

THE LEXMARK E250/350/450 DRUM UNIT



DOC# 0386

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Remanufacturing the Lexmark E250/350/450 Drum Unit



The Lexmark
E250/350/450 Drum Unit

The Lexmark E250/350/450 machines were introduced in January 2006. They are replacing the E230/330/240/340 series of machines. These cartridges are not backwards compatible with the E230/240/series. The cartridges and chips (Toner cartridges) are all new. **Figures 1-8** show the differences from the E230 (12A8302) drum unit (1-4) and the new E250 (E250X22G) (5-8). **Figures 9-11** Show the foam and plastic spacer, shipping protector. The plastic keeps the PCR from contacting the drum.

Figure 1

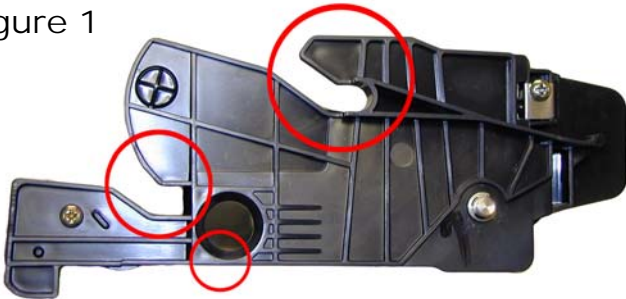


Figure 2

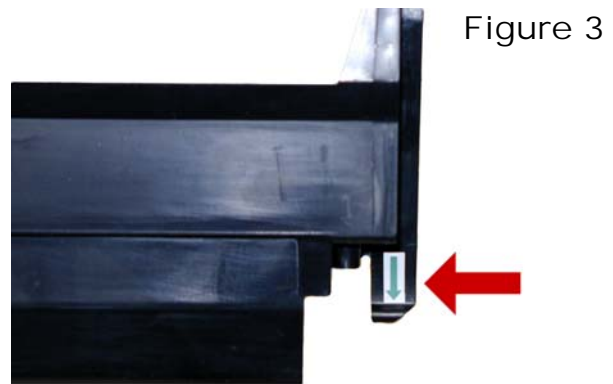
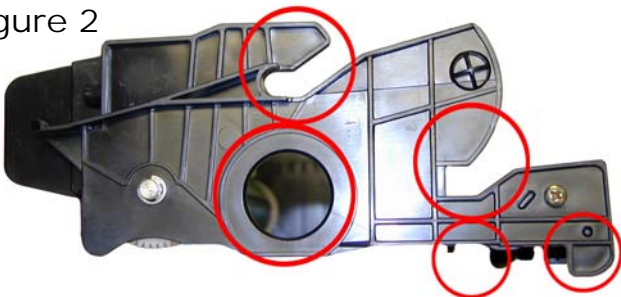


Figure 3

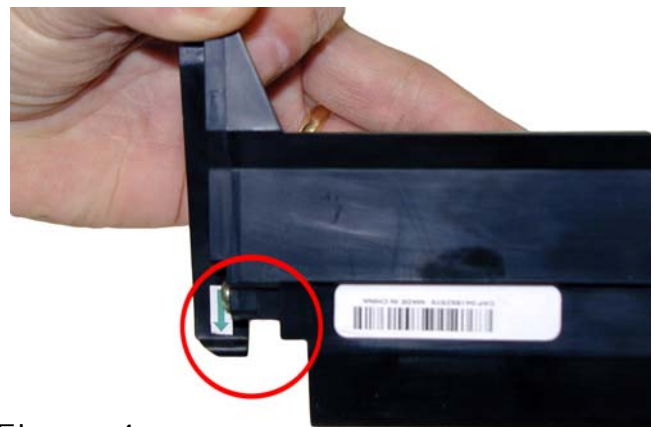


Figure 4

Figure 5



Figure 6

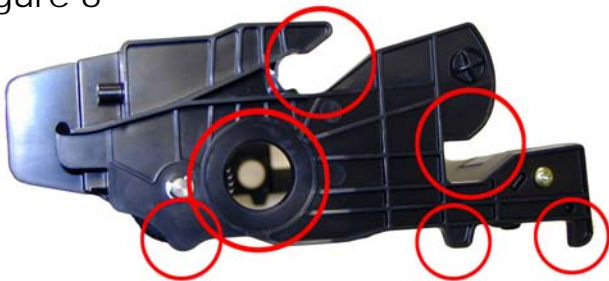


Figure 7

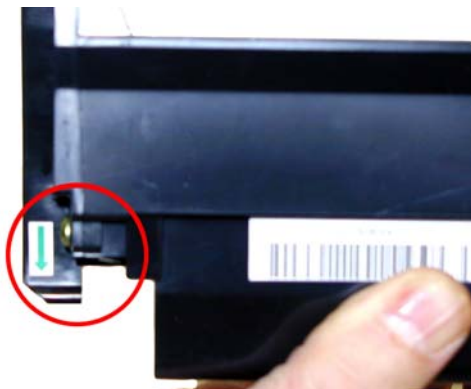


Figure 8

Figure 9



Figure 10



Figure 11



The new machines are based on a Lexmark 30, 35, or 45ppm (depending on the printer), 1200 DPI engine. With a street price of around \$265.00(February 2007) for the E250, these machines continue to be very popular.

This series of machines according to Lexmark have some new designs that set them apart from other similar printers. They feature a "Quiet Mode" which optimizes the settings to deliver "one of the quietest laser printers

in the industry". (Basically it just slows the printer down and drops the sound level while printing from 53dBA to 49dBA). They also feature a new type of laser scanner unit (Print head). This new unit features a miniature pivoting mirror which reduces moving parts, and is supposed to increase reliability. Like most printers these days, these machines have an instant on fuser that has a first page out from sleep mode as fast as 6.5 seconds.

As with the E330/E340 series, there are two cartridges used for this engine, a toner and drum unit. These instructions cover the drum units. While the toner cartridges are different for different regions of the world, the drum unit is the same worldwide. A listing of the cartridges available as well as US pricing follows.

Cartridges For use in the E250/350; USA and Canada

Part#	Type	Yield	List Price
E250A11A	Std. Return cartridge	3,500	\$95.50*
E250A21A	Standard cartridge	3,500	\$122.50*
E352H11A	HY Return E350/352 ONLY	9,000	\$175.50*
E352H21A	HY Standard E350/352 ONLY	9,000	\$202.50
E250X22G	OPC Drum cartridge (All)	30,000	\$37.50*

Cartridges For use in the E450; USA and Canada

Part#	Type	Yield	List Price
E450A11A	Std. Return cartridge	6,000	\$111.00*
E450A21A	Standard cartridge	6,000	\$138.00*
E450AH11A	HY Return cartridge	11,000	\$167.75*
E450H21A	High Yield cartridge	11,000	\$194.75*
E250X22G	OPC Drum cartridge (All)	30,000	\$37.50*

Cartridges For use in the E250/350; Europe, The Middle East and Africa

Part#	Type	Yield
E250A11E	Std. Return cartridge	3,500
E250A21E	Standard cartridge	3,500
E352H11E	HY Return E350/352 ONLY	9,000
E352H21E	HY Standard E350/352 ONLY	9,000
E250X22G	OPC Drum cartridge (All)	30,000

Cartridges For use in the E450; Europe, The Middle East and Africa

Part#	Type	Yield
E450A11E	Std. Return cartridge	6,000
E450A21E	Standard cartridge	6,000
E450AH11E	HY Return cartridge	11,000
E450H21E	High Yield cartridge	11,000
E250X22G	OPC Drum cartridge (All)	30,000

Cartridges For use in the E250/350; Asia Pacific Region

Part#	Type	Yield
E250A11P	Std. Return cartridge	3,500
E250A21P	Standard cartridge	3,500
E352H11P	HY Return E350/352 ONLY	9,000
E352H21P	HY Standard E350/352 ONLY	9,000
E250X22G	OPC Drum cartridge (All)	30,000



Cartridges For use in the E450; Asia Pacific Region

Part#	Type	Yield
E450A11P	Std. Return cartridge	6,000
E450A21P	Standard cartridge	6,000
E352H11P	HY Return cartridge	11,000
E352H21P	High Yield cartridge	11,000
E250X22G	OPC Drum cartridge (All)	30,000

Cartridges For use in the E250/350; Latin America

Part#	Type	Yield
E250A11L	Std. Return cartridge	3,500
E250A21L	Standard cartridge	3,500
E352H11L	HY Return E350/352 ONLY	9,000
E352H21L	HY Standard E350/352 ONLY	9,000
E250X22G	OPC Drum cartridge (All)	30,000

Cartridges For use in the E450; Latin America

Part#	Type	Yield
E450A11L	Std. Return cartridge	6,000
E450A21L	Standard cartridge	6,000
E450AH11L	HY Return cartridge	11,000
E250X22G	High Yield cartridge	11,000
E250X22G	OPC Drum cartridge (All)	30,000

The Drum cartridge as noted above is used worldwide.

E250X22G Drum cartridge 30,000 \$37.50*

*Pricing as of February 2007 from the Lexmark Website

Machines based on this engine are the:

Lexmark E250d, E250dn, E350d, E352dn, E450dn

IBM InfoPrint 1601 Express, 1602 Express, 1612 Express and the 1622 Express

The IBM cartridges are as follows:

Part#	Type	Yield
39V1638	Infoprint 1601/1602 (E250) Return toner	3,500
39V1637	Infoprint 1601/1602 (E250) Std toner	3,500
39V1642	Infoprint 1612* (E350) HY Return toner	9,000
39V1641	Infoprint 1612* (E350) HY STD toner	9,000

* The 39V1638 and 1637 cartridges also work in the 1612 machines

Part#	Type	Yield
39V1640	Infoprint 1622 (E450) Return toner	6,000
39V1644	Infoprint 1622 (E450) HY Return toner	11,000
39V1643	Infoprint 1622 (E450) HY STD toner	11,000
39V1645	Photoconductor for entire 1610-1622 series	30,000

As with the E330/E340 series, the drum units do not use chips. They do however need to be reset when replaced. The reset procedure is listed at the end of this article.

How to take test prints as well as cleaning the printer, a repetitive defect chart are covered at the end of the article.



Supplies required

New Replacement drum
New Wiper Blade
Cotton Swabs
Isopropyl Alcohol
Drum Padding Powder

Tools Required

Phillips head screw driver.
Small Common screw driver
Vacuum approved for toner
Needle Nose Pliers

1) Remove the E-ring from the small gear side of the drum axle shaft. See **Figure 12**



Figure 12

2) Remove the drum axle from the large gear side of the drum. If you try to pull it out from the small gear side, the shaft will jam up on the drum ground contact and damage the contact. See **Figure 13**



Figure 13

3) Carefully remove the drum. See **Figure 14**

Figure 14



4) Carefully lift out the PCR. The PCR holders will most likely come out with the PCR. This is OK. It makes it easier to re-install it later. Be very careful not to touch the roller with your skin. As with any PCR, the oils naturally present in your skin will be absorbed by the roller and cause printing problems. (Extra marks on the page) See **Figure 15**

Figure 15



5) Remove the two screws from the wiper blade. See **Figure 16**



Figure 16

6) Remove the wiper blade, and clean out any waste toner. See **Figure 17**

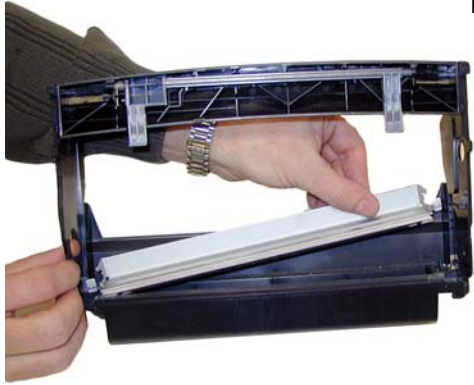


Figure 17

7) Install a new wiper blade coated with your preferred lubricant and two screws. See **Figure 18**

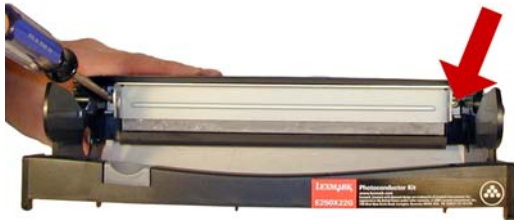


Figure 18

8) Clean the PCR holders with 99% pure isopropyl alcohol. Snap on to the ends of the PCR. See **Figure 19**



Figure 19

9) Install the PCR and holders. See **Figure 20**



Figure 20

10) With the waste chamber facing you, install the drum so that the large gear is on the left side, spring on the small gear facing down. See **Figure 21**

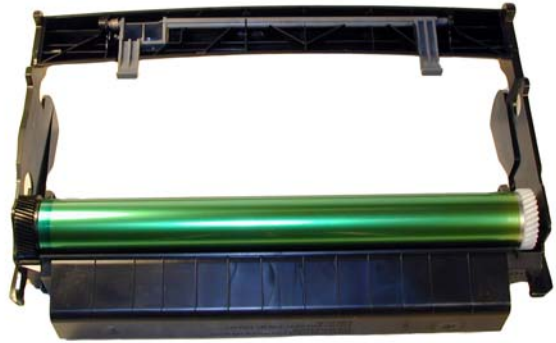


Figure 21

11) Install the drum axle from the large gear side. See **Figure 22**

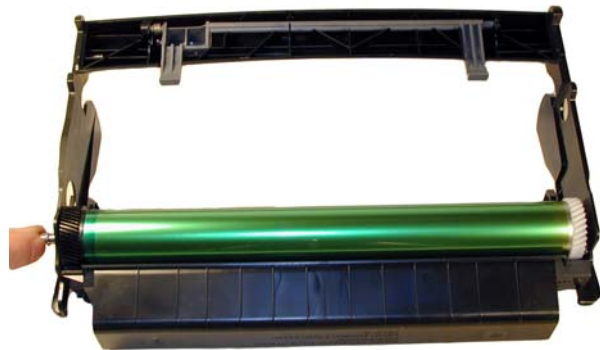


Figure 22

12) Install the E-ring on to the axle. See **Figure 23**



Figure 23

13) Just to make sure that everything is meshing properly and lubricated properly, rotate the drum by the large gear in the proper direction. This is always a good idea for drum units as a final check before installing the cartridge in your test machine.

Resetting the Lexmark E350/352/450 machines (Display)

- 1) With the printer off and the Press and hold the SELECT and BACK buttons, turn the printer on
- 2) Press the right arrow until "RESET PC CNT" appears on the display.
- 3) Press the SELECT button. "=RESET" appears on the display
- 4) Press SELECT again. "RESETTING PC CNT VALUE" appears on the display
- 5) Turn the printer off, and on. The counter is reset!

You can confirm the counter was reset by printing a "menu settings page".

Resetting the Lexmark E250 machines (Non Display)

- 1) Turn off the printer.
- 2) Open the front cover.
- 3) Press and hold the Continue button (Big silver button with Diamond shape symbol) and turn the printer on.
- 4) Hold the button down until the last light (error light) is on solid, release the button and close the front cover.
- 5) When the cover is closed, all the top 3 lights should be on solid.
- 6) Press the cancel button (triangle symbol) 4 times very slowly until you see the toner low light (second light from top) on solid.
- 7) Press the continue button and wait until you see the light sequence.
- 8) Press the cancel button and wait until you see the light sequence.
- 9) Finally power off the printer and power it back on to exit the configuration mode.

This resets the drum count on the printer. (Called the PC count by Lexmark).

Printing test pages E350/450 Series

- 1) Press the "Key" button on the control panel
- 2) Press the "Down arrow" until REPORTS appears on the display
- 3) Press the Select button
- 4) Press the "Down Arrow" until the MENU SETTINGS PAGE, NETWORK SETUP PAGE, or PRINT FONTS appears on the display.

Printing test pages E250 Series

- 1) Make sure the printer is READY
- 2) Press the "Continue" button
- 3) Both the menu settings page and the network setup page will print out

Cleaning the Printhead glass

Open the front cover and remove the toner and drum cartridges. Locate the glass printhead lens in a recess above the cartridge bay. Wipe the glass down with a lint free dry cloth. Do NOT use any type of chemicals on the glass. Re-install the cartridges and close the cover.

Repetitive Defect Chart

38.2mm	PCR
47.8mm	Developer Roller
51.7mm	Transfer Roller
79.8mm	Upper fuser Belt
95.5mm	Lower fuser Roller
96.7mm	OPC Drum

