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Version 1 -October 2005
SYSTEM SUPPORT SERIES™

CARTRIDGE REMANUFACTURING INSTRUCTIONS FOR:

SAMSUNG® CLP-500/510/550; XEROX® PHASER® 6100

Samsung® CLP-500/510/550

Reference Info

Samsung released the CLP-510 in January of 2005. The CLP-510 was targeted at small and medium sized businesses. It was marketed as one of the quietest printers in its class. Samsung also released a network capability version of the CLP-510. The CLP-510 has the optional wireless capability for the network version and the original. Samsung previouly released the CLP-550 which was modeled after the Xerox 6100DN. It has a first page out of 15 seconds for mono pages and 24 for color.

Use of Compressed Air

As of April 28, 1971, the Occupational Safety & Health Administration (OSHA) Standard, 29 CFR 1910.242 paragraphs a & b for general industry requires effective chip guarding and personal protective equipment (PPE) when using compressed air. When cleaning residual toner particles from cartridges using a compressed air system, you must use air nozzles meeting OSHA requirements. Air nozzles that regulate air pressure to a maximum of 30 psi comply with this standard. Refer to the OSHA publication for any updates or changes that have occurred since the date noted above.

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GO TO WWW.SCC-INC.COM

For the latest cartridge information
Click on "Online Engine Center"

Other System Support Series™ documents available in Adobe® Acrobat® format

QUESTIONS?

Please call one of our main numbers and ask for your Support Team Representative or E-mail us at:

US AND CANADA
info@scc-inc.com

UK
info@scceurope.co.uk

Purpose of this SSS

The purpose of this SSS is to provide you a guide and the basic information needed to remanufacture a Samsung® CLP-500/510/550. This SSS contains information about:

- Disassembling each section.
- Basic cleaning.
- Reassembling the cartridge.

Your cartridge might have been changed by the original equipment manufacturer (OEM) and include parts or features which are not described in this documentation. The documentation might be updated occasionally to include information about those changes, or technical updates might be available from the SCC Web site. Complete the following steps to check for updated documentation and technical updates:

Before you begin, read the entire SSS to familiarize yourself with the procedures and take notes.

Be sure to follow all necessary safety precautions while working with tools, and chemicals, such as toner and alcohol.

Illustrations

The illustrations and photos in this document might differ slightly from your cartridge. Every effort is made to include the most up to date photos and illustrations at the time of printing. However, the OEM may make changes which were not available at the time of printing.

Safety

Statement 1:

Always wear eye protection while operating power tools.

Statement 2:

Always wear eye protection and protective clothing while working with toner and or other chemicals.

Statement 3:

Do not swallow or ingest toner, isopropyl alcohol, toner dust, or any chemicals or materials used in the process of remanufacturing

For Basic Remanufacturing:

- Phillips Screwdriver
- Compressed Air for Cleaning
- Cotton Swab (QTIP)
- Lint-Free Cleaning Cloth (LFCCLOTH)
- Small Flatblade Screwdriver
- Small Hammer
- Hopper Jig (SAM550HJIG)
- Hopper Cap Removal Tool (SAM550HCRTOOL)
- Angled Blade Knife (ABKNIFE)

The following table is a summary of the Samsung® CLP-500/510/550 and the Xerox® Phaser® 6100 printer specifications. This information was obtained from the OEM's web site and is considered to be the most up to date information at the time of printing.

Printer Information	**Samsung® 500**	**Samsung® 510**	**Samsung® 550**	**Xerox® Phaser® 6100**
Printer Introduction Price	$450	$449	$550	$499
Processor	Samsung SPGPm	Samsung SPGPm	266MHz	Host Based
First page Out (sec)	15 mono/ 24 color	13 mono/ 21 color	15 mono/ 24 color	15 mono/ 24 color
Memory	64 MB to 192 MB	64 MB to 192 MB	64 MB to 320 MB	64 MB
Duplex	Auto Standard	Auto Standard	Auto Standard	Auto Standard
Engine Information				
Print Resolution (dpi)	1200 x 1200	1200 x 1200	1200 x 1200	1200 x 1200
Print Speed (pages per minute)	21 mono/ 5 color	25 mono/ 6 color	21 mono/ 5 color	21 mono/ 5 color
Duty Cycle (pages per month)	35,000	35,000	35,000	35,000
Cartridge Information				
OEM Cartridge number	CLP-500D7K/XAA, CLP-500D5M/KAA, CLP-500D5C/XAA, CLP-500D5Y/XAA	CLP-510D7K, CLP-510D5M, CLP-510D5C, CLP-510D5Y	CLP-500D7K/XAA, CLP-500D5M/KAA, CLP-500D5C/XAA, CLP-500D5Y/XAA	106R00680, 106R00681, 106R00682, 106R00684
Cartridge Price (MSRP)	$110 (black), $123 (color)	$110 (black), $123 (color)	$110 (black), $123 (color)	$100 (black), $130 (color)
Cartridge Page Capacity @ 5% coverage	7k (black), 5k (color)	7k (black), 5k (color)	7k (black), 5k (color)	7k (black), 5k (color)
Chip	Yes	Yes	Yes	Yes

Separating the Cover from the Toner Cartridge

REMANUFACTURING THE **SAMSUNG® CLP-500/510/550**

This section provides the information needed to separate the Cover from the Toner Cartridge. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

1. Using a phillips screwdriver, remove the three screws from the top of the cartridge, see Figure 1.

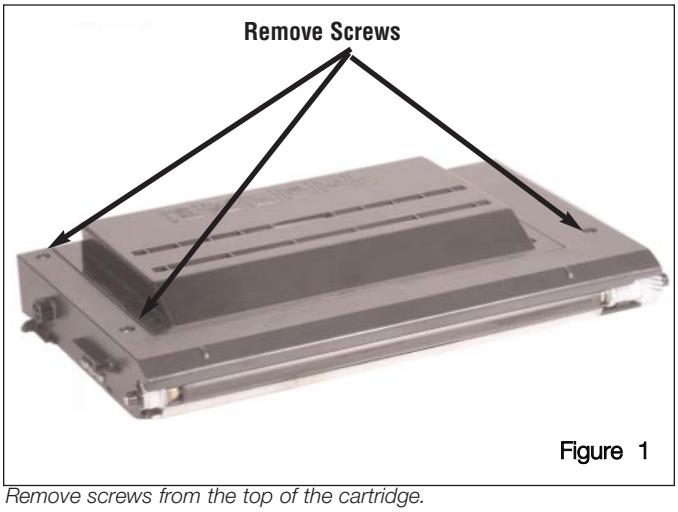


Figure 1

Remove screws from the top of the cartridge.

2. Using a phillips screwdriver, remove the screw from the primary geared side of the cartridge, as shown in Figure 2.

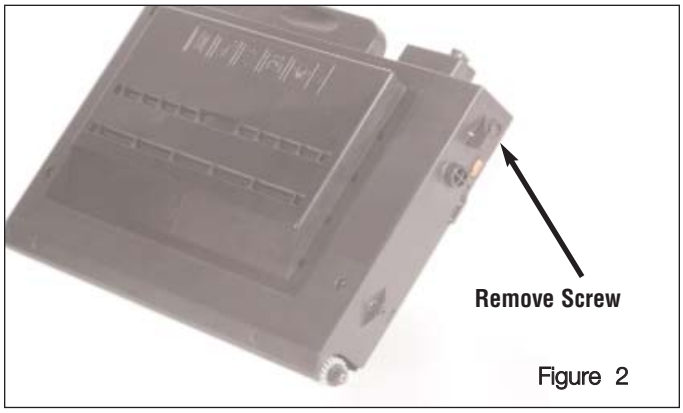


Figure 2

Remove the screw from the large geared side of the cartridge.

3. Using a small flatblade screwdriver, release the two tabs from each side of the cartridge, see Figures 3a and 3b.

4. Grasp the cartridge cover on the side and lift from the cartridge, see Figure 4a.

5. Use an Angled Blade Knife to release the adhesive that secures the cover to the toner cartridge, see Figure 4b.

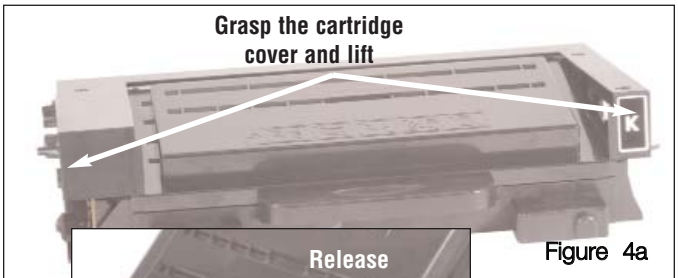


Figure 4a

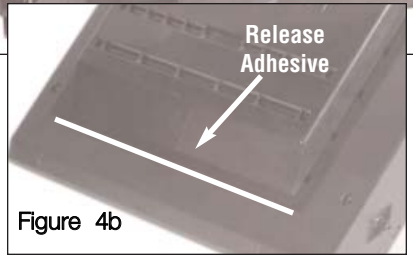


Figure 4b

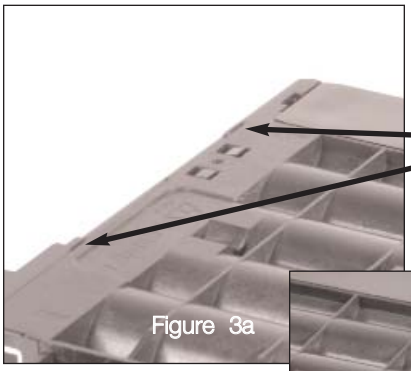


Figure 3a

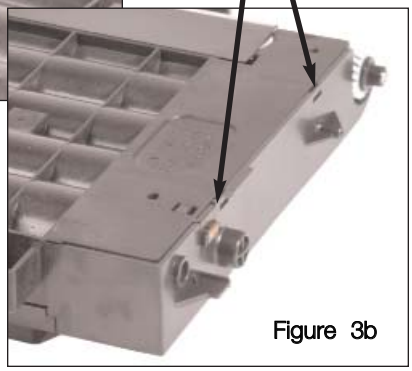


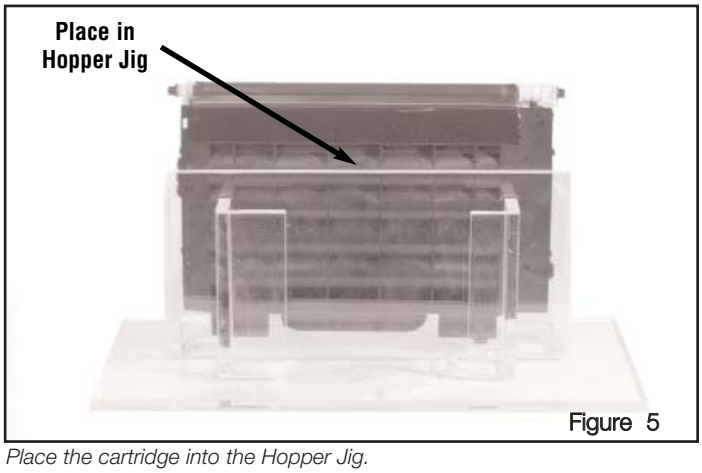
Figure 3b

Disassembling the Toner Cartridge

REMANUFACTURING THE **SAMSUNG® CLP-500/510/550**

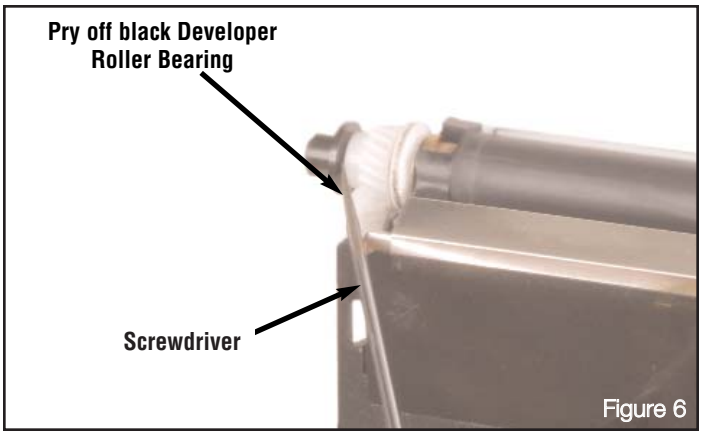
This section provides the information needed to disassemble the Toner Cartridge of the cartridge. At this point you should have separated the cover from the Toner Cartridge as described earlier in this SSS™. For information on separating the two sections see "*Separating the Cover from the Toner Cartridge*" on page 1. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

1. Place the cartridge into the Hopper Jig with the Developer Roller facing up, as shown in Figure 5.



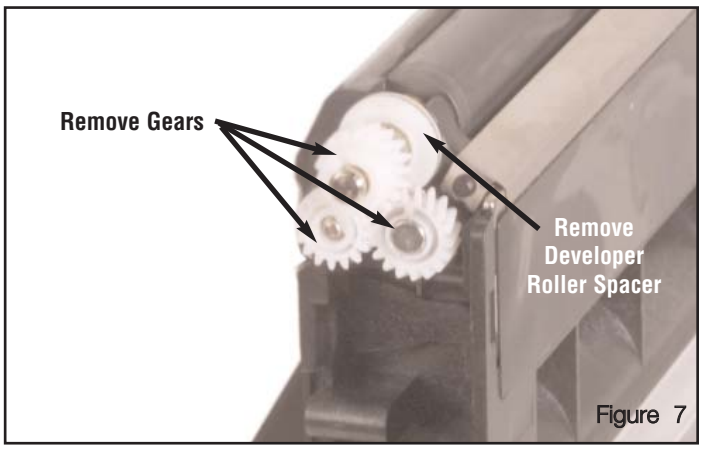
Place the cartridge into the Hopper Jig.

2. Using a small flatblade screwdriver, pry off the black Developer Roller Bearing from the idler-geared side, as shown in Figure 6.



Pry off the idler-geared side, black Developer Roller Bearing.

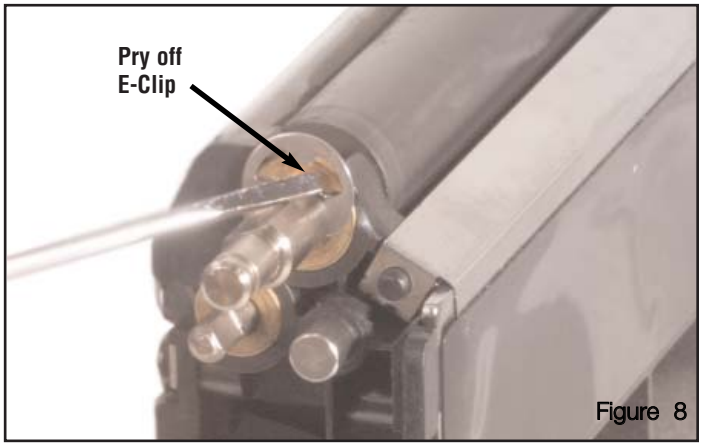
3. Remove the gears from the idler-geared side of the cartridge, as well as the Developer Roller Spacer, see Figure 7.



Remove the Secondary Developer Roller Drive Gear, the Idler Gear, the Adder Roller Drive Gear, and the Developer Roller Spacer.

4. Using a small flatblade screwdriver, pry off the E-Clip from the Developer Roller shaft, as shown in Figure 8.

Note: Be careful not to lose the e-clip when removing.



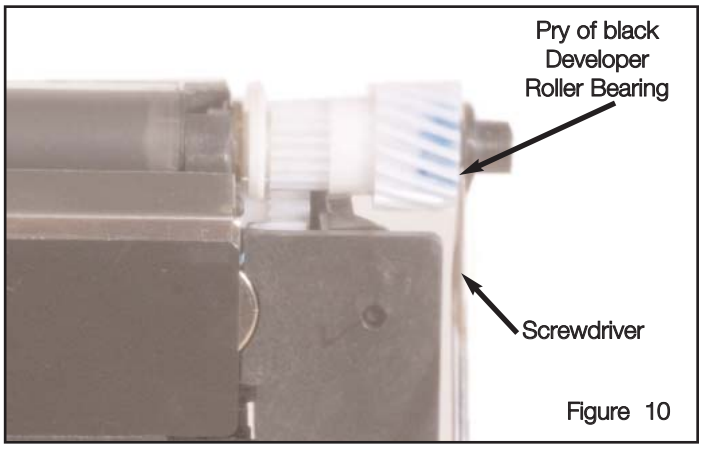
Pry off the e-clip from the Developer Roller shaft.

5. Using a small flatblade screwdriver and a small hammer, tap the brass bushing from the slot and remove, see Figure 9.

Tap the brass bushing from the slot and remove from the cartridge.

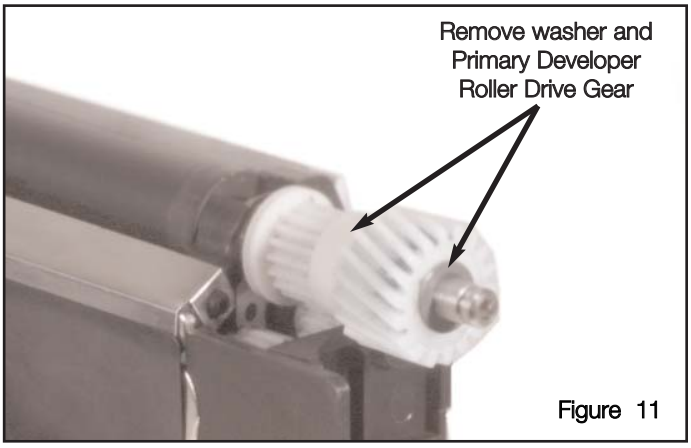
6. Using a small flatblade screwdriver, pry off the geared side black Developer Roller Bearing, as seen in Figure 10.

Note: Be careful not to lose or damage the washer on the end of the Primary Developer Roller Drive Gear, see Figure 11.



Remove the geared side black Developer Roller Bearing.

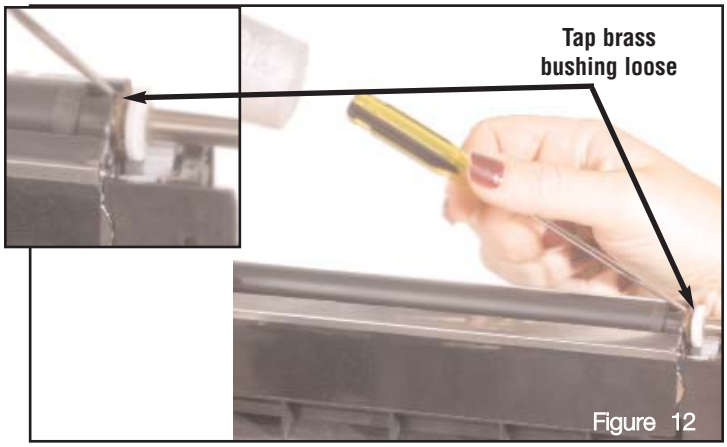
7. Remove the washer and Primary Developer Roller drive gear, see Figure 11.



Remove the washer and the Primary Developer Roller Drive Gear.

8. Using a small flatblade screwdriver and a small hammer, tap the brass bushing loose from the slot on the geared side of the cartridge, as shown in Figure 12.

Note: Electrical Contact prevents the brass bushing from being completely removed.



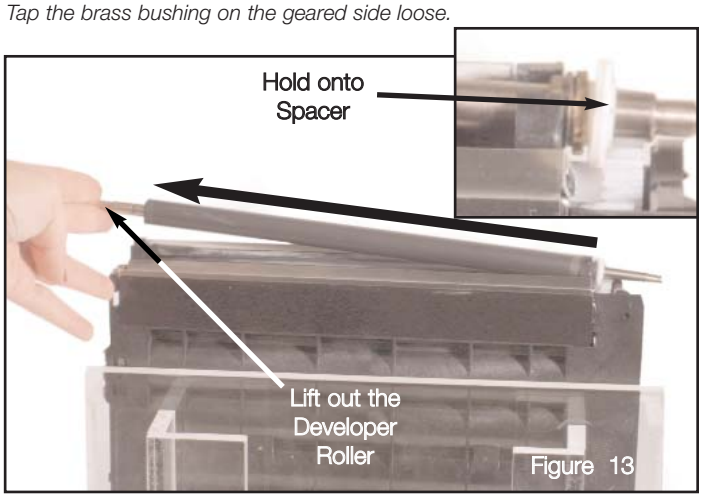
Tap the brass bushing on the geared side loose.

9. Grasp the Developer Roller on the idler-geared side of the cartridge and lift. Slide the geared side from the cartridge, see Figure 13.

Note: Be sure to grasp the Developer Roller spacer or it may be lost, see Figure 13.

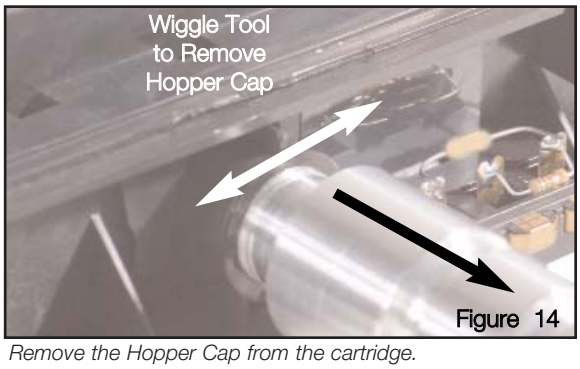
10. Clean the Developer Roller with dry, filtered compressed air and place on a dry, lint-free cloth.

Note: Be sure to remove the four teflon washers, two from each end of the Developer Roller prior to cleaning. Replace washers when done with cleaning.



Remove the Developer Roller, do not lose the Developer Roller Drive Gear Spacer.

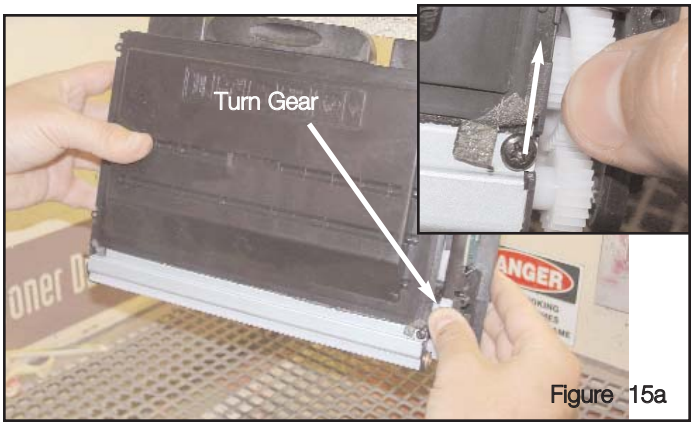
11. Screw SCC's Hopper Cap Removal Tool into the Hopper Cap and wiggle the tool left to right to remove the Hopper Cap, as shown in Figure 14.



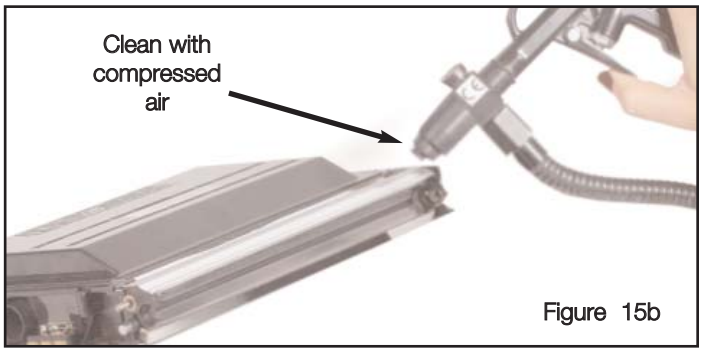
Remove the Hopper Cap from the cartridge.

12. Hold the Cartridge upside down over a cartridge cleaning workstation and shake while turning the drive gear to rotate agitators, as shown in Figure 15a. Then clean out with dry, filtered compressed air, see Figure 15b.

Note: Rotate the shaft of the Adder Roller, on the idler-geared side of the Toner Cartridge.

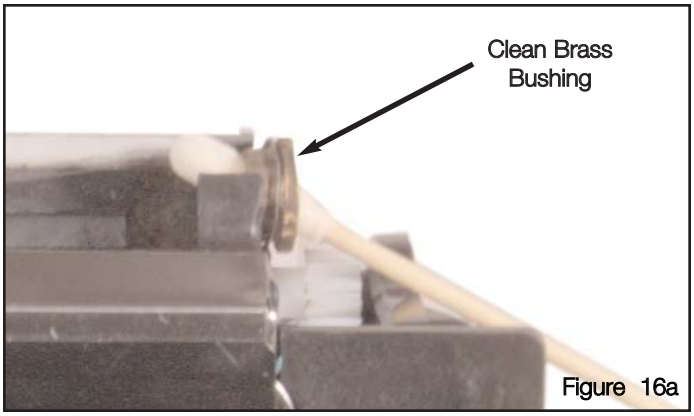


Dump toner out in Cartridge Cleaning Workstation.



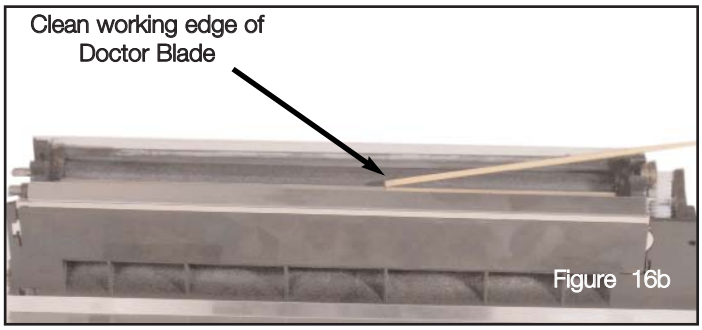
Clean out the cartridge, removing any remaining toner.

13. Clean the excess toner from the geared side brass bushing, using a cotton swab, see Figure 16a.



Clean excess toner from the geared side brass bushing.

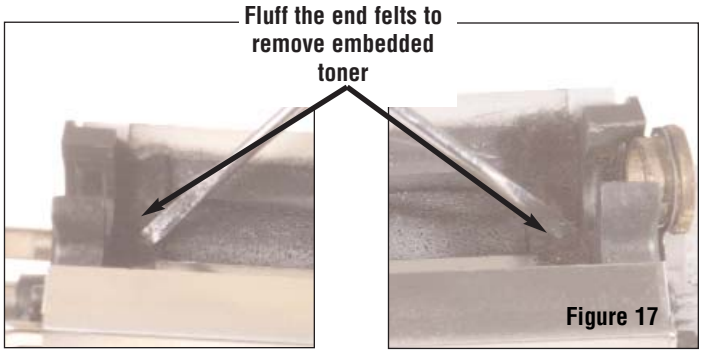
14. Clean the Doctor Blade with the wooden end of the cotton swab. Run wooden end along the working edge of the Doctor Blade to release embedded toner, see Figure 16b.



Clean embedded toner from the working edge of the Doctor Blade.

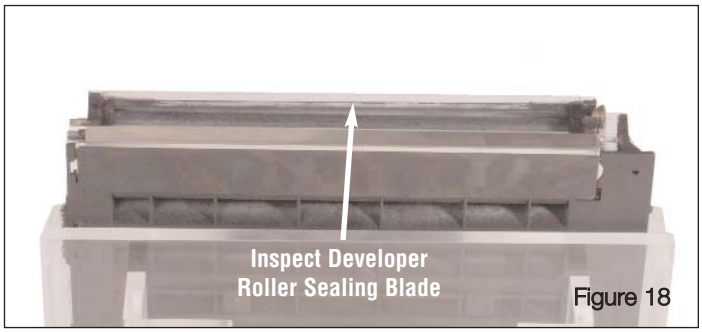
Reassembling the Toner Cartridge

1. Using a small flatblade screwdriver, fluff the Developer Roller End Felts to remove any embedded toner, as shown in Figure 17.



Fluff the Developer Roller End Felts to remove any embedded toner.

2. Inspect the Developer Roller Sealing Blade for damage, see Figure 18.

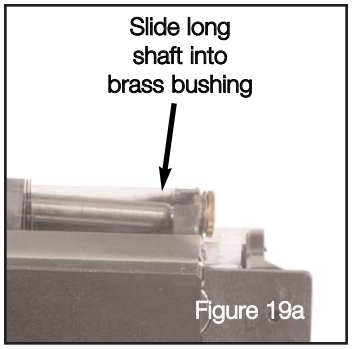


Inspect the Developer Roller Sealing Blade for damage.

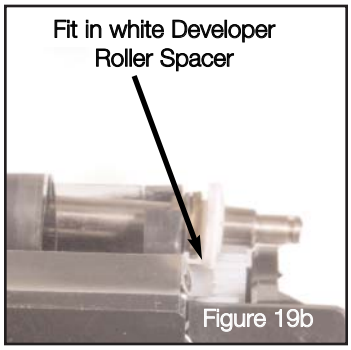
3. Install the Developer Roller.

   a. Slide the long shaft of the Developer Roller through the brass bushing on the geared side, as shown in Figure 19a.

Note: Be sure to fit the white Developer Roller Spacer between the brass bushing and the gear as shown in Figure 19b.

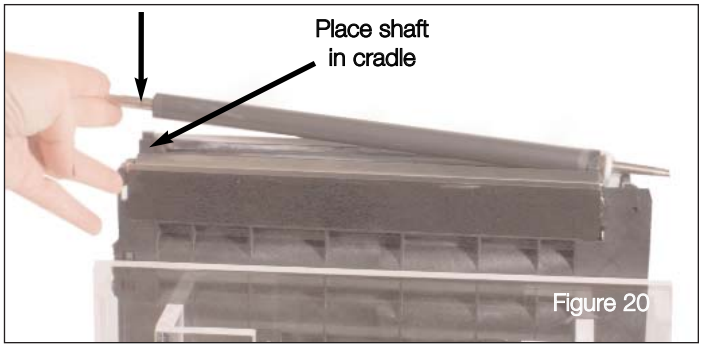


Slide long shaft of Developer Roller through brass bushing.



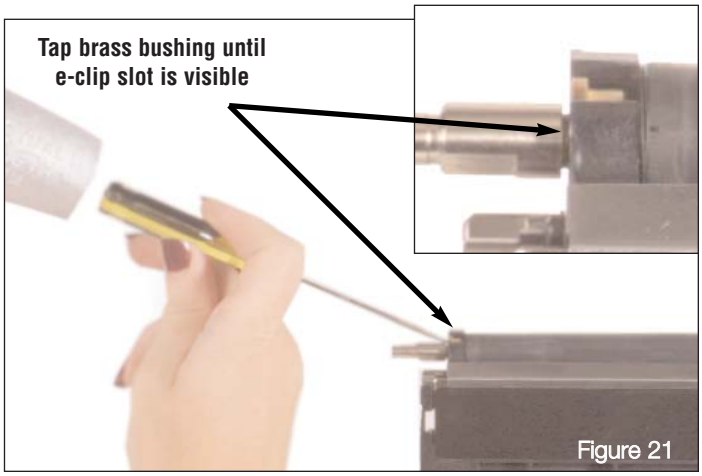
Fit white Developer Roller Spacer between brass bushing and gear.

   b. Place the short shaft of the Developer Roller into the slot on the non-geared side of the cartridge, see Figure 20.



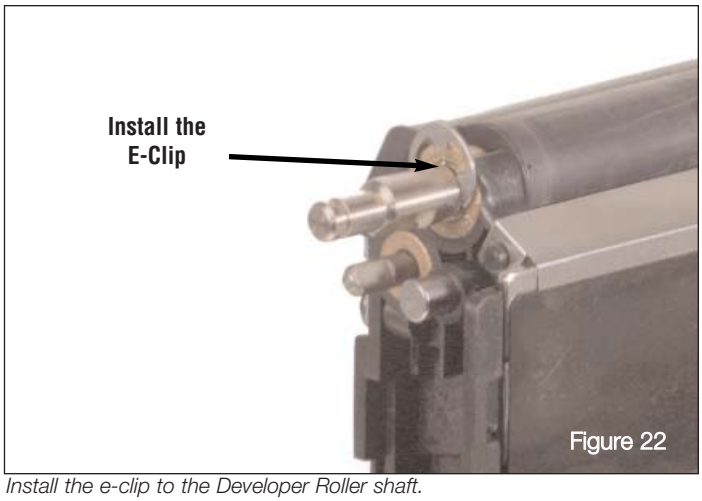
Place the short shaft of the Developer Roller into the cradle.

4. Replace the brass bushing on the idler geared side of the cartridge and gently tap into place until the e-clip slot is visible, see Figure 21.



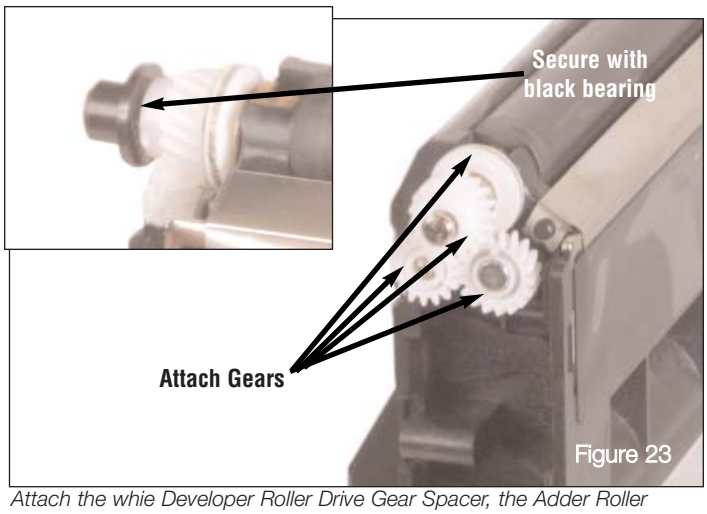
Place the brass bushing on idler-geared side of the cartridge and gently tap until the e-clip slot is visible.

5. Install the e-clip to the idler geared side of the cartridge, see Figure 22.



Install the e-clip to the Developer Roller shaft.

6. Attach the white Developer Roller spacer, the Adder Roller Gear, the Idler Gear, and the Secondary Developer Roller Drive Gear, and secure by pushing on the black Developer Roller Bearing as shown in Figure 23.



Attach the whie Developer Roller Drive Gear Spacer, the Adder Roller Gear, the Idler Gear, the secondary Developer Roller Drive Gear, and secure with the black Developer Roller Bearing.

7. Attach the Primary Developer Roller Drive Gear, and the Developer Roller Drive Gear Washer, and secure by pushing on the black Developer Roller Bearing as seen in Figure 24.

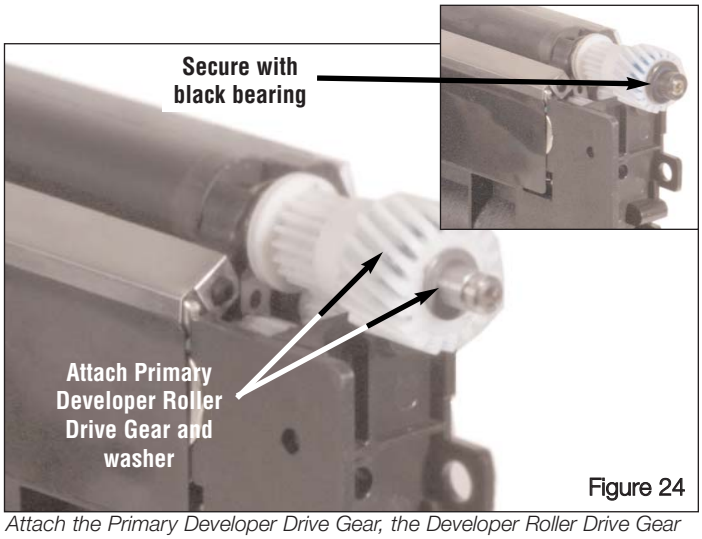


Figure 24

Attach the Primary Developer Drive Gear, the Developer Roller Drive Gear Washer, and secure with the black Developer Roller Bearing.

8. Place the Hopper in the Fixture as shown in Figure 25. Fill with qualified Toner and replace the Hopper Cap.

Refer to SSS™ 800 for Chip Replacement/Installation information.

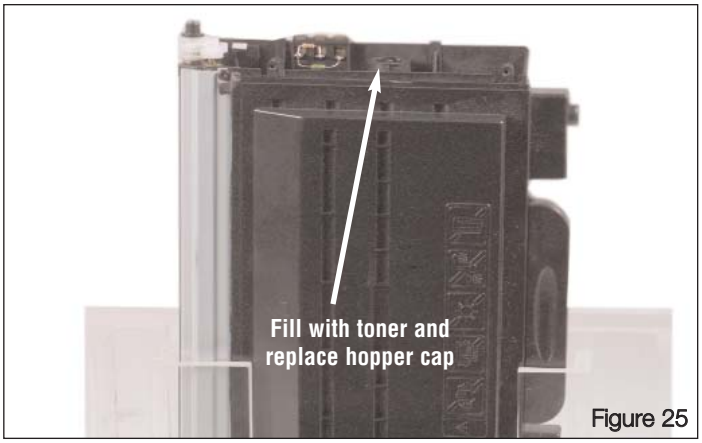


Figure 25

Fill with qualified toner and replace the Hopper Cap.

1. Replace the Cartridge Cover and press down to lock the locking clips, see Figure 26.

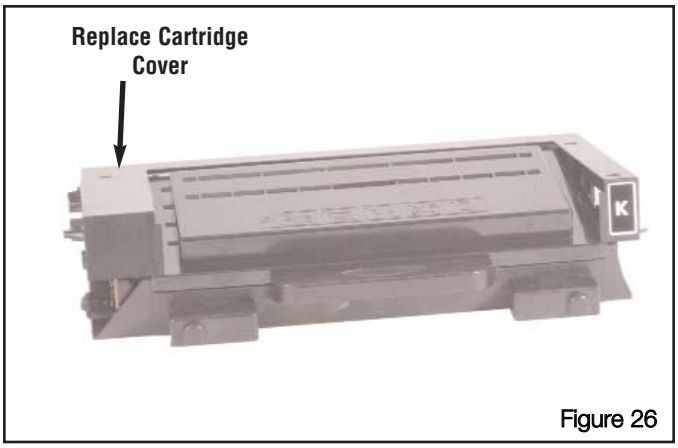


Figure 26

Replace the Cartridge Cover and lock the locking tabs.

Note: Be sure that the locking clips are engaged, see Figure 27.

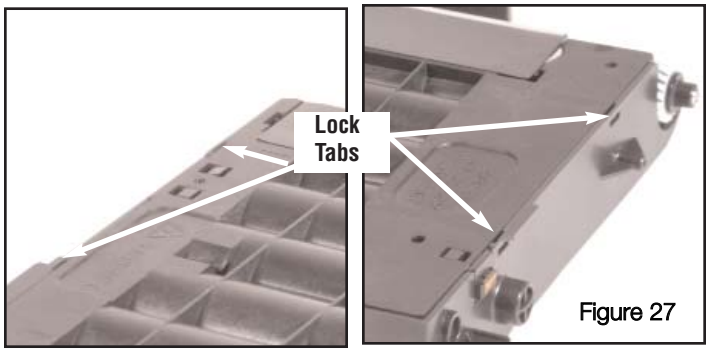


Figure 27

Replace the Cartridge Cover and lock the locking tabs.

2. Replace the three screws on the top of the cartridge and the one on the primary geared side to secure the Cartridge Cover, see Figure 28.

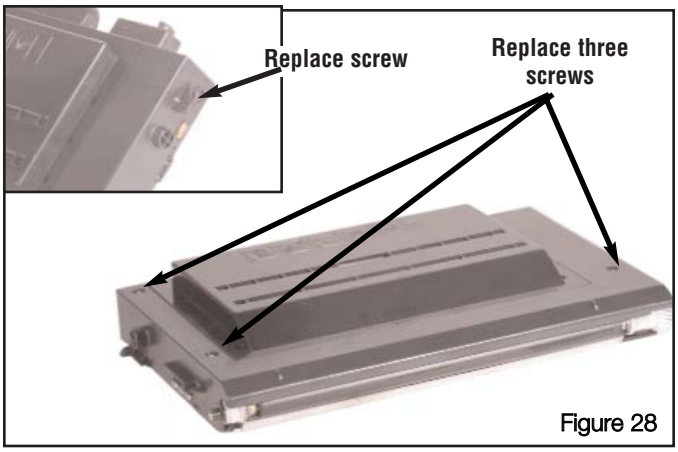


Figure 28

Replace the four screws to secure the cover.

STATIC CONTROL COMPONENTS, INC.

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The development of cartridge imaging systems is the primary mission of our Imaging Labs. Through extensive testing and research, we develop the optimum combination of matched components for each cartridge system. Our engineering and manufacturing expertise provides us with total control in design, quality and development to produce products from the ground up. The result is a system of components that seamlessly work together in each cartridge application.

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STATIC CONTROL COMPONENTS, INC.

SCC Imaging Division
3010 Lee Avenue • PO Box 152 • Sanford, NC 27331
US/Can 800·488·2426 • US/Can Fax 800·488·2452
Int'l 919·774·3808 • Int'l Fax 919·774·1287
www.scc-inc.com

Static Control Components (Europe) Limited
Unit 32, Sutton's Business Park • Sutton's Park Avenue •
Earley Reading • Berkshire RG6 1AZ • United Kingdom
Tel +44 (0) 118 923 8800 • Fax +44 (0) 118 935 1177