NINJA ROTATIONAL FLEX REGULATOR OWNERS MANUAL

Patent No.: US 11,169,550 B2

ADJUSTABLE OUTPUT REGULATORS

300-900psi

1.877.NINJAUSA (1.877.646.5287)

VIDEO GUIDES

DUE TO THE HIGH FLOW CHARACTERISTICS OF THE PIN REGULATOR YOU MAY EXPERIENCE CONNECTION / ACTIVATION DIFFICULTIES WITH CERTAIN MARKERS. TO ELIMINATE SIMPLY ADJUST REGULATOR OUTPUT PRESSURE TO 500PSI OR BELOW.
SEE PAGE 4 FOR PRESSURE ADJUSTMENT.
SEE OUR YOUTUBE CHANNEL FOR FULL GUIDES

⚠WARNING: This is not a toy. Misuse may cause serious injury or death. Eye protection designed specifically for paintball must be worn by the user and persons within range. Recommend 18 years or older to purchase. Persons under 18 must have adult supervision. READ OWNERS MANUAL BEFORE USING

FILLING THE NINJA FLEX REGULATOR SYSTEM

The ***FLEX*** Regulator system is equipped with the industry standard "QD Style" fill fitting, which allows your ***FLEX*** Regulator system to be refilled either on or off the marker. The ***FLEX*** Regulator system may be filled with clean ***dry*** Compressed Air or Nitrogen.

UNDER NO CIRCUMSTANCES SHOULD THE FLEX REGULATOR SYSTEM BE FILLED WITH PURE OXYGEN. OXYGEN WILL IGNITE CAUSING INJURY OR DEATH.

When filling your ***FLEX*** Regulator system do not exceed the pressure rating shown on the CYLINDER'S LABEL.

DO NOT APPLY OR INJECT OIL OF ANY TYPE INTO THE FILL OR BURST DISK PORTS. OIL WILL VAPORIZE AND POSSIBLY IGNITE DURING THE FILL PROCEDURE CAUSING INJURY OR DEATH

It is important to keep dirt, oil, and water out of your ***FLEX*** Regulator system. Most regulator failures are due to dirt or contamination. Always keep a cover on the fill nipple when you are not filling the Flex Regulator system. If you use compressed air, make sure that the compressor providing that air is equipped with **WORKING** filters and moisture separators.

CONNECTING YOUR FLEX REGULATOR

PRIOR TO EVERY USE OF YOUR NINJA FLEX AIR SYSTEM PLEASE DO THE FOLLOWING.
FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY.

- INSPECT TO MAKE SURE THE BONNET SET SCREWS (X3) AND ROATATIONAL RING SET SCREWS (X3) ARE PRESENT AND SECURELY TIGHTENED.
- DO NOT USE THE NINJA FLEX AIR SYSTEM IF ANY OF THE BONNET OR ROTATIONAL RING SET SCREWS ARE MISSING OR NOT SECURELY TIGHTENED.

NEVER REMOVE THE SET SCREWS OR ADJUST THE ROTATIONAL RING WITH PRESSURE IN THE BOTTLE.

ROTATIONAL ADJUSTMENT: **DO NOT ADJUST WITH AIR IN YOUR TANK: TANK MUST BE EMPTY.**
The following tools are required and are available at most hardware stores:

- 5/64 Allen Wrench (included)
- Soft jaw pliers to assist in bonnet removal

After connecting your Ninja FLEX regulator system into your markers ASA fitting, you may wish to orientate your Ninja FLEX regulator. The Ninja Flex regulator has a full 360 degree rotation.
Follow these simple steps:

BEFORE PROCEEDING, MAKE SURE YOUR SYSTEM HAS BEEN COMPLETELY DEGASSED BY DEPRESSING THE OUTPUT PIN UNTIL NO TRAPPED GAS IS PRESENT.

DO NOT ADJUST ROTATIONAL RING WITH AIR IN YOUR TANK: TANK MUST BE EMPTY

1. Using a 5/64 allen wrench, loosen (turn counter clockwise) the (3) Rotational ring set screws. **DO NOT REMOVE SCREWS. SCREWS HAVE A VIBRATION PATCH.**
2. Grasp the bottle and turn the Ninja FLEX regulator to your desired position.
3. Tighten the (3) 8-32 rotational collar set screws securely. Fill your air system and you are ready for use.

THE SAFETY SYSTEM

The NINJA ***FLEX*** Regulator is equipped with an ASTM COMPLIANT bottle Burst Disk required by the Department of Transportation (D.O.T)

In addition to the required safety burst disk, the regulator has a Low Pressure (LP) safety burst disk.

The LP safety burst disk is there to protect you and your marker in the unlikely event your Ninja ***FLEX*** regulator fails.

⚠REMEMBER, Most regulator failures are the result of contaminated air.

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

- Disassemble the regulator (refer to Service and Rebuild procedures), inspect the regulator for contamination and clean if necessary.
- Install a new LP Burst disk, PER THE INSTRUCTIONS ON PAGE 6, Available at most paintball shops and refill the system.

If the LP burst disk vents after rebuild see and airsmith for help or call : 1.877.NINJAUSA (1.877.646.5287)

NINJA REGULATORS have a Safety Vent Groove on the stem (as shown in below image). This lifesaving feature allows for the venting of the bottle, in the event the regulator is unscrewed from the bottle with pressure present in the bottle.

ALWAYS CHECK 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
Safely drain your system and wait for the system to FULLY DEGAS! Contact a qualified Airsmith IMMEDIATELY OR CALL 1.877.NINJAUSA

PRESSURE ADJUSTMENT

Unless ordered otherwise, all Ninja ***FLEX*** Regulators are shipped at their lowest pressure output setting. VIDEO GUIDES AVAILABLE using QR code provided on first page of this manual.

ALWAYS WEAR EYE PROTECTION, GLOVES AND POINT THE AIR SYSTEM IN A SAFE DIRECTION AWAY FROM YOURSELF AND ALL BYSTANDERS PRIOR TO DEGASSING OR ADJUSTING THE SYSTEM!

NOTE: THE FOLLOWING TOOL MAY BE REQUIRED AND WAS SHIPPED WITH YOUR FLEX REGULATOR: **30-32 Hook spanner wrench.**

When adjusting you must activate or vent the regulator with every 1/6 of a turn or every notch on the adjusting collar.

DO NOT EXCEED AN OUTPUT PRESSURE OF MORE THAN 1200PSI

You should you always start at the lowest setting and adjust up to the desired output.

Please note the adjustment marks on the adjustment collar indicating which way will increase or decrease the output pressure.

Turning the collar up toward the bonnet will lower/decrease the output pressure and turning the collar down toward the body will raise/increase the output pressure.

NOTE: TO REDUCE WEAR ON THE ADJUSTMENT COLLAR WE RECOMMEND YOU PERIODICALLY APPLY A DROP OR TWO OF AIR TOOL OIL TO THE ADJUSTMENT COLLAR THREADS ON THE GAS DISTRIBUTION BODY (#17) AND TO EACH ADJUSTMENT BALL (#14)

*THE OUTPUT GAUGE **(MARKED "OUTPUT" ON THE GAS DISTRIBUTION BODY)** WILL NOT SHOW ANY ADJUSTMENT TO PRESSURE WHEN DECREASING UNTIL THE SYSTEM IS VENTED OR ACTIVATED.*

TOURNAMENT LOCK SLEEVE

To prevent any pressure adjustment while *on field.* Included with your Ninja ***FLEX*** regulator is a Tournament Lock Sleeve. Simply slide over regulator prior to installation on your marker to ensure compliance with any field rules and regulations.
This sleeve is constructed out of non abrasive delrin material to prevent scratches to your regulator.

Note:
Sleeve is designed to fit in only one orientation. Match the "FILL PORT" engraving to the fill port for proper installation.

SERVICE & REBUILD PROCEDURES

FOR SAFETY AND RELIABILITY ONLY USE NINJA REPLACEMENT PARTS.
VIDEO GUIDES AVAILABLE USING THE QR CODE PROVIDED ON THE FIRST PAGE OF THIS MANUAL.
For reference purposes, consult the exploded parts diagram found on page 8.

ALWAYS WEAR EYE PROTECTION, GLOVES AND POINT THE AIR SYSTEM IN A SAFE DIRECTION AWAY FROM YOURSELF AND ALL BYSTANDERS PRIOR TO DEGASSING THE SYSTEM!

SPARE PARTS & REBUILD KITS AVAILABLE AT YOUR NINJA DEALER.
NOTE: THE FOLLOWING TOOLS MAY BE REQUIRED AND ARE AVAILABLE AT MOST HARDWARE STORES:

-5/64" HEX KEY WRENCH (INCLUDED) TO REMOVE BONNET SET SCREWS (x3)
-SOFT JAW PLIERS TO ASSIST IN BONNET REMOVAL

PRIOR TO DISASSEMBLY FULLY DEGAS THE AIR SYSTEM

POINT THE BOTTLE AWAY FROM YOURSELF AND BYSTANDERS

DEPRESS 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 1.877.NINJAUSA (1.877.646.5287)

1. All internal parts are accessed by removing the Bonnet set screws (#3) with the 5/64" hex wrench and unscrewing the Bonnet (#3) from the Gas Distribution Body (#17).
2. After separating the bonnet (#3) from the Gas Distribution Body (#17), The spring stack (#9), Shims (#10), Ring (#11) Piston (#8) and pin valve components (#5 & #6) can be removed. **Helpful Hint:** Do not use tools to remove the piston (#8) as this may damage the piston. Firmly grip the end of the piston and wiggle the piston while pulling with your fingers.
3. Clean the inside of the Ninja FLEX Gas Distribution body (#17) and Bonnet (#3) with a cotton swab. If required rubbing alcohol can be used.
4. To reassemble, lightly lubricate the piston "O" Rings (#7 & #12) using silicone lube.
5. Re-install the Output Pin Valve and Spring (#5 & #6) by dropping the pin (#5) into the bonnet (#3). Make sure the pin (#5) is seated and located in the bonnet pocket.
6. Place the Pin spring (#6) into the piston cavity. Then carefully push the piston assembly into the piston bore in the Bonnet (#3). The Piston must be properly seated in the bonnet before proceeding further. The Piston is properly seated when it cannot be pushed in any further.
7. Do not apply excessive torque when screwing the Bonnet (#3) and Gas Distribution Body (#17) together. Replace and securely tighten the (3) 8-32 Bonnet retaining screws (#2) with the 5/64" hex key wrench.

"NEW" NINJAOFV O-RING FILL CHECK VALVE

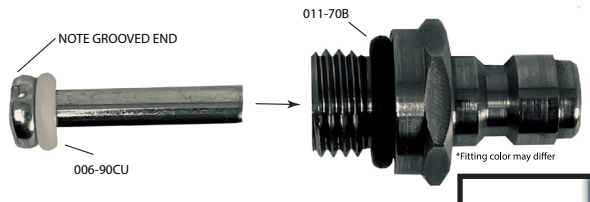
INNOVATIVE DESIGN
NO NEED FOR THREAD TAPE OR SEALANT
EASY POSITIVE STOP INSTALLATION

- **THE NINJAOFV O-RING FILL VALVE WILL ONLY WORK WITH A COMPATIBLE NINJAOFV SERIES REGULATOR. OFV IS LASERED ABOVE THE FILL PORT ON THE REGULATOR GAS DISTRIBUTION BODY. SEE PHOTO BELOW.**
- **DO NOT USE THE NINJAOFV O-RING FILL VALVE WITH OLDER NINJA REGULATOR VERSIONS OR ANY NON OFV REGULATOR**

The NINJAOFV O-RING FILL VALVE on your NINJA OFV SERIES regulator is one of the items that will require periodic replacement, Either due to leakage or mechanical wearing damage to the QD portion of the fill nipple which will cause difficulties attaching the fill valve to a fill station. **TO REPLACE FOLLOW THE PROCEDURE BELOW:**

1. ALWAYS WEAR SAFETY GLASSES AND POINT THE REGULATOR AWAY FROM YOURSELF AND ALL BYSTANDERS.
2. **MAKE SURE THE SYSTEM IS COMPLETELY DE-PRESSURIZED BY DEPRESSING THE PIN VALVE UNTIL ALL AIR HAS BEEN RELEASED.**
3. Using a **1/2" wrench**, turn counterclockwise. Remove the NINJAOFV.
   NOTE: OFV is laser engraved above the fill above the fill valve port on the gas distribution body as seen below.
4. Clean any debris out of the port.
5. Inspect the 3/8-24 female fill check port threads on the gas distribution body for damage. **IF THREADS ARE DAMAGED OR WORN STOP! DO NOT USE THE REGULATOR SEE AN AIRSMITH OR CALL 1.877.NINJAUSA.** It is recommended that a 3/8-24 Class 2B go/no go gauge be used to verify these threads. This gauge is available at www.mscdirect.com
6. **DO NOT USE THREAD TAPE OR SEALANT ON THE THREADS!! THE NINJAOFV WILL SEAL ON THE 011-70B O-RING, NOT THE THREADS.**
7. Make sure the strut is inserted fully into the NINJAOFV as shown below
8. Install the NINJAOFV assembly turning clockwise until the OFV is hand tight, O-RING IS SEATED IN OFV PORT.
9. Use a 1/2" torque wrench and torque to ***55-85 INCH POUNDS***. Fill the bottle to verify no leaks.
10. If the fill valve is leaking **STOP** and contact an Airsmith or call 1.877.NINJAUSA for assistance.

NEVER INJECT OIL INTO THE FILL PORT VALVE. OIL DROPLETS CAN VAPORIZE AND IGNITE DURING THE FILL PROCEDURE CAUSING INJURY OR DEATH



BODIES WILL BE MARKED "OFV" AS SHOWN IMAGE

PIN VALVE SEAT REPLACEMENT

1. The Pin Valve Seat (#4) sits inside of the Bonnet (#3) in the bonnet pocket. To replace the Pin Valve Seat (#4) use a small pick to gently pull the Pin Valve Seat from the Bonnet taking care to not damage the Bonnet.
2. When Placing the Pin Valve Seat (#4) into the Bonnet (#3) place the seat within the inner Bonnet pocket and gently push it into place using the eraser end of a pencil or similar small blunt object.

BURST DISK REPLACEMENT

ASTM compliant Unified Burst Disks are used on paintball regulators and CO2 Valves for both the D.O.T. (Department Of Transportation) required bottle protection and downstream over-pressure protection.

THE 3000 PSI (3K) BURST DISK IS FOR CO2 BOTTLES ONLY!!!

Four (4) most common burst disks.
1800 PSI. Used for down stream over-pressure safeties on regulators.

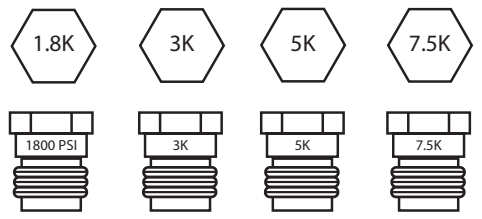
3000 PSI. Used for the D.O.T. required safety on CO2 storage bottles.

5000 PSI. Used for the D.O.T. required safety on 3000psi N2/HPA storage bottles and on "X" PCP/ ***FLEX*** regulators as the downstream safety.

7500 PSI. Used for the D.O.T. required safety on 4500psi rated N2/HPA storage bottles.

WARNING SERIOUS PERSONAL INJURY OR DEATH FROM IMPROPER DISK REPLACEMENT. IT IS ABSOLUTELY ESSENTIAL THAT YOU ONLY REPLACE FAILED UNITS WITH EXACT REPLACEMENTS!! ASTM UNIFIED BURST DISKS HAVE THE PRESSURE IDENTIFICATION MARKED ON THE HEAD OF THE DISK. SOME DISKS MAY HAVE THE PRESSURE IDENTIFIER ON THE SIDE OF THE DISK.

IF YOU ARE UNSURE DO NOT GUESS! SEE A QUALIFIED AIRSMITH OR CALL 1.877.NINJAUSA (1.877.646.5287)



TO REPLACE A UNIFIED BURST DISK ASSEMBLY:

1. Unscrew (turn counterclockwise) the failed unit and discard it. **(They are not serviceable)**
2. Visually inspect the female port for damage or debris and clean out if necessary. If the port is damaged, do not replace the disk. Consult an airsmith or call 1.877.NINJAUSA for assistance. We recommend the female port be checked with a 3/8-24 UNF-2B go/no go gauge available at www.mscdirect.com
3. Screw in the new replacement unit and torque to a minimum 55 inch-pounds and a maximum 95 inch-pounds. UNIFIED BURST DISK MUST BE ASSEMBLED WITH AN INCH POUND TORQUE WRENCH!
4. If Burst Disk assembly does not seal at 95 inch-pounds, the valve should be inspected by an airsmith or call 1.877.NINJAUSA for assistance.

NINJA *FLEX* REGULATOR BREAKDOWN

1. *Tank O-Ring (015-90u x 2)*
2. *Bonnet Set Screws (3) 8-32x3/32"*
3. *Bonnet*
4. *Pin Seat (008-PTFE)*
5. *Pin*
6. *Pin Spring*
7. *Piston O-Ring (012-90u)*
8. *Piston*
9. *Belleville Spring Stack***
10. *Fine adjustment shims (QTY may vary)*
11. *FLEX Ring*
12. *Piston O-Ring (008-90u)*
13. *Adjusting collar*
14. *Adjusting ball bearings (x4)*
15. *Gauges*
    1-Bottle Pressure (6000psi)
    1-Output Pressure (1200psi)
16. *OFV Fill Valve Assembly*
17. *Gas Distribution Body*
18. *Low Pressure Burst Disk*
19. *High Pressure Burst Disk*
20. *Thick Bottle O-Ring (112-70B)*
21. *30-32 Spanner Wrench*
22. *Rotational Ring*
23. *Rotational Ring Set Screws*
    (3) 8-32X1/8" with patch
24. *5/64" Hex Wrench*

*****BELLEVILLE SPRING STACK ORIENTATION WILL VARY BASED ON APPLICATION***
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