LEMARK® MS/MX 310/410/510/610
TONER CARTRIDGE REMANUFACTURING INSTRUCTIONS

LEXMARK MS/MX 310/410/510/610 TONER CARTRIDGE

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REMANUFACTURING THE LEXMARK SERIES MS/MX 310/410/510/610 TONER CARTRIDGE

By Enrique Stura, Daniel Reyes and the Technical Staff at UniNet

Introduced to the market early in 2013, the Lexmark MS/MX series of monochrome multifunction printers were designed to eventually replace the older E, T and X series.

Notable improvements are the dual core 800 MHz processors and all-expandable 125 MB to 2.5GB memory, as well as 1200 x 1200 DPI print resolution and speeds from 35 to 55 pages per minute, which make for an important option in today's competitive market.

With regard to the xerographic design, all printers come with a toner cartridge and separate imaging unit, which extends the long life of the OPC drum and helps maintain a low cost per page ratio when compared to other competing brands using AIO devices.

Now for the not-so-good news, all the printer models offered are regionalized and use a chip in both the toner cartridge and imaging unit that must be replaced each cycle. This type of chip in the imaging unit is a radical move for Lexmark when compared to prior E models where the drum reset procedure was performed directly and economically via control panel.

REGIONAL PRINTER DESIGNATIONS

Africa / Middle East / Central Eastern Europe:	**Region 5**
Latin America / Puerto Rico / Mexico:	**Region 4**
Asia Pacific:	**Region 3**
Europe / EFA / Switzerland:	**Region 2**
USA / Canada:	**Region 1**

The smaller machines ship with return-program starter cartridges, rated for 1,500 pages and identified with a third digit corresponding to the region list (505, 504, 503, 502 and 501 respectively). The larger replacement cartridges include the letter **H** to represent "high yield" at 5,000 pages; **X** for "extra high yield" at 10,000 pages; and **U** for "ultra high yield" at 20,000 pages (depending the models involved); while the imaging unit is listed at 60,000 pages.

With regard to multifunctional MX machines, the range of yields are altered, shipping with starter cartridges rated at 2,500 pages for up to the MX611 model; 6,000 pages from the MX611 onward; then normal yields of 10,000 pages (letter **H**) and 20,000 pages (letter **X**) option up to model MX611. The numbering for MX cartridges are 605, 604, 603, 602 and 601 depending of their regions.

REQUIRED TOOLS

1. Phillips screwdriver
2. Jeweler's type Phillips screwdriver
3. Small flat screwdriver
4. Hook tool for spring removal

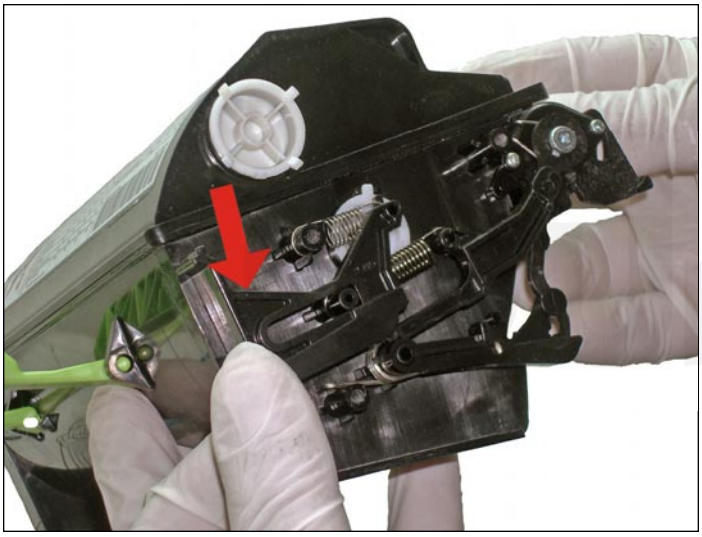
REQUIRED SUPPLIES

1. New, replacement toner for use in Lexmark Series MS/MX cartridges, with designated gram load
2. Replacement chip for toner cartridge, with proper yield and corresponding regional setting

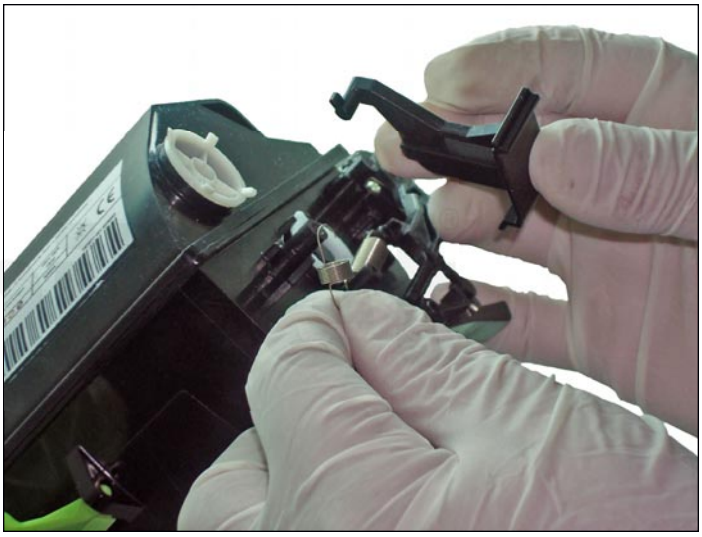
You will only need to remanufacture just one of the end caps where the fill plug is located. The other end cap does not need to be removed.

1. Remove the three screws of the right-side end cap of the toner cartridge.

2. Carefully pry open the end cap while holding the push-plate steady to avoid dropping it.



3. Remove the end cap holding your finger on the small plastic arm indicated by the arrow. It is possible that the pushing-rod of the toner-exit lid could come loose, requiring proper seating adjustment during assembly to function properly.



4. Remove the spring at the end of the arm, and lift to remove it from the sliding support.

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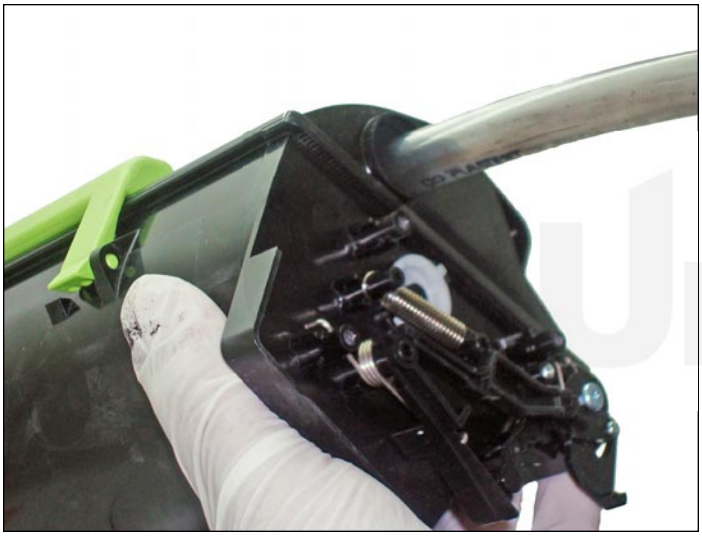
5. Apply leverage with a small screwdriver on the edges of the fill plug to be able to pry it all around, be sure to apply force to the plug itself, and not where it is seated. Fortunately the plug is made of a softer silicone-like material that helps minimize damage when removed.

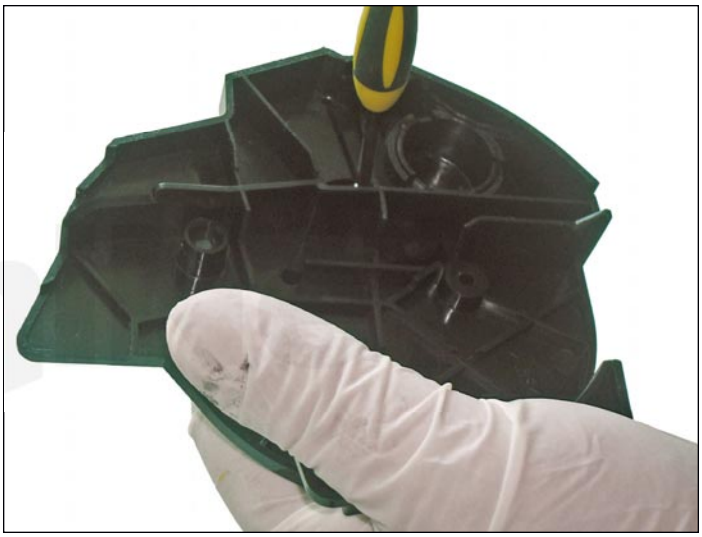
6. Remove the fill plug.



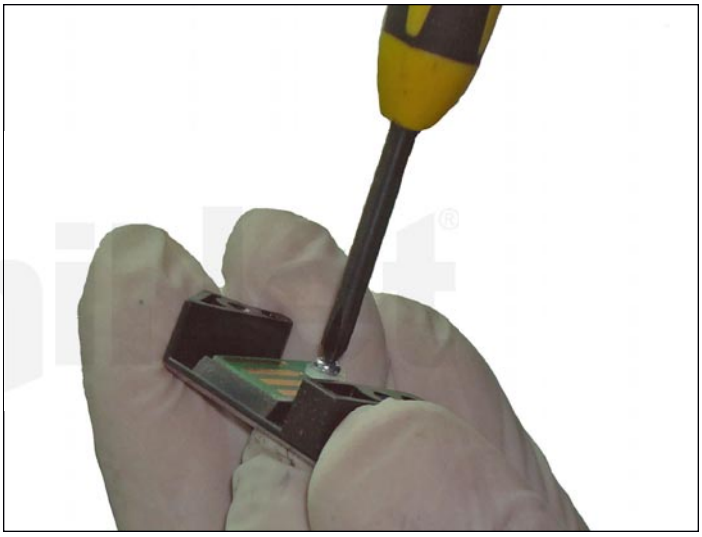
7. Vacuum all remaining toner inside the hopper.

8. Fill with the appropriate amount of toner for the proper yield.

9. Replace the fill plug and check for leaks.

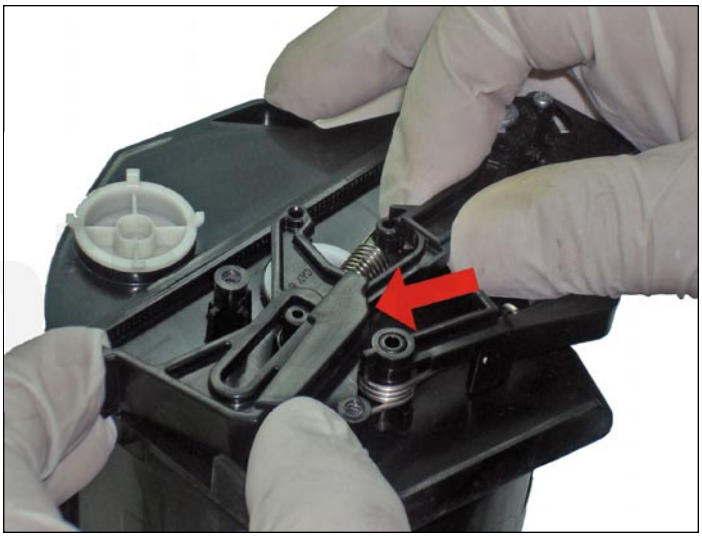


10. Remove the chip by first removing the two screws securing the holder inside the end cap.



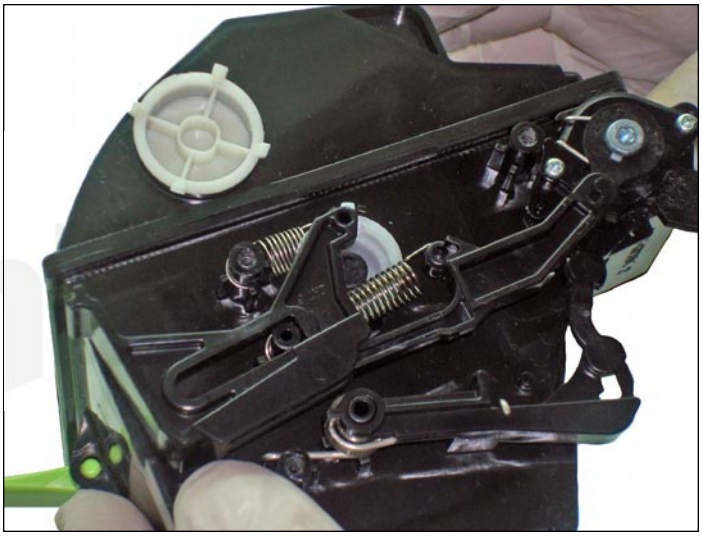
11. Unscrew and separate the chip from the holder.

12. Install the new chip and assemble the cartridge following the previous steps in reverse order.



13. Install the push-plate into the sliding guide and insert the tip of the arm inside it.

14. Position the spring on the punch-plate and hook one end to the fixed post in the cartridge, and the other end in the top end of the push-plate.



15. The installation of the complete assembly must be completed as shown in the photo.

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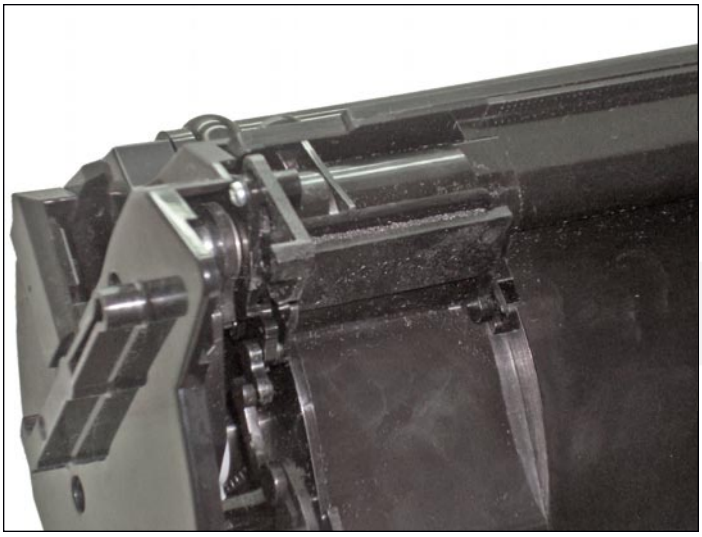
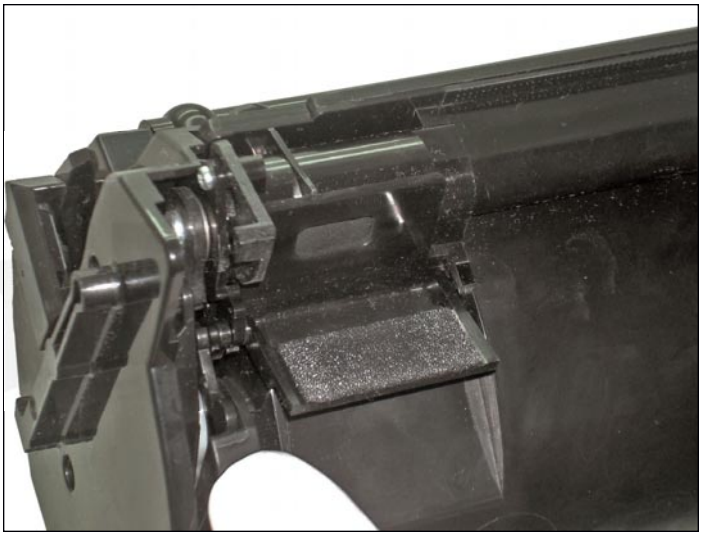
16. While keeping the mechanism pressed against the cartridge to avoid displacement, position the end cap to be seated in its final place.

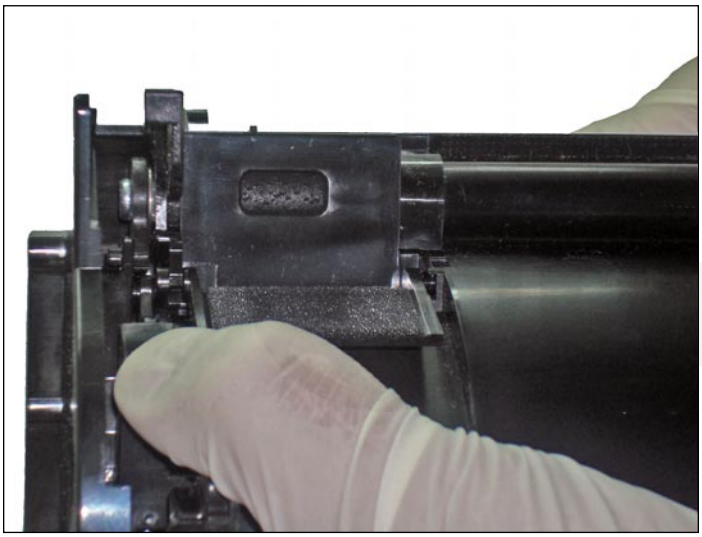
17. Secure the end cap with the three Phillips screws.



18. Check to make sure the closing and opening of the toner outlet system functions properly. Without pressing the front plate, the toner outlet must remain closed all the time.



19. By manually pressing the arm (as shown in the photo) or by inserting the cartridge in the machine, the outlet lid must open and close when released.



20. When the front cover of the machine is closed it pushes the plate all the way in and allows the toner feeding to be ready.