

TECHNICAL DOCUMENT

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Xerox 5011 (13R44) and 5012/5014 (13R19) OPC Cartridges

DOC-0208

OVERVIEW



These instructions cover the recycling of the Xerox 5011, 5012/5014 OPC cartridge used in Xerox 5011, 5012, and 5014 copiers

NOTE: The Drum 1012 will physically fit in the Xerox 1012 OPC (part # 13R8), the Xerox 5011 OPC (part # 13R44), and the Xerox 5012/14 OPC (part # 13R19). These instructions only cover the 5011, 5012/5014 cartridges. For the Xerox 1012, see document # 0209. These cartridges all look very similar to each other, so it is best to verify the type of machine that it came from.

If you are not sure which type of machine your cartridge came from, look at the front cover, the 5011 says "5011", and the 5012/14 says "5012/5014". The 1012 does not have any markings on it. However, on the top of the waste chamber there is a clear piece of plastic that sticks up about 1" from the waste chamber cover. If this section is there and there are no identifying marks on the cartridge, you have a 1012 OPC and should refer to Document # 0209.

We highly recommend that you replace the OPC Drum with a new Long Life Replacement Drum. The OEM drum will usually last 1 additional cycle if NOT damaged. We recommend changing the drum because the drum is so exposed (at least 3/4 of it is not protected), and it is usually physically or light damaged when received. These Drums are orange/red in color, and do not change color when light damaged as some other drums do.

The purpose of this procedure is to vacuum out toner from the waste chamber and any toner that will have spilled inside the cartridge during shipping and/or rough handling. 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.

This procedure should be read in it's entirety before proceeding with the actual recycling process.

REQUIRED TOOLS



- Phillips head screw driver.
- Small Common screw driver
- Vacuum approved for toner
- Electric 3/8" Drill
- 3/8" Bullet type Drill bit - This type of drill bit has a small starting/centering bit protruding from the center. Usually approximately 1/8" in size. (Optional see text)
- 11/64" drill bit

- Vise Grip Pliers (Optional, see text)
- Safety goggles and breathing mask.
- Soldering Iron

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, Omega-S style Portable vacs. 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.

REQUIRED SUPPLIES



- DRUM-1012 Long Life OPC Drum
- Wiper Blade [For newer style cartridges only]
- XRC-5011 (Reset counter for 5011 ONLY)
- XRC-5012 (Reset counter for 5012/5014 ONLY)
- 9 (Nine) #6 x 3/8" Self Tapping Screws
- Cotton Swabs
- DPP Drum Padding Powder (Zinc Sterate)
- Isopropyl Alcohol
- Can of clean compressed air
- 3 (Three) #6 Flat Washers (Optional)
- Solder Wick (This is a roll of braided copper that aids in de-soldering connections. It is available in any electronic supply store such as Radio Shack)

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



There are two versions of these cartridges currently in the field. The newer, and easier type has three screws in recessed holes on the large End Cap. The older, and more difficult type has three melted plastic rivets in the same recessed holes.

1. Turn the cartridge so that the large end cap is facing you.
2. If you have the newer type, remove all three screws and place aside. Proceed to step 3.5B.

NOTE: There are two methods for removing the drum on the older style cartridges. The first is the easiest, but if you are not careful, the cartridge can become damaged. The second although harder, is more reliable.

Method A:

Turn the cartridge so that the back end is facing you, and the drum is on top. With the pair of Vise Grip pliers, grasp the drum axle firmly. Twist and pull the axle out. The drum can now be removed. The danger with this procedure is that sometimes the front cover will break off in the area of the axle. There is no way to fix this, you must either get a new cartridge, or front cover from a scrapped cartridge. If the axle came out without damage, proceed to step 3.7

Method B:

Take the 3/8" Bullet type drill bit, and drill out the TOPS of the melted rivets. It is important to keep the drill as level to the cartridge as possible.

NOTE: Be very careful not to go through the end cap cover! Drill out only enough so that the end cap is free from the rest of the cartridge. It is best to drill a little, and check to see if that section has come free. repeat this until the section by each rivet is free. If you do drill in too far, you can use a #6 flat washer to repair the hole. This will only work if you have not gone completely through the plastic.

Take the 11/64" drill bit and carefully drill a hole in the remainder of the rivets. It is important to keep the drill as level to the cartridge as possible here also.

While holding the Drum in place, remove the large End Cap and place aside. A long metal shaft will come along with it, this is the Drum Axle.

WARNING: Make sure you hold the OPC Drum when doing this or it will fall out of the cartridge, and possibly become damaged.

Remove the metal plate that is located behind the large End Cap. If you are replacing the OEM Drum with a new one, skip to section 4.

End Method B

- 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: 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.

- 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



- Vacuum the Wiper Blade, Recovery blade area clean. Do not try to remove the waste toner through these blades, this will be done in a later step.

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.

- Turn the cartridge so that the flat area of the waste chamber is facing you.
- There are 6 rivets that hold the top cover on. With a sharp knife or razor blade, carefully slice the top of each rivet off.

NOTE: Some of the newer cartridges have Torx screws holding the cover on. If this is the case, remove the screws and proceed.

CAUTION: When you are slicing the rivet tops off, make sure you cut away from yourself. The rivets tend to come off suddenly, and if you slip you could severely hurt yourself.

- Lift off the Top Cover and place aside. The cover will still be attached to the waste chamber by an orange, white, or green colored Ribbon cable. Be careful not to damage this cable as it serves as the erase lamp. It may be necessary to take a small common screwdriver and gently pry up along the seam before the top cover will release. To completely remove the cover, pry the tabs out on the connector attached to the film, and remove.
- Vacuum all the waste toner from the bottom of the Waste Chamber, make sure that you get all the toner from around the white Styrofoam (if present).
- Clean the Corona Grid with compressed air, and the vacuum. Do NOT use alcohol on this grid as it will remove the black coating, and reduce print quality.
- Take the soldering Iron and un-solder the old reset connector from the ribbon cable. Be very careful not to damage

the cable by heating it up too much. Place just enough heat on the connection to melt the solder. Use Solder-Wick to immediately remove the melted solder.

CAUTION: When handling the new connectors, do not remove the tape or touch them in the area of the red dots. This area is very delicate, and even the lightest touch can damage them.

8. Once the old connector has been removed, take the new connector being careful of the above, and position it on the ribbon cable. Solder the new connector in place. Again; be very careful not to use too much heat so that the cable does not become dam

RE-ASSEMBLE THE CARTRIDGE



1. Place the connector in its slot on the outside of the cartridge, make sure the tabs lock it back in place.
2. Place the Top Cover Back on the Waste Chamber. Make sure to line up the holes in the cover with the rivet shafts so that nothing gets damaged, and the cover lies flat.
3. Using the 11/64" drill bit drill a small hole in each of the 6 rivets. Take 6 self tapping screws and secure the Top Cover down. If your cartridge uses the Torx screws, replace them now.
4. Coat the OPC Drum with DPP (Zinc Sterate), and carefully place in the cartridge.

NOTE: If you have an extremely old cartridge, the gears are not the same as the new replacement drum, and will not fit into the cartridge. In order for the new drum to fit, the small clear plastic spacer by the drum axle must be filed down. File off a small amount at a time until the replacement drum fits securely.

NOTE: If you used method A to remove the drum, follow steps 5.5A- 5.7A. For Method B follow steps 5.5B-5.7B

Method A

With the back end of the cartridge facing you as before, take the drum and look inside the Non-gear end. The metal contact you see is the drum ground contact. The shaft must go past this contact and at the same time touch it.

Place the drum in the cartridge so that the drum ground contact is on top, and the geared side of the cartridge is facing the rear. Slowly slide the blunt end of the shaft into the rear of the cartridge. Lift up the front end of the drum so that you can get the axle past it without bending it.

Once past the contact, locate the axle hole in the front cover, and tap the axle in place.

End Method A

Method B:

Take the Metal Plate Assembly, and re-insert it onto the end of the cartridge .

Take the End Cap/Drum Axle assembly and re-install it on the cartridge. Make sure the End Cap aligns properly with the Metal Plate, and that the Drum Axle goes all the way through the OPC Drum.

Take the remaining four screws, and insert them in the holes you previously drilled. Remember if you partially drilled through the side of the recessed hole, you can use a #6 flat washer to repair it.

End Method B

5. Turn the drum manually towards the Picker Finger to make sure it turns freely. If not take the drum out and re-coat it with the DPP.
6. If you are going to test the cartridge, Keep in mind that the fuses will blow at 100 pages. It is best to keep your testing to a minimum.
7. Take the protective cover that the new OPC Drum came in and tape it over the exposed drum area. If you are re-using the OEM Drum, use the protective cover from another type of drum. When packaging the cartridge, make certain that the connector end of the cartridge is protected!
8. Store in a light-proof foil bag.
9. Pack the cartridge carefully, if you do not have the original packing materials, wrap the entire cartridge in bubble wrap to protect it from damage. Again, make sure the connector end is adequately protected.

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RECOMMENDED SUPPLIES



[Microsoft][ODBC Microsoft Access Driver]General error Unable to open registry key 'Temporary (volatile) Jet DSN for process 0x698 Thread 0xe4c DBC 0x97a3ff4 Jet'.

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