

TECHNICAL DOCUMENT



- [Overview](#)
- [Required Tools](#)
- [Required Supplies](#)
- [Disassembly](#)
- [Printing a Configuration Page](#)
- [Setting the Print Density](#)
- [Error Codes](#)
- [Recommended Supplies](#)

Fuji-Xerox XP-21 Toner Cartridges

DOC-0299

OVERVIEW



First released in February 2000, the XP-21 series of printers are based on the Fuji-Xerox XP-21 21ppm 1200 dpi engine. Currently there are three printer manufacturers using this engine in their machines, IBM, Xerox, and GCC Tech. The model Numbers are as follows:

MANUFACTURER	MODEL	CART PART#	YIELD	
GCC Tech.	Elite 21	PA2767	15,000, 5%	
GCC Tech	Elite 21 DN	PA2767	15,000, 5%	
GCC Tech.	Elite 21 N	PA2767	15,000, 5%	
GCC Tech.	Elite 21 SE	PA2767	15,000, 5%	
IBM	InfoPrint 21	38L1410	15,000, 5%	
Xerox	Docuprint N2125	113R00445	10,000, 5%	
			113R00446	15,000, 5%
		Docuprint N2125b	113R00445	10,000, 5%
			113R00446	15,000, 5%

The Xerox and IBM cartridges are identical and interchangeable. We were not able to obtain a GCC cartridge to check.

Only Xerox at this time is selling two different cartridges, the 10,000 page and the 15,000 page cartridge. The list prices on these cartridges are \$239.00 for the 15,000 and \$205.00 for the 10,000. With such a small difference, I doubt that you will see much of the 10,000 page cartridges other than as starter cartridges in new machines. The list price for the IBM cartridge is \$216.00. This is another fairly simple cartridge to do with very nice margins!

On the GCC printers only, a startup page prints out every time the printer is powered up. The procedure for disabling or enabling this page will be listed at the end of this article

We will also run through Common printer errors, maintenance, and running test prints at the end of this article.

REQUIRED TOOLS



- Toner approved vacuum.

- A small Common screw driver
- A spring hook
- Needle nose pliers
- Small tack hammer
- Small punch/jewelers screwdriver

REQUIRED SUPPLIES



- 225g Black Toner (MICR available also)
- New Drum
- New Wiper Blade (Unique to XP-21)
- New Dr. Blade (Optional, XP-17 blade is identical)
- Sealing Strip (XP-17 Seal works)
- Conductive grease
- 99% pure isopropyl alcohol
- Cotton swabs
- Soft, lint free wipes

DISASSEMBLY



1. On the right side of the cartridge (fill plug Side, remove the spring. See Figure 1
2. With a small punch or jewelers screwdriver and the tack hammer, tap out the small metal pins located on each side of the cartridge. Make sure that you have the drum on top so that when the pins fall inside, they do not damage the drum. See Figure's 2 & 3
3. Separate the two halves, and retrieve the two pins. See Figure 4

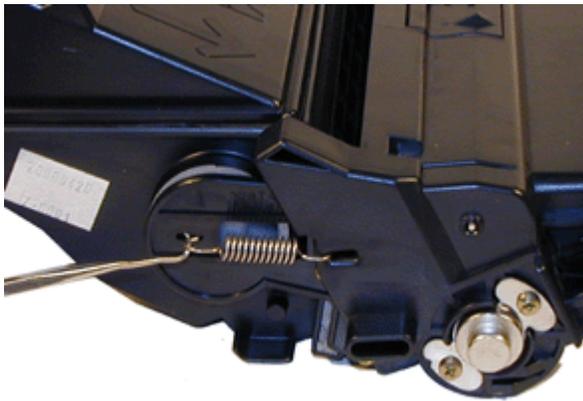


FIGURE 1

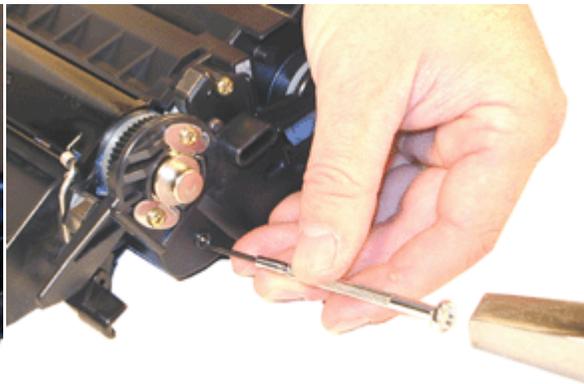


FIGURE 2



FIGURE 3



FIGURE 4

4. Remove the drum axle pins and two screws from both sides of the cartridge. Both axle pins are identical and can be swapped. See Figure 5
5. Remove the OPC Drum. Place in a safe lightproof bag. See Figure 6
6. Remove the PCR. Note the conductive grease on the Black Holder side of the shaft. This grease should be cleaned and replaced when re-assembly. See Figure 7
7. Remove the two screws and wiper blade. Clean out the waste chamber. See Figure 8

NOTE: Be very careful not to damage or distort the thin Mylar Recovery Blade next to the wiper blade. If this blade is bent or damaged in any way, it should be replaced.

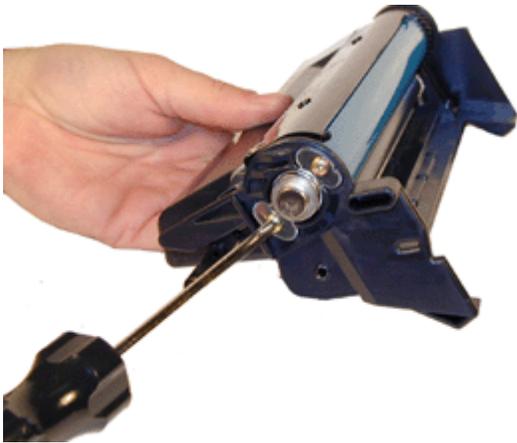


FIGURE 5



FIGURE 6

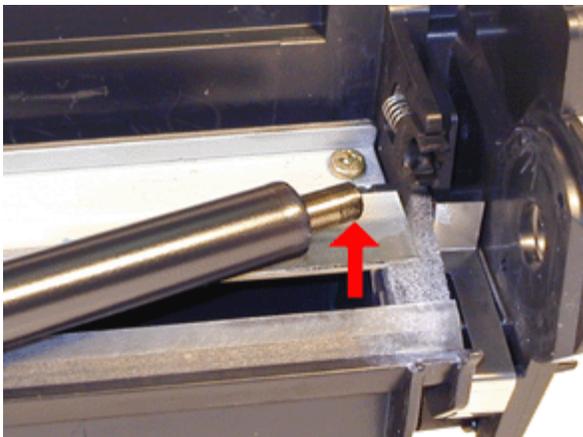


FIGURE 7



FIGURE 8

8. Coat the new wiper blade with your preferred lubricant, and install the wiper blade and two screws. The wiper blade screws are the larger ones, all the rest are smaller.

9. Clean the PCR by wiping it down with a clean lint free cloth. Do not use any chemicals to clean these PCR's. Clean the Black PCR Holder with a cotton swab and alcohol. Replace the Conductive grease on the black holder. See Figure 9
10. Install the cleaned PCR. See Figure 10

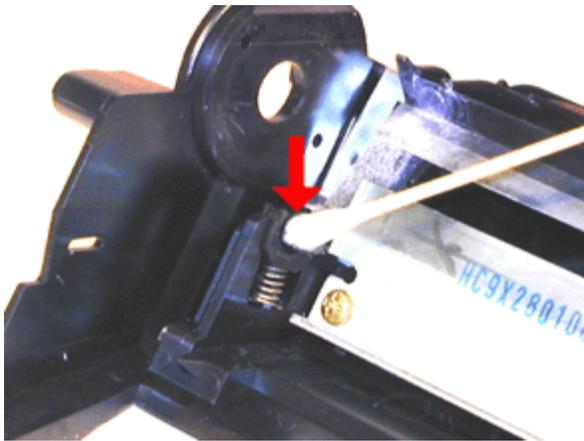


FIGURE 9



FIGURE 10

11. Install the drum, both axle pins, and all four screws. Make sure that the screws are all the same size. If you accidentally used a short screw on the wiper blade, the longer screw that is left can contact the drum gear and cause the cartridge to lock up. See Figure's 11, 12 & 13
12. Remove the two screws on the right side end cap (fill plug side). Remove the end cap. See Figure 14

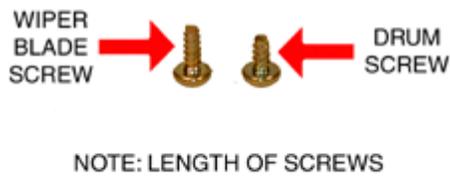


FIGURE 11



FIGURE 12



FIGURE 13



FIGURE 14

13. If you are NOT going to install a seal, the Magnetic roller and Dr. Blade are in good shape, remove the fill plug and fill with XP-21 toner. If the Mag roller has thin white lines in the toner, the Dr. blade should be removed and cleaned. See Figure 15

To remove the Magnetic roller for cleaning and to seal the cartridge do the following:

14. Remove the left side end cap and screws. See Figure 16
15. Carefully remove the Magnetic Roller assy. See Figure 17
16. Remove the two screws and the Dr. Blade. See Figure 18



FIGURE 15



FIGURE 16



FIGURE 17



FIGURE 18

17. Remove the Fill Plug. The best way to do this with out damaging the plug is to grasp the center of the plug with a pair of pliers and pull out. If you try to pry the plug out it will dent the lip and almost certainly cause a leak. See Figure 19
18. Clean the supply chamber out.
19. Install the seal strip. Tuck the pull strip out under the seal foam at the edge of the cartridge and out. The foam can be removed to make this easier. The foam should also be cleaned off as it tends to hold a lot of toner. The Fuji-Xerox XP-17 seal is not a perfect fit but it works just fine. See Figure's 20 & 21
20. Fill with XP-21 toner. Replace the fill plug. Check for leaks. See Figure 22



FIGURE 19



FIGURE 20



FIGURE 21



FIGURE 22

21. Wipe the Teflon edge of the Dr. Blade with a clean lint free cloth. If the coating is worn off, the blade should be replaced. As listed in the supplies chart, the Dr. Blade is the same as the XP-17. See Figure 23
22. Replace the Dr. Blade and two screws. See Figure 24
23. Clean the Magnetic Roller with a lint free cloth and dedicated mag. roller cleaner Replace the Magnetic Roller Assy. See Figure 25
24. Install the right side end cap. Make sure that the keyed end of the magnetic roller fits into the keyed slot in the end cap. Also make sure the alignment pin is set correctly. See Figure 26



FIGURE 23



FIGURE 24



FIGURE 25



FIGURE 26

25. Install the left side end cap and two screws. See Figure 27
26. Place both halves of the cartridge together. See Figure 28
27. Install both of the hinge pins one on each side. The pins should be all the way in as in Fig. 30 See Figure's 29 & 30

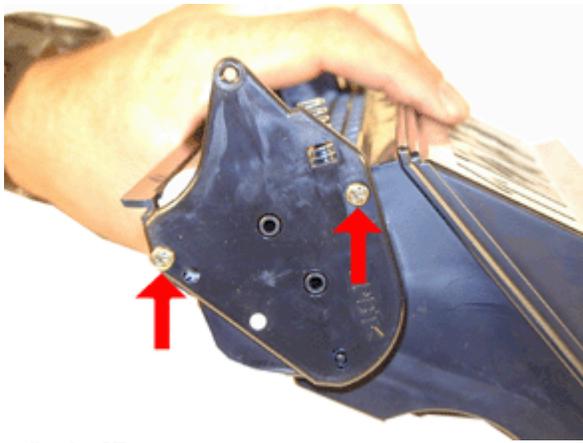


FIGURE 27

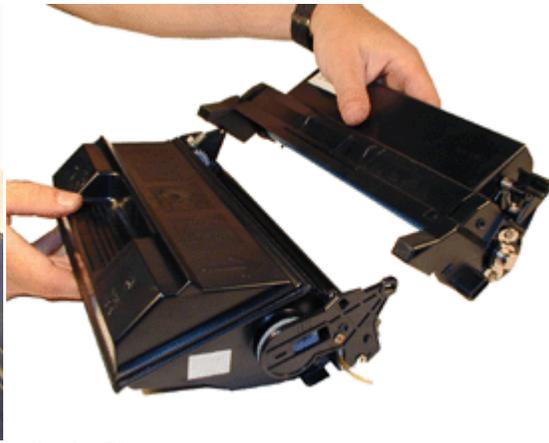


FIGURE 28

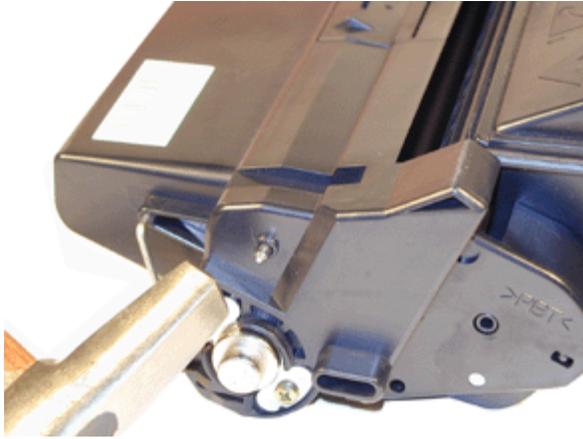


FIGURE 29



FIGURE 30

28. Install the spring across the covers. See Figure 31

The cartridge is finished! If you are testing the cartridge, (As always, Highly Recommended) a test page can be generated from the machine. The procedure is as follows:



FIGURE 31

PRINTING A CONFIGURATION PAGE



1. Press the "MENU" button once. Test Menu appears in the display.
2. Press the "ITEM" button once. Printer Config appears in the display
3. Press ENTER, The page will print out

To print a Font page or a DEMO Page, press the "ITEM" button until Print PCL Fonts or DEMO appears on the display. Press "ENTER" to print the page.

SETTING THE PRINT DENSITY



1. Press the "MENU" Button until Config Menu appears on the display
2. Press the "ITEM" Button until Density=* appears on the display. Where * equals the current density setting.
3. Press the "VALUE" button until the setting you want appears. 6 is the darkest, 0 the lightest, 3 is the factory default.
4. Press "ENTER" to select the new setting.
5. Press "ONLINE" to exit the menu.

ERROR CODES



All three printer manufacturers have their own error codes. Xerox and GCC Seems to have all text codes that are fairly self-explanatory. IBM Uses both numerical and text codes. I am listing some of the IBM codes here:

002	Toner Low
006	Toner error. Cartridge not seated correctly.
008	Fuser Life expired.
011	Paper out.
012	Auxiliary paper tray empty
031	Output Full Main Bin
035	Output Full Offset Bin
074	Cover Open Front Cover
075	Cover Open, Rear Cover
430	Motor error
451	Fan Error
454	Fuser error
511	Laser error

GCC Printer Startup Page

To either turn on or turn off the Startup Page on GCC Printers do the following.

NOTE: This feature is only available on GCC Printers. Xerox and IBM do not have this feature.

1. Make sure that the display shows "READY"
2. Press the "MENU" button until Configuration appears
3. Press the "ITEM" button until Startup Page appears
4. Press "VALUE" until either Disabled or Enabled is displayed.
5. Press "SELECT" to accept the new setting
6. Press the "MENU" until the display returns to READY.

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RECOMMENDED SUPPLIES



Microsoft OLE DB Provider for ODBC Drivers error '80004005'

[Microsoft][ODBC Microsoft Access Driver]General error Unable to open registry key 'Temporary (volatile) Jet DSN for process 0x3464 Thread 0x3738 DBC 0x8473d24 Jet'.

