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## Panasonic KXP-4420 OPC Cartridges

DOC-0206

### OVERVIEW



These instructions cover the recycling of the Panasonic KX-P4420 OPC cartridge used in laser printers, and plain paper fax machines using the Panasonic 4420 engine.

The purpose of this procedure is to vacuum out toner that will have spilled inside the cartridge during shipping and/or rough handling. We highly recommend that you replace the OPC Drum with a new Long Life Replacement Drum, and also replace the 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
- Vacuum approved for toner
- Needle Nose Pliers
- 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 Atrix HCTV Canister Style vac. or the Atrix AAA style Portable vac. 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, creating a real mess.

### REQUIRED SUPPLIES



- Drum-4420 Long Life OPC Drum And replacement fuse
- WB-4420 Wiper Blade

- Cotton Swabs
- DPP Drum Padding Powder (Zinc Sterate)
- Isopropyl Alcohol

## 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.

## DISASSEMBLY



1. On the side of the cartridge that has the Green Stripe, there are 3 Phillips head screws. Remove all three screws.  
**NOTE:** Do not remove the screw on the small, round, spring loaded end cap.
2. Remove the entire end cap and vacuum clean. Vacuum the end of the cartridge at this time also.
3. Turn the cartridge so that the label is facing you. On the front edge of the cartridge you will see three plastic tabs. Press in on each tab, and lift the Top Cover off.
4. On the right side of the cartridge, you will see three metal pins coming out from the drum axle, the center pin has a "C" ring on it. Remove the "C"-ring and drum cap.
5. From the left side, pull the drum axle out completely, and gently pry out the left plastic axle pin out. Pull it out 1/4" until the OPC Drum comes free. Remove the OPC Drum and place aside.

## CLEANING THE DEBRIS CAVITY



Turn the cartridge over so that the Wiper Blade and Three screws are visible. Remove the screws and Wiper Blade, vacuum the Debris 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.

## RE-ASSEMBLE THE CARTRIDGE



1. Lightly dust the NEW WB-4420 with zinc sterate (not Kynar), and replace in the cartridge.
2. On the right side is a small green Printed circuit board, held in by one screw. Remove the screw and board.
3. Un-solder the original fuse from the PCB Board, (small & black, looks like a transistor). Solder in the new replacement fuse, making sure you have a good electrical contact, and replace the board on the cartridge.

**NOTE:** This fuse serves as the counter re-set for the printer, if you have a bad electrical contact, the counter will not reset.

**NOTE:** If you have a machine and wish to test the cartridge, do not change the fuse until after it has been tested. If you change the fuse first, it will blow and reset your test machine. Your customers machine will still show the change

drum message, and will not print.

4. 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. Make sure to clean the grid also.
5. Remove the gears from the old OPC drum. See Document #4019 on our Fax on Demand system if you are not sure how.
6. 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 help insure a good electrical contact.

**NOTE:** It is a good idea to dry fit the contact gear in the sanded side first, and check for a good contact with an Ohm meter. The reading should be a direct short, or no more than 1 or 2 Ohms. If you are not sure how to do this, again please see document # 4019 on our Fax on Demand system.

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

**NOTE:** Make sure that the copper contacts do not come in contact with the glue, or the glue will insulate the gear from the drum and cause serious print defects.

8. Let the glue dry for approximately 5 minutes. (Remember to protect it from light.)
9. Coat the NEW OPC Drum with DPP (Zinc Sterate) and place the Drum in and press the left axle pin back in place.
10. Replace the metal axle rod through the OPC Drum. Replace the right side drum cap and "C"-ring.
11. Snap the Top Cover back on.
12. Replace the side end cap, and the three screws.
13. Store in a light-proof foil bag.

## TROUBLE SHOOTING



A very common problem with this cartridge, is a gray shaded band across the top of the page, usually 1" thick. This problem has been known to occur in new OEM cartridges as well as rebuilt cartridges. Depending on the severity, sometimes all that will print is the shaded band, or in less serious cases, the band will show across the printed page. The cause of this problem is a bad contact in the drum ground circuit. This is usually located at (but not limited to) the contact gear in the OPC Drum. It is very important to lightly sand the inside of the OPC drum on the contact gear side. It is also very important not to get any glue on the contacts as this will insulate the gear from the drum. If the gear contacts are OK, check the connections to the circuit board in the end cap. If any of these contact points are not good, you will get a shaded bar across the page every time. For more information on Drum Gear removal and replacement, see Section 5, Items 5.5-5.8 in this instruction or document # 4019 on our Fax on Demand System.

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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 0x2de8 Thread 0x1f64 DBC 0x3f3b014 Jet'.

/script/catSearch.asp, line 58