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## STATIC CONTROL INSTRUCTIONS

Version 2 February 2007 SYSTEM SUPPORT SERIES<sup>™</sup>



Konica® Minolta® PagePro 1350



Konica® Minolta® PagePro 1400

Konica<sup>®</sup> Minolta<sup>®</sup> Printing Solutions announced the PagePro 1350W the newest additions to its line of affordable, monochrome laser printers. The PagePro 1350W prints at 21 pages per minute and has an introductory price of \$179.99. It delivers high-resolution images at up to 1,200 x 1,200 dpi on page sizes up to 8.5" x 14". Its footprint is 15" wide that makes it a suitable choice for small offices or home offices that need high-speed laser printing in a minimum of space. A monthly duty cycle of 15,000 prints per month demonstrates the printer's capacity for handling any document production task likely to be encountered in the small business environment.

The PagePro 1350W is the first printer to bear the logo of the new Konica<sup>®</sup> Minolta<sup>®</sup> Printing Solutions and takes the place of the PagePro 1250W in the family of monochrome printers from Konica<sup>®</sup> Minolta<sup>®</sup>.

The PagePro 1350W is similar to the Epson EPL-6200 and 6200L in the UK and the Epson LP-2500 and LP-1400 in Japan. An Epson 6200 printer utilizes cartridges that look exactly like the 1350 cartridges. The Epsons have a slightly different green handle on the drum cartridge, it has a more aggressive mechanism than the Konica-Minoltas to keep the toner cartridge in place.

The PagePro 1350W includes a Status Display utility that provides more printer status information to the user than most typical printer-mounted control panel keypads. The Status Display installs automatically with the printer driver. Residing in the memory of the PC, the Status Display constantly monitors activity at the printer. It informs the user immediately if any problem should arise in the printer. The user can proactively check the level of remaining consumables (toner and imaging unit) through the Status Display. It also provides step-by-step instructions for replacing toner or adding paper, as well as a "Midnight Mode" setting that programs the PagePro 1350W for quieter operation at specified times.

#### Konica® Minolta® PagePro 1400

The Konica-Minolta 1400 Printer is the latest addition to the 1300 series of printers with the 1350 model being the North American version of the 1300 model. The 1400 was released globally on January 4, 2006. The 1300 and 1400 have different OEM part numbers for the drum cartridge, and the toner cartridge has a fin on the top that prevents one from being universal. The 1350 drum cartridge has a longer side plate that comes in contact with the fin on the toner cartridge. This prevents a 1400 toner cartridge from being used in a 1300 drum cartridge. Removal of the fin and side plate can be a solution to a universal cartridge.

The 1400 utilizes 120vac @50/60 Hz in a 120V and 220/240V model. Print speed is advertised at 17ppm, while the maximum duty cycle is listed at only 9,000 pages per month. The US list price is \$119.99.

Cartridges come in two parts, the toner cartridge and the drum cartridge, just like the 1300's. A standard yield toner cartridge, rated at 2,000 pages, has a list price of \$54.99 and the drum cartridge, which is the same as the 1300/1350 cartridge, is rated at 20,000 pages and is priced at \$105. There is only a standard yield toner cartridge offered on the OEM website as of January 23, 2006.

#### CARTRIDGE REMANUFACTURING INSTRUCTIONS FOR:

## KONICA<sup>®</sup> MINOLTA<sup>®</sup> PAGEPRO 1350/1400

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#### GO TO WWW.SCC-INC.COM

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

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## REMANUFACTURING THE KONICA® MINOLTA® PAGEPRO 1350/1400

# Purpose of this SSS

The purpose of this SSS is to provide you a guide and the basic information needed to remanufacture a Konica<sup>®</sup> Minolta<sup>®</sup> PagePro 1350. This SSS contains information about:

- Separating the two sections.
- Disassembling each section.
- · 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.

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

## **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 91-99% Isopropyl Alcohol should be used for cleaning as directed in this instruction. 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.

# **Cartridge Similarities**

Konica Minolta's 1400 and 1350 printers are both similar to the Lexmark Optra E printer. Both printers have separate toner and OPC cartridges. In the Optra E, each cartridge is installed separately but in the 1350 and 1400, the two cartridges are connected then installed into the printer. Speed varies greatly with the Optra E rated at only 6 ppm.

An Epson 6200 printer utilizes cartridges that look exactly like the 1350 and 1400 cartridges. It is rated at 20 ppm. SCC has just recently received the 6200 printer. The Epson drum cartridge box contains instructions for resetting an OPC counter (20,000 pages?).

There is no waste bin.

The PCR materials in the Optra E, 1350, and 1400 are felt but the 1350 and 1400 PCRs are denser. Both have what appears to be cleaning foam before the PCR. The foam is attached to a steel plate that is electrically connected to the PCR. There are two rows of foam in the 1350 and 1400 but only one in the Optra E.

Neither drum cartridge utilizes a recovery blade.

The toner cartridges of the 1350 and 1400 and Optra E are similar in appearance and technology. Both utilize developer rollers made with black conductive plastic sleeves over foam cores. Doctor Blades and agitators all are designed alike with doctor blades being a thin sharp metal. An aluminum roller in the hopper, located between the developer roller and agitator, seems to help deliver toner to the developer roller. The aluminum roller is not charged. It rolls against a Mylar wiper. The only seal is foam located between doctor blade and hopper.

A molded plastic cover protects the developer roller before installation.

# <u>Minolta® 1350/1400</u>



# **Toner Hopper Assembly**

product wirelines



# **Waste Bin Assembly**

product wirelines

The following table is summary of the Konica® Minolta® PagePro 1350 and the Epson® EPS 6200 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 PP1300W (Europe)	Minolta QMS PP1350W (N & S America)	Epson EPL 6200(Europe) / LP-2500 (Japan)	Epson EPL 6200L(Europe) / LP-1400 (Japan)
Printer Introduction Price	\$163	\$180	£180/\$329	£110/\$198.85
Processor	48 MHz	48 MHz	200 MHz	48 MHz
First page	13 seconds	13 seconds	13 seconds	13 seconds
Memory	8 MB	8 MB	12 MB	12 MB
Duplex	Manual	Manual	Manual	Manual
Engine Information				
Print Resolution (dpi)	1200/1200	1200/1200	1200/1200	600/600
Print Speed (pages per minute)	16 ppm	21 ppm	20 ppm	20 ppm
Duty Cycle (pages per month)	15,000	15,000	15,000	15,000

# Cartridge Information Table

The following is a summary of the cartridge information for the Konica® Minolta® PagePro 1350 and the Epson® EPL 6200 series printer and printer cartridge.

Cartridge Information	Minolta 1300 Std Toner	Minolta 1300 HY Toner	Minolta 1350 Std Toner	Minolta 1350 HY Toner	Minolta 1300/1350 Drum Unit	Epson Std Toner	Epson Drum Unit
Cartridge Part Number	1710566-003	1710567-003	1710566-001	1710567-001	17105686-001	C13S050167	C13S051099
OEM Rated Page Yield	3К	6K	3K	6K	20K	3k	20k
OEM MSRP*	\$80	\$130	\$80	\$130	\$105	\$65 – Low \$126 - High	\$65 – Low \$122 - High

\* Prices as of 1/2007

The following table is summary of the Konica<sup>®</sup> Minolta<sup>®</sup> PagePro 1400 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® PagePro 1400W
Printer Introduction Price	\$120
Printer Introduction Date	January 2006
Processor	Naltec
First page	13 seconds
Memory	8 MB
Duplex	Manual
Engine Information	
Print Resolution (dpi)	1200/600
Print Speed (pages per minute)	17 ppm
Duty Cycle (pages per month)	9,000

# Cartridge Information Table

The following is a summary of the cartridge information for the Konica® Minolta® PagePro 1400 series printer and printer cartridge.

Cartridge Information	Minolta 1400 Std Toner	Minolta 1400 Drum Unit
Cartridge Part Number	9J04203	4519401
OEM Rated Page Yield	2K	20K
OEM MSRP*	\$54.99	\$105

\* Prices as of 1/2007

### For Basic Remanufacturing:

- Jewelers Phillips Screwdriver
- Phillips Screwdriver
- Needle Nose Pliers
- Hook Tool (HTOOL)
- Compressed Air for Cleaning
- Lint-Free Cleaning Cloth (LFCCLOTH)
- Safety Glasses
- Small Flat Blade Screwdriver
- QTip 6" Single Swab (QTIP)
- Hopper Jig (HP25HJIG)
- Hopper Cap (PCHCAP)
- Perimeter Foam (M1350PFOAM)
- Deionized Water



This section provides the information needed to separate the toner hopper and drum unit from each other. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.



Note: For illustration purposes, a Konica® Minolta® PagePro® 1350 was used in this instruction.

1. Release the locking lever, see Figure 1.



2. Separate the two sections by pulling the toner hopper away from the drum unit, as shown in Figure 2.





This section provides the information needed to disassemble the toner hopper section of the cartridge. At this point you should have separated the toner hopper section from the drum unit, as described earlier in this SSS. For information on separating the two sections see "Separating the Toner Hopper and Drum Unit" on page 1. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

1. Position the toner hopper with the developer roller facing upward and the contact side hopper tension clip (pink) on the left side, see Figure 3.



2. Using a pair of needle nose pliers or the hook tool, remove the two developer roller tension springs, located above the doctor blade, as seen in Figures 4 & 5.



Note: Do not damage or lose the two springs , they will be re-used in the re-assembly. SCC does not have a replacement.





Figure 4

Figure 5

3. Remove the hopper tension clips on the drive side (blue) and the contact side (pink) by rotating forward and pulling outward away from the hopper unit, see Figure 6 & 7.





Figure 6

Figure 7

- Remove the developer roller. 4.
  - a. Grasp the developer roller by the metal shaft on the contact end and lift out of the hopper, with the two white plastic shims on both ends (Figure 8). Place on a dry, lint free cloth.



Note: Be careful not to lose the plastic shims. SCC does not have a replacement.



c. Clean the developer roller with dry, compressed, filtered air and if necessary clean with a lint-free cloth lightly dampened with deionized water (Figure 9).



- 5. Remove the doctor blade assembly.
  - a. Using a Phillips screwdriver remove the two screws holding the doctor blade and lift it off of the guide pins, see Figure 10.



Note: Be careful with the toner hopper perimeter foam that is attached to the Hopper under the doctor blade. If it is damaged during removal and cleaning, replace with SCC's replacement.



b. Remove any remaining toner on the blade and perimeter foam with dry, filtered compressed air (Figure 11).



- c. Place doctor balde on a flat surface to clean with deionized water and a lint-free cloth. Ensure the doctor blade is completely dry (Figure 12a).
- Note: Inspect the doctor blade for scratches and wear. If it has any scratches it will need to be replaced.
  - Clean the toner buildup off of the doctor blade edge by scraping with the wood tip end of the Q-Tip, see Figure 12b.



- 6. Remove the hopper cap and remove any remaining toner out of the hopper with dry, filtered compressed air (Figure 13a).
- 7. Clean sealing foam, sealing blade and rotate adder roller while cleaning with dry, filtered compressed air (Figure 13b).





1. Realign the top edge of the toner hopper perimeter foam on the guide pins on the hopper section, see Figure 14.





- Install the doctor blade assembly. 2.
  - a. Position the doctor blade over the guide pins, see Figure 15a.



Note: Ensure the doctor blade is positioned under the metal contact tab on the contact side. See Figure 15b.



- b. Secure the doctor blade with the two Phillips screws (Figure 16).
- Note: Ensure the developer roller tension strips are positioned in front of the doctor blade. See Figure 16.



- Re-install the developer roller. З.
  - a. Ensure the white shims are installed on to the ends of the developer roller shaft, see Figure 17.





Note: Ensure the plastic shims are positioned inside the developer roller channel seated against the developer roller.



4. Install the contact side hopper tension clip on the developer roller axle then rotate and lock in to place. See Figure 19.



Note: Ensure the clear developer roller tension strip is in front of the tension clip. See Figure 19.



Install the drive side hopper tension clip on the developer roller axle then 5. rotate and lock in to place. See Figure 20.



Note: Ensure the clear developer roller tension strip is in front of the tension clip. See Figure 20.



Using a pair of needle nose pliers or hook tool, re-attach the 6. two developer roller tension springs on the tension strips to the hopper, as shown in Figure 21 & 22.



Figure 21

Figure 22

- 7. Fill with toner and install SCC's hopper cap.
- 8. Replace Chip and post test. For detailed instructions, please refer to SSS<sup>™</sup> #689, "Minolta® 1350 (M1350CHIP) and Epson<sup>™</sup> 6200 (EPL62CHIP) smartek<sup>™</sup> Chip Solution".

Replace Chip and post test. For detailed instructions, please refer to SSS<sup>™</sup> #833, "Minolta<sup>®</sup> 1400 (M1400CHIP).



## REMANUFACTURING THE KONICA® MINOLTA® PAGEPRO 1350/1400

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

- Remove the drum shutter 1.
  - a. Begin on the drive side and use a small flat blade screwdriver to pry up the shutter arm and lift off the locating peg on the drum unit, see Figure 23a.
  - b. Carefully remove the contact side shutter arm from the keyed locating peg, see Figure 23b.



Note: The contact side drum shutter spring will fall out with the drum shutter arm. Set aside for re-assembly (Figure 23b).





Figure 23a

Figure 23b

Using a jewelers Phillips screwdriver, remove the four Phillips 2. screws, located on the contact side of the drum unit, see Figure 24a. Then remove the Phillips screw located on the drive side of the drum unit, see Figure 24b.



Lift the PCR contact plate off of the drum housing, see Figure 25. З.



Use needle nose pliers to remove the wiper blade contact wire, see 4. Figure 26.



Note: Be careful not to lose the wiper blade contact wire. SCC does not have a replacement.



Remove the Drum 5.

- a. Use a small flatblade screwdriver to lift the alignment tab on the under carriage from the alignment post, see Figure 27a.
- b. Tilt the under carriage of the drum unit away from the drum unit, see Figure 27b.



b. Remove the drum from the drum housing (Figure 28).



Note: Clean PCR and cleaning assembly with dry, filtered compressed air.





This section provides the information needed to reassemble the toner hopper section of the cartridge. At this point you should have disassembled and cleaned the entire cartridge as described in this SSS<sup>™</sup>. If you have not disassembled and cleaned the cartridge see page 1 for instructions. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

- 1. Install the drum.
  - a. Replace drum and insert the gear side axle of the drum in to the drive side drum housing (Figure 29).



- b. Reposition the alignment tab on the under carriage on to the alignment post on the contact side (Figure 30a). Then ensure the under carriage is aligned on the drive side, see Figure 30b.
- Figure 30b Under Carriage



Figure 30a

2. Install the wiper blade contact wire, see Figure 31.

3. Align the PCR contact plate with the drum axle and press in to place, see Figure 32.



- 4. Secure the PCR contact plate and the drum under carriage with the four Phillips screws, see Figure 33a. Then re-install the Phillips screw located on the drive side of the drum unit, see Figure 33b.
- Phillips Screws Figure 33a Figure 33a

- 5. Install the drum shutter.
  - a. Install the drum shutter spring on the shutter arm, see Figure 34.
  - b. Install the contact side shutter arm on to the keyed locating peg, see Figure 35.
  - Note: Ensure the spring is seated behind the contact plate, see Figure 35.





Figure 34

Figure 35

c. Install the shutter arm on to the locating post on the drive side of the drum unit, see Figure 36.





This section provides the information needed to reassemble the toner hopper section to the drum unit . At this point you should have disassembled and cleaned the entire cartridge as described in this SSS<sup>™</sup>. If you have not disassembled and cleaned the cartridge see page 6 for instructions. Before attempting to perform the following procedures, read the entire section carefully. Ensure that you follow all necessary safety precautions.

 Hold the drum unit with the handle facing upward and the toner hopper with the locking latch facing upward (Figure 37). Slide the two sections together.



 Snap the locking latch in to the locking position as seen in Figure 38.



Note: If you are installing this drum cartridge into an Epson EPL-6200, EPL-6200L, LP-2500, or LP-1400 you need to reset the drum counter for the printer. Because of the different interfaces of the printers there are two different ways to reset the counter for the two different types of printers.

For the Epson EPL-6200 and LP-2500:

- 1. Install the new Drum Unit and Toner Cartridge and close the front door completely.
- 2. Make sure the printer is turned off, and hold down the Start/Stop and the Information buttons together.
- 3. While continuing to hold both of those buttons, power on the printer. When the **Ready** (green) and **Error** (red) lights are on, you may let go of the buttons and your drum counter is reset.

For the Epson EPL-6200L and LP-1400:

- 1. These printers do not have any buttons to interface with the user, so the drum counter must be reset using the printers supplied software.
- To access the printer driver from Windows, click Start, point to Settings, and click Printers. Next, right-click the EPSON EPL-6200/EPL-6200L/LP-2500/LP-1400 Advanced icon and click Properties (in Windows Me, 98, or 95), Printing Preferences (in Windows XP or 2000) or Document Defaults (in Windows NT 4.0).
- 3. You should now see the "Advanced Properties" window. Click on the **Optional Settings** tab and then click **Printer Settings**. The "Printer Settings" window should appear.
- 4. Click Reset OPC Level, You will be asked to confirm, click Yes. Your drum counter is now reset.

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