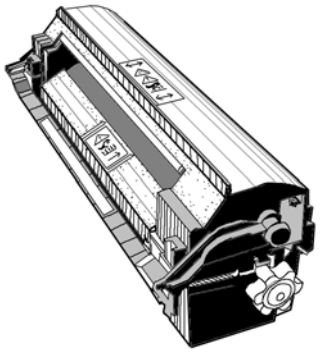
DC265 style… REPAIRING THE FUSER MODULES

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

DC265 style Fuser Module



A few months back we covered the DC265 style machines….
That article included a listing of Status Codes as well as an overview of some of the adjustments available from the Customer Tools menus. The machine is quite technician friendly except that without a specially equipped laptop computer called a PWS (Portable Work Station), a technician is given very limited access to diagnostic procedures and tests. Fortunately, many of the adjustments we need are in the Customer Tools.

We also learned that this machine is extremely modular… an inexperienced tech can remove the Fuser Module and replace it with a new one.

A new Fuser Module sells for over $1200.-… so rebuilding these makes sense. You have plenty of room to turn a tidy profit while serving your customers well.

Today we take a photographic journey through the process of repairing, servicing and rebuilding the Fuser Modules. We'll start with a bit of background information, such as the different versions of the modules within the series, and what components you'll be concerned with.

These Fusers are extremely easy to remove from the machine… so easy in fact that they're considered CRU's (Customer Replaceable Units). You open the front door, release the carriage which the Fuser sits on, slide the carriage out and lift the fuser off.

If you do things the way you were intended to, you'll buy a new Fuser Module (or one rebuilt by Xerox) and plop it in place and walk away… unfortunately what that effectively does is defeat the purpose of having a technician at all. The key is that you need to be prepared to repair your own Fuser Modules. This is true whether you are an independent technician or the service arm of a certified dealership. The upside to all of this is that you can do repairs at the comfort of your own work bench… if you have a fuser module ready to go, you can complete a service call in a matter of minutes and then go back to the shop to repair the used unit so it's ready for the next customer who needs one. Not a bad life style really. You then make your money on the sale of the rebuilt Module rather than on the labor of installing it.

These Fuser Modules come in a few varieties. The DC240 uses a different module from the rest of the models in the series. I've not yet seen one of the DC240 Fuser Modules to compare it physically to the DC265 etc module. Likelihood is that it is extremely similar if not interchangeable except for the CRUM (Customer Replaceable Unit Monitor) or "Connector" as we've been calling them which is on the rear of the Module. There are different ID's on the connectors which allows the machines to be set up for different markets each with their own version of the Fuser Module. If you install the incorrect reorder number Fuser Module, the machine will read the Connector and reject it.

The largest group of models which use the same Fuser Modules includes the DC265, DC255, DC460, DC470,. DC480, DC490, DT65, DT75, DT90, DP65, DP75,

and DP90. These use either the "Sold" version (109R330), or the "Metered" or SMA (Service Maintenance Agreement) version (109R329) depending on how the machine was set up when it was first placed. You can usually tell by checking the sticker on the front of the Fuser Module to read which reorder number the customer has been using.

The Connector also has another purpose which is to keep count and time out forcing the customer to replace the Module when the time comes. The timing is mostly centered around the expected life of the Fuser Web Cartridge (see Photo 1)… it protects against the web running out. So… most first time fuser repairs will involve replacing the Fuser Web Cartridge and replacing the Connector to reset the Fuser Module counter. Eventually someone will likely come out with a generic web but for now, the OEM cartridge is the only way to go.

Photo 1

DC265 style Web Cartridge

Replacing the Web Cartridge and the Connector is a piece of cake. You need to turn the Fuser Module upside down and release two tabs (see Photo 2). Then pivot the Web Cartridge up and out (see Photo 3 below). With the Web Cartridge out, releasing the tabs for the Fuser's Main Connector is made easier (see photo4) (you can release both tabs without removing the web but it's tricky to release the inside tab with the web in place). Once you release both tabs, you can gently remove the Main Connector. With the Main Connector out, you can get to the release tabs for the three little connectors. The Main Connector houses the CRUM Connector, the Thermistor (the connector with two black wires), and the Thermostat (the connector with two orange wires) (See photo5).

Photo 2

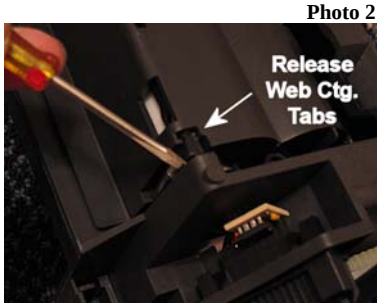
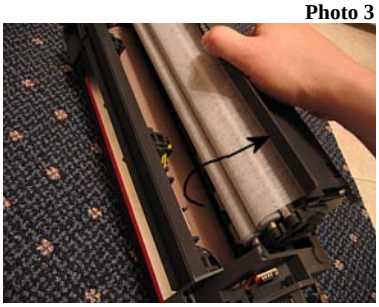
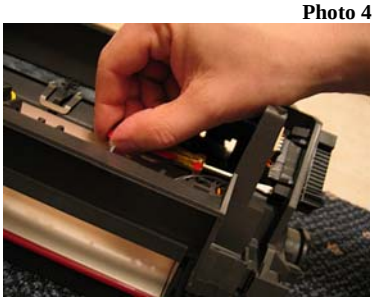


Photo 3



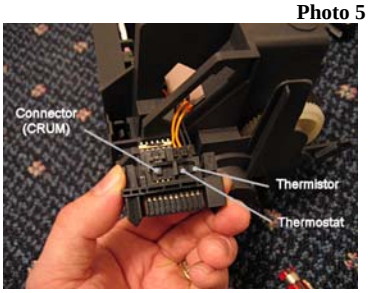
Pivot the Web Cartridge up and lift out.

Photo 4



Release the inside tab on the Main Fuser Connector

Photo 5



Connector release tabs on Main Fuser Connector.

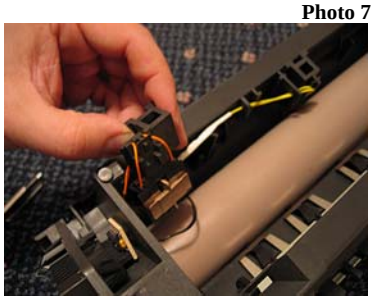
To unseat the Thermistor, the Thermostat or the Thermal Fuse, is also easy with the Web Cartridge out. Use a small flat-head screwdriver to release the catch on the plastic holders for each (see Photo 6) and then lift / slide them out. If you're in there servicing the unit, you'll want to

Photo 6

Release the clip and slide the holder straight up.
(The Thermistor, Thermostat, and Thermal Fuse Holders all work this way)

check and clean the face of the thermistor and the thermostat (see Photo 7). There is also an AC overheat fuse in the Fuser Lamp circuit which can be accessed in the same way.

Photo 7



The Thermostat on its Holder

Now it's time to flip the unit right-side-up to go after the Stripper Assembly and the Handle. The Stripper Assembly includes 6 Heat Roll Picker Fingers and 3 Press Roll Picker Fingers (see Photo 8). It is designed to open up to help customer's clear jams easily. Pull up on the silver bar with the green sticker on it and pivot the Stripper Assembly down and away (see Photo 9). You can then dislodge the Stripper Assembly by removing one e-clip from the rear of the assembly (see Photo 10). The Handle also has one e-clip on the rear end. There is a second e-clip on the front end of the Handle under a rubber cap.

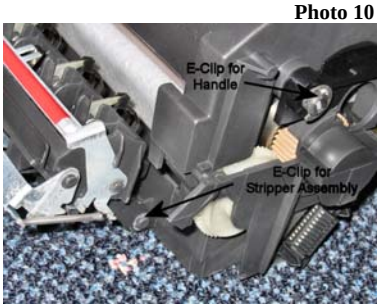
Photo 8

Fuser Stripper Assembly

Photo 9

Lift silver bar and pivot Stripper Assembly down and away.

Photo 10

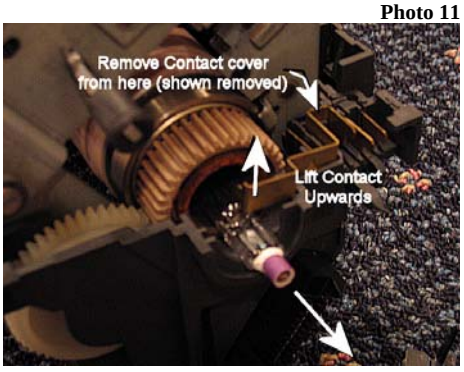


Remove E-Clips for the Handle and the Stripper Assembly.

Now you'll want to take off the Top Cover to get to the Fuser Lamp, Pressure Roll and Heat Roll. There are four clips holding the top cover on which you'll need to release before the cover will lift off.

The Fuser Lamp is held between two terminals, the front one is spring loaded. If you go the rear terminal, you'll remove a round disk of plastic and a plastic contact cover over the terminal plugs… then you can press on the rear end of the lamp till you can free it from the rear terminal contact (see Photo 11). Next lift up a little bit on the rear lamp contact till you have enough clearance to slide the Fuser Lamp all of the way out.

Photo 11



Fuser Lamp Removal.

You can remove the chrome upper baffle assembly by releasing the ground strap (one 5.5mm nut driver screw) and then lifting the assembly straight up and off.

If you want to remove the Pressure and Heat Rollers, you'll first need to release the tension on the Pressure Roll. Start by marking the screws which go through the pressure springs so that when you're done

you can return the unit to the same specs it started at. Then back out the two screws all the way (do them a little at a time alternating between the two to help reduce the chances of stripping the thread on the screws). Place the screws, springs and washers aside.

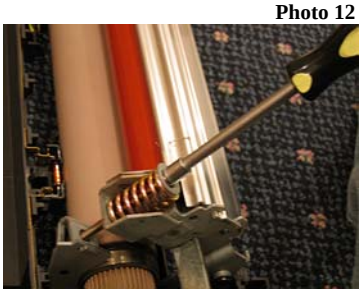
With the pressure off of the two rollers, you can pivot the Pressure Roller Assembly up and away (see Photo 13). The Pressure Roller and it's shaft will now drop out freely. The Heat Roller Assembly (with its bearings and drive gears) will likewise lift up and out easily.

The jam clearance knob on the front of the Fuser Module has a transmission of gears behind it to make it possible to turn the rollers when a customer is clearing a jam. The transmission with the knob can be removed as a unit as well. It is held by a single clip… if you release the clip, the assembly will slide up and out for you.

The parts for these Fuser Modules are beginning to become available in spite of the fact that the OEM Service Manual does not offer any exploded view of the module. As to the Connectors (see Photo 14)… Connector Repair services will unquestionably be available very shortly if they're not already available by the time this article goes to print… Web Cartridges are available, Fuser Lamps too. The Heat and Pressure Rollers you'll likely not need for the first cycle of rebuilding these, but they can be gotten as well.

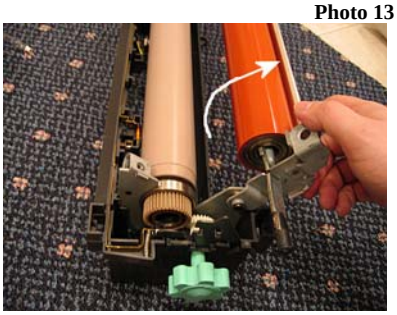
That should do it for the Fuser Modules. We'll be hitting on the Xerographic Modules as well in a future article as the Photoreceptors and Cleaning Blades are now becoming available.

Photo 12



Releasing the Pressure Springs.

Photo 13



Pivot the Pressure Roll Assembly away from the Heat Roll.

Photo 14

The Connector (CRUM)