MAINTENANCE

1.1 ROUTINE MAINTENANCE SCHEDULE

Table 4. HSC 4.0 Maintenance Table

	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: AEROSUITE UPLOAD			X	2 MINS
LAPTOP: AEROSUITE UPDATES			X	2 MINS
LAPTOP: AEROSUITE UPDATES			X	10 MINS

1.2 CLEANING PROCEDURES

Nozzle Cleaning Procedures

Fanbox nozzle

Proper cleaning and maintenance will greatly 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.

Required Tools:

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

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.

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).

Inspection

1. Inspect for build-up on insert tube
2. Visually inspect for an amber color or other residue
3. “Fingernail check” by feeling for any resistance change along the tube.
4. Inspect for build-up in the nozzle ID.
5. Inspect for damage on the Q-rings.

Clean

1. Soak the nozzle in cleaner.
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 be more 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.

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.
2. Check for ferrule deformation and cracks (from overtightening).
3. Assemble triangle.
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.

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).

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 1/8" tube and ferrule.
5. Notice the burnt sealant on the outside of the 1/8" tube – be sure to remove this old sealant using steel wool before reassembly.
6. Insert 0.142" 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 1/8" 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 0.142" 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 4 or 5 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 very 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.

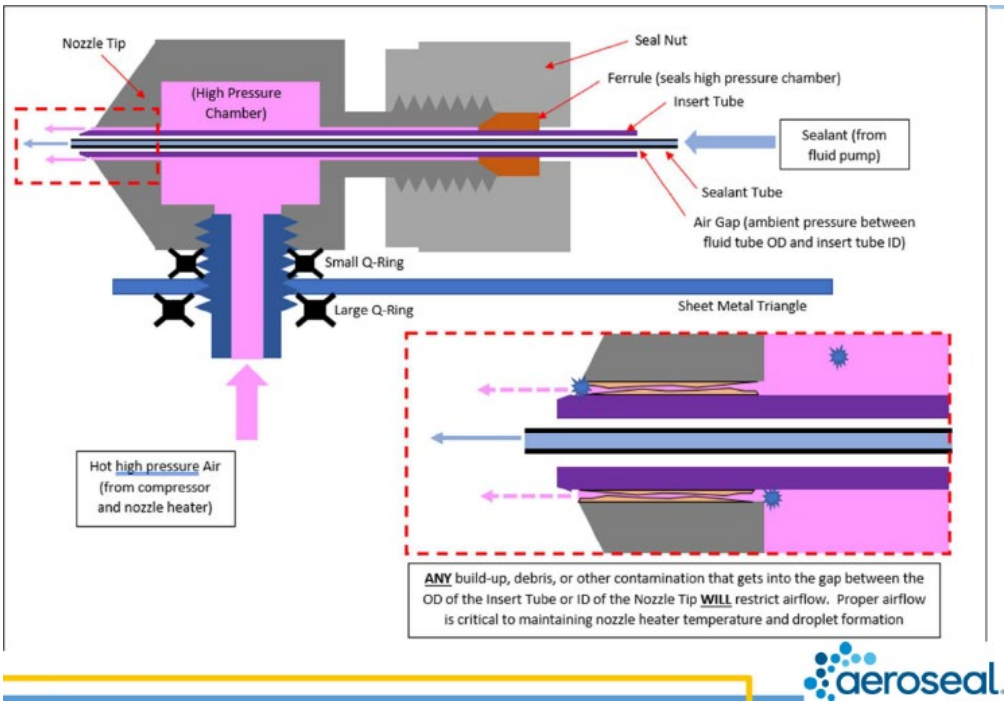

Figure 5. Nozzle cleaning instructions

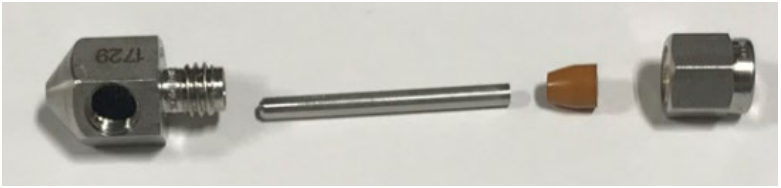

Figure 6: Cleaning Tools

1.3 PARTS & ACCESSORIES

Table 5. HSC 4.0 Parts and Accessories

Item	Minimum Requirements
Dry compressed air	Continuous duty air compressor with at least 90 psi pressure and maximum 125 psi, Flow - 6.5 SCFM @ 100 psi, with oil and moisture filters and an output pressure regulator
Air scrubber	> MERV 13 filtration (3-10 micron particles) capability
Generator (optional)	5 kW / 5.5 kVA (for operating the machine) 10 kW / 12.5 kVA (for operating machine, compressor and accessories)
Oil and moisture filter (recommended)	Desiccant dryer 7 SCFM flow / 125 psi minimum Regenerative dryer with an oil coalescent filter to deliver clean, oil-free, and dry air

1.4 DEALER MAINTENANCE

Table 6. HSC 4.0 Maintenance Information

Task	Instructions
INSPECT SEALANT CONDITION	Clean clogs and loose sealant Ensure breather hole is open Check for clumps of sealant Remove any build up sealant
DRAIN COMPRESSOR AIR TANKS	Follow the manufacturer's instructions for maintaining the compressor
INSPECT COMPRESSED AIR FILTERS/FITTINGS	Follow the manufacturer's instructions for maintaining the compressor
CLEAN/INSPECT PUMP & ROLLERS	Remove any debris
INSPECT/REPLACE FANBOX FILTER	Fanbox filter must be MERV-1 Filter size: 16 x 20 x 1 in.

INSPECT/REPLACE AIR SCRUBBER FILTERS	Scrubber filters must be at least MERV-14 Filter size: 16 x 16 x 1 in.
CLEAN/INSPECT SEALANT BUILDUP ON INLET GATE	Remove sealant build up on gate
CLEAN/INSPECT SEALANT BUILDUP ON TUBE FITTINGS ON LID	Remove sealant build up on tube fittings and ports
CLEAN/INSPECT SEALANT BUILDUP ON FANBOX BREAKERS	Remove sealant build up on breaker connections
LAPTOP: AEROSUITE SYNC	Perform a sync once a month
LAPTOP: AEROSUITE UPDATES	When prompted, update to the latest version of AeroSuite

1.5 SERVICE & REPAIR PARTS

Table.❸¡.HSC.0¡6.Service.and.Repair.Parts

Description	Quantity
SCREW, #6 X 2", P, FH, SELF TAP, STEEL, BLACK PHOSPHATE	10
TUBING, 1/8" X 1/4", 70A SOFT, PU, BLUE	1
WASHER, SELF-LOCK, #10 X 1.5", SS	10
FITTING, UNION BARB, 1/8" BARB, PLASTIC	3
TOOL, WRENCH, 6" ADJUSTABLE	2
FITTING, BARB UNION TEE, 1/8" BARB, NYLON	1
TOOL, .142 HSS, STRAIGHT FLUTE REAMER	1
TOOL, POCKET BLOW GUN, 1/4" INLET, 0-120 PSI	1
SCREW, #6-32 X 1/2, P, FH, MS, SS, BLACK OXIDE	1
SCREW, #6-32 X 1", P, FH, MS, SS, BLACK OXIDE	1
NUT, 6-32, NYLON LOCK, SS, BLACK OXIDE	2
ADAPTER, RP-SMA-MALE TO SMA-FEMALE	1

Description	Quantity
ANTENNA, WI-FI ANTENNA - FOR CONNECT PLATFORM	2
ANTENNA, GSM	1
FERRULE, 1/8" X 1/8", VESPEL	1
1.438" NOZZLE TUBING INSERT	1
MAGNETS FOR TRIANGLE MOUNTING PLATE	2
STANLEY SORTMASTER LITE ORGANIZER 11.5" LX2.5" WX8.5" H BLACK YELLOW CLEAR	1
TOOL, WIRE BRUSH KIT	1
SEAL RING, 1/4" ID X 7/16" OD, 3/32", NOZZLE TOP	2
SEAL RING, 5/16" ID X 1/2" OD, 3/32", NOZZLE BOTTOM	2
TOOL, DENTAL PICK SET	1
GROMMET, 11/32" X 1/16" MATERIAL, 1/4" ID	1
ASSEMBLY, DRILL BIT W/COATING	1
PICKUP TUBE	1
FLUID TUBE ASM (HSC 4.0)	2