

## TECHNICAL DOCUMENT

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## Sharp ZT-50DR & Xerox 5008/5009 OPC Cartridges

DOC-0212

### OVERVIEW



These instructions cover the recycling of the Sharp ZT-50DR OPC cartridge used in Z-50, Z-70, and Z-80 series copiers. This same cartridge with small modifications is used in the Xerox 5008 (13R50), and 5009 (13R55) series of copiers. The modifications are external only, and are there so that these cartridges cannot be used in each others machines. These copiers are a 5 cpm, machine that uses a two cartridge system. The OPC cartridge is rated at 10,000 pages. At 8000 pages, the drum light will begin to flash, at 9,000 pages it will light up steadily and the copier will not print. This cartridge system is different from others in that the waste toner is moved by a series of augers from the OPC cartridge into the waste chamber located on the toner cartridge.

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, and Wiper Blade. 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.

### REQUIRED TOOLS



- Phillips head screw driver.
- Small Common screw driver
- Hammer
- Ohm Meter
- 12" Long 1/8" thick metal rod
- 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 Omegas/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 it's entirety before proceeding with the actual recycling process.

## REQUIRED SUPPLIES



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

## 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. TM-1 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 upside down so that the round green pull handle is to the left.
2. Remove the two Phillips head screws from the large metal plate. Remove the plate.
3. Turn the cartridge so that the green handle is on the right side.
4. Remove the two Phillips head screws from the spring/separation pad assembly located on the left side of the cartridge. Remove the assembly by pulling out on the black plastic and lifting the assembly up and out. There is a small metal tab that locks into the plastic. Pulling the plastic out will release the tab.
5. Remove the right side end cap by pressing in on the three visible plastic tabs, and one partially hidden tab. The partially hidden tab is located just below the green handle, and next to the small toner recovery auger. The fifth tab is completely hidden. With a small common screwdriver pry up along the edge of the cover until it is loose.
6. Remove the two screws from the small toner auger assembly. Remove the assembly. Note that there are two white gears that can fall off if you are not careful. They should be removed and placed aside. The double gear goes on the bottom shaft, and the single gear just above it.
7. Turn the cartridge so that the green handle is on the right.
8. Remove the four screws that hold the two halves together. One is located in the top center, two are on the left end, and the fourth is in the top right, back corner.
9. While pressing in on the large tab (located on the right center side of the cartridge), lift up the left side and separate the two halves. If the large tab will not press in, take a small common screwdriver and gently pry the top half up next to the tab.

## CLEANING THE DEBRIS CAVITY



1. Remove the OPC drum and bushing. (The bushing fits over the left gear of the OPC drum.)

If the OPC drum is going to be re-used, vacuum any remaining toner and debris from the drum, being very careful not to come into 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 using a can of compressed clean air. Never use un-filtered compressed air for this as un-filtered air will have small dirt particles which blown at high speeds, will damage the drum.

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

2. Place the OPC Drum in a soft lint free cloth and then into a foil bag, or cover from bright light by some other suitable means. OEM drums will usually last 1 cycle. If the OPC material has been worn off from the sides, the drum should be replaced.
3. Remove the long thin metal bar next to the Wiper Blade. Note how the blade fits, notched side to the top, and long side to the left.
4. Vacuum both halves of the cartridge clean. Remove the large auger from the top half, and vacuum clean also.

**NOTE:** Be very careful not to bend or otherwise damage the small thin recovery blade located next to the large auger was located. 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 copier. 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.

5. Vacuum the small toner recovery auger assembly clean.
6. Remove the four Phillips head screws on the Wiper Blade. Remove the Wiper Blade and discard. We do not recommend that a wiper blade be used for more than one cycle.

## RE-ASSEMBLE THE CARTRIDGE



1. Coat the new Wiper blade with zinc Sterate (not Kynar), and replace in the cartridge.
2. 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.

**NOTE:** If you are re-using the OPC Drum, skip to section 5.9.

3. Remove the gears from the old drum by sliding the metal rod into the hole of one hub and carefully knocking out the opposite side. Work the rod around the edge of the gear while lightly tapping the rod with the hammer.
4. Take the new OPC drum and lightly sand the area INSIDE the OPC Drum where the metal part of the contact hub will touch. This will insure a good electrical contact.

**NOTE:** It is a good idea to "dry fit" the contact hub 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 gear, 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).
7. Replace the bushing on the left gear, and place the Drum in the cartridge.
8. Replace the long thin metal bar so that the bent end sticks out about 1/4" from the edge of the cartridge. The bar should fit over the small leaf spring, with the notched section on top.
9. Replace the Top half of the cartridge, insert the four screws.
10. Replace the large metal bar, and two screws.
11. Replace the separation pad/spring assembly, and two screws.
12. Replace the small toner recovery auger assembly. (Use the two brass or copper colored screws).
13. Replace the two white gears. Place the double gear on the bottom shaft and the single gear on the shaft above it.
14. Snap the end cap back into place.
15. Make sure that the metal bar on the left side of the cartridge sticks out approximately 1/4". This bar will press into the counter lever on the back wall of the copier, and reset the counter. As the cartridge is fully seated into the copier, the bar is pushed back into the cartridge. If the bar is broken, or the counter did not reset, remove the OPC cartridge from the copier, and with your hand, press the lever located on the small black box which is mounted on the back wall of the copier. The counter is reset! If the cartridge has failed prematurely, and you would like to see the page

count on it, remove the cover from the counter (it snaps off) there is a 3 digit counter. To get the page count multiply the reading by 10.

Wrap the cartridge in the black paper, and bubble wrap that the new OPC was packaged in. Store in a foil bag.

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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 0x698 Thread 0x1128 DBC 0x97a3ffc Jet'.

/script/catSearch.asp, line 58