

CANON® IMAGECLASS MF7200 SERIES • EP 105 TONER CARTRIDGE REMANUFACTURING INSTRUCTIONS



CANON EP 105 TONER CARTRIDGE

REMANUFACTURING THE CANON EP 105 TONER CARTRIDGE

By Mike Josiah and the Technical Staff at UniNet

First released in September 2006, the Canon imageCLASS MF7200 series of printers are based on a 1200 dpi, 20 ppm Canon engine. They are true multifunction machines, in that they are a duplex copier, laser printer, color network scanner, Super G3 fax, and are network capable. These machines also print on up to 11 x 17 inch (tabloid) paper, have a touch screen interface, come standard with 256 Mb of memory, have a 50-sheet ADF (automatic document feeder), and have a first-page out at less than 7.9 seconds.

The cartridge for the MF7200 series is the EP 105 (0265B001AA) and is rated for 10,000 pages. The cartridge is unique in its design, and as of June 2007, there is no comparable HP cartridge. Testing is ongoing to determine what parts are needed, or available to remanufacture these cartridges. As with most Canon cartridges they do NOT use a chip.



The image on the **left** shows the potential location for a chip, and possibly a different plastic configuration for other manufacturers. However no chips are used on the EP 105 version and we have not seen any other manufacturers use this cartridge yet.

The image on the **right** shows the cartridge as removed from the box. Note the many shipping lock and tape seals. This cartridge even comes with a bag of desiccant (drying agent) attached!

This cartridge has a list price of \$388.00 USD* but so far has a street price of about \$205.00 USD*.

***Pricing as of June 2007, in U.S. American Dollars.**

So far, the only machine based on the MF7200 engine is the imageCLASS MF7280.

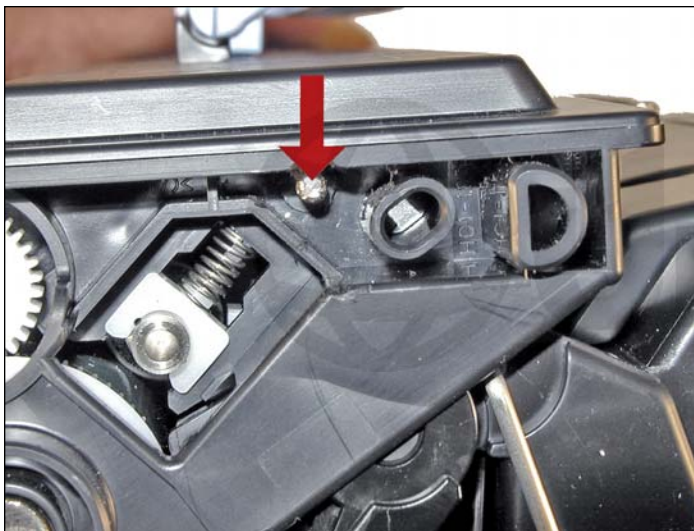
Printing test pages, cartridge troubleshooting as well as some simple machine troubleshooting is covered at the end of this article. The theory for these cartridges is the same as most of the other HP/Canon monochrome cartridges, so we will not include them here.

REQUIRED TOOLS

1. Toner approved vacuum
2. A small common screwdriver
3. A Phillips head screwdriver
4. Needle nose pliers
5. Flush cutting wire cutters

REQUIRED SUPPLIES

1. Toner (500 grams) for use in the Canon EP 105 cartridge
2. New OPC drum
3. New wiper blade
4. New PCR (optional)
5. New magnetic roller (optional)
6. New doctor blade (optional)
7. 99% isopropyl alcohol
8. Magnetic roller cleaner
9. Drum lubricant
10. Conductive grease
11. White lithium grease



1. Note on each end of the cartridge there are small silver pins. To separate the two halves, these pins must be removed. There is no need to cut through the top of the cartridges to remove the pins. With a Dremmel tool or wire cutters, cut away the plastic from around the pins and remove the pins.



2. Separate the two halves.



3. On the large gear side, remove the drum alignment plate and screw.



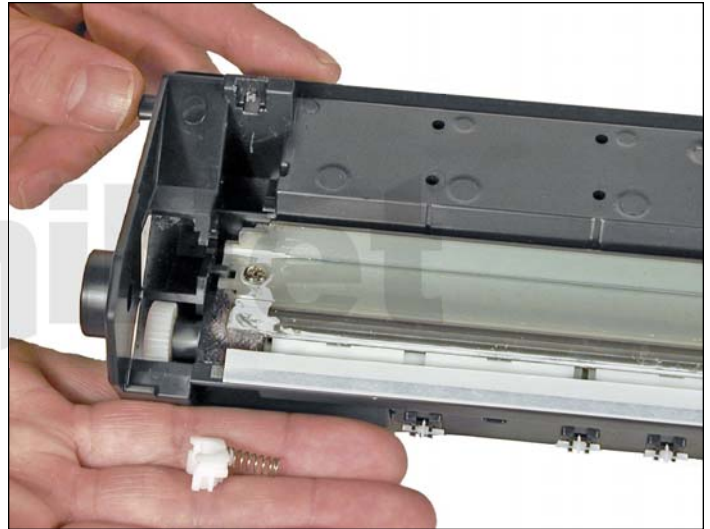
4. On the small gear side, remove the metal axle pin with wire cutters. The pin comes out easily, and there are already two notches in the plastic that allow the wire cutters access.



5. Remove the photoconductive drum, and place aside.



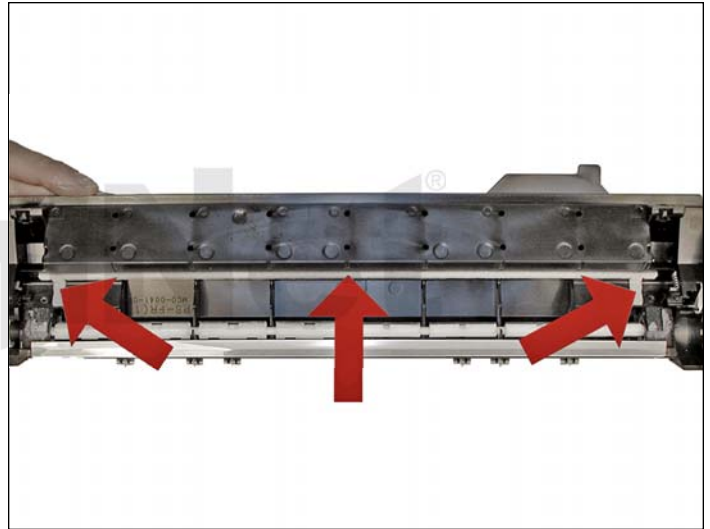
6. Remove the primary charge roller (PCR), by prying it out of the clips on either end. Clean the PCR with your preferred cleaner and place the aside.



7. Remove the white PCR holder by carefully prying it off the cartridge. This holder must be removed to allow the wiper blade to be removed.



8. Remove the wiper blade and two screws. **NOTE:** Be very careful not to damage or distort the thin mylar recovery blade, next to the wiper blade. If this blade is bent or damaged in any way, it should be replaced.

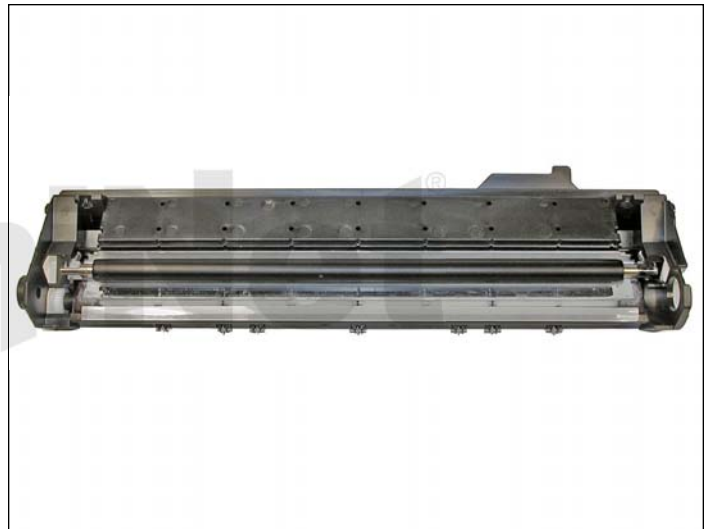
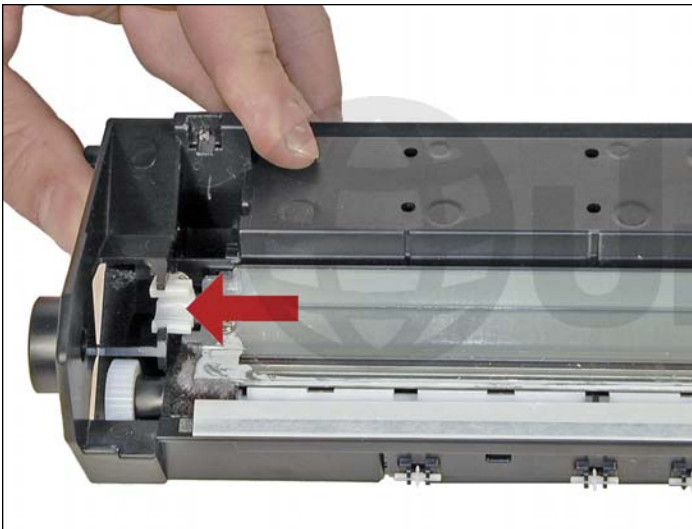


9. Clean out any remaining waste toner. Make sure the foam seals under the wiper blade are clean and not damaged.



10. Lightly coat the new blade with your preferred lubricant.

Install the wiper blade and two screws into the cartridge.



11. Install the white PCR holder and spring.

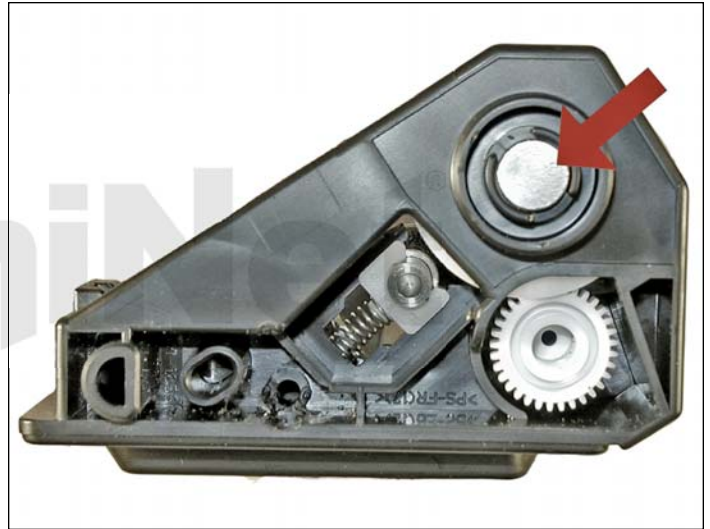
Clean both of the PCR holders, and place a small amount of conductive grease on the black side.

Install the PCR.

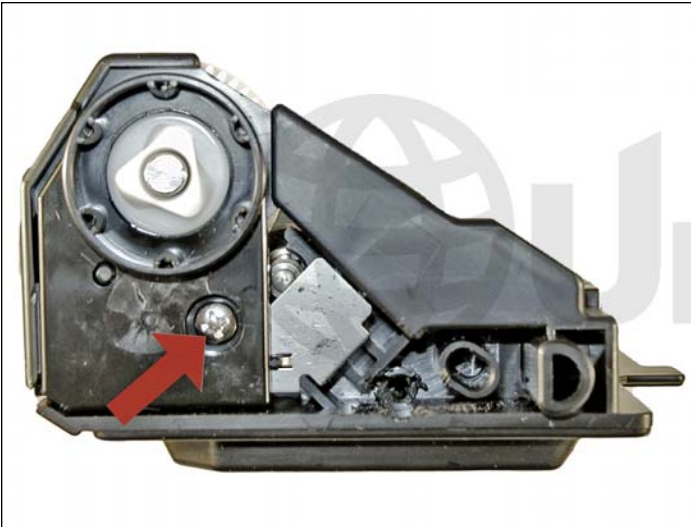


12. Coat the drum with your preferred lubricant.

Install the drum.



13. Replace the metal drum axle pin, and install it on the cartridge.



14. Install the plastic drum alignment plate and screw.

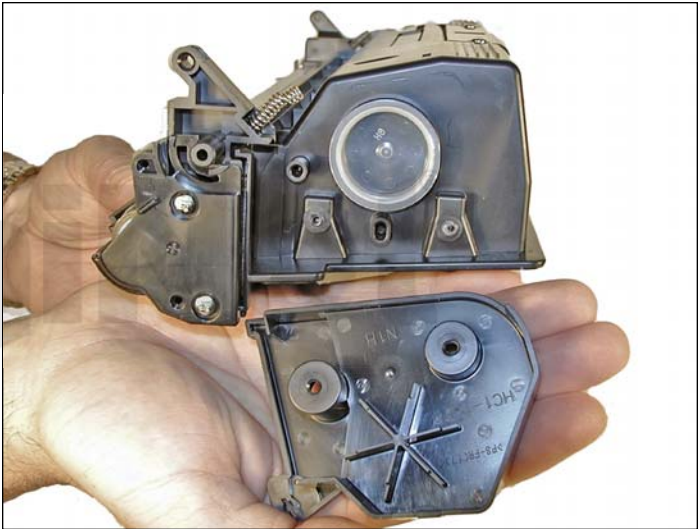
Place the waste chamber aside.



15. Remove the drum cover by prying up the metal bar on each side of the toner hopper.

Pry off the spring-loaded arm.

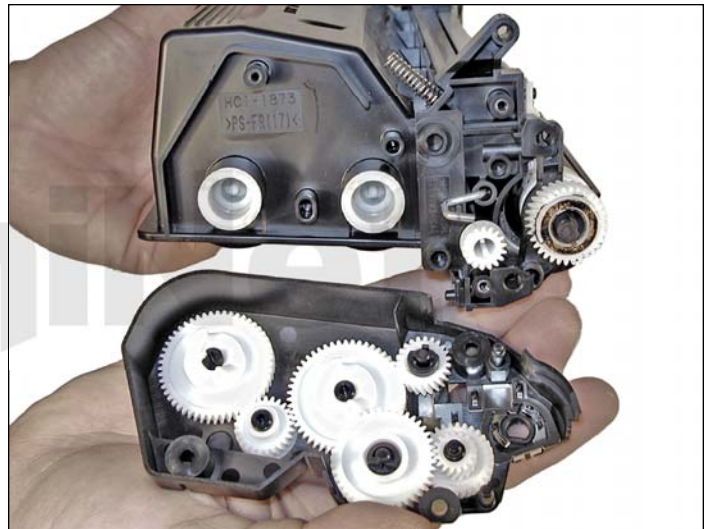
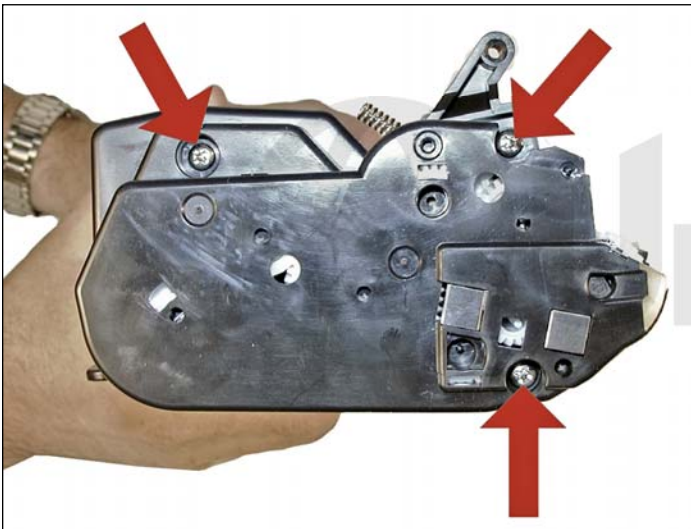
Be careful not to lose the spring!



16. Take the supply section on the plastic end cap that is held on with plastic rivets.

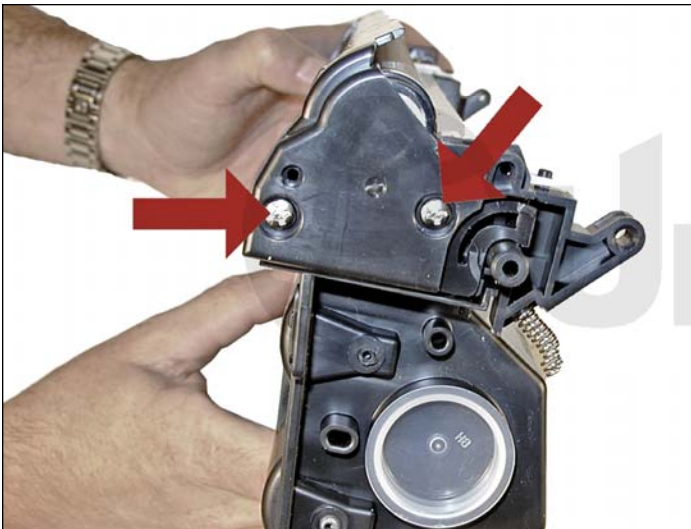
Using a common screwdriver, snap the rivets off.

Remove the end cap.



17. Remove the three screws on the large gear side end cap. Remove the end cap.

Note that most of the gear train will come with it. The gears themselves will not fall off.



18. Remove the two screws from the left-side (non-gear side) small end cap.



19. Remove the magnetic roller assembly from the cartridge.



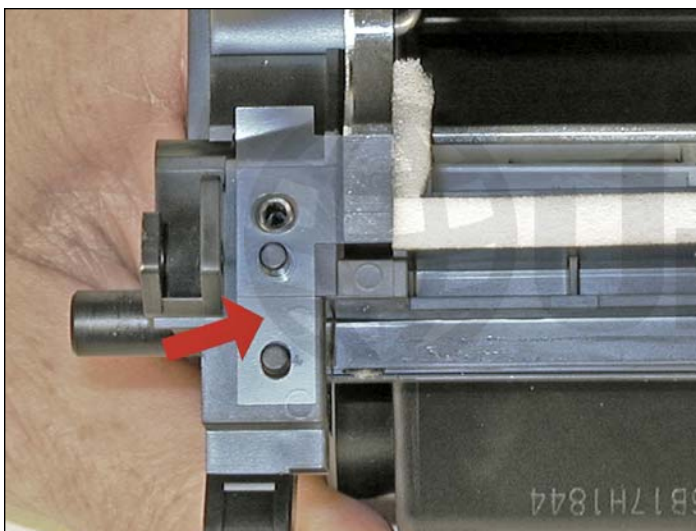
20. Remove the magnetic roller drive gear and copper contact plate, so they do not get lost.



21. Remove the two screws and doctor blade.

Pry the bar up, being very careful not to break the alignment pins.

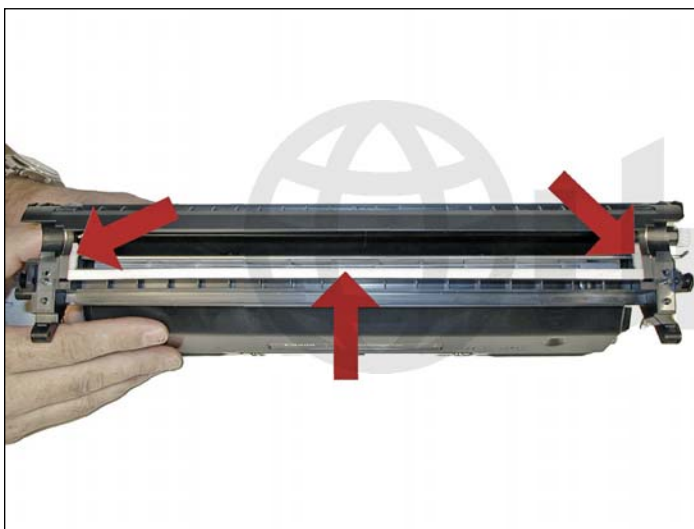
Note the screws used here are of a darker color, and are longer than other screws in this cartridge.



22. Clean out any remaining toner.

Be very careful not to lose the clear doctor blade shims!

If a seal is available, install it now.



23. Make sure the doctor blade seals are clean.

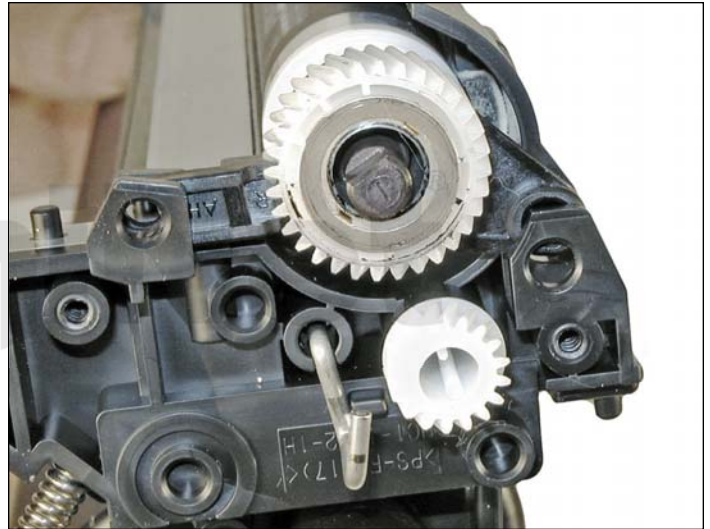
Install the doctor blade and two screws (be sure to use the darker colored screws).



24. Clean the magnetic roller contact plate that you removed earlier from the drive gear. Clean the magnetic roller sleeve with a dedicated magnetic roller cleaner.



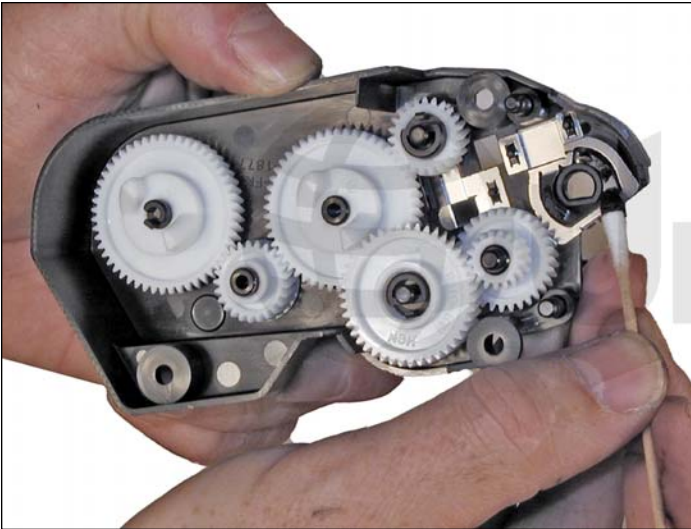
25. Install the magnetic roller drive gear and copper contact plate onto the magnetic roller assembly. Make sure the contact fits tight!



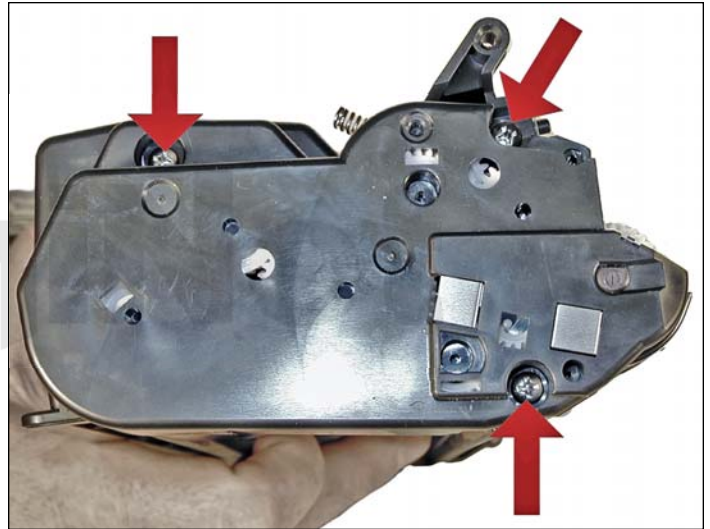
26. Install the magnetic roller assembly.

Set the bearings so they fit into their respective slots.

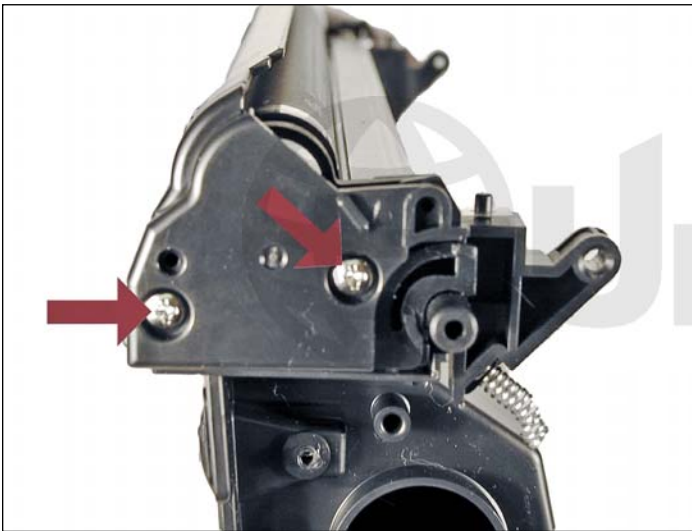
Replace the conductive grease on the contact plate.



27. Clean the contacts on the gear end cap, and replace the conductive grease.



28. Install the gear end cap and three screws. If the end cap does not fit, the stationary magnet needs to be turned, so that it fits properly.



29. Install the small end cap and two screws.



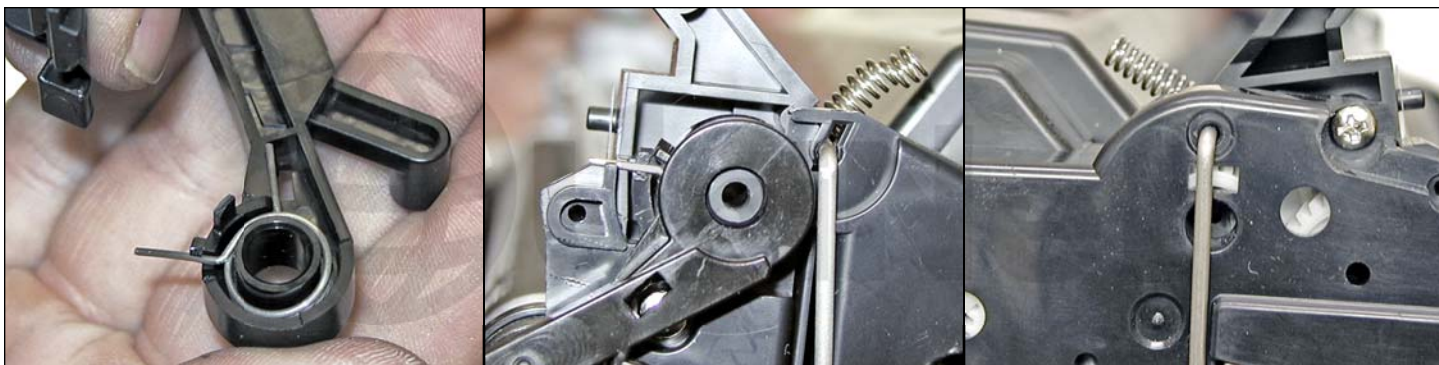
30. Fill the toner hopper with 500 grams of toner for use in the Canon EP 105 cartridge. Replace the fill plug.



31. While holding the remaining end cap in place, drill two small shallow holes into where the plastic pins once were.

Install two screws to hold the end cap in place.

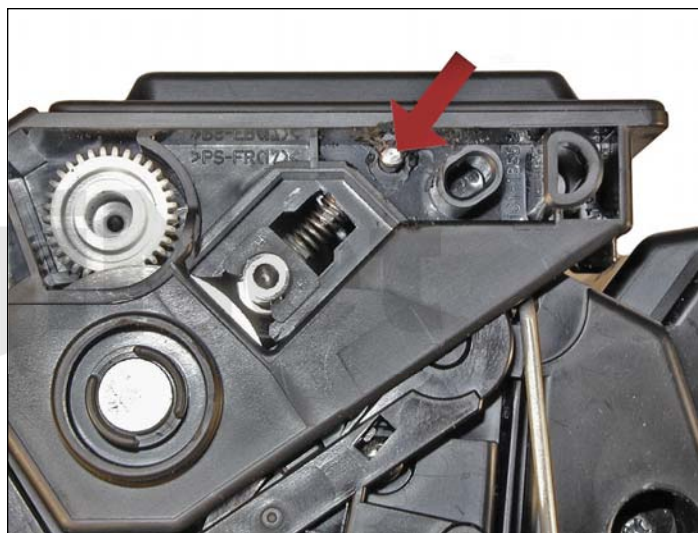




32. Set the spring on the drum cover arm as shown.

Install each end of the metal bar into its proper holes.

Snap the arm into place. Make sure the spring-loaded arm is set correctly.



33. Place the two halves together.

Make sure the springs are set, and install the two pins.

PRINTING TEST PRINTS

As this is a copier, the simplest way to make a test print is to just take a good test sheet and make a copy.

REPETITIVE DEFECT CHART

Drum:	95 mm
Magnetic roller:	63 mm
PCR:	45 mm

PRINTER TROUBLESHOOTING

While most of the error messages are text-oriented and fairly specific, there are a few that are numbered only. We are listing some of the more common ones here:

001:	Paper jam
009:	No paper
037:	Memory full

CHANGING THE DENSITY

1. Press ADDITIONAL FUNCTIONS, then ADJUSTMENT/CLEANING.
2. Press the up or down arrow until SPECIAL MODE M appears on the display.
3. Press SPECIAL MODE M.
4. Select NORMAL, LOW, or HIGH.
5. The mode is set.
6. Press DONE repeatedly until the BASIC FEATURES screen appears.