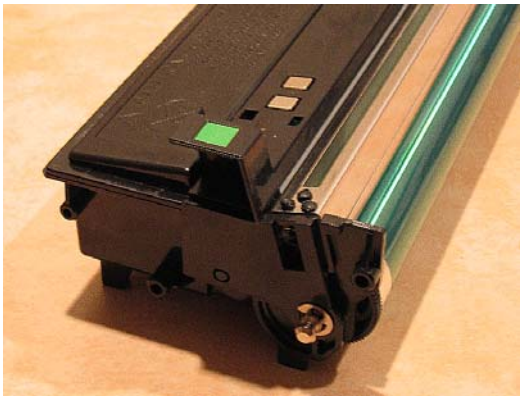
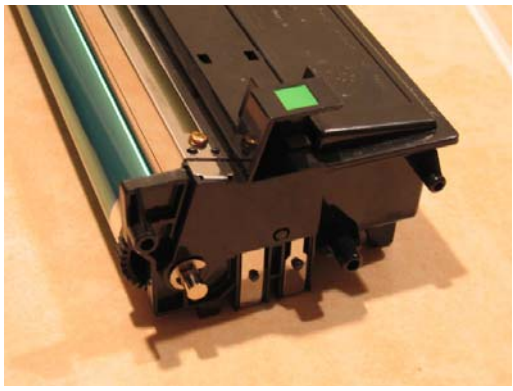
Repairing the Xerox Fax Drum Cartridges…
Pro635/645/657, Pro665/685/765/785

In a recent article (Sept. 2004), we learned some good stuff about the Xerox fax machines… there is the Pro645 style (Pro635/645/657) and then there is the Pro665 style (Pro665/685/765/785)… two distinct groups with lots and lots of similarities. This month, lets have a look at the Drum Cartridges for each style, including a bit about how the Pro645 and Pro665 drum cartridges are different from one another. We'll also talk about how the machine's drum count is reset by a new or properly reconditioned cartridge and we'll do a refresher on the drum count reset procedure from the diagnostics (something which was also covered in the Sept. 2004 article).


Front End of Cartridge


Rear End of Cartridge

These cartridges are rather simple to service and with drums and blades becoming available, it'd be a shame to pay $200.- or so for a new cartridge. The reorder number for the Pro635/645/657 Drum Cartridge is 101R203. These cartridges retail for $219.00. The Pro665/685/765/785, use the reorder number 113R459 and sell for $192.00. So… there's plenty of room to turn a profit and save your customer some money too. The only tricky bit is to replace the fuse which requires some soldering… if you will be present to install the reconditioned cartridge, you can skip that and reset the drum count from the diagnostics.

The first step in this procedure is to remove the rear E-clip from one end of the Drum Shaft and extract the shaft from the other end (see Photo 1). Then you can lift the Drum out of its cradle and put it aside where it'll be safe and protected from light.


Photo 1:
Extracting the Drum Shaft…


Photo 2:
Releasing the front end of the Charge Corona / Discharge Lamp Assembly

Next you'll want to remove the Charge Corona and Discharge Lamp Assembly. This is

best done by first releasing the front end and lifting it slightly (see Photo 2), then go to the rear end and release the two Charge Contacts with a small flat head screwdriver (see Photo 3)… they are pressed onto a plastic post so you'll need to be very gentle with the contacts, so as not to deform them any more than is absolutely necessary. You can then lift the Charge Corona / Discharge Lamp Assembly off of the Cleaning Assembly portion of the cartridge exposing the Cleaning Blade.

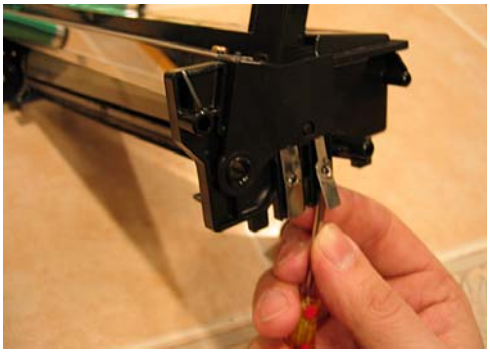


Photo 3:
Releasing the Rear Charge Contacts

The Cleaning Blade is held on by two screws which, oddly enough, there are no indexing pins… so the blade could be reinstalled in a variety of positions. I found that unnerving, so I think it wise to mark the position of the blade before removing the screws.

Photo 4:
The Cleaning Assembly…

With the blade off, you can empty the toner reclaim compartment, dumping it over a disposal container (wear a mask, this will be messy). A vacuum with a good toner rated filter should be able to get a majority of the toner out of there. When you install a new blade, make sure it lines up with the marks you made before you removed the screws so that you can count on the blade to clean the drum evenly from end to end.

Photo 5:
The reset Fuse…

Next you'll want to turn your attention to the Charge Corona / Discharge Lamp Assembly. The Discharge Lamp Board is clipped in place and is easily removed… you will find a series of LED's as well as a couple of resistors and, yes a drum reset fuse. Here's where the soldering comes in… Once you've replaced the fuse, clean up the Charge Corona thoroughly grid and all and then reassemble the assembly.

Now you can reassemble everything. Start with reinstalling the Charge Corona / Discharge Lamp Assembly… pay careful attention to the two contacts … they should be flush with the plastic once you "snap" them back in place (if they're protruding, they may get hung up when your customer goes to drop the cartridge back into the machine). Be careful when sliding the drum shaft in through the drum as there's a grounding clip inside the drum which you don't want to mangle.

If you chose to not install a new fuse in the cartridge, you'll need to reset the drum count manually from the keypad. Here's a refresher on how that is accomplished: *Press and hold down the '1', '3', and '0' buttons together while turning on the power. The display will say "F/T NMB = " prompting you to enter a code. Enter '80' using the numeric keys… the display will briefly show "DRUM MNG DATA CLEAR". Turn the power off and back on to exit this special diagnostic mode and restore the machine to use. I recommend you be very careful not to enter any other codes as there is no listing to show what other codes are available or what they may do (could change something you wouldn't want to change and create difficulties for yourself). The code is activated by itself, so you don't get an opportunity to press 'enter' to confirm the code… so don't be sloppy about pressing the '80' and never try to guess the code if you don't remember it for sure.*

Now perhaps you're wondering as, I was, what is the difference between the two styles of cartridges? The drums and blades and the fuse are identical… the difference lies in the way the cartridge interfaces with its respective Developer Unit in the machine. The pins front and rear near the drum are different in shape with the Pro645 version being a little smaller in diameter and the Pro665 also has an extra pin sticking off the rear end. Take a peek at the photo comparison of the rear pins…

<u>Comparison</u>: Rear DV Guide Pins

Pro635/645/657

Pro665/685/765/785

Another series of models, the 7042 style (7041, 7042, 4010, 4011) use an extremely similar drum cartridge which appears to share the same drum and blade. The 7042 cartridge has Developer Guide pins like the Pro645 style but the metal contacts on top of the Discharge Lamp Assembly are positioned further from the front of the cartridge… so the machine will know if you try to swap cartridges (the contacts on the underside of the laser unit on the machine wouldn't make contact and the machine would see that). The other difference in the 7042 is the lack of a reset fuse… the 7042 style used a separate "Connector" piece which came with the new drum unit… the customer would have to seat the connector in a receptor slot on the machine when replacing the drum unit. At any rate, none of the three cartridge types could be interchanged but the drums and blades would be interchangeable.

That should get you repairing these things… don't pass up this part of repairing the copier just because someone called it "reconditioning". It's a vital part of servicing machines these days, so it's worthwhile to learn how to do it yourself. Happy Cartridge Repairing!