

## **LICENSE AGREEMENT**

Static Control Components, Inc. (Static Control) grants this limited license to the person, firm or corporation (hereinafter "User) downloading electronically or by printing this file to use Static Control's copyrighted documents in accordance with the terms of this agreement. If you agree with the terms of the license then you may download this information. If you do not agree with the terms of the license, then you are not authorized to use this information, and any use of it may be in violation of Static Control's copyrights or trademarks.

## **TRADEMARKS**

The Static Control material herein may make reference to its own trademarks, or trademarks of others. Static Control grants a limited license to the User to use Static Control's trademarks in its internal documents and for its internal purposes on the following terms and conditions. Any use of Static Control's trademark must be used in a context which makes it clear that the product reference is a Static Control Components, Inc. product, and not a product from any source.

The materials provided to the User may include reference to trademarks of others. Any use of the User makes of these marks should reference the owner of those marks. Nothing in this agreement constitutes any authorization by Static Control to use any of these trademarks in any context.

## **COPYRIGHTS**

Static Control grants a limited license to the User to use the attached copyrighted documents. The permitted use of these documents is limited to internal purposes and needs of the company. The company is prohibited from using these copyrighted documents, or any part of them, including graphic elements, in any materials that are used outside the physical business location of the User. The User is prohibited from using any materials in any documents whether printed or electronic, which are distributed to any third party. The use of these copyrighted documents, or parts of them, including graphic elements, from these documents in marketing material, either print, electronic or web is prohibited. The sale, transfer, copying of these documents or any parts of these documents to any other party is prohibited.

Static Control Components, Inc. retains all rights to its copyrighted documents, and any use of these documents by User should reference Static Control's copyrights, with the notice "copyright Static Control Components, Inc."

Static Control reserves the right to cancel this license on 30-days written notice. All of the User's material incorporating Static Control's copyrighted documents shall be destroyed upon receipt of its notice of termination.

The User may not distribute, share, and otherwise convey the copyrighted documents to any other persons, corporations or individuals.

The User, by use of these documents, acknowledges Static Control's copyright in these materials.

## **STATIC CONTROL DOES NOT GUARANTEE OR WARRANT DOWNLOADED INFORMATION**

The information User is downloading is published by Static Control in "as is" condition "with all faults". Static Control makes no representations or warranties of any kind concerning the quality, safety, or suitability of the downloadable materials, either express or implied, including without limitation any implied warranties of merchantability, fitness for a particular purpose, or non-infringement. Further, Static Control makes no representations or warranties as to the truth, accuracy or completeness of any statements, information or materials concerning items available for download. In no event will Static Control be liable for any indirect, punitive, special, incidental, or consequential damages however they may arise even if Static Control has been previously advised of the possibility of such damages.



Xerox® DocuPrint® 4508

# Remanufacturing Instructions



## About the Cartridge

In January 1996 Xerox® released the 8 ppm DocuPrint® 4508 Personal Laser printer, aimed at the “personal corporate” desktop laser market. It replaced their 5 ppm 4505, which was retired in February the same year.

The 4508 was distributed mainly through COMDEX dealers, corporate resellers and VARs, with a limited retail distribution in what Xerox called “selected markets”.

Instead of a Fuji-Xerox® engine, the monochrome 4508 utilized the familiar 8 ppm ML-6000 engine from Samsung’s® QwikLaser 84/85 models. The compact footprint, along with the excellent price and performance of the Samsung engine, made it much more attractive than the Fuji-Xerox® engines used in nearly every other Xerox desktop laser at the time.

The 4508 utilizes a single piece “all-in-one”

cartridge using a non-magnetic microfine toner. The fuser is “user-adjustable”, allowing the user to change the fusing temperature to optimize their print quality when using different paper stock, which can have varying heat transfer characteristics.

Remanufacturing the 4508 cartridge is fairly simple, since the one hundred percent toner transfer eliminates the need for a waste bin, and there is no recovery blade or wiper blade.

### Key Points

- Instead of a doctor blade there is a fixed metallic doctor bar.
- There is a sponge-type toner adder roller.
- The hard PCR is not friction fed, but has a drive gear.
- The cartridge contains no recovery blade or wiper blade.
- A “user-adjustable” fuser allows users to change the fusing temperature for better print quality on different paper stock.
- There are spring loaded stabilizers located in both end caps to insure that the developer roller maintains direct contact with the drum.
- The developer roller is made of urethane.
- 100% toner transfer eliminates the need for a waste bin.

## Table of Contents

About the Cartridge . . . . . 1  
 Cartridge - Separation of . . . . . 2-3  
 Cartridge - Assembly of . . . . . 14-15  
 Cartridge - Sealing of . . . . . 14  
 Drum Unit - Disassembly of . . . . . 4-8  
 Drum Unit - Reassembly of . . . . . 9-12  
 Toner Hopper Unit -  
     Disassembly of . . . . . 13  
 Toner Hopper Unit -  
     Reassembly of . . . . . 13  
 Tools & Supplies You Will Need . . . 2  
 Use of Compressed Air . . . . . 2  
 Use of Isopropyl Alcohol . . . . . 2

Get the latest information on the web at Static Control's Xerox® DocuPrint® 4508 Online Engine Center at [www.scc-inc.com/Engine/Xerox4508](http://www.scc-inc.com/Engine/Xerox4508)



System Support Series™ Documents are available on our Web site in Adobe® Acrobat® format.

If you need additional information or technical assistance, please contact your Static Support Team.

1.800.488.2426 (USA)  
 919.774.3808 (Int'l)  
 +44 (0) 118 923 8800 (UK)  
 info@scc-inc.com (USA e-mail)  
 info@scc-europe.co.uk (UK e-mail)  
[www.scc-inc.com/imaging/Imaging.htm](http://www.scc-inc.com/imaging/Imaging.htm)

### Samsung® QL-85 (ML-6000) Engine Information

Printer Name . . . . .	Xerox® DocuPrint® 4508
Date of Introduction (Current/Discontinued) . . . . .	January 1996 (Discontinued)
Print Speed . . . . .	8 ppm

### Xerox® DocuPrint® 4508 Cartridge Information

Toner Cartridge OEM Part Number (Code) . . . . .	113R00265
Cartridge List/Wholesale Price* . . . . .	\$133/\$99
OEM Rated Page Yield . . . . .	4,000 pages at 5% coverage
Toner Weight . . . . .	150 grams
Toner Class . . . . .	Non-magnetic, Mono-component

### Model Compatibility

Xerox® DocuPrint® 4508, Xerox® 4508, Samsung® 6000/6050/6100, Samsung® QwikLaser 84/85, Mannesman Tally® 9108/ 9208, Compuprint Pagemaster 815/825.

\*Prices as of January 2001



# Tools and Supplies You Will Need

## 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, we recommend using ONLY 91-99% for cleaning as directed in these instructions. 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.

## Tools and Supplies

### Recommended for Basic Remanufacturing:

- 91-99% Isopropyl Alcohol ..... (See left)
- Compressed Air for Cleaning ..... (See left)
- Conductive Grease ..... CONCLUDE
- Cotton-tipped Cleaning Swab w/Wooden Handle ..... QTIP
- Hooked-end Metal Tool ..... HTOOL
- Lint-free Cleaning Cloths ..... LFCCLOTH
- Phillips Screwdriver (2 pt)
- Small Flat-blade Screwdriver
- Toner qualified for Xerox® DocuPrint®4508
- Xerox® 4508 or Compatible Printer for testing your cartridge

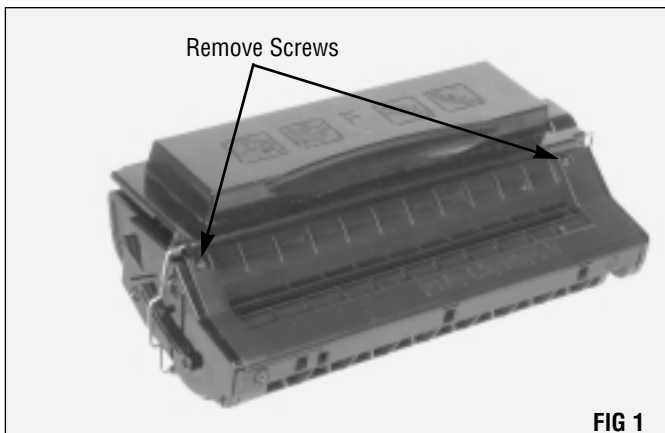


# Separation of the Cartridge

**NOTE** There is no need to remove the drum shutter. By releasing the drum shutter spring the shutter will easily fold back out of the way during remanufacturing.

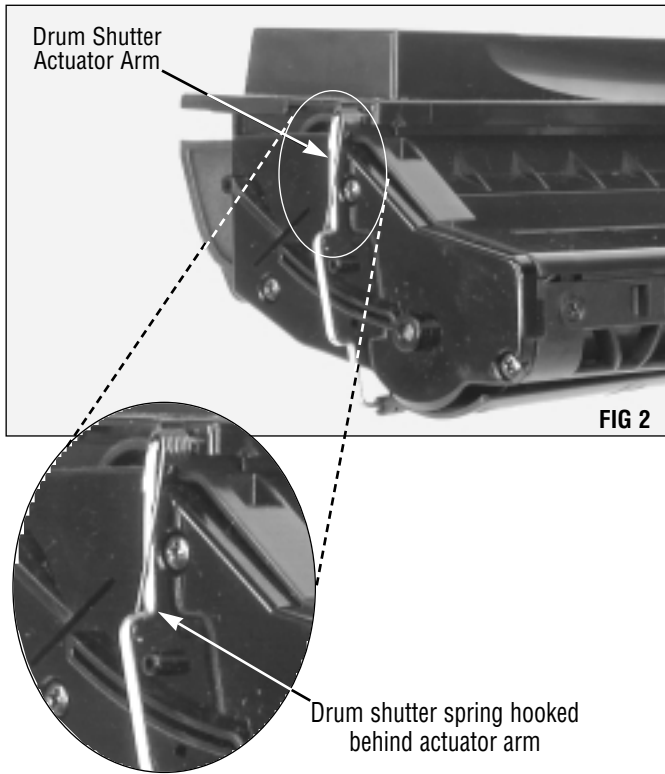
### 1. Remove the hopper section

Remove the two screws from the top of the cartridge (FIG 1).

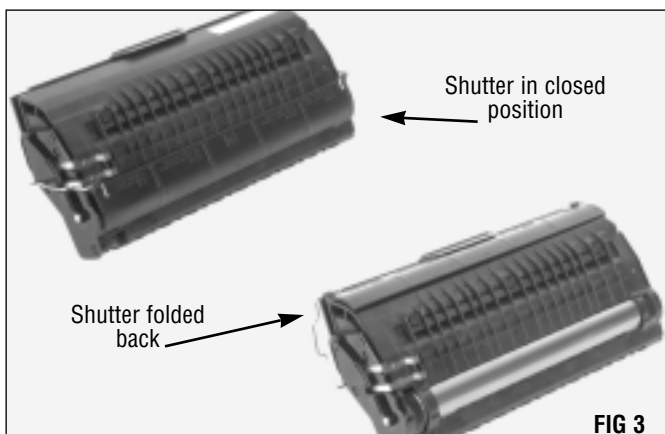


**NOTE** The OPC drum will be replaced in this demonstration. Instruction photos will not show the use of materials to protect the drum from light and impact damage. However, if you plan to reuse the drum, make sure you cover your work surface with a soft, protective material to avoid possibly scratching or otherwise damaging the drum, and protect it from light and impact damage during remanufacturing.

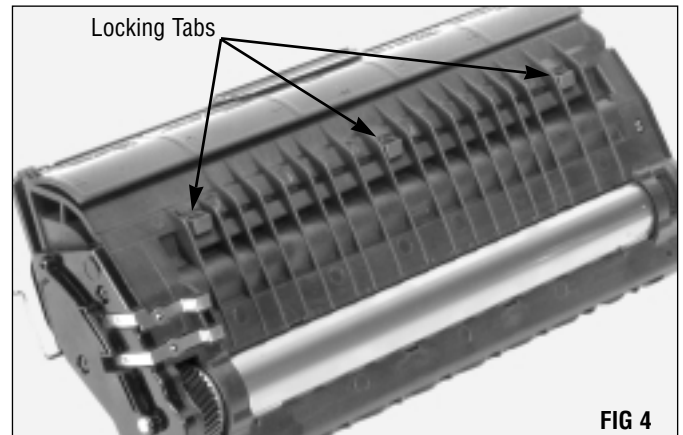
Using a small, flat blade screwdriver or hook tool, release the drum shutter spring by moving it from behind the drum shutter actuator arm (FIG 2).



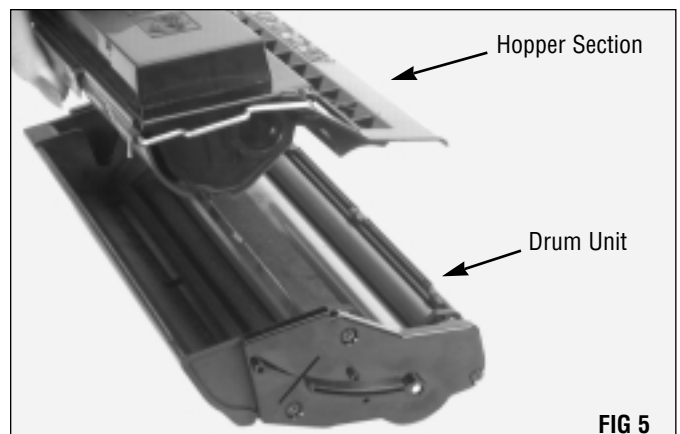
Turn the cartridge over and fold the shutter back out of the way (FIG 3). If you do not plan to replace the drum, be sure to protect it from light and impact damage.



Using a small, flat blade screwdriver, release the three locking tabs by pressing them inward (FIG 4).



Hold the shutter in place with one hand while carefully lifting off the hopper section. Set it aside for now (FIG 5).

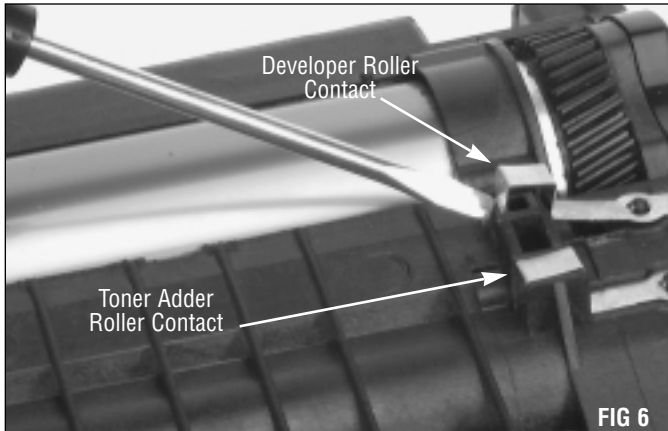




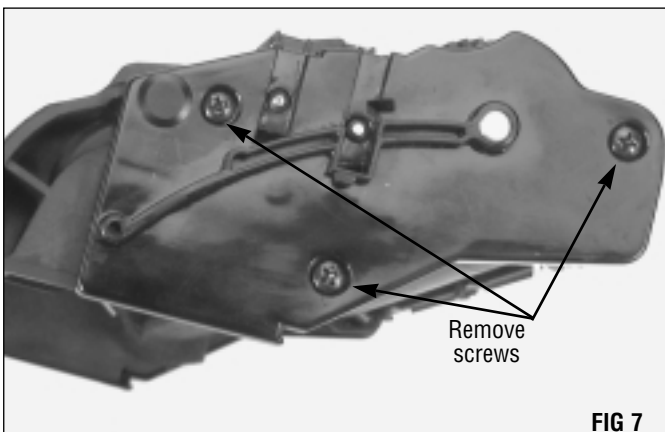
## Disassembly of the Drum Unit

### 1. Remove the end plates

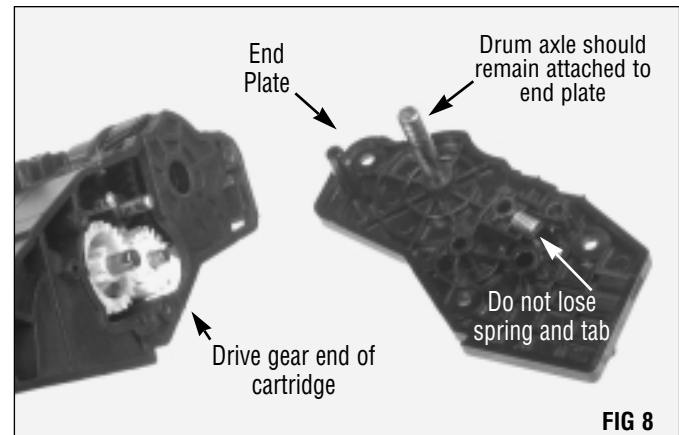
Using a small, flat blade screwdriver, carefully remove the two electrical contacts from the contact/drive gear-end of the drum unit (FIG 6). Take care not to bend or misplace these contacts.



Remove the three screws from the contact/drive gear-end of the drum unit (FIG 7).

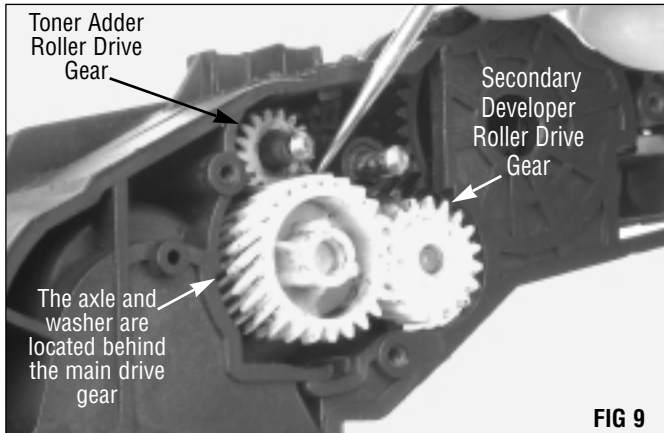


Remove the end plate from the contact/drive gear end of the cartridge (FIG 8). You may need to rock it gently side-to-side while pulling it away from the unit. Note that a drum axle approximately 1.5" long will remain attached to the end plate.

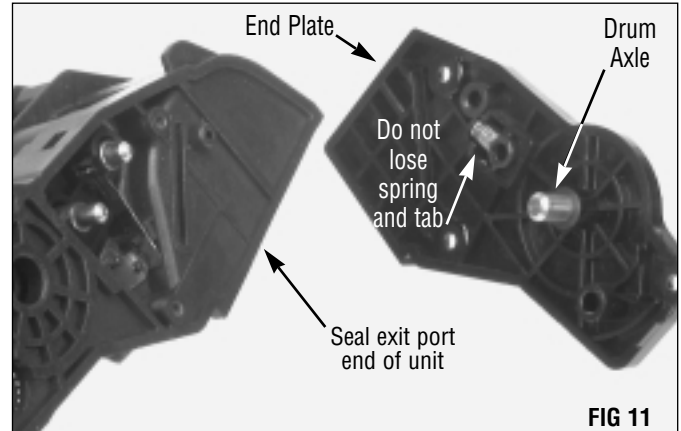


**NOTE** There is a small spring and plastic tab seated within the end cap that may fall out when the end cap is removed. These work together to maintain direct contact between the developer roller and drum. Be careful not to lose these components, as your cartridge will not work properly without them.

Using a small, flat blade screwdriver or hook tool, remove the main developer roller drive gear, washer and axle, the secondary developer roller drive gear, and the toner adder roller drive gear (FIG 9).

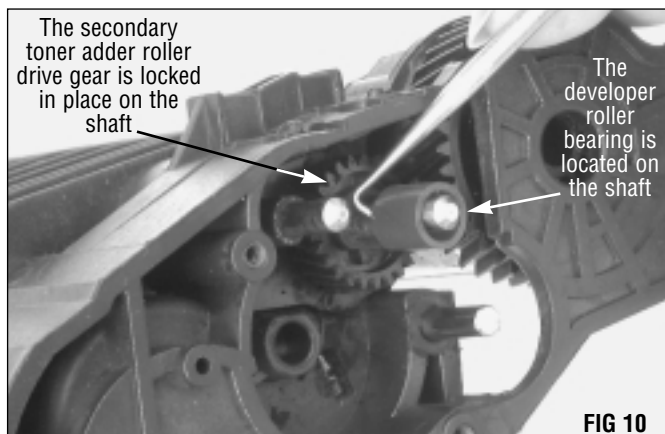


Remove the three screws from the seal exit port end of the drum unit and remove the end plate (FIG 11). You may need to rock it gently side-to-side while pulling it away from the unit. Note that a drum axle approximately 7/8" long will remain attached to the end plate.



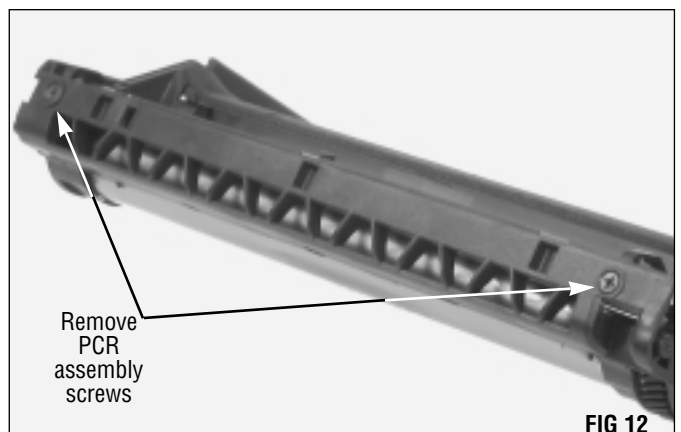
**NOTE** There is a small spring and plastic tab seated within the end cap that may fall out when the end cap is removed. These work together to maintain direct contact between the developer roller and drum. Be careful not to lose these components, as your cartridge will not work properly without them.

Remove the developer roller bearing. The secondary developer roller drive gear will remain in place (FIG 10).



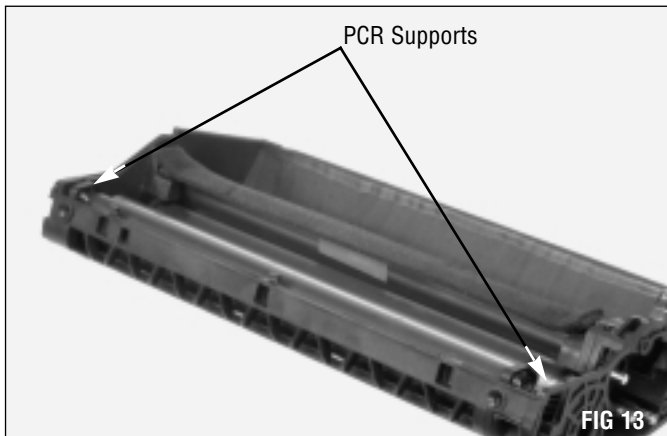
## 2. Remove the PCR

Position the drum unit with the PCR facing up. Using a Phillips screwdriver, remove the two screws on the front of the unit that secure the PCR assembly (FIG 12).

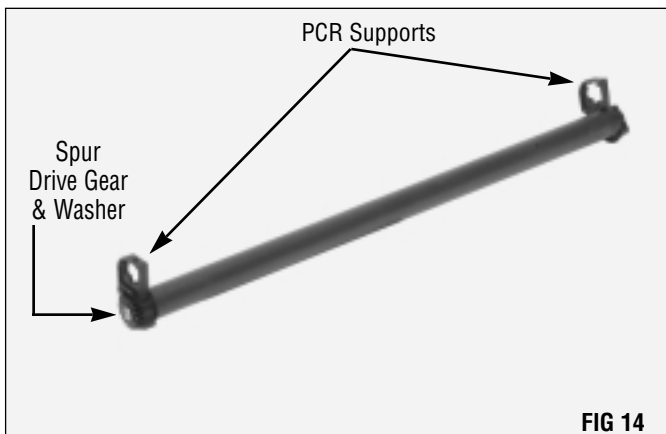


**NOTE** Do not stack PCR's, lay anything on top of them, wrap them with rubber bands or touch the surface of the PCR with your bare fingers.

Turn the unit over and lift the PCR out by the two end supports (FIG 13).

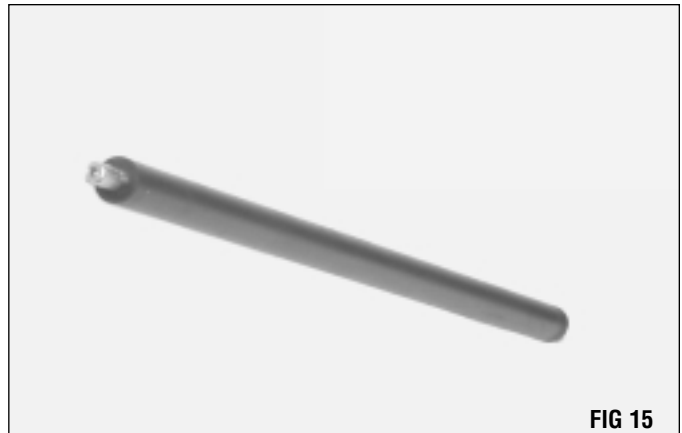


Remove the spur drive gear, washers and PCR supports from the ends of the PCR (FIG 14).



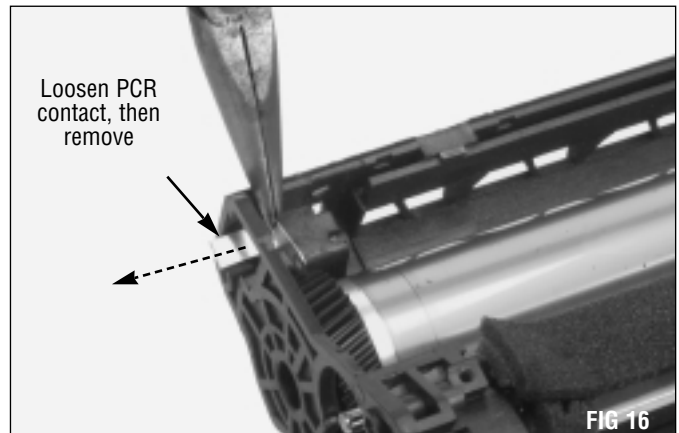
### 3. Clean the PCR

To clean the PCR, blow off the surface using dry, filtered, compressed air, or wipe clean with a lint-free cloth. DO NOT use alcohol or other chemicals on the PCR surface (FIG 15).



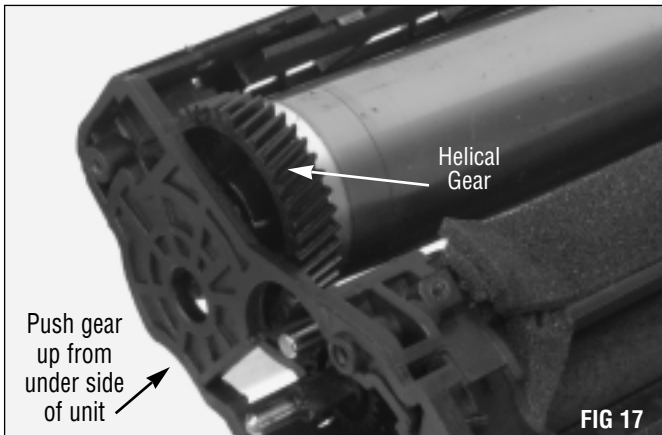
### 4. Remove the OPC drum

The PCR contact will scratch the drum if left in place when the drum is removed. Using needlenose pliers, loosen the contact, then slide the PCR contact off the unit (FIG 16).



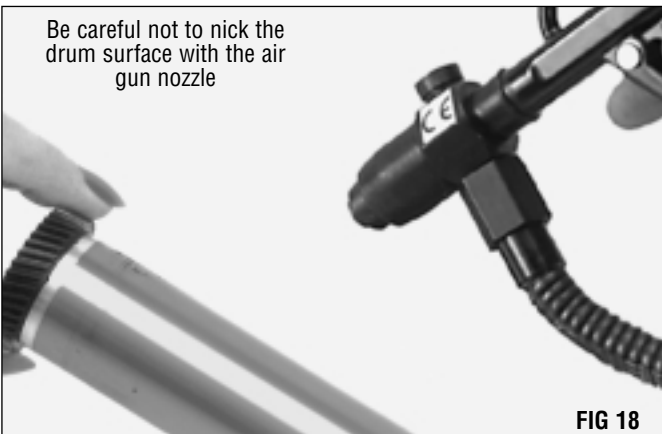
**NOTE** If you are planning to reuse the drum, wear gloves or use other protective materials, or handle the drum by the gears only.

While tilting the unit toward you, push the helical gear end of the drum up from the underside and lift the drum out of the unit (FIG 17).



### 5. Clean the OPC drum

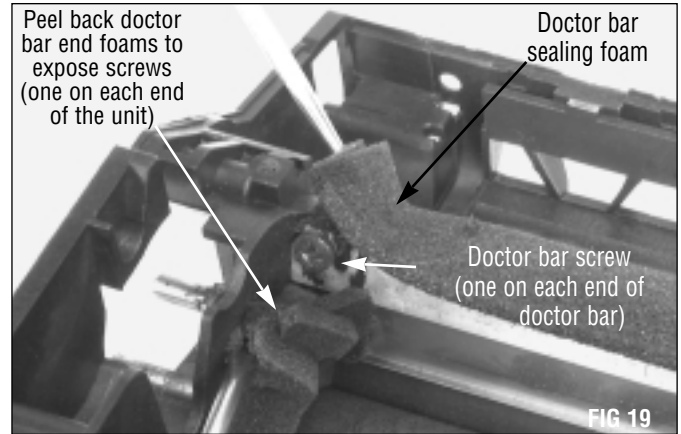
If you are reusing the drum, clean the OPC surface with dry, filtered, compressed air or with a soft, lint-free cloth (FIG 18). Inspect the drum for deep concentric wear lines, scratches or cracks in the coating. Set the drum aside, protected from light and impact damage.



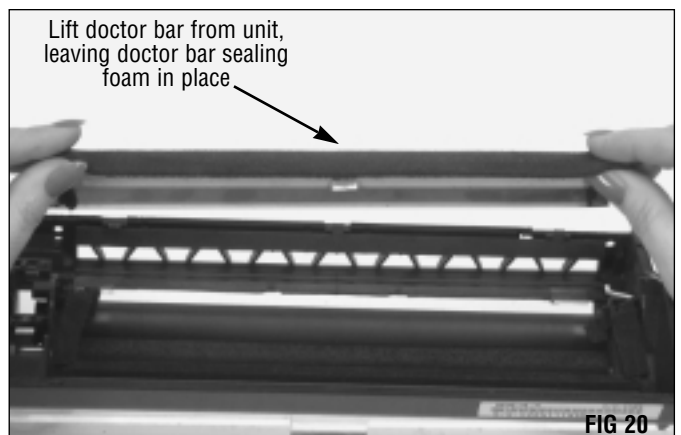
**NOTE** Do not use cleaning agents or coatings on the drum, and be careful not to nick the surface of the OPC with the air nozzle.

### 6. Remove the doctor bar

The doctor bar is held in place with two Phillips screws, which are located beneath the sealing foams (FIG 19). Carefully peel back (but **do not remove**) the two end foams and the doctor bar sealing foam, then remove these screws.



Gently pry the doctor bar up and remove it from the unit. Leave the sealing foams attached (FIG 20).

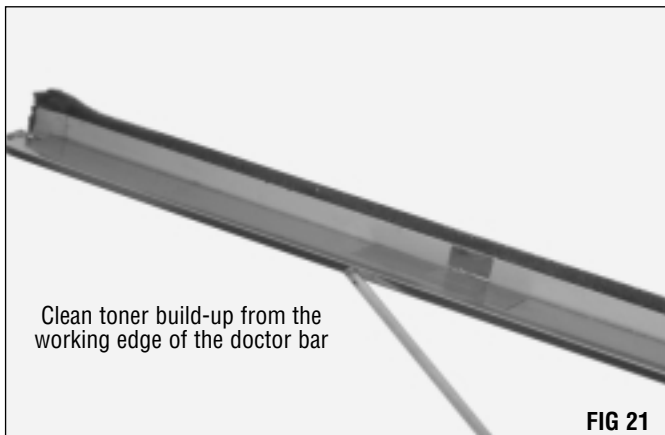




## 7. Clean the doctor bar

Using dry, filtered, compressed air, clean the doctor bar. Be careful around the foams to make sure they are not torn or dislodged.

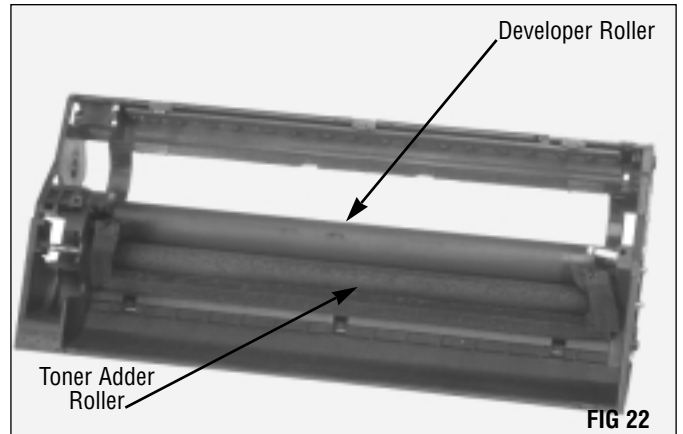
Toner build-up along the working edge of the bar can be removed by carefully running the wooden end of a cotton-tipped swab along the edge (FIG 21). No chemical cleaners are necessary.



**NOTE** Oils from your skin will adhere to the magnetic developer (mag) roller causing print defects. If you plan to reuse the roller, be sure to use gloves or other protective materials when working near the developer roller.

## 8. Clean the developer roller

Leaving the developer roller in place, clean the roller and surrounding areas using dry, filtered, compressed air (FIG 22). Rotate the roller and repeat until you have cleaned the entire developer roller.



**NOTE** Do not remove the copper-colored contact taped to the doctor bar.

**NOTE** Do not use alcohol or other chemicals on the developer roller.

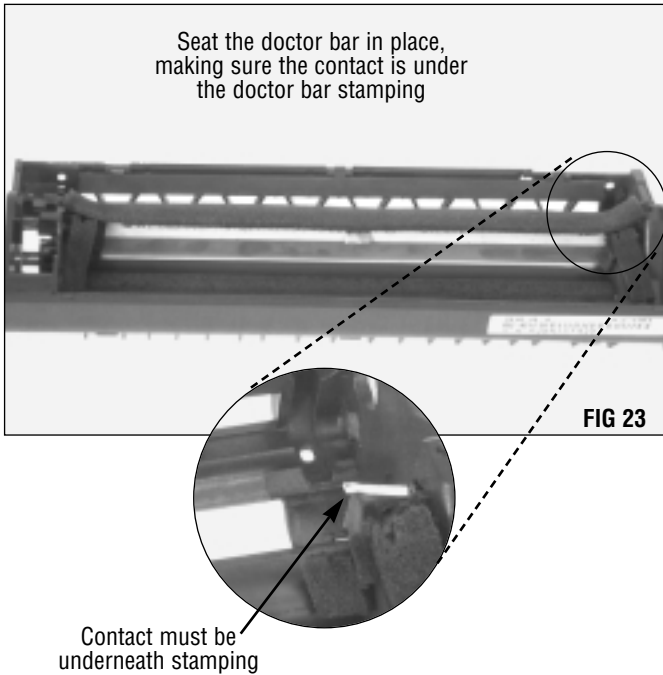
Concentric wear lines on the developer roller can cause print defects. Once you have finished cleaning the roller, carefully inspect it for damage and replace the roller if needed.



# Reassembly of the Drum Unit

## 1. Replace the doctor bar

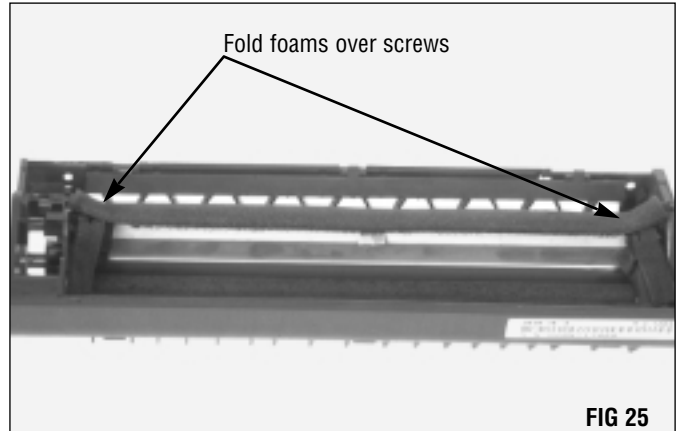
Gently move the foams out of the way as you seat the doctor bar in place. Make sure the contact on the seal exit port end is under the doctor bar stamping (FIG 23).



Being careful not to tear the foams, replace the two Phillips screws (FIG 24).



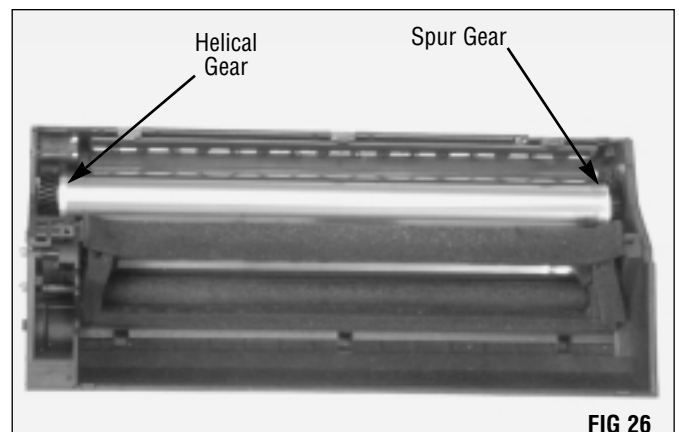
Reposition the foams in place over the screws (FIG 25).



**NOTE** Static Control recommends replacing the doctor bar after the second cycle. Contact your Support Team for availability and pricing.

## 2. Replace the OPC drum

Check the inside of the drum to make sure the electrical contact is present. Place the drum into the unit with the drive gear on the seal exit port side of the cartridge (FIG 26).

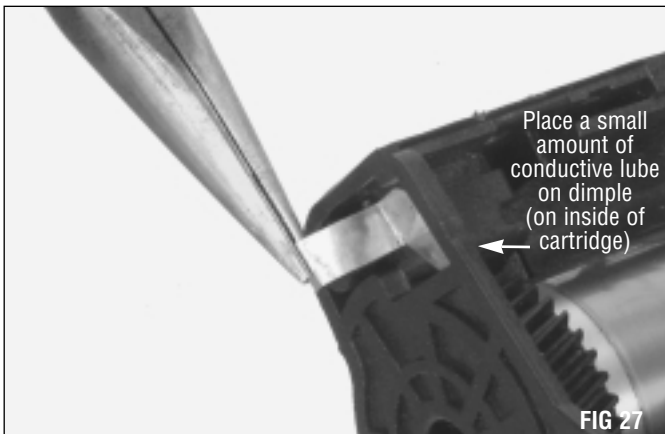


**NOTE** Wear gloves or use other protective materials. Always handle the drum by the gears only.

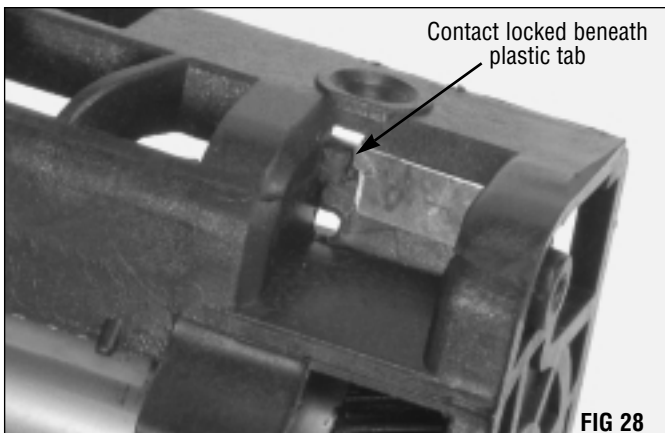
### 3. Replace the PCR contact

Using needlenose pliers, replace the PCR contact. Placing the dimpled arm in first will help in positioning the contact.

Place a small amount of conductive lubricant on the contact dimple (FIG 27). The wooden end of a cotten-tipped swab makes precise application of the lubricant easy.



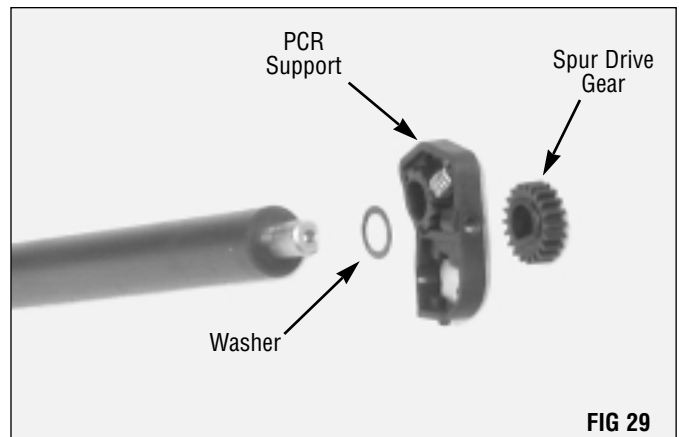
Make sure the back of the contact locks in beneath the plastic tab on the cartridge (FIG 28).



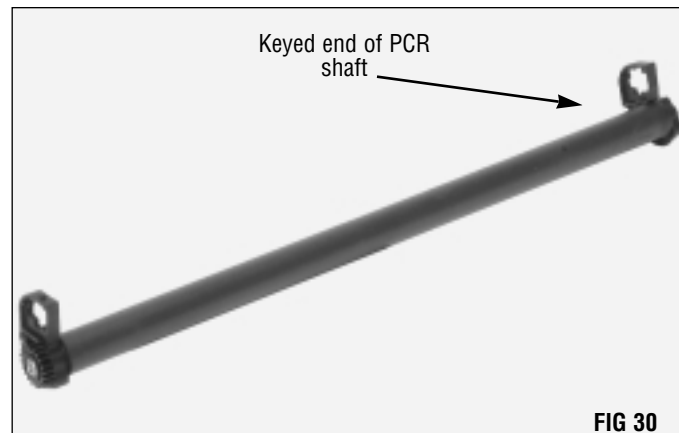
**NOTE** The PCR supports are shaped differently. Be sure to follow these instructions closely so you do not place the wrong support on the wrong end of the PCR.

### 4. Replace the PCR

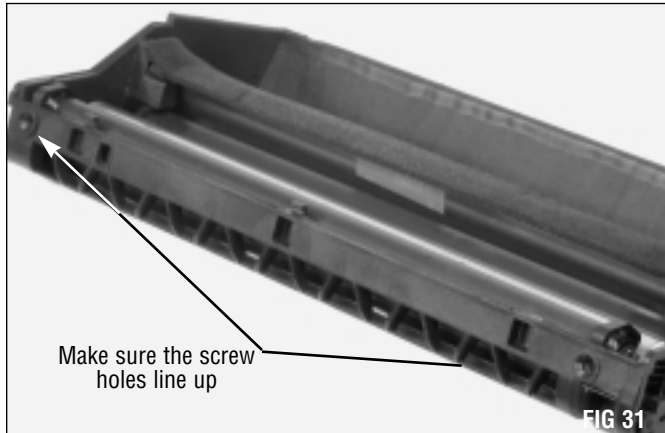
In order, place the washer, straight PCR support and spur drive gear on the non-keyed end of the PCR shaft (FIG 29).



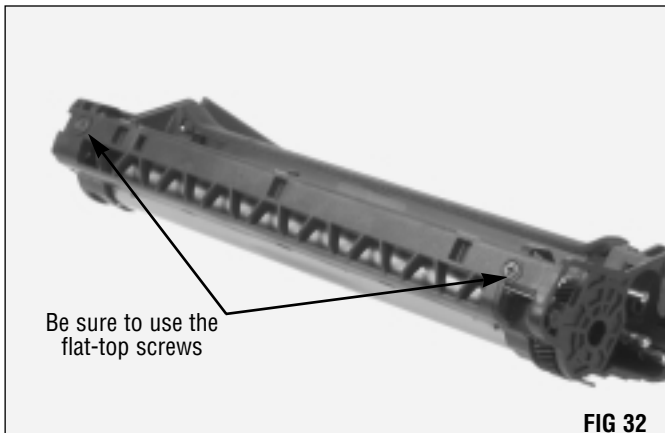
Place the washer and the remaining PCR support on the keyed end of the PCR shaft (FIG 30).



Place the PCR into position. Make sure the screw holes in the PCR supports line up with the holes in the cartridge (FIG 31).

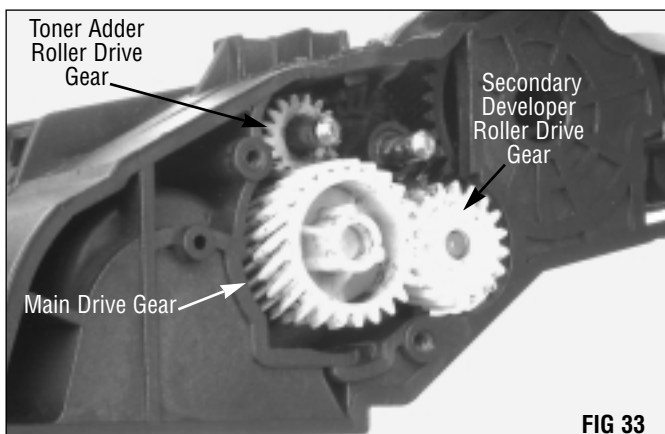


Replace the two Phillips (flat-top) screws (FIG 32).

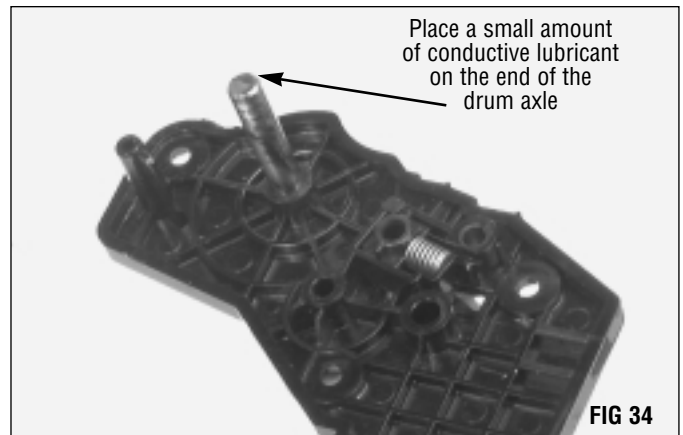


**5. Replace the end plates**

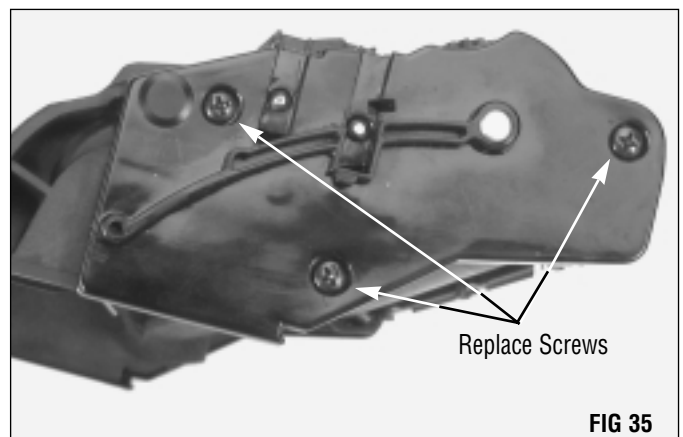
Replace the toner adder roller, main drive gear and secondary drive gear (FIG 33). Be sure to include the smaller secondary drive gear washer.



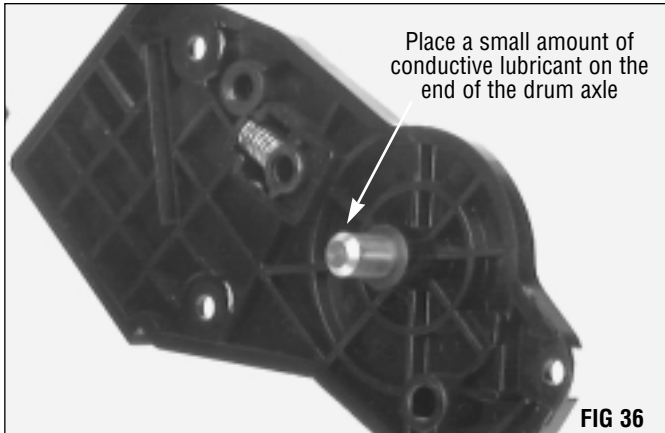
Replace the spur gear end plate first (FIG 34). Apply a small amount of conductive lubricant to the end of the drum axle (FIG 34). The drum axle should slide easily into the drum and the plate should snap into place.



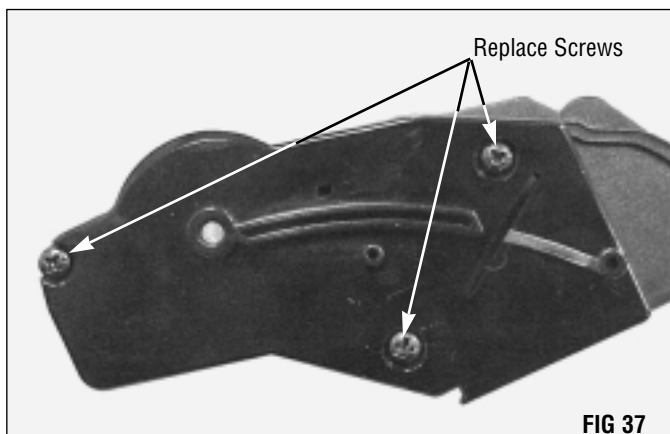
Replace the three Phillips screws (FIG 35).



Place a small amount of conductive lubricant on the end of the drum axle. Push up slightly on the helical gear to align the hole in the drum with the hole in the housing before attempting to slide the drum axle (secured to the end plate) into the drum (FIG 36).

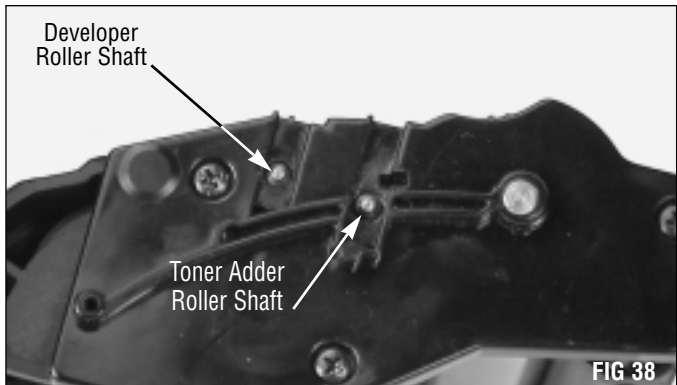


Replace the three Phillips screws (FIG 37).



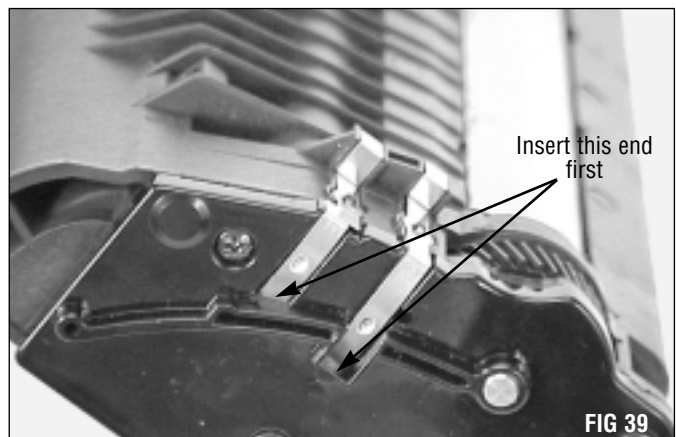
#### 6. Replace the electrical contacts

Place a small amount of conductive lubricant on the ends of the developer roller and toner adder roller shafts (FIG 38).



**NOTE** The two electrical contacts differ in length. The longer one is the developer roller contact, and the shorter is for the toner adder roller.

Replace the electrical contacts by inserting the tab on the end of the contact into the slots in the end cap and pressing the contact into place (FIG 39).

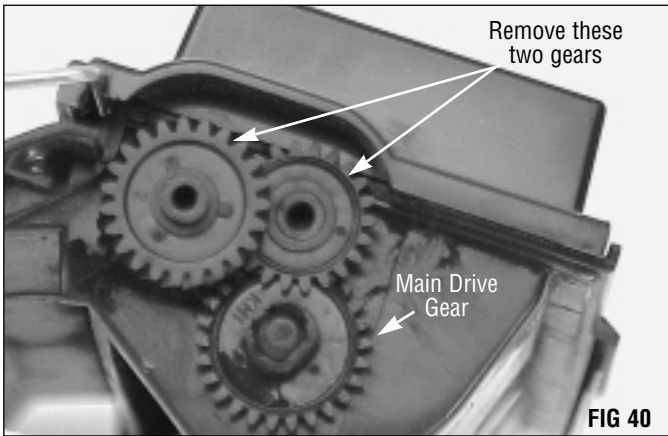


Set the drum unit aside while working on the hopper section. Be sure to protect the drum from light and impact damage.

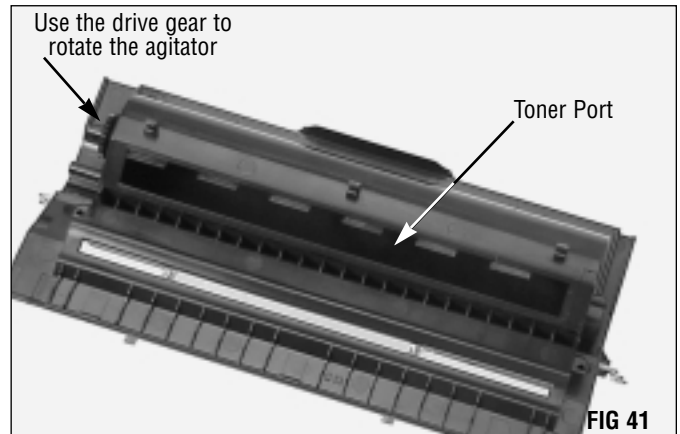
# Disassembly of the Toner Hopper Unit

## 1. Remove the drive gears

Remove the two smaller gears in the toner agitator bar drive chain. The main drive gear will remain in place (FIG 40).



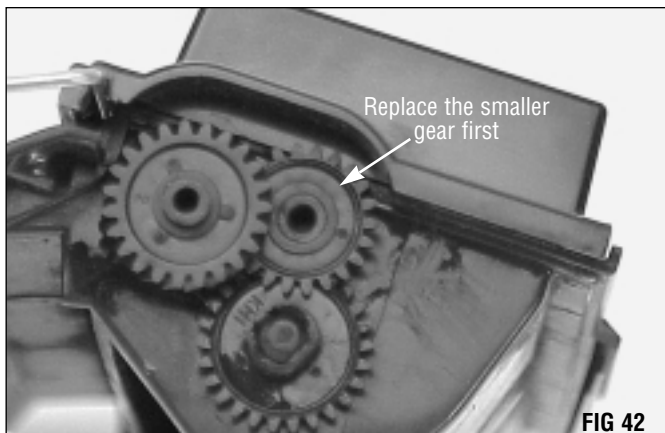
Direct dry, filtered, compressed air through the toner port to thoroughly clean the hopper. Be sure to rotate the toner agitator as you blow out the hopper (FIG 41).



# Reassembly of the Toner Hopper Unit

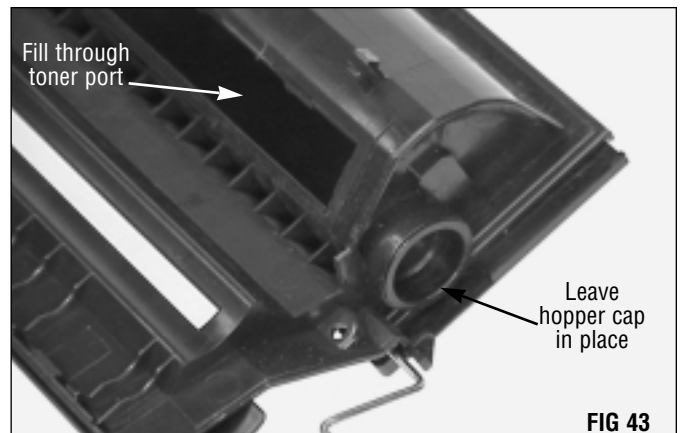
## 1. Replace the drive gears

Replace the smaller of the two agitator drive gears first, then the larger helical gear (FIG 42).



## 2. Refill the hopper

To avoid damage to the hopper cap, leave it in place and fill the hopper through the toner port (FIG 43).



## Sealing the Cartridge

An adhesive seal is necessary to prevent toner leakage during transportation and storage of your Xerox® DocuPrint® 4508 toner cartridge. See System Support Series™ (SSS™) 306 for complete instructions.

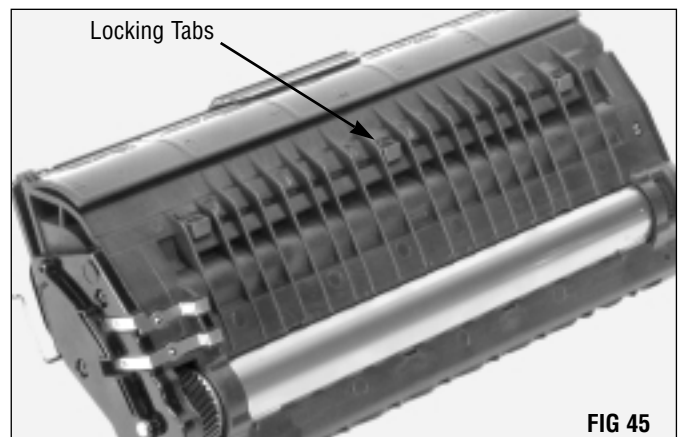
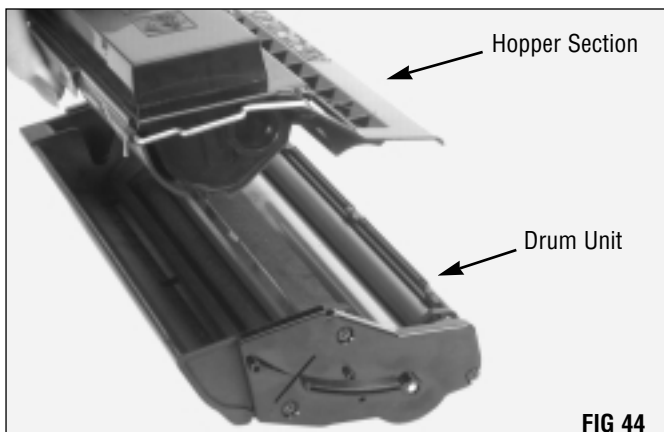
## Assembly of the Cartridge

**NOTE** To avoid toner leaking from the holes where the tabs lock into place, hold the hopper vertically when moving it.

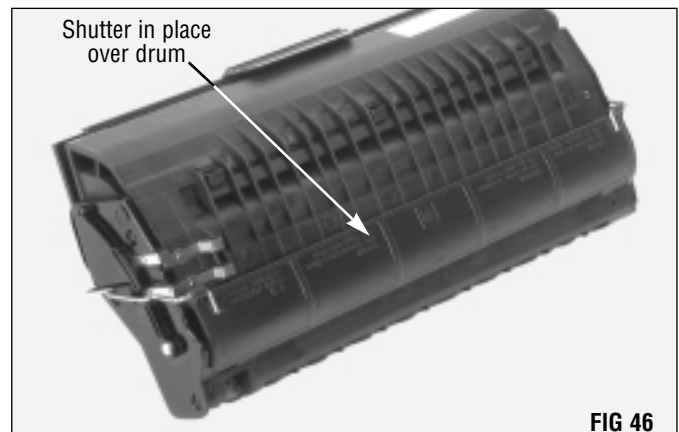
Gently press the two halves together, making sure the tabs lock into place (FIG 45).

### 1. Secure the hopper section

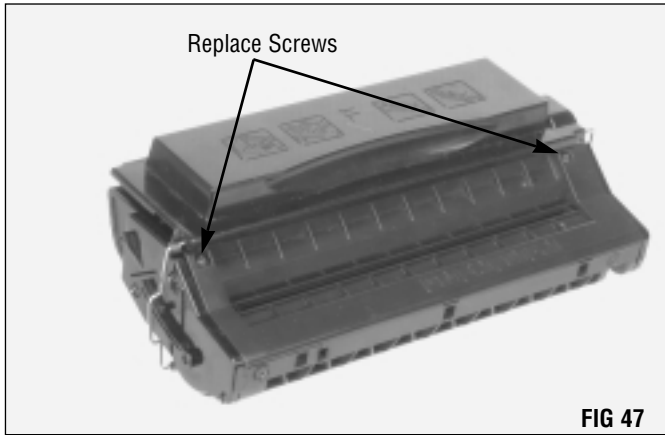
Place the hopper and drum sections together (FIG 44).



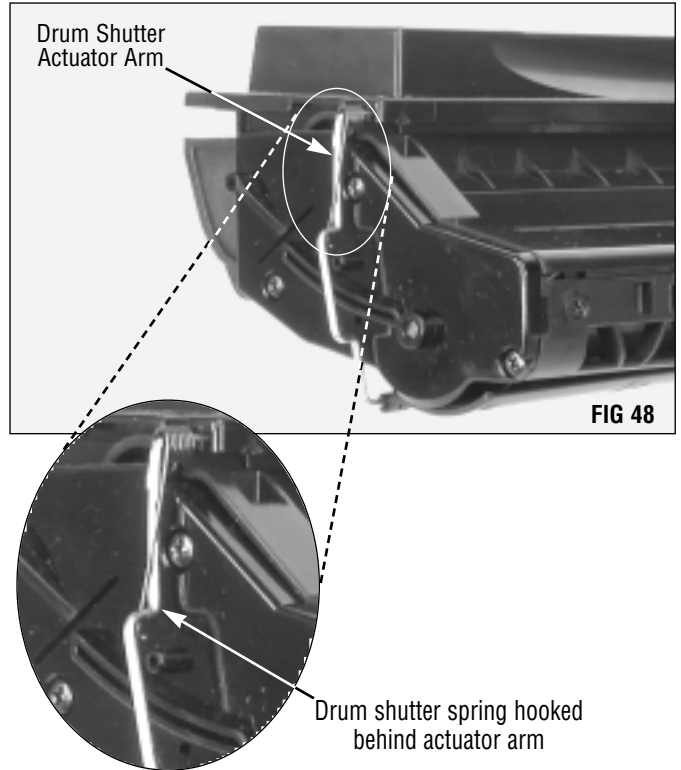
Fold the shutter over the drum (FIG 46).



Turn the cartridge over and replace the two Phillips screws (FIG 47).



Using a small, flat-blade screwdriver or hook tool, secure the drum shutter spring behind the actuator arm (FIG 48).



Now that your cartridge is reassembled, it is ready for print testing.

Static Control recommends testing your cartridges in the appropriate equipment after remanufacturing.





## Technology and Support You Can Rely On!

---

We realize that the success of your business directly affects the success of Static Control. It's no longer a matter of keeping up with your competition, but surpassing them. That is why we invest so much time and effort in the technology necessary for your business to address new market opportunities quickly, and with confidence.

Where monochrome once ruled the industry, color is now emerging and taking a foothold. It is our pledge to you, our customer, to do all we can to help you move into this new opportunity and others, as quickly and effortlessly as possible. We will continue to support monochrome markets, while building a comprehensive color technology library for your reference, along with products to support your growing business. Together we can build a partnership for a successful future.



**SCC Imaging Division**  
3010 Lee Avenue • PO Box 152 • Sanford, NC 27331  
US/Can 800-488-2426 • US/Can Fax 800-488-2452  
Int'l 919-774-3808 • Int'l Fax 919-774-1287  
[www.scc-inc.com/imaging/Imaging.htm](http://www.scc-inc.com/imaging/Imaging.htm)

**Static Control Components (Europe) Limited**  
Unit 30, Worton Drive  
Reading • Berkshire RG2 0TG • United Kingdom  
Tel +44 (0) 118-923-8800 • Fax +44 (0) 118-923-8811  
[www.scc-inc.com/imaging/Imaging.htm](http://www.scc-inc.com/imaging/Imaging.htm)