

# TIPPMANN®

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## CARVER ONE

Paintball Marker  
Owner's 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 IN A SHOOTING SITUATION, AS DETAILED IN TRIGGER SAFETY INSTRUCTIONS.**

**ALWAYS KEEP THE BARREL SLEEVE INSTALLED WHEN NOT IN A SHOOTING SITUATION, SEE BARREL SLEEVE INSTRUCTIONS BELOW.**



### Barrel Sleeve Installation Instructions

- Insert the Barrel Sleeve onto the Barrel and loop the cord over the top of the receiver and position at the back of the grip as shown.
- 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 pull the cord/retainer up over the top of the marker to remove the Barrel Sleeve for firing.
- 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.
- Before and after playing, inspect the Barrel Sleeve. Replace the Barrel Sleeve if the sleeve or cord is damaged, or there is a loss of cord elasticity.
- Clean the Barrel Sleeve with plain, warm water and store out of sunlight in a dry area when not in use.



### Introduction

CONGRATULATIONS on your purchase of your Tippmann® paintball marker. We believe our Carver One™ marker to be the most accurate and durable paintball marker available, and it is proudly manufactured by Tippmann. The Tippmann® Carver One marker will provide you many years of dependable service if cared for properly.

Please take time to read this manual thoroughly and become familiar with your Tippmann® Carver One™ 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 Consumer Relations at 1-800-533-4831 for fast, friendly service.

### Warning / Liability Statement

This marker is classified as a dangerous weapon and is surrendered by Tippmann Sports, LLC 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, LLC 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, LLC 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, LLC requests you do not use a Tippmann Sports, LLC marker. By using this paintball marker you release Tippmann Sports, LLC of any and all liability associated with its use.

### Safety Is Your Responsibility! Trigger Safety

#### WARNING

**EXCEPT WHEN YOUR MARKER IS IN USE, ALWAYS MAKE SURE THAT THE TRIGGER SAFETY IS IN THE SAFE POSITION, (WHICH DISABLES THE TRIGGER) AND THAT THE BARREL SLEEVE IS PROPERLY INSTALLED (SEE BARREL SLEEVE INSTALLATION ABOVE).**



**TO LOCK THE TRIGGER (SAFE POSITION):  
PUSH THE TRIGGER SAFETY IN FROM THE MARKER SIDE SHOWN ABOVE TO THE SAFE POSITION.**

**TO UNLOCK THE TRIGGER (FIRE POSITION):  
PUSH THE TRIGGER SAFETY FROM THE OPPOSITE SIDE OF THE MARKER TO ENABLE FIRING.**

### Familiarize Yourself with Safety...

The ownership of this marker places upon you the total responsibility of 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 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 Trigger Safety in the Safe position until ready to shoot (see Warning message above).
- Keep a barrel sleeve installed on marker when not shooting (see Warning message above).
- 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 paintballs or foreign debris lodged in the chamber, barrel, or the marker's 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 barrel 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 a 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/CO2 cylinder (see *Unloading Your Marker* and *Air/CO2 Cylinder Warnings*), put the Trigger Safety in the Safe position and install the barrel sleeve.
- Do not field strip or otherwise disassemble this marker while it is pressurized.
- Dress appropriately when playing the game of paintball. Avoid exposing any skin when playing the game of paintball. Even a light layer of clothing will help absorb some of the impact and protect you from the paintballs.
- Keep exposed skin away from escaping gas when installing or removing the air/CO2 cylinder, or if the marker or air/CO2 cylinder is leaking. Compressed air, CO2, and nitrogen gasses are very cold and can cause frostbite under certain conditions.
- Use only .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 the air/CO2 cylinder. Contact the air/CO2 cylinder manufacturer with any questions.
- Always measure your marker's velocity before playing paintball and never shoot at velocities in excess of 300 feet per second (see *Velocity Adjustment* instructions).
- Always keep in mind that the sport of Paintball is viewed and judged by your safe and sportsmanlike conduct.

### 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 with air.
- 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 over tighten, as this may potentially strip the threaded parts.

### 1. Prepare Marker for Air/CO2 Cylinder Installation.

- Apply Tippmann oil to the Barrel O-ring.
- Insert the Barrel into the Receiver.
- Carefully turn the Barrel clockwise by hand until tight.

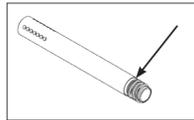


Figure 1: Barrel and O-ring

### 2. Air/CO2 Cylinder Installation.

Review *Air/CO2 Cylinder Safety Tips*.

- Put the Trigger Safety in the Safe position and install the Barrel Sleeve.
- Cock the marker by sliding the bolt handle all the way back until it locks into place. Always keep marker in the cocked position when attaching air/CO2 cylinder to the marker. This helps prevent an accidental discharge.
- Lubricate the air/CO2 cylinder valve O-ring with a little Tippmann® oil.
- Insert the air/CO2 cylinder valve into the Air Supply Adapter (ASA) (29) at the back end of the marker grip.
- Twist the air/CO2 cylinder clockwise into the ASA until it stops. Use caution as the marker is now capable of firing after you put the Trigger Safety in the Fire position. (If the tank is full and you do not hear the air/CO2 cylinder engage, the pin valve could be too short or the pin valve seal is damaged, follow the *Air/CO2 Cylinder Removal* instructions and take your air/CO2 cylinder to a "C5" Certified Airmith for inspection or contact the cylinder manufacturer).



Figure 2: Pull the Bolt Handle back until it locks into place.

### 3. Loading the Hopper

The Barrel Sleeve must be installed and the Trigger Safety in the Safe position.

- Make sure that the Feed Elbow (9) and Hopper are clean and free of sharp edges or debris. This keeps paintballs from breaking prematurely, and allows paintballs to feed to the marker's chamber smoothly.
- Install the Hopper neck into the Feed Elbow.
- Tighten the Feed Elbow Bolt (11) using the included 3/16" allen wrench.
- With the Barrel Sleeve installed, and the Trigger Safety in the Safe position, you are now ready to load the hopper with .68 caliber paintballs. Do not force excessive numbers of paintballs into the hopper.

### 4. Fire the Marker

- Remove the Barrel Sleeve from the marker.
- Point the marker in a safe direction.
- Put the Trigger Safety in the Fire position.
- Pull the trigger to fire the marker.



Figure 3: Velocity Adjustment Screw Location

### 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 set below 300 feet per second (or less if required by the playing field).

To adjust the velocity, use the 3/16" allen wrench included with your marker. The Velocity Adjustment Screw (#51 in Parts Diagram and shown in Figure 3) is located on left side receiver. To reduce the velocity, turn the screw inward or clockwise. To increase the velocity, turn the screw counterclockwise. Do not remove the velocity screw.

### Unloading Your Marker

- Eye protection designed for paintball use must be worn by the user and any person within range.
- Install the barrel sleeve and put the Trigger Safety in the Safe position.
- Empty and remove the Hopper.
- Go to a designated firing area, remove the Barrel Sleeve, and put the Trigger Safety in the Fire position.
- Point your marker in a safe direction and fire several times to be sure there are no remaining paintballs lodged in the chamber or barrel. IMPORTANT: Do not cock your marker as uncocking your marker may push a ball into the chamber or down into the barrel, making it hidden from view.
- Return the Trigger Safety to the Safe position and reinstall the Barrel Sleeve.
- Visually inspect the chamber for paintballs.
- Read the following *Air/CO2 Cylinder Warnings* and *Safety Tips* before removing the air/CO2 cylinder from your marker.

### Air/CO2 Cylinder Warnings

#### WARNING

**The brass or nickel plated cylinder valve (Figure 4, #1) is intended to be permanently attached to the air/CO2 cylinder (2). An air/CO2 cylinder can fly off with enough force to cause serious injury or death if the cylinder (2) unscrews from the cylinder valve (1).**

Refer to Figure 4. 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 supply adaptor (ASA) of the paintball marker, when in fact they are 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.

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 Figure 5, the cylinder is starting to unscrew from the cylinder valve and you must **STOP** and take the entire unit to a "C5" certified airmith 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 4th full turn and the cylinder valve is not unscrewed from the paintball marker, **STOP!** Take the entire unit to a "C5" certified airmith for safe removal and/or repair.

Locate a "C5" Certified Airmith at [www.paintball-pti.com/search.asp](http://www.paintball-pti.com/search.asp).

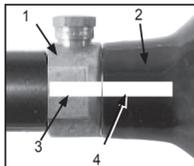


Figure 4: Properly marked Valve and Cylinder

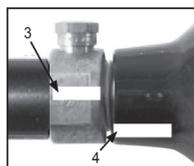


Figure 5: Misaligned Valve and Cylinder

Whether you have a new or used refillable air/CO2 cylinder, you are at risk if any of the following has occurred:

- The valve unit was replaced or altered after purchase.
- An anti-siphon device was installed.
- The valve unit was removed from the cylinder for any reason.
- Any modification was done to the refillable air/CO2 cylinder.

If any of these conditions has occurred, take your air/CO2 cylinder to a "C5" Certified Airmith for inspection or contact the cylinder manufacturer.

### Air/CO2 Cylinder Safety Tips

SAFETY TIPS to ensure that your air or CO2 cylinder is safe for play:

- Improper use, filling, storage, or disposal of air/CO2 cylinder may result in property damage, serious personal injury or death.
- Make sure that any maintenance or modification to any air/CO2 cylinder is done by a qualified professional, such as a "C5" certified airmith.
- The use of anti-siphon devices is not recommended. However, if one is already installed on your air/CO2 cylinder, or such device is desired, it is critical that your cylinder be checked by a qualified professional, and you have the device installed by a qualified professional.
- All air/CO2 cylinders must be filled only by properly trained personnel.
- Cylinder valves must be installed only by properly trained personnel.
- Do not overfill a cylinder! Never exceed the air/CO2 cylinder's capacity.
- Do not expose pressurized air/CO2 cylinder to temperatures exceeding 130 degrees Fahrenheit (55 degrees Celsius).
- Do not use caustic cleaners or strippers on the air/CO2 cylinder or cylinder valve, and do not expose them to corrosive materials.
- Do not modify the air/CO2 cylinder in any way. Never try to disassemble the cylinder valve from the air/CO2 cylinder.
- Any air/CO2 cylinder that has been exposed to fire, or heated to a temperature of 250 degrees Fahrenheit (121 degrees Celsius) or more must be destroyed by properly trained personnel.
- Use appropriate gas for your cylinder. Only use CO2 in a CO2 cylinder and only use compressed air in a compressed air cylinder.
- Keep all cylinders out of the reach of children.
- The air/CO2 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/CO2 cylinder, or if the marker or cylinder is leaking. Compressed air and CO2 gasses are very cold, and can cause frostbite under certain conditions.

**NOTE:** Locate a "C5" certified airmith at [www.paintball-pti.com/search.asp](http://www.paintball-pti.com/search.asp).

### Air/CO2 Cylinder Removal

- Read *Air/CO2 Cylinder Warnings* and *Air/CO2 Cylinder Safety Tips* before beginning the cylinder removal process.
- Eye protection designed for paintball use must be worn by the user and any person within range.
- Follow the *Unloading Your Marker* instructions.
- Watch the marks on the cylinder and cylinder valve (as shown in Figure 4) as you turn the cylinder approximately ¼ turn counterclockwise. This allows the air/CO2 cylinder's pin valve to close so that no gas enters the marker.
- Remove the Barrel Sleeve. Set the Trigger Safety to the Fire position. 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/CO2 cylinder.

**NOTE:** If during this step, you turned the air/CO2 cylinder and it began to leak before you pulled the trigger, the cylinder's O-ring should be checked for damage before any re-assembly (see *Repairing Air/CO2 Cylinder Leaks* below).

- After the air/CO2 cylinder is removed, again point and fire the marker in a safe direction to verify the marker is completely discharged of gas.
- Move the Trigger Safety to the Safe position and install the Barrel Sleeve.

### Repairing Air/CO2 Cylinder Leaks

The most common leak occurs from a bad air/CO2 cylinder 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/CO2 cylinder valve. The best valve O-rings are made of urethane. Urethane O-rings are not affected by high air/CO2 pressures. These may be purchased from Tippmann® or your local paintball dealer.

**NOTE:** If a new air/CO2 cylinder valve O-ring does not resolve a leak, do not attempt to repair the air/CO2 cylinder. Contact Tippmann Sports, LLC, your local paintball dealer, or a "C5" Certified Airmith.

### Cleaning and Maintenance

- Eye protection must be worn by the user.
- To reduce the chance of an accidental discharge, follow the *Unloading Your Marker* and *Air/CO2 Cylinder Removal* instructions.
- Do not disassemble a marker while it is pressurized with air.
- Do not pressurize a partially assembled marker.
- Follow warnings listed on the air/CO2 cylinder for handling and storage.
- Familiarize yourself with instructions listed on air/CO2 cylinder.
- Contact the air/CO2 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 your paintball marker exterior, use a damp towel to wipe off paint, oil, and debris.

To clean inside the barrel:

- Remove the Hopper.
- Completely loosen the Feed Elbow Thumb Nut (10) from the Receiver and remove the Feed Elbow (9) from the marker.
- Insert the tab of the cleaning squeegee into the Feed Elbow opening to the barrel and push the squeegee into the barrel until the tab is accessible at the muzzle end of the barrel.
- Pull the squeegee through the barrel to remove debris.
- Repeat if necessary.
- Replace the Feed Elbow back onto the marker.
- Tighten the Feed Elbow Thumb Nut to secure the Feed Elbow to the marker and reinstall the Hopper.

To maintain your marker in good working condition, inspect, clean, and replace any damaged parts. Lubricate as instructed in the *Marker Disassembly/Re-assembly* section below. The best valve O-rings are made of urethane. Urethane O-rings are not affected by high gas pressures. These may be purchased from Tippmann® or your local paintball dealer. Use Tippmann® oil to lightly lubricate the O-rings, springs, and other areas indicated in *Marker Disassembly/Re-assembly* instructions. This maintains your marker in good working condition.

### Storage

Put the Trigger Safety in the Safe position. Unload the marker and remove the air/CO2 cylinder. Put the bolt in the forward (uncocked) position. Clean and oil the marker so that it does not rust. Install the Barrel Sleeve, and store your marker in a dry area. When removing your marker out of storage, make sure the Trigger Safety is in the Safe position and the Barrel Sleeve is installed. You should re-oil the rear bolt O-ring and the front bolt O-ring before use.

### Marker Disassembly/Re-assembly

Always wear eye protection when performing any marker disassembly or re-assembly. Refer to the Parts Diagram for these instructions (item numbers are in parentheses). Disassembly instructions are listed here. To re-assemble, just do the steps in the reverse order.

- Pull the bolt handle back (see Figure 2) and keep holding onto it. Then pull the trigger and allow the bolt handle to move slowly forward. This uncocks the marker.
- To remove the **Barrel** (item 54, see Figure 1), simply unscrew the Barrel from the Receiver, and to reinstall it, just turn it clockwise to thread it into the Receiver.
- To remove the **Left Grip** (22) or the **Right Grip** (18), remove two **Screws** (14) from each grip. Reassemble by using the Screws to fasten the Grips to the Receiver.
- To remove the **Feed Elbow** (9) from the receiver, unscrew the **Thumbnut** (10) from the right side of the receiver. The **C-Clip** (16) keeps the Thumbnut from coming loose from the Feed Elbow. The Feed Elbow hinges downward and the bottom tabs come out of

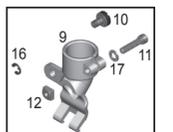


Figure 6: The Feed Elbow.

the slots in the Right Receiver Half (1). The **Screw** (11), **Flat Washer** (17) and **Nut** (12) are used to hold the Hopper in the Feed Elbow. Replace only if necessary. Do all reassembly in the reverse order.

- Lay the marker with the right side on the workbench. Use the included allen wrench to turn the **Velocity Screw** (51) all the way in. Separate the **Receiver Halves** (1 and 2) by first removing three (longer) **Screws** (25), and then four (shorter) **Screws** (26) and finally one **Bolt** (19). Retain eight **Nuts** (15) for these fasteners from the Right Receiver Half. Carefully lift the Left-Receiver Half to access the internal parts.

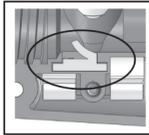


Figure 7: Ball Latch properly installed into the right receiver half.

- If the **Ball Latch** (8) needs to be replaced, pry the old one out of the Right Receiver Half. Put the new Ball Latch into the Right Receiver Half, oriented as shown in Figure 7 (circled item).

- Remove the **Screw** (23) from the **ASA** (29). Slide the ASA from the pin in the Right Receiver Half. Be sure to keep track of the **Nut** (30). If necessary, you can unthread the ASA from the **Gas Line** (21). Use teflon tape on threads for assembly.

NOTE: Do not remove the gas line fitting unless it is leaking or you need to replace the valve. If you do remove it, you will need some teflon tape or paste to reinstall it. Carefully hand start all threaded parts. Do not overtighten threaded parts when assembling. To fully remove the Gas Line, unscrew it from the **Valve Body** (43).

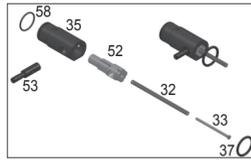


Figure 8: The Rear Bolt Assembly.

### The Valve

Disassembly instructions:

- Remove the **End Cap Cover** (56), and then remove the **End Cap** (57).
- Remove the **Guide Pin** (33) and **Drive Spring** (32). These parts must be removed before the Rear Bolt Handle can be removed.
- Disconnect the **Linkage Arm** (36) from the **Rear** (35) and **Front** (49) Bolts.
- Slide the Front Bolt off the **Power Tube** (48) and check the O-ring. Clean and oil the O-ring, or if damaged, replace with a new one. Do the same with the Rear Bolt O-ring.
- Remove the **Rear Bolt Handle** (53) from the **Rear Bolt Plug** (52).

- If it is necessary to remove the Valve, unscrew the two **Valve Lock Bolts** (13) from the right side of the Receiver. Use a wrench to slowly unscrew the **Gas Line** (21) fitting from the Valve. Once the fitting is removed, the **Valve** (43) slides out the back of the Power Tube. Be sure to set the parts on the workbench. Inspect and clean the exterior of all assemblies.

NOTE: Check the external **Valve O-ring** (58) and if damaged, replace with a new one. If the O-ring is damaged, your marker will not function correctly.

- Inspect and lubricate these internal drive assembly parts:

- **Front Bolt O-ring** (34)
- **Rear Bolt O-ring** (58, see Figure 8)
- **Linkage Arm** (36)
- **Drive Spring** (32) and **Guide Pin** (33)

- Inspect and lubricate the **Barrel O-ring** (38) and the air/CO2 cylinder valve O-ring with a few drops of oil.

Reassembly:

- Reinstall the Valve into the Power Tube. Insert the cleaned and oiled Valve into the Power Tube and align the holes of the Valve and Power Tube. Apply teflon tape or thread paste on threads of the Gas Line fitting and carefully screw it into the Valve. Snug with a wrench (do not over tighten and strip threaded parts). Wipe off any excess paste.
- Reinstall the Power Tube/Valve into the Receiver. Align the holes of the Power Tube to those of the Right Receiver Half. Apply red Loctite™ #271 sealant to threads of two **Valve Lock Bolts** (13) and tighten - do not over-tighten bolts as you could strip threads.

### The Trigger

Disassembly instructions:

- Remove the **Trigger** (59) assembly from the receiver. Be sure to retain the trigger return **Spring** (61, located in front of the Trigger, and not shown in Figure 9)
- To remove the **Trigger Return Slide** (60) and the **Spring** (61), you must first remove the upper **Return Slide Dowel Pin** (20) from the Trigger assembly.
- When re-assembling the Trigger and Sear, make sure the black **Sear Dowel Pin** (4) is in the location shown (arrow in Figure 10). The black pin is hardened, and it is critical that it be located in this position.

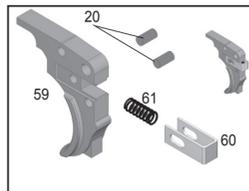


Figure 9: The Trigger is pulled from the right receiver half.

### General Troubleshooting

- **Issue** — Marker range is too short.  
**Cause** — Not enough gas is entering the system.  
**Solution** — Check velocity with a chronograph. Turn Velocity Adjuster to increase velocity, and recheck with a chronograph.
- **Issue** — Marker range is too long.  
**Cause** — Too much gas is entering the system.  
**Solution** — Check velocity with a chronograph. Turn Velocity Adjuster to decrease velocity, and recheck with a chronograph.
- **Issue** — Gas leak around cylinder to receiver connection.  
**Cause** — Worn out or damaged air/CO2 cylinder O-ring.  
**Solution** — Replace air/CO2 cylinder O-ring.
- **Issue** — Minor gas leak.  
**Cause** — Worn or damaged valve seat O-rings.  
**Solution** — Replace valve seat O-ring or return valve if it is defective.
- **Issue** — Paintballs fall out of the barrel.  
**Cause** — Worn or broken Ball Latch (8).  
**Solution** — Replace the Ball Latch.

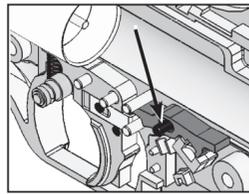


Figure 10: The black pin is hardened and must be installed in the position as shown.

### Specifications

Model	TIPPMMAN® Carver One™
Caliber	.68
Action	Semi-Automatic (open bolt blow-back)
Power	Pneumatic
Gas Supply	Compressed Air, Nitrogen, or CO2 cylinder
Hopper Capacity	188 Paintballs
Ball Feed	Gravity Feed System
Firing Rate	8 paintballs per second
Trigger	Mechanical
Standard Barrel Length	8.5" / 21.6 cm
Length (with standard barrel, no cylinder)	18.75" / 47.6 cm
Effective Range	150+ feet / 45.72+ meters
Weight (without cylinder)	3.245 lbs / 1.472 kg
Finish	Powder Coated Receiver and ASA, Anodized Barrel

Velocity — 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

TIPPMMAN SPORTS, LLC ("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  
[www.tippmann.com](http://www.tippmann.com)  
1-800-533-4831

### 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 registering online at [www.tippmann.com](http://www.tippmann.com).

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. TIPPMMAN 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:

- If you have aftermarket parts on your Marker, please test the Marker with original stock parts before returning the Marker for service or repair.
- Always unload and remove the air/CO2 cylinder from the Marker. Do not ship the air/CO2 cylinder if it is not completely empty.
- Ship the Product to the Tippmann address identified above.
- You must pre-pay postage and delivery charges.
- Provide the date of purchase for the Product.
- Briefly describe the repair requested.
- 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.

Carver One Parts List			
ITEM NO.	QTY.	PT. NO.	DESCRIPTION
1	1	TA06053	Right Receiver Half
2	1	TA06052	Left Receiver Half
3	4	98-33	Receiver Dowel Pin
4	1	CA-36	Sear Dowel Pin (Black)
5	1	02-35	Sear
6	1	TA02036	Sear Spring
7	2	TA02021	ACT Linkage Arm Guide Pin
8	1	FA-18	Ball Latch
9	1	TA06051	Feed Elbow
10	1	TA06059	Feed Elbow Thumb Nut
11	1	PL-42C	Screw, 1/4-20 x 1" SHCS
12	1	PL-42D	Nut, 1/4-20 Square (Black)
13	2	98-26	Screw, 10-32 x 1/2" BHCS
14	4	CA-02A	Screw, 6-32 x 3/4" BHCS
15	8	9-PA	Nut, Hex 10-32 (Black)
16	1	TA06047	Lock Screw C-Clip
17	1	98-45	Flat Washer M6 (Black)
18	1	TA05004	Split Grip, Right
19	1	98-01A	Bolt, 10-32 x 0.675"
20	2	98-19	Return Slide Dowel Pin
21	1	98-09C	Gas Line, #4 x 7/8"
22	1	TA06003	Split Grip, Left
23	1	TA06048	Screw, 10-32 x 1.1875" BHCS
24	1	TA06057	US Army Jewel
25	3	TA06015	Screw, 10-32 x 0.840" LHSCHS
26	4	TA09919	Screw, 10-32 x 0.500" LHSCHS
29	1	TA06049	Air Supply Adapter (ASA)
30	1	CA-08B	Nut, 10-32
31	1	TA06056	CARVER ONE Nameplate
32	1	CA-14	Drive Spring
33	1	CA-15	Guide Pin
34	1	SL2-4	O-ring, Front Bolt
35	1	TA02011	Rear Bolt
36	1	TA01016	Linkage Arm
37	1	98-57	O-ring, End Cap
38	1	98-40	O-ring, Barrel
39	1	CA-27	Front Valve Seat
40	1	PA-28	Valve Stem Cup Seal
41	1	CA-29	Valve Stem Cup
42	2	SL2-25	O-ring, Valve Seat
43	1	98-25N	Valve Body
44	1	98-56	Valve Plug
45	1	CA-30N	Valve Stem
46	1	98-32	Compression Spring
47	1	PA-31A	Snap Ring
48	1	98-21NR	Power Tube
49	1	02-17	Front Bolt
50	1	TA05021	Power Tube Plug
51	1	02-22	Velocity Set Screw
52	1	TA05005	Rear Bolt Plug
53	1	98-13	Rear Bolt Handle
54	1	TA06046	Barrel
55	1	TA06060	O-ring, Barrel Sleeve
56	1	TA06017	End Cap Cover
57	1	TA06006	End Cap
58	2	98-12A	O-ring, Valve/Rear Bolt
59	1	98-36A	Trigger
60	1	98-18	Trigger Return Slide
61	2	98-20	Spring
62	1	98-37N	Safety Pin
63	1	98-55	O-ring, Safety (Red)
64	1	FA-07	O-ring, Safety (Black)

# PARTS DIAGRAM AND PARTS LIST

