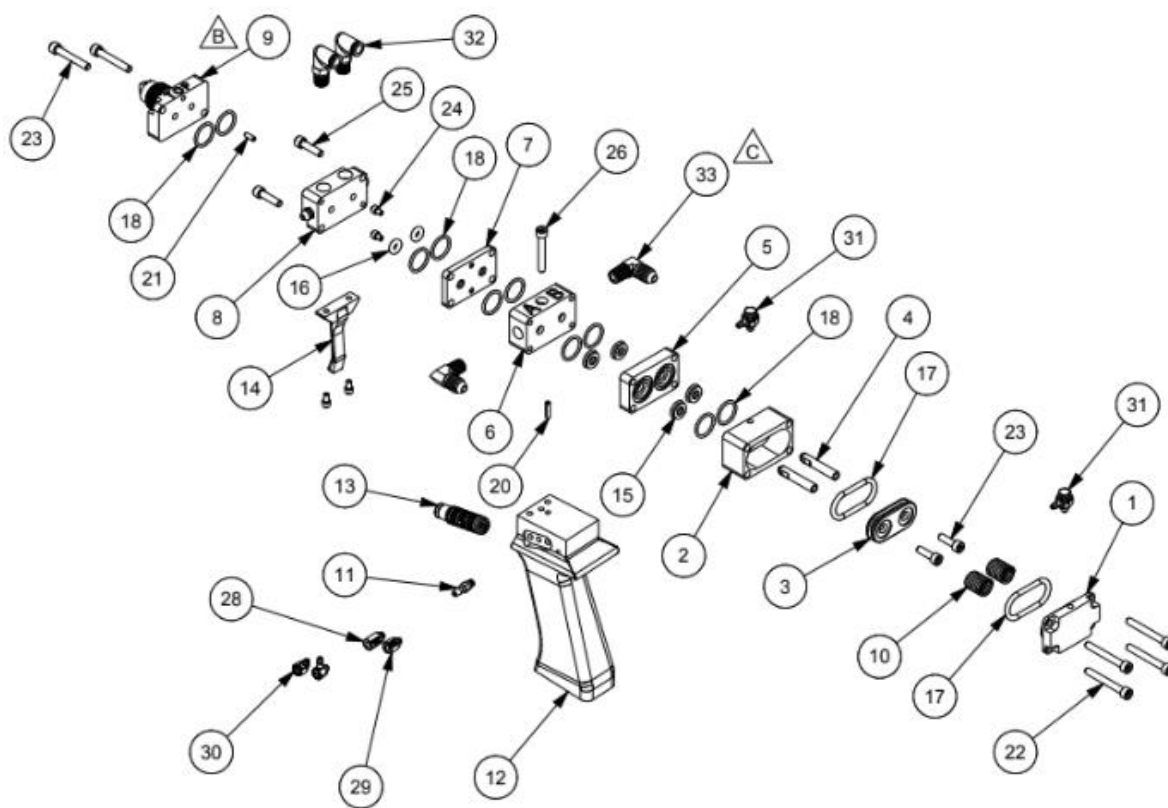




Nitrosys Plus Metal Gun

GENERAL

The dispensing valve assembly is designed to dispense plural component materials such as low or high viscosity urethanes, epoxies, silicones, and foams. The valve provides an on-off function only, it does not meter the chemical components. The metering is controlled by the proportioning pumps. The valve has been engineered to operate with an air purge to help eliminate the need for environmentally damaging solvents.



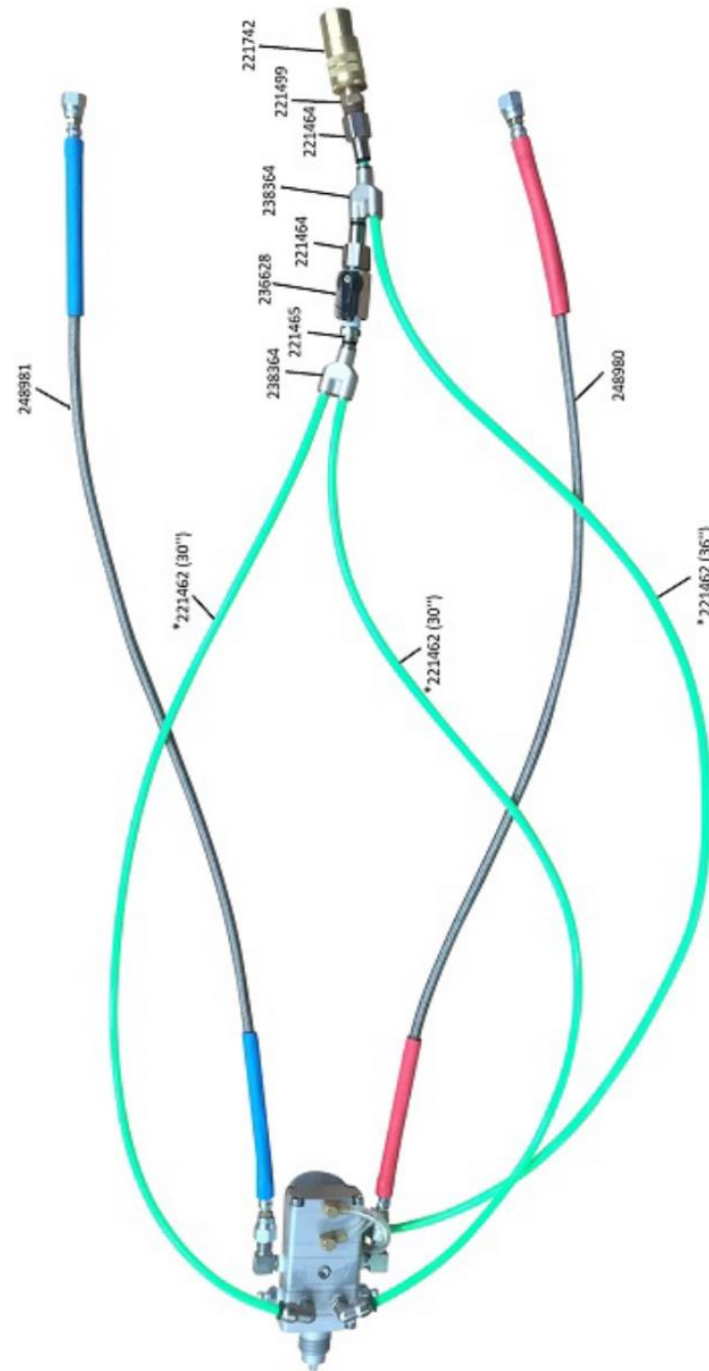
Technical Support

888-362-6411

GENERAL- COMPONENT LIST

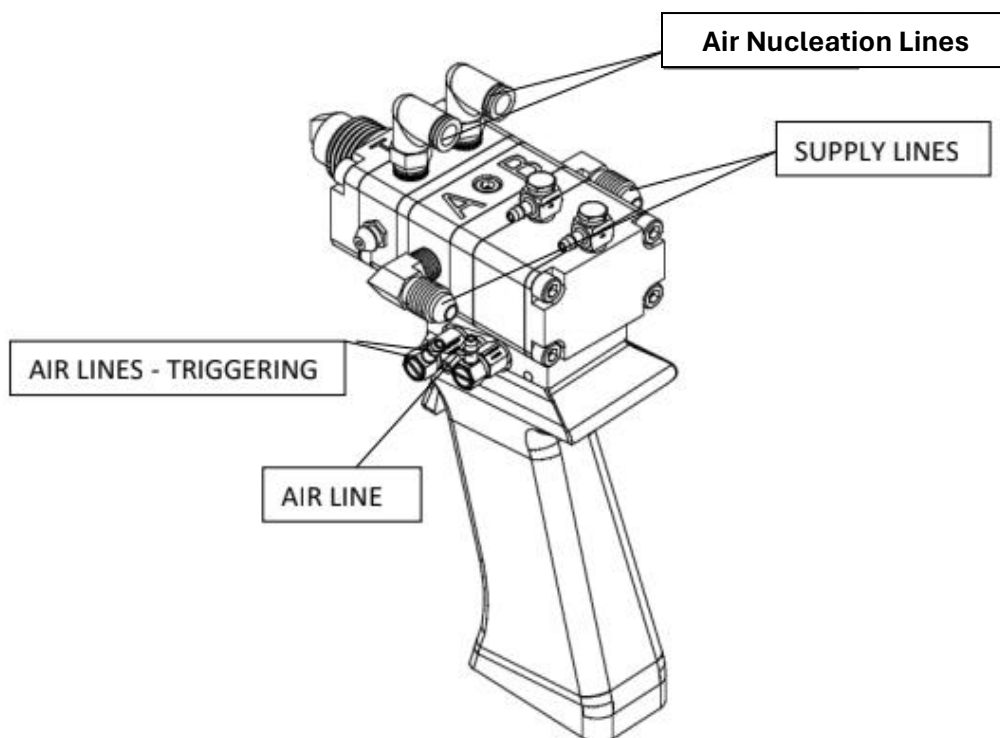
ITEM NO.	COMPONENT PART NO.	COMPONENT DESCRIPTION	QTY
1	236472	UG-25-001 AIR END CAP, BLANK	1
2	236736	UG-25-002 PISTON HOUSING	1
3	236632	UG-25-003 AIR PISTON	1
4	236737	UG-25-004 FLUID SHAFT	2
5	236738	UG-25-005 REAR SEAL BODY	1
6	236614	UG-25-006 INLET BODY	1
7	236613	UG-25-007 FRONT SEAL BODY	1
8	236604	FLUSH BODY, DOUBLE 1/8" NPT, W/ ZERK PORTS	1
9	236740	CPT ME STYLE LIQ END CAP 1:1	1
10	236741	SPRNG AIR CYL.#16 CSP-0636	2
11	236742	HOSE BARB, #SBF-170-1/4"	1
12	236938	VALVE HANDLE MODIFIED #15	1
13	236485	#4P HUMPH VALVE MOD	1
14	236744	U100AA TRIGGER COMPLETE	1
15	233989	U-CUP SEAL URETHANE 90 D	4
16	233990	O-RING, #2-201 VITON 90 DURO	2
17	233991	O-RING, #2-216 BUNA	2
18	233992	O-RING, #2-016 VITON	10
19	236745	TUBE, GUN, 1/4" URE.1B-025-10 7A4	1
20	236746	SPRING PIN DIA. 1/8 X 1/2	1
21	236747	HARDENED DOWEL 1/8 X 3/8	1
22	236748	SS SOCKET HEAD CAP SCREW 10-24 X 1 1/2	4
23	236749	SS SOCKET HEAD CAP SCREW 10-32 X 5/8	2
24	236553	BLK SOCKET HEAD CAP SCREW 6-32 X 3/16	2
25	236603	SS SOCKET HEAD CAP SCREW 10-24 X 3/4	2
26	236750	SS SOCKET HEAD CAP SCREW 10-24 X 1 1/4	3
27	236751	BLK SOCKET HEAD CAP SCREW 6-32 X 1/4	2
28	236488	ADAPTER, BESWICK MEB-1010-3-V, M 5/32 X F 5/32, 1/2" L	1
29	236490	ADAPTER, BESWICK MEB-1010-2-V, M 5/32 X F 5/32, 3/8" L	1
30	236554	ELBOW, BESWICK MLAS-1332-V, 1/8 BARB X 5/32	2
31	236487	ELBOW, BESWICK MLSB-1332-V, 1/8 BARB X 5/32	2
32	249106	ELBOW, 1/4 X 1/8 #PL1/4-N1U	2
33	236753	ELBOW, #4MJIC X 1/8MNPT #25501-4-2	2

GENERAL



INSTALLATION

1. Connect A & B supply hoses to the fittings on the sides of the inlet body. The inlet body has the letters A and B engraved on the top of it to ensure the hoses are connected to the correct ports. Between the dispensing valve and the metering unit or metering pumps, the fluid hoses should be kept as short as possible.
2. Connect the main air supply to the middle hose barb on the handle of the dispensing valve.
3. For triggering of valve, air lines are connected to hose barbs on top of the valve. The hose barb closest to the inlet body is used for opening of the dispensing valve. The hose barb at the back of the valve is used for closing the dispensing valve.
 - a. NOTE: Airline must have a minimum of 60-90 psi. Depending on your chemical pressure
4. Connect the purge line (Air nucleation lines) to the fittings located on the top of the flush body.



START-UP

1. Start proportioning pumps (Nitrosys System) and purge any air out of the “A” and “B” fluid hoses. Ensure steady flows of both chemicals are present.
2. After steady flows of both chemicals are present, spray the face of the flush body with brake cleaner and wipe off. Ensure flush body o-rings are greased and in place.
3. Place the liquid end cap onto the dispensing valve and use the socket head cap screws to attach. Install a new mix tube.
4. Check chemical mix and cure time.
 - a. Always spray a test patch off target on cardboard

SHUTDOWN

Tools Required
5/16 Hex Wrench
7/64 Hex Wrench
Flat Head Screw Driver

For daily shutdown - connect grease gun to the zerk fittings on the flush body (A and B side of gun) and fill until you see grease coming out of both the front ports of the liquid end cap. Screw on the night cap to prevent moisture from getting into the gun overnight.



****If gun has cured foam build-up, it can be sent in to Spray Foam Systems' Service Center for cleaning and rebuilding****

If the gun is going to be stored longer than 12 hours, please follow the steps on the next page to remove the liquid end cap and let it sit in solvent until you're ready to use it again.

SHUTDOWN

1. Remove the static mix tube and flush the dispensing valve.
2. Shut off the Nitrosys unit and transfer pumps. Please follow the shutdown procedure in the Nitrosys+ system manual.
3. Close the air line and chemical ball valves on your whip.
4. Trigger the dispensing valve to relieve the pressure in the whip
5. Flush the dispensing valve again.
6. Remove the liquid end cap. The liquid end cap can be removed without disconnecting the dispensing valve from the fluid supply lines.
 - a. NOTE: There are two O-rings in the flush body. When removing the liquid end cap, the O-rings may come out of the flush body. Ensure O-rings do not get misplaced during shut down and cleaning.
7. Clean the face of the liquid end cap with brake cleaner. Clean the fluid holes with the proper size drill bits. When gun is functioning well at the end of the day, it is recommended to use air purge. If the gun is clogged or dirty, soak the liquid end cap in solvent over night.



8. Remove the O-rings from the flush body and clean the face of the flush body with brake cleaner.

SHUTDOWN

9. Wipe down the flush body O-rings with a towel and apply grease to the O-rings.
 - a. NOTE: Wipe off excess brake cleaner. Prolonged exposure to brake cleaner is known to make O-rings swell.



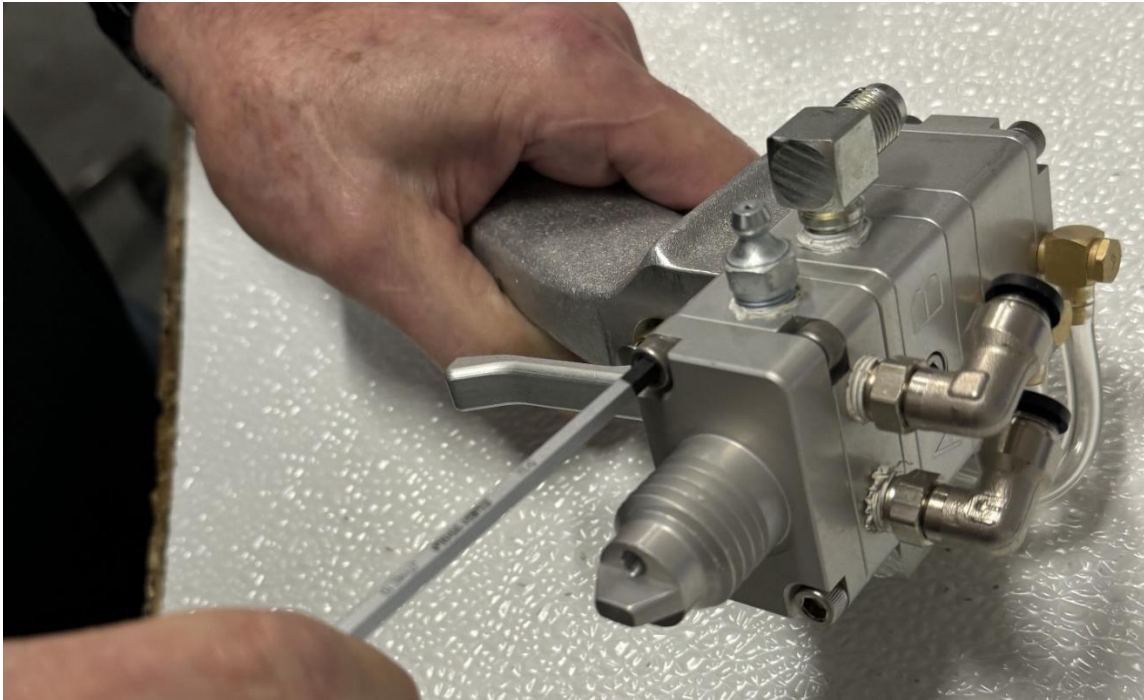
10. Install the flush body O-rings into the pockets in the flush body.
 - b. CAUTION: DO NOT swap the O-rings. The A side O-ring must stay in the A pocket and the B side O-ring must stay in the B pocket. This prevents the chemicals from contacting one another.
11. Pack the chemical holes in the flush body with grease to prevent air and moisture from reacting with the chemicals during the shut-down.



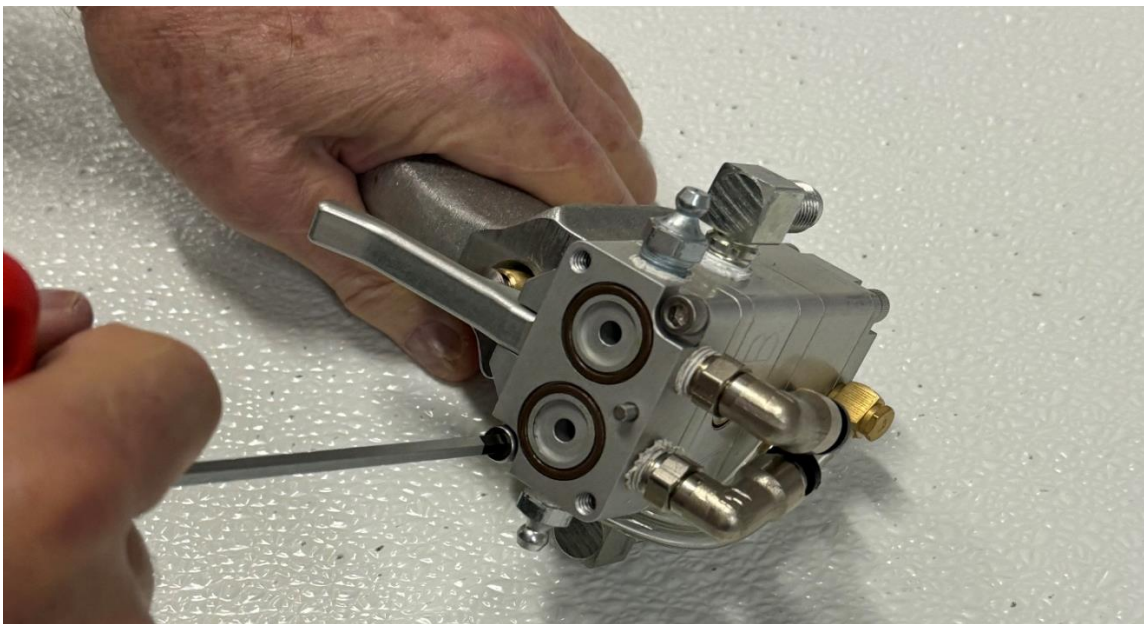
12. Apply a generous amount of grease to the face of the liquid end cap and place the cap onto the dispensing valve. Use the socket head cap screws to secure.
 - a. SILICONE GREASE CANNOT BE USED

MAINTENANCE

1. Remove the socket head cap screws to separate the liquid end cap from the front of the dispensing valve.

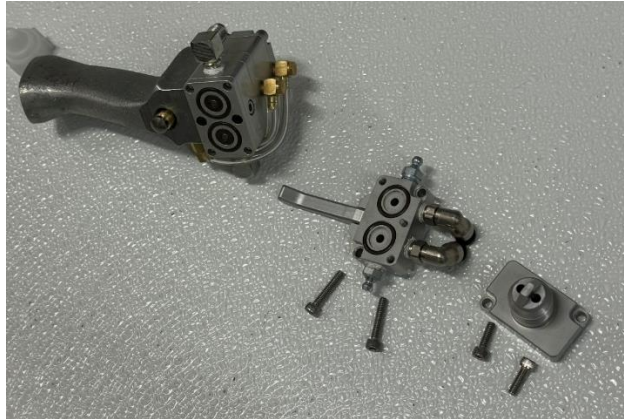


2. Remove the socket head cap screws to separate the flush body.



MAINTENANCE

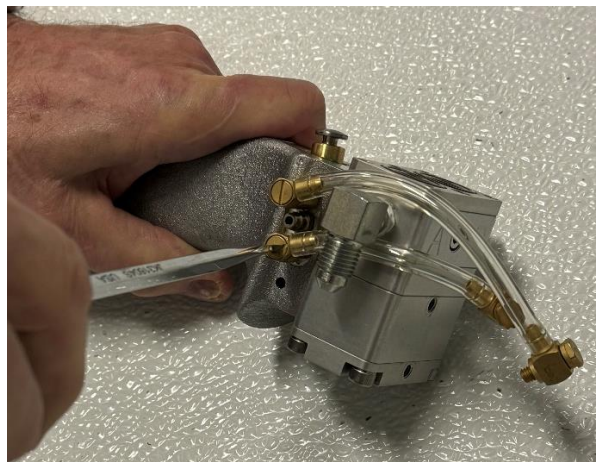
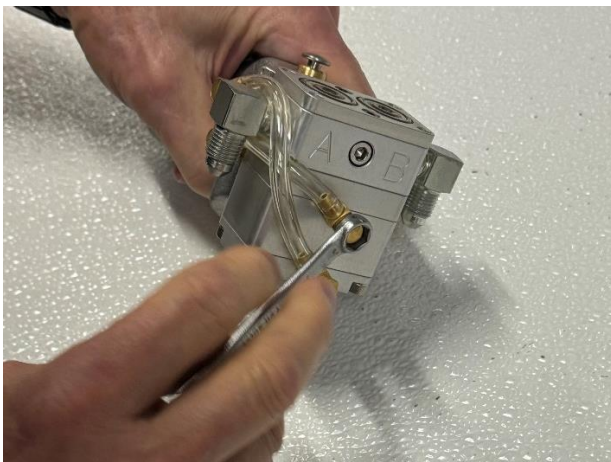
3. Separate the flush body.



4. Remove the socket head cap screws to separate the front seal body.



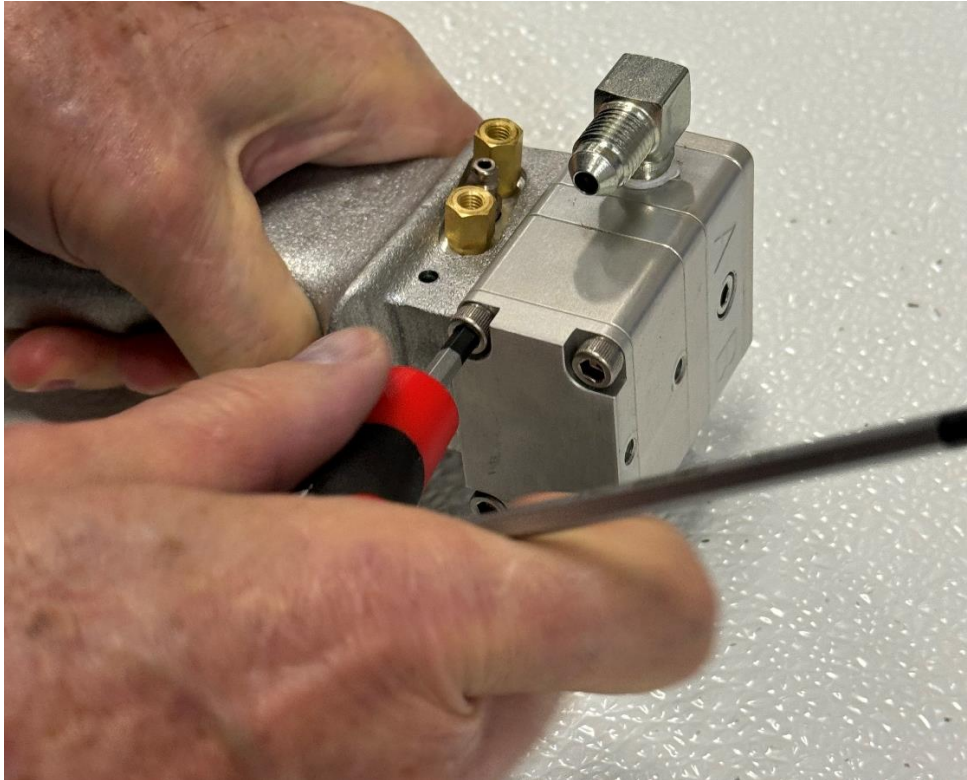
5. Remove the brass fittings from the side of the handle and the top of the gun



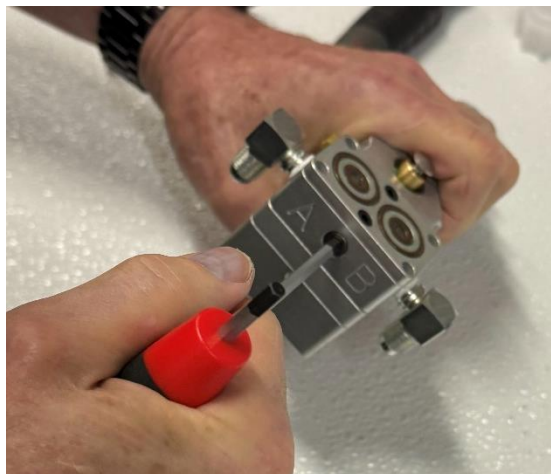
MAINTENANCE

6. Remove the hose barb from the gun handle
7. Remove the socket head cap screws to separate the air end cap and springs.

CAUTION SHOULD BE USED WHEN REMOVING THE AIR CYLINDER END SCREWS. SPRINGS ARE COMPRESSED AND MAY SPRING OUT.



8. Remove the socket head cap screws to separate the gun handle from the inlet body.



MAINTENANCE

9. Separate the inlet body by pulling it from the shafts.



10. Remove the piston from the piston housing.
11. Separate the rear seal body from the piston housing.
12. Disassembly of the valve is complete. Check all metal parts (i.e. shafts, piston) for wear.

Replace or clean if needed.

- a. DO NOT USE WATER WHEN CLEANING DISPENSING VALVE PARTS, O-RINGS, OR SEALS. ALWAYS USE BRAKE CLEANER (NOT FOR O-RINGS)

13. Inspect the elbows on the flush body and replace if needed.



MAINTENANCE

14. Clean or replace the O-rings used on the air end cap and piston. Apply thin film of grease to o-rings and place back on air end cap and piston.
15. Replace the o-rings and seals. Apply thin film of grease to o-rings and seals before reinstalling.
16. Install the piston in the piston housing.

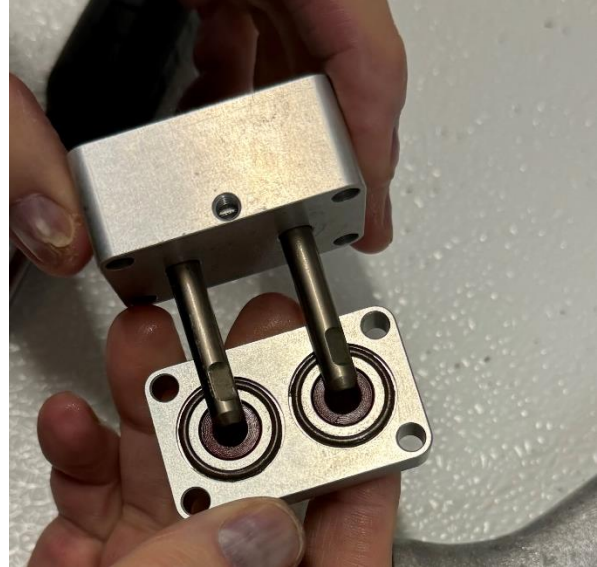


17. Place the inlet body against the rear seal body.



MAINTENANCE

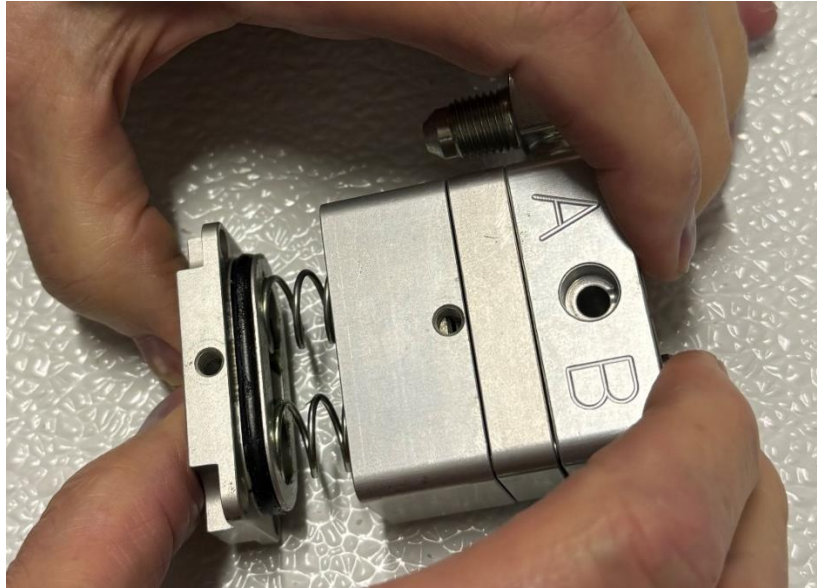
18. Place the shafts into the rear seal body and inlet body.
 1. Ensure the cup seals face the correct way. Both side should have the cupped side facing the fluid pressure (Towards the sprayer)



MAINTENANCE

19. Place the springs in the air end cap and place the air end cap against the piston housing.

1. Compress springs to ensure proper seating



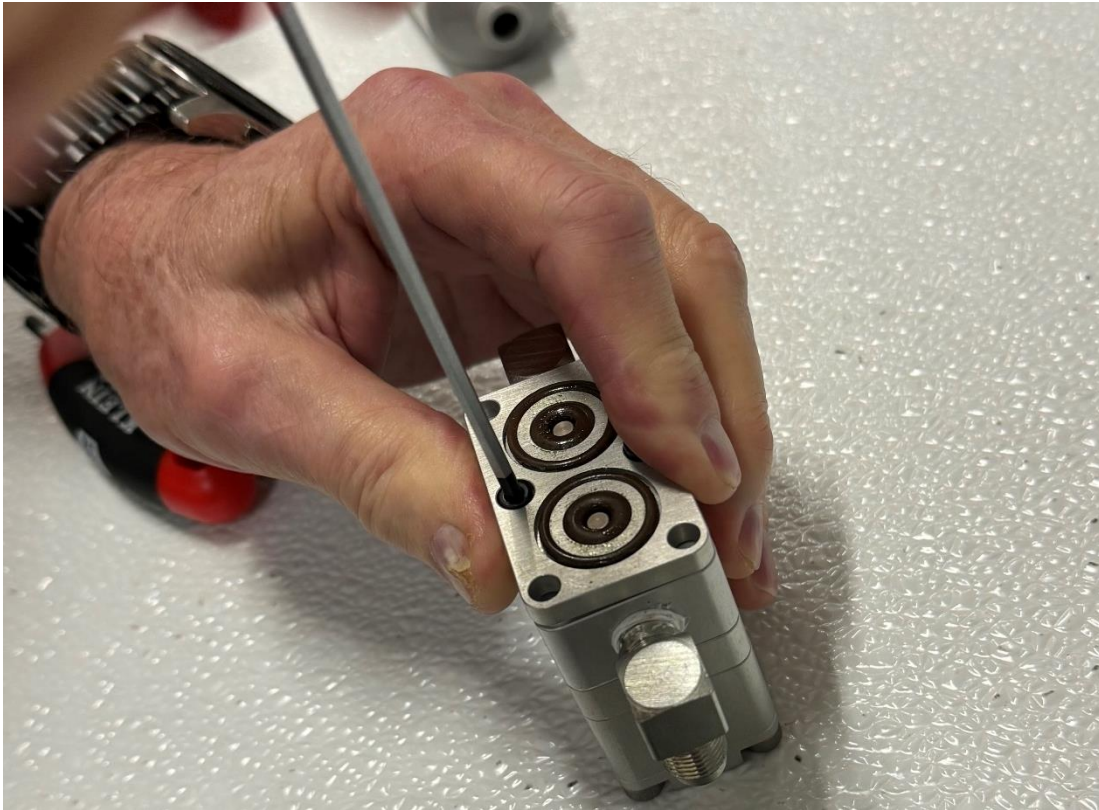
20. Use the socket head cap screws to secure. Do not over tighten socket head cap screws.

1. Start to tighten one socket head cap screw, and once 3/4 of the way down, begin the diagonal socket head cap screw. Repeat this process and fully tighten all screws

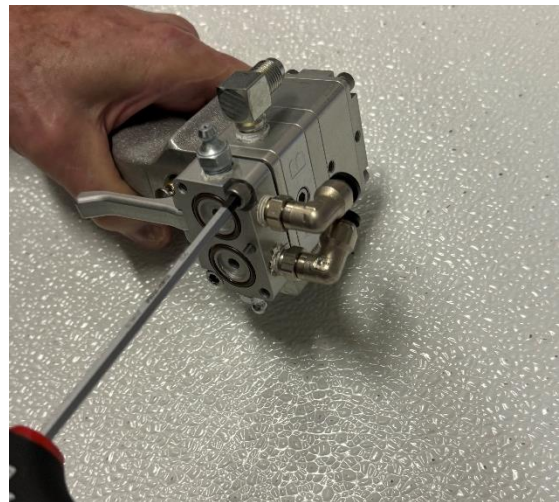
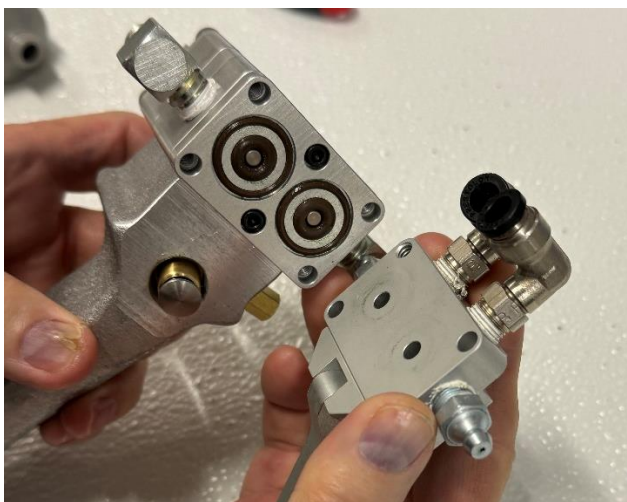


MAINTENANCE

21. Place the front seal body onto the inlet body. Use the small socket head cap screws to secure.

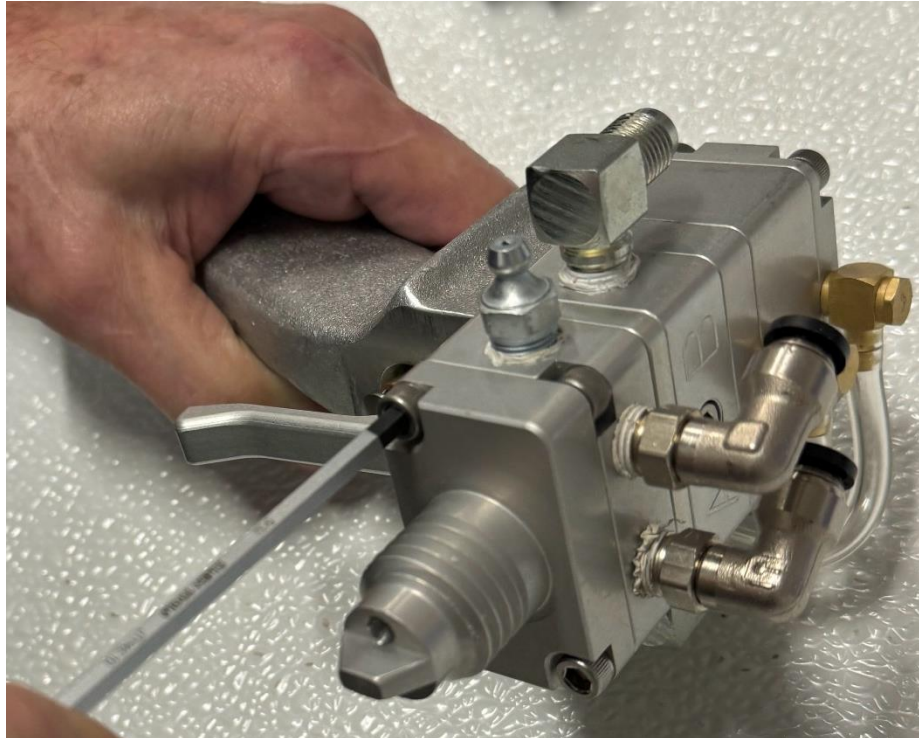


22. Place the flush body up against the front seal body. Use the socket head cap screws to secure



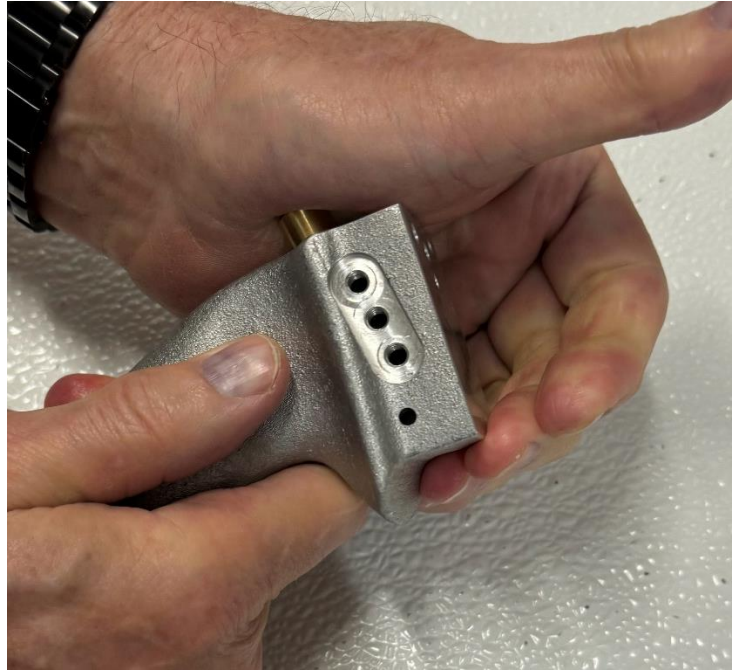
MAINTENANCE

23. Use the screws to attach liquid end cap to the flush body.

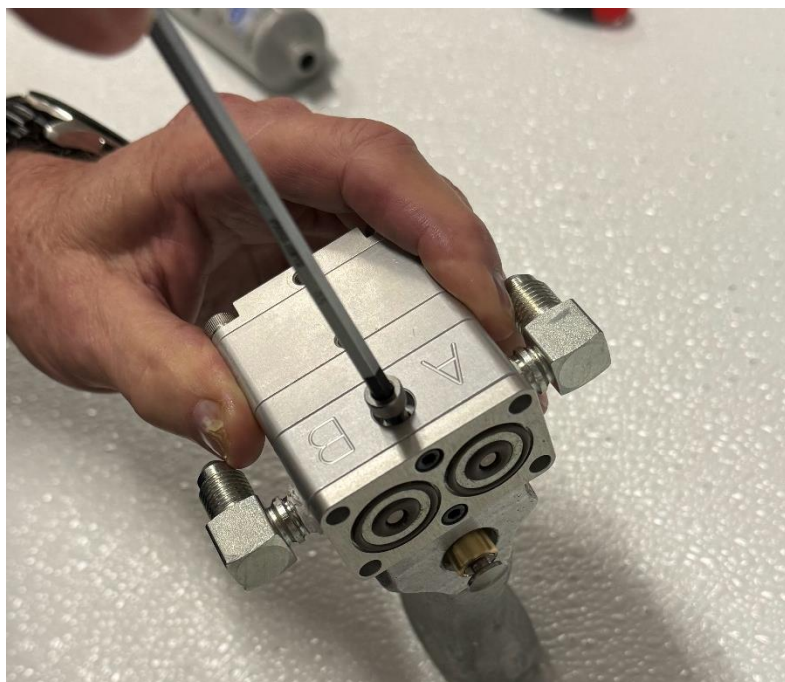


FINAL ASSEMBLY

1. If removed, install the trigger valve in the handle. Use a small amount of grease on the trigger valve to ease installation. Rotate the trigger valve clockwise as it is being pushed in to avoid cutting the O-rings.



2. Attach the body assembly to the handle with the cap screw.



FINAL ASSEMBLY

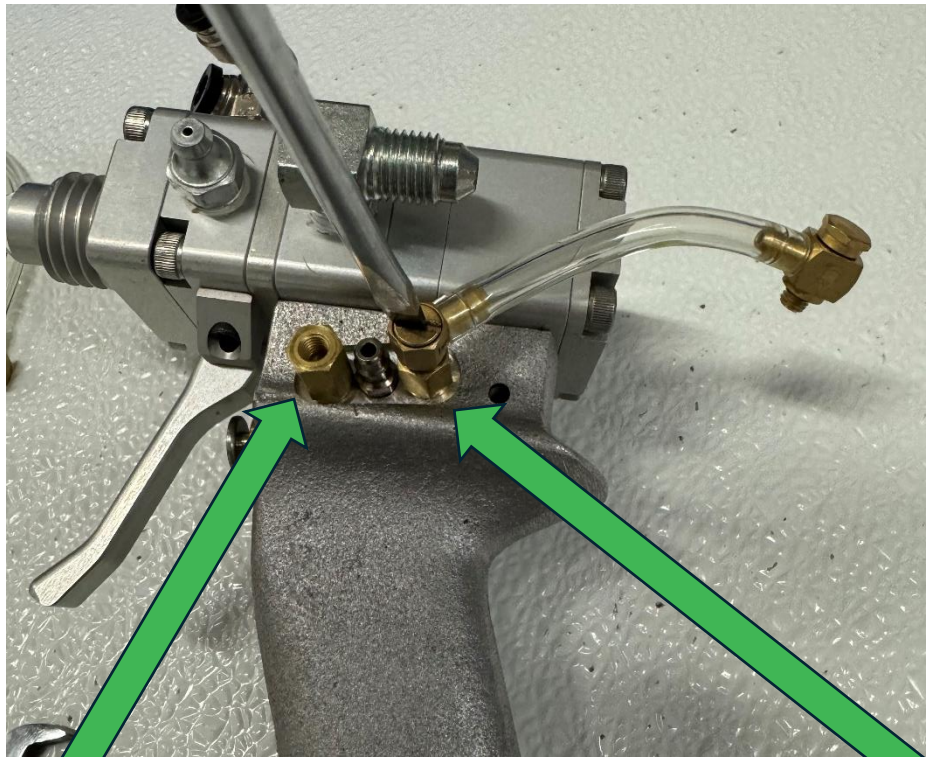
3. Attach the hose barb to the gun handle first, and then add the brass adapters.
 - a. The tall brass adapter is inserted into the front hole. 5/16 WRENCH REQUIRED



FINAL ASSEMBLY

(BE VERY CAREFUL WHEN TIGHTENING, THE FITTINGS ARE BRASS)

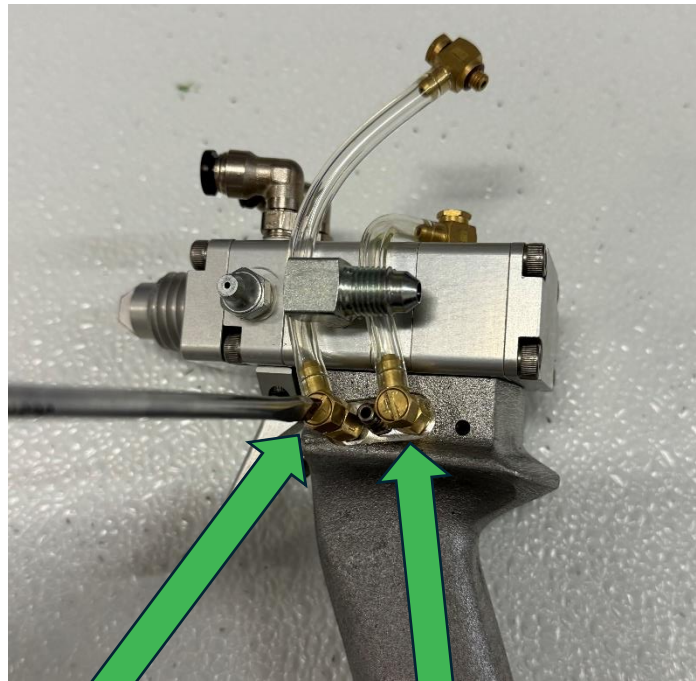
Fitting 2 has longer tubing. Lightly Tighten the fittings.



Fitting 2

Fitting 1

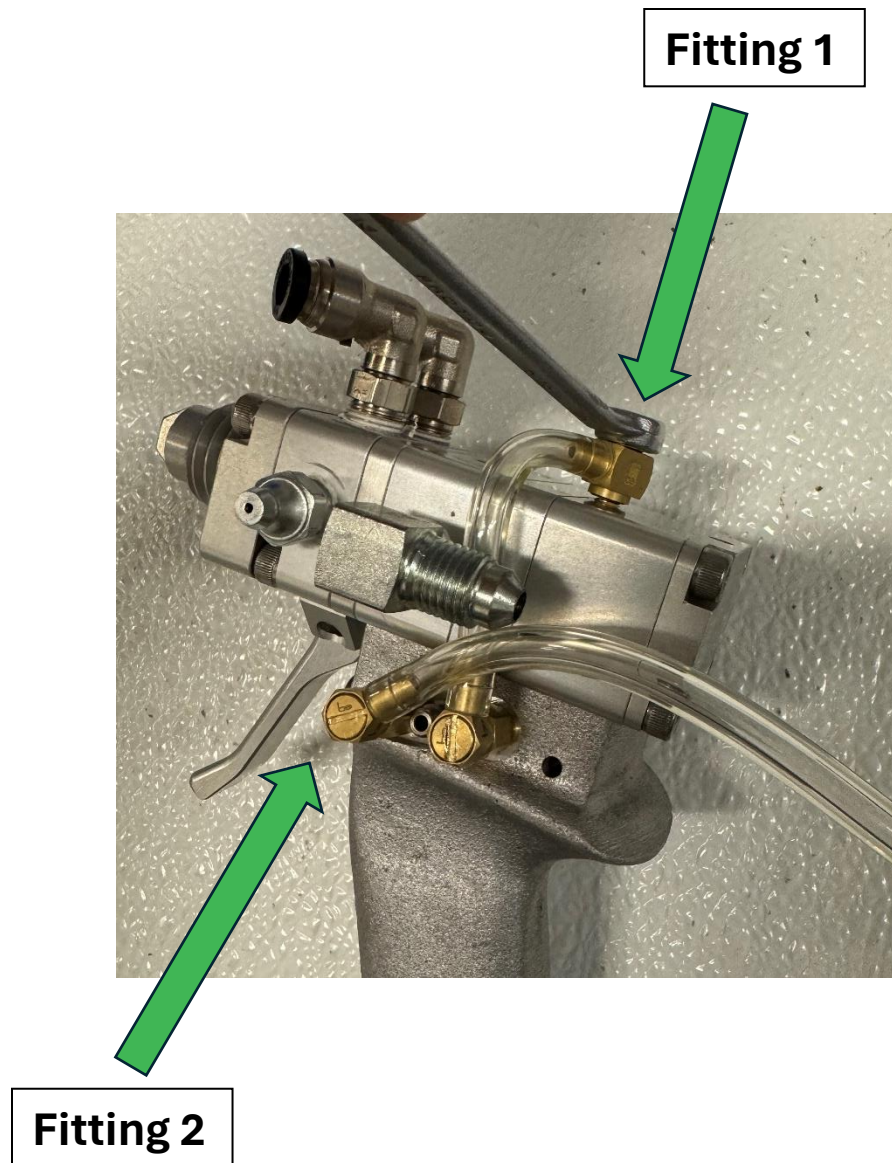
FINAL ASSEMBLY



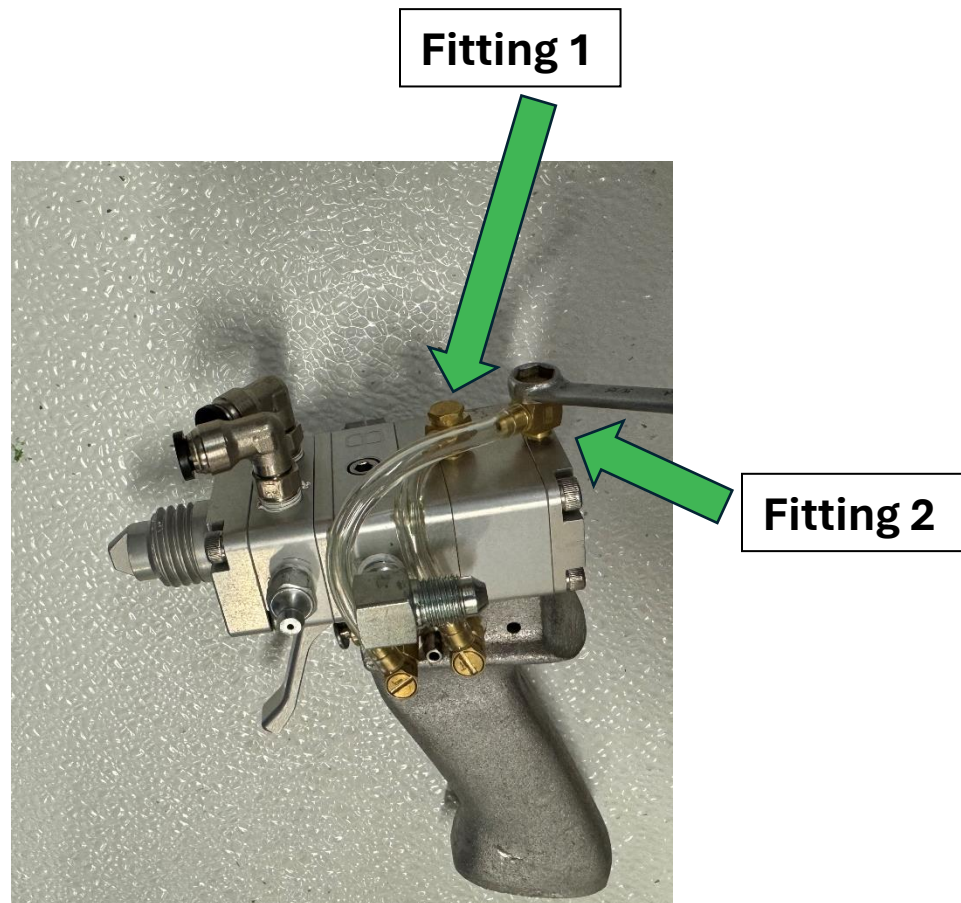
Fitting 2

Fitting 1

FINAL ASSEMBLY



FINAL ASSEMBLY



TROUBLESHOOTING

The dispensing valve has been designed to provide trouble free operation. However, the dispensing valve consists of mechanical parts and is subject to maintenance and service. In addition, there are times when action is required due to malfunction. The following is a list of potential problems, their causes, and possible solutions.

PROBLEM	CAUSE	SOLUTION
NO FLOW	MIX TUBE PLUGGED	REMOVE AND REPLACE
	LIQUID END CAP PLUGGED	REMOVE AND CLEAN
	TRIGGER VALVE MALFUNCTIONING	INSPECT AND REPLACE IF NEEDED
	LOW AIR PRESSURE	INCREASE AIR PRESSURE
OFF RATIO A:B	LACK OF CHEMICAL	CHECK A & B CHEMICAL SUPPLY
MATERIAL NOT MIXING	FOULED MIX TUBE	REMOVE AND REPLACE
VALVE LEAKS IT IS RECOMMENDED TO DO A COMPLETE REBUILD OF THE DISPENSING VALVE WHEN CONSTANT LEAKING OCCURS	FLUID SHAFTS FOULED OR WORN	CLEAN OR REPLACE
	O-RINGS CUT OR TORN	INSPECT AND REPLACE
	LOW AIR PRESSURE	INCREASE AIR PRESSURE
	AIR PISTON BINDING	INSPECT AND CLEAN.
CHEMICAL BACKING UP INTO AIR LINES	TUBE/LIQUID END CAP PLUGGED	INSPECT AND CLEAN, OR REPLACE IF NEEDED.
	DAMAGED SEALS IN FRONT SEAL BODY	INSPECT AND REPLACE
	OUT OF CHEMICAL	CHECK CHEMICAL SUPPLY
	SUPPLY PUMPS MALFUNCTIONING	INSPECT FOR PROPER OPERATION OF PUMPS

ACCESSORIES

Description	Part Number
N+ Metal Gun Maintenance Kit*	236327
N+ Rebuild Kit**	236816
N+ Spare Parts Kit***	236217
3' Whip 3/8"	251003
3' Whip 1/4"	236675
1/4" Brass Ball Valve	236628
Air Cutoff Valve	260726
Whip Quick Connect Air Fitting	260727
Metal Y Fitting	238364
Long Cone Nozzles (25 Pack)	234191
Short Cone Nozzles (25 Pack) (6 Adapters)	236953
1/4" Neon Green Tubing	221462
1.5' Scuff Guard	221504
Night Cap	233993

* N+ Metal Gun Maintenance Kit includes: Tools for rebuild

** N+ Metal Gun Rebuild Kit includes: O-rings and green tubing for rebuilding gun

*** N+ Metal Gun Spare Parts Kit includes: The rebuild Kit + brass fittings and a liquid end cap