

THE RECYCLER

Trade magazine for the toner and inkjet remanufacturing industry ~ making waste work

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Technical Guide

Remanufacturing the Xerox WorkCentre 3210/3220 toner cartridge



By Mike Josiah and the Technical Staff at Uninet

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The Xerox WorkCentre 3210/3220 printers are based on a 30ppm, 1,200dpi engine. The first page out is stated to be under 8.5 seconds, and the printer comes standard with 128MB of memory (expandable to 384MB). Duplexing is also built-in (for the 3220 only). Both of these machines are print/copy/scan and fax-capable.

These cartridges do not have a drum cover, and come new with a piece of heavy paper taped around the cartridge (see *Figure 1*). All new cartridges opened so far have shown some toner leakage on the drum that would have shown on any prints for at least a few pages.

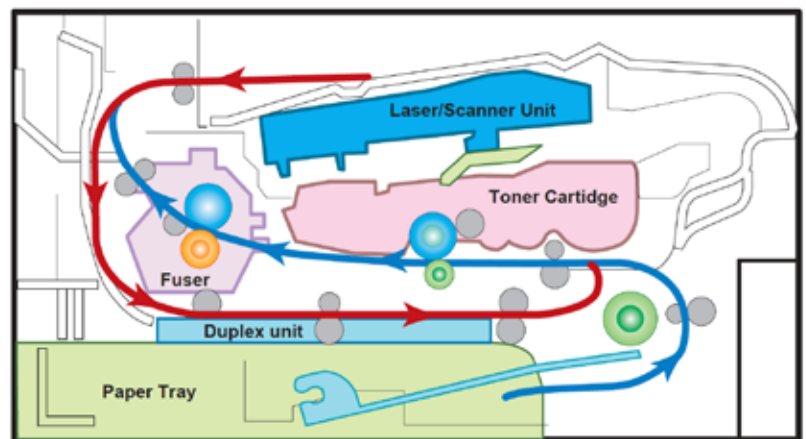
The standard cartridge (Xerox part number 10601485) is rated for 2,000 pages. The high yield cartridge (Xerox part number 106R0146) is rated for 4,100 pages. As with pretty much all cartridges these days, the cartridge has a chip, and it has to be replaced each cycle.

Figure 2 shows the basic machine/cartridge component layout including the paper path with duplexing. The workings are pretty straightforward, so we will not go into the theory here.

Figure 1



Figure 2



The machines currently based on this engine are:

WorkCentre 3210

WorkCentre 3220

A repetitive defect chart for this engine will be listed at the end of the instructions.

REQUIRED TOOLS

- Toner-approved vacuum
- A small common screwdriver
- A Phillips head screwdriver
- Needle nose pliers

REQUIRED SUPPLIES

- Toner for use in the Xerox WorkCentre 3210/3220 (standard or high yield load)
- Dedicated replacement chip (standard or high yield)
Note: Make sure you have the correct load of toner to match the standard or high yield chip! The chips are also regional, so make sure you have the correct chip for our region!
- Conductive grease
- 99 percent isopropyl alcohol
- Drum-lubricating powder

STEP ONE

Place the cartridge with the handle up, facing towards you. Remove the three screws from the right side end cap.



STEP TWO

On the left side end cap, remove the three screws.



STEP THREE

While still on the left end cap, locate the top tab. Press in on the tab, and remove the end cap. The drum axle may come out with the end cap. Separate the two (see Figures 3A, 3B and 3C).



STEP FOUR

On the right side end cap, press in on the top tab and remove the end cap.



STEP FIVE

Separate the two halves slightly, and lift off the middle top cover.



STEP SIX

Lift up on the drum/waste hopper and remove. If the drum axle came loose, be careful to hold the drum so it does not become damaged. Remove the drum/waste assembly.



STEP SEVEN

Remove the drum axle from the large gear side of the waste assembly. Remove the drum.



STEP EIGHT

Remove the PCR from the assembly.



STEP NINE

Remove the PCR cleaning roller.



STEP TEN

Clean the PCR with your normal PCR cleaner.



WARNING: Do not clean the OEM PCR with alcohol, as this will remove the conductive coating from the roller. If the PCR is an aftermarket, follow the cleaning methods recommended by the manufacturer. If the PCR is an OEM, we recommend it be cleaned with your standard (non-solvent based) PCR cleaner.

STEP ELEVEN

Remove both the PCR holders by pressing in on the tabs at the bottom of the holder. These holders need to be removed to allow access to the wiper blade.



STEP TWELVE

Remove the two screws from the wiper blade, and remove the blade.



STEP THIRTEEN

Clean out all the waste toner from the hopper. Make sure the seals are clean.



STEP FOURTEEN

Install the cleaned or new wiper blade and two screws.



STEP FIFTEEN

Install the two PCR holders.



STEP SIXTEEN

Blow off or vacuum the PCR cleaning roller. Install in the waste hopper.



STEP SEVENTEEN

Place a small amount of conductive grease in the holders, and install the PCR.



STEP EIGHTEEN

The large gear side of the drum axle shaft has conductive grease on it. Regardless of if you are replacing the drum or not, clean the old grease off, and replace with new.



STEP NINETEEN

Install the drum and axle from the small gear side of the drum into the waste hopper. Make sure the keyed end of the shaft is on the large gear side.



STEP TWENTY

On the supply hopper, carefully pry out the fill plug and dump out any remaining toner. The fill plug can be difficult to remove as it is recessed. Take a small common screwdriver and work it around the edge, lifting slightly until it comes loose.



STEP TWENTY-ONE

Remove the developer roller.



STEP TWENTY-TWO

Remove the two screws from the doctor blade, and remove the blade.



STEP TWENTY-THREE

Clean out all the remaining toner from the hopper.

STEP TWENTY-FOUR

Make sure the doctor blade sealing foam and the developer rollers seals are clean and intact.



STEP TWENTY-FIVE

Clean the doctor blade edge so there is no evidence of build-up along the edge. If any build-up exists, the cartridge will streak. This blade can be cleaned with your preferred doctor blade cleaner.



STEP TWENTY-SIX

Install the doctor blade and two screws.



STEP TWENTY-SEVEN

Clean the developer roller with a dedicated developer roller cleaner, and replace into the hopper.



STEP TWENTY-EIGHT

Fill the hopper with toner for use in the 3210/3220 toner cartridge, replace the fill plug, and check for leaks.



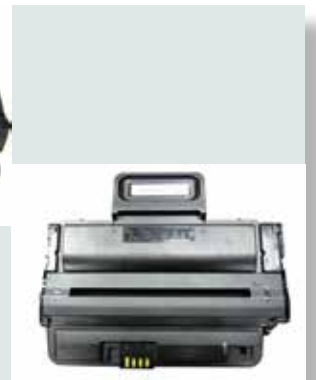
STEP TWENTY-NINE

Fit both sides of the waste hopper tabs into the toner hopper.



STEP THIRTY

Slide the middle top cover/PCR assembly into place. Make sure all the middle tabs fit under the edge of the waste hopper.



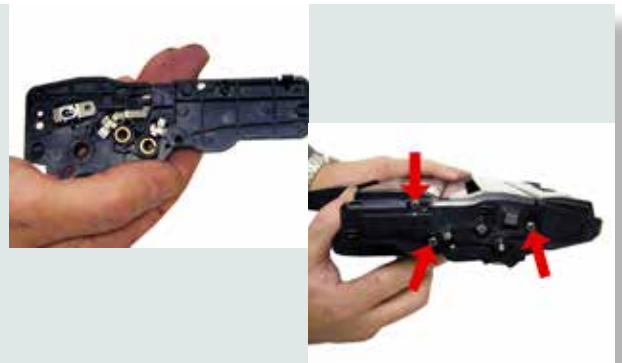
STEP THIRTY-ONE

Clean the contacts on the left side end cap, and replace the conductive grease. Align the drum axle keyed end so it will fit into the keyed slot of the end cap. Snap the end cap into place.



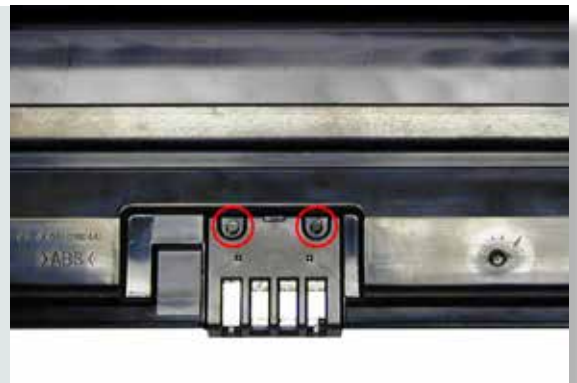
STEP THIRTY-TWO

Clean the contacts on the right side end cap, and replace the conductive grease. Snap the end cap into place, and replace the three screws.



STEP THIRTY-THREE

To replace the chip, drill out the two plastic rivets with a small drill, and remove the cover and chip.



STEP THIRTY-FOUR

Install the new chip and cover, and insert two small screws that correspond to the holes drilled to hold everything in place.



REPETITIVE DEFECT CHART:

Upper heat roller: 77.8mm
OPC drum: 75.5mm
Lower pressure roller (1st): 62.8mm
Lower pressure roller (2nd): 37.7mm
Supply roller: 47.1mm
Transfer roller: 47.0mm
Developer roller: 35.2mm
PCR: 26.7mm

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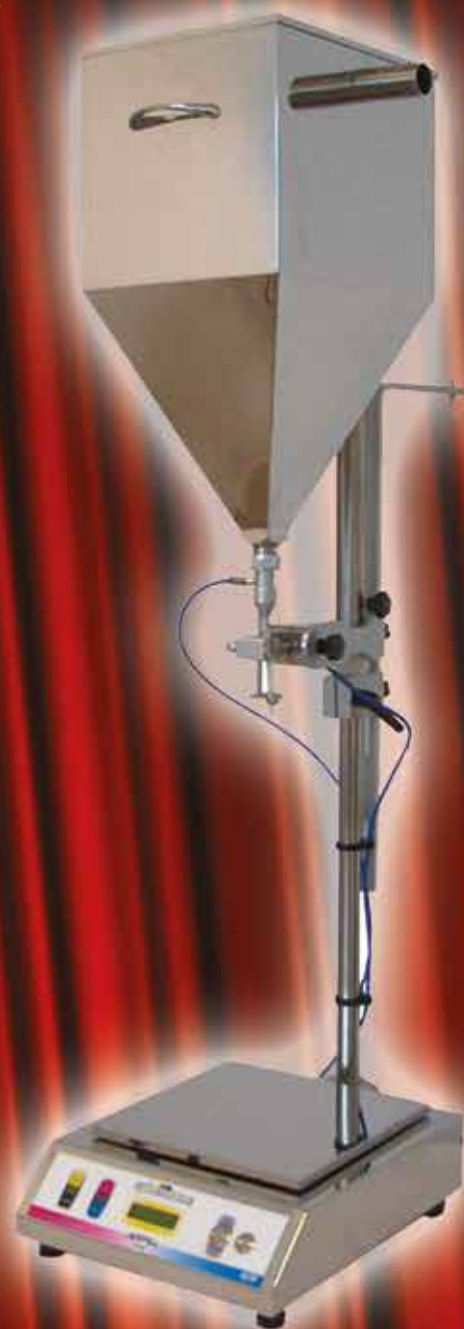
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