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## Remanufacturing of the Lexmark T430 Toner Cartridge



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- **Supplies Required**
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## Remanufacturing the Lexmark T430 Toner Cartridge

0360

### OVERVIEW



The T430 series of printers use cartridges that look very similar to the T-420; basically they are a modernized version of it. There are four different cartridges for these machines. Two high yield, two low yield. Return Program and Non-Return are available for both.

First released in January 2005, the T430 series are based on the Lexmark 4048 32ppm, 1200dpi engine. So far only three models have been released, the T430, T430d, and the T430dn. Both come standard with duplex capabilities and a fast 366 MHz processor that gets the first page out in less than 8 seconds. These machines are quite an upgrade to the T420. The T420 ran at 22ppm, and used a 200MHz processor.

As stated above, there are actually four cartridges currently available for these machines. They are as follows:

Part	Type	List\$	Yield
12A8425	High yield Return	\$273.00	12,000
12A8420	Standard Return	\$172.00	6,000
12A8325	High Yield NON-Return	\$304.00	12,000
12A8320	Standard NON-Prebate	\$162.00	6,000

As with all the newer Lexmark cartridges, the PCR is not in the cartridge it's in the printer. The wiper blade inside the cartridges uses a PCR cleaner to keep the PCR clean. Because these cartridges use ARD chips, only the Non-Return cartridges can be remanufactured until new or repair chips are released. It should also be noted that because of the play between the toner hopper and the OPC drum, a shipping lock should be installed in every cartridge. This holds true even if you are going to hand deliver the cartridge.

Taking test prints, as well as some common cartridge/machine problems will be covered at the end of this article.

### SUPPLIES REQUIRED



- T430 black toner. Exact gram weights are under investigation
- Long life OPC Drum (Optional, T420 may work testing is ongoing.
- Wiper Blade
- Shipping Lock
- New White Developer Roller Shims (Optional)
- Drum lubricant
- Cotton Swab
- Isopropyl Alcohol
- Poly Wipes Cotton Pads

## TOOLS REQUIRED



- Toner approved vacuum.
- A small Common screw driver
- A Phillips head screwdriver
- Spring hook

## DISASSEMBLY



- 1) Vacuum the exterior of the toner cartridge.
- 2) Place the cartridge on the bench drum side down, and the toner supply towards you.
- 3) With the spring hook, remove the two springs from each end of the cartridge. The right side is easy to see, the left is somewhat recessed. See Figures 1 & 2
- 4) Bend out the two side panels to release the hopper. See Figure 3.
- 5) Remove the E-Ring from the small helical (white) gear end of the drum axle. There is no need to remove the other E-ring. See Figure 4



Figure 1



Figure 2



Figure 3

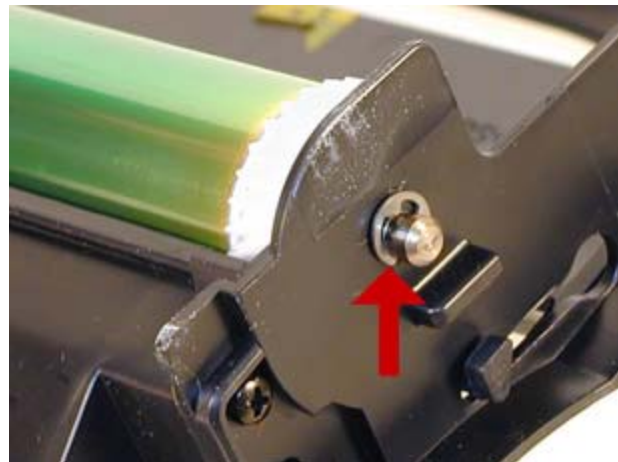


Figure 4

- 6) Slide the Drum Axle out of the cartridge. See Figure 5
- 7) Gently lift the Drum and Drum spring up and out of the cartridge, and place in a light protected area. Be careful not to lose the spring from the small white gear. Its purpose is to keep the drum from rotating backwards. See Figure 6

Cleaning out the waste chamber can be done two ways. The easiest way is to remove the drum cover, and then the two screws, and blade. The second way is also easy, it just is somewhat more time consuming. This method entails removing four screws, two from



each side of the cartridge, and then the blade and two screws. The first method is covered in steps 8-9; the second is covered in steps 10-11

8) **FIRST METHOD:** To remove the drum cover, Bend the cover out in the middle of the cover so that the two side pins are released. See Figure 7.

9) Once the two small pins are released, slide the large tab on the cover out through the large hole in the side wall of the cartridge. See Figure 8

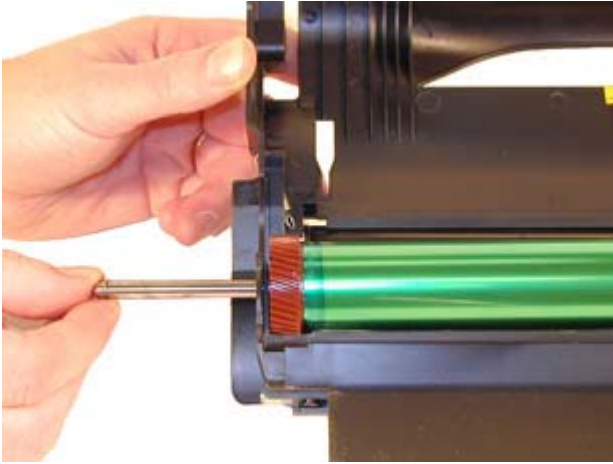


Figure 5



Figure 6

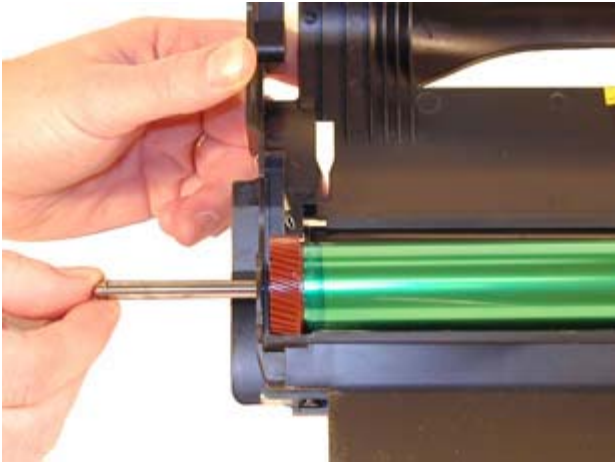


Figure 7

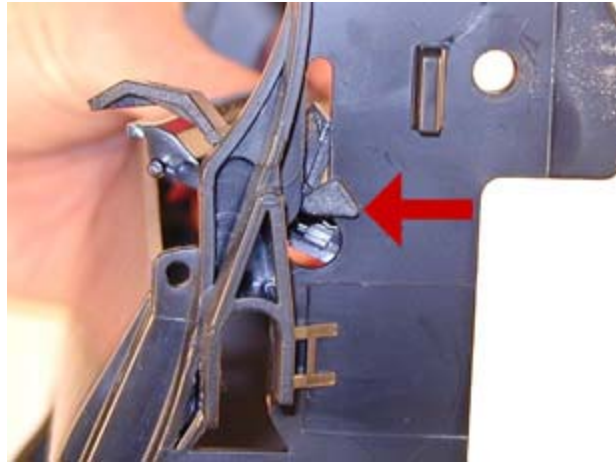


Figure 8

10) **SECOND METHOD:** Remove the two screws on each side of the waste chamber. (Four screws total). See Figures 9 & 10.

11) Remove the waste chamber from the cartridge shell.

12) Remove the two screws and the wiper blade, from the waste chamber. Vacuum it clean. See Figure 11

13) Make sure the foam seal on the bottom of the wiper blade is not torn or the cartridge may leak. See Figure 12

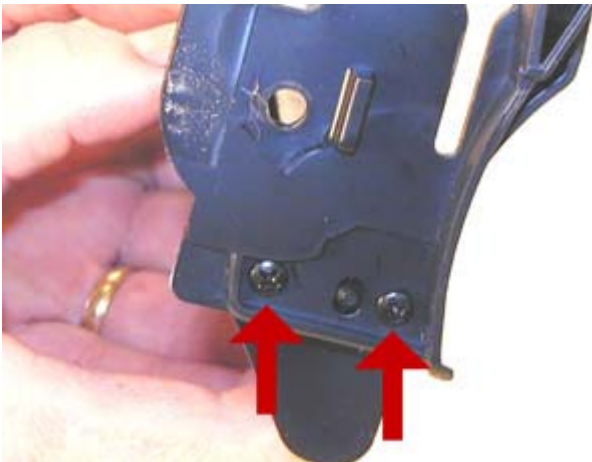


Figure 9



Figure 10



Figure 11



Figure 12

14) Coat the Wiper Blade with your preferred lubricant, replace the blade and two screws into the cartridge. See Figure 13

15) Install the waste chamber into the cartridge shell, and install the 4 screws. See Figure 14

16) If it was removed, install the drum cover. Install the large tab through the hole, and bend the cover in the middle so that the pins on both sides fit into their respective holes. See Figure 15

17) On the toner hopper, remove the Doctor Blade Spring by pressing down on the center of the spring. See Figure 16



Figure 13



Figure 14



Figure 15



Figure 16

18) On the left side of the Developer Roller there is a small metal copper colored bushing, take a small screwdriver, press the contact plate down and pry the bushing off the shaft. See Figures 17 & 18

19) Remove the star drive gear from the opposite side of the developer roller, remove the developer roller. The star gear has a very tight fit. See Figure 19

NOTE: Always remove the Doctor Blade Spring before removing the Developer Roller, failure to do this will allow the Doctor Blade to slide down from its original position.

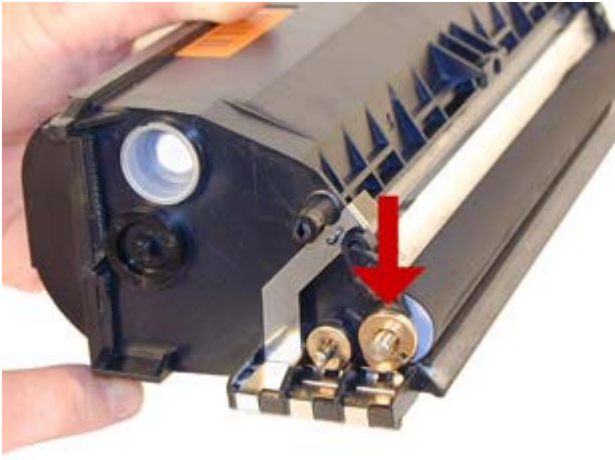


Figure 17

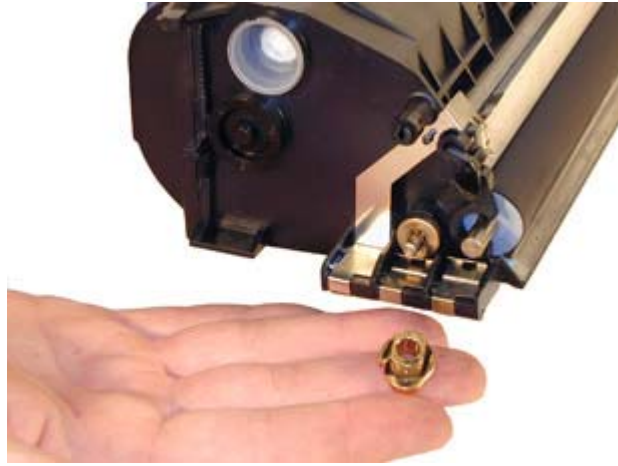


Figure 18

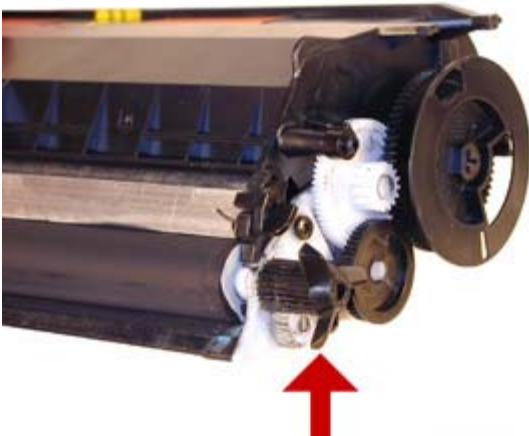


Figure 19

20) Remove the fill plug from the hopper. See Figure 20

21) Vacuum the Toner Hopper clean.

22) With a cotton swab dipped in alcohol, clean the Blue Developer Roller seals located on either end of the developer roller section. This also a good time to clean the bottom edge of the Dr. Blade. See Figures 21 & 22

23) Carefully vacuum or blow off the Developer Roller, Be careful not to touch the roller with your hands, or to damage this roller in any way.

24) If the OEM developer roller spacers are damaged, they should be replaced. The shims used on all previous Lexmark cartridges will work here also. Damaged shims will allow toner to leak out of the cartridge. See Figure 23



Figure 20

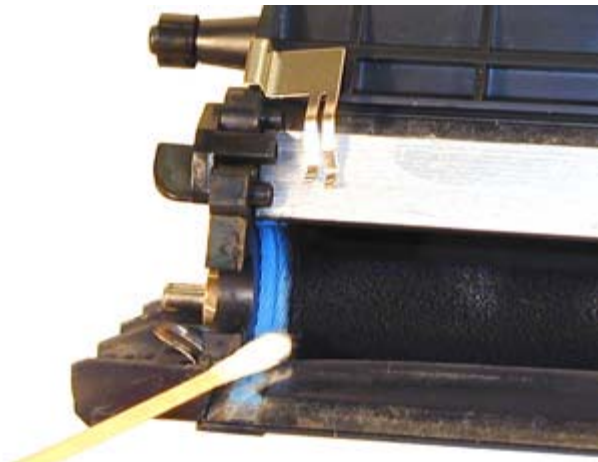


Figure 21



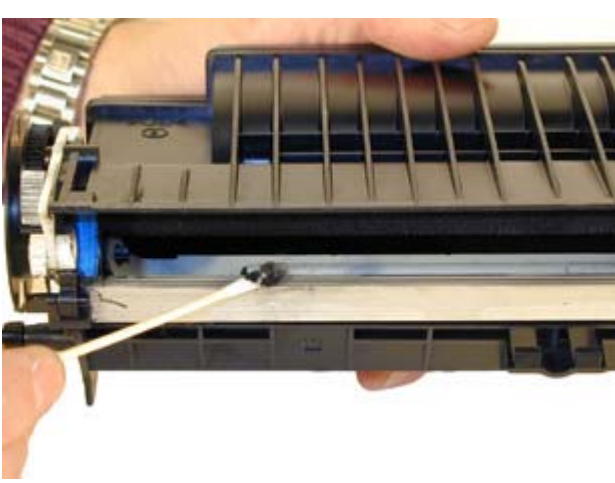


Figure 22



Figure 23

25) Place the keyed end of the Developer Roller into the cartridge,

and install the roller. Install the metal bushing. Turn the bushing so that the oblong side locks into the spring contact. Install the star gear, note that the gear and shaft are both keyed. Do not force the gear on as it will be damaged. See Figures 24, 25 & 26.

26) Install the Doctor Blade Spring. See Figure 27



Figure 24

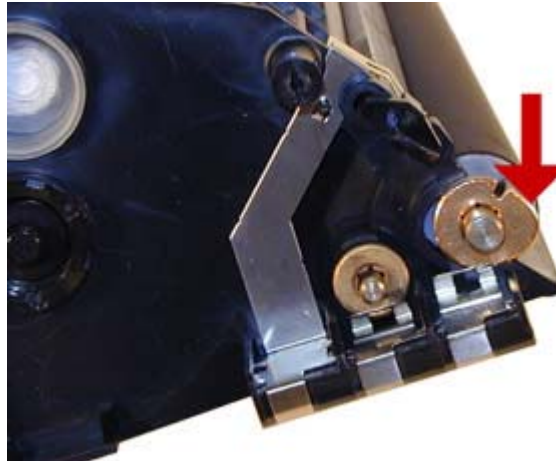


Figure 25

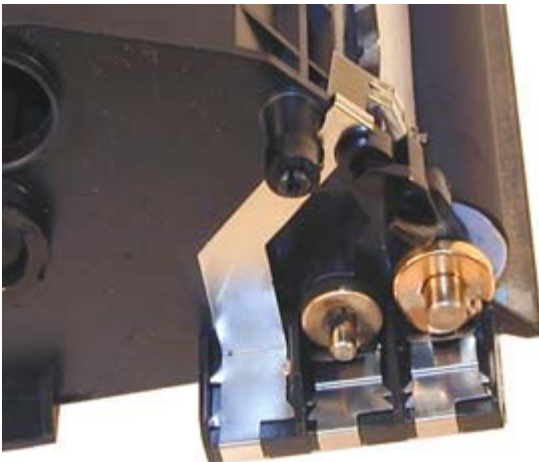


Figure 26



Figure 27

27) Fill the hopper with the appropriate amount of toner. Install the Fill Plug. See Figure 28

28) Lightly coat the drum with your preferred lubricant.

29) With the cartridge upside down and the waste chamber facing you, place the OPC Drum into the cartridge with the white gear side of the drum to the right side of the cartridge. Make sure that the spring is facing down, and is in between the two slots. (The slots are only on the right side). See Figure's 29 & 30.

30) Install the Drum Axle pin into the large gear side of the drum.

This is the opposite side from where the axle was removed. The Axle

must be installed this way to prevent the axle from bending and damaging the drum ground contact located inside the drum. See Figure 31



Figure 28

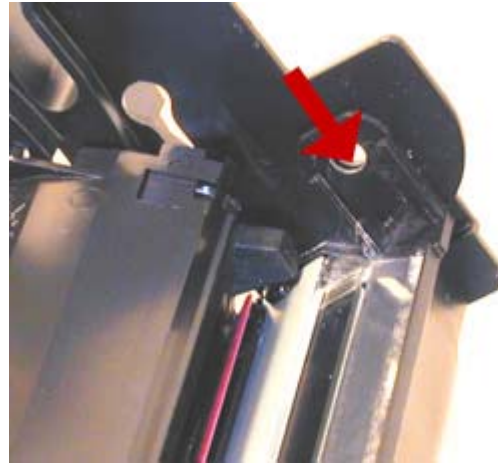


Figure 29

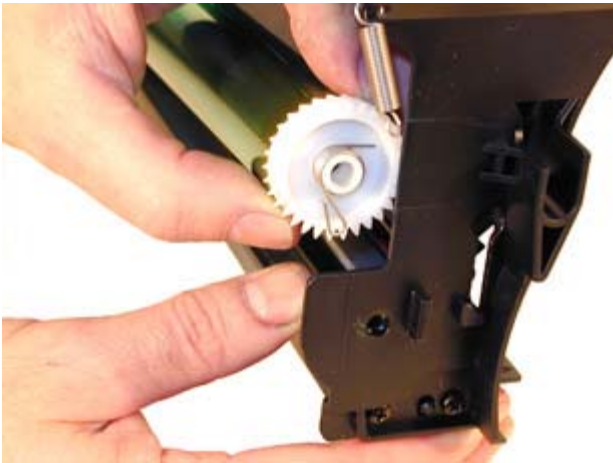


Figure 30

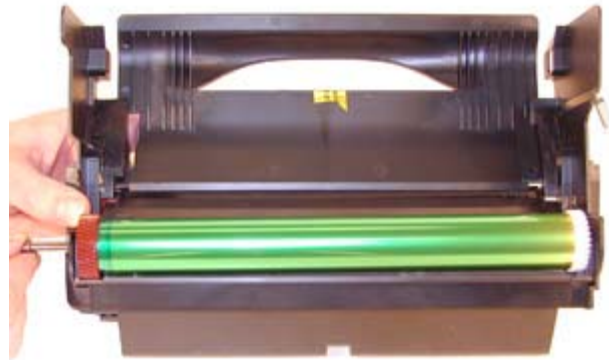


Figure 31

31) Install the E-Ring on the end of the axle. See Figure 32

32) Spin the drum for a few revolutions towards the waste chamber to ensure the drum and wiper blade are properly lubricated.

33) Make sure both springs are in their respective holes in the cartridge side walls. See Figure 33

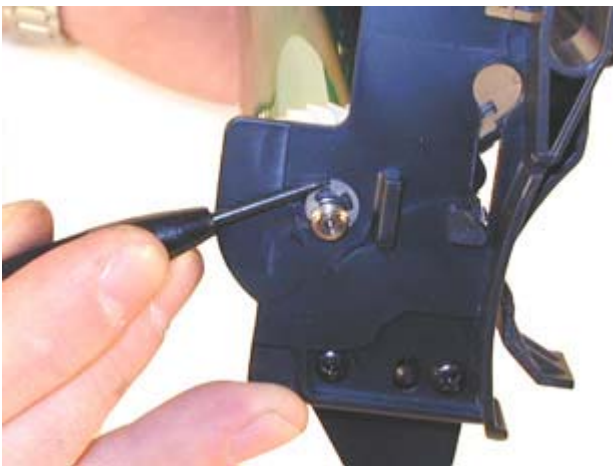


Figure 32

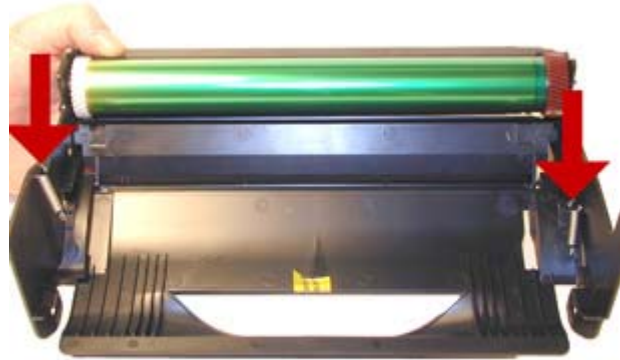


Figure 33

34) Take the Toner Hopper and install it straight in. Bend out the side wall of the cartridge so that the top pins are able to lock in place. Make sure that the two front pins are in their slots. See Figures 34, 35, & 36





Figure 34

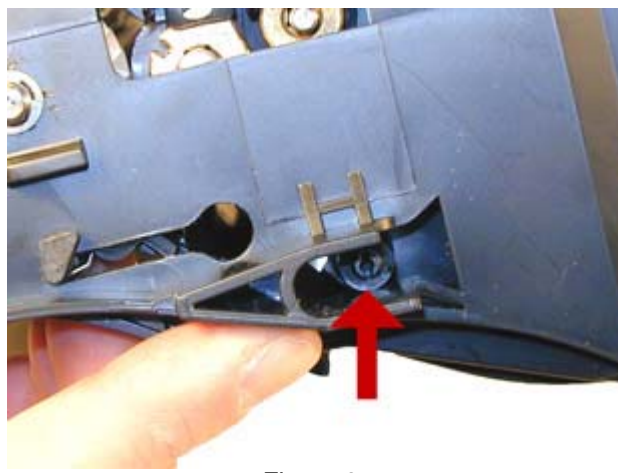


Figure 35

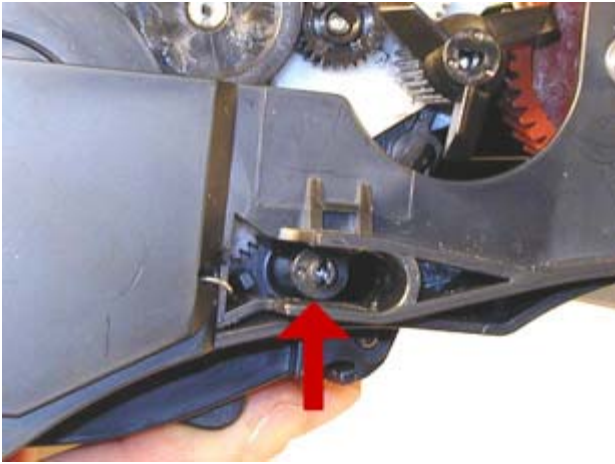


Figure 36

35) With spring hook, replace both springs on to the Toner Supply Chamber. See Figures 37 & 38

36) If this is a Prebate cartridge, the chip must be replaced. Remove the screw, and remove the old chip. Install the new chip, and replace the screw. See Figure 39

37) A shipping lock must now be installed. This lock should be used even if you are going to hand deliver the cartridge. It will prevent the toner hopper from coming in contact with the OPC Drum, and causing damage to either the Drum or the Developer Roller. Press the two red tabs into the sides of the cartridge as indicated. See Figure 40

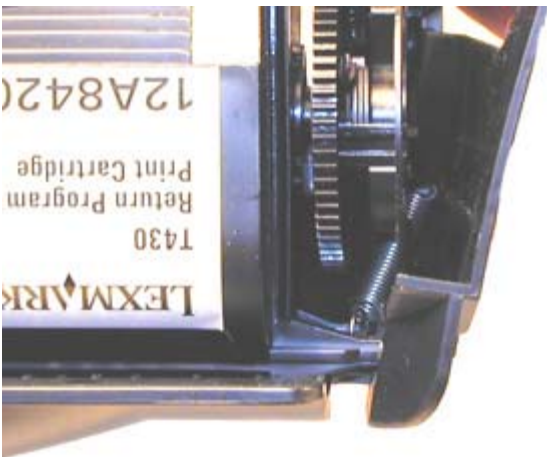


Figure 37



Figure 38

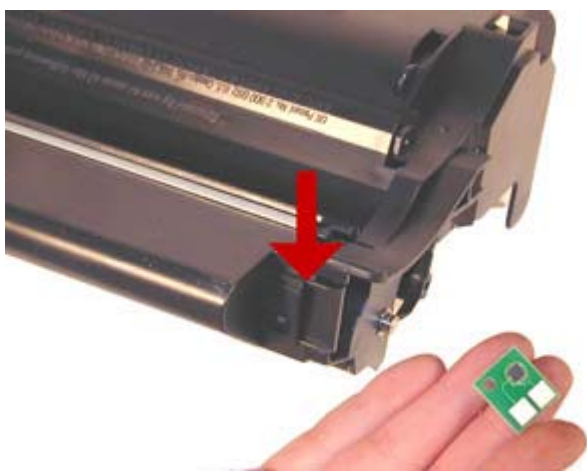


Figure 39



Figure 40

## PRINTING TEST PAGES



### Running Test Prints:

Menu Settings Page:

- 1) Make sure that the ready light is on.
- 2) Press and release the "MENU" button until "Utilities Menu" appears on the display
- 3) Press "SELECT"
- 4) Press and release the "MENU" button until "Print Menu" appears on the display
- 5) Press "SELECT"
- 6) The menu settings page will print. If the machine is the network version, an additional network settings page will also print

### Print Quality Test Pages:

- 1) Turn the printer off.
- 2) Press and hold the SELECT and RETURN buttons, turn the printer on.
- 3) Release the buttons once "PERFORMING SELF TEST" displays.
- 4) Select "Prt Quality Pgs".
- 5) Three pages will print. Two graphics pages and an information page.

If you have ever tried to run these pages from a T420 machine, this is much, much easier!

## TROUBLESHOOTING



### Printer Trouble shooting

All the error messages below 900 are in English, and no explanation is needed. All messages above 900 call for service. We will update this as soon as the service manual is available.

#### Common toner cartridge problems:

Scratched drum This is shown by a very thin, perfectly straight line that runs from the top to the bottom of the test page.

Chipped drum This will show as a dot or series of dots that repeat 3 times per page.

Light damaged drum This will show up as a shaded area on the test print that should be white. Again this will repeat 3 times per page.

Bad wiper blade This will show as either a gray line approximately 1/8" thick, or as shading across the entire page. In either case there will be a film of toner on the drum surface.

Weak Dr. Blade Spring This will usually show as shaded areas on one or both sides of the page.

#### Changing the Printer Density

- 1) Make sure that the ready light is on.
- 2) Press and release the "MENU" button until "Quality Menu" appears on the display.
- 3) Press "SELECT".
- 4) Press and release the "MENU" button until "Toner Darkness" appears on the display.

5) Press "SELECT".

6) The settings can be changed from 1 to 10 with 8 being the default

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