Static Control®

REMANUFACTURING INSTRUCTIONS

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Lexmark® X264/363/364/463/464/466 MFP
Dell® 2230/2330/2350/3330/3333/3335
Sindoricoh® MF2400/2405/3400/LP 4000
Source Technologies® ST9612/9620 MICR
Source Technologies® ST9622 MICR MFP
LG® LMP-3510/3515/4010
Lenovo® LJ3900
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SSS™ 1071

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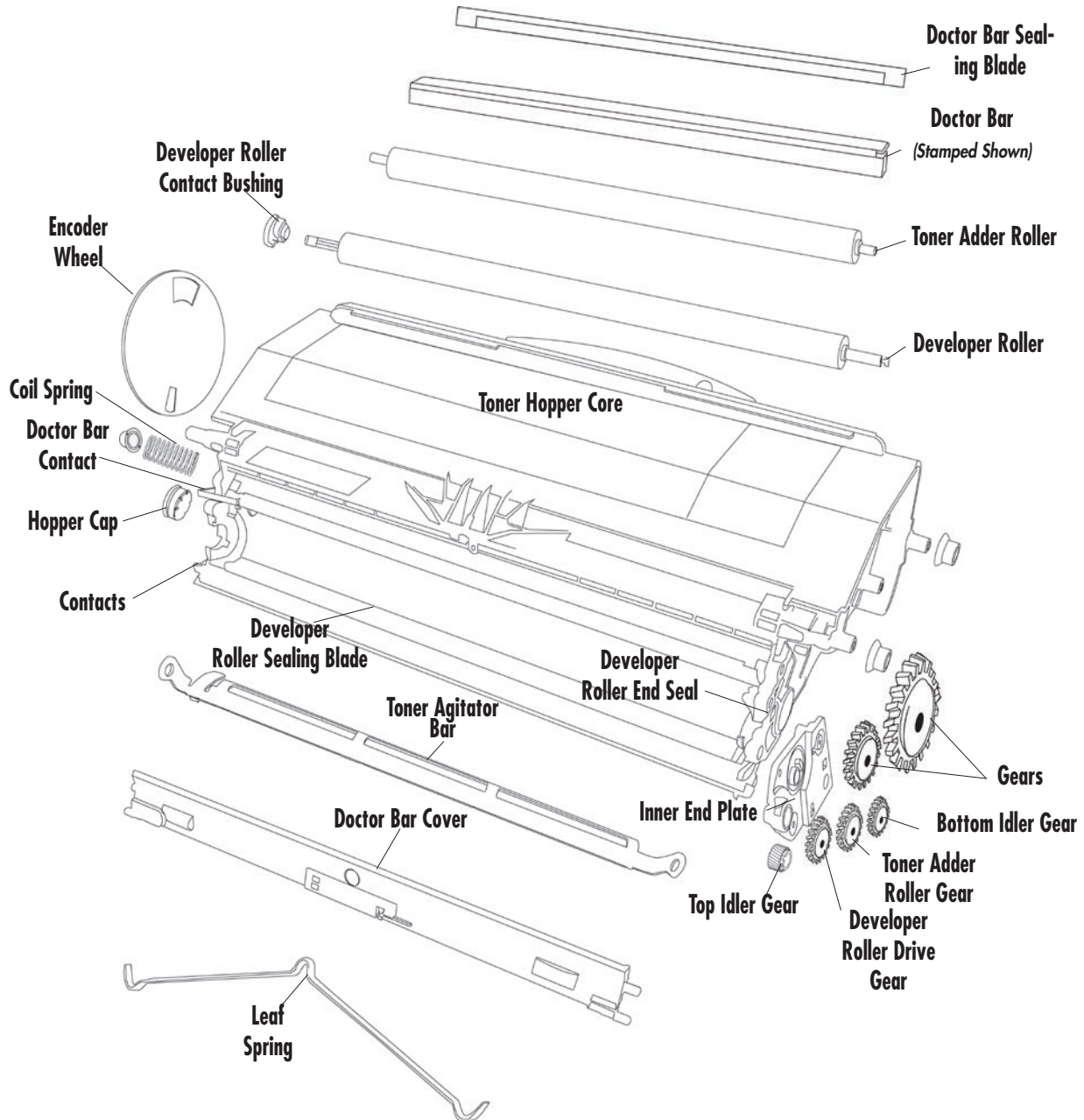
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V.1.6 - 03.13

- Small Phillips Screwdriver

- Slotted Screwdriver

- Needle Nose Pliers

- Dry, Filtered, Ionized, Compressed Air for Cleaning

- 91-99% Isopropyl Alcohol

- Cotton-Tipped Swab (QTIP)

- Lint-Free Swab (LFSWAB)

- Lint-Free Cleaning Cloth (LFCCLOTH)

- Cartridge Sealant (CSEALANT)

- Safety Glasses

- Powder-Free Gloves

Small Phillips Screwdriver

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Needle Nose Pliers

Dry, Filtered, Ionized, Compressed Air for Cleaning

91-99% Isopropyl Alcohol

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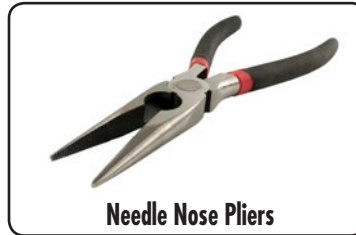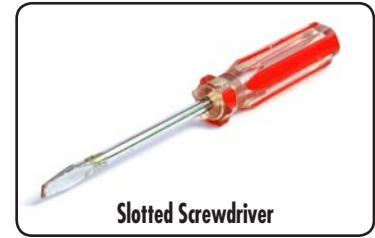
LEXMARK® E260/360/460 HOPPER ASSEMBLY

Contact Side   Drive Side
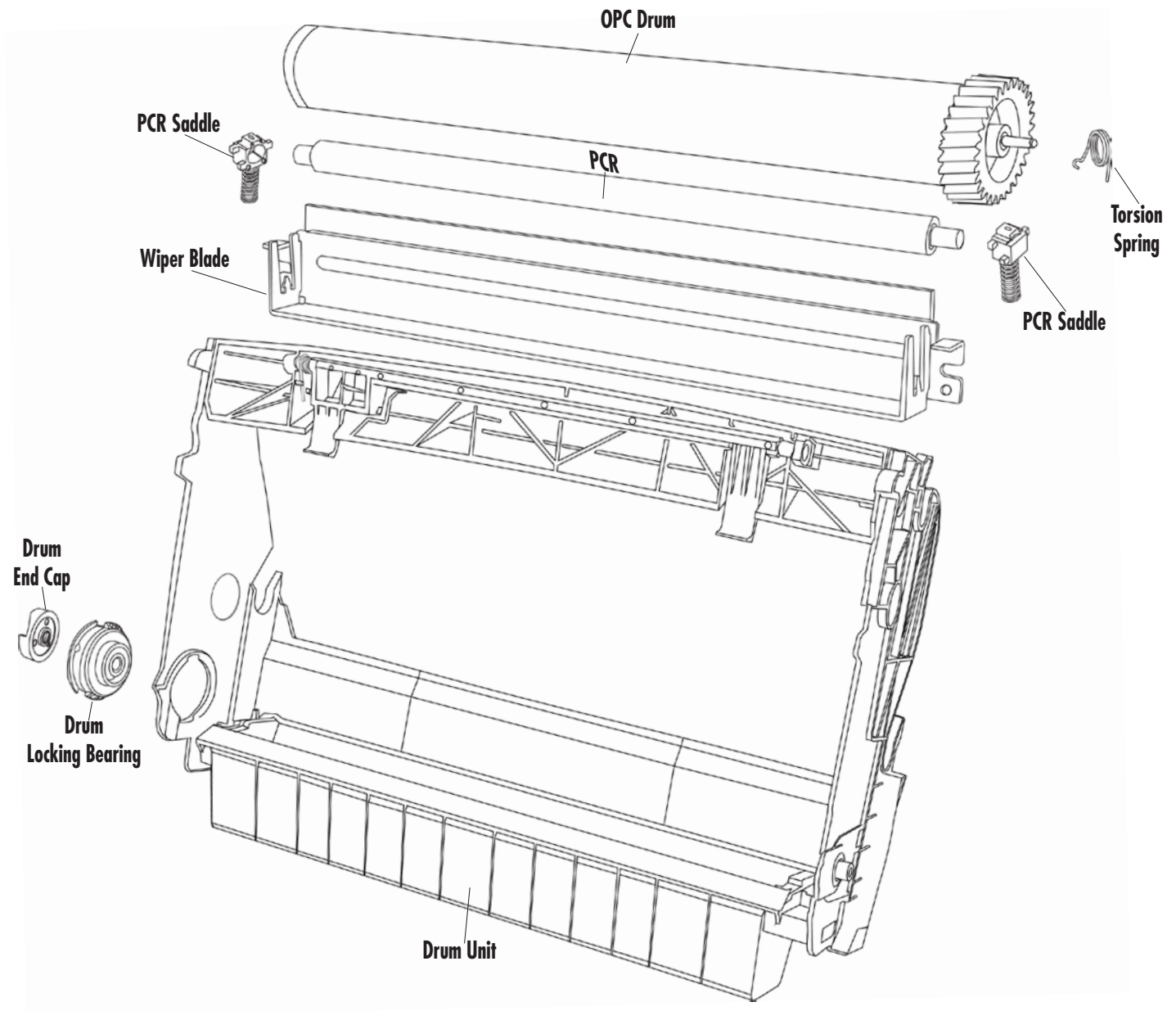
Doctor Bar Sealing Blade

Doctor Bar
(Stamped Shown)

Developer Roller Contact Bushing

Toner Adder Roller

Encoder Wheel

Developer Roller

Coil Spring

Toner Hopper Core

Doctor Bar Contact

Hopper Cap

Contacts

Developer Roller Sealing Blade

Developer Roller End Seal

Toner Agitator Bar

Gears

Doctor Bar Cover

Inner End Plate

Bottom Idler Gear

Top Idler Gear

Toner Adder Roller Gear

Developer Roller Drive Gear

Leaf Spring

Static Control®
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LEXMARK® E260/360/460 DRUM UNIT

Contact Side
  (Hub Side)

Drive Side

OPC Drum

PCR Saddle

PCR

Torsion
Spring

Wiper Blade

PCR Saddle

Drum
End Cap

Drum
Locking Bearing
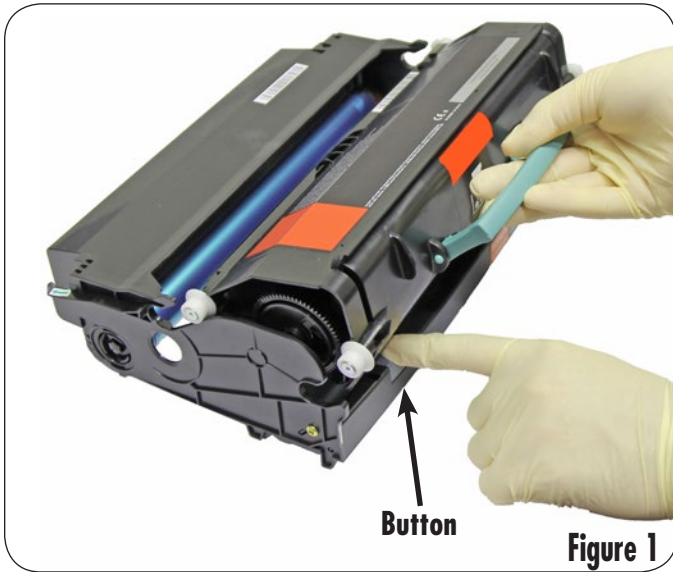
Drum Unit

For instructional purposes a E260A21E cartridge is shown. Use of powder-free latex gloves recommended. Please wear eye protection.

1. To release the toner hopper from the drum unit, press the release button located on the drum unit and pull the toner hopper away from the drum unit using the handle as shown in Figure 1.
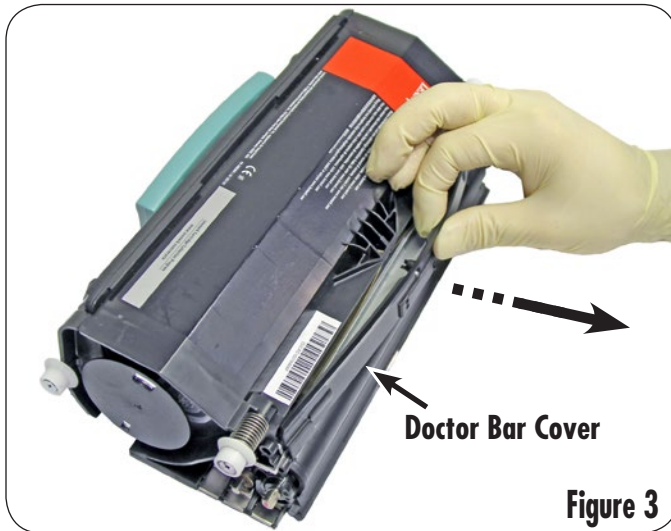

Button

Figure 1

1. Using a small Phillips screwdriver, remove the screw from the doctor bar cover as shown in Figure 2.


Screw
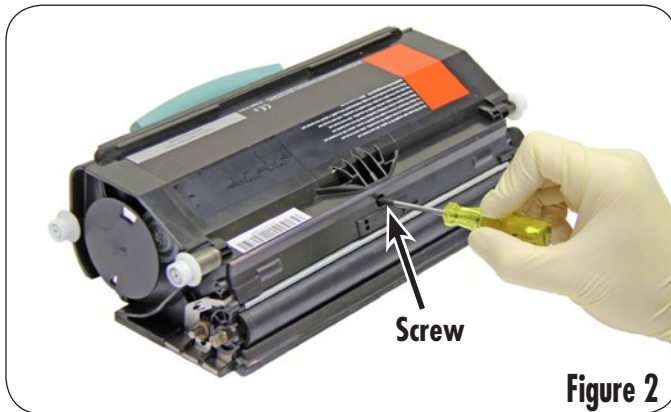
Figure 2

2. Remove the doctor bar cover by flexing the center of the cover away from the hopper so that the posts on both ends of the cover can be removed from the hopper as shown in Figure 3.

Doctor Bar Cover

Figure 3

3. While keeping the feet of the leaf spring in place, gently press down on the center of the spring to release from the spring seat as shown in Figures 4a and 4b.

Note: Be careful not to let the leaf spring snap into the developer roller. Also, be sure not to over bend the leaf spring when removing it. If leaf spring is damaged it will need to be replaced.

Press

Leaf Spring

Figure 4a

Leaf Spring
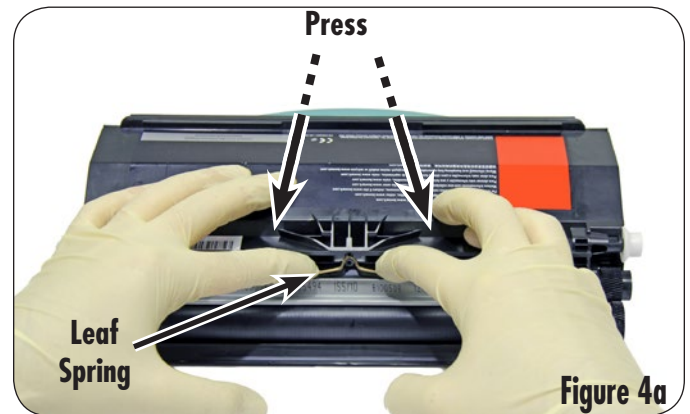
Figure 4b

4. Remove the doctor bar from the toner hopper as shown in Figure 5a. If reusing the doctor bar then clean using dry, filtered, ionized, compressed air and wipe the working surface from the center outward with a lint free cloth (Figure 5b).
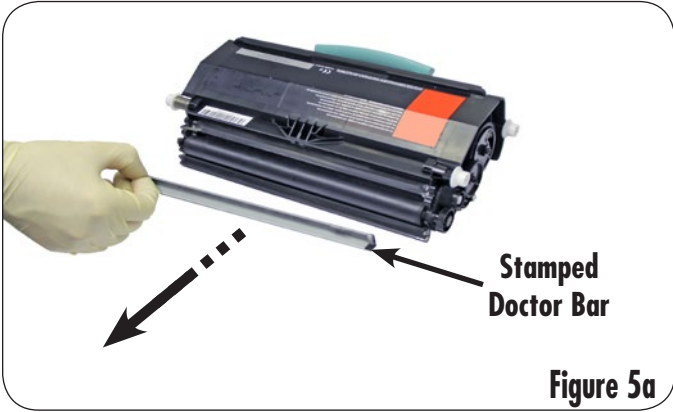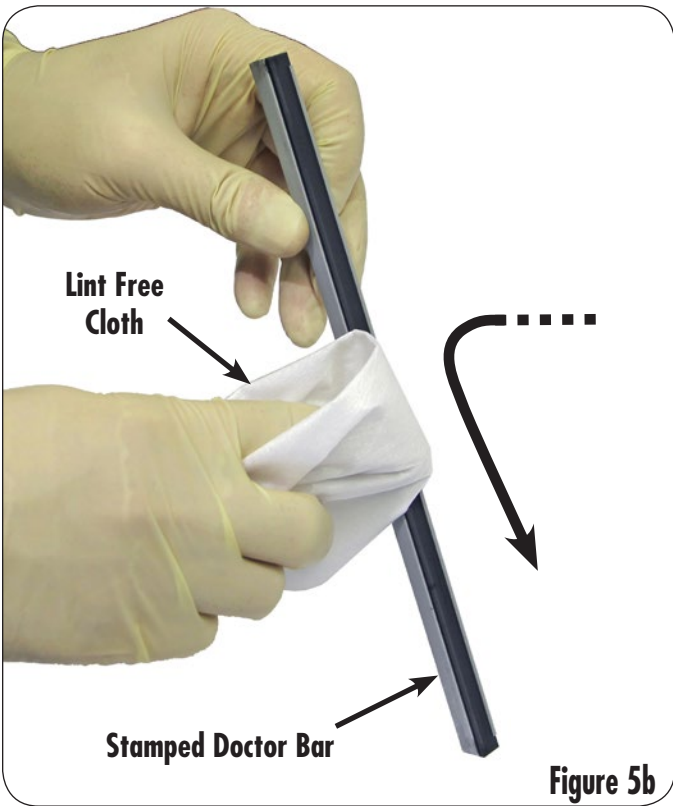

Stamped Doctor Bar

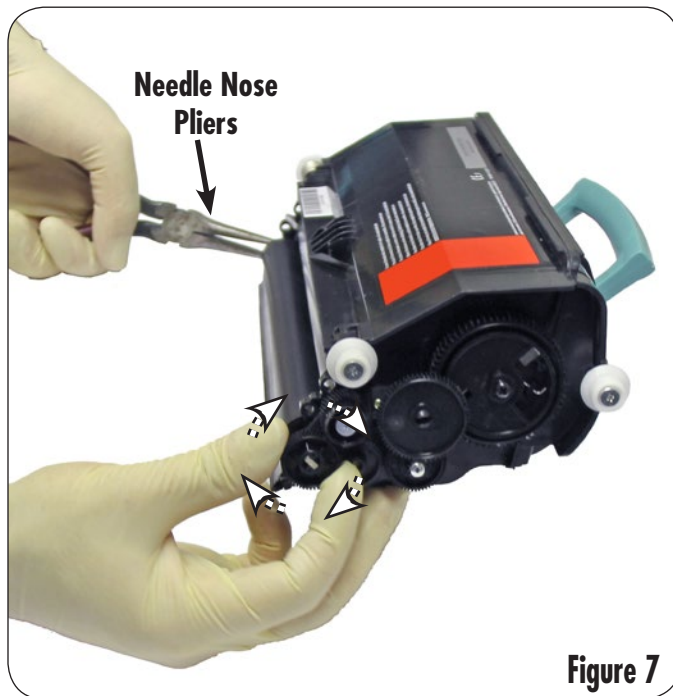**Figure 5a**

Lint Free Cloth

Stamped Doctor Bar

Figure 5b

Note: There are three different styles of doctor bars: solid steel (Figure 5c), solid steel with foam (Figure 5d), and stamped (Figure 5e). Mark the side of the bar that was facing outward for reference later if reusing the OEM solid steel doctor bar.


Solid Steel (no foam) Figure 5c

Solid Steel (with foam) Figure 5d

Stamped Figure 5e

5. Using needle nose pliers, grasp the developer roller shaft on the contact side to prevent the roller from spinning while removing the developer roller drive gear (Figure 6).


Shaft

Needle Nose Pliers
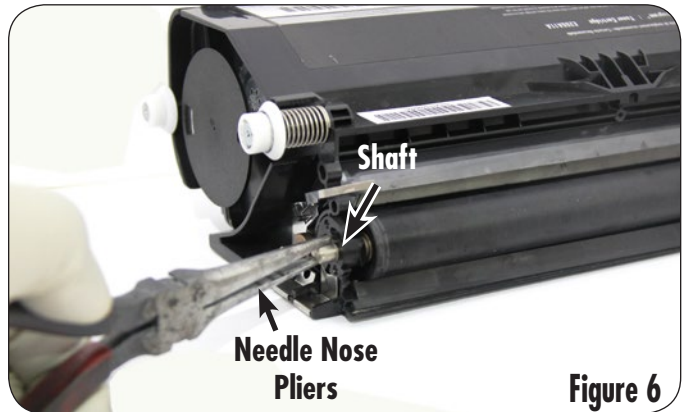
Figure 6

6. Rotate the developer roller drive gear clockwise by hand as shown in Figure 7 to unlock it from the shaft.


Needle Nose Pliers

Figure 7

7. Use a slotted screwdriver to gently pry the developer roller drive gear off the developer roller shaft (Figure 8).

Developer Roller Drive Gear

Slotted Screwdriver
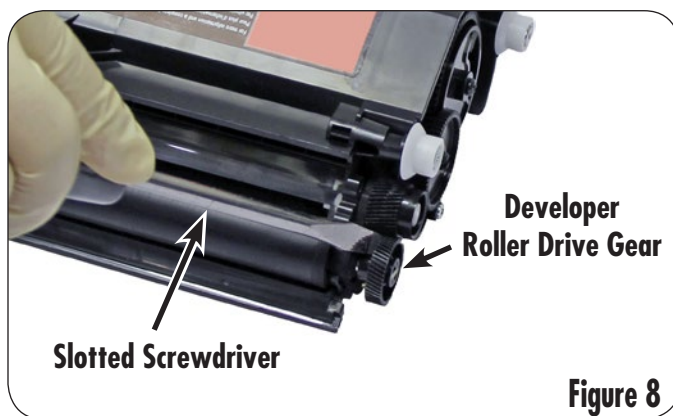
Figure 8

8. Use a slotted screwdriver to release the locking tab on the developer roller contact bushing as shown in Figure 9.

Locking Tab

Slotted Screwdriver
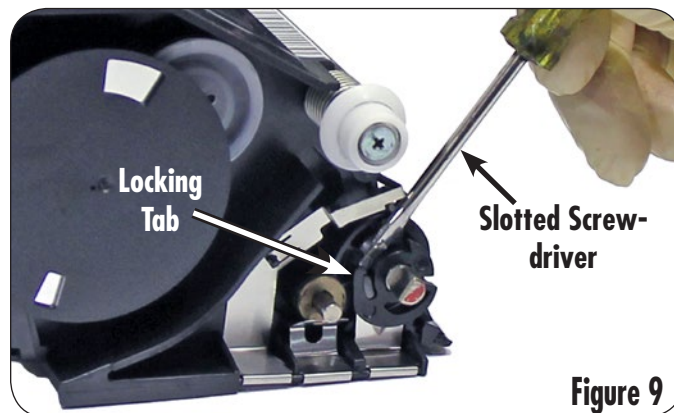
Figure 9

9. Using a slotted screwdriver, rotate the developer roller contact bushing counter clockwise as shown in Figure 10.

**Slotted Screwdriver**

Figure 10
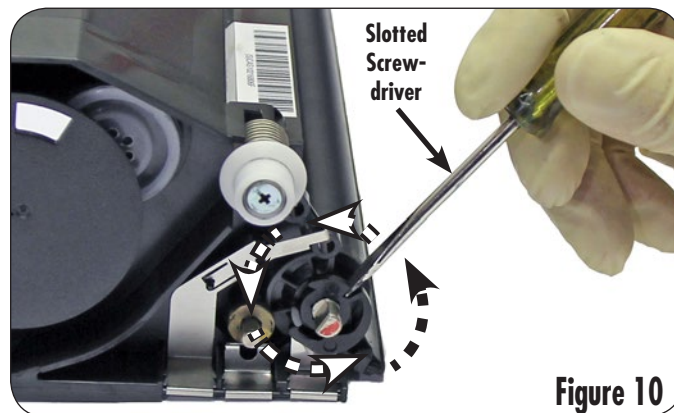
Note: Be careful not to damage or break the developer roller contact bushing.

10. To remove the developer roller, first remove the contact side of the developer roller from the hopper and then slide the drive side out of the toner hopper as shown in Figure 11.

Developer Roller

Figure 11

11. Remove the developer roller contact bushing from the developer roller end shaft as shown in Figure 12. Clean the bushing using a lint-free cloth.


Contact Bushing
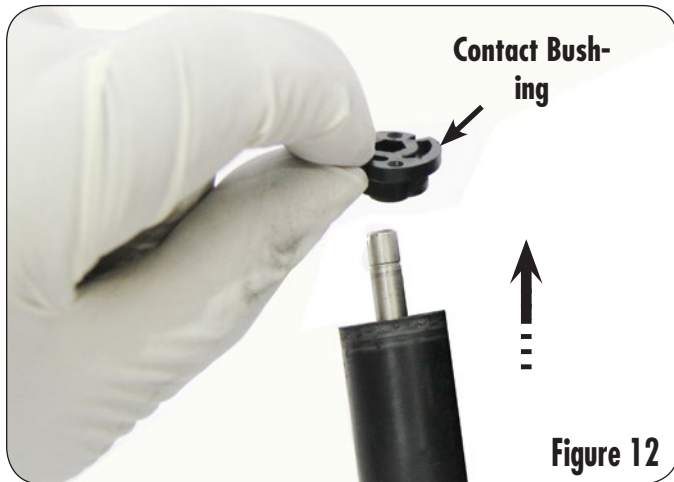
Figure 12

12. Clean the developer roller with dry, filtered, ionized, compressed air and wipe from the center outward using a lint free cloth (Figure 13).

Note: If needed, the roller can also be cleaned by first wiping with a lint-free cloth dampened with 91-99% isopropyl alcohol, then wiping with a lint-free cloth dampened with de-ionized water, then blown dry with dry, filtered, ionized, compressed air.

**Warning:** Do not touch the developer roller surface with your bare hands.

Lint Free Cloth

Developer Roller

Figure 13

13. Using a slotted screwdriver, gently pry the encoder wheel off by the base of the wheel as shown in Figure 14.

**Encoder Wheel**

Slotted Screwdriver
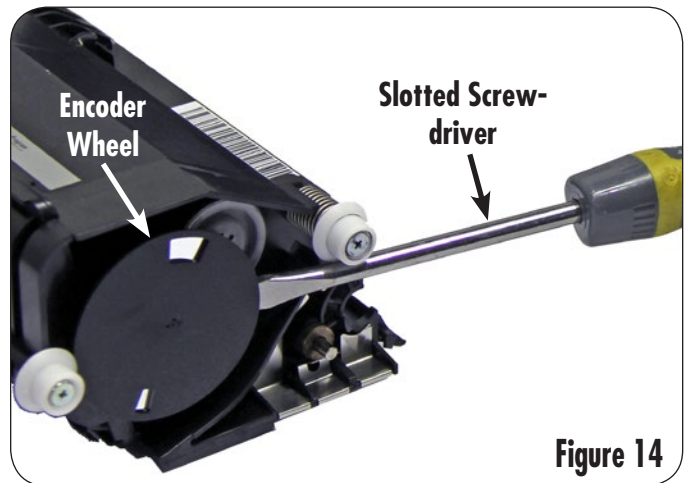
Figure 14

14. Using a slotted screwdriver, remove the hopper cap as shown in Figure 15.


Slotted Screwdriver

Hopper Cap
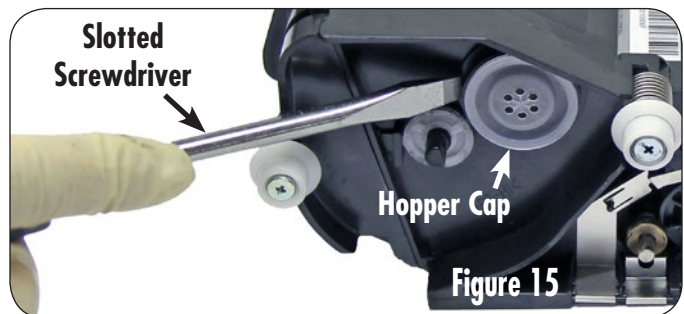
Figure 15

15. Dump any remaining toner from the toner hopper and clean using dry, filtered, ionized, compressed air as shown in Figure 16.

Compressed Air
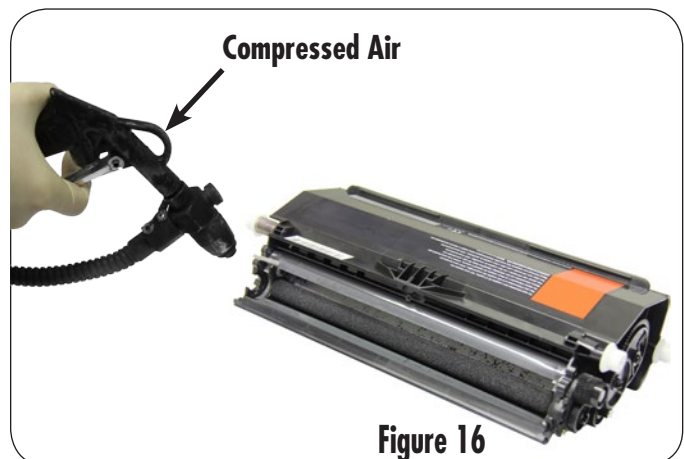
Figure 16

16. Thoroughly clean the toner adder roller noted in Figure 17. Blow the roller clean with dry, filtered, ionized, compressed air while rotating it using the gears.


Toner Adder Roller

Gears
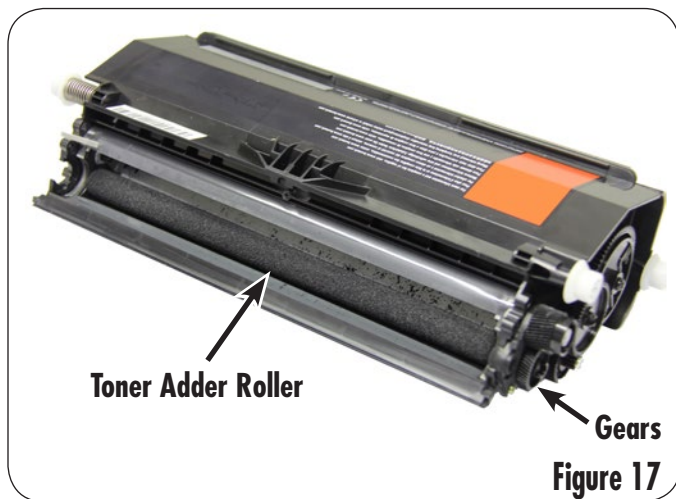
Figure 17

17. Inspect the developer roller and doctor bar sealing blades noted in Figure 18 for damage. Replace if necessary.


Sealing Blades
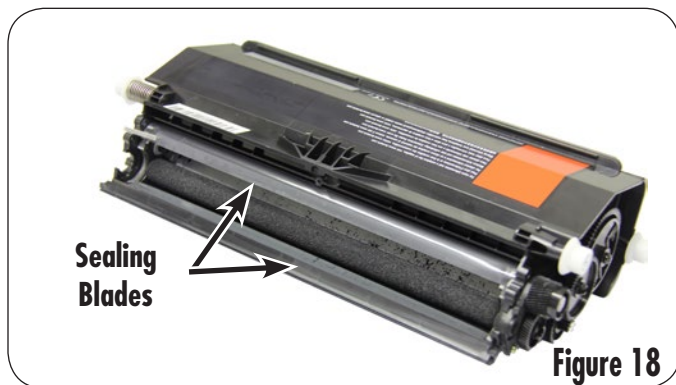
Figure 18

18. Clean toner from the developer roller end seals at each end of the toner hopper (noted in Figures 19a and 19b) using a lint-free foam tipped swab as shown in Figure 19c.

Note: It is important to completely clean the developer roller end seals or the cartridge may leak.

Developer Roller End Seal

Figure 19a

Developer Roller End Seal

Figure 19b

Seal

Swab

Figure 19c
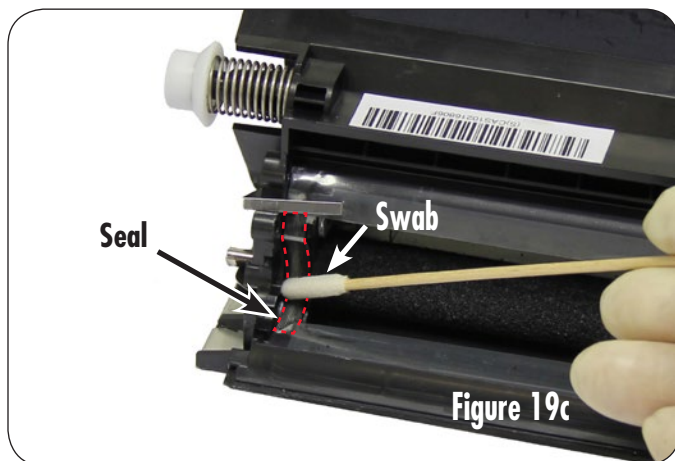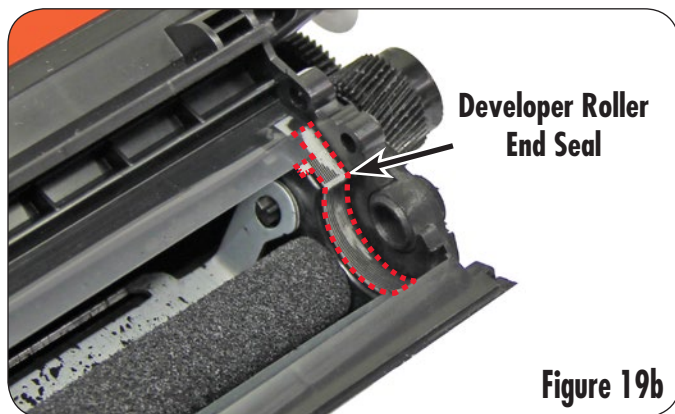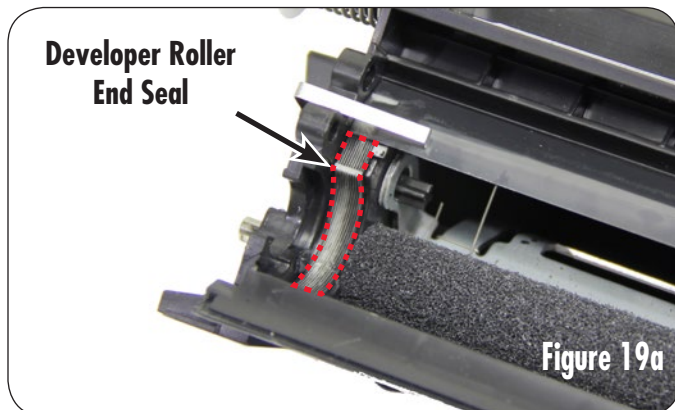
19. Using a lint-free or cotton tipped swab dampened with 91-99% isopropyl alcohol, clean the toner hopper contacts as shown in Figure 20.



Swab

Contacts
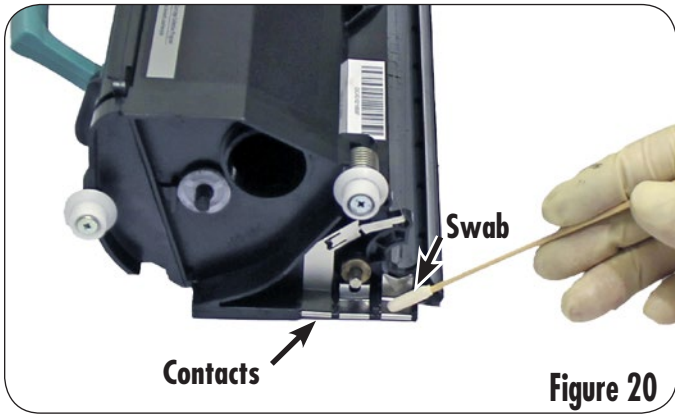
Figure 20

1. Using a lint-free foam tipped swab, apply a thin coat of cartridge sealant to the left and right developer roller end seals (Figures 21a and 21b) and the seal walls as shown in Figure 21c.

Note: Too much sealant will cause print defects and premature cartridge failure, too little will allow toner to leak.
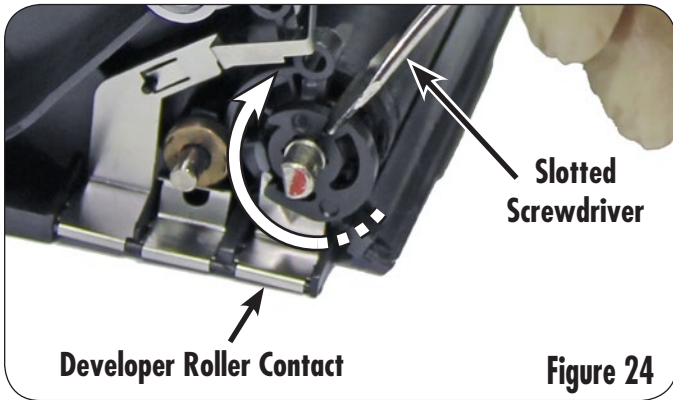

Developer Roller End Seal

Figure 21a

Developer Roller End Seal

Figure 21b

Seal Wall
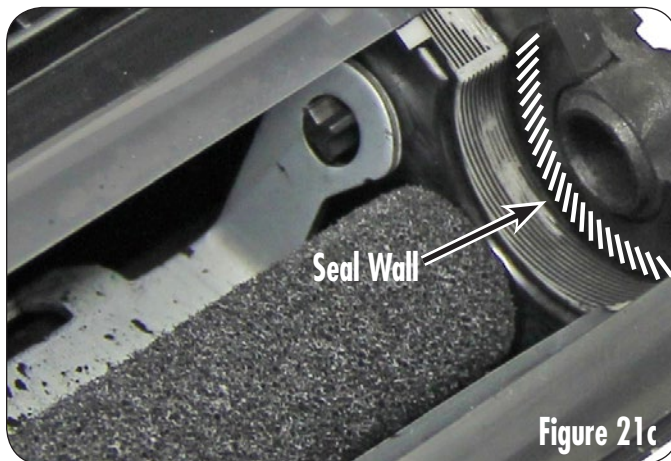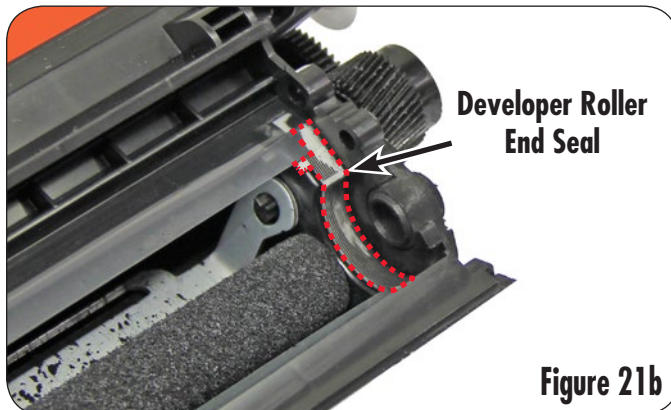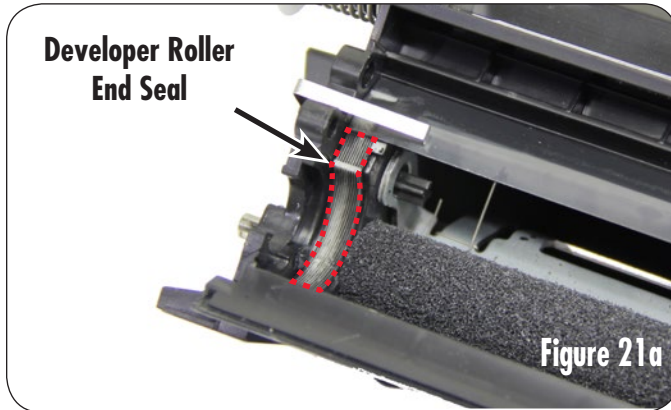
Figure 21c

2. Slide the developer roller contact bushing onto the developer roller end shaft as shown in Figure 22.

**Contact Bushing**
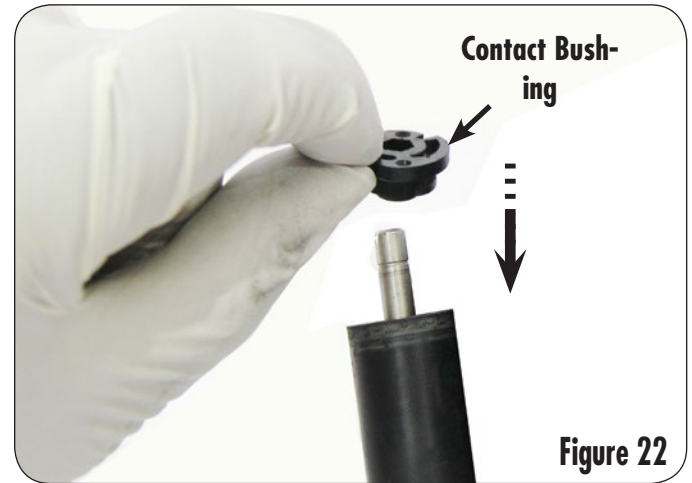
Figure 22

3. Insert the "T" shaped end of the developer roller shaft (Figure 23a) into the drive side of the toner hopper, then place the contact side of the developer roller shaft and contact bushing into the contact side of the toner hopper as shown in Figure 23b.

"T" End of Developer Roller

Figure 23a

"T" End of the Developer Roller
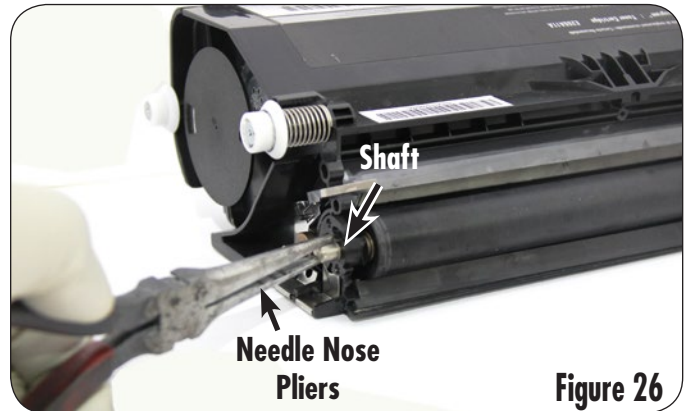
Developer Roller
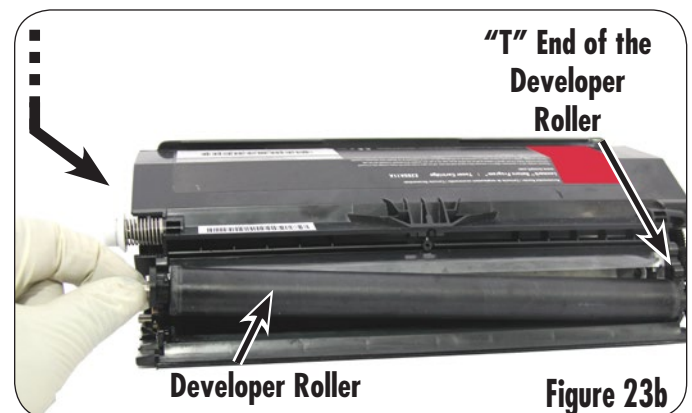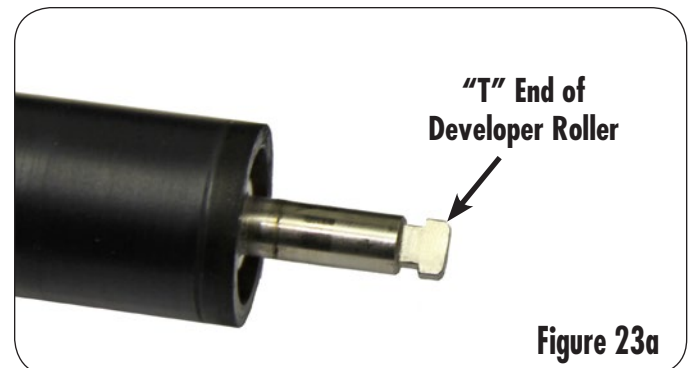
Figure 23b

4. Rotate developer roller contact bushing clockwise to lock in place (a slotted screwdriver may be needed as shown in Figure 24). Ensure that the developer roller bushing is making good contact with the developer roller contact on the toner hopper.

Slotted Screwdriver

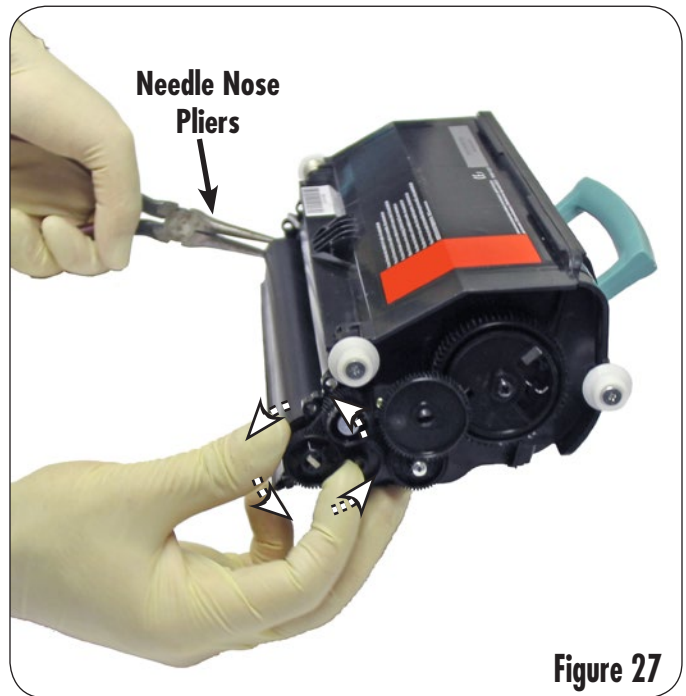**Developer Roller Contact**

Figure 24

5. Slide the developer roller drive gear onto the drive side of the developer roller shaft as shown in Figure 25. Be sure the gear is completely seated on the shaft. The gear may need to be rotated to be completely seated.


Developer Roller Drive Gear
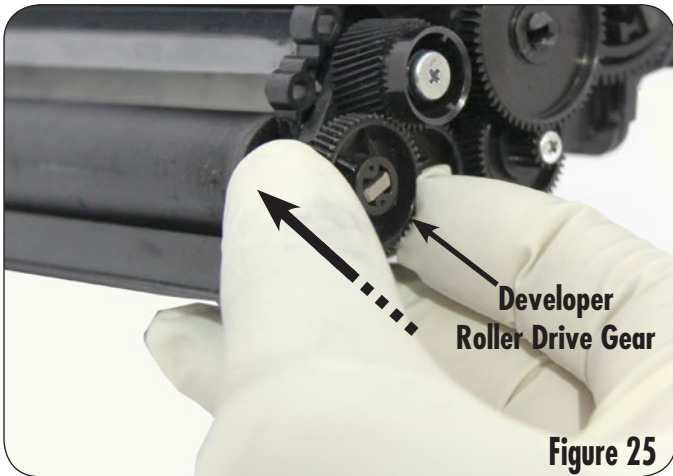
Figure 25

6. Using needle nose pliers, grasp the developer roller shaft on the contact side to prevent the roller from spinning (Figure 26).


Shaft

Needle Nose Pliers

Figure 26

7. Rotate the developer roller drive gear counter clockwise by hand until it is locked on the developer roller shaft as shown in Figure 27.


Needle Nose Pliers

Figure 27

8.   Install the doctor bar into the toner hopper as shown in Figure 28a. Make sure the working edge (dull finish or black material) is facing the developer roller. See Figures 28b, 28c, and 28d for clarification.


Stamped Doctor Bar   **Figure 28a**
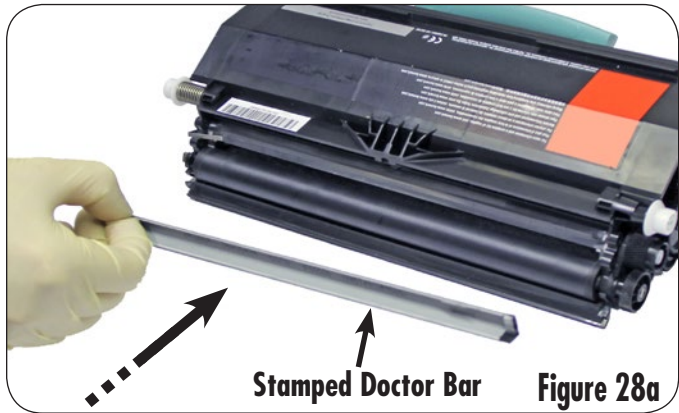
Note: If reusing the OEM solid steel doctor bar without the foam (Figure 28b) on the back, make sure the side marked earlier is now facing inward and move the adhesive pads to the other side of the bar. Flipping the bar provides a new working surface for the cartridge. The OEM "stamped" doctor bar (Figure 28c) and the solid steel doctor bar with the foam on the back (Figure 28d) cannot be rotated.

Solid Steel (no foam) Figure 28b

Solid Steel (with foam) Figure 28c

Stamped Figure 28d
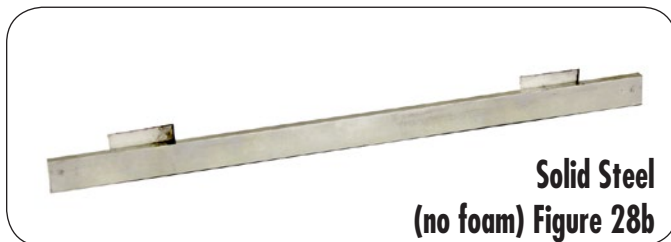
9.   Confirm the doctor bar contacts are touching the doctor bar (Figure 29).

Confirm Contact
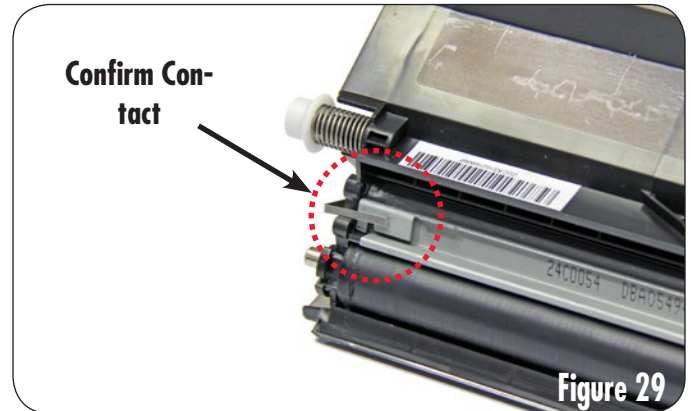
Figure 29

10.   Before installing the leaf spring, orient the spring so the "V" on the spring is pointing toward you and the number is upright as shown in Figures 30a and 30b.

Fig. 30b
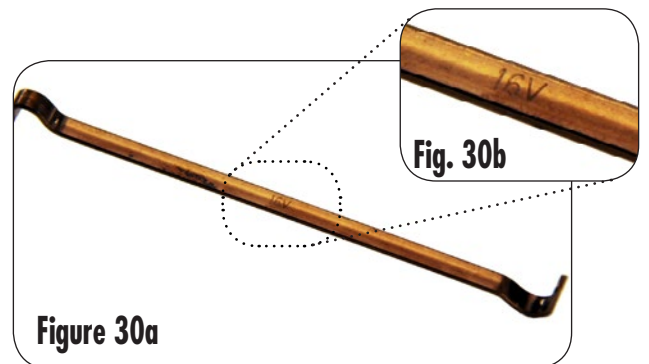
Figure 30a

11.   While holding each of the leaf spring feet, insert the center bend into the seat on the toner hopper as shown in Figure 31a. Using minimal pressure, push up on the leaf spring feet until they can be positioned on the top of the doctor bar as shown in Figure 31b.
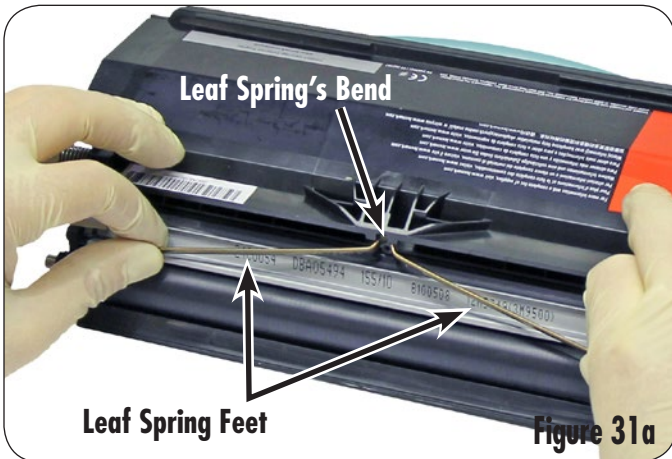
Leaf Spring's Bend

Leaf Spring Feet
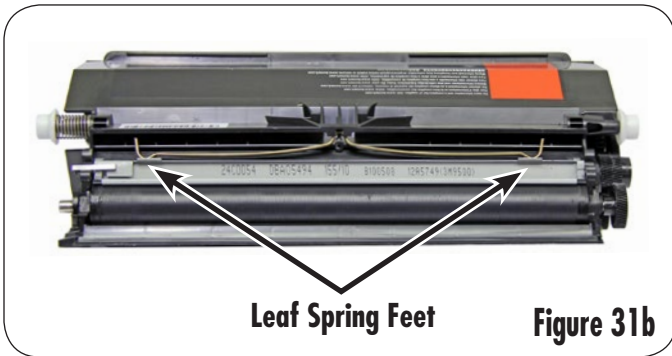
Figure 31a

Leaf Spring Feet

Figure 31b

12. Install the doctor bar cover by first inserting the posts on the contact side of the cover into the toner hopper (Figure 32a) and then flexing the cover so that the posts can be inserted into the toner hopper on the drive side as shown in Figure 32b.
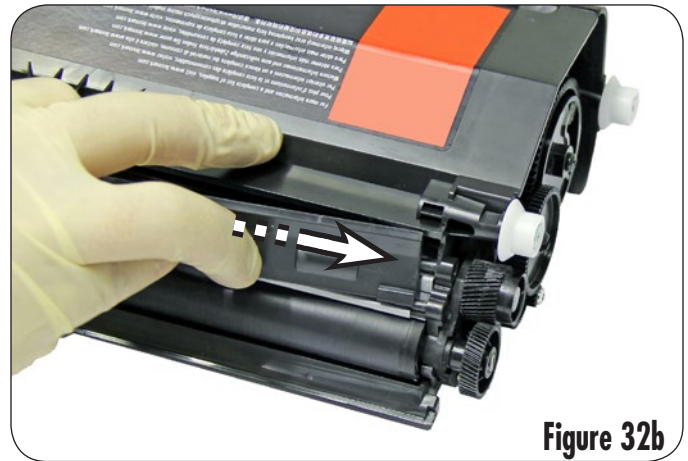

Figure 32a

Figure 32b

13. Install the screw into the doctor bar cover as shown in Figure 33.
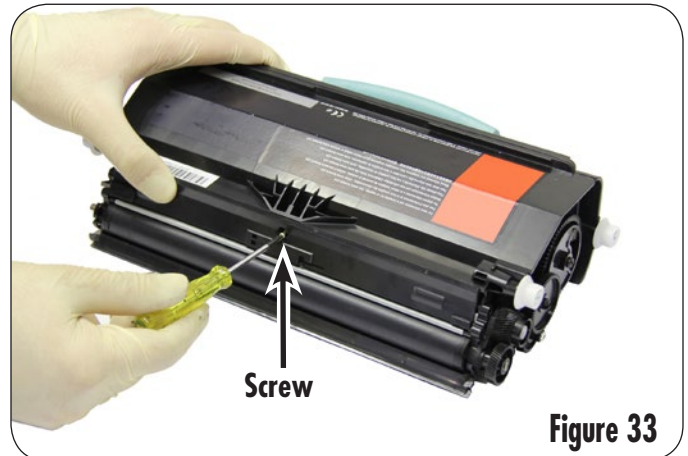

Screw

Figure 33

14. Rotate the developer roller drive gear counter clockwise 2-3 rotations to smooth out the cartridge sealant added earlier and create a complete seal (Figure 34).

Note: Cartridge sealant should be present on each end of the

developer roller, but out of the paper path after this step. If no thin coating of sealant is present, leaking may occur.
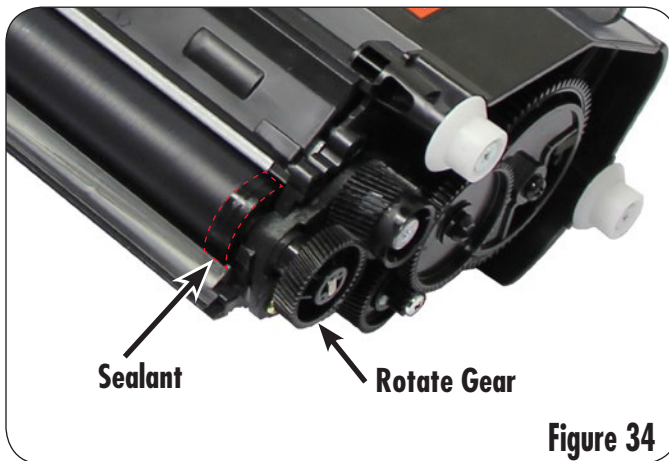

Sealant   **Rotate Gear**

Figure 34

15. Fill the toner hopper with approved toner as shown in Figure 35.

Note: Overfilling the toner hopper can cause a premature "Toner Low" indication and/or cartridge failure.
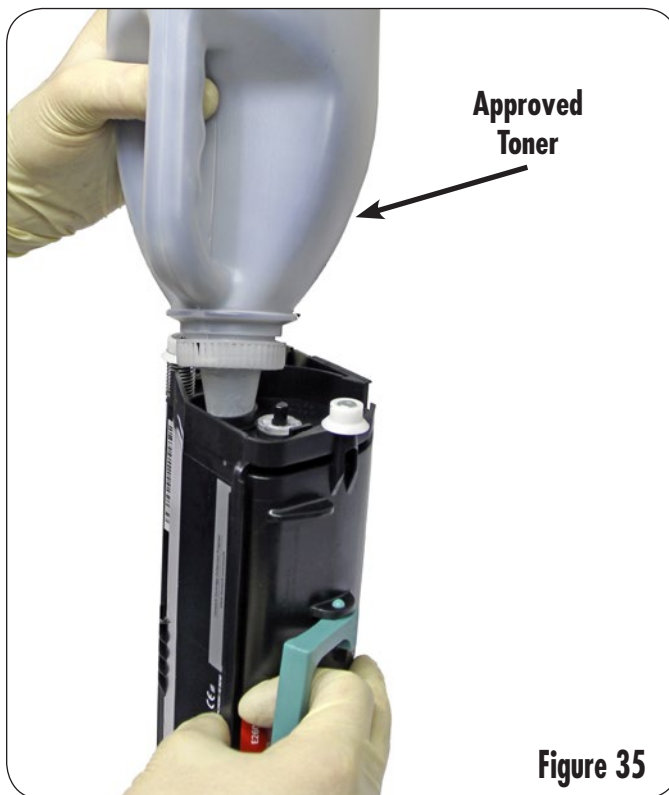

Approved Toner

Figure 35

16. Install the hopper cap as shown in Figure 36.

Figure 36

17. To install the encoder wheel, align the key of the axle with the key in the base of the wheel and push the encoder wheel onto the toner agitator paddle axle. Press on the center of the wheel to ensure the wheel is completely seated (Figure 37).
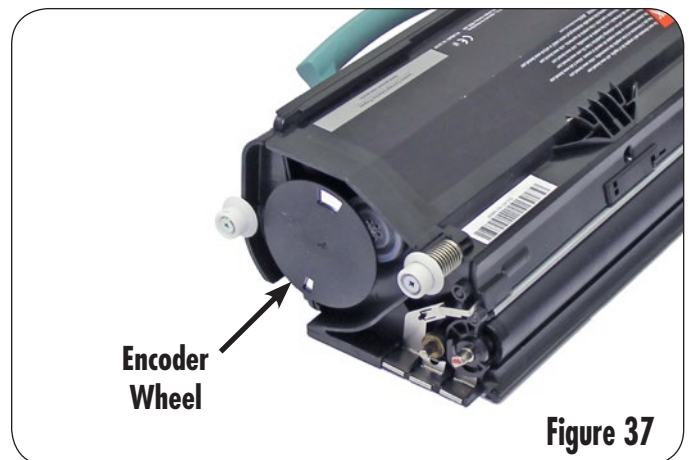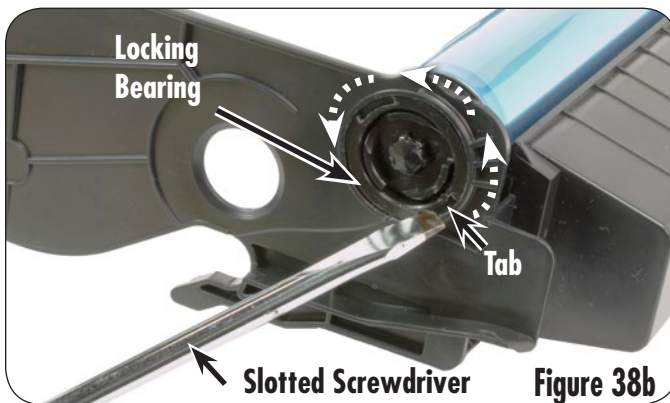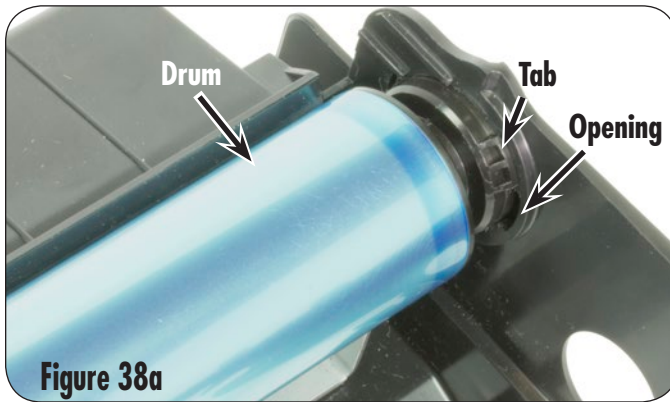

Encoder Wheel

Figure 37

**Note:** Refer to SSS™ 1136 for chip installation instructions.
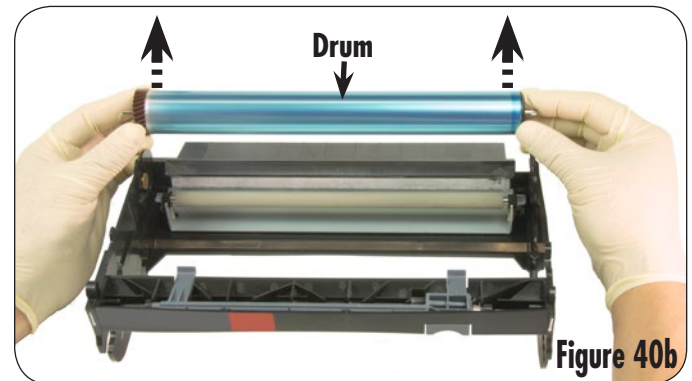
Disassembling the Drum Unit

1. Notice the tab on the drum locking bearing and the openings on the drum unit (Figure 38a). Rotate the drum locking bearing counterclockwise until the tabs on the bearing line up with the openings on the drum unit as shown in Figure 38b.

Figure 38a

Figure 38b

2. Using a slotted screwdriver, pry between the drum hub and the drum locking bearing until the drum end cap and locking bearing slide off the drum shaft (Figure 39).
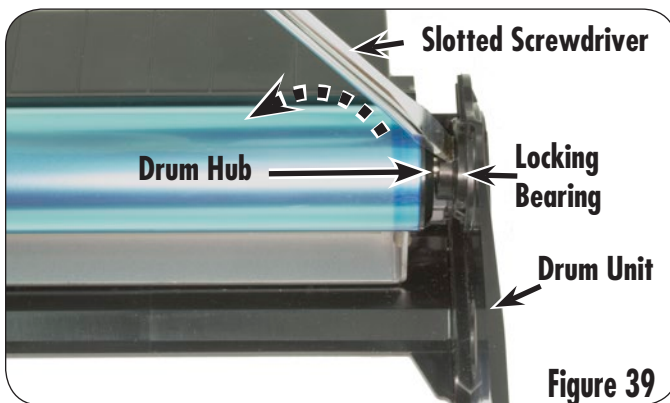
Figure 39

3. Remove the drum from the drum unit by lifting upwards on the hub end of the drum and sliding the gear side from the drum unit as shown in Figures 40a and 40b.

Figure 40a

Figure 40b

4. Remove the torsion spring from the drum gear by rotating the spring arm clockwise while pulling it from the gear (Figure 41).
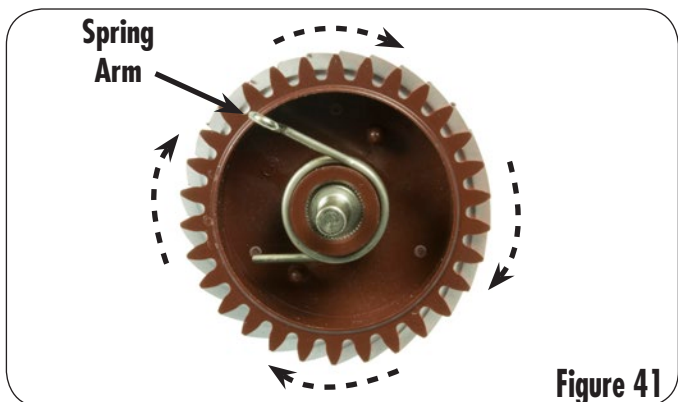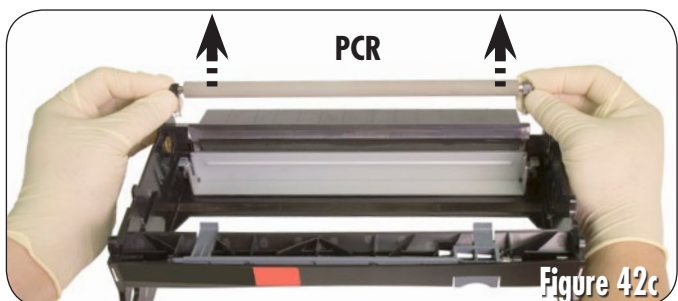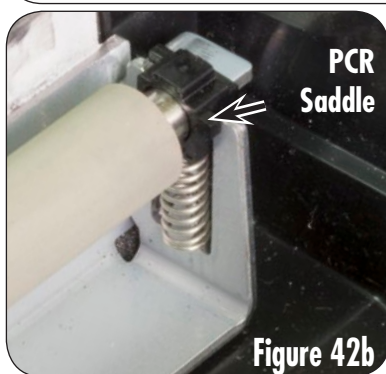

Spring Arm

Figure 41

5. To remove the wiper blade, lift the PCR and PCR saddles from the blade as shown in Figures 42a, 42b and 42c.

PCR Saddles

PCR

Figure 42a

PCR Saddle

Figure 42b

PCR

Figure 42c
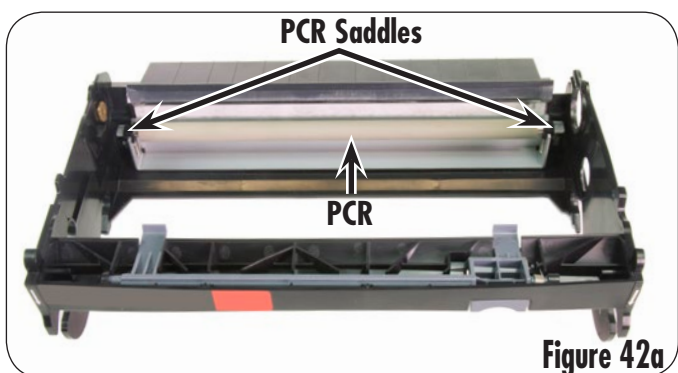
6. Using a Phillips screwdriver, remove the two screws holding the wiper blade and then lift the wiper blade from the drum unit (Figures 43a, 43b and 43c).

Figure 43a

Figure 43b
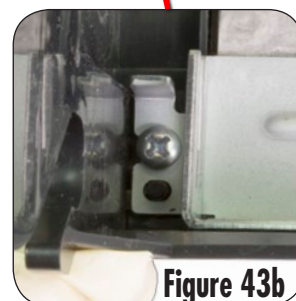
Figure 43c

7. Dump the waste toner from the drum unit and use dry, filtered, ionized, compressed air to clean the drum unit (Figure 44).

Drum Unit

Air Gun
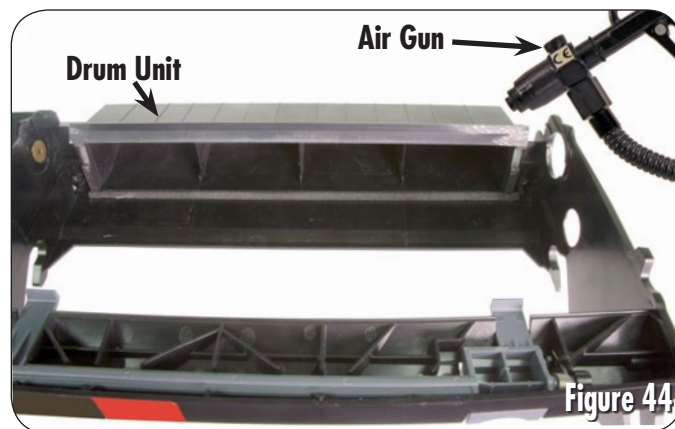
Figure 44

8. Inspect the wiper blade end foams, wiper blade sealing foam and recovery blade for damage (Figure 45).

Recovery Blade

Wiper Blade End Foam

Wiper Blade Sealing Foam

Figure 45

1. Lubricate the wiper blade. Dip the edge of the wiper blade in a long, shallow trough containing toner qualified for use in the cartridge being remanufactured. Repeat once to ensure even coverage. Tap metal end to remove any excess toner (Figure 46).

Wiper Blade

Toner

Figure 46

2. Set the wiper blade into the drum unit. Using a Phillips screwdriver, secure the two screws (Figures 47a, 47b and 47c).

Figure 47a

Figure 47b

Figure 47c
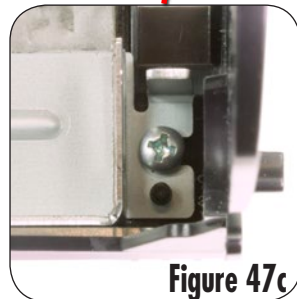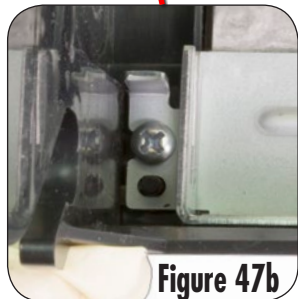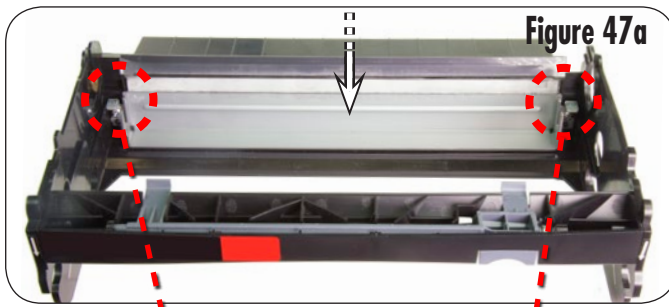
3. Install the PCR saddles onto the PCR and place into the wiper blades as shown in Figures 48a, 48b and 48c).
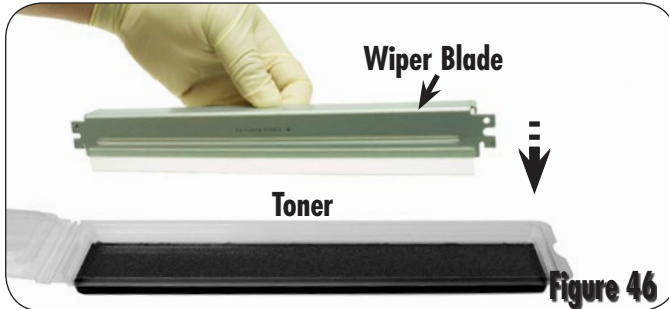

PCR

Figure 48a

PCR Saddle

Figure 48b

PCR Saddles

PCR

Figure 48c
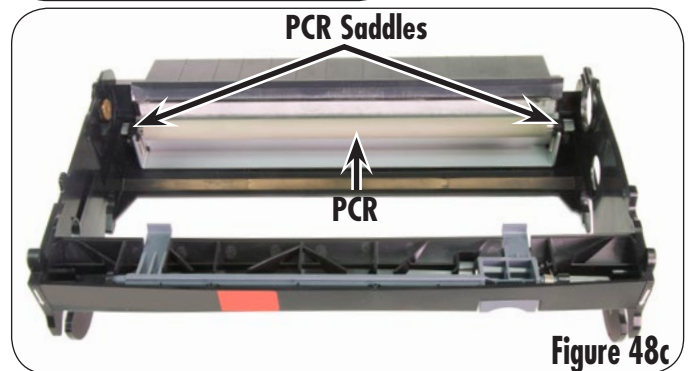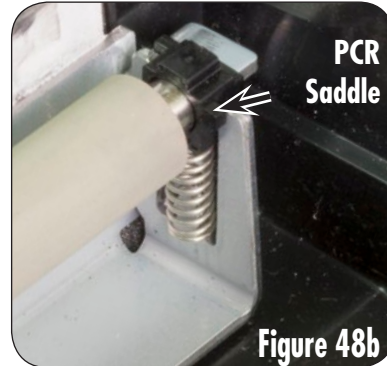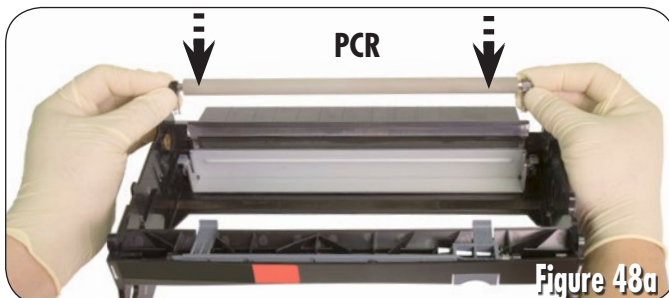
4. Install the torsion spring on the new Static Control drum by carefully twisting clockwise and pushing onto the hub of the drum gear as shown in Figures 49a and 49b.

Torsion Spring

Figure 49a

Spring Arm

Figure 49b
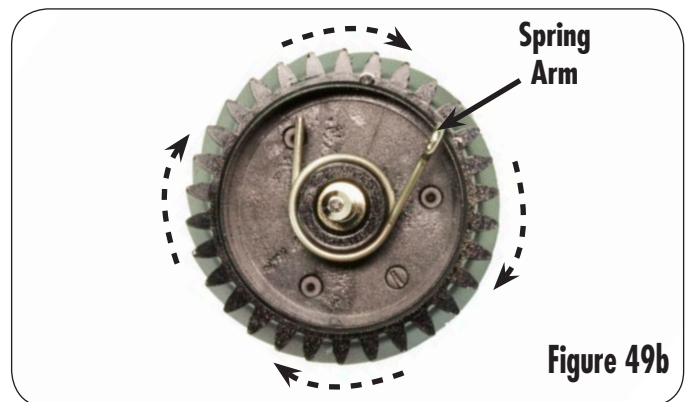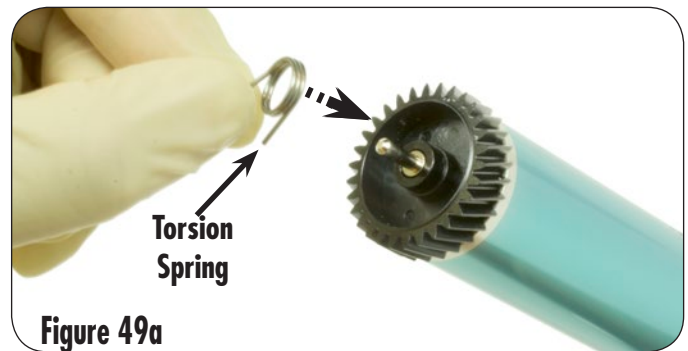
5. Place the drum into the drum unit, installing the gear end of the drum first (Figure 50a). Ensure the spring arm of the torsion spring is seated in the alignment hole of the drum unit (Figure 50b).

Figure 50a

Torsion Spring Arm
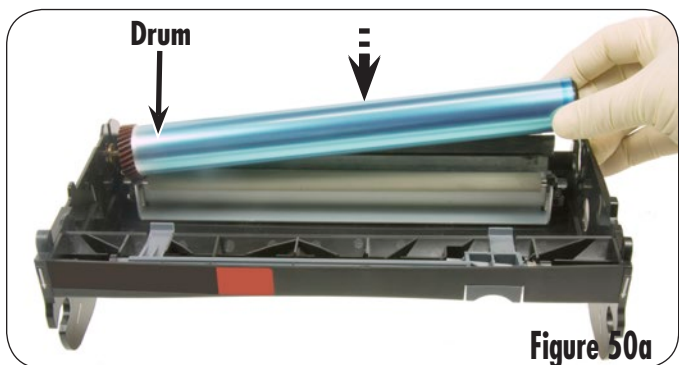
Figure 50b

6. Align the tabs on the locking bearing with the opening in the waste bin and place the locking bearing onto the hub side of the drum (Figure 51a). Using a slotted screwdriver, rotate the locking bearing clockwise until it is locked into place on the drum unit (Figure 51b).

Locking Bearing

Figure 51a

Locking Bearing
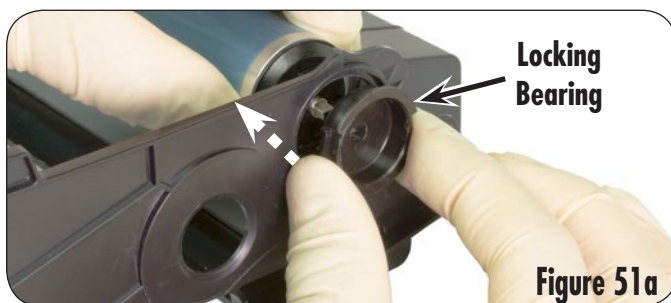
Figure 51b

7. Press the drum end cap that is included with the Static Control drum on the end of the drum shaft as shown in Figure 52.

End Cap

Figure 52

Note: The OEM drum end cap is not needed for installation of the drum. New Static Control drum includes an end cap.

8. Without touching the drum's coated surface, place fingers on the gear and hub side of the drum and rotate at least three full rotations to lubricate the drum (Figure 53).

Note: Be careful not to nick or damage the drum at all while rotating it.

Figure 53

1. To combine the toner hopper with the drum unit, align the white bosses as shown in Figure 54 and slide the toner hopper into the drum unit. The button on the drum unit may need to be pressed to engage the locking tabs.

Button

Bosses

Figure 54
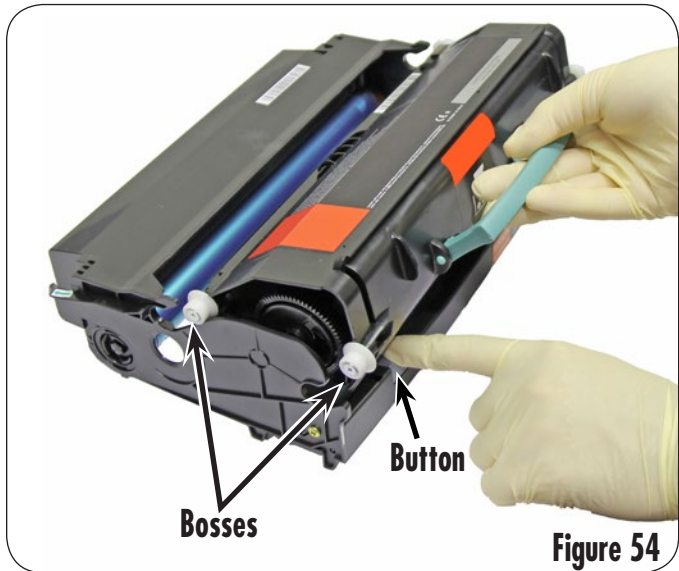
Printer OPC Drum Reset

For the: Lexmark® E260/360/460/462/
Lexmark® X264/363/364/463/464/466
Dell® 2230/2330/2350/3330/3333/3335
IBM® 1811/1812/1822/1823
IBM® InfoPrint 1930/1940 MFP

1. With the power on, open Front Cover and place the toner and drum assembly into the printer. Do not close the front door.

2. Press and hold the (✕) button for five seconds until all lights flash in sequence to reset the printer.

3. For other models, press and hold the (✕) button, RESETTING PC COUNTER appears on the display. The power blinks.

4. Close the front door.

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.

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.

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 Information

- Always wear eye protection while operating power tools.

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

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

- Employers should not allow employees to use compressed air for cleaning themselves or their clothing. The eyes and other body parts, such as the respiratory system, may be damaged as the result of inadequate personal protective equipment, lack of chip guards, and/or uncontrolled release of compressed air.

DEDICATION TO TRAINING

In order to produce consistent high quality prints that are virtually indistinguishable from the OEM, it is essential to follow Static Control's remanufacturing instructions exactly as directed. Static Control is dedicated to informing customers of the latest innovations in training and knowledge. Access to these instructions, our technical support staff and View on Demand Webinars is available to all customers in good standing.

ELECTROPHOTOGRAPHICALLY MATCHED COMPONENTS

We provide these critical components that have been electrophotographically matched for use in remanufactured toner cartridges. It is vital that the critical components be replaced as a system to ensure consistent high quality performance. We provide additional components such as felts, foams and recovery blades, should you decide they are necessary. Using Static Control's system of components allows you to use less expensive non-virgin cartridges and create remanufactured cartridges that provide high quality prints virtually indistinguishable from the OEM.

INDUSTRY LEADER

Static Control is the global leader in aftermarket imaging and remanufacturing technology. Offices are located worldwide and all research, development, manufacturing and engineering takes place at their Sanford, North Carolina, USA world headquarters. Currently, Static Control manufactures in-house over 10,000 imaging products and supplies over 14,000 imaging products to the aftermarket industry.

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