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Minolta®/QMS® magicolor® 2300 DL
Toner Cartridge

Reference Info

The Minolta®/QMS® magicolor® 2300 was released in March, 2003 and was targeted at home users and small business. In Nov. 2003 a \$200 price reduction made it the lowest cost color laser printer in history (\$499). Print speeds are comparable to many black-and-white workgroup printers at 16 ppm monochrome and 4 ppm in full color. It is compact in size for desktop use and auto duplex is an optional feature. Ships with 1.5k toner cartridge and the replacement cartridges are available with 1.5k (color only) and 4.5k (color & black). There is a separate drum unit.

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.

CARTRIDGE REMANUFACTURING INSTRUCTIONS FOR:

MINOLTA®/QMS® MAGICOLOR® 2300 DL TONER CARTRIDGE

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GO TO WWW.SCC-INC.COM

For the latest cartridge information
Click on "Online Engine Center"

Other System Support Series™
documents available in
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QUESTIONS?

Please call one of our main numbers
and ask for your
Support Team Representative
or E-mail us at:

US AND CANADA
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Purpose of this SSS

The purpose of this SSS is to provide you a guide and the basic information needed to remanufacture a Minolta®/QMS® magicolor® 2300 DL Toner Cartridge. This SSS contains information about:

- Disassembling the cartridge
- 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 might be updated occasionally to include information about those changes, or technical updates might be available from the SCC Web site.

Visit www.scc-inc.com/Library/ to check for updated documentation and technical updates:

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

Additional Tools & Supplies

Additional Items:

- Hopper Fixture (HP25HJIG)
- Hopper Cap (PCHCAP)

For Basic Remanufacturing:

- Phillips Screwdriver
- Small Phillips Screwdriver
- Small Flat blade Screwdriver
- Compressed Air for Cleaning
- Lint-Free Cleaning Cloth (LFCLOTH)

The following is a summary of the cartridge information for the Minolta®/QMS® magicolor® 2300 DL Toner Cartridge.

Cartridge Information <i>(Standard/High Capacity)</i>	Cyan	Magenta	Yellow	Black	Drum unit
Cartridge Part # (OEM)	1710517-004 1710517-008	1710517-003 1710517-007	1710517-002 1710517-006	*No standard black found 1710517-005	1710520-001
OEM Rated Page Yield	1,500/4,500	1,500/4,500	1,500/4,500	N/A/4,500	11,250 color 45,000 black
OEM MSRP*	\$70/\$130	\$70/\$130	\$70/\$130	\$85	\$149
OEM Wholesale*	\$61/\$112	\$61/\$112	\$61/\$112	\$73	\$133
*Prices as of April, 2005					

The following table is a summary of the Minolta®/QMS® magicolor® 2300 DL Toner Cartridge specifications. This information was obtained from the OEM's web site and is considered to be the most up to date information at the time of printing.

Printer Information	Minolta®/QMS® magicolor® 2300W	Minolta®/QMS® magicolor® 2300DL
Printer Introduction Price	\$699	\$799
First page	26color / 14 mono	26color / 14 mono
Memory	32 MB/not upgradeable	32MB/288MB
Duplex	Manual	Manual
Engine Information		
Print Resolution (dpi)	1200 x 600	1200 x 600
Print Speed (pages per minute)	4 color / 16 mono	4 color / 16 mono
Duty Cycle (pages per month)	35,000	35,000



Disassembling the Toner Cartridge

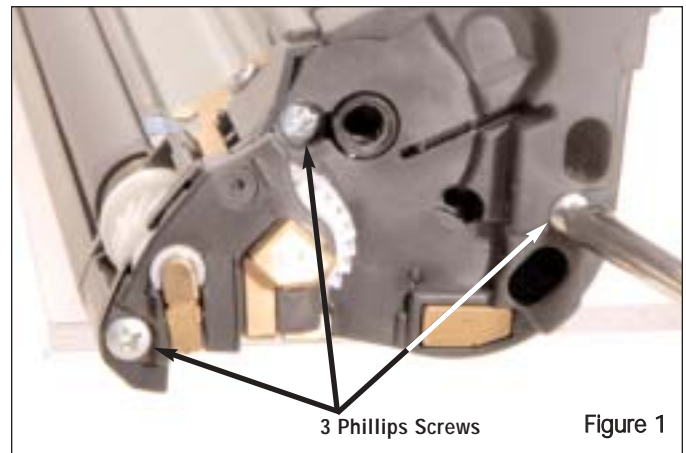
REMANUFACTURING THE MINOLTA®/QMS® MAGICOLOR® 2300 DL TONER CARTRIDGE

This section provides the information needed to disassemble the Toner Cartridge. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

Special Information:

1. The HP2500 Hopper Fixture can be used during the QMS 2300 Remanufacturing process.
2. The HP2500 Hopper Fixture was not used in this instruction.

1. Remove the Developer Roller Drive Gear End Cap
 - a. Using a Phillips Screwdriver, remove the three Phillips Screws that secure the End Cap. See Figure 1.



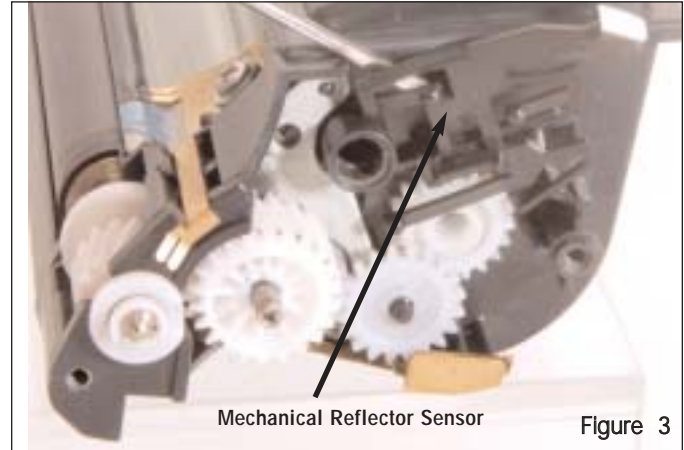
- b. Rotate the Cartridge with the Developer Roller facing downward. Remove the small, black Phillips Screw from the Electrical Contact Strip, see Figure 2.

- c. Carefully remove the End Cap from the Cartridge so that the electrical contact strip is not damaged.




disassembling the toner cartridge

2. If the Mechanical Reflector Sensor has not fallen off, remove it from its extended location, as shown in Figure 3.




3. Rotate Cartridge to the Non-Geared Side. Using a Phillips Screwdriver, remove the one black Phillips Screw and the End Plate. See Figure 4.

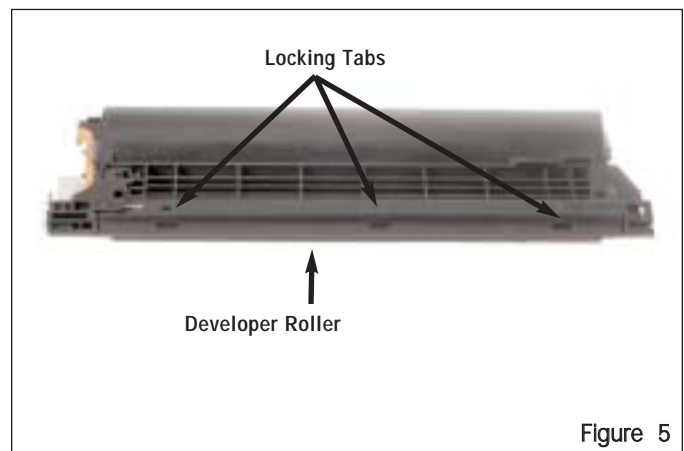
 **NOTE:** Each color Cartridge will have the appropriate colored End Plate.



4. Remove the Doctor Blade cover.

- a. Position the Cartridge with the Developer Roller laying face down on the work surface (Figure 5).

 **NOTE:** The Doctor Blade Cover is held in place with three Locking Tabs. Be careful so that they are not damaged or broken, because there is not a Doctor Blade Cover replacement.



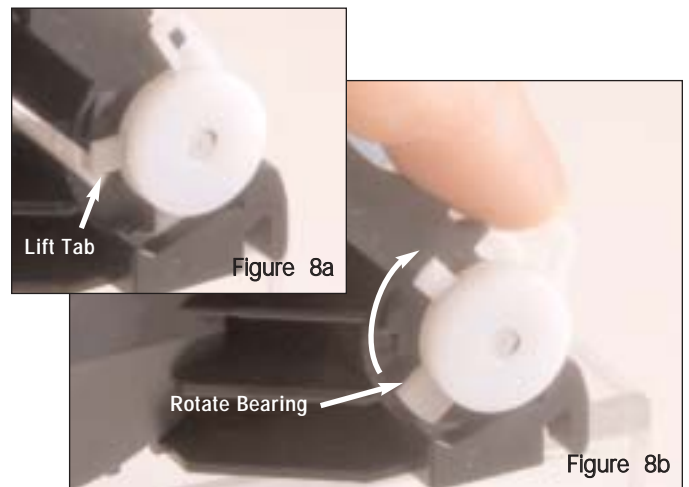
- b. Starting at one end of the Cover, carefully pry off with your fingers and using a small Flat blade Screwdriver insert in Locking Tab opening and gently twist as the Cover is being lifted off (Figure 6).



- 5. Turn Cartridge to the Geared Side. Using a small Flat blade Screwdriver, remove the white Center Bearing from the end of the Developer Roller Shaft. See Figure 7.




- 6. Remove the Capped Center Bearing.
 - a. Turn Cartridge around to the Non-Geared Side.
 - b. Using a small Flat blade Screwdriver and lift the Tab (Figure 8a) and rotate the Bearing clockwise until it stops (Figure 8b).
 - c. Carefully pull the Center Bearing off the Shaft.



disassembling the toner cartridge

7. Remove the Developer Roller.

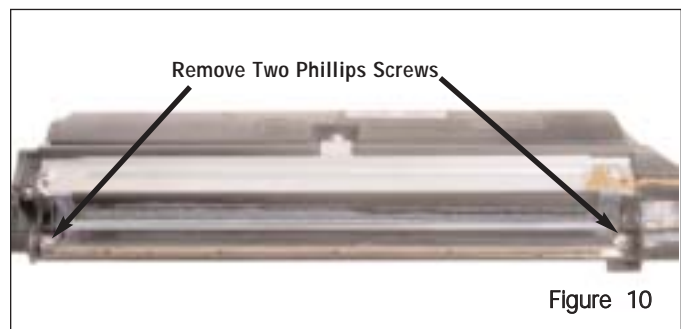
- a. Grasp both ends of the Developer Roller by the metal shafts, with the Developer Bearings and Developer Roller Driver Gear and lift out of the cartridge (Figure 9). Place on a dry, Lint Free Cloth.
- b. Clean with a dry, Lint Free Cloth and Compressed Air.


 **NOTE:** The Bearings and Drive Gear may need to be removed and cleaned with dry, filtered compressed Air.



8. Remove the Doctor Blade Assembly.

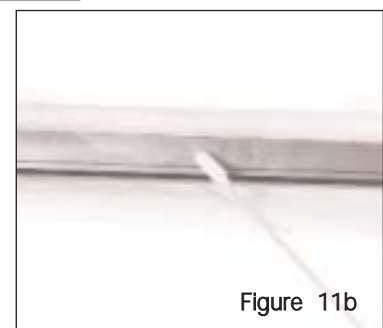
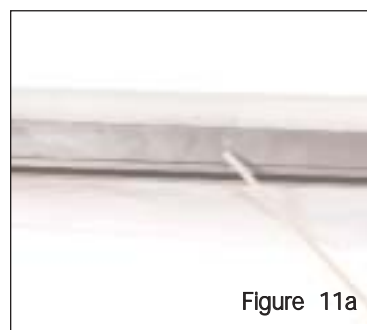
- a. Remove the two Phillips Screws from the Doctor Blade Assembly (Figure 10), using a small Flat blade Screwdriver and carefully lift it out of the Toner Cartridge.
- b. Remove any remaining Toner on the Blades with dry, filtered compressed Air and place on a dry, Lint Free Cloth.




 **NOTE::** Do not bend the Blades during removal.

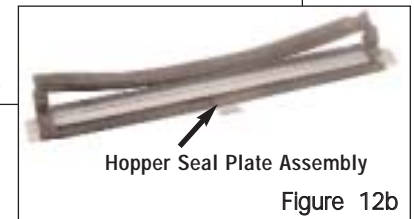
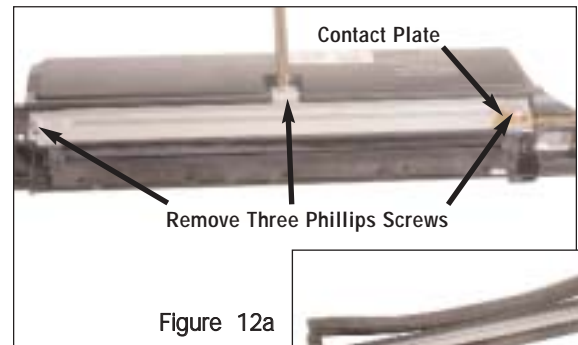
9. Clean the Doctor Blade.

- a. Using the wooden end of a cleaning swab (QTIP), carefully remove any toner build-up from the edge of the Doctor Blade. Be careful not to scratch or bend the thin metal blade, see Figure 11a.
- b. Using the opposite end of the cleaning swab, dampen with 91-99% Isopropyl alcohol, then gently wipe any toner from the surface and underside of the Doctor Blade and stamping, see Figure 11b.



10. Remove the Hopper Seal Plate Assembly.
 - a. Remove the three Shoulder Screws as seen in Figure 12a.
 - b. Carefully remove the Contact Plate and the Seal Plate & Foam Assembly that is attached (Figure 12a & 12b).
 - c. Clean Assembly with dry, filtered compressed Air.

 **NOTE:** Be careful with the Seal Plate & Foam Assembly, it is one piece and may tear during the removal, cleaning and re-installation process.



11. Use a small Flat blade Screwdriver to remove the Hopper Cap (Figure 13). Take care not to damage the Cartridge housing or rim of the Hopper Cap, as toner leakage may result. In the event the cap is damaged, a replacement is available from Static Control Components, Inc.



12. Clean the Cartridge with dry, filtered compressed air. See Figure 14. Ensure the Adder Roller and the Hopper has been thoroughly cleaned of any remaining Toner.

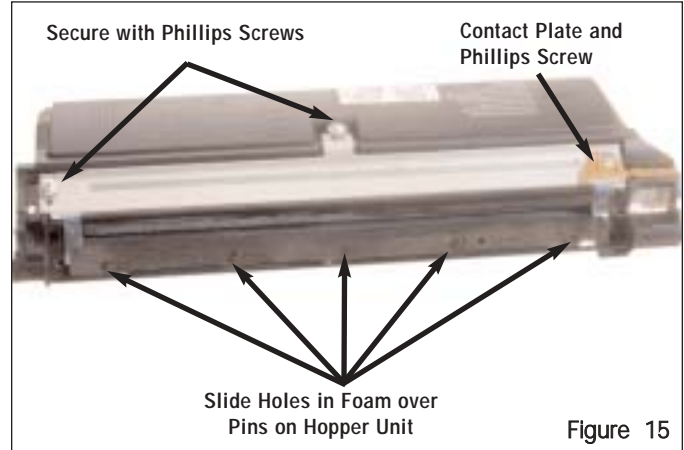





Reassembling the Toner Cartridge

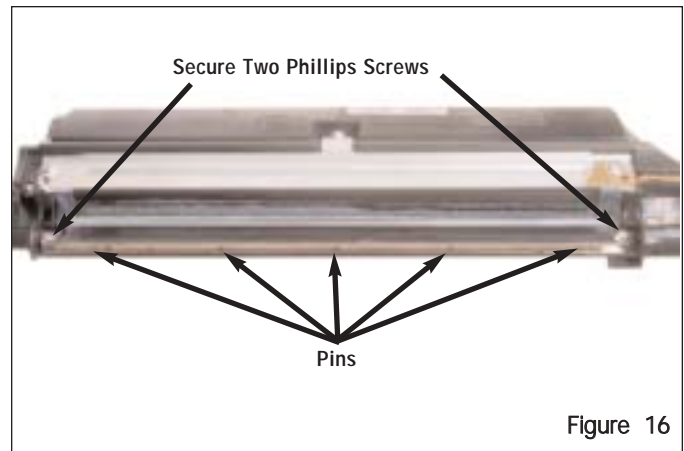
REMANUFACTURING THE MINOLTA®/QMS® MAGICOLOR® 2300 DL TONER CARTRIDGE

1. Re-install the Hopper Seal Plate Assembly.
 - a. Place the Contact Plate and the Seal Plate Assembly and secure the Non-Geared Side and Top positions with two of the Phillips Screws. See Figure 15.
 - b. Position Foam and slide the holes over the Pins on Cartridge (Figure 15).
 - c. Install the Contact Plate on the Gear Side and secure with the remaining Phillips Screw (Figure 15).



2. Align the five holes on the Doctor Blade Assembly over the Pins on the Hopper Unit and secure with the two Phillips Screws (Figure 16).

 **NOTE:: DO NOT** bend, touch or damage the thin metal Blades during the installation.



3. Install the Developer Roller with the Developer Bearings and Developer Roller Driver Gear attached in to the Cartridge. See Figure 17.



4. Re-install the small white Center Bearing on the Gear Side of the Developer Roller Shaft. The Bearing is positioned so that the two small Tabs on the side of the Bearing will fit in to the Developer Roller Shaft opening on the Cartridge. See Figure 18.

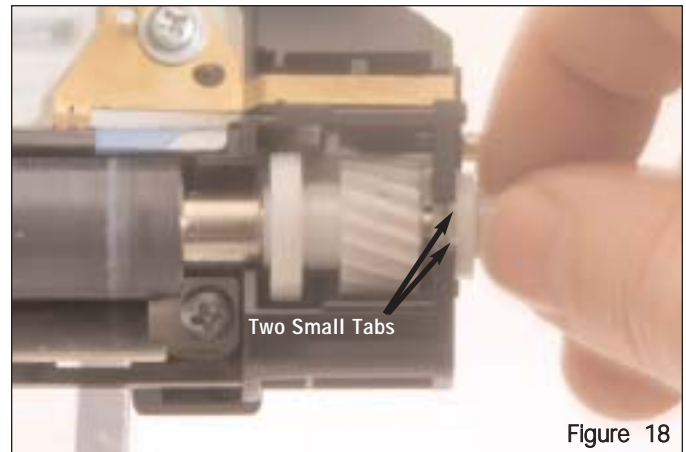


Figure 18

5. Turn Cartridge to the Non-Geared Side in order to install the capped white Center Bearing. Position the hollow Tab facing up, then rotate the Bearing counter clockwise until the hollow Tab snaps on to the small notch on the Cartridge. As shown in Figure 19. Ensure the Bearing is locked securely in place.

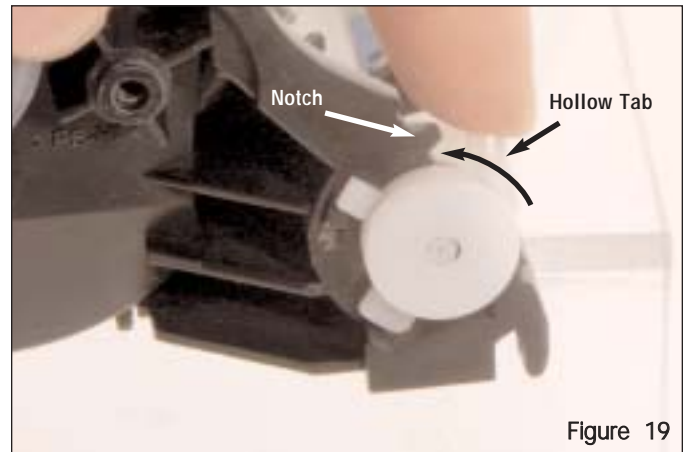


Figure 19

6. Re-install the Doctor Blade Cover.
 - a. Position the Cover with the Foam Ends facing in, over the latches (Figure 20).
 - b. Starting at one end of the Cover, carefully snap in to place.

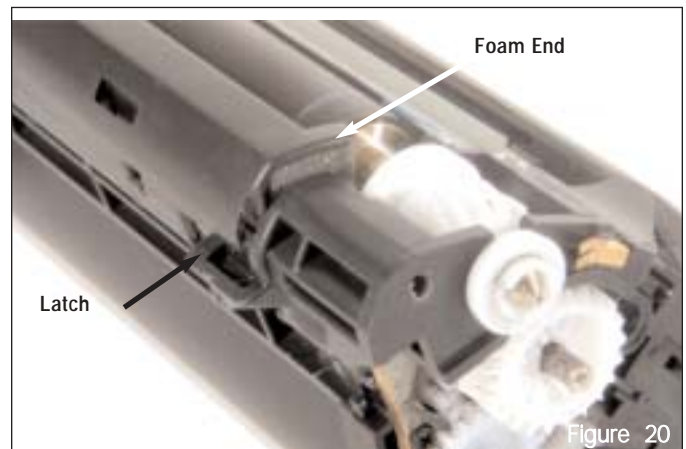


Figure 20

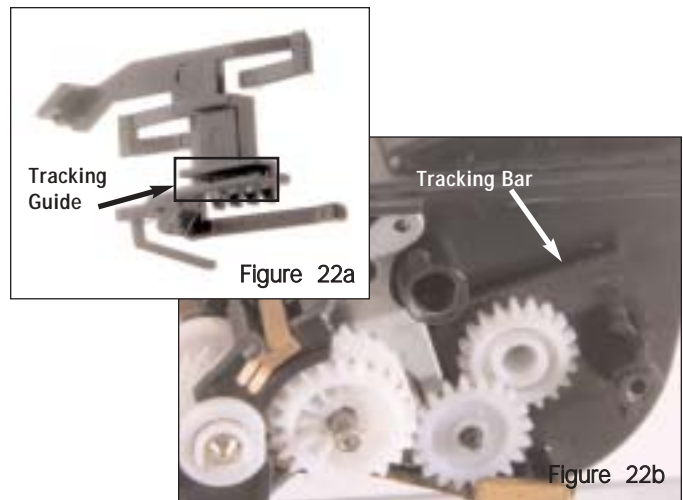
reassembling the toner cartridge

7. Fill Hopper with Toner and replace the Hopper Cap (Figure 21).

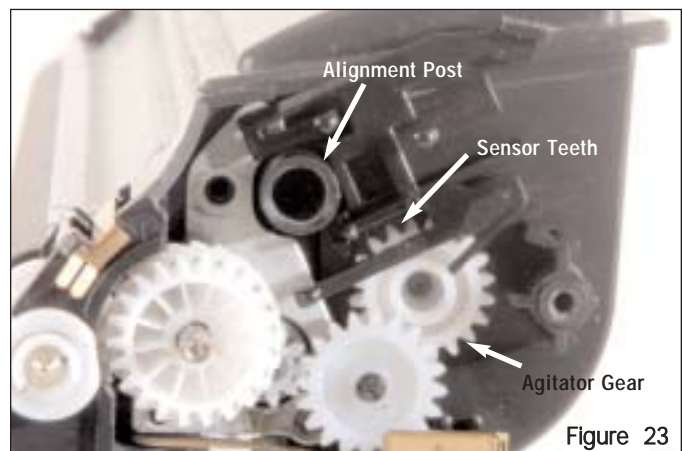


8. Install the Mechanical Reflector Sensor.

- a. Align the tracking guide on the Sensor (Figure 22a) with the tracking bar on the Hopper (Figure 22b).

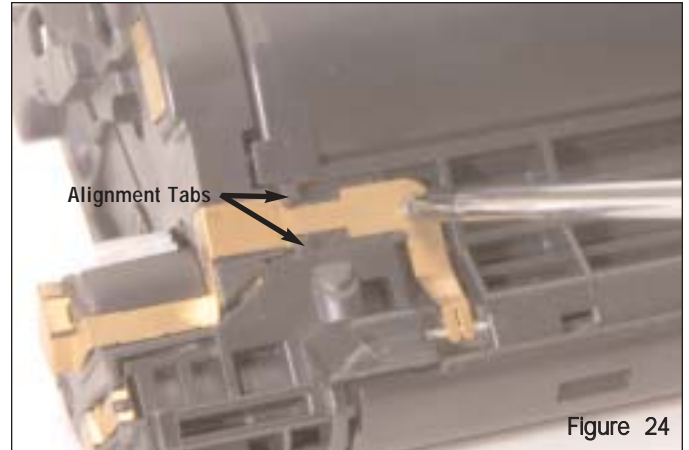


- b. Place the Sensor in to the 'start' position completely seated against the alignment Post. Ensure three teeth on the Sensor are engaged with the Agitator Gear. See Figure 23.

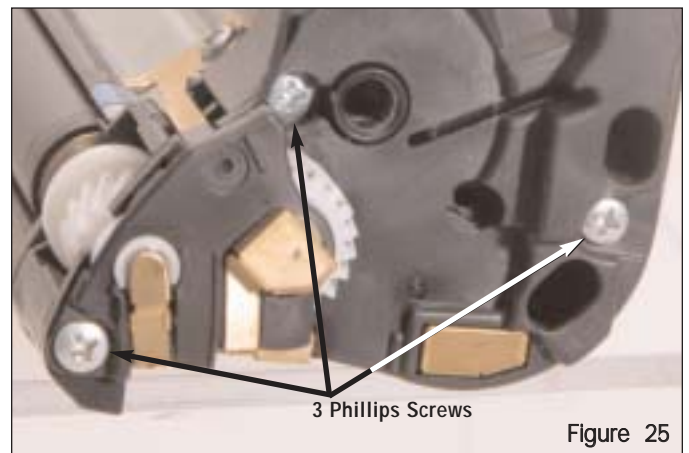


9. Install the Drive Gear End Cap .

- a. Carefully position the Electrical Contact and ensure the Contact Strip is positioned under the Alignment Tabs. Then secure with the small black Screw. As shown in Figure 24.



- b. Secure the End Cap with the three Phillips Screws as seen in Figure 25.



10. Install the Non-Geared End Plate with the black shoulder Phillips Screw (Figure 26).



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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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