

Bulldog II

Patent # 6,409,150

Preset Regulator



Owners MANUAL

⚠ WARNINGS ⚠

IMPORTANT SAFETY INSTRUCTIONS WARNINGS FOR SAFE CYLINDER HANDLING *Observe these warnings and all others that appear throughout this manual.* The Bulldog II is not a toy. Careless or improper use, including failure to follow instructions in the Operators Manual, could cause death or serious injury. Read Operators Manual before use and comply with all safety instructions.

- ✓ Paintball industry standard head/face/throat/eye protection designed specifically for paintball games must be worn by user and any person within 200 yards (183 meters) when used in conjunction with a paintball marker.
- ✓ Observe all local laws, Regulations and guidelines concerning use. Use only on professional paintball fields where codes of safety are strictly enforced.
- ✓ Use compressed AIR, NITROGEN or CO2 to power 0.68 calibre paintball markers.
- ✓ As the owner of the Bulldog II it is your statutory obligation to comply with current and future legislation regarding maintenance and use of the Bulldog II and associated parts.
- ✓ Should you sell the Bulldog II to third parties it is your obligation to ensure it complies with current regulations before disposal.
- ✓ All Pressure must be relieved from the air system assembly prior to servicing
- ✓ Never purge or fill the Bulldog II in confined spaces or near naked flames. Air under pressure will aid combustion. Nitrogen in high concentrations will cause asphyxiation therefore adequate ventilation is required.
- ✓ Vented gases at high pressures can emit high sound levels, which may damage your hearing. Precautions must be taken to protect your hearing and others.
- ✓ Never use damaged hoses or fittings. Split, torn, crushed hoses may fail in a violent manner. Inspect all hoses & fittings at regular intervals.
- ✓ Never over-tighten any threads or fittings as excessive torque can damage the threads.
- ✓ Do not transport pressurized gas cylinders
- ✓ Never use inappropriate oils or greases on the cylinder assembly, the only lubricant approved for use is ACI Airlube. The use of inappropriate lubricants may result in unit failure.
- ✓ Never put pressurized gas directly against skin or use the Bulldog II to blow debris around, as serious injury can result to yourself and others.

- ✓ Do not exceed the pressure rating shown on your system's storage cylinder. Never pressurize the cylinder/Bulldog II beyond its safe working pressure. The high pressure gage on the Bulldog II will indicate tanks pressure.
- ✓ Never use incorrect safety rupture devices. The one-piece burst disc/nut assembly used in the Bulldog II incorporates a captive burst disc in its burst nut. In the event of rupture of the captive burst disc the one-piece burst disc/nut assembly should only be replaced with another one-piece burst disc/nut assembly, and not with a separate copper burst disc. The fitting of a separate burst disc with the one-piece burst disc/nut assembly can result in the pressure relief safety device on the regulator failing to operate correctly. This could lead to the cylinder exploding which may result in serious injury or death.
- ✓ Only use suitable fill stations that are fitted with industry standard connectors. Inspect all connectors prior to filling for signs of wear, abuse and suitability. Filling only to be carried out by competent trained personnel.
- ✓ Fast filling of cylinders results in heating of the gas and cylinder: If filled too fast, this heat can become excessive which may cause damage to the cylinder. Such damage can lead to failure of the cylinder, causing potential property damage and personal injury. Care must be taken to fill the cylinder at a rate so the cylinder temperature does not exceed 140 degrees F (60 degrees C). Prior to each filling, the cylinder should also be examined for signs of damage, including heat/flame exposure. If any damage is observed, do not fill the cylinder. Take the suspect cylinder to a DOT or HSE authorized hydrostatic tester for inspection and pressure testing. Any questions concerning the safe filling or use of these fibre wrap cylinders should be directed to the cylinder manufacturer.
- ✓ Only genuine Bulldog II replacement parts must be used.
- ✓ The cylinder must only be removed once all pressure has been relieved from the system.
- ✓ Only suitable fill stations that can supply a regulated gas output pressure that does not exceed the rated working pressure of the cylinder should be used for filling. Only use suitable fill stations that are fitted with industry standard connectors. Inspect all connectors prior to filling for signs of wear, abuse and suitability. Filling only to be carried out by competent trained personnel.

The **Bulldog II** Preset Regulator

The BULLDOG is a preset, inline regulator for use with any Paintball Gun originally designed to be powered by unregulated CO₂, or other inert gases at similar pressures.

NOTE: NOT ALL PAINTBALL GUNS WERE DESIGNED FOR COMPRESSED AIR, CHECK YOUR PAINTBALL GUN OWNERS MANUAL FOR COMPATIBILITY.

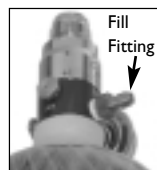
FILLING YOUR POWER SYSTEM

Your new Bulldog II Preset Regulator is equipped with the standard QD Style fill fitting, that allows your system to be refilled whether it's on the marker or off. The Bulldog II system can be filled with *Clean Dry* Compressed Air or Nitrogen if you wish. No noticeable difference will be apparent in your gun's performance.



NOTE: NEVER FILL YOUR POWER SYSTEM WITH PURE OXYGEN !!!

Depending on which model you purchased, your new BULLDOG II regulator can be mounted on either an 1800 PSI, 3000 PSI or 4500 PSI bottle. Please understand that while the regulator can accept input pressures up to 4500 PSI, it is the bottle that determines the maximum safe fill pressure. *Do not fill your bottle beyond its pressure rating shown on your system's storage bottle!* The regulator comes standard with a high pressure gauge, and lets you quickly see how much air you have left.



You, as the operator must understand how important it is to keep dirt, oil and water out of your power system. It is not an exaggeration to say that 99% of all regulator failures are due to dirt or contamination. Always keep a cover on the fill nipple when you are not actually filling. If you use compressed air, make sure that the compressor providing that air is equipped with *WORKING* filters and moisture separators.

CONNECTING YOUR POWER SYSTEM

Your BULLDOG II Preset Regulator is set at the factory to deliver gas at normal CO₂ pressure. Because of this, there is no setup or user adjustment that is required. The BULLDOG II System screws into your Marker's ASA fitting, the same way the CO₂ bottle it's replacing does. Just like your old CO₂ bottle, the Bulldog II has a "pin valve" type output valve that shuts off the gas when the power system is removed from the Marker.



MAINTAINING YOUR POWER SYSTEM

(1) Flange _____
 (2) Flange O-Ring _____
 (3) Pin Valve Seal _____
 (4) Pin Valve _____
 (5) Pin Spring _____
 (6) Tank O-Ring _____
 (7) Housing _____
 (8) HP Fill Nipple _____
 (9) 4000 PSI Gage _____

(10) 1.8K Unified Burst Disk (on back, not shown)
 (11) 5K Unified Burst Disk

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Through general use, the Bulldog II may need to replace some of the parts. The diagram to the left shows the order in which to assemble the internal parts should they become worn or damaged. See chart below to reorder parts.

Description	Part No.
(1) Flange (LH thread) . . . . .	.5404202A
(2) Flange O-Ring (Nitrile) . . . . .	.5680011
(3) Pin Valve Seal . . . . .	.5404208
(4) Pin Valve . . . . .	.5404204
(5) Pin Spring . . . . .	.402008
(6) Tank O-Ring . . . . .	.5700015
(7) Housing . . . . .	.8700101/C
(8) HP Fill Nipple . . . . .	.5402500
(9) 4000 PSI Gage . . . . .	.5409400
(10) 1.8K Unified Burst Disk . . . . .	.5404211A
(11) 5K Unified Burst Disk . . . . .	.5404215

TROUBLE SHOOTING

PROBLEMS	POSSIBLE CAUSE	SOLUTION
Flange leaks air from tank O-Ring	Worn Flange O-Ring or loose Flange	Replace Flange O-Ring or tighten Flange (LH threads)
Air leaks from pin area	Worn Seal or debris	Replace Pin Seal and/or Flange
Housing leaks when screwed into gun	Worn tank O-Ring	Replace tank O-Ring
1.8K Unified Burst Disk bursts when tank is filled	There may be two causes for this, 1- Refilling cylinder too quickly, or 2- Bad seal	Replace with 1.8K burst disk, and reduce flow rate when refilling. If problem persists, have an ACI or authorized air-smith replace seal
Air shoots from 1.8K Unified Disk Burst	Blown Burst Disk	Replace Burst Disk
Air shoots from 5K Unified Burst Disk	Blown Burst Disk	Replace Burst Disk
Air leaking from housing and body	Seal has shifted from use	ACI or authorized airsmith rebuild required
Air leaking form regulator body and connection	Seal has shifted from use	ACI or authorized airsmith rebuild required
Airflow restricted	Low tank pressure or debris in air passage	ACI or authorized airsmith rebuild required
Wont screw into gun adapter	Housing threads damaged	ACI or authorized airsmith rebuild required

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