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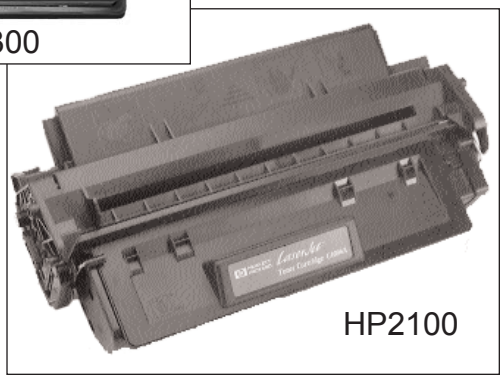
Hewlett Packard® LaserJet® 2300/2100
Remanufacturing Instructions

HP2300



HP2100

The cartridges are similar in size and shape. However by looking at the hopper sections the difference is immediately apparent. These differences include, the chip on the cartridge body, shape of the hopper section, toner weight, and page yield. The HP2300 holds 360 grams of OEM toner while the HP2100 holds 250 grams. The HP2300 yields 1,000 more pages than the HP2100 @ 5% coverage. While the HP2300 replaces the HP2100, you can not use the HP2300 cartridge in the HP2100 printer.

Printer Availability

HP2300

The Hewlett-Packard LaserJet® 2300 was officially released in April 2003 to replace the HP2100 series. List price for the HP2300 ranges from $549 (for the base model) to $1,099 (for the HP2300dtn).

There are six models in the 2300 series; the base 2300, the 2300n (network-ready), 2300d (duplex standard), 2300dn (duplex standard/network-ready), 2300dtn (duplex standard/network-ready), 2300L (20 page per minute (ppm) base model).

HP2100

In February 1999, Hewlett-Packard announced the release of the LaserJet® 2100 series printers. The 2100 series is the replacement of HP's LaserJet 5P/6P (VX engine) printers, at an estimated $699 US street price. This printer has been discontinued by HP and replaced by the HP2300.

There were five models in the 2100 series; the base 2100, the 2100se , 2100xi, 2100m, 2100tn.

Similarities and Differences

The HP2300 and 2100 printers have a similar foot print. However the similarities end there. The most obvious difference between the two printers is the control panel which is present on the HP2300. The HP2100 did not have a control panel.

The Smart Chip (HP2300 only)

Like many of HP's latest cartridges the HP2300 uses a smart chip to monitor toner-low functions, and store information. The chip stores manufacturing dates, serial numbers, and provides information to be printed out on the supplies page.

Critical Issues:

- The HP2300 is a chipped cartridge, while the HP2100 is not
- The 2 sections of the cartridge are held together by pins which can be difficult to remove
- The HP2300 Toner Cartridge is only available in the 6,000 page yield and the HP2100 is only available in the 5,000 page yield
- The HP2300 and HP2100 cartridges are not interchangeable

Table of Contents

World Wide Web

Get the latest information on the web at SCC's HP2300 Engine Reference Center at www.scc-inc.com

If you need additional information or technical assistance, please contact the Technical Support Group.

1.800.948.1072 (USA)
+44 (0) 118 935 1888 (UK)
email: techservices@scc-inc.com

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Version 3 December 2004

Specifications

The following is a summary of the specifications for the HP2300/2100 series printer cartridges.

	Hewlett-Packard ® Q2610 & C4096ACartridge		
		Q2610A	***C4096A***
General Information	Cartridge	Q2610A	C4096A
	Chip	Yes	No
	Printer Compatibility	HP LaserJet 2300, 2300n, 2300d, 2300dn, 2300dtn, 2300L	HP LaserJet 2100, 2100se, 2100xi, 2100m, 2100tn
	Page Yield @ 5% coverage	6,000	5,000
	Density	1.50-1.52 (OEM) 1.52-1.54(Odyssey) N/A (MICR Toner)	1.50-1.52 (OEM) 1.45-1.50 (Odyssey) 1.38-1.42 (MICR Toner)
	Duty Cycle (total prints)	30,000-50,000	30,000-50,000
	Looks Similar To	C4096A (HP2100)	HP4000 (C4127A) HP5000 (C4129J)
Toner Color		Black	Black
Technology	Print	Laser	Laser
	Resolution	Smart	Ultraprecise
Environmental			
Relative Humidity (RH)	Operating	20%-80% (RH)	10%-80% (RH)
	Storage	0%-85% (RH)	10%-90% (RH)
Temperature *(Celsius (C))* *(Fahrenheit (F))*	Operating	15 to 32.5 degrees C (59 to 90.5 degrees F)	15 to 32.5 degrees C (59 to 90.5 degrees F)
	Storage	-20 to 40 degrees C (-4 to 104 degrees F)	-20 to 40 degrees C (-4 to 104 degrees F)
Dimensions			
	Packaging	15.35 x 7.48 x 9.72 inches	13.9 x 6.14 x 9.72 inches
Weight	OEM Toner	360 grams (OEM)	250grams (OEM)
	SCC Toner		240 grams (HP21-240B)
			260 grams (HP21-260B)
			290 grams (HP21-290B)
	Odyssey	360 grams (HP23-375B-OS)	240 grams (HP21-240B-OS)
			290 grams (HP21-290B-OS)
	SecureRITE™ MICR Toner		240 grams (HP21-240B-M)
	Package	3.53 lb	3.63 lb
Replaces		Q4096A	C4129J
Price	Street Price	$119.99	$76.00

Specifications

The following is a summary of the specifications for the HP2300/2100 series printers.

	Hewlett-Packard ® 2300& 2100 Series Printers			
	HP2300 Printer Information		*HP2100 Printer Information*	
General Information (Dots Per Inch (dpi), Pages Per Minute (ppm))	Released	April 2003	Released	February 1999
	Resolution	1200 X 1200 dpi	Resolution	1200 X 1200 dpi
	Print Speed	20-25 ppm	Print Speed	10 ppm
	First Page out	Less than 10 sec.	First Page out	Less than 10 sec.
	Processor Speed	266 MHz	Processor Speed	66 MHz
	Memory Std/Max	32 MB-48 MB/304 MB	Memory Std/Max	4 MB-8 MB/52 MB
Color	Toner	Black	Toner	Black
Technology	Technology	Laser	Technology	Laser
	Resolution	Smart	Resolution	Ultra Precise
Environmental				
Relative Humidity (RH)	Operating	10%-80% (RH)	Operating	10%-80% (RH)
	Storage	10%-90% (RH)	Storage	10%-90% (RH)
Temperature *(Celsius (C)) (Fahrenheit (F))*	Operating	15 to 32.5 degrees C (59 to 90.5 degrees F)	Operating	15 to 32.5 degrees C (59 to 90.5 degrees F)
	Storage	-20 to 40 degrees C (-4 to 104 degrees F)	Storage	-20 to 40 degrees C (-4 to 104 degrees F)
Dimensions				
	HP LaserJet 2300L, 2300, 2300n , 2300d, 2300dn	10.2 x 16.2 x 17.7 inches	HP LaserJet 2100, 2100se, 2100xi, 2100m, 2100tn	9 x 15.9 x 16.5 inches
	HP LaserJet 2300dtn w/500 sheet tray	15.6 x 16.2 x 17.7 inches		
Weight				
	HP LaserJet 2 300L, 2300, 2300n, 2300d, 2300dn	31.3 lb (with print cartridge)	HP LaserJet 2100	31.7 lb (with print cartridge)
	HP LaserJet 2300dtn w/500 sheet tray	41.6 lb (with print cartridge)	HP LaserJet 2100 dtn w/500 sheet tray	41.6 lb (with print cartridge)
Replaces		HP 2100 Series		5P/6P (VX engine)
Price		$549-$1,099		$699

Introduction

Purpose of this SSS™

The purpose of this SSS™ is to provide you a guide and the basic information needed to remanufacture an HP LaserJet® 2300 or 2100cartridge. This SSS™ contains information about:

- Disassembling the cartridge and part inspection
- Basic cleaning
- Reassembling the cartridge.

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

1. Go to http://www.scc-inc.com/imaging/Imaging.htm.

2. Scroll down to the Technical Documents area of the screen.

3. Select the link for the new or updated SSS™.

4. When the SSS™ file opens, print the file.

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

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

Illustrations

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

Safety

Statement 1:

Always wear eye protection while operating power tools.

Statement 2:

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

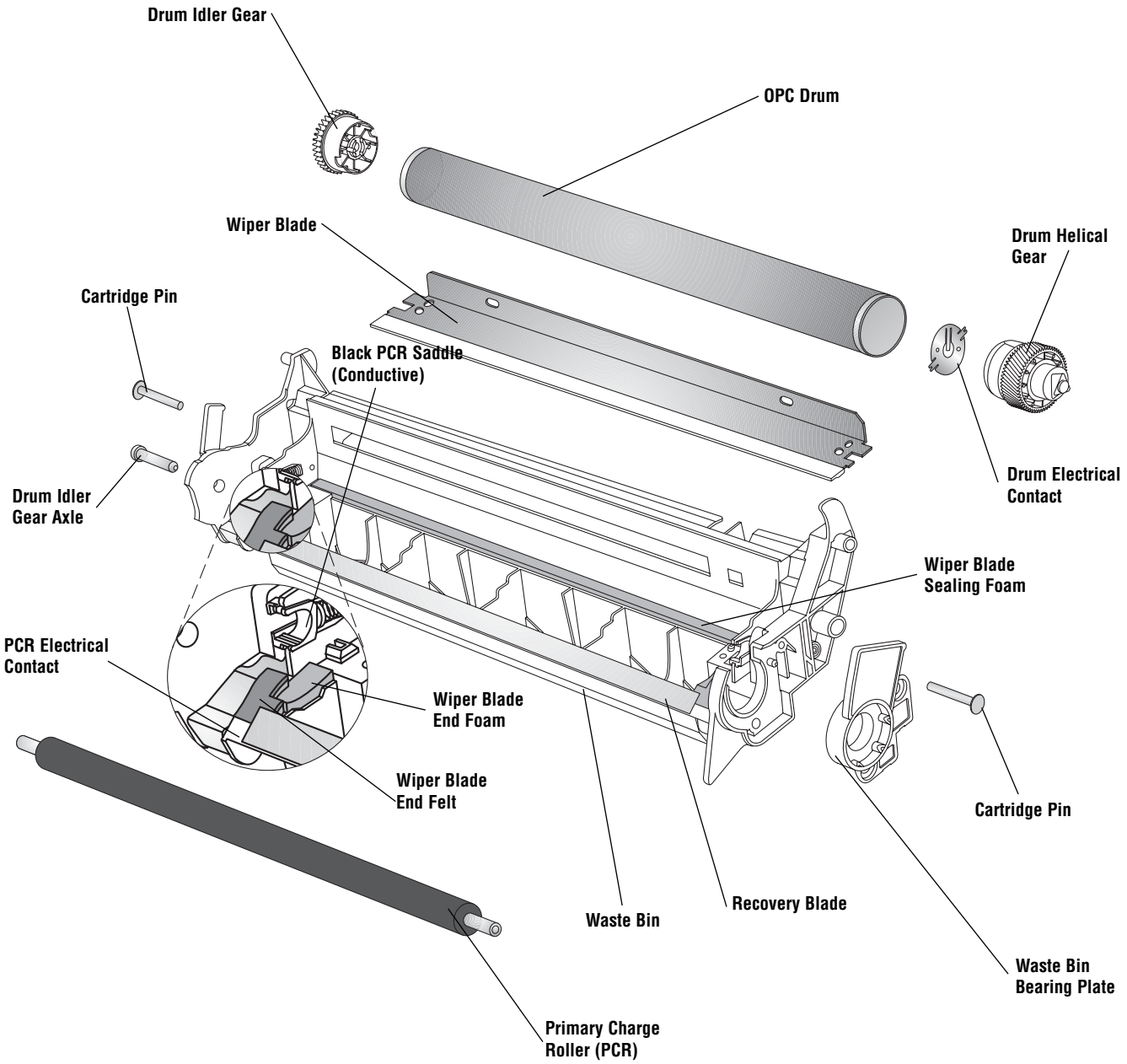
Statement 3:

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

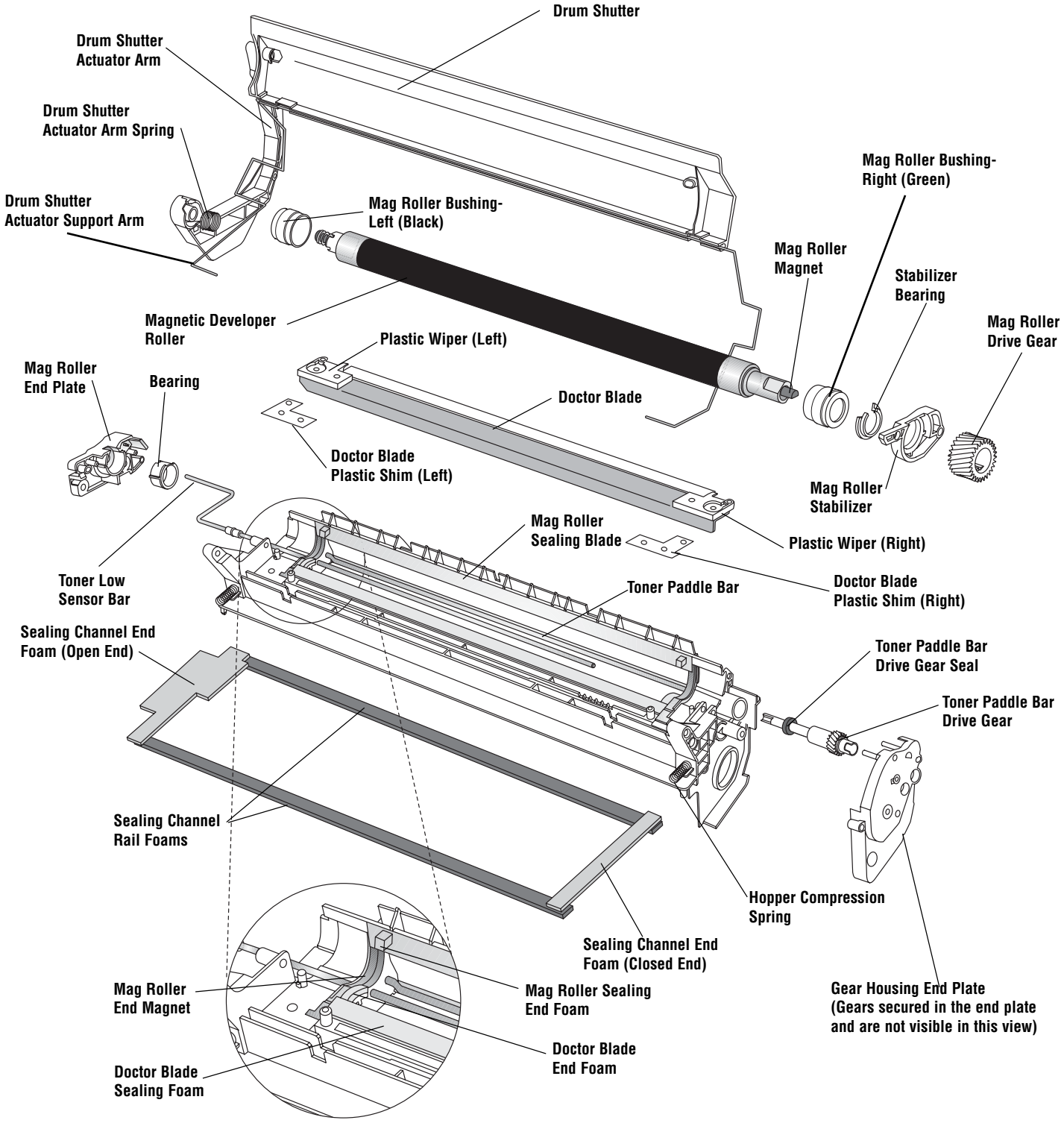
Comparisons

	HP LaserJet 6P/6MP	HP LaserJet 2100 Series Printers	HP LaserJet 2300 Series Printers
Model	C4170A/C4171A/ C4172A/C4138A/ C4139A	C3150A/C3155A	Q2472A /Q2477A/ Q2474A/ Q2473A/ Q2475A
Printer Speed	8 pages per minute	10 pages per minute	25 pages per minute 20 pages per minute (HP2300L)
Resolution	600 dpi	1200 dpi	1200 dpi
Languages	Enhanced PCL 5, PostScript (R) Level 2	HP PCL 6 HP PostScript Level 2 emulation (2100 M/TN only)	HP PCL 6 HP PCL 5e HP PostScript Level 3 emulation
Memory Type	SIMM	DIMM	DIMM
Resident Memory	2 MB/3 MB	4 MB/8 MB (2100 M/TN only)	48 MB 32 MB (HP 2300 & 2300L)
Printer Maximum Memory Capacity	50 MB/35 MB	52 MB/40 MB (2100 M/TN only)	304 MB 288 MB (HP 2300 & 2300L)
Available Memory Slots	Three/Two	Three/Two (2100 M/TN only)	Three
PC Tray Capacity	250 sheets	250 sheets (plus a 250-sheet Tray 3, standard on 2100TN, optional on LJ2100, LJ2100M)	250 sheets (plus 500 sheet tray standard on 2300dtn)
MP Tray Capacity	100 sheets	100 sheets	100 sheets
Output Capacity	100 sheets	100 sheets	100 sheets
Interfaces	Parallel B-Type, Parallel C-Type, Local Talk	Parallel B-Type, Fast infrared port (IrDA compliant), Local Talk, EIO slot, HP Jetsend enabled (Ir and EIO only)	IEEE 1284 ECP-compliant, B-size bidirectional parallel port, 1 USB 1.1 port, HP Jetdirect 615n Fast Ethernet (10/100Base-TX) internal network print server in EIO slot
EconoMode	Yes	Yes	Yes
Toner Average Life (At 5% Coverage)(OEM)	4000 Pages	5000 Pages	6000 Pages
Maximum Monthly Duty Cycle (OEM)	12000 pages	15000 pages	50000 pages 30000 page (HP2300L)

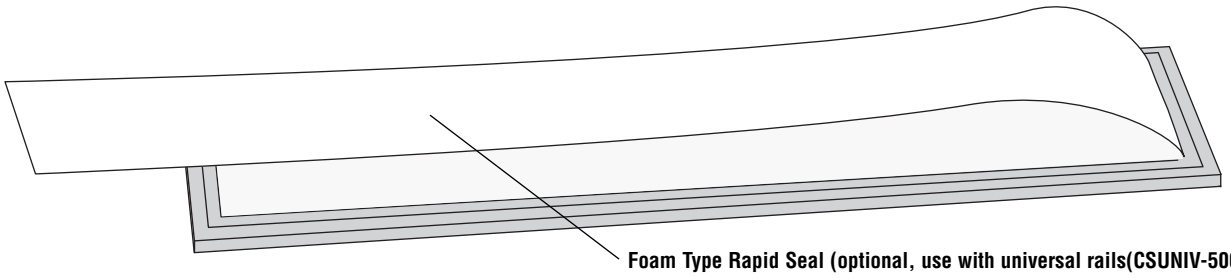
Waste Bin Section (HP2300)

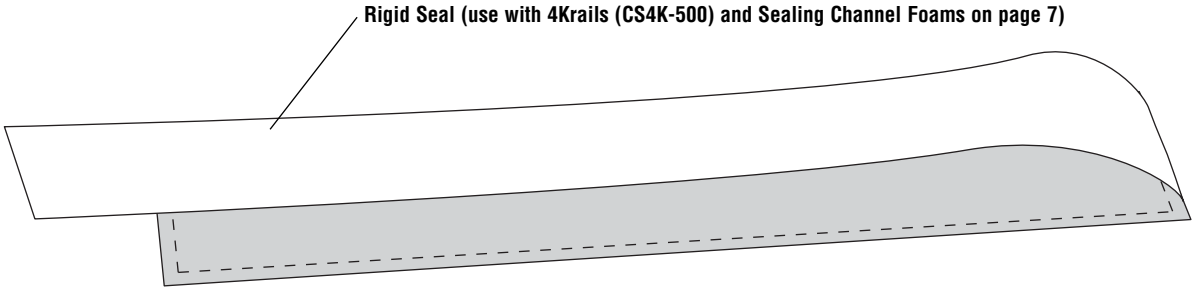


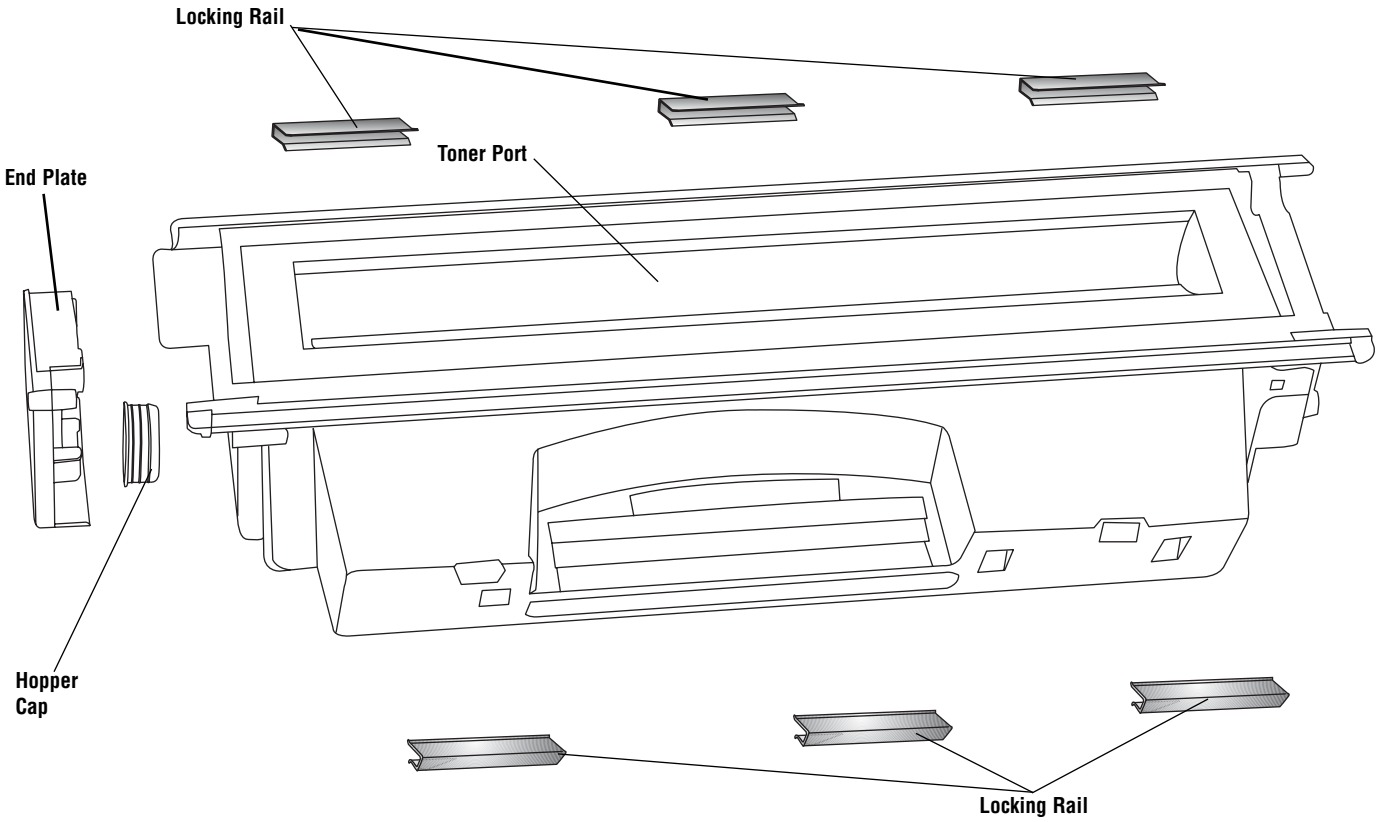
Mag Roller Housing (HP2300)



Toner Reservoir (HP2300)

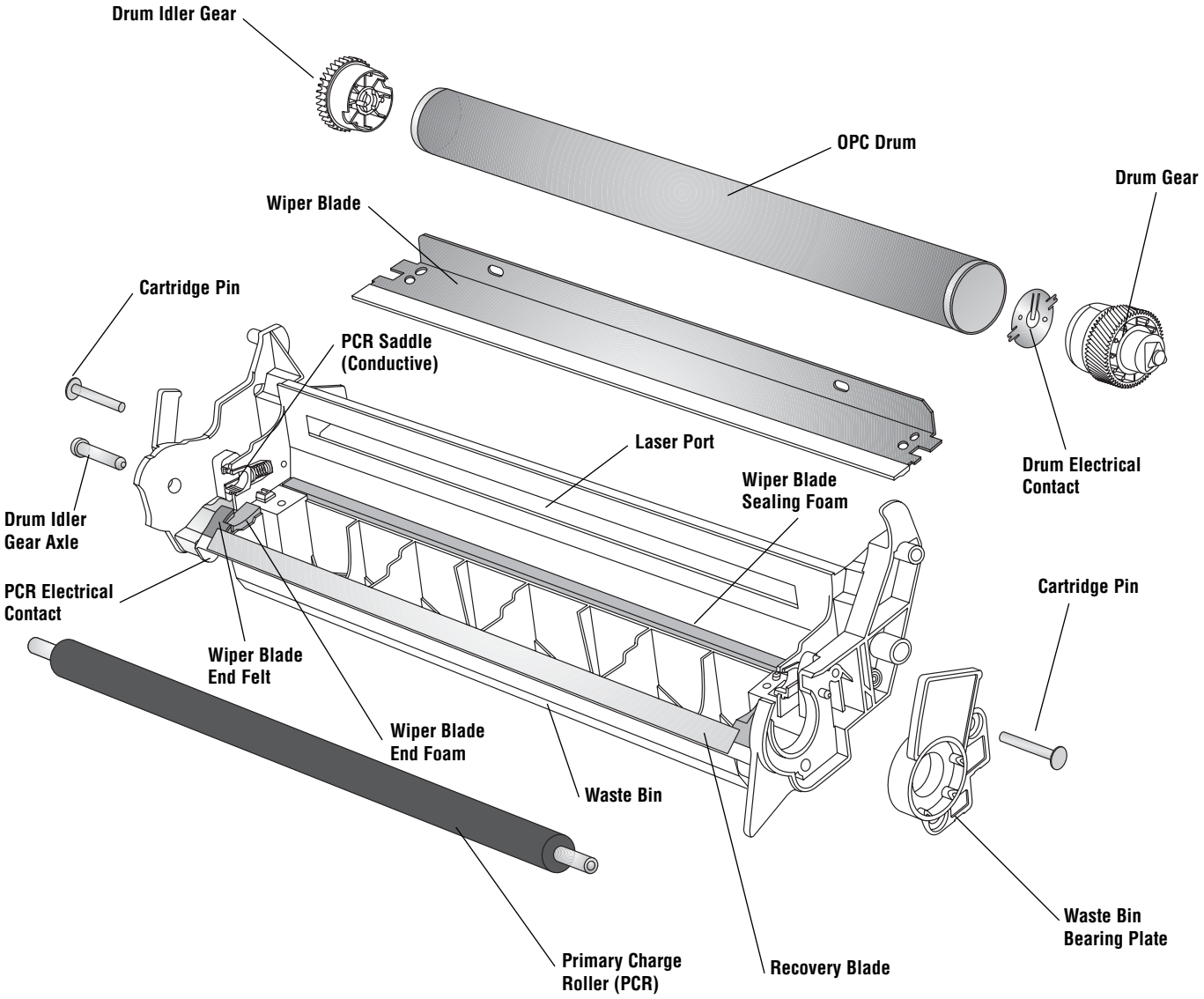




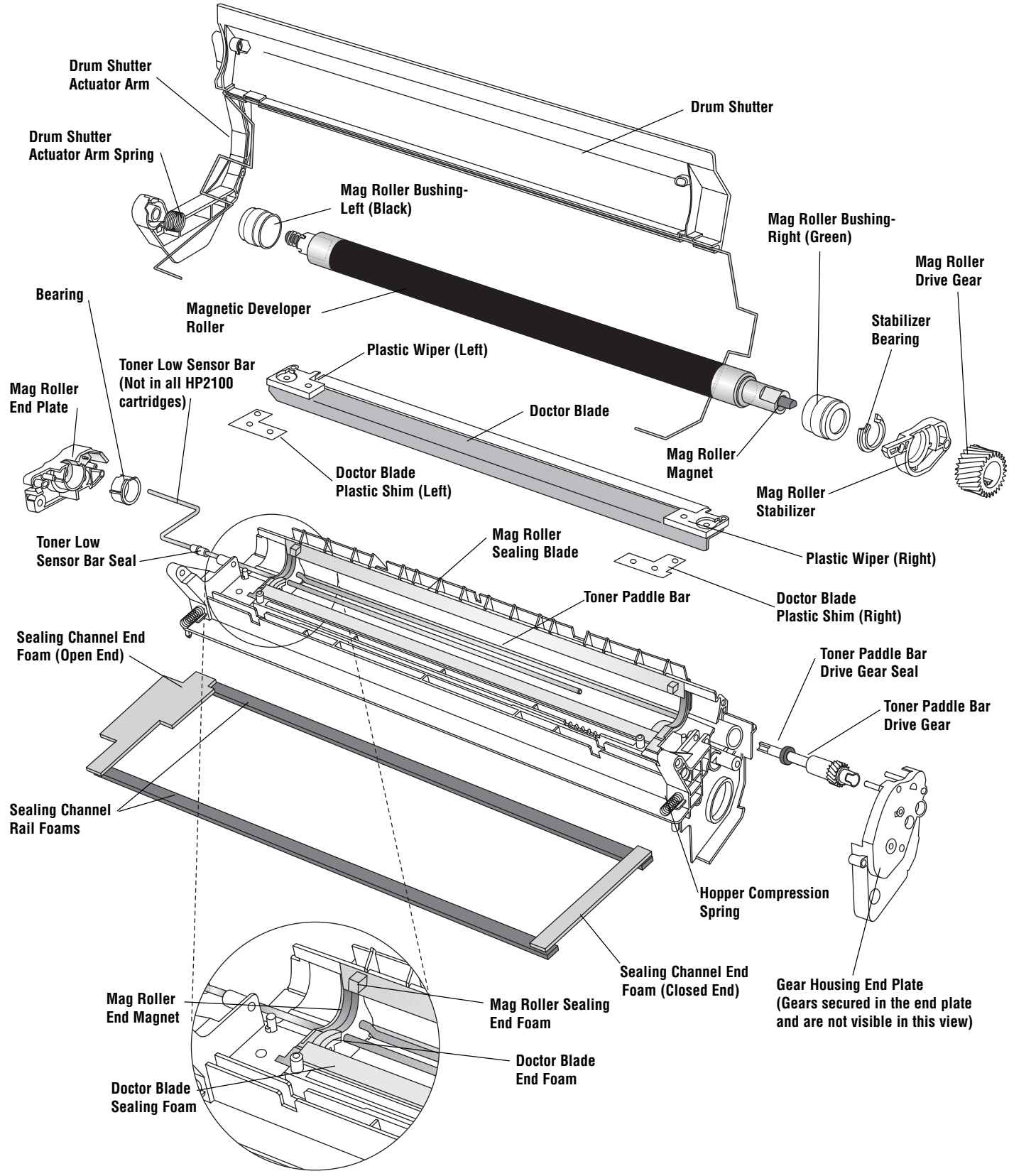


Notes:

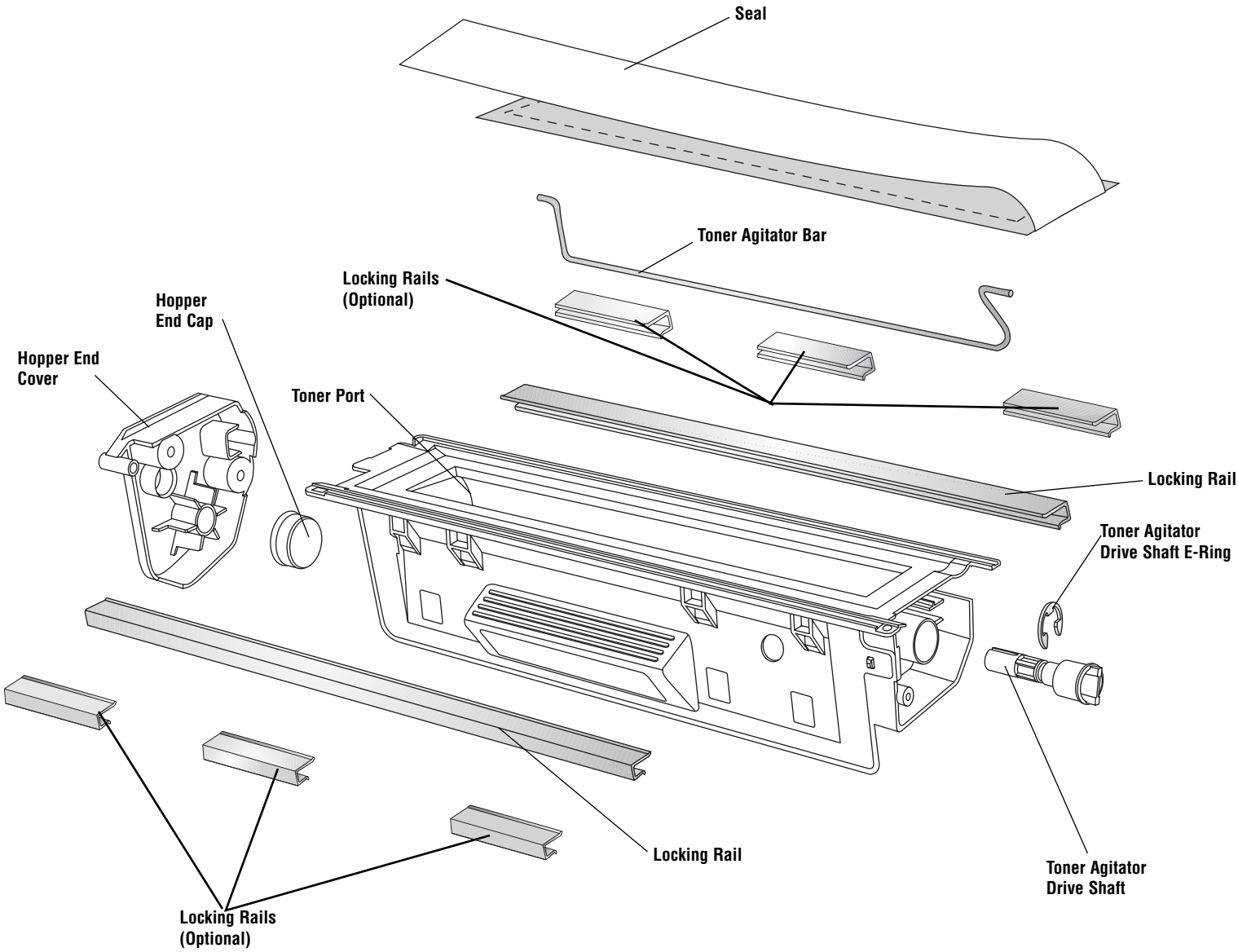
Waste Bin Section (HP2100)



Mag Roller Housing (HP2100)



Toner Reservoir (HP2100)



Notes:

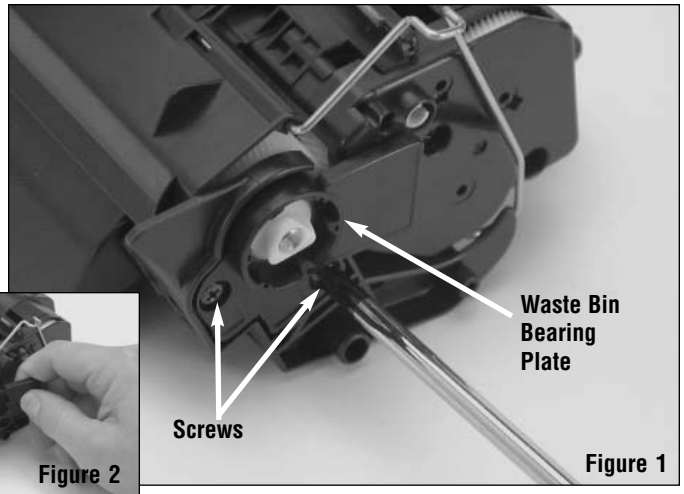
Separating the Cartridge

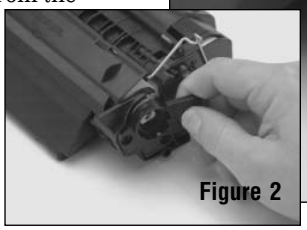
This section provides the information needed to separate the waste bin and hopper sections of the cartridge.

1. Remove the waste bin bearing plate.

   a. Remove the two screws that secure the Waste Bin Bearing Plate using a Phillips® screwdriver. See Figure 1.

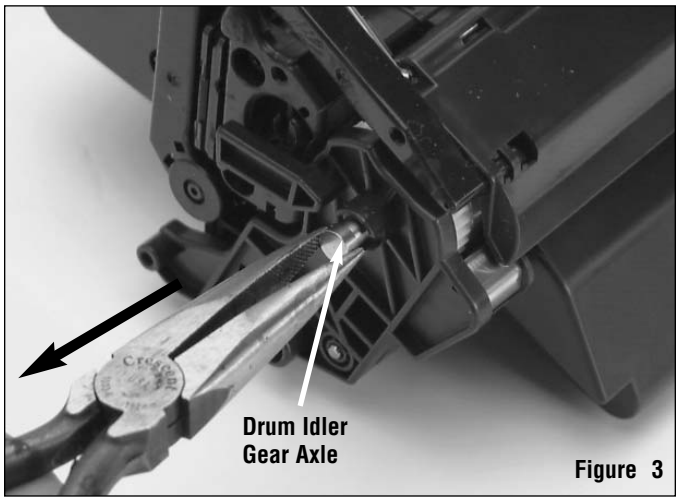
   b. Then, remove the Waste Bin Bearing Plate from the cartridge as shown in Figure 2.





Remove the Waste Bin Bearing Plate by removing the 2 screws.

2. Using a pair of needle nose pliers remove the Drum Idler Gear Axle as shown in Figure 3.



Remove the Drum Idler Gear Axle with needle nose pliers.

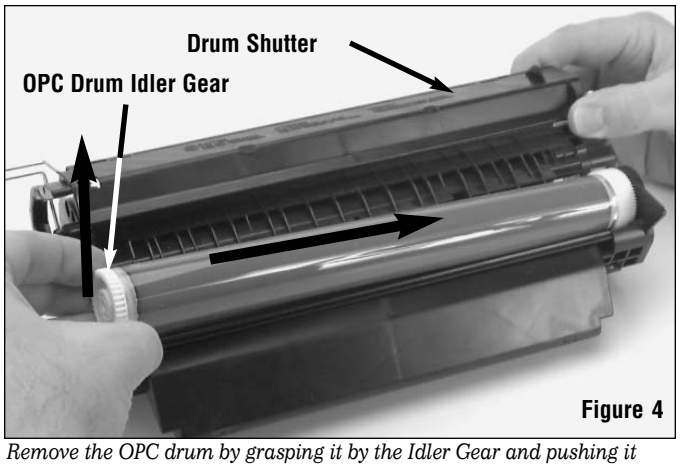
3. Remove the Organic Photoconductor(OPC) Drum. See Figure 4.

   a. Hold the Drum Shutter open.

   b. Using the OPC Drum Idler Gear push the OPC drum toward. the drive (or right) side of the cartridge.

   c. Then lift the drum out of the cartridge holding the OPC drum by the Idler Gear.

Note: If you plan to reuse the OPC drum. Ensure that it is stored in a safe light restricted area for future use.

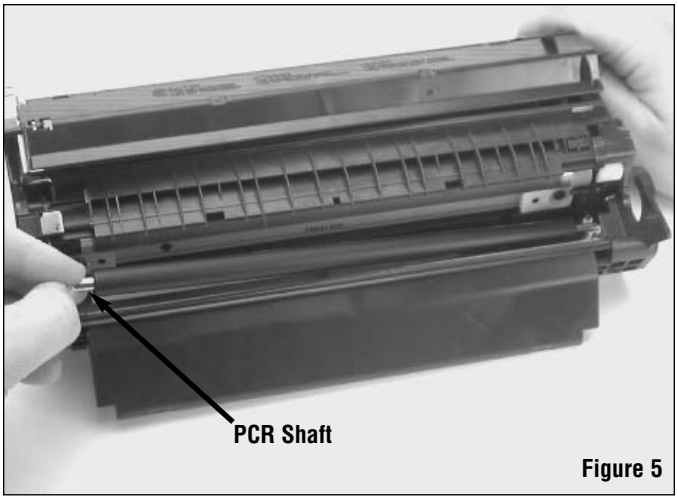


Remove the OPC drum by grasping it by the Idler Gear and pushing it toward the drive gear side of the cartridge; then, lift the OPC drum out.

Separating the Cartridge

4. Using a pair of needle nose pliers to grasp the Primary Charge Roller (PCR) Shaft; then, lift the PCR from the cartridge. See Figure 5.

Note: See page 36 for information on cleaning the PCR.



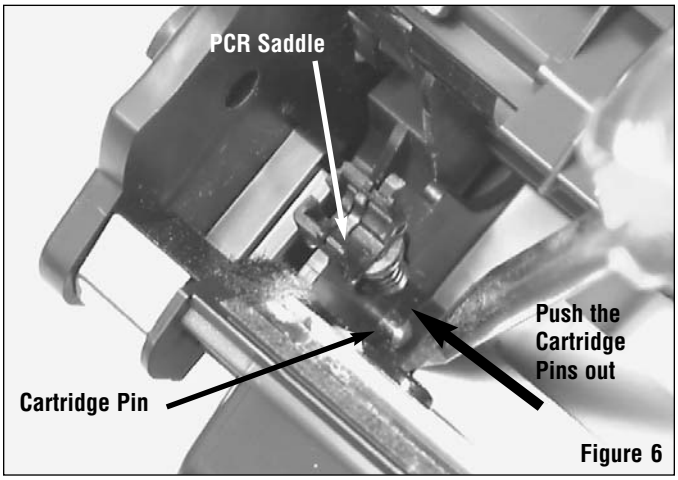
Using the PCR shaft lift the PCR from the cartridge.

5. Remove the Cartridge Pins from the cartridge. Refer to Figure 6.

   a. Locate the two Cartridge Pins under the PCR Saddles on each end of the cartridge.

   b. Using a flat tipped screwdriver, place the blade of the screwdriver against the end of the pin; then, tap the screwdriver to push the pin outward until it is flush with the inside surface of the cartridge.

   c. Using a pair of pliers grasp the Cartridge Pins on the outside of the cartridge and pull them out.



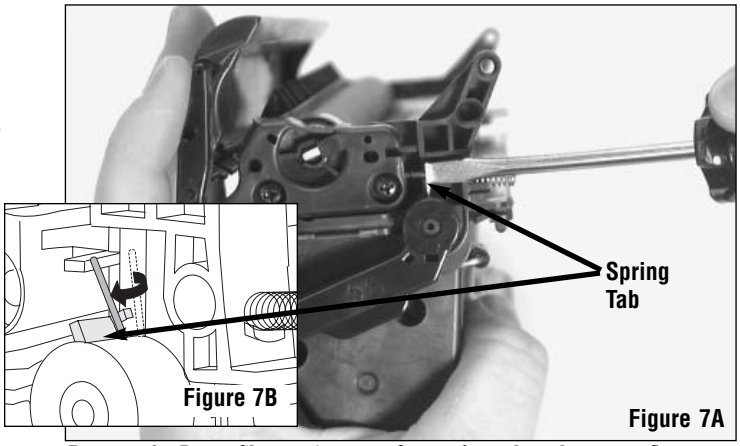
Using a screwdriver push the Cartridge pins out toward the outside of the cartridge; then, use a pair of pliers to remove the Cartridge Pins from the cartridge.

6. Now separate the two halves of the cartridge.

Disassembling the Hopper Section

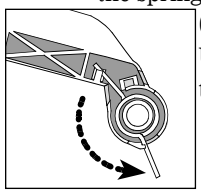
1. Remove the Drum Shutter from the hopper section.

   a. While holding the Drum Shutter open, and using a flat tipped screwdriver. Pry the leg of the Drum Shutter Actuator Spring from its position on the cartridge body and place it on the tab of the Drum Shutter Actuator Arm. See figures 7A and 7B.



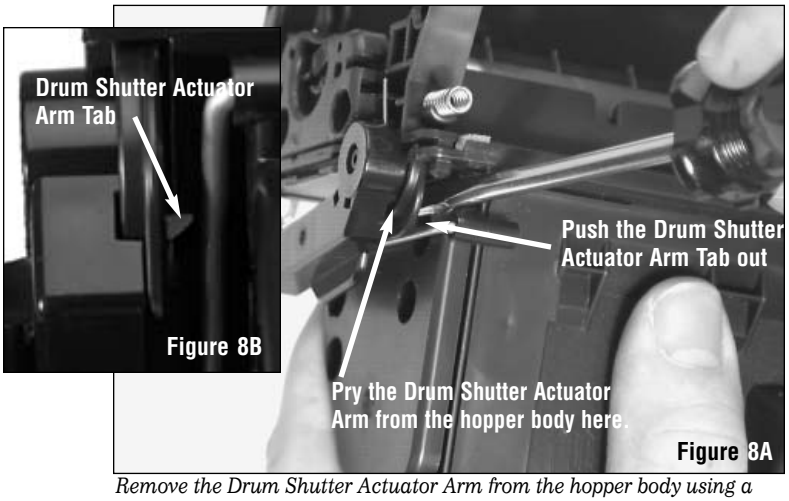
Remove the Drum Shutter Actuator Spring from the tab using a flat tipped screwdriver.

Note: If the Drum Shutter Actuator Spring falls out of the Drum Shutter Actuator Arm it must be reinstalled. If the spring is lost or broken order SCC product code (4KDSAS).



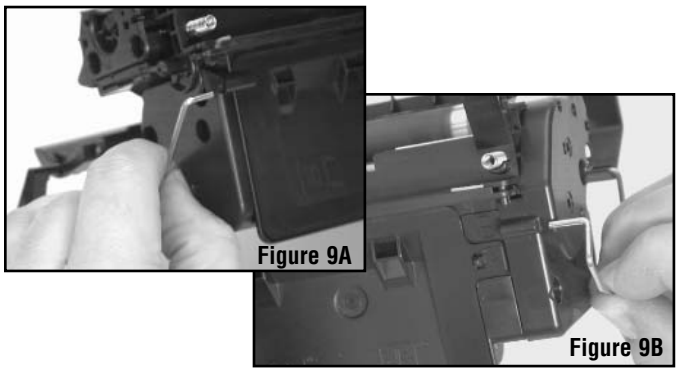
Use this figure as a guide to help reinstall the spring.

   b. From behind the Drum Shutter Actuator Arm, use a flat tipped screwdriver to push the Drum Shutter Actuator Arm Tab out. If the Drum Shutter Actuator Arm is damaged or broken use SCC product code (4KDSARM) to order a replacement. See figures 8A and 8b.



Remove the Drum Shutter Actuator Arm from the hopper body using a screw driver.

   c. Then, remove the Drum Shutter Actuator Arm and support bar from the hopper body. See figure 9A and 9B.



Remove the Drum Shutter Actuator Arm Support Bar from the hopper body.

Disassembling the Hopper Section

2. Remove the Mag Roller. See figures 10A and 10B.

   a. Remove the screws securing the contact end plate to the hopper body.

   b. Press down on the Tab located on top to of the end plate. This will release the Contact Side End Plate completely from the Hopper body.

Note: In some instances, the Mag Roller Bearing may remain in the end plate. If this happens you may remove it and install it on the Mag Roller, or leave it in place.

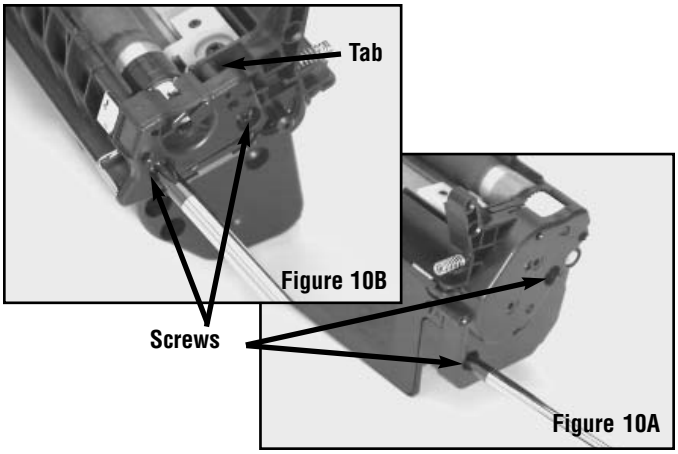
   c. Next, remove the drive side end plate by removing the 2 mounting screws and pulling the end plate off the cartridge body.

   d. Grasp the Mag Roller by the Mag Roller Drive Gear and the Mag Roller Bushing on the opposite end; then, lift the Mag Roller out of the hopper body. See figure 11. If the Mag Roller is damaged or worn, use SCC product code (4KMDR-OS) to order a replacement and ensure that the Mag Roller Bushings are installed properly .

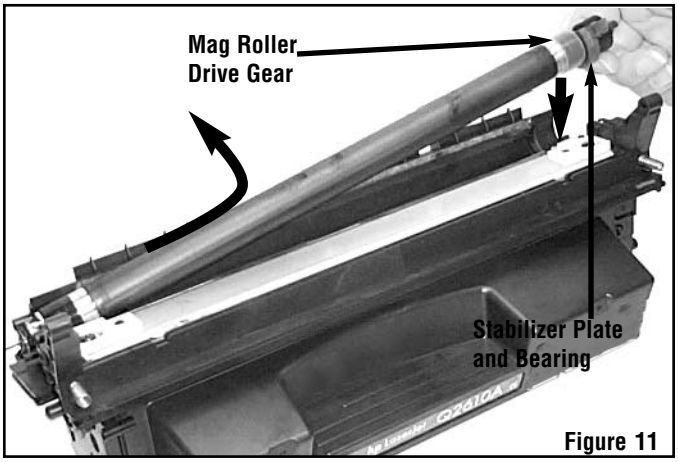
Note: The Stabilizer Plate and Bearing must clear the edge of the cartridge body to remove the Mag Roller. If the Mag Roller Stabilizer Plate or Bearing is damaged or worn, use SCC product code (4KMDRS) and (4KSBEARING) to order replacements.

Additional Mag Roller Information:

- There are 2 bushings installed on the Mag Roller, a green(short) one and a black (long) one.
- The green or short bushing (4KSBUSH-S) should be installed on the drive side of the Mag Roller.
- The black or long bushing (4KSBUSH-L)should be installed on the contact side of the Mag Roller.
- Do not use isopropyl alcohol to clean the Mag Roller. To properly clean the Mag Roller use ionized, dry, filtered, compressed air.
- Inspect the Mag Roller Sealing Blade for signs of wear or damage. If necessary, use SCC product code (LJ4MRSBLADE) to order a replacement.
- Inspect the Mag Roller Sealing Foam for signs of wear or damage. If necessary, use SCC product code (4KMRSFAOM) to order a replacement.



Remove the screws securing the end plates to the hopper body.



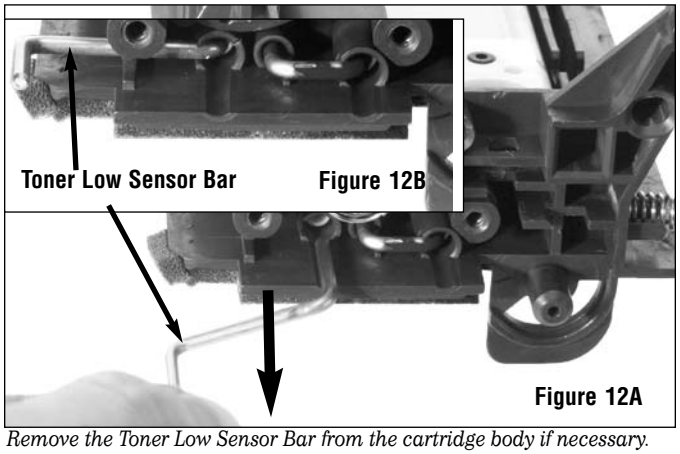
Grasp the Mag Roller Drive Gear, and lift the Drive Gear, and Stabilizer Plate up slightly;then, while pulling slightly to the right side lift the mag Roller out of the cartridge.

Disassembling the Hopper Section

3. If necessary, remove the Toner Low Sensor Bar. See figure 12A and 12B.

   a. Use a flat tipped screw driver to pry the Toner Low Sensor Bar loose.

   b. Then, remove the Toner Low Sensor Bar from the cartridge and place it in a safe place for future use.



Remove the Toner Low Sensor Bar from the cartridge body if necessary. Not all cartridges have Toner Low Sensor Bars.

⚠ Caution:

If your cartridge has a toner low sensor bar. It must be removed before splitting the cartridge.

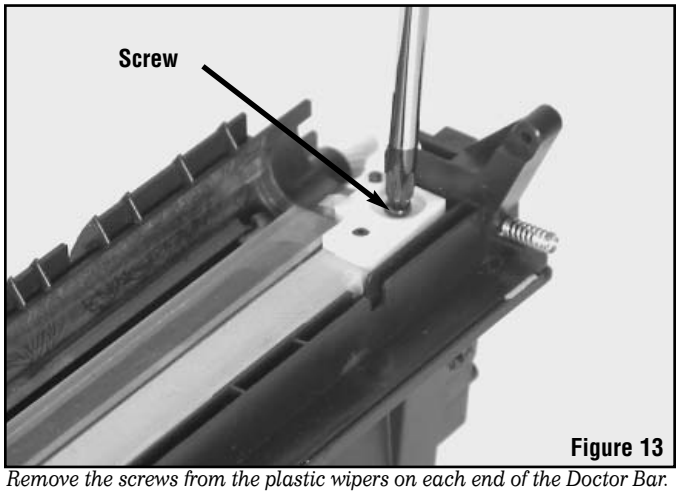
Notes:

1. Some HP2100 cartridges do not have a Toner Low Sensor Bar.

2. The Toner Low Sensor Bar only needs to be removed if the hopper body is to be split. If the hopper body has been split previously, then skip this step and continue with the disassembly.

4. Remove the Doctor Blade from the hopper body. See figure 13.

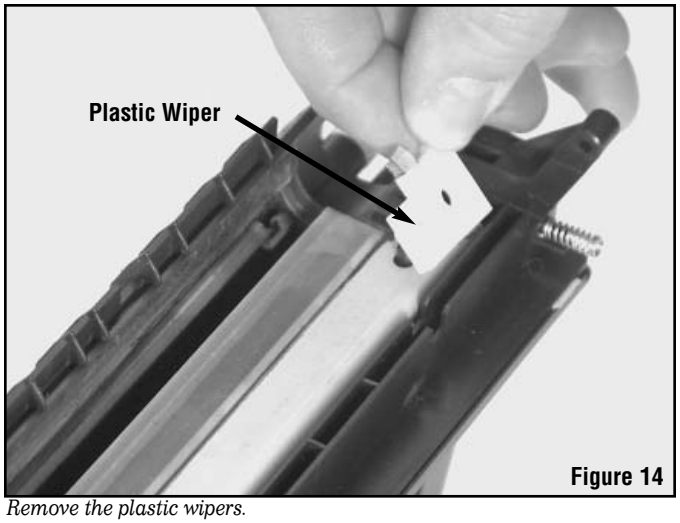
   a. Remove the 2 screws from the plastic wipers on both ends of the Doctor Blade. You should note that these screws are longer than any of the others. Be sure to put them in a safe place for future use.



Remove the screws from the plastic wipers on each end of the Doctor Bar.

Disassembling the Hopper Section

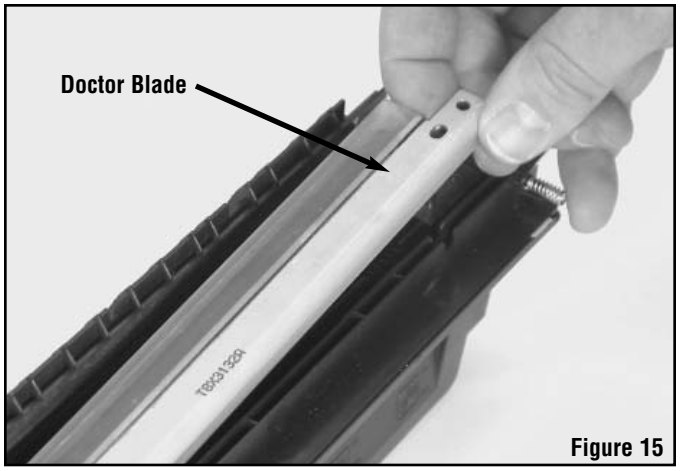
b. Remove the Plastic Wipers from the Doctor Blade as shown in figure 14. If tabs are worn or broken discard them and order replacements using SCC's product code (HP41MDRWTAB);then, store them in a safe place for use once the cartridge is ready to be reassembled.



Remove the plastic wipers.

c. Lift the Doctor Blade out of the hopper body as shown in figure 15.

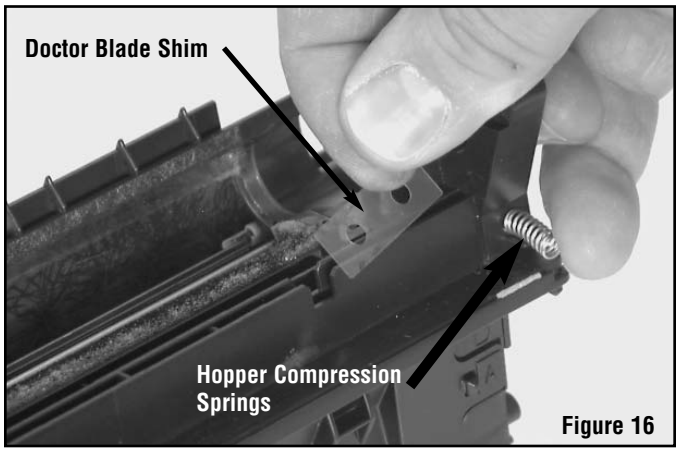
Note: If this is a virgin cartridge it may be difficult to remove the Doctor Blade. If necessary use a small flat tipped screw driver to gently pry up the drive side of the Doctor Blade; then, remove it from the hopper body.



Lift the edge of the Doctor Blade and remove it from the hopper body.

d. Remove the clear plastic Doctor Blade Shims that were under the Doctor Blade. See figure 16. Place the shims in a safe place for reuse.

Note: Secure the Toner Paddle Bar Drive Gear in place using a small piece of tape to prevent it from falling out during cleaning and storage of the hopper section. See the diagrams on page 7(HP2300) and page 11(HP2100) for the location of the Toner Paddle Bar Drive Gear.



Remove the Doctor Blade Shims, and if necessary the Hopper Compression Springs.

5. Inspect the Doctor Blade Sealing and End Foams. If they are worn or damaged, remove them and clean off any residual adhesive with 91%- 99% Isopropyl Alcohol. For detailed instructions on how to remove and replace the Doctor Blade Sealing and End Foams see step #4 on page 28.

Disassembling the Hopper Section

6. Split the Hopper.

Note: You will need to split the hopper in preparation for filling it with toner, sealing it, and reassembly. For detailed information on how to split the hopper, see SSS™ # 278 "*How to use your...HP2100 RapidSplitter™ Power Splitting System*"; then, return here and continue with these instructions.

7. Remove the End Plate to gain access to the Hopper Cap. (For best results use SCC's End Plate Kit (HP21EPLATEKIT).

   a. Locate the access shafts to the heat welds on the contact end of the cartridge body. See Figure 17.

   b. Using SCC's Hopper End Cover Removal Tool (5KHECRTOOL) and a 1000 Revolutions Per Minute (RPM) electric drill. Remove the heat welds that secure the End Plate to the cartridge body.

   c. Use a flat tipped screw driver to pry the End Cap from the cartridge body;then, discard the End Cap. For detailed information on how to remove the end cap, see SSS™ # 310 "*How to use your...HP2100 End Plate Kit*"; then, return here.

8. Clean the Hopper Section Body and its parts with ionized, dry, filtered, compressed air. Then, ensure that all the parts have been placed in safe location for later use.

Note: See "*Cleaning Tips & Techniques for Critical Imaging Components*" on page 36.

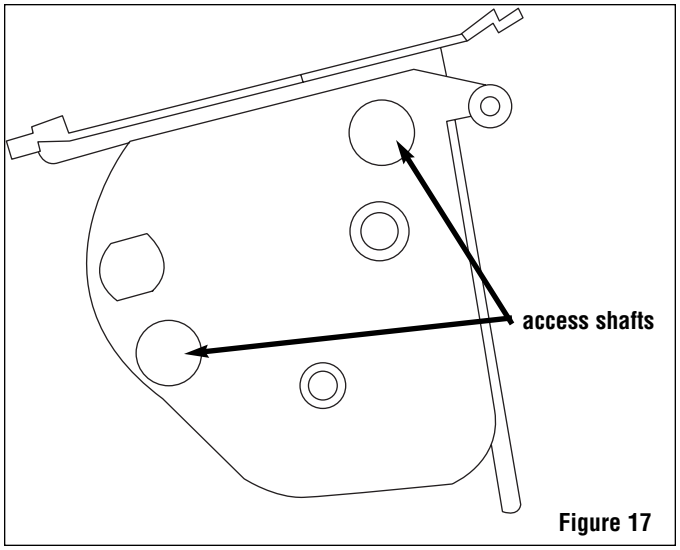


Figure 17

Use a Hopper End Cover Removal Tool (5KHECRTOOL) to remove the heat welds; then, remove the End Cap from the cartridge body.

⚠ Caution:

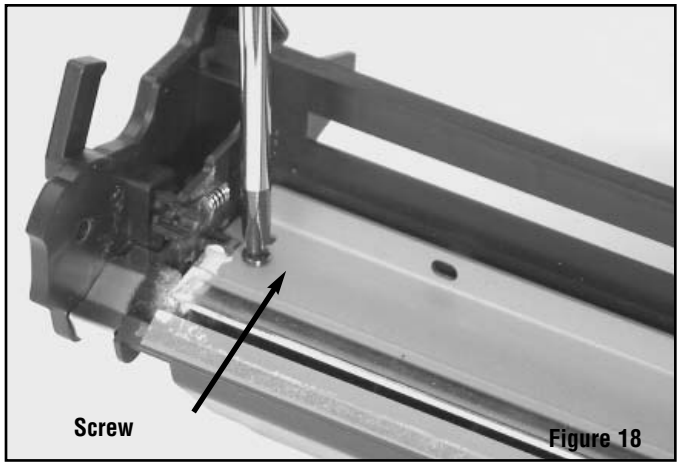
If your cartridge has a toner low sensor bar. It must be removed before splitting the cartridge. If you attempt to split the HP2300/2100 cartridge with the Toner Low Sensor Bar installed, it will result in damage to the RapidSplitter™ and possible bodily injury.

Notes:

Disassembling the Waste Bin

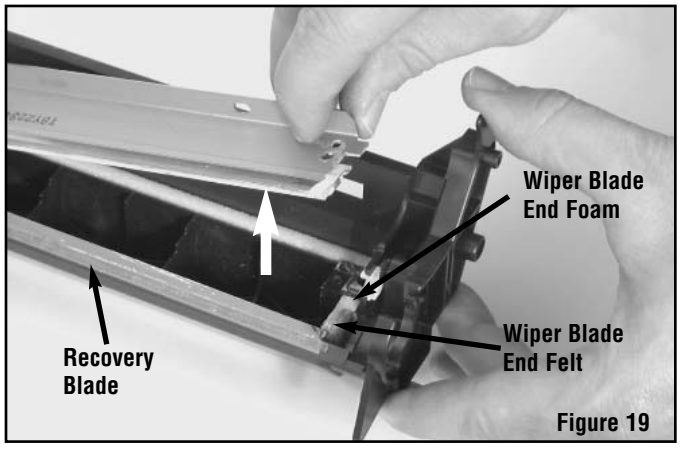
1. Remove the Wiper Blade from Waste Bin body.

   a. Remove the 2 screws securing the Wiper Blade to the Waste Bin body. See figure 18.



Remove the screws from the Wiper Blade.

   b. Grasp one end of the Wiper Blade and lift it out of the Waste Bin.



Remove the Wiper Blade from the Waste Bin.

2. Inspect the Wiper Blade End Felts, Wiper Blade End Foams, and the Recovery Blade for signs of wear or damage. For detailed information on how to replace the Wiper Blade End Felts (4KWBEFELT), Wiper Blade End Foams (4KWBEFOAM), and the Recovery Blade (PRECB-LJ4 or LJ4RECBLADE) see step 1 on page 24.

Notes:

   1. When inspecting for wear or damage, you are looking for uneven spots , edges, or broken parts.

   2. Some Felts can be saved by simply brushing them with a blunt object such as the end of a screw driver.

   3. If the foams or felts are damaged or worn, remove them from the hopper body and be sure to clean the surfaces with 91%-99% isopropyl alcohol to remove any residual adhesive.

3. Clean the Waste Bin Section Body with ionized, dry, filtered, compressed air, 91%-99% isopropyl alcohol, and a lint-free cloth. Then, ensure that all the parts have been placed in safe location for later use.

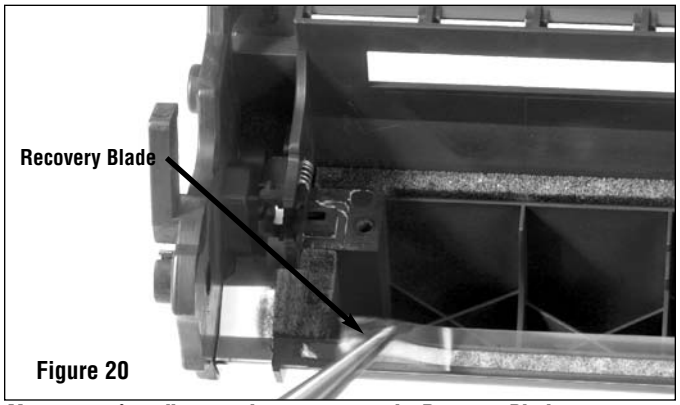
Notes:

Assembling the Waste Bin Section

This section provides the information needed to assemble the Waste Bin Section of the cartridge. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

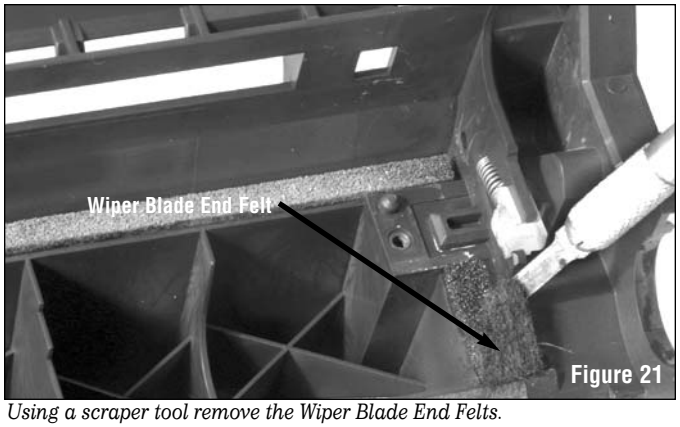
1. If necessary replace the Recovery Blade (PRECB-LJ4 or LJ4RECBLADE), Wiper Blade End Felts (4KWBEFELT), and the Wiper Blade End Foams (4KWBEFOAM) from the cartridge body.

   a. Using a pair of needle nose pliers, peel the recovery blade from the cartridge body. See figure 20.



Use a pair of needle nose pliers to remove the Recovery Blade.

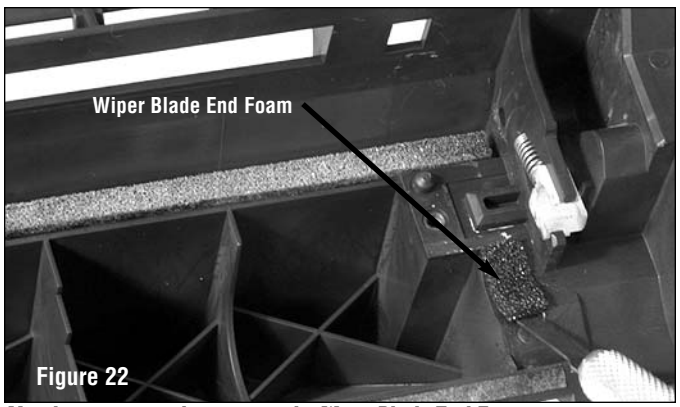
   b. Next remove the Wiper Blade End Felts, using a scraper tool (FSTOOL). Peel the Wiper Blade End Felts up and off the cartridge body, as shown in figure 21. SCC has created a kit (4KWBEFMKT), which includes the tools and felts to perform this procedure.



Using a scraper tool remove the Wiper Blade End Felts.

   c. Then, using the scraper tool remove the Wiper Blade End Foams from each end of the cartridge. See figure 22.

   d. Remove any adhesive residue from the cartridge body by wiping the areas down with 91%-99% isopropyl alcohol and a lint free cloth.



Use the scraper tool to remove the Wiper Blade End Foams.

Assembling the Waste Bin Section

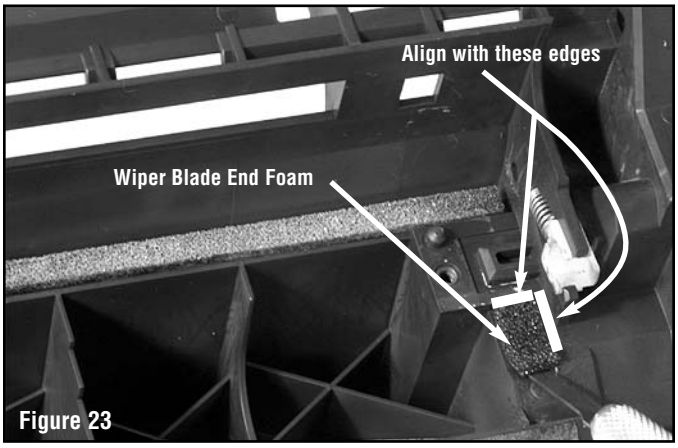
2. Install new Wiper Blade End Foams (4KWBEFOAM), Wiper Blade End Felts (4KWBEFELT), and a new Recovery Blade (PRECB-LJ4 or LJ4RECBLADE).

   a. To install the Wiper Blade End Foams:

      1. Remove the backing from the Wiper Blade End Foam.

      2. Align the straight edge of the Wiper Blade End Foam with the edge of the cartridge body; then, using the scraper tool, place the Wiper Blade End foam in to the cartridge body. See figure 23.

      3. Press the Wiper Blade End Foam firmly in to place. (Repeat on the opposite end of the cartridge).



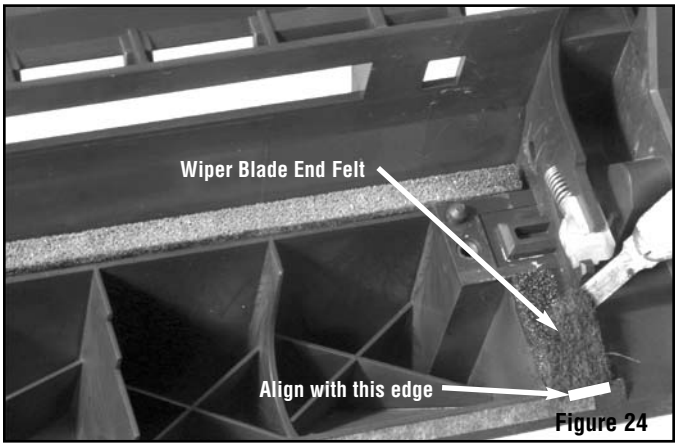
Using a scraper tool install the Wiper Blade End Foams in the cartridge body.

   b. To install the Wiper Blade End Felts:

      1. Remove the backing from the Wiper Blade End Felt.

      2. Using a scraper tool align the front edge of the Wiper Blade End Felt with the ledge, just in front of where the Recovery Blade is installed. See figure 24.

      3. Press the Wiper Blade End Felt firmly in to place. (Repeat on the opposite end of the cartridge).



Using a scraper tool install the Wiper Blade End Felts in the cartridge body.

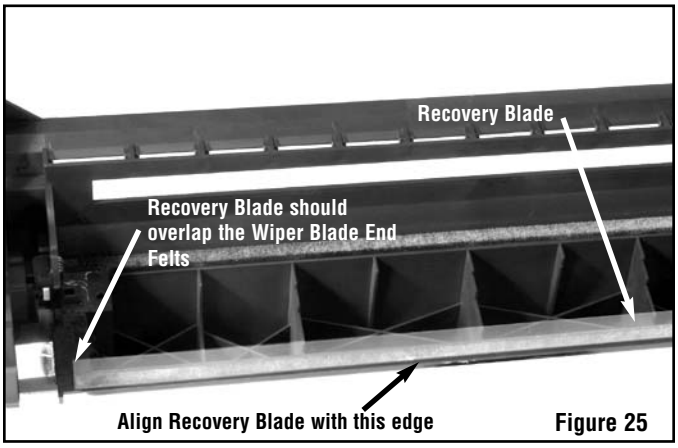
   c. To install the Recovery Blade:
   (For best results use SCC's Poly Recovery Blade Installation Kit (RBIKIT-PBL) or Mylar Recovery Blade Installation Kit (RBIKIT)).

      1. Remove the backing from the Recovery Blade.

      2. Position the Recovery Blade so that it overlaps the Wiper Blade End Felts, and is aligned with the front edge of the cartridge body. See figure 25.

      3. Then, using your fingers press down firmly along the entire length of the Recovery Blade.

   d. Continue on to the step 3 on the next page.



Position the Recovery Blade so that it overlaps the Wiper Blade End Felts, and is aligned with the front edge of the cartridge body.

Assembling the Waste Bin Section

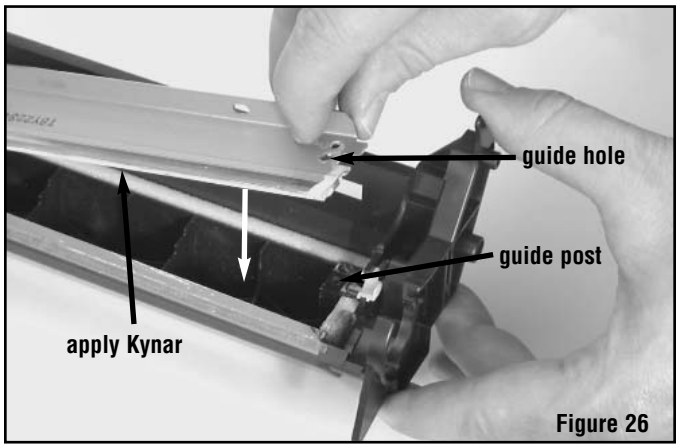
3. Install the Wiper Blade in the cartridge body.

   a. Dip the working edge of the Wiper Blade in a long, shallow trough containing Kynar® (KPOW) lubricating powder; then, repeat once to insure even coverage.

   b. Tap the Wiper Blade once against the edge of the trough to remove excess Kynar lubricating powder from the Wiper Blade.

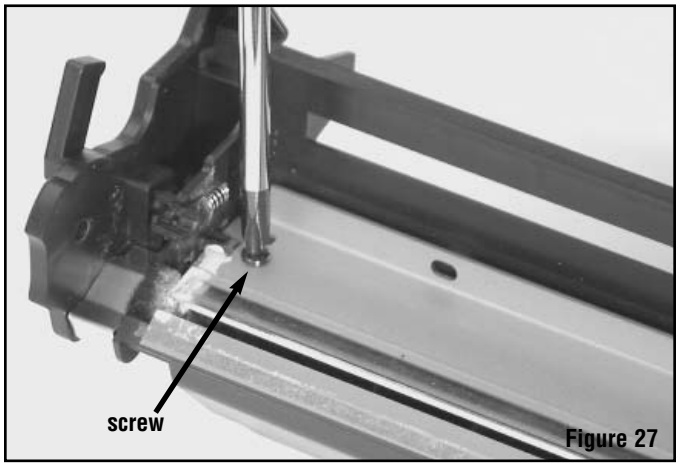
   c. Orientate the Wiper Blade so that the guide hole is directly over the guide post on the cartridge body as shown in figure 26.

   d. Then, lower the Wiper Blade in to place.



Apply Kynar lubricating powder to the working edge; then, line up the guide hole with guide post and install the Wiper Blade.

   e. Next, secure the Wiper Blade in place using 2 screws. See figure 27.



Secure the Wiper Blade with 2 screws one on each end.

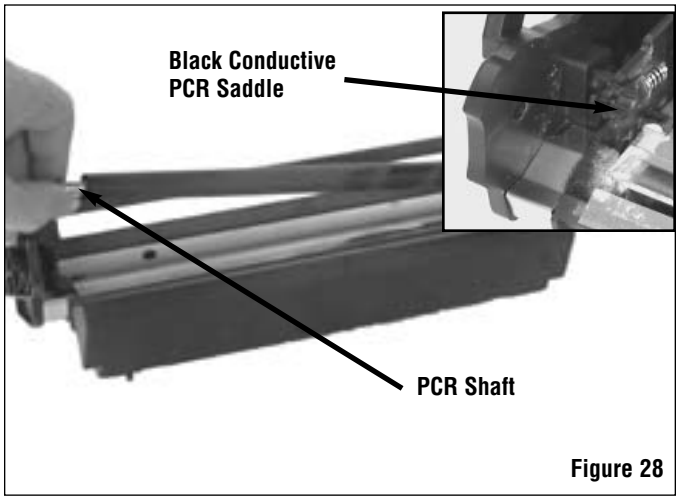
4. Install the PCR in the Waste Bin Section.

   a. Clean the Black Conductive PCR Saddle on the contact side of cartridge with a cotton-tipped swab dampened with 91-99% isopropyl alcohol.

   b. Using the wooden end of the swab, apply a small amount of conductive cartridge lubricant to the inside of the PCR Saddle.

   c. Holding the PCR by the shaft, place it on top of the PCR Saddles inside the cartridge body as shown in figure 28.

   d. Using your thumb or a straight slotted screwdriver, press down firmly on the PCR shaft above the PCR Saddles. The PCR will snap in to place.



Apply conductive grease to the Black Conductive PCR Saddle; then, using the PCR shaft place the PCR on top of the PCR Saddles and press it in to place.

Assembling the Waste Bin Section

5. Install the OPC Drum in the Waste Bin Section.

   a. Grasp the OPC Drum by the Idler Gear.

   b. Insert the drive side of the OPC Drum in to the cartridge body first as shown in figure 29.

   c. While applying slight pressure toward the drive side, press the Idler Gear in to the cartridge body.

   d. Install the Drum Idler Gear Axle in to the cartridge body as shown in figure 30.

Notes:

1. If the Drum Idler Gear Axle does not slide in easily, apply slight downward pressure to the Idler Gear. This should align the hole in the Idler Gear with hole in the cartridge body.

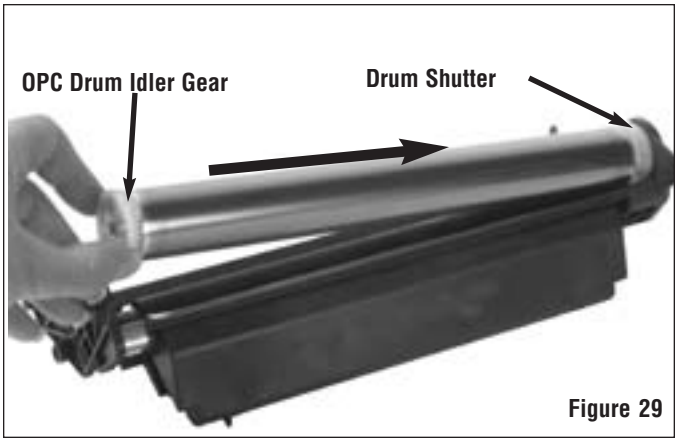
2. In most cases no tools are required to install the Drum Idler Gear Axle. If you do use tools such as the needle nose pliers shown in the figure. Be careful not to push the Drum Idler Gear Axle through the side of the cartridge body.

   e. Clean around the perimeter Waste Bin Bearing Plate with isopropyl alcohol.

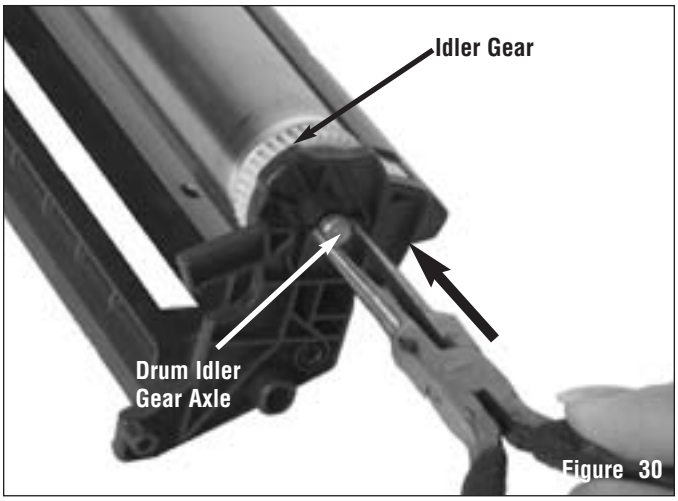
   f. Using a cotton swab, apply four drops (size of the diameter of a cartridge pin) of Lubriplate #105 Motor Assembly Grease (found in auto parts stores) around the perimeter of the Waste Bin Bearing Plate as shown in Figure 31A. Then, lightly coat inside diameter wall of bearing plate with the greased cotton swab. See Figure 31A.

   g. Install the Waste Bin Bearing Plate on the drive side of the cartridge body; then, secure it in place using 2 screws. See figure 31B and 31C.

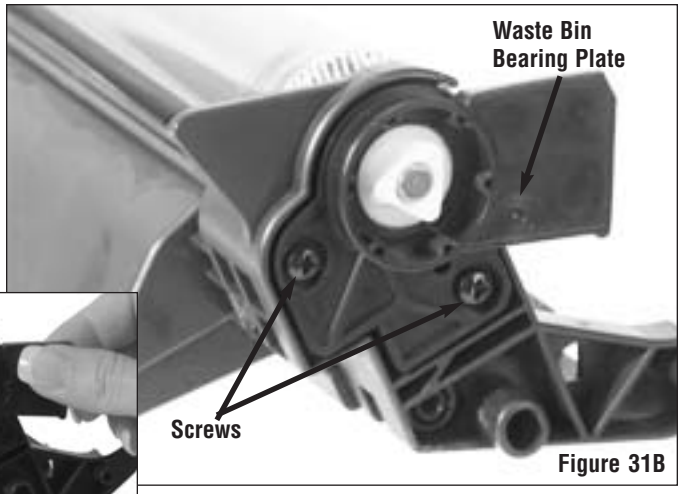
6. To continue reassembling the cartridge, go to page 28 and continue with "Assembling the Hopper Section"



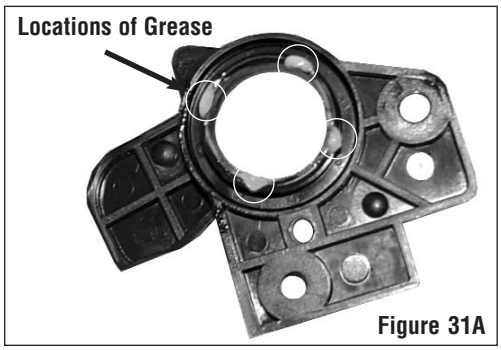
Install the OPC drum by grasping it by the Idler Gear and pushing it toward the drive gear side of the cartridge; then, press the OPC drum in.

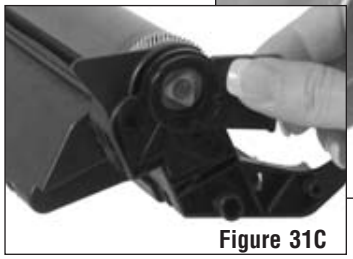


Install the Drum Idler Axle.



Install the Waste Bin Bearing Plate securing it with 2 screws.

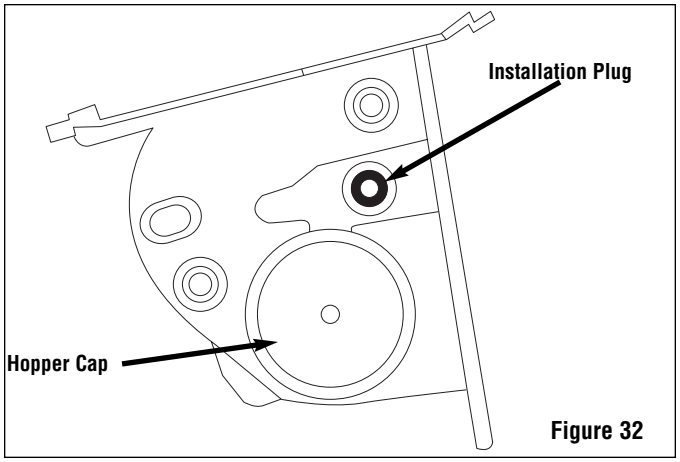




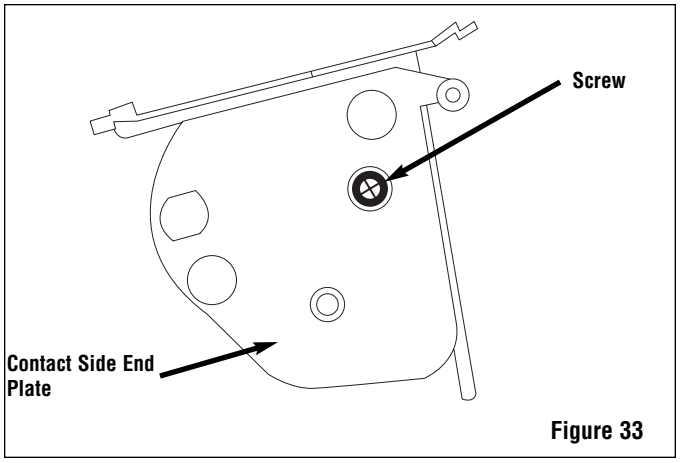
Assembling the Hopper Section

This section provides the information needed to assemble the Hopper Section of the cartridge. Before attempting to perform the following procedures, read the entire section carefully and follow all necessary safety precautions.

1. Seal the Hopper. For detailed instructions see, SSS™ #193 "*How to use your...HP4000 Split Hopper Sealing Systems*" (for HP2100) or SSS™ #567 "How to install...HP2300 Adhesive ProSeal™ (for HP2300);then, return here to complete the remanufacturing process.
2. If necessary fill the Hopper with Toner and install the Hopper Cap.
3. Reattach the Contact Side End Plate. See figure 32 and 33. For detailed instructions see, SSS™ #310 "*How to use your...HP2100 End Plate Kit (HP21EPLATEKIT)*".
   a. Get the replacement End Plate from the End Plate Kit.
   b. Place a couple of drops of multipurpose glue on one end of the end plate installation plug.
   c. Place some additional multipurpose glue around the outside rim of the installation plug. Do not allow the glue to flow into the center hole of the installation plug.
   d. Place the new End Plate on the Hopper and secure it with the screw provided in the kit. See figure 33.



Install the Contact Side End Plate.

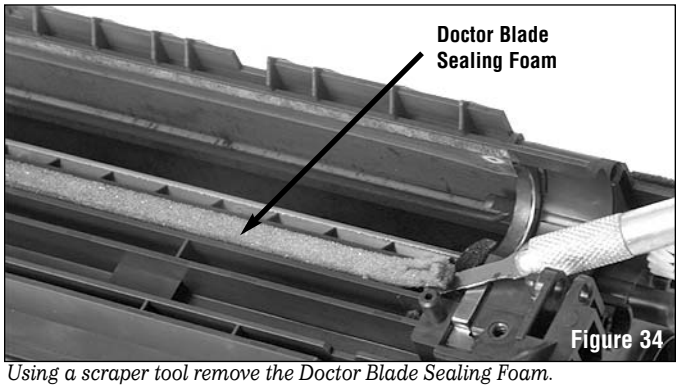


Secure the Contact Side End Plate using the screw provided.

4. If necessary replace the Doctor Blade Sealing and End Foams.

Note: The Doctor Blade Sealing and End Foams must be replaced if they are torn, damaged, or show signs of wear. Signs of wear are: Creases in the foam, holes, or flat spots.

   a. Using a scraper tool (FSTOOL), lift the edge of the Doctor Blade Sealing Foam; then, peel the sealing foam



Using a scraper tool remove the Doctor Blade Sealing Foam.

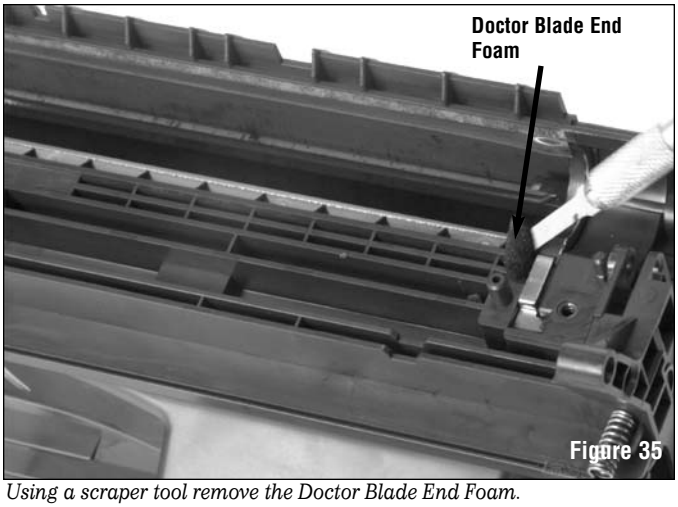
Assembling the Hopper Section

from the cartridge body. See figure 34.

b. Next, remove the Doctor Blade End Foams from the cartridge body as shown in figure 35.

c. Then using 91%-99% isopropyl alcohol remove any residual adhesive from the cartridge body.

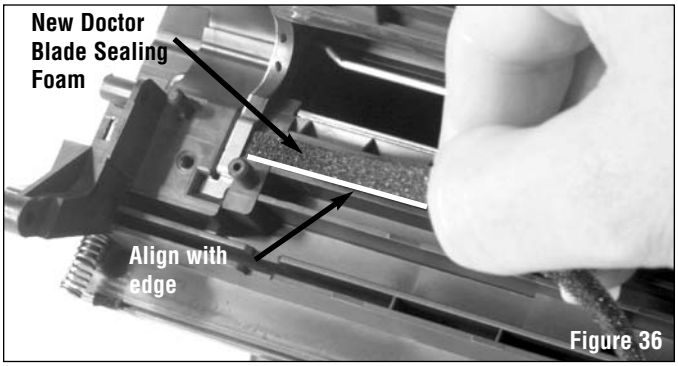
d. Install the new Doctor Blade Sealing Foam, by removing the protective strip from the back of the Doctor Blade Sealing Foam.



Using a scraper tool remove the Doctor Blade End Foam.

e. Then starting at one end, align the edge of the Doctor Blade Sealing Foam with the raised edge of the cartridge body as shown in figure 36.

f. Press the Doctor Blade Sealing Foam firmly in to place.



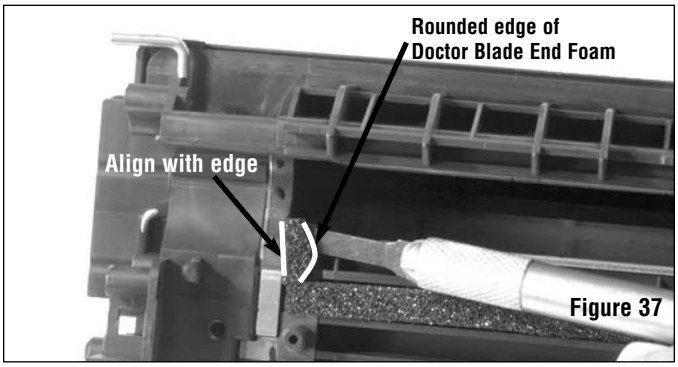
Starting at one end align the Doctor Blade Sealing Foam with the raised edge and press it firmly in to place.

g. Next install the new Doctor Blade End Foams. Remove the protective backing from the Doctor Blade End Foam.

h. Then, using a scraper tool to support the Doctor Blade End Foam. Align the flat edge of the Doctor Blade End Foam with the inside ledge of the cartridge body as shown in figure 37.

Note: Ensure that the rounded edge of the Doctor Blade End Foam is toward the inside of the hopper.

i. Press the Doctor Blade End Foam in to place; then, repeat step g and h, on the opposite side.



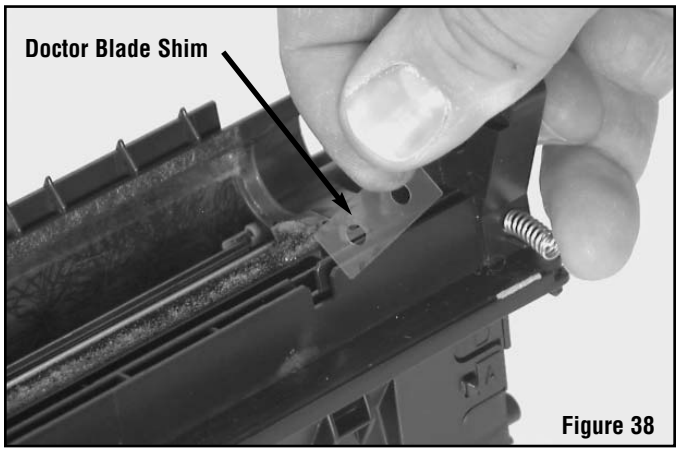
Using a scraper tool, place the Doctor Blade End Foam against the inside ledge, then press it firmly in place.

Assembling the Hopper Section

5. Install the Doctor Blade in to the cartridge body.

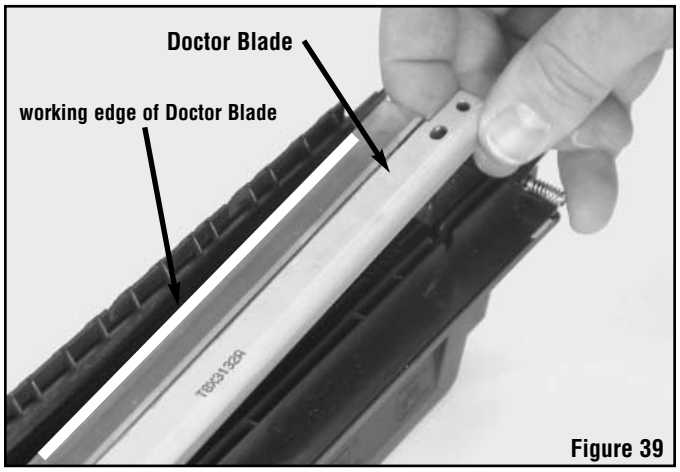
   a. Install the clear plastic Doctor Blade Shims. See figure 38.

Note: If you are remanufacturing an HP2300, remember that the 2 Doctor Blade Shims are different . See the diagrams on page 7 (HP2300) or page 11(HP2100).



Install the Doctor Blade Shims if necessary.

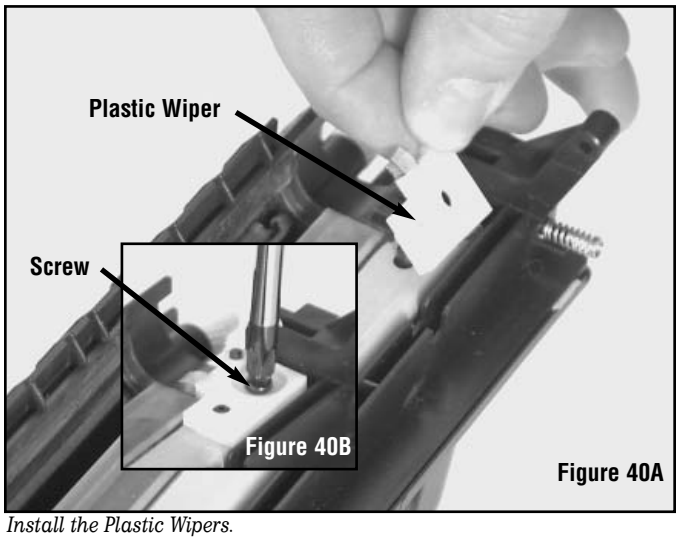
   b. Orientate the Doctor Blade so that the working edge is on toward the inside of the hopper; then, set the Doctor Blade in place. See figure 39.



Install the Doctor Blade in the hopper body.

   c. Place the 2 white Plastic Wipers on to the Doctor Blade as shown in figure 40A.

   d. Secure all of the Doctor Blade and its associated parts in place with the 2 long screws you removed during the disassembly of the Hopper. See the insert figure 40B.



Install the Plastic Wipers.

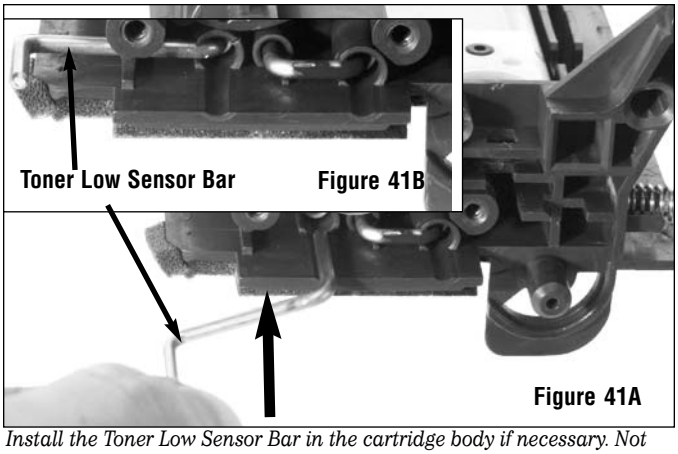
Assembling the Hopper Section

6. If necessary, install the Toner Low Sensor Bar. See figure 41A and 41B.

Note: Not all cartridges have a Toner Low Sensor Bar. Early models of the HP2100 and the present models of the HP2300 do have Toner Low Sensor Bars. However, newer HP2100 cartridges do not.

   a. Insert the long end of the Toner Low Sensor Bar in to the cartridge body as shown in figure 41A.

   b. Press firmly directly on the Toner Low Sensor Bar until it clicks in to place. See figure 41B.

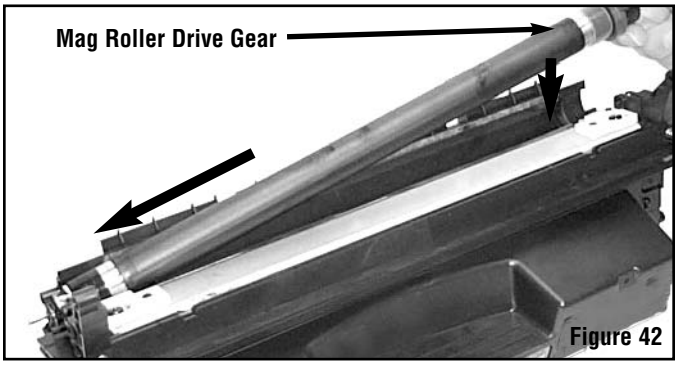


Install the Toner Low Sensor Bar in the cartridge body if necessary. Not all cartridges have Toner Low Sensor Bars.

7. Install the Mag Roller in to the cartridge body.

   a. Holding the Mag Roller by the Mag Roller Drive Gear and the Mag Roller Bushing on the contact end, place the contact end first as shown in figure 42.

   b. Then guide the Stabilizer Plate in to the slot on the drive side of the cartridge body.

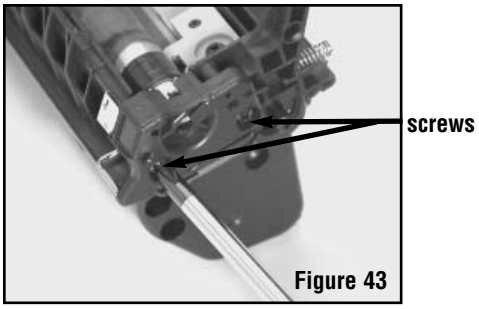


Install Mag Roller in to cartridge body.

8. Install the Mag Roller End Plate. Ensure that the Mag Roller Bearing is installed before continuing.

   a. Align the Mag Roller End Plate with the Mag Roller and the guides.

   b. Press the Mag Roller End Plate firmly in place, and secure it using 2 screws as shown in figure 43.



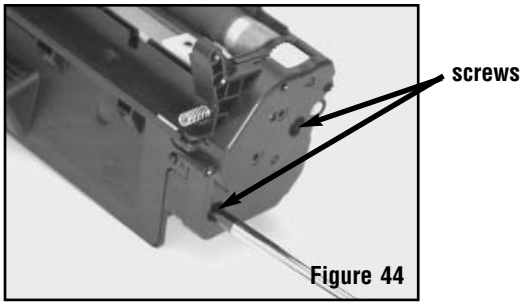
Install the screws securing the end plate to the hopper body.

Assembling the Hopper Section

9. Install the Gear Housing End Plate on to the drive side of the cartridge body.

   a. Align the guide pins on the Gear Housing End Plate with the holes in the cartridge body.

   b. Insert the guide pins in to the guide holes; then secure the Gear Housing End Plate in place using 2 screws. See figure 44.

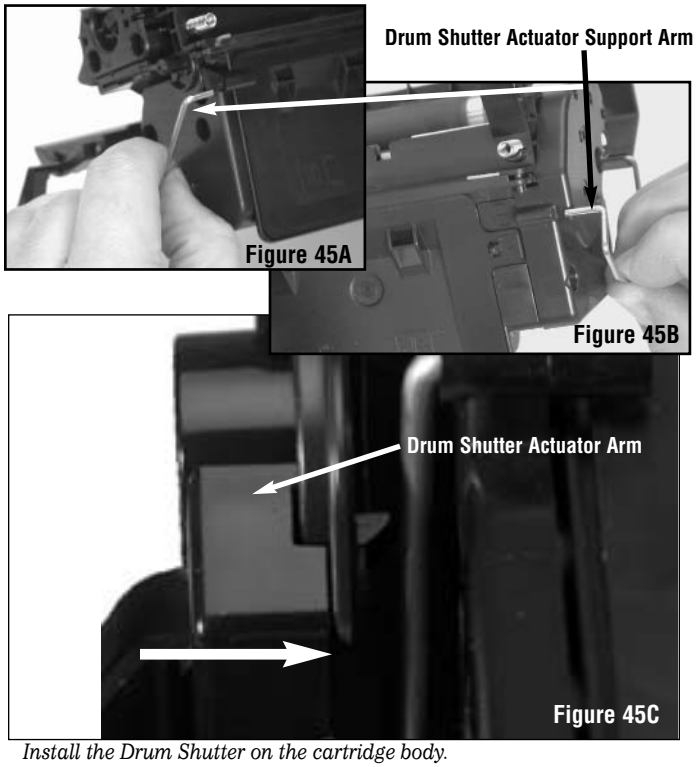


Install the screws securing the end plate to the hopper body.

10. Install the Drum Shutter on the cartridge body.

   a. First place the ends of the Drum Shutter Actuator Support Arm in to the holes on each side of the cartridge body as shown in figure 45A and 45B.

   b. Then, on the contact side of the cartridge press the Plastic Drum Shutter Actuator Arm in to place. See figure 45C.



Install the Drum Shutter on the cartridge body.

Assembling the Hopper Section

c. Release the Drum Shutter Actuator Arm Spring, letting the arm of the spring rest on the cartridge body as shown in figure 46.

d. Test the Drum Shutter to see if works properly.

Note:

1. To test the Drum Shutter, pull it back slightly then release it. The Drum Shutter should snap back in to the closed position.

2. If it does not shut properly, remove the Drum Shutter and repeat steps 10a through 10c again.

3. Ensure that the Drum Shutter Actuator Arm Spring is in place inside the Drum Shutter Actuator Arm and is not broken.

4. If problems persist, contact tech support for help.

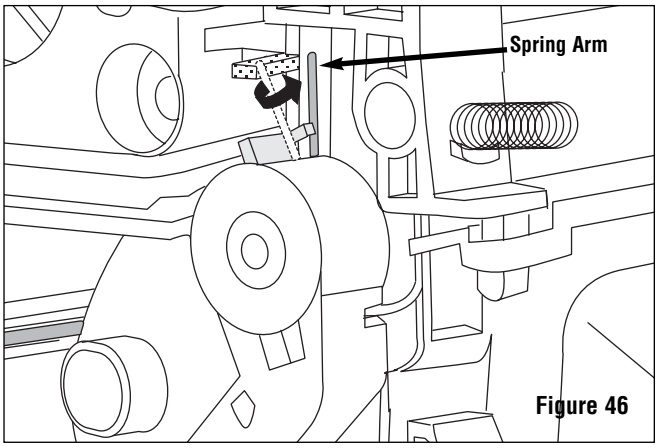


Figure 46

Let the Drum Shutter Actuator Arm Spring rest against the cartridge body.

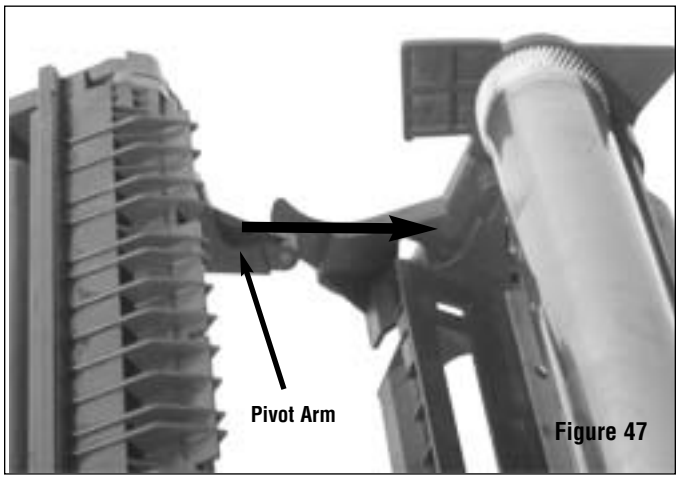
11. Continue to the next page to assemble the Hopper and Waste Bin sections of the cartridge together.

Assembling the Hopper and Waste Bin Together

This section provides the information needed to assemble the Hopper and Waste Bin Sections of the cartridge together. At this point you should have assembled the Hopper and Waste Bin Sections as described in this SSS™. If you have not assembled the Hopper and Waste Bin Sections use the instructions starting on page 24 to assemble the two sections. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

1. Assemble the Hopper Section and Waste Bin Sections.

   a. While holding the shutter open, insert the pivot arms of the Waste Bin Section in to the Hopper Section as shown in figure 47.

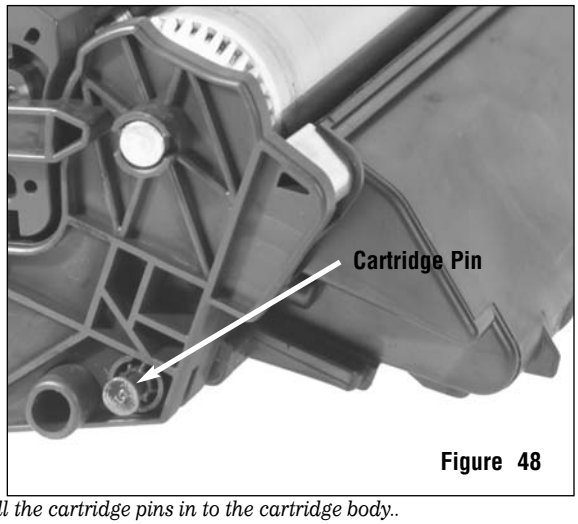


Insert pivot arms of Waste Bin Section in to the Hopper Section

   b. While holding to two sections together, insert the Cartridge Pin (5KPIN) through the hole as shown in figure 48. Then, repeat on the opposite side.

   c. Press firmly on the head of the pins until they are seated in place.

Note: The Cartridge Pins should slide in easily, in most cases you can use your thumb or a blunt object to push them in.



Install the cartridge pins in to the cartridge body..

Notes:

Cleaning Tips & Techniques for Critical Imaging Components

Primary Charge Roller

Use a lint-free cloth dampened with deionized water and gently wipe the PCR in one direction. The PCR may also be cleaned using ionized, dry, filtered, compressed air.

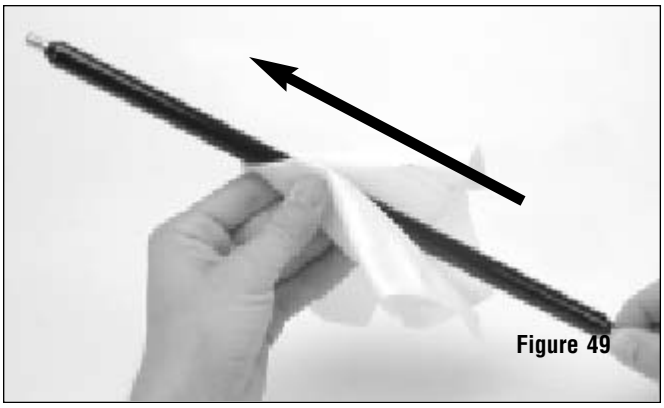


Figure 49

Wiper Blade and Doctor Blade

Clean wiper and doctor blades only with ionized, dry, filtered, compressed air. The surface of the blade is cut to an accuracy of less than .001". Any abrasive action to the edge of the blade, such as rubbing with a cloth, can degrade the edge of the blade and contribute to wiper blade-related defects.

Use Kynar® for lubricating the wiper blade. Dip the edge of blade in Kynar and pad the drum. Reinstall the drum and wiper blade; then rotate the drum in to the wiper blade until the Kynar is deposited in to the waste bin.

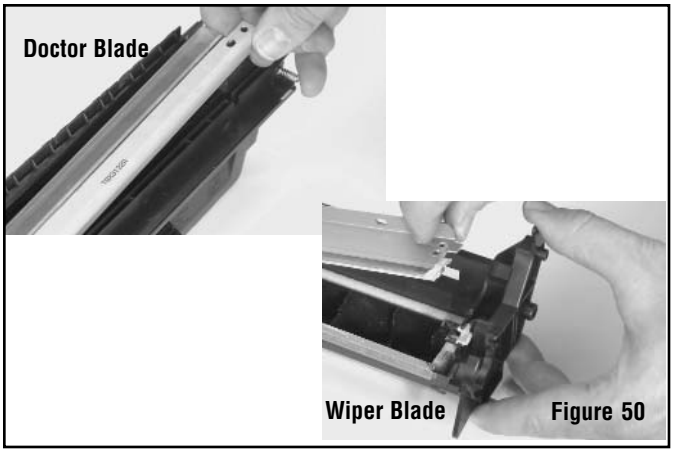


Figure 50

OPC Drums

Clean the drum with ionized, dry, filtered, compressed air. Avoid touching the coated surface of the drum with your fingers, and be sure to keep the drum in a light-protected area when you remove it from the cartridge.

Do not use cleaning solutions or coating treatments on the drum. Not only will they have an adverse effect on the drum, but they may also harm the wiper blade, PCR, or mag roller.

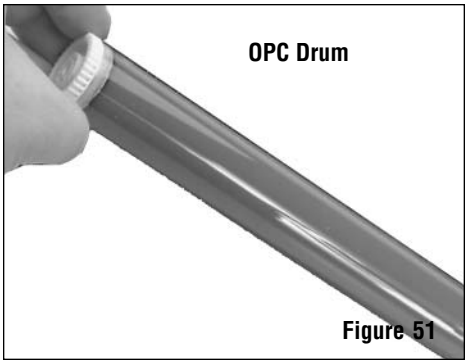


Figure 51

Mag Roller

Clean the mag roller with ionized, dry, filtered, compressed air or a dry, lint-free cloth. Always handle the roller by the axles or use clean latex gloves. Touching the coated surface of the mag roller with your fingers can leave oil on the roller. The oil can remain on the roller and cause print defects such as background or smudge defects at the mag roller interval.

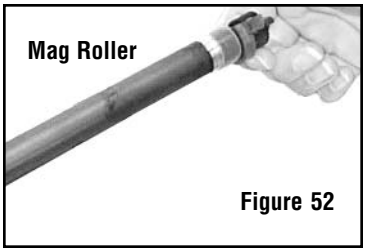


Figure 52

Notes:

Imaging System Technology You Can Count On!

The development of cartridge imaging systems, such as the HP2300/2100, is the primary mission of our Imaging Labs. Through extensive testing and research, we develop the optimum combination of matched components for each cartridge system. Our engineering and manufacturing expertise provides us with total control in design, quality and development to produce products from the ground up. The result is a system of components that seamlessly work together in each cartridge application.

This dedication and commitment results in integrated cartridge systems that Static Control™ fully supports, allowing you to quickly attack new market opportunities with complete confidence in the reliability and performance of your cartridges.

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