



**TIPPMANN**

# **RAIDER**



**USER MANUAL**

## **WARNING**

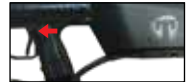
**This is not a toy. Misuse may cause serious injury or death. Eye, face, and ear protection designed for paintball must be worn by the user and any person within range. We recommend you be at least 18 years old to purchase. Persons under 18 must have adult supervision when using this product. Read the Owner's Manual before using this product.**

## **WARNING**

### **Safety is Your Responsibility**

**Read and familiarize yourself and any other user of this marker with the safety instructions in this manual. Follow these instructions when using, working on, transporting, or storing this marker.**

**Always keep the trigger safety in safe mode unless firing as detailed in instructions on page 6.**



**Always keep the barrel blocking device installed when not in a shooting situation, see instructions on page 5.**



# RAIDER

by

# Tippmann Sports/GI Sportz

2955 Adams Center Road. Fort Wayne, IN 46803  
1-800-533-4831 • 1-260-749-6022

CONGRATULATIONS on your purchase of your Tippmann Raider paintball marker. We believe our Raider to be the most accurate and durable paintball marker available. Raider markers will provide many years of dependable service if cared for properly.

Please take time to read this manual thoroughly and become familiar with your Raider marker's parts, operation, and safety precautions before you attempt to load or fire this marker. If you have a missing or broken part, or need assistance, please contact Tippmann/GI Sportz Customer Service at 1-800-220-3222 for fast, friendly service.

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## **WARNING**

**This product contains one or more chemicals that are known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.**

## **WARNING**

**Always keep the barrel blocking device installed except when your marker is in use. Always make sure that the Safety is in the safe mode (see instructions on page 6) and the barrel blocking device is properly installed on your marker according to the instructions to prevent damage to property, serious injury, or death.**

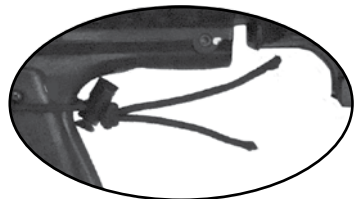
### **Barrel Blocking Device Installation Instructions**

1. Insert the barrel blocking device onto the Barrel, and loop the cord over the Air Supply Adapter (ASA) and position at the back of the grip as shown.

2. Adjust the cord length retainer up to the back of the grip by pulling the cord through it until the retainer is snug against the back of the grip. Keeping the cord as tight as possible, leave just enough cord elasticity to remove the cord/retainer from under the marker to remove the barrel blocking device for firing.



3. After the cord length is properly adjusted, lock the cord length by tying a knot in the cord against the back of the retainer as shown.
4. Before and after playing, inspect the barrel blocking device. Replace the barrel blocking device if the device or cord is damaged, or there is a loss of cord elasticity.



Cord Length Retainer and Knot

5. Clean the barrel blocking device with plain, warm water and store out of sunlight in a dry area when not in use.

## Warning/Liability Statement

This marker is classified as a dangerous weapon and is surrendered by Tippmann Sports/GI Sportz/GI Sportz with the understanding that the purchaser assumes all liability resulting from unsafe handling or any action that constitutes a violation of any applicable laws or regulations. Tippmann Sports/GI Sportz shall not be liable for personal injury, loss of property or life resulting from the use of this weapon under any circumstances, including intentional, reckless, negligent or accidental discharges.

All information contained in this manual is subject to change without notice. Tippmann Sports/GI Sportz reserves the right to make changes and improvements to products without incurring any obligation to incorporate such improvements into products previously sold.

If you as a user do not accept liability, Tippmann Sports/GI Sportz requests you do not use a Tippmann Sports/GI Sportz marker. By using this paintball marker you release Tippmann Sports/GI Sportz of any and all liability associated with its use.

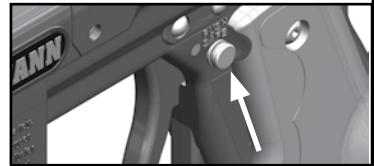
## SAFETY IS YOUR RESPONSIBILITY!

### **WARNING**

**Except when your marker is in use, always make sure that the safety button is in safe mode, and that the barrel blocking device is properly installed (see page 5).**

**To turn on safe mode: push the safety button in from left side.**

**To go to fire mode: push the safety button on the right side.**



Push in here for safe mode (fire mode shown).

### Familiarize Yourself With Safety...

The ownership of this weapon places upon you the total responsibility for its safe and lawful use. You must observe the same safety precautions as you would any firearm to assure the safety of not only yourself but everyone around you. Outlined here are some general precautions to be aware of. The user should at all times use caution and common sense when using this marker and always remember that the game of paintball can only survive and grow if it remains SAFE!

- Do not load or fire this marker until you have completely read this manual, and are familiar with its safety features, mechanical operation, and handling characteristics.
- Handle this and any marker as if it were loaded at all times.
- Keep your finger off the trigger until you are ready to shoot.
- Do not look down the barrel of a paintball marker. Accidental discharge into the eyes may cause permanent injury or death.
- Keep the marker in safe mode until ready to shoot (see Warning box above).
- Keep the barrel blocking device installed on marker when not shooting (page 5).
- Never point the marker at anything you do not intend to shoot.
- Never fire your marker at anything you do not intend to shoot because there may be balls or foreign debris lodged in the chamber, barrel, and/or the marker valve.

- Do not shoot at fragile objects such as windows.
- Never fire your marker at personal property of others. The paintball impact can cause damage and the paint can stain the finish of automobiles, houses, etc.
- Always keep the muzzle pointed down or in a safe direction, even if you stumble or fall.
- Eye, face, and ear protection designed specifically to stop paintballs in the form of goggles and full face mask meeting ASTM Specification F 1776 must be worn by the user and any person within range.
- Never shoot at a person who is not protected by eye, face, and ear protection designed for paintball.
- Pressurize and load the marker only when the marker will be immediately used.
- Store the marker unloaded and degassed in a secure place.  
NOTE: Before storing or disassembling, be sure to remove paintballs and air supply (see *Unloading Your Marker* and *Air Cylinder Removal* instructions on pages 8 and 10) and install the barrel blocking device (see page 4).
- Do not field strip or otherwise disassemble this marker while it is pressurized with air supply.
- Dress appropriately when playing the game of paintball. Avoid exposing any skin when playing the game of paintball. Even a light layer will absorb some of the impact and protect you from the paintballs.
- Keep exposed skin away from escaping gas when installing or removing air cylinder or if the marker or air supply is leaking. Compressed air can be very cold and may cause frostbite under certain conditions. Never use any other gas than high pressure air (HPA).
- Only use .68 caliber paintballs. Never load or fire any foreign objects.
- Avoid alcoholic beverages before and during the use of this marker. Handling markers while under the influence of drugs or alcohol is a criminal disregard for public safety.
- Avoid shooting an opponent at point blank, 6 feet or less.
- Familiarize yourself with instructions listed on air supply cylinder or adapter. Contact the air supply cylinder or adapter manufacturer with any questions.
- Read the *High Pressure Air Cylinder Warnings* and *Safety Tips* on pages 8–10 before beginning the cylinder installation or removal.
- Always measure your marker's velocity before playing paintball and never shoot at velocities in excess of 300 feet per second (see instructions on page 10).
- Do not brandish or display this product in public as it may cause confusion and may be a crime. Police or others may mistake this product for a real firearm. Altering the coloration or markings required by state or federal law to make the product look more like a firearm is dangerous and may be a crime.

## Getting Started

- Eye protection designed for paintball use must be worn by the user and any person within range.
- Do not disassemble this marker while it is pressurized.
- Do not pressurize a partially assembled marker.
- Read each step completely before performing the step.

**NOTE:** Carefully hand start all threaded parts when assembling, and do not overtighten, as this may potentially strip the threaded parts.

### **WARNING**

**Install the air supply and load the hopper with paintballs only after you:**

- **have a barrel blocking device installed (see page 5)**
- **have the Safety in safe mode (see page 6).**

**Eye protection designed for paintball use must be worn by the user and any person within range.**

### 1. Install the Barrel

- a. Install the Barrel and Hand Guard by turning it clockwise into the receiver.
- b. Install the barrel blocking device (page 4).

### 2. High Pressure Air (HPA) Cylinder Installation

Read the *Air Cylinder Warnings, Safety Tips, and Removal* on pages 8-10 before beginning the HPA cylinder installation. Do not pressurize a partially assembled paintball marker. Never use any other gas than high pressure air (HPA).

- a. Put the Safety in safe mode (see page 5) and install the barrel blocking device (see page 4).
- b. Lubricate the air cylinder valve O-ring with a little Tippmann grease.
- c. Insert the air cylinder valve into the Air Supply Adapter (ASA) at the back end of the marker grip.
- d. Twist the air cylinder clockwise into the ASA until it stops. Use caution as the marker is now capable of firing after you put the Safety in a fire mode. If you do not hear the full air cylinder engage, the pin valve could be too short or the pin valve seal is damaged, follow the *Air Cylinder Removal* instructions on page 10 and take your air cylinder to a "C5" Certified Airsmith for inspection or contact the cylinder manufacturer.

### 3. Loading the Loader

The barrel blocking device must be installed (see page 5) and the Safety in safe mode (see page 6).

- a. Open the lid on the loader
- b. Load your loader with .68 caliber paintballs. Do not force excessive numbers of paintballs into the loader.
- c. Turn the loader prime wheel to the right to feed balls into the feed channel. Once the channel is full do not force the wheel as it can cause paintball breakage.
- d. Close the loader lid



## 4. Firing the Marker

- Point the marker in a safe direction.
- Remove the barrel blocking device from the marker.
- Move the Safety from safe mode to fire mode.
- Pull the trigger to fire the marker.



## Unloading Your Marker

The barrel blocking device must be installed (see page 4) and the Safety in safe mode (see page 6).

- Eye protection designed for paintball use must be worn by the user and any person within range.
- Empty all paintballs from the Hopper.
- Go to a designated firing area, remove the barrel blocking device, and move the Safety to fire mode.
- Point your marker in a safe direction and fire several times towards the ground to be sure there are no remaining paintballs lodged in the feed channel, chamber or barrel.
- Return the Safety to safe mode (see page 5).
- Reinstall the barrel blocking device (see page 4).
- Read the *Air Cylinder Warnings and Safety Tips* on pages 9-10 before removing the air cylinder from your marker (removal instructions - page 10).
- Remove breech cover by pressing the release button on the side and then lift cover up.

## Velocity Adjustment

Each time you play paintball, check the velocity of your paintball marker with a chronograph (an instrument for measuring velocity) prior to playing paintball. Verify that the marker's velocity is under 300 feet per second (FPS), or less if required by the playing field.

To adjust the marker's velocity, use the included 1/8 hex wrench in the bottom of the vertical regulator (white arrow). Turning the hex wrench counterclockwise (CCW) increases the velocity (higher FPS). Turning clockwise (CW) decreases the velocity (lower FPS).

## High Pressure Air Cylinder Warnings

### **WARNING**

**The brass or nickel plated cylinder valve (#1) is intended to be permanently attached to the air cylinder (2).  
An air cylinder can fly off with enough force to cause serious injury or death if the cylinder (2) unscrews from a cylinder valve (1).**

Refer to the top image at right. There have been reported incidents caused by players unknowingly unscrewing the cylinder (2) from the cylinder valve (1). This occurs when the player thinks the entire valve-cylinder assembly is being unscrewed from the air adapter of the paintball marker, when in fact he or she is unscrewing the cylinder from the cylinder valve.

To avoid this danger, it is recommended (if your cylinder is not already marked) that you use paint or nail polish to place a mark (3) on the cylinder valve, and place another mark (4) on the cylinder, in line with the #3 mark as shown in the top image.

Whenever you turn the cylinder during removal, watch the marks on the cylinder and the cylinder valve to be sure that they rotate together. If at any time these marks start to separate



as shown in the bottom image, the cylinder is starting to unscrew from the cylinder valve and you must **STOP** and take the entire unit to a “C5” certified airsmith for safe removal and/or repair.

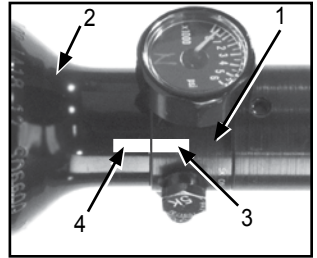
**NOTE:** The cylinder valve should unscrew from the paintball marker in about 3 or 4 full turns. If you finish the 4<sup>th</sup> full turn and the cylinder valve is not unscrewed from the paintball marker, **STOP!** Take the entire unit to a “C5” certified airsmith for safe removal and/or repair.

Locate a “C5” Certified Airsmith at [www.paintball-pti.com](http://www.paintball-pti.com).

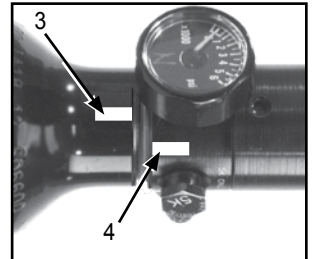
Whether you have a new or used refillable air cylinder, you are at risk if any of the following has occurred:

- The valve unit was replaced or altered after purchase.
- The valve unit was removed from the cylinder for any reason.
- Any modification was done to the refillable HPA cylinder.

If any of these conditions has occurred, take your air cylinder to a “C5” Certified Airsmith for inspection or contact the cylinder manufacturer.



Properly Marked Valve and Cylinder



Misaligned Valve and Cylinder

## Air Cylinder Safety Tips

SAFETY TIPS to ensure that your air cylinder is safe for play:

- Never use any other gas than high pressure air (HPA).
- Improper use, filling, storage, or disposal of air cylinder may result in property damage, serious personal injury or death.
- Make sure that any maintenance or modification to any air cylinder is done by a qualified professional, such as a “C5” certified airsmith.
- All air cylinders must be filled only by properly trained personnel.
- Cylinder valves must be installed or repaired only by properly trained personnel.
- Do not overfill a cylinder! Never exceed the air cylinder’s capacity.
- Do not expose pressurized air cylinder to temperatures exceeding 130 degrees Fahrenheit (55 degrees Celsius).
- Do not use caustic cleaners or strippers on the air cylinder or cylinder valve and do not expose to corrosive materials.
- Do not modify the air cylinder in any way. Never try to disassemble the cylinder valve from the air cylinder.
- Any air cylinder that has been exposed to fire or heated to a temperature of 350 degrees Fahrenheit (177 degrees Celsius) or more must be destroyed by properly trained personnel.
- Use appropriate gas for your cylinder. Only use compressed air in a compressed air cylinder. Never use any other gas than high pressure air (HPA).
- Keep all cylinders out of the reach of children. The air cylinder should be inspected and hydrostatically retested at least every 5 years by a DOT licensed agency.
- Keep exposed skin away from escaping gas when installing or removing the air cylinder, or if the marker or air cylinder is leaking. Compressed air is very cold, and can cause frostbite under certain conditions.

**NOTE:** Locate a “C5” certified airsmith at [www.paintball-pti.com](http://www.paintball-pti.com).

## Air Cylinder Removal

1. Read *Air Cylinder Warnings* (page 8) and *Air Cylinder Safety Tips* (page 9-10) before beginning the cylinder removal process.
2. Eye protection designed for paintball use must be worn by the user and any person within range.
3. Follow the *Unloading Your Marker* instructions on page 8.
4. Watch the marks on the cylinder and cylinder valve as you turn the cylinder approximately  $\frac{3}{4}$  turn counterclockwise. This allows the air valve pin to close so that no air will enter the marker.
5. Remove the barrel blocking device. Set the Safety to fire mode. Point the marker in a safe direction, and discharge the remaining gas in the marker by repeatedly pulling the trigger until the marker stops firing (this may take 4-5 shots). If your marker continues to fire, the cylinder’s pin valve has not closed yet. The cylinder pin valve could be longer than usual. Because of the variances in cylinder pin valve parts, each cylinder varies slightly on exactly how far it has to be turned. Turn the cylinder counterclockwise a little further and repeat this step until the marker does not fire. Only then remove the air cylinder.  
**NOTE:** If during this step, you turned the air cylinder and it began to leak before you pulled the trigger, the cylinder O-ring should be checked for damage before any re-assembly (see *Repairing Air Cylinder Leaks* below).
6. After the air cylinder is removed, again point and fire the marker in a safe direction to verify the marker is completely discharged of gas.
7. Move the Safety to safe mode (see page 5) and install the barrel blocking device (see page 4).

## Repairing Air Cylinder Leaks

The most common leak occurs from a bad air valve O-ring. To replace a valve O-ring you must first remove the bad O-ring and then install a new one. This O-ring is located on the tip of your air valve. The best valve O-rings are made of urethane. Urethane O-rings are not affected by high air pressures. These may be purchased from Tippmann or your local paintball dealer. There is an extra O-ring in the Accessory Pack that came with your marker.

**NOTE:** If a new air valve O-ring does not resolve an air leak, do not attempt to repair the air cylinder. Contact Tippmann Sports/GI Sportz, your local paintball dealer, or a “C5” Certified Airsmith.

## Cleaning and Maintenance

- To reduce the chance of an accidental discharge, follow the *Unloading Your Marker* (on page 8) and *Air Cylinder Removal* (on page 10).
- Eye protection must be worn.
- Do not disassemble a marker while it is pressurized with air.
- Do not pressurize a partially assembled marker.
- Follow warnings listed on the HPA cylinder for handling and storage.
- Familiarize yourself with instructions listed on air cylinder.
- Contact the air cylinder manufacturer with any questions.
- Do not use any petroleum based cleaning solvents.
- Do not use any cleaning solvents that come in aerosol cans.

**NOTE:** Petroleum based products and aerosol products can damage your marker’s O-rings.

To clean the exterior of your paintball marker, use a damp towel to wipe off paint, grease, and any debris. To clean the inside of the barrel, remove the barrel by unscrewing it from the Receiver. Insert the tab end of the cable squeegee into barrel. Pull the squeegee through the barrel to remove debris and paint.

General maintenance on your marker should be performed every 8000-10,000 shots or before the start of each day of play, whichever comes first. To perform general maintenance remove the bolt system as explained in *Disassembly Instructions* section under *Disassembly of Bolt System*. Apply silicon based grease (Dow 33 or similar) to specific areas in the parts diagram. This will keep your marker in good working condition. It is unnecessary to disassemble the rest of your marker for general maintenance. Inspect the air supply valve O-ring, and lubricate it with a little grease when attaching the air supply cylinder.

## Storage

Before storage, unload the marker (page 8) and remove air cylinder (see page 10). Ensure the Safety is in safe mode (see page 6) and the barrel blocking device is installed (see page 5). Store your marker in a dry area.

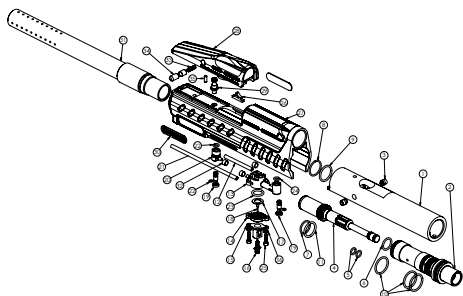
When removing your marker out of storage, make sure to keep the Safety in safe mode (see page 5) and keep the barrel blocking device installed (see page 4).

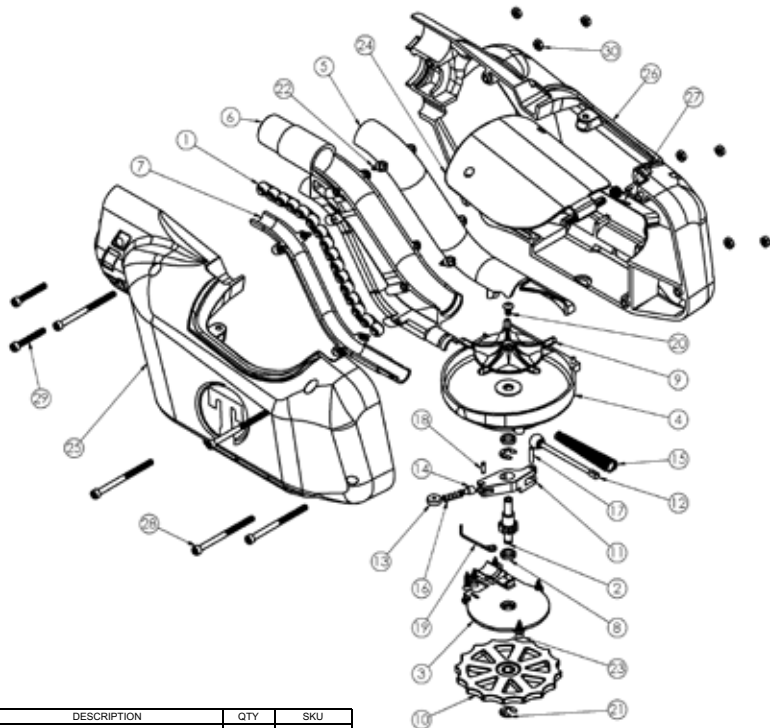
## Disassembly Instructions

Set up a workbench with plenty of workspace to make sure no small parts become lost. Always wear eye protection when performing any marker disassembly or re-assembly. Refer to the Parts Diagrams for these instructions.

- Follow *Unloading Your Marker* on page 8 and *Air Cylinder Removal* instructions on page 10.
- Do not pressurize a partially assembled paintball marker.

ITEM	DESCRIPTION	QTY	SKU
1	BODY	1	74435
2	BACK CAP	1	74436
3	DETENT	2	74218
4	BOLT	1	74220
5	O-RING URETHANE 70 DUR -010 (.239 ID)	2	57645
6	O-RING URETHANE 70 DUR -014 (.489 ID)	1	72553
7	O-RING URETHANE 90 DUR -015 (.551 ID)	1	65015
8	O-RING BUNA-N 70 DUR -017 (.676 ID)	1	40916
9	O-RING GREEN URETHANE 70 DUR -017 (.676 ID)	1	10247
10	O-RING BUNA-N 70 DUR -018 (.739 ID)	3	10249
11	O-RING BUNA-N 70 DUR 2MM CS X .16MM ID	1	10248
12	SHORT HOSE	1	74437
13	VALVE BODY	1	74438
14	VALVE CAP	1	74439
15	VALVE EXTENSION	1	74440
16	VALVE PLUNGER	1	74441
17	VALVE WASHER	1	74442
18	VALVE BALL SEAL	1	74443
19	AIR TRANSFER SCREW	2	74444
20	FRONT AIR FITTING	1	74212
21	LONG HOSE	1	74445
22	O-RING BUNA-N 70 DUR 1.0MM CS X 3.0MM ID	3	72487
23	O-RING BUNA-N 70 DUR 2.0MM CS X 10.8MM ID	1	74446
24	O-RING BUNA-N 70 DUR -008 (.176 ID)	2	10250
25	SCREW SHCS 5-40 X .438	2	72516
26	FEED TUBE BALL LATCH	1	11839
27	BODY SHELL	1	74447
28	BREECH COVER	1	74448
29	BREECH COVER SCREW	1	74449
30	LOGO PLACARD WITH TAPE	2	74243
31	BARREL	1	74450
32	HOSE CLAMP	3	74476
33	BREECH COVER RELEASE SPRING	1	74477
34	BREECH COVER RELEASE BUTTON	1	74478
35	DOWEL PIN 3MM DIA X 8MM	1	74479
36	LOCK WASHER SIZE 5	2	74481





ITEM	DESCRIPTION	QTY	SKU
1	ROLLER ASSY (COMPLETE)	1	74451
2	DRIVE SHAFT WITH GEAR	1	74452
3	CATCHCUP COVER	1	74453
4	CATCHCUP	1	74454
5	RAMP TOP	1	74455
6	RAMP MIDDLE	1	74456
7	RAMP BOTTOM	1	74457
8	DRIVE BUSHING	2	74458
9	PADDLE	1	38948
10	DRIVE WHEEL	1	74459
11	DRIVE CAM	1	74460
12	DRIVE ROD	1	74461
13	DRIVE ROLLER	1	74462
14	DRIVE PLUNGER	1	74463
15	DRIVE ROD SPRING	1	74464
16	DRIVE PLUNGER SPRING	1	74465
17	DRIVE ROD PIN	1	74466
18	DRIVE ROLLER PIN	1	74467
19	DRIVE SPRING	1	74468
20	SCREW BHCS 6-32 X .250	1	17529
21	E-RING 3/16 GROOVE DIA X .025 THK	2	38823
22	SCREW FHST PHL #4 X .500 (PAN HEAD)	8	74469
23	SCREW FHST PHL #4 X .500 (FLAT HEAD)	5	74470
24	LID	1	74471
25	REAR SHELL LH	1	74472
26	REAR SHELL RH	1	74473
27	LID SPRING	1	74475
28	SCREW SHCS 6-32 X 2.00	5	74474
29	SCREW SHCS 6-32 X 1.00	2	17856
30	NUT HEX 6-32 .25 WIDE X .092 THK	7	17857

Use the diagram above to disassemble and reassemble these main components of the Marker. The subassembly parts diagrams are on the following pages.

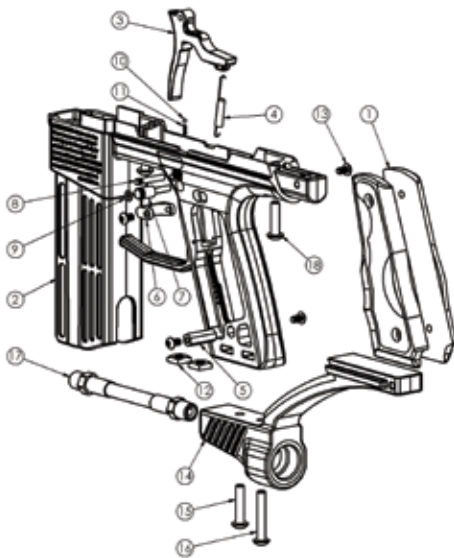
### Disassembly of Bolt System

Remove loader assembly by removing two hex head screws. You can perform general maintenance like lubricating and replacing O-rings.



### Removal of Grip Frame and Regulator

1. Remove loader assembly.
2. Remove the 2 screws on the bottom of the ASA that hold the ASA in place. On the bottom side of the grip frame remove the 2 screws, 1 just above the trigger and 1 above and behind the grip.
3. Above the regulator where the barrel is inserted into the marker body use a hex wrench to remove the screw, freeing the regulator from the body.
4. Lastly disconnect the flexible hose from the quick disconnect fitting by squeezing the fitting towards the regulator and then pull the hose out of the fitting.
5. You can now slide the regulator down out of the bottom of the foregrip.



ITEM	DESCRIPTION	QTY	SKU
1	GRIP	1	17959
2	FRAME	1	74431
3	TRIGGER	1	74432
4	TRIGGER SPRING	1	74433
5	FRAME HEX INSERT	1	74230
6	FRAME SCREW INSERT	1	74231
7	SAFETY	1	74232
8	TRIGGER PIN	1	74235
9	O-RING BUNA-N 70 DUR 1.0MM 3.0MM ID	1	74237
10	BEARING BALL 2.0 MM DIA	1	74234
11	SAFETY SPRING	1	74236
12	NUT SQUARE 10-32 .375 WIDE X .125 THK	2	19423
13	SCREW BHCS 6-32 X .250	4	17529
14	LOADER ADAPTER	1	17529
15	SCREW BHCS 10-32 X .875	1	74246
16	SCREW BHCS 10-32 X 1.125	1	74247
17	BRAIDED HOSE	1	74242
18	SCREW BHCS 10-32 X .750	2	74245

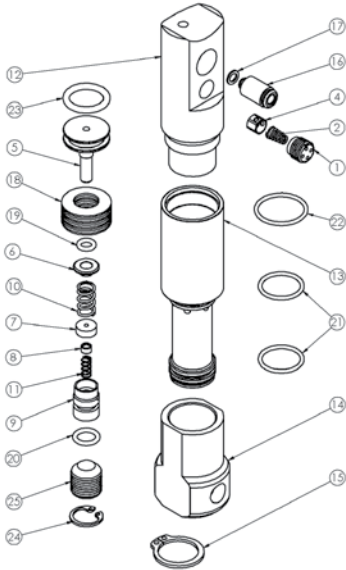
## Regulator Disassembly and Maintenance

Regulator maintenance should be performed every 50,000 – 70,000 shots or if there is an issue.

1. Remove the regulator as described in the *Removal of Grip Frame and Regulator* section on the previous page.
2. At this point you can access the regulator piston of the regulator by unscrewing the top half from the bottom half of the regulator.
3. To get the brass piston out, tap the regulator gently on your hand until the piston falls out of the regulator body.
4. To perform maintenance on the regulator, you should apply silicon based grease (Dow 33 or similar) to the regulator piston O-ring and shaft. Be sure when reassembling the regulator to place the spring washers in the correct orientation:

LARGE END OF PISTON )()() SMALL END OF PISTON.

Further disassembly of regulator is only necessary should the regulator be leaking or the pressure of the regulator is not remaining stable. See section *Advanced Regulator Disassembly & Maintenance* on page 22.



ITEM	DESCRIPTION	QTY	SKU
1	COVER PLATE REGULATOR	1	72627
2	REGULATOR OPP SPRING	1	72604
4	REGULATOR SEAL RUBBER	1	72606
5	PISTON REGULATOR	1	72471
6	RETAINER	1	72472
7	SEAL ADJUSTER	1	72473
8	VENT PISTON ADJUSTER	1	72474
9	PISTON ADJUSTER	1	72475
10	SPRING REGULATOR	1	72477
11	SPRING REGULATOR ADJUSTER	1	72478
12	REGULATOR TOP	1	74333
13	REGULATOR BODY	1	74334
14	REGULATOR BOTTOM	1	74335
15	RETAINING RING EXTERNAL 18MM SHAFT X 1.2MM THK	1	74314
16	PUSH TO CONNECT AIR FITTING 5/32" HOSE-10-32 THREAD	1	74317
17	10-32 FITTING GASKET NITRILE	1	74317
18	SPRING BELLEVILLE WASHER 20MM OD 10.2 ID X .9MM THK	7	72511
19	O-RING URETHANE 70 DUR -008 (.176 ID)	1	41015
20	O-RING URETHANE 70 DUR -011 (.301 ID)	1	10608
21	O-RING BUNA-N 70 DUR -016 (.614 ID)	2	72664
22	O-RING BUNA-N 70 DUR -018 (.739 ID)	1	10249
23	O-RING URETHANE 70 DUR -113 (.549 ID)	1	72492
24	RETAINING RING INT .500 BORE	1	72506
25	REGULATOR ADJUSTMENTS SCREW	1	74480

## Advanced Regulator Disassembly and Maintenance

Should your regulator have a leak or the pressure is not stable, causing velocity issues the following steps can be taken. **WARNING:** The below steps may be difficult for the novice paintball marker user and may require special tools. Damage to your regulator due to negligence may void your warranty.

1. First use expanding c-clip pliers to remove the larger retaining ring at the bottom of the regulator. The sleeve connected to the steel hose will now slide off. Should you have diagnosed a leak in this area you can now inspect the 2 O-rings that seal the sleeve and replace them if necessary (parts 21 in regulator assembly diagram).
2. You should remove the smaller internal retaining ring with contracting c-clip pliers. You can now use a hex wrench to fully unscrew the regulator adjustment screw from the bottom of the regulator. Once this screw is removed some parts may freely fall out of the bottom of the regulator (see regulator assembly diagram). If there was a leak coming from the bottom of the regulator, you should replace the O-ring located on piston adjuster (part 20 in regulator assembly diagram). If there was a leak coming from the small hole in the side of the regulator body, you should replace the O-ring inside the regulator (part 19 in the regulator assembly

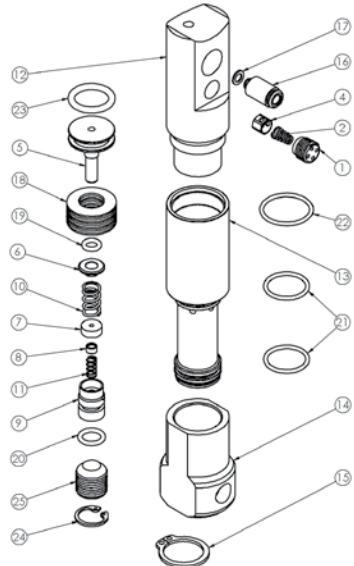


diagram). This O-ring may stay located inside the regulator. Carefully use a pick to extract this O-ring.

3. If your regulator was causing velocity fluctuations and general maintenance didn't help, you need to change the regulator seal adjuster (part 7 in regulator assembly diagram). Be sure when reassembling the regulator to follow the regulator assembly diagram. Assembling the regulator incorrectly will cause performance issues with the marker.

## Specifications

Model.....	TIPPMANN® Raider®
Caliber .....	.68
Air Supply .....	compressed air (HPA)
Hopper Capacity.....	200 Paintballs
Ball Feed .....	Intergrated
Firing Rate .....	10 paintballs per second
Trigger .....	Mechanical
Effective Range .....	150+ feet / 45.72+ meters
Velocity .....	Adjustable

Always measure your marker's velocity before playing paintball and never shoot at velocities in excess of 300 feet (91.44 meters) per second. See *Velocity Adjustment* instructions.

## Warranty and Repair Information

Tippmann Sports/GI Sportz ("Tippmann") is dedicated to quality paintball products and outstanding service. In the unlikely event of a problem with this Tippmann paintball marker ("Marker") and/or Tippmann accessories ("Accessories"), Tippmann's customer service personnel are available to assist you. For customer service and/or other information, please contact:

Tippmann Sports, LLC  
2955 Adams Center Road  
Fort Wayne, IN 46803  
1-800-533-4831 • 1-260-749-6022



## Warranty Registration

To activate the Marker's Limited Warranty, you must register the Marker within thirty (30) days of the date of original retail sale by completing the attached warranty registration card and returning it to the address above.

The Limited Warranty for Tippmann Accessories does not require activation or registration; by registering the Marker, you activate the warranty for the Accessories.

## Limited Warranty

Tippmann warrants to the original purchaser that it will make any repairs or replacements necessary to correct defects in material or workmanship, at no charge to you, for the Marker for a period of one (1) year from the date of original retail sale. Further, Tippmann warrants to the original purchaser that it will make any repairs or replacements necessary to correct defects in material or workmanship, at no charge to you, for Tippmann Accessories for a period of ninety (90) days from the date of original retail sale. All Tippmann asks is that you properly maintain and care for the Marker and Accessories (collectively, the "Product") and that you have warranty repairs performed by Tippmann or a Tippmann Certified Tech Center.

This Limited Warranty is non-transferable, and it does not cover damage or defects to the Product caused by (a) improper maintenance; (b) alteration or modification; (c) unauthorized repair; (d) accident; (e) abuse or misuse; (f) neglect or negligence; and/or (g) normal wear and tear.

Tippmann does not authorize any person or representative to assume or grant any other warranty obligation with the sale of this Product.

THIS IS THE ONLY EXPRESS WARRANTY GIVEN WITH THE PURCHASE OF THIS PRODUCT; ANY AND ALL OTHER EXPRESS WARRANTIES ARE DISCLAIMED. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE APPLICABLE LIMITED WARRANTY PERIOD SET FORTH HEREIN, AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, SHALL APPLY AFTER EXPIRATION OF SUCH PERIOD.

Some states and nations do not allow limitations on the duration of implied warranties, so the above limitation may not apply to you.

The sole and exclusive liability of Tippmann and/or its authorized dealers under this Limited Warranty shall be for the repair or replacement of any part or assembly determined to be defective in material or workmanship. TIPPMMANN SHALL NOT BE LIABLE FOR, AND YOU EXPRESSLY DISCLAIM, ANY DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES (COLLECTIVELY, "DAMAGES") ARISING OUT OF THE SALE OR USE OF, OR YOUR INABILITY TO USE, THE PRODUCT. NO PAYMENT OR OTHER COMPENSATION WILL BE MADE FOR DAMAGES, INCLUDING INJURY TO PERSON OR PROPERTY OR LOSS OF REVENUE WHICH MIGHT BE PAID, INCURRED OR SUSTAINED BY REASON OF THE FAILURE OF ANY PART OR ASSEMBLY OF THE PRODUCT.

Some states and nations do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that may vary from state to state or nation to nation.

## Warranty and Non-Warranty Repairs

When shipping the Product to Tippmann for warranty or non-warranty repair:

1. If you have aftermarket parts on your Marker, please test the Marker with original stock

parts before returning the Marker for service or repair.

2. Always unload (page 10) and remove the air supply from the marker (page 14). Do not ship the air supply cylinder if it is not completely empty.
3. Ship the Product to the Tippmann address identified.
4. You must pre-pay postage and delivery charges.
5. Provide the date of purchase for the Product.
6. Briefly describe the repair requested.
7. Include your name, return address and a telephone number where you can be reached during normal business hours, if possible.

Tippmann makes every effort to complete its repair work within twenty-four (24) hours of receipt. Tippmann will return the Product to you via regular ground UPS. If you wish to have it returned using a faster service, you can request NEXT DAY AIR UPS OR SECOND DAY AIR UPS, but you will be charged for this service and must include your credit card number with the expiration date. Your credit card will be charged the difference in additional cost over regular ground shipping service.

### **PATENT(S):**

See [www.paintballsolutions.com/patents](http://www.paintballsolutions.com/patents) © 2016 G.I. Sportz. All rights reserved. This G.I. Sportz product is protected by one or more United States patents. G.I. Sportz Trademarks, Designs and Copyrights are protected by one or more United States patents and International Law. For more information contact G.I. Sportz at [info@keeactionsports.com](mailto:info@keeactionsports.com)



**TIPPMANN**

# **RAIDER**

**NOTES:**

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