

TECHNICAL DOCUMENT

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Fuji-Xerox XP-4 Toner Cartridges

DOC-0245

OVERVIEW



These instructions cover the recharging of the Fuji-Xerox XP-4 toner cartridge used in the Epson Actionlaser 1100, and 1400 and other printers using the Fuji Xerox XP-4 Laser Engine. These printers have a resolution of 300dpi, and the cartridges are rated for 4,000 pages at 5% coverage. This cartridge is unique in that the Transfer Charge Roller is built into the cartridge, not the printer. For this reason care must be taken when handling this cartridge to avoid contaminating the roller.

The purpose of this disassembly procedure 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 clean and fill the supply chamber with new toner. This disassembly 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.

NOTE: These Instructions should be read completely before proceeding with the recharge.

TOOLS REQUIRED



- Phillips head screw driver.
- Small Common Screwdriver
- Toner approved vacuum
- Needle Nose Pliers
- Flush cutting wire cutters
- Razor Blade Knife
- Ruler, or straight edge
- Safety goggles and breathing mask.

SUPPLIES REQUIRED



- Black Toner 160 Grams
- Sealing Strip (SS-510, Must be modified, see text)
- Replacement OPC drum [optional]
- Cotton Swabs (CT-100)
- Lint Free Cotton Pads (PW-96)
- Toner Magnet
- 99% Isopropyl Alcohol (FR-8)
- Clean compressed air
- Conductive Grease

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 type toner vac, 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, creating a real mess.

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. On each side of the cartridge there is a spring, a Brass colored one on the Right, and a silver colored one on the Left. This is with the waste chamber facing you. Remove each spring. (There are also 2 small silver spring across each end of the Transfer Charge Roller. Leave these springs alone.
2. The two halves of the cartridge are held together by two small pins, which are located under each end of the transfer charge roller. Take a small screwdriver and push the pins out from the inside about 1/16". Be careful not to damage the transfer roller while doing this.
3. With the flush cutting wire cutters, carefully pry the pins out. (This is very similar to removing the pins from and LX cartridge).
4. Separate the two halves.

REMOVE THE OPC DRUM



1. On both sides of the cartridge, there are two drum axle pins, held in place by Phillips head screws. Remove the two screws and the axle pins. Note that the black cap matches the black gear side, and the white cap matches the white gear side.
2. Carefully remove the Transfer Charge Roller, and place aside. **DO NOT TOUCH THIS ROLLER WITH YOUR HANDS!** The oils present in your skin can contaminate the roller, touch the metal ends only. Vacuum the roller clean, do not clean with ANY type of chemicals.
3. Carefully remove the OPC drum, being very careful not to scratch it. 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: When using the Compressed clean air, 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.

4. Place the OPC 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 OPC Drum with a dry cloth as this may scratch its surface. If there is any matter left on the drum that must be cleaned off, use 99% pure Isopropyl Alcohol (FR-8), and a soft lint free cotton pad (PW-96) to lightly wipe the drum surface. Vacuum and then blow off the Drum using the Compressed Air. Always handle the OPC drum with the utmost caution, since if damaged it is costly to replace.

CLEANING THE DEBRIS CAVITY



1. Remove the Primary Charge Roller. At this point we do not recommend that it be cleaned with Nu-Finish car polish. The roller should be cleaned with a lint free cotton pad, and distilled water. Be careful not to rub the roller too hard or the PCR may become damaged.
2. Remove the two screws on either end of the Wiper Blade, and carefully pry it off. There is a long strip of glue located under this blade which can make it difficult to remove. Take your time, and be careful to pry up only under the metal parts of the blade, or you may damage the rubber cleaning part. Wipe the blade off with a toner magnet when removed. .

WARNING: 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 to a height equal to, or slightly higher than the Wiper Blade. Make sure that the edge of this blade is even across its entire length.

3. Vacuum the waste area clean, be careful of the recovery blade.
4. Re-install the wiper blade. Place a small amount of rubber cement in the areas of the original glue if needed.

NOTE: Do not use the screws to re-seat the Wiper Blade, or you will strip the screw hole. (If this happens, you can install a larger self tapping screw.)

CLEANING THE TONER SUPPLY HOUSING



1. Pry out the fill plug located on the side of the toner supply. Remove the small gear from the side, dump out any remaining toner and vacuum clean. NOTE: Before vacuuming, rotate the magnetic roller and, observe the layer of toner on the roller surface. The toner should form an even consistent layer with no clumps or lumps showing. Should the layer of toner be thicker in some areas, the Magnetic Roller should be cleaned using a dedicated magnetic roller cleaner (MRC-16) or 99% Pure Isopropyl Alcohol. Always remove the roller before cleaning and make sure it is completely dry before re-installing it.
2. At this point there if you are going to ship the cartridge, a seal must be installed, and to install a seal, the Magnetic roller must be removed.
3. On the gear side of the supply there is an end cap held in place by 4 screws, one on each corner. Remove the screws and the end cap.
4. On the opposite side of the hopper there is an end cap held in place by two screws. Remove the screws and the end cap.
5. Carefully remove the Magnetic Roller Assembly, and clean with a dedicated mag roller cleaner (MRC-16), or 99% pure Isopropyl Alcohol.
6. Until a dedicated seal becomes available, the sealing strip used in the Fuji-Xerox XP-510 cartridge can be modified to fit this cartridge by trimming it down on one side. With a straight edge and a razor knife, cut 1/16" from the wide side of the seal along it's entire length.
7. Install the seal.
8. Fill the supply with toner and check for leaks. Remember to save a small amount of toner in the bottle cap to "salt" the magnetic roller for testing purposes.
9. Replace the Magnetic Roller assembly. Note that the end cap that has two screws has the electrical contacts for the mag roller inside. Clean these contacts, and replace the conductive grease.
10. Install the two screw end cap first, make sure that the keyed end of the Stationary Magnet fits into it's proper keyed hole. Slide the seal through the slot in the end cap.
11. Replace the 4 screw end cap.

RE-ASSEMBLE THE TONER SUPPLY CHAMBER, OPC DRUM AND DEBRIS CAVITY



1. Coat the OPC Drum with Kynar Padding Powder (DPP-K), and install in the cartridge. The white gear side should be opposite the electrical contact side of the PCR. Install the axle pins, but do not screw them in. Spin the drum a few times in the proper direction, until the drum surface is clean.
2. Remove the Axle pins, and OPC drum.
3. Replace the clean PCR into the waste chamber. Clean the PCR contact with alcohol. Be careful not to get any on the PCR surface!
4. Re-install the OPC drum, Transfer Charge Roller, and Axle Pins. Install the screws. The Transfer Charge roller has no right or left side, just make sure that both gears are in contact with the drum gears.

The cartridge should be put together in this order so as not to contaminate the PCR Roller with the Kynar, which may cause print defects.

5. Place the two halves together, and re-install the two pins.
6. Install the two springs, Silver on the left, and Brass on the right. (This is with the waste chamber facing you). Wipe down the outside of the cartridge with a Toner Magnet cloth.

NOTE: Be very careful not to touch the Transfer Charge Roller with your hands!!
This cartridge does not use a felt wand.

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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 0x3464 Thread 0x3738 DBC 0x8459fd4 Jet'.

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