

AIRLESS SPRAYERS

As far as spraying equipment goes, the airless sprayer is the most dangerous piece of equipment a homeowner or Contractor can rent or own.

I was sandblasting some equipment for a large construction company in 1976 and we had a paint crew following us priming the equipment as we did the cleaning blast. A veteran painter had a clogged tip and was trying to loosen the nut and what was left of the guard (the guard housing was broke off) housing to take out the tip and had his hand on the trigger and he pulled the trigger by mistake and it blew his arm up to his shoulder like a balloon. He lived about 4 hours before dying of blood poisoning. 99% of the tip guards are made red, remember red your dead, they are red for a purpose.



This person **thought** the gun was not under pressure. He was wrong. Almost everyone I meet, that has run an airless a few times, seems to know everything there is to know about using an airless sprayer.

This reminds me of saw injuries. I will never understand why anyone would be in such a hurry that they take the chance of an injury like this. Proper procedure with any tool prevents these needless life threatening injuries.

At the tip, the material coming out is 4000 psi, and at 12" from the tip it is not even 1 psi.

This amount of pressure coming out of a .012-.035 hole is strong enough to cut off fingers and hands.

Another airless sprayer a lot of people don't think about is a power washer and the sprayer at a car wash, same thing, same danger; it is just not as prone to stop up as a paint sprayer is. The car wash sprayer has a larger tip but still will cut you like a razor blade. There are poisons coming out of it just like a paint sprayer, some probably more deadly. I have always wondered why OSHA has not made tip guards mandatory on 1000psi+ sprayers.



This is a typical guard seen around construction jobs; this one probably got stepped on or dropped.



This is a typical pump you have seen, covered with paint, filter stopped up, motor cooling fan covered with paint. I got the job of cleaning and making it work again.

This picture below is the gun that was with it.

I have a Graco pump that I have had for over 11 years, not a drop of paint on it. Toughest piece of machinery I ever owned. I take care of it and it takes care of my paint projects.



I poured a couple of inches of MEK into a bucket and put the gun, suction hose, bypass hose and connectors in it and let it soak with a lid on top for about an hour. Then I spent 3 hours cleaning this mess.



This is the fruit of my labor. It's not as clean as mine but it is working and operating.

If this was mine I would have cleaned the frame, every part and replaced the guard and tip.

I am a Graco mechanic for airless sprayers. We were taught the correct way to operate and clean an airless. www.Graco.com

Most painters think it is wasted time and labor keeping their machines clean. They are dead wrong and all of them know it.

The process of cleaning and maintaining an airless is a detailed job. It is something you should do every time you use your machine.

I am going to make this as short as possible but still covering every detail of the process. You can copy this, paste it on Word, print it, laminate it and then hang it on your airless if you want.

We are going through the paint process and then we will get into the cleaning. This procedure is for brand new and old machines, same process.

Near safety glasses. Some haven't and they can't read this article.

Painting

Step 1

Pour one gallon of thinner of the same base, (water/denatured alcohol/oil thinner/lacquer thinner) as the paint you are going to use into a bucket and circulate the thinner in your machine.

Step 2

Turn you knob from circulating to pressure. Make sure you adjust the pressure control for at least 2500 psi. Spray or stream the material until you get some of the thinner you are using out of the gun. Lock the safety on the gun trigger.

Step 3

Return the knob to circulate and turn the machine off. Let the thinner drain out of the suction and bypass hoses.

Step 4

Strain and pour your paint into a clean bucket. Set your machine over the bucket and insert both hoses in the bucket.

Step 5

Turn the machine on and let it circulate for a 30 seconds.

Step 6

Unlock the gun, set the knob for pressure, and reverse your tip to stream instead of spray then catch your thinner that is in the hose if you want to keep it. When you see your material coming out move the stream into the bucket and let it run for 1 minute then reverse your tip to spray and you are ready to paint.

Cleaning

Step 1

Pour one gallon of your base (base thinner is the thinner recommended by your paint manufacturer on your container) thinner into a clean bucket. Remove your paint bucket from the unit. Wipe as much paint of the hoses as you can, the more the better.

Step 2

Set your bucket of water or thinner under the unit; put the suction hose in the thinner bucket. Put the circulating hose in a small dump bucket to the side and take a brush or rag and clean the suction hose as much as possible.

Step 3

Set the knob for circulate and run the paint from your two hoses into the dump bucket. Stop the machine. Clean the circulator hose and place it in the thinner bucket. Circulate for 2 minutes then turn the knob to pressure. Unlock gun and set tip for stream and run the paint out into your paint bucket.

When your gun spits the first time, stop, place the tip on stream, then place the gun in the thinner bucket and let it run for 3-5 minutes, clearing the hose of most of the paint.

Step 4

Make sure the hoses are clean then pour the dirty thinner in your dump bucket and pour in 2 gallons of mek, acetone or lacquer thinner.

With one of these hot thinners you can finish cleaning your hoses and wet your gun and machine with this thinner to get started cleaning them.

Step 5

Circulate this thinner for a few seconds then unlock gun and turn to pressure. Spray or stream the thinner until you get the smell of lacquer thinner. Turn the machine off, lock the gun and **let it set for 10 minutes under pressure**. Now with the gun locked you can get a brush, clean the gun, your pump and wherever else there is overspray or paint residue.

Step 6

Caution: Now turn your selector knob to circulate and a **splash of thinner** will go into the bucket, **Safety Glasses, a drop of mek could blind you**. Don't forget to do this every time when you have a unit under pressure.

Now start the pump, unlock and select stream for the tip and shoot into your dump bucket, stopping and changing from spray to stream a few times. I sometimes set my gun for stream and drop it in the lacquer and let it run for 15 minutes.

Step 7

You can stop and you should have about one gallon of thinner left. Turn selector to circulate and turn off the pump. Release any pressure on the gun. **Lock the trigger**, break down your tip, clean it and replace or clean the filters if needed.

Step 8

Assemble your gun and turn knob to pressure. Your unit is clean inside and outside.

Step 9

Pour the remaining thinner back into its bucket. Pour one gallon of diesel or conditioner (**Sherwin-Williams**) into the bucket. Circulate and spray until diesel comes out the gun. Stop pump, relieve all pressure on the hose, gun and unit, lock the gun, you're done.

Step 10

Spray your gun, hoses, pump and all frame parts with furniture polish, lemon oil, pledge or some oil to keep paint from sticking when you use it again.

MEK, lacquer and acetone are hot thinners; they will explode just like gas, never use gasoline as a thinner or cleaner, never.

I could write seven pages about the safe use of an airless and it would all accumulate to exactly what I have just given you in this article, proper procedure.

A safety class is nothing more than teaching proper procedure.

You can skip parts of this procedure, most do. But if you want to do it right, follow these procedures word for word. Besides being safe, it is the correct procedure.

This is a **gun** you are using, treat it as a **pistol**. Always consider the spray gun as if is **loaded** with pressure.

Bob Johnston, carpenter

www.carpenterbooks.com

