



**OWNER'S MANUAL**

***Quality Uncompromised!!***

***Be on top of your game with Consistent Air Pressure!***

***Tanks available in 48 cubic inch 3000 PSI and 48& 68 cubic inch 4500 PSI. Combined with the best regulator on the market, DXS Air Systems deliver unbeatable consistency in Air Pressure delivery.***

ASTM approved, our 2-in-1 Regulators can toggle from 800 PSI to a low 450-550 PSI output in a few minutes (Low Pressure Kit sold separately).

**MADE IN USA**

**PATENT NUMBERS 6,851,447 / 7,059,343 / 7,051,751**



**FILLING THE DXS REGULATOR™**

Your Preset Regulator is equipped with the standard “QD Style” fill fitting, which allows your regulator system to be refilled either on or off the marker. Your **DXS Regulator™** may be filled with either Clean, Dry Compressed Air or Nitrogen. **NOTE YOUR DXS REGULATOR IS OFFERED IN STANDARD AND LOW PRESSURE CONFIGURATIONS.**

**LOW PRESSURE REGULATORS HAVE AN ORANGE THREAD PROTECTOR CAP AND ARE LASER ETCHED LOW PRESSURE ABOVE THE FILL NIPPLE. LOW PRESSURE SPRINGS ARE GOLD. LOW PRESSURE REGULATORS CAN BE CONVERTED TO STANDARD PRESSURE BY INSTALLING THE OPTIONAL SILVER SPRING KIT SEE PAGE 4**

**▲ UNDER NO CIRCUMSTANCES SHOULD ANY POWER SYSTEM BE REFILLED WITH PURE OXYGEN**

When filling your **DXS REGULATOR™** do not exceed the pressure rating shown on your system’s storage bottle!

**▲ DO NOT APPLY OR INJECT OIL OF ANY TYPE TO THE FILL OR BURST DISC PORTS OIL WILL VAPORIZE AND POSSIBLY IGNITE DURING THE FILL PROCEDURE.**

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

**CONNECTING YOUR DXS REGULATOR™**

Screw your **DXS REGULATOR™** into your markers ASA fitting. The **DXS REGULATOR™** has a “pin valve” output valve which shuts off the gas delivery when the power system is removed from the marker.

## THE SAFETY SYSTEM

All DXS REGULATOR™ are equipped with an ASTM APPROVED bottle Burst Disk required by the Department Of Transportation. (D.O.T.)

In addition to the required safety burst disk, all DXS REGULATORS™ have an 1800 PSI safety burst disk (stamped 1800 PSI).

The 1800 PSI safety burst disk is there to protect you and your marker in the unlikely event that the regulator fails. **REMEMBER, most regulator failures are the result of contaminated air.**

If the 1800 PSI safety burst disk vents, it did so for a reason. We recommend you do the following:

- Disassemble the regulator (refer to page 3) inspect the regulator for contamination and clean if necessary.
- Install a new 1800 psi burst disc. and refill the system.
- If the 1800 psi burst disc vents after rebuild see an airsmith for help or call 1-815-477-0007 extension 321.

ALL DXS REGULATORS™ now come with Safety Vent Grooves in the bottle threads. (As shown in the illustration on page 1.) These lifesaving features allow for the venting of the bottle, in the event the regulator is unscrewed from the bottle with pressure present in the bottle.

ALWAYS CHECK THE TO MAKE SURE THERE IS NO GAP BETWEEN THE BOTTLE AND REGULATOR SEAL. SEE ILLUSTRATION BELOW. IF THERE IS A GAP ▲ **STOP!!! DO NOT FILL OR USE YOUR SYSTEM. PLACE THE SYSTEM ON THE GROUND AND WAIT FOR THE SYSTEM TO FULLY DEGAS! CONTACT A QUALIFIED AIRSMITH IMMEDIATELY! OR CALL 815-477-0007 EXT 321 FOR ASSISTANCE.**



# **SERVICE & REBUILD PROCEDURES**

*For reference purposes, consult the exploded parts diagram on the following page.*

**▲ALWAYS WEAR EYE PROTECTION, GLOVES AND POINT THE AIR SYSTEM IN A SAFE DIRECTION PRIOR TO DEGASSING THE SYSTEM!!!**

**PRIOR TO DISASSEMBLY FULLY DEGAS THE AIR SYSTEM BY DEPRESSING THE PIN VALVE UNTIL NO AIR REMAINS IN THE BOTTLE!!!**

**IF YOU ARE NOT COMFORTABLE WITH DISASSEMBLING THE REGULATOR BRING THE REGULATOR TO A QUALIFIED AIR SMITH! OR CALL 815-477-0007 EXT 321**

All internal parts are accessed by unscrewing the Bonnet from the Gas Distribution Body. To remove the Bonnet, first remove the two locking screws. The bonnet can then be unscrewed. No thread locking compound was used, so **▲DO NOT APPLY HEAT!** If the bonnet does not easily unscrew, **▲MAKE SURE THE SYSTEM IS COMPLETELY DEGASSED BY DEPRESSING THE PIN VALVE TO EXHAUST ANY TRAPPED GAS.**

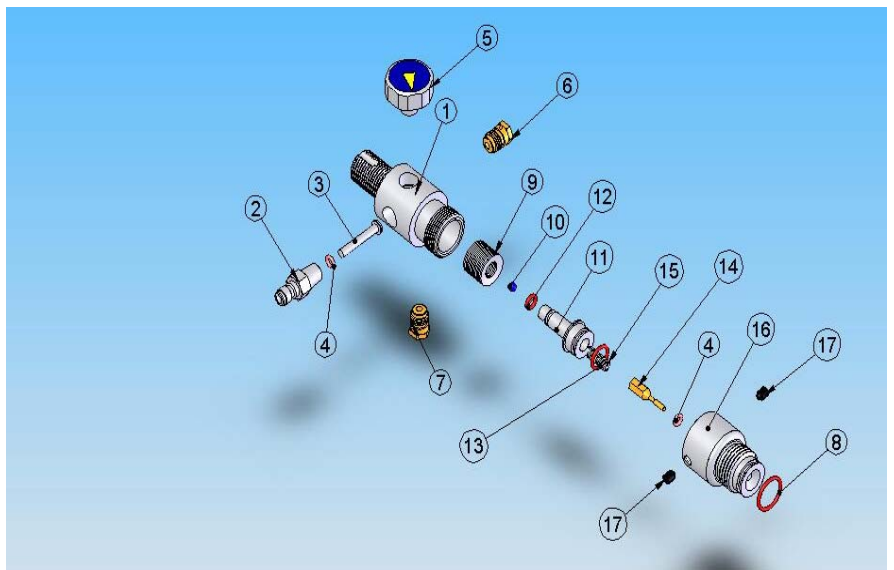
Once the Gas Distribution Body and Bonnet have been separated, the coil spring, piston, and Output Pin Valve components can be removed.

Replace both "O" rings on the piston. Inspect the reg seat ball for dirt or debris and clean if necessary.

To reassemble, lubricate both piston "O" rings using Dow 33 or silicone. Re-install the Output Pin Valve & Spring, and carefully push the Piston Assembly into the piston bore in the Bonnet. The Piston must be properly seated in the Bonnet before proceeding further. Reinstall the coil spring and any shims. Do not apply excessive torque when screwing the Bonnet and Gas Distribution together. Replace and securely tighten the (2) 10-32 bonnet retaining screws.

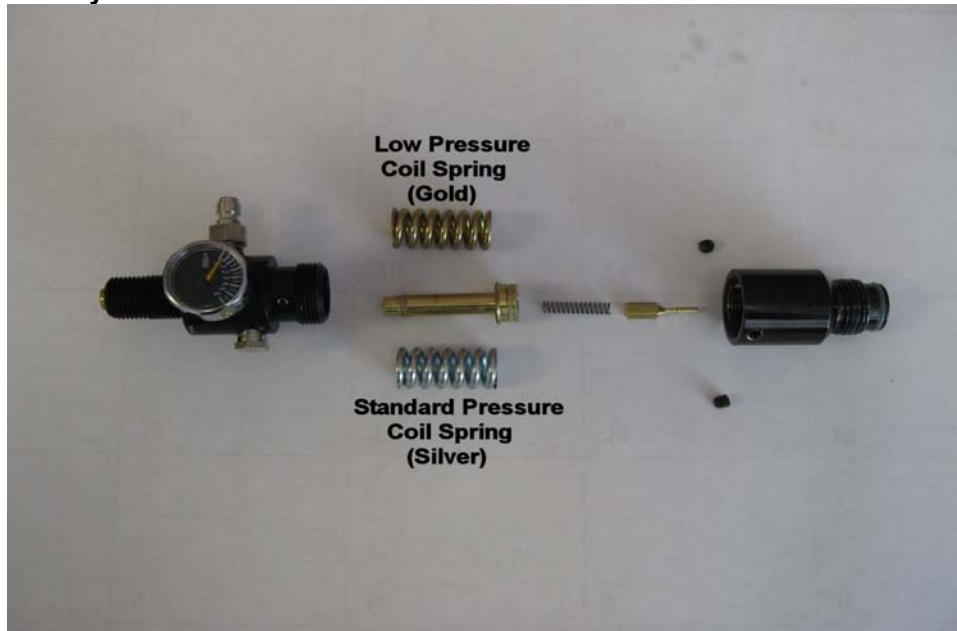
## **EXPLODED VIEW**

- 1.GASDISTRIBUTION BODY
- 2.FILL FITTING
- 3.CHECK STRUT
- 4.006-90 URETHANE ORING
- 5.HIGH PRESSURE GAUGE
- 6.HIGHPRESSURE BURST DISK
- 7.LOWPRESSURE BURST DISK
- 8.015-90 URETHANE ORING
- 9.COIL SPRING
- 10.REG SEAT BALL
- 11.PISTON
- 12.008-90 URETHANE ORING
- 13.012-90 URETHANE ORING
- 14.OUTPUT PIN VALVE
- 15.OUTPUT PIN VALVE SPRING
- 16.BONNET
- 17.BONNET LOCKING SCREWS



# COIL SPRING INSTALLATION

The installation of the Low Pressure gold spring or Standard Pressure silver spring is simple and requires only a 3/32" Allen wrench.



**▲ BEFORE PROCEEDING, MAKE SURE YOUR SYSTEM HAS BEEN COMPLETELY DEGASSED VIA THE OUTPUT PIN VALVE, TO INSURE THAT NO TRAPPED COMPRESSED GAS IS PRESENT!**

1. Remove the two set screws that lock the Bonnet (the top portion of the regulator) to the Reg Body.
2. Unscrew the Bonnet from the Reg Body. (It has normal right-hand threads.) Bonnet should remove easily. Make sure there is no trapped air in the bonnet by depressing the pin valve.
3. Being careful not to lose the brass Output Pin Valve or its spring, pull the Piston/Coil spring assembly out of the Bonnet.
4. Remove any factory adjustment shims from the Reg Body that may be present. Store them with your original coil spring in case you ever wish to return your regulator to the normal output pressure range.
5. Insert the Low Pressure gold or standard pressure silver coil spring assembly into the Reg Body.
6. Insert the small spring and the Output Pin Valve into the bore of the Piston.
7. Carefully screw the Bonnet back onto the Reg Body, making sure that the nose of the brass Output Pin Valve is correctly aligned with the small bore on the ASA side of the Bonnet.
8. Replace the two locking set screws and tighten securely.

**NOTE:** Not all regulators have shims. Shims are factory installed to dial in output pressure. We recommend that if your regulator has shims with the standard silver coil spring that you should remove the shims when installing the gold spring and store the shims with the standard silver coil spring. If you install the standard silver coil spring make sure you install the shims.

**PLAY SAFE HAVE FUN ALWAYS WEAR ASTM APPROVED EYEWEAR PROTECTION!**

21 November 2006