Euroseal 4.0 Maintenance

Fanbox nozzle

Proper cleaning and maintenance will reduce the risk of nozzle overheating and is critical for proper sealant droplet formation in the ducts.

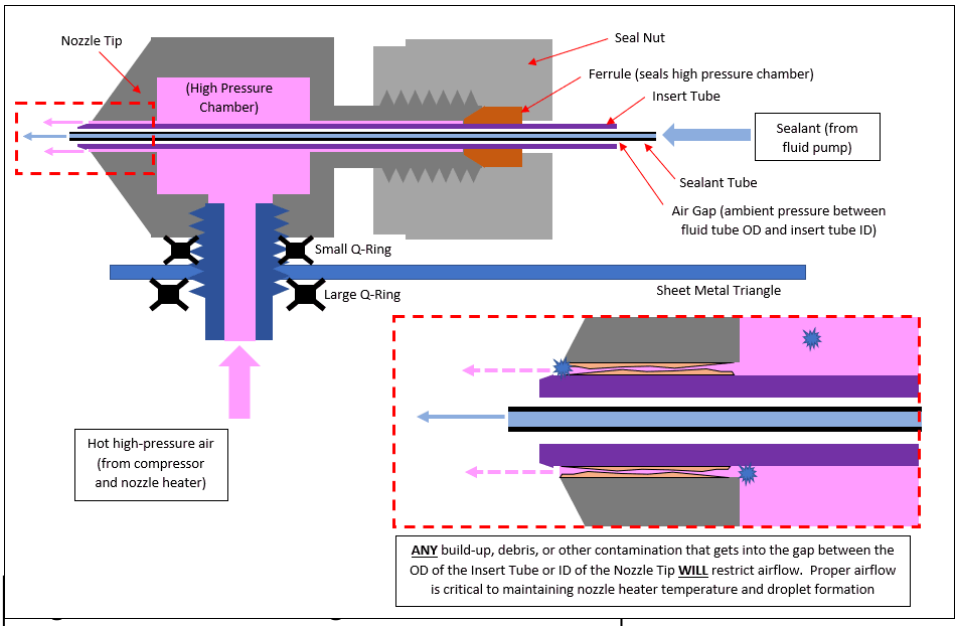
Clean the nozzle after every seal. It is critical to follow cleaning procedures to ensure that there are no obstructions in key components of the injection system.

Figure 11: Cleaning Tools

Required Tools: (See Figure 11)

- HSC nozzle assembly
- Air nozzle cleaning brushes
- Dental picks
- Hot (tap) water
- Cleaner
- (2) plastic cups
- Disposable shop towels
- Nitrile gloves

See Figure 12 for a full diagram for cleaning the nozzle.



Disassemble

1. Remove fluid line and braided hose.
2. Remove triangle assembly from fanbox.
3. Hold nozzle securely.
4. Twist bottom elbow to separate pieces from sheet metal triangle.
5. Separate Q-rings, loosen nozzle compression nut, separate nozzle, insert tube and ferrule. (See Figure 13)

Note: This prevents damage to the Q-ring under the nozzle tip (cuts and abrasions on the Q-ring can cause debris to collect inside the nozzle assembly which will block airflow and cause overheating).

Figure 13: Disassemble nozzle parts

Inspection

1. Inspect for build-up on insert tube: (See Figure 14)
    a. Visually inspect for an amber color or other residue
    b. "Fingernail check" by feeling for any resistance change along the tube.
2. Inspect for build-up in the nozzle ID.
3. Inspect for damage on the Q-rings.

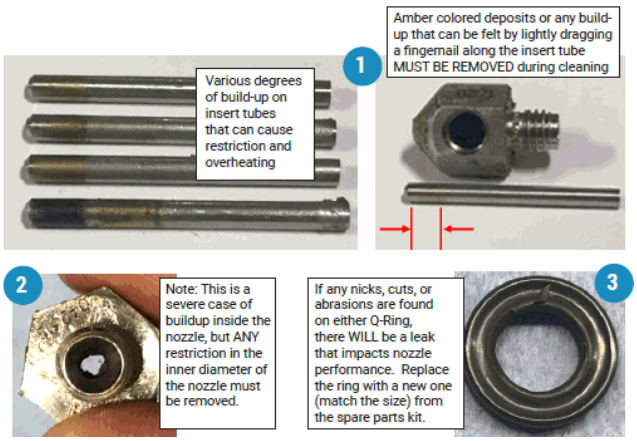


Figure 14: Inspect

Clean

1. Soak the nozzle in cleaner. (See Figure 15)
2. Rinse and soak for 2 minutes in hot water, be sure to agitate during soak time.
3. Wipe exterior of all parts with clean shop towels.
4. Clean ALL interior surfaces with small air nozzle cleaning brushes and dental picks.
    a. Using brushes reduces the chance of leaving debris/lint inside the nozzle components.
    b. twisting the brush clockwise during insertion and/or use of dental picks into the part can help pull debris to the outside edges where it can easily cleaned.
5. Rinse parts in hot water and blow dry (inside/outside) with filtered compressed air.
6. If any surface is still tacky or has smeared adhesive, repeat steps 1-5.

Figure 15: Clean

Reinspect

- Inspect critical areas on parts before reassembly.
- Wipe sheet metal triangle with cleaner and a shop towel.
- Rinse and dry.

Reassemble

1. Assemble nozzle. (See Figure 16)
2. Check for ferrule deformation and cracks (from overtightening).
3. Assemble triangle. (See Figure 17)
4. Large Q-ring fully installed onto the inlet elbow (push flush to the shoulder on the fitting).
5. Small Q-ring on top of the sheet metal triangle (push flush to the triangle).
6. Hold the nozzle stationery and thread the inlet elbow into it (appx 2 turns).
7. Finish with the nozzle and inlet elbow aligned as shown.

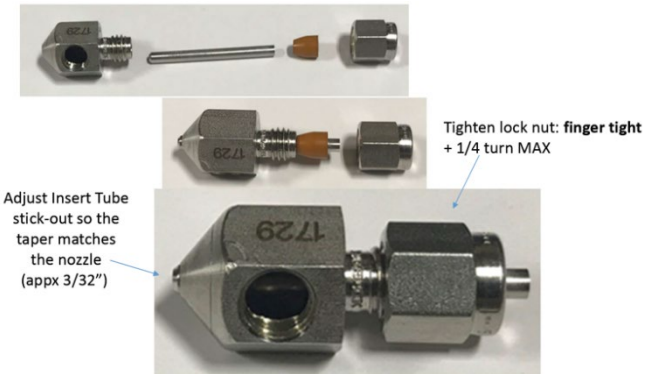


Figure 16: Reassemble Nozzle

NOTE: The nozzle assembly may not feel fully "tight" when correctly assembled. It should not rattle on the triangle, but over compressing the Q-Rings (3rd turn on the inlet elbow) will create leaks and cause issues with droplet formation.

8. Reinstall onto the fanbox (insert and align fluid tube, connect braided hose).

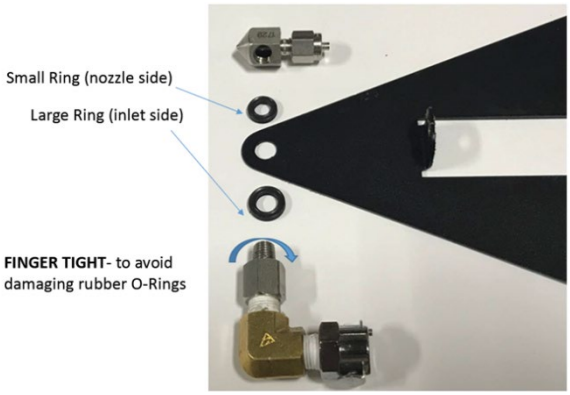


Figure 17: Triangle

Nozzle

1. Remove the sealant nut and washer first.
2. Loosen the liquid nut and push the liquid tube back through the nozzle.
3. Loosen the nozzle standpipe lock nut and rotate the nozzle tail toward you about 45 degrees.
4. Remove the compression fitting and the 3.18mm tube and ferrule.
5. Notice the burnt sealant on the outside of the 3.18mm tube – be sure to remove this old sealant using steel wool before reassembly.
6. Insert reamer into the nozzle tip by hand and spin the reamer to remove any baked-on sealant. Blow out the scrapings using compressed air to complete the cleaning. This cleaning will restore your nozzle to like-new condition.
7. Insert 1/8th in. / 3.18mm tube back into the nozzle tip and center the tube while tightening the compression fitting. Do not over-tighten the compression fitting or you will damage the tube.
8. Rotate the compressed air nozzle back in-line with the liquid tube. Slide the liquid tube back into place sticking out approximately 1mm from the nozzle tip and tighten its compression fitting only finger tight. Make use of the alignment tool to get both nozzle and sealant end aligned. Then add ¼ turn to both compression fittings using the supplied adjustable wrench.
9. Replace the cleanout screw and washer. Reamer may be purchased from Aeroseal or online from a machine shop supply company. You will need a reamer.
10. Do not soak nozzle tip in cleaner before routine cleaning. This would turn the sealant into jelly and become difficult to remove completely. For best results, wait until the nozzle is dry with no water present. This makes it easier to remove external sealant from the nozzle body.
11. Aeroseal recommends cleaning the nozzles after every four or five uses.
12. After each use, blow out the sealant and air tube of the nozzle using the blowout tool provided in your maintenance kit. Inside this kit you will also find a small alignment tool

and a small drill bit. These are used to clear the sealant tube and cooling gap on the nozzle prior to next usage. Simply insert the small drill bit into the sealant tube and make sure it is free and clear. Then insert the small alignment tool into the nozzle head over the sealant tube. Make sure the tool can be seen in between the two nuts that tighten the ferrules. Then clean off any sealant residue and dirt.

Table 4: Air Compressor Maintenance

Procedure	Daily	Weekly	Monthly	Annually (200 Hrs.)
Check pump oil level	X			
Oil leak inspection	X			
Drain condensation in air tanks	X			
Check for unusual noise/vibration	X			
Check for air leaks	X			
Inspect belt(s)	X			
Inspect air filter(s). Clean or replace if necessary		X		
Clean exterior of compressor		X		
Check safety relief valve			X	
Check belt adjustment			X	
Check and tighten all bolts			X	
Check air connections and compressor joints for leaks			X	
Change pump and/or engine oil				X

NOTICE **The pump oil must be changed after the first 20 hours of operation. The will remove contaminants contained in the crankcase due to break-in.**

Table 5: Component Maintenance

Item	Maintenance Instruction
Gate	The gate must flow freely open and close. If the gate is stiff moving up and down, it is typically due to sealant overspray. Use WD-40 to loosen the gate.
Pump head	This piece of the machine is the most difficult of all to clean. There are several moving parts to check. If you have a hard time turning the pump center screw (large) with a screwdriver, try WD-40 on it and work it in. It should turn but will be a bit stiff. Also make sure that the black slide connectors are in proper position. Use a soft rag to finish up the cleaning.
Filter	Recommend replacing the fiberglass filter at least every 6 seals.
Pick-up tube	After each use, the pick-up tube should be rinsed out thoroughly to ensure proper sealant flow from sealant bottle during operation.

Item	Maintenance Instruction
Fanbox	Using a wet soapy rag, wipe down the exterior of the fanbox to get as much off as possible. Then spray cleaner on it. Wait about a minute or two and wipe off very well. If there is a slight residue, this can be removed with warm soapy water. The inside can be cleaned in the same way. If you have had a major spill of sealant in the box, wipe it up as soon as you can. If you have a buildup of sealant on your heaters, please contact tech support and they will walk you through how to get them clean. A visual check of all electrical connections under the lid is something to look at as well, due to vibration from moving the unit from place to place. Make sure the electrical connections are secure and tight. Check the bulkhead connectors for tightness as well. If loose, tighten. These are the blue tube connecters located on the rear of the fanbox lid.
Sheet Metal	Apply the cleaner with a spray bottle. Allow the solvent to sit for several minutes. Once the solvent has had time to soak in, use a plastic brush to work it in. Clean up residue with a rag and repeat again with clean paper towel. Once the residue has been cleaned up, rinse again with water to pick up the remaining residue.
Sprayer	WARNING: Do not soak nozzle tips in solvent while attached to the nozzle. The chance of solvent ingress into compressed air heater and consequent damage is high. Use a spray bottle to lightly coat the nozzle and Aeroseal equipment. Let the solvent soak in for several minutes. Use a plastic brush to work the solvent on the affected areas. Wipe down with clean dry rags or paper towels. Rinse with water to clean the remaining residue. **Note**: unfinished or unpainted aluminum surfaces will discolor if left for periods longer than 15 minutes.

1.1 Maintenance Schedule

	EVERY SEAL	DAILY	MONTHLY	DURATION
Clean Nozzle Assembly	X	X	X	15 Mins
Inspect Sealant Condition	X	X	X	1 Min
Drain Compressor Air Tanks	X	X	X	2 Mins
Inspect Compressed Air Filters/Fittings	X	X	X	2 Mins

Clean/Inspect Pump & Rollers		X	X	5 Mins
Inspect/Replace Fanbox Filter		X	X	1 Mins
Inspect/Replace Air Scrubber Filters		X	X	3 Mins
Clean/Inspect Sealant Buildup on Inlet Gate			X	3 Mins
Clean/Inspect Sealant Buildup on Tube Fittings on Lid			X	2 Mins
Clean/Inspect Sealant Buildup on Fanbox Breakers			X	2 Mins
Laptop: Upload			X	2 Mins
Laptop: Updates			X	2 Mins
Laptop: Windows Updates			X	10 Mins