Technical Document

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IBM 4037 Toner Cartridges
DOC-0235

OVERVIEW

These instructions cover the disassembly of the IBM 4037 style toner cartridges. The purpose of this disassembly is to vacuum out toner that will have spilled inside the cartridge during shipping and/or rough handling, to clean the debris cavity and to fill the toner supply housing with new toner. The disassembly can also be used to examine the internal parts of the cartridge for possible damage should the printing of the cartridge be poor and not correctable by other means.

The IBM 4037 Printer is rated at 5ppm, and has a maximum resolution of 300 dpi. The 4037 Cartridge (part # 1380200) has 200g of toner and is rated for 5,000 pages at 5% coverage. This procedure should be read in it's entirety before proceeding with the actual recycling process.

REQUIRED TOOLS

The tools needed to successfully and safely recharge toner cartridges are as follows:

- Toner approved vacuum. The Atrix HCTV canister type toner Vac, OR the Atrix AAA toner vacuum.

  Some type of approved toner vacuuming system is important. Toner consists of very fine particles that will pass right through a normal vacuum filter and blow out the exhaust.

- A small screw driver (Common Style)

- A Phillips head screwdriver (#1)

- Needle-nose pliers

- Air compressor or canned compressed air

SUPPLIES NEEDED

- Black Toner 200g

- Drum Padding Powder (DPP-K, Kynar)

- Cotton Swabs (CT-100)

- Isopropyl Alcohol (FR-8)

- Poly Wipes Cotton Pads (PW-96)

- 6" of 2" Packing Tape

PREPARE WORK AREA

1. Before proceeding with the following procedure you should have a work area available with approximately 4' x 3' clear space. It should be covered with some disposable paper since toner will spill on this area. It is recommended that brown craft paper be used and taped to the work area. This will hold the paper in place when trying to vacuum toner from the paper.

2. An empty garbage can with a strong plastic liner should be adjacent to the work area to empty used toner. It should be at least 2' deep to prevent toner from clouding up and over the top of the bag during disposal.

3. Have a few rags available and some disposable paper towels in case of toner spillage. Toner Magnet cloths are perfect for this.

4. The work area should be capable of being ventilated, if by accident toner becomes dispersed into the air. An exhaust fan in one window is recommended for
ventilation.
If the Circulation of air in the work area room is combined with other rooms in the building, toner dust may be carried into the other rooms. A separate and isolated HVAC system is recommended for the work area room.

DISASSEMBLY

1. Vacuum the exterior of the toner cartridge.

2. Place the cartridge on the bench with the label face down, and the Red Handle facing you.

3. There are two springs on either side of the cartridge. Locate and remove them.

4. Spread the housing apart so that the plastic posts slip out of their holes in the housing. Slide the toner supply out and place aside.

5. Remove the OPC Cover by carefully separating the hinge posts on either side of the Cover. Lift the Cover out and release the third post on the Cover Arm Assembly.

6. On the gear side of the OPC Drum, there is a C-Ring. Remove the C-Ring.

   NOTE: These rings have a tendency to suddenly fly off when removed, be careful not to loose this C-Ring!

REMOVE PHOTO-CONDUCTIVE DRUM

1. Pull out the OPC Drum Axle Pin from the opposite side.

2. Remove the Photo conductive Drum being extremely careful not to scratch it. Vacuum any toner and debris from drum being careful not to let the vacuum hose come in contact with the drum surface. Do not polish or wipe the drum with a

dry cloth since this may scratch the drum.

Blow off any remaining dust from the Drum using C-1270 compressed clean air. If their is any matter on the drum that must be cleaned off, use 99% pure Isopropyl alcohol (FR-8 Film Remover) and a soft lint free cotton pad (PW-96) to lightly wipe the drum surface, then blow off the Drum using C-1270 compressed clean air.

CAUTION: Be very careful not to tilt or shake the can while spraying, as the propellant may spray out and possibly ruin the drum.

Always handle the Photo conductive Drum with the utmost caution, since if damaged it can not be replaced.

3. Place the Photo conductive Drum in a soft lint free cloth and then into a dark colored bag or cover from bright light by some other suitable means. Again, do not rub or wipe the Photo conductive Drum with a dry cloth as this may scratch its surface.

NOTE: Be careful not to lose the small metal washer on the gear side of the OPC Drum.

CLEAN THE TONER SUPPLY CHAMBER

1. Locate the taped holes on the top of the Toner supply, and remove the Blue Tamper Proof Tape. Vacuum out any remaining toner.

NOTE: If you do not wish to completely disassemble the Supply Housing, fill with 200g of 4037 toner, place 2 small pieces of 2" tape over the holes, and proceed to section 6. If it is necessary to clean or replace the Magnetic Roller, Sponge rollers, or Mylar strips. Refer to the following steps, (this is not normally necessary).

2. Remove the screw on the metal post of the Toner Supply Gear Assembly. Carefully remove the three gears.

NOTE: These gears turn the Magnetic Roller, and the Foam Roller inside the Toner Supply.

3. Carefully pry off the Gear Base with a small common screwdriver. Start at one end and work your way around the base prying and lifting as you go.

4. Remove the "Fly Wheel" from the other side of the Toner Supply Chamber. Slide off the black axle bushing from the Magnetic Roller axle.

5. Remove the Magnetic Roller by lifting up the metal post on each side of the roller.

NOTE: When re-installing the roller, make sure that the Mylar strip is on top of the roller, and not underneath.

6. Remove the Foam Roller from the Supply Chamber through the hole on the Gear Assembly side. Vacuum the chamber and rollers clean. Fill with 200g of 4037 toner AFTER you have re-assembled the Supply section. Don't forget to place two small pieces of 2" tape over the fill holes!

CLEANING THE DEBRIS CAVITY

1. Remove the two screws from Wiper Blade in the Debris Cavity.

2. Carefully bend the entire Wiper Blade back so that you have access to the open cavity.

3. Vacuum any toner out, replace the Wiper Blade, and coat with DPP-K (Kynar) Drum Padding powder. Do not use DPP (Zinc Sterate)!

RE-ASSEMBLE THE TONER CARTRIDGE

Re-assembly of the cartridge can be accomplished by reversing the above steps, and keeping the following notes in mind.

1. Make sure that the Magnetic Roller Mylar strip is on top of the roller and not underneath. Rotate the roller towards you when putting it back in place.

2. If you experience leakage from the Gear Base around the Foam Roller, Place a small amount of rubber cement around the edge of the plug area.

3. Make sure that the Drum Axle is pushed completely through the OPC Drum

4. Don't forget to re-install the metal washer on the shudder arm side of the OPC Drum. (This is the side opposite the Gears).

5. Before replacing the OPC Drum, lightly coat with the DPP-K Drum Padding Powder,(Kynar). Do NOT use DPP (Zinc Sterate), this powder will stick to the Primary charge roller (located in the printer), and cause print defects.

   NOTE: The Primary Charge Roller (PCR), is located in the printer, and not in the cartridge. It is recommended that you rotate the OPC Drum a few times in the proper direction, so that when the cartridge is installed, the powder will not contaminate the printers PCR.

6. Normally, only the Transfer Charge Roller is located in the printer, not both of them.

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 0xe54 Thread 0x1930 DBC 0x8585024 Jet'.

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