

# XEROX® PHASER 3600

## TONER CARTRIDGE REMANUFACTURING INSTRUCTIONS



XEROX® PHASER 3600 TONER CARTRIDGE

# REMANUFACTURING THE XEROX PHASER 3600 TONER CARTRIDGE

By Mike Josiah and the Technical Staff at UniNet

The Xerox Phaser 3600 printers are based on a Xerox 40 ppm, 1200 dpi engine. The time for first-page out is nine seconds or less and all versions have a 400Mhz processor. They are fairly heavy duty machines in that they all have a monthly duty cycle of 200,000 pages.

## MACHINES BASED ON THE PHASER 3600 ENGINE

**Phaser 3600B**

**Phaser 3600N**

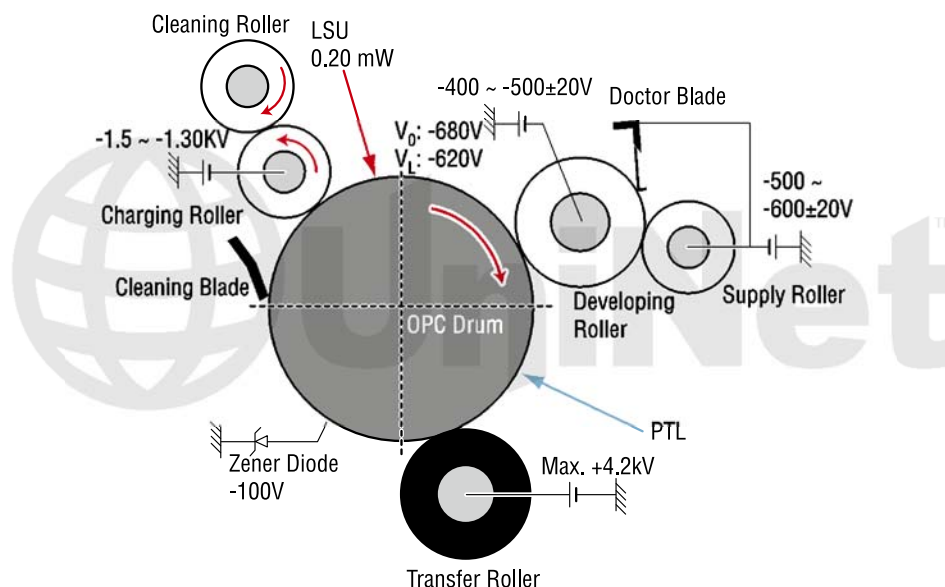
**Phaser 3600DN**

This is one of those cartridges that can be tricky in that they have to be taken apart and put back together in a certain way. If they are not, the cartridge will at some point fall apart with parts coming out all over, and you will be left wondering where they are supposed to go. Trust me.

There are two cartridges available for this series: the 106R01370 cartridges, rated for 7,000 pages at 5% coverage; and the 106R01371, rated for 14,000 pages. New printers all come standard with the low yield cartridge. The service manual also mentions two extra-high capacity cartridges. At the time I wrote this, I could not find mention of them anywhere else. They are both 20,000 page cartridges: part numbers 106R01372 and 106R01369 for a metered/page-pack cartridge. The metered cartridge is used for Xerox's cost-per-page program.

In addition to an adhesive sealing strip, these cartridges also use a shipping lock. This lock keeps the developer roller away from the drum and helps prevent the developer roller from getting a flat spot during storage. It is very important that the shipping lock be installed when shipping, and it is also a good idea to store your cores with the lock in place. As with all Xerox cartridges these days, there is a chip that must be replaced each cycle.

The diagram shown below is an overview of how the cartridge works. It is a basic monochrome printing system, but there is the addition of a PCR cleaning roller. This roller has a relatively high voltage on it (-1500 to -1300VDC). The roller uses that voltage to attract any toner buildup from the PCR. The rest of the diagram is useful if you have ever wondered what voltages were placed on particular parts inside a cartridge as it prints:



**REQUIRED TOOLS**

1. Toner approved vacuum
2. A small common screwdriver
3. Phillips head screwdriver (#1)
4. Needle nose pliers
5. Spring hook

**REQUIRED SUPPLIES**

1. Xerox 3600 toner
2. Replacement chip (make sure you have the correct yield chip for your cartridge)
3. New wiper blade
4. New doctor blade
5. New OPC drum
6. Sealing strip
7. Shipping lock
8. Drum lubricant
9. PCR cleaner
10. Conductive grease



1. Remove the shipping lock (if you keep your cores stored that way). Place the cartridge with the handle facing up and close to you (the waste is away from you).

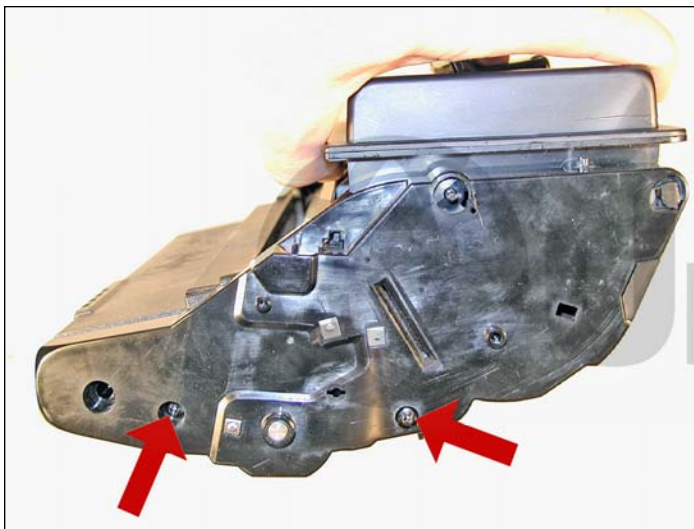


2. On the right side remove the drum cover arm.



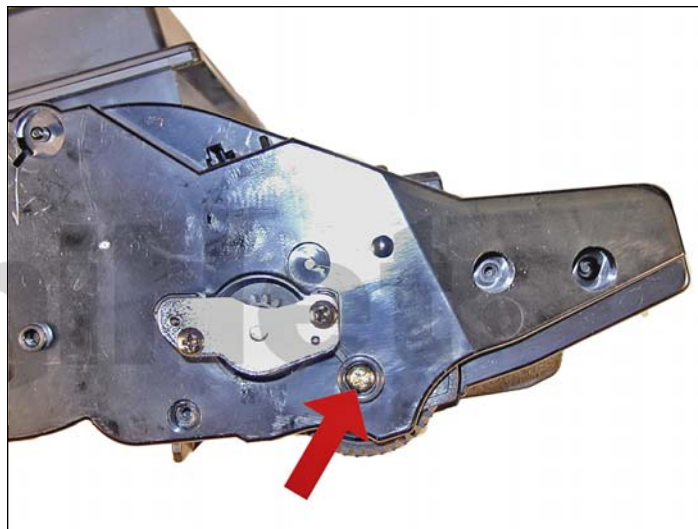
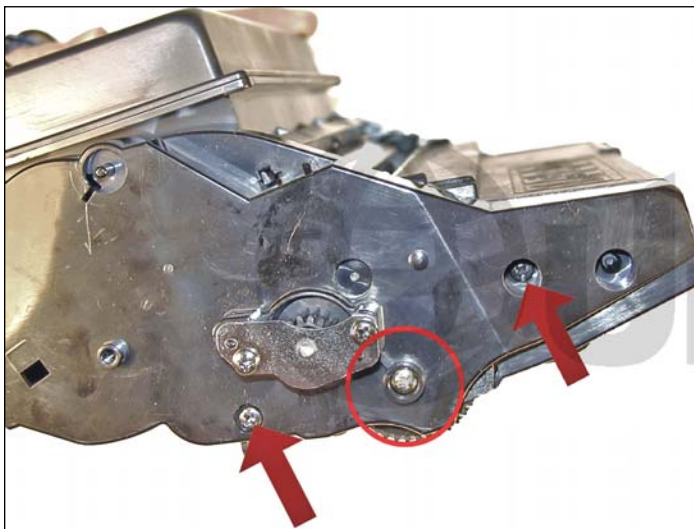
3. Remove the same from the left side.

Remove the drum cover.



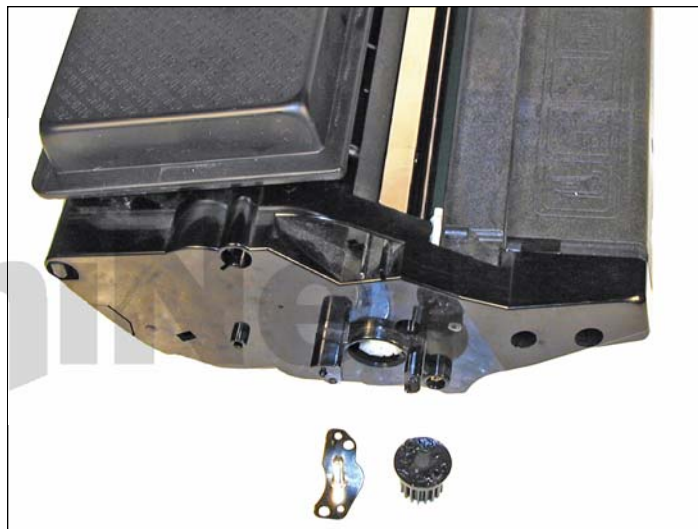
4. Remove the two screws on the left end cap.





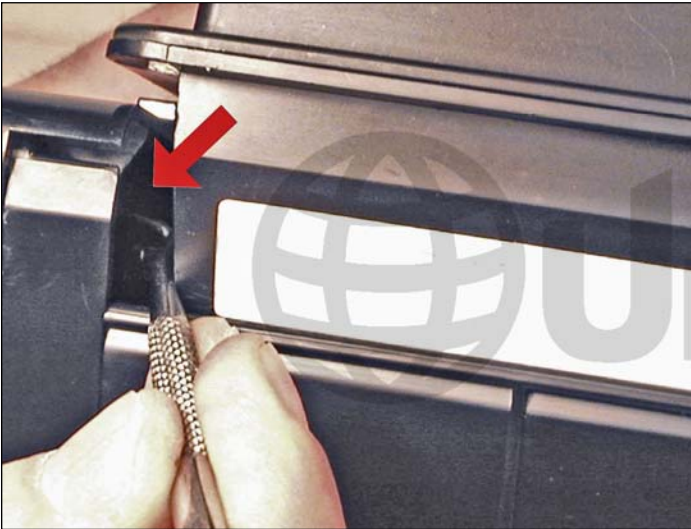
5. Remove the two black screws from the right side end cap.

Do not remove the silver screw.



6. Remove the two screws on the metal plate.

Remove the plate and gear.



7. Using a spring hook remove the two springs from the back of the toner hopper. One on the left and one on the right side, about one inch from the back edge.



8. Carefully rock the left side end cap until it becomes free from the cartridge frame. Turn the back edge up so it becomes free from the hopper. The spring and possibly a small gear will fall from the cartridge. The installation of both parts will be shown later.

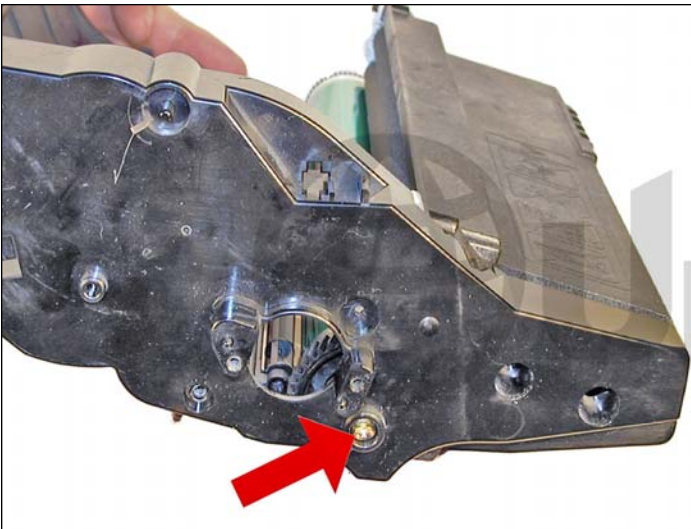




9. Slide the metal rod located above the developer roller away from the remaining end cap to free it from the end caps.



10. Remove the toner hopper from the frame.



11. On the waste hopper, remove the gold colored screw from the drum axle. Work the waste section away from the frame.



12. Remove the waste section from the frame.



13. On the waste section, remove the drum axle by pulling it out from the small straight gear side. Note the conductive grease on the large helical gear side of the axle.



14. Remove the drum.

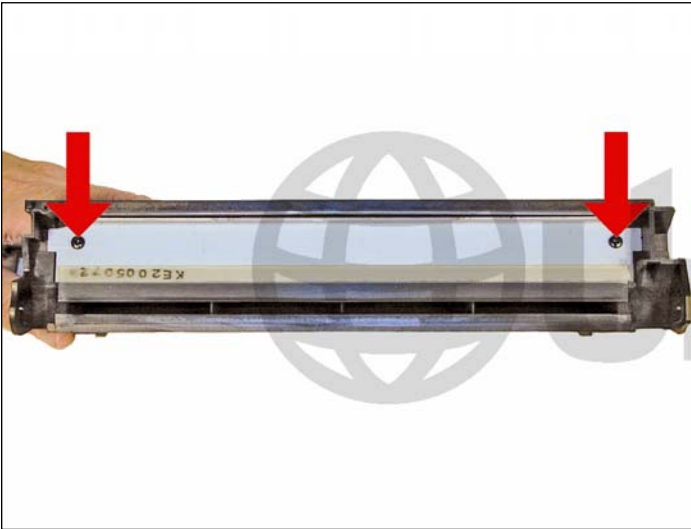


15. Remove the two screws on the PCR assembly.



16. Pry up the white plastic holders and remove the PCR assembly.





17. Remove the two screws on the wiper blade.

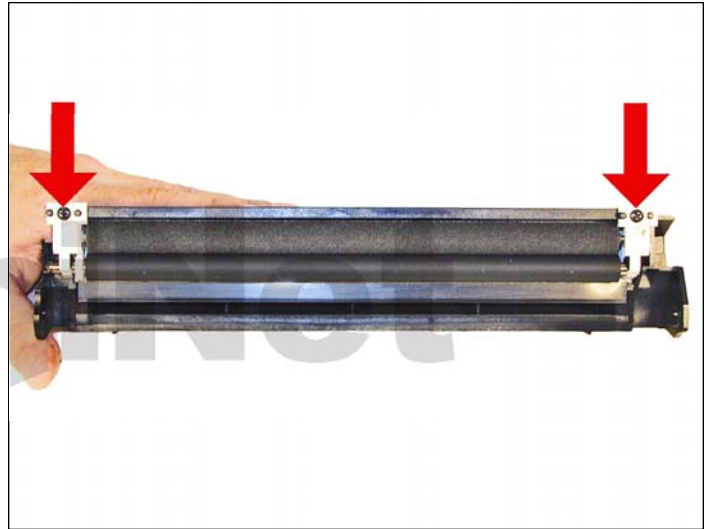
Remove the blade. Clean out all the waste toner.



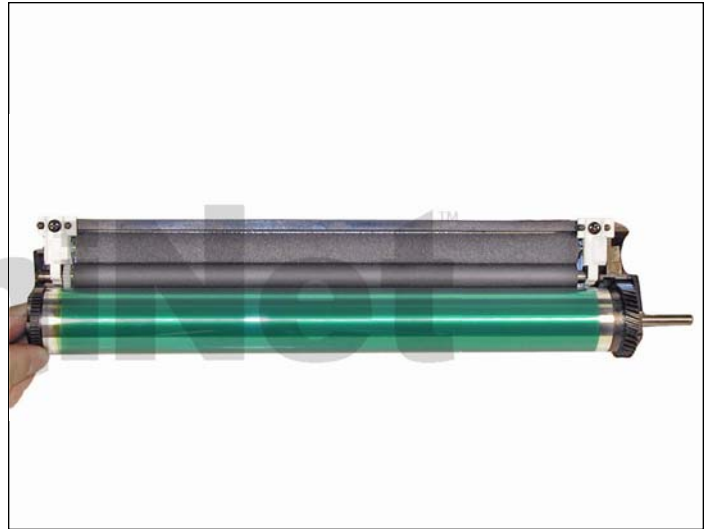
18. Install the new wiper blade and two screws.



19. Slide the holders off the PCR assembly and clean the PCR with your preferred PCR cleaner. Blow off the PCR cleaning roller as well.



20. Re-assemble the PCR assembly and install it in the waste hopper. Install the two screws. Make sure it is not upside down!



21. Install the drum and drum axle (large gear to the non-gear side of the PCR).

Slide the drum axle through the large gear side. Keep the conductive grease to the large gear side.

Place the waste hopper aside.



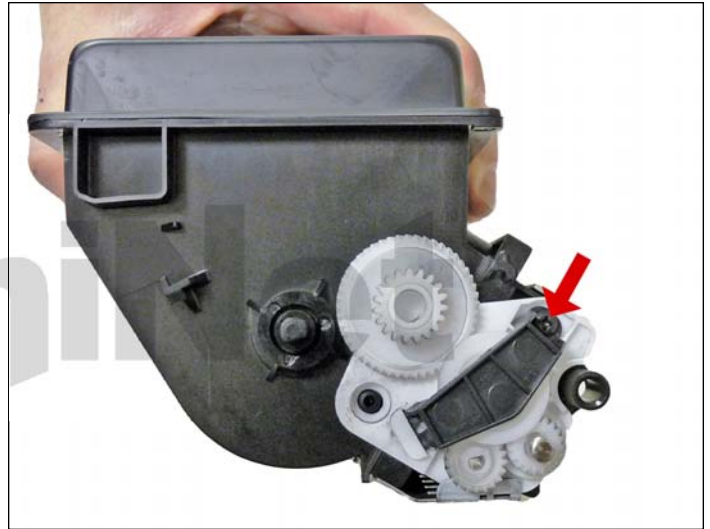
22. On the toner hopper, remove the large black gear and small white gear from the developer roller shaft.



23. Slide out the metal bar.



24. Remove the fill plug and dump out all remaining toner from the hopper. Vacuum clean.



25. Remove the screw from the gear holder.

Remove the holder.

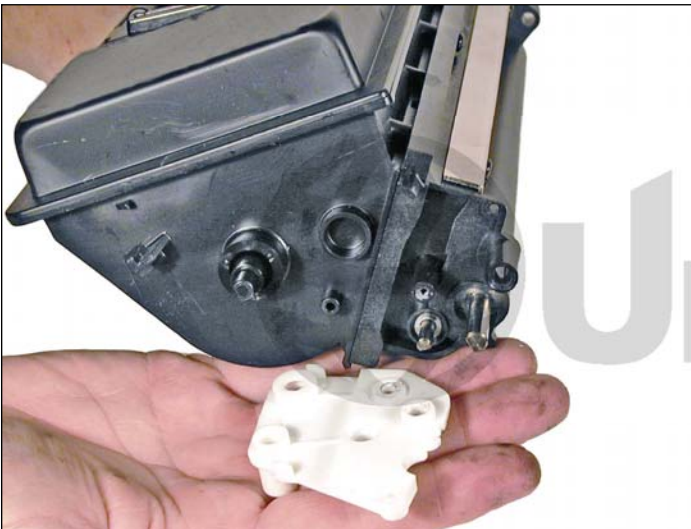


26. Remove the remaining four gears and the bearing.

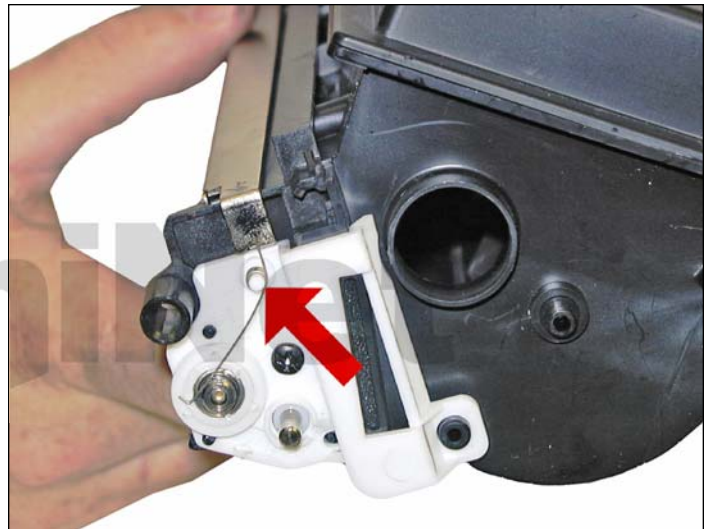


27. Remove the bottom metal plate.

Carefully pry it off the locking tabs located one on each side, and one in the middle of the hopper.

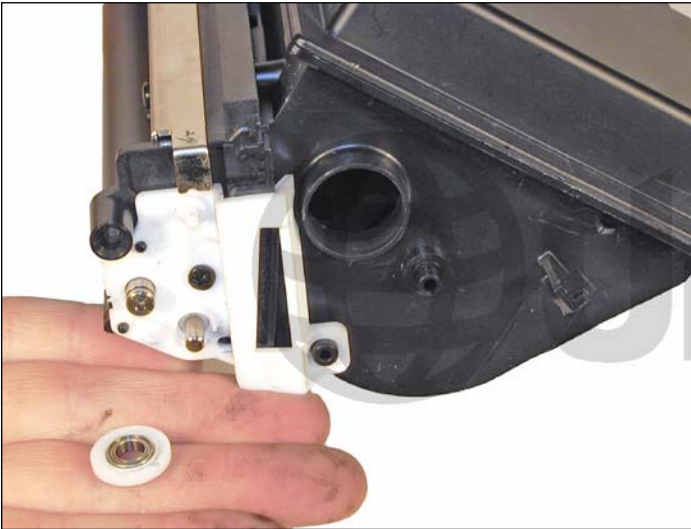


28. Remove the white plastic end cap.



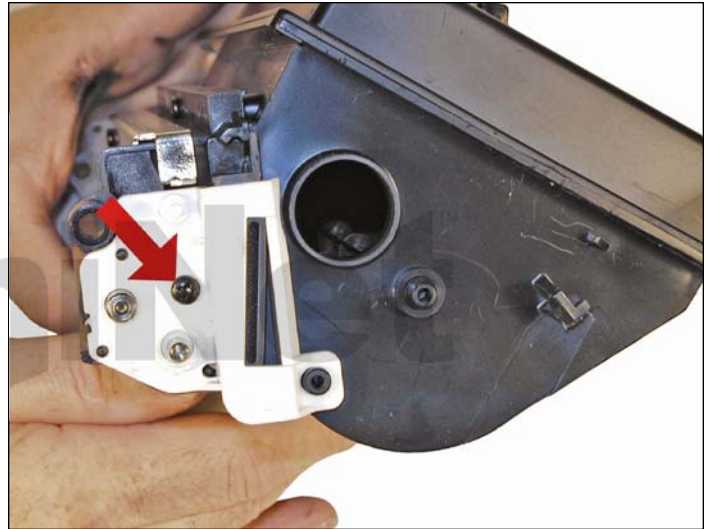
29. On the opposite side of the hopper, release and remove the small spring.





30. Remove the bearing.

**Note:** this bearing can be hard to remove! Carefully pry it off.



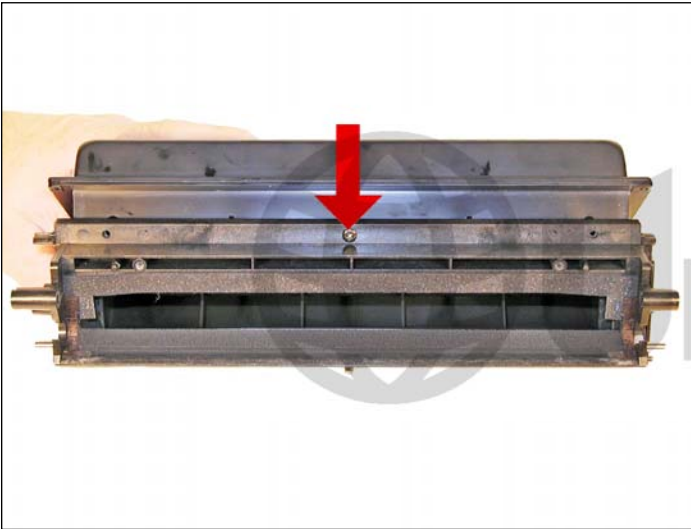
31. Remove the screw and the white plastic alignment plate.



32 Remove the developer roller.



33. Remove the two screws and the doctor blade.



34. Remove the center screw from the toner hopper.

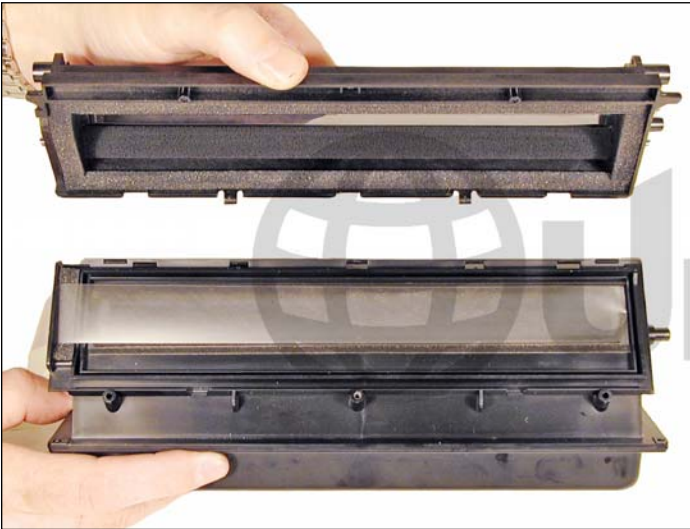
The top half of the developer roller assembly will now come free.



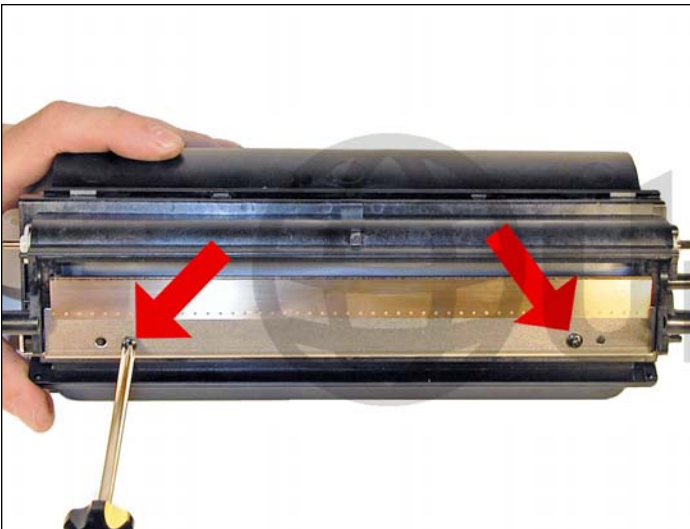
35. Clean out any remaining toner from both halves of the assembly. Make sure the foam seals are clean. Also, if the supply roller is worn, it can now be easily replaced.



36. Install the seal fold over the pull-tab so it sits over the foam edge seal. Slide the tab through the slot.

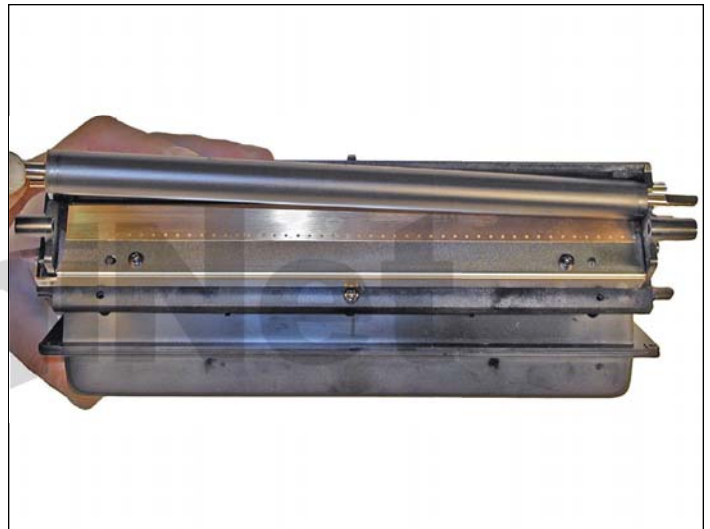


37. Slide the seal tab out the slot of the top cover. Set the three plastic tabs into their slots and rotate the top cover down into place. Install the screw. Make sure the cover locks into place! Check the seam on the end of the hopper to be sure.



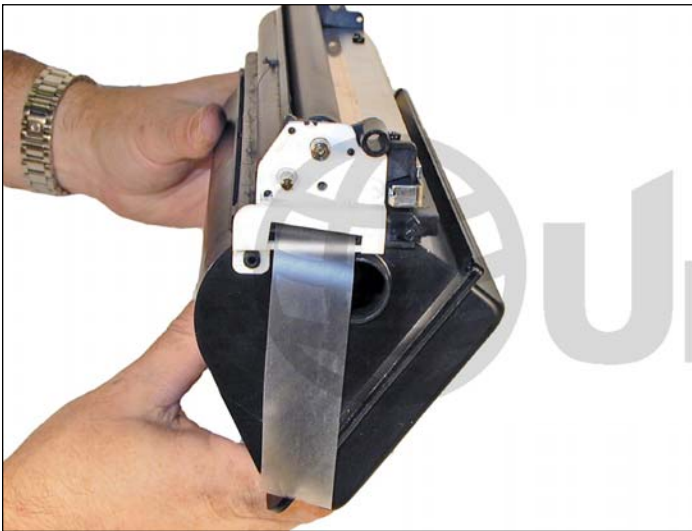
38. Clean or replace the doctor blade.

Install with the two screws into the hopper.

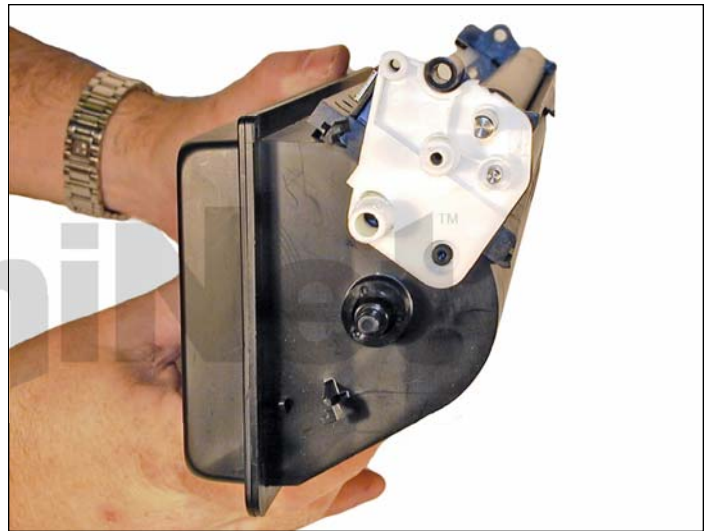


39. Install the developer roller (long shaft side) to the gear side of the hopper (non-fill plug side).

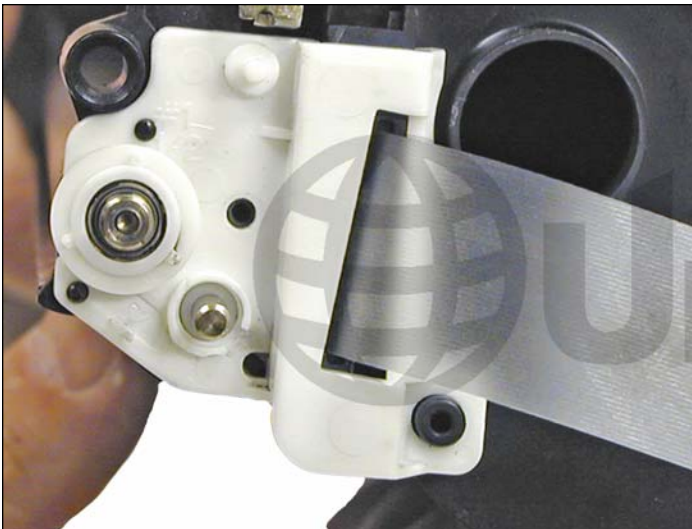




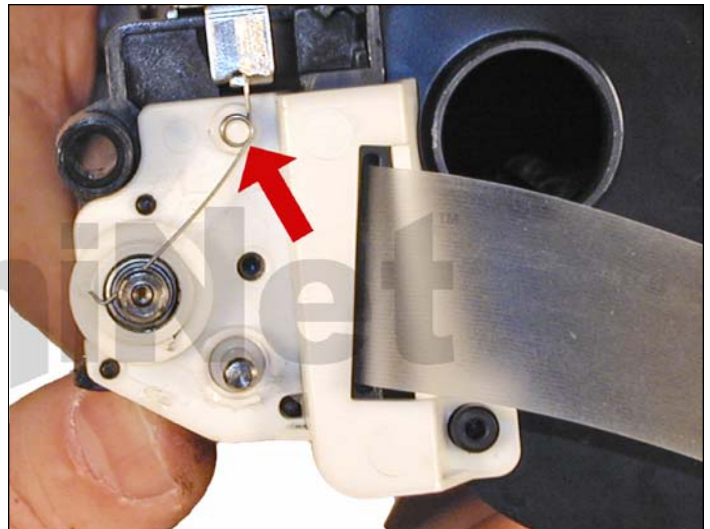
40. Install the white plastic alignment plate and the screw, on the fill plug side.



41. Install the white plastic alignment plate on the gear side.



42. Install the bearing onto the developer roller shaft of the fill plug side.

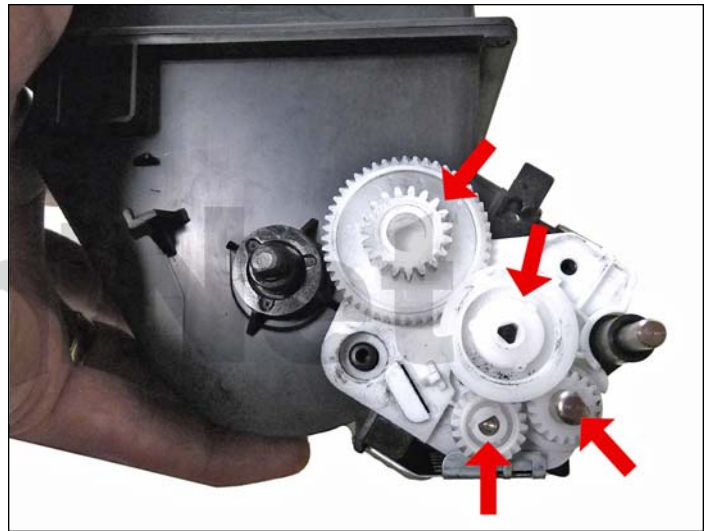


43. Install the small spring as shown onto the developer roller shaft.





44. Install the bearing onto the developer roller shaft (gear side of the hopper).



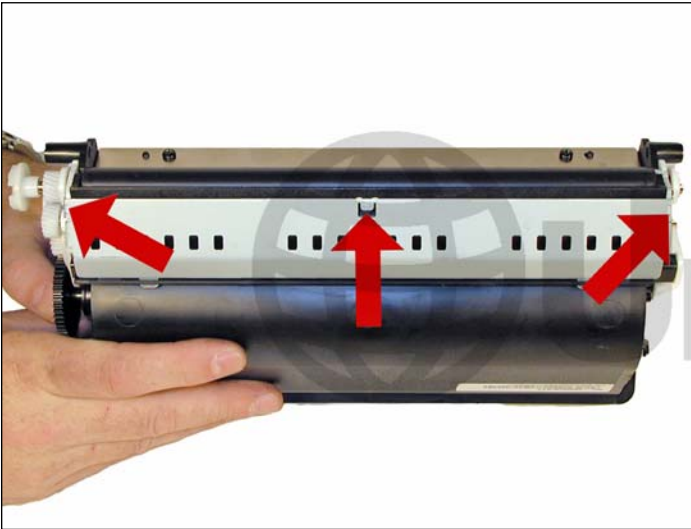
45. Install the four white gears as shown.



46. Install the gear holder and screw.



47. Install the large black gear and the small white drive gear.



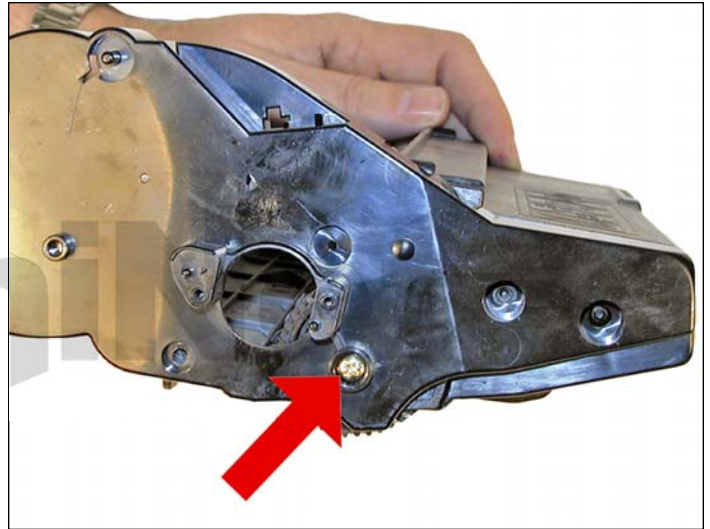
48. Install the bottom metal plate. Insert the three tabs first and rotate into place. Make sure all three locks snap into place (two sides and middle).



49. Fill the hopper with 3600 toner (330g for the 12k and 165g for the 6k). Replace the fill plug and check for leaks.

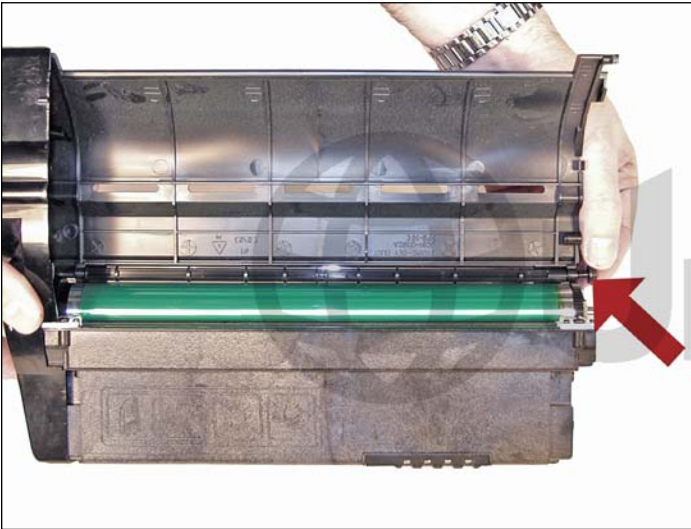


50. Install the waste chamber into the frame.

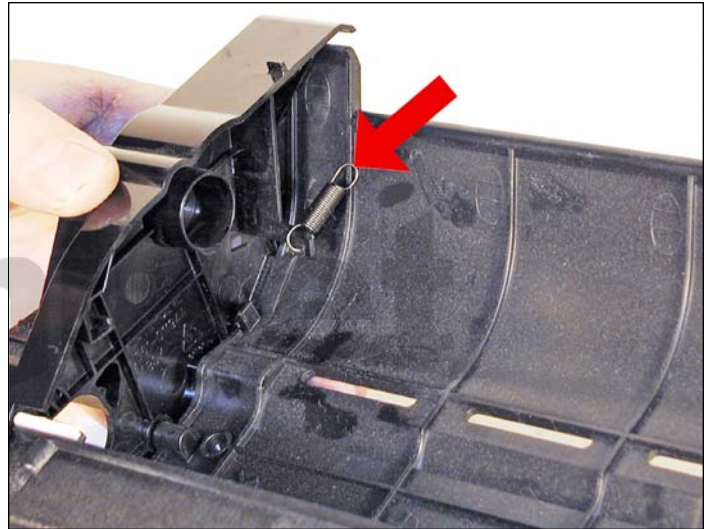


51. Install the gold screw into the drum axle.

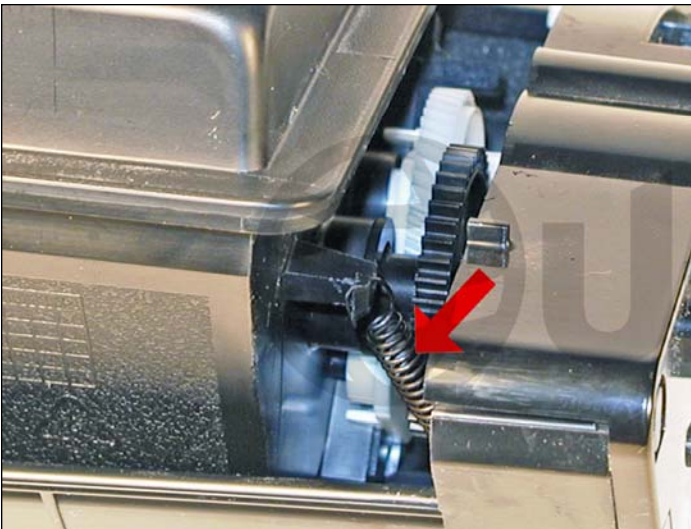




52. Make sure the small round black plastic rod is in place. Install the small drive gear (this was the gear that came loose when the end cap was removed).



53. Install the hopper spring onto the end cap.

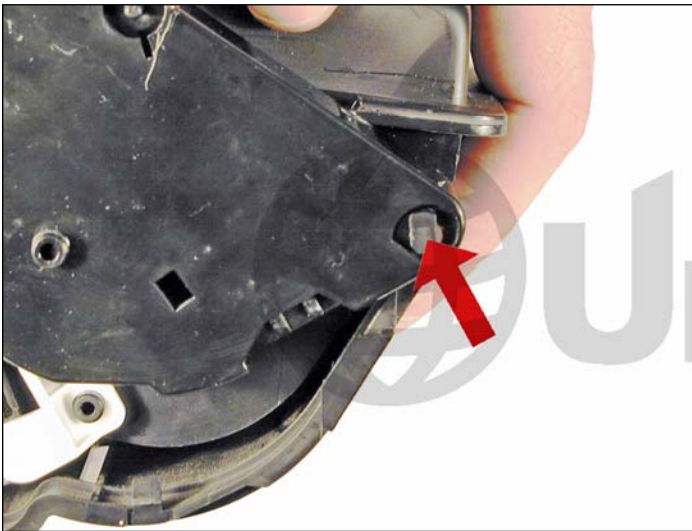


54. Place the hopper partially into the frame.

Hook the spring onto the hopper.



55. Partially install the metal rod on the toner hopper. Seat the hopper into the end cap and seal the metal rod. Make sure the rod is seated into its hole and the white drive gear is centered into the 1-inch hole.



56. Rotate the remaining end cap and partially install on the frame so that the rear tab locks into place.



57. Install the spring from the end cap to the hopper.

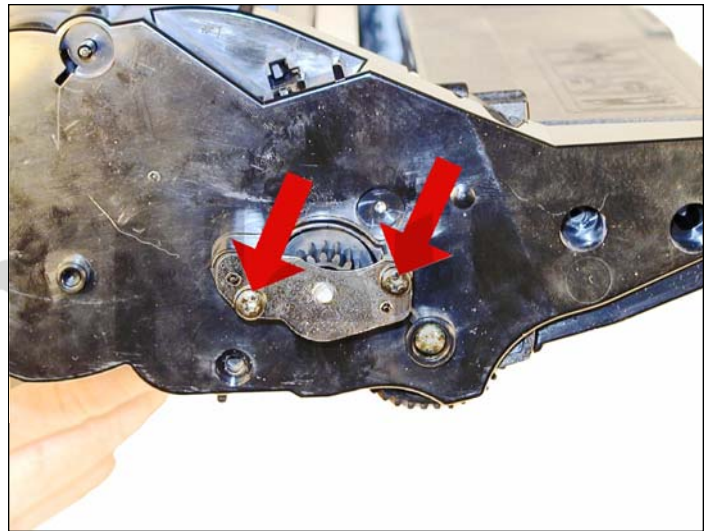


58. Pull the seal tab through the end cap seal slot.



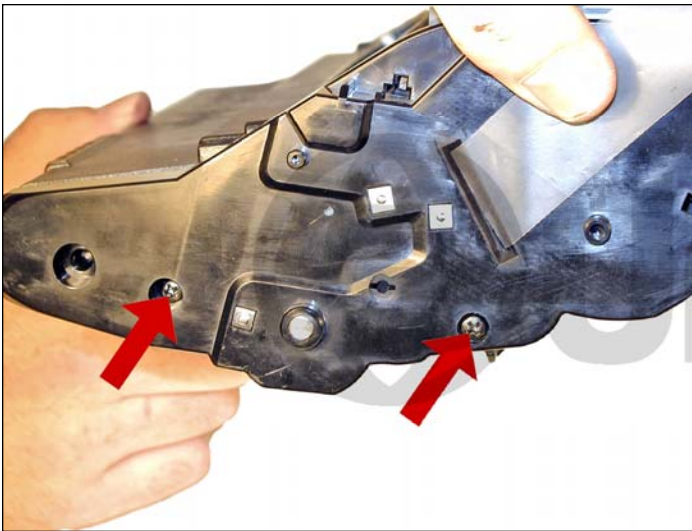
59. Align and snap the end cap into place.



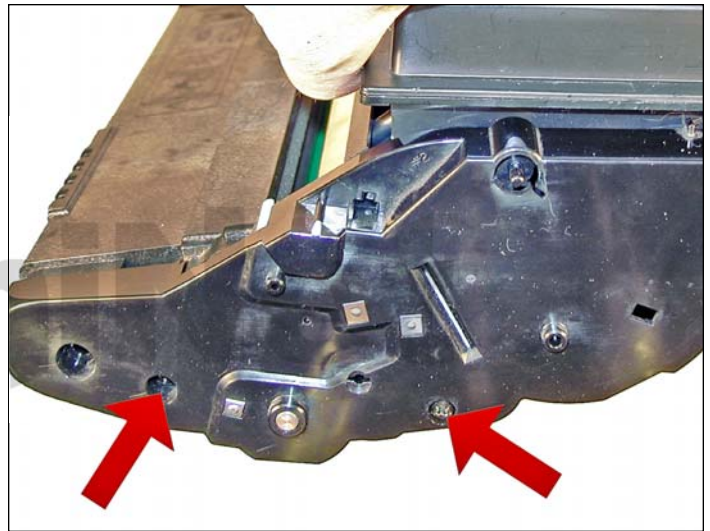


60. Install the drive gear, metal plate and two screws.

Make sure the tabs on the back of the black drive gear fit into the slots in the white drive gear.



61. Install the two screws into the left side end cap.



62. Install the two screws into the right side end cap.



63. Install the drum cover arms. Place the arm into place and rotate the tail of the springs so they fit into their respective slots.



64. Install the shipping lock.



65. Remove the screw and cover for the chip.

Replace the chip.

**REPETITIVE DEFECT CHART**

<b>PCR</b>	<b>38 mm</b>
<b>Developer roller</b>	<b>50 mm</b>
<b>Supply Roller</b>	<b>42 mm</b>
<b>Transfer Roller</b>	<b>56 mm</b>
<b>OPC Drum</b>	<b>94 mm</b>
<b>Upper Fuser Roller</b>	<b>126 mm (mark on the front of the page)</b>
<b>Lower Fuser Roller</b>	<b>126 mm (mark on the back of the page)</b>

**PRINTING TEST PAGES**

1. Press the MENU button until INFORMATION appears on the display.
  2. Press OK.
  3. Press the UP or DOWN arrow until the desired test page appears on the display.
- Some options are the INFORMATION page and DEMO page appear.

**RUNNING THE CARTRIDGE CLEANING PAGE**

1. With the printer at READY, press the MENU button and select SYSTEM SETUP>MAINTENANCE>CLEAN DRUM.
2. Select PRINT>YES.
3. The cleaning page will run.

**RUNNING THE FUSER CLEANING PAGE**

1. With the printer at READY, Press the MENU button and select SYSTEM SETUP>MAINTENANCE>CLEAN FUSER
2. Select PRINT>YES.
3. The fuser page will run.