

# LEXMARK™ C780

## CARTRIDGE REMANUFACTURING INSTRUCTIONS



LEXMARK C780 TONER CARTRIDGE

# REMANUFACTURING THE LEXMARK C780 BLACK & COLOR TONER CARTRIDGES

By Mike Josiah and the Technical Staff at UniNet

First released in April 2008, the Lexmark C780 is based on a color Lexmark 33-38ppm, 1200 dpi engine. In addition to using chips that must be replaced each cycle, the gears must also be positioned in a certain way or the machine will not reset. The proper gear settings will be covered later in the instructions. These cartridges are fairly easy to remanufacture and have a high retail cost, so they are very profitable to do!

## PRINTERS IN THIS SERIES

<b>C780n</b>	<b>C780dn</b>	<b>C780dtn</b>
<b>C782n</b>	<b>C782dn</b>	<b>C782dtn</b>

Lexmark, once again, almost has a full set of "return" and "non-return" cartridges.

I state almost as they do not have standard EHY (extra-high yield) cartridges for the C782, just the return versions:

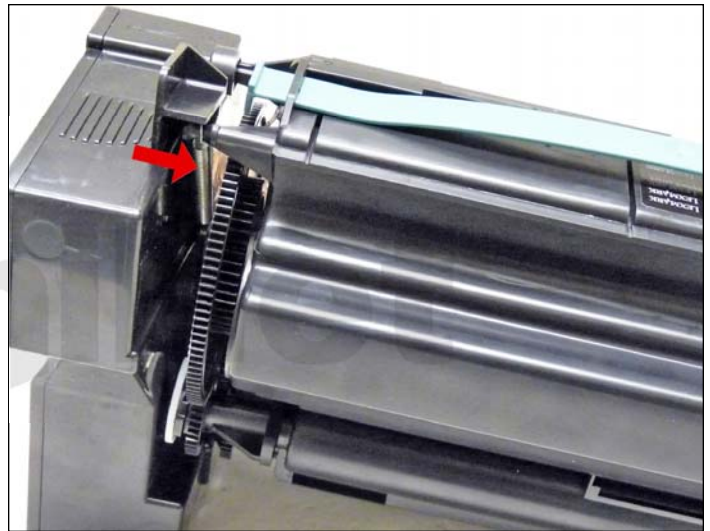
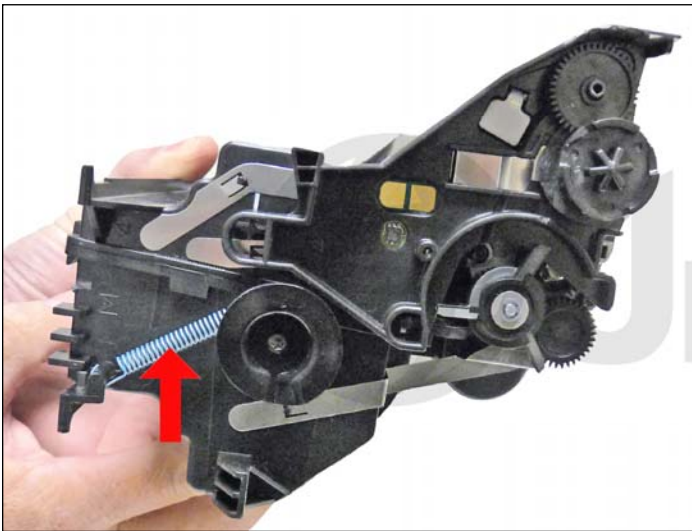
<b>C780A2KG</b>	<b>BLACK</b>	<b>6,000 page standard cartridge</b>
<b>C780A2CG</b>	<b>CYAN</b>	<b>6,000 page standard cartridge</b>
<b>C780A2MG</b>	<b>MAGENTA</b>	<b>6,000 page standard cartridge</b>
<b>C780A2YG</b>	<b>YELLOW</b>	<b>6,000 page standard cartridge</b>
<b>C780A1KG</b>	<b>BLACK</b>	<b>6,000 page RETURN cartridge</b>
<b>C780A1CG</b>	<b>CYAN</b>	<b>6,000 page RETURN cartridge</b>
<b>C780A1MG</b>	<b>MAGENTA</b>	<b>6,000 page RETURN cartridge</b>
<b>C780A1YG</b>	<b>YELLOW</b>	<b>6,000 page RETURN cartridge</b>
<b>C780H2KG</b>	<b>BLACK</b>	<b>10,000 page standard cartridge</b>
<b>C780H2CG</b>	<b>CYAN</b>	<b>10,000 page standard cartridge</b>
<b>C780H2MG</b>	<b>MAGENTA</b>	<b>10,000 page standard cartridge</b>
<b>C780H2YG</b>	<b>YELLOW</b>	<b>10,000 page standard cartridge</b>
<b>C780H1KG</b>	<b>BLACK</b>	<b>10,000 page RETURN cartridge</b>
<b>C780H1CG</b>	<b>CYAN</b>	<b>10,000 page RETURN cartridge</b>
<b>C780H1MG</b>	<b>MAGENTA</b>	<b>10,000 page RETURN cartridge</b>
<b>C780H1YG</b>	<b>YELLOW</b>	<b>10,000 page RETURN cartridge</b>
<b>C782U1KG</b>	<b>BLACK</b>	<b>16,500 page RETURN cartridge C782 ONLY</b>
<b>C782U1CG</b>	<b>CYAN</b>	<b>16,500 page RETURN cartridge C782 ONLY</b>
<b>C782U1MG</b>	<b>MAGENTA</b>	<b>16,500 page RETURN cartridge C782 ONLY</b>
<b>C782U1YG</b>	<b>YELLOW</b>	<b>16,500 page RETURN cartridge C782 ONLY</b>
<b>10B3100</b>	<b>Waste</b>	<b>Up to 180,000 pages monochrome, 50,000 color</b>

## REQUIRED TOOLS

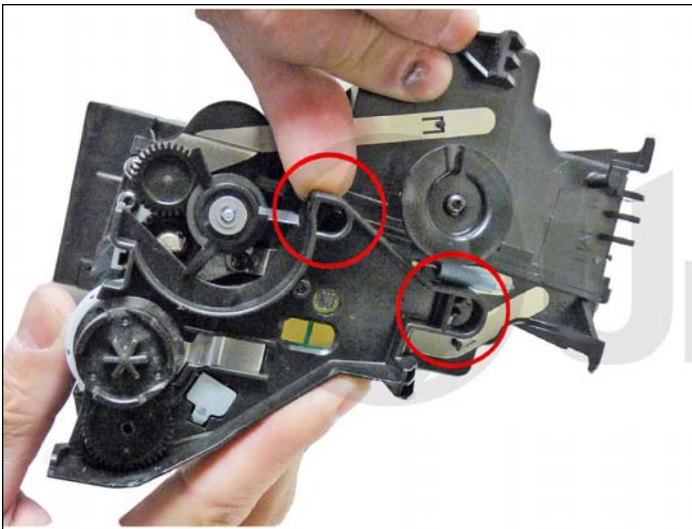
1. Toner approved vacuum
2. A small Common screwdriver
3. A Phillips head screwdriver
4. Needle nose pliers
5. Size T-7 Torx driver

## REQUIRED SUPPLIES

1. 145g toner
2. New drum (in development)
3. New wiper blade (in development)
4. Conductive grease
5. 99% pure isopropyl alcohol
6. Cotton swabs
7. Soft, lint-free wipes



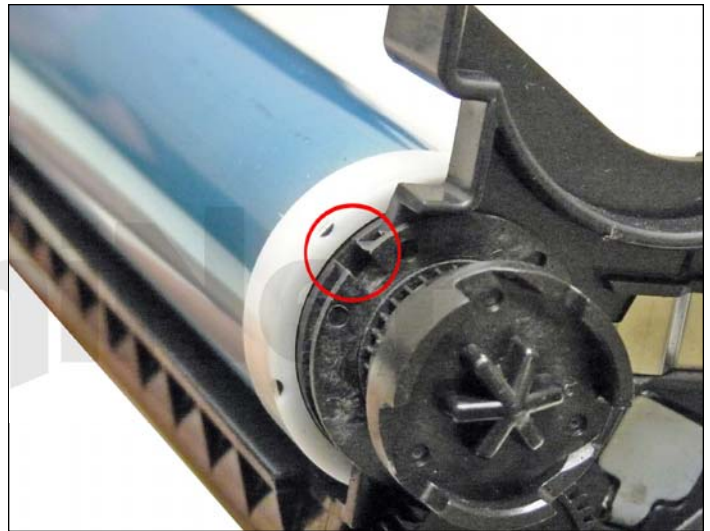
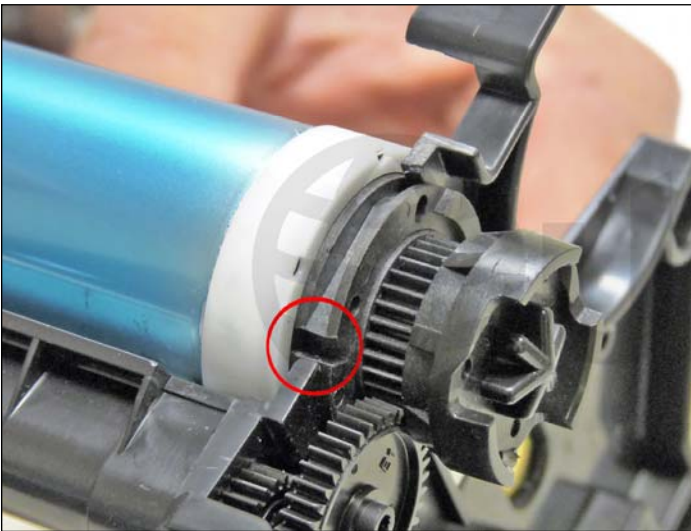
1. Remove the springs from both sides of the cartridge.



2. Carefully pry the chip side cartridge wall out to free the two posts.



3. Separate the two halves.

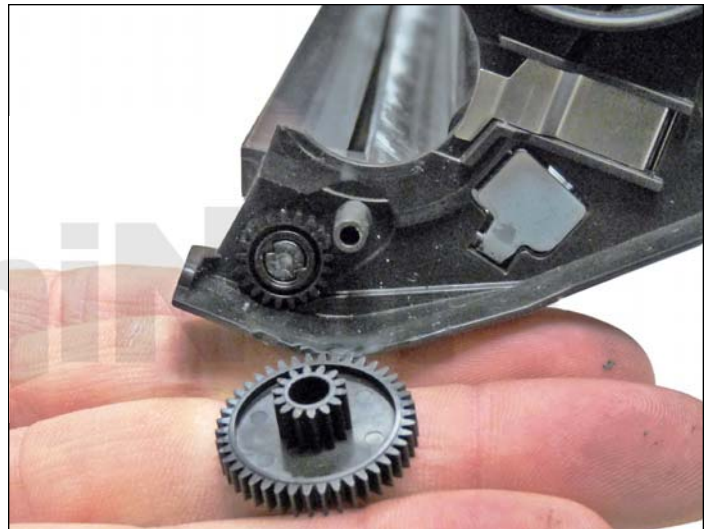


4. From the drive gear side of the waste hopper, locate the slot in the bushing.

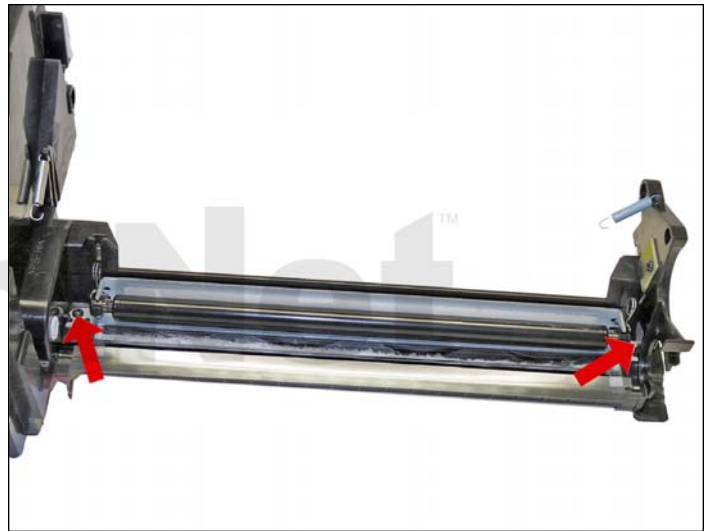
With a common screwdriver, turn the slot to the opposite side of the opening.



5. Lift the drum out of the waste hopper.



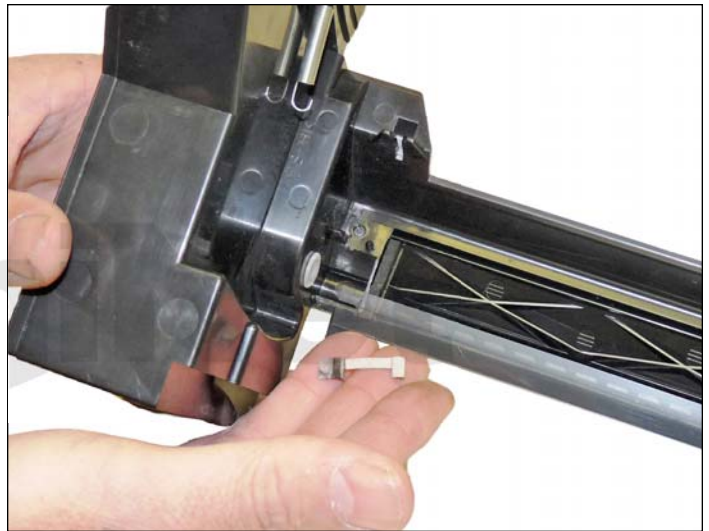
6. Remove the larger of the two remaining gears.



7. Using a T-10 Torx driver, remove the two screws from the wiper blade.



8. Lift the wiper blade/PCR assembly from the waste hopper.



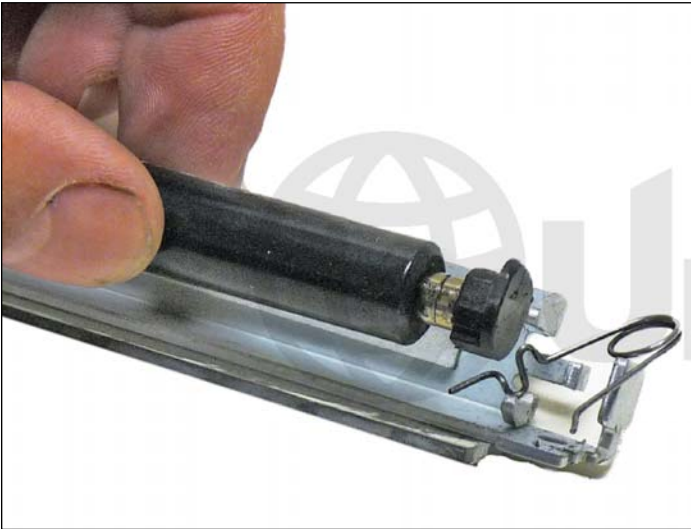
9. Clean out any waste toner from the hopper and auger.

The white foam seals will come loose! It is best to remove them first.

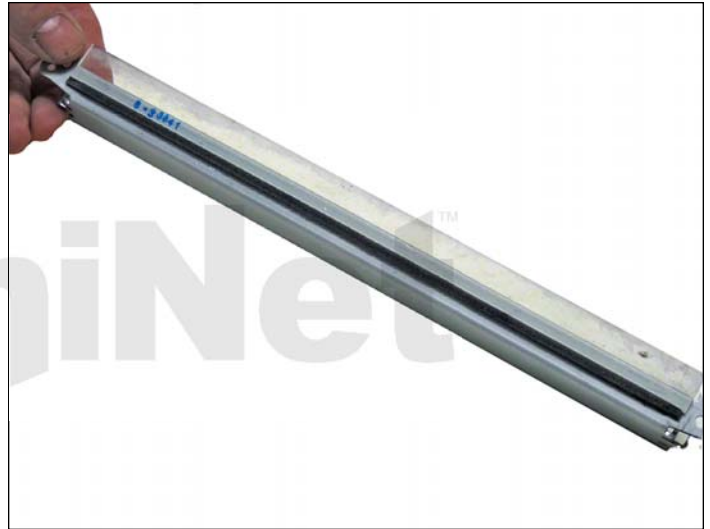


10. Cut or melt a hole on the inside of the large waste hopper. Clean out all the toner from inside.

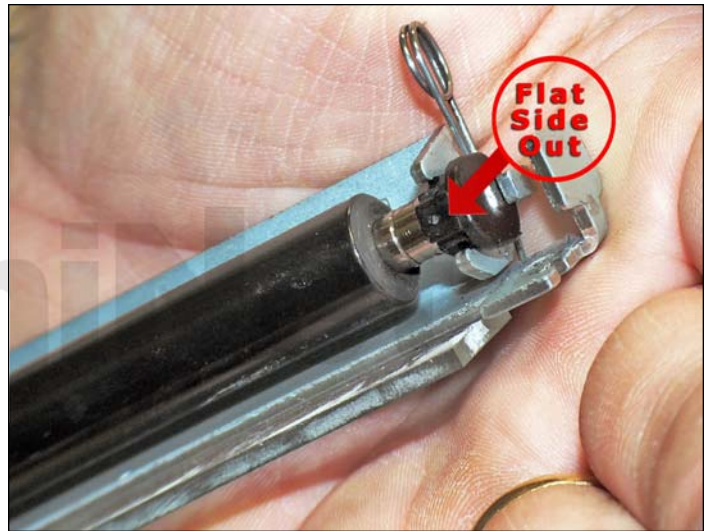
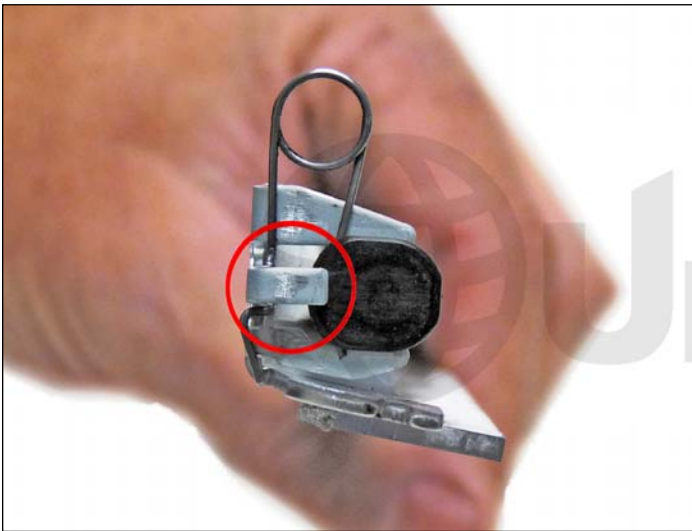
Place a good seal over the hole. We use a screw tip type soldering iron that we modified with a 1/2" copper cap to melt the hole.



11. Remove the PCR from the blade by prying out the black bushing. The tension spring will come loose, be careful not to lose it! Clean the PCR with a lint free cloth. We do not recommend that any chemicals be used at this time to clean the PCR.

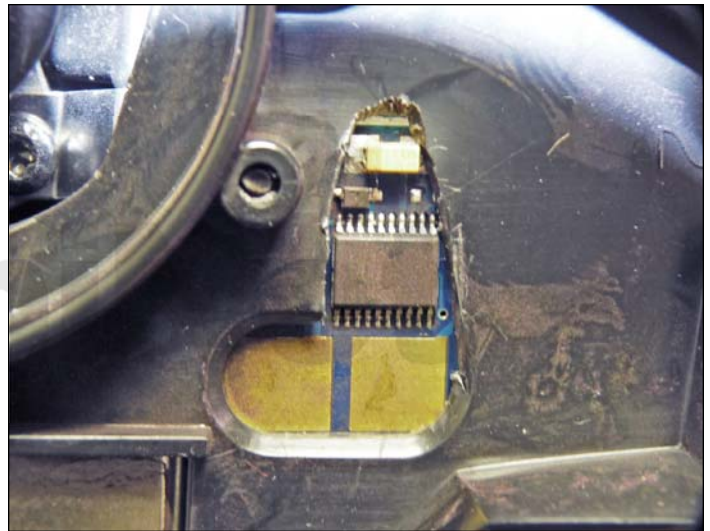


12. If you are re-using the wiper blade, clean the white foam PCR cleaner on the top and the gray sealing foam strip on the bottom.



13. Set the spring as shown, and install the cleaned PCR.

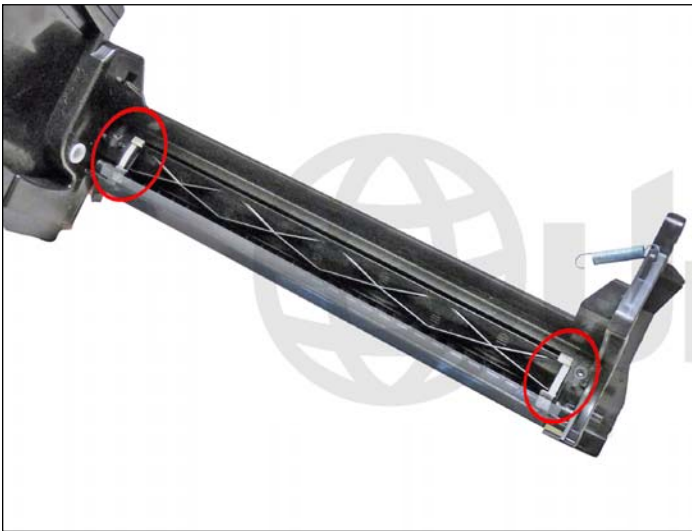
Make sure on the black bushing the flat side is facing out (there is a back and front on these bushings).



14. Modify the chip hole to accommodate the aftermarket chip. It just has to be opened a bit so the new chip sits flush.

Replace the chip.

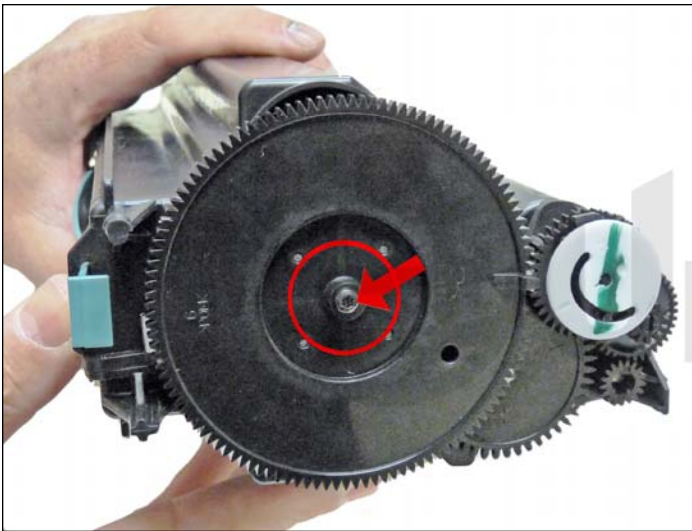




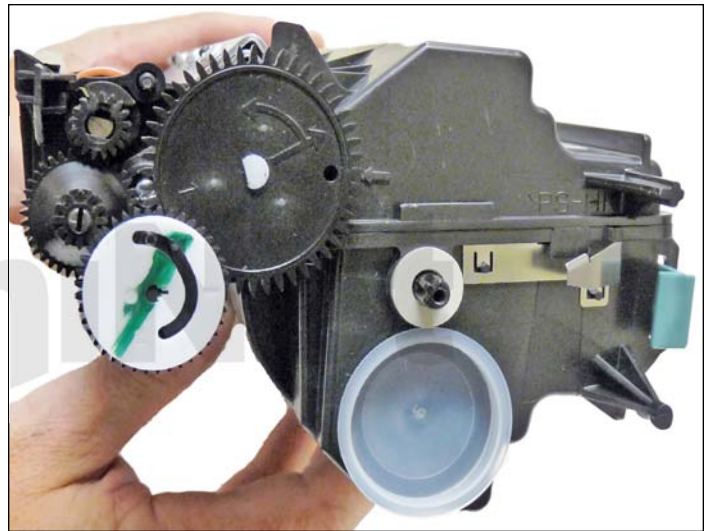
15. Replace the two white foam seals on the wiper blade.  
Make sure the front edge fits under the recovery blade.



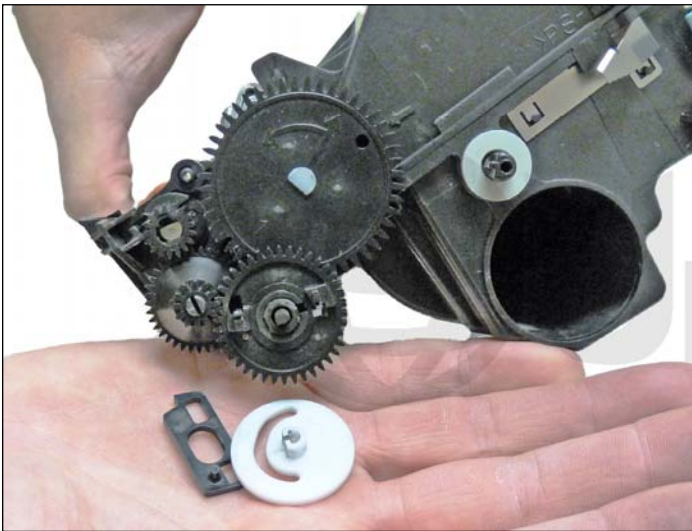
16. Install the wiper blade/PCR assembly and two screws.



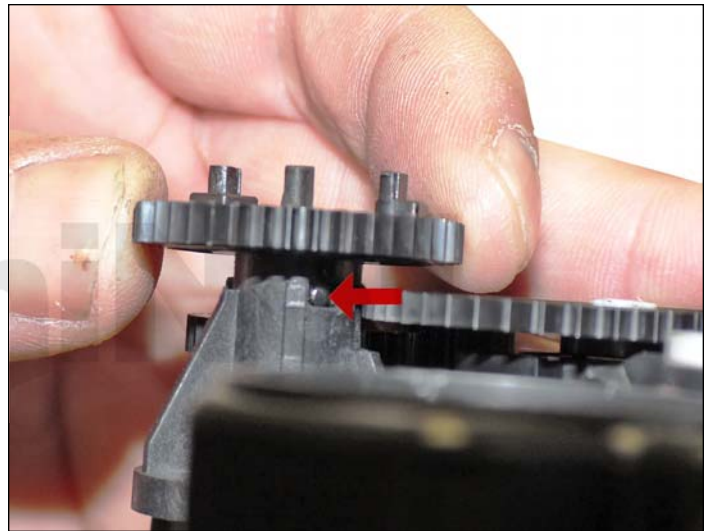
17. On the supply chamber, remove the T-10 Torx screw and large gear.



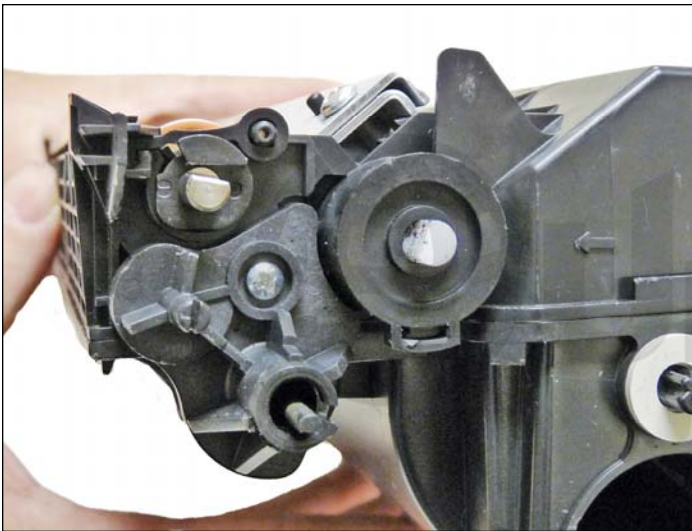
18. Remove the fill plug and dump out any remaining toner.



19. Remove the white gear and slide bar.

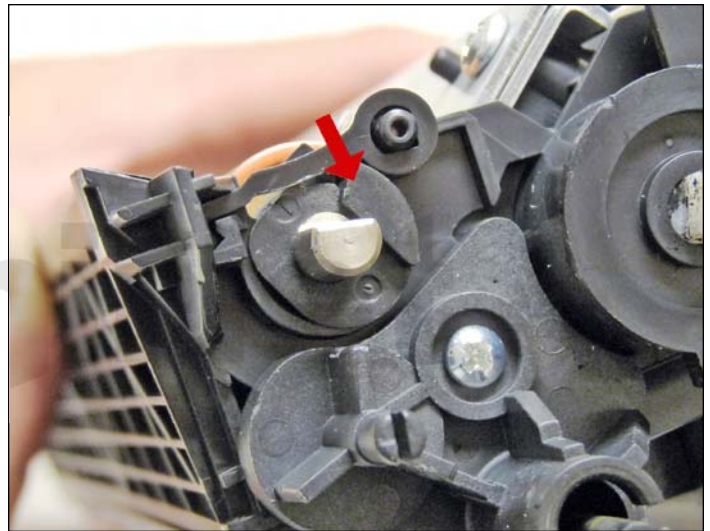
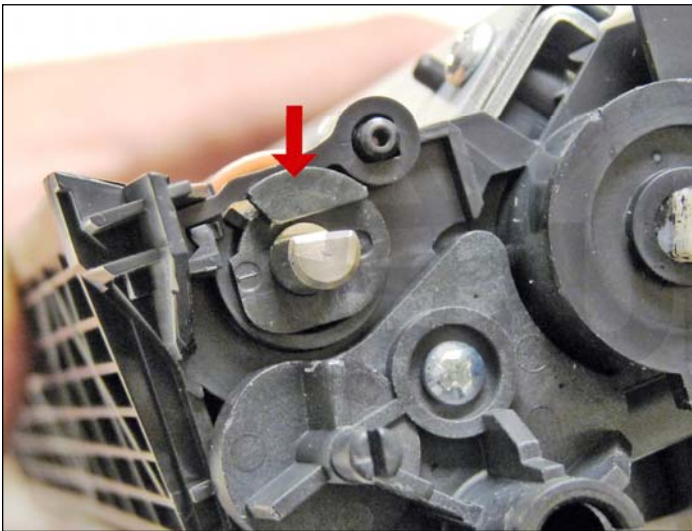


20. Under the medium gear, locate the tab in the slide slot. With a small screwdriver, move the tab to the end of the slot and remove the gear.

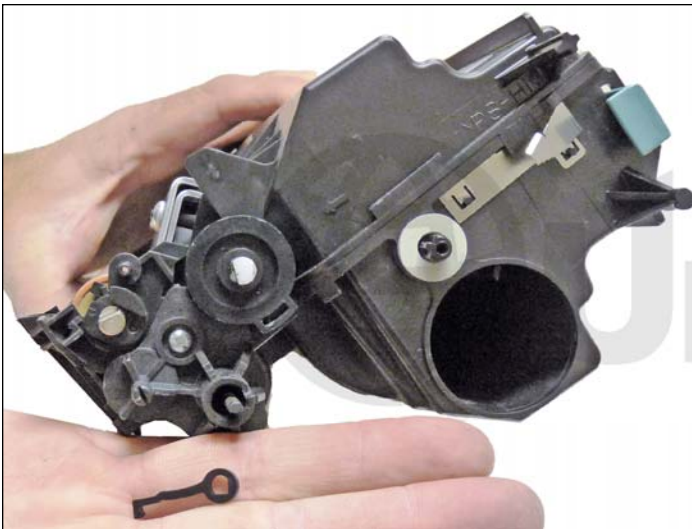


21. Remove the rest of the gears.

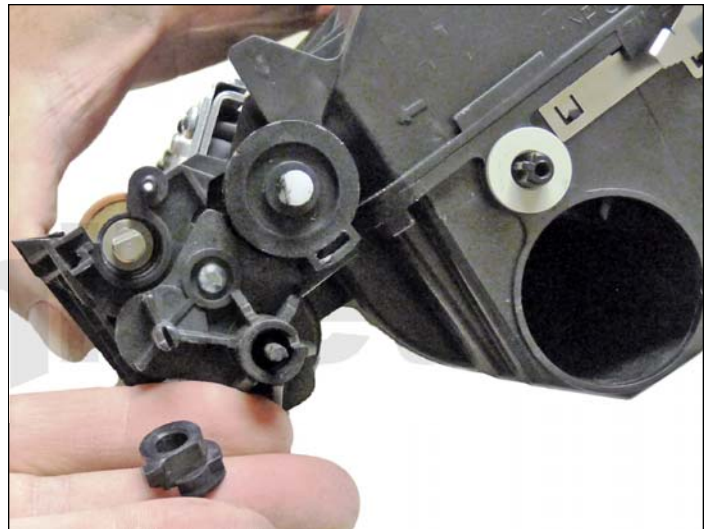
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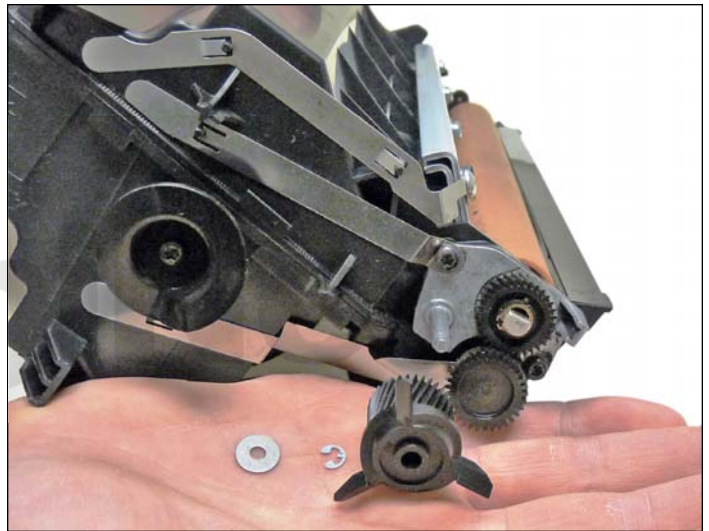
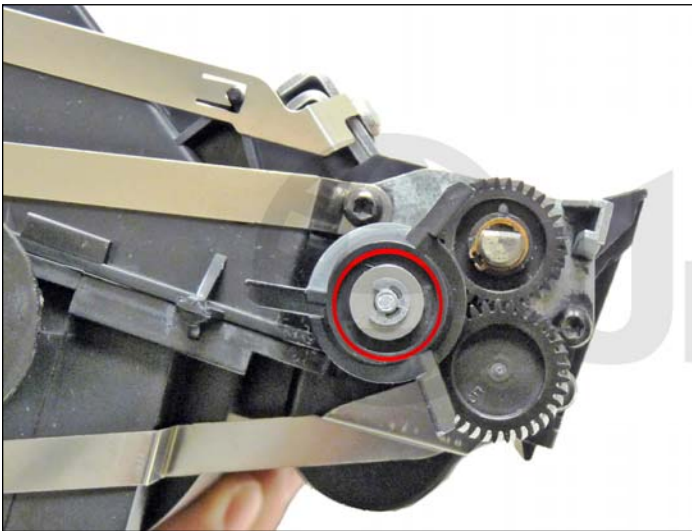
22. On the developer roller, slide the lock over towards the doctor blade.



23. Remove the locking bar.

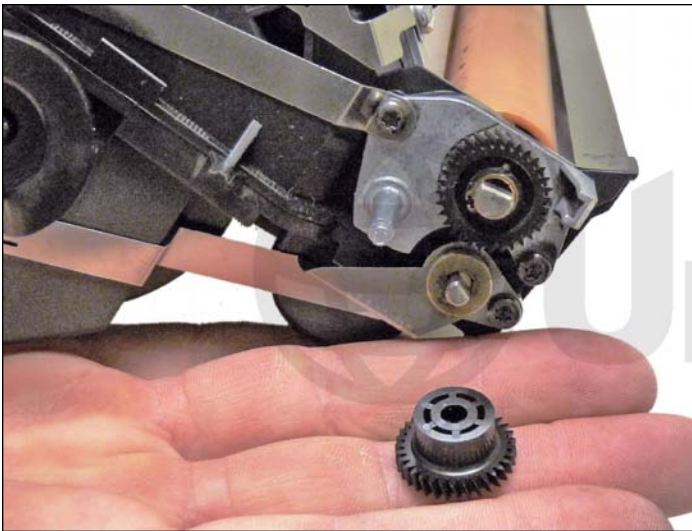


24. Remove the developer roller bushing.

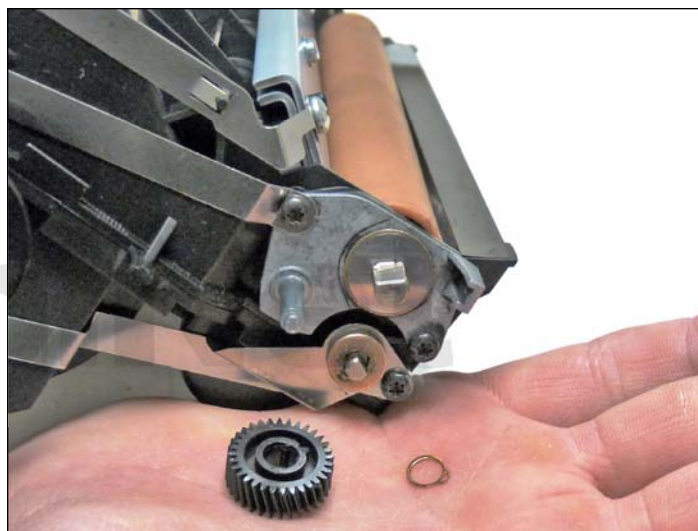
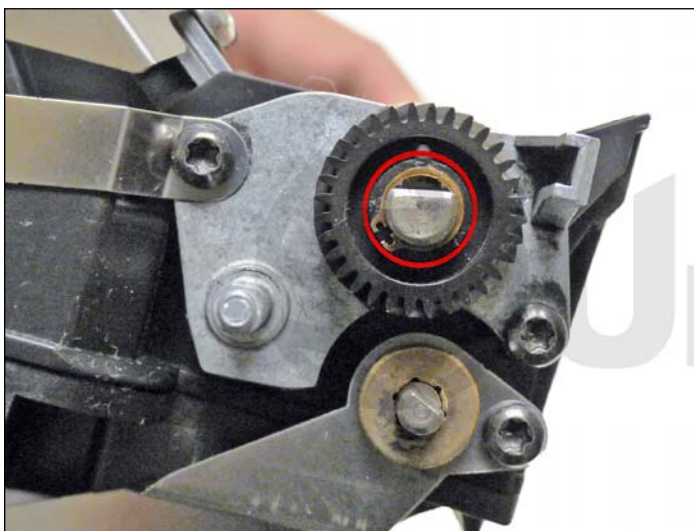


25. On the opposite side of the roller, remove the E-ring and washer from the drive gear.

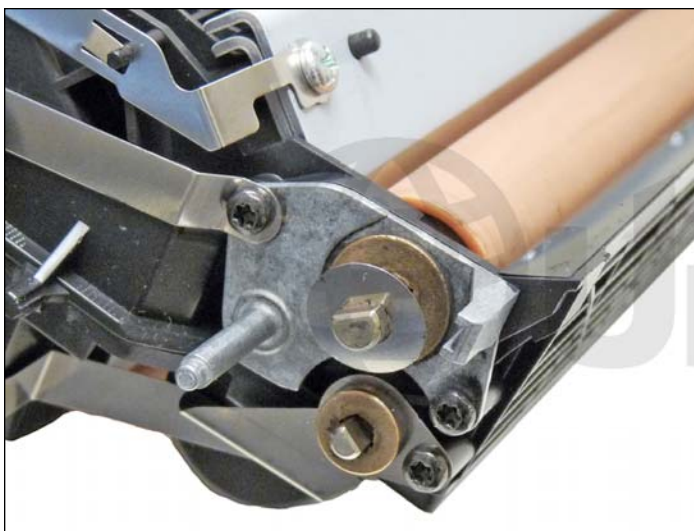
Remove the drive gear.



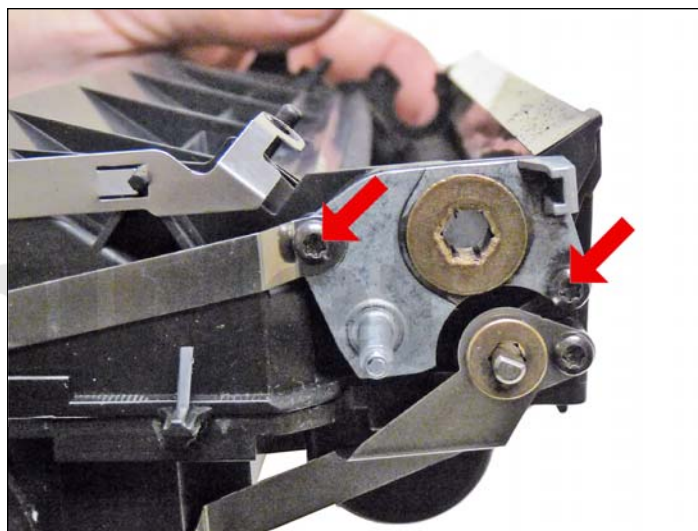
26. Remove the idler gear.



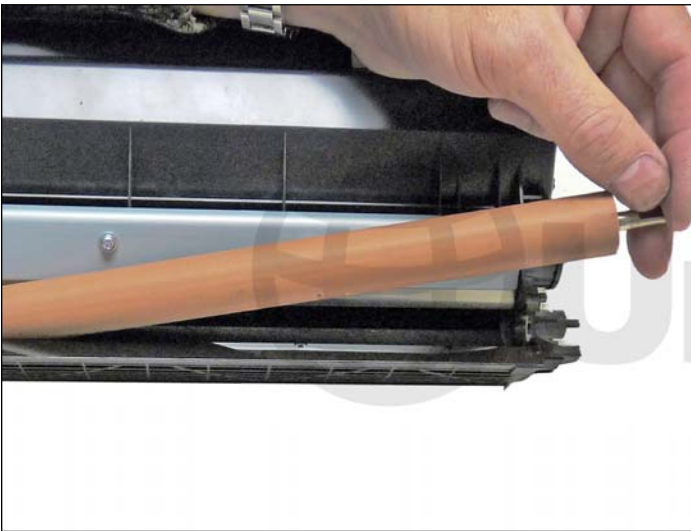
27. Remove the snap ring and gear.



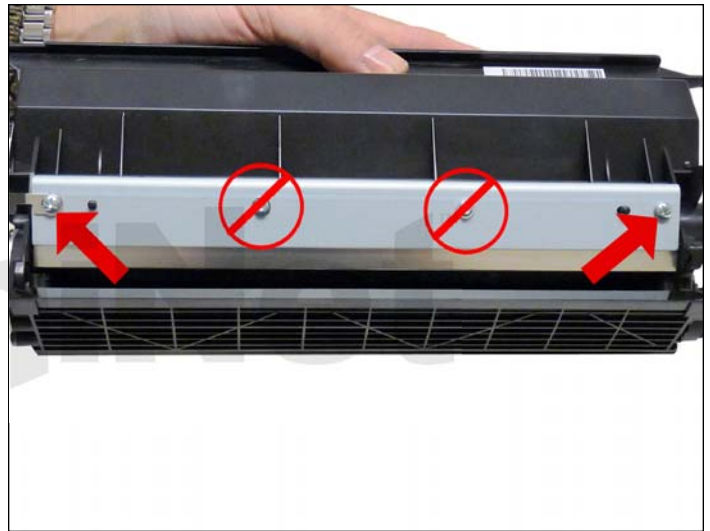
28. Remove the metal washer.



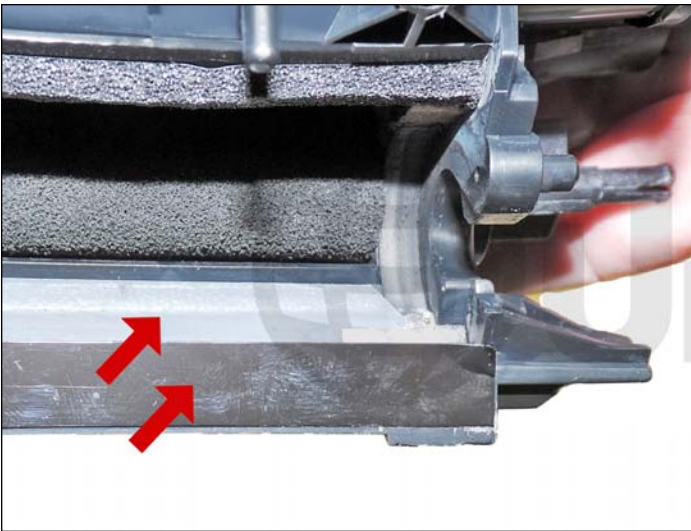
29. Remove the metal axle plate and two screws.



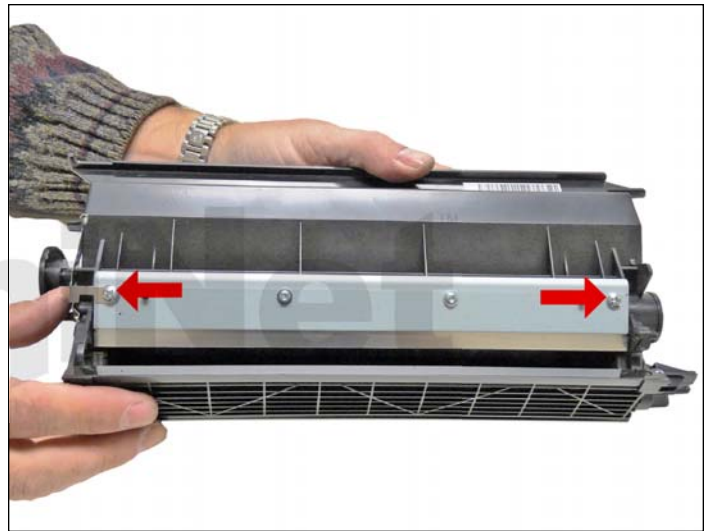
30. Remove the develop roller. At this time we recommend it only be cleaned with a soft lint-free cloth. Do not use any chemicals to clean it.



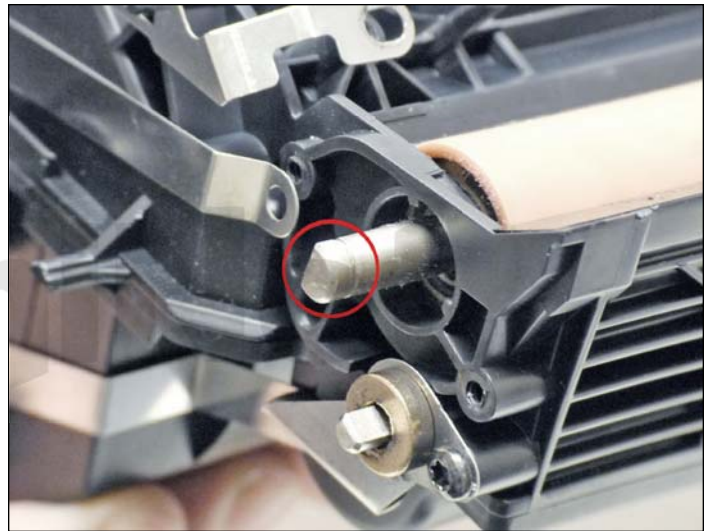
31. Remove the two outside doctor blade screws. Do not touch the two inner Torx screws. They hold the doctor blade together. Remove the doctor blade.



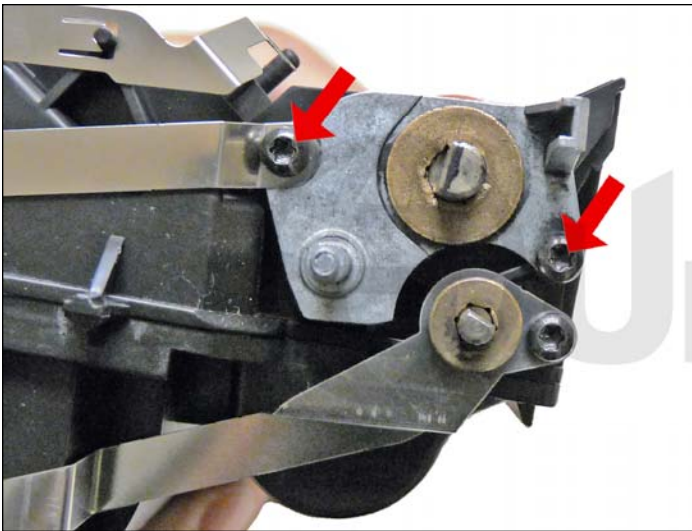
32. Clean out all the remaining toner from the hopper. Be very careful not to damage the two retaining blades.



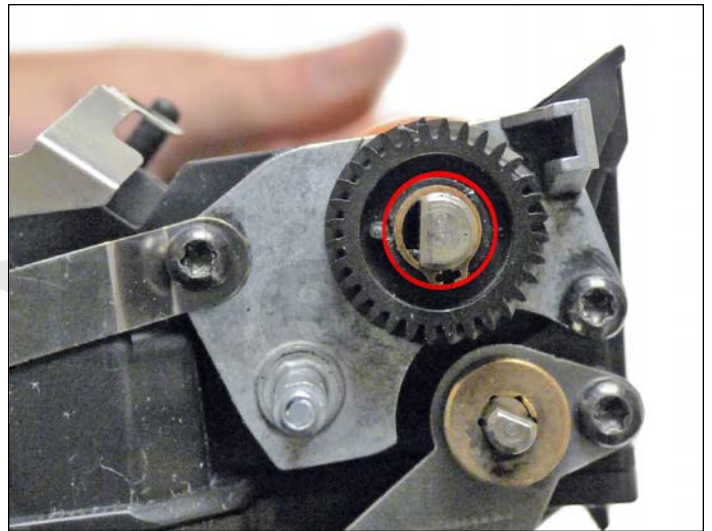
33. Install the doctor blade and two screws.



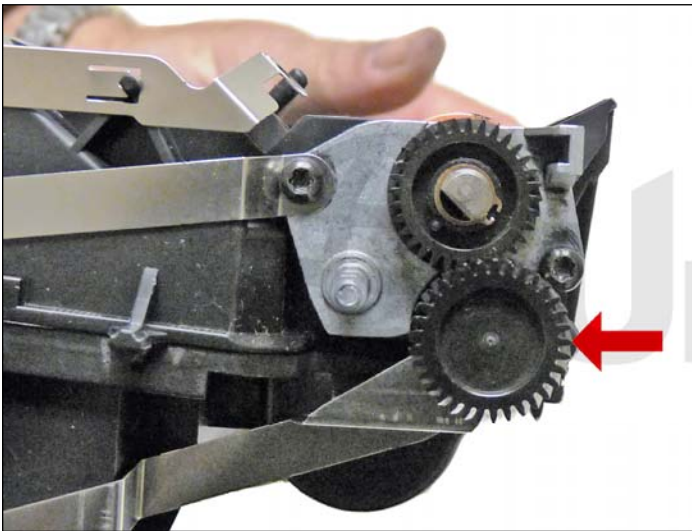
34. Re-install the cleaned developer roller. Put the shaft with the ring slot to the metal axle plate side of the hopper.



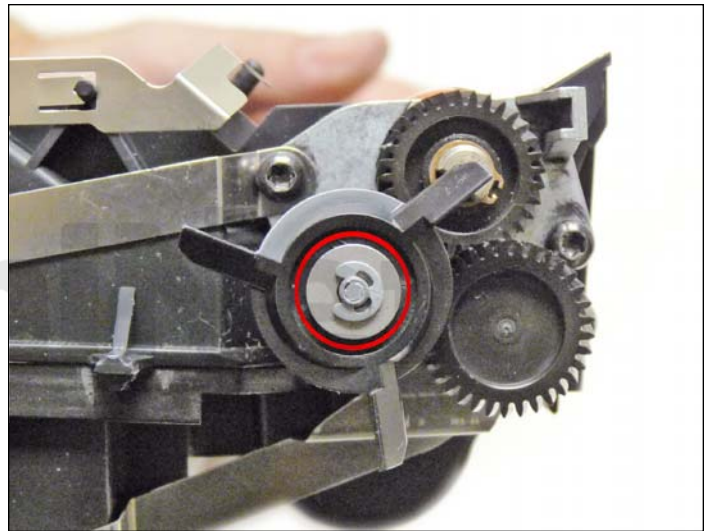
35. Install the metal axle plate and two screws.



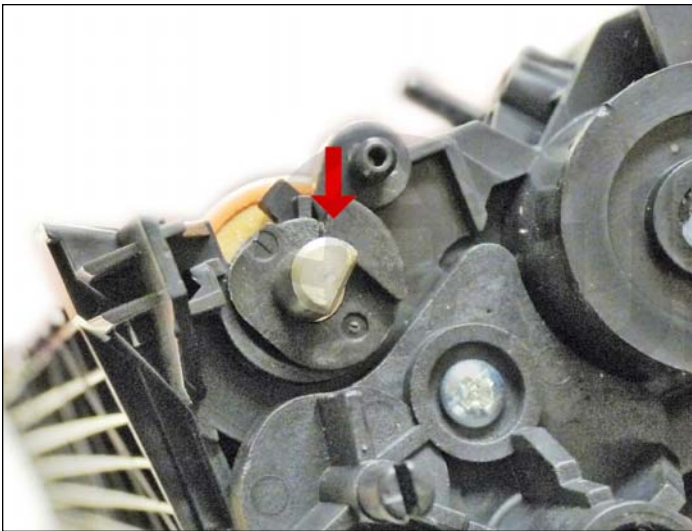
36. Install metal washer, drive gear, and clip ring.



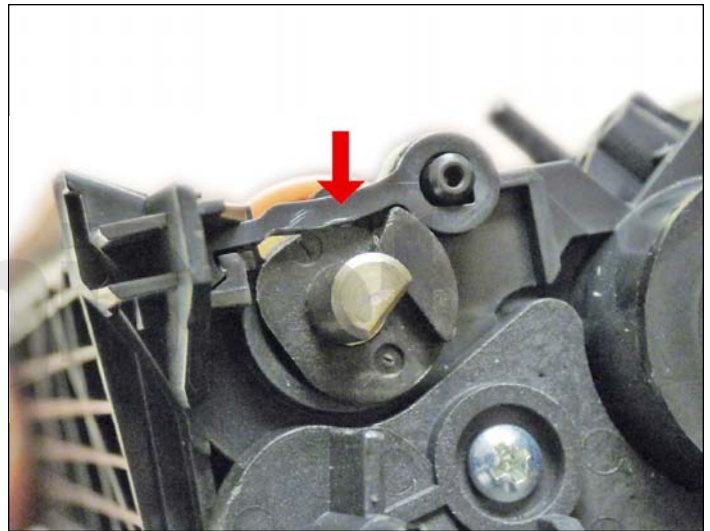
37. Install the idler gear.



38. Install the wing shaped drive gear, washer and E-ring.

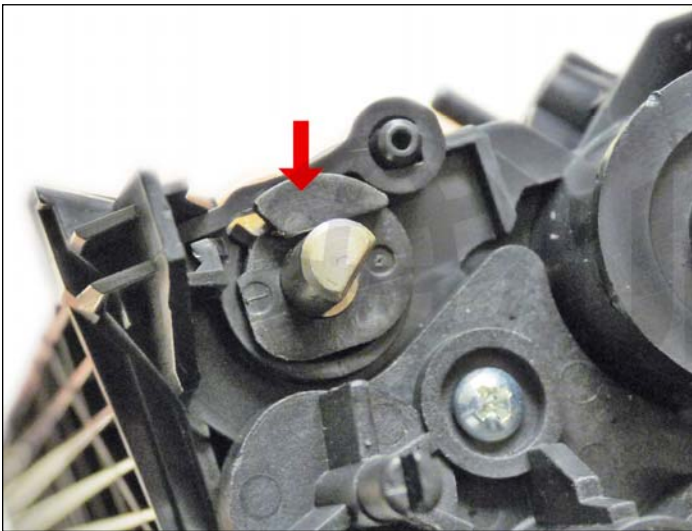


39. Install the bushing on the opposite side of the roller.

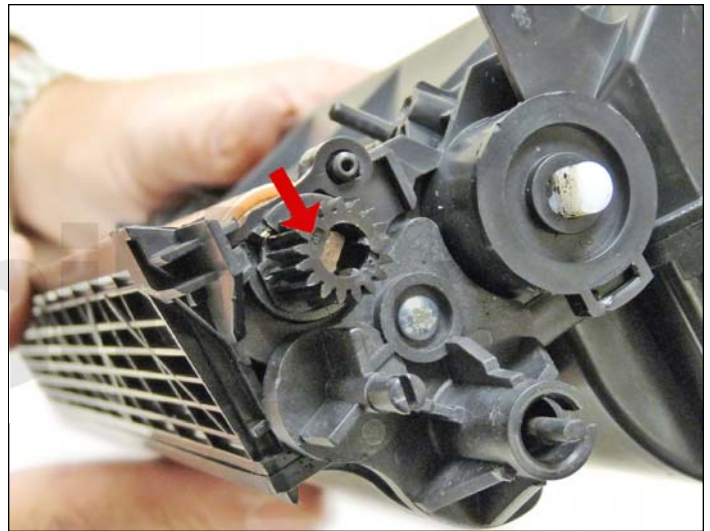


40. Install the locking bar.

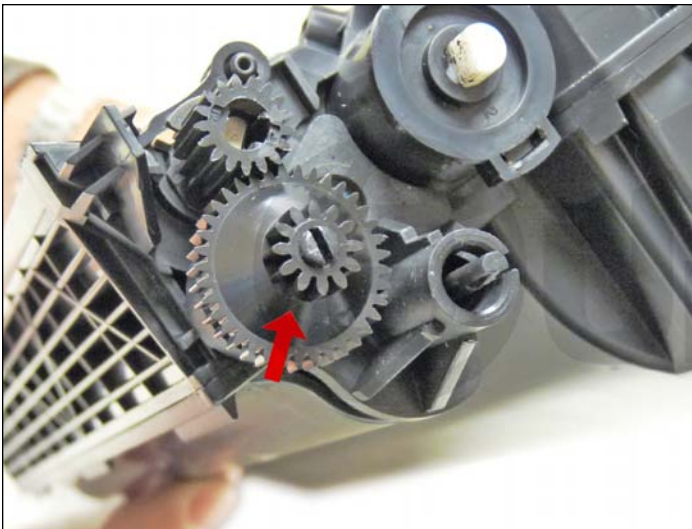




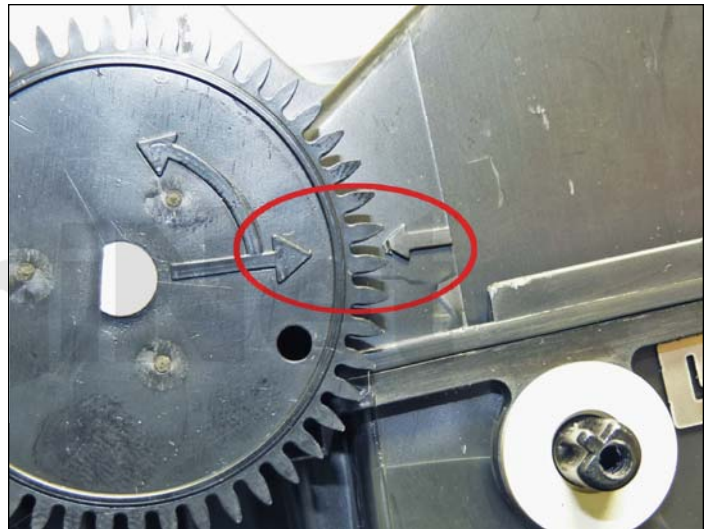
41. Turn the bushing so it locks against the bar and hold the developer roller bushing in place.



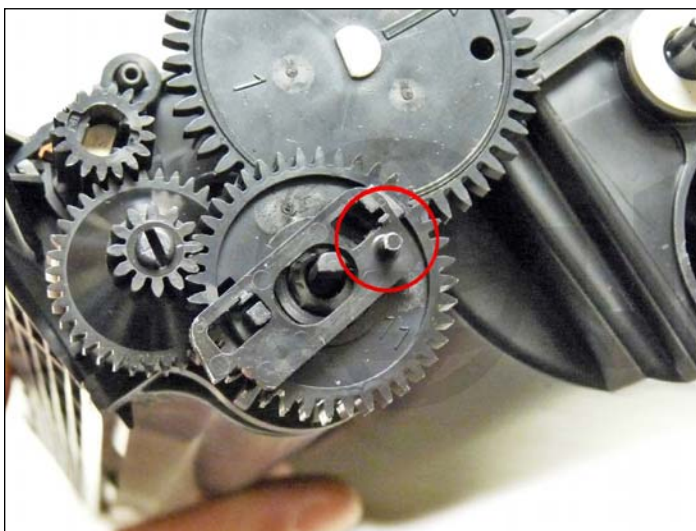
42. Install the developer roller drive gear.



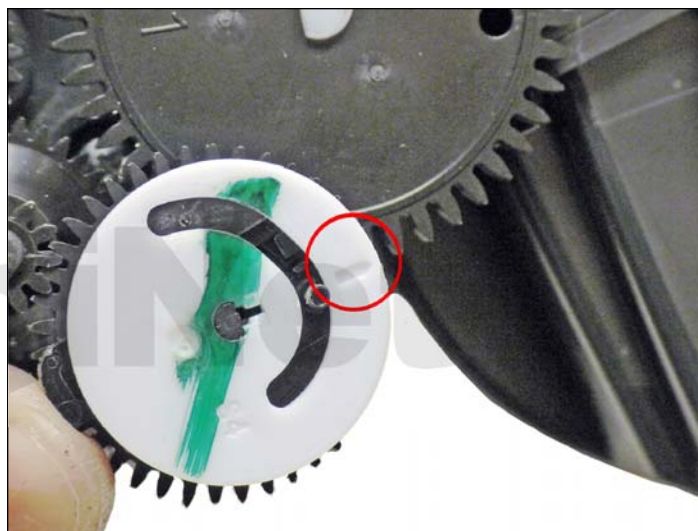
43. Install the tapered gear taper side up. NOTE: These next steps are very important! If the gears are not set correctly, the cartridge will not reset (even though you changed the chip).



44. Install the gear marked #1 so that the arrow on the gear aligns with the arrow on the cartridge wall.



45. Install the remaining gear so it locks into the shaft and slide bar so that the tab on the slide bar is facing up and fits into the slot on the white gear.



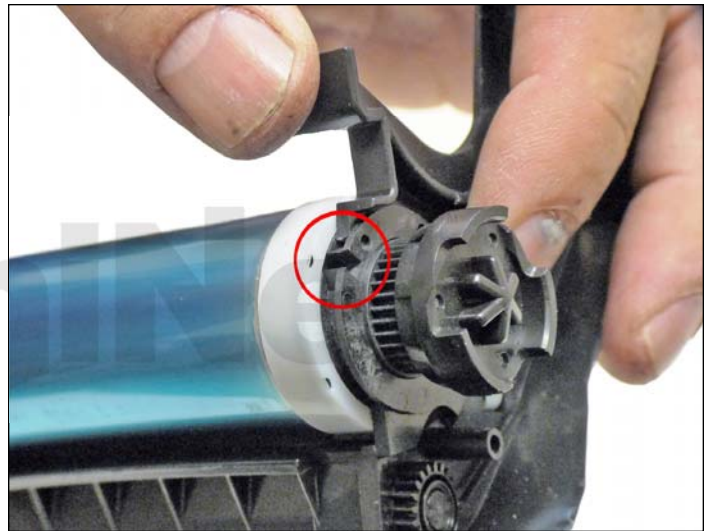
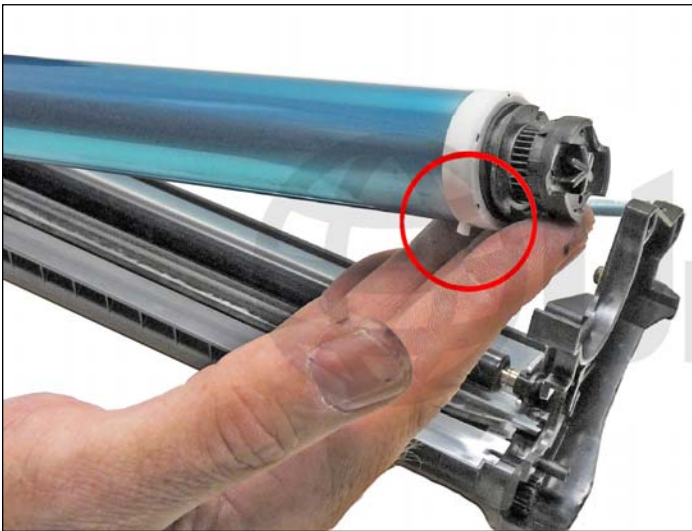
46. The small arrow on the white gear should face straight across the cartridge or point towards the end of the green handle on the opposite side of the hopper.



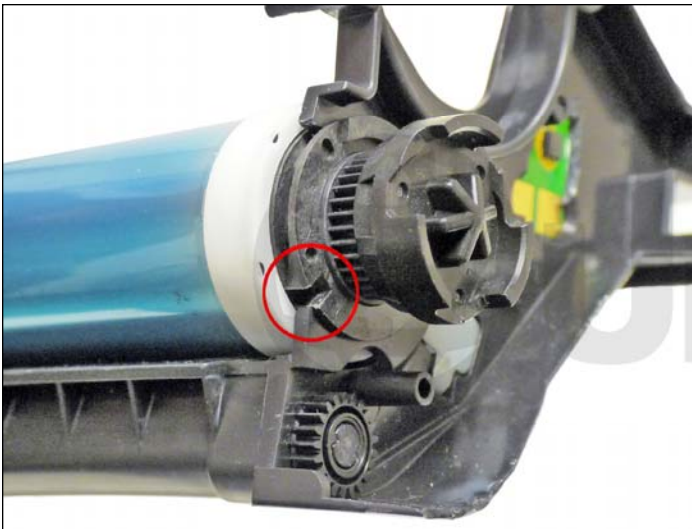
47. Fill the cartridge with dedicated color C780 toner and install the fill plug.



48. Install the large gear and screw (Torx). The hole in the large gear must line up with the hole in the smaller (#1) gear. Use a punch to align them. It helps to keep the gear slightly up from the rest of the gear train while aligning the holes.



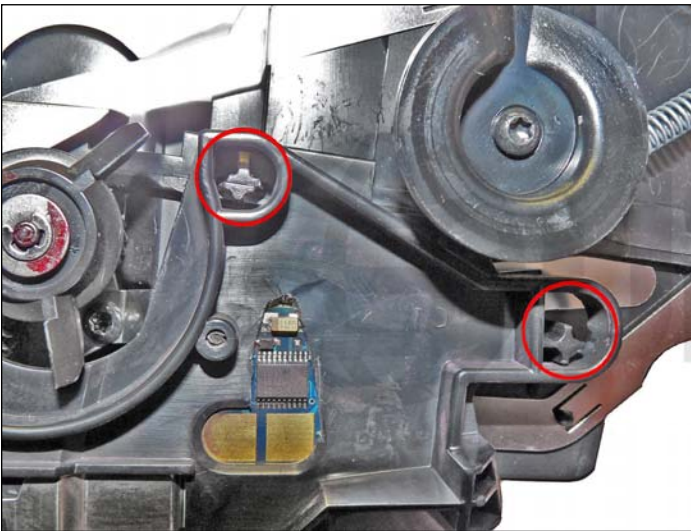
49. Place the drum back in the waste hopper so that the two white bushing tabs fit into the bottom slots and the locking bushing slot is on top. Install the small idle gear.



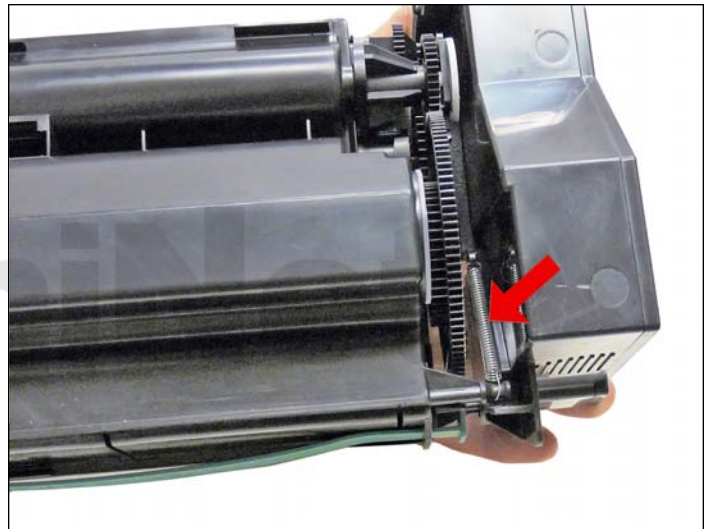
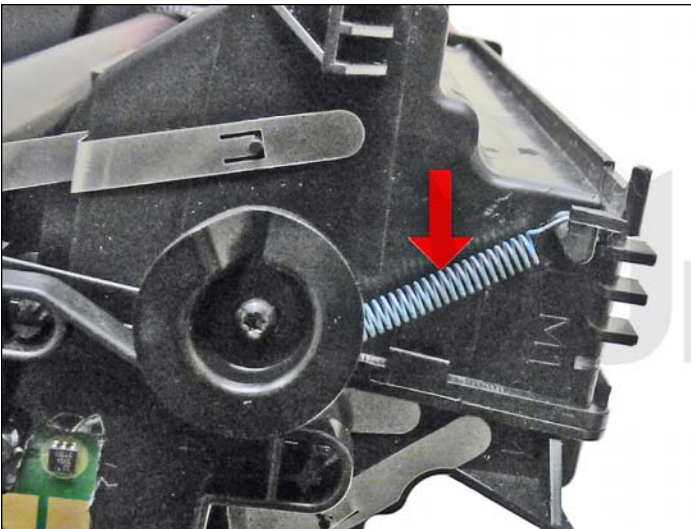
50. Turn the locking bushing down so it locks the drum in place.



51. Place the supply hopper on the waste hopper. Make sure the top tab on the hopper fits into the slot on the top of the waste chamber.



52. On the opposite side bend out the cartridge wall so that the two tabs fit into their respective slots.



53. Install both springs.

Install the drum cover and shipping locks.

The cartridge is finished!

**PRINTING A TEST PAGE**

1. Press PRT QUALITY PAGES from the CONFIG Menu.
2. Press SELECT.

**TO GET TO THE CONFIG MENU**

1. Turn off the printer.
2. Press and hold the CHECK and RIGHT ARROW buttons.
3. Turn on the printer.
4. Hold the buttons for about 10 seconds until the clock face appears.

**REPETITIVE DEFECT CHART**

<b>Cartridge Auger</b>	<b>349mm</b>
<b>Upper Fuser Roller</b>	<b>147mm</b>
<b>Lower Fuser Roller</b>	<b>147mm</b>
<b>Color PCR</b>	<b>101.0mm</b>
<b>ITU Drive/Backup Rolls</b>	<b>101.0mm</b>
<b>OPC Drum</b>	<b>96.8mm</b>
<b>OPC Drum cleaner</b>	<b>96.8mm</b>
<b>Second Transfer Roller</b>	<b>59.4mm</b>
<b>First Transfer Roller</b>	<b>53.2mm</b>
<b>ITU Reverse Roller</b>	<b>50.5mm</b>
<b>Developer roller</b>	<b>47.9mm</b>
<b>Metering rollers</b>	<b>47.0mm</b>
<b>TAR</b>	<b>46.4mm</b>
<b>PCR</b>	<b>38.7mm</b>

The service manual has a nice defect ruler and explanations of what some of the above parts are. All the parts with strange names (like TAR) are in the printer so it is not necessary to go into them here.