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### Hewlett Packard® 5500/5550

#### Reference Information

In November 2002 HP® released their 21ppm (letter-sized) Color LaserJet® HP5500 as the replacement for the A3-sized LaserJet® 8500 and 8550 (1998). The following report contains information on the HP®5500 printers and their cartridges.

21 Page-per-minute in Both Color and Monochrome.

The 5500 is essentially a wide-format version of the 17 ppm Color LaserJet® 4600 (June 2002), which was the first printer to use HP's in-line direct to paper technology, rather than four-pass printing. In-line (single-pass) printing transfers toner directly from the four print cartridges to the paper, making printing more efficient and consistent. The 5500 prints color at the same speed as black-and-white (21ppm letter), and has a first-page-out time of 18 seconds (ready state).

The same single-pass engine is utilized in the 22 ppm Canon® LBP-2810, which is been available in Japan.

There are five models of the HP5500, ranging in price from \$3,250 to \$5,900 (OEM web pricing). Each ships with an embedded web server for printer and supplies management.

#### Six Consumables

Four toner cartridges, a fuser kit and an imaging kit make up the 5500's consumables package. The all-in-one cartridges utilize RF

smart chip technology similar to that of the HP®4100 and 4600 printers, with functions that include cartridge identification, toner low/toner out functionality, supplies status information, and cartridge performance. The chip uses non-contact radio frequencies to communicate with the printer, and to supply power to the chip (for more information on chip technologies, ask your Static Support Team for the Chip Technology White Paper).

The toner is a spherical "chemically-grown" formulation, with an integrated release agent to enable "oil-less" fusing.

### CARTRIDGE REMANUFACTURING INSTRUCTIONS FOR:

## HEWLETT PACKARD® 5500/5550

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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



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## Introduction

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### Purpose of this SSS

The purpose of this SSS is to provide a guide and the basic information needed to remanufacture a HP®5500/5550. This SSS contains information about:

- Separating the two sections.
- Disassembling each section.
- Basic cleaning.
- Reassembling the cartridge.

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.

### Multifunction Hopper Jig


SCC has developed a Multifunction Hopper Jig which facilitates various tasks performed during the remanufacturing process of the cartridges. For illustrative purposes it is not depicted in all instructional photos.

### 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.



## Needed Tools and Supplies

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### For Basic Remanufacturing:

- Angle Blade Knife (ABKTOOL)
- Dry, Filtered, Compressed Air for Cleaning
- Cartridge Pin Removal Pliers
- Conductive Cartridge Lube (CONCLUBE)
- De-ionized Water
- HP55700 Doctor Blade and Developer Roller Cleaning Jig (HP55DRCLEANJIG)
- Drill
- Drive Gear Tool (HP46DRVTOOL)
- Drum Pin Removal Installation Kit (HP55PRKIT)
- Felt Foam Scraper (CSBTOOL)
- Funnel for Toner Bottle
- Hook End Metal Tool (HTOOL)
- 91%-99% Isopropyl Alcohol
- Lint-Free Cleaning Cloth (LFCLOTH)
- Multifunction Hopper Jig (HP55HJIG)
- Mylar Recovery Blade Installation Tool (IBMSBTOOL)
- Pin Removal Tool (HP55PRTOOL)
- Safety Glasses
- Phillips Screwdriver
- Small Phillips Screwdriver
- Small Flatblade Screwdriver
- Wooden Handle Cleaning Swab (QTIP)
- 3M® Toner Vacuum, 115 Volt (TONERVAC115)

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### 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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### Use of Isopropyl Alcohol

For best results 91-99% Isopropyl Alcohol should be used for cleaning as directed in this instruction. 91% Isopropyl Alcohol is available at most major drug stores; 99% Isopropyl Alcohol is available through distributors of chemical products. Follow the Alcohol manufacturer's safety instructions.



# Printer Data

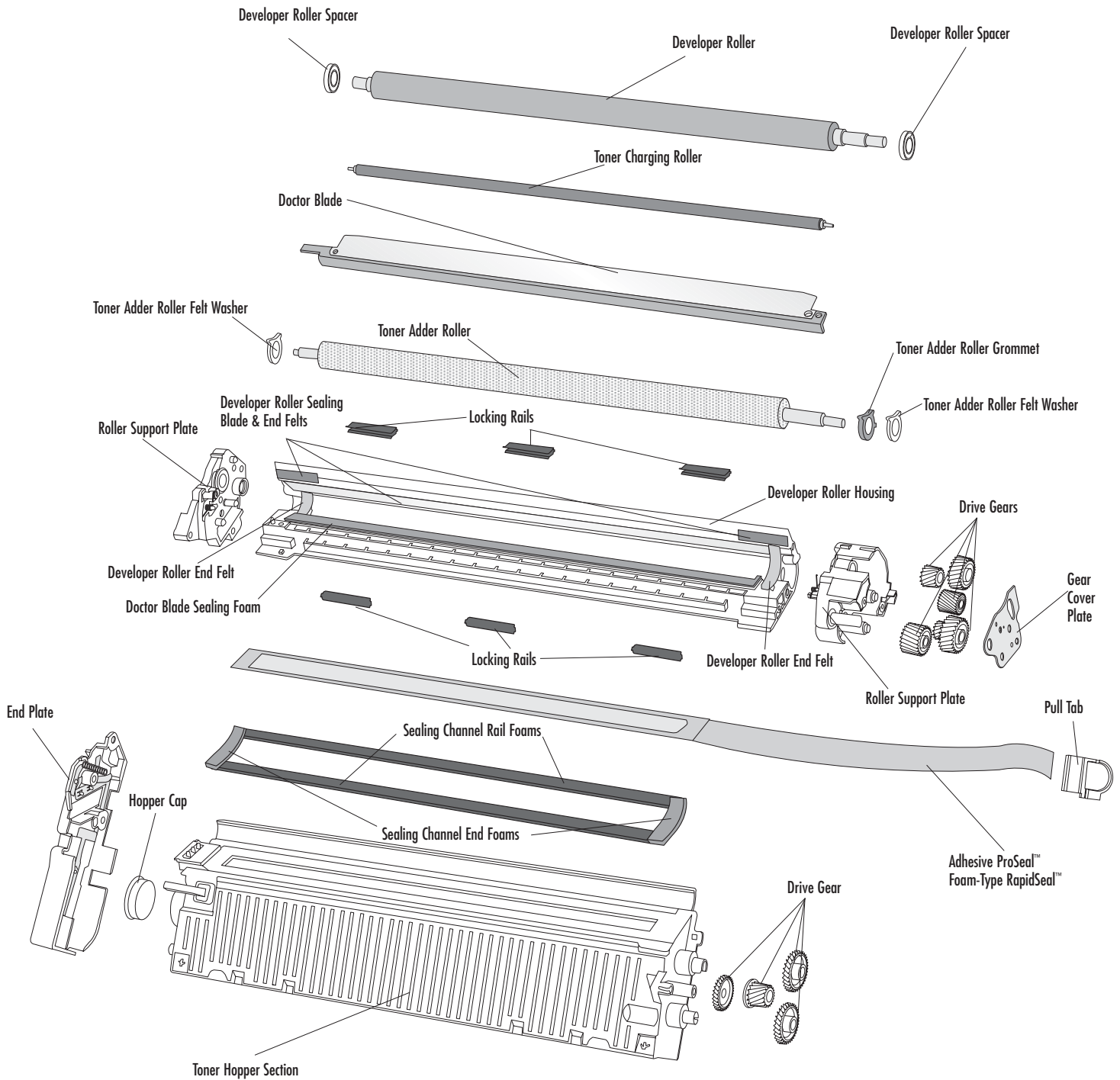
	HP®5500	HP®5500n	HP®5500dn	HP®5500dtn	HP®5500hdn	HP®5500n
<b>Printer Information</b>						
Printer Introduction Date	Nov. 2002	Nov. 2002	Nov. 2002	Nov. 2002	Nov. 2002	2003
Printer Introduction Price	\$3,250	\$3,599	\$3,799	\$4,999	\$5,899	\$2,999
Processor	450 MHz	450 MHz	450 MHz	450 MHz	450 MHz	533 MHz
First page Out (sec)	18 sec(ready)	18 sec(ready)	18 sec(ready)	18 sec(ready)	18 sec(ready)	N/A
Paper input tray	100-sheet multipurpose, 500-sheet feeder	100-sheet multipurpose, 500-sheet feeder	100-sheet multipurpose, 500-sheet feeder	100-sheet multipurpose, 500-sheet feeder	100-sheet multipurpose, 500-sheet feeder	100-sheet multipurpose, 500-sheet feeder
Memory	96 MB/416 MB	96 MB/416 MB	96 MB/416 MB	96 MB/416 MB	96 MB/416 MB	96 MB/416 MB
Duplex	manual	manual	auto std	auto std	auto std	manual
<b>Engine Information</b>						
Print Resolution (dpi)	600 x 2400	600 x 2400	600 x 2400	600 x 2400	600 x 2400	N/A
Duty Cycle (pages per month)	120,000	120,000	120,000	120,000	120,000	N/A
<b>Cartridge Information</b>						
OEM Cartridge Number	K: C9730A C: C9731A Y: C9732A M: C9733A	K: C9730A C: C9731A Y: C9732A M: C9733A	K: C9730A C: C9731A Y: C9732A M: C9733A	K: C9730A C: C9731A Y: C9732A M: C9733A	K: C9730A C: C9731A Y: C9732A M: C9733A	K: C9720A C: C9721A Y: C9722A M: C9723A
Cartridge Price List * (MSFP)	Black - \$226 Color - \$316	Black - \$226 Color - \$316	Black - \$226 Color - \$316	Black - \$226 Color - \$316	Black - \$226 Color - \$316	Black - \$156 Color - \$211
Page Yield	Black - 13,000 Color - 12,000	Black - 13,000 Color - 12,000	Black - 13,000 Color - 12,000	Black - 13,000 Color - 12,000	Black - 13,000 Color - 12,000	Black - 9,000 Color - 8,000

\* Prices as of Dec. 2003

Compatibility : HP5500, HP5500n, HP5500dn

# HEWLETT-PACKARD® 5500/5550

## TONER HOPPER SECTION - BLACK AND COLOR

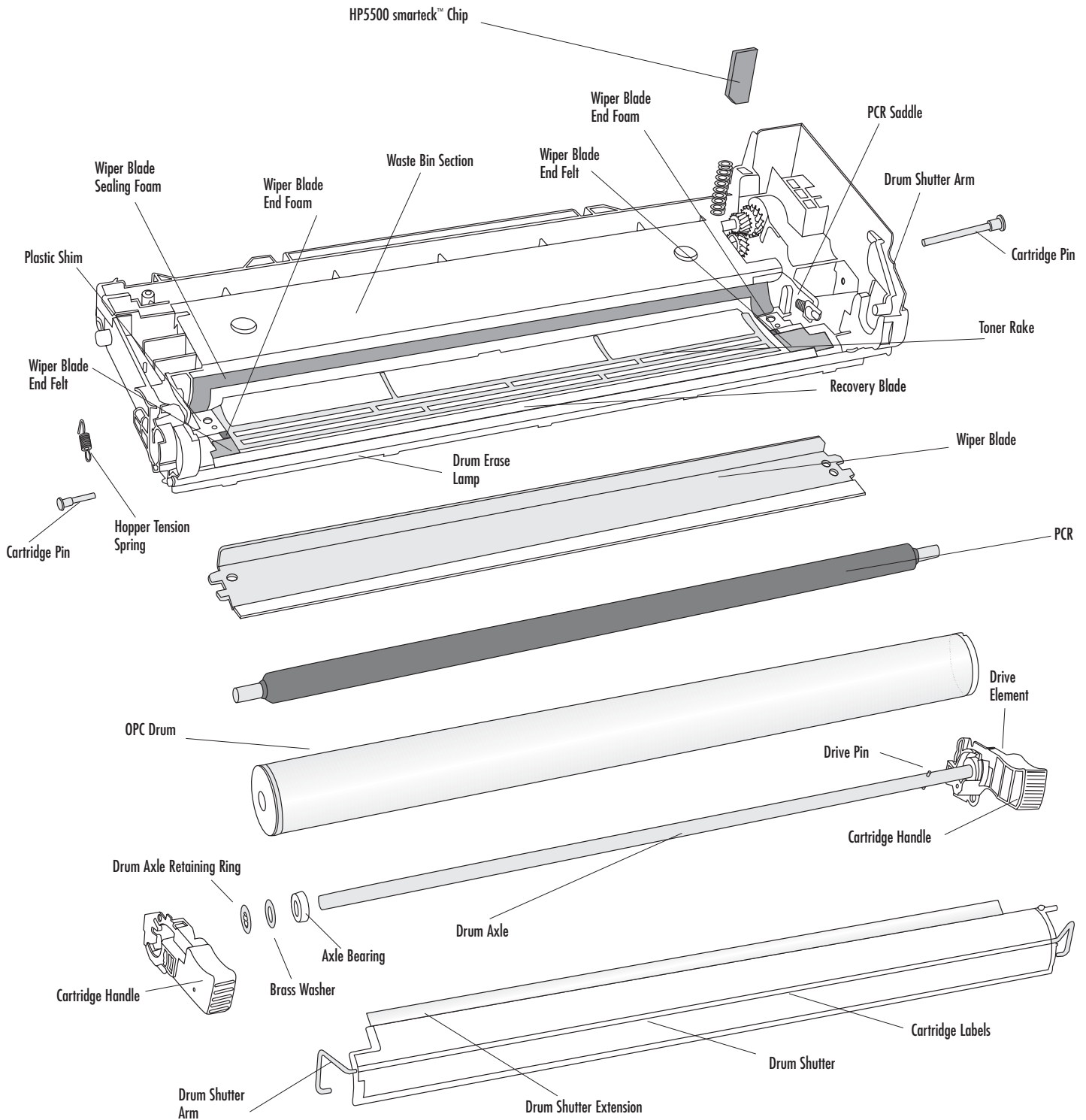


Note:

When installing the Adhesive Pro-Seal you must purchase and install a vented Hopper Cap (HP46VHCAP)

# HEWLETT-PACKARD® 5500/5550

## WASTE BIN SECTION





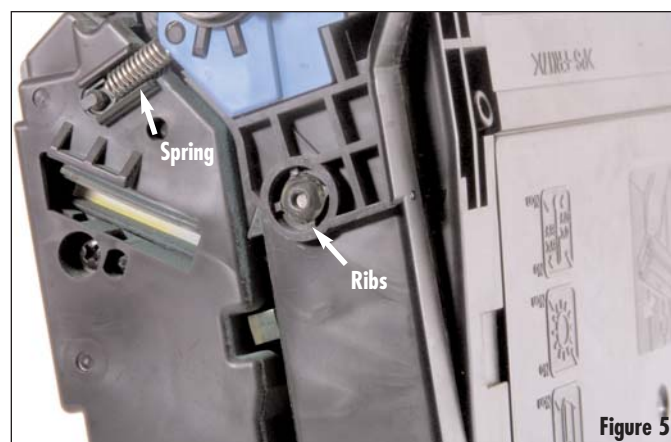
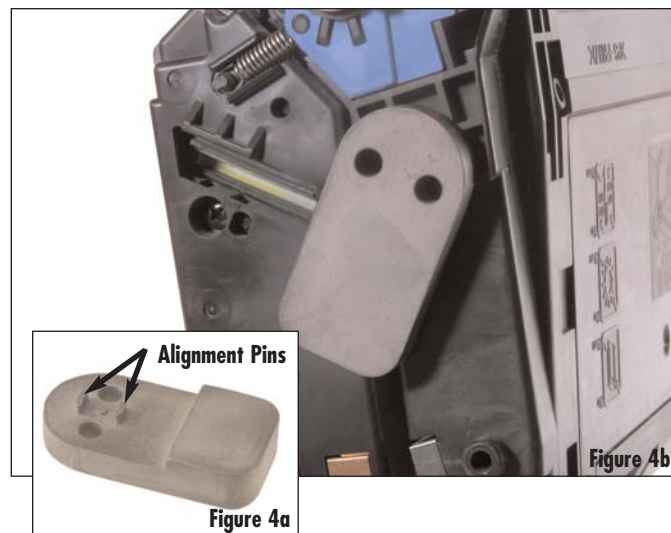
# Disassembly of the Cartridge

1. Rotate the shutter to the position shown and pull the ends of the shutter support bar free from the cartridge (Figure 1 & 2); then, pull the shutter free from the shutter arm (Figure 3).



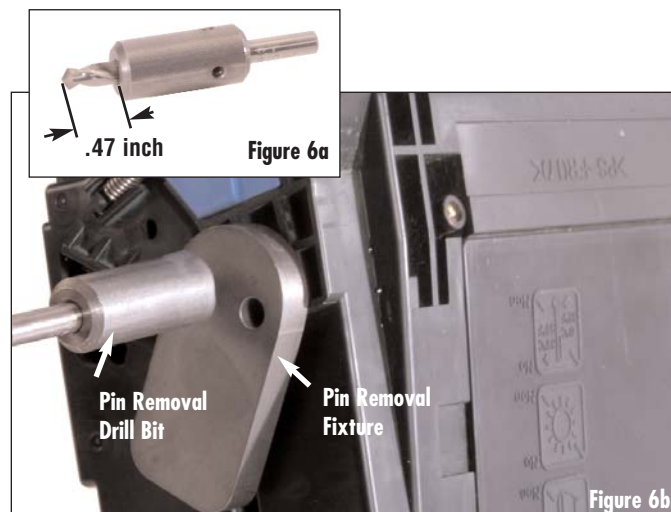


2. Place the pin removal fixture (Figure 4a) on the cartridge as shown Figure 4b. The alignment pins should fit in the ribs surrounding the pin as seen in Figure 5.



3. Using the pin removal drill bit (Figure 6a), drill through the two holes until the drill stop reaches the fixture surface (Figure 6b).

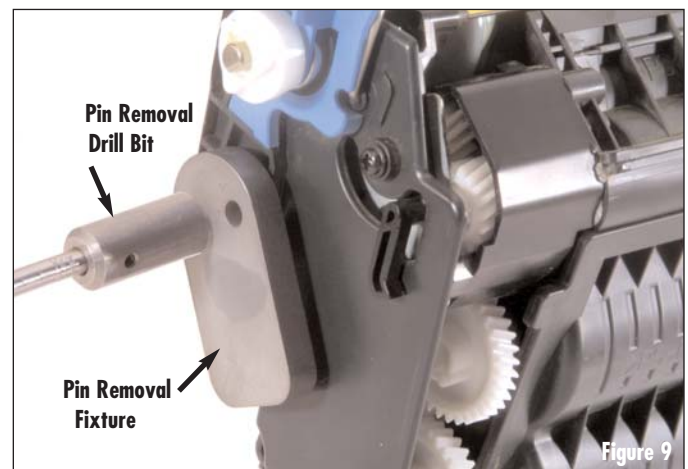
**Note:** Use of a drill bit without the drill stop could damage the cartridge



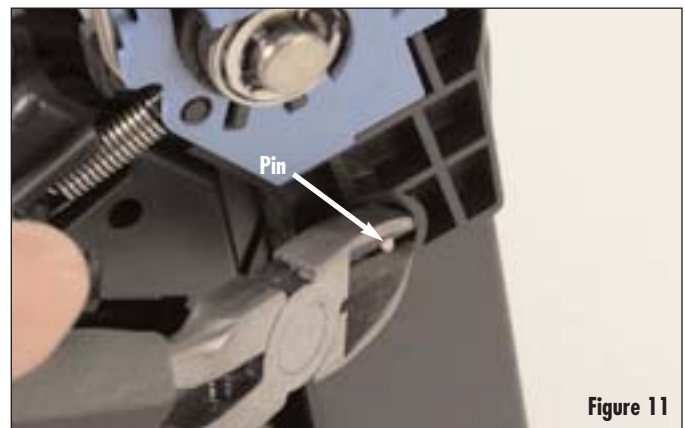
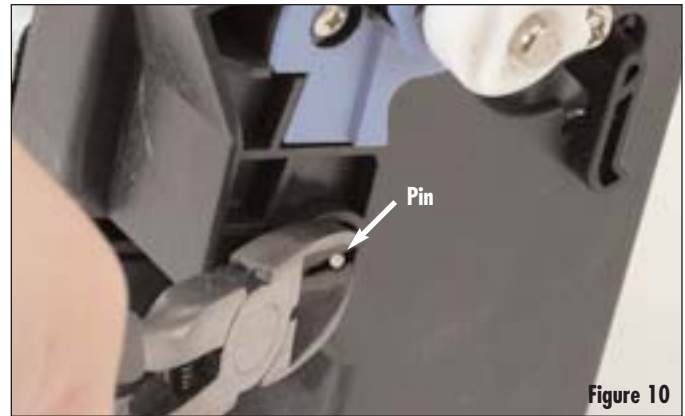
4. Place the pin removal fixture on the other side of the cartridge as seen in Figure 7. The alignment pins should fit in the ribs surrounding the pin as seen in Figure 8.



5. Using the pin removal drill bit, drill through the two holes until the drill stop reaches the fixture surface (Figure 9).



6. Use the pin removal pliers to cut through the plastic surrounding the pin and remove the cartridge pins on each side of the cartridge. See Figures 10 and 11.



7. Use a hook tool to release the hopper tension spring (Figure 12) before separating the sections (Figure 13).





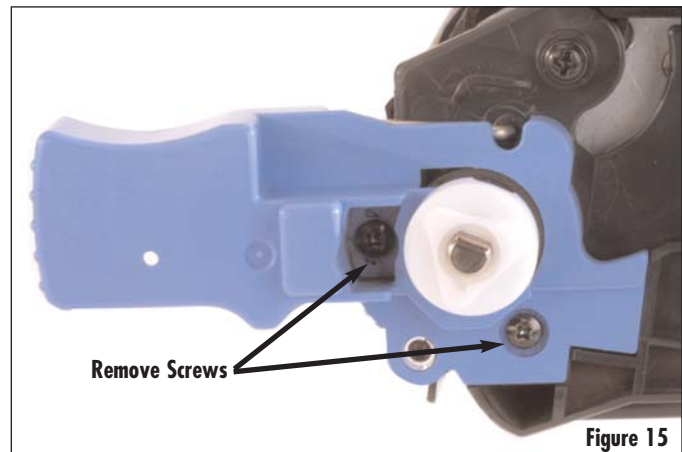
## Disassembly of the Drum Section

1. Remove the drum axle retaining ring and washer (Figure 14). Using a small flat blade screwdriver. The bearing can be retained in the cartridge body.

**Note:** Be careful not to damage the drum axle when removing the drum axle retaining ring.

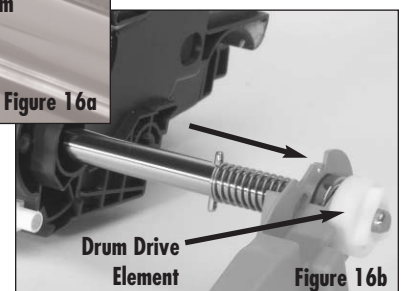
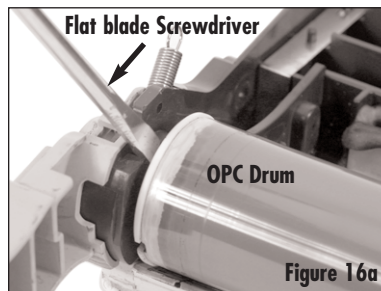


2. On the drive side remove the two screws from the handle (Figure 15).

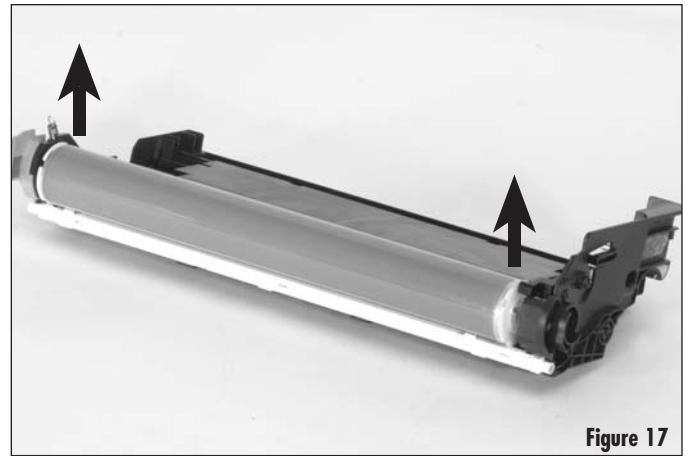


3. Insert a flat blade screwdriver between the Organic Photoconductive (OPC) drum hub and cartridge edge and gently pry the drum away from the cartridge as seen in Figure 16a. Then, pull the drum drive element to remove the drum axle and slide the axle out of the drum (Figure 16b).

**Note:** Do not use a punch or hammer to knock the axle free as this may result in damage to the axle.

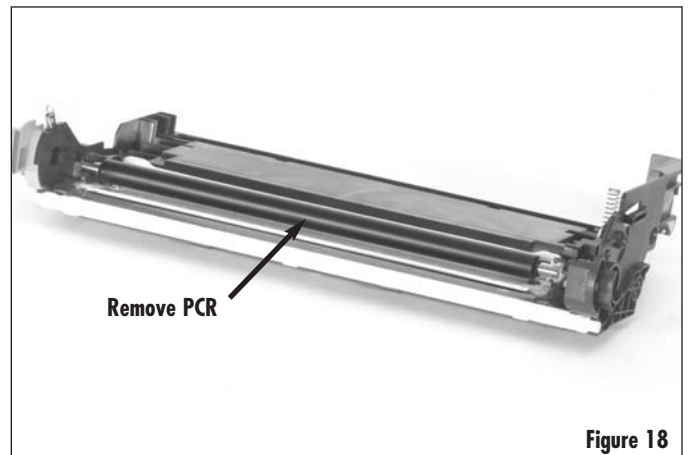


4. Remove the OPC drum (Figure 17).

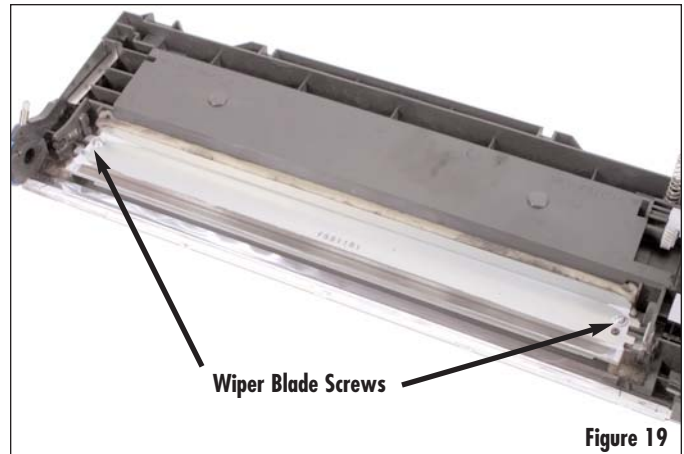


5. Grasping the axles at each end remove the PCR (Figure 18).

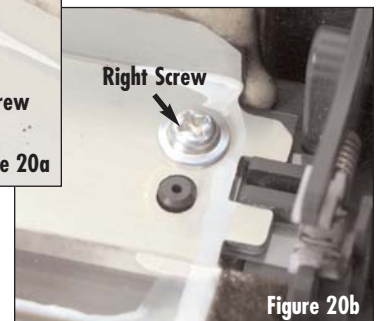
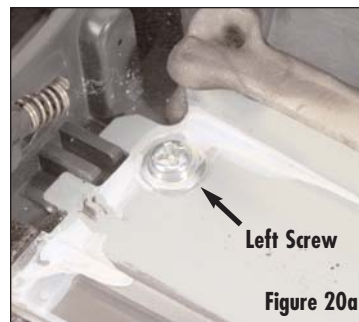
**Note:** See Appendix D for cleaning instructions.



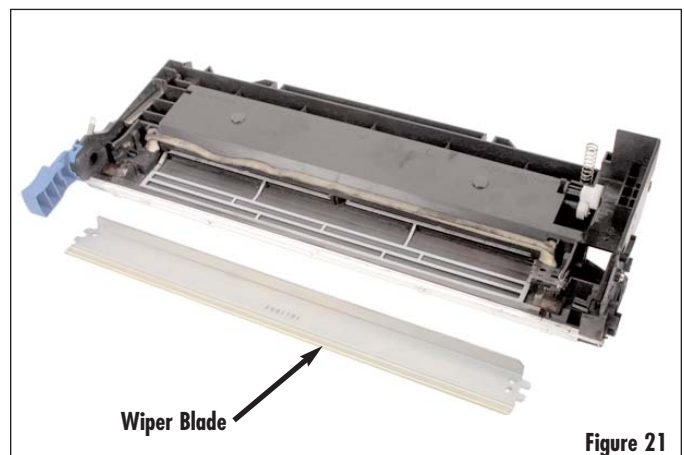
6. Remove the wiper blade.
  - a. Remove the two screws. (Figure 19).



**Note:** There may be a difference between the left and right screw (Figures 20a & 20b). If so, then note the location of screws when removed.

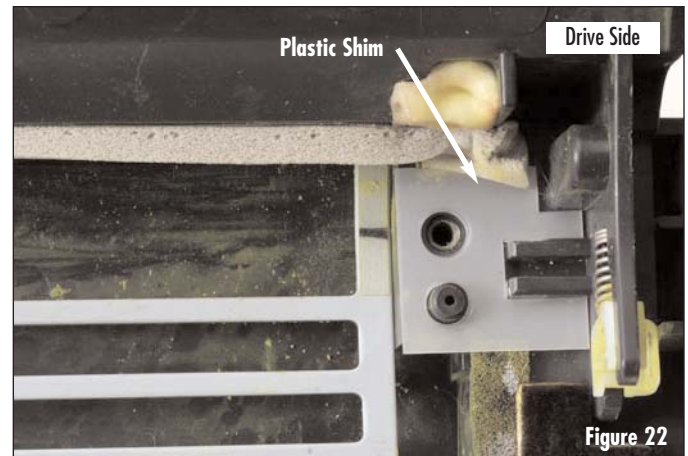


- c. Remove the wiper blade. (Figure 21). Ensure the OEM hot melt material remains attached to the cartridge surface and does not pull off with the wiper blade.

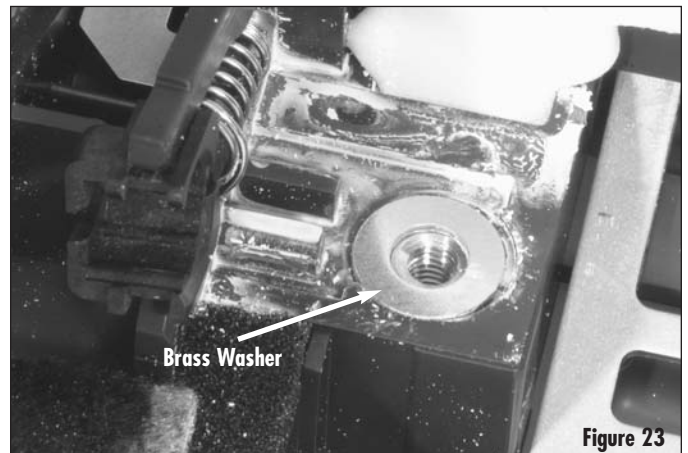


7. Remove the plastic shims (if any) under each end of the wiper blade. SCC has found that not all OEM cartridges have shims installed (Figure 22).

**Note:** There may be more than one shim on each side. Note the location of shims when removed.



8. If provided, remove the brass washer (Figure 23).



9. Remove the wiper blade sealing foam, leaving approximately 1/2" of the OEM material at each end, see Figure 24.





10. Clean the waste bin and drum erase lamp with ionized, dry, filtered, compressed air (Figure 25a & 25b). Be very careful not to damage the drum erase lamp or recovery blade during waste toner removal.

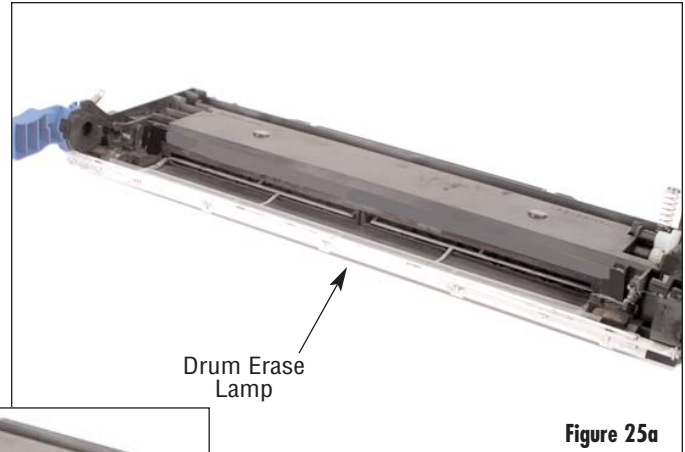


Figure 25a

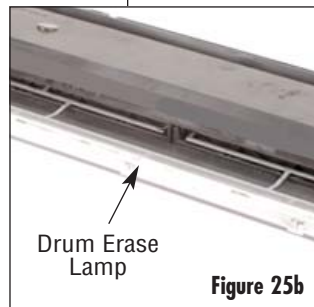


Figure 25b



# Disassembly of the Toner Hopper Section

1. Remove the screws that secures the contact side end plate (Figure 26).

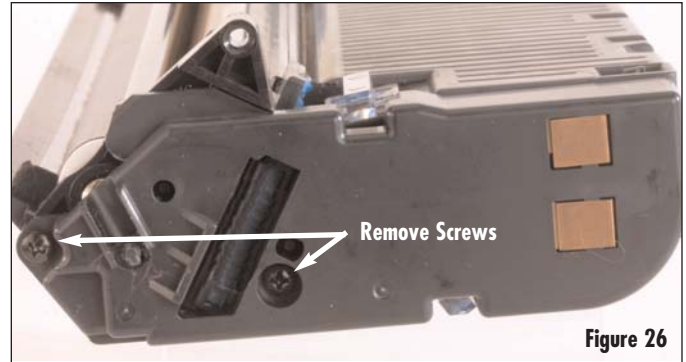


Figure 26

2. Remove the gear cover plate by removing the two screws securing it to the cartridge (Figure 27). Remove plastic spacer if present.

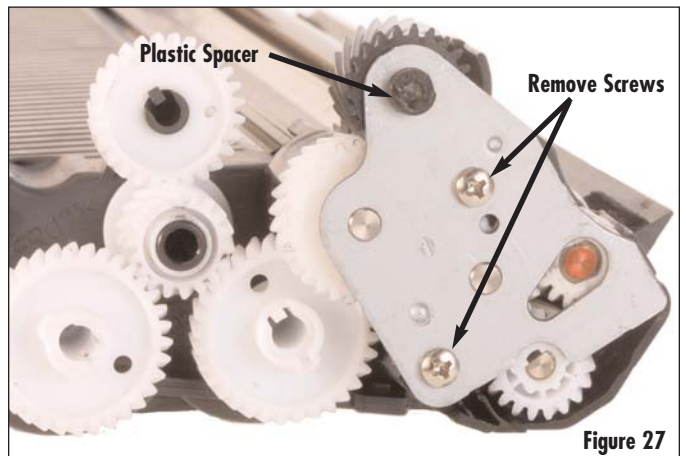


Figure 27

3. Remove the gears behind the gear cover plate and the waste bin drive gear. (Figure 28).

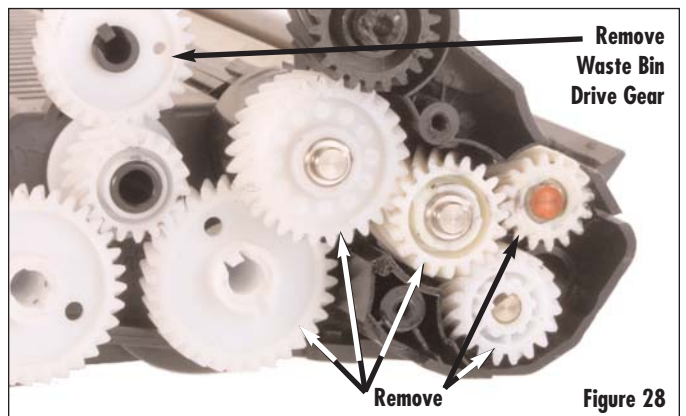
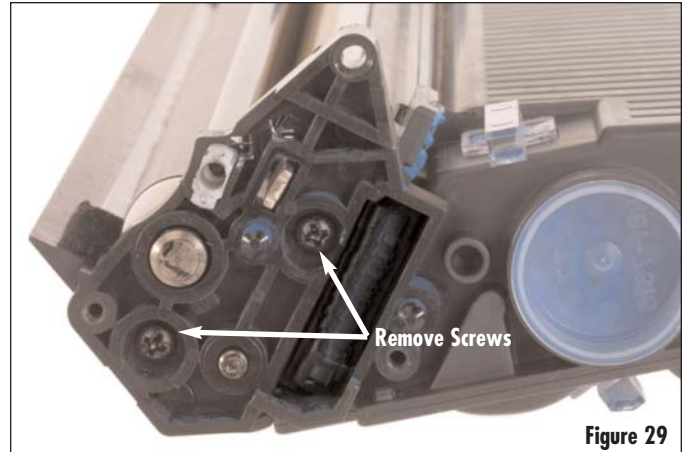


Figure 28

4. Remove the contact side roller support plate by removing the two screws securing it to the cartridge (Figure 29).

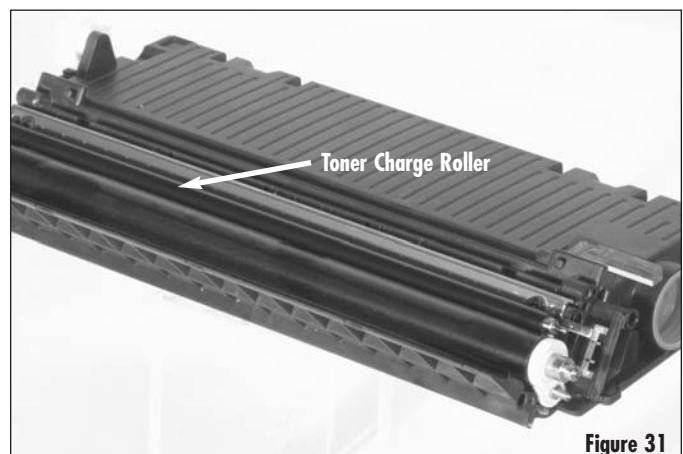


5. Remove the two screws that secure the drive side roller support plate (Figure 30). Remove the roller support plate.



6. If present, remove the toner charge roller by lifting it from the cartridge (Figure 31). For orientation purposes note the pre-existing band on the drive side of the toner charge roller.

**Note:** Clean the toner charge roller with a dry, lint-free cloth. Clean until toner has been removed as much as possible.



7. Remove the developer roller along with the spacers on each end of cartridge (Figure 32).

**Note:** See Appendix C for developer roller cleaning instructions.

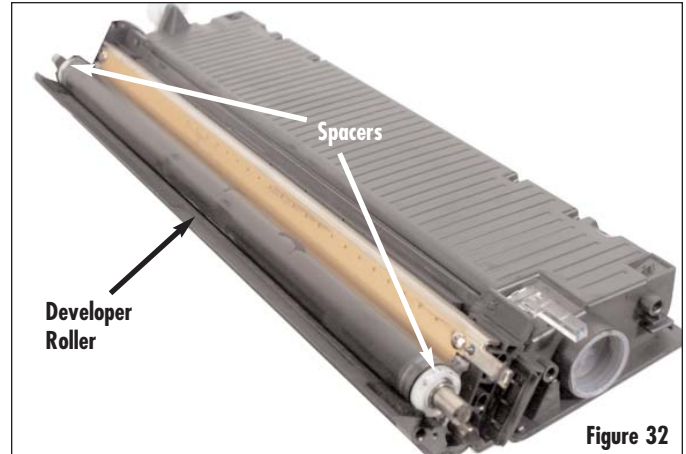


Figure 32

8. Remove the doctor blade
  - a. Remove the two screws that secure the doctor blade (Figure 33a).
  - b. Use an angle blade knife to gently pry up the drive side and contact side of the doctor blade; then, remove it from the Hopper (Figure 33b).

**Note:** For detailed instructions on how to clean the Doctor Blade and Developer Roller, see "Cleaning Instructions" in the Appendix. See SSS™#580 "HP3500/3700/2500/HP4600 and 5500 Doctor Blade/Developer Roller Cleaning Fixture" for further information.

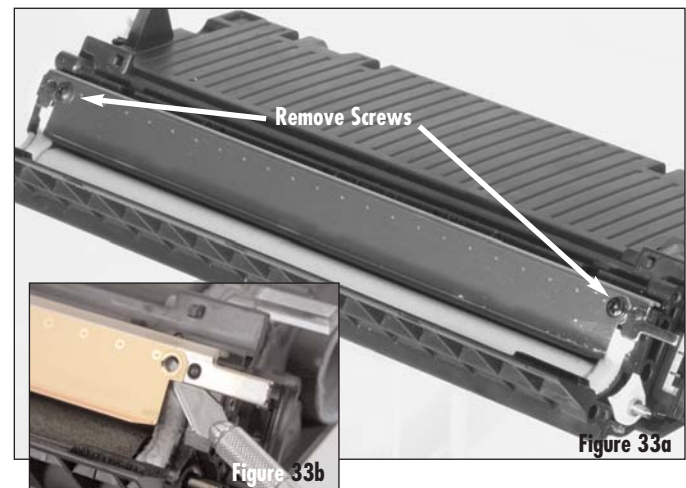


Figure 33a

Figure 33b

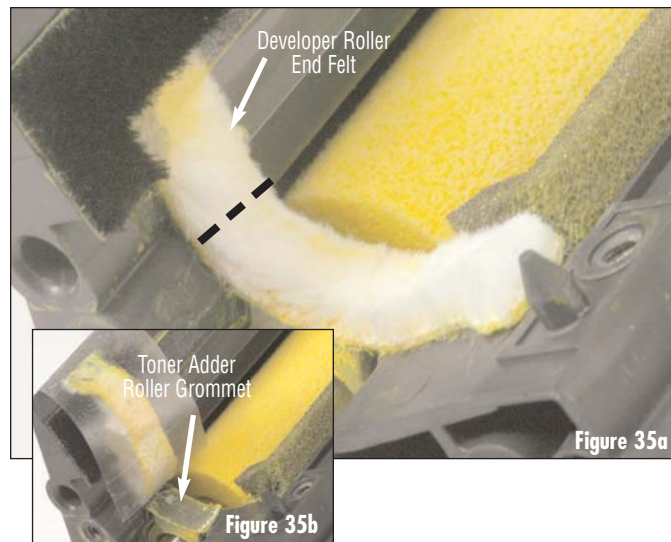
9. Inspect the toner adder roller for surface irregularities, brittle and/or flat spots on the foam material. Ensure foam material is securely attached to shaft without any separation. Replace toner adder roller if torn or damaged as described in steps a thru c below.
  - a. Using a flatblade screwdriver push the toner adder roller felt washer off the adder roller shaft (on each end) as shown in Figure 34.



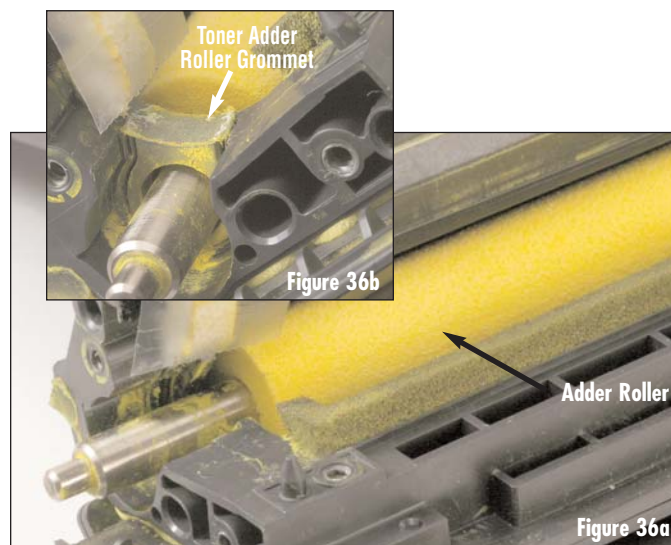
Figure 34

- b. Use the curved scraper blade tool to lift the developer roller end felt from the mounting surface beside the doctor blade sealing foam and peel away from the toner adder roller grommet, stopping at the dotted line as shown in Figure 35a. Secure out of the way with a small piece of tape (Figure 35b).

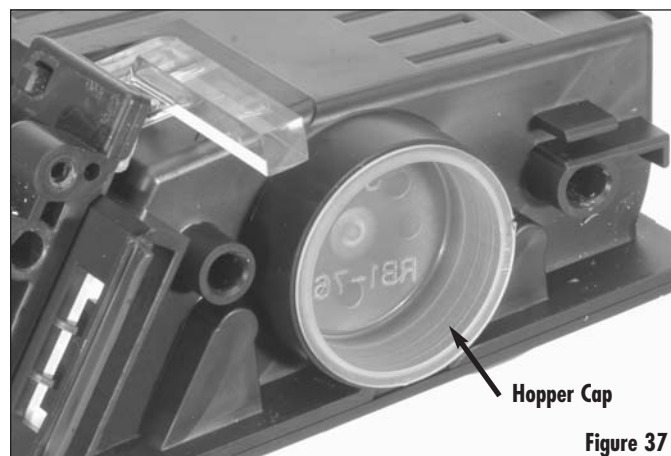
**Note:** DO NOT remove developer roller end felt completely.



- c. Remove the toner adder roller grommet and lift the toner adder roller from the hopper (Figure 36a & 36b).



- 10. Carefully remove the hopper cap (Figure 37) by gently prying around the perimeter with a flat blade screwdriver, until the hopper cap can be removed.



11. Dump the remaining toner from the hopper and clean with dry, filtered, compressed air (Figure 38). Rotate the agitator gear while blowing to ensure all surfaces are clean. If the toner adder roller was not removed, manually rotate shaft to clean.



Figure 38

12. Inspect the sealing components and replace as required. Foams and felts should display a smooth, clean surface. The sealing blade should exhibit a smooth, flat surface along the entire length of the blade.

Note: Remove foams and felts if they are compacted with toner, torn or display a shiny surface.

Note: Split and seal the cartridge to guard against toner leakage. For splitting instructions refer to SSS™ #516 "HP4600 & HP5500 RapidSplitter™ Power Splitting System" or SSS™ #561 "HP4600 & HP5500 RapidSplitter™ Power Splitting System CE Version". For sealing instructions refer to SSS™ #517 "HP4600 & HP5500 Foam Type RapidSeal™ w/ Pull Tab Instructions" or SSS™ #497 "HP5500 ProSeal™ Insertion Tool and Adhesive ProSeal™ with Pull Tab Instructions".





# Assembly of the Toner Hopper

1. Fill the hopper with toner and replace the hopper cap (Figure 39).

**Note:**

- a. If the cartridge is not going to be sealed, continue with instructions and fill hopper with toner after replacing the roller support plate (contact end plate).
- b. When installing the Adhesive Pro-Seal you must purchase and install a vented hopper cap.



Figure 39

2. Install the toner adder roller.
  - a. Install the toner adder roller in to the hopper section as seen in Figure 40.

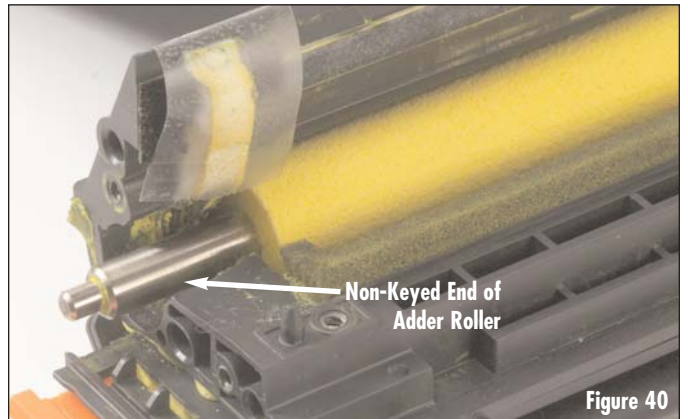


Figure 40

- b. Replace the toner adder roller grommet by inserting on the shaft of the toner adder roller and pressing it in to the hopper as shown in Figure 41.

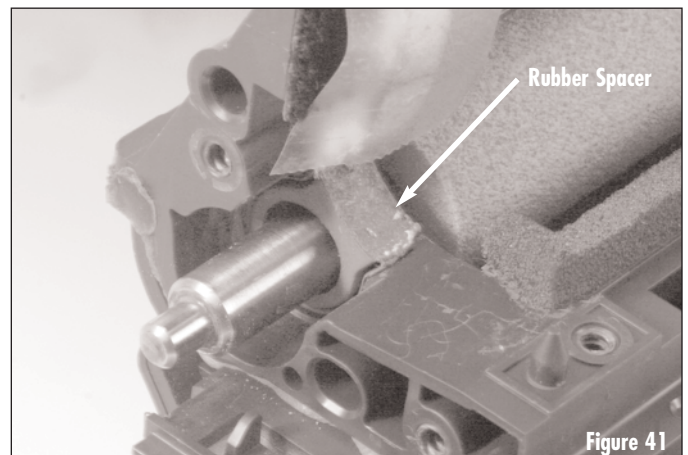


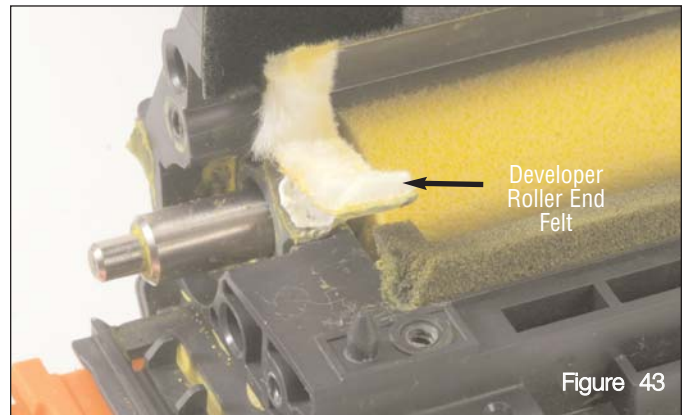
Figure 41



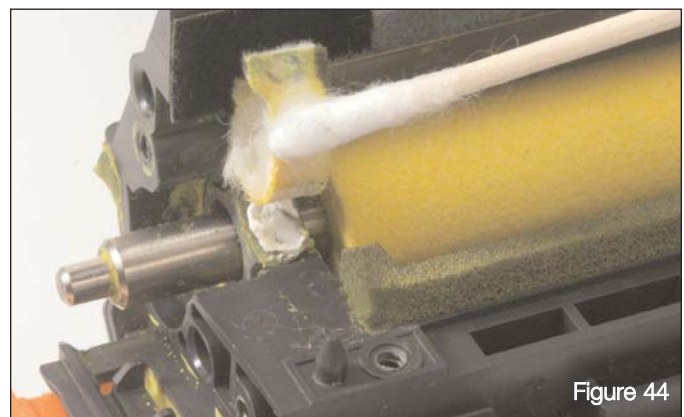
- c. Clean the top of the toner adder roller grommet and apply a small amount of adhesive caulk to the top surface of the grommet (Figure 42).



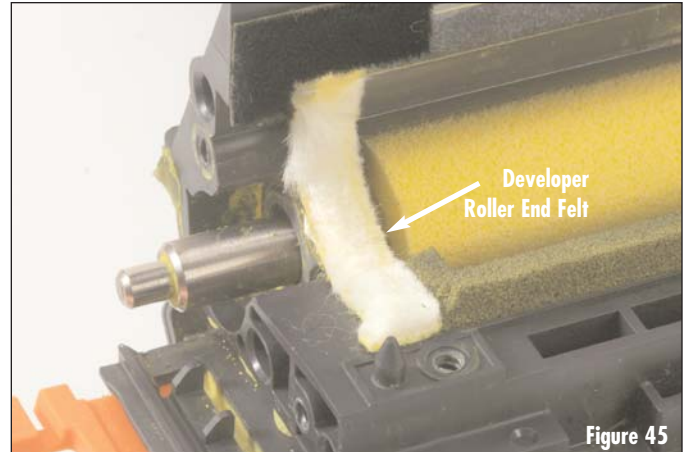
- d. Remove the tape from the developer roller end felt on the contact side of the cartridge (Figure 43).



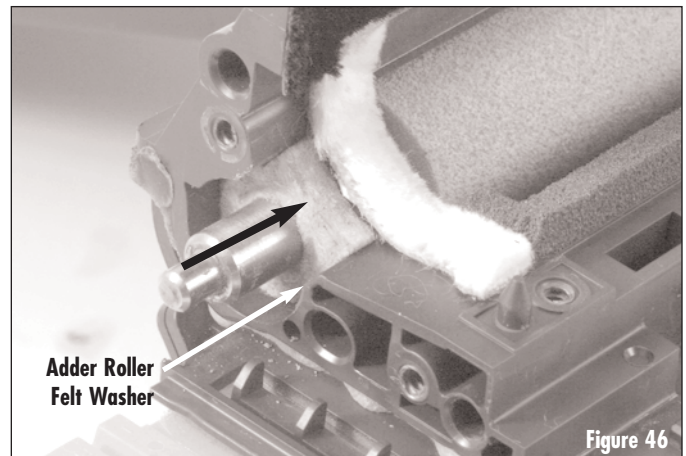
- e. Use the cotton swab soaked in isopropyl alcohol to clean and reactivate the adhesive side of the felt as seen in Figure 44. Be sure to remove all toner residue from the end felt and allow to dry before continuing.



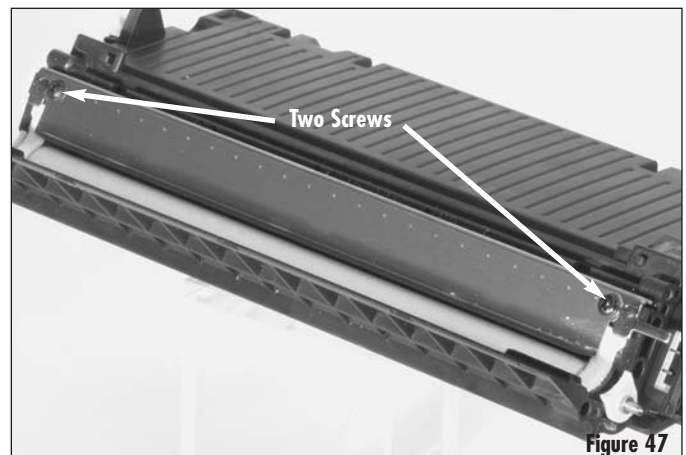
- f. Reposition the developer roller end felt on the toner adder roller grommet (Figure 45). The top of the felt should be adjacent to the doctor blade sealing foam. Roughen or fluff the felt with a flat blade screwdriver. Felts that are compacted with toner, torn or that display a shiny surface should be replaced. The developer roller sealing blade must also be replaced if the end felts are replaced.



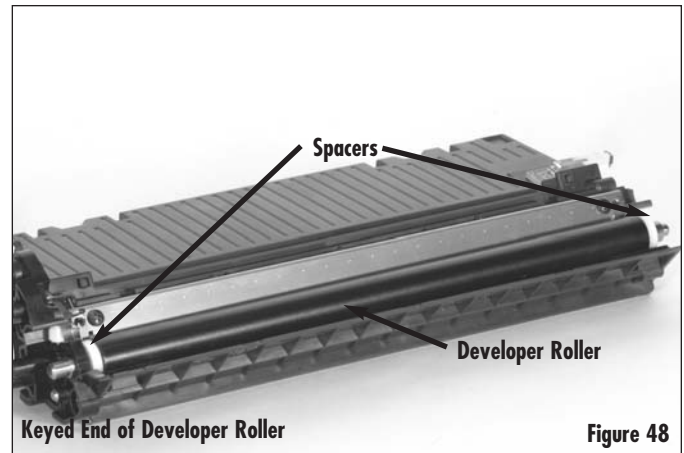
- g. Using a flat blade screwdriver push the adder roller felt washer on to the adder roller shaft, one on each end (Figure 46).



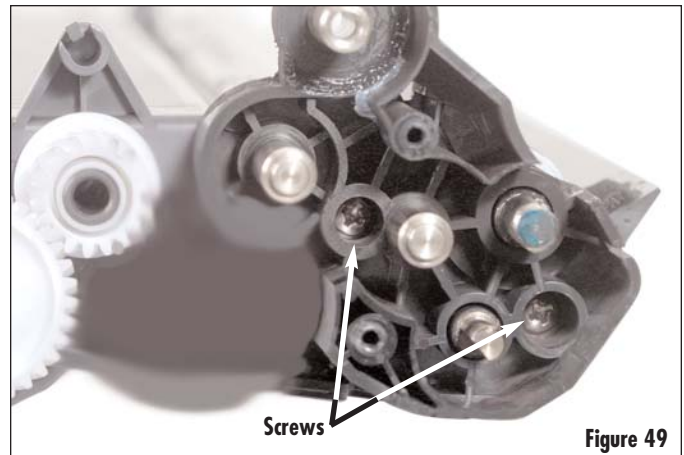
- 3. Install the doctor blade and secure with the two screws (Figure 47).



4. Install the developer roller along with the spacers with the keyed end of the developer roller with spacer as shown in Figure 48.

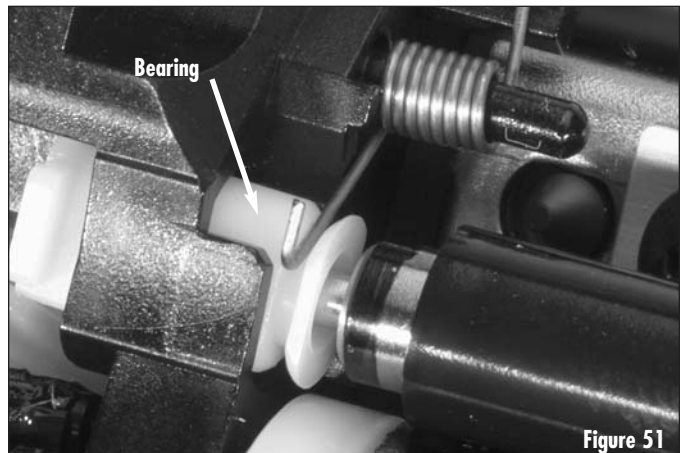
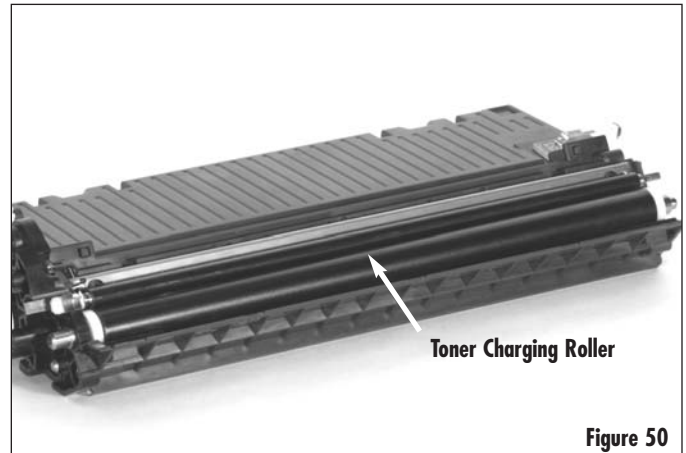


5. Install the drive side roller support plate and secure with the two screws (Figure 49).

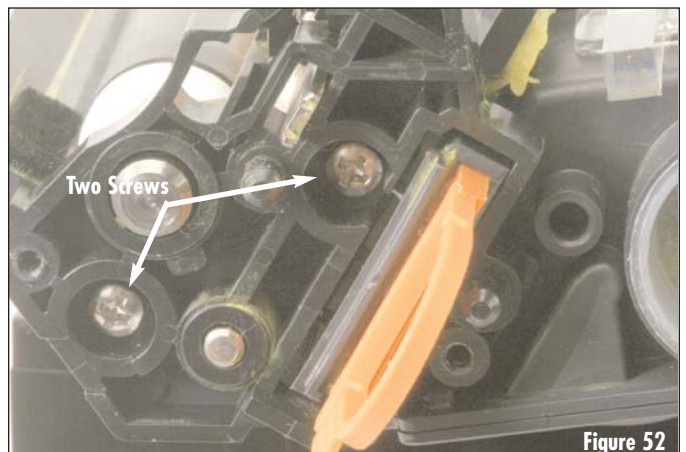


6. If present, install the toner charge roller (Figure 50), by sliding the axle of the roller into the bearing on the roller support plate (Figure 51).

**Note:** Install the toner charger roller shaft so that the permanent marker mark is on the drive side of the hopper.



7. Install the contact side roller support plate and secure with the two screws (Figure 52).



8. If the toner charging roller is present check the positioning of the contact side and drive side tension springs on the mounting posts as shown in Figure 53a & 53b.

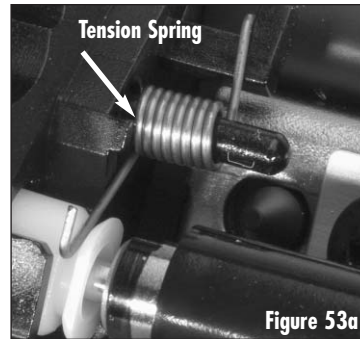


Figure 53a

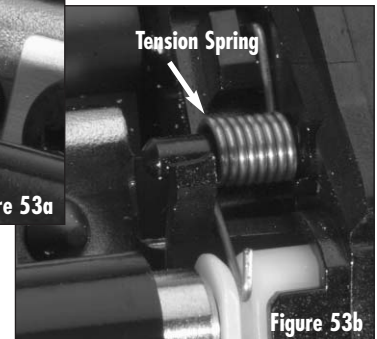


Figure 53b

9. Install the drive gears (Figure 54).



Figure 54

10. Replace the gear cover plate and secure it with the two screws (Figure 55). Install plastic spacer if present.

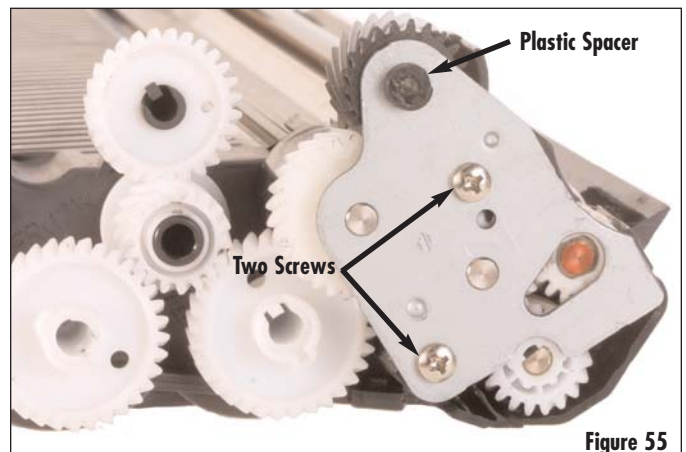
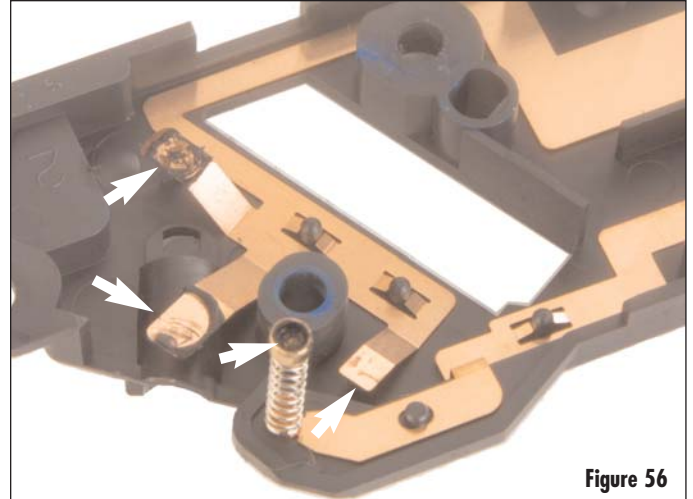


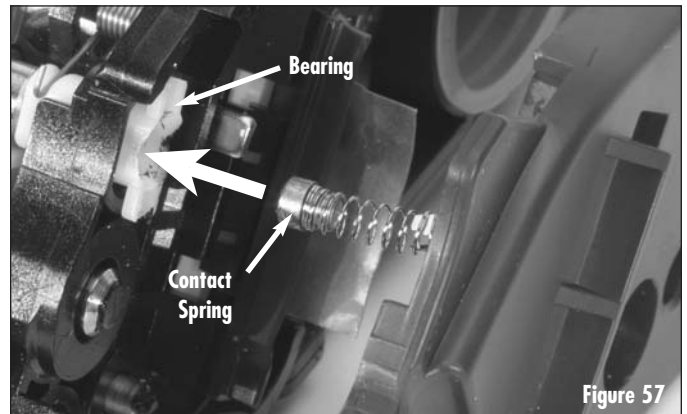
Figure 55

11. Place the contact side end plate on a flat surface and clean contacts with a cotton swab dipped in isopropyl alcohol. Then apply a thin layer of conductive cartridge lubricant to the contacts as shown (Figure 56).



12. If not sealing, then fill hopper with approved toner and install the hopper cap.

**Note:** When replacing the contact side end plate on hoppers equipped with the toner charging rollers, make sure to line up the contact spring on the end plate with the bearing (Figure 57).



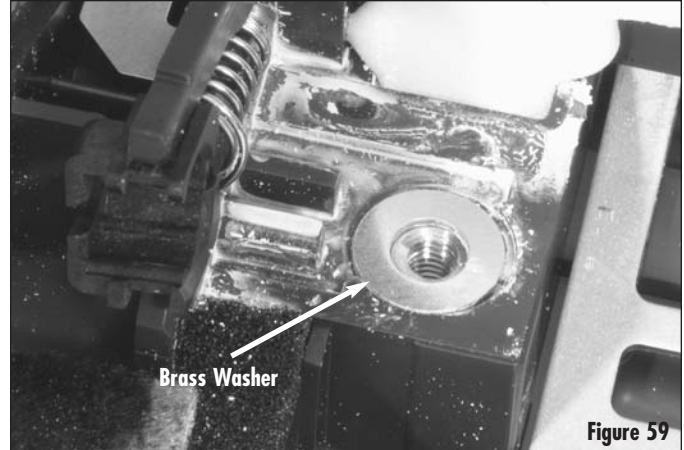
13. Secure the contact side end plate with two screws (Figure 58).



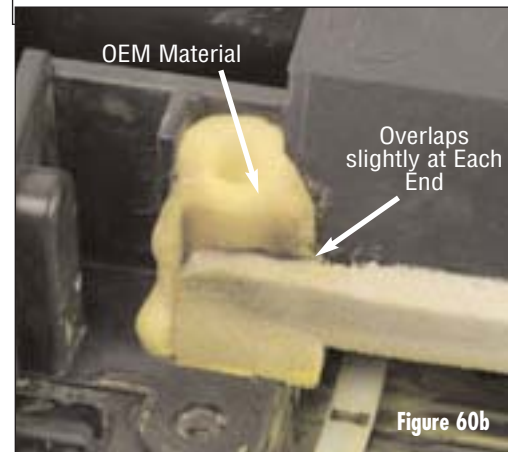
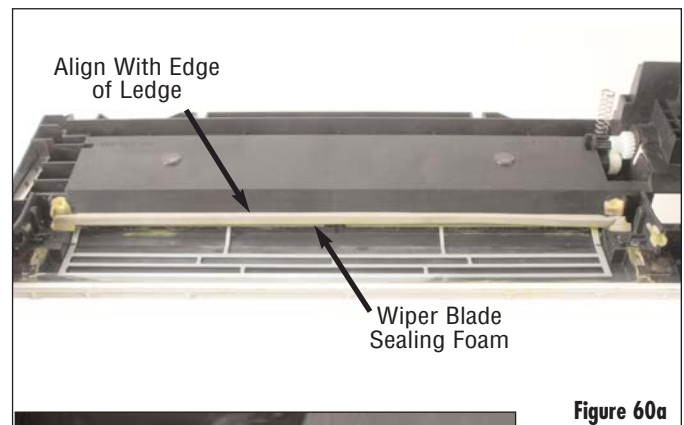


## Assembly of the Drum Section

1. Install the brass washer if provided (Figure 59).

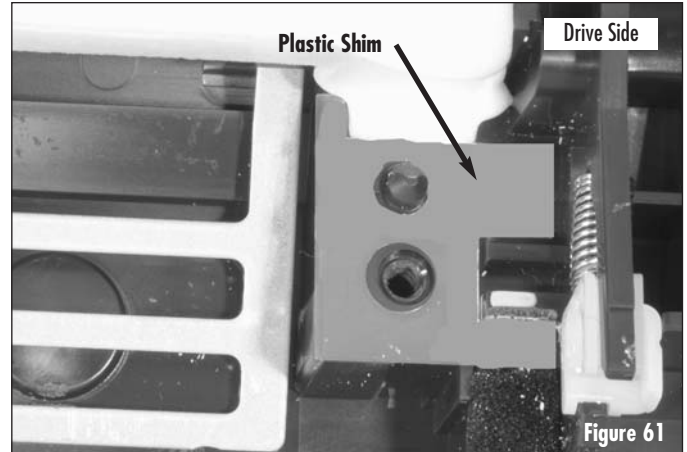


2. Place the wiper blade sealing foam on the cartridge as shown (Figure 60a). Align the top edge of foam with the edge of the ledge. The ends of the foam should overlap existing OEM material left, and the bottom of the foam on each side should be in contact with the wiper blade mounting surface (Figure 60b).



3. If present, install the plastic shims in the correct location (Figure 61) at each end of the wiper blade mounting surface.

**Note:** There may be more than one shim on each side. Ensure each shim is installed in the correct location.



4. Install the wiper blade.

**Note:** Using the yellow toner from the lot being installed, dip the working edge of the wiper blade to help lubricate it during the first drum rotations of the remanufactured cartridge.

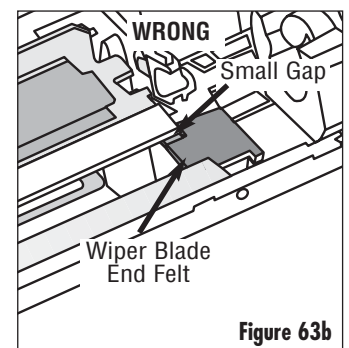
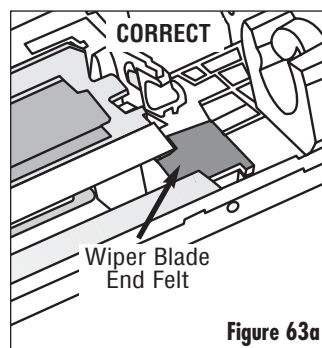
- a. Position the wiper blade as shown in Figure 62.
- b. Secure the wiper blade with the two screws as seen in Figures 62.



**Important:**

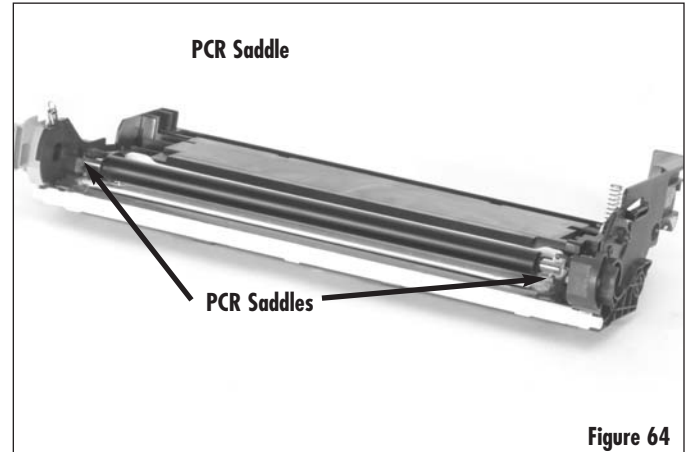
The corners of the wiper blade must be butted up to the edges of the wiper blade end felts. There should be no overlapping of the end felts over the wiper blade or the wiper blade over the end felts or leakage could occur.

**Note:** When replacing the wiper blade, adjust the wiper blade end felt around the wiper blade as shown in Figure 63a. Make sure there are no gaps between the blade and end felt as shown in Figure 63b. This will cause toner leakage. See SSS™#541 for further instructions on replacing the wiper blade end felts.



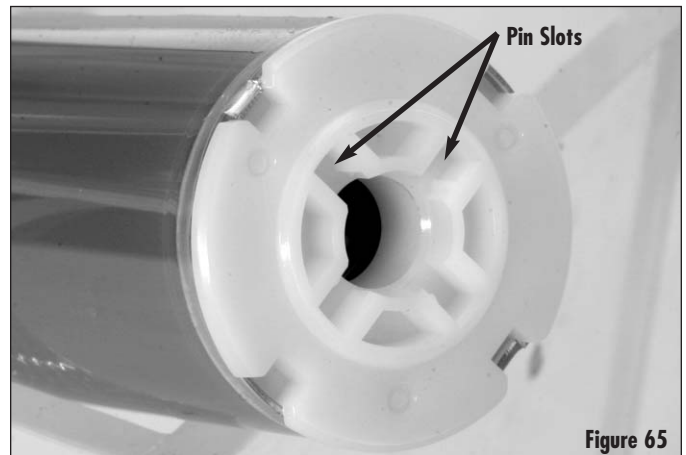


5. Install the primary charge roller (PCR).
  - b. Position the PCR and snap each end of the shaft into the PCR saddles (Figure 64).



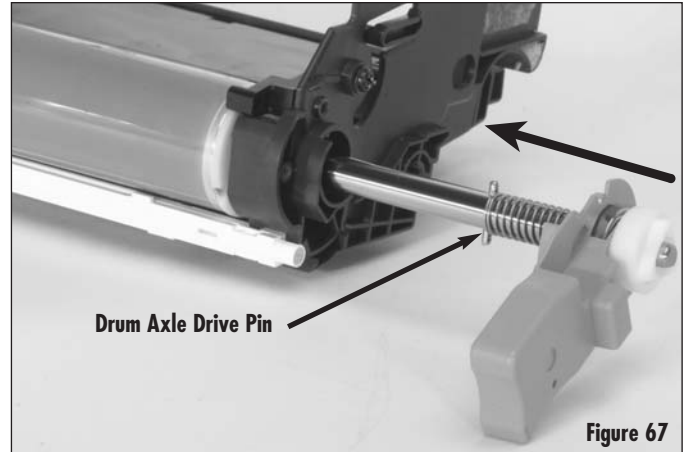
**Note:** Apply a dusting of Kynar to surface of the OPC drum.

6. Install the OPC drum (Figure 66). Note the end of the drum shown in Figure 65 goes on the drive side of the cartridge with the hopper compression spring.

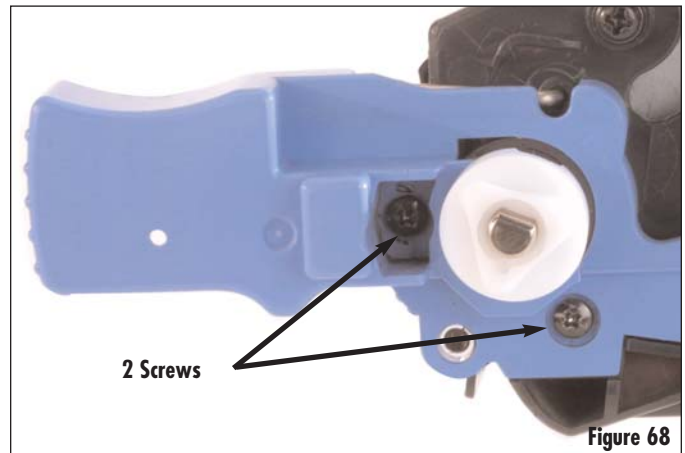


7. Install the drum axle into the OPC as shown in Figure 67. Ensure that the drum axle drive pin engages with one of the pin slots in the end of the OPC drum.

Note: Use care not to damage the drum axle contact when installing the axle. The drum axle contact is located behind the drum axle bearing.

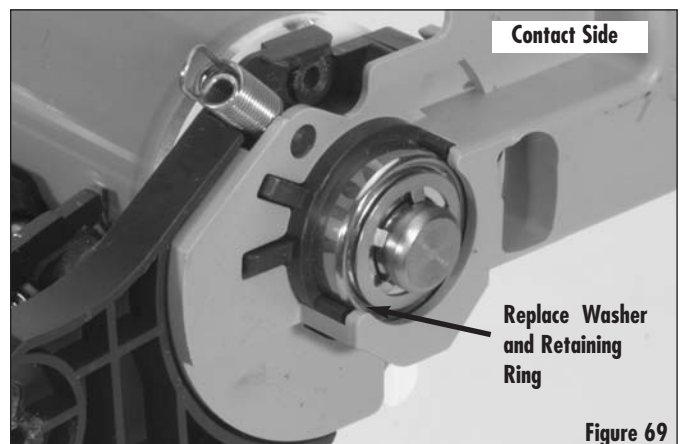


8. Secure the drive side cartridge handle with two screws (Figure 68).



9. Replace the drum axle washer and retaining ring (Figure 69). Make sure the retaining ring fits snugly.

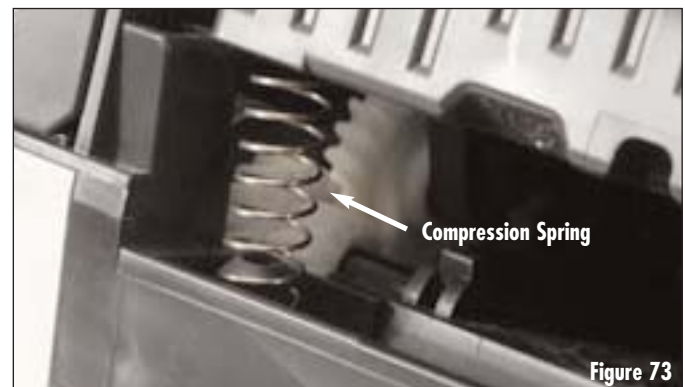
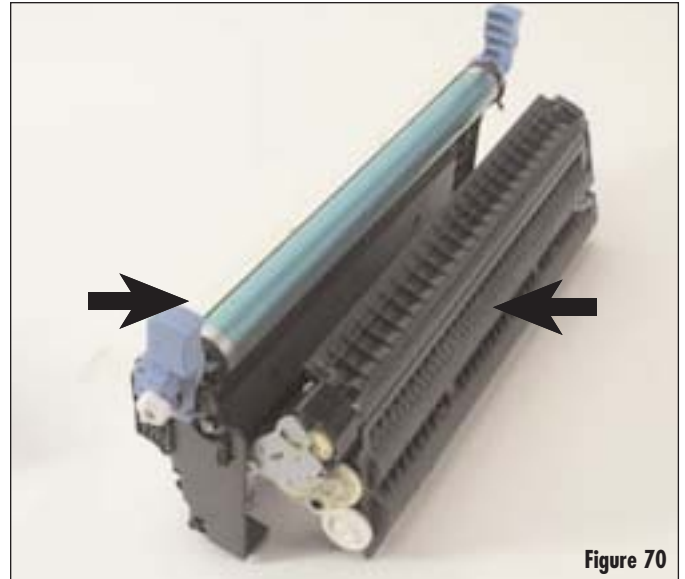
10. Using a clean, dry cloth, rotate the OPC drum and wipe any toner/Kynar off of the PCR.



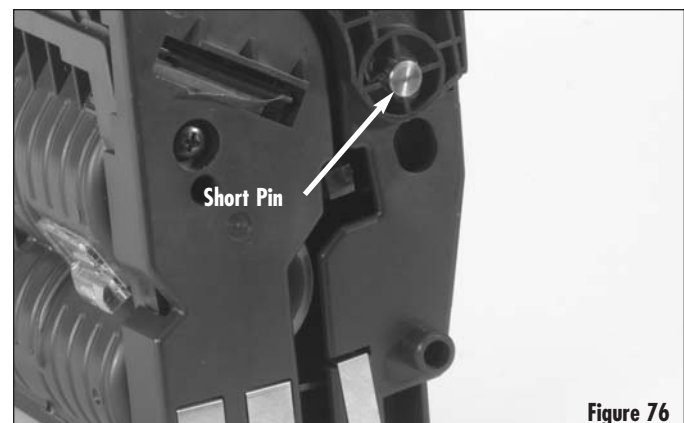
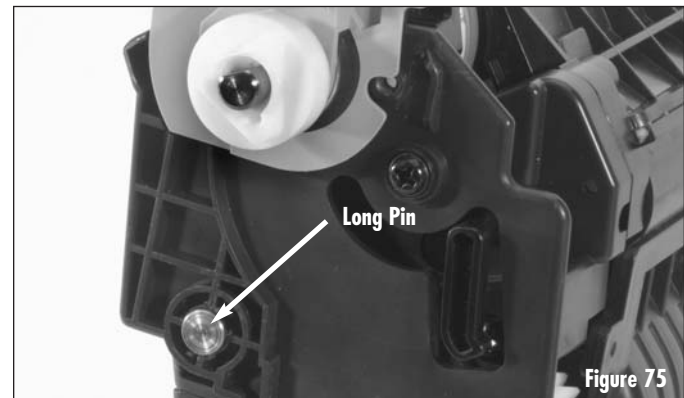
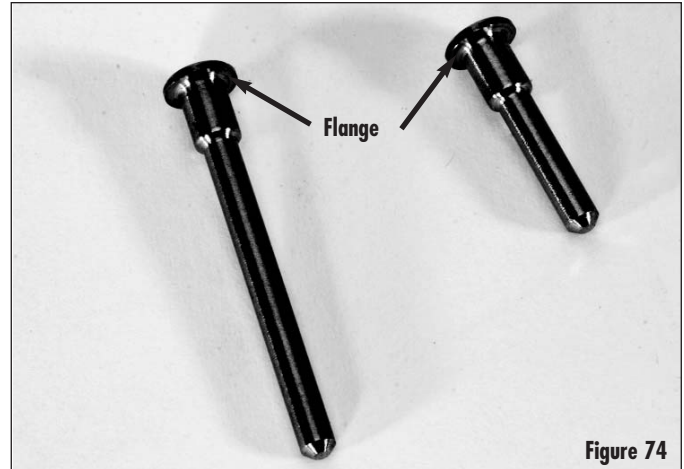


# Cartridge Reassembly

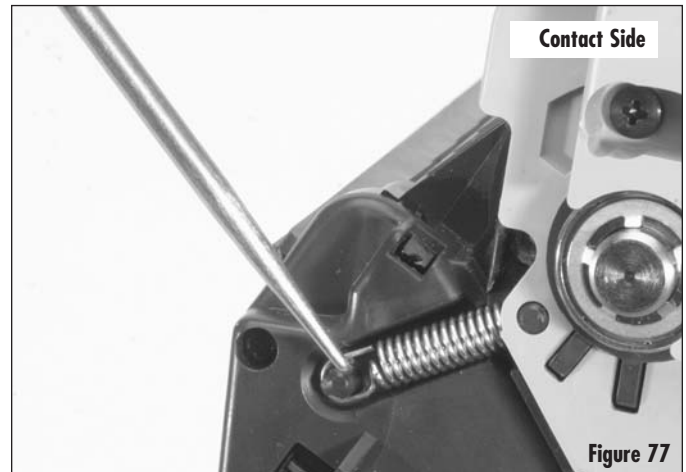
1. Place the cartridge sections back together (Figure 70). Make sure the compression spring is properly seated in the square slot on the cartridge (Figure 71 & 72).



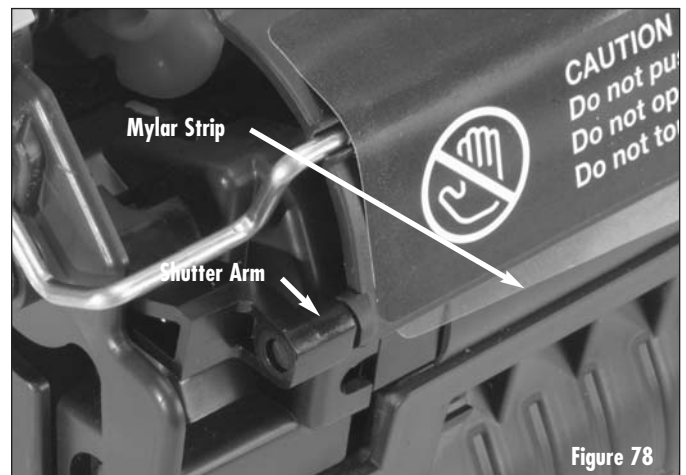
2. Replace the OEM cartridge pins with HP4600 short cartridge pin and the HP5500 long cartridge pin to facilitate disassembly during subsequent remanufacturing cycles (Figure 74). The long pin goes on the drive side (Figure 75) and the short pin goes on the contact side (Figure 76).



3. Use a hook tool to fasten the hopper tension spring (Figure 77).



4. Install the shutter.
  - a. Press the shutter back into the shutter arm (Figure 78).



- b. Put the ends of the shutter support bar back into the holes on the cartridge (Figure 79 & 80).



- c. Test the shutter for proper movement. Make sure the mylar strip on the bottom of the shutter is on the outside and not under the edge of the hopper after reassembly.



# Post Testing

## Appendix A

### Important

The cartridge must be post-tested without the seal pull tab in place.

1. Run a small bead of toner in the valley between the developer roller sealing blade and the developer roller (fig. 81).
2. Rotate the developer roller away from the doctor blade until no toner is seen in the valley. It is important that all toner is pulled into the system with no toner left visible to avoid leaking into printer (fig. 82).
3. Reassemble the cartridge.
4. Install the mule chip\* onto the cartridge.
5. Install the cartridge into the printer.
6. Print two 30% pages from the computer for troubleshooting purposes. Run solid pages until toner is exhausted from the system.
7. Remove the cartridge. Install new chip for end user prior to packaging.

\* **MULE CHIP:** A chip that can be used numerous times for testing purposes. To create a mule chip, install a new Static Control chip on a cartridge. Put the cartridge into the test printer. The test printer will write to the chip. When the chip is reinstalled on a different cartridge, the same test printer will recognize it. Once the test printer recognizes the chip it will not recalibrate at installation, saving time during post test.



Figure 81

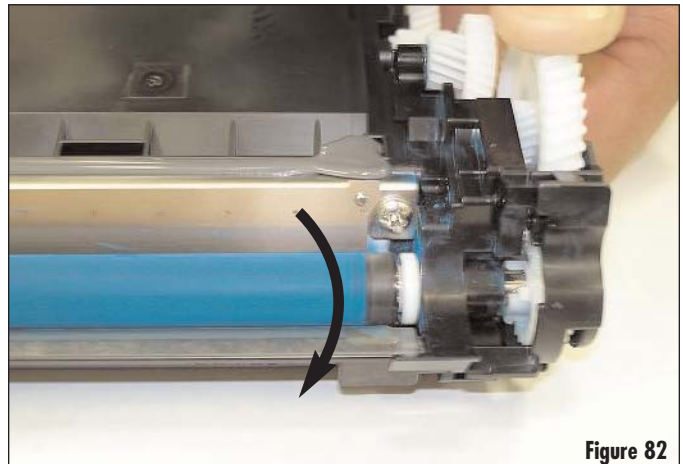


Figure 82





# Cleaning Instructions

This section provides the information needed to properly clean the doctor blade and developer roller. For information on how to remove the doctor blade and developer roller see "Disassembly of the Toner Hopper Section".

**Important:** The use of 99% isopropyl alcohol is recommended to clean these component parts. Do not use 91% isopropyl alcohol to clean component parts because using 91% isopropyl alcohol will require excessive scrubbing, which will damage the doctor blade and developer roller.

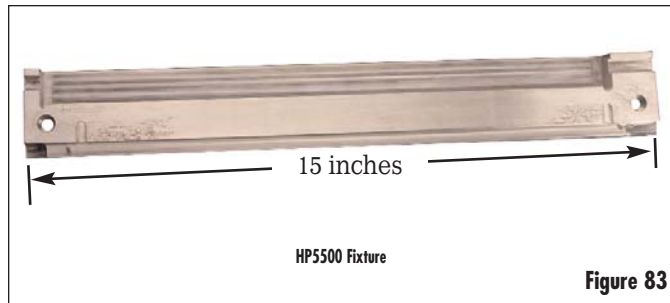


Figure 83

## Doctor Blade Cleaning

1. Using ionized dry, filtered, compressed air clean any loose toner from the Doctor Blade (Figure 84).

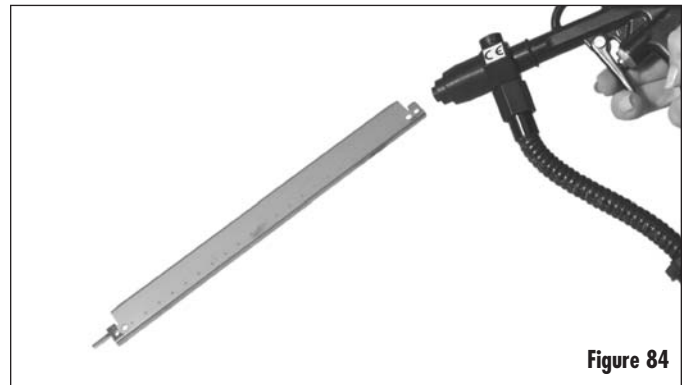


Figure 84

2. Place the doctor blade on the fixture as shown in Figure 85.

**Note:** The fixture is needed in order not to damage the doctor blade in the process of cleaning.

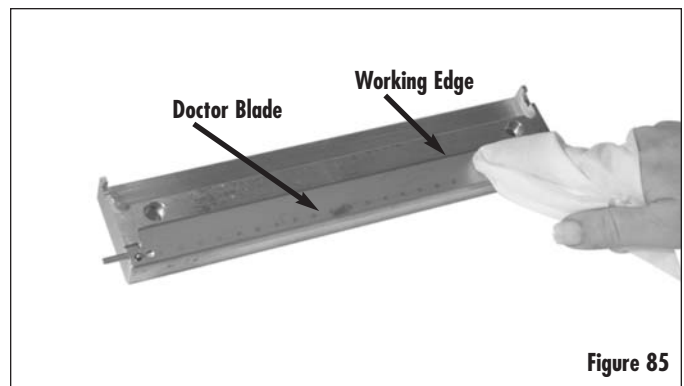


Figure 85

3. Saturate a lint-free cloth with 99% isopropyl alcohol and use it to carefully remove any toner build-up left on the surface of the doctor blade. See Figure 86. Do not apply isopropyl alcohol directly to the blade as damage to the blade's coating may occur if it is saturated and allowed to soak in isopropyl alcohol.

**Note:** Care must be taken when wiping surface not to damage or bend corners of the doctor blade.

**Note:** After removing the toner build-up, the working edge of the doctor blade will remain discolored from the toner. Do Not attempt to remove this discoloration or you could damage the doctor blade.

4. If necessary, repeat step 3 and reinspect the surface to ensure that it is completely clean and free of any toner build-up.

**Note:** If the toner build-up is not thoroughly cleaned you may see print defects.

5. Once you are sure that the doctor blade is clean, use a lint free cloth saturated with deionized water to wipe down the entire surface of the doctor blade as shown in Figure 85.

6. Blow off any water left on the doctor blade with ionized dry, filtered, compressed air.



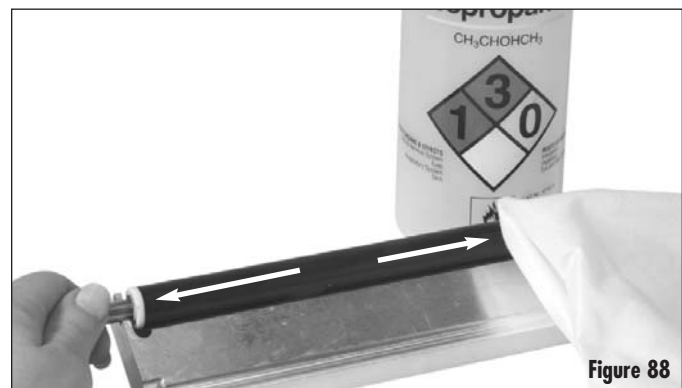
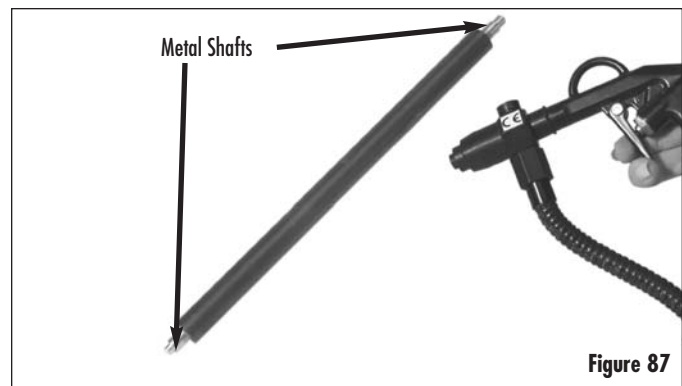
Figure 86

## Developer Roller Cleaning

1. Grasp the developer roller by the metal shaft at either end; then, using ionized, dry, filtered, compressed air remove any loose toner (Figure 87).
2. While holding the developer roller by the metal shaft, rotate and gently wipe the entire length of the developer roller from left to right with a dry, lint free cloth.
3. Visually inspect the the developer roller for signs of damage, such as cuts, nicks, dents, or fraying of the coating on the ends of the roller.

**Note:** If there are signs of damage, then discard the Developer Roller and replace it. If there are no signs of damage then continue with this procedure.

4. Place the developer roller in the fixture as shown in Figure 88.
5. Saturate a lint free cloth with 99% isopropyl alcohol.
6. Grasp the developer roller by the metal shaft at either end; then, starting from the center use the moistened lint free cloth, to gently wipe to and beyond the end of the developer roller.



7. Rotate the developer roller and repeat the wiping motion until the roller is clean of toner.
8. Grasp the opposite end of the developer roller and repeat steps 4 through 7 in the opposite direction.

**Note:** While cleaning the developer roller you may notice a ring of toner at the ends of the developer roller. To remove this ring of toner, use shorter strokes. Do not use a scrubbing motion or heavy pressure to remove this ring as this could damage the developer roller. Wipe in the direction from center to the end of the roller so as not to damage the coating on the ends of the roller.

9. Once all of the toner has been removed, and there is a uniform appearance to the surface of the developer roller. Use a lint free cloth dampened with deionized water to remove any cleaning residue (Figure 89).
10. Blow off any water left on the developer roller with ionized dry, filtered, compressed air.



## Appendix D

This section provides the information needed to clean the PCR. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

### PCR Cleaning

1. Using ionized dry, filtered, compressed air clean any loose toner from the PCR.
2. Place the PCR on the fixture (the fixture should be verified as clean prior to use. If not, clean using a combination of alcohol, lint-free cloth and compressed air, the fixture needs to be free of all contaminants including loose toner) as shown in Figure 90.

**Note:** The fixture is needed in order not to damage the PCR in the process of cleaning.

3. Use deionized water and a lint free cloth to remove any toner build-up left on the surface of the PCR. Start cleaning at the center of the PCR and clean out to each end of the PCR. Rotate the PCR to clean the entire diameter. See Figure 91.

**Note:** Care must be taken when wiping surface so as not to damage.

4. Remove the PCR from the fixture and wrap the PCR in a new lint-free cloth saturated with deionized water, then clean the PCR again using an up and down motion along the entire outer surface of the PCR. See Figure 92.

5. If necessary, repeat step 3 and 4 and reinspect the surface to ensure that it is completely clean and free of any toner build-up.

**Note:** If the toner build-up is not thoroughly cleaned you may see print defects.

6. Blow dry PCR using dry, filtered compressed air. After drying and cleaning the PCR should be black and uniform.

**Note:** If the PCR still has a grayish white deposits or color differential indicating contaminants, repeat the previous steps.

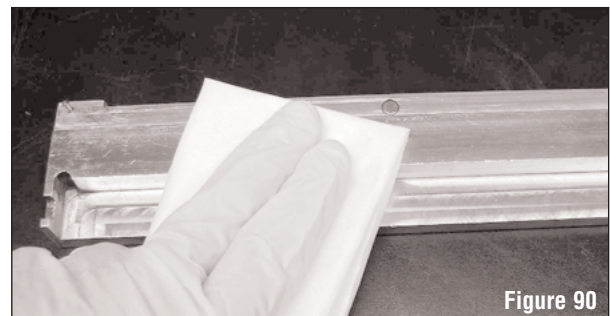


Figure 90

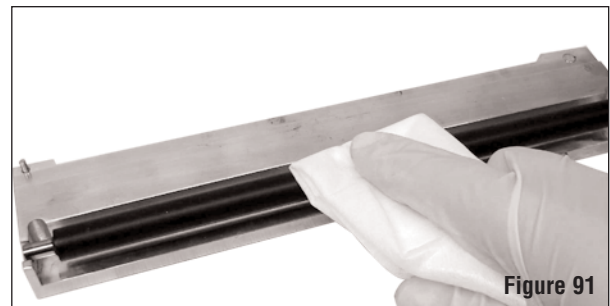


Figure 91

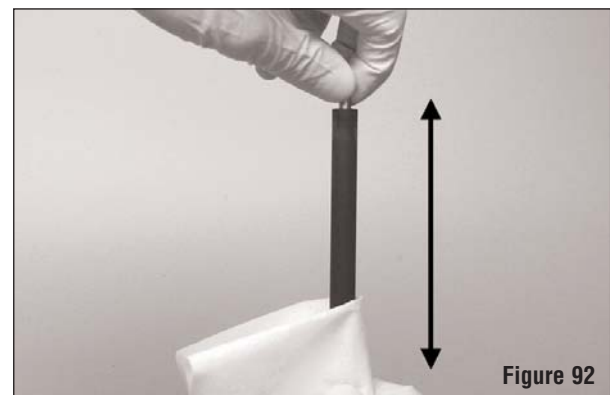


Figure 92





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