

C35 style FUSERS... Worthy of service.

Repairing the Fuser Modules of the Xerox Copy Centre C35, C45, C55, & (Document Centre) DC535, DC545, DC555, & Workcentre M35, M45, M55, Pro35, Pro45, Pro55.



The C35 style machines are proliferating.... A new wave has just been released, so they'll probably be quite popular. They are very modular... so the OEM plan is to have everyone go and replace the modules of the machine rather than doing traditional field service. The Fuser Module is likely to prove to be one of the most important pieces. It is sold under the part number 109R636. You may want to simply replace the fuser the first time you run across a need for one and then keep the core. This way you can repair it and offer a rebuilt unit at a better price to the next customer who needs one. This is where the Service Industry is going it seems... if you're not repairing the modules of the machines, you'll miss out on a good part of the work.

The Connector or CRUM on the rear of the Fuser Module keeps track of the copy count for the fuser. It is set to run 350K copies before it times out at which point the machine will lock you out till it sees a new Connector (CRUM) on the fuser. Interestingly the Service Manual acknowledges that it is possible for the Fuser Cleaning Web to run out before the Fuser Copy Count runs out if the client runs an unusually high ratio of long sheets (14" or 17" paper)... so the fuser reset is going to be quite important.

These fusers are physically quite typical in many respects... they have a Heat Roller which is a Teflon coated roll.... Then a sleeved silicon Pressure Roller. Each roller rides on ball bearings. There are two thermistors and two thermal fuses (thermostats) which appear to be self resetting bi-metal fuses. The Fuser Exit Switch is also in the module as well as a set of Upper Picker Fingers. On the top of the Fuser Module, there is a Cleaning Web assembly which includes a foam pinch roll.

This Fuser Module turned out to be rather simple to disassemble. Following is a procedure for a good way to approach it...

- 1.) Remove the upper Picker Finger Assembly (2 screws) which also houses the Fuser Exit Switch. This is on the right hand side of the fuser. Disconnect the Exit Switch's connector at the rear end.
- 2.) Remove the Top Cover (4 screws) to gain access to the Fuser Cleaning Web Assembly.
- 3.) Remove the Cleaning Web Assembly. There is one screw near the front end (from the top) and a second screw near the rear end. The rear screw also retains a metal clip which serves to prevent the Web Take-up Gear from turning backwards.
- 4.) Next you'll go after the Thermistor / Thermal Fuse Assembly (2 screws from the left side) This assembly also includes the electrical connector for most of the circuits of the fuser. You'll need to disconnect the two front fuser lamp connectors. Disconnect also the two rear Fuser Lamp



connectors and the green ground wire (1 screw). Then remove the rear lamp holder bracket which is trapping the lamp connectors (2 screws). Now you can get to both Thermal Fuses and the two Thermistors easily. It appears that the two thermistors would be interchangeable if it were not for the length of their wires. The two Thermal Fuses are identical to one another. Replacing one of the Thermal Fuses would be a piece of cake. To replace the thermistors you'll need to release molex pins from the

fuser's Electrical Connector. It'll be important to know which wire goes to each pin on that Electrical Connector (see the pinout for the AC Connector after the procedure).

5.) Now for the lamps... you've already removed the

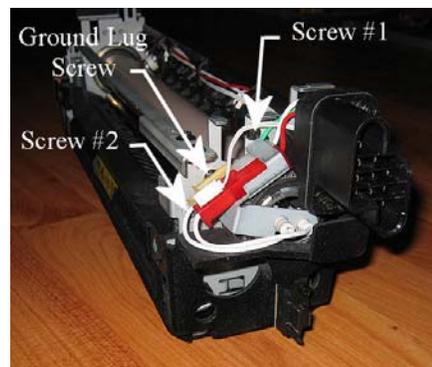
Rear Lamp Holder Bracket. Now remove the front lamp holder bracket (1 screw). Be very gentle sliding out the two Fuser Lamps as they tend to want to get hung up on one another on the way out.

6.) Before you start removing the upper Heat Roll, release the tension from the Pressure Roller... There is an adjusting screw on the front end and one on the rear end which suspend 'L' brackets which have the pressure springs attached to them. Take note or mark how each is positioned before you start so that you can later return them to the same tension. Now you can remove the 'C' clips from the Heat Roller. One from the outer rear end allows you to slide off the Fuser Drive Gear, Upper Fuser Bearing, and Heat Sleeve. Similarly the front end can be dismantled. The Heat Roll can now come out and the lower roller with its bearings can then be lifted out of its cradle. Note that the flanges from the lower bearing are positioned on the inside of its metal cradles so that they can't walk off the ends of the roller.

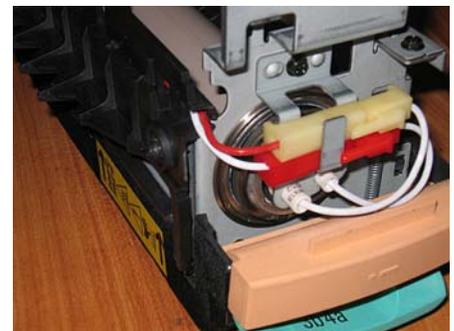
7.) Once you've cleaned everything up and replaced any bad parts, its time to reassemble. Everything goes back pretty much the way it came apart. Make sure to clean the faces of the Thermistors. Also, once the Cleaning Web Assembly and its metal clip (the piece on the rear end which engages the web Take-up Drive Gear) are in place, turn the take-up gear (counterclockwise when viewed from the rear) to remove any slack on the web. Its also helpful to remember to reconnect the Exit Switch's connector before you install the top cover (while it is still accessible).



The Thermistor / Thermal Fuse Assembly.



Rear Fuser Lamp Holder Bracket.



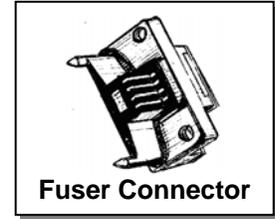
Front Fuser Lamp Holder Bracket



Releasing the tension on the Pressure Roller.

8.) If you wish to reset the Fuser's Copy Count, you will need to replace the Connector (or CRUM) from the rear of the fuser module.

THAT SHOULD DO IT!



Now ... here's the pinout for the Fuser's Electrical Connector:



- Pin #1: Red Wire to Rear Thermal Fuse
- Pin #2: Red Wire (short) to Rear Red Connector Fuser Lamp
- Pin #3: White Wire (short) to Rear White Connector Fuser Lamp
- Pin #4: White Wire to Front Thermal Fuse
- Pin #5 & 6: Rear Thermistor
- Pin #6 & 7: Front Thermistor
- Pin #8: Green Ground Lug Wire
- Pin #9 & 10: Exit Switch

I suspect that these Fusers will become familiar assemblies to many of us in the months and years to come. Happy Repairs !

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 on their website www.partsdrop.com. If you'd like to read more about Xerox brand office equipment, there's a complete listing of past articles under contributing writers on the ENX website (www.ENXMAG.com).