CARING FOR YOUR INKJET SUBLIMATION PRINTER

By Kevin Lumberg

An inkjet printer is like any other piece of equipment. You must take care of it and maintain it in the proper environment, so that it works at its very best. If you don’t, just like other equipment, a sublimation printer can be frustrating. But it does not have to be that way. I live in Minnesota, and it is rumored to occasionally get very cold in the winter.

If I purchased a car, left it outside in the cold, didn’t make sure it was properly maintained, and didn’t drive it periodically, should I be mad at the car or the car maker, or car seller, if I attempt use it and it does not work properly? No, I should be mad at myself for not taking care of something I purchased.

But you do need to know what to do to take care of your equipment and not everyone is given this information, so I am going to share some basic tips and ideas to keep your inkjet sublimation printer working in tip top condition.

WHAT MAKES A SUBLIMATION PRINTER TICK?

To take care of an inkjet sublimation printer, first we need to know some basics of how it works. First of all, in desktop sublimation we use Epson inkjet printers. The reason for this is that Epson printers use a “cold” technology to spray the ink onto the paper. This technology is called Piezo head technology which is patented by Epson.

The print head has a small crystal that vibrates when stimulated with an electrical charge, and this forces the ink out of the print head nozzles. Since sublimation dyes are heat activated, it is perfect for the sublimation process. Other inkjet printers use heat to “boil” the ink onto the paper. This would not work so well for the sublimation process because the dyes would be activated before we wanted them to.

There are basically two ways to deliver ink to a printer, either cartridges (including refillable), or an external bulk ink delivery system. On the smaller sublimation printers, such as the C88, C120, 1400, or R1800, the cartridges ride on top of the print heads in the print carriage and feed ink directly into the print heads. These cartridges work well, but they are very low capacity, and not very cost effective, so a bulk ink system is preferred.

With a bulk ink system, the ink is contained in bags. The ink feeds through tubing, up to damper cartridges that install where regular cartridges would be. The bulk system works as a siphon system that is at equilibrium. That is why it is important to keep the container with the ink on the same level as the printer. If you put it
higher, the ink could start siphoning into the printer, and if it is lower, the ink will run back into the bags. Either outcome can cause serious problems.

Occasionally with bulk systems, a damper cartridge may lose its prime. Your ink bag may have run empty or the hose may have kinked, cutting off the free flow of liquid. The system loses it prime and will not pull ink through to the print heads. When this happens, a printer cleaning cycle (done through your printer driver) may correct the problem. If not, you need to re-prime that damper cartridge.

When you first purchased your bulk system, you should have received either a syringe or a squeeze bottle to initially prime your bulk system. You pulled the ink through the damper cartridge and ink feed tubes into the system to create the first siphon or prime. Use this syringe or bottle to pull ink into the damper cartridge, to re-prime your system the same way you did when you originally set up your bulk system. Run a nozzle check with your printer driver to confirm that your printer is again printing correctly.

If your printer has been sitting idle for a period of time and if three or four head cleaning cycles does not clear the print head, remove the bulk system and re-install the original Epson ink cartridges. After a couple cleaning cycles the nozzle check should improve. Re-install the bulk ink system as you did originally, and verify proper operation with a nozzle check performed through the printer driver. Always contact your distributor if you have questions during this process.

**PROTECT YOUR PRINTER’S ENVIRONMENT**

The environment—most specifically, humidity and temperature—plays a big part in how an inkjet printer functions. Inkjet printers prefer a consistent temperature that is cool but not cold. Further, they love humidity between 40-60 percent. I know Florida has very high humidity, and sublimators may still have problems with their printers. But remember, it may be really humid outside, but inside your air conditioning has taken all the moisture out of the air. This is bad for your printer. It is suggested to run a humidifier inside your home near the printer to maintain inside humidity.

In Minnesota we have a big problem in the winter when heaters are running full time. The air gets really dry and printers have more problems. We run humidifiers twenty-four hours around the clock, and put about 10 gallons of water each day into the humidifier to maintain 50 percent humidity. Folks in the drier climates of the country like Arizona will have the same problems and need to work extra hard to maintain humidity.

If you are working in your home, and have a basement, inkjet printers love to live there. I had an old sublimation printer with inks installed and had it stored
in my basement for over a year unused. A basement is naturally cool and humid. I took the printer out and printed a
test print, as I was curious, and the first print was perfect. That printer would not have printed, had it not been in my
basement because the ink would have dried solid inside the print heads and would have been very difficult if not
impossible to correct.

This is an extreme solution, but I know of folks in Arizona that were having constant printer problems because of the dry
air. They tried using a humidifier but could not maintain a high enough humidity because of constantly running air
conditioning. They have an Epson 4800, and when they were not using the printer, they put a damp sponge in a tray
inside the top cover of the printer.

The damp sponge naturally kept the inside of the printer humid and they have not had any further problems. You need
to be very careful using this method because you could damage the printer if you forgot to take it out before printing.
You also don’t want standing water and only a damp sponge to avoid the possibility of spilling water inside your printer
which will also damage your printer.

OUT OF SIGHT OUT OF MIND…OUT OF SERVICE

You should never leave your inkjet sublimation printer sit for an extended period of time without printing. The length of
time depends on your environment. You should run at least a nozzle check periodically to move fresh ink through your
print heads. Think of your nozzles as a cup of coffee that you leave sitting on your office desk. If you left it there for a
couple weeks or maybe only a couple of days, the water would evaporate, leaving a brown crusty deposit. You would
have to scrub pretty aggressively to clean out that mug.

The same thing can happen to a print head. The ink sits in the nozzle and the liquid evaporates over time, leaving a
crusted over nozzle. You would have to run some head cleaning cycles to get all the nozzles to print correctly, and this
wastes ink. I personally recommend running a nozzle check each day, but sometimes that can be hard to remember. I
like to take the remembering out of my hands. There is a tool available called Harvey Head Cleaner. It is a software
program that is installed on your computer.

You can set it up on a schedule of your choosing, and it will run an automatic nozzle check. You can load “cheap” copy
paper in your printer, and even reuse the paper over and over again. If you happen to print something on the printer
that day, “Harvey” will skip the nozzle check. The key is to not allow the ink to have extended time to dry in the nozzles.
It only takes a few drops of ink to do a nozzle check, but it takes a lot more to run cleaning cycles to clear a clogged
printer.

WITH KNOWLEDGE COMES CONFIDENCE

You probably spent a lot of time researching sublimation printers before you eventually settled on the model you
purchased. You ordered your package, and when it arrived, you set it up, and started creating sublimation products.

Now you have the knowledge of how your inkjet sublimation printer works, and you know that you must provide your
printer a good environment, and exercise it regularly. If you do these simple things, you can be confident that when you
need your inkjet sublimation printer, it will print flawlessly.