

## TECHNICAL DOCUMENT

- [Overview](#)
- [Supplies Required](#)
- [Tools Required](#)
- [Prepare Work Area](#)
- [Disassembly](#)
- [Cleaning the Debris Cavity](#)
- [Re-Assemble the Cartridge](#)
- [Recommended Supplies](#)

### Pentax 240 OPC Cartridges

DOC-0237

#### OVERVIEW



These instructions cover the recycling of the Pentax 240 OPC cartridge used in Pentax PL-F0240 laser printers. The 240 printer is a continuous feed, 16ppm, 240 dpi machine that uses a three cartridge system. By continuous feed, we mean that the printer uses fan-fold paper, (similar to what is used in dot matrix printers). The OPC cartridge is rated at 20,000 pages.

The purpose of this procedure is to vacuum out toner that will have spilled inside the cartridge during shipping and/or rough handling, to clean the Waste chamber, and to replace the OPC Drum with a new Long Life Replacement Drum. This procedure should also be used to examine the internal parts of the cartridge for possible damage, or wear should the printing of the cartridge be poor and not correctable by any other means.

#### SUPPLIES REQUIRED



- Long Life OPC Drum
- Emery Cloth or Fine grit sand paper
- Cotton Swabs
- Drum Padding Powder
- Isopropyl Alcohol

- Super Glue
- Toner Cloths

## TOOLS REQUIRED



- Phillips head screw driver.
- Small Common screw driver
- Hammer
- 12" Long 1" thick wooden dowel
- Hack Saw
- Heat gun or Hair dryer
- Leather work gloves
- Vacuum approved for toner
- Safety goggles and breathing mask.

**WARNING:** Always wear safety goggles and breathing mask when working with or around toner. Do not disperse the toner into the air. Use approved toner vacuums and filters at all times.

### Approved Vacuum systems:

Toner approved vacuum. The HCTV canister style vacuum or the Atrix AAA portable style vacuum.

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

This procedure should be read in its entirety before proceeding with the actual recycling process.

## 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. A 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. Toner Magnets 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. Turn the cartridge so that the drum is facing away from you.
2. Remove the Corona Wire cleaner and place aside.
3. Remove the top two Phillips head screws, and remove the cover.
4. Carefully vacuum the metal and felt rollers clean. Be careful not to scratch them.

**NOTE:** Some cartridges do not use a roller system to feed toner to the drum. The newer cartridges have a Wiper Blade. If your cartridge has a Wiper Blade, remove the blade and vacuum the entire area clean. Remember to

replace the blade.

5. Turn the cartridge so that the OPC drum is facing you. Remove the three Phillips head screws on the right side. Remove the cover.
6. Turn the cartridge around so the opposite side is facing you. Remove the three Phillips head screws, and cover.
7. Remove the two "C" rings from both ends of the drum axle shaft.
8. Carefully pull out the drum axle shaft.
9. Remove the OPC drum and place aside.

It is not recommended that the OEM OPC drum be re-used.

10. Vacuum the drum area clean.

**NOTE:** Be very careful not to bend or otherwise damage the small thin recovery blade located next to the Wiper Blade. If this blade is bent down lower than the height of the wiper blade, toner will accumulate on top of the blade and spill into the printer. If the blade does get bent, it may be possible to carefully bend the blade up equal to or slightly higher than the Wiper Blade.

## CLEANING THE DEBRIS CAVITY



1. Turn the cartridge so that the gear assembly is facing you.
2. Remove the two Phillips head screws and small metal plate.
3. Remove the large double gear.
4. Remove the "C" ring that holds the lower gear on. (This gear is attached to the auger).
5. Remove the Auger, and the small white gear. Vacuum the entire area clean
6. Vacuum the Auger, and small white gear. Replace them back into the cartridge.
7. Replace the large white double gear, small metal plate, and two screws
8. Turn the cartridge so that the metal roller is facing away from you. Locate the plastic piece marked L & R. This is the Corona Wire Cover. Pull from the center and lift off.
9. Clean the Primary Corona Wire Assembly with the Isopropyl Alcohol, and a cotton swab. Run the swab carefully along the wire and the wire guides. Be very careful not to break this fragile wire. If there is any toner remaining in the assembly blow it off with a can of clean air. Be certain to blow away from yourself and only after all heavy signs of toner have been removed.  
Clean the metal Corona Wire Grid also.
10. Turn the cartridge around so that the foam roller is facing you. Locate the two pieces of felt on either end. With your finger nail, gently scrape the felt until the surface is rough, and not compressed anymore.

## RE-ASSEMBLE THE CARTRIDGE



1. Coat the Wiper blade with zinc Sterate (not Kynar), and replace in the cartridge. These blades are present in the newer cartridges only.

The gears on this OPC drum are easily broken, and can be difficult to remove. We have found the best way to remove them is the following procedure.

2. Cut the old OPC drum in half with the hack saw.
3. Heat the hub end of each drum half with the heat gun or hair dryer until the glue is softened. Be careful not to melt the plastic! Knock out the hub from the inside with the 1" wooden dowel and a hammer.

**Caution:** The metal drum section will be hot. It is recommended that you wear leather gloves when heating or handling the drum halves.

4. Take the new OPC drum and lightly sand the area INSIDE the OPC Drum where the metal part of the contact gear will touch. This will insure a good electrical contact.

**NOTE:** It is a good idea to "dry fit" the contact gear in the sanded side first and check the contact with an OHM meter. The reading should be a direct short, or no more than 1 or 2 ohms.

5. Place a few drops of super glue on the inside of the OPC Drum, and insert the gears.

**NOTE:** Be very careful not to get any glue on the contact part of the hub, as this will insulate the hub from the drum and cause serious print defects.

6. Once the glue has dried, (approximately 5 minutes). Coat the NEW OPC Drum with DPP (Zinc Sterate) and place the Drum in the cartridge. Remember to place the gear side of the drum in the side of the cartridge opposite the metal contacts.
7. Insert the metal Axle Shaft into the cartridge, replace both of the "C" rings.
8. Replace the left end cover and screws (two on each side).
9. Take the right end cover and locate the spring loaded plastic disc. Spin the disc until it is fully visible from the outside of the cover. This disc serves as the reset mechanism for the cartridge. While holding the disc, install the end cover, and 2 screws.
10. Wrap the cartridge in the black paper, and bubble wrap that the new OPC was packaged in. Store in a foil bag.

## 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 0xee0 DBC 0x97a3f8c Jet'.

/script/catSearch.asp, line 58