Static Control

www.scc-inc.com

REMANUFACTURING INSTRUCTIONS

Brother*® *HL-2230/2250
2220/2280/2130/2132/2240/2270

Brother*® *TN-420/450 & DR-420, TN-2220 & DR-2200,
TN-2250 & DR-2225, TN-2280 & DR-2225
and TN-27J & DR-22J

SSS™ 1138

V.1.16 - 06-14

- Phillips Screwdriver

- Slotted Screwdriver

- Dry, Filtered, Compressed Air for Cleaning

- 91-99% Isopropyl Alcohol

- Conductive Cartridge Lubricant (CONCLUBE)

- Lint-Free Cleaning Cloth (LFCCLOTH)

- Needle Nose Pliers

- Small Slotted Screwdriver

Phillips Screwdriver

Conductive Cartridge Lubricant (CONCLUBE)

Slotted Screwdriver

91-99% Isopropyl Alcohol

Dry, Filtered, Compressed Air for Cleaning

Lint-free Cleaning Cloth (LFCCLOTH)

Needle Nose Pliers

Small Slotted Screwdriver
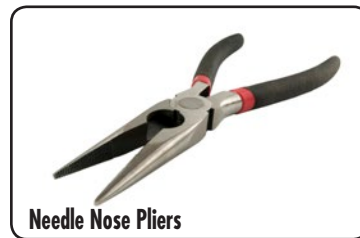
- Lint-Free Foam Tipped Swab (LFSWAB)

- Vacuum (TONERVAC115) US Version or Toner Vacuum 220V (TONERVAC220)

- Toner Pour Spout (TPS)

- De-Ionized Water

- Powder-Free Gloves

- Safety Glasses

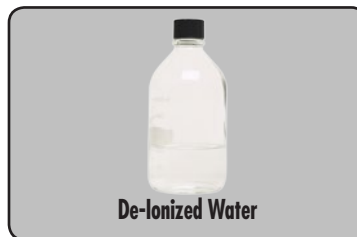- Toner Cloth (TCLOTH)

Toner Pour Spout (TPS)

Safety Glasses

Lint-free Foam Tipped Swab (LFSWAB)

Vacuum (TONERVAC220)

De-Ionized Water

Powder-Free Gloves

Toner Cloth (TCLOTH)

Brother HL-2220/2230/2240/2240D/2270DW/2280DW

	Cartridge Name	SKU	Page Yield
NA / LA	Cartridge	TN-420	1200
		TN-450	2600
	Drum Unit	DR-420	12000

Brother HL-2130/2132/2240/2240D/2250DN/2270DW

	Cartridge Name	SKU	Page Yield
EU	Cartridge	TN-2010	1000
		TN-2210	1200
		TN-2220	2600
	Drum Unit	DR-2200	12000

Brother HL-2130/2132/2240D/2250DN/2270DW

	Cartridge Name	SKU	Page Yield
ANZ / AP	Cartridge	TN-2030	1000
		TN-2230	1200
		TN-2250	2600
	Drum Unit	DR-2225	12000

Brother HL-2130/2132/2240D/2270DW

	Cartridge Name	SKU	Page Yield
MEA	Cartridge	TN-2060	700
		TN-2260	1200
		TN-2280	2600
	Drum Unit	DR-2255	12000

Brother HL-2240D/2270DW

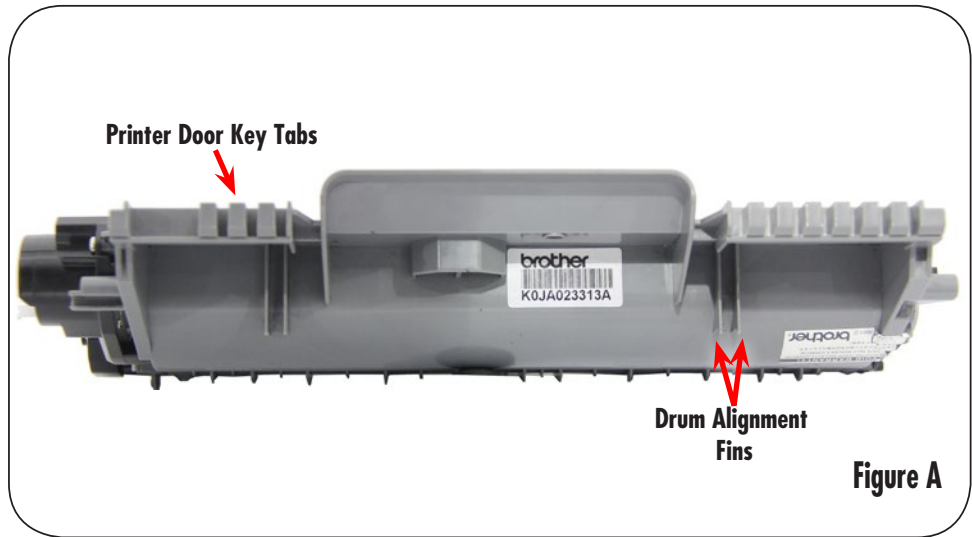|	Cartridge Name	SKU	Page Yield
JAPAN	Cartridge	TN-27J	2600
	Drum Unit	DR-22J	12000

Note: Keying variations exist from region to region.

Brother HL - 2130/2132

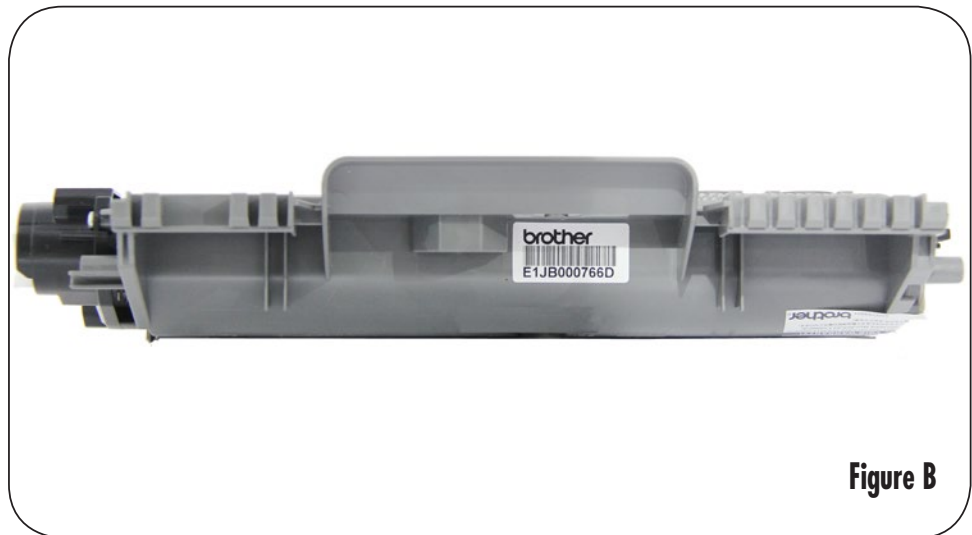**Cartridge Fins And Key Tabs Vary From Region To Region. Differences Shown Below.**

Brother HL - 2240 / 2270
TN - 420 /450 (NA/LA)

Printer Door Key Tabs

Drum Alignment Fins

Figure A

Brother HL - 2130 / 2132
TN - 2010 (EU) / 2030 (AP)

Note: The TN-2010 (EU) and 030 (AP) cartridge keys are identical in the alignment of their keys. These drum alignment fins are identical to the TN-420/450.
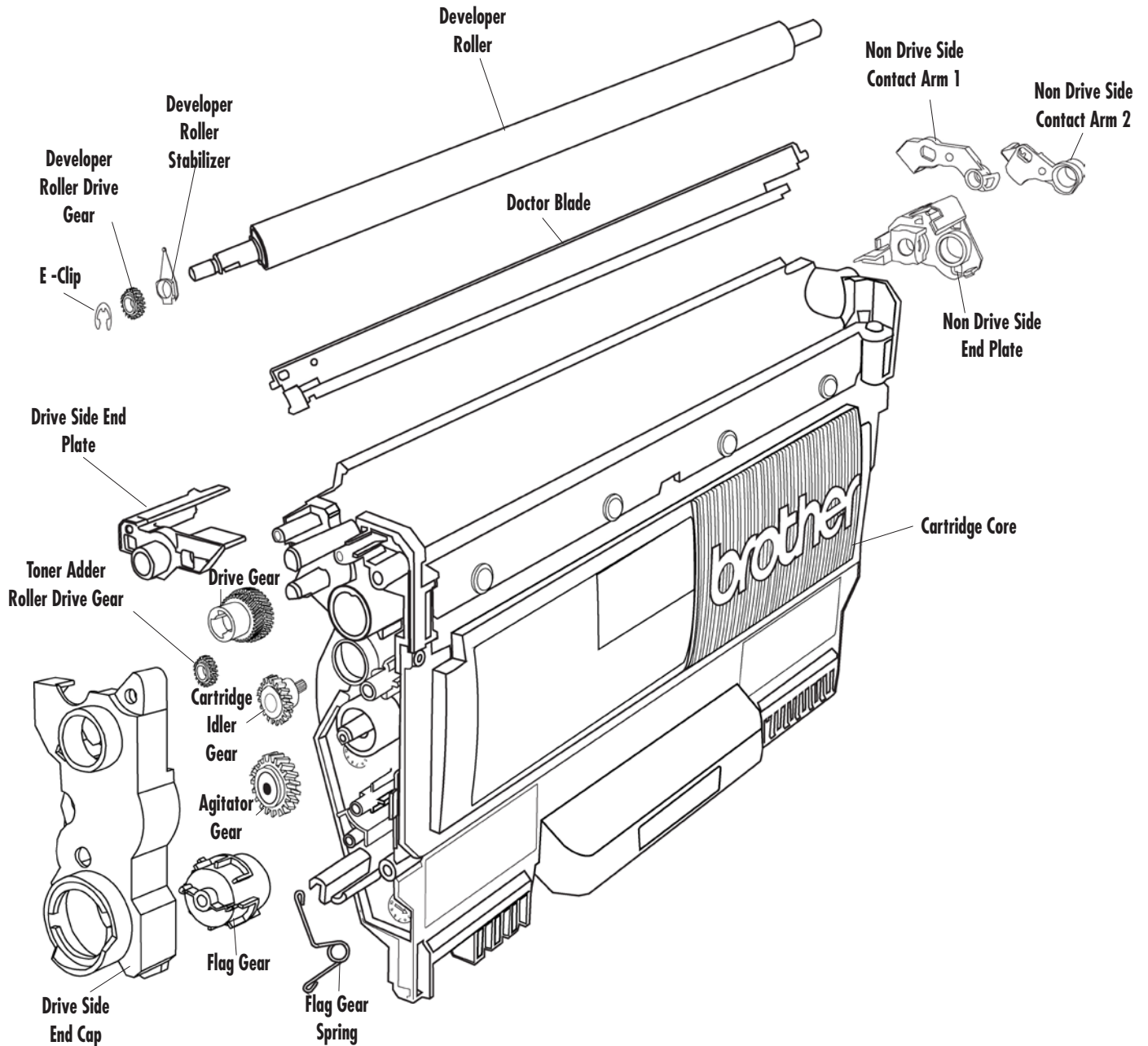
Figure B

Brother HL - 2130 / 2132
TN - 2060 (MEA)

Note: Drum alignment fins on the Brother TN-2060 (MEA) are shifted farther to the right than the TN - 420 / 450 (NA/LA), the TN 2010 (EU) and the TN - 2030 (AP).
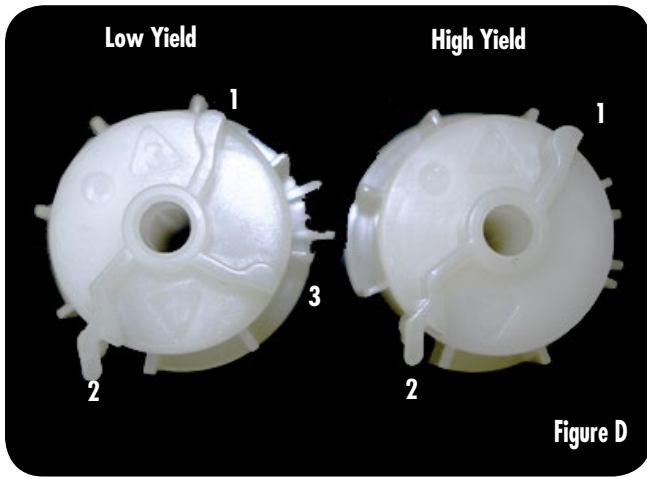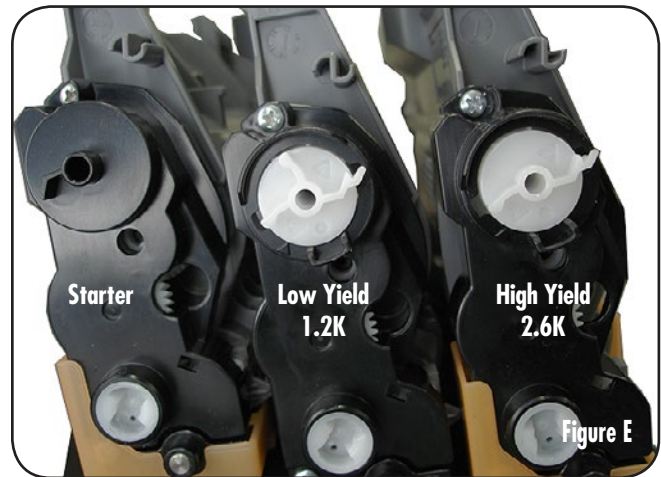
Figure C

BROTHER® HL-2270 TONER HOPPER

Developer Roller

Non Drive Side Contact Arm 1

Non Drive Side Contact Arm 2

Developer Roller Stabilizer

Developer Roller Drive Gear

Doctor Blade

E -Clip

Non Drive Side End Plate

Drive Side End Plate

Cartridge Core

Toner Adder Roller Drive Gear

Drive Gear

Cartridge Idler Gear

Agitator Gear

Flag Gear

Drive Side End Cap

Flag Gear Spring

Static Control®

www.scc-inc.com

BROTHER® HL-2270 DRUM UNIT

Corona Assembly

Drum Axle Stabilizer Bushing

E-Clip

Drum Axle

OPC Drum

E-Clip

Drum Unit
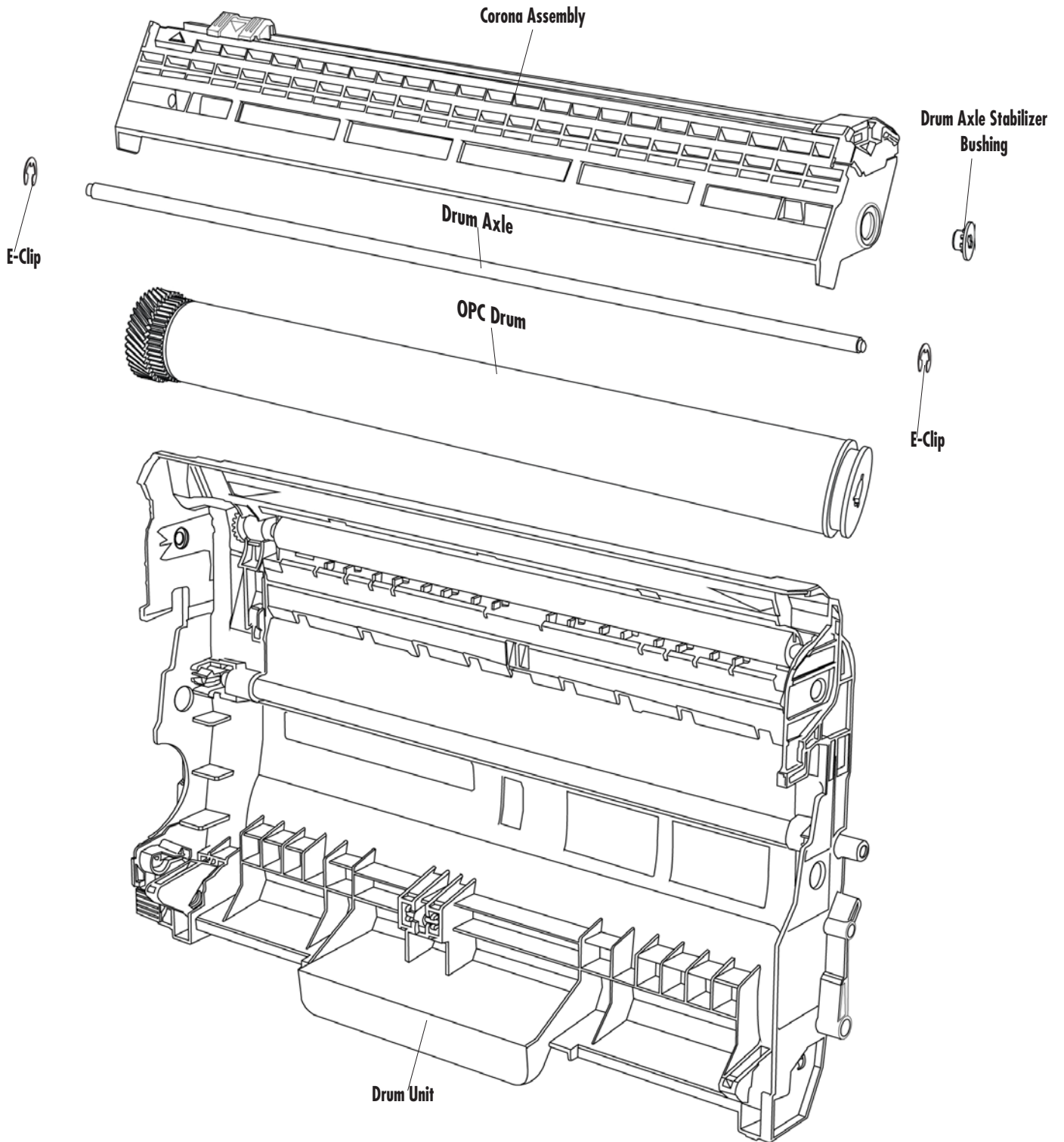
Flag Gears

Figure D

Note: Low yield flag gears have 3 posts and high yield flag gears have 2 posts as shown in Figure D.

Flag Gears

Figure E

Note: The placement and number of posts for both low yield and high yield flag gears as well as starter drive side end plates are shown in Figure E.

Note: Please wear eye protection and powder-free gloves when disassembling the hopper cartridge.

1. On the drive side remove the two screws and drive side end cap as shown in Figure 1.

Screws

End Cap

Phillips Screwdriver
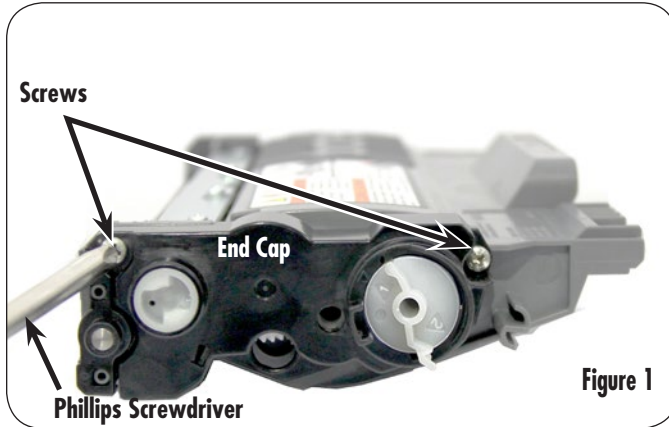
Figure 1

2. Remove the drive side end cap using a slotted screwdriver by gently twisting and prying to move it away from the cartridge as shown in Figure 2.

Drive Side End Cap
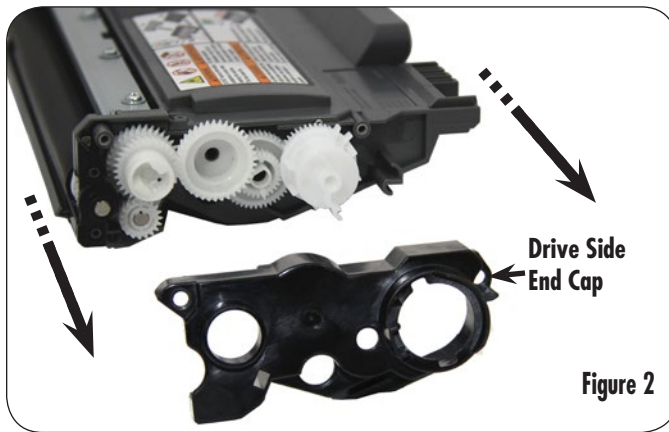
Figure 2

3. Using a slotted screwdriver remove the drive side developer roller end plate (Figure 3).

Drive Side End Plate

Slotted Screwdriver
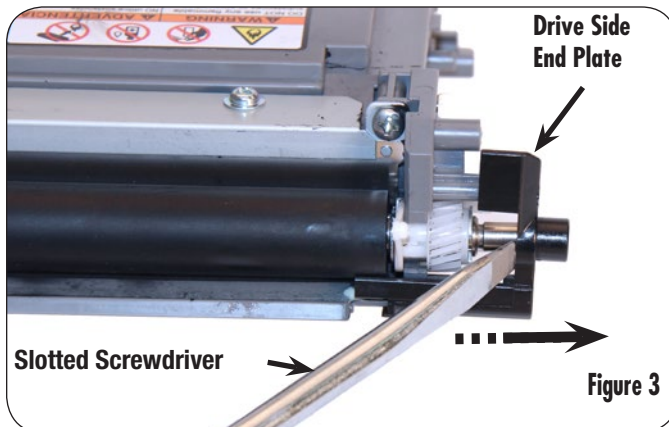
Figure 3

4. Remove all gears on the drive side in the order shown in Figure 4.
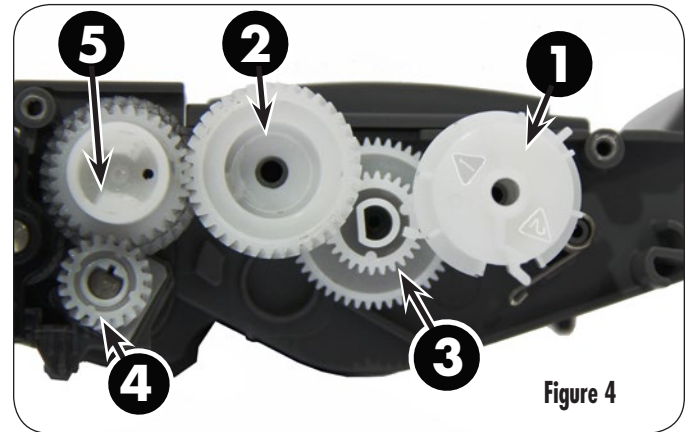
Figure 4

Note: Remove the cartridge flag gear (1), idler gear (2), agitator gear (3), toner adder roller drive gear (4) and drive gear (5).

5. Remove the two screws from the contact arms as shown in Figure 6.


Contact Arms

Screws
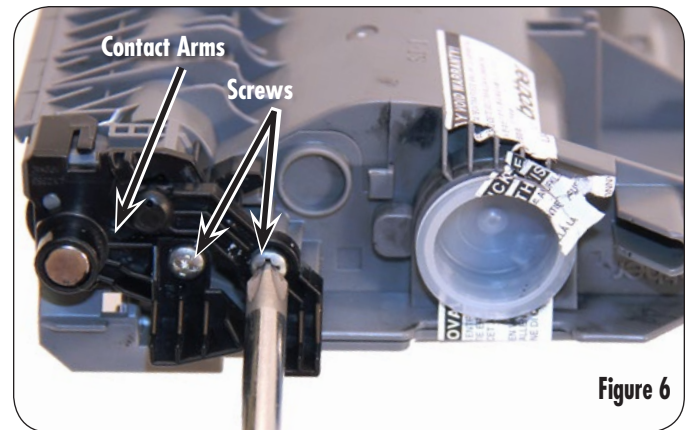
Figure 6

6. Rotate contact arm 1 up as shown in Figure 7a to unlock, then pull it away from the cartridge. Remove contact arm 2 by pulling it out and away from the cartridge (Figure 7b).

Contact Arm One

Figure 7a

Contact Arm Two
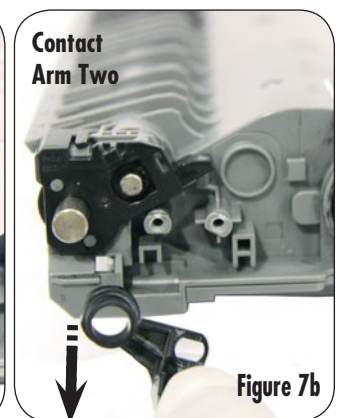
Figure 7b

7. Remove the non drive side end plate by pressing firmly on the latch shown in Figure 8a with the slotted screwdriver to release the end plate from the cartridge. Place the slotted screwdriver in the gap between the end plate and the cartridge as shown in Figure 8b. Twist the screwdriver to release the non drive side end plate and pull the end plate out and away from the cartridge as shown in Figure 8c.

End Plate Latch

Figure 8a

Slotted Screwdriver

Non Drive Side End Plate

Figure 8b

Non Drive Side End Plate
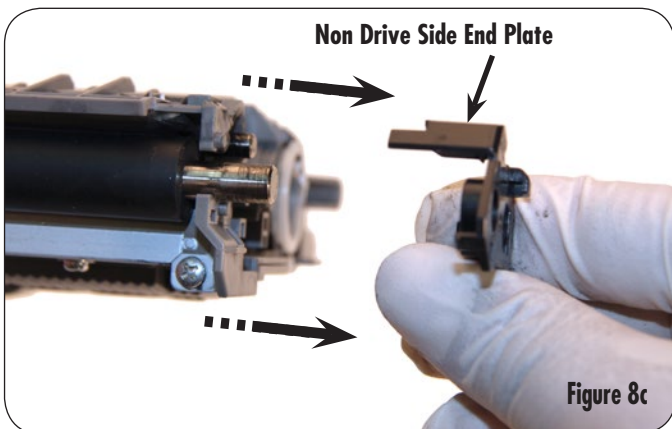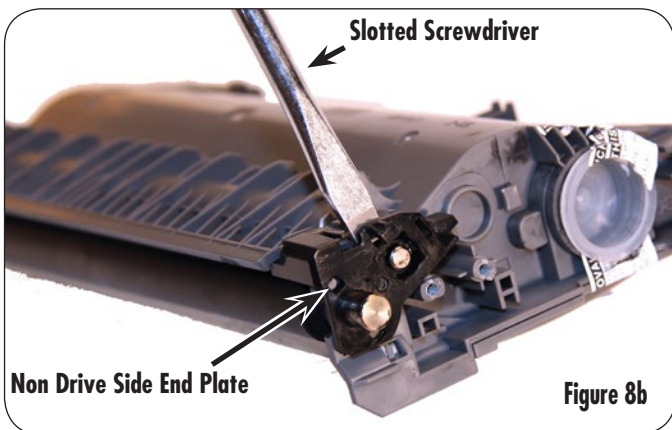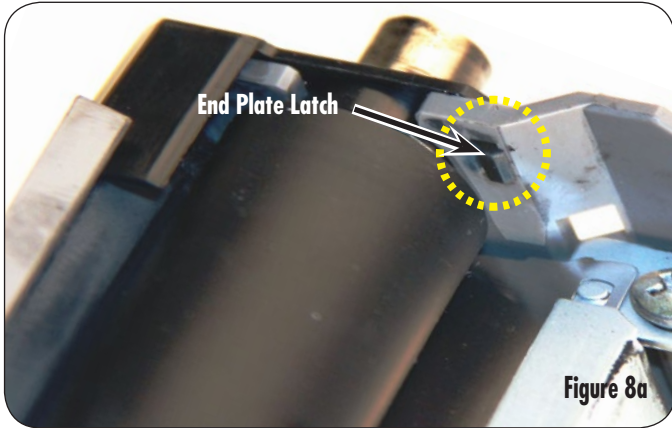
Figure 8c

8. Use a slotted screwdriver to release the developer roller stabilizer on the developer roller (Figure 8a and 8b).

Locking Tab Port Hole

**Developer Roller Stabilizer**
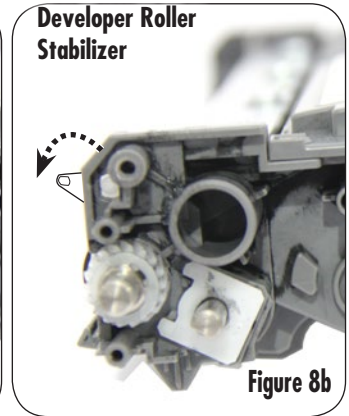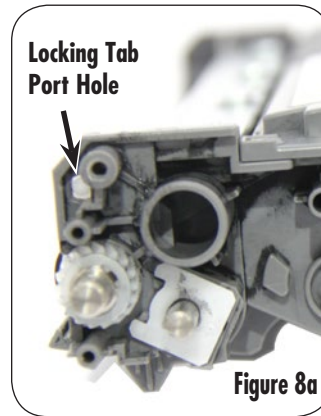
Figure 8a

Figure 8b

Note: Push the developer roller stabilizer tab out of the port hole located on the cartridge. Once the tab is out, rotate the developer roller stabilizer away from the cartridge to unlock the developer roller as shown in Figure 8b.

9. Remove the developer roller from the cartridge (Figure 9).

**Developer Roller**
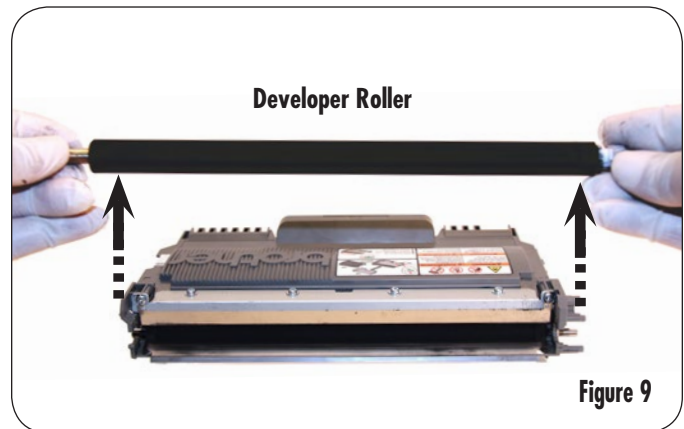
Figure 9

Note: After removing the developer roller remove the drive gear and stabilizer before cleaning.

10. Blow off any excess toner from the developer roller with dry filtered compressed air (Figure 10).

**Developer Roller**
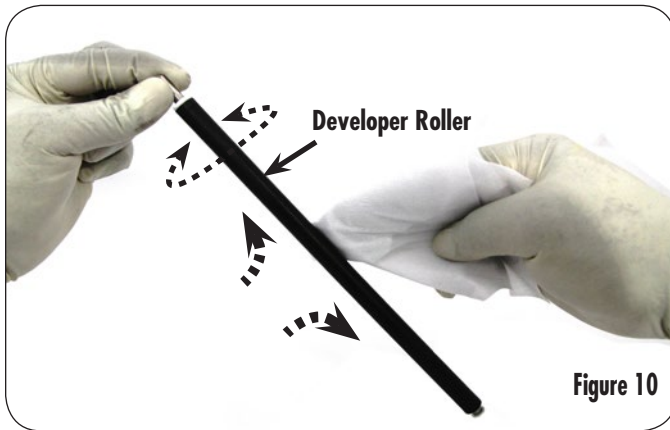
Figure 10

Note: Gently clean the developer roller by using up and down strokes while rotating the developer roller as shown in Figure 10. Wipe with a lint-free cloth dampened with 91-99% isopropyl alcohol, then using another lint-free cloth dampened with de-ionized water, wipe from the center to the ends. Next blow dry with dry, filtered, compressed air.

11. Using a Phillips Screwdriver remove the two doctor blade screws as shown in Figure 11.
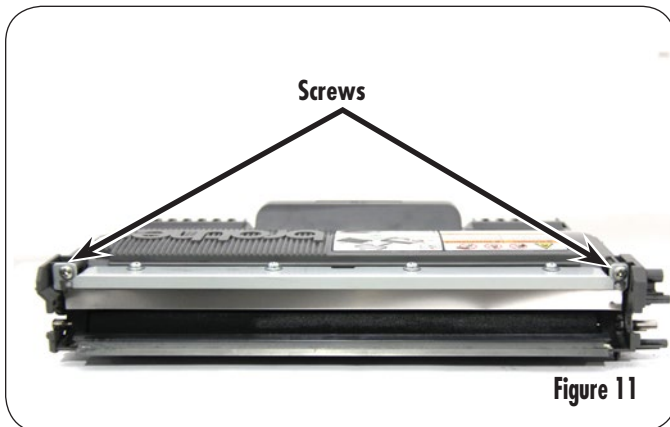
Screws

Figure 11

12. Using a slotted screwdriver gently pry the doctor blade up from the cartridge and remove the doctor blade (Figure 12).

Doctor Blade

Figure 12
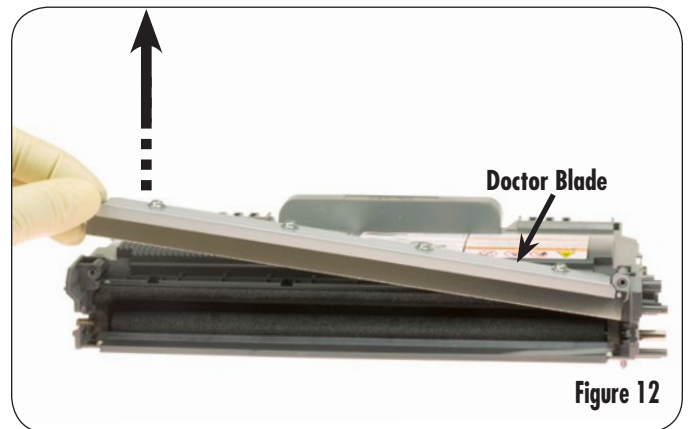
Note: To clean the doctor blade wipe the blade with a saturated lint-free cloth with 91-99% isopropyl alcohol, Then clean with a lint-free cloth saturated with de-ionized water. Blow dry with dry, filtered, compressed air.

13. Using a slotted screwdriver, remove the hopper cap as shown in Figure 13.

Slotted Screwdriver

Hopper Cap
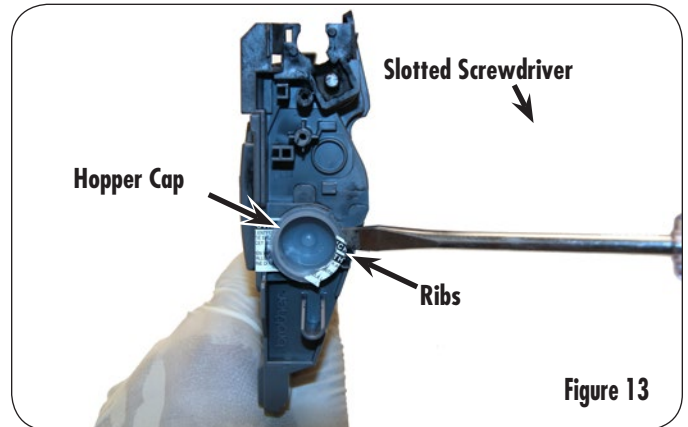
Ribs

Figure 13

Note: Pry the hopper cap off by placing a slotted screwdriver beneath the plastic edge of the cap while using the plastic ribs beside the hopper cap for added support as shown in Figure 13. The plastic ribs provides more support helping to remove the hopper cap.

14. Clean the hopper out using dry, filtered, compressed air as shown in Figure 14.

Figure 14

Note: Rotate the toner agitator while blowing toner out of the hopper.

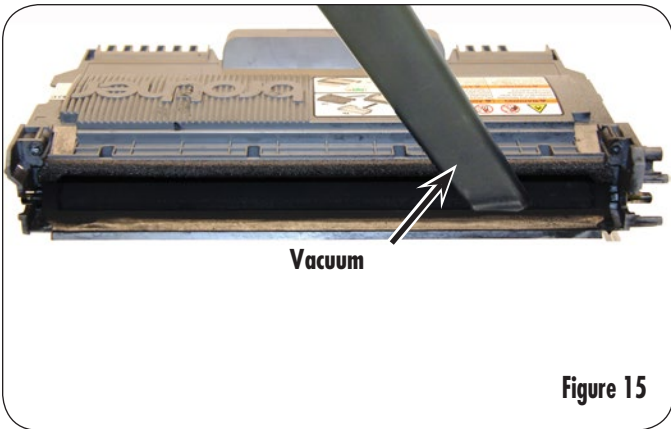15. Vacuum the adder roller as shown in Figure 15.

Vacuum

Figure 15

Note: Rotate and repeat until toner has been completely cleaned out of the hopper.

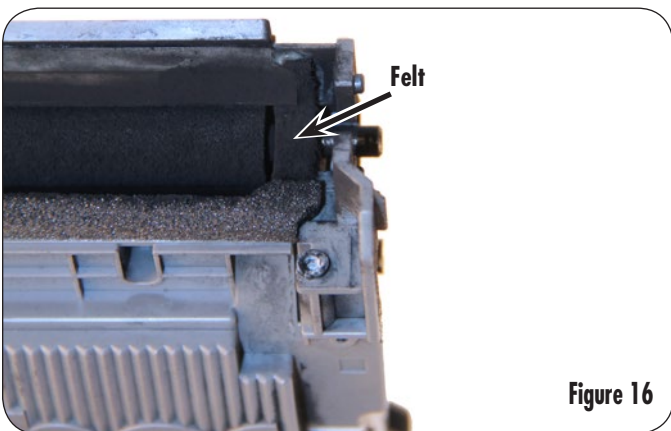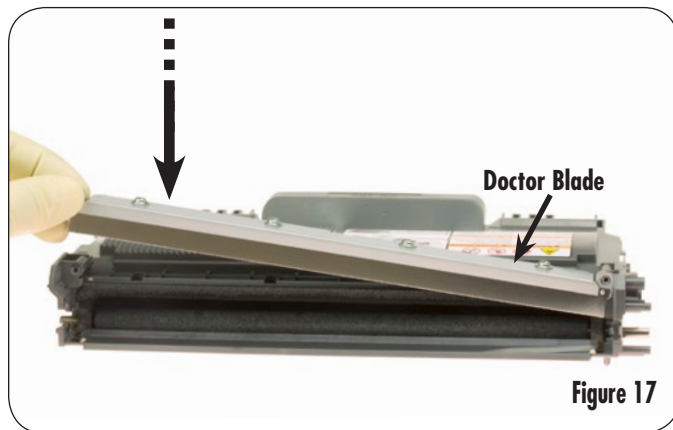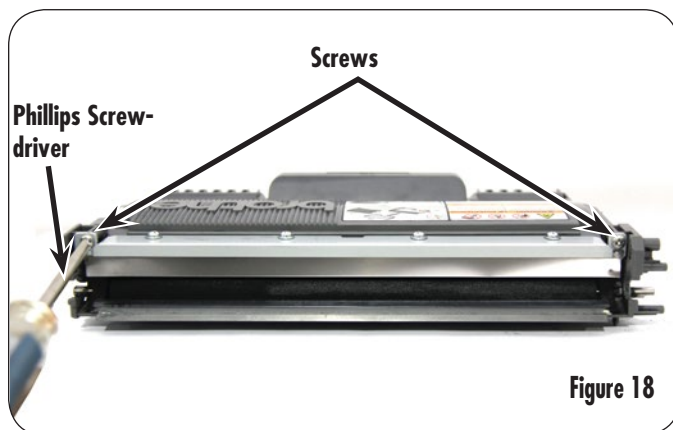16. Fluff the developer roller end felts then blow off with dry, filtered compressed air (Figure 16).

Felt

Figure 16

1. Place the doctor blade onto the cartridge (Figure 17).

Doctor Blade

Figure 17

2. Secure the doctor blade into the cartridge with two screws as shown in Figure 18.

Screws

**Phillips Screw-driver**

Figure 18

3. Install the stabilizer and drive gear onto the developer roller and place the roller into the cartridge. Rotate the developer roller stabilizer to engage the locking tab as shown in Figure 19.

**Locking Tab**

Slotted Screwdriver
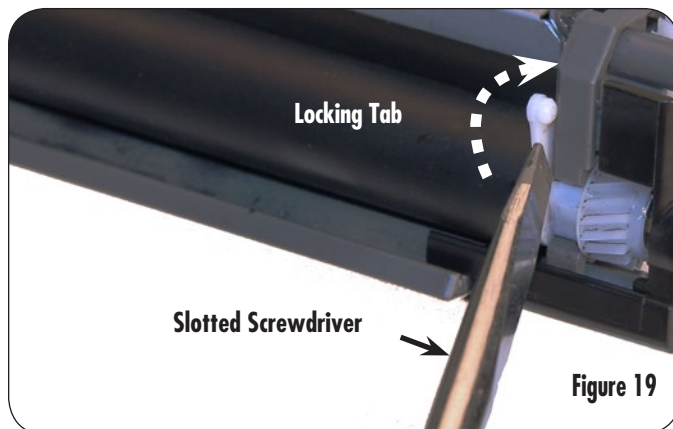
Figure 19

Note: Ensure the developer roller stabilizer is properly seated and locked in the upright position.

4. Install the non drive side end plate as shown in Figure 20a and 20b. Apply a small amount of conductive lubricant to the back of the non drive side end plate as indicated by the arrows shown in Figure 20a.


Apply Conductive Lubricant

Swab

Figure 20a

Non Drive Side End Plate
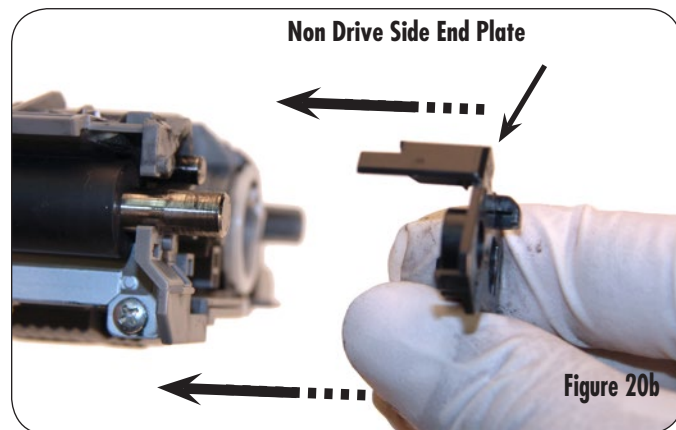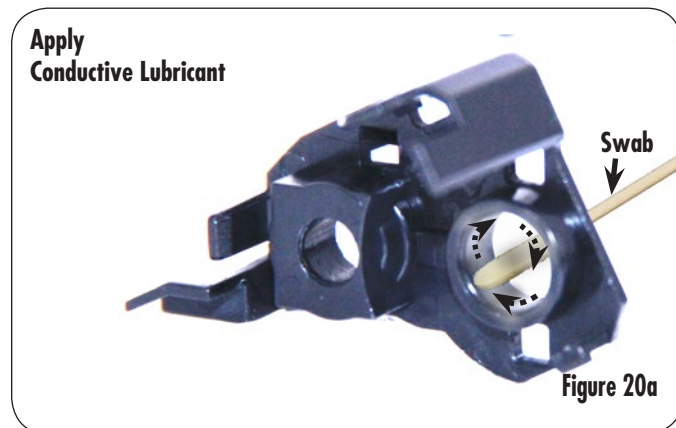
Figure 20b

5. Install contact arm 2 by sliding it over the developer shaft and aligning the screw hole as shown in Figure 21.

Align
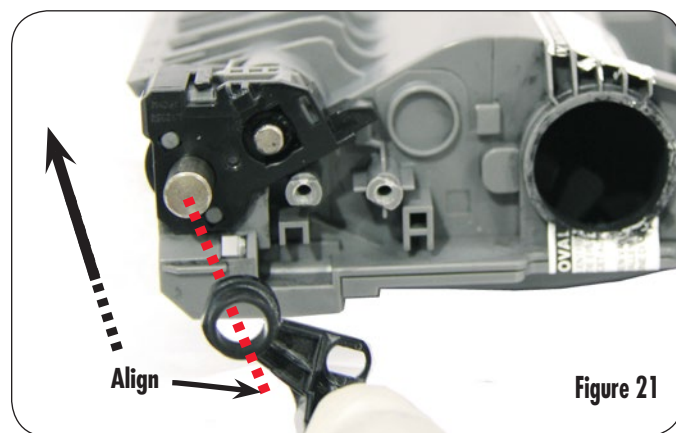
Figure 21
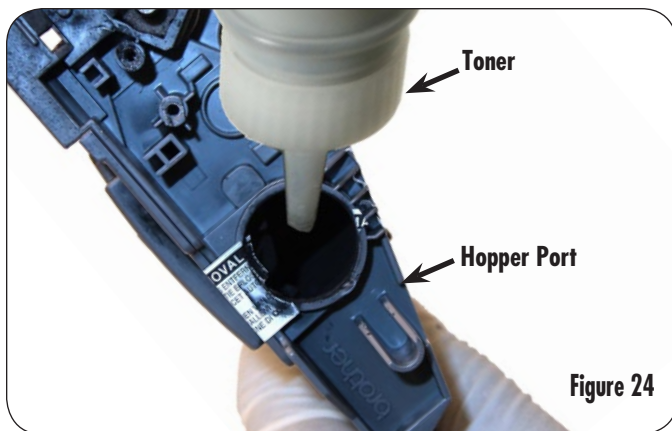
6. Install contact arm 1 next to contact arm 2 and then rotate the arm into the seated position (Figure 22).
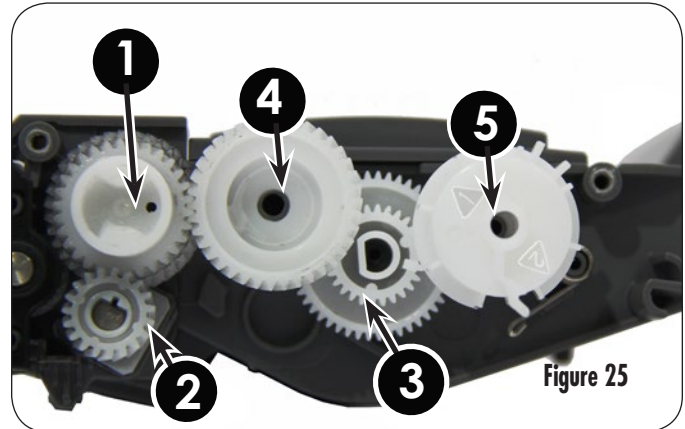

Contact Arm
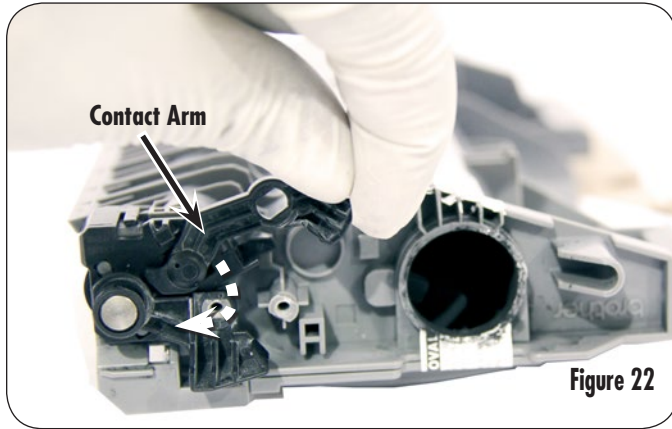
Figure 22

7. Install the two screws as shown in Figure 23.

Screws

Phillips Screwdriver
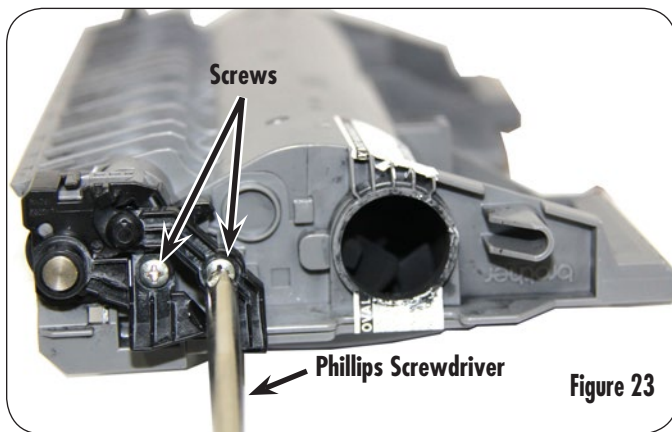
Figure 23

8. Fill the hopper using approved toner as shown in Figure 24.

Toner

Hopper Port

Figure 24

Note: Replace the hopper cap after filling with toner.

9. On the drive side, install the drive side gears in the order shown in Figure 25.

Figure 25

Note: Place the drive gear (1), toner adder roller drive gear (2), agitator gear (3), idler gear (4) and flag gear (5). Developer roller stabilizer, drive gear and E-Clip should already be installed.

Note: Refer to Page 16 "Resetting Flag Gear" section to reset the flag gear.

10. Place the drive side end plate onto the cartridge (Figure 26).

Drive Side End Plate
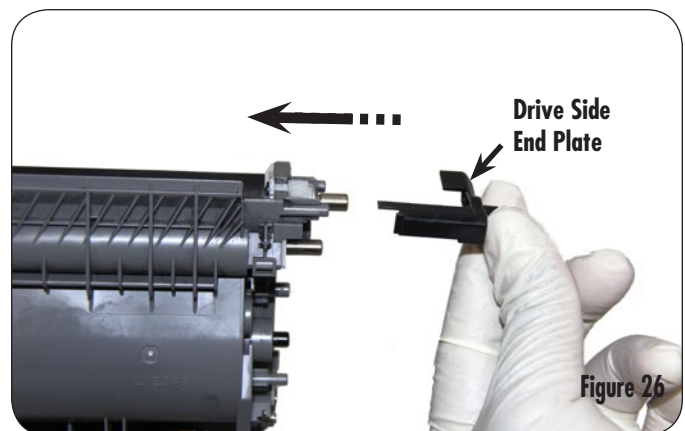
Figure 26

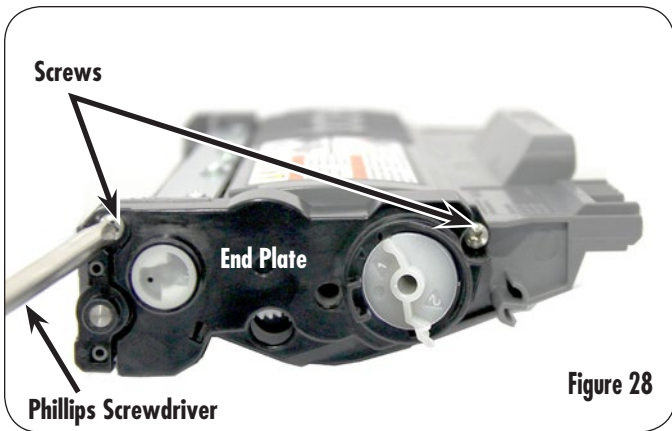11. Install the drive side end plate as shown in Figure 27.

Note: For precise flag gear positioning refer to page 16 resetting the flag gear section, before placing the end plate onto the cartridge.
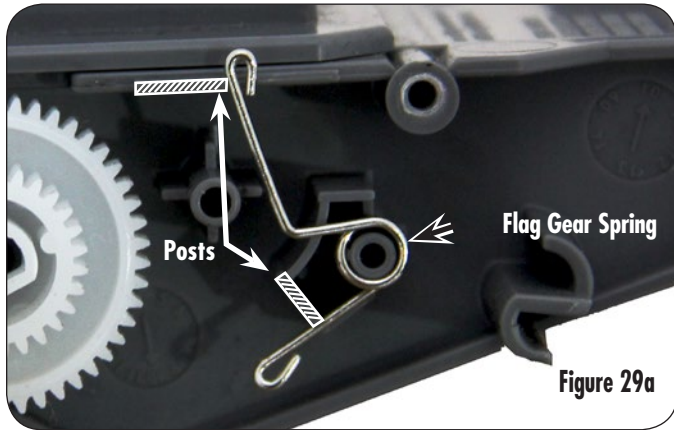

Drive Side End Plate

Align
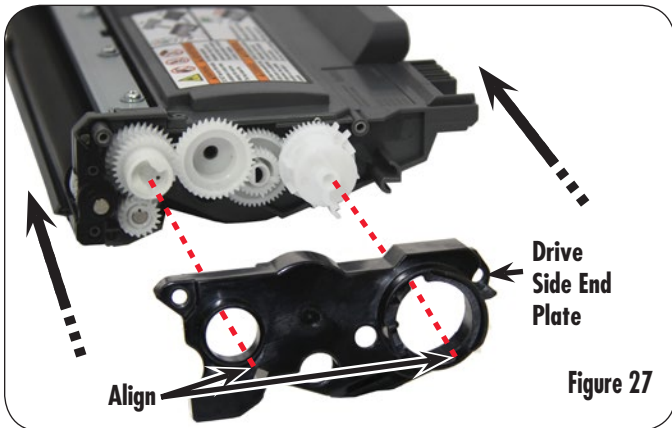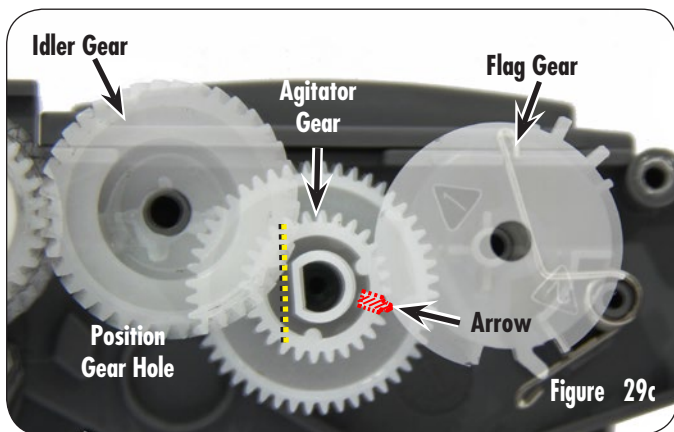
Figure 27

12. Install the two screws (Figure 28).

Screws

End Plate

Phillips Screwdriver

Figure 28

1. Reset the flag gear spring against the posts as shown in Figure 29a.

Posts

Flag Gear Spring

Figure 29a

⚠️ **WARNING:** Position the agitator gear with the straight edge of the agitator gear hole and arrow on the flag gear as shown in Figures 29b and 29c. **This is extremely important** in order to properly reset the printer.

Arrow   **Flag Gear**

Figure 29b

Idler Gear   **Agitator Gear**   **Flag Gear**

Position Gear Hole   **Arrow**

Figure 29c
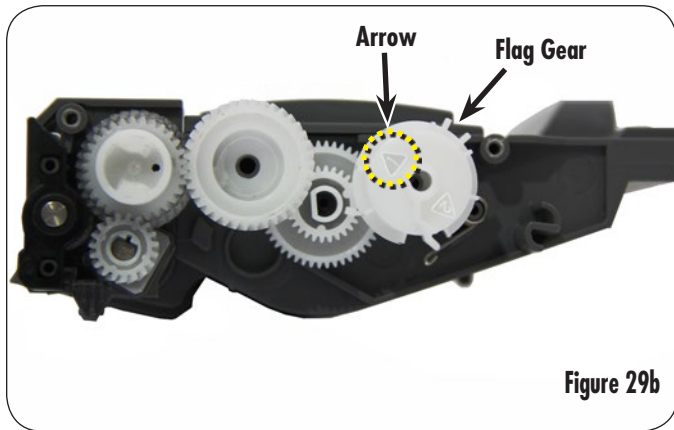
📋 **Note:** A properly reset flag gear with the end plate installed is shown in Figure 30.

Flag Gear Arrow Alignment
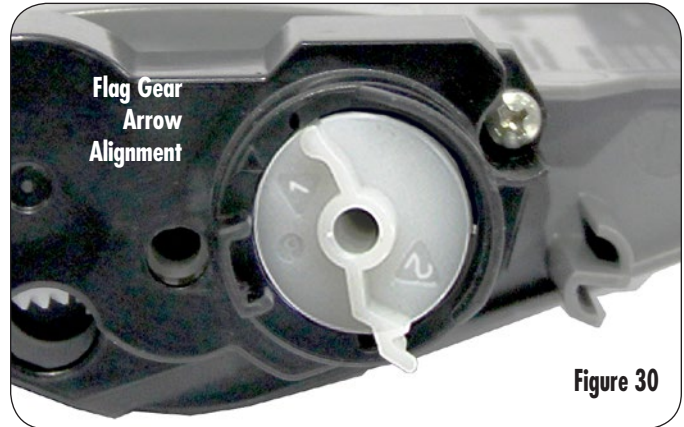
Figure 30

1. Using a small slotted screwdriver pry the E-Clip from the drive side of the drum unit (Figures 31a and 31b).

Drive Side

E-Clip

Figure 31a

E-Clip
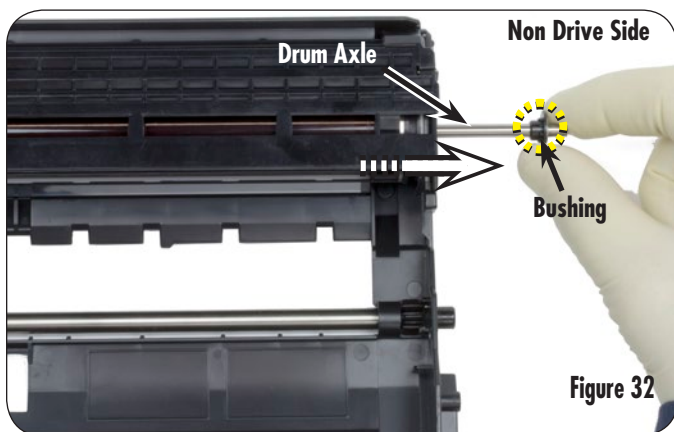
**Small Slotted Screwdriver**
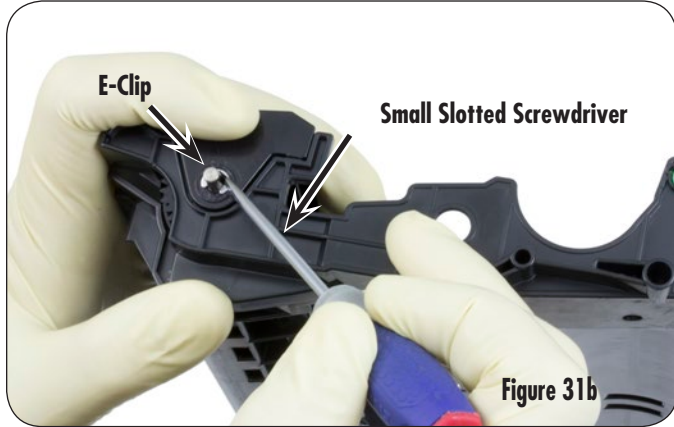
Figure 31b

2. Push the drum axle on the drive side of the drum unit to remove the drum axle from the non drive side as shown in Figure 32.

Non Drive Side

Drum Axle

Bushing

Figure 32

Note: The bushing from the non drive side of the drum unit can be removed and set aside after the axle is removed.

3. Lift the corona assembly and remove from the drum unit (Figure 33a). Lift the drum by the drive gear to remove from the drum unit (Figure 33b).

Corona Assembly

Figure 33a

Drive Gear

Drum

Figure 33b
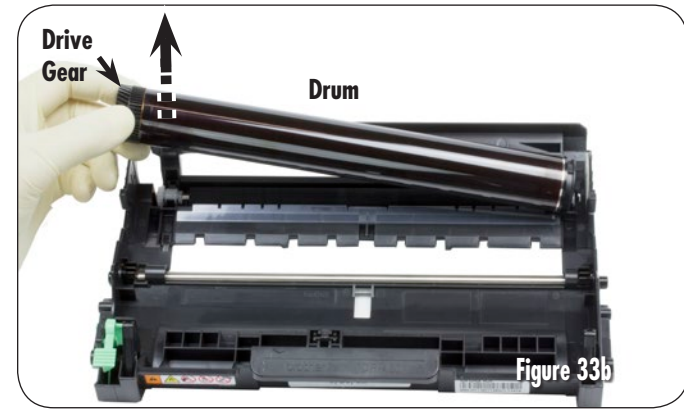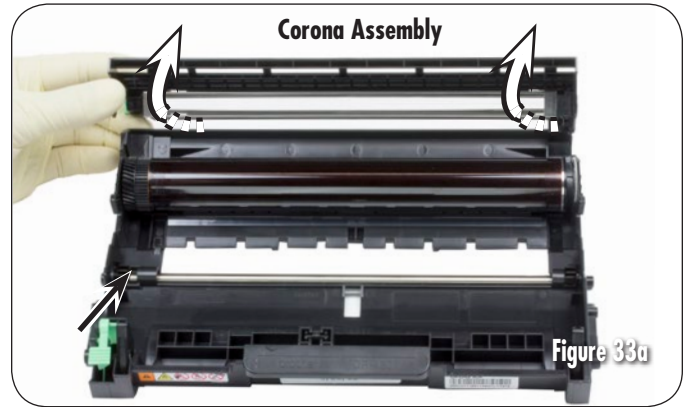
4. Clean the corona assembly and drum unit with dry, filtered, ionized, compressed air (Figures 34a and 34b).

Air Gun

Corona Assembly

Figure 34a

Air Gun
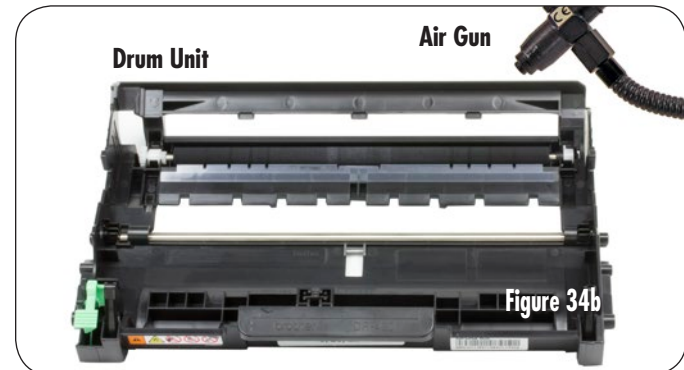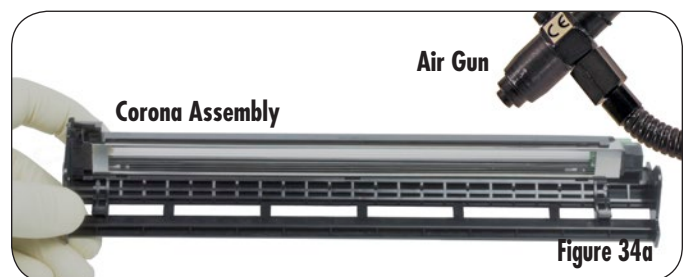
Drum Unit

Figure 34b

5. Place the Static Control OPC drum into the drum unit. Ensure the large gear is placed into the drive side of the drum unit (Figure 35).

Drive Side **Non Drive Side**

Drum

Large Gear

Figure 35

6. Place the corona assembly into the drum unit (Figure 36).

Corona Assembly
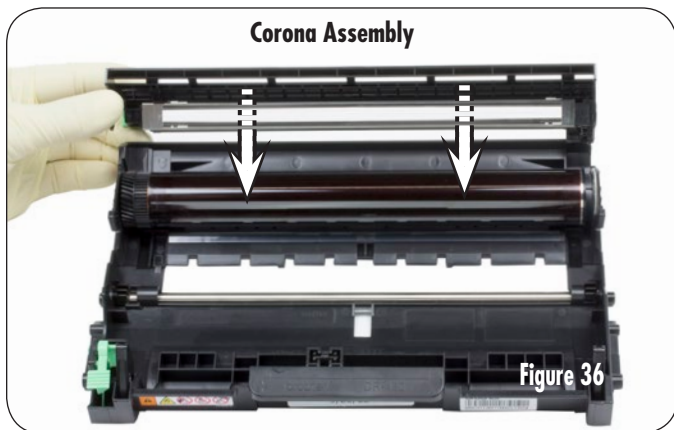
Figure 36

7. Slide the drum axle with E-Clip installed into the large drive side of the Static Control drum (Figure 37).

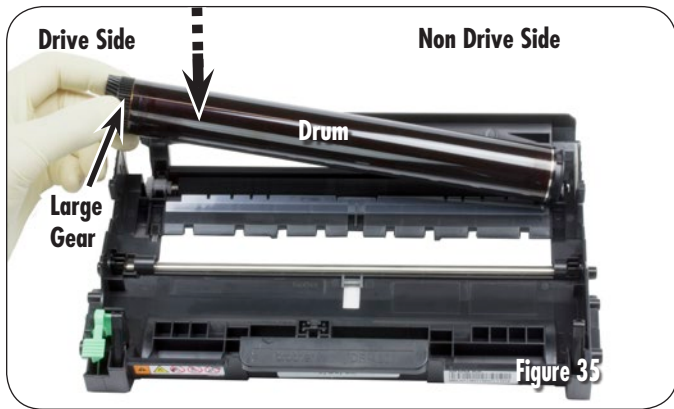

Drum Axle
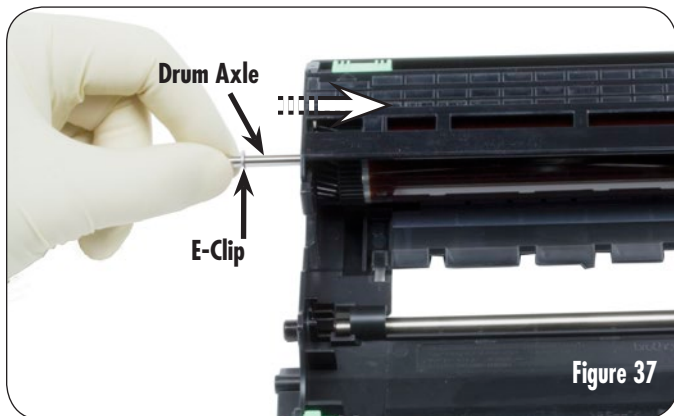
E-Clip

Figure 37

8. Place the drum axle bushing onto the non drive side of the drum axle (Figure 38).

Bushing
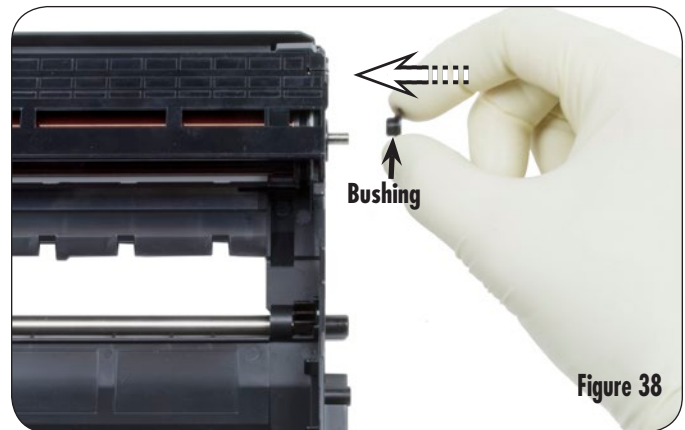
Figure 38

9. Secure the drum axle by placing the E-Clip onto the non drive side of the drum axle as shown in Figure 39.

E-Clip

Pliers

Drum Axle
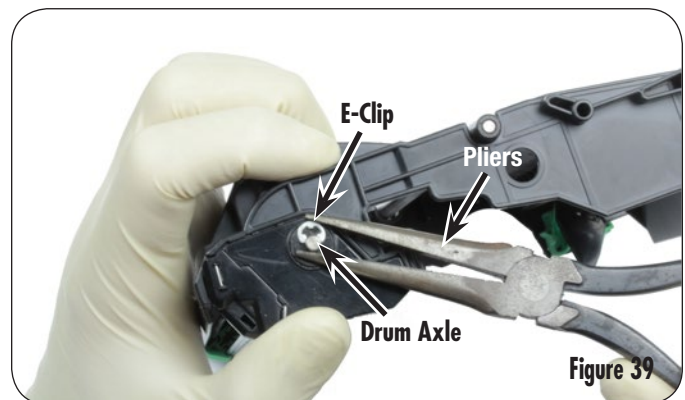
Figure 39

10. Slide the corona wire cleaner tab side-to-side twice as shown in Figure 40.

Corona Cleaner Tab

Figure 40

11. Place the corona wire cleaner tab into the locked position ensuring the arrows are aligned (Figure 41).

Corona Cleaner Tab

Figure 41
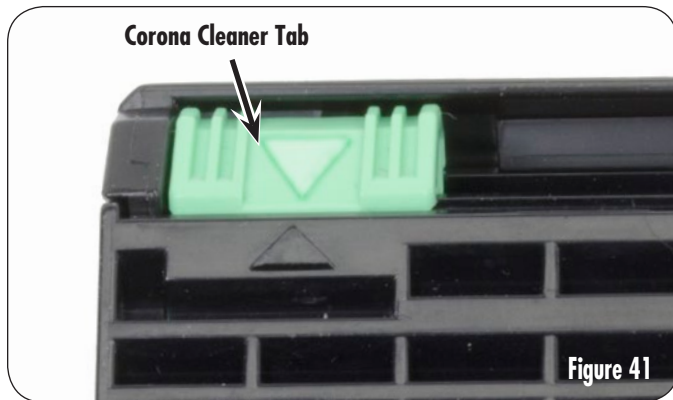
Drum Reset Instructions

With the power on and the Toner Hopper / Drum Unit assembly installed, open the front cover.

For HL-2220/2230/2240/2270 Models:

Press and hold the "**Go**" button until all LED lights are lit, then release the "**Go**" button and close the front cover.

For HL-2280 and DCP - 7060/7065 Models:

Press the "**Clear**" button and then the up arrow ▲.
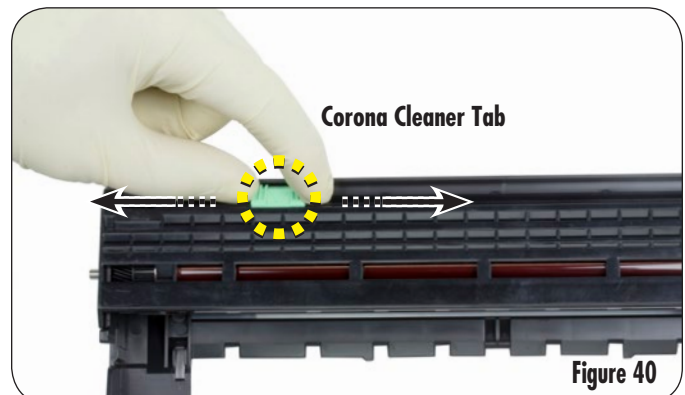When the word "**Accepted**" appears on the display screen, close the front cover.

For MFC-7360/7460/7860 and Fax Models:

Press the "**Clear**" button and then press the "**1**" button. When "**Accepted**" appears on the display screen, close the front cover.

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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