

# SAMSUNG ML-3471 TONER CARTRIDGE REMANUFACTURING INSTRUCTIONS

## THE ML-3471 TONER CARTRIDGE



DOC# 0438

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– a distributor of Summit and Uninet Products.



# Remanufacturing the Samsung ML-3471 Toner Cartridge



## THE ML-3471 TONER CARTRIDGE

**F**irst released in February 2008, the Samsung ML-3471ND printers are based on a 35ppm, 1200dpi engine. This particular model is network ready and has a duplexer built in.

The ML-3471 has a first page out in under 9 seconds, uses a 400Mhz Processor and comes standard with 64Mb RAM,(Expandable up to 320Mb). The monthly duty cycle is 50,000 pages.

These cartridges do not have a drum cover, and come new with a piece of heavy paper with foam glued to it taped around the cartridge.

There are 2 cartridges available for these machines. The LY (ML-D3470A) is rated for 4,000 pages, and the HY (ML-D3470B) is rated for 10,000 pages.

At the time of this writing three machines worldwide have been released using this engine. The ML-3471ND, ML-3470D, and the ML-3471DK

The cartridges themselves are easy to remanufacture

and with list prices (As of 3/1/08) of \$199.99 for the HY and 139.99 for the LY, very profitable as well.

### Required Tools

- 1) Toner approved vacuum.
- 2) A small Common screw driver
- 3) A Phillips head screwdriver
- 4) Needle nose pliers

### Required Supplies

Samsung ML-3471 Toner 250g for HY ML-D3470B and 125g for LY ML-D3470A cartridges (Preliminary amounts)

- Replacement Chip HY or LY
- New replacement Drum
- New Replacement Wiper Blade
- New replacement Doctor Blade
- New Replacement Developer Roller
- Conductive Grease
- Drum lubricating powder

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1) Place the cartridge with the handle/supply chamber towards you. Remove the 3 screws on the right end cap. See **Figure 1**

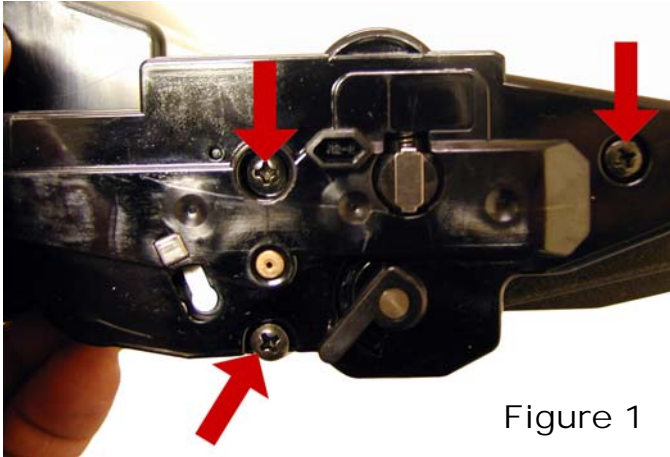


Figure 1

2) Gently pry off plastic drum axle bushing. Keep this bushing with the appropriate end cap when removed. Each side is different. See **Figure 2**

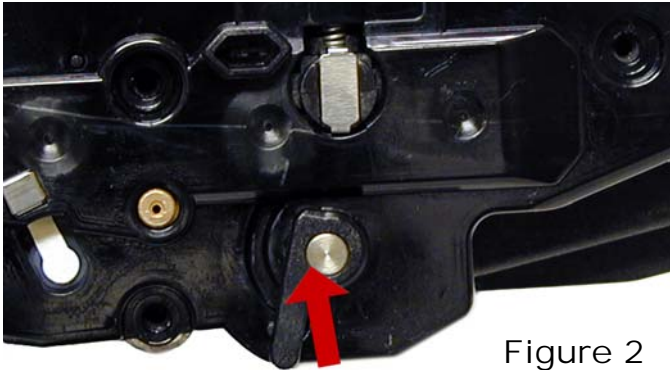


Figure 2

3) On the top and bottom back edge of the end cap, there are two plastic tabs. Press in on the tab and remove the right end cap. See **Figures 3 & 4**

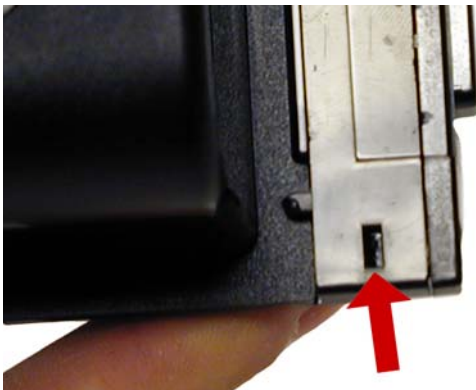


Figure 3

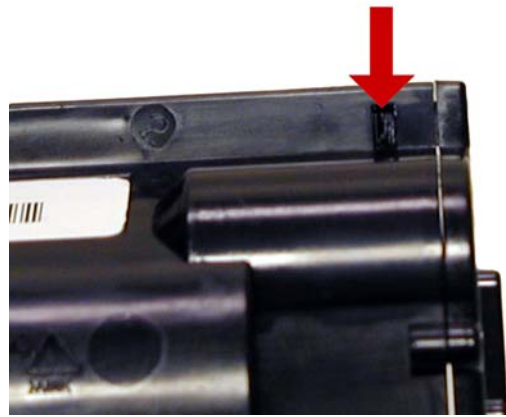


Figure 4

4) On the opposite side of the cartridge, remove the three screws on the left end cap. See **Figure 5**

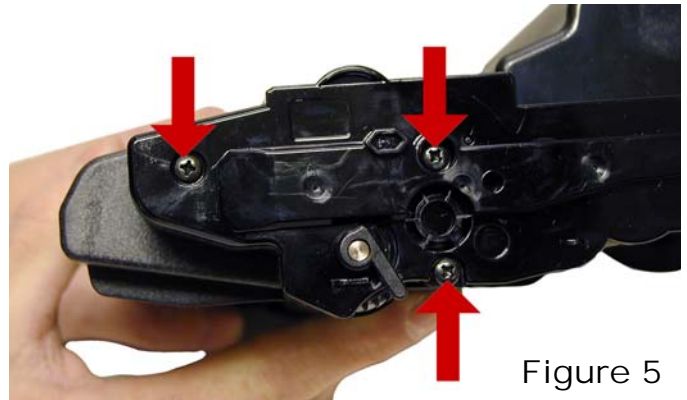


Figure 5

5) Gently pry off plastic drum axle bushing. Keep this bushing with the appropriate end cap when removed. See **Figure 6**

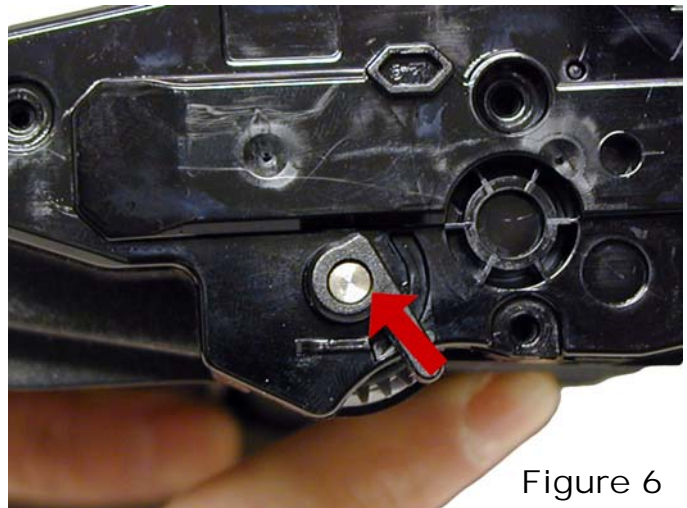
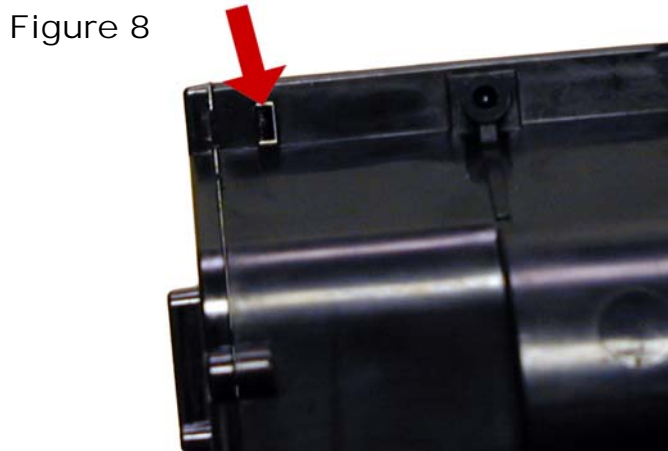
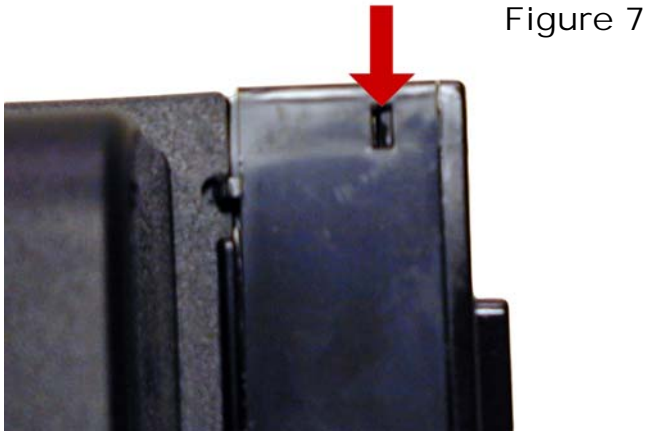


Figure 6

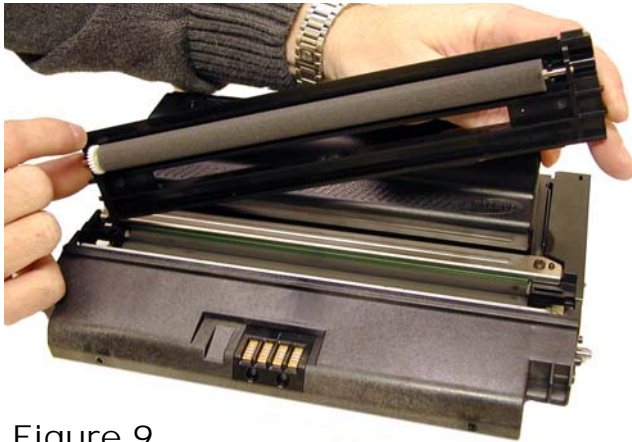
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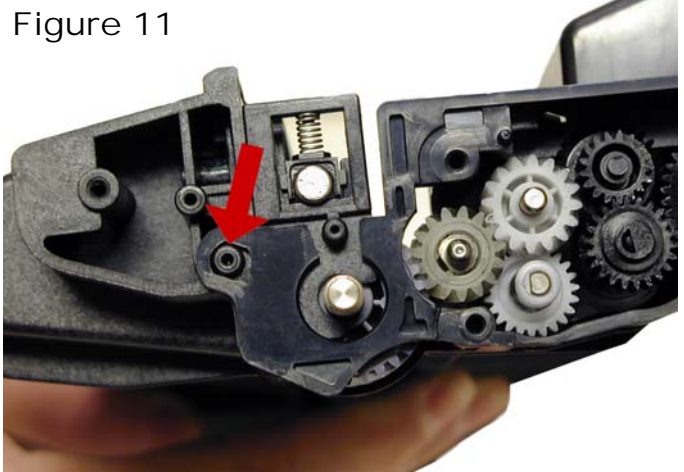
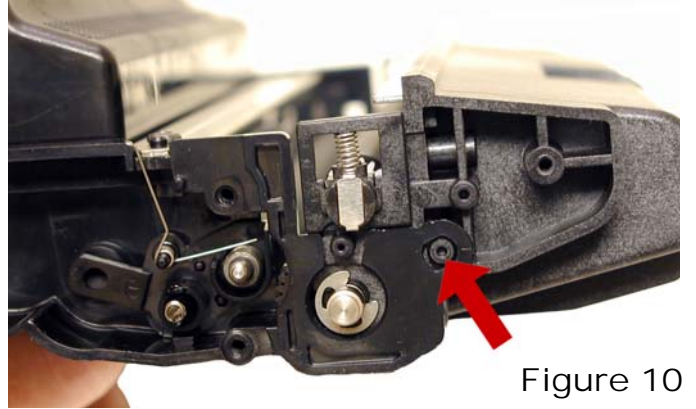
6) On the top and bottom back edge of the end cap, there are two plastic tabs. Press in on the tab and remove the left end cap. See **Figures 7 & 8**.



7) Lift off the roller assembly. See **Figure 9**



8) Carefully pry up the side plastic pieces on both sides to release the waste chamber. See **Figures 10 & 11**



9) Remove the waste chamber. See **Figure 12**



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10) On the supply hopper, remove the fill plug and dump out any remaining toner. See **Figure 13**



Figure 13

11) Remove the developer roller drive gear; put a strip of tape across the remaining gears. They do not need to be removed the tape will help keep them in place See **Figures 14 & 15**

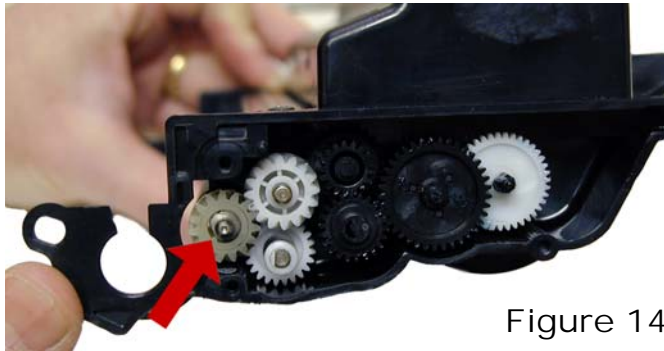


Figure 14



Figure 15

12) On the fill plug side, press in on the plastic tab and remove the spring/plastic bushing assembly. Be careful not to lose the spring! See **Figure 16 & 17**



Figure 16



Figure 17

13) Remove the developer roller. See **Figure 18**



Figure 18

14) Remove the two screws on the doctor blade. See **Figure 19**



Figure 19

16) Carefully pry up the doctor blade. See **Figure 20**



Figure 20

17) Clean out any remaining toner from the hopper.

18) Clean the doctor blade and foam seals. See **Fig. 21**

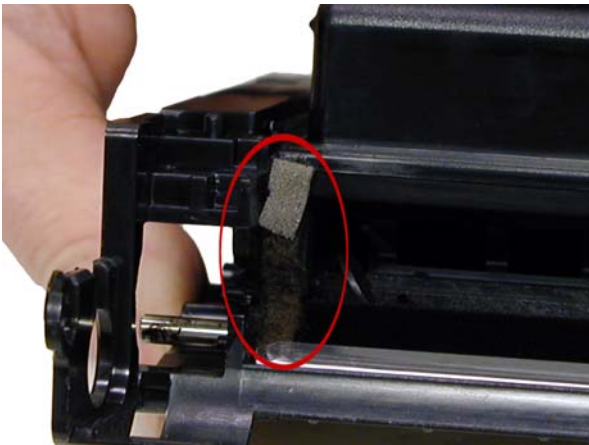


Figure 21

19) Replace the doctor blade and 2 screws. See **Fig. 22**



Figure 22

20) Clean and install the developer roller, long shaft side to gear side first. See **Figure 23**



Figure 23

21) Snap the spring/plastic bushing assembly in place. Make sure the tail of the spring is set properly. See **Figures 24 & 25**

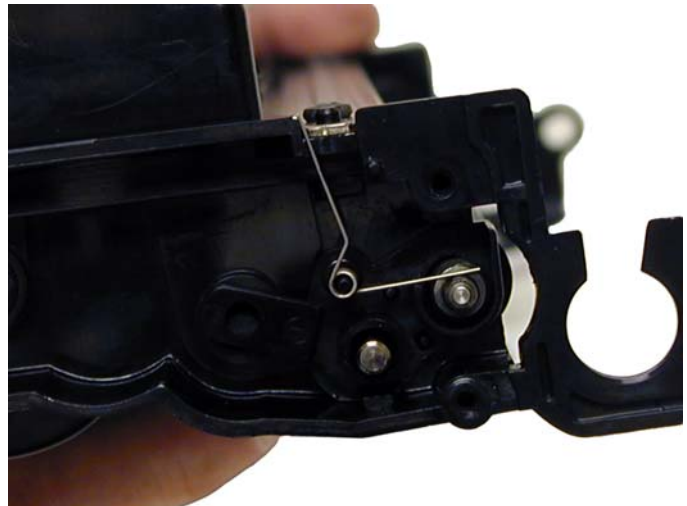
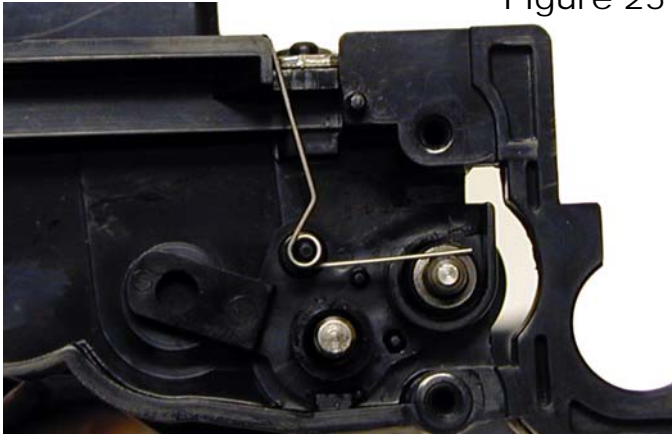


Figure 24

Figure 25



Place the supply hopper aside

25) On the waste hopper, remove the E-ring from the drum axle. See **Figure 28**

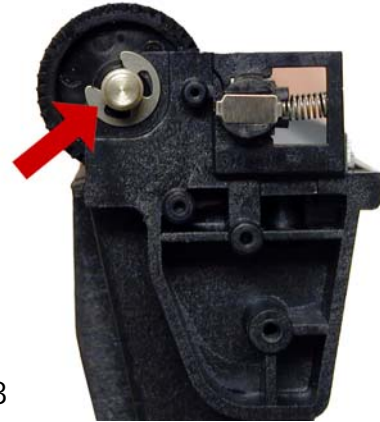


Figure 28

26) Slide the drum axle out from the side opposite the E-ring. See **Figures 29**

23) Install the drive gear on the developer roller. See **Figure 26**

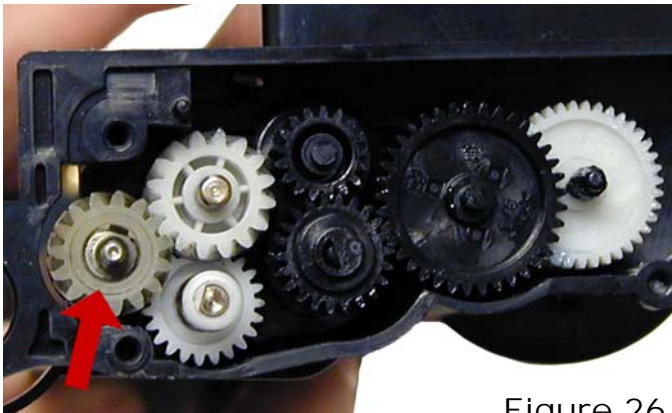


Figure 29

24) Fill the hopper with 250g of ML-3471 toner for the HY (10K cartridge and 125g for the LY 4K cartridge). Replace the fill plug and check for leaks. See **Figure 27**

27) Remove the OPC drum. See **Figure 30**



Figure 27

Figure 30



28) Slide the PCR to the non contact side. Remove the PCR. See **Figures 31 & 32**



Figure 31



Figure 32

29) Remove the two screws and the wiper blade. See **Figure 33**



Figure 33

30) Clean out all the toner from the hopper.

31) Coat the new wiper blade with your preferred lubricant. Install the new wiper blade and two screws. The tail of the wiper blade should face up. See **Fig. 34**



Figure 34

32) Clean the PCR with your preferred 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.

33) Clean the old conductive grease off the PCR shaft and contact. Replace with new. See **Figure 35**



Figure 35

34) Install the PCR by sliding the long shaft side through the non-contact side. Bring it back to fit into the contact side. See **Figure 36**



Figure 36

35) Coat the OPC drum with your preferred lubricant and install the drum. See **Figure 37**

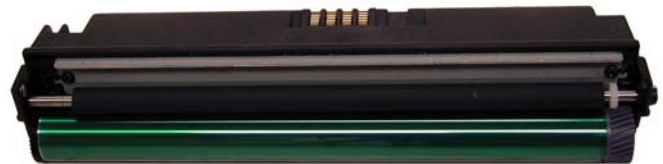


Figure 37





36) Install the drum axle small drum gear side first. Make sure that the E-ring groove ends up on the small drum gear side. See **Figures 38 & 39**



Figure 38

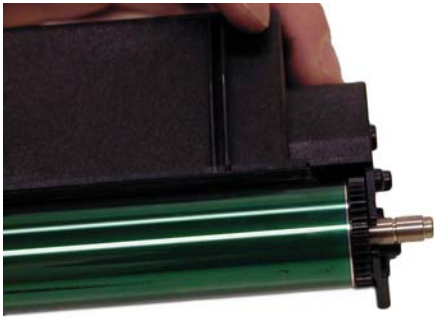


Figure 39

37) Install the E-ring. See **Figure 40**

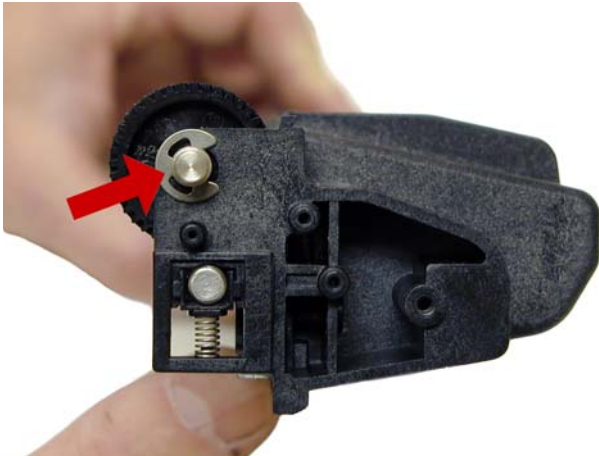


Figure 40

38) Install the waste hopper on to the supply chamber. Make sure that the tabs on both sides lock into place on the side wall. See **Figures 41 & 42**

39) Clean the foam rollers in the roller assembly with clean compressed air.

40) Install the roller assembly. See **Figure 43**

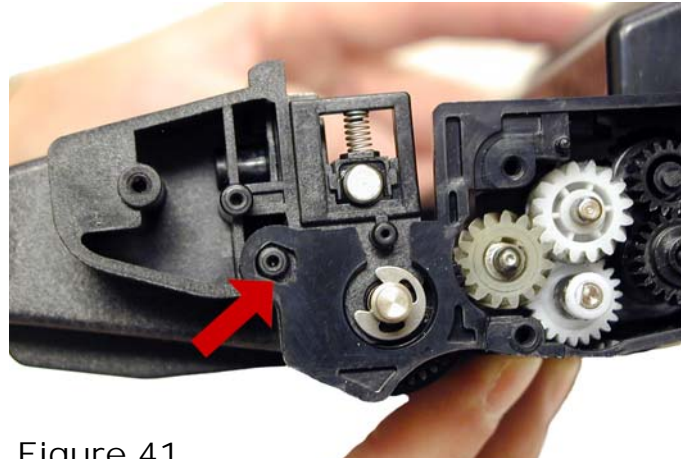


Figure 41

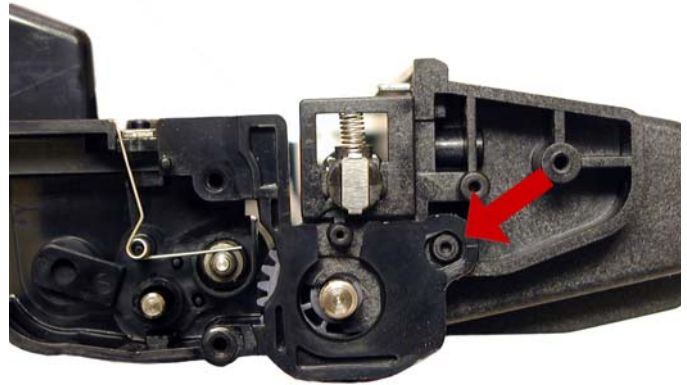


Figure 42



Figure 43



41) Install the right side end cap and three screws. Make sure the top rear tabs lock in place. **Figs. 44 & 45**

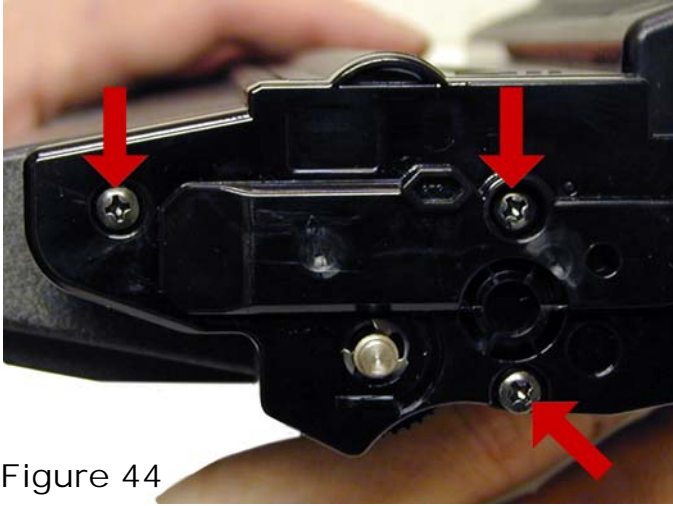


Figure 44

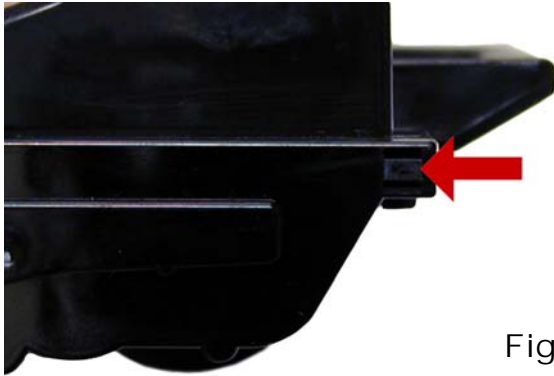


Figure 45

42) Press the drum axle bushing in place. Set it so the small tab is at the end of the groove; make sure it is fully seated. The two small bushings are different. Make sure you have the correct bushing for this side. See **Fig. 46**

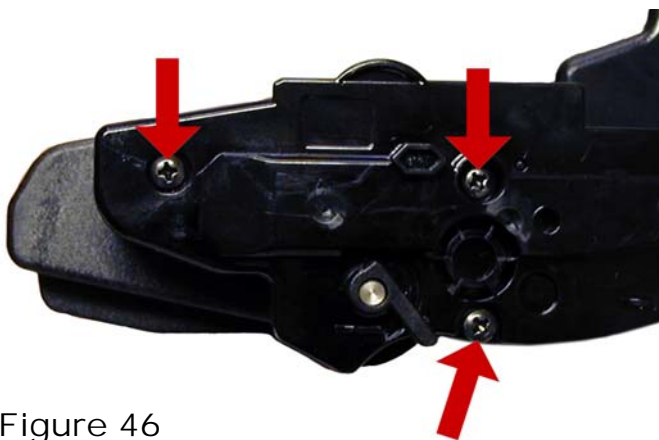


Figure 46

43) Remove the tape from the gears, and install the left side end cap and three screws. Make sure the top rear tab locks in place. See **Figures 47 & 48**

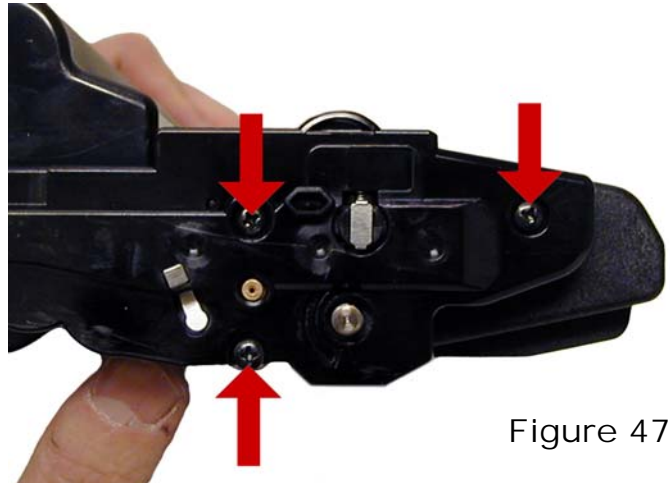


Figure 47

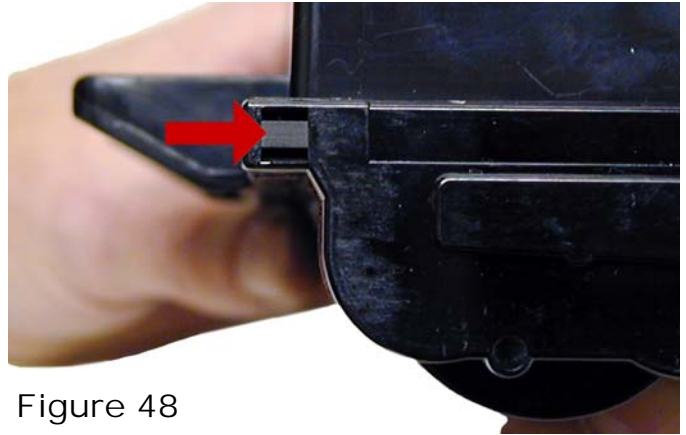


Figure 48

42) Press the drum axle bushing in place. Set it so the small tab is at the end of the groove; make sure it is fully seated. The two small bushings are different. Make sure you have the correct bushing for this side. See **Fig. 49**

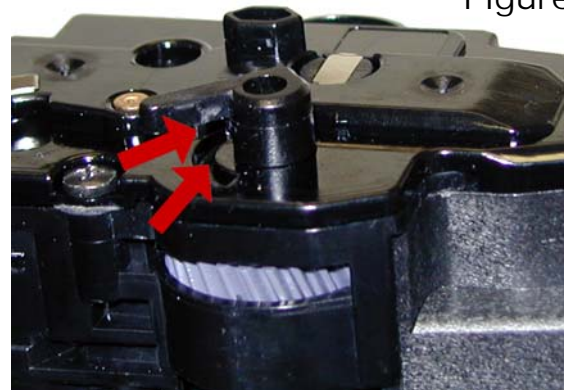


Figure 49

43) The chip is held in place by plastic rivets. To replace the chip, drill out the plastic rivets and install 2 small self tapping screws. Install the two screws before you remove the cover so that the alignment does not change. You can now remove the screws and cover to replace the chip. See **Figures 50 & 51**

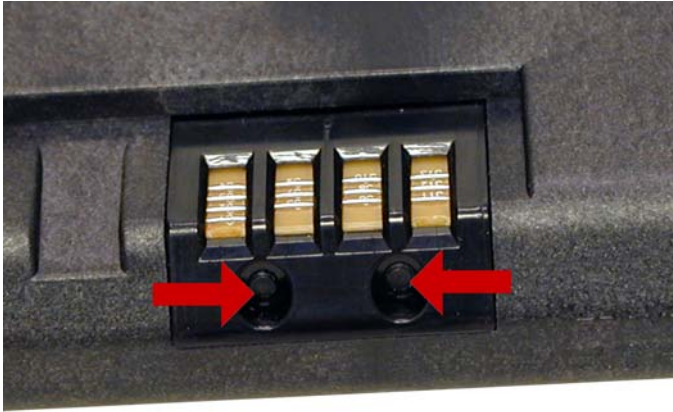


Figure 50

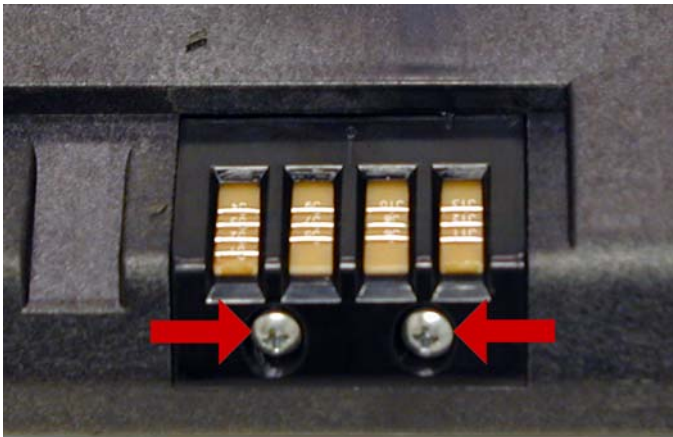


Figure 51

**Printing Test Pages:**

**Demo Page**

Press the MENU button until Information appears on the display.  
 Press Scroll Button until DEMO PAGE appears on the display  
 Press the OK button. A demo page will print out

**Configuration page**

Press the MENU button until Information appears on the display.  
 Press Scroll Button until CONFIGURATION appears on the display  
 Press the OK button. A configuration page will print out

**Repetitive Defect Chart**

Upper Fuser roller	77.8mm
OPC Drum	75.5mm
Lower Pressure roller	62.8mm (Back of page)
Transfer Roller	47.1mm (Back of page)
Supply roller	44.9mm
PCR	37.7mm
Developer Roller	35.2mm

**Machine Error Codes:**

The error codes put out by these machines are all in plain English and there is no need to go into them here.

**Expected printer part life:**

Transfer roller	70,000 pages
Fuser unit	80,000 pages
Pickup roller	150,000 pages

