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# Minolta® QMS® magicolor® 6100 Remanufacturing Instructions For Toner Units



## About the Cartridges

In November 1999 QMS® introduced the magicolor® 6100 series of color printers, the 6100N, 6100GN, 6100EN and 6100DP. The same engine is used in all four models, and is based on Hitachi's new B-size engine. Each model differs from the others in the series only by standard memory configurations and preinstalled options.

With a speed of six pages per minute (ppm) in full color and 24 ppm in monochrome, the 6100 printers look like and operate like the magicolor 2, only faster and larger. One obvious change is that the 6100

handles 13 x 19 inch paper, allowing the printing of "full-bleed" 11 x 17 inch images. The A4 paper feeds long-edge first, rather than short-edge.

By design the imaging system of the 6100 is basically identical to that in the magicolor 2. It uses the same number of consumables - cyan, magenta, yellow and black toner cartridges, an OPC belt, a fuser bottle, fuser cleaning rollers and a toner waste bin.

Three minor improvements over the magicolor 2 engine are the addition of a "fine mode" for higher quality images, a heavier transfer drum for smoother rotation, and an optical toner sensor. This sensor replaces the rocker switch that signaled when the waste bin was full, and is expected to be more reliable than the mechanical switch.

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[www.scc-inc.com/imaging/Imaging.htm](http://www.scc-inc.com/imaging/Imaging.htm)

Get the latest information  
 on the web at Static Control's  
 QMS® magicolor® 6100  
 Online Engine Center at  
[www.scc-inc.com/Engine/QMS6100](http://www.scc-inc.com/Engine/QMS6100)



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 Documents are available on our  
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[www.scc-inc.com/imaging/Imaging.htm](http://www.scc-inc.com/imaging/Imaging.htm)

### Hitachi® Engine Information

Printer Name . . . . .	QMS® magicolor® 6100 DeskLaser
Date of Copier Introduction (Current/Discontinued) . . . . .	November 1999 (Current)
Print Speed . . . . .	6 ppm (Full color)*
. . . . .	12 ppm (2 color)*
. . . . .	24 ppm (Monochrome)*

\*Based on letter/A4 size paper

### Cartridge Information

Cyan Toner Cartridge OEM Part Number (Code) . . . . .	1710362-002
Magenta Toner Cartridge OEM Part Number (Code) . . . . .	1710362-003
Yellow Toner Cartridge OEM Part Number (Code) . . . . .	1710362-004
Color Cartridge List/Wholesale Price* . . . . .	\$180/\$160
OEM Rated Page Yield . . . . .	8,500 pages @ 5% coverage
Toner Class . . . . .	Non-magnetic, mono-component

Monochrome Toner Cartridge OEM Part Number (Code) . . . . .	1710362-001
Monochrome Cartridge List/Wholesale Price* . . . . .	\$140/\$125
OEM Rated Page Yield . . . . .	14,000 pages @ 5% coverage
Toner Class . . . . .	Non-magnetic, mono-component

Belt Unit OEM Part Number (Code) . . . . .	1710365-001
Unit List/Wholesale Price* . . . . .	\$411/\$361
OEM Rated Page Yield . . . . .	120,000 pages (Monochrome)
. . . . .	30,000 pages (Color)

\*Prices as of August 2000

### Model Compatibility

QMS® 6100N, 6100GN, 6100EN, 6100DP



# Toner Unit

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Although the cartridges look alike, there are a few minor differences between the magicolor® 2 and the 6100, other than their size. For example, the doctor blade has been moved from above the developer roller assembly bracket to beneath the bracket, and the doctor blade upper support has been eliminated.

## Key Points

- OEM “starter” cartridges (shipped with the printer) are low capacity “half-life” units.
- All four toner cartridges are self-contained, and are keyed to insure installation in the correct slot.
- The center of the black toner cartridge housing is raised to allow for the higher toner capacity, resulting in a higher yield cartridge. This configuration prevents the black cartridge from being re-used as a color cartridge.
- The developer roller is made of aluminum, with a smooth surface, and appears to be a one-piece design. It is in direct contact with the OPC belt during development, and does not utilize mag roller bushings to set the air gap.

- Components under the developer roller are a toner adder roller, one upper developer-sealing blade, one lower developer-sealing blade, and four toner augers. To gain access to these components an ultrasonic weld must be broken, which destroys the cartridge.

- The doctor blade is made of a urethane member, attached to a thin, flexible metal stamping, and is easily replaceable.
- The toner hopper can only be cleaned through the toner fill port, making it impossible to remove all residual toner. Any replacement toner must be compatible to avoid contamination problems.

## 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.

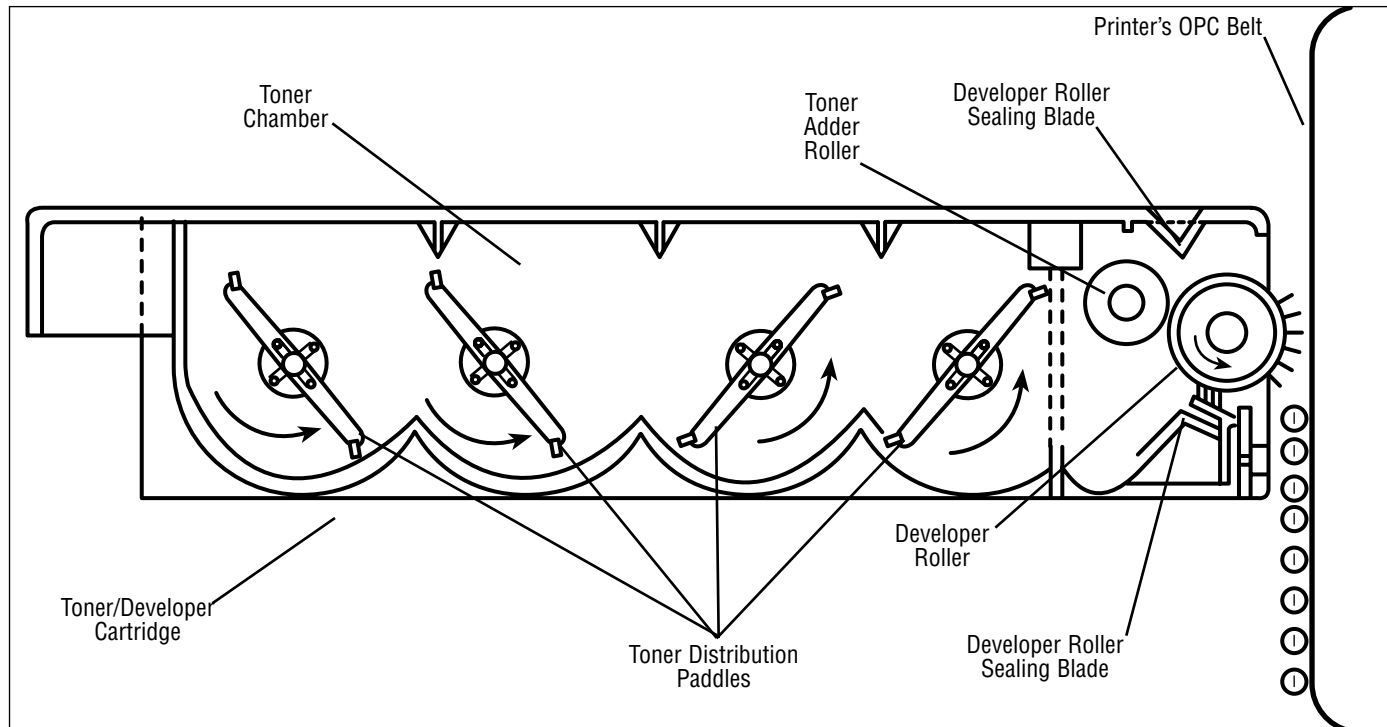
## Tools and Supplies You Will Need

### For Basic Remanufacturing:

- 91-99% Isopropyl Alcohol .....(See left)
- Compressed Air for Cleaning .....(See left)
- Needlenose Pliers
- Phillips Screwdriver #2
- Standard Flat-Blade Screwdriver
- Compatible Toner
- Minolta®/QMS® magicolor® 6100 printer



## Toner Cartridge Cross-Section



## Disassembly of The Toner Unit

**NOTE** Avoid touching the developer roller with your fingers. Oils from your skin will transfer to the aluminum coating on the developer roller; attract and hold toner, and result in print defects. Use of gloves or other protective materials is recommended.

### 1. Remove the doctor blade

Using a Phillips screwdriver, remove the five screws that hold the developer roller assembly cover in place (FIG 1). Lift the cover off and set it aside.

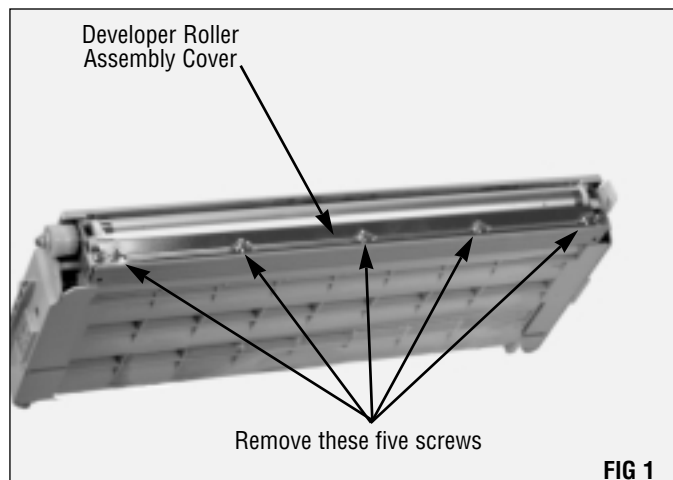
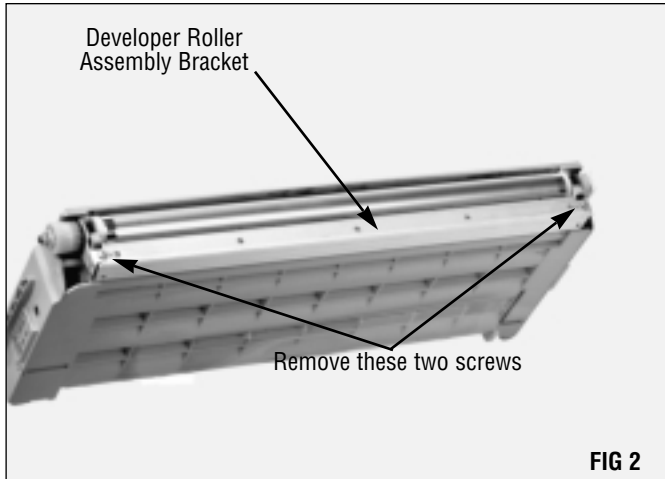


FIG 1

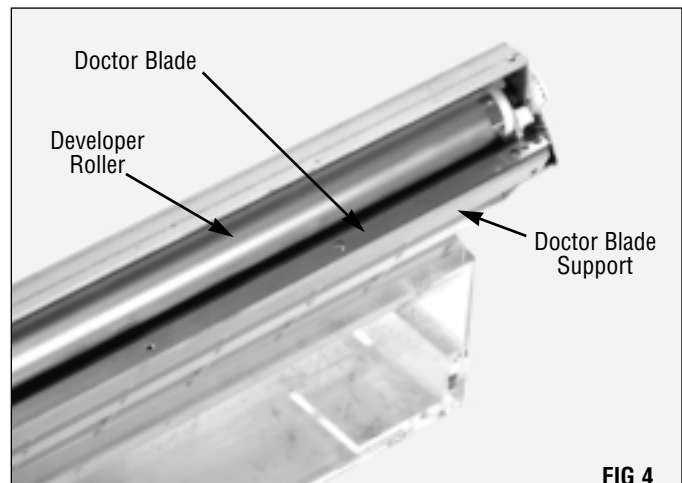
Remove the two Phillips screws that secure the developer roller bracket (FIG 2).



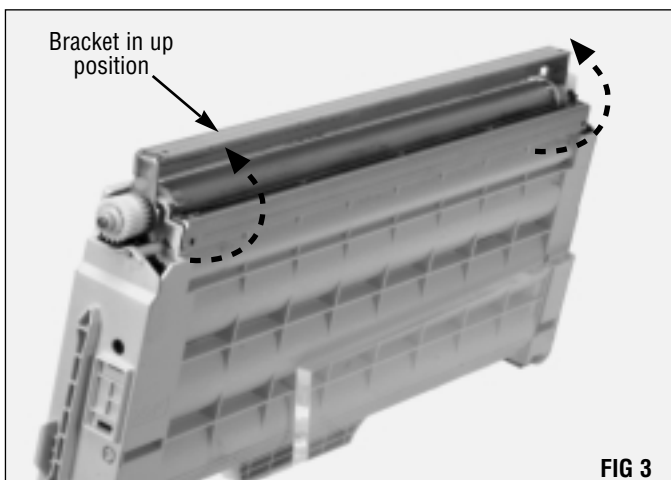
**NOTE** The doctor blade lies on the doctor blade support, which rests on a foam base. Once the developer roller assembly bracket has been raised, the doctor blade support may fall out of the unit

**NOTE** The doctor blade is attached to a thin metal stamping with a sharp edge. This edge can cause injury if not handled with care.

Carefully lift the doctor blade out from under the developer roller (FIG 4) and inspect for damage. Avoid bending the metal strip. Lift off the doctor blade support and set it aside.



Pivot the developer roller assembly bracket up (FIG 3). Be careful not to touch the developer roller with your bare fingers.

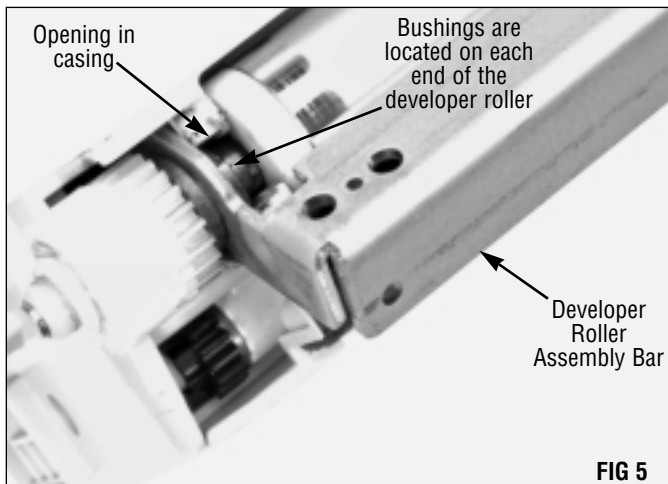


Clean the doctor blade and doctor blade support with dry, filtered, compressed air, or wipe with a dry, lint-free cloth. Do not use any chemicals or water.

## 2. Remove the developer roller assembly

There are bushings on each end of the developer roller. Each has a flat spot that corresponds with an opening in the cartridge housing (FIG 5). The bushings must be aligned with the opening in the housing to allow removal of the assembly.

Using both hands, grasp the developer roller assembly bar near the extreme ends. With a slight lifting motion, rotate the bar down until the keyed areas of the bushings align with the openings in the housing. Lift the entire assembly up and out. Be careful not to touch the developer roller with your fingers.

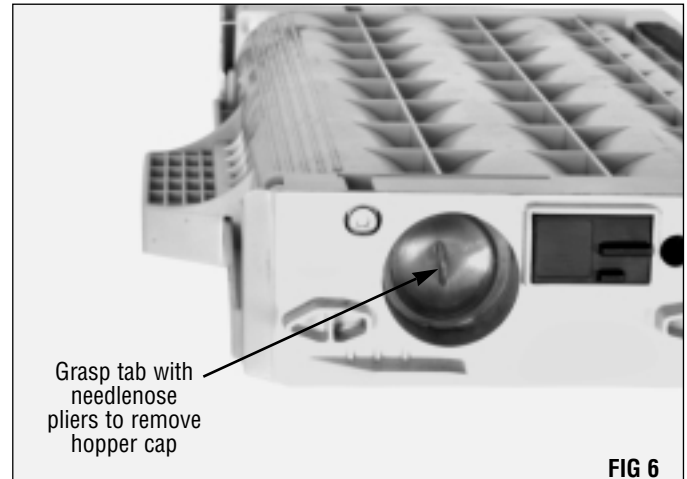


Clean the developer roller assembly using dry, filtered, compressed air, or by wiping with a dry lint-free cloth. Do not use water or chemicals of any kind.

Place the assembly on a flat surface, away from your immediate work area to avoid accidentally touching the developer roller with your bare skin.

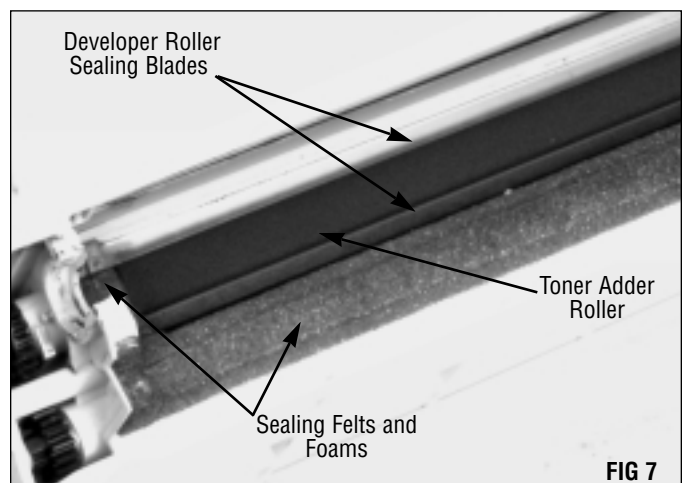
## 3. Remove the hopper cap

Using needle nose pliers, grasp the center tab on the hopper cap (FIG 6). Remove the cap, being careful not to puncture or distort it in any way.



## 4. Clean the hopper

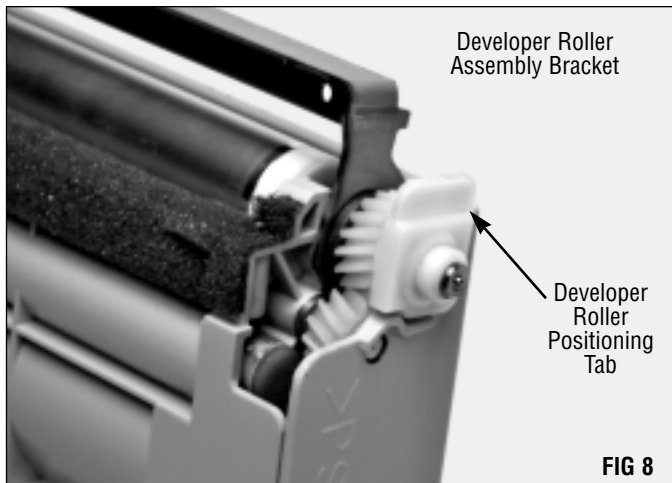
After dumping any residual toner from the toner hopper, clean the hopper and the area around the developer roller sealing blades, foams and felts using dry, filtered, compressed air (FIG 7).



# Reassembly of The Toner Unit

## 1. Replace the developer roller

With both the developer roller assembly bracket and positioning tab pointing up, seat the developer roller assembly in place (FIG 8).

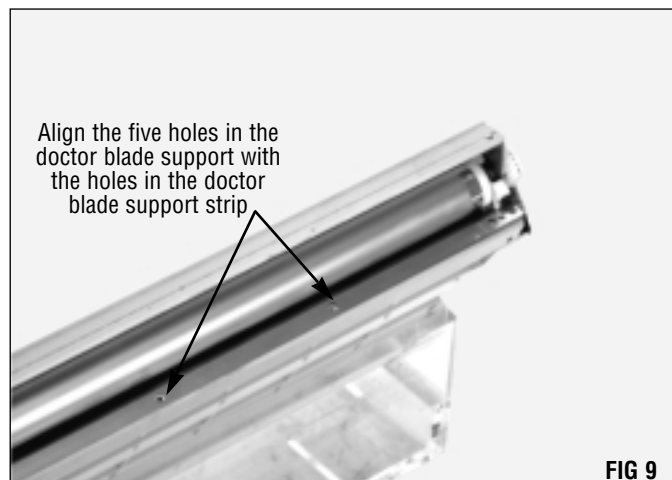


**NOTE** As of this printing, testing to determine the life of the developer roller is in progress.

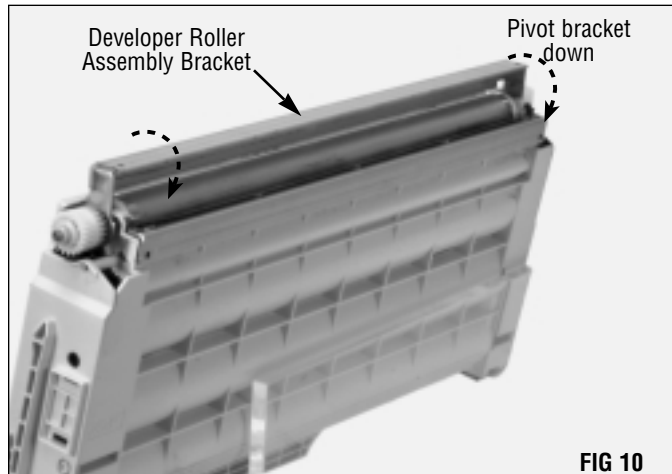
## 2. Replace the doctor blade

Tilt the cartridge back during replacement of the doctor blade and doctor blade support to prevent the components from falling out of place.

Replace the doctor blade and doctor blade support (FIG 9). Push the blade under the developer roller until the screw holes in the metal strip are aligned with the holes in the support beneath the doctor blade.

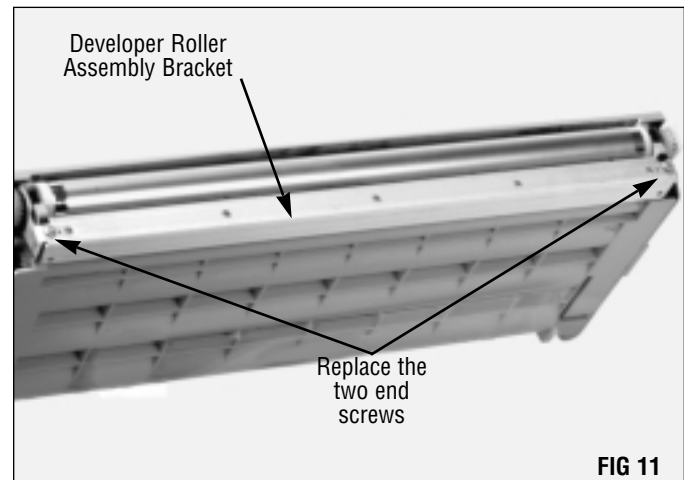


Rotate the developer roller assembly bracket down and into place over the doctor blade (FIG 10).

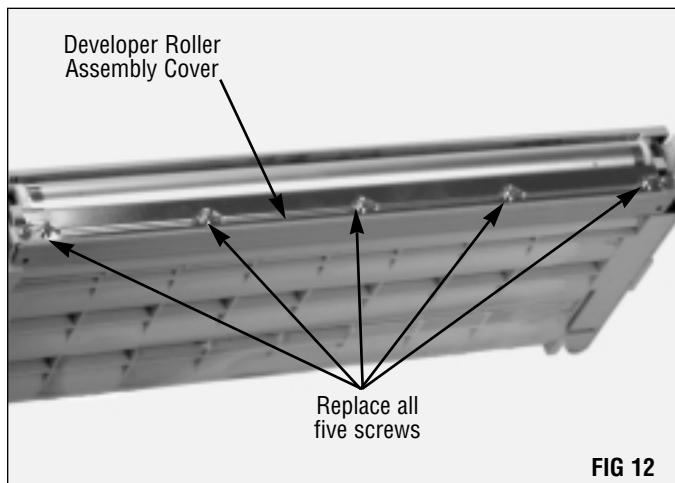


Make sure the holes in the top of the developer roller assembly bracket line up with the holes in the doctor blade stamping and the doctor blade support.

Replace the two screws to secure the bracket in place over the doctor blade and doctor blade support (FIG 11).



Replace the developer roller assembly cover and secure with five screws (FIG 12).



### 3. Refill the hopper

Refill the toner hopper through the toner fill opening and replace the toner hopper cap.

### 4 Test print the cartridge

Static Control recommends test printing remanufactured cartridges in a compatible printer.







## Imaging System Technology You Can Count On!

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*The development of cartridge imaging systems, such as the QMS® magicolor® 6100 System, 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.*



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