

DocuColor 250 (DC250 style)... Cooking Good.
*Xerox Docucolor 240, 250, 242, 252, 260, WorkCentre 7655,
7665, 7675*



Few Xerox models have earned as much praise as the DocuColor 250 series. The technicians who are working on them say they are reliable and very technician friendly. The machine is designed with a stack of access drawers which make replacing the various modules and parts easier than just about any model of machine in recorded history. The fuser module is naturally one of the more important pieces. Reports from the field say that more often than not, the Heat Roll fails early with the rest of the unit still being in good shape. Replacing the Heat Roll makes sense from both environmental and economic standpoints. This month we'll get a quick overview on the fusers and then we'll crack one of these babies open to see how best to replace the heat roller.

This one ended up being far more daunting to disassemble than I had hoped... but as is usually the case, the second time will likely prove a lot easier. Also, there is a trick or shortcut to replacing just the heat roll which is all that is usually needed. Read after the main procedure for info on how to sneak the heat roll in and out of there.

Hopefully with some advanced knowledge gleaned from this article, you'll find it less intimidating than I did. It's perhaps the most complex fuser we've tackled to date, with a total of 21 pins on the main fuser connector. There are a like number of wires leading away to 3 heat lamps, a ground point, 3 temperature sensors, 2 thermal fuses, an exit sensor and a pressure cam position sensor... all onboard the fuser.

The Pressure is applied not by a traditional press roll, but instead by a Pressure Belt inside of which is a pressure pad which pushes the belt against the heat roll where the paper passes between them.

The Heat Sensors in this fuser are unusual. There's one traditional thermistor near the front end of the heat roll which makes direct contact with the Heat Roll's surface. Then there are two other sensors which don't make contact directly but they do seem to monitor the surface temperature of the Heat Roll from a slight distance.

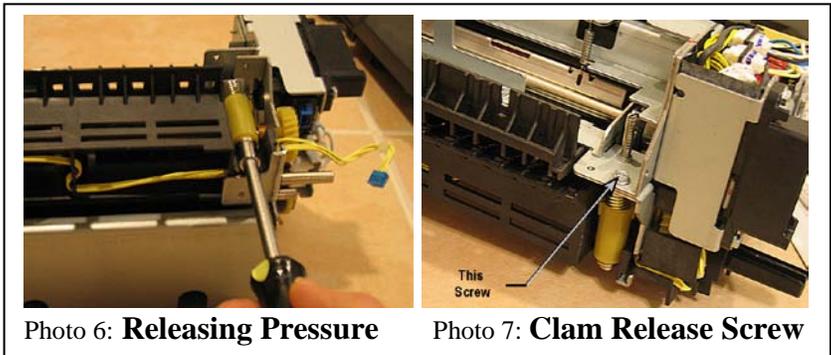
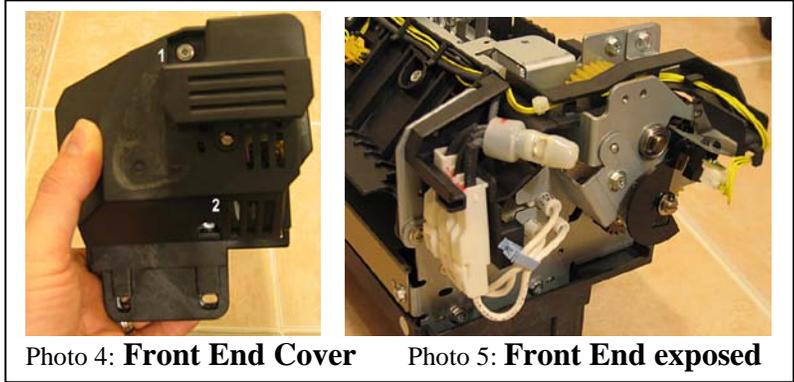
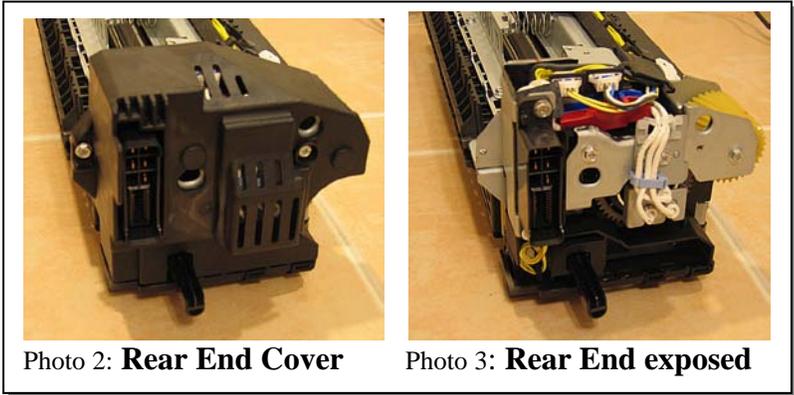
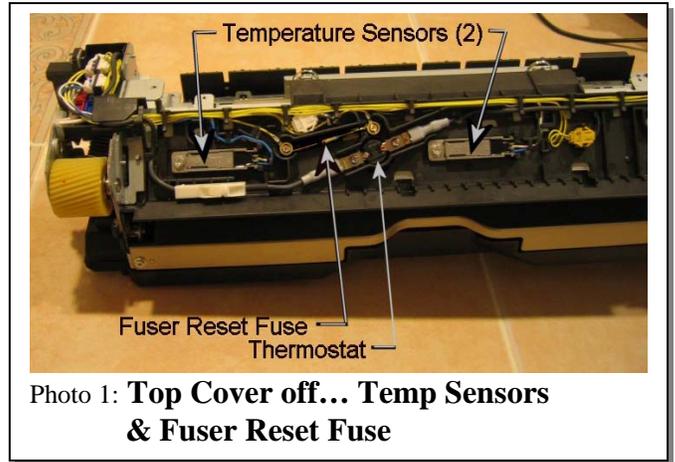
There are a bunch of gears both on the front and rear ends which handle the heat roll drive and the pressure cam mechanism. One of the gears is on a spring loaded plunger which can engage the drive to the Pressure Cam mechanism when something in the machine pushes the plunger in from the rear (I would guess there would be a solenoid performing that function although I was unable to find the part on the Parts List pages).

The Fuser Heat Roll has an aluminum core with a silicon sleeve over it. It has typical Heat Roll Bearings and Heat Sleeves (bushings). There are no Picker Fingers in this machine... instead there's a stripper plate which helps the paper off of the heat roll when it exits.

Now for a quick walk-through of how this thing comes apart...

FUSER DISASSEMBLY:

1. Start with the Top Cover... (2 screws on top from above, and 2 screws near the right side, also from above). This gives you easy access to both the Thermostat and the Fuser Reset Fuse as well as the thermistors (see Photo 1). The Thermostat is can-shaped and in-line with the fuser heat lamp circuits. The Fuser Reset Fuse is a standard bullet-shaped thermal fuse. It serves as the Fuser Reset Fuse. When replaced, if you run 50 copies or more, the machine will reset the Fuser Life to 100%.
2. Remove the Front End Cover (2 screws from the front)... which exposes the pressure gear / cam mechanism and its home sensor
3. Remove the Rear End Cover (2 screws from rear, see Photos 4 & 5)
4. Remove the lower input baffle (a metallic plate on the left side which has a row of static elimination brushes on it which ride on the Pressure Belt's surface. Pay attention at this point to the 2 clips on the lower rear edge of the fuser... these clips occupy 2 out of 4 possible locations back there and they pop off kind of easily... you will want to know where these go back if they pop off, because if my hunch is right, they are likely to be the way the fuser "type" is recognized by the machine.
5. Next you'll work on releasing the pressure between



the Heat Roll and the Pressure

Belt Assembly. First mark the Pressure set screws with a magic marker or tape so you can get them back to the same position later... and then back the set screws out from the bottom using a 5.5mm hex driver (you might be tempted to use a flat head driver on the slot on the top of the screw but it is far too fragile). Once the Pressure set screws are removed, you can also remove the two screws near them from the top which hold the top and bottom halves together.

6. Remove the Upper Exit Baffle from the right side by pivoting it up far enough to escape its front and rear mounts... grab the two large springs which keep it pushed down since they will no longer be captive.

7. Release the large Main Fuser Connector from its mounts (2 screws) and disconnect one blue connector behind the Main Connector (this one has the wiring from the Exit Sensor which is the only electrical component on the lower half of the fuser). Now the upper assembly can pivot up and off of the lower half of the fuser.

8. The Pressure Belt Assembly can now lift out of the lower half and the Fuser Exit Roll can be easily replaced as can the Exit Sensor Assembly. If the Pressure Belt needs replacing, you can remove it now by first taking off the bearing at one end or the other (one screw from the outside holding it to the plastic cross-member). Then the Pressure Belt can slide off rather easily. You will want to be sure that there is adequate grease inside the sleeve (there is a pad inside which dispenses some extra grease). This grease material must be a high temperature grease.

9. Now turn to the Heat Roll Stripper Plate on the Upper Half of the fuser. First release the two springs, then slide the two bushings toward the middle of the shaft



Photo 8: **End of Pressure Belt Assembly...**



Photo 9: **Upper Half (w/ Heat Roller, etc.)**

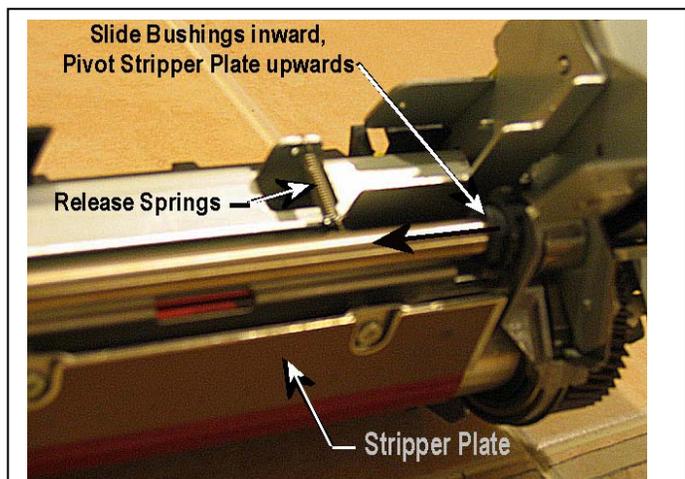


Photo 10: **Removing the Stripper Plate**

they are on (see Photo 9). Finally pivot the Stripper Plate up until it clears its mountings and comes off for you.

10. To remove the Heat Roll Assembly, first disconnect the 3 Fuser Heat Lamps at either end and remove them. All 3 lamps are rated for 112V with one being 1050watts (red connector, marked 126K17292), a second being 870watts (white connector, marked 126K17302) and the third being 740watts (blue connector, marked 126K17312). Take off the Heat Roll Bearing retainer brackets (one front and one rear... each has 1 screw holding it). The Heat Roll with its bearings and heat sleeves and drive gear will now lift out. Replace the Heat Roll and Heat Sleeves (bushings) and if needed the bearings as well.

10. Reassemble it all and test the heat lamps & thermal fuses to make sure none of them are blown.

That's it !

Now for a shortcut... How to replace just the most critical parts... Fuser Heat Roll & Fuser Reset Thermal Fuse Replacement:

1. Remove the three covers: front, rear and top.
2. Remove the rear Fuser lamp bracket and disconnect the 3 lamp connectors at the rear end... straighten out the wires as much as possible. The front connectors can remain connected.
3. Remove the Heat Roll Retaining Clips (front and rear) from the Heat Roller.
4. Release the pressure on the Heat Roll by turning the pressure cam gear until the sensor flag is sticking up in the air.
5. Temporarily push the roller towards the front to allow room to remove the Fuser Heat Roll Drive Gear, rear Heat Sleeve and rear Heat Roll Bearing.
6. Remove the fuser roller through the rear of the unit sliding it over the lamps.
7. Install the new Fuser Heat Roller by sliding it over the lamps and through the front bushing & bearing far enough to allow the rear bushing, bearing and drive gear to be reinstalled.
8. Reinstall both Heat Roll Retaining Clips.
9. Reseat the front end of the Fuser Heat Lamps in the front end bracket. Then reinstall the rear bracket (Each lamp has its own position, so pay attention to get them in the right places in the bracket... they are color coded).
10. Try turning the Heat Roll a few revolutions with the pressure back on to make sure the reassembly went well for you.
11. Replace the Fuser Reset Fuse (a thermal fuse on the top of the fuser).
12. Reinstall the three covers.
13. Test the Fuser Module in the machine. Running 20 pages will break in the new roller and will also ensure that the Fuser Reset Fuse blows as it should... It's a thermal fuse, so the fuser needs to be good-and-hot before it will blow and reset the fuser count) Some models can also be reset from the Diagnostics... go into Diagnostic Mode and choose DC135. Highlight the Fuser and reset it.

- It's a good idea to enter the User Tools and check the "Consumables" to make sure the fuser life returns back to 100% as it should be.

Hopefully this will encourage some of you to tackle the fusers instead of tossing them. There is money to be saved on these things.. Enjoy!

DIFFERENCES Between versions:

Within the "DC250 style" there are a few fuser modules... some of which are actually interchangeable. The good news is that all of the consumable parts such as the Fuser Heat Roller (DC250FHR), Fuser Reset Fuse (DC250FRF), and Fuser Pressure Sleeve (DC250FPS), and therefore our Fuser Rebuild Kit (DC250FRK) will all work in all of the fuser types shown below.

There are 2 basic differences of importance:

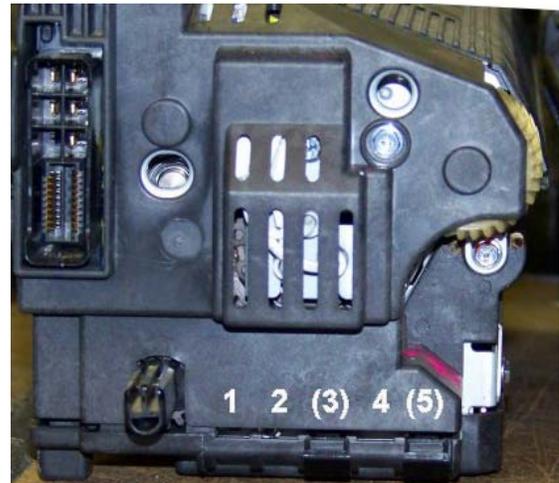
- Voltage (110 volt versions vs. 220 volt versions). For some models, 220 volt is the only choice. Never try a 110 volt in a 220 volt machine or vice versa.
- Key Positions... There are 2 "keys" which snap into a row of 5 slots on the bottom rear of the fuser... each version of the fuser has the 2 "keys" in different slots. Refer to the photos.

Keys in slots 3 & 5

- DC250 version (110Volt)
 (8R12988 / 008R12988)
 for: (DocuColor) 240/242/250/252,
 (WorkCentre) 7655/7665/7675/7755/7765/7775
- 550/560 version (110Volt)
 (8R13102 / 008R13102)
 for: (Xerox Color) 550 / 560

We still need to know which slots the 2 keys are found-in for the 220 volt European versions of these.

Note: Heat Lamps for above fusers same as each other: 112v / 870w... 112v / 740w... 112v / 1050w



Keys in slots 1 & 2:

- DC260 version (always 220 volt)
 (8R13039 / 008R13039)
 for: (DocuColor) 260
- DCP 700 version (always 220 volt)
 (8R13065 / 008R13065)
 for: (Digital Color Press) DCP 700

Keys in slots 3 & 4:

- J75 version (always 220 volt)
 (8R13146 / 008R13146)
 for: (Xerox Color Press) J75 / C75



NOTE: this version also has an additional adjustment knob on the rear with settings numbered 0-9. That knob is not present on any of the other models and likely sets it apart from the others.