Technical Document

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Ricoh AP-2000

Ricoh AP-1400

Ricoh AP-1400/2000 Toner Cartridges
DOC-0295

OVERVIEW

The Ricoh AP-1400/2000 laser printers were first introduced in April 1999. The AP-1400 printer runs 14ppm at 1200dpi, while the AP-2000 runs 20ppm at 600 dpi. The AP-2000 is capable of printing on 11 x 17" paper, the AP-1400 8 ½ x 11". Both cartridges are virtually identical except for their size. Both are recycled the same way. The AP-1400 uses 460g of toner, where the Type 2000 uses 700g. The toner used to remanufacture them is the same. It is interesting to note that the machines are so similar that they both share the same user manual. There are very few points in the manual where the machines are listed differently.

The Toner cartridge Type 1400 lists for $99.00 and is rated for 8000 pages, the Type 2000 lists for $169.00 and is rated for 14,000 pages. Both are fairly simple to remanufacture. The AP-2000 is primarily a network machine, so there should be decent volume from any company that owns one.

The AP-2000 cartridges are also known as the Ricoh NX-700 outside North America.

We will cover some basic troubleshooting, maintenance, and test prints at the end of this instruction.

REQUIRED TOOLS

- Toner approved vacuum.
- Common (Flat Head) screwdriver
- A Phillips head screwdriver
- Needle nose pliers
- Spring Hook

REQUIRED SUPPLIES

- Dedicated Ricoh AP toner

- 460g for the AP-1400
- 700g for the AP-2000/NX-700
- New OPC Drum
- Wiper Blade

DISASSEMBLY

1. Remove the two rear springs. See Figure's 1 & 2

2. Take a flat head screwdriver and slide it inside the cartridge. Pry up by the plastic pin. The two halves should separate. See Figure's 3 & 4.

FIGURE 1
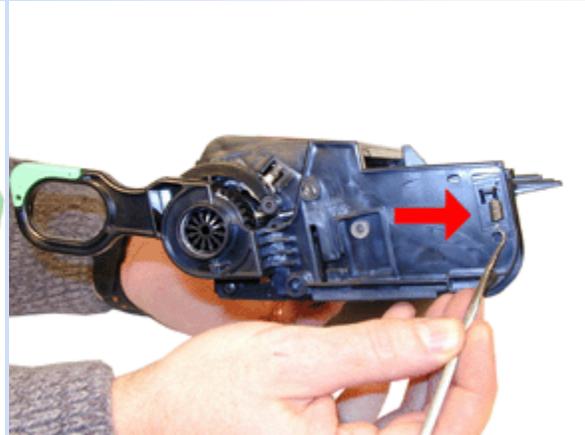
FIGURE 2
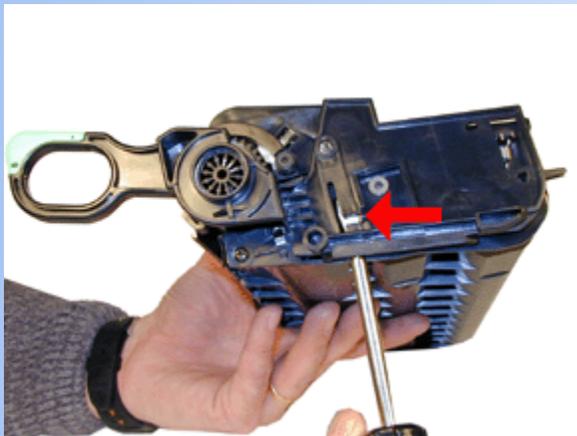
FIGURE 3

FIGURE 4

3. Remove the Drum axle screw and axle. See Figure's 5 & 6

4. Remove the drum. See Figure 7

FIGURE 5
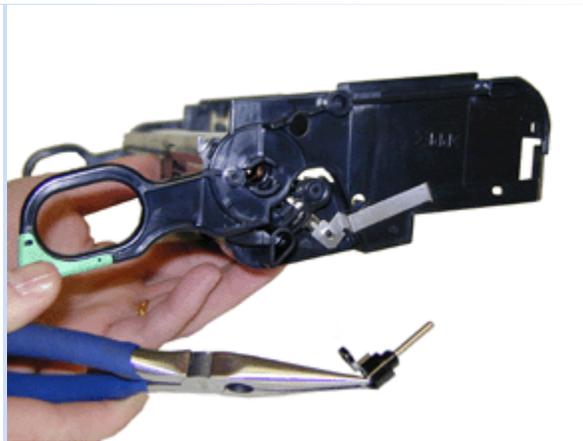
FIGURE 6

FIGURE 7

5. Remove the PCR. Be careful as the PCR holders come out easily! See Figure's 8 & 9

6. Remove the two screws and wiper blade. Twist the blade out so the center clip is not damaged. See Figure 10.

7. Vacuum/clean the waste chamber clean.

8. Install the new Wiper Blade. Coat with what ever lubrication you normally use. Rotate the new blade so that the metal edge comes up under the center plastic clip. The blade should then drop in place. See Figure 11

FIGURE 8

FIGURE 9

FIGURE 10

Plastic Clip
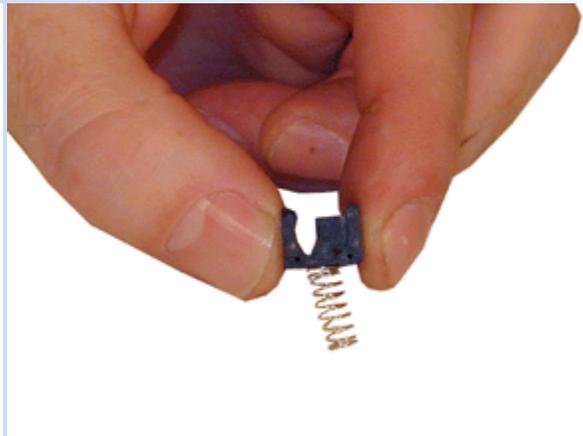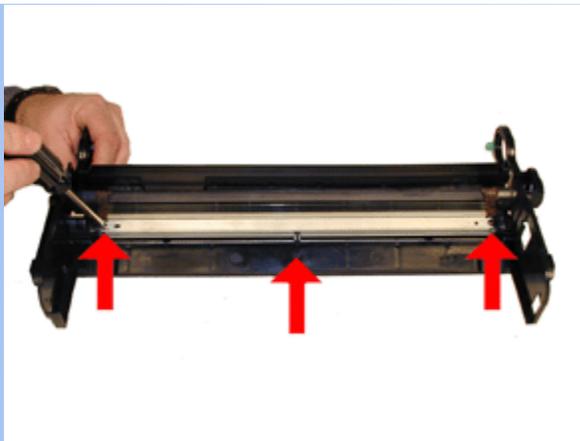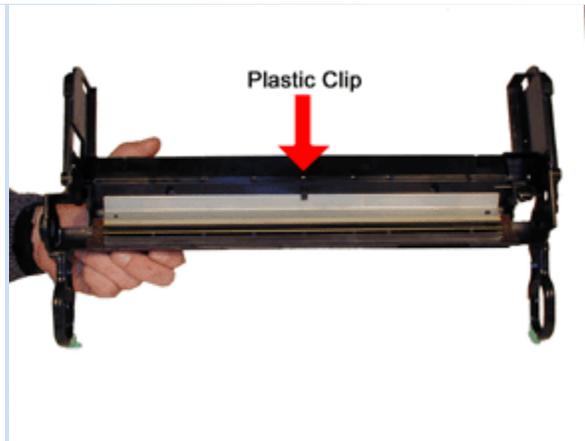
FIGURE 11

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

9. Re-install the PCR holders White to the left, Black to the right (With the handles facing you). Make sure that the springs fit over the posts. See Figure 12 & 13

10. Clean the PCR and replace in the cartridge. We use Nu-Finish to clean our PCR's with great success.

11. Install the new drum, drum axle pin, and screw. See Figure 14

   Note the condition of the white Lithium grease on the large drum gear side of the cartridge wall. If the grease has toner in it clean it off, and replace with new

FIGURE 12

FIGURE 13

FIGURE 14

12. Spin the drum towards the drum cover to ensure that the drum and wiper blade are properly lubricated.

13. Remove the two screws and DR. Blade. Be very careful not to damage the alignment pins! See Figure's 15 & 16

14. Remove the rubber gasket from the magnetic roller shaft. See Figure 17

FIGURE 15
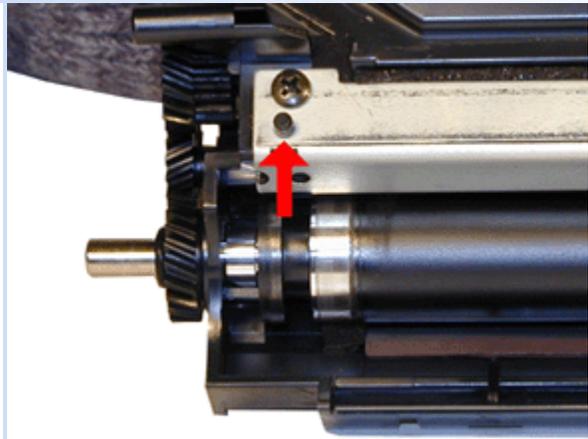
FIGURE 16
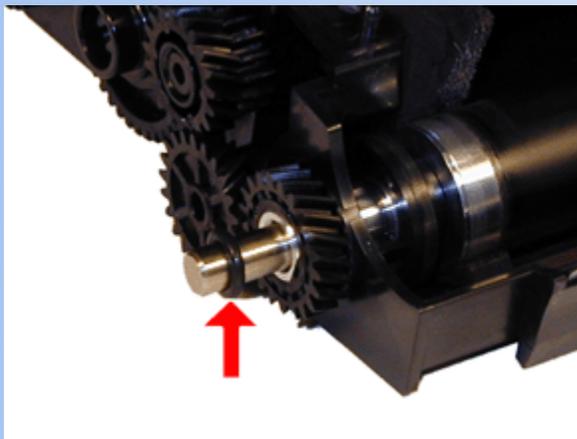
FIGURE 17

15. Remove the magnetic roller drive gear by prying up on the small tab. See Figure's 18 & 19

16. From the opposite side, remove the screw and contact plate. See Figure 20

17. Pull the magnetic roller assembly out to the right, and remove. See Figure 21
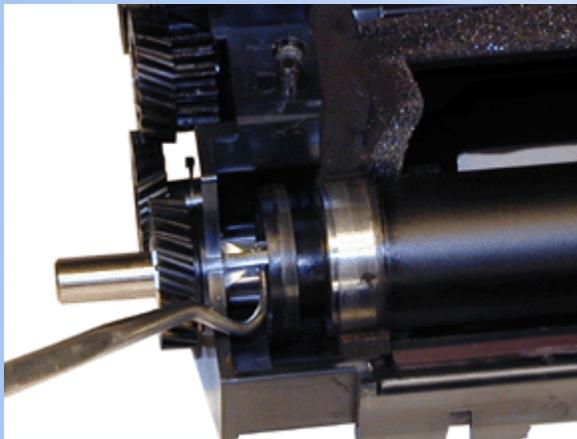
FIGURE 18

FIGURE 19

FIGURE 20

FIGURE 21

18. Clean out any remaining toner from the supply hopper.

19. Fill with new toner. 460g for the AP-1400, 700g for the AP-2000/NX-700 See Figure 22

20. Once a seal is available, it should be installed now.

21. Replace the Dr. Blade and screws being careful not to damage the alignment pins. See Figure 23

22. Clean and replace the magnetic roller assy. See Figure 24

23. Install the contact plate and screw. Make sure the slotted hole is lined up with the magnetic roller shaft. See Figure 25

FIGURE 22

FIGURE 23
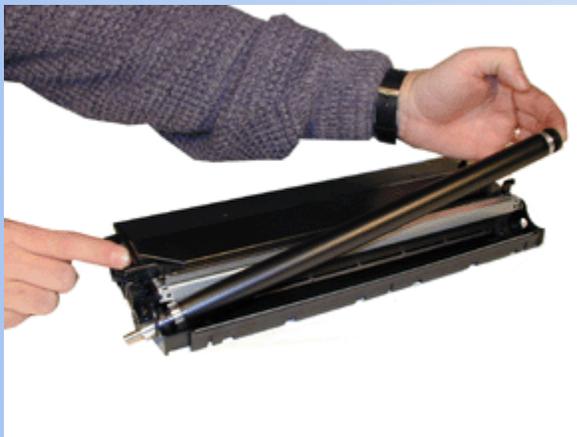
FIGURE 24
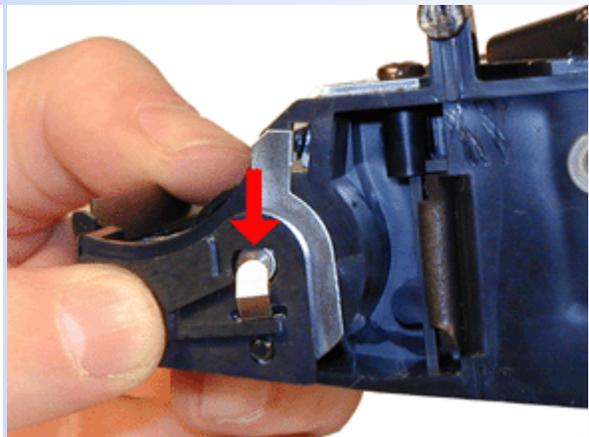
FIGURE 25

24. Install the magnetic roller drive gear. Line up the slotted side of the gear with the shaft. See Figure 26

25. Install the rubber gasket back on to the magnetic roller shaft.

26. Make sure all the gears are on properly! See Figure 27

27. Put the left side of the toner hopper into the waste chamber, line up the plastic post on the right with the grooved channel and drop in place. See Figure's 28 & 29
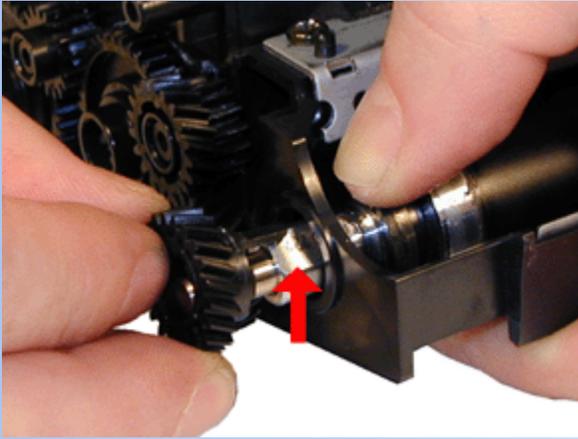
FIGURE 26
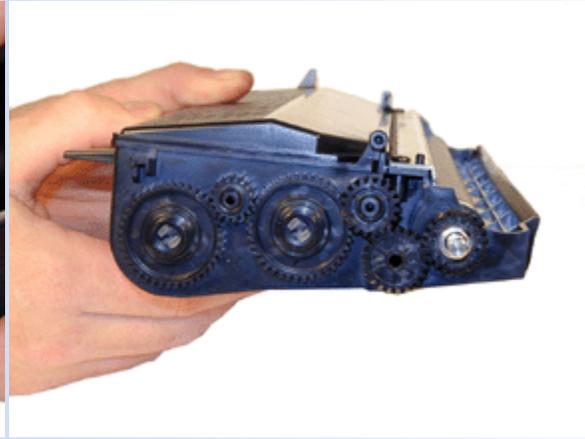
FIGURE 27
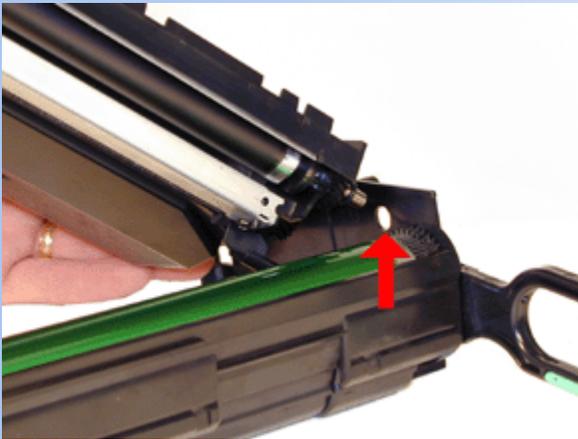
FIGURE 28

FIGURE 29

28. Install the two rear springs. See Figure 30
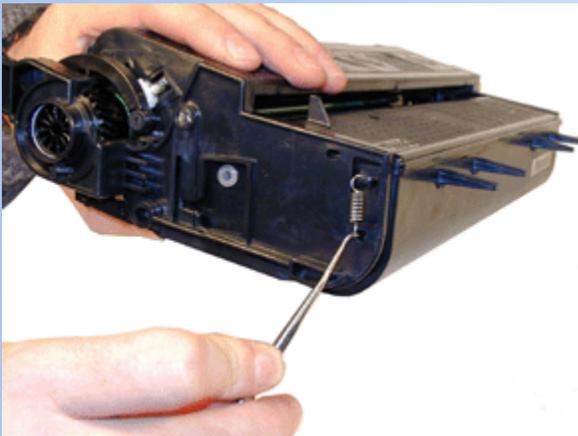
FIGURE 30

CHANGING THE DENSITY

This is done through the printers control panel.

Press the MENU button.

Press the UP or DOWN ARROW until "PRINT QUALITY" appears.

Press ENTER

Press the UP or DOWN ARROW until "IMAGE DENSITY" appears.

Press ENTER

You now have an interesting set of choices: Very Light, Light, Normal, Dark, and Very Dark.

Once you have the setting you want, press ENTER.

RUNNING A TEST PAGE

This is also done through the printers control panel.

Press the MENU button.

Press the UP or DOWN ARROW until "LIST PRINT" appears.

Press ENTER

Press the UP or DOWN ARROW to scroll through the options: "CONFIG PAGE, PCL FONT LIST, PS FONT LIST, DISK DIRECTORY (only if a hard disk is installed). Make your choice and press ENTER

TROUBLE SHOOTING

The separation pad for both machines is located in the paper tray. The pad should be wiped down with a damp lint free cloth.

Paper feed rollers are located on the under side of the printer. The paper tray must be removed to access the roller. The roller is located in different locations on the AP-2000 and 1400, but both are in the same general vicinity. Clean them with a good quality rubber roller cleaner.

SC_320 The printer is not seeing the toner cartridge. If the cartridge is installed properly, Cycle the printer by turning it off and on. If the message re-appears, replace the cartridge. If it still appears, the printer needs service.

All other codes listed in the Ricoh manual relate only to board errors, or are in English and are self explanatory ("Replace Toner Cartridge" Etc).

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 0x698 Thread 0x1494 DBC 0x97a4044 Jet'.

/script/catSearch.asp, line 58