Note the location and direction of the connectors on the circuit board for reassembly. **(SEE PIC 61)**

With the connectors dislodged, turn the REV-i body so that the underside is facing up.

Using (5/65") allen wrench key, locate and remove both screws from the solenoid to the marker body. **(SEE PIC 62)**

PIC 60

PIC 61



PIC 62

Once both screws are removed, gently lift and remove the solenoid. **(SEE PIC 63)**

Place solenoid on a flat surface, with the wiring harness side facing down and solenoid disassembly screw facing up. **(SEE PIC 64)**

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 64)**

Remove solenoid spring. **(SEE PIC 65)**

PIC 63

PIC 64

PIC 65

With thin tweezers or needle nose pliers, carefully remove the solenoid piston by gently securing the tip and pulling it out. **(SEE PIC 66)**

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. With a cotton swab, lightly apply a small amount of DP-40 lube to the solenoid piston assembly. **(SEE PIC 67)**

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.

PIC 66

PIC 67

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.

WARNING
REMEMBER TO DE-GAS THE REV-I BEFORE SERVICING THE RAPS™ ASA. FOLLOW INSTRUCTIONS PREVIOUSLY OUTLINED ON PAGE 29 TO SAFELY AND PROPERLY REMOVE EXCESS AIR FROM THE MARKER.

Remove macro-line from RAPS™ ASA. **(SEE PIC 68)**

Remove butterfly grip panels from trigger frame.

Disconnect solenoid wiring harness from circuit board. **(SEE PIC 69)**

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 70)**

PIC 68

PIC 69

PIC 70

Locate front and back screws within grip frame as illustrated, and unscrew with (3/32") allen key wrench. **(SEE PIC 71)**

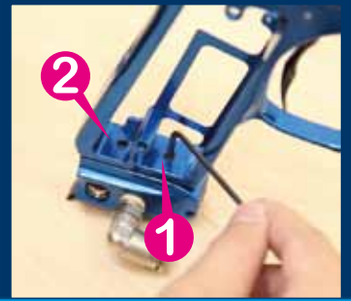
Slide RAPS™ ASA forward on rail to remove from frame. **(SEE PIC 72)**

Locate hex screw on RAPS™ ASA casing.

Using (5/64") allen key wrench, loosen and remove screw by turning it counterclockwise. **(SEE PIC 73)**

Remove RAPS™ lever and piston from RAPS™ body as shown.

Check spring for proper tension. Replace if worn or damaged.



PIC 71

PIC 72

PIC 73

Use a lightly dampened cloth and/or cotton swab to remove debris or grime from all RAPS™ ASA compenents, including the piston, spring, lever, and casing. **(SEE PIC 74)**

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 75)**

Make sure the spring is properly seated on the piston, then reassemble the RAPS™ ASA in the reverse order of assembly. **(SEE PIC 76)**

PIC 74

PIC 75

PIC 76

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

LIMITED LIFETIME WARRANTY

DANGEROUS POWER™ warrants this REV-i paintball marker, to the initial retail purchaser, to be free from defect in original materials and/or workmanship for the lifetime of the marker, with the following exceptions:

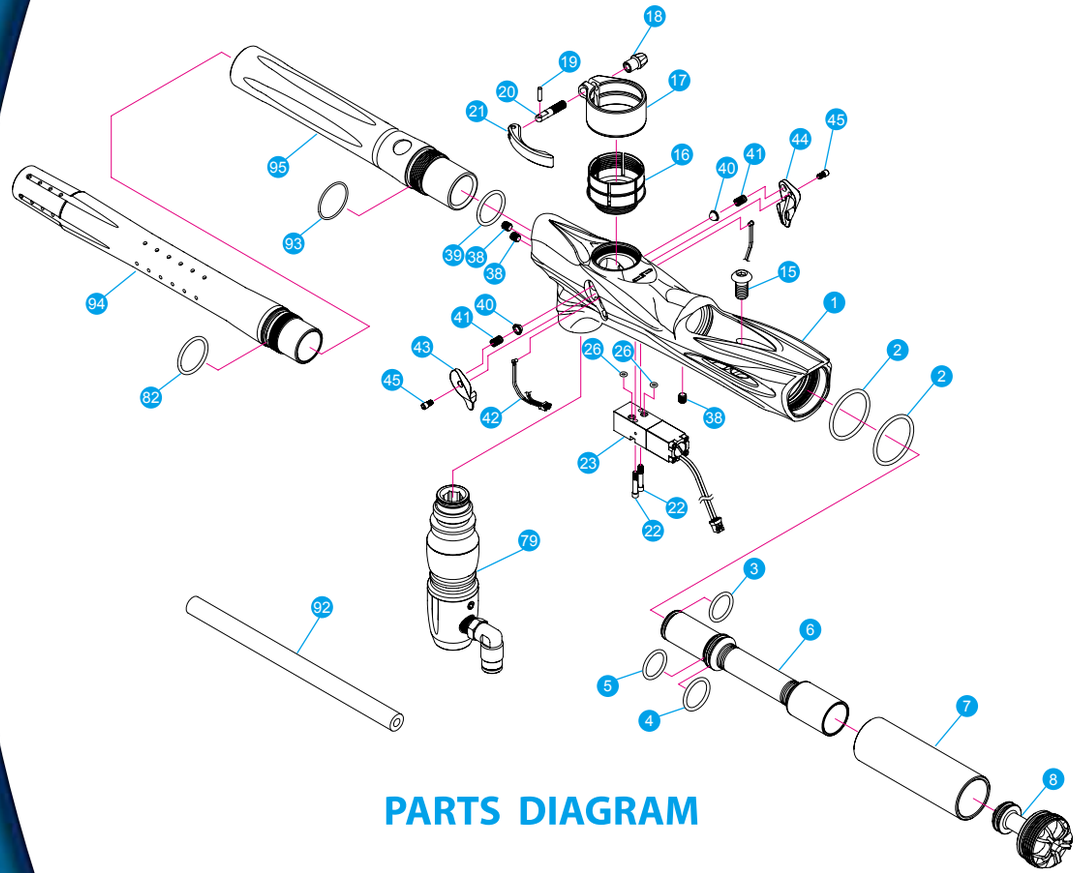
Disposable parts (batteries, o-rings, seals, micro switch, air pressure hose, rubber and/or plastic material parts, etc.) are not included in this limited lifetime warranty.
Electronic parts on this marker are fully warranted for 30 days from the original date of purchase.
Bolt and striker systems of this marker are fully warranted for 6 months from the original date of purchase.
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 lifetime warranty, including any applicable shipping costs, labor, and/or installation.

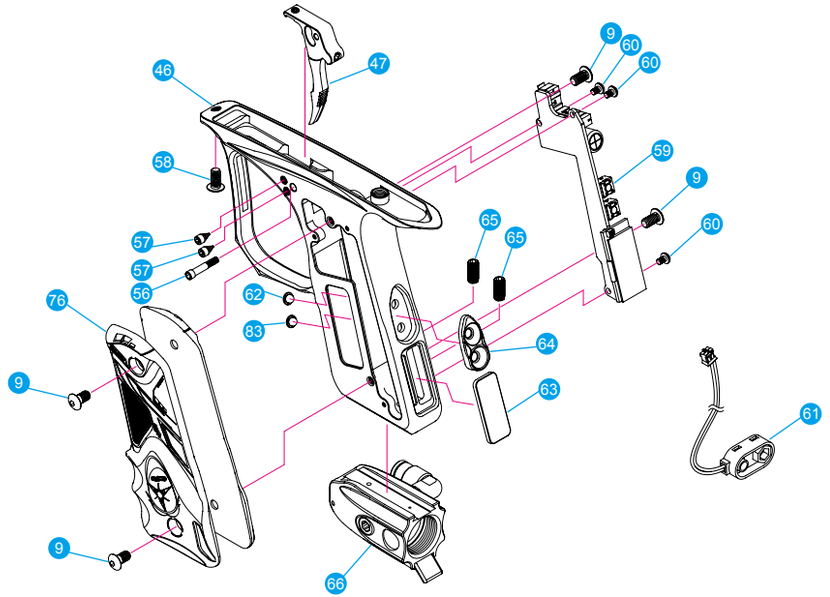
DANGEROUS POWER™ reserves the right to determine the legitimacy of claimed defective original parts and their eligibility for coverage under the terms of this warranty. DANGEROUS POWER™, its authorized dealers, affiliates, and/or agents, will not be held liable under this warranty, state, federal, or 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 lifetime 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.



PARTS DIAGRAM



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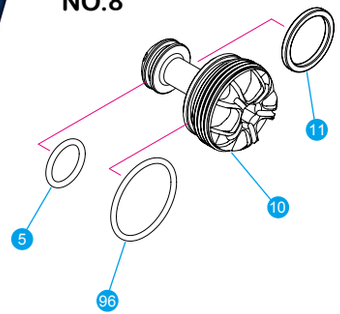

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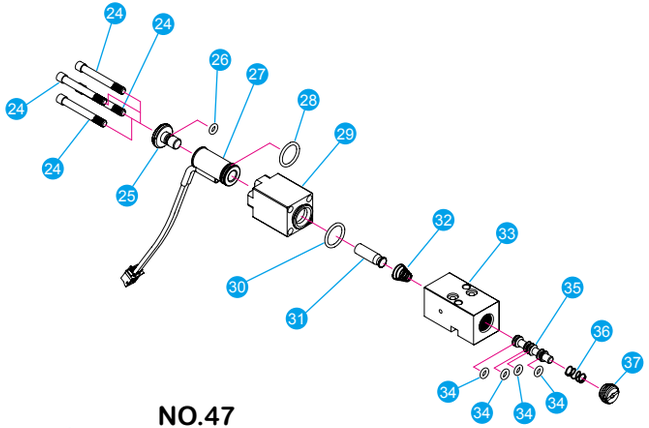

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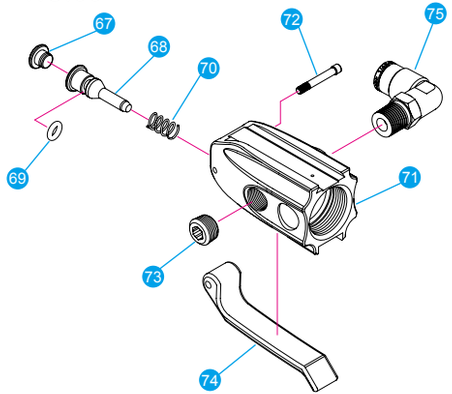

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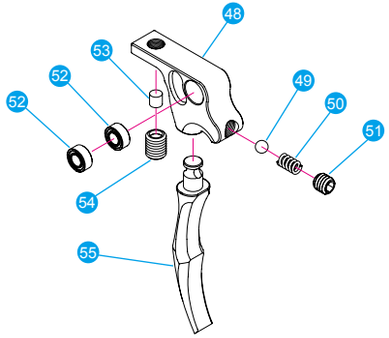

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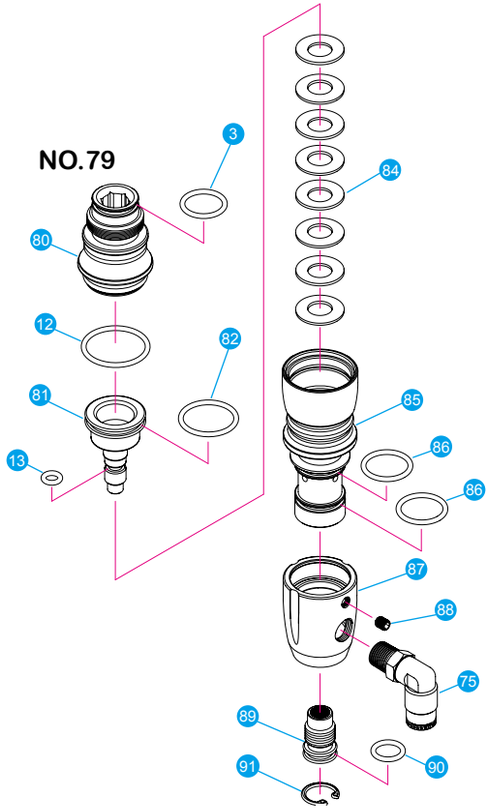

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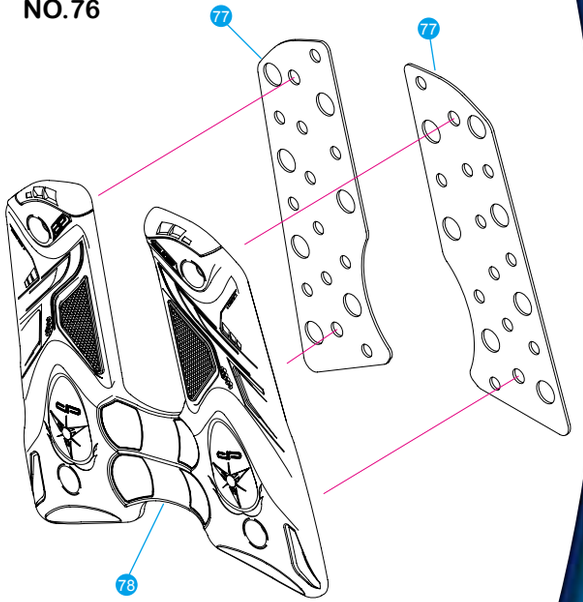

PARTS LIST

No	Item Number	Qty	Note
1	20-B01167-300-PREV0B	1	
2	20-F01790-000-PREV0B	2	Ø26xØ2
3	20-F01510-000-PFUS0A	2	Ø14xØ1.78
4	20-F01750-000-PTHR7A	1	Ø15.8xØ1.9
5	20-F01720-000-PTHR7A	2	Ø13.8xØ1.9
6	20-B10053-300-PREV0B	1	
7	20-E20123-000-PREV0B	1	
8	20-A40210-300-PREV0B	1	
9	20-H03180-000-PREV0B	4	#8-32UNC-5/16"L
10	20-B10143-300-PREV0B	1	
11	20-E10170-000-PT00	1	
12	20-F01550-000-PFUS0A	1	Ø21.95xØ1.78
13	20-F01570-000-PFUS0A	1	Ø4.47xØ1.78
14	————————————————		
15	20-H03170-000-PREV0B	1	#1/4"-28UNF-12L
16	20-B25653-300-PG3LEH	1	
17	20-B15974-300-PG3LEH	1	
18	20-H03150-000-PG300B	1	
19	20-H05560-000-PFUS0A	1	
20	20-C25030-104-PG300B	1	
21	20-B30725-301-PG3LEH	1	
22	20-W10790-000-PFUS0A	2	#3-56UNF-13.3L
23	20-A06192-305-PIQ00L	1	
24	20-W10780-000-PFUS0A	4	#3-56UNF-19.8L
25	20-C20040-104-PFUS0A	1	
26	20-F01780-000-PG300B	3	Ø2xØ1
27	20-A06170-000-PSPI0B	1	
28	20-F01480-000-PFUS0A	1	Ø6xØ1
29	20-C01042-104-PFUS0A	1	
30	20-F01470-000-PFUS0A	1	Ø7.5xØ1
31	20-C20053-104-PTHR7A	1	
32	20-G10230-000-PFUS0A	1	
33	20-B20242-305-PTHR7A	1	
34	20-F01700-000-PFUS0A	4	Ø2xØ1
35	20-H05480-000-PTHR7A	1	
36	20-G10220-000-PFUS0A	1	
37	20-H03112-000-PFUS0A	1	
38	20-W10930-000-PTHR7A	3	#5-40UNC-3/16"L
39	20-F01730-000-PTHR7A	1	Ø17.17xØ1.78
40	20-E01150-000-PSPI0B	2	
41	20-G10300-000-PSPI0B	2	
42	20-W23600-000-PSPI0B	1	
43	20-B30405-300-PREV0B	1	
44	20-B30625-300-PREV0B	1	
45	20-W11020-000-PSPI0B	2	#3-56UNF-4L
46	20-B05175-300-PREV0B	1	
47	20-A06220-300-PREV0B	1	
48	20-B30704-300-PREV0B	1	
49	W50090-E17C	1	Ø3
50	20-G01250-000-PREV0B	1	
51	20-W10710-000-PFUS0A	1	#8-32UNC-5/32"L
52	20-W60010-000-PREV0B	2	
53	20-W63020-000-PREV0B	1	Ø3xT3
54	20-W11042-000-PREV0B	1	#10-32UNF-6L
55	20-B30774-300-PREV0B		
56	20-H03200-000-PREV0B	1	#3-56UNF-15L
57	20-W11014-000-PFUS8A	2	#8-32UNC
58	20-H03190-000-PREV0B	1	#8-32UNC-12L
59	20-W23650-000-PREV0B	1	
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67	20-E01130-000-PFUS0A	1	
68	20-H05540-000-PG300B	1	
69	20-F01590-000-PFUS0A	1	Ø3.69xØ1.78
70	20-G10250-000-PFUS0A	1	
71	20-B25554-300-PG3LEH	1	
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73	20-W10560-000-PM31	1	#3-56UNF-17.3L
74	20-B30765-300-PG3LEH	1	
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76	20-A13860-610-PREV0B	1	
77	20-C10110-000-PSPI0B	2	
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79	20-A20260-300-PREV0B	1	
80	20-B25543-300-PREV0B	1	
81	20-B10302-305-PG3LEH	1	
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84	20-W20090-000-PFUS0A	8	
85	20-B15843-300-PREV0B	1	
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89	20-H05523-000-PG3LEH	1	
90	20-F01580-000-PFUS0A	1	Ø9.25xØ1.78
91	20-W53010-000-PFUS0A	1	
92	20-E02092-000-P031	1	Ø1/4"x130L
93	20-F01600-000-PFUS0A	1	Ø20xØ1
94	20-B16153-300-PG3LEH	1	
95	20-B16174-300-PREV0B	1	
96	20-F01740-000-PTHR7A	1	Ø25.12xØ1.78

DP ENGINEERING

Product Registration Card

Fill out all of the information below completely. To activate your warranty.visit 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 for more information on how to claim warranty.

ENGINEERING