

TECHNICAL DOCUMENT

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Brother HL-630 OPC Cartridge DI

DOC-0178

OVERVIEW



These instructions cover the recycling of the Brother 630 OPC cartridge used in laser printers, and fax machines that use the Brother 630 laser engine. The OPC cartridge is rated for approximately 15,000 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,(Drum-630), and Wiper Blade (WB-630). 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.

Background shading vertically down the page is a major problem with these cartridges. Shading is normally caused by two items; the wiper blade, or the developer. If your customer was experiencing shading before the cartridge was removed, we recommend that the wiper blade be replaced, and the cartridge tested before continuing with the rest of the procedure. If the cartridge prints normally, the rest of the cartridge should be recycled. If the shading continued, the developer is probably bad, and the cartridge is good for parts only. No new developer is currently available. Keep in mind that if the drum is bad, you will get horizontal shading 3x across the page. The developer will cause vertical shading. Changing the wiper blade is a very simple task, and will only take a minute or two.

REQUIRED TOOLS



1. Phillips head screw driver.
2. Jewelers screwdriver
3. Spring Hook
4. Small Common screw driver
5. Hammer
6. 12" Long 1/8" thick metal rod
7. Vacuum approved for toner
8. 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/OmegaS 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.

SUPPLIES REQUIRED



1. Long Life OPC Drum
2. Wiper Blade
3. Emery Cloth or Fine grit sand paper
4. Cotton Swabs (CT-100)
5. Drum Padding Powder (DPP)
6. Isopropyl Alcohol (FR-8)
7. 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. 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. Place the cartridge upside down. remove the two Phillips head screws on the Primary Corona Wire Assembly.
 2. Locate the three tabs that hold the Corona Wire Assembly in place. Carefully pry them loose with a jewelers screwdriver and remove the assembly.
 3. Remove the two Phillips head screws located on the front of the cartridge. Carefully pry the Wiper Blade away from the ends of the sealing foam. On some cartridges a small amount of glue is holding the foam to the blade.
 4. Vacuum clean the toner waste area. Be very careful not to damage the long spring!
 5. Take the new wiper blade and coat the edge with a small amount of padding powder. While holding the sealing foam in place, install the wiper blade and screws.
 6. Clean the Corona wire assemble with clean compressed air, and a lint free cotton swab dipped in 99% pure Isopropyl Alcohol.
 7. Install the Corona Wire Assembly. Make sure the three tabs are snapped in place, and install the two screws.
- NOTE:** If you are not sure of the condition of the developer, test the cartridge before proceeding as detailed in the beginning of this instruction.
8. Hold the cartridge so that it is standing on the front edge. Remove the two small springs from the toner hopper. Note that there is a small amount of glue holding the springs on.
 9. Remove the two Phillips head screws from the Left end cap. Remove the End Cap by releasing the two small plastic clips
 10. Turn the cartridge over, and remove the two screws that hold the developer section in place.

11. Carefully remove the developer section, (located next to the two rollers), and place it next to the cartridge. Be careful not to damage the black plastic tube. This tube houses the other end of the long spring that acts as an auger to move the waste toner back into the developer section. We do not recommend that the developer section be completely removed from the cartridge.
12. Remove the transfer roller assembly by taking out the two screws, and pressing in on the two clips.
13. Remove the toner supply hopper. This can be difficult to remove. The easiest way is to lift the hopper up on the left side to about 45 degrees, lift up and slide out. This may take some force to accomplish.

CLEANING THE DEBRIS CAVITY



1. Pull the drum axle rod out from the cartridge until approximately 1 is left inside. With your other hand, remove the drum and drum drive gear (two separate items).
2. Remove the two washers from the drum axle, and remove the axle.

NOTE: We do not recommend that the OEM drum be re-used. The OEM drum will not last another full cycle.

3. Carefully clean out any remaining toner from the cartridge. Be very careful not to damage the long spring!

NOTE: Be very careful not to bend or otherwise damage the small thin recovery blade located next to the auger spring 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 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. Clean the drum Axle with alcohol, and slide in to the cartridge about 1. Install the two washers. Make sure that the smaller metal washer will be against the drum gear.
2. 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.
3. 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.

4. 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.

5. Once the glue has dried, (approximately 5 minutes). Coat the NEW OPC Drum with DPP (Zinc Sterate).
6. Slide the Drum Axle into the drum, through the Drive Gear, and into a hole in the side of the cartridge.
7. Make sure that the drum ground contact inside the drum is making good contact with the axle and that it was not bent out of the way when the axle was installed.
8. Install the transfer Roller Assembly, and the two screws.
9. Install the Toner Hopper section by dropping it in at an angle, and sliding it in.
10. Carefully install the Developer Section, and two screws. Make sure that the black plastic tube is aligned correctly.
11. Install the End Cap and two screws. Make sure the two clips snap in place.
12. Take a spring hook tool and install the two springs on the toner hopper.

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



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 0x1c78 Thread 0x300c DBC 0x21ae434 Jet'.

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