



Technical Data Sheet
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CHANGING ATOMIZING SETS ON QUALSPRAY GUNS

We recommend the following procedure when changing atomizing sets on your QualSpray and Asturo AM series Gun. Failure to seat the fluid nozzle properly results in problems with adjusting the fan width and in some cases causes leaking of finish through the front of the gun. Keep several pointers in mind.

- Do not use the stamped metal wrench that comes with your gun to install or remove the fluid nozzle. It's best to use a socket or open end wrench that's 19mm. You can substitute a 3/4" socket if you don't have the 19mm.
- Hold the gun in a padded vise so you are able to adequately seat the new nozzle. Once you've seated it and removed several times you usually can seat the nozzle by holding the gun.

ATOMIZING SET COMPONENTS



There's 3 parts to a complete atomizing set. They should have numbering as follows:

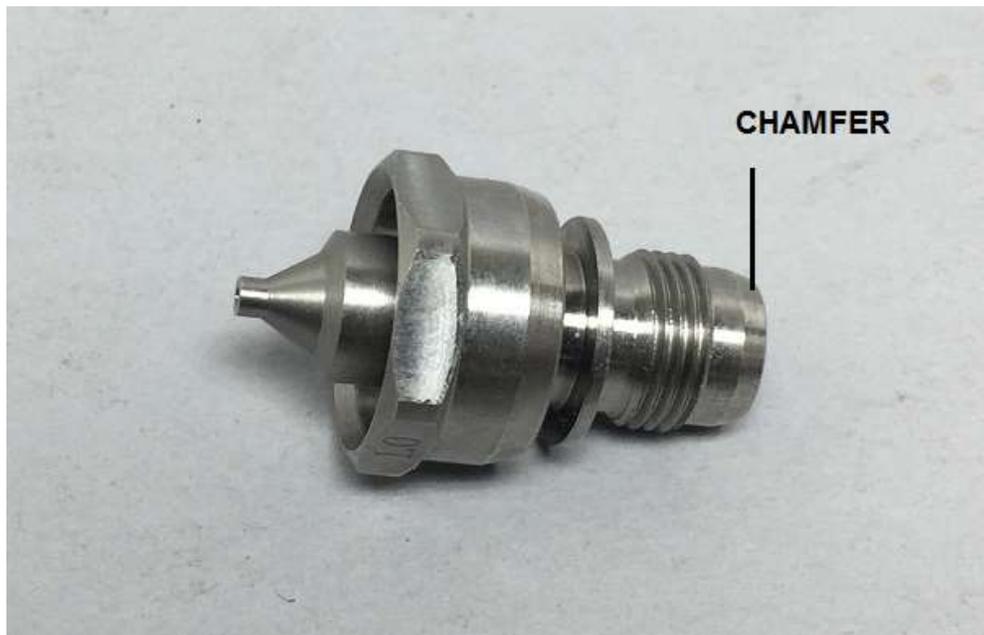
- The Fluid nozzle has a number stamped on one of the six sides.
- The aircap has a Letter/Number on one of the horns. The Letter is H and the number is 1-3.
H1 – used with 1.0mm-1.5mm
H2 – used with 1.8mm-2.0mm
H3 – used with 2.5mm
- The needle has a number etched on the shaft towards the back. This is always matched to the number on the fluid nozzle.

REMOVING THE ATOMIZING SET

Remove the atomizing set in order as explained to prevent damage.

1. Remove the aircap by turning the colored retaining ring
2. Unscrew the fluid delivery valve all the way until it comes out. Be careful not to lose the compression spring.
3. Pull the needle out backwards with needle nozzle pliers.
4. Holding the gun in a padded vise, remove the fluid nozzle with a socket wrench or open end wrench. The correct size is 19mm but you can substitute $\frac{3}{4}$ ".

INSTALLING THE NEW SET



The fluid nozzle has a chamfer on the back of the nozzle. This has to be seated firmly to the fluid passage inside the spray gun. If it isn't one of the following problems will happen

- You'll see bubbles bubbling up inside the cup when the trigger is depressed (gravity guns)
- The fan control width adjustment valve won't change the pattern
- Fluid leaks from the front of the gun



It's important to use a bit of torque on the fluid nozzle the first time you install a new one. That's why we recommend holding the gun in a padded vise and using a socket wrench. Seat the nozzle as tightly as you can. Then install the fluid needle and adjustment knob, then the aircap. If one of the above problems occurs (after installing the needle and aircap), put the gun back in the vise and give it a little extra snug. If you have a torque wrench you can go as high as 250 pounds. Sometimes the nozzle seats with a gentle snug, other times a new one may require a bit more torque.

GENERIC VISCOSITY CHART AND NOZZLE SETUPS

Generic Viscosity	Viscosity time (1)	Gravity	Suction	Pressure Feed
Water thin	10- 15 (2)	1.1	1.3-1.4	0.7
	15-23	1.2-1.3	1.5	.8-1.0
	23-35	1.5	1.7	1.1
Medium	35-40	1.5-1.7	1.9	1.1 – 1.2
	40-45	1.7		1.2-1.3
	45-55	1.9	2.2	1.3-1.5
Thick	55+	2.2	N/R	1.5-1.7
				1.7-2.2

1. Measured in a Ford #4 viscosity cup with finish @ 70 degrees F
2. Water = 10 seconds
3. To convert millimeters to inches multiply by .03937. For example 1.3 mm x .03937 = .051"

CHANGING THE NEEDLE LENGTH



QualSpray needles are made in two parts, separated by the little hex nut towards the back. The length of the needle is set by the factory and should not need adjustment; however it can be adjusted if necessary. This procedure is **ONLY** recommended if there are problems triggering the gun. Improper needle length causes the following issues:

- In pressure feed guns, when the trigger is released the gun leaks through the front (needle too short)
- The trigger has to be pulled too far back to start releasing finish (needle too short)
- The trigger starts the finish flow too quickly (needle too long)

The last two problems tend to be more related to operator preference. We recommend adjusting the needle length only if there are problems with operation such as the first issue.



The factory locks the position of the needle with Loctite. Heating the shaft for a bit using a heat gun helps. Using 2 channel locks, grasp the back shaft and the front shaft near the hex nut (see photo). You can then turn the needle to lengthen it. To shorten it, adjust the hex screw towards the back of the shaft. We recommend locking the needle when you are satisfied with the length with Loctite (medium strength)