Repair or Replace: Weighing the Options for Your Wide-Format Printer

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As a service repair company, we receive calls everyday for repairs of wide-format (typically solvent) printers. Due to the industrial nature of this equipment and the inherent costs of operation and maintenance, many of these repairs can get quite expensive, as our bills attest. Although this is part of the cost of doing business, most people never plan on maintenance for their printers and typically only have work performed when the unit breaks. Often, they compensate for degrading print quality by slowing the printer down, manually perform more frequent maintenance cycles, or worse — deliver sub-standard work to their customers.

When you reach this point with your printer, you need to make that all-important decision: Do I fix it or do I replace the printer?

At the entry level of solvent printing, there are two main printhead technologies, each surrounded by different ink systems and sub systems. These printheads range in price from just under $1,000 to more than $2,500. Clearly, proper care of these printheads (many units have more than one) is paramount not only for optimum printer performance but also for reducing long-term maintenance costs.

Though the equipment sellers rarely, if ever, discuss service costs and intervals with their customers during the initial sales cycle, all such printers need periodic preventive maintenance (PM). Without any new printheads being part of the mix, the cost of standard PM can run from $1,000 to $2,000 for time and materials, plus the technician's travel to their site. Typically PM will include parts such as dampers, pumps, capping/maintenance stations or individual caps, various belts and so on.

In fact a full bill of materials for PM may vary widely from model to model. However, we have seen that the overall maintenance costs are similar from model to model — for the $2,000 PM, the printheads are more expensive variety, but the PM often "holds" longer than for the $1,000 PM model before additional PM is required, and the heads tend to be more durable. The printheads are typically far more sensitive on the $1,000 PM machine and far more prone to damage and clogging if the printer is offline. Although some industry players say that these heads can be recovered, we have had far more success with more rugged industrial heads on the pricier PM units.

Return on Investment

In the end, so much about running a business and making important financial decisions comes down to return on investment (ROI). Here is a typical scenario when dealing with a repair or replace decision:

You have a printer that costs you around $30,000 initially. We often see four- to six-year-old printers in this price class now selling for around $5,000 if they are in less than stellar condition, which is likely why you are looking to have it repaired in the first place. Let's say you have budgeted the same $30,000 for a new printer and will try to sell the old unit on your own. For the most part, dealers are burdened to take in used equipment on a trade, so the sale of your old printer will be on you.

That gives you a net cost of $25,000 for that new printer, which on a five-year lease will run around $580 per month plus tax and will put your monthly payments at around $625 per month (this rate will vary somewhat depending on your credit rating and other factors).

Now let's factor in the costs of some of the preventive maintenance jobs mentioned above. Although most people

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wince at the $1,000–$2,000 price tag, as they have no choice they generally will jump in on these figures with little hesitation, but balk when installing new printheads enters the discussion. With new printheads in the mix, the bills can easily get into the $3,000–$4,000 range, and we have had some full system rebuilds with as many as four heads, bringing the final bill is $6,000 or more.

Going back to ROI, isn't it informed decisions that make your business flow more smoothly and most importantly, profitably? The math is actually very simple — for the $3,000 fix, your ROI is less than five months; for a $4,000 fix, less than seven months. Remember, should you choose to purchase new equipment, you will still be on the hook for the rest of the five-year lease term, but with the repair you are done and can begin to "fill the hole" immediately and will be ahead of the game in a relatively short period of time.

As good as that sounds, it is not always that simple as other factors often come in to the decision-making process:

- There is exciting new technology you feel the need to be a part of.
- Your old printer has been giving you steady problems and you find that you have to invest in expensive repairs every few months.
- It is simply time — you just want a new printer.

On the surface, it may be hard to argue with any of these points, but let's quickly analyze the impact of each.

New Technology

Although exciting, new technology is often fraught with problems unforeseen by the manufacturer. You may encounter quirks in the operation of the unit and/or the RIP printer driver, which is usually also new. The new equipment also may not be stable, considering the marketing pressures manufacturers have to get it on the street in time for a show or to make budget. You may be an unwitting guinea pig.

And what about the inevitable learning curve when it comes to new technology? There is a cost in down time during training as well as inefficiencies as your shop gets up to speed with the new equipment.

Not uncommonly, new ink technology also has its own set of issues. There's proper adhesion to your favorite materials, UV fade resistance, formulation stability, touted flexibility in the case of UV curable inks, dealing with temperature extremes, and even water fastness or other chemical resistance.

Even with all of the testing that manufacturers do, there is no way they run the gamut of possibilities that exist in the field — and their third-generation cyan may not match the first, so the wrap panel you suddenly have to reprint may not match its neighbor anymore, for example.

As your prior equipment aged, you likely have realized lower costs of operation — first of all with no lease payment and secondly with ink costs, which in many cases decline as printers have been on the street for a while. While there are cases where new ink technologies carry significant benefits such as no VOC's, some of this new ink technology is quite expensive when using the dollar per square foot formula. After all, the ink is the Holy Grail for the equipment manufacturers, and quite often, high ink costs come with the new technology.

Now, if this new technology is much faster and you can put it in the same footprint in your shop, or if it offers significantly lower ink costs through a bulk inking system — those are compelling arguments to consider in your decision-making process.

Your Old Printer is Giving You Problems Too Often

Admittedly, there are times where a piece of equipment has given you its life with good service, and you have to move on with something new. It may be due to older technology or maybe it was the first in a product line where the later models offered significant improvements in speed or reliability, etc. However, we have found in many cases if a repair is done properly the first time, that work will carry the piece of equipment for awhile and not necessitate further repairs so quickly. We strongly resist the urge to save customers marginal dollars on a job when not replacing a particular part can cause problems again in the short term. The cost of travel time and labor is too great, as is the cost of down time for our customers.

Steps to avoid falling into this trap:

- Be involved in the repair process. Have the technician explain what parts are being replaced and why, and ask what

other related parts may need replacing now or in the near future. Determine the cost of the parts and the impact on the labor portion of the job if they are replaced at the same time.

- Do it right the first time! For example, if you are replacing a $1,000 printhead, replace the $30 damper at the same time (price is model dependent). The technician takes the dampers off when he removes the printhead. Plus, some dampers have filters in them, and yes, they are a consumable part. Why call a technician back to replace dampers? Keep in mind there may be four to 32 or even more dampers depending on your printer model.
- Insist on detailed service records about what was replaced for any given repair. Make sure you keep these records as they will help the technician with any future repairs and minimize the likelihood of someone replacing a part at too short of a service interval, saving you money.

If the equipment is really toasted (major electrical repairs, multiple issues, etc.) the decision to repair is not a good option. If you don't repair and simply unplug the unit it may lose any value it had, as printheads dry out and other systems fail along with it.

You Weigh the Options and Choose to Replace

If you choose to replace the equipment, you will want to protect your investment for resale or for trade in purposes. Here are some tips:

- If the printer is still working but the performance has degraded, print a series of verification prints such as nozzle checks or industry-standard quality tests to show where the printer "was" when you took it out of production.
- If it is still a worthy piece of equipment, invest in a flush kit to get all the ink out of the lines. Keep in mind that this process has limited effectiveness. Once charged, it is very, very difficult to remove all ink, pigment and particulates from a printing system. Eventually the flush will dry out too, leaving your printer completely dry, almost as if ink had been left in it for all intents and purposes.
- If it generally works but needs significant repairs such as printheads, you may be better off selling it "as is" rather than repairing it and then trying to sell the unit — unless you can sell it yourself. There are several factors at work here. If you choose to repair the printer, you are essentially doing so at "retail" price for the parts and labor. Most buyers will not acknowledge that, any more than you will get 100 percent of your investment in the beautiful kitchen you put in your home in order to sell it.

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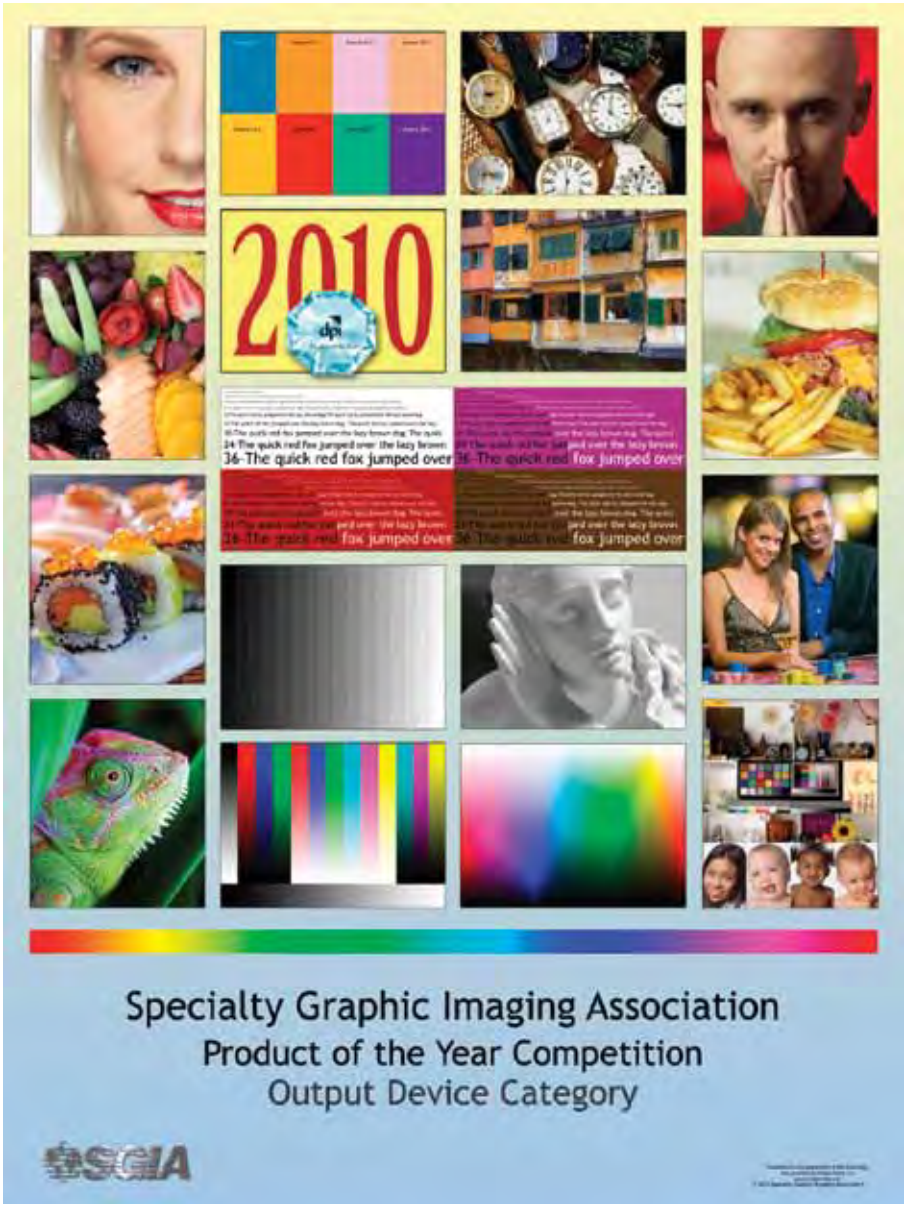

Output device test print for SGIA's 2010 Product of the Year Competition. For details about how to enter this year's competition visit SGIA.org, Keyword: 2011POY.

If you want to get $8,000 for your printer, why put $4,000 into it when you could possibly sell it for $4000 and let someone else worry about the repairs? This is especially the case when selling it through a dealer or repair company, either of whom could repair it at "wholesale" for the parts and labor. We run into this all the time. We have just repaired a printer

for someone and they now wish to sell it. As a perfectly working unit, it is now like a low-mileage car worth far more than book value because of the functionality it now has, but you may never get what it's really "worth."

Whatever you do, move as quickly as possible and find out from your technician what is needed to keep the unit functional so the self-maintenance routines can run to protect the printheads. As we constantly tell people, it is all about keeping the heads wet in a solvent printer.

The Importance of Regular Maintenance

Given the cost of this equipment and of repairs, we are constantly amazed at the poor care and neglect of many printers in the field. Equally important, we are appalled by the apparent lack of training given to the users of this equipment, at least by what we are told. This section could be an article in itself, but here are a few basic pointers:

- Ask questions: Be ready to ask questions during the installation about daily maintenance requirements, and of any technician who comes to service your printer. There are certain basics you need to follow, but most technicians have their own pet techniques for doing things. Learn some of them. These are not bad questions to also ask at the pre-purchase stage, not only to see what you are getting into, but also to see how familiar the seller is with the equipment. If a salesman doesn't know, ask to speak with his technician. At a minimum, this will give you an idea of the quality of support you can expect post-purchase.
- Keep it clean: That means printheads, cap station, wipers, etc. — basically any area where ink is exposed and can accumulate.
- Keep the heads wet: Whether it be head washings, nozzle cleanings/wash (names vary according to printer), run as recommended. Even better, if you are not busy printing, make up a small file of a variety of colors that will use every ink in the printer and run it daily. It only needs to be a few inches long, just get the heads firing. Also, don't forget light cyan and magenta, or other non-CMYK variants. The ink needs to be moving in these units.

The bottom line: This is no longer a fledgling industry and the technology has begun to stabilize to a large degree. There is always the bleeding edge of new ink technologies, higher speeds, etc., that can cause some issues at the outset. However, with proper care and maintenance, most of today's wide-format solvent printers, if properly cared for and maintained, can give you years of dependable, reliable and profitable service.

A 20-plus year industry veteran, Bob Flipse is a partner at Grafx Network, a national network affiliation of wide-format service technicians. Flipse was an early innovator in digital printing starting in aqueous and now going all the way to super-wide, grand-format solvent. In addition, he is the former owner of a dealership selling equipment, supplies and services, and has a deep understanding of the equipment, materials and applications of wide format.

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