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Samsung ML-6060 Toner Cartridges

DOC-0283

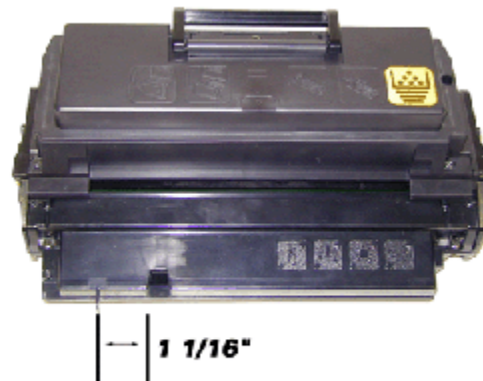
OVERVIEW



NEC SS 1400



**Xerox P1210
(106R442)**



The Samsung ML-6060, NEC Superscript 1400, and Xerox P1210 series of printers are based on a Samsung 12 ppm, 1200 dpi engine. Although the exact engine number is not known, these cartridges from the outside seem to be a beefed up version of the P8e. From the inside however, they are completely different. These cartridges are at the same time deceptively easy and deceptively difficult to remanufacture. I will explain more as we go through the process.

The NEC 1400 series consists of the Superscript 1400, 1450, and the 1450 N. All are fairly standard except they have one unique feature. The software provided with the printers includes a "Poster Printing" feature. This allows you to take an image or document and break it into as many as 36 8 1/2 x 11" pages (6 across, 6 high)! It also allows you to set the overlap between pages. A little extreme, but fun to do!

The NEC standard cartridge (20-150) is rated for 3,000 pages at 5% coverage and the High Yield cartridge (20-152) is rated for 6,000 pages at 5%.

These cartridges are not interchangeable with any of the many Samsung versions currently produced.

REQUIRED TOOLS



- Toner approved vacuum.
- A small Common screw driver
- #1 Phillips head screwdriver
- Needle nose pliers

REQUIRED SUPPLIES



- NEC 1400 toner, 190g (For 6k cartridge)
- Wiper Blade (Check for availability)
- OPC Drum (Check for availability)
- Kynar padding powder
- PCR Cleaner
- Conductive grease

DISASSEMBLY



1. Clean the exterior of the cartridge.
2. Place the cartridge with the handle facing up. Remove the top 2 screws. See Figure 1
3. Tilt the hopper away from the screw holes and remove. Vacuum both the hopper and cartridge clean See Figure 2

CAUTION: The upper half of the toner hopper is being removed. If there is a lot of toner left in the hopper, it will dump out all over! .



FIGURE 1



FIGURE 2

4. Locate both the drum cover arms and gently pry them off. Try to keep the springs on the arms to make re-assembly easier later. See Figures 3 & 4
5. Remove the two screws on the Waste chamber. Lift the waste chamber off the cartridge. See Figure 5 & 6

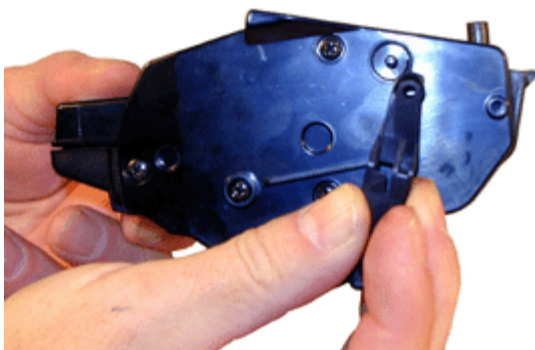


FIGURE 3



FIGURE 4

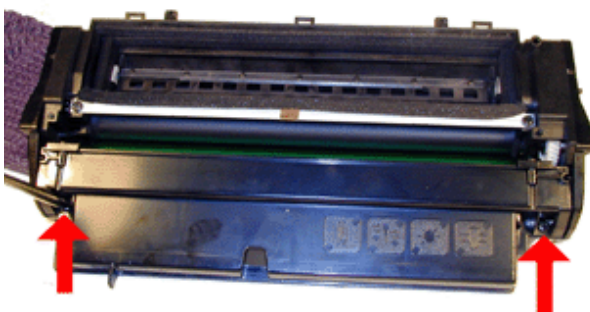


FIGURE 5

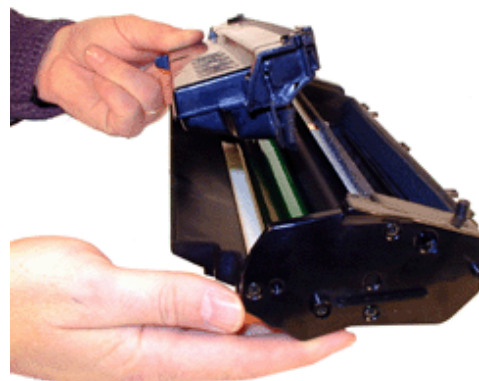


FIGURE 6

6. On the waste chamber, remove the two screws on the PCR clips. Remove the clips, and the PCR. Make sure you note the orientation of the PCR as each side is different. See Figure 7
7. Remove the two screws on the wiper blade. Remove the blade. Figure 8 & 9



FIGURE 7

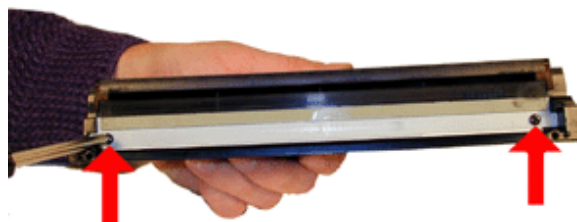


FIGURE 8



FIGURE 9

8. Clean out the Waste chamber.

NOTE: Be very careful not to damage or distort the thin Mylar Recovery Blade next to the wiper blade. If this blade is bent or damaged in any way, it should be replaced

9. Clean the PCR.

WARNING: Do not clean the OEM PCR with alcohol as this will remove the conductive coating on the roller. IF the PCR is an after market, follow the cleaning methods recommended by the manufacturer. If the PCR is an OEM, we recommended it be cleaned with your standard PCR cleaner

10. Re install the Wiper Blade. New blades are at the time of this writing not available, but the OEM will easily last another cycle.
11. Reinstall the PCR and clips. Put the entire assy. aside. See Figure 10

Up to now this has been extremely easy. The next part on removing the drum, had me going for a while. It's not that hard, just very different.

NOTE: If you are not replacing the drum, there is no need to do this. Just leave the old drum alone. Proceed to step 16

12. Remove the Three screws on the left side end cap. Remove the end cap. See Figure 11.



FIGURE 10

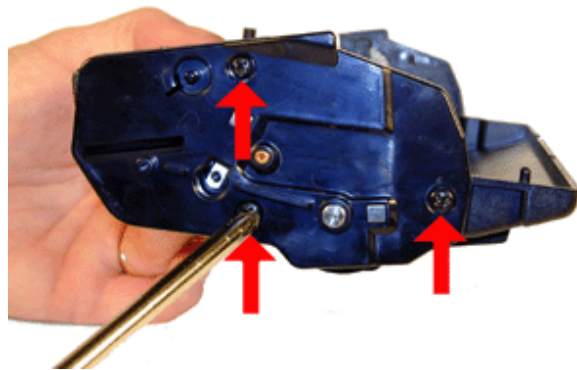


FIGURE 11

13. Remove the three screws on the right side end cap. The fourth screw in the drum axle uses a left hand thread. Make sure you turn that screw to the right to remove it. Keep this screw separate so it doesn't get mixed up. See Figure 12.

Although the drum axle pin looks like it should come out, it doesn't. The drum axle has a slug/silencer attached to it inside the drum. To remove the drum, do the following:

14. Remove the Metal plate and gear assy. Make sure to note the orientation of the remaining gears as they are now loose. See Figure 13

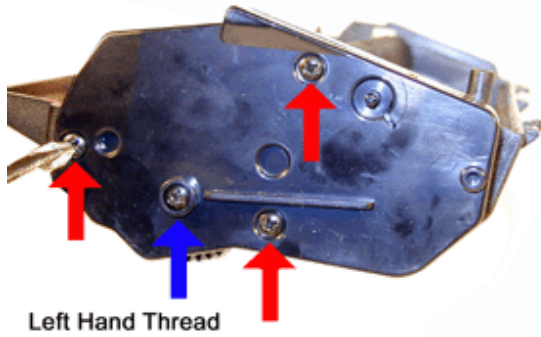


FIGURE 12

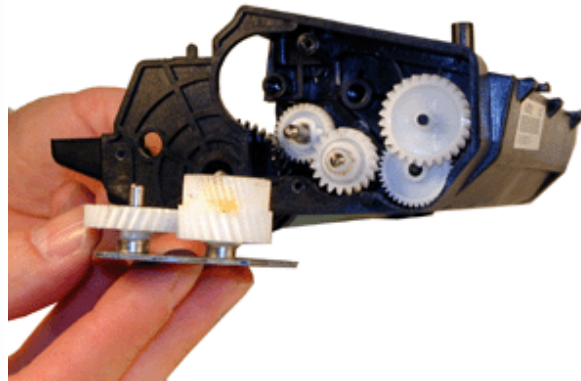


FIGURE 13

15. From the large gear side, push the axle in as far as it will go. From the outside of the cartridge, press the axle in and up. Remove the drum. See Figure 14.

We have removed the gear from an OEM drum to show the axle/silencer combo. New replacement drums once available will either come with one gear installed or no gears at all. See Figure 15

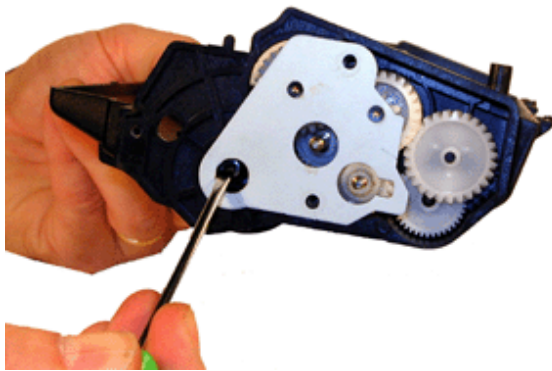


FIGURE 14



FIGURE 15

16. Install new drum axle and gears. Make sure you glue in the gears. The screw hole side of the axle is on the large gear side. See Figure 16.
17. Re-install the gear assy. and right end cap, and all the screws.
18. Re-install the waste chamber and screws. See Figure 17.



FIGURE 16



FIGURE 17

19. Install the seal on the toner hopper. See Figure 18
20. Remove the fill plug on the toner hopper and fill the hopper with the correct toner. Re-install the fill plug. This plug is made with a hard plastic, if it gets damaged, put a small bead of silicon around the lip to seal the cavity. See Figures 19 & 20
21. Slide the seal pull tab under the foam seal and out the cartridge wall. See Figure 21



FIGURE 18



FIGURE 19



FIGURE 20



FIGURE 21

22. Clean the contacts on the left end cap. Re-install the conductive grease. Install the end cap making sure the seal tab is inserted through the slot. See Figure 22
23. Install the drum cover. Press the spring tab into the slot in the end cap to set the spring tension. See Figure 23

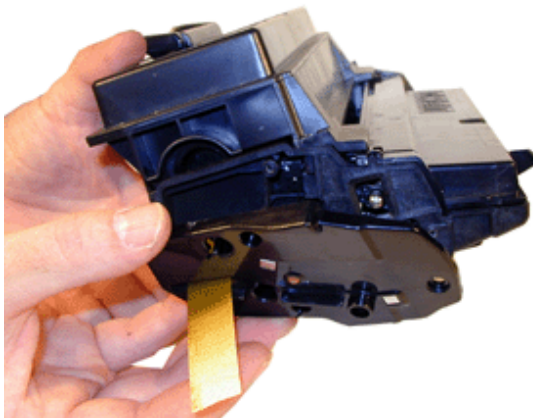


FIGURE 22



FIGURE 23

COMMON CARTRIDGE PROBLEMS



Some of the more common toner cartridge problems are:

A Dirty or Bad Primary Charge Roller (PCR); located inside the cartridge, this will show on the test print as vertical gray streaks down the page, as a gray background throughout the page, or as ghosting where part of a previously printed area is repeated.

Dirty PCR Connection; This will show as horizontal dark black bars across the page, or as shading throughout the page.

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. Any drum defects will 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.

Light print overall: Check to see if the toner save mode is on.

PRINTING TEST PAGES



Make sure the computer is turned off. When the Ready light is on steady, press and hold the GO/CONTINUE button until the led lights cycle 2 (two) times. This takes about 4 seconds. When the GO button is released, the configuration page will print

PRINTING A CLEANING PAGE



Press and hold the GO/CONTINUE and CANCEL buttons simultaneously. All four lights will blink and the internal cleaning sheet will print. According to NEC this should be done once a month or whenever toner marks appear on the BACK side of the pages.

CLEANING THE PRINTER



Not much of the machine is accessible. All that can be done easily is to vacuum the interior and wipe the lens down with a clean lint free cloth. The lens is located on the bottom of the top cover directly below the cartridge cover.

COMMON ERROR CODES



The error light patterns are not very helpful for anything besides a paper jam, but here they are:

Paper Jam: Paper LED is on, Error LED is blinking

Cover open/no cartridge: The error LED is on steady

Internal error: All four LED's blink in sequence, at a high rate of speed. See next error.

Engine error: Same as above, all four LED's blink in sequence, at a high rate of speed. This can be caused by a memory crash, Main board or fuser error!

RECOMMENDED SUPPLIES



Microsoft OLE DB Provider for ODBC Drivers error '80004005'

[Microsoft][ODBC Microsoft Access Driver]General error Unable to open registry key 'Temporary (volatile) Jet DSN for process 0xc5c Thread 0x1e34 DBC 0x86140ec Jet'.

/script/catSearch.asp, line 58