

PT Xtreme

PT Xtreme

Operation Guide





Play Safe

Safety

Instruction Manual

Congratulations on your purchase of the 32 Degrees PT Xtreme semi-auto. Before you use this marker, please read this manual in its entirety. Please follow all safety instructions as described in this manual.

Warning

This paintball marker is not a toy. Misuse or mishandling can result in serious injury or death. The PT Xtreme is to be used by adults 18 years of age or older, or under the direct supervision of an adult. Please follow all local, state, and federal laws concerning paintball markers and playing paintball. By purchasing this marker you assume all liability. 32 Degrees accepts no liability for injury or death due to misuse or mishandling of this marker.

PT Xtreme Specifications

Model	PT Xtreme Semi-Auto
Caliber	.68
Action	Blow Back Semi-Auto
Power	C02
Cycle Rate	Up to 6 balls per second
Effective	Range 150+ feet
Length	11.5 inches
Height	6.5 inches

1. Never point a paintball marker at anyone not wearing paintball approved goggles. Even at the lowest possible operating velocity, a paintball will cause serious injury should it hit someone in the eye area.

2. Never look down the barrel of your marker with or without wearing paintball approved goggles.

3. Always disconnect your air-source and dry fire the marker before working on or cleaning it. Always have a qualified air smith do repairs or modifications to your PT Xtreme.

4. Always leave the PT Xtreme uncocked and turn the power feed plug to the "off" position.

5. Only play at commercial playing fields that have a chronograph, referees and clearly marked safe fields. Chronograph your marker before each game to ensure your gun is operating at safe velocities. Safe velocities are considered to be below 280 feet per second.



Always wear
Paintball Approved
Goggles



Getting Started

General Description and Basic Use Instructions

Included with your PT Xtreme semi-auto should be the following items:

- PT Xtreme Semi-Auto
- Barrel
- Packet with o-rings, velocity thumb screw, and allen wrench
- Instruction manual

The 32 Degrees PT Xtreme is almost ready to use out of the box. All that is needed is a CO2 tank, paintballs, and a feeder, and then you are ready use your marker.

With your paintball approved goggles on and the safety in the "safe" position, screw your CO2 tank into the constant air adapter, or for 12-gram versions, after cocking the gun, lift the 12-gram cartridge quick disconnect latch and install the 12-gram cartridge with the thin end facing the back end of the marker. Be sure to chronograph the PT Xtreme before using it.

maintenance

Now that the goggles are on make sure your marker is in the cocked position. Install the CO2 cartridge and your PT Xtreme is ready to fire. Make sure you chronograph your marker before you use it. Like any other paint marker, maintenance is the key to keeping the PT Xtreme shooting consistently. This chapter is a basic overview of what it takes to keep the PT Xtreme functioning properly. If you have the bottom-line version of the PT Xtreme you can simply screw the CO2 tank into the bottom-line CO2 tank adapter.

Lubrication: To keep your PT Xtreme's internal components operating smoothly, place about four drops of oil in your gun's CO2 adapter and dry fire the gun (after removing the barrel). This will spread the oil throughout the gun. After cleaning your PT Xtreme internally, lube the hammer/push strut assembly as well--be careful not to over-oil this area.

Warning: Some petroleum based oils can damage your gun's o-rings. Use only oil manufactured specifically for paintball markers. If you expect any degree of consistency from your PT Xtreme, you must keep it clean internally and externally. The two external areas you'll need to be the most careful with are the power feed/feed tube and the barrel. If you break a ball in the barrel, you will lose most of your accuracy until you clean it completely. On the field, remove the barrel and run a pull-through squeegee through it. For a more complete cleaning (off the field) you'll need to clean the barrel with warm water or barrel cleaner/treatment and squeegee it until it is dry. A pull-through squeegee can also be used to clean the power feed once the plug is removed.



Disassembly / Reassembly

Internally, inspect the hammer/push strut assembly and clean with warm water if necessary. Always lube the internal parts after cleaning as described above. Check the o-rings on the bolt and striker for wear and replace if necessary. Standard tank o-rings work well on the bolt, but don't use the black rubber type.

To ensure that your PT Xtreme will be operational at the paintball field, there are a few parts and tools you'll need. The most common o-ring in the PT Xtreme is the "tank" o-ring. If you need to change any of these o-rings, you'll probably need an o-ring pick to remove the old ones. You really should keep several of these on hand at all times.

Adjusting the Velocity:

To adjust the velocity of your PT Xtreme, screw the thumb screw velocity adjuster (found in the bag of parts) into the rear lower hammer plug. By adjusting your thumb velocity screw clockwise you will increase your markers velocity. By adjusting your thumb velocity adjuster counter clockwise you will decrease your velocity.

Field stripping your PT Xtreme: First degas your marker, and remove the feed tube along with any paintballs. Step two remove your barrel from the marker. After your barrel is removed apply pressure to the velocity thumb adjuster and remove connecting pin. Let the pressure off slowly to remove thumb adjuster. Once that the velocity adjuster and lower chamber plug is removed you will find and spring strut, main spring and striker buffer. After these parts are removed simply pull back the upper bolt, this will remove the upper bolt as well as the lower bolt. That concludes the removal of the field stripping parts.

Advanced Disassembly: After completing your field stripping you will be left with your main body, valve, trigger assembly, and Co2 cartridge lock. You will now want to remove the cartridge lock first. This can be done by removing the connecting screw. Then remove your trigger assembly. Once trigger assembly is removed the belly of the main body will be exposed. You will notice a black set screw which is used to hold your valve body in place. Remove that set screw and the bolt in front of the set screw. You are now ready to remove the valve from the body. Upon removal of the valve you will have access to the puncture pin, notice that the front of the valve where the puncture pin is located has a spot to place a standard screw driver. If you remove the puncture pin face you will have access to the valve pin and valve spring as well as the cup seal. You have successfully disassembled your PT Xtreme. To reassembly follow this procedure in reverse.



Trouble Shooting

Gun does not recock: If you fire the PT Xtreme and it does not recock by itself, remove your air

source and disassemble the gun (after you've made sure that your CO2 tank has enough gas). Look for debris wedged between the upper bolt and the breach. Free your marker of any debris, and re-lubricate all of your o-rings. Now reassemble your marker and you should be ready to go. Be sure to check and see if the connecting pin is still in place. Sometimes the connecting pin will shift up or down and "lock" the bolt and hammer.

Low velocity: The first thing you'll need to do (after you make sure your CO2 tank is not empty or low) is to check the velocity adjusting screw located in the rear of the hammer plug. To increase the velocity, turn the screw clockwise and re-chronograph the gun. Still shooting low? Check to make sure the gun is clean and lubricated internally. Look for debris on or around the bolt/hammer assembly and clean if necessary. Another possible cause of velocity problems with the PT Xtreme is a weak striker spring. You may need to order a stiffer or longer spring. If all else fails, you can place a spacer between the velocity adjusting screw and spring guide.

Air leaking out of the barrel: You will need to replace your cup seal. To replace the cup seal remove your gas connector, valve spring, and existing cup seal. Replace the cup seal and reassemble.

(Tech Tip) Cup seals leaking are a common problem among blow back style markers.

Excessive ball breakage: Ball Breakage is usually the result of high velocity, weather, dirty marker, paint, or bore size.

High Velocity: Be sure that your marker is shooting below 290 (fps) feet per second. High velocity is a common cause of ball breakage.

Weather: Cold weather can make paintballs brittle allowing for more ball breakage. Hot weather can cause paint to expand and therefore your paint will be torn through your barrel.

Dirty Marker: Remember a clean marker is a happy marker. Dirty components will usually result in ball breakage.

Paint: Old paint or lower end paints can sometimes be the cause of ball breakage. Check your paintballs for flat spots, color fading, etc.

Bore Size: Your barrels bore size plays a large part in shooting accurate and limiting ball breakage. So be sure to use the proper size barrel.

Inconsistent velocity: Velocity can be effected by the list given above. Be sure that your marker is clean and lubricated and remember CO2 is affected by temperature therefore when using this gas allow for expansion and contraction.

High velocity: High Velocity is usually the result of expanded CO2 or broken paint in your barrel. To help maintain a consistent velocity be sure your marker is clear of all debris in both the lower and upper chambers.

(Tech Tip) If using CO2 as your power source we recommend an expansion chamber to help stabilize a very active gas.

Double feeding paintballs: If your PT Xtreme is double feeding, you've probably lost the ball detent. A new one will almost certainly fix the problem. If not, your paint is probably very small. To replace the ball detent simply remove recoil spring cover. Then remove the old ball detent and replace with a new one.

Double firing on one trigger pull: This can be caused by liquid CO2 in the valve. If your double firing problem is not caused by liquid CO2, inspect your trigger sear and be sure to remove any debris in the trigger assembly. This will most likely solve double firing. If double firing persists check the lower bolt o-ring.

The gun fires but no paint comes out: Make sure the power feed plug is turned the right direction. Check your paint for swollen balls. This will cause the gun to misfeed. Never pick paint up off of the ground. It will cause more problems than you could imagine.

1. Never leave your CO2 tank in the sun or heat. Co2 is a volatile gas that is greatly affected by temperature.

More on CO2...

Understanding the Characteristics of CO2

Understanding the characteristics of CO2 is a bit more difficult than it sounds. CO2 is a volatile gas, or should I say substance compared to other gasses used in Paintball. The fact that CO2 can convert from gas to liquid and visa versa easily is a real problem for Paintball players and their equipment. CO2 is greatly affected by temperature changes. In fact, a properly filled CO2 tank will have an internal pressure of about 850 pounds per square inch (psi) in 70 degree (F) temperatures. A temperature increase of one degree will cause the pressure in your tank to rise by 11 psi. So if you're playing in a cool summer morning of about 70 degrees, when the hot afternoon temperature comes your tank pressure can rise 400+ psi with no trouble at all. This will probably cause your gun to shoot "hot." Possibly even dangerously high. Let's take a closer look at why CO2 is a real problem for Paintball players.

Why your tank "chills" when you rapid fire: Have you ever noticed that when you rapid fire your paint gun for any length of time, your CO2 tank gets cold or even "frosted"? What happens next is a real pain -- your velocity drops off. Here's why. When you rapid fire your paint gun, you are using a large amount of



CO2 quickly. Your tank gets cold because the liquid CO2 inside is changing into gas to replace the CO2 used during rapid firing. This change from liquid to gas is called a change of

phase. When you fire your gun (with a chilled tank), you are releasing less CO2 than if the tank was warm.

Velocity Spikes: If you are shooting a regular (gas) CO2 tank and you point the gun downward, you will notice frost coming out of your barrel. With some guns (Automag, Autococker, etc.) you will quickly render your gun unusable if this happens. If liquid CO2 gets into your gun's valve, you will usually get velocity spikes. Let's take a look at why this happens. The liquid and gas CO2 in your tank is always the exact same pressure because your tank is a "closed system". The pressure in your gun's valve will also be the same pressure. The exception to this rule is if you are using a pressure regulator on your gun. When liquid gets into the gun valve, your velocity will spike because you are hitting the paintball with more CO2. In other words, the CO2 in the valve is of a much greater weight than if it were in a gaseous state.

2. CO2 works fine for paintball guns, but if you're looking for high performance, you may want to look at purchasing a high pressure system.

About high pressure (nitrogen and compressed air)

When someone refers to high pressure in regards to paintball, they generally are speaking about nitrogen or compressed air. For Paintball purposes both are

the same. A high pressure system can be filled with either nitrogen from a bulk tank, or compressed air from a compressor or a scuba tank that was filled from a compressor. The reason these systems are called high pressure systems is that they are filled (by pressure, not by weight as with CO2) to 3000 - 4500 600-800 psi outgoing pressure. This means that a constant pressure flow to your gun can be safely achieved.

The advantages of high pressure: Nitrogen and compressed air have virtually the same characteristics. Compressed air is the air that you breath every day that is compressed into a higher pressure than its normal state. Compressed air is around 78% nitrogen and 21% oxygen. Under normal conditions, nitrogen and compressed air are unaffected by temperature changes and fluctuations. Unlike CO2 which boils at about 89 degrees Fahrenheit, nitrogen boils at the very high temperature of 196 degrees Celsius.

So for paintball, no matter how hot or cold it gets the gun will be supplied with consistent pressure from the regulated tank (assuming your equipment is working properly). This means that your velocity will stay much more consistent than you've come to expect appealing to Paintball players than CO2. Another advantage with high pressure is that you do not have to chill the tank to fill it. To get a complete fill however, you need to fill to 3000 psi, wait a few minutes for the tank pressure to stabilize,



and top off with 300 - 400 psi. There are many more smaller advantages to using high pressure--High pressure systems allow you to play all year, where as CO2 does not really work

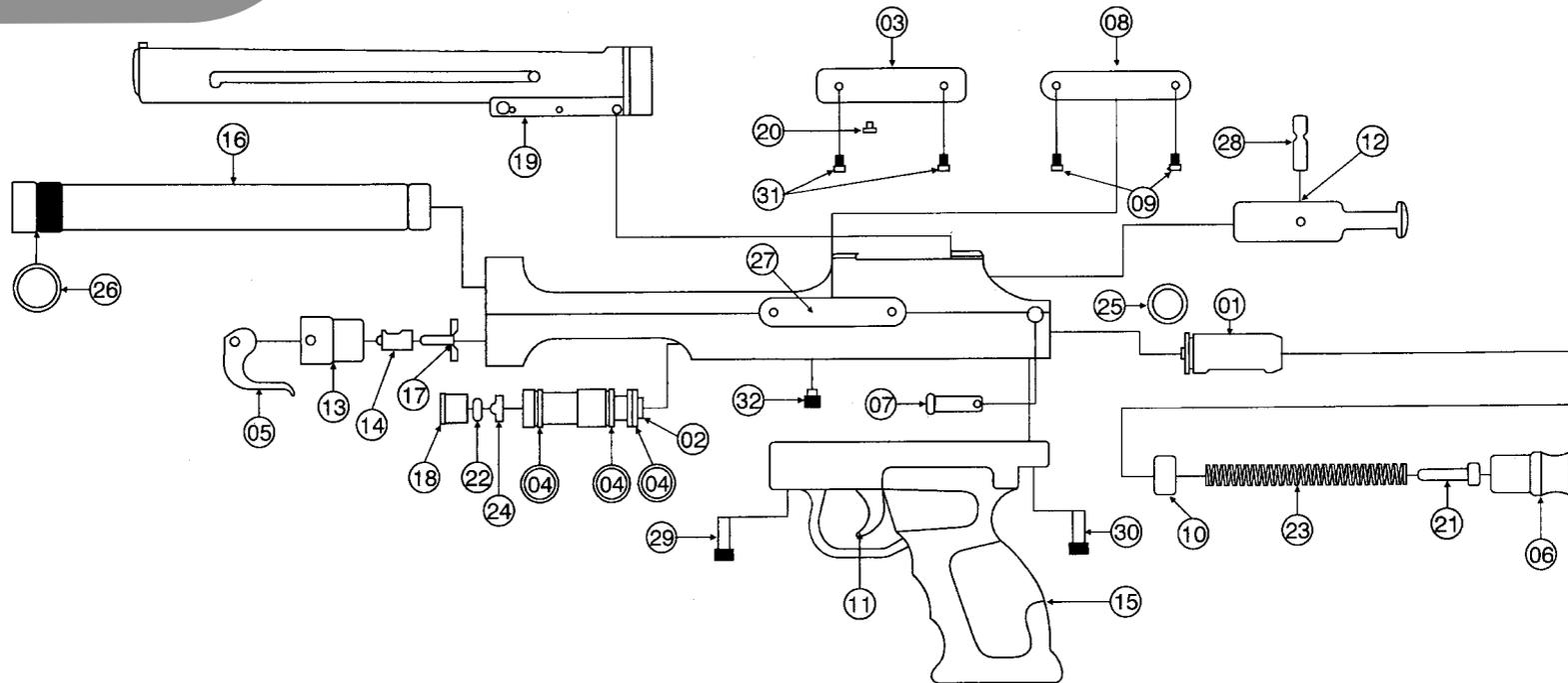
well in any gun in the extreme cold. What happens if you burst a hose or damage your system using high pressure is actually less dangerous than the more volatile CO2. Again we'll cover that one in the next chapter.

3. Use only oil designed for paintball guns in your PT Xtreme.

The primary function of oil in regards to your paint gun is to reduce friction in the moving internal components. This will minimize the wear of the parts while increasing the speed and smoothness of the operation. If you are going to use an oil that is not specifically designed for paint guns there are some important issues to look at. First, the temperature of liquid CO2 is somewhere in the - 50 to -60 degree Celsius range. You'll need an oil that does not thicken in that temperature range. Motor oil for instance, is designed to work in hot temperatures and will thicken in the cold. This will cause the internal parts of your gun to slow down or even cease. The "thickness" of an oil is called viscosity. Some oils tend to have viscosity break-down in extreme hot or cold temperatures--some do not. There is actually a viscosity index which will tell you how "durable" an oil is in hot or cold temperature. Paint gun oil should have a viscosity index of 300+ and should be able to handle temperatures of -60 to +60 degrees C.

Check Out These Great Paintball Resources

- Paintball 2Xtremes Magazine
- www.Paintball Safety.com
- NPPL Website
- www.Paintballbusiness.com



PT Xtreme PAINTBALL MARKER PARTS LIST

- | | | | |
|-------------------------|------------------|----------------------|--------------------|
| 1. Hammer | 9. Screw | 17. Push Set | 25. O-ring |
| 2. Gas valve | 10. Recoil pad | 18. Value black plug | 26. O-ring |
| 3. Recoil cover | 11. Trigger | 19. Ball bag | 27. Main body |
| 4. O-ring | 12. Bolt | 20. Ball detent | 28. Pull rod strut |
| 5. wrench | 13. 12g Co2 plug | 21. Spring guide | 29. Screw |
| 6. Hammer plug | 14. Piston | 22. Washer | 30. Screw |
| 7. Quick disconnect pin | 15. Grip | 23. Pressure spring | 31. Screw |
| 8. Gas cover | 16. Barrel | 24. Thimble | 32. Plug |