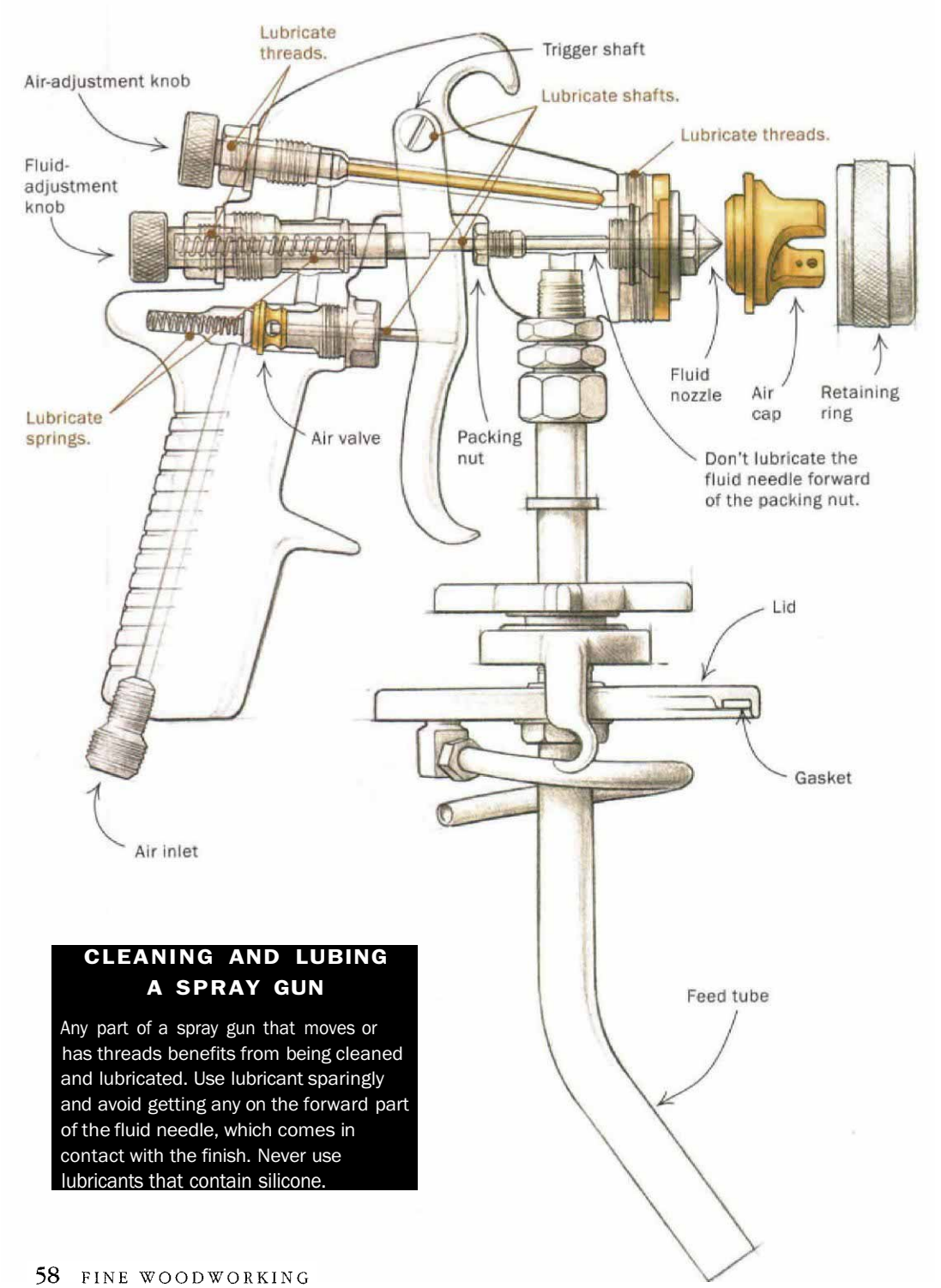
TLC for Spray Guns

Simple cleaning and lubrication keep a spray gun in top form

BY ANDY CHARRON



CLEANING AND LUBING A SPRAY GUN

Any part of a spray gun that moves or has threads benefits from being cleaned and lubricated. Use lubricant sparingly and avoid getting any on the forward part of the fluid needle, which comes in contact with the finish. Never use lubricants that contain silicone.

When I first began spray finishing, I was thrilled with how easy it was to lay down smooth, blemish-free topcoats with any material imaginable. I was less thrilled with dismantling the gun and cleaning it after each use. I let neglect run its course, and it wasn't long before the gun protested by spitting instead of spraying.

A spray gun needs a little tender, loving care to perform well. The maintenance doesn't take that long, and it sure is faster than trying to remove built-up finish that's turned into an epoxylike glaze. Cleaning and lubrication methods are pretty similar for spray guns commonly found in small shops, whether they be high pressure, high volume low pressure (HVLP) or turbine powered.

Wood toothpicks make good cleaning tools

Cleaning tools that come in contact with a spray gun should be stiff enough to remove gummy finish but not hard enough to damage the gun. Most gun manufacturers sell cleaning kits that include a skinny brush that fits inside hard-to-reach places. An old toothbrush works well, too. I also keep plenty of round wood toothpicks on hand for picking specks of finish out of hard-to-reach areas, like deep inside the horns of an air cap.

After washing out the cup, thoroughly clean the gasket that

Drawing: Bob La Pointe

Some disassembly required. *To get at places where finish tends to gum up a spray gun, partly disassemble it. Small brushes and wood toothpicks make good cleaning tools.*

goes between the cup and gun (see the left photo below). With a gravity-fed gun, the cup remains fixed; just remember to clean the cap and make sure the vent hole is clear.

Next, unscrew the air cap and look around for dried or gummy finish. This is where a wood toothpick will come in handy (see the middle photo below). Don't use wire or metal materials because they can damage the gun. If the dried finish does not budge with the prodding of a toothpick, use a soft brush and lacquer thinner to dissolve the finish. Poor spray pattern or atomization often can be traced to a dirty air cap.

If your gun hasn't been thoroughly cleaned in a while, you may have to take it apart to get at gummed-up parts. A long, skinny brush dipped in lacquer thinner can be used to clean the inside of the gun (see the right photo below). Smaller parts can be soaked in lacquer thinner. But remove any rubber O-rings because lacquer thinner will cause them to swell. Although the O-rings will eventually shrink back to normal, you can damage them if you try to reassemble the gun when the rubber is swollen. Replace any O-rings that are torn or abraded.

Special steps for when you switch finishes

If you spray both water- and solvent-based finishes through the same gun, you need to take additional precautions. Water-based finishes can dissolve dried lacquer or lacquer thinner, just as lacquer will dissolve water-based finish left in the gun. The result is usually not pretty: A hunk of gunk splats on the tabletop as you make your last pass with the spray gun.

When switching from solvent-based finishes to water-based products, first clean the gun with lacquer thinner. Next, run denatured alcohol through the system, followed by water. When switching back, reverse the process.

Lube anything that moves

Cleaning a gun removes some oil from critical joints, so replace the lubricant regularly. The lubricant should be designed for spray equipment and contain no silicone. Silicone ruins finishes by creating depressions known as fisheyes. Once silicone has been introduced into your gun, it is difficult to remove, so be careful what type of lubricants you use both in and around your equipment. If you don't have spray-gun lubricant (available from paint suppliers), petroleum jelly will do. Don't get lubricant on the forward part of the fluid needle. □

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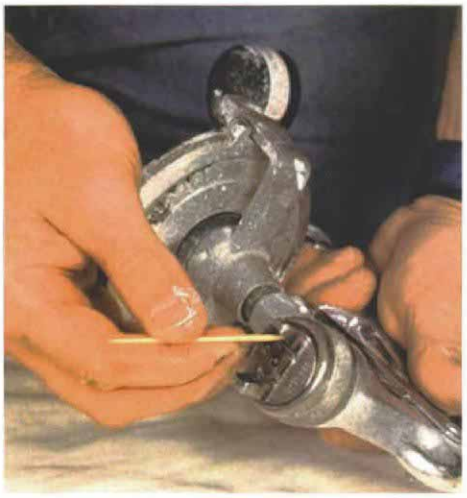
Clean the gasket. *The gasket needs to be free of debris; otherwise, the gun will not seal properly and will leak when tipped.*



Clear the air passages. *Wood toothpicks won't damage the precisely machined air-cap orifices, which can get clogged with finish.*

Remove the air cap and fluid nozzle. *The inside of the gun is best cleaned with a skinny brush soaked in lacquer thinner.*

Photos: Anatole Burkin