Technical Document

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Fuji-Xerox XP-20/28 Toner Cartridges
DOC-0292

OVERVIEW

First introduced in February of 2000, the XP-20/28 engine is a 20-28ppm, 1200dpi laser printer engine. The print speed is dependant on the actual printer model. The cartridge itself is very easy to remanufacture, and with list prices above $200.00USD per cartridge, a nice profit maker as well. While as of this writing, only the toner is available. Drums, wiper blades, doctor blades, and seals are in development. The cartridge is rated for 17,000 pages and is loaded with 720g of toner. These machines are workgroup printers, so if you have a customer that has one, the cartridge volume will be on the high side.

Figure 1 shows a removable tab on the cartridge that most likely is used to differentiate between different manufacturers (such as Genicom and Acom). We were not able to obtain any of these cartridges so we cannot say for sure that different tabs are used, but if you come across a non-Xerox cartridge, check the tab. This is especially true if the cartridge is not going back to the customer it came from.

FIGURE 1

The machines that are based on the XP-20/28 engine are as follows.

- Xerox Docuprint N2025/TD

- Xerox Docuprint N2825/N/DT/DX

- Genicom Microlaser 280/N

- Acom MICR-Enhanced Docuprint N2025

- Acom MICR-Enhanced Docuprint N2825

- Acom TRI-Mode Docuprint N2025

Some of the above machines are dedicated MICR only printers. MICR toner is available for them as well.

Printer error codes as well as how to run test prints will be discussed at the end of this article.

SUPPLIES REQUIRED

- 720g XP-20/28 toner
- New drum (Check for availability)
- New Wiper Blade (Check for availability)
- Sealing Strip (Check for availability)
- Cotton Swabs (CT-100)
- Isopropyl Alcohol (FR-8)
- Kynar Drum Padding Powder
- Dedicated Magnetic Roller Cleaner

TOOLS REQUIRED

- Phillips head screw driver.
- Small Common screwdriver
- Needle Nose pliers
- Spring Hook
- Safety goggles and breathing mask.
- Vacuum approved for toner

DISASSEMBLY

Orient the cartridge so that the handle is towards you (Spring on the right).

1. On either side of the cartridge is a white plastic oval shaped plastic pin. This is what holds and locks both halves together. Rotate and remove both of the pins. See Figures 2 & 3

2. Remove the spring from the right side of the cartridge. See Figure 4
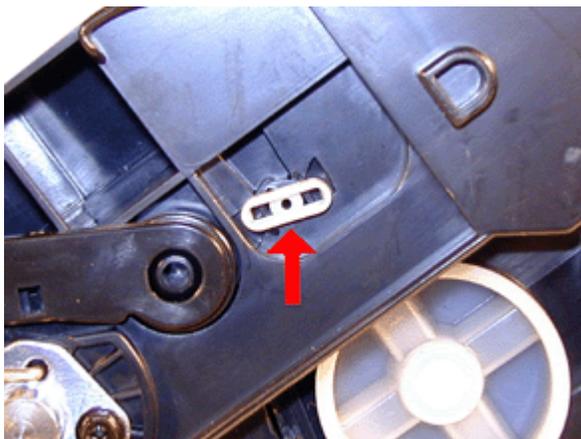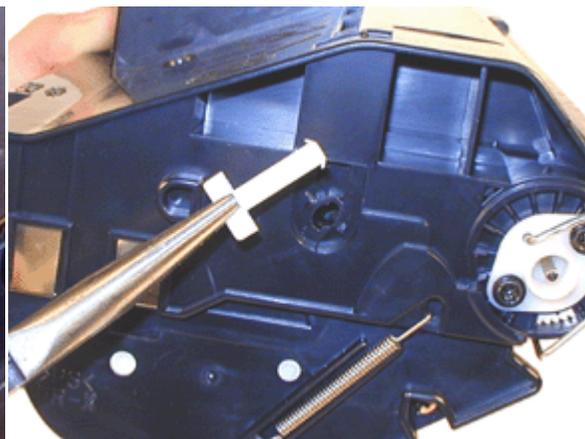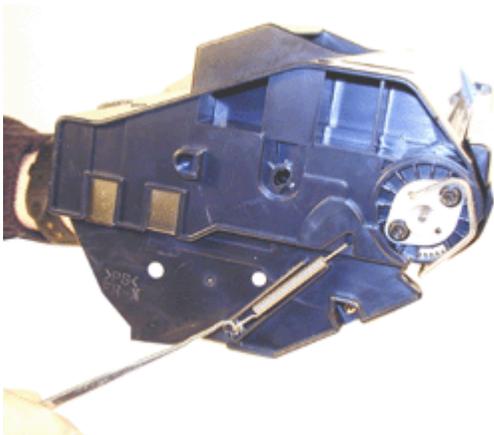

FIGURE 2

FIGURE 3

FIGURE 4

3. Remove the drum cover bar from both drum axle pins. See Figures 5 & 6

4. Press in on the tab of the drum cover hinge arm to release the hinge. Remove the entire cover and place aside. See Figure 7

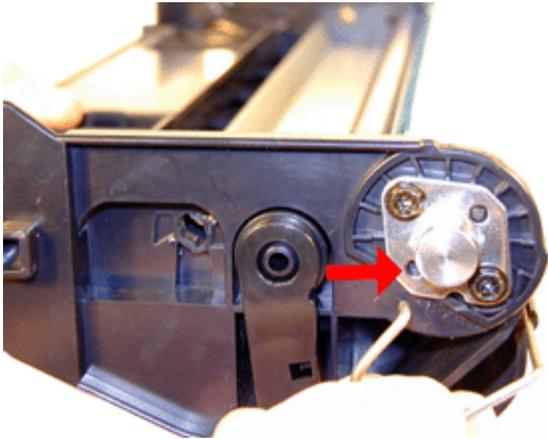5. Remove the two screws and metal drum axle pin from the double gear side of the drum. See Figure 8
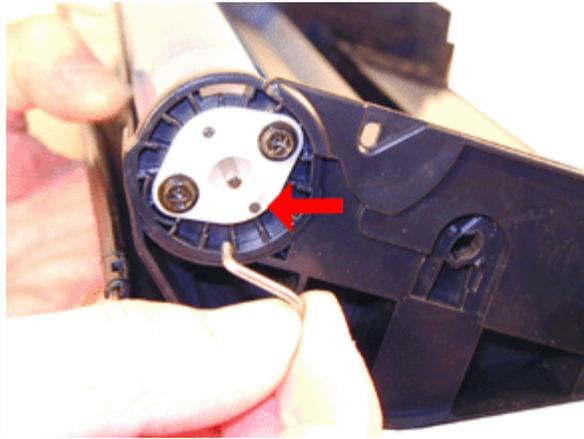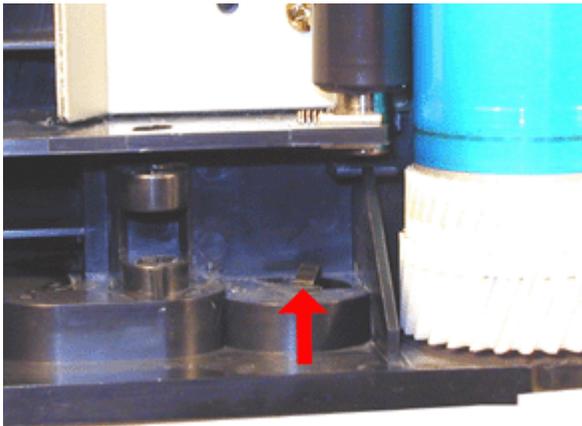

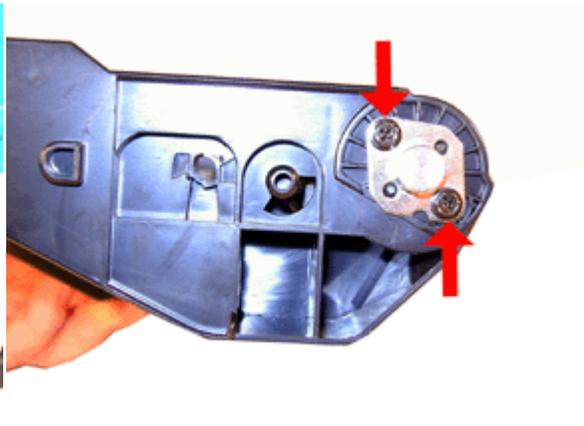**FIGURE 5**

FIGURE 6

FIGURE 7

FIGURE 8

6. Remove the two screws and white plastic drum axle pin from the single gear side of the drum. See Figure 9

7. Remove the drum. See Figure 10

8. Remove the PCR from its holders. See Figure 11

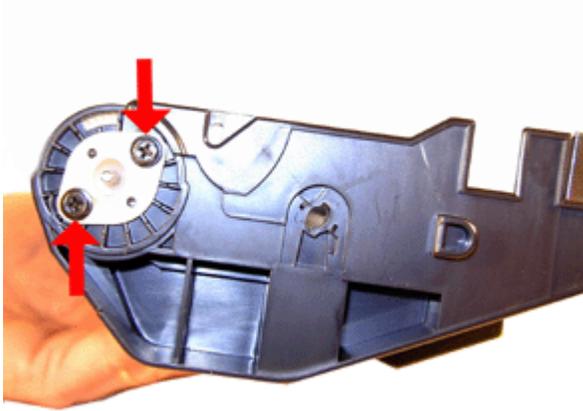9. Remove the two screws and wiper blade. See Figure 12

FIGURE 9

FIGURE 10

FIGURE 11

FIGURE 12

10. Clean out the waste chamber. Be very careful not to lose or damage the foam wiper blade seal. This seal is very fragile and a vacuum/compressed air cleaning system will damage it if you are not careful. Note that the waste chamber is very small for this size cartridge. This is the first Fuji-Xerox system I have seen that is efficient in the use of toner. See Figure 13

11. Coat the wiper blade with your preferred lubricant, and install in the cartridge. Install the two GOLD COLORED screws; do not use the black screws, as they are required for the drum axles. See Figure 14

12. Clean the PCR contacts with a cotton swab and alcohol. See Figure 15

13. Clean the PCR with your preferred PCR cleaner, and install in the holders. See Figure 16
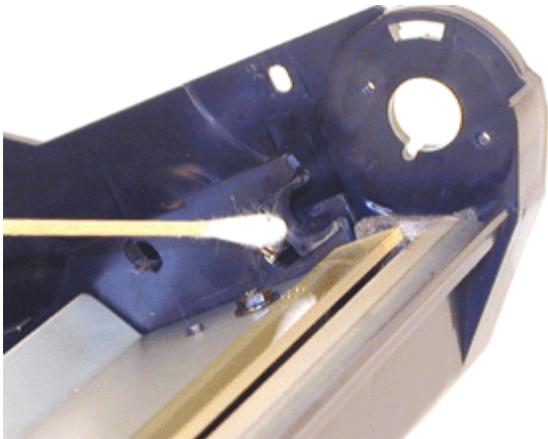
FIGURE 13

FIGURE 14

FIGURE 15

FIGURE 16

14. Install the drum, axle pins, and screws. Make sure that the metal axle pin is on the double gear side, and the white plastic pin is on the single gear side. See Figures 17 & 18.

15. Install the drum cover hinge and metal bar into both drum axle pins. Make sure that the hinge arm tab locks into place. See Figure 19

16. Although the toner hopper can be cleaned and filled through the fill plug, it is recommended that the magnetic roller be removed and cleaned. This will also be necessary to do once a seal is available.

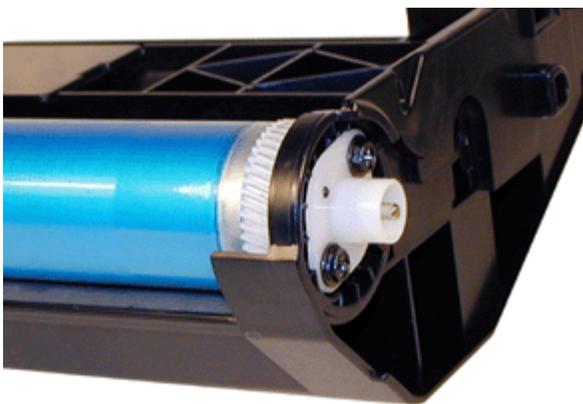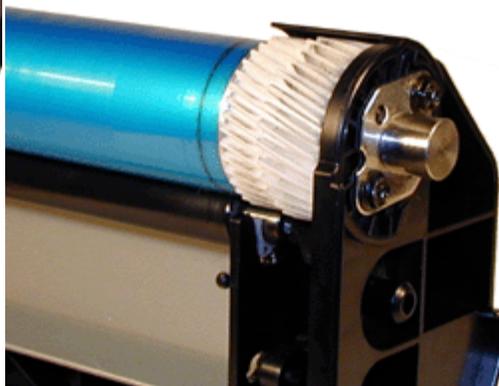17. Remove the two screws from the right side end cap. See Figure 20.
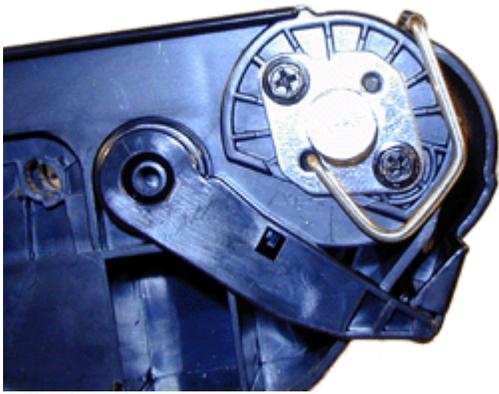

FIGURE 17
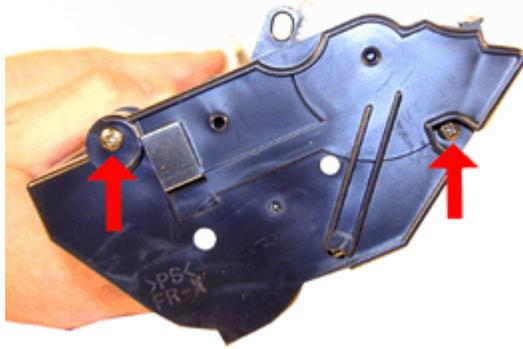

FIGURE 18

FIGURE 19

FIGURE 20

18. Remove the end cap. A large white gear will stay on the end cap. See Figure 21.

19. Remove the Small white gear on the hopper to prevent it from being lost. See Figure 22

20. With the pair of needle nose pliers, pull the fill plug out. Grasp the plug by the cross braces, and pull. This method does not damage the plug seal. Dump out any remaining toner from the hopper. See Figure 23
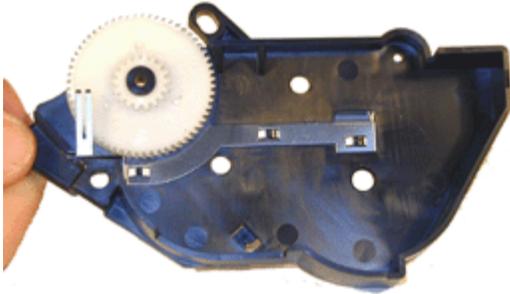

FIGURE 21

FIGURE 22

FIGURE 23

Do not remove the smaller plug. This is actually the bushing for the toner agitator shaft.

21. On the right side of the magnetic roller, press in on the tab and rotate the locking clip up so that the keyed shaft is free. See Figures 24 & 25

22. With the keyed shaft of the magnetic roller free, lift up on the keyed end. Pull the entire magnetic roller assembly free. See Figure 26.

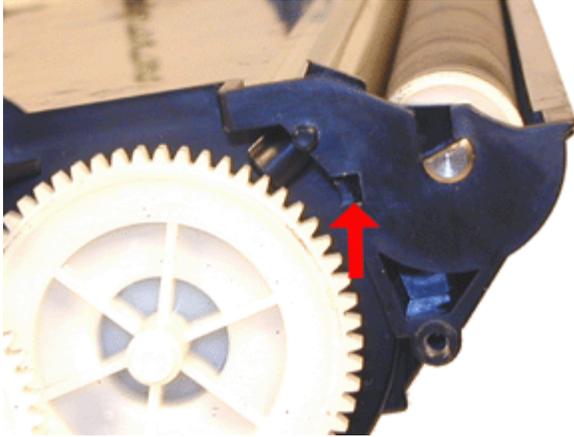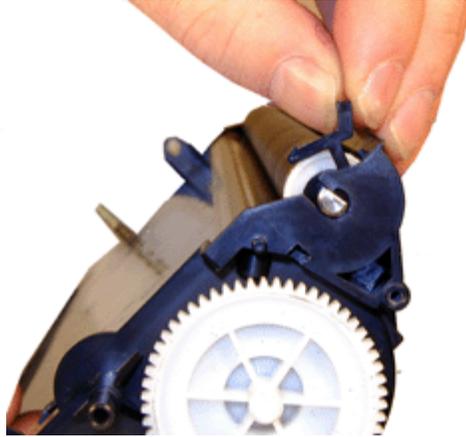23. Remove the two screws and doctor blade. See Figure 27

FIGURE 24

FIGURE 25

FIGURE 26

FIGURE 27

When a seal is available, it should be installed now. Make sure the seal tab is slid into the seal tab slot. See Figure 28

24. Install the cleaned doctor blade and two screws. Be careful not to damage the alignment pins. See Figure 29

25. Clean the magnetic roller assembly with a dedicated magnetic roller cleaner. Install the assembly left side (round shaft) first. Drop the keyed shaft into it's slot. See Figure 30

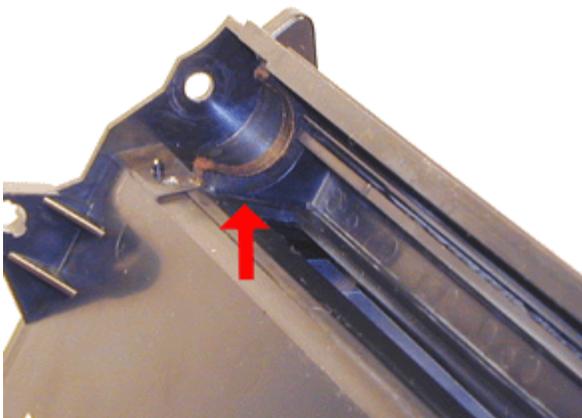26. Rotate the locking clip down. Make sure the tabs locks in place. See Figure 31
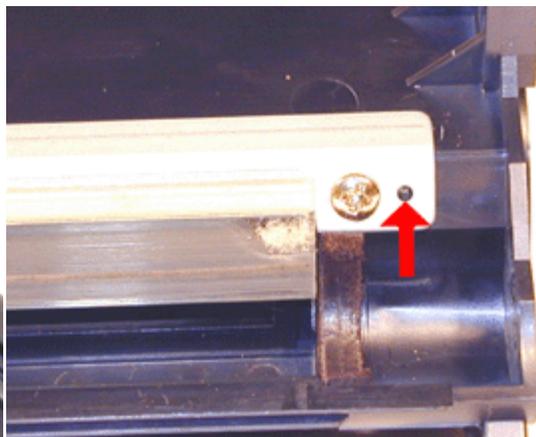
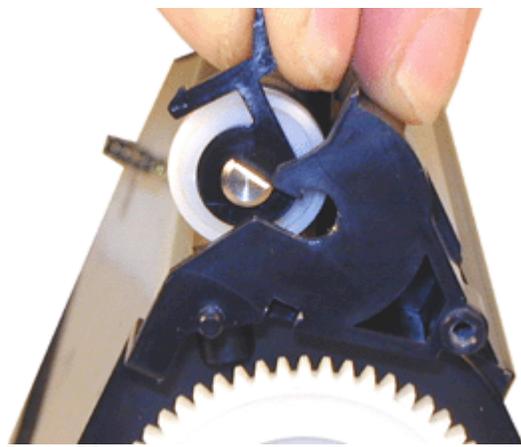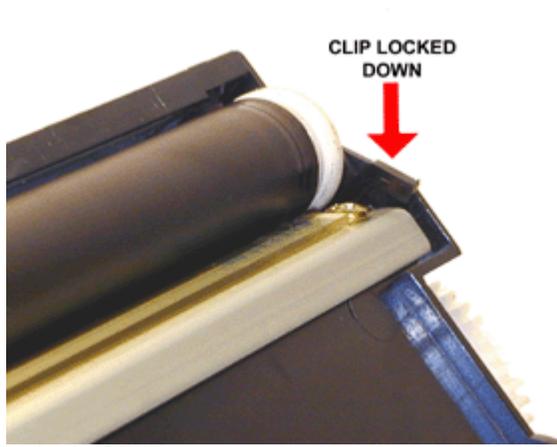**FIGURE 28**

FIGURE 29

FIGURE 30

FIGURE 31

27. Install the small gear onto its' shaft. See Figure 32

28. Clean the contact on the end cap, and install with the two screws. See Figure 33

    NOTE: The gear train only drives the toner agitator inside the hopper, it does not drive the magnetic roller.

29. Fill with 720g XP-20/28 toner. See Figure 34

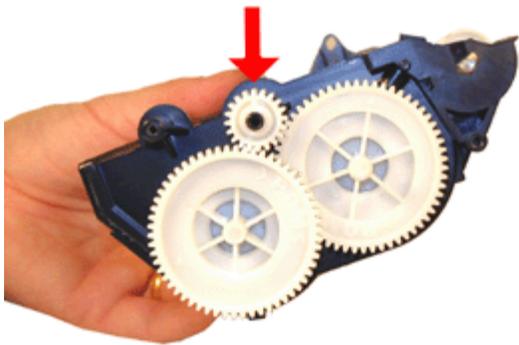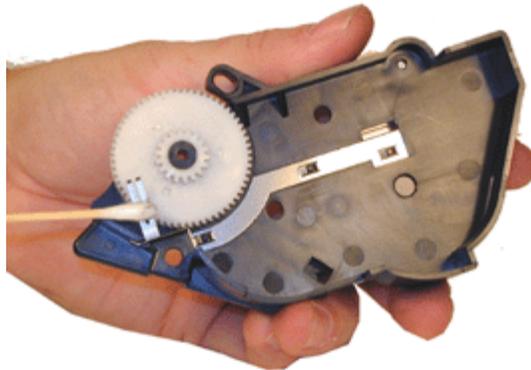30. Install the fill plug, check for leaks. See Figure 35

FIGURE 32
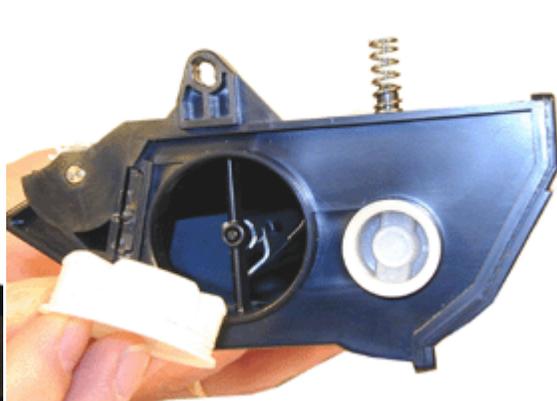

FIGURE 33

FIGURE 34

FIGURE 35

31. Install the toner supply section onto the waste chamber. See Figure 36

32. Install the two white plastic locking pins. Rotate them so that they lock. Be careful not to rotate the pins to far, or force them to turn. Forcing them will cause the small locking tabs to break off. See Figure 37

33. Install the spring onto the outside of the cartridge. See Figure 38
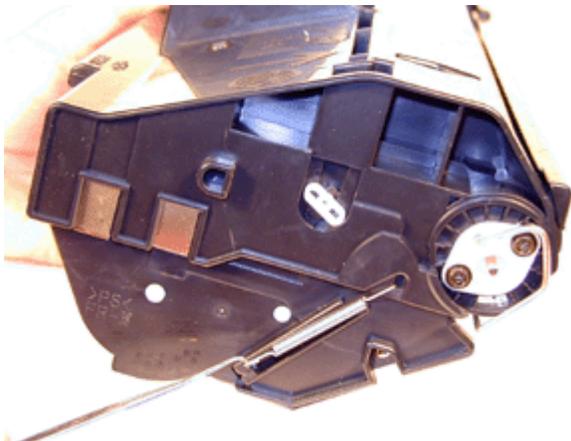

FIGURE 36

FIGURE 37

FIGURE 38

The cartridge is finished!

CARTRIDGE DEFECT LISTING

We have found no strange defects related to these cartridges. The following is a list of repetitive defects for the more common failures.

95mm	OPC Drum
44mm	PCR
55mm	Magnetic Roller

RUNNING TEST PAGES

Press the MENU UP/DOWN button until "PRINT MENU" is displayed.

Press the ITEM UP/DOWN button until the test print desired is displayed.

Press ENTER

The test prints available are:

DEMO PAGE

PCL FONT LIST

PS FONT LIST

MENU MAP

TEST PRINT (Test Pattern Page)

MACHINE ERROR CODES ▲

The error codes in these machines follow the trend of using all English messages (No Number Codes). The modules in the printer are the "Smart Type", where they can report a problem to the main board. All messages are self-explanatory (failed fuser says BAD FUSER). Paper jams indicate where the jam is located 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 0x3464 Thread 0x1914 DBC 0x8473d24 Jet'.

/script/catSearch.asp, line 58