

**PURPOSE OF THIS SECTION****In this section:**

- The model will be introduced.
- The main specifications will be discussed.
- The optional peripherals will be listed.

When you finish this section, you should know the answers to these questions.

- How many models are there in the series?
- What are the differences between the models?
- How much memory do the machines have?

What Models are there in the Series?

	Copy Speed (A4)	PDL	NIC	Duplex	Optional 500-sheet Tray	USB host	Fax
Perseus-P1a (G165)	16/16 ppm	GDI	Yes	No	No	No	
Perseus-P1b (G166)	20/20 ppm	PCL,PS	Yes	No	Option	No	
Perseus-P1c (G167)	20/20 ppm	PCL,PS	Yes	Yes	Option	Yes	
Perseus-MF1a (G181)	16/16 ppm	GDI	Yes	No	No	No	No
Perseus-MF1b (G183)	20/20 ppm	GDI	Yes	Yes	Option	Yes	Yes
Perseus-MF1c (G184)	20/20 ppm	PCL,PS	Yes	Yes	Option	Yes	Yes

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- The two copy speed figures are for black-and-white/color.
- Yes: Built-in as standard equipment
- No: Not built-in, not available as an option. For the duplex column, 'no' means that manual duplex can be done but not automatic duplexing.
- For Letter paper, the copy speed is a bit higher, at 16.5 ppm or 21 ppm.

Appearance – Printer Model



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No additional notes

Appearance – MFP Model



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- This is the G181, that has no built-in ADF.

Appearance – MFP Model with ADF



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- This is the G183/G184. These models have a built-in ADF.

Operation Panel – Printer Model



- The red lights show when toner and paper have run out.

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- We will study this again in more detail in a later section of the course.

Operation Panel – MFP Model

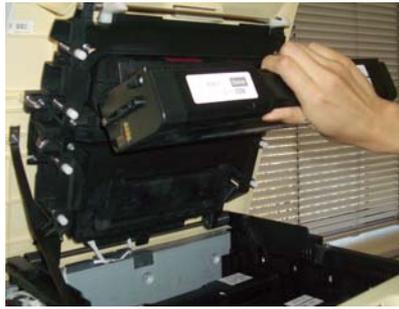


- ❑ The Menu key is unusual. We will study it in a later section of the course.

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- ❑ The G181 does not have the On Hook Dial button or the blue button below the centre of the LCD.
- ❑ We will study this again in more detail in a later section of the course.

Uses an AIO Cartridge



- ❑ The OPC, charge roller, and development unit are all in an AIO cartridge.
 - ◆ AIO: All-in-one
- ❑ The cartridge can be removed with one hand.

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No additional notes

Optional Equipment

- Memory Unit Type F 256MB G891
- TK1010 Paper Feed Unit G849

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- These are both new options, not used before on other models.
- These options are not available for all models, as explained in the following slides about machine specifications.

Main Specifications – Printer Model

- ❑ Warm-up time: 51 s
- ❑ First print speed: 14 s
- ❑ Recovery from energy saver mode: 10 s
- ❑ Paper Input Capacity:
 - ◆ 250 sheets (standard tray)
 - ◆ 1 sheet (bypass tray)
 - ◆ 500 sheets (optional paper tray unit)
- ❑ Paper Output Capacity: 150 sheets
- ❑ Paper Weight
 - ◆ Standard and bypass trays: 60 - 160g/m², 16lb - 40lb Bond
 - ◆ Optional paper tray unit: 60 - 105g/m², 16lb - 28lb Bond
- ❑ Resolution: 600 x 600
- ❑ Memory: 64 MB (G165), 128 MB (G166/G167)
 - ◆ G166 and G167 can be upgraded with one 256 MB module to a maximum of 320MB.

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- ❑ Duplex printing cannot be done for thick paper (more than 105 g/m², 28 lb Bond).
- ❑ Printing on OHP transparencies is not possible.
- ❑ Resolution settings: There are three settings (600 x 600 1-bit, 600 x 600 2-bit [also called 1200 x 600], 600 x 600 4-bit [also called 2400 x 600 dpi])
 - Without 256 MB of extra memory, 2400 x 600 dpi duplex LG size cannot be printed.
- ❑ Other specs:
 - Printer Language
 - G165: DDST*
 - G166/G167: PJL, PCL 5c/6, PostScript Level 3*
 - G167 only: PictBridge*
 - Paper sizes, paper types, paper weights: See the Operating Instructions (Hardware Guide - 4. Paper and Other Media)

Main Specifications – MFP Model

- ❑ **Same as the Printer model except the following.**
- ❑ **First copy speed: 30 seconds**
 - ◆ First print speed: Same as the printer model
- ❑ **Resolution**
 - ◆ Printing: 600 x 600, 1200 x 600, 2400 x 600
 - ◆ PC Scanning: 1200 x 2400
 - » Scan from operation panel: 600 x 600
 - ◆ Copying: 600 x 600, 600 x 300 (ADF)
- ❑ **Memory: 128 MB (G181/G183), 256 MB (G184)**
 - ◆ G184 can be upgraded with one 256 MB module to a maximum of 512 MB.

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- ❑ Why is 1st copy time so much slower than the 1st print time?
 - Scanner initialization and movement to the start position takes more time.
- ❑ Auto duplex copying is not possible: There is no operation panel procedure to access such a function, even though duplex printing is possible with the printer driver.
- ❑ Other specs
 - Maximum paper size for scanning
 - Exposure glass: A4, Letter (8.5×11")*
 - ADF (G183 and G184 only): Legal (8.5×14")*
 - Maximum paper size for printing: Legal (8.5×14")
 - ADF capacity: 35 sheets
 - Scan area (scanner mode)
 - Exposure glass: 216 x 297 mm (8.5 x 11.7 inches)*
 - ADF: 216 x 356 mm (8.5 x 14.1 inches)*
 - Gradations
 - Copier mode: Scanning 256 levels, Printing 2 levels*
 - Scanner mode: Input 16-bit color, Output 8-bit color*
 - Printer language
 - G181/G183: DDST*
 - G184: PCL6, PCL5c, PostScript 3*
 - Paper sizes: See the Operating Instructions (User Guide – 11. Appendix - Specifications of the Machine)

Fax Specifications – MFP Model

- Resolution: 8 x 3.85, 8 x 7.7 dots/mm
- Modem rate (max): 33.6 kbps
- Transmission time: 3 seconds
- Data compression method: MH, MR, MMR
- Memory capacity: More than 100 sheets (8 x 3.85)
- Speed dial: 50 (total for Fax and Scan to E-mail)
- Quick dial: 20
- Number of redials: 1

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No additional notes

Service Modes

❑ Printer model

- ◆ Accessed from a PC via USB or Ethernet with a utility called SOM (Smart Organizing Monitor).
- ◆ The customer installs SOM during the installation procedure, and also uses this utility to monitor the machine and access user tools.
- ◆ There is a password to access the service mode adjustments.
- ◆ Technicians must have access to a PC in order to use the service mode

❑ MFP model

- ◆ Accessed at the machine's operation panel through menus

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- ❑ For the printer models, technicians must have access to a PC in order to use the service mode.

RICOH**G165 SERIES TRAINING****INSTALLATION**

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PURPOSE OF THIS SECTION**In this section you will:**

- Install your machine and the peripherals.
- Install the software.

When you finish this section, you should know the answers to these questions.

- Who installs the machine?
- What is the meaning of the star and circle marks near the fusing unit?

Hardware Installation Procedure



- ❑ The customer installs the machine.
- ❑ However, please install the machines, and try to see what types of errors the customers could make.



- ◆ G165/G166/G167 Printers: Quick Installation Guide
- ◆ G181/G183/G184 Copiers: Quick Installation Guide

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No additional notes

Installing the Options



- ❑ **The customer installs the options.**
 - ◆ Paper tray unit
 - ◆ Memory
- ❑ **Install the optional memory and paper tray unit:**



- ◆ G165/G166/G167 Printers: Hardware Guide - 2. Installing the Printer and Options – Installing the Options
- ◆ G181/G183/G184 Copiers: User Guide - 2. Getting Started – Installing Options

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No additional notes

Software Installation Procedure Printer



- ❑ **Now we must do the following:**
 - ◆ Install Smart Organization Monitor (SOM)
 - ◆ Specify an IP address
 - ◆ Install the printer driver
- ❑ **The customer normally does this.**
- ❑ **However, please install the software, and try to see what types of errors the customers could make.**



- ◆ Software Installation Guide for Network Connection
- ◆ Addendum: Software Installation Guide for Network Connection

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- ❑ The customer normally does this.
- ❑ However, you need to know how to install the software, because SOM is needed for field service adjustments.

Software Installation Procedure Copier



- Now we must install the drivers and software.

- ◆ Driver Installation Guide



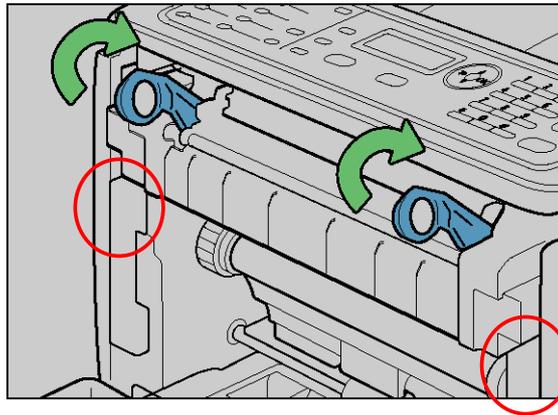
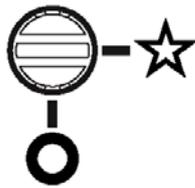
- Also, study how to update the driver.

- ◆ Driver Update Guide

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- The customer normally does this. However, please install the software, and try to see what types of errors the customers could make.

Tell the User About This



- ❑ **If the user leaves the machine for a long period (days, weeks, months), this knob must be set to the 'star' position.**
 - ◆ In the 'star' position, the pressure roller is not in contact with the hot roller. This prevents the hot roller from deforming if the machine is turned off for a long period.
 - ◆ For normal operation, it should be at the 'circle' position.

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- ❑ **THIS IS NOT IN THE OPERATION MANUAL!!!!** So please tell the users about this somehow.
- ❑ The 'star and circle' adjustment locations are in the red circles. Adjust both of them with a screwdriver.
 - To go to the 'star' position, turn counter-clockwise. This moves the pressure roller away from the hot roller.
 - To go to the 'circle' position, turn clockwise. This moves the pressure roller into contact with the hot roller.
 - If the machine power is kept on, the fusing unit will idle every 24 hours to prevent damage to the hot roller. But if the machine is turned off with pressure still applied, the hot roller could deform. So this adjustment was added.
 - For shipping, the blue levers are down, which also releases pressure between the rollers.

RICOH**G165 SERIES TRAINING****SERVICE MODE**

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PURPOSE OF THIS SECTION**In this section you will:**

- Study how to use service mode

When you finish this section, you should know the answers to these questions.

- Is the service mode the same for copier and printer models?
- What is the purpose of the four symbols on the Menu key?

Overview

❑ Printer Model

- ◆ There is no LCD on the printer models.
- ◆ To use service mode, you must connect a PC to the printer.
 - » USB
 - » Ethernet (use a normal Ethernet cable if connecting through a network, or use a crossover Ethernet cable if connecting directly to the printer).
- ◆ To enter the service program mode, start the SOM (Smart Organizing Monitor) utility from your computer.

❑ MF Model

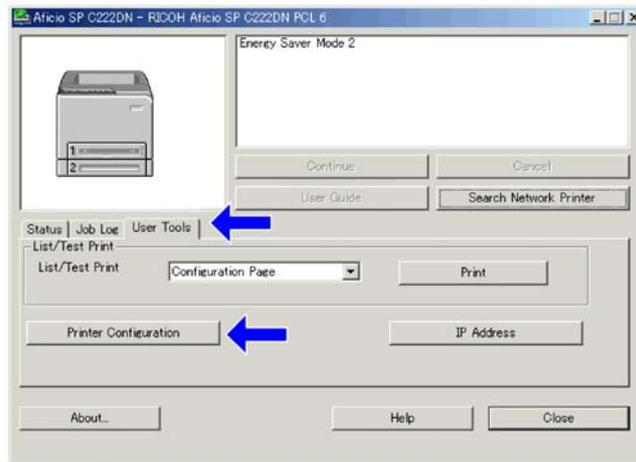
- ◆ There is an LCD on the MF models.
- ◆ To enter the service program mode, access the "Maintenance Mode Menu" or "Fax Service Menu" at the machine's operation panel.
- ◆ Many of the important adjustments are in the "Engine Maintenance" menu within the "Maintenance Mode Menu".

❑ **For the printer models, technicians must have access to a PC in order to use the service mode.**

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*Service Manual – Service Tables – Service Program –
Overview*

Printer Model – SOM (1)



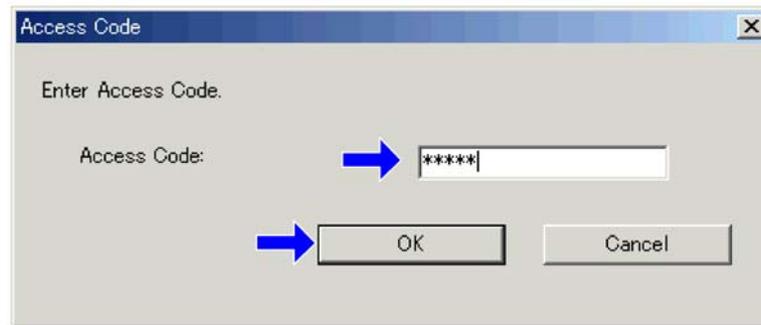
g168s501

- Start SOM on your PC. You will see the above screen.
- In the User Tools tab, click Printer Configuration.

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Service Manual – Service Tables – Service Program – Overview

Printer Model – SOM (2)



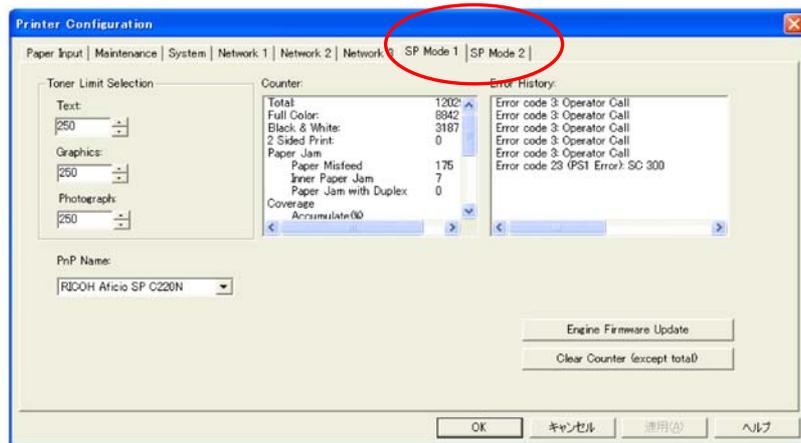
- ❑ Input Admin074 and click OK.

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Service Manual – Service Tables – Service Program – Overview

- ❑ Admin074 gets access to the SP modes.
- ❑ The default password of 'admin' is for the customer's administrator. This password does not give access to SP modes.
 - The user should change this password.
 - To change the password, the user must log on as an Administrator, and then make the necessary settings. For details, see Smart Organizing Monitor Help.

Printer Model – SOM (3)



g165s510

- There are two tabs of SP modes.

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Service Manual – Service Tables – Service Program – Overview

Copier Model – Maintenance Mode



- ❑ **To enter Maintenance Mode**
 - ◆ Press these keys in the following order: "Clear/Stop", "1", "0", "7" and "Color Start"
 - ◆ "Maintenance Mode" is displayed on the LCD.
- ❑ **Selecting an Item**
 - ◆ To select an item, press the "Up" or "Down" key.
- ❑ **Going into the Next Level/Returning to the Previous Level**
 - ◆ To go into the next level of an item, select an item then press the "OK" key.
 - ◆ To return to the previous level of an item, press the "Return" key.
- ❑ **Exiting the Maintenance Mode Menu**
 - ◆ To exit the maintenance mode menu, press the "Clear/Stop" or "Return" key until the "Ready" display appears.

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No additional notes

Copier Model – Fax Service Mode



- ❑ **To enter Fax Service Mode**
 - ◆ Turn on the machine while pressing the "Fax" key.
- ❑ **Selecting an Item**
 - ◆ To select the item, press the "Up" or "Down" key.
- ❑ **Going into the Next Level/Returning to the Previous Level**
 - ◆ To go into the next level of an item, select an item then press the "OK" key.
 - ◆ To return to the previous level of an item, press the "Return" key.
- ❑ **Exiting the Maintenance Mode Menu**
 - ◆ To exit the maintenance mode menu, press the "Clear/Stop" or "Return" key until the "Ready" display appears.

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No additional notes

Copier Model – User Tools

Menu

The diagram shows a circular control panel with three main elements: a left-pointing arrow on the left, a central circle containing an upward-pointing arrow above a downward-pointing arrow, and the letters 'OK' on the right. A red oval highlights the central circle. Blue lines connect callout boxes to each of these three elements.

☐ Press the Menu key.

Goes back to the previous level of the menu

Goes to the next level of the menu, or inputs settings to memory

Scrolls through the current menu.
Moves the cursor: The 'up' arrow moves it to the left. The down arrow moves it to the right.

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- ☐ Note the strange way to move the cursor, using the up and down arrow keys.

RICOH**G165 SERIES TRAINING****UPDATING THE FIRMWARE**

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PURPOSE OF THIS SECTION**In this section you will:**

- Study how to update the firmware

When you finish this section, you should know the answers to these questions.

- Is the procedure the same for all models?
- How do we know when the download finished successfully?

Procedures

- ❑ **Printer Model: Start SOM and follow the procedures in the manual.**
 - ◆ You must connect a PC to the printer to use SOM.
 - » USB
 - » Ethernet (use a normal Ethernet cable if connecting through a network, or use a crossover Ethernet cable if connecting directly to the printer).
- ❑ **Copier model: Connect the machine to a PC with USB or an Ethernet crossover cable, and follow the procedures in the manual.**
 - ◆ Before you start, make sure that the printer driver is installed on the PC.
- ❑ **In each case, there are two procedures.**
 - ◆ One for engine firmware, and one for controller firmware.

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Service Manual – Service Tables – Firmware Updating

- ❑ For the copier model, you do not actually use the printer driver. However, the designers say that the printer driver should be installed before you start the procedure.

Cautions

- ❑ **Do not turn off the main power of the machine during firmware updating.**
 - ◆ If you switch the power off, the EGB board and/or controller board may be damaged.
- ❑ **If power failed during the download, try again. If you still cannot download the firmware, it may be necessary to change the EGB and/or the controller board.**

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No additional notes

Cautions

- ❑ **The machine displays a message to indicate that download is complete.**
 - ◆ For the printer models, this message appears on the SOM, on the connected PC. For the copier (MF) models, the message appears on the machine's operation panel.
- ❑ **If this message does not appear, the download failed. Try again.**
 - ◆ You can also switch from an Ethernet connection to a USB connection (or the other way around) and see if that works.
- ❑ **If you still cannot download the firmware, it may be necessary to change the EGB and/or the controller board.**

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No additional notes

Download the Firmware



- ❑ **Do the procedures in the service manual:**
 - ◆ Service Manual – Service Tables – Firmware Updating – Printer Model
 - » Controller Firmware
 - » Engine Firmware
 - ◆ Service Manual – Service Tables – Firmware Updating – MF Model
 - » Controller Firmware
 - » Engine Firmware
- ❑ **Follow all notes and cautions in the manual.**

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Service Manual – Service Tables – Firmware Updating

RICOH**G165 SERIES TRAINING****MAINTENANCE**

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PURPOSE OF THIS SECTION**In this section you will:**

- Study the maintenance procedures.

When you finish this section, you should know the answers to these questions.

- Who does the maintenance?
- What items must be replaced?

Procedures

- ❑ **The following maintenance procedures are done by the user.**
 - ◆ Replacing the Print Cartridges
 - » Yield is about 2k prints per cartridge
 - ◆ Replacing the Waste Toner Bottle
 - » Yield is about 25k prints per bottle (if the machine is used 50% for color and 50% for black-and-white)
- ❑ **To see the current status of the consumables:**
 - ◆ Copier model: Menu button – Machine settings – Supplies Info
 - ◆ Printer model: SOM – Status tab
- ❑ **There are no PM procedures for the technician to do.**

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Service Manual – Preventive Maintenance

Study the Procedures



❑ Copier Models:

- ◆ User Guide: 9. Troubleshooting
 - » Replacing Print Cartridges
 - » Replacing the Waste Toner Bottle

❑ Printer Models:

- ◆ Hardware Guide: Replacing Consumables

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No additional notes

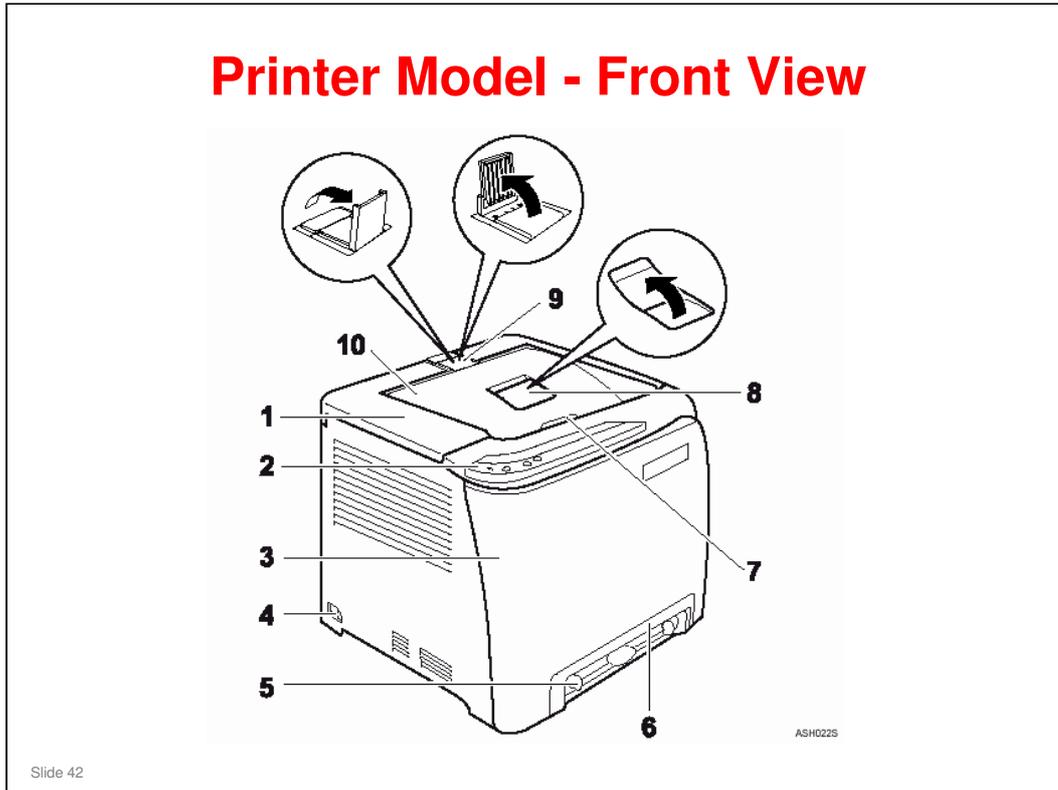
RICOH**G165 SERIES TRAINING****MACHINE OVERVIEW**

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PURPOSE OF THIS SECTION**In this section you will:**

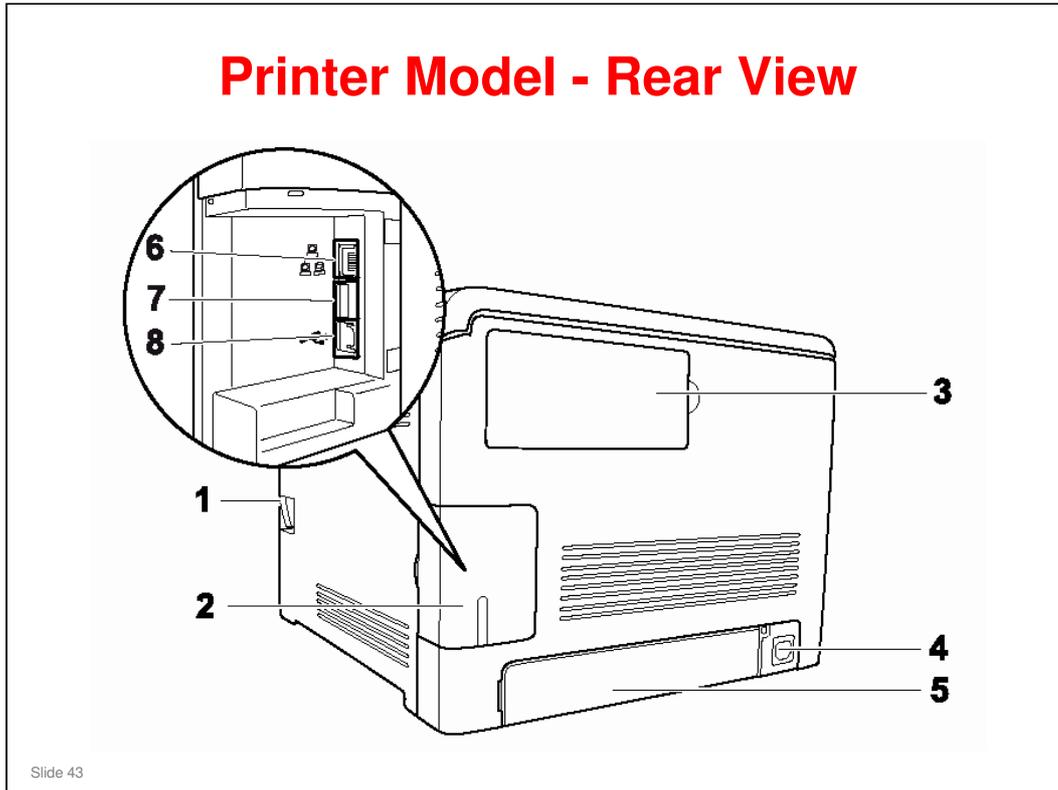
- Study the machine's components.
- Do the replacement procedures for motors and circuit boards.
- Study some troubleshooting hints.

When you finish this section, you should know the answers to these questions.



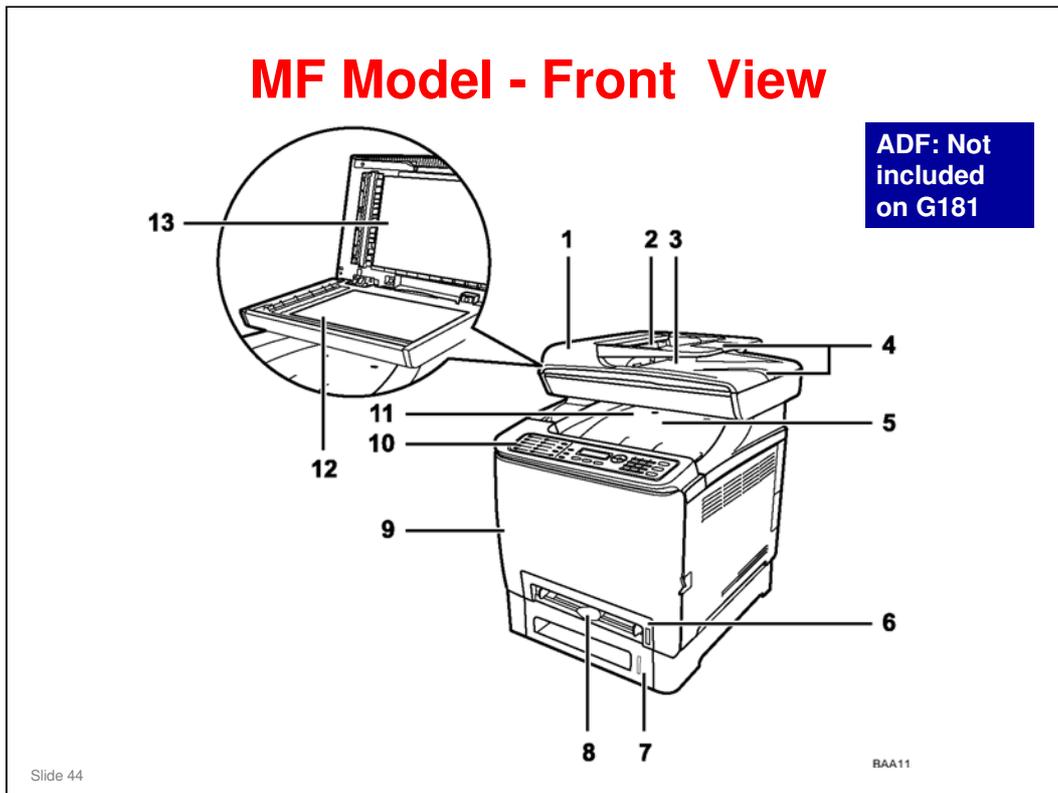
Operating Instructions – Hardware Guide - 1. Guide to the Printer

- 1. Top Cover: Open this cover to replace the print cartridge.
- 2. Operation Panel
- 3. Front Cover: Open this cover to replace the waste toner bottle or remove jammed paper.
 - To open this cover, pull the lever on the right side of the printer.
- 4. Power Switch
- 5. Bypass Tray: 1 sheet
- 6. Tray 1: Up to 250 sheets of plain paper
- 7. Top Cover Open Lever
- 8. Standard tray extension
 - Use this to support sheets that come out curled after they are printed.
 - Flip open the extension by pushing down on the end that is toward the rear of the machine.
- 9. Stop Fences: Use these to stop legal-size or A4-size prints falling behind the machine.
 - For legal-size prints, raise the rear fence.
 - For A4-size prints, raise the forward fence.
- 10. Standard Tray: Output is stacked here with the print side down.



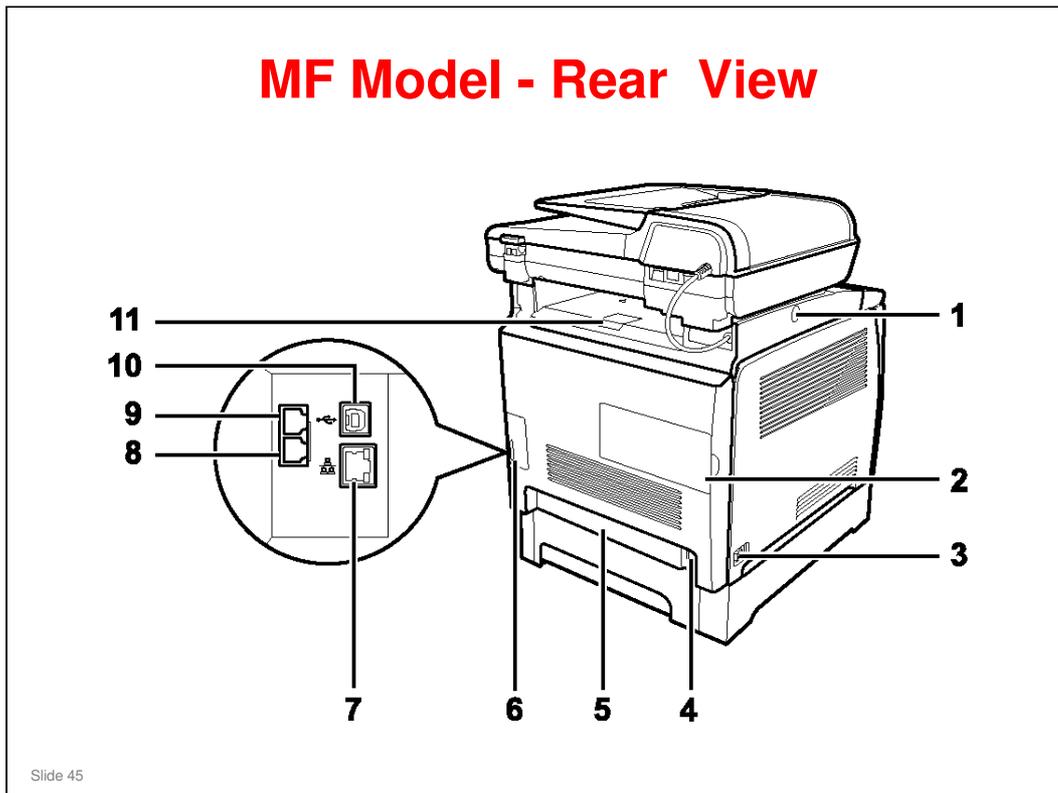
Operating Instructions – Hardware Guide - 1. Guide to the Printer

- 1. Front Cover Open Lever
- 2. Cable cover
- 3. Memory cover (G166/G167 only): Remove this cover to install the additional memory unit (option).
- 4. Power Socket
- 5. Rear cover: Remove this cover when you load paper larger than A4 in the paper tray.
- 6. Ethernet Port: Use a network interface cable to connect the printer to the network.
- 7. USB Host Interface (G167 only): Use a USB cable to connect a digital camera to the printer. You can print images directly from a digital camera, without having to connect to a computer.
 - The camera must support PictBridge.
- 8. USB Port: Use a USB cable to connect the printer to the host computer.



Operating Instructions – User Guide - 1. Guide to the Machine - Guide to Components

- 1. ADF (Auto document feeder) Cover
- 2. Input Tray for the ADF: Up to 35 sheets.
- 3. Output Tray for the ADF
- 4. Extender for the ADF Trays: For paper longer than A4 in the ADF.
- 5. Top Cover: Open this cover to replace the print cartridges.
- 6. Tray 1: Up to 250 sheets.
- 7. Tray 2 (option): Up to.
- 8. Bypass Tray: One sheet only
- 9. Front Cover: Open this cover to replace the waste toner bottle or remove jammed paper.
- 10. Operation Panel
- 11. Output Tray: Up to 150 sheets.
- 12. Exposure Glass
- 13. Cover for the Exposure Glass

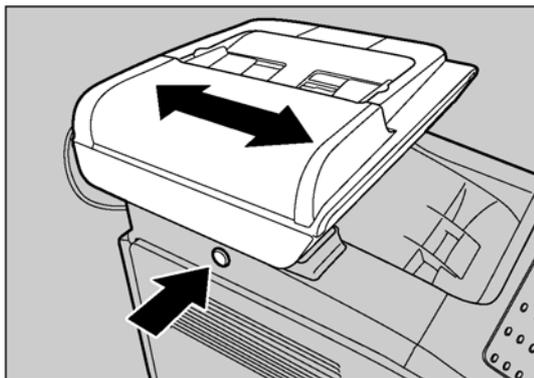


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Operating Instructions – User Guide - 1. Guide to the Machine - Guide to Components

- ❑ 1. Button for Sliding the ADF: Press to slide the ADF towards the rear of the machine and hold it in that position, if paper output to the output tray is difficult to retrieve.
 - Explained in more detail later.
- ❑ 2. Memory Cover: Remove this cover to install the optional memory unit.
- ❑ 3. Power Switch
- ❑ 4. Power Socket
- ❑ 5. Rear Cover: Remove this cover when loading paper longer than A4 in tray 1.
- ❑ 6. Cable Cover: Remove this cover when connecting cables to the machine.
- ❑ 7. Ethernet Port
- ❑ 8. G3 Fax Line Interface Connector (G183/G184 only)
- ❑ 9. External Telephone Connector (G183/G184 only)
- ❑ 10. USB Port
- ❑ 11. Stop Fences: Raise this fence to prevent paper falling off when printing a large job. The fence can be adjusted at the A4/Letter or Legal size position.
 - Explained in more detail later.

MF Model – Sliding the ADF

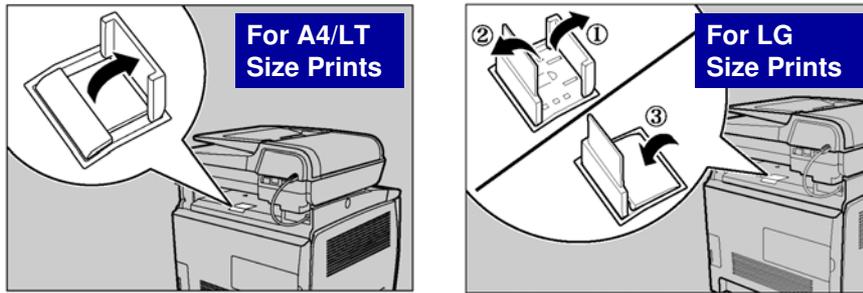


- ❑ Slide the ADF towards the rear of the machine and hold it in that position, if paper output to the output tray is difficult to retrieve.
- ❑ Slide the ADF only when the exposure glass cover or ADF is closed.
- ❑ Be careful not to trap your fingers when sliding.

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No additional notes

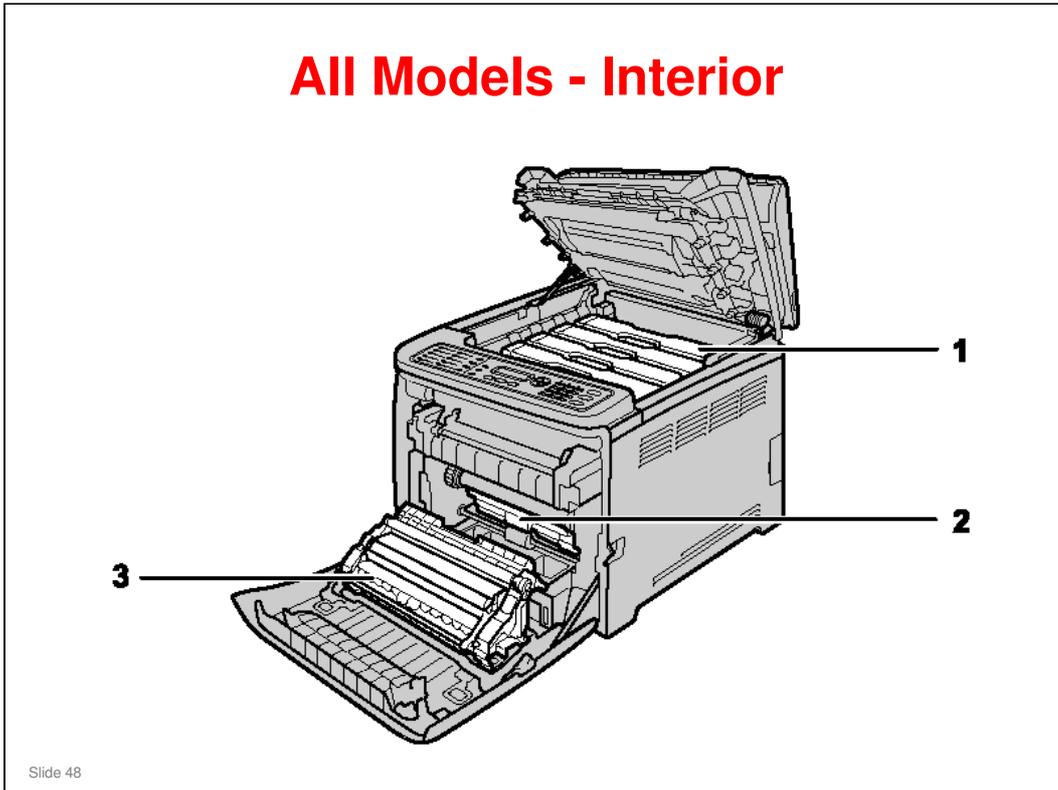
MF Model – Stop Fences



- Raise the fence as shown to prevent prints from falling off.

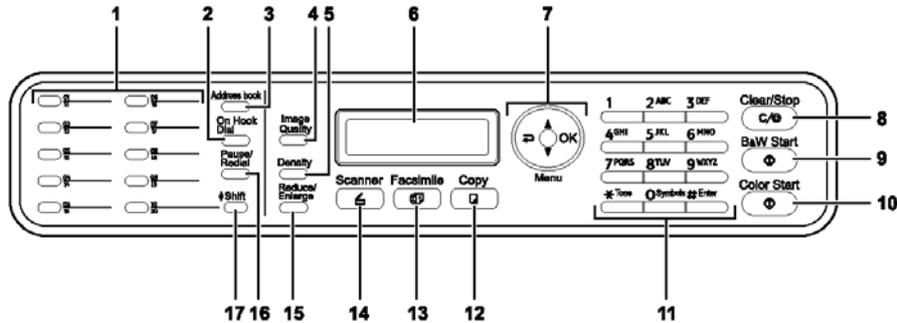
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No additional notes



- ❑ 1. AIO Print Cartridges: Load from the machine rear, in the order of cyan (C), magenta (M), yellow (Y), and black (K). Messages appear on the screen (MF models) or an indicator lights on the operation panel (printer model) when print cartridges need to be replaced.
- ❑ 2. Waste Toner Bottle: Collects excess toner during printing. Messages appear on the screen (MF models) or on the SOM (printer model) when the waste toner bottle needs to be replaced.
- ❑ 3. Transfer Unit: Remove this unit when replacing the waste toner bottle.

MF Model – Operation Panel



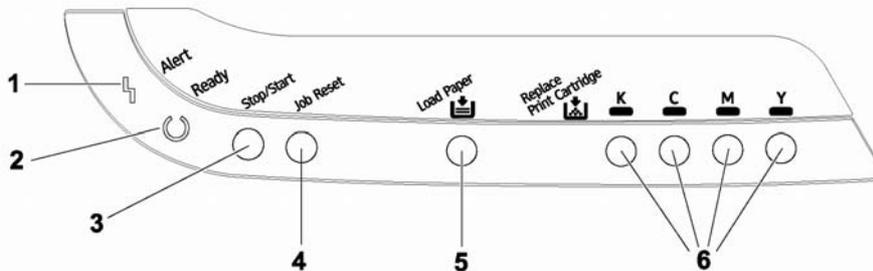
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Operating Instructions – User Guide - 1. Guide to the Machine - Guide to Components

- ❑ See the operation manual for details.
- ❑ Note the following.
 - 1. One Touch Buttons: Press to select a scan or fax destination using entries registered as Quick Dial in the Address Book.
 - 7. Menu keys: Press any of these four keys to enter the user tools menu. Use the keys to navigate around the menu.

The right hand key with the carriage return symbol on it is for going back to the previous level of the menu.
 - 9. {B&W Start} key: Press to scan or copy in black and white, or start sending a fax.
 - 10. {Color Start} key: Press to scan or copy in color.
 - 17. {Shift} key: Press if you want to use Quick Dial entries Nos. 11 to 20 when specifying a scan or fax destination.

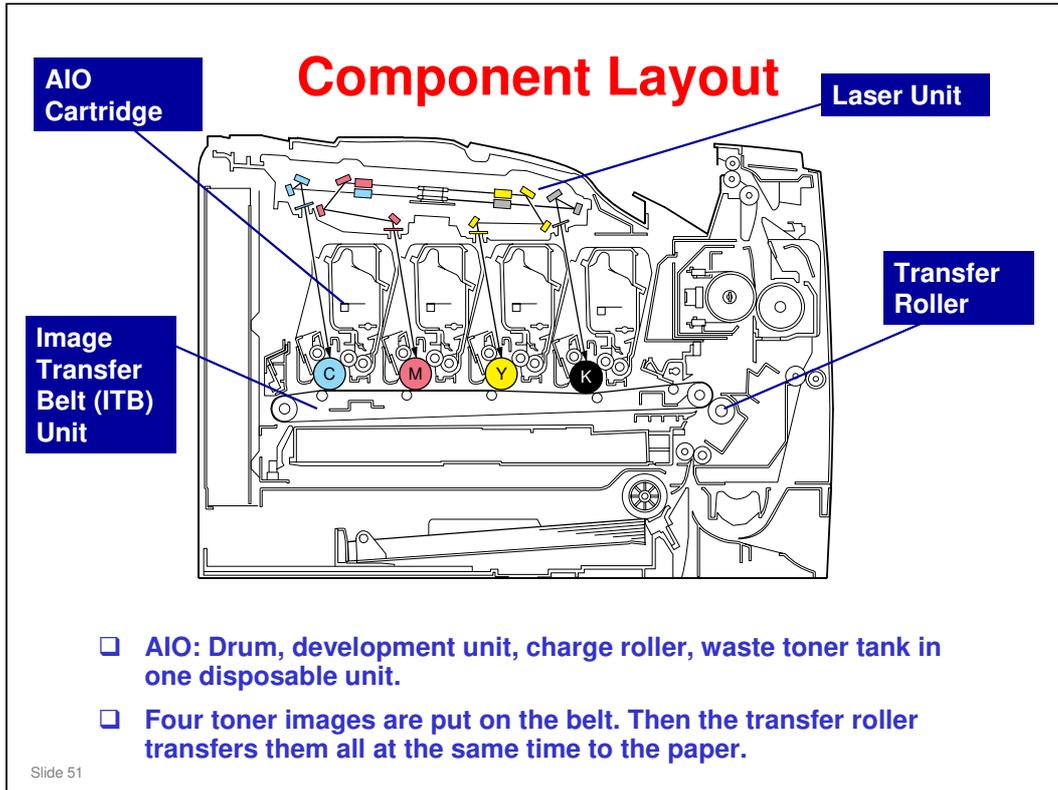
Printer Model – Operation Panel



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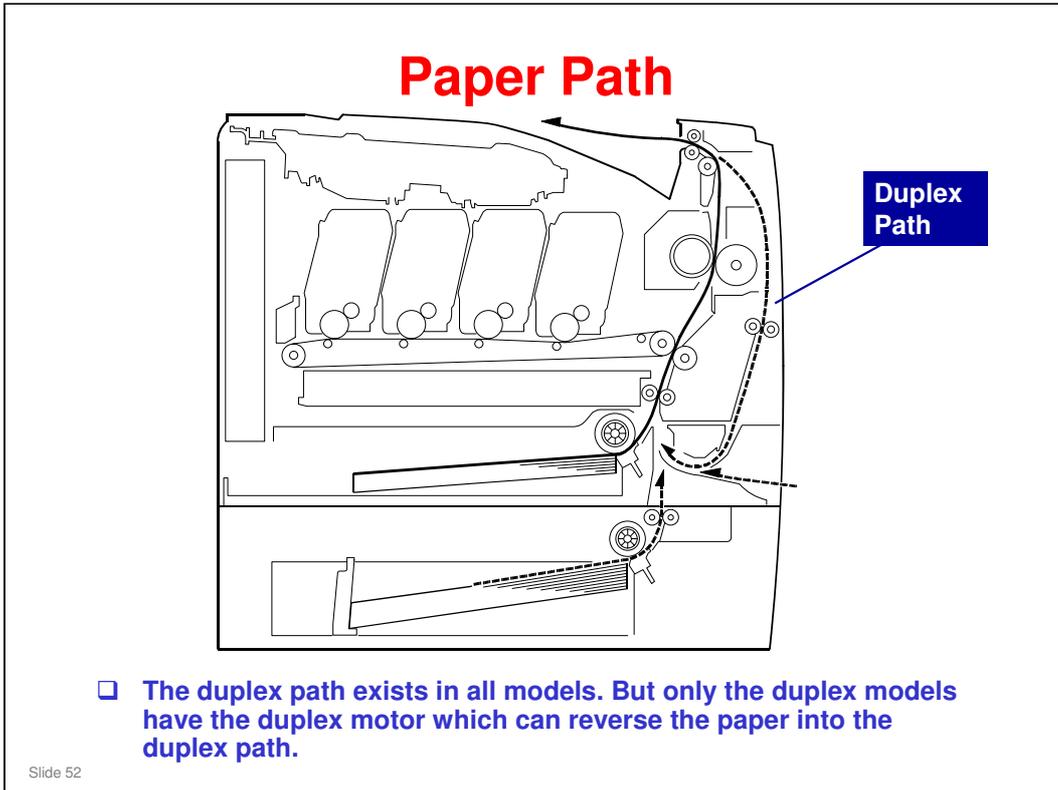
Operating Instructions – Hardware Guide - 1. Guide to the Printer

- ❑ 1. Alert Indicator: Lights up when a printer error occurs. Use Smart Organizing Monitor to check the error.
- ❑ 2. Ready Indicator: Lights up when the printer is ready to receive data from a computer. Flashes when the printer is warming up or receiving data.
- ❑ 3. {Stop/Start} key: If you press this key, the printer stops receiving data, and printing is not possible. Press the {Stop/Start} key again to return to the ready condition.
 - You can also use this key to print the configuration page. See the operation manual for details.
- ❑ 4. {Job Reset} key: Press this key to cancel a job that is printing out.
 - You can also use this key to print a test page. See the operation manual for details.
- ❑ 5. Load Paper Indicator: Lights up when a paper tray is empty or unattached.
- ❑ 6. Replace Print Cartridge Indicator: The indicator under each toner icon flashes when toner is in the near-end condition. The indicator remains lit when there is no toner left.
 - The LED color corresponds to Toner color.

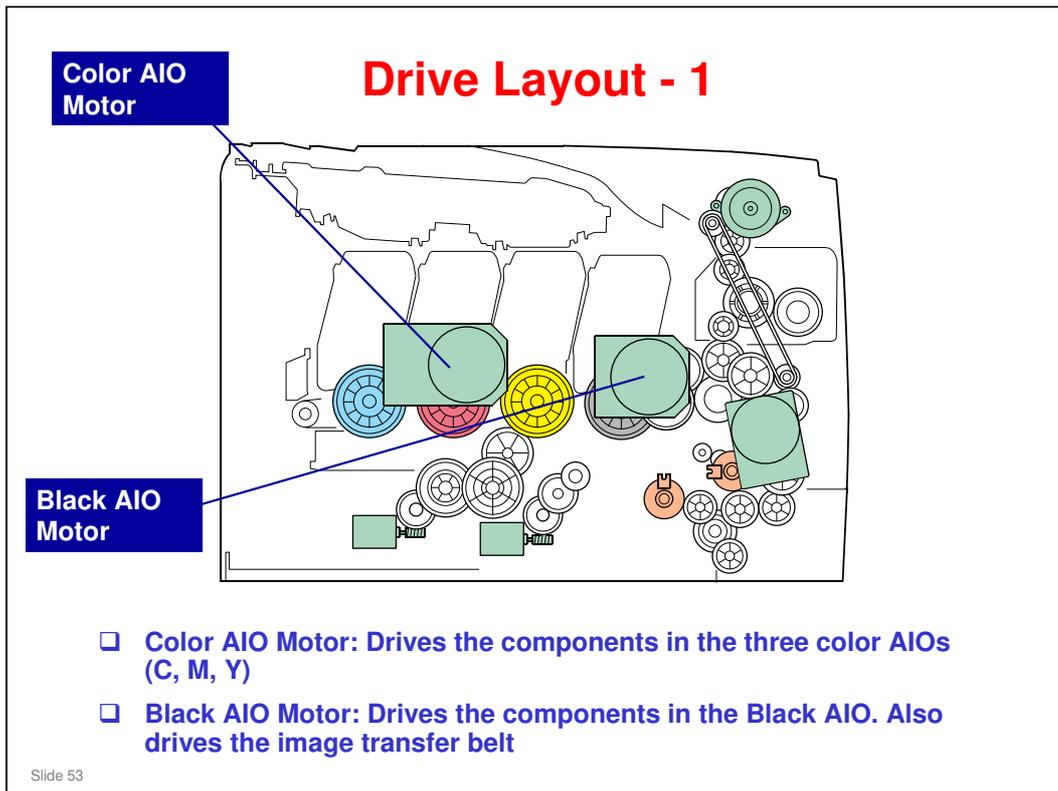


Service Manual, Details, Machine Overview, Component Layout

- ❑ Waste toner: No recycling. There is also another waste toner tank in the image transfer belt unit.
- ❑ AIO: All-in-one



- No additional notes



Service Manual, Details, Machine Overview, Drive Layout

- ❑ The diagram shows the most important motors. For others, see the service manual.

Drive Layout - 2

- ❑ **Duplex Motor (duplex models only):** Drives the paper exit roller and reverses the paper into the duplex feed path.
- ❑ **Transport/Fusing Motor:** Drives the paper feed/registration rollers and the fusing unit (all models), and the paper exit roller (non-duplex models)

Slide 54

Service Manual, Details, Machine Overview, Drive Layout

- ❑ The diagram shows the most important motors. For others, see the service manual.

Electrical Components



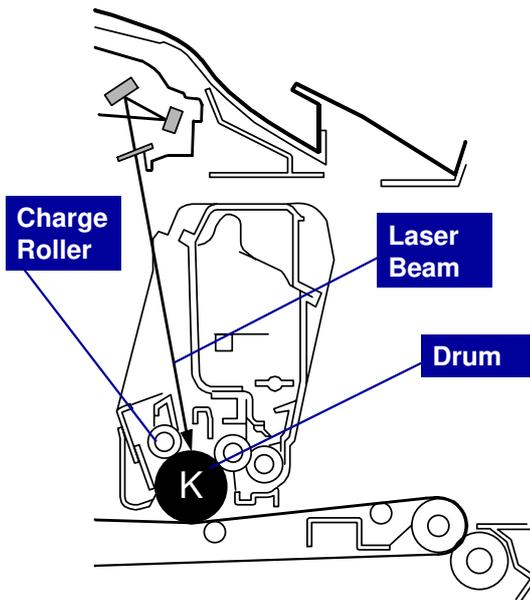
- ☐ See the electrical component list.

Slide 55

Service Manual, Details, Machine Overview, Electrical Component Layout

- ☐ The components will be explained in the applicable sections of the course.
- ☐ At this point, note only these points.
 - Waste toner overflow and bottle set sensors: these are for the waste toner bottle that collects toner from the transfer belt. The waste toner from the drums is collected inside each AIO.
 - EGB (engine board): This is the main board.
 - Temperature/humidity sensor: This is used for process control, to determine whether the conditions have changed significantly enough so that process control must be done.

Printing Process - 1

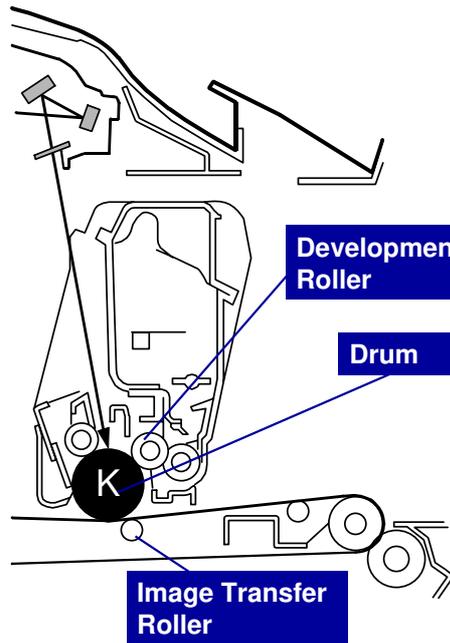


- ❑ The charge roller gives the drum a negative charge.
- ❑ The laser beam writes the latent image on the drum.

Slide 56

Service Manual, Details, Machine Overview, Printing Process

Printing Process - 2

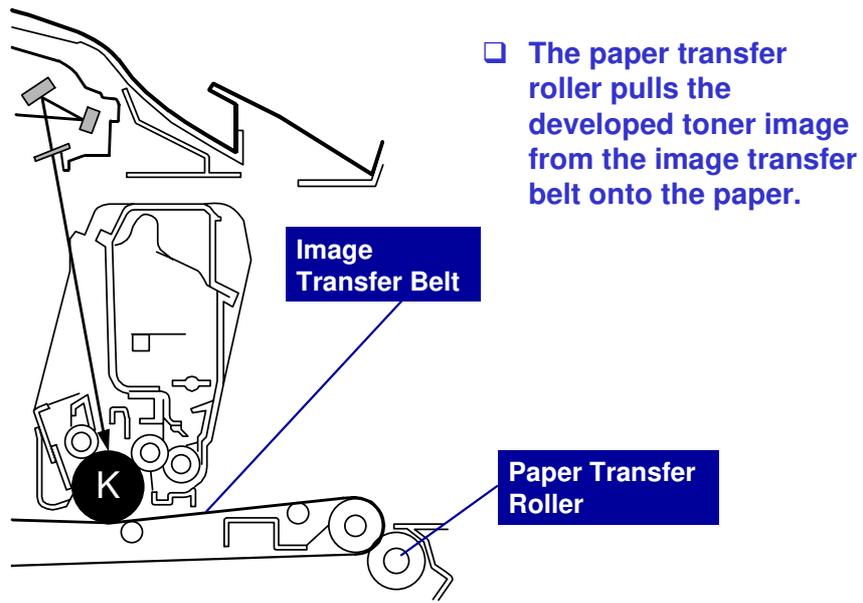


- ❑ The development roller applies toner to the latent image on the drum.
- ❑ The image transfer roller pulls the developed toner image onto the image transfer belt.

Slide 57

Service Manual, Details, Machine Overview, Printing Process

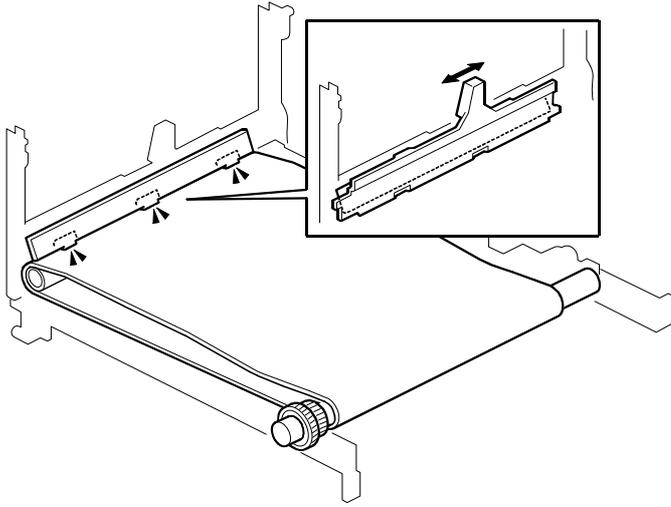
Printing Process - 3



Slide 58

Service Manual, Details, Machine Overview, Printing Process

TM Sensors



The diagram shows a transfer belt assembly with three TM sensors. An inset shows a close-up of one sensor with an arrow indicating its movement.

- ❑ The central TM sensor is used for process control and toner end detection.
- ❑ The other two TM sensors are used for MUSIC and other internal adjustments.

Slide 59

Service Manual – Details – Process Control

- ❑ For more about process control, read this section of the manual.
- ❑ MUSIC: This is the internal process used by the machine to automatically correct for color registration errors (to make sure that the colors are deposited in the exact positions on the transfer belt).

Process Control Summary

□ What is done?

- ◆ The machine calibrates the TM sensors
- ◆ The machine makes a 9-grade pattern on the belt, and the central TM sensor scans these patterns.
- ◆ The machine can then calculate the correct development bias and laser diode power.
- ◆ MUSIC: The machine then checks for color registration errors. To do this it makes lines at the left, center, and right of the transfer belt and scans these lines with the TM sensors.

Slide 60

Service Manual – Details – Process Control

- For more about process control, read this section of the manual.

Boards

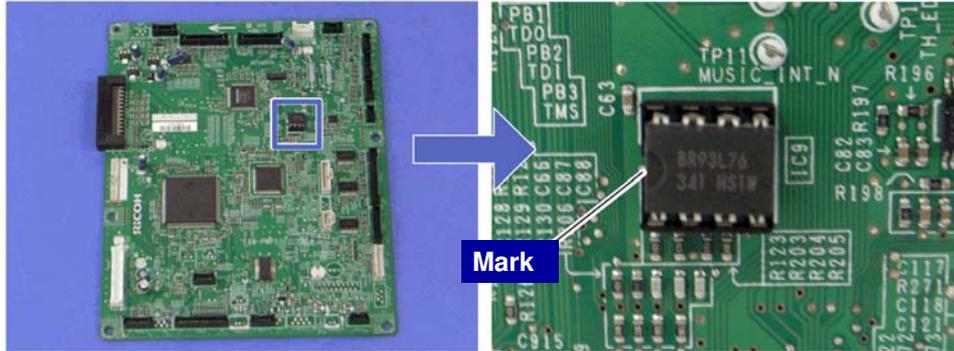
- ❑ **EGB (Engine Board): Controls the engine. This is the machine's main board.**
- ❑ **Controller: Controls the interface with the operation panel, and controls applications**
- ❑ **ID Chip Board: Relays data about the AIOs to/from the EGB.**

Slide 61

Service Manual, Details, Machine Overview, Board Structure

Replacing Boards

- ❑ The EEPROM on the controller cannot be removed.
- ❑ The EEPROM on the EGB board can be removed.
- ❑ Take the EEPROM from the old EGB board and install it on the new one. The mark must point to the left side as shown in the service manual.



Slide 62

Service Manual – Replacement and Adjustment – Electrical Components – EGB (Engine Board)

Replacing the EEPROM

- ❑ After you replace the EEPROM, do the procedure in the service manual.
- ❑ The procedure for the printer models is different from the procedure for the copier models.



- ◆ Service Manual – Replacement and Adjustment – Electrical Components – EEPROM

Slide 63

- ❑ Serial Number:
 - You must ask your supervisor how to input this number.
- ❑ LSU Adjustment:
 - A sheet of paper comes with each new laser optics housing unit. This sheet contains the adjustment value. It contains 160 characters that must be input.
 - What to do if the EEPROM must be reset but the laser optics housing unit has not been changed. New machines are not shipped with a sheet of paper that contains the values, and there is no known procedure to print the values on a list. This question remains unanswered at this time, but the problem is known and will soon have a solution (November 2007).
- ❑ What does Transfer Belt Adjust do?
 - The new transfer belt may not be exactly the same length as the old one. With this SP mode, the machine calibrates the motor speed for the new belt (the speed is checked with a TM sensor pattern).
- ❑ Fuser SC Detect:
 - This is normally OFF.
 - If you turn this ON, the machine will issue SC559 and stop working if three consecutive paper jams occur in the fusing unit. Then, the technician must visit the machine and reset the SC code and check the fusing unit.
 - If a sheet of paper feeds correctly, the counter is cleared – the SC only appears if there are three consecutive jams on three successive sheets.
- ❑ 2nd Transfer Front/Back:
 - Normally all settings are 0.
 - You may need to change the settings in unusual environmental conditions, for example if the humidity is low.

Power Supply Unit (PSU)

- The PSU contains a fuse.
- This fuse can be replaced. Always use the correct type of fuse, or the machine could be damaged.
- See the service manual for the correct type of fuse to install.

Slide 64

*Service Manual – Replacement and Adjustment – Electrical
Components – PSU*

Replacement



- ❑ **Do the procedures in these sections of the service manual.**
 - ◆ Replacement and Adjustment – Exterior Covers
 - ◆ Replacement and Adjustment – Electrical Components
- ❑ **Follow all notes and cautions in the manual.**

Slide 65

No additional notes

Error Codes

- ❑ Error codes can be seen with SOM (printer models) or on the operation panel (MF models).
- ❑ Fusing related SCs: To prevent damage, the machine cannot be operated until the SC has been reset by a technician.
 - ◆ Enter SP mode (printer models) or engine maintenance mode (MF models).
 - ◆ Printer models: Click "Fuser SC" in SOM, and then turn the main power switch off and on.
 - ◆ MF models: Press "O.K" in "Fuser SC Reset" with engine maintenance mode, and then turn the main power switch off and on.

Slide 66

Service Manual – Troubleshooting – Service Call Conditions

Image Problems

Paper Feed

Problems at Regular Intervals

- ❑ 24-mm intervals: Image transfer belt unit
- ❑ 38-mm intervals: AIO cartridge (Development roller)
- ❑ 60-mm intervals: Transfer roller
- ❑ 75-mm intervals: AIO cartridge (OPC drum)
- ❑ 110-mm intervals: Fusing unit (Pressure roller)
- ❑ 114-mm intervals: Fusing unit (Hot roller)

Slide 67

Service Manual – Troubleshooting – Image Problems

- ❑ Why 24 mm for the image transfer belt?
 - This is the circumference of the image transfer rollers. See the Transfer section of the course for information on these rollers.

RICOH**G165 SERIES TRAINING****DOCUMENT FEED AND SCANNING**

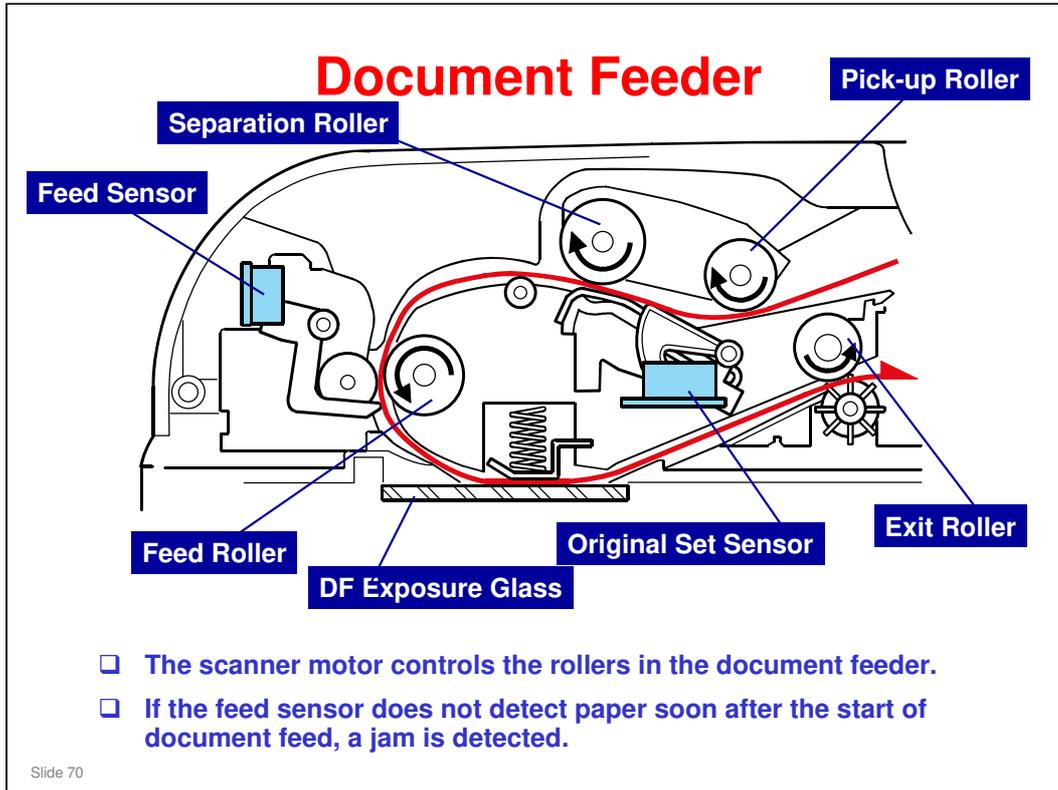
Slide 69

PURPOSE OF THIS SECTION**In this section you will:**

- Study the mechanisms in the document feeder and scanner.

When you finish this section, you should know the answers to these questions.

- Does the scanner use a CCD or a CIS?
- How do we move the scanner to the shipping position?



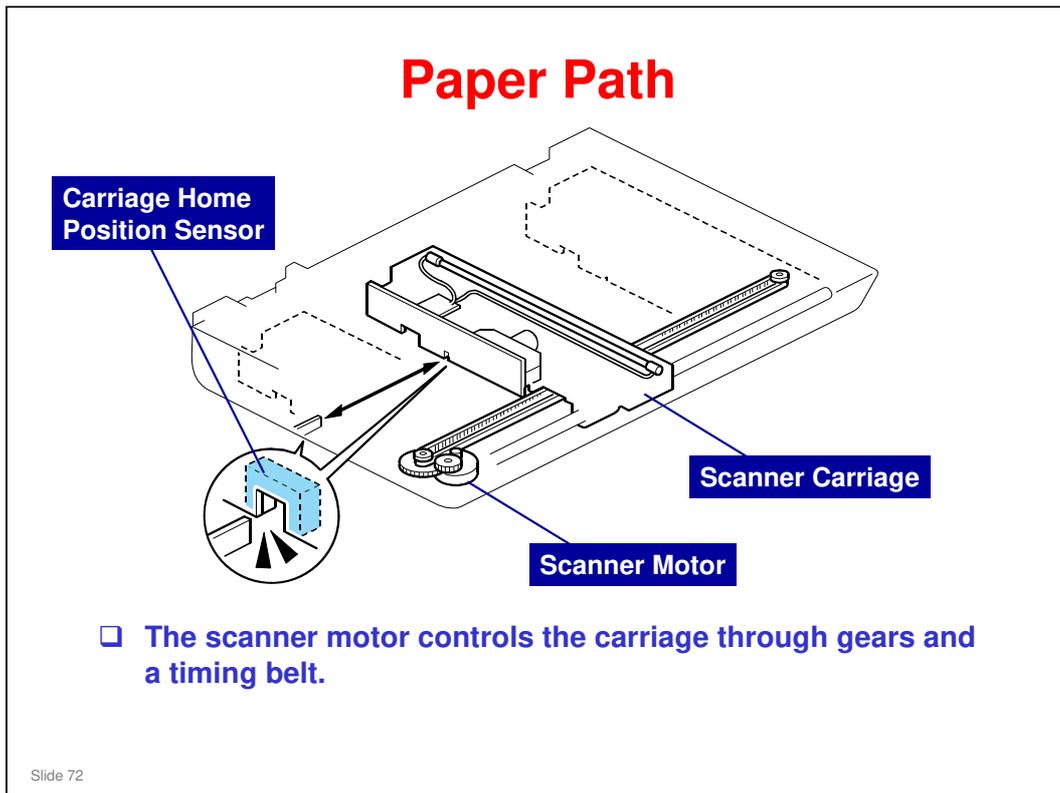
- ❑ The original feed path is shown in red.
- ❑ The separation roller and pick-up roller are included in an assembly that is called the ADF Feed Unit.

Scanner Layout

- The carriage moves along the drive rail.
- In ADF mode, the carriage remains below the DF exposure glass and the original feeds above it.
- In platen mode, the carriage moves below the main exposure glass to scan the original.
- The scanner contains a CCD.

Slide 71

No additional notes



No additional notes

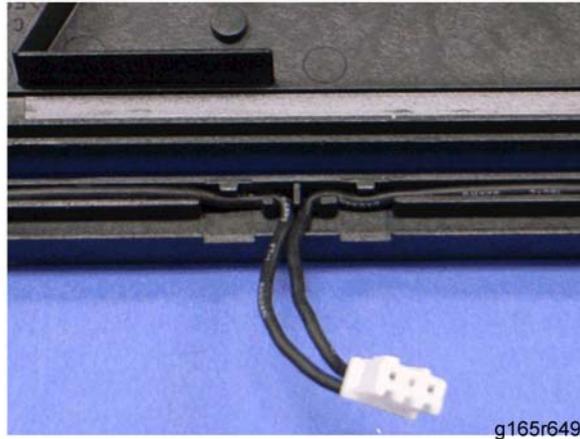
Shipping the Machine

- Do the following user tool to move the scanner to the shipping position, before you move the machine.
 - ◆ Menu key – Machine settings – Scanner carriage
- Execute

Slide 73

No additional notes

Replacing the Exposure Lamp



- ❑ Install the cables as shown, to avoid damage to the cables when the top cover of the carriage unit is attached.

Slide 74

No additional notes

Replacement



- Do the procedures in these sections of the service manual.**
 - ◆ Replacement and Adjustment – ADF
 - ◆ Replacement and Adjustment – Scanner

- Follow all notes and cautions in the manual.**

- The exposure glasses are included in the scanner top cover assembly. Replace this assembly if you need to replace an exposure glass.**

Slide 75

No additional notes

RICOH**G165 SERIES TRAINING****LASER EXPOSURE**

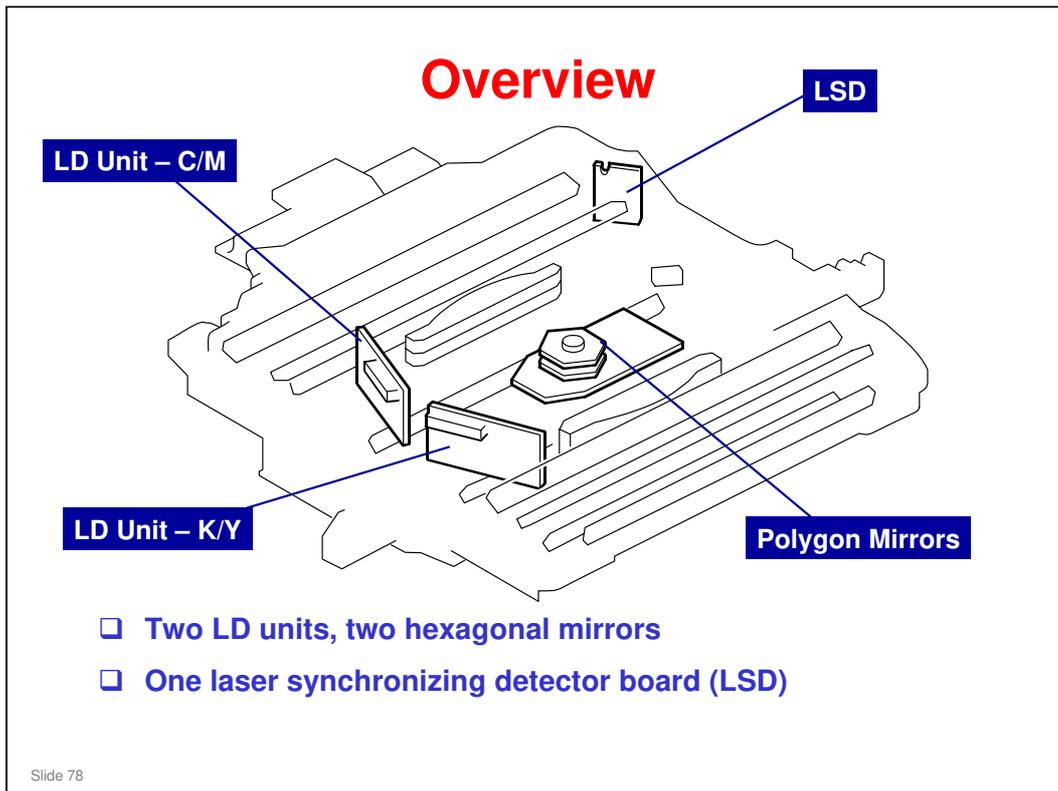
Slide 77

PURPOSE OF THIS SECTION**In this section you will:**

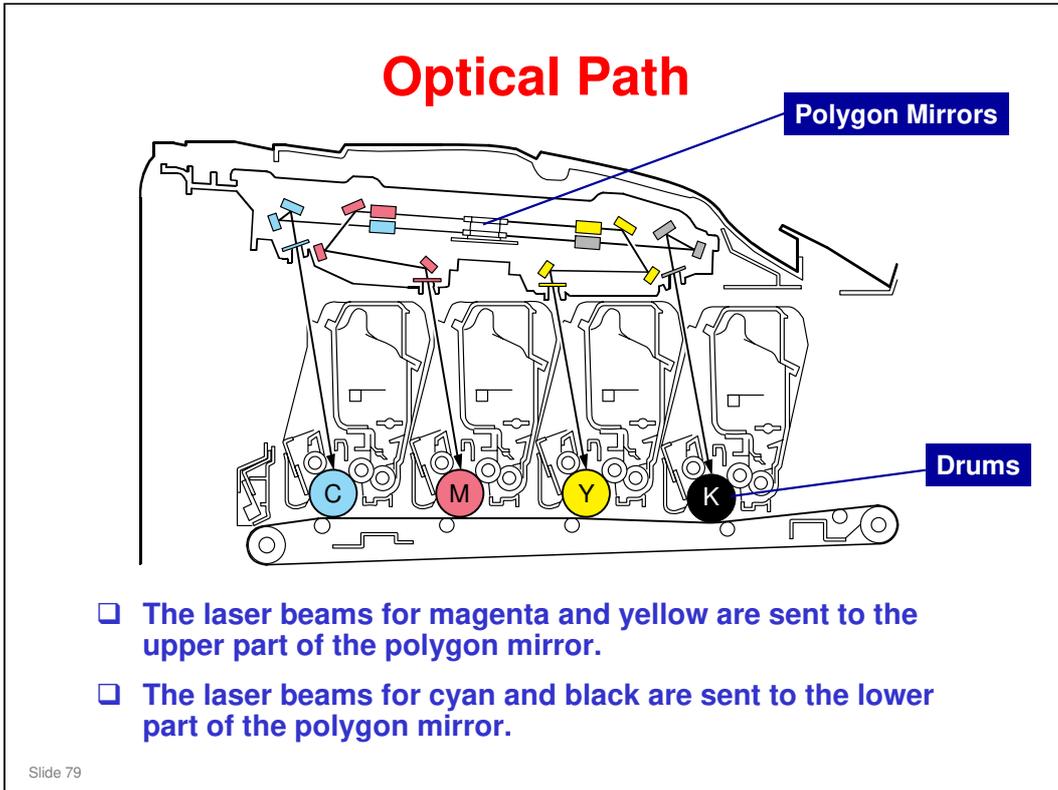
- Study the components of the laser unit.

When you finish this section, you should know the answers to these questions.

- What adjustments must be done after we change the laser optics housing unit?
- Where are the safety switches?

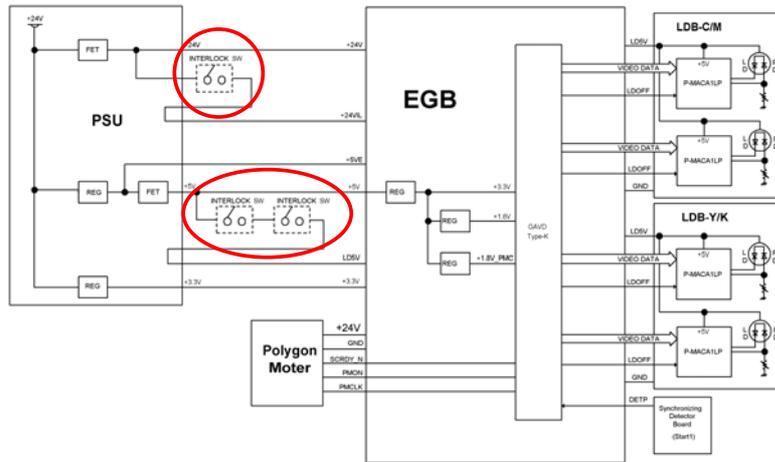


- ❑ Laser exposure for magenta and cyan starts from the left side of the drum, but for yellow and black it starts from the right side of the drum.
- ❑ This is because the units for magenta and cyan are on the other side of the polygon mirror from the units for yellow and black.



No additional notes

Safety Switches



g165d505

- A safety switch disconnects power to the laser diodes when the front cover or the top cover is opened.

Slide 80

No additional notes

General Caution

- Turn off the main power switch and unplug the printer before you start to work on the laser unit. Laser beams can cause serious eye injury.

Slide 81

No additional notes

Laser Optics Housing Unit



g165r519

- ❑ Always use two hands when carrying the laser optics housing unit. Be sure not to drop the laser optics housing unit.

Slide 82

No additional notes

After you Replace the Laser Optics Housing Unit

- ❑ **Important: First, open the front cover and turn on the machine.**
- ❑ **Then, input the setting values for the laser optics housing unit with "LSU Adjustment".**
 - ◆ "SP Mode 2" tab (printer model) or the "Engine Maintenance" menu (MF model)
 - ◆ The settings are on a sheet of paper that comes with the laser optics housing unit.
- ❑ **Close the front cover.**
- ❑ **Execute "Color Registration"**
 - ◆ "SP Mode 2" tab (printer model) or the "Engine Maintenance" menu (MF model)
- ❑ **Adjust the registration settings for each tray and for the front and rear side of the paper if necessary.**
 - ◆ "Registration" in the "SP Mode 2" tab (printer model) or the "Engine Maintenance" menu (MF model)

Slide 83

❑ LSU Adjustment:

- A sheet of paper comes with each new laser optics housing unit. This sheet contains the adjustment value. It contains 160 characters that must be input.
- What to do if the EEPROM must be reset but the laser optics housing unit has not been changed. New machines are not shipped with a sheet of paper that contains the values, and there is no known procedure to print the values on a list. This question remains unanswered at this time, but the problem is known and will soon have a solution (November 2007).

Replacement



- Do the procedures in these sections of the service manual.**
 - ◆ Replacement and Adjustment – Laser Optics
- Follow all notes and cautions in the manual.**

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No additional notes

RICOH**G165 SERIES TRAINING****AIO CARTRIDGE**

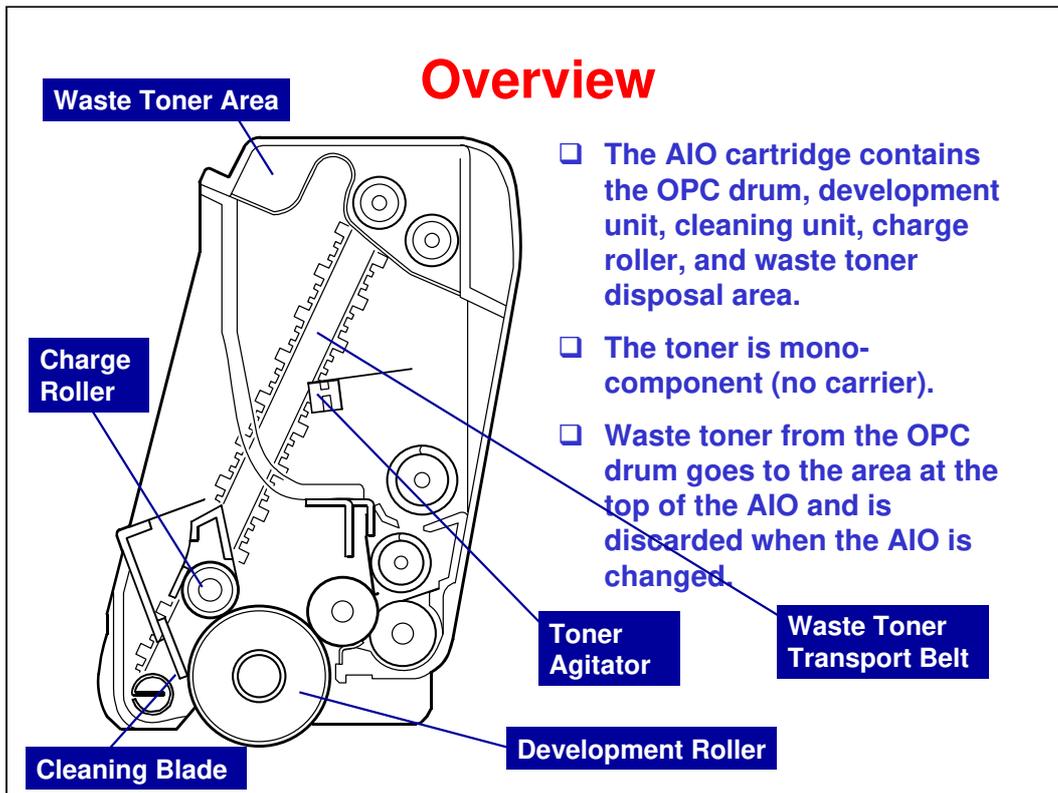
Slide 86

PURPOSE OF THIS SECTION**In this section you will:**

- Study the components of the AIO cartridge.

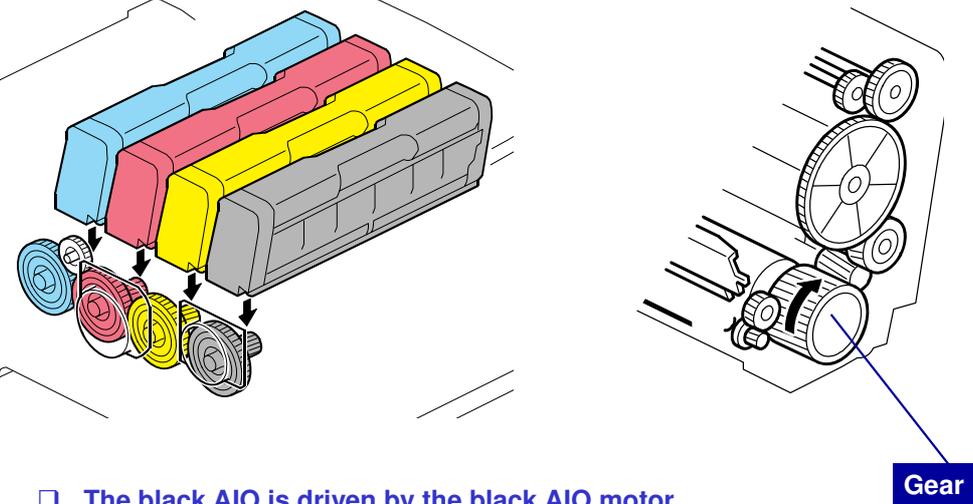
When you finish this section, you should know the answers to these questions.

- What does AIO mean?
- What type of toner is used?



- ❑ The term AIO means 'All-in-One'. All image creation components are in one easily-replaceable unit.

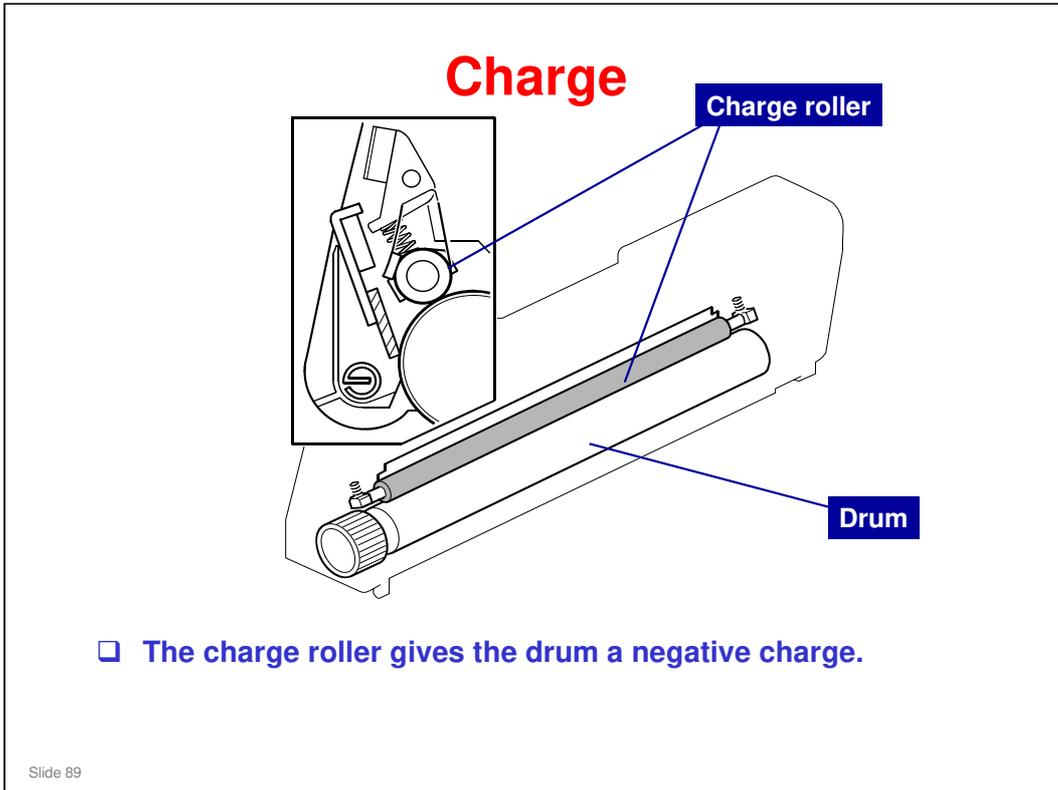
Drive



- The black AIO is driven by the black AIO motor.
- The three color AIOs are driven by the color AIO motor.
- A gear transmits drive from the motor to the other gears and rollers in the AIO.
- No adjustment is needed if you replace the motors.

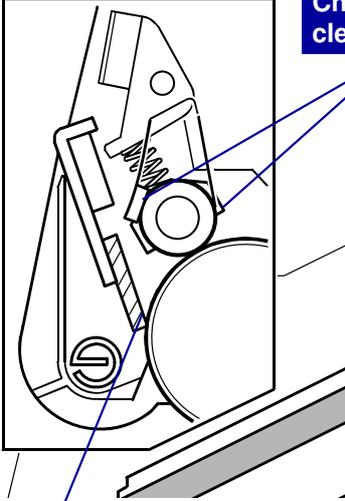
Slide 88

No additional notes



No additional notes

Cleaning



**Charge roller
cleaning blades**

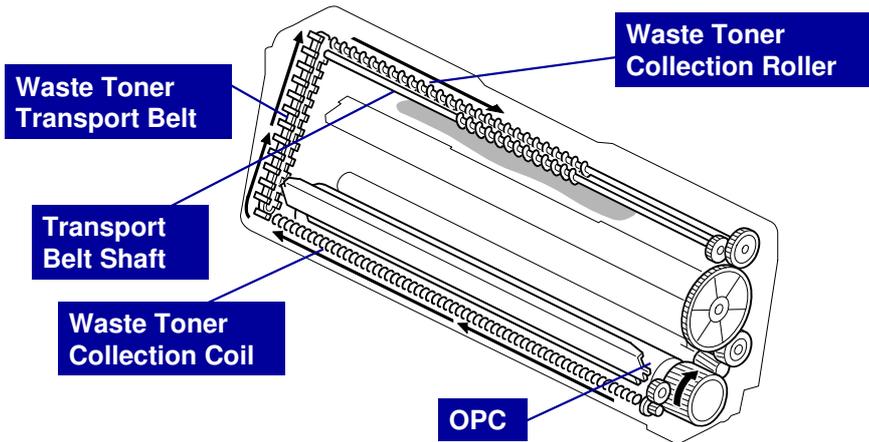
**Drum cleaning
blade**

- ❑ The drum and the charge roller both have cleaning blades.
- ❑ Waste toner from cleaning goes to the toner collection coil.
- ❑ The toner collection coil moves the toner to the waste toner transport belt.

Slide 90

- ❑ We will see the toner transport belt on the next slide.

Waste Toner Collection - 1

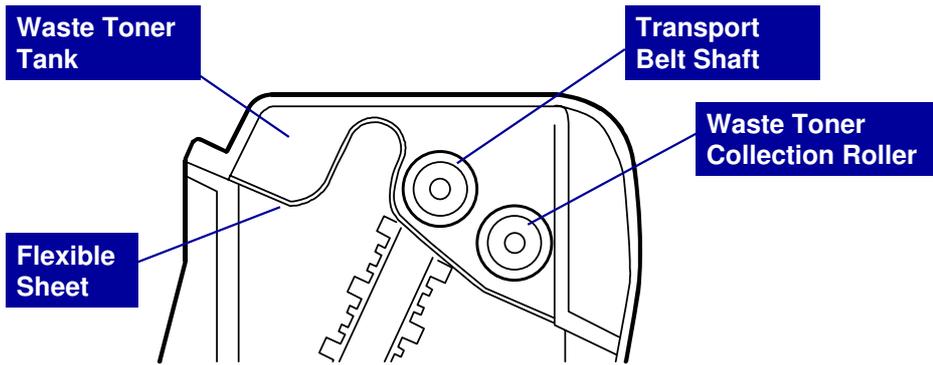


- ❑ The waste toner collection coil moves waste toner from the OPC to the right side of the AIO.
- ❑ Then, the waste toner transport belt lifts the waste toner up to the waste toner tank (at the top of the AIO).
- ❑ The collected waste toner is moved to the left side of the AIO by the waste toner collection roller and transfer belt roller.

Slide 91

- ❑ See the next slide for more about the waste toner tank.
- ❑ There is another toner collection mechanism for the image transfer unit, and a separate collection bottle. This is explained in another section.

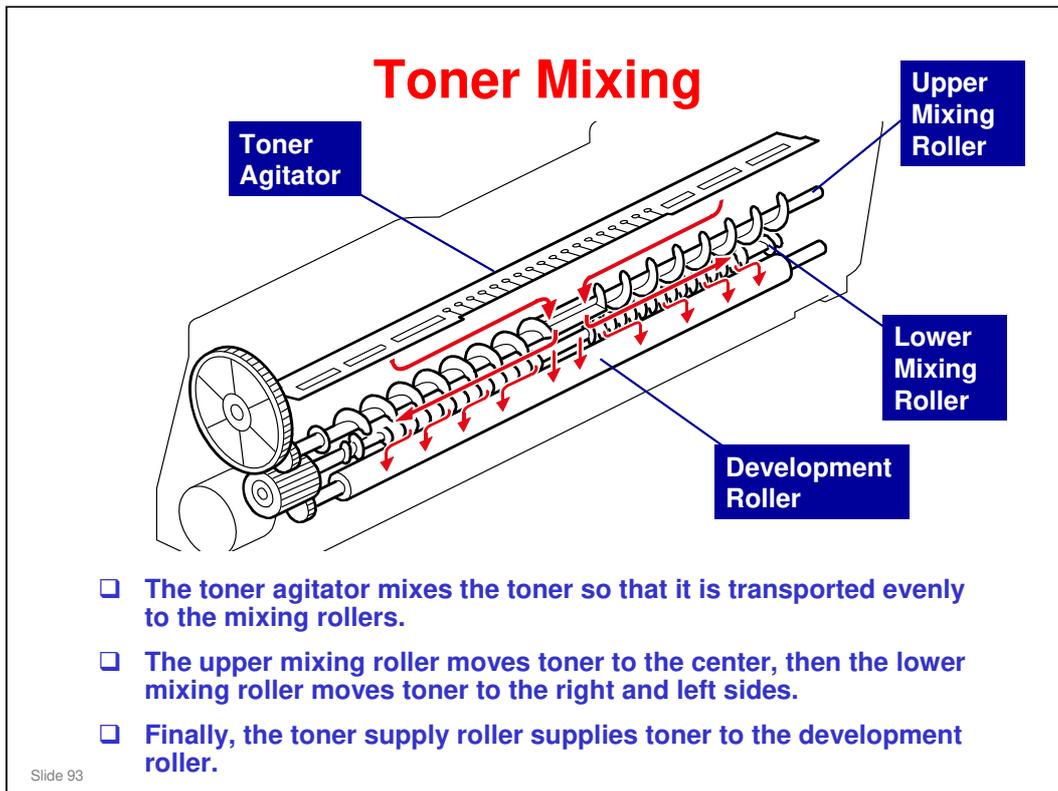
Waste Toner Collection - 2



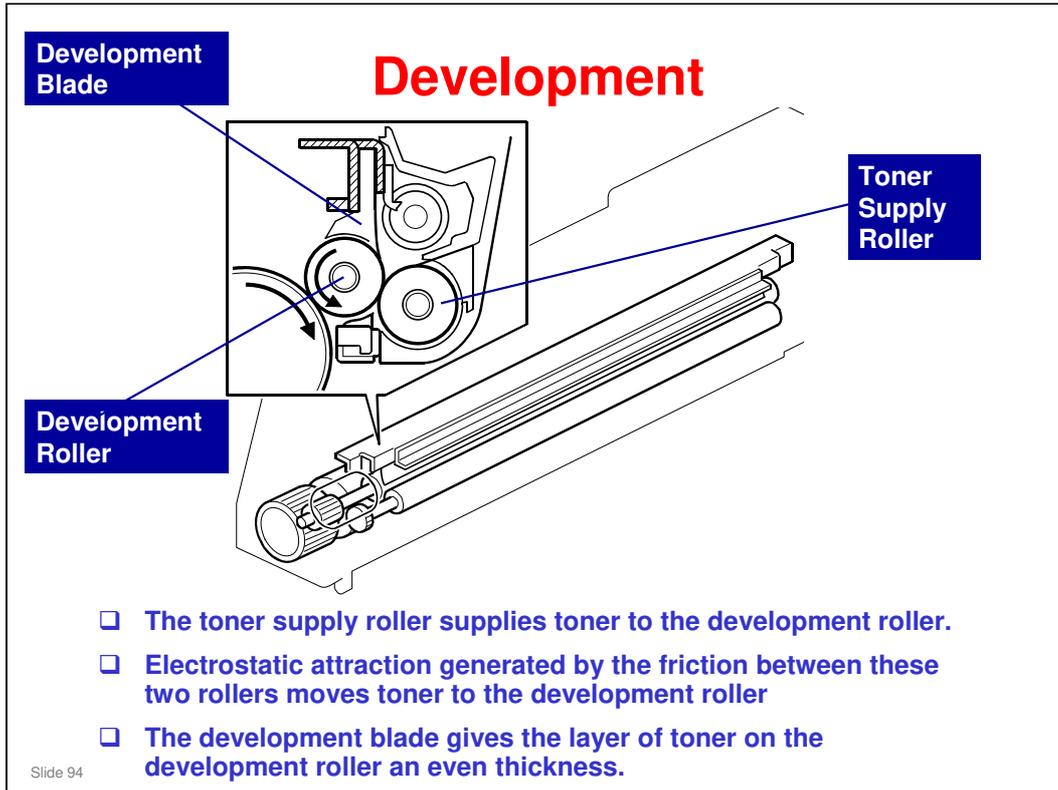
- ❑ A flexible sheet separates the unused toner area from the waste toner area.
- ❑ The waste toner area becomes larger when toner is consumed.
- ❑ This toner is not recycled.

Slide 92

No additional notes.

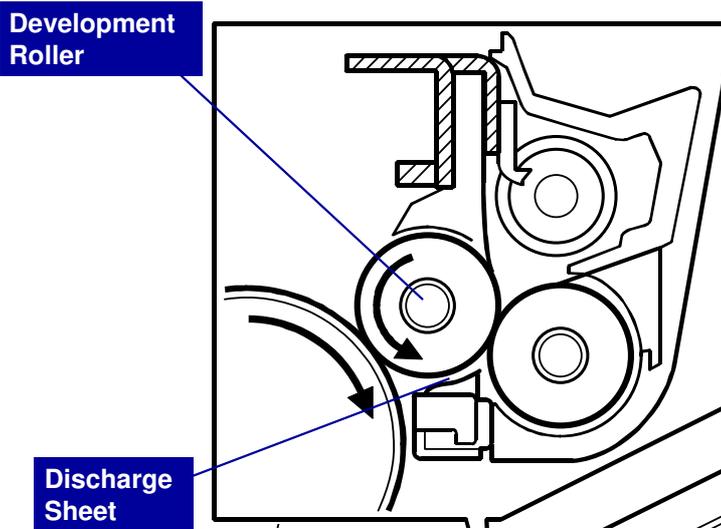


- ❑ This mixing mechanism prevents toner hardening and uneven image density in the outputs.



- ❑ This machine uses mono-component toner, with no carrier, so a TD sensor is not necessary.

Development Roller Discharge



- ❑ The discharge sheet removes charge from the development roller after it has turned past the drum.

Slide 95

- ❑ This system is used instead of a quenching lamp.

Toner Near-end Detection

- ❑ The machine uses the following to detect toner near-end:
 - ◆ Pixel count since the new toner was installed.
 - ◆ AIO rotation distance (machine copy speed x rotation time)
- ❑ After toner near-end, about 200 sheets can be printed (A4, 5% coverage) until toner end occurs.

Slide 96

- ❑ These two figures are stored in the memory chip in the AIO.

Toner End Detection

- The machine makes a sensor patch on the ITB.
- The central TM sensor scans this patch and if the toner density is too low, toner end is detected.

Slide 97

No additional notes

New AIO Detection

- ❑ There is a new unit detection mechanism for the AIO. It uses the ID chip that is built into each AIO.
- ❑ Other units do not have new detection mechanisms.
 - ◆ For example, after the ITB is replaced, SP modes must be done.

Slide 98

No additional notes

Replacement



- ❑ Do the procedures in these sections of the service manual.
 - ◆ Replacement and Adjustment – AIO Cartridge
- ❑ Follow all notes and cautions in the manual.

Slide 99

No additional notes

RICOH**G165 SERIES TRAINING****PAPER FEED**

Slide 101

PURPOSE OF THIS SECTION**In this section you will:**

- Study the paper feed, duplex, and paper exit mechanisms.

When you finish this section, you should know the answers to these questions.

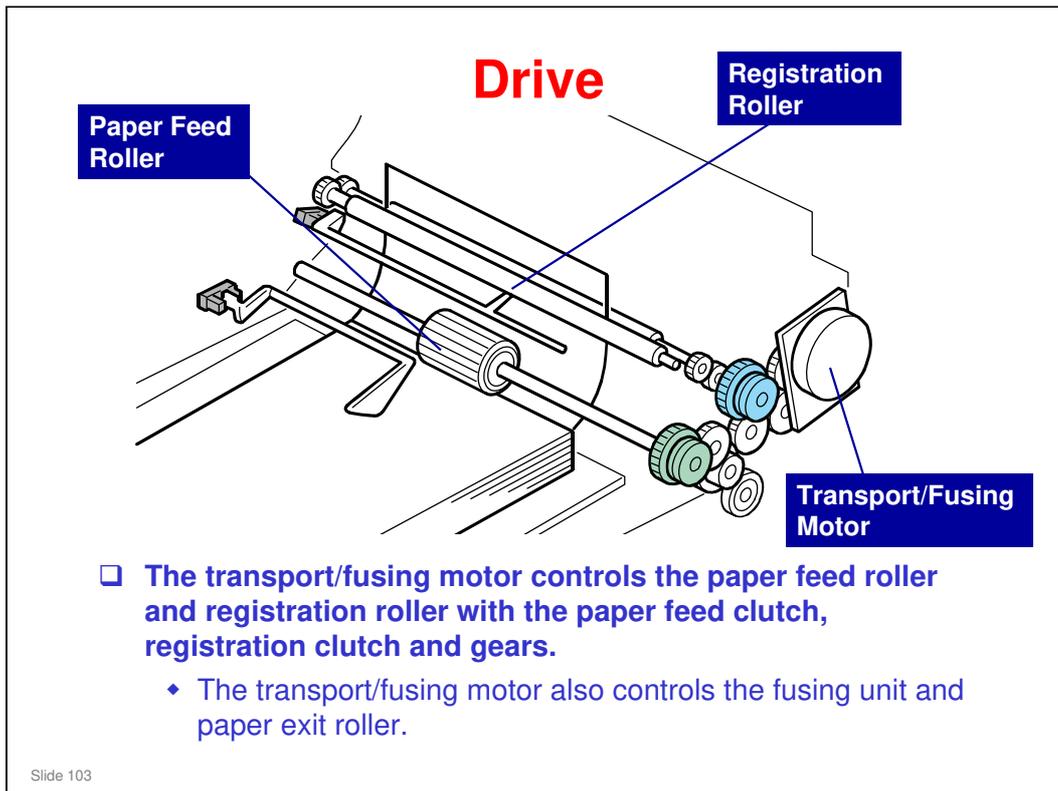
- What type of feed mechanism is used?
- How many sheets of paper can be fed through the machine at the same time in duplex mode (interleaving)?

Overview

- ❑ This machine uses a friction pad and feed roller system.
- ❑ The tray can hold 250 sheets.
- ❑ The bypass can hold one sheet.

Slide 102

- ❑ The paper end sensor detects whether paper is installed in the tray and whether the tray is set in the machine.
 - This machine does not have a tray set sensor.
- ❑ This machine also does not have automatic paper size detection.
 - The machine determines the paper size from the on-off timing of the registration sensor.
 - If the paper type which is selected at the PC does not match the paper size measured by the registration sensor, the machine issues a paper jam alert and stops the motors.



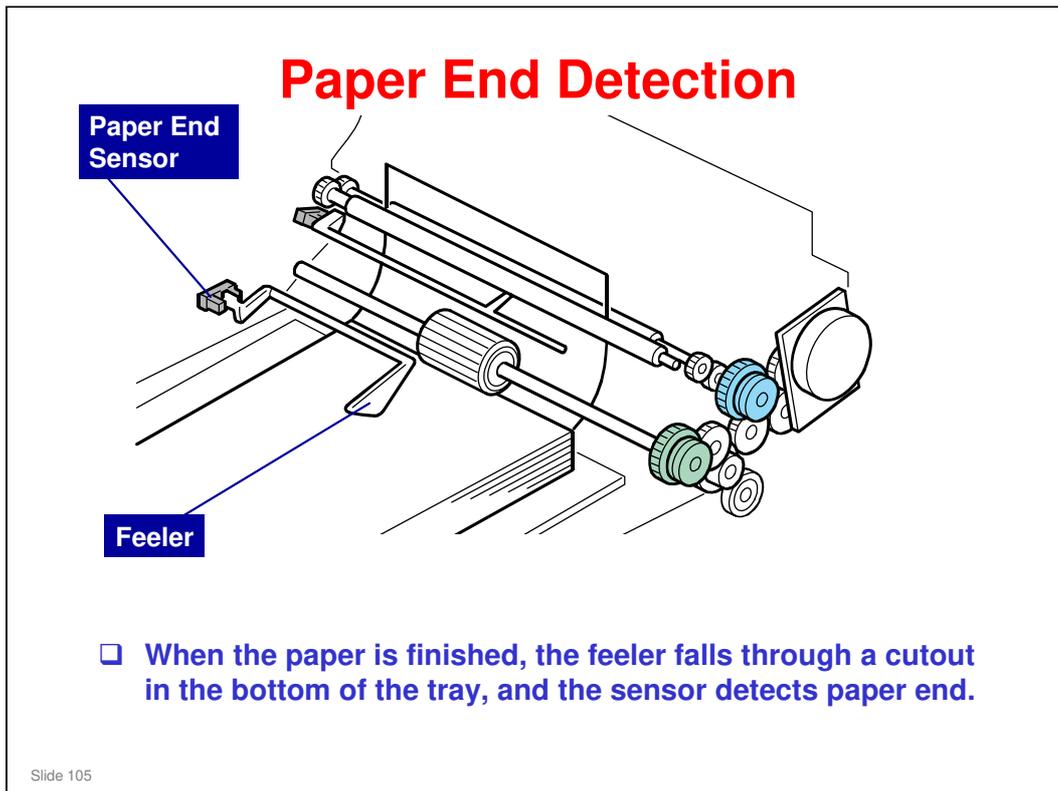
- ❑ The clutches are shown in blue.

Registration

- When the registration sensor detects paper, the machine makes a paper buckle at the registration roller to correct paper skew.
- Then, the registration clutch turns on, and then the registration roller transports a sheet of paper to the transfer roller unit.
- There is no paper buckle adjustment.

Slide 104

- No additional notes



- No additional notes

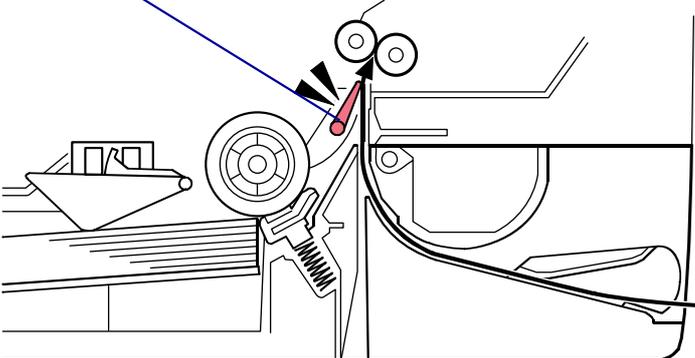
Tray Lift

- Springs lift the bottom plate when the tray is installed in the machine.**
- There is no mechanism to lower the tray. You must push the bottom plate down.**

Slide 106

No additional notes

Bypass Feed



Registration Sensor

- ❑ If the registration sensor detects paper but no job is coming in from the PC, the machine detects that a sheet of paper has been placed in the bypass tray.
- ❑ The bypass can only hold one sheet at a time.

Slide 107

No additional notes

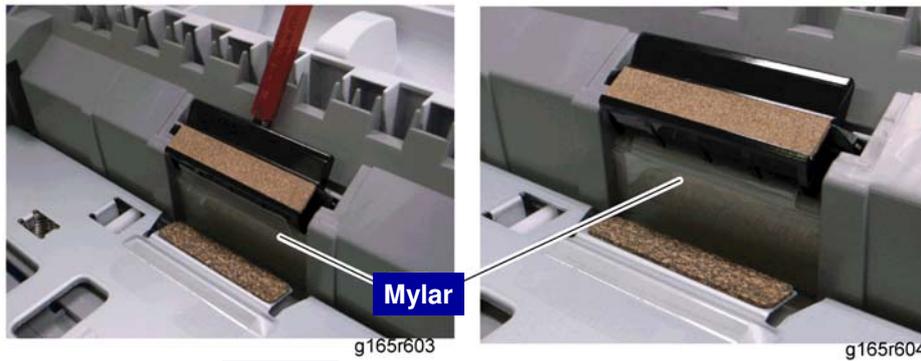
Feed-out and Duplex

- The duplex motor feeds paper out of the machine.
 - ◆ If the motor rotates in reverse, it feeds paper to the duplex mechanism.
- The paper exit sensor controls the timing for the duplex motor.
- There is no interleaving.
 - ◆ Only one sheet can pass through the machine at one time.
- The second side is printed first, then the first side.

Slide 108

No additional notes

Replacing the Separation Pad



Correct

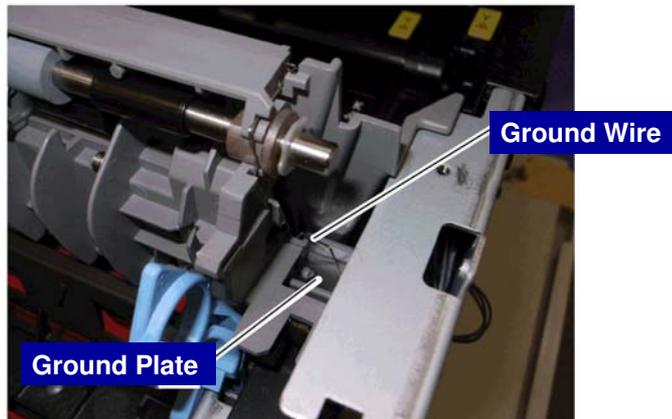
Incorrect

- When reinstalling the separation pad, make sure that the mylar is not placed under the separation pad.

Slide 109

No additional notes

Reinstalling the Paper Exit Roller



- ❑ Make sure that the ground wire [A] from the discharge sheet touches the ground plate [B] on the machine.

Slide 110

No additional notes

Replacement



- ❑ **Do the procedures in these sections of the service manual.**
 - ◆ Replacement and Adjustment – Paper Feed
 - ◆ Replacement and Adjustment – Paper Exit
- ❑ **Follow all notes and cautions in the manual.**

Slide 111

No additional notes



The slide features the RICOH logo in red at the top left. In the center, the text "G165 SERIES TRAINING" is written in red, and "IMAGE TRANSFER" is written in blue below it. In the bottom left corner, the text "Slide 113" is written in a small font.

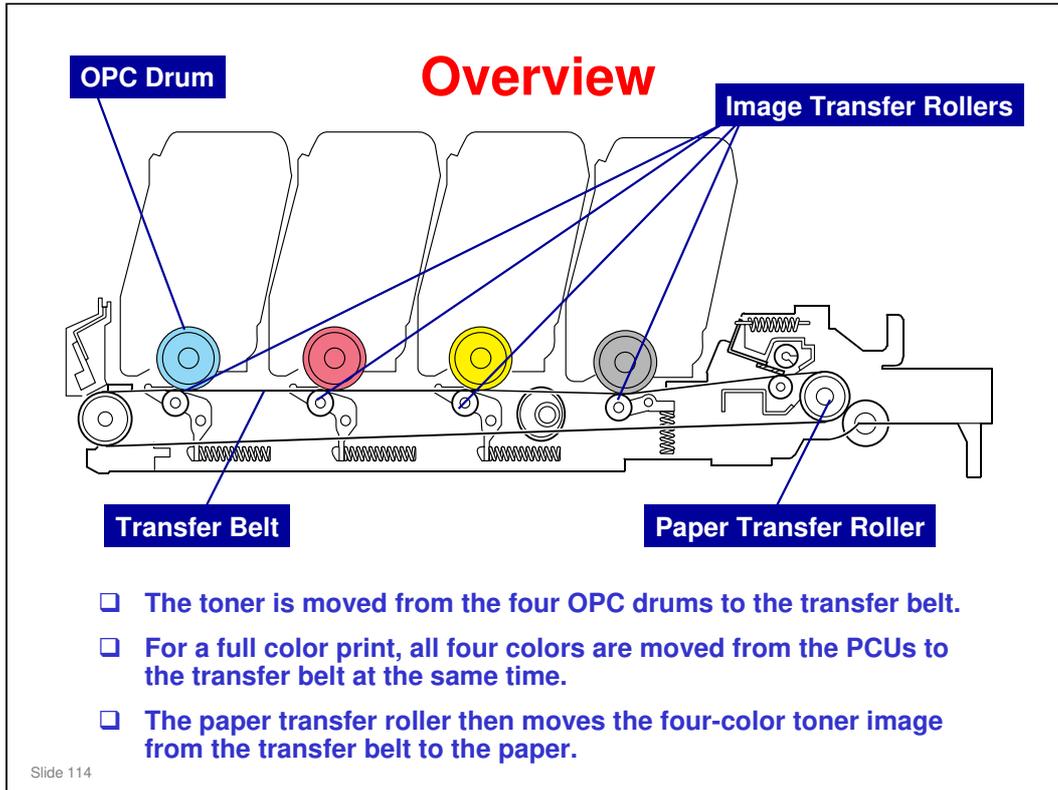
PURPOSE OF THIS SECTION

In this section you will:

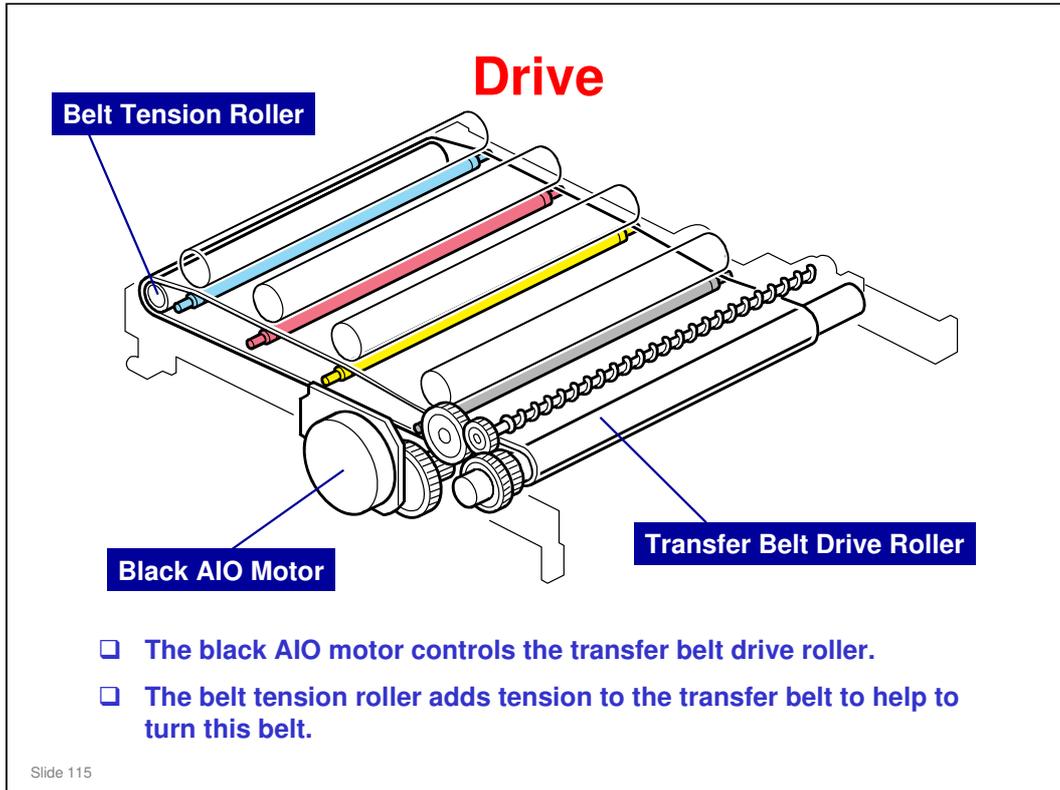
- Study how the machine moves the toner from the drums to the image transfer belt and on to the paper.

When you finish this section, you should know the answers to these questions.

- Are all four colors moved from the drums to the transfer belt at the same time?
- What adjustments must we do after replacing the image transfer belt?

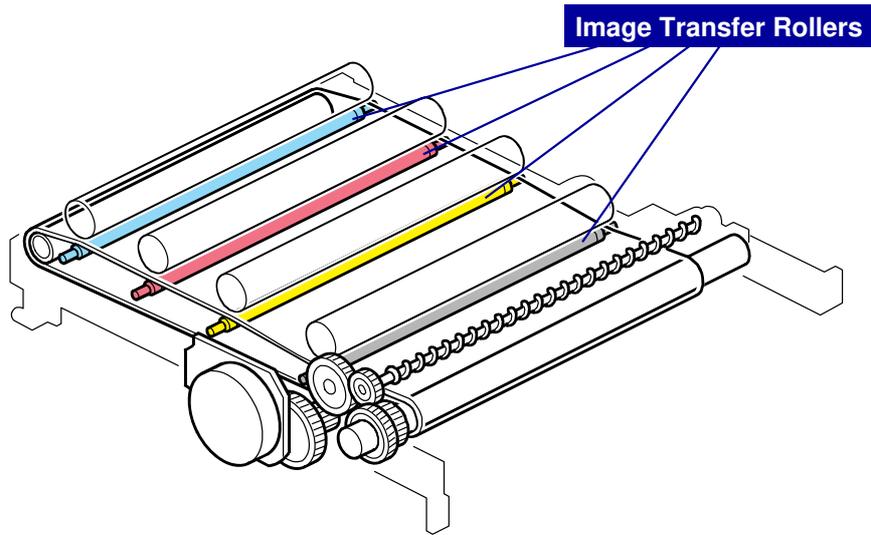


No additional notes



No additional notes

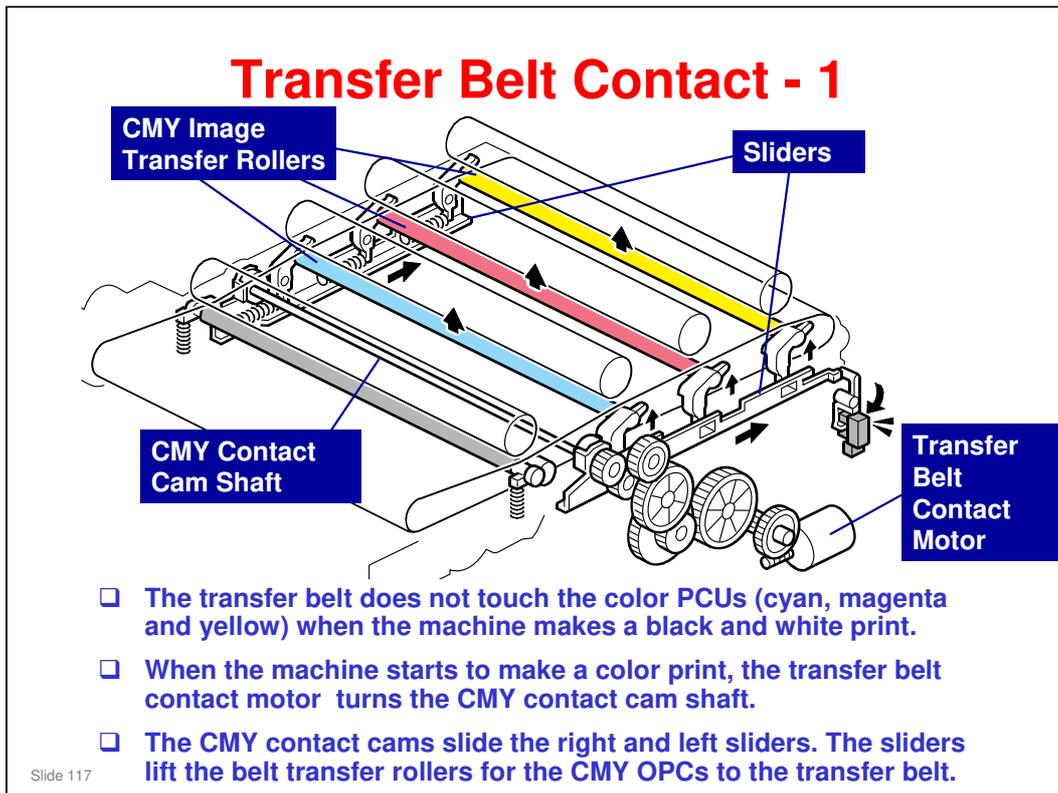
Transfer Voltage



- ❑ The image transfer rollers move the toner from the PCUs to the image transfer belt.

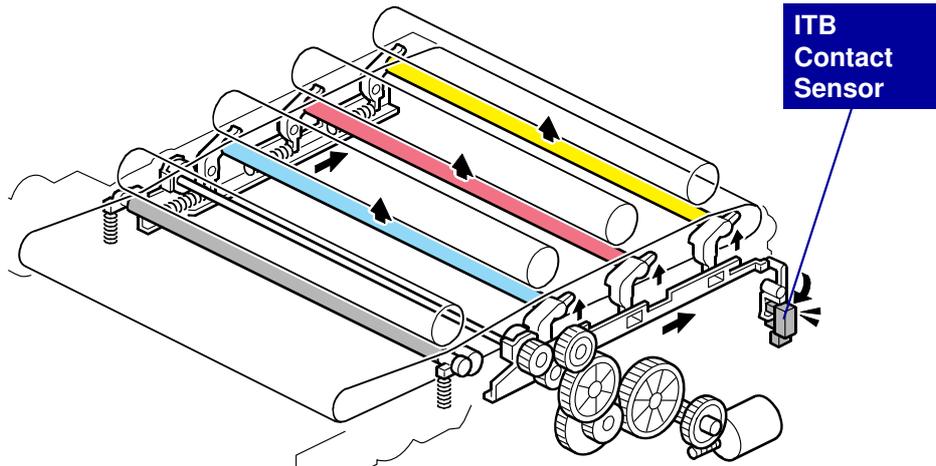
Slide 116

No additional notes



- ❑ Because of this mechanism, the life of the transfer belt is longer (it is not necessary for the transfer belt to touch the color PCUs when the machine makes a black and white print).
 - However, if the customer selects "Off" with the "ACS" setting, the four OPC drums always touch the image transfer belt.

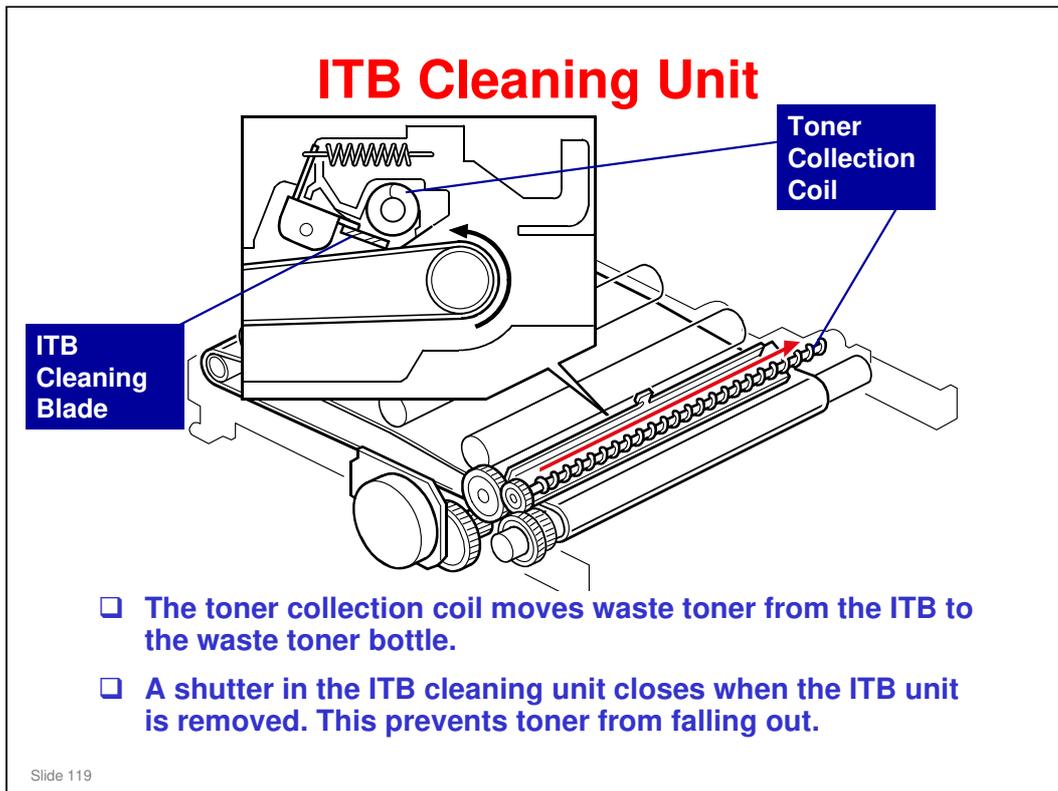
Transfer Belt Contact - 2



- ❑ The ITB contact sensor detects if the transfer roller unit for each OPC (CMY) touches the transfer belt.
- ❑ If it does not touch the transfer belt during color printing, the machine stops and shows SC 445, 446, or 447.

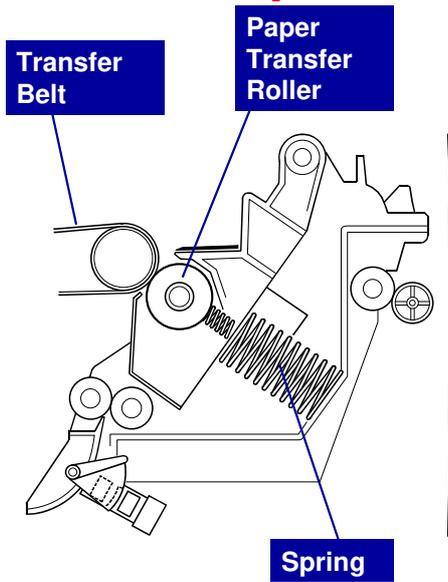
Slide 118

No additional notes



- ❑ We will see more about the waste toner collection mechanism for the ITB later in this section.

Paper Transfer Roller

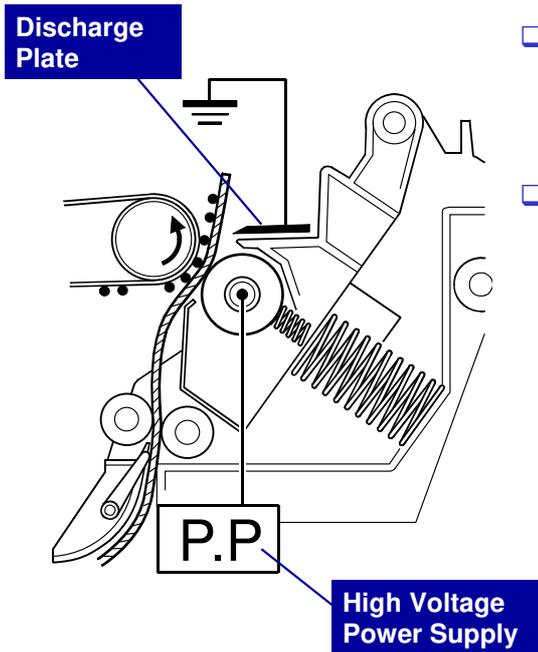


- ❑ The transfer roller is always pressed against the image transfer belt by pressure from a spring.
- ❑ The transfer roller moves the toner image from the transfer belt to the paper.
- ❑ When a sheet of paper goes between the transfer roller and the transfer belt, the transfer roller turns with the paper.

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- ❑ In some places, you will see the term '2nd Transfer'. This refers to what the transfer roller does (transfer from belt to paper).

Paper Transfer and Discharge

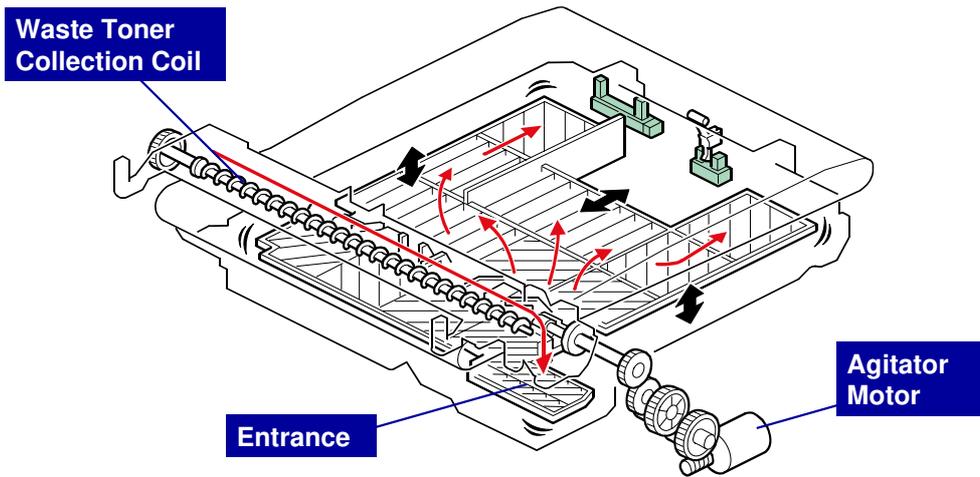


- The transfer roller receives a positive charge from the high voltage power supply.
- The discharge plate removes charge that was applied to the paper during paper transfer. This helps paper move away from the transfer roller.

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No additional notes

Waste Toner Collection - 1

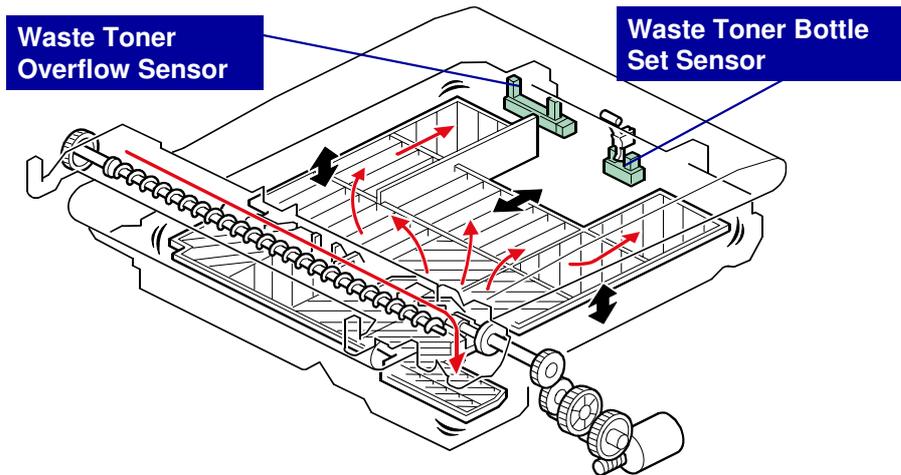


- ❑ The waste toner collection coil moves waste toner from the transfer belt to the entrance of the waste toner bottle.
- ❑ The agitator plate makes sure that the waste toner is evenly distributed. The agitator motor controls this plate.

Slide 122

No additional notes

Waste Toner Collection - 2



- ❑ The waste toner bottle set sensor detects whether the waste toner bottle is set.
- ❑ The waste toner overflow sensor detects whether the waste toner bottle is full.
- ❑ When the machine detects that the bottle is full, 400 more pages can be printed. Then the machine stops.

Slide 123

- ❑ If the bottle is not set or if it is full, an error message appears on the LCD for the MF model, or on the SOM display on the computer for the printer model.

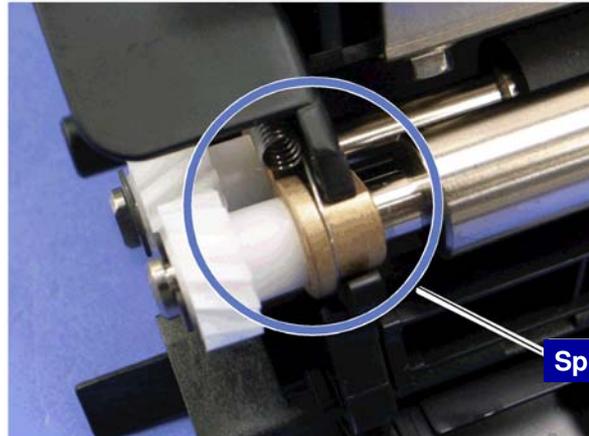
After you Replace the Image Transfer Belt

- ❑ **Important: First, open the front cover and turn on the machine.**
- ❑ **Execute "Reset Transfer Unit Life Counter".**
 - ◆ "SP Mode 2" tab (printer model) or the "Engine Maintenance" menu (MF model)
- ❑ **Close the front cover.**
- ❑ **Execute "Trans. Belt Adjust".**
 - ◆ "SP Mode 2" tab (printer model) or the "Engine Maintenance" menu (MF model)
- ❑ **Adjust the registration settings for each tray and for the front and rear side of the paper if necessary.**
 - ◆ "Registration" in the "SP Mode 2" tab (printer model) or the "Engine Maintenance" menu (MF model)

Slide 124

- ❑ Normally, the life of the transfer belt unit is the same as the life of the machine. It should only be necessary to replace this unit if it becomes defective.
- ❑ What is the Transfer Belt Unit Life Counter?
 - The resistance of the belt changes during its life. The machine automatically compensates for this by adjusting the transfer voltage. For a new belt, the life counter must be reset so that the machine applies the correct voltage for a new belt.
- ❑ What does Transfer Belt Adjust do?
 - The new transfer belt may not be exactly the same length as the old one. With this SP mode, the machine calibrates the motor speed for the new belt (the speed is checked with a TM sensor pattern).

Installing the Registration Roller



g168r559

- Make sure that you hook the spring correctly.

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No additional notes

Other Notes

- ❑ **The ITB cleaning unit contains waste toner. When you remove the ITB cleaning unit, put it on a sheet of paper.**
 - ◆ A shutter mechanism inside the unit should prevent toner from falling out. But a small amount may already be on the exterior.
- ❑ **Waste toner bottle set sensor, waste toner overflow sensor: make sure to connect these up to the correct connectors, as explained in the manual.**

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No additional notes

Replacement



- ❑ **Do the procedures in these sections of the service manual.**
 - ◆ Replacement and Adjustment – Image Transfer
 - ◆ Replacement and Adjustment – Paper Transfer
- ❑ **Follow all notes and cautions in the manual.**

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No additional notes

RICOH**G165 SERIES TRAINING****FUSING**

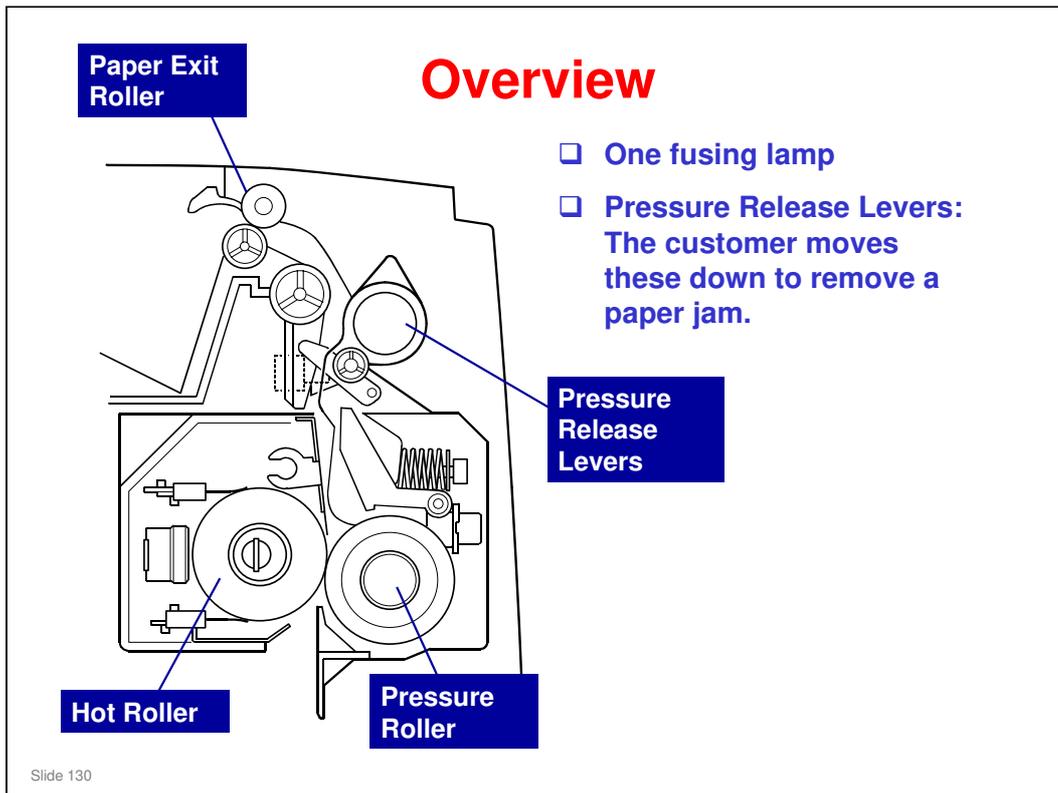
Slide 129

PURPOSE OF THIS SECTION**In this section you will:**

- Study the fusing unit.

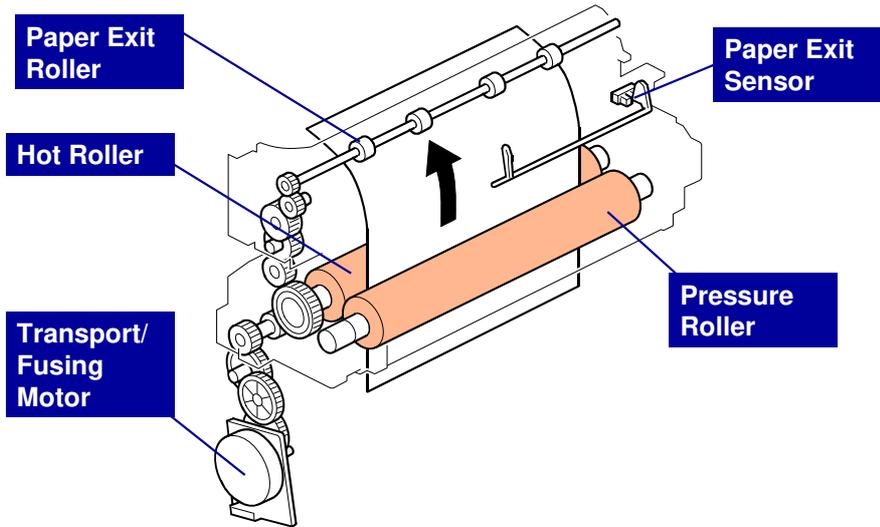
When you finish this section, you should know the answers to these questions.

- How many fusing lamps?
- What to check if toner is not fused to the paper?



No additional notes

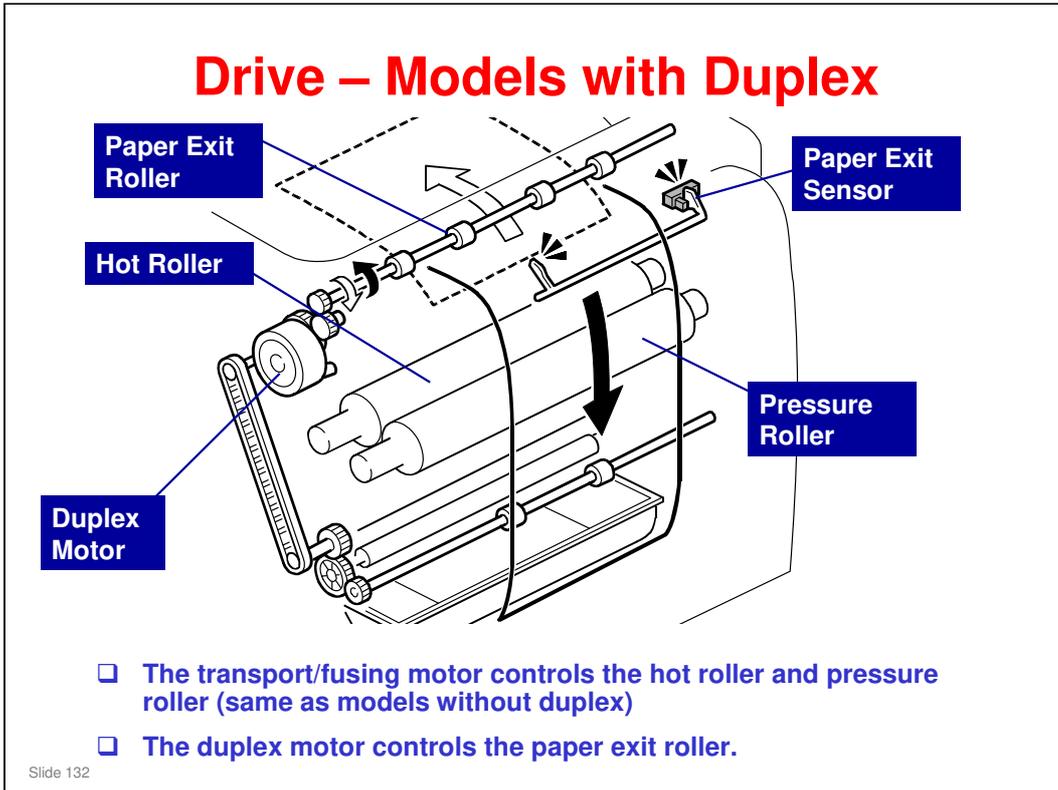
Drive – Models without Duplex



- ❑ The transport/fusing motor controls the hot roller, pressure roller, and paper exit roller.
- ❑ The paper exit sensor detects when to stop the motor. It also detects paper jams.

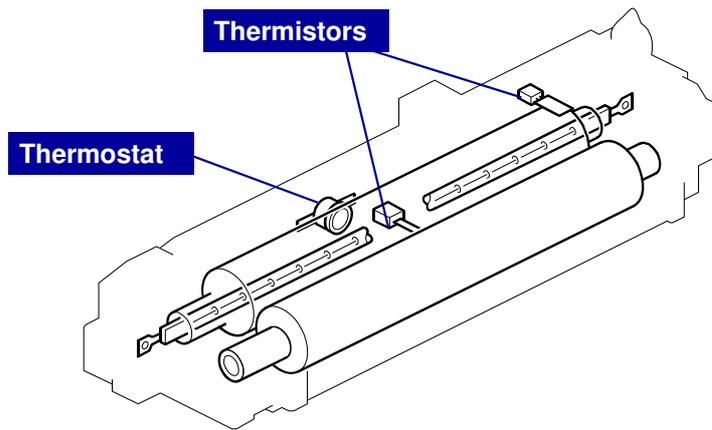
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No additional notes



No additional notes

Temperature Control



- ❑ **Two thermistors, one thermostat**
 - ◆ Fusing temperature control is based on measurements from the thermistor at the center.
- ❑ **The thermostat cuts power to the fusing lamp.**
- ❑ **The machine turns power off and enters sleep mode if the machine is idle for 15 minutes.**

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Service Manual, Details, Fusing, Temperature Control

- ❑ The service manual contains details on the fusing unit temperatures and control method.
- ❑ The fusing temperature is different for each paper type.

Fusing Unit SCs

- ❑ SC541, 542, 543, 544, and 545
- ❑ To prevent damage to the machine, the machine cannot be operated until the fusing related SC has been reset by a technician.
- ❑ To reset the machine, do one of the following in SP mode:
 - ◆ Printer model: Click "Fuser SC Reset" in SOM, and then turn the main power switch off and on
 - ◆ MF model: "Engine Maintenance" menu, "Fuser SC Reset", press 'OK' then turn the main power switch off and on

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No additional notes

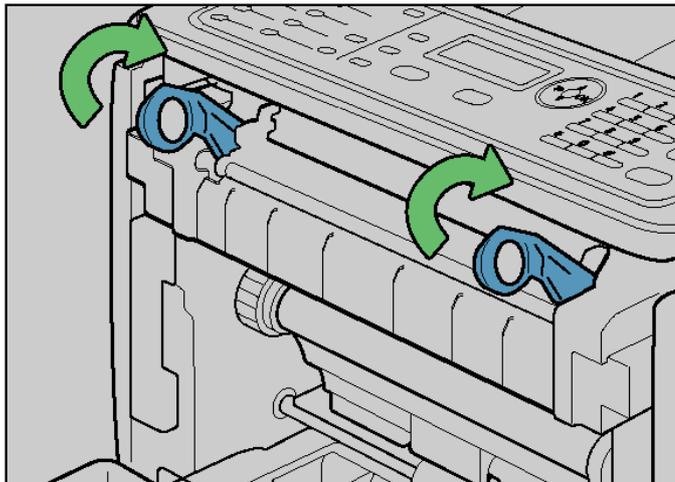
Humid Environments

- ❑ **To reduce paper curl in high temperature and humidity environments, the fusing unit does idle rotation before a job, if the customer enables this function in the user mode.**
 - ◆ Mode 1: No fusing idling, transfer roller voltage is increased
 - ◆ Mode 2: Fusing unit rotates for 30 seconds before a job, transfer roller voltage is increased.
 - ◆ Mode 3: Fusing unit rotates for 60 seconds before a job, transfer roller voltage is increased.

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- ❑ Lab tests: Fusing idling mode 2 should be enough in most cases
- ❑ MF Model: Menu – Machine Settings – High Humidity Mode
- ❑ Printer model: SOM – System tab – Anti-Humidity

If Toner is Not Fused to the Paper - 1

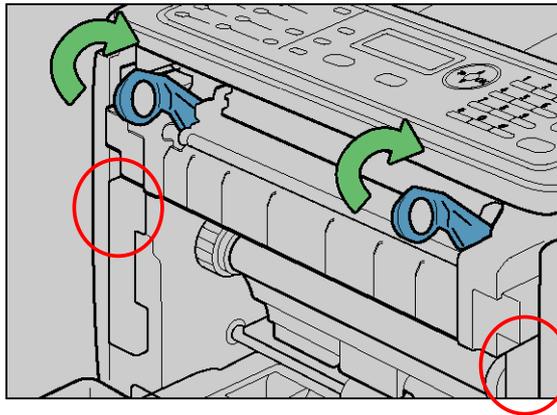
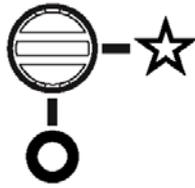


- ❑ If the image is not fused to the paper properly, it is possible that the user forgot to put the fusing unit levers back up after removing a paper jam.
- ❑ Check these levers and move them up if necessary.

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No additional notes

If Toner is Not Fused to the Paper - 2

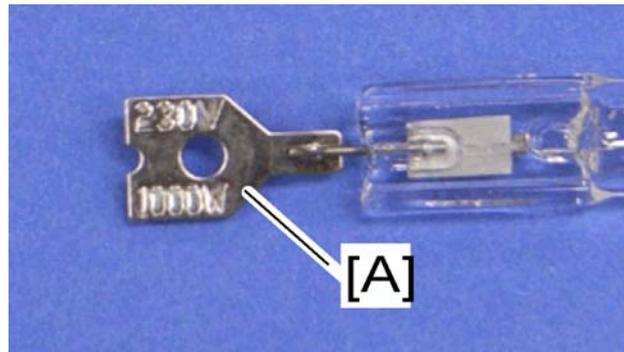


- ❑ Also, if toner is loosely fused to the paper, check the position of the above indicator.
- ❑ For normal operation, it should be at the 'circle' position.
- ❑ If it is at the "star" position, this means that the pressure roller is not in contact with the hot roller, and toner will not be fused to the paper.

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- ❑ The 'star and circle' adjustment locations are in the red circles. Adjust both of them with a screwdriver.
 - To go to the 'star' position, turn counter-clockwise. This moves the pressure roller away from the hot roller.
 - To go to the 'circle' position, turn clockwise. This moves the pressure roller into contact with the hot roller.
 - If you move the blue levers, this does not affect the setting of the 'star and circle'. Also, if you change the 'star and circle' setting, the blue levers are not affected.

Fusing Lamp Replacement



- ❑ The terminal [A], which shows the voltage and power rating, must be placed at the right side of the fusing unit.
- ❑ The thermistors and thermostat cannot be replaced in the field. The position of these components is adjusted precisely in the factory with special tools.

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No additional notes

Replacement



- ❑ Do the procedures in these sections of the service manual.
 - ◆ Replacement and Adjustment – Image Fusing
- ❑ Follow all notes and cautions in the manual.
- ❑ Make sure that the fusing unit is cool before you touch it.
- ❑ Make sure to restore the insulators, shields, etc after you service the fusing unit.

Slide 139

No additional notes

Fusing Unit Jams

- ❑ Normally, the user will remove fusing unit jams.
- ❑ But, if the service program 'Fuser SC Detect' is changed to 'on', the machine stops if a jam occurs in the fusing unit for three consecutive paper feeds. Then, SC559 appears. The technician must remove the jam.

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No additional notes

RICOH**G165 SERIES TRAINING****OPTIONAL PAPER TRAY UNIT (G849)**

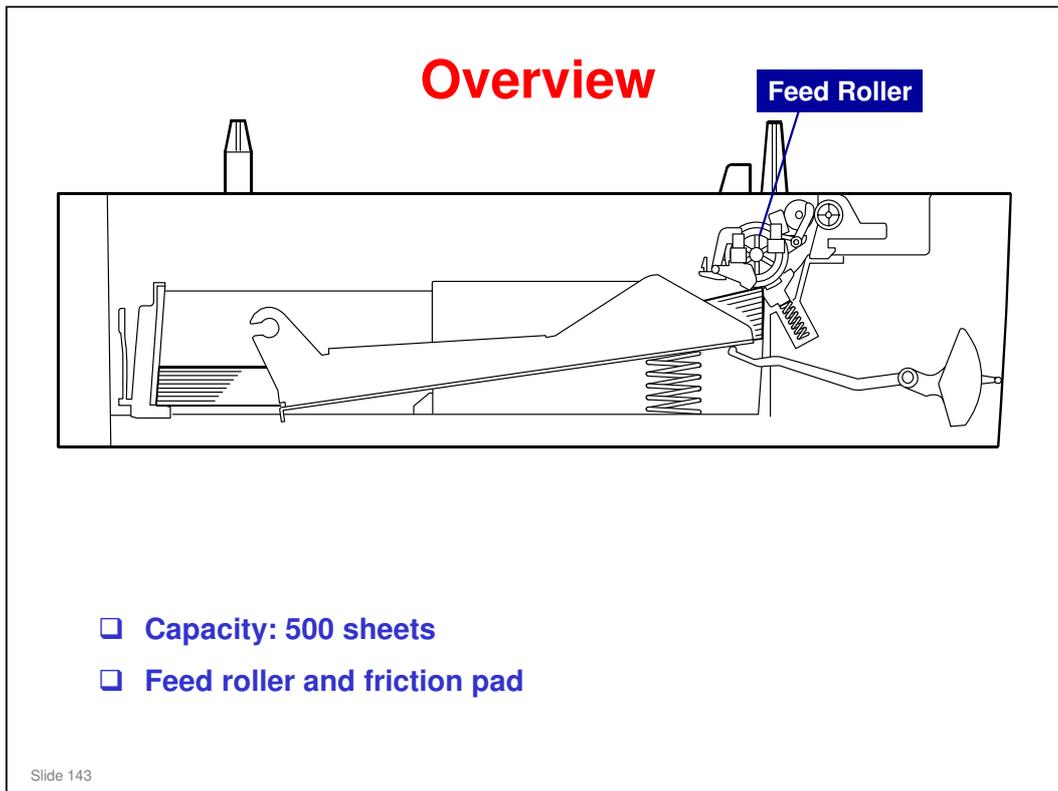
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PURPOSE OF THIS SECTION**In this section you will:**

- Study the optional paper tray unit

When you finish this section, you should know the answers to these questions.

- What type of feed mechanism is used?
- How many sheets of paper can the tray hold?



G849 Service Manual – Detailed Section Descriptions - Overview

Feed

Relay Clutch

Paper Feed Clutch

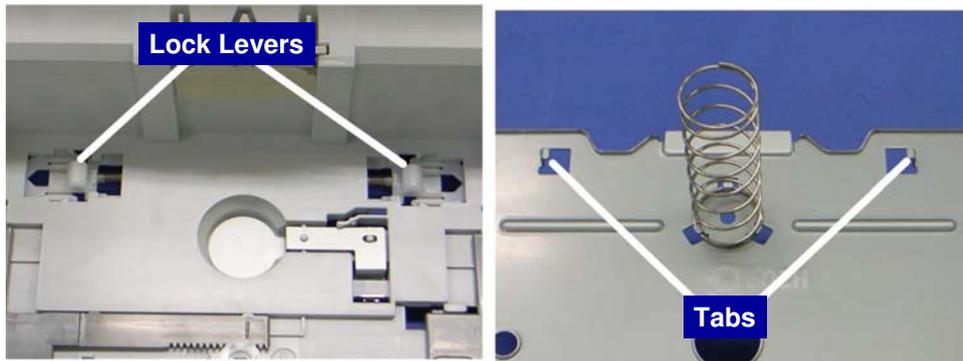
Gear

- The transport/fusing motor in the main machine drives the gear.
- The clutches transfer drive to the rollers at the correct times.

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No additional notes

Paper Lift - 1

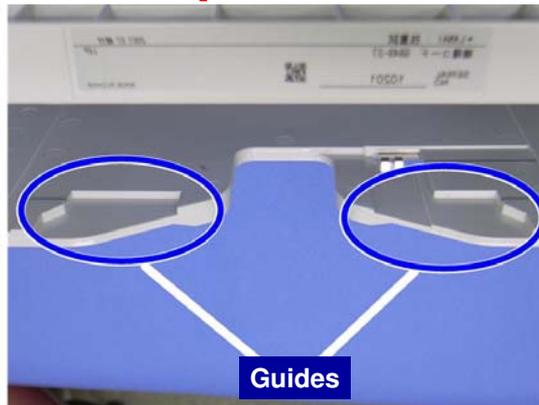


- ❑ The spring pushes the bottom plate up. So, you must press the bottom plate down before you put the tray in the machine.
- ❑ After the bottom plate is pressed down, the tabs hold the lock levers.

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- ❑ The next slide shows what happens after you put the tray in the machine.

Paper Lift - 2

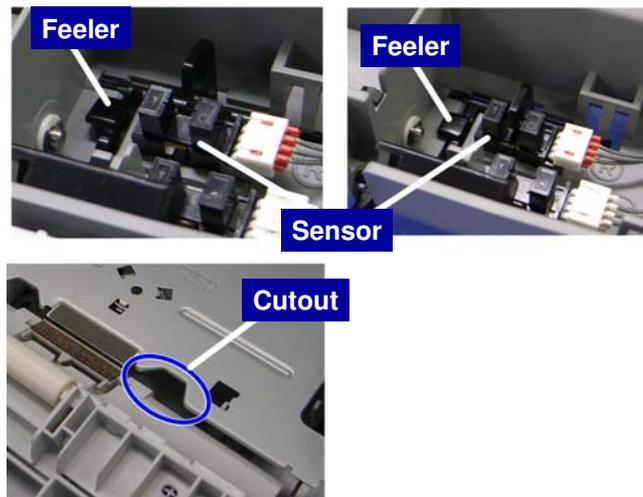


- ❑ When you put the tray in the machine, the guides in the main body of the paper tray unit push the lock levers, and the lock levers release the tabs.
- ❑ Then, the spring lifts the bottom plate.

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No additional notes

Paper End Detection

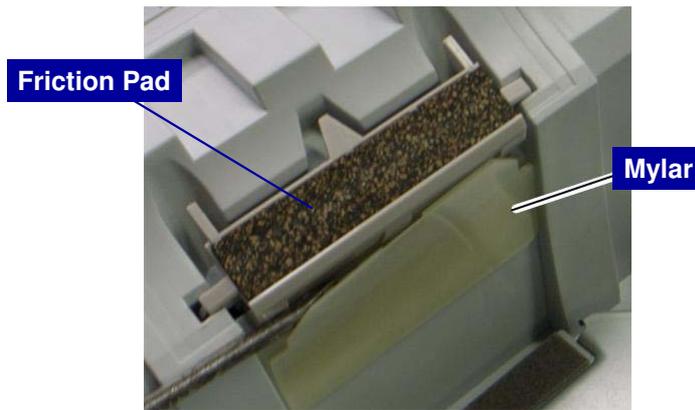


- When there is no paper in the tray, a feeler drops through a cutout in the bottom plate, and the actuator attached to the feeler enters the paper end sensor.

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No additional notes

Reinstalling the Friction Pad



- ❑ When re-installing the friction pad, make sure that the Mylar does not go under the friction pad.

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*G849 Service Manual – Replacement and Adjustment –
Paper Feed Unit – Friction Pad*

Replacement



- ❑ Do the procedures in this section of the G849 service manual.
 - ◆ Replacement and Adjustment
- ❑ Follow all notes and cautions in the manual.

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No additional notes