

BOBCAT™

INSTRUCTION MANUAL

Designed and produced by
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BOBCAT™

INSTRUCTION MANUAL
Version 1.2B

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THIS AIR GUN IS NOT A TOY. IT IS TO BE USED BY ADULTS ONLY. IT IS TO BE USED ON SAFETY CERTIFIED FIELDS ONLY. OBEY ALL LOCAL, STATE AND FEDERAL LAWS. FOLLOW THE RULES OF SAFE PAINTBALL GUN HANDLING. READ ALL INSTRUCTIONS BEFORE USE.

BOBCAT OVERVIEW

The BOBCAT is a quality marking instrument specially designed to meet the needs of the professional style tournament player. The BOBCAT is a semi-automatic, open bolt, blow-back-type marking device. The major components of the BOBCAT are machined from solid, aircraft-grade aluminum, then hard anodized per military specifications. No castings or extrusions are used in the construction of the BOBCAT. No welds or epoxies are used to fill or block holes, thereby providing the end user with a high-quality, precision-engineered marking instrument.

Semi-automatics take a great pounding. Indian Creek Design, Inc. has built the BOBCAT with this in mind. There are no hot welds to distort or cold welds to crack along joints and air lines. All internal parts, wear and contact surfaces have been heat treated or hard anodized. The hardest and most resilient materials have been used in the design of this instrument. But keep in mind: even jack hammers need care and maintenance.

The BOBCAT does not need tools to field-strip it down. Removing the cocking-lug and the rear plug enables the removal of the entire bolt assembly. The barrel extension is removed with six revolutions of the barrel.

The BOBCAT offers the ultimate in gas efficiency and usage. Gas usage and main-spring tension are the means of adjustment. Gas usage is controlled by two adjustment screws on the side of the gun, marked RECOCK and VELOCITY. The unique feature of this gun is the RECOCK adjustment. This allows precise adjustment for the recocking of the gun for both speed and gas efficiency.

The BOBCAT comes with a removable barrel system. This feature allows the user to select a barrel that is most suitable for the playing conditions. All barrels are mirror-honed and stock length is 7".

The BOBCAT comes standard with the Verticle Angled Tank System on the front of the gun. This adaptor allows the use of a front tank or hose attachment. The tank is angled back at 22 degrees toward the hand grip. With the tank angled in this manner it distributes the weight of the tank back under your hand.

OPERATION

Read the entire manual before you prepare your BOBCAT for firing. Safety and safe gun handling are the most important aspects of paintball sports. Please practice each of the following steps with an **unloaded** gun before attempting to charge your gun with CO2 and paint pellets. Do not load CO2 or paintballs into your BOBCAT until you feel completely confident with your ability to handle your BOBCAT safely.

Keep your finger out of the trigger guard and away from the trigger; point the muzzle of the gun in a safe direction at all times. Keep the gun in "SAFE" mode until ready to operate. Push the safety button in to the safe position. This will prevent the trigger from traveling its full range.

NEVER depend entirely upon your mechanical safety!
ALWAYS KEEP YOUR BOBCAT POINTED IN A SAFE DIRECTION.
ALWAYS USE A BARREL PLUG.

CO2 Usage

The BOBCAT uses CO2 as a propellant. The BOBCAT uses industry standard CO2 bottles or cartridge adaptors.

Consult the place where you purchased your BOBCAT or a recognized and competent airsmith for instruction in

the safe handling of CO2 cylinders before purchasing or connecting one to your BOBCAT.

Before pressurizing your BOBCAT with CO2, check and make sure that you have pulled the cocking lug back until it locks into position. If this is not done, the CO2 might leak or hiss down the barrel. The CO2 tank can now be threaded into the tank adaptor. After screwing in the CO2 bottle, the gun will become pressurized and ready to be fired immediately! To depressurize, unscrew the CO2 bottle from the gun.

Paintball and Loader Usage

The BOBCAT comes equipped to accept 7/8" OD, standard-gravity feed loaders and elbows. Fit the elbow over the direct feed. Always twist it down in a CLOCKWISE direction. Always twist it off in a COUNTERCLOCKWISE direction as well. The BOBCAT uses .68 caliber, water-soluble paint pellets. The pellets are gravity fed from the loader through the direct-feed nipple and into the breech of the gun. Incorporated into the direct feed is what has become known as a POWER FEED. Thanks to AIRGUN DESIGNS for originating the use of this type of device.

Firing the BOBCAT

Keeping your finger out of the trigger guard and away from the trigger, point the muzzle of your gun in a safe direction at all times during this process. Push the safety button to the safe position.

ALWAYS KEEP YOUR BOBCAT POINTED IN A SAFE DIRECTION.

1. Place the empty loader and elbow onto the gun. Be sure that it is securely mounted in place.
2. Pull the cocking lug back until it locks into position.
3. Screw the CO2 bottle into place, pressurizing the gun.
4. Put the paintballs into the loader.
5. Remove the barrel plug.
6. Aim the gun at the target.
7. Remove the safety by pushing the "push to fire" button.
8. Place your finger on the trigger.
9. Pull the trigger with a smooth squeezing motion.
BANG.....

Unloading the BOBCAT

Keeping your finger out of the trigger guard and away from the trigger, point the muzzle of your gun in a safe direction during this entire process. **ALWAYS KEEP YOUR BOBCAT POINTED IN A SAFE DIRECTION.**

1. Push the safety button into the safe position.
2. Place the barrel plug into the end of the barrel.
3. Remove the CO2 bottle by unscrewing it carefully.
4. Tilt the gun so that the loader is lower than the body of the gun.
5. Remove the paintball loader from the direct-feed tube, turning the elbow in a clockwise direction.
6. Inspect the inside of the direct-feed tube to be sure that a ball does not remain inside the breech.

MAINTENANCE

CAUTION: Before attempting to perform any maintenance operations or any gun disassembly, make sure that **all** paint pellets and sources of CO2 have been removed from the gun. Insert a barrel plug, push the safety button to the safe position and keep the gun in its "SAFE" mode.

Simple Maintenance

Keeping your BOBCAT clean and lubricated will serve to eliminate the friction that would prevent reliable operation. It is recommended that you clean and lube the gun before each use, and do not put it away dirty. It is recommended that petroleum based lubricants **not** be used in the lubrication of this gun. Teflon or silicon spray lubricants are the recommended types for the lubrication of the BOBCAT.

Cleaning Paint from the Barrel

Unscrewing the barrel with approximately one and one half (1&1/2) revolutions will enable the barrel to be

removed for swabbing/cleaning. Keeping the barrel clean is very important for the continuing accuracy of the BOBCAT. Gelatin from the paintballs has a tendency to build up in the barrel. It is recommended that you include in your cleaning ritual washing out the barrel with hot soapy water and rinsing well.

Removing the Bolt Assembly (Field Stripping)

Remove the paint and CO2 from the gun. **THE GUN CANNOT BE FIELD STRIPPED WHILE IT IS PRESSURIZED WITH CO2.**

1. With slight resistance on the cocking lug, pull the trigger and allow the bolt to move to the uncocked position.
2. Unscrew the rear plug and remove it along with the main spring.
3. Pull the bolt back via the cocking lug, and remove the cocking lug.
4. Point the barrel upward as if to pour the bolt out of the gun. A slight tap on the back of the gun with the palm of your hand may be required to completely remove the bolt.

Once the bolt assembly is removed, it is possible to clean the entire upper receiver of the gun, including the breech and feed tube area. Lubricate the rear section of the bolt and the rear-bolt chamber with a light synthetic liquid or spray lubricant before re-installing the bolt. Do not use petroleum based lubricants, it is recommended that you use a teflon or silicon based lubricant.

1. Point the barrel downward and push the bolt in until it stops. At this point the bolt will not be completely inside the gun.
2. Apply pressure on the back of the bolt and pull the trigger. At this point the bolt should slide in all the way.
3. Screw the cocking lug into place.
4. Push the bolt via the cocking lug all the way forward.
5. Replace the main spring and rear plug.

STORAGE AND TRANSPORTATION

- Your BOBCAT must be clear of all paint and CO2 when not being used.
- Keep the safety on.
- Put the barrel plug in place.
- Make sure the gun is clean.
- Store your BOBCAT in a clean, cool, dry place.
- Keep your BOBCAT away from children.

THIS AIR GUN IS NOT A TOY! TO BE USED BY ADULTS ONLY!

Your BOBCAT must be clear of all paint and CO2 during transportation to and from the playing field. Keep your barrel plug in place. Keep the safety on. Protect your BOBCAT from excessive heat during transportation. Observe and obey all local, state and federal laws concerning the transportation of paintball guns. For information concerning any of the laws in your area, contact the IPPA or your nearby friendly law enforcement agency.

IMPORTANT: Never carry your BOBCAT un-cased when not on a playing field. The non-playing public and law enforcement personnel may not be able to distinguish the difference between a paint marking device and firearm. For your own safety and to protect the image of the sport, always carry your BOBCAT in a suitable gun case or in the box in which it was shipped.

If you must ship your BOBCAT for any reason, the box in which you purchased the gun is acceptable to all major carriers. Never ship charged CO2 containers.

BOBCAT TUNING GUIDE
Version 1.2

The BOBCAT has a totally new and innovative valving system that allows the independent control of the projectile velocity and the independent control of the re-cocking gas flow. This ability to control each system separately allows the operator to tune the gun to its maximum efficiency.

This tuning is accomplished through the use of the main-spring tension-adjustment screw and two screw-type adjustments located on the side of the gun labeled RECOCK and VELOCITY. Turning of the screws is done by using a 5/32 allen wrench on the main-spring tension screw and a 5/64 allen wrench inserted into the recock or velocity screw.

Turning the screw clockwise on the main-spring tension screw increases the main-spring tension and increases the velocity and the recock gas expulsion. Turning the main-spring tension screw counter-clockwise decreases the tension on the main-spring and decreases the inertia gained by the hammer, which strikes the poppet valve with less pressure, and therefore decreases the gas flow, decreasing the velocity and/or the recocking action.

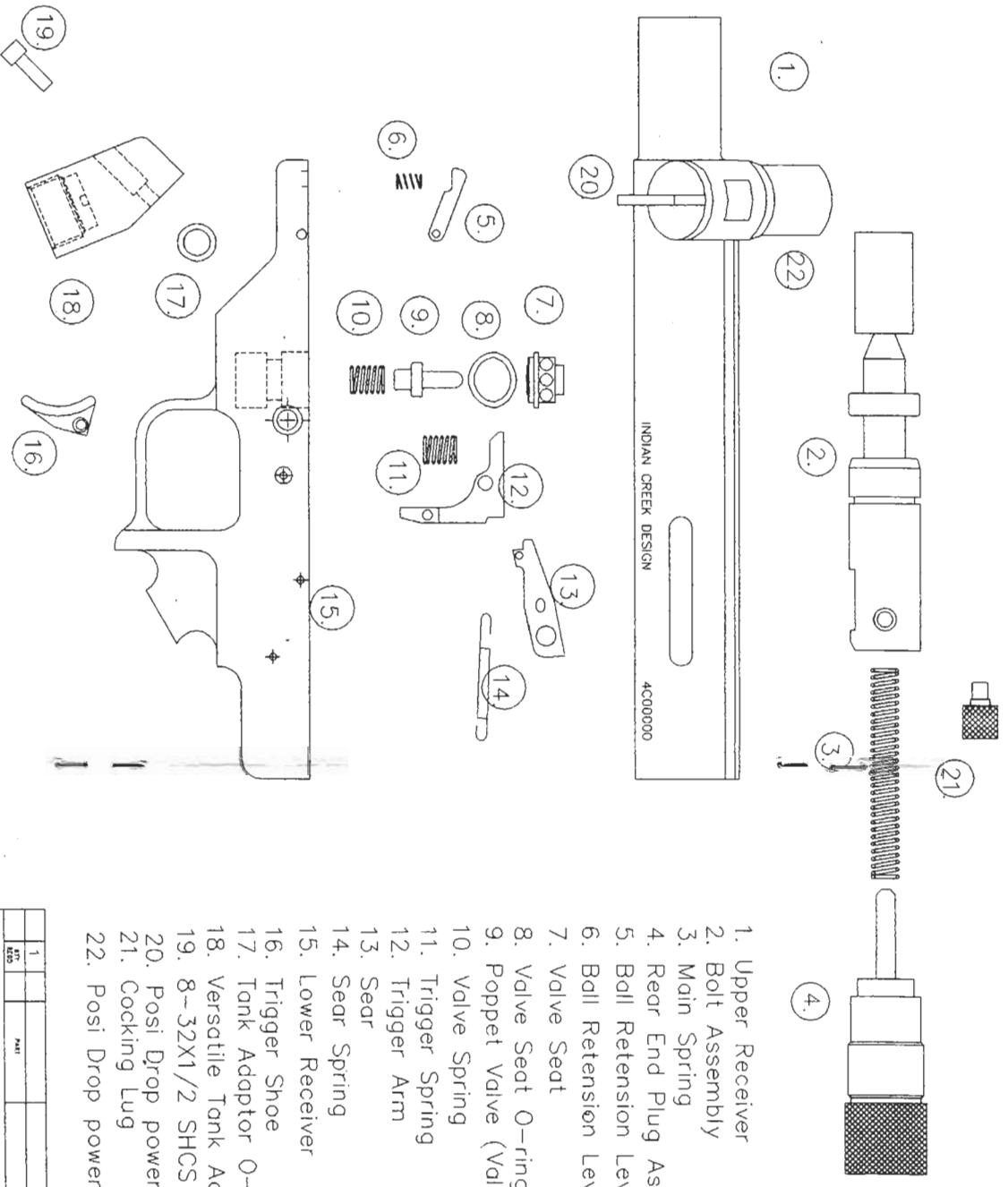
Turning the VELOCITY or RECOCK adjustment screws in the clockwise direction restricts the gas flow to either the velocity or recock. Turning the screw counter-clockwise increases gas flow, thus increasing the gas used to propel the paintball, or the recocking action.

Getting Started

With a full tank of CO₂, a chronograph, and the paintball of your choice:

1. Before installing the paintballs or the tank, push the safety button in to lock the trigger. Cock the gun by pulling cocking lever towards the back of the gun until it clicks into place.
 2. Using the 5/64 allen wrench, close the recocking valve by turning the screw clockwise until it stops. Now turn counter-clockwise 1/4 to 1/2 turn. If you are attempting to use a siphon tank system start with the recock adjustment screw turned clockwise until it stops (shut-off).
 3. Using the 5/64 allen wrench, close the velocity valve by turning the screw clockwise until it stops. Now turn counter-clockwise three turns.
 4. Using the 5/32 allen wrench, back off the main-spring tension screw by turning it counter-clockwise until the face of the screw is flush with the face of the end plug, then turn clockwise three full revolutions.
- (This starting position for the adjustment screws is the intermediate position.)
5. With the gun pointed in a safe direction, follow the tank insertion guidelines in the CO₂ usage section of this manual and screw the tank into the adaptor.
 6. Drop one(1) paintball into the feed tube.
 7. Aim the gun over the chronograph.

REV	REV	DESCRIPTION	DATE	APPROVED



1. Upper Receiver
2. Bolt Assembly
3. Main Spring
4. Rear End Plug Assembly
5. Ball Retension Lever
6. Ball Retension Lever Spring
7. Valve Seat
8. Valve Seat O-ring
9. Poppet Valve (Valve Pin)
10. Valve Spring
11. Trigger Spring
12. Trigger Arm
13. Sear
14. Sear Spring
15. Lower Receiver
16. Trigger Shoe
17. Tank Adaptor O-ring
18. Versatile Tank Adaptor (VTS)
19. 8-32X1/2 SHCS
20. Posi Drop power feed Plug
21. Cocking Lug
22. Posi Drop power feed Tube

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REV	REV	DESCRIPTION	DATE	APPROVED
1				

DATE			
SCALE	1:1	SHEET	1 OF 1

INDIAN CREEK DESIGN, INC.	BOBCAT
DATE	9/93
DESIGNER	J. DOBBS
CHECKED	
APPROVED	

8. Remove the safety by pushing the fire button.

9. Pull the trigger to shoot the paintball, and check the velocity and recoil action. Use the main-spring tension screw to get you "in the neighborhood" of the desired velocity by increasing or decreasing the tension of the main spring. Once you are close with the main spring adjustment, then, to decrease the velocity, turn the velocity screw clockwise in 1/2 turn increments; to increase the velocity, turn the screw counter-clockwise in 1/2 turn increments. Under normal circumstances the recocking jet should not have to be further adjusted once Step 2 has been performed. Repeat Steps 6-9 until the desired velocity is reached.

10. Push the safety button in to lock the trigger and place your paintball feed system onto the feed tube.

NOTE 1. This gun was not designed to be a jack-hammer. The lighter the main-spring tension is, the more reliable and more consistent the gun will be--not to mention the longer life that will be obtained on all the parts of the gun. High main-spring tension, coupled with the VELOCITY jet being screwed in, or all the way out, and the RECOCK jet screwed all the way out, will result in the premature deterioration of the gun, poor performance and efficiency, and a very disappointing day. Remember, your shooting gelatin capsules filled with paint, not shattering concrete or driving 16 penny nails.

NOTE 2. Under normal circumstances the RECOCK valve should **never** be adjusted more than 1/2 to 3/4 of a turn from being all the way in!!!

NOTE 3. This gun is not designed to shoot above the safety limits established by industry standards.

General Notes

1. Once the velocity adjustment screw is turned clockwise all the way, it only functions for six turns in the counter-clockwise direction. Although it may turn more than six revolutions, it only functions for the first six revolutions.

2. Once the recoil adjustment screw is turned clockwise all the way, it only functions for one and a half(1&1/2) turns maximum in the counter-clockwise direction. Although it may turn more than one and a half revolutions, it only functions for the first one and a half revolutions. Under normal circumstances the RECOCK valve should **never** be adjusted more than 1/2 to 3/4 of a turn from being all the way in!!!

If either of the screws protrudes out of the side of the gun, they have been turned out too far and have lost any of their ability to affect the performance of the gun, and it is possible that they could fall out of the gun. If the VELOCITY jet, and the RECOCK jet are screwed all the way out, this will result in the premature deterioration of the gun, poor performance and efficiency, and a very disappointing day. Remember, your shooting gelatin capsules filled with paint, not shattering concrete or driving 16 penny nails.

If opening the jets all the way is the only way that you can make the gun function--something is wrong. Immediately call **Indian Creek Design, Inc.** at (208) 888-6130.

INDIAN CREEK DESIGN, INC. LIMITED WARRANTY

Indian Creek Design, Inc. warrants the replacement of any original part due to defect in materials and/or workmanship of this air gun. This warranty shall be in effect for twelve (12) months for parts and twelve (12) months for labor following the original date of purchase for the original purchaser. Such warranty service will be provided only if the warranty registration card included with this manual is filled in completely and on file at **Indian Creek Design, Inc.** All other service will be duly charged for and returned via UPS C.O.D.

Indian Creek Design, Inc. will replace without charge any original part that is determined by **Indian Creek Design, Inc.** to be defective under the terms of this warranty. However, shipping charges are not covered hereunder. Failure due to accident, abuse, neglect, modification, normal wear, maintenance by other than an authorized **Indian Creek Design, Inc.** dealer, or use of parts inconsistent with the use originally intended for the air gun as sold, is not covered by this warranty.

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For warranty parts, service or information contact:

Indian Creek Design, Inc.
9000 South Black Cat Road
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TROUBLE SHOOTING

Recocking Related Problems

1. The gun does not recock when you pull the trigger; it shoots and sticks forward.
 - a. The pressure in the tank is low.
 - b. Needs lubrication in the hammer-slide chamber.
 - c. Open the recock valve, 1/4 turn at a time--**but NEVER MORE than 3/4 total turns.**
 - d. The hammer/bolt assembly is dragging and the inertia that it takes to open the poppet valve is lost.
2. The gun does not recock when you pull the trigger; it shoots and pounds down (does not come back all the way).
 - a. The pressure in the tank is low.
 - b. Needs lubrication in the hammer-slide chamber.
 - c. Open the recock valve, 1/4 turn at a time--**but NEVER MORE than 3/4 total turns.**
 - d. The hammer/bolt assembly is dragging and the inertia that it takes to open the poppet valve is lost.
3. The gun does recock; but, when you pull the trigger, it shoots and bounces (double fires) before recocking (breaks paintballs in the breach, and sends paint back up into the feed tube).
 - a. Too much gas is being expelled to the recock chamber. (This is often the case, especially when using a siphon tank system. If using a siphon tank, turn the RECOCK screw all the way in. (shut-off))
 - b. The pressure in the tank is high.
 - c. Close the recock valve and reopen the recock valve, 1/4 turn at a time--**but NEVER MORE than 3/4 total turns.**

- d. Hammer and sear contact points have worn and need replacing.
 - e. Main spring tension may be too high. Back it off and re-tune the gun.

Leak Related Problems

1. The BOBCAT has a leak down the barrel. Reason: CO2 is leaking through or around the valve area.
 - a. Can you hear the leak when the CO2 is removed? Yes? There is no leak. You hear the ocean.
 - b. CO2 bottle has no gas left and there is not enough pressure to keep the cup seal closed.
 - c. The cup seal is marred/scratched or worn out or dirt has gotten to it. Replace it.
 - d. The o-ring for the valve seat has been removed and not replaced.
 - e. The sealing surface on the valve seat is scratched or gouged. Replace the valve seat.
2. The BOBCAT has a leak around the VTS adaptor seam. Reason: The seal between the VTS adaptor and the lower receiver is bad.
 - a. Tighten VTS adaptor screws.
 - b. Check and/or replace the small o-ring.

Ball Breakage Problems

1. The paintballs break in the barrel.
 - a. Change paintballs. The gelatin that paintballs are made from, can lose its elasticity with age making the shell of the paintball brittle, and not able to withstand the shock of the blast of CO2 when shot.
 - b. Rebalance your CO2 usage by re-tuning the VELOCITY and RECOCK adjustments.
 2. The ball breaks in the breech.
 - a. The balls in your loader can bind, messing up your trigger timing. Note the ball drop through your elbow.
 - b. As you run and shoot you actually unweigh the gravity-fed balls in your loader. This can cause a ball to hesitate in its drop. This affects your trigger timing.
 - c. If the ball retension arm does not move freely, the paintballs will crush against it or it may have stuck in the depressed position allowing double feeding. Check its tension regularly and keep this area as clean as possible.
 - d. If the ball retension arm is too sloppy, the ball will not be held in the proper position. This may allow the next ball to enter the path of the bolt, subjecting it to impact cracking or shearing. Verify the spring tension.
- IF YOUR GUN IS OUT OF TUNE AND JUST WILL NOT DO ANYTHING BUT BREAK PAINT, STUTTER AND CHATTER, GO BACK TO "GETTING STARTED", STEPS 1 THROUGH 4.