

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 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.

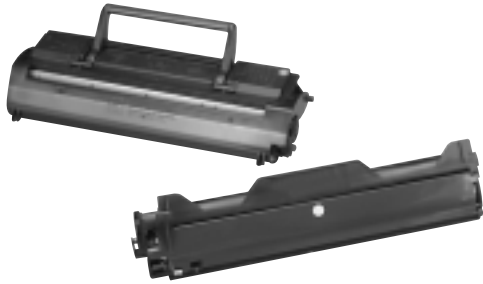
The User, by use of these documents, acknowledges Static Control's copyright in these materials.

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.



Minolta® SP-302 (Lexmark® Optra® E) Remanufacturing Instructions



About the Cartridge

The Minolta® SP-302 engine was originally released in 1996. Since that time it has been used by a wide range of OEMs in printer, multifunctional and fax applications. There are variations in the cartridges between these applications. Due to keying issues and varying toner fill weights the cartridges are not all interchangeable even though the supplies may be identical.

Below is a partial list of compatible machine models using the Minolta SP-302 engine. Static Control is in the process of validating the more popular variations of this engine and will publish further information as it is available.

The Minolta SP-302 cartridge design features separate toner and OPC units. The design includes a brush-type charge roller and does not require a waste bin. Residual toner is electrostatically removed from the OPC Drum eliminating the need for a wiper blade. The developer roller consists of a black conductive plastic sleeve with a foam core. The doctor blade is metal and very thin and very sharp. A seal is not required. The hopper cap is difficult to remove and easily damaged, SCC's PC Hopper Cap (PCHCAP) is compatible.

SCC's imaging system for the Minolta SP-302 engine includes the Odyssey™ ungeared drum and Optra E toner. This combination offers OEM-equivalent densities ranging from 1.50 to 1.55 and exceeds OEM rated yield by delivering 3,000 to 3,200 pages under the ASTM F1856 Yield Test Standard.

Table of Contents

About the Cartridge 1
Drum Unit Section 2
Toner Unit Section 2
Tools & Supplies You Will Need . 3
Use of Compressed Air 3
Toner Unit
Disassembly 4-5
Reassembly 6-7
Drum Unit 8-9
Disassembly 8-9
Reassembly 10-11

WWW.SCC-INC.COM

Get the latest information on the web at Static Control's SP-302 Online Engine Center at www.scc-inc.com

Minolta® SP-302 Engine Information

Engine Name	Minolta® SP-302
Engine Type	Monochrome Laser
Date of Printer Introduction	Optra® E, January 1996 (discontinued) Optra® E+, May 1997 (current)

Print Speed (pages per minute)	6 ppm
Duty Cycle	10,000 pages/month
Print Resolution (dpi)	600 x 600 dpi

Cartridge Information

Toner Cartridge OEM Part Number	69G8256
Cartridge List Price*/Wholesale Price*	\$68/\$47
OEM Rated Page Yield	3,000 pages

Drum Cartridge OEM Part Number	69G8257
Cartridge List Price*/Wholesale Price*	\$95/\$67
OEM Rated Page Yield	20,000 pages
Toner Class	Non-magnetic, monocomponent

*Prices as of August 1999

Printer Compatibility (all cartridges are not interchangeable)

Epson® EPL 5500/5500W	Minolta® Pageworks 6
Lanier Fax® 1210/1240/1260	Minolta® SP302
Lexmark® 4026, 4026A/B/D/E	NEO® SuperScript 660+
Lexmark® Optra® E/E+/Ep/Es	Ricoh® Fax 1700L, Type 70
Minolta® Fax 2500/3500/5500	Savin® 3650
Minolta® PagePro 6	Sharp FO 4500/5500/5600, 6500/6550/6600



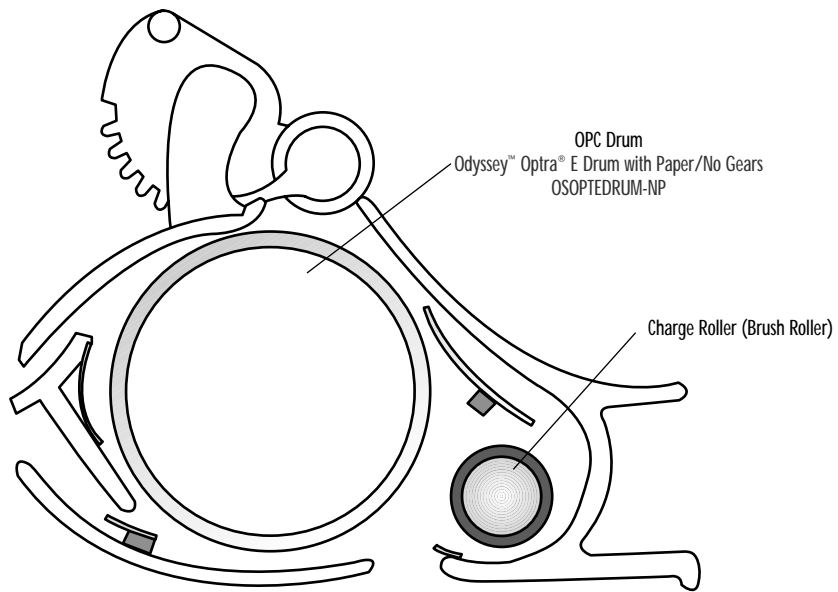
Documents are available on our Web site in Adobe® Acrobat® format.

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

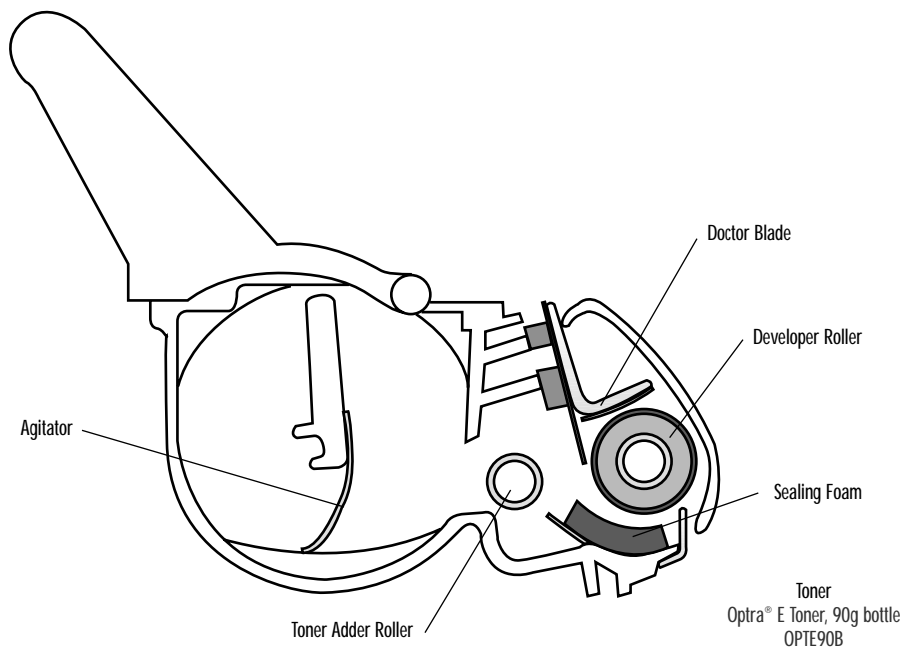
1.800.948.1072 (USA)
 +44 (0) 118 9323 8800 (UK)
 e-mail: techservices@scc-inc.com



OPC Drum Unit Section



Toner Unit Section





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.

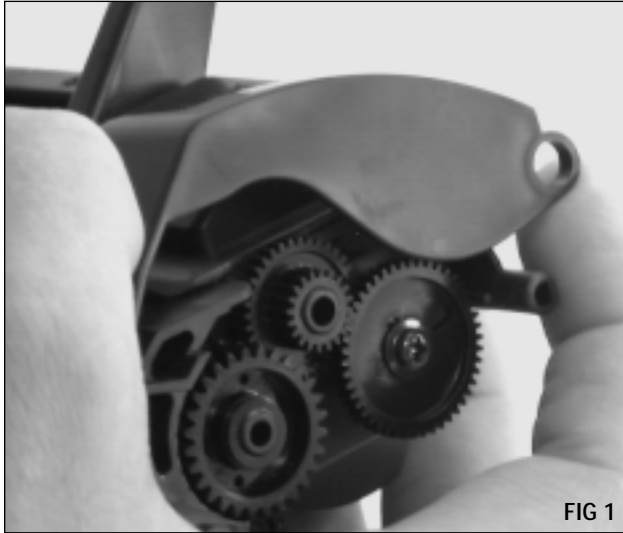
Tools and Supplies You Will Need:

- Phillips Screwdriver
- #0 Size Phillips Head Precision Screwdriver
- Small Flathead Screwdriver
- Hook ToolHTOOL
- Lint-Free Foam Tip SwabLFSWAB
- Lint-Free Cleaning ClothLFCLOTH
- Compressed Air(See"Use of Compressed Air")

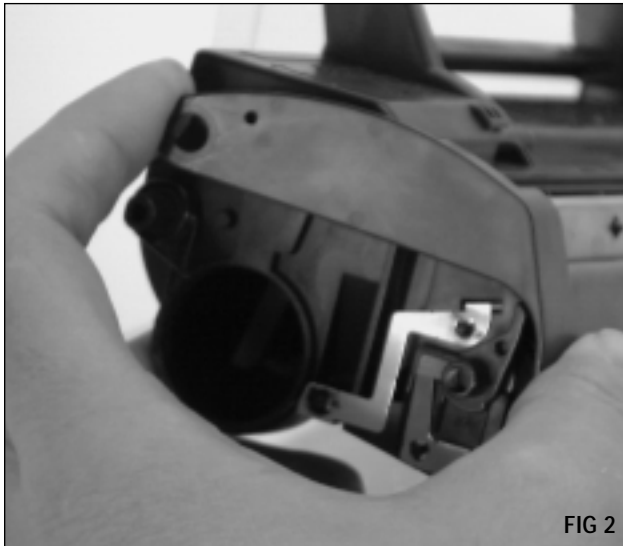


Dissassembly of the Toner Unit

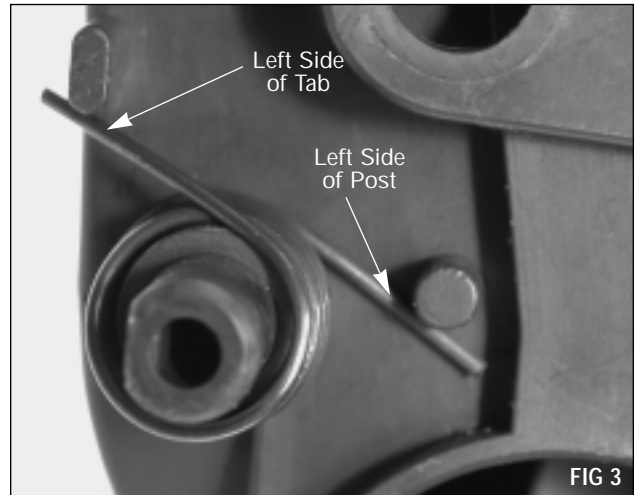
1. With the shutter facing you, disengage the right arm of the shutter by pulling it out to the right off of its axle (FIG 1).



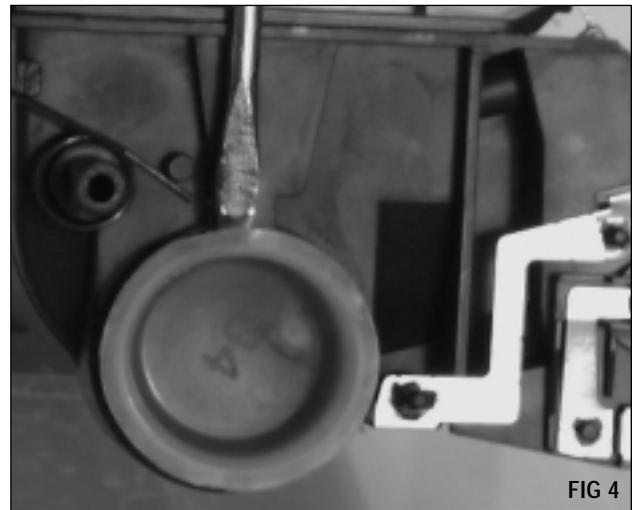
2. Disengage the left arm of the drum shutter by pulling it out to the left off of its axle (FIG 2). Note the shutter tension spring will become disengaged from the shutter. Remove the shutter.



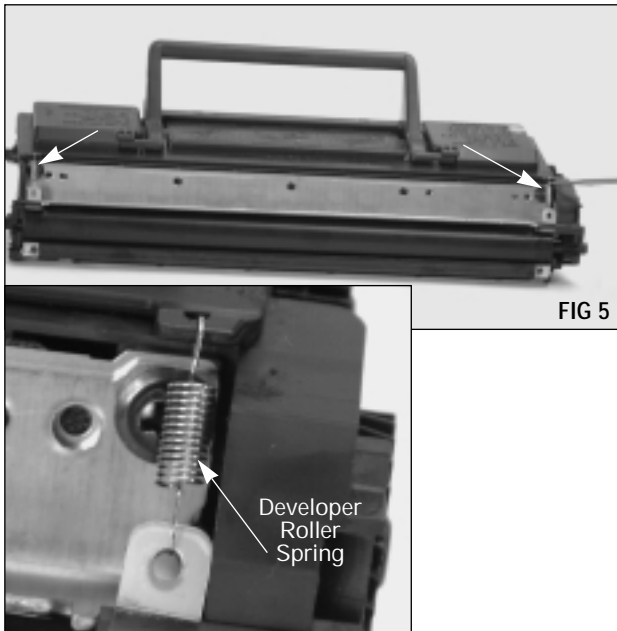
3. With the lower arm of the shutter tension spring positioned against the left side of the post, bend the upper arm of the spring over and hook against the left side of the tab (FIG 3).



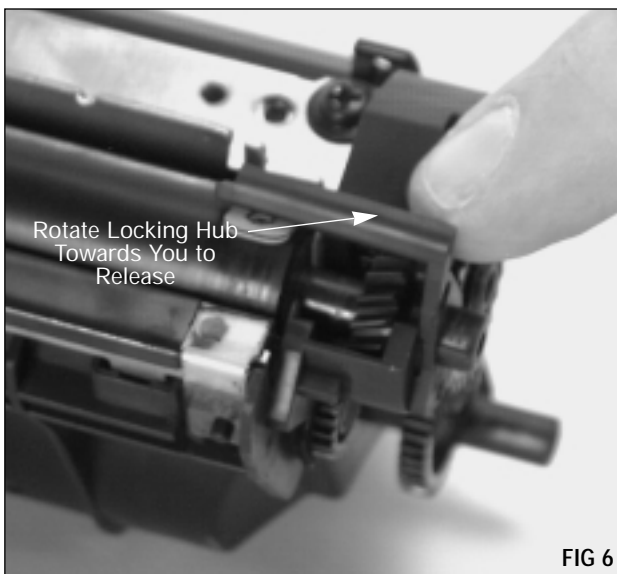
4. Use a small screwdriver to pry loose and remove the hopper cap (FIG 4). The hopper cap is easily damaged. SCC's PC Hopper Cap (PCHCAP) is compatible. Empty the toner from the toner unit and clean with dry, filtered compressed air.



5. Use the Hook Tool (HTOOL) to remove the two developer roller springs located at each end of the doctor blade (FIG 5). Be careful not to scratch the surface of the developer roller.



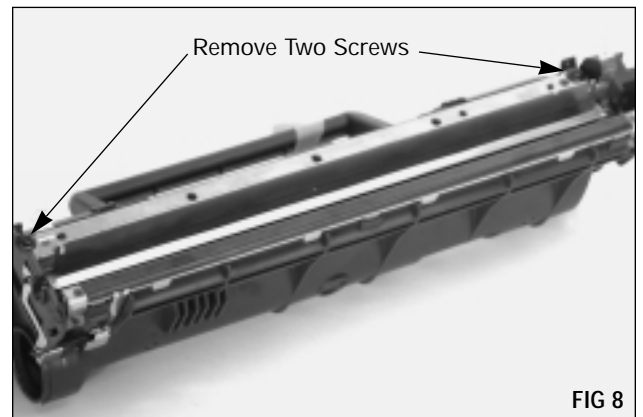
6. On each end of the developer roller there is a locking hub. Rotate the arms of the locking hubs toward you to release and remove them (FIG 6).



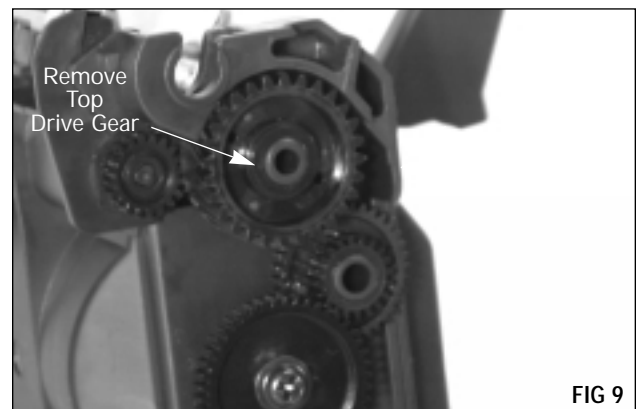
7. Carefully remove the developer roller (FIG 7). Clean only with dry filtered compressed air. Be careful not to lose the two plastic shims located at each end of the developer roller.



8. Using a Phillips screwdriver remove the two screws that secure the doctor blade (FIG 8). Remove the doctor blade and clean with a Lint-Free Cleaning Cloth (LFC CLOTH).

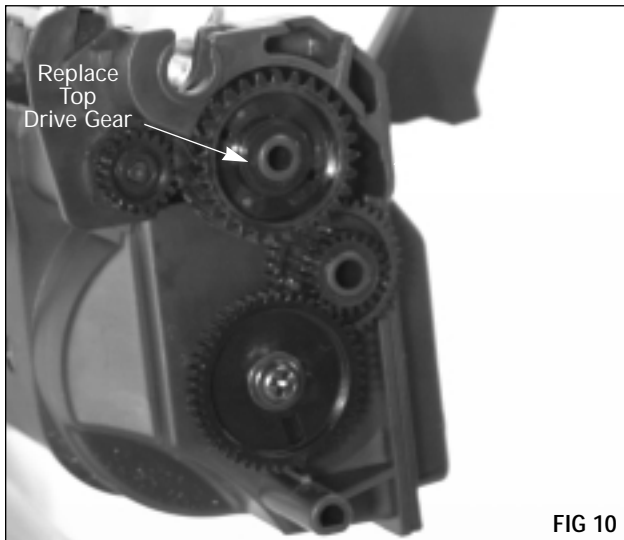


9. Remove the top drive gear (FIG 9). Clean the hopper with dry, filtered compressed air. Clean toner and debris from the foam sealing components.



Reassembly of the Toner Unit

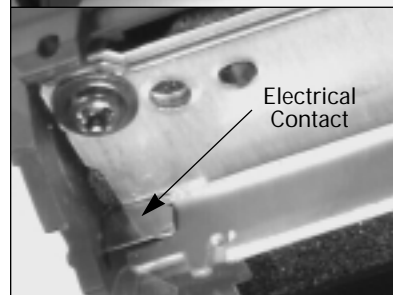
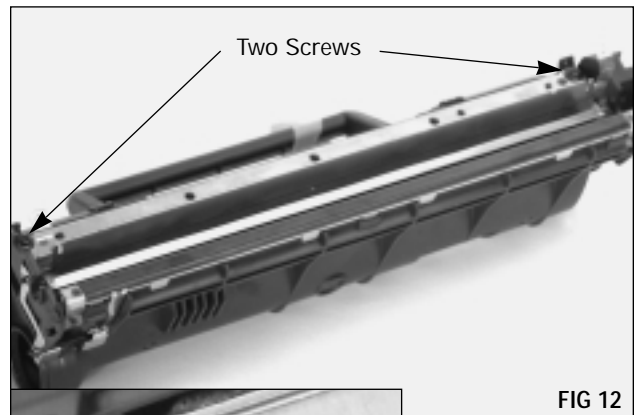
1. Replace the top drive gear (FIG 10).



2. Press the doctor blade sealing foam back into place, making sure the holes on the foam are located over their corresponding positioning posts (FIG 11).



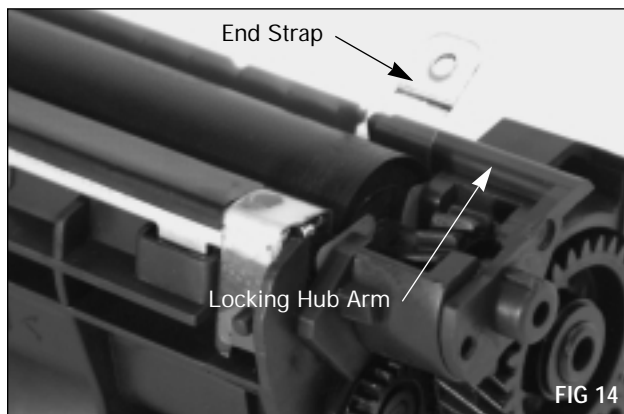
3. Replace the doctor blade and secure with the two screws. Make sure as you position the left side of the doctor blade that you keep the electrical contact against the back side of the blade (FIG 12).



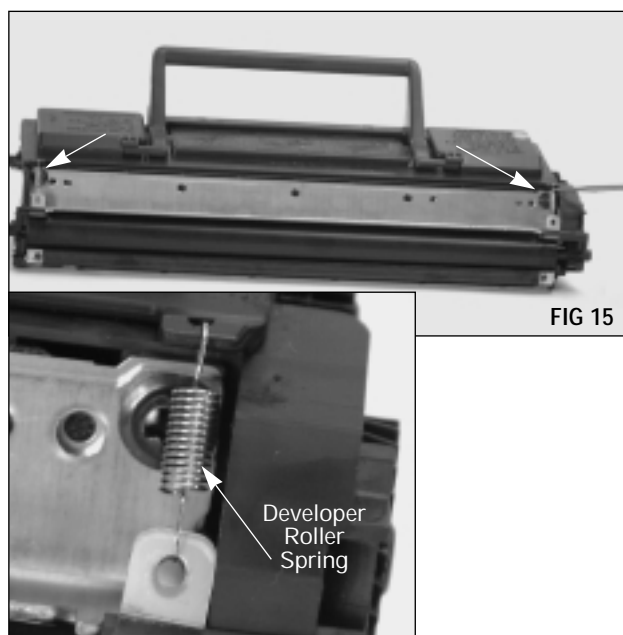
4. Replace the developer roller, making sure the plastic shims are in position (FIG 13).



5. Replace the developer roller locking hubs. Make sure the end straps go under the developer roller and over the arms of the locking hubs (FIG 14).



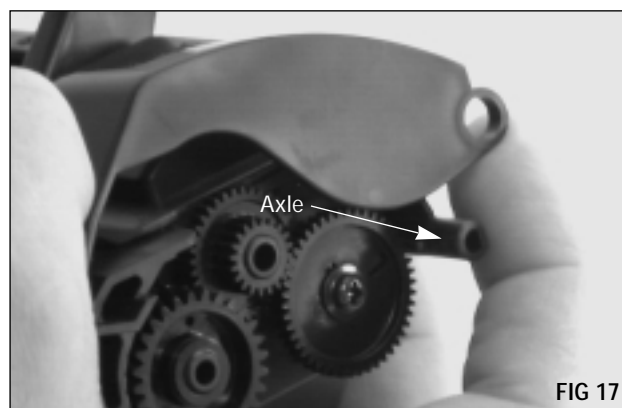
6. Replace the developer roller springs (FIG 15).



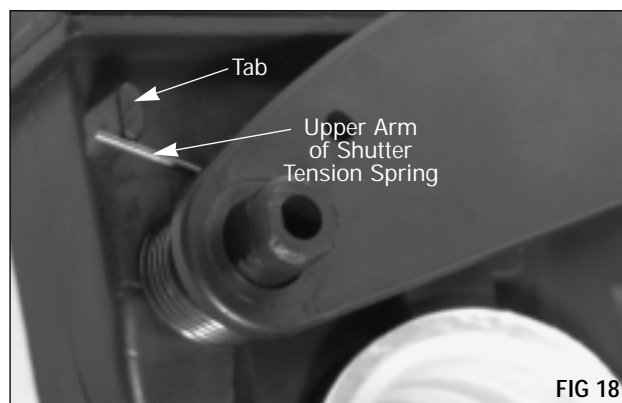
7. Fill the toner unit with 90 grams of toner and replace the hopper cap. Use a Lint-Free Foam Tip Swab (LFSWAB) to clean any remaining toner residue from the electrical contacts (FIG 16).



8. Replace the shutter by fitting each arm over its corresponding axle (FIG 17).



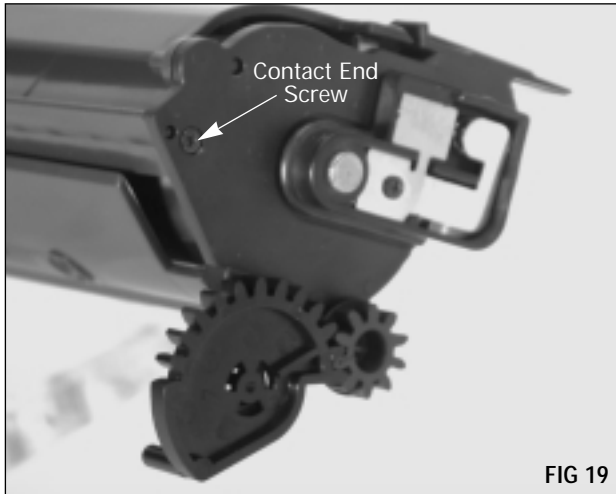
9. Pull the upper arm of the shutter tension spring over the tab and release and it will snap back into normal operating position against the shutter post (FIG 18).



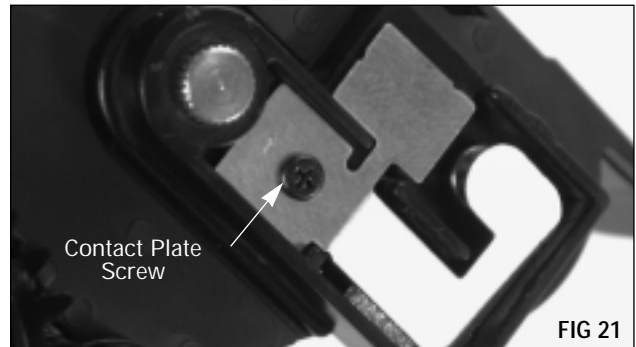


Dissassembly of the Drum Unit

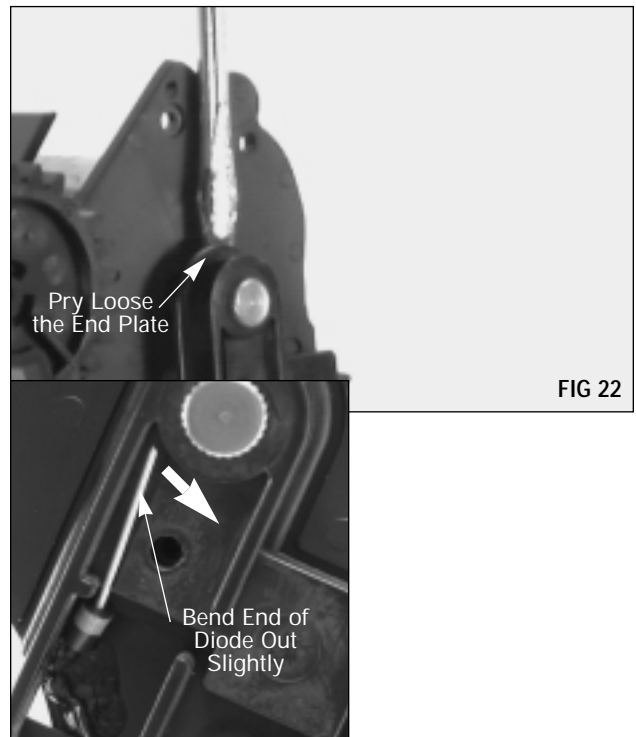
1. Use a #0 size Phillips head precision screwdriver to remove the screw that secures the contact end (FIG 19) and the gear end (FIG 20) of the shutter assembly. Carefully remove the shutter assembly.



2. Remove the screw that secures the copper electrical contact plate to the drum axle end plate (FIG 21). Remove the contact plate.

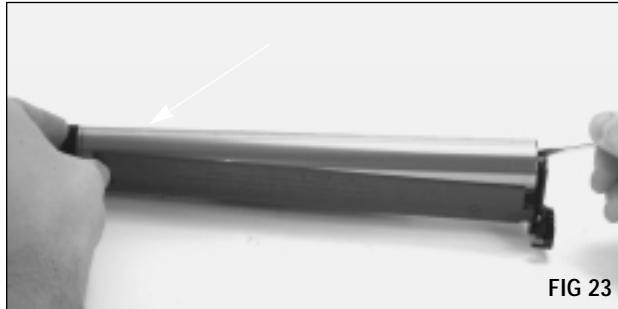


3. Underneath the contact plate there is a diode. Bend the end of the diode out slightly and use a small screwdriver to pry loose the drum axle end plate (FIG 22).

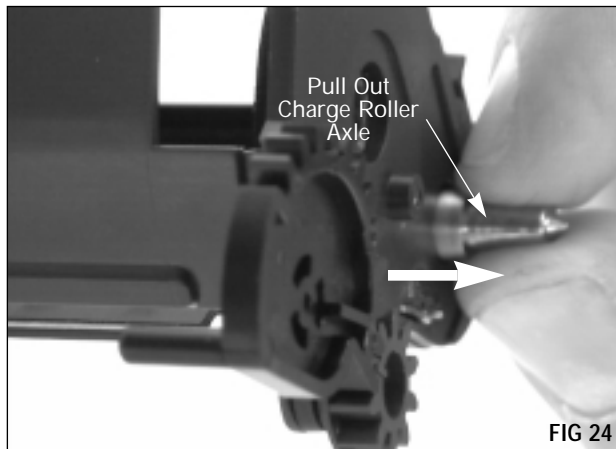


CAUTION If the diode breaks loose it will have to be glued back with CONDUCTIVE ADHESIVE during reassembly.

4. With one finger on the geared end of the drum, take a small screwdriver and pry the ungeared end of the drum loose from the cartridge (FIG 23). Lift up on the drum and remove it from the cartridge. If you plan to reuse the drum, store it in an area where it is protected from light and impact damage. Clean the drum with low pressure compressed air.



5. Pull out the right end of the charge roller (brush roller) axle with your right hand (FIG 24). Put a finger from your left hand into the open slot underneath the drive gear on the left end of the charge roller, push up on the drive gear (FIG 25). Remove the charge roller.



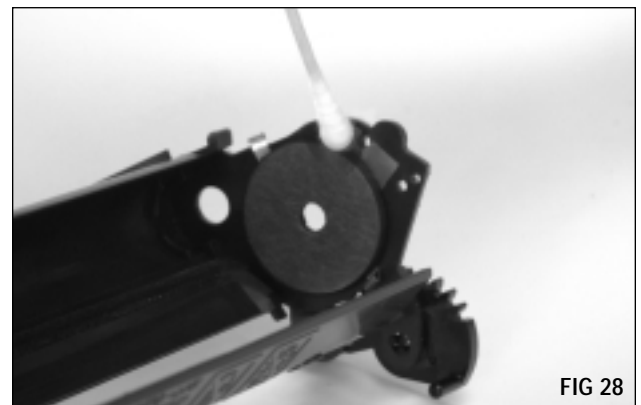
6. Clean the charge roller with low pressure compressed air (FIG 26).



7. Clean the drum unit housing with low pressure compressed air (FIG 27).



8. Use a lint-free swab and a lint-free cleaning cloth to clean the electrical contacts on the drum unit housing (FIG 28).



Reassembly of the Drum Unit

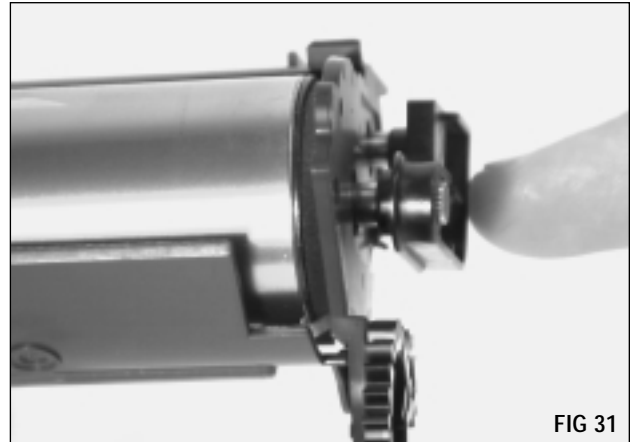
1. Replace the charge roller. First insert the contact end of the charge roller into the corresponding hole on the contact end of the drum unit housing. Then lower the drive gear on the opposite end of the charge roller into its corresponding hole on the drum unit housing (FIG 29).



2. Replace the OPC drum. Insert the geared end of the OPC drum into the corresponding hole on the drum unit housing and then lower the non-geared end of the drum into the housing (FIG 30). Do not touch the surface of the OPC drum. Handle the drum by its gear on one end and by the end cap on the opposite end.



3. Replace the drum axle end plate, inserting the axle into the OPC drum and aligning the corresponding hole on the end plate to the contact end of the charge roller (FIG 31).



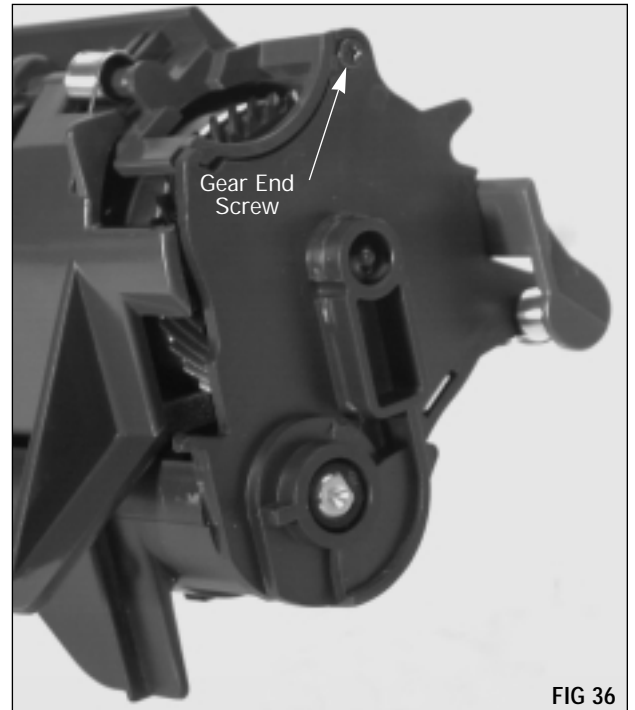
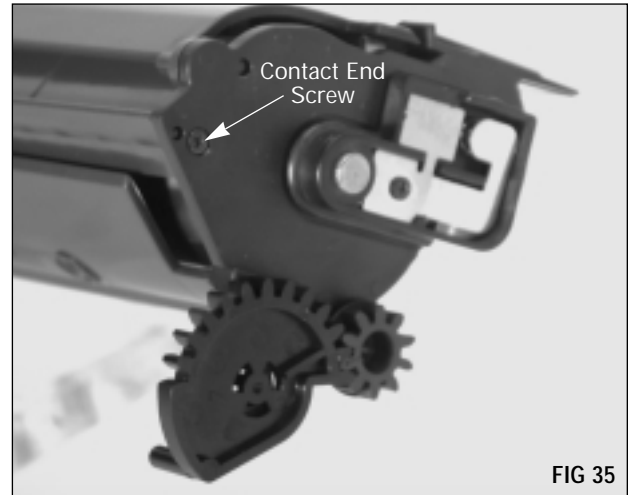
4. Bend the end of the diode back into its operating position (FIG 32). If the diode came loose during disassembly, glue it into position with conductive adhesive.



5. Replace the copper electrical contact plate and secure with the screw (FIG 33).



6. Replace shutter assembly (FIG 34) and secure with the two screws, one at the contact end (FIG 35) and one at the gear end (FIG 36).





Imaging System Technology You Can Count On!

The development of cartridge imaging systems, such as the Minolta® SP-302 (Optra® E), is the primary mission of our technology laboratories. 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.



Static Control Components, Inc.
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

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