SAMSUNG® ML-1630

TONER CARTRIDGE REMANUFACTURING INSTRUCTIONS

SAMSUNG ML-1630 TONER CARTRIDGE

UniNet
www.**uninet**imaging.com

REMANUFACTURING THE SAMSUNG ML-1630 TONER CARTRIDGE

By Mike Josiah and the Technical Staff at UniNet

First released in October 2007, the Samsung ML-1630, ML-1631, ML-1630S, and SCX-4500 printers are based on one of Samsung's newest engines. The ML-1630 series runs at 17 ppm with a maximum resolution of 600 DPI.
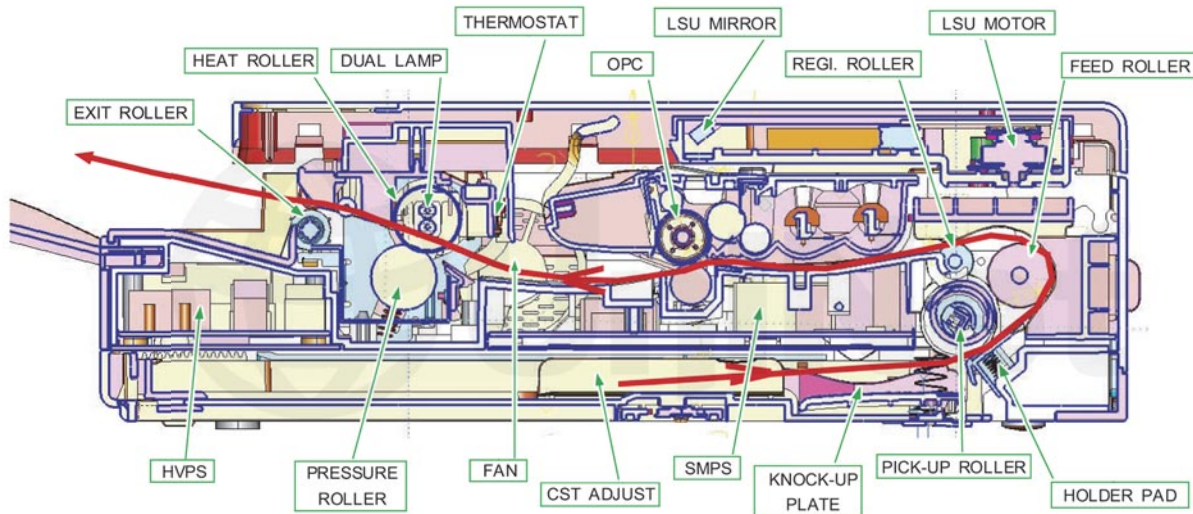
The design is new for Samsung and all other printer manufacturers for that matter. They are pushing its sleek design as a nice office addition not only as a printer but aesthetically as well. While this system uses all standard monochrome technology, the printer itself is extremely small and compact.

One interesting thing is that the fuser uses a 2-lamp system. Most machines these days use a film and ceramic heater to fuse the toner. This system is more like the HP 8100.

These cartridges do not have a drum cover, and come new with a piece of heavy paper taped around the cartridge. 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-D1630A comes new with 40g toner, and is rated for 2,000 pages at 5% coverage. The starter cartridge however is rated for only 1,000 pages.

As with pretty much all cartridges these days, the cartridge has a chip, and it has to be replaced.

EXIT ROLLER

HEAT ROLLER | DUAL LAMP

THERMOSTAT

LSU MIRROR

LSU MOTOR

OPC | REGI. ROLLER | FEED ROLLER

HVPS | PRESSURE ROLLER | FAN | CST ADJUST | SMPS | KNOCK-UP PLATE | PICK-UP ROLLER | HOLDER PAD

Shown is a complete layout of the entire printer. We have not taken a machine apart yet, and we hope we never have too!

REQUIRED TOOLS

1. Toner approved vacuum
2. A small common screwdriver
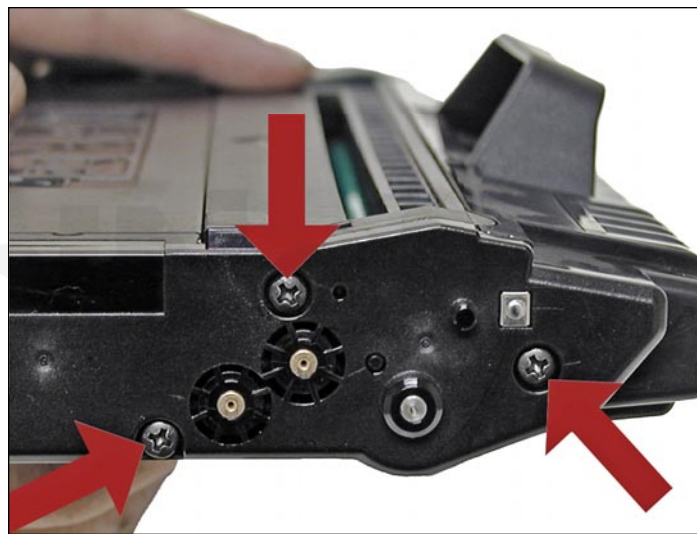3. A Phillips head screwdriver
4. Needle nose pliers

REQUIRED SUPPLIES

1. 40g (2,000 pgs) new replacement toner for use in Samsung ML-1630
2. New replacement chip
3. Conductive grease
4. 99% isopropyl alcohol
5. Drum lubricating powder

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

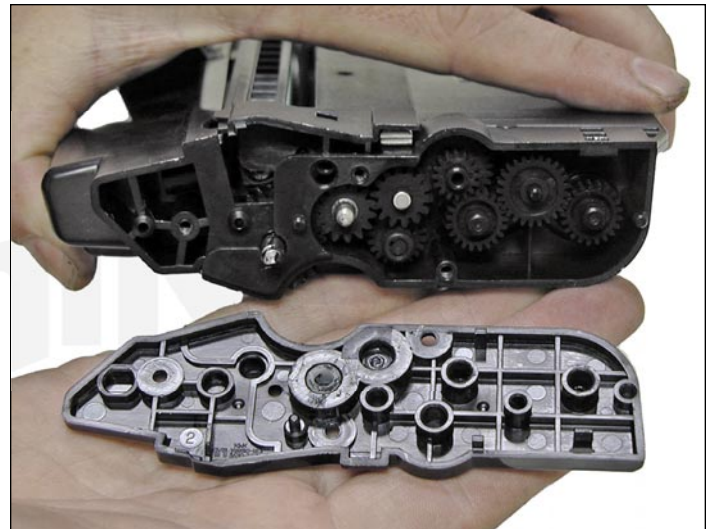1. Place the cartridge with the handle up, facing towards you.

Remove the three screws from the right side end cap.

2. On the left side end cap, remove the three screws.

UniNet

3. While still on the left end cap, locate the top and bottom tabs.

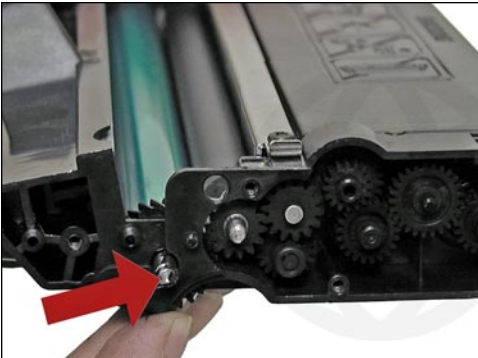Press in on these tabs, and remove the end cap

4. On the right side end cap, press in on the top tab and remove the end cap.

The right side does not have a bottom tab, but it fits on very tight and must be carefully pried off.

www.uninetimaging.com

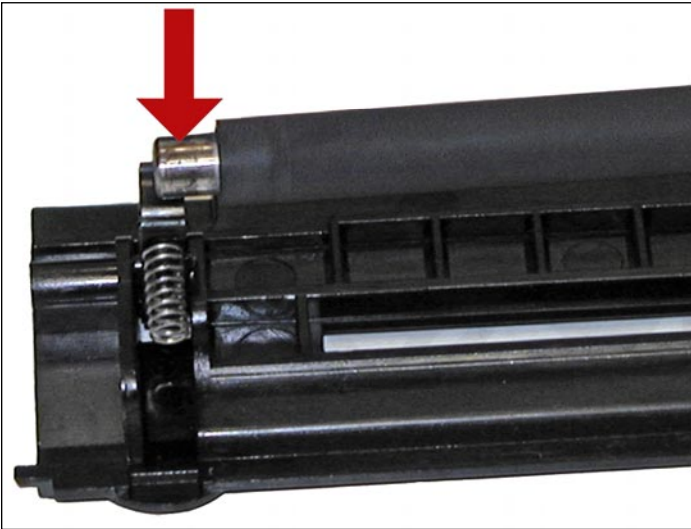5. Separate the two halves slightly, and lift off the middle top cover/PCR assembly.

6. Pull the metal drum axle from the toner hopper clips on both sides.
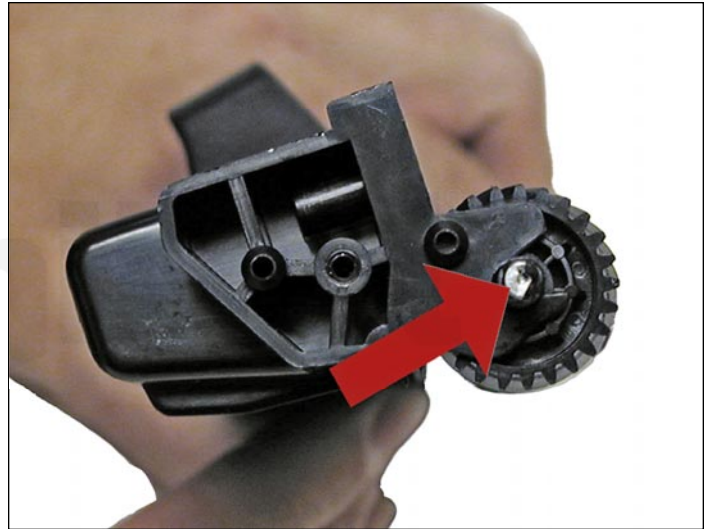
Remove the drum/waste assembly.

www.**uninet**imaging.com

7. On the top cover, lift up on the PCR. Remove the PCR from the assembly. 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.

8. Place a small amount of conductive grease in each of the PCR holders, and replace the PCR.
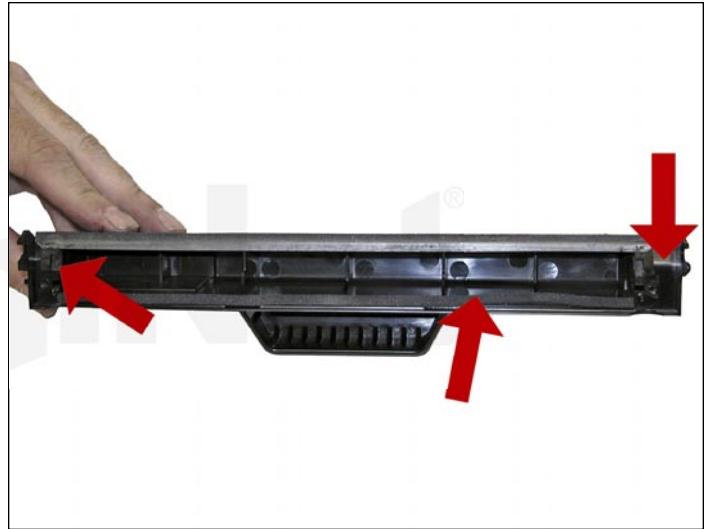
UniNet
www.**uninet**imaging.com

9. Remove the drum axle from the clips on both sides of the waste assembly.

Remove the drum.

10. Remove the two screws from the doctor blade.

Remove the blade.

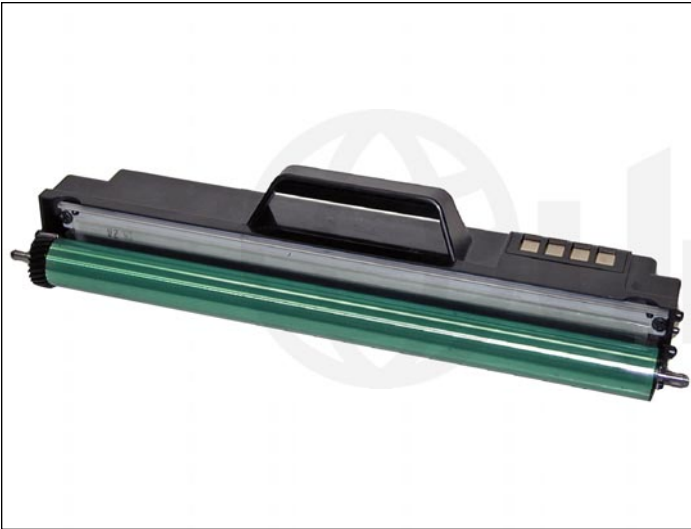11. Clean out all the waste toner from the hopper.

Make sure the foam seals are clean.

![UniNet logo]
www.uninetimaging.com

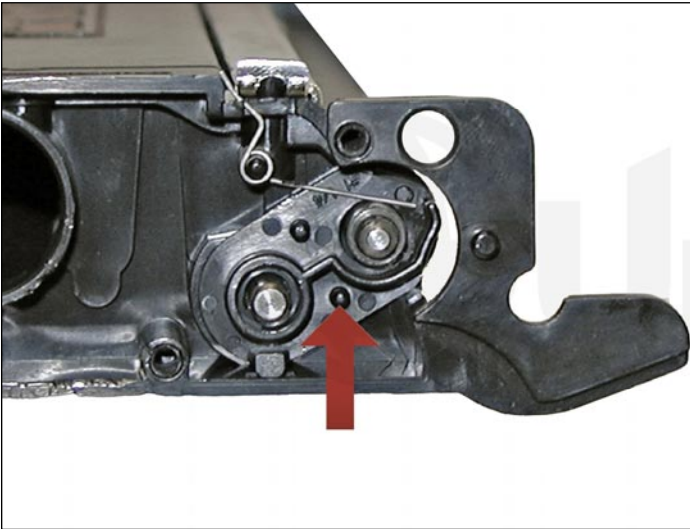12. Install the cleaned or new doctor blade and two screws.

13. The 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.
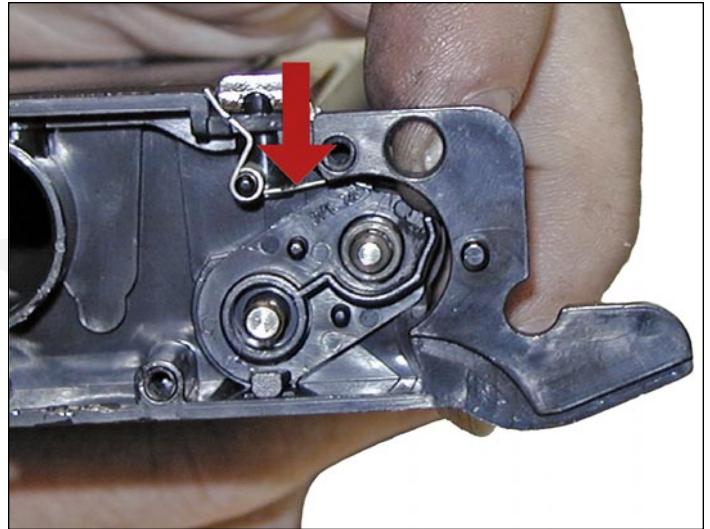

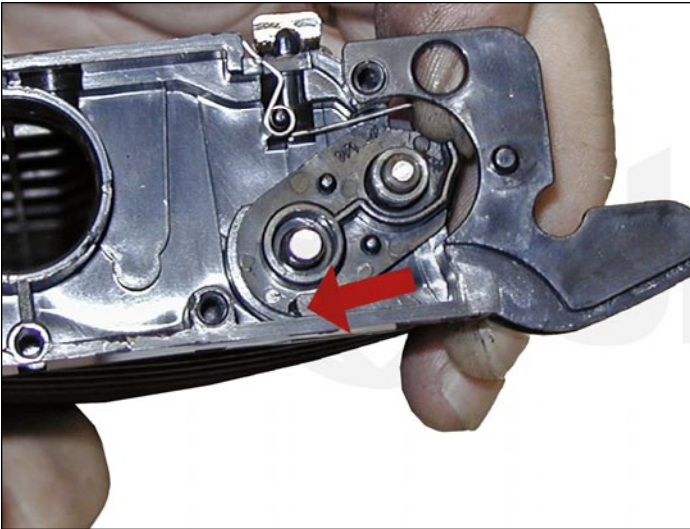14. Install the drum/axle into the clips of the waste toner assembly.

15. Carefully pry out the fill plug on the toner hopper, and dump out any remaining toner. The fill plug can be difficult to remove. Take a small common screwdriver and work it around the edge lifting slightly until it comes loose.
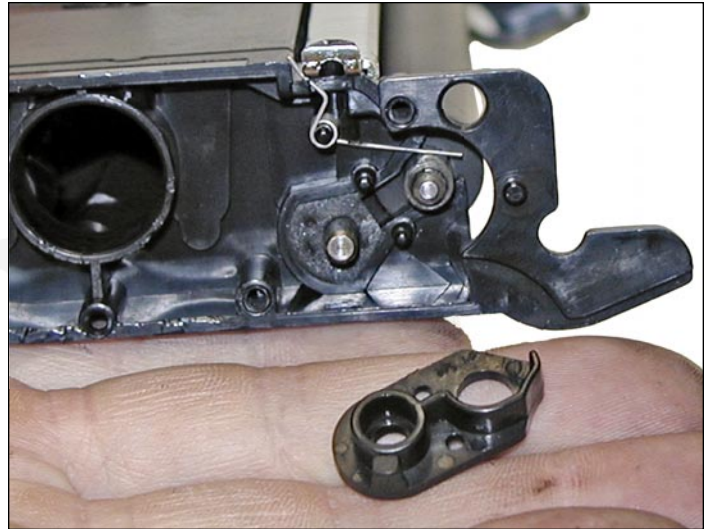
UniNet
www.uninetimaging.com

16. On the fill plug side of the hopper, locate the double-plastic bushing and contact spring.

17. Take the long tail of the spring and move it off the developer roller shaft so it sits against the bushing.

18. Press in on the bushing tab, and remove the bushing.

Be careful not to lose the spring!

www.uninetimaging.com

19. Slide the developer roller over, and lift out to remove.

20. Remove the two screws from the doctor blade.

Remove the blade.

21. Clean out all the remaining toner from the hopper. Make sure the doctor blade sealing-foam and the developer roller seals are clean and intact.

www.**uninet**imaging.com

22. Clean the doctor blade edge so there is no evidence of build-up along the edge.

If any build-up exists, the cartridge will streak.
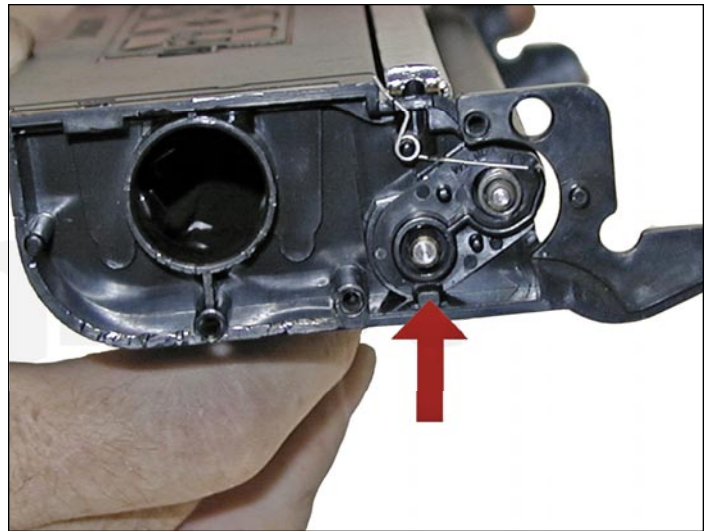
This blade can be cleaned with your preferred Samsung doctor blade cleaner.
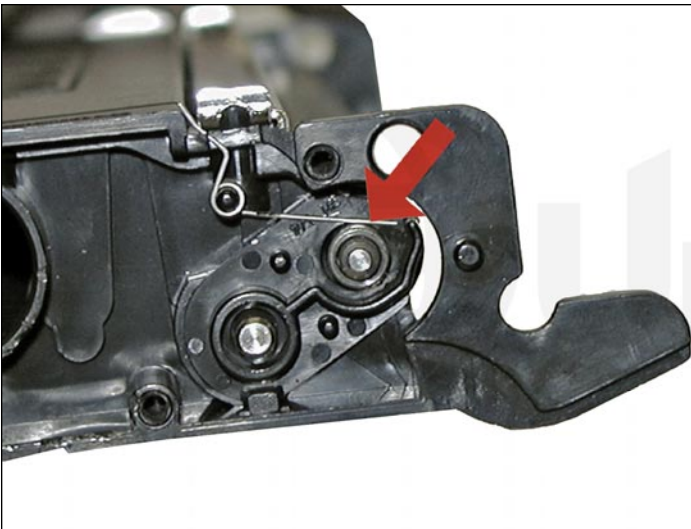

23. Install the doctor blade and two screws.

24. Clean the developer roller (DVR) with a dedicated DVR cleaner, and replace into the hopper. Install the gear side first.
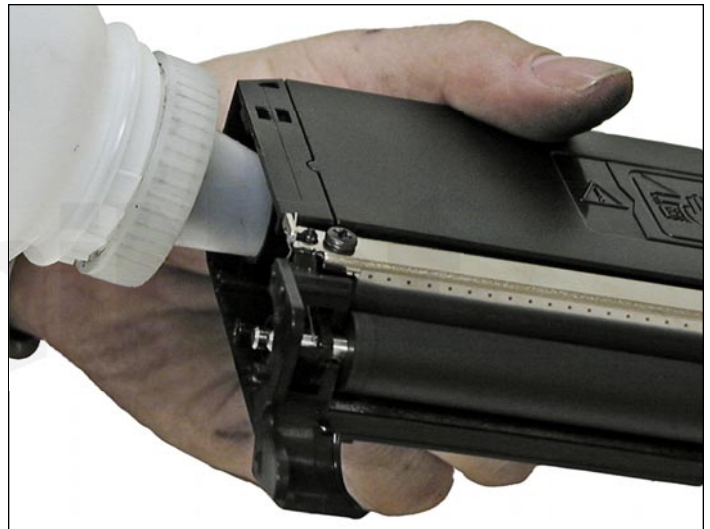
UniNet
www.uninetimaging.com

25. While holding the developer roller contact spring back, install the double bushing.

Make sure it snaps into place.

26. Set the long tail of the contact spring so it touches the shaft of the developer roller.

27. Fill the hopper with 40g of new replacement toner for use in ML-1630. Replace the fill plug, and check for leaks.

UniNet
www.uninetimaging.com

28. Snap the drum axle shaft into both clips on the toner hopper.

29. Slide the middle top cover/PCR (primary charge roller) assembly into place.

Make sure the two middle tabs fit under the edge of the waste hopper.
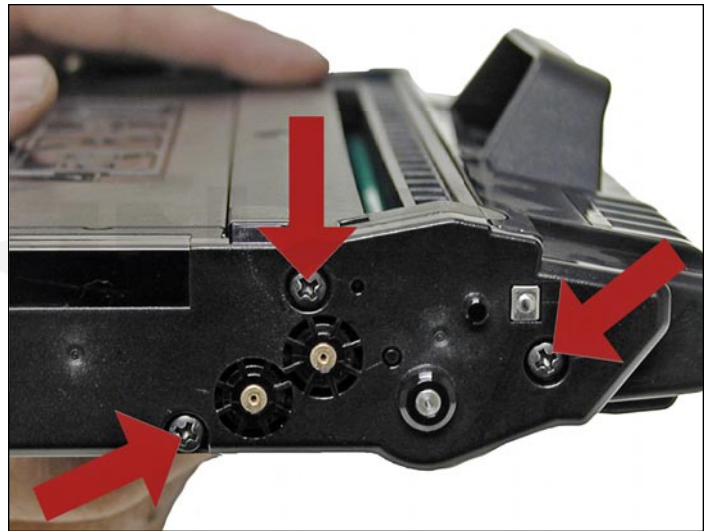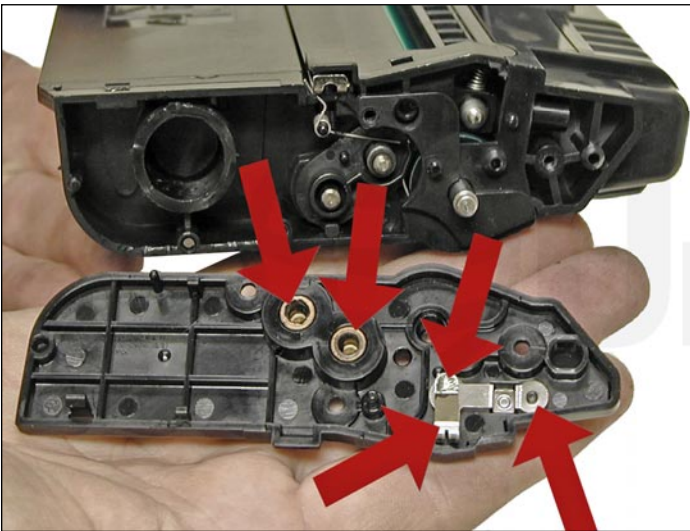
www.**uninet**imaging.com

30. Take the right side end cap, and align the drum axle keyed end, so it will fit into the keyed slot of the end cap.
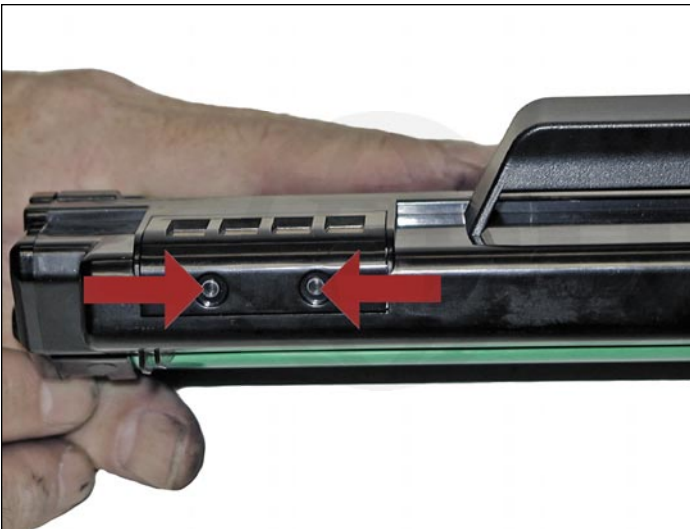
Snap the end cap into place.

31. Install the three screws into the end cap.

UniNet
www.uninetimaging.com

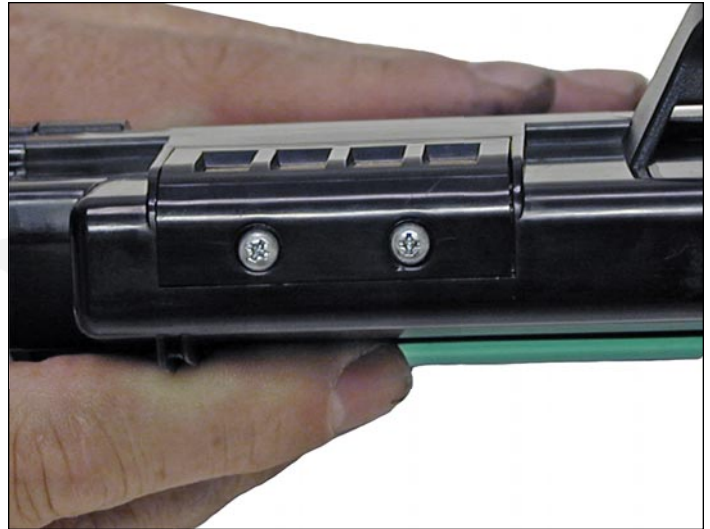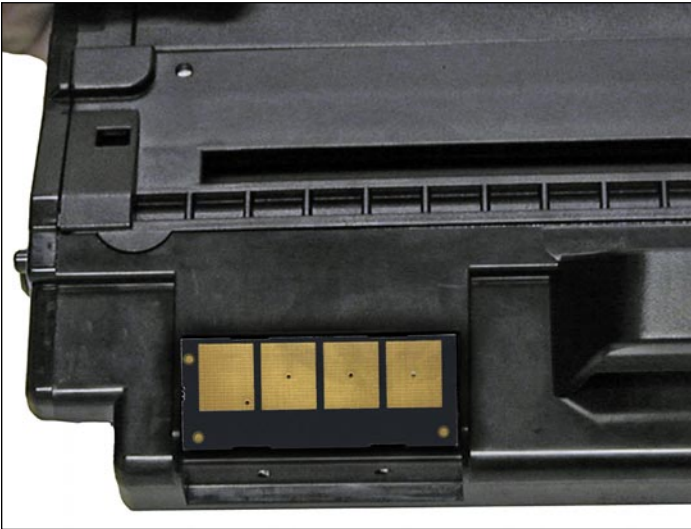32. Clean the contacts on the left side end cap, and replace the conductive grease.

Snap the end cap into place, and replace the three screws.

33. To replace the chip, drill out the two plastic rivets with a small drill.

Remove the cover, and chip.

We used a 5/64" bit for this.

UniNet
www.uninetimaging.com

34. Install the new chip and cover.

Insert two small screws that correspond to the holes drilled, to hold everything in place.

COMMON CARTRIDGE PROBLEMS

Repetitive defect chart:

Upper heat roller:	**77.09 mm**
Lower pressure roller:	**75.36 mm**
OPC drum:	**62.8 mm**
Transfer roller:	**47.1 mm**
Supply Roller:	**46.9 mm**
Developer roller:	**35.2 mm**
Primary charge roller (PCR):	**26.7 mm**

Printer Error Messages:

!!T1:	**Toner Exhausted**
!!T2:	**Invalid toner (cartridge has been refilled but the chip has not been replaced)**
!!T3:	**Cartridge not installed correctly or missing**
!!T4:	**Non genuine Toner; cartridge not compatible with this machine (too soon yet to see what causes this)**
!!CO:	**Top cover open**
!!EE:	**Internal error**
!!J0:	**Paper feed jam rear of machine**
!!J1:	**Paper jam rear of machine**
!!J2:	**Paper jam exit area**

UniNet

www.**uninet**imaging.com