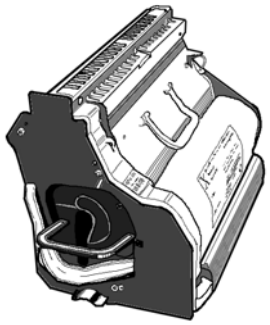
Xerox DC265 style… REBUILDING THE XEROGRAPHIC MODULES

(DocumentCentre 240, DC255, DC265, DC460, DC470, DC480, DC490, DocuTech-65, DT75, DT90, DocuPrint-65, DP75, DP90, C65, C75, C90, Pro65, Pro75, Pro90)

Xerox DC265 style



Xerographic Modules

This series of Xerox mid-volume multifunction machines continues to be strong, particularly in niche markets. We've covered the machine itself and the Fuser Modules in past ENX articles. Now it is high time we hit on the "Xerographic Modules". This piece is basically the Photoreceptor unit. In past series, Xerox might have called it the drum cartridge or copy cartridge. This assembly contains the Photoreceptor Belt, and its cleaning assembly… also the charge corotron and transfer corotron.

The units are quite expensive when purchased new from Xerox, so there is plenty of room to make some good money repairing and rebuilding them, and still save your customer a bundle. They require about one full hour to properly rebuild (maybe a bit longer till you get familiar with them). You'll need a Torx T-20 driver, a small flathead screwdriver, a pair of latex gloves, some toner cleanup cloths, and a good vacuum with a toner-rated filter.

The Connector (CRUM)

Photoreceptors and blades have been available for a while now, so repairing a damaged unit has been possible, but only recently have we seen the Connector CRUM (Customer Replaceable Unit Monitor) made available in the market. That is the key to resetting the copy count for the module. If you want to rebuild one of these, you'll want to replace that Connector to start the count over again. The machine keeps track of the copy count on the Connector. So, if you were to take a module out of one machine and install it in another, the Xerographic Module's copy count would follow the module.

The other function of the Connector CRUM is to divide up the various regional and plan markets. In the US there are two "plans". First there is the "Sold" plan. We've become accustomed to referring to these as "Type A" cartridges. These are cartridges sold to customers who are not on a Service Maintenance Agreement with Xerox. The US reorder number was originally 113R131 (some of the more recently released models require a newer reorder number: 113R620). The other plan is the "Metered" plan (Type 'B'). Machines under Full Service Maintenance Agreements are set up to use the Type B cartridges. Originally they were sold under the number; 113R132 (later came the 113R621).

From what I understand, the older versions of the cartridges are missing a slot where the faster model machines have an extra lamp array of some sort to help clear the photoreceptor at the higher speeds. This means that you can use a 113R620 or 113R621 in any US model which has a matching plan (sold vs. metered) but if you tried to use a 113R131 or 113R132 in one of the faster models (DC490, DP90, DT90), it would not function properly.

There is also a reorder number for the OEM rebuilt units: 113R626. These are referred to as the "EP" (Environmental Partnership) cartridges and they sell for slightly less than the other reorder numbers. These will work in the machines which are under the "Sold" (Type 'A') plan.

There are similar pairs of cartridge types for the overseas markets. Europe has its own, as does Latin America. Here's a chart of the different reorder numbers and where they fit into the scheme of things:

Reorder #	Models	Region – Market
113R131	All except DC490 / DP90 / DT90	US – Sold (Type 'A')
113R132	All except DC490 / DP90 / DT90	US – Metered (Type 'B')
113R133	All except DC490 / DP90 / DT90	Europe (XE) – Sold
113R134	All except DC490 / DP90 / DT90	Europe (XE) – Metered (FSMA)
113R174	All except DC490 / DP90 / DT90	Latin America (ACO) – Sold
113R175	All except DC490 / DP90 / DT90	Latin America (ACO) – FSMA
113R620	All Models	US – Sold (Type 'A')
113R621	All Models	US – Metered (FSMA)
113R622	All Models	Europe (XE) – Sold
113R623	All Models	Europe (XE) – Metered (FSMA)
113R624	All Models	Latin America (ACO) – Sold
113R625	All Models	Latin America (ACO) – Metered (FSMA)
113R626	All Models	US – Sold (EP : "Environmental Partnership"… OEM rebuilt)

To rebuild one of these cartridges is somewhat time consuming, however with the proper procedure, it gets a lot easier. My first stab at taking one apart was at least two years ago. Since I didn't have the Connectors available yet, I didn't get too far into it, before I decided to procrastinate for a while (till now actually). I was very fortunate and thankful that a DVD called "Lakes CRU Rebuild" was given to me by a good friend. It turned out to be my sort of tutorial. Nothing fancy… very well explained. The fellow on the DVD has an easy going, matter-of-fact way of talking. He is obviously very comfortable with the procedure and it's unscripted which is kind of refreshing. The DVD gave me a leg-up on the process and probably saved me from destroying the first cartridge in the process of learning how to properly take it apart.

This is also a rather messy procedure… make sure you prepare a good work space accordingly. Toner will spill out of the dust filter vacuum ducts right from the onset (the ducts start on the left side of the cartridge and travel through the front end cover).

You'll start by removing the Front End Cover. This is held on by 4 screws (Torx T20 heads) (see the little white arrows on Photo 1). With the screws removed, you need to shimmy the cover and jiggle it a bit till it comes off towards the front. Pay attention to the

Photo 1 – Front View

Photo 2 – Front Cover (inside)

way the corona cleaning knob pokes through the front cover and also how the cleaning assembly cam tensioner on the front cover mates with the cam on the cartridge (see Photo 2).

Next remove the dust filter & its container from the right side of the cartridge. It is easily released by simply flexing the rear frame of the cartridge where it forms a collar around the round part of the dust container. Then it can be pivoted out and removed (see Photo 3). Vacuum the filter out carefully and thoroughly.

Photo 3 – Dust Filter Container Removal (release collar at the rear end)

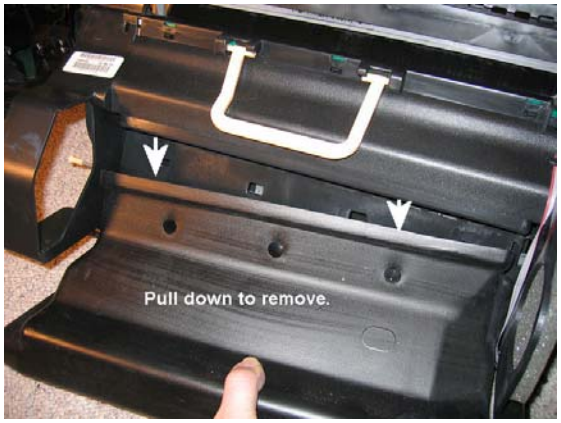


Photo 4 – Toner Waste Sump Removal (jiggle and pull down)

The Toner Waste Sump is next. It is a large container on the lower right side of the cartridge. You will jiggle it and pull it down till it clears the chute above it (see Photo 4). Be prepared for a big mess here… toner will spill out of the Cleaning Assembly Chute which feeds the waste container.

Now go to the other side and remove first the Front-Left Photoreceptor Guide Clip by compressing the top anchor and pushing it through, then gently pivot the guide clip inward till the lower "L" shaped anchor can be extracted (see Photo 5). Then you can remove the Left Side Cover by removing 6 T-20 screws. If you are planning on preserving the used photoreceptor belt, be particularly careful not to kink the belt (it is still held by the left-rear guide clip, so it would be easy to get it hung up when removing the left cover). The yellow "U" shaped on the top rear of the cartridge will now fall right off, so grab it and put it aside (that piece helps the customer line the cartridge up properly during installation).

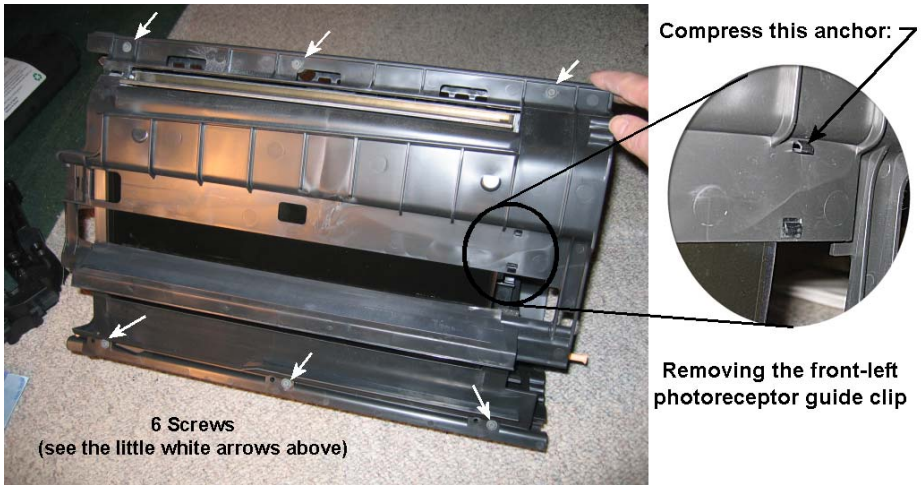


Photo 5 –Left Side Cover Removal (Remove the front-left photoreceptor guide clip first)

Now the Charge Corotron is

holding on by only its two mounting position pins and the metal contact terminal on the rear end. (Take notice of how the terminal is connected to the unit so it will be clear to you where it goes during reassembly). Remove the Transfer / Detack Corotron's Rear Photoreceptor Belt Guide Clip by compressing one anchor and swinging it down and off. (See Photo 6). Take the Transfer assembly off and lay it aside for now.

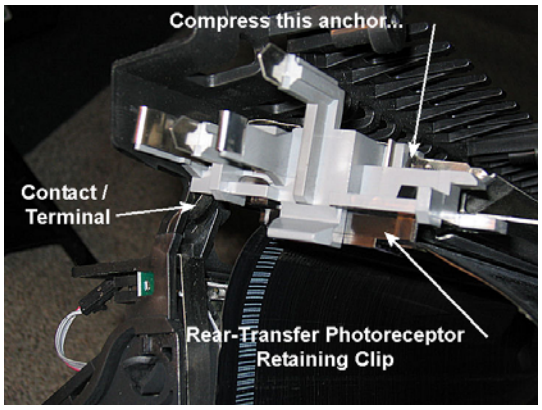


Photo 6 – Rear view of the Transfer Corotron Assembly…

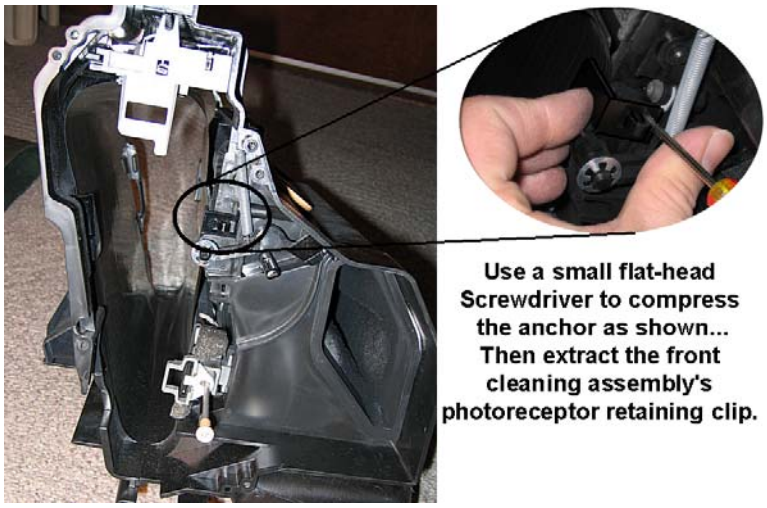


Photo 7 – Front retaining clip removal…

Next go to the front of the cartridge and remove another Photoreceptor guide Clip from the front of the Cleaning Assembly (compress an anchor and extract the clip… see Photo 7). At this point, the photoreceptor belt is retained by only one more Guide Clip (at the rear of the Cleaning Assembly), so it can easily be removed. If you plan on reusing the belt, make sure to put it in a black bag to protect it from light-shock.

Remove the Charge Corotron Assembly by sliding it forward till it clears its rear metal retaining flat-spring and the pair of ground clips behind the center of the corona assembly. When handling the Corotron Assemblies, wear latex gloves or otherwise avoid touching the corona wires, teeth, contacts, and particularly the charge grid. These items can cause some serious copy quality problems if you get oils from your finger or dirt on them. Clean both Corotron Assemblies thoroughly. For the charge Grid, use only a water-dampened lintless cloth to clean the grid's face gently. Don't use solvents or alchohol because they will destroy the grid's fragile coating. The grid can be safely released from its anchors by pressing in on a white, spring loaded piece at the front end of the corona assembly.

Now at long last, we come to the Cleaning Assembly and most significantly to the Cleaning Blade. While working in the Cleaning Assembly, be gentle and respectful to the seal blade and other soft gasket or sponge pieces so as not to damage anything. First remove the discharge lamp's seal blade from above the cleaning brush (release 3 clips from the right outside of the cartridge). Release the spring at the front end which tensions the blade retract cam. Remove one screw near the front end of the cleaning assembly. Now the Cleaning Brush is loose and can be removed for a thorough but gentle vacuuming. The Cleaning Blade is bolted onto a mounting bar which has the cam for the blade retract mechanism at the front end. The Blade Assembly can be removed at this point. There are two little nuts which hold the blade to its mounting bar. The aftermarket blades which we have seen so far, come without the mylar baffle attached to them. You'll want to peel off the old mylar baffle

piece… clean it thoroughly with alcohol, and re-adhere it to the new cleaning blade using some industrial strength double-sided tape. Note that the edge of the baffle lines up with the first bend in the metal of the blade (see Photo 8). You will need to gently flex the lower Seal Blade down a bit when reinstalling the Cleaning Blade Assembly… Be gentle and patient and it'll all go back together and seat right with a little finesse.

Photo 8 – Cleaning Blade Assembly… (Reuse your old mylar baffle on the new blade)

Now you can clean everything up nicely and replace the Connector CRUM (it is mounted on the back of the Main Connector on the rear of the cartridge body… see Photo 9). With the new Connector, the machine should show the Xerographic Module counter as being reset, and it should get up running. Just make sure you get the right Connector CRU to match the market which your machine is set-up for.

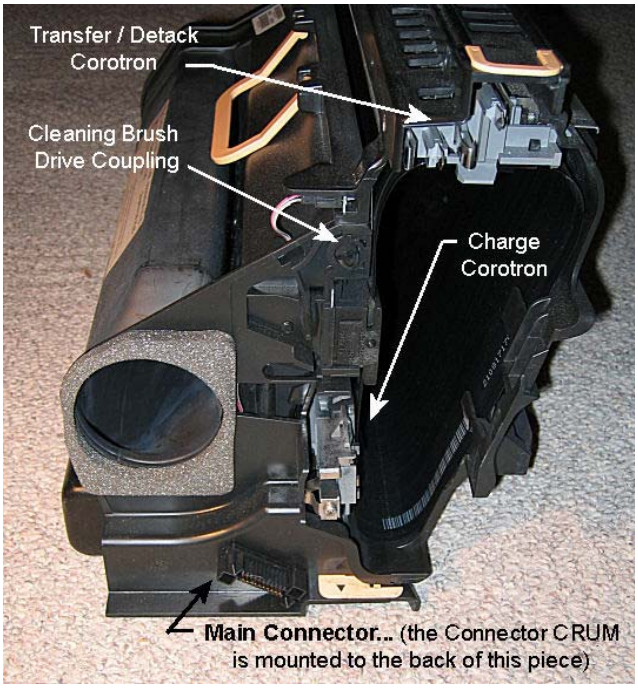


Photo 8 – Cleaning Blade Assembly… (Reuse your old mylar baffle on the new blade)

That does it for this one folks! As the Xerographic Modules become increasingly scarce, this one is bound to be something worth tackling.

Britt works for The Parts Drop, a company whose primary business is providing parts, supplies and information for Xerox brand copiers, printers and fax machines. You can find more information, including many of Britt's past ENX articles on their website, www.partsdrop.com. If you'd like to read more about Xerox brand office equipment, there's also a complete listing of past articles under contributing writers on the ENX website (www.ENXMAG.com).