THE SAMSUNG ML-2850/2851ND TONER CARTRIDGE

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Remanufacturing the Samsung ML-2850/2851ND Toner Cartridge

THE SAMSUNG ML-2850/2851ND TONER CARTRIDGE

First released in January 2008 the Samsung ML-2850/2851ND printers are based on one of Samsung's newest engines. The ML-2851 series runs at 30 ppm with a maximum resolution of 1200 dpi. The first page out is stated to be under 8.5 seconds, and the printer comes standard with 32MB of memory. (Expandable to 160MB). As the model number implies, Duplexing and a network card are built in.

These cartridges do not have a drum cover, and come new with a piece of heavy paper taped around the cartridge. (See **Figure 1**) All new cartridges opened so far have shown some toner leakage on the drum that would have shown on any prints for at least a few pages.

The standard cartridge (Samsung part# ML-2850A) is rated for 2,000 pages. The HY cartridge (Samsung part# ML-2850B) is rated for 5,000 pages. As with pretty much all cartridges these days, the cartridge has a chip, and it has to be replaced each cycle.

Cartridge troubleshooting as well as common error messages will be listed at the end of the instructions

Figure 1

Required Tools

1) Toner approved vacuum.
2) A small Common screw driver
3) A Phillips head screwdriver

4) Needle nose pliers

Required Supplies

Samsung 2851 Toner
New replacement chip
Conductive Grease
99% Isopropyl alcohol
Drum lubricating powder

1) Place the cartridge with the handle up, facing towards you. Remove the three screws from the right side end cap. See **Figure 2**
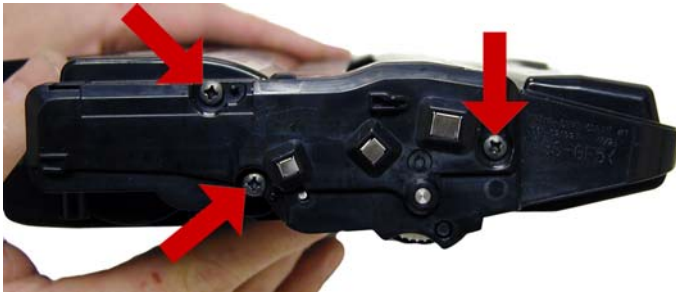

Figure 4

Figure 2

2) On the left side end cap, remove the three screws. See **Figure 3**

Figure 5

Figure 3

3) While still on the left end cap, locate the top tab. Press in on the tab, and remove the end cap. The drum axle may come out with the end cap. Separate the two. See **Figures 4, 5, & 6**
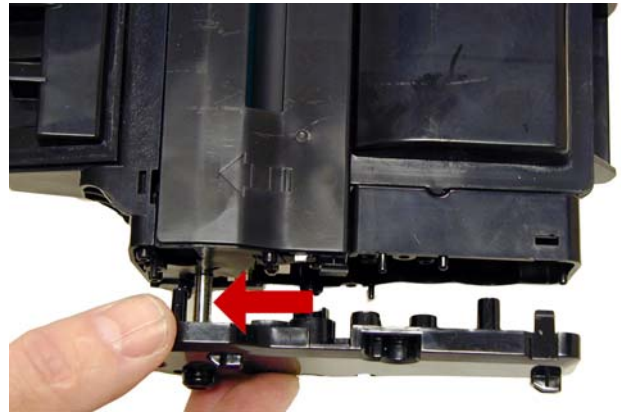

Figure 6

4) On the right side end cap, press in on the top tab and remove the end cap. See **Figures 7 & 8.**

Figure 7

Figure 8

5) Separate the two halves slightly, and lift off the middle top cover. See **Figure 9**

Figure 9

6) Lift up on the drum/waste hopper and remove. If the drum axle came loose, be careful to hold the drum so it does not become damaged. Remove the drum/waste assy. See **Figure's 10 & 11**
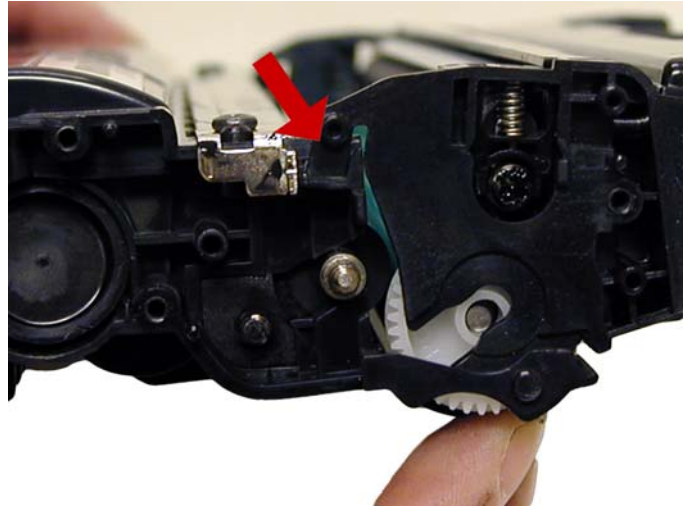

Figure 10

Figure 11

7) Remove the drum axle from the large gear side of the waste assembly. Remove the drum.

See **Figure's 12 & 13**
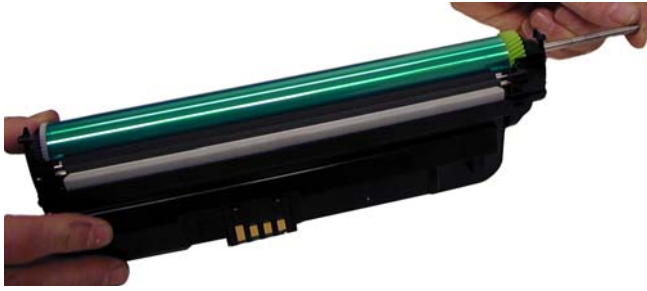
Figure 12

Figure 13

8) Remove the PCR from the assembly. See **Figure 14**

Figure 14

9) Remove the PCR cleaning roller. See **Figure 15**

Figure 15

9) Clean the PCR with your normal PCR cleaner.

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

10) Remove both the PCR holders by pressing in on the tabs at the bottom of the holder. These holders need to be removed to allow access to the wiper blade. . See **Figures 16 & 17**

Figure 16

Figure 17

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11) Remove the two screws from the wiper blade, remove the blade. See **Figure 18**

Figure 18

12) Clean out all the waste toner from the hopper. Make sure the seal are clean. See **Figure 19**

Figure 19

13) Install the cleaned or new wiper blade and two screws. See **Figure 20**

Figure 20

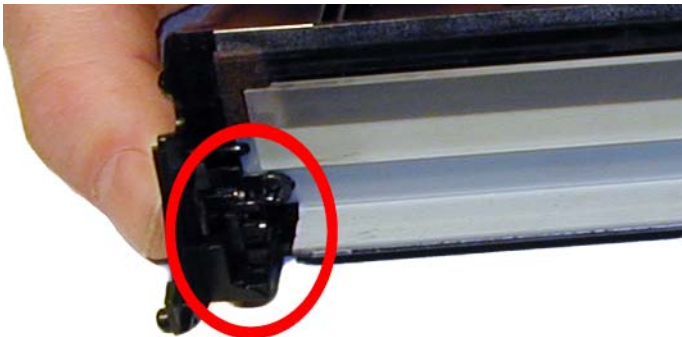14) Install the two PCR holders. See **Figure 21**

Figure 21

15) Blow off or vacuum the PCR cleaning roller. Install in the waste hopper. See **Figure 22**

Figure 22

16) Place a small amount of conductive grease in the holders, and install the PCR. See **Figure 23**

Figure 23

17) The large gear side of the drum axle shaft has conductive grease on it. Regardless of if you are replacing the drum or not, clean the old grease off, and replace with new. See **Figure 24**
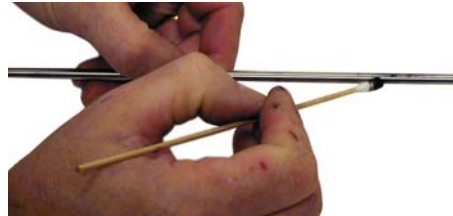
Figure 24

18) Install the drum and axle from the small gear side of the drum into the waste hopper. Make sure the keyed end of the shaft is on the large gear side. See **Figure 25**

Figure 25

19) On the supply hopper, carefully pry out the fill plug and dump out any remaining toner. The fill plug can be difficult to remove as it is recessed. Take a small common screwdriver and work it around the edge lifting slightly until it comes loose. See **Figure 26**

Figure 26

20) Remove the developer roller. See **Figure 27**

Figure 27

21) Remove the 2 screws from the doctor blade, remove the blade. See **Figure 28**

Figure 28

22) Clean out all the remaining toner from the hopper.

23) Make sure the doctor blade sealing foam and the developer rollers seals are clean and intact. See **Fig. 29**

Figure 29

24) Clean the Dr. blade edge so there is no evidence of build up along the edge. If any buildup exists, the cartridge will streak. This blade can be cleaned with your preferred Samsung DB cleaner. See **Figure 30**
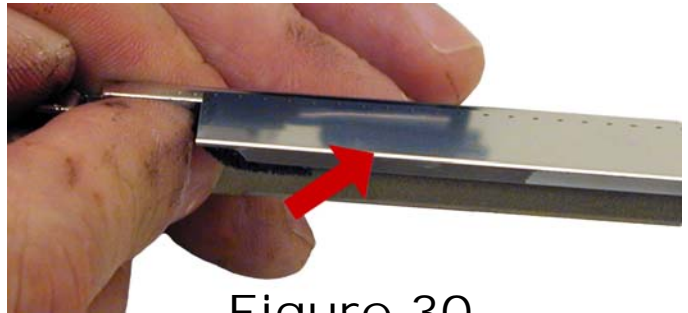

Figure 30

25) Install the doctor blade and two screws. See **Fig. 31**

Figure 31

26) Clean the developer roller with a dedicated DVR cleaner, and replace into the hopper. See **Figure 32**

Figure 32

27) Fill the hopper with **ML**-2851 toner, replace the fill plug, check for leaks. See **Figure 33**

Figure 33

28) Fit both sides of the waste hopper tabs into the toner hopper. See **Figure 34**
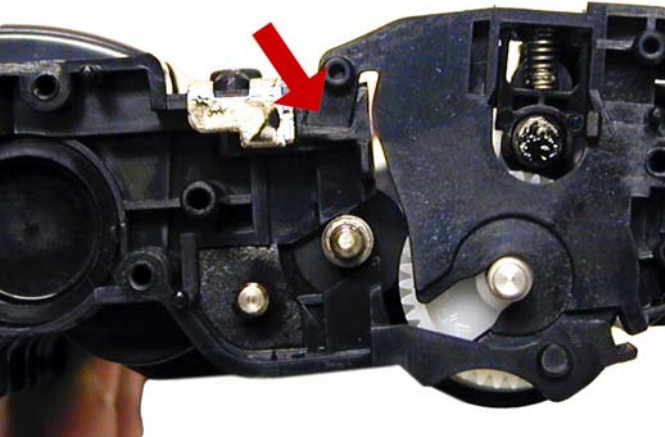

Figure 34

29) Slide the middle top cover/PCR assembly into place. Make sure all the middle tabs fit under the edge of the waste hopper. See **Figures 35 & 36**

Figure 35

Figure 36

30) Clean the contacts on the left side end cap, and replace the conductive grease. Align the drum axle keyed end so it will fit into the keyed slot of the end cap. Snap the end cap into place. See **Figures 37 & 38**

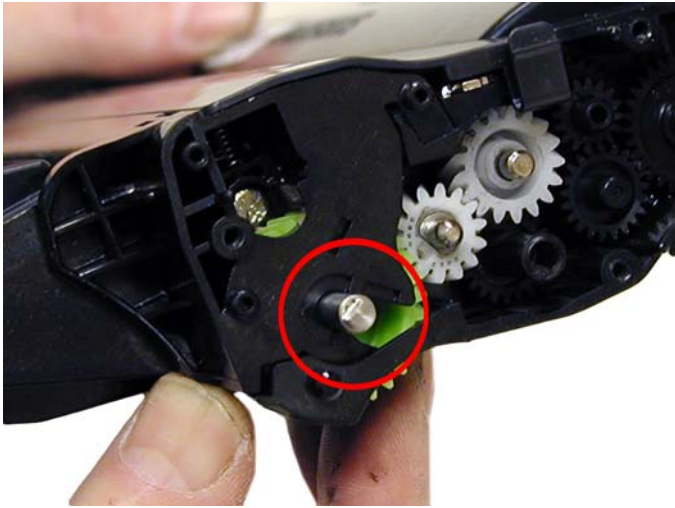31) Install the three screws into the end cap. See **Figure 39**

Figure 37

34) Clean the contacts on the right side end cap, and replace the conductive grease. Snap the end cap into place, and replace the three screws. See **Figures 40 & 41**

Figure 40

Figure 38

Figure 41

35) To replace the chip, drill out the two plastic rivets with a small drill, remove the cover, and chip. See **Figure 42**

Figure 39

Figure 42

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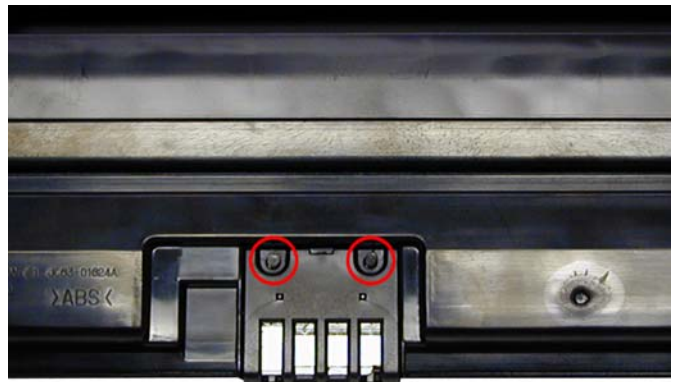
36) Install the new chip and cover, insert 2 small screws that correspond to the holes drilled to hold everything in place. See **Figure's 43 & 44**
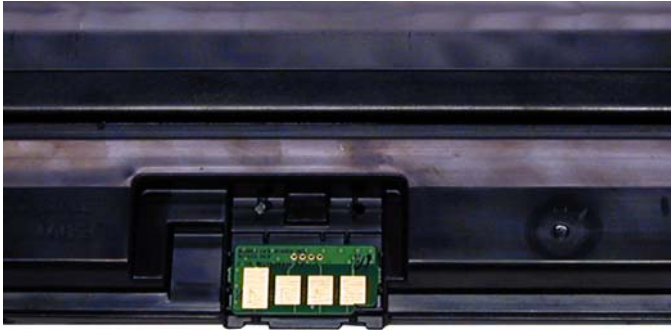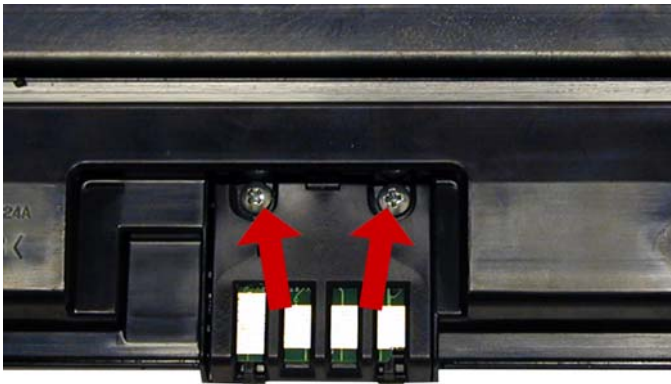

Figure 43

Figure 44

Printer Error Messages:

Error light is on steady, red color: Cover open, Toner cartridge missing, toner cartridge empty
Error light is on blinking, red color: Printer error, Toner Low
Error light is on steady, Orange color: paper jam

Printing test Pages:
To print the Demo page, Press and hold the cancel button for 2 seconds. The demo page will print out.

To print the configuration page/menu map pages, Press and hold the Cancel button for 4 seconds. Both the configuration pages and the menu map pages will print.

Common Cartridge Problems

Repetitive defect chart:

Upper heat roller: 77.6mm
OPC drum: 75.5mm
Lower pressure roller(1st): 62.8mm
Lower pressure roller (2nd): 37.7mm
Supply Roller: 47.1mm
Transfer roller: 47.0mm
Developer roller: 35.2mm
PCR 26.7mm