

# USER'S GUIDE

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DCP-9045CDN

## **If you need to call Customer Service**

**Please complete the following information for future reference:**

**Model Number:** DCP-9045CDN

**Serial Number:** <sup>1</sup> \_\_\_\_\_

**Date of Purchase:** \_\_\_\_\_

**Place of Purchase:** \_\_\_\_\_

<sup>1</sup> **The serial number is on the back of the unit. Retain this User's Guide with your sales receipt as a permanent record of your purchase, in the event of theft, fire or warranty service.**

**Register your product on-line at**

**<http://www.brother.com/registration>**

By registering your product with Brother, you will be recorded as the original owner of the product. Your registration with Brother:

- may serve as confirmation of the purchase date of your product should you lose your receipt; and
- may support an insurance claim by you in the event of product loss covered by insurance

# Approval Information and Compilation and Publication Notice

## Compilation and Publication Notice

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Under the supervision of Brother Industries, Ltd., this manual has been compiled and published, covering the latest product descriptions and specifications.

The contents of this manual and the specifications of this product are subject to change without notice.

Brother reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical and other errors relating to the publication.

# EC Declaration of Conformity



## EC Declaration of Conformity

### Manufacturer

Brother Industries Ltd.,  
15-1, Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan

### Plant

Brother Technology (Shenzhen) Ltd.,  
NO6 Gold Garden Ind. Nanling Buji, Longgang, Shenzhen, China

Herewith declare that:

Products description : Laser Printer  
Model Number : DCP-9045CDN

is in conformity with provisions of the Directives applied : Low Voltage Directive 73/23/EEC (as amended by 93/68/EEC) and the Electromagnetic Compatibility Directive 89/336/EEC (as amended by 91/263/EEC and 92/31/EEC and 93/68/EEC).

Harmonized standards applied :

Safety EN60950-1+A11:2004

EMC EN55022: 1998 +A1: 2000 +A2: 2003 Class B  
EN55024: 1998 +A1: 2001 +A2: 2003  
EN61000-3-2: 2000  
EN61000-3-3: 1995 +A1: 2001

Year in which CE marking was first affixed : 2006

Issued by : Brother Industries, Ltd.

Date : 15th December, 2006

Place : Nagoya, Japan

Signature :

A handwritten signature in black ink, appearing to read "J. Shiota", written over a horizontal line.

Junji Shiota  
General Manager  
Quality Management Dept.  
Printing & Solutions Company



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# General

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## Using the documentation

Thank you for buying a Brother machine! Reading the documentation will help you make the most of your machine.

### Symbols and conventions used in the documentation

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The following symbols and conventions are used throughout the documentation.

<b>Bold</b>	Bold style identifies keys on the machine control panel or computer screen.
<i>Italics</i>	Italicized style emphasizes an important point or refers you to a related topic.
<code>Courier New</code>	Courier New font identifies the messages shown on the LCD of the machine.



Warning icons tell you what to do to avoid the risk of injury.



Electrical Hazard icons alert you to a possible electrical shock.



Hot Surface icons warn you not to touch machine parts that are hot.



Caution icons tell you about procedures you must follow to prevent damaging the machine.



Incorrect setup icons alert you to devices and operations that are not compatible with the machine.



Note icons give useful tips.

## Accessing the User's Guides

This User's Guide does not contain all the information about your machine. The advanced features of the Printer, Network and Scanner are explained in the Software and Network User's Guides that you can find on the CD-ROM.

## Viewing documentation

### Viewing documentation (Windows®)

To view the documentation, from the **Start** menu, point to **Brother**, **DCP-9045CDN** from the program group, and then click **User's Guides in HTML format**.

If you have not installed the software, you can find the documentation by following the instructions below:

- 1 Turn on your PC.  
Insert the Brother CD-ROM labelled Windows® into your CD-ROM drive.
- 2 If the language selection screen appears, click your language.
- 3 If the model name screen appears, click your model name. The CD-ROM main menu will appear.



*If this window does not appear, use Windows® Explorer to find and run the start.exe program from the root directory of the Brother CD-ROM.*

- 4 Click **Documentation**.

- 5 Click the documentation you want to read:

- HTML documents (3 manuals):  
HTML User's Guide for stand-alone operations, Software User's Guide and Network User's Guide.

This format is recommended for viewing on your computer.

- PDF documents (4 manuals):

PDF User's Guide for stand-alone operations, Software User's Guide, Network User's Guide and Quick Setup Guide.

This format is recommended for printing the manuals. Click to go to the Brother Solutions Center, where you can view or download the PDF documents. (Internet access and PDF Reader software are required.)

## How to find scanning instructions

There are several ways you can scan documents. You can find the instructions as follows:

### Software User's Guide:

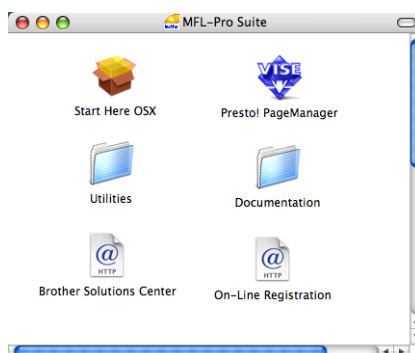
- Scanning a document using the TWAIN driver in Chapter 2
- Scanning a document using the WIA driver (For Windows® XP/Windows Vista® only) in Chapter 2
- Using ControlCenter3 in Chapter 3
- Network Scanning in Chapter 4

### ScanSoft™ PaperPort™ 11SE with OCR How-to-Guides:

- The complete ScanSoft™ PaperPort™ 11SE with OCR How-to-Guides can be viewed from the Help selection in the ScanSoft™ PaperPort™ 11SE with OCR application.

## Viewing documentation (Macintosh®)

- 1 Turn on your Macintosh®. Insert the Brother CD-ROM labelled Macintosh® into your CD-ROM drive.
- 2 The following window will appear.



- 3 Double-click the **Documentation** icon.
- 4 If the language selection screen appears, double-click your language.
- 5 Double-click the documentation you want to read:  
HTML documents (3 manuals):  
HTML User's Guide for stand-alone operations, Software User's Guide and Network User's Guide.  
This format is recommended for viewing on your computer.



### Note

The documents are also available in PDF format (4 manuals):  
PDF User's Guide for stand-alone operations, Software User's Guide, Network User's Guide and Quick Setup Guide.  
The PDF format is recommended for printing the manuals.

Double-click **Brother Solutions Center** icon to go to the Brother Solutions Center, where you can view or download the PDF documents. (Internet access and PDF Reader software are required.)



## How to find scanning instructions

There are several ways you can scan documents. You can find the instructions as follows:

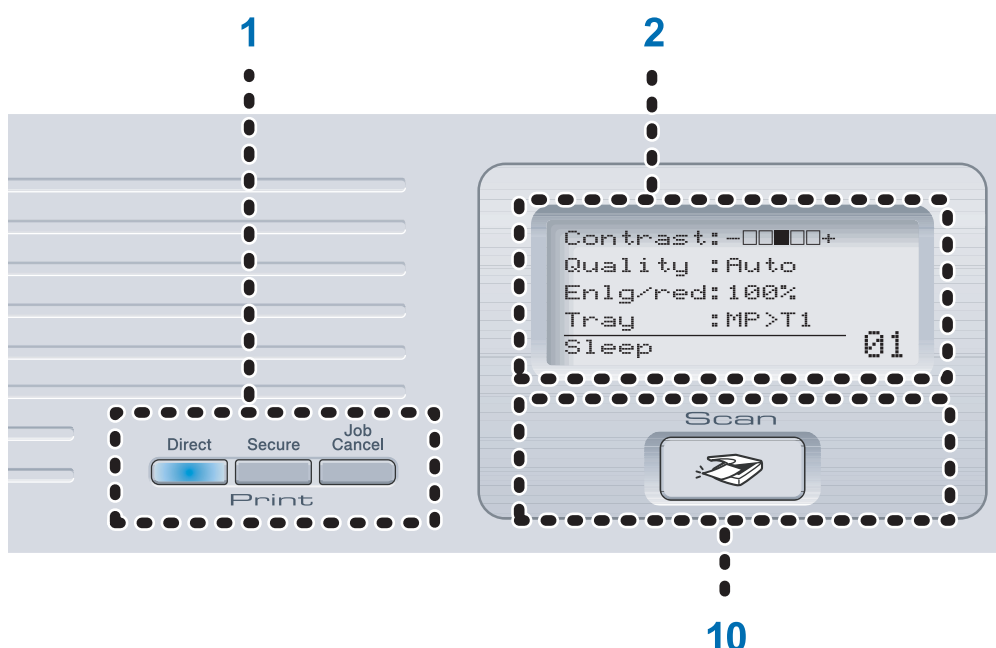
### Software User's Guide:

- Scanning in Chapter 9
- Using ControlCenter2 in Chapter 10
- Network Scanning in Chapter 11

### Presto!<sup>®</sup> PageManager<sup>®</sup> User's Guide:

- The complete Presto!<sup>®</sup> PageManager<sup>®</sup> User's Guide can be viewed from the Help selection in the Presto!<sup>®</sup> PageManager<sup>®</sup> application.

# Control panel overview



## 1 Print keys:

### Direct

Lets you print data from a USB flash memory drive that you can connect directly to the machine. You can also print images directly from your PictBridge compatible camera.

### Secure

When using Secure Function Lock, you can switch restricted users by holding down **◀** as you press the **Secure** key. (See *Secure Function Lock* on page 24.)

You can print data saved in memory when you enter your four-digit password. (For details about using the Secure key, see *the Software User's Guide on the CD-ROM*.)

### Job Cancel

Cancels a programmed print job and clears print data in the machine's memory.

## 2 LCD

Displays messages to help you set up and use your machine.

## 3 Status LED

The LED will flash and change colour depending on the machine's status.

## 4 Menu keys:

### Menu

Lets you access the Menu to program your settings in the machine.

### Clear/Back

Deletes entered data or lets you cancel the current setting.

### OK

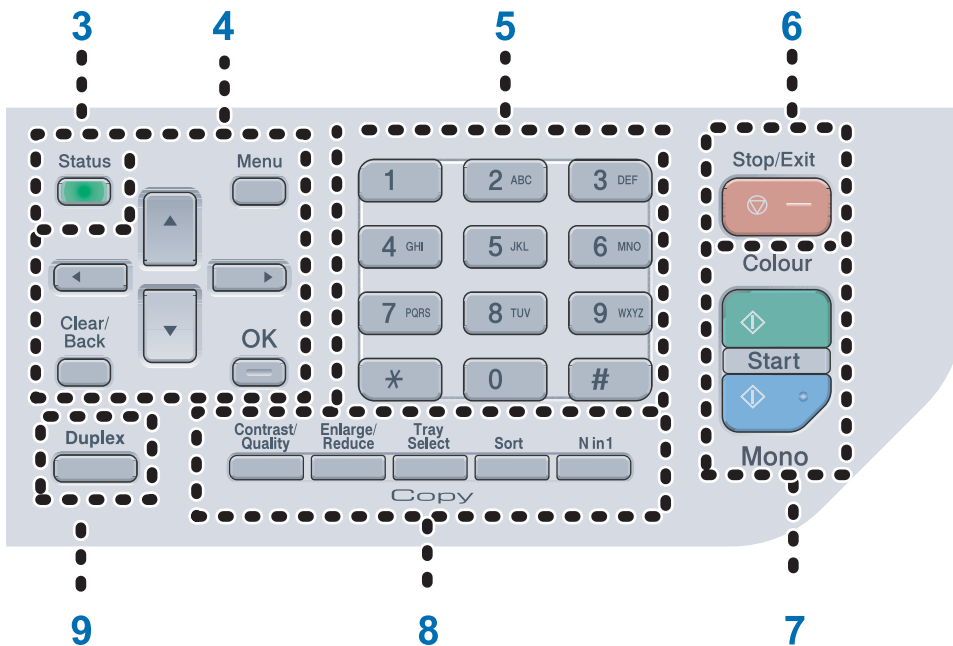
Lets you store your settings in the machine.

**◀ or ▶**

Press to scroll backwards or forwards through menu selections.

**▲ or ▼**

Press to scroll through the menus and options.



## 5 Numeric keys

Use to enter information into the machine.

## 6 Stop/Exit

Stops an operation or exits from a menu.

## 7 Start:

### Colour

Lets you start making copies in full colour.

### Mono

Lets you start making copies in black & white.

## 8 Copy keys:

### Contrast/Quality

Lets you change the quality or contrast for the next copy.

### Enlarge/Reduce

Reduces or enlarges copies.

### Tray Select

Lets you change which tray will be used for the next copy.

## Sort

Sorts multiple copies using the ADF.

## N in 1

You can choose N in 1 copy to 2 or 4 pages onto one page.

## 9 Duplex

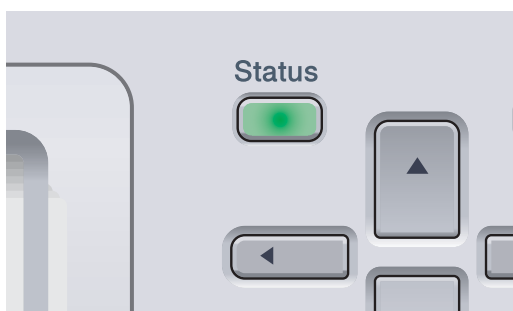
You can choose Duplex to copy on both sides of the paper.

## 10 Scan

Puts the machine in Scan mode. (For details about scanning, see *the Software User's Guide on the CD-ROM*.)

## Status LED indications



The **Status** LED (light emitting diode) will flash and change colour depending on the machine's status.



The LED indications shown in the table below are used in the illustrations in this chapter.

LED	LED Status
	LED is off.
 Green      Yellow      Red	LED is on.
 Green      Yellow      Red	LED is blinking.

LED	Machine Status	Description
	Sleep Mode	The power switch is off or the machine is in Sleep mode.
 Green	Warming Up	The machine is warming up for printing.
 Green	Ready	The machine is ready to print.
 Yellow	Receiving Data	The machine is either receiving data from the computer, processing data in memory, or printing data.
 Yellow	Data Remaining in Memory	Print data remains in the machine's memory.

LED	Machine Status	Description
 Red	Service error	Follow the steps below. 1. Turn off the power switch. 2. Wait a few seconds, and then turn it back on and try to print again. If you cannot clear the error and you see the same service call indication after turning the machine back on, please call your Brother dealer.
 Red	Cover open	The front cover or back cover is open. Close the cover.
	Toner life end	Replace the toner cartridge with a new one.
	Paper error	Put paper in the tray or clear the paper jam. Check the LCD message.
	Scan lock	Check that the scanner lock lever is released.
	Out of memory	Memory is full.
	Others	Check the LCD message.

**Note**

When the power switch is off or the machine is in sleep mode, the LED is off.

## Acceptable paper and other media

### Recommended paper

To get the best print quality, we suggest using the following paper.

Paper Type	Item
Plain paper	Xerox Premier 80 g/m <sup>2</sup>
	Xerox Business 80 g/m <sup>2</sup>
Recycled paper	Xerox Recycled Supreme
Labels	Avery laser label L7163
Envelope	Antalis River series (DL)

Print quality may vary according to the type of paper you are using.

You can use the following types of media: plain paper, labels or envelopes.

For best results, follow the steps below:

- Use paper made for plain paper copying.
- Use paper that is 75 to 90 g/m<sup>2</sup>.
- Use labels which are designed for use in laser printers.
- Avoid touching the printed surface of the paper immediately after printing.
- Use long grain paper with a neutral Ph value, and a moisture content of approx 5%.

### CAUTION

DO NOT load envelopes, labels or thick paper (more than 105 g/m<sup>2</sup>) into the paper tray or optional lower tray. It may cause paper jams.

### Type and size of paper

The machine loads paper from the installed standard paper tray, or multi-purpose tray, or optional lower tray.

#### Standard paper tray

Since the standard paper tray is a universal type, you can use any of the paper sizes (one paper type and size at a time) listed in the table in *Paper capacity of the paper trays* on page 11. The standard paper tray can hold up to 250 sheets of Letter/A4, legal and folio size paper (80 g/m<sup>2</sup>). Paper can be loaded up to the maximum paper mark on the sliding paper width guide.

#### Multi-purpose tray (MP tray)

The MP tray can hold up to 50 sheets of paper (80 g/m<sup>2</sup>) or up to 3 envelopes. Paper can be loaded up to the maximum paper mark on the sliding paper width guide.

#### Optional lower tray (LT-100CL)

The optional lower tray can hold up to 500 sheets of Letter/A4, legal and folio size paper (80 g/m<sup>2</sup>). Paper can be loaded up to the top line of the maximum paper mark on the sliding paper width guide.

The names for the paper trays in the printer driver and this Guide are as follows:

Tray and optional unit	Name
Standard paper tray	Tray 1
Optional lower tray	Tray 2
Multi-purpose tray	MP tray

## Paper capacity of the paper trays

	Paper size	Paper types	No. of sheets
Paper Tray (Tray #1)	A4, Letter, Legal, Executive, A5, A6, B5, B6 and Folio <sup>1</sup>	Plain paper, Thin paper and Recycled paper	up to 250 (80 g/m <sup>2</sup> )
Multi-purpose tray (MP tray)	Width: 69.9 to 215.9 mm (2.75 to 8.5 in.) Length: 116.0 to 406.4 mm (4.57 to 16.0 in.)	Plain paper, Thin paper, Thick paper, Recycled paper, Bond paper, Envelope and Labels	up to 50 (plain paper) (80 g/m <sup>2</sup> ) up to 3 (envelopes)
Paper Tray (Tray #2)	A4, Letter, Legal, Executive, A5, B5, B6 and Folio <sup>1</sup>	Plain paper, Thin paper and Recycled paper	up to 500 (80 g/m <sup>2</sup> )

<sup>1</sup> Folio size is 8 in. × 13 in.

## Recommended paper specifications

The following paper specifications are suitable for this machine.

Basis weight (g/m <sup>2</sup> )	75-90
Thickness (μm)	80-110
Roughness (sec.)	Higher than 20
Stiffness (cm <sup>3</sup> /100)	90-150
Grain direction	Long grain
Volume resistivity (ohm)	10e <sup>9</sup> -10e <sup>11</sup>
Surface resistivity (ohm-cm)	10e <sup>9</sup> -10e <sup>12</sup>
Filler	CaCO <sub>3</sub> (Neutral)
Ash content (wt%)	Below 23
Brightness (%)	Higher than 80
Opacity (%)	Higher than 85

## Handling and using special paper

The machine is designed to work well with most types of xerographic and bond paper. However, some paper variables may have an effect on print quality or handling reliability. Always test samples of paper before purchasing to ensure desirable performance. Store paper in its original packaging and keep it sealed. Keep the paper flat and away from moisture, direct sunlight and heat.

Some important guidelines when selecting paper are:

- Your supplier should be informed that the paper or envelopes will be used in a colour laser machine.
- Preprinted paper must use inks that can withstand the temperature of the machine's fusing process (200 degrees centigrade for a period of 0.1 seconds).
- If you have selected a cotton bond paper, paper having a rough surface, such as cockle or laid finished paper or paper that is wrinkled or puckered, the paper may exhibit degraded performance.

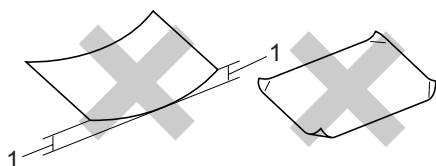
### Types of paper to avoid

#### ! CAUTION

Some types of paper may not perform well or may cause damage to your machine.

DO NOT use paper:

- that is highly textured
- that is extremely smooth or shiny
- that is curled or warped



1 2 mm or greater

- that is coated or has a chemical finish
- that is damaged, creased or folded
- that exceeds the recommended weight specification in this guide
- with tabs and staples
- with letterheads using low temperature dyes or thermography
- that is multipart or carbonless
- that is designed for inkjet printing

If you use any of the types of paper listed above, they may damage your machine. This damage is not covered under any Brother warranty or service agreement.

## Envelopes

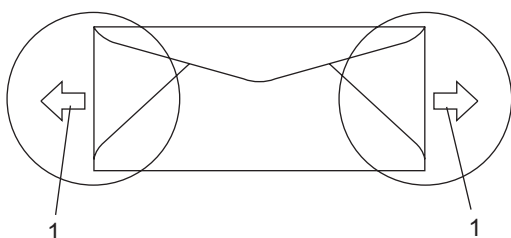
Most envelopes will be suitable for your machine. However, some envelopes may have print-quality problems because of the way they have been made. A suitable envelope should have edges with straight, well-creased folds and the leading edge should not be thicker than two pieces of paper. The envelope should lie flat and not be of baggy or flimsy construction. You should buy quality envelopes from a supplier who understands that you will be using the envelopes in a laser machine.

Envelopes can only be fed from the MP tray.

Before you put envelopes in the tray, check the following:

- Envelopes should have a lengthwise sealing flap.
- The sealing flaps should be folded crisply and correctly (irregularly cut or folded envelopes may cause paper jams).
- Envelopes should have two layers of paper in the area circled below.





## 1 Feeding direction



### Note

- Before you print envelopes, you must 'fan' the stack to avoid paper jams and misfeeds.
- Before you print a lot of envelopes, test one to make sure that the print results are what you want.
- Envelope joints that are sealed by the manufacturer should be secure.
- DO NOT put different types of paper in the paper tray at the same time because it may cause paper jams or misfeeds.
- DO NOT print envelopes using duplex printing.
- For correct printing, you must choose the same paper size from your software application as the paper in the tray.
- We recommend that you do not print within 15 mm. of the edges of the envelopes.
- See *Acceptable paper and other media* on page 10.

## Types of envelopes to avoid

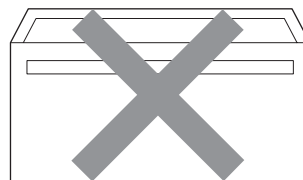


### CAUTION

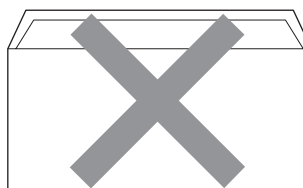
DO NOT use envelopes:

- that are damaged, curled, wrinkled or an unusual shape
- that are extremely shiny or textured
- with clasps, staples, snaps or tie strings
- with self-adhesive closures

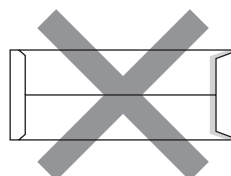
- that are of a baggy construction
- that are not sharply creased
- that are embossed (have raised writing on them)
- that were previously printed by a laser machine
- that are pre-printed on the inside
- that cannot be arranged neatly when stacked
- that are made of paper that weighs more than the paper weight specifications for the machine
- with edges that are not straight or consistently square
- with windows, holes, cut-outs or perforations
- with glue on the surface as shown in the figure below



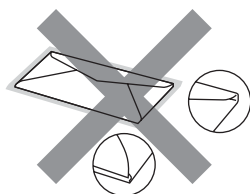
- with double flaps as shown in the figure below



- with sealing flaps that have not been folded at purchase
- with sealing flaps as shown in the figure below



- with each side folded as shown in the figure below



If you use any of the types of envelopes listed above, they may damage your machine. This damage is not covered under any Brother warranty or service agreement.

Occasionally you may experience paper feed problems caused by the thickness, size and flap shape of the envelopes you are using.

## Labels

The machine will print on most types of labels designed for use with a laser machine. Labels should have an adhesive that is acrylic-based since this material is more stable at the high temperatures in the fuser unit. Adhesives should not come in contact with any part of the machine, because the label stock may stick to the belt unit or rollers and cause jams and print quality problems. No adhesive should be exposed between the labels. Labels should be arranged so that they cover the entire length and width of the sheet. Using labels with spaces may result in labels peeling off and causing serious jams or print problems.

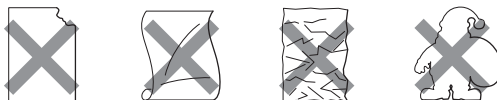
All labels used in this machine must be able to withstand a temperature of 392 degrees Fahrenheit (200 degrees centigrade) for a period of 0.1 seconds.

Label sheets should not exceed the paper weight specifications described in this User's Guide. Labels exceeding this specification may not feed or print properly and may cause damage to your machine.

Labels can be fed from the MP tray only.

## Types of labels to avoid

Do not use labels that are damaged, curled, wrinkled or an unusual shape.



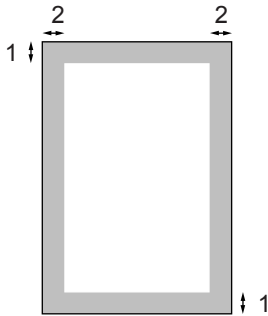
### **! CAUTION**

DO NOT feed part used label sheets. The exposed carrier sheet will damage your machine.

# Unprintable area

## Unprintable area for copies

The printable area begins at approximately 4 mm (0.16 in.) from the top and bottom and 3 mm (0.12 in.) from both sides of the paper.



1 4 mm

2 3 mm



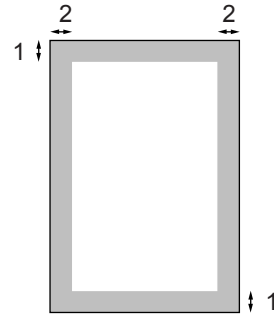
### Note

This unprintable area shown above is for a single copy or a 1 in 1 copy using A4 size paper. The unprintable area changes with the paper size.

## Unprintable area when printing from a computer

When using the default driver the printable area is smaller than the paper size, as shown below.

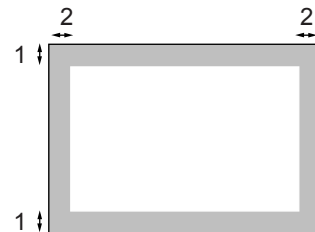
### Portrait



1 4.23 mm

2 4.23 mm

### Landscape



1 4.23 mm

2 4.23 mm



### Note

The unprintable area shown above is for A4 size paper. The unprintable area changes with the paper size.

# Loading paper and envelopes

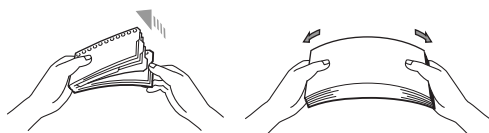
The machine can feed paper from the standard paper tray, optional lower tray or multi-purpose tray.

When printing on plain paper 60 to 105 g/m<sup>2</sup> use the paper tray.

For printing on other types of media use the MP tray (multi-purpose tray).

When you put paper into the paper tray, note the following:

- If your application software supports paper size selection on the print menu, you can select it through the software. If your application software does not support it, you can set the paper size in the printer driver or by using the control panel buttons.
- Before using paper that has holes in it, such as organizer sheets, you must 'fan' the stack to avoid paper jams and misfeeds.

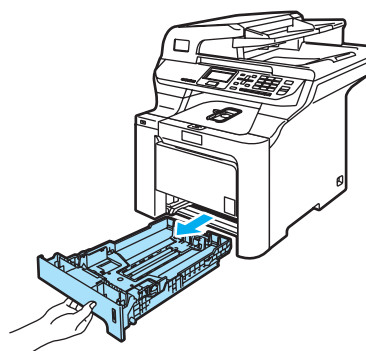


## Loading plain paper in the paper tray

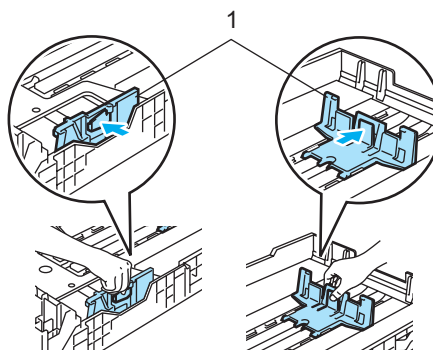
- 1 Unfold the output paper tray support flap (1).



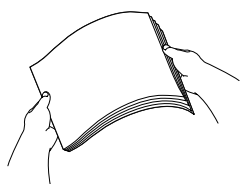
- 2 Pull the paper tray completely out of the machine.



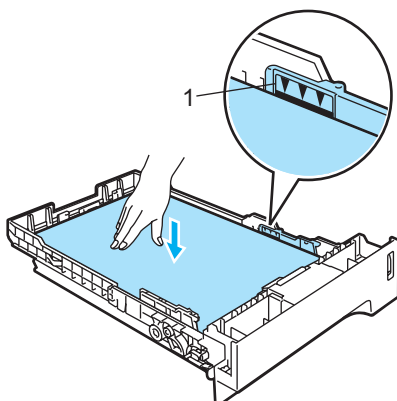
- 3 While pressing the green paper-guide release lever (1), slide the paper guides to fit the paper size. Make sure that the guides are firmly in the slots.



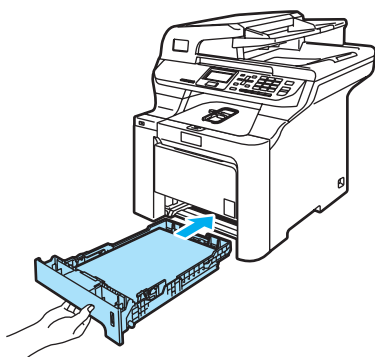
- 4 Fan the stack of paper well to avoid paper feeding problems.



- 5 Put the paper into the paper tray with the top edge of the paper in first and the print side face down. Make sure that the paper is flat in the tray and below the maximum paper mark (1).



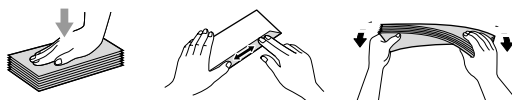
- 6 Push the paper tray firmly back into the machine.



## Loading envelopes or other media in the multi-purpose tray (MP tray)

Use the MP tray when printing envelopes, labels, and thick paper.

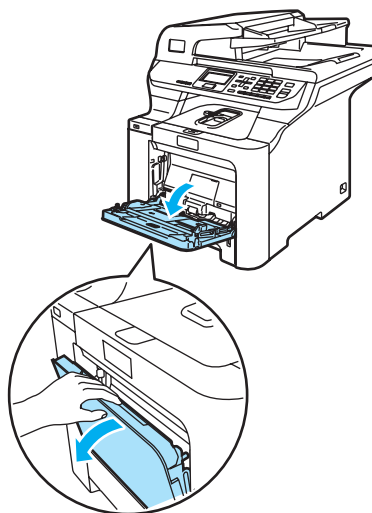
Before loading, press the corners and sides of the envelopes to make them as flat as possible.



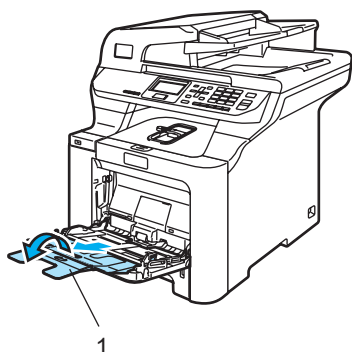
- 1 Unfold the output paper tray support flap (1).



- 2 Open the MP tray and lower it gently.



- 3 Pull out the MP tray support flap (1).



- 4 Put the envelopes (up to 3) or media in the MP tray with the top edge first and the print side face up.

## Loading documents

You can make copies, and scan from the ADF (automatic document feeder) and from the scanner glass.

### Using the ADF (automatic document feeder)

The ADF can hold up to 50 pages and feeds each sheet individually. Use standard 80 g/m<sup>2</sup> paper and always fan the pages before putting them in the ADF.

Make sure documents written with ink are completely dry.

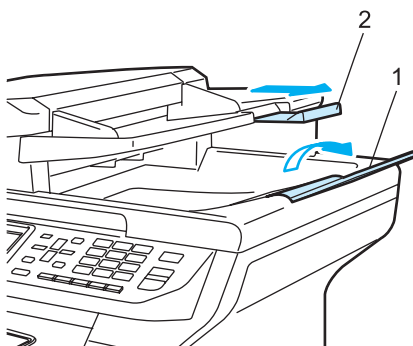
#### CAUTION

DO NOT leave thick documents on the scanner glass. If you do this, the ADF may jam.

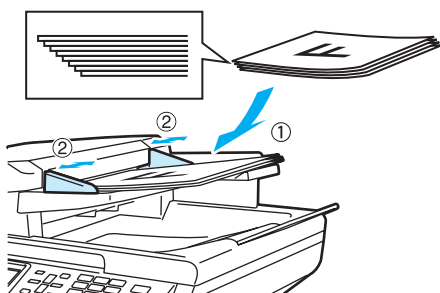
DO NOT use paper that is curled, wrinkled, folded, ripped, stapled, paper-clipped, pasted or taped.

DO NOT use cardboard, newspaper or fabric.

- 1 Unfold the ADF document output support flap (1) and the ADF support flap (2).



- 2 Fan the pages well.
- 3 Place your document, face up top edge first, in the ADF until you feel it touch the feed roller.
- 4 Adjust the paper guides to fit the width of your document.



### ! CAUTION

To avoid damaging your machine while using the ADF, DO NOT pull on the document while it is feeding.

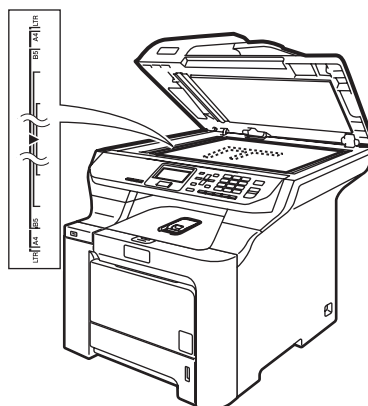
To scan non-standard documents see *Using the scanner glass* on page 19.

## Using the scanner glass

You can use the scanner glass to scan or copy the pages of a book or one page at a time. Documents can be up to 215.9 mm wide to 355.6 mm long (8.5 inches wide and up to 14 inches long).

To use the scanner glass, the ADF must be empty.

- 1 Lift the document cover.
- 2 Using the document guidelines on the left, centre the document face down on the scanner glass.



- 3 Close the document cover.

### ! CAUTION

If the document is a book or is thick, DO NOT slam the cover or press on it.

# 3

## General setup

### Paper settings

#### Paper type

Set up the machine for the type of paper you are using. This will give you the best print quality.

**1** Do one of the following:

- To set the paper type for the MP Tray press **Menu, 1, 1, 1**.
- To set the paper type for Tray#1 press **Menu, 1, 1, 2**.
- To set the paper type for Tray#2 press **Menu, 1, 1, 3** if you installed the optional tray.

```

11.Paper Type
 1.MP Tray
▲   Plain
▼   Thick
Select ▲▼ or OK
    
```

**2** For Tray#1 and Tray#2 press ▲ or ▼ to choose Thin, Plain or Recycled Paper. For MP Tray press ▲ or ▼ to choose Thin, Plain, Thick, Thicker or Recycled Paper. Press **OK**.

**3** Press **Stop/Exit**.

#### Paper size

You can use nine sizes of paper for printing copies: A4, Letter, Legal, Executive, A5, A6, B5, B6 and Folio.

When you change the size of paper in the tray, you will also need to change the setting for paper size at the same time so your machine can fit the document on the page.

**1** Do one of the following:

- To set the paper size for the MP Tray press **Menu, 1, 2, 1**.
- To set the paper size for Tray#1 press **Menu, 1, 2, 2**.
- To set the paper size for Tray#2 press **Menu, 1, 2, 3** if you installed the optional tray.

```

12.Paper Size
 1.MP Tray
▲   A4
▼   Letter
Select ▲▼ or OK
    
```

**2** Press ▲ or ▼ to choose A4, Letter, Legal, Executive, A5, A6, B5, B6, Folio or Any. Press **OK**.

**3** Press **Stop/Exit**.



#### Note

- Any (size) appears only when you choose the MP tray (**Menu, 1, 2, 1**).
- If you choose Any for the MP Tray Paper size, you must choose MP Only for the Tray Use setting.
- You cannot use the Any Paper Size option for the MP tray when making N in 1 copies. You must choose one of the other available Paper Size selections for the MP tray.
- A6 size is not available for the optional Tray #2.



## Tray use in copy mode

You can change the priority tray that the machine will use for printing copies.

When you choose **Tray#1 Only**, **MP Only** or **Tray#2 Only**<sup>1</sup>, the machine loads the paper only from that tray. If the selected tray is out of paper, **No Paper** will appear on the LCD. Insert the paper in the empty tray.

To change the tray setting follow the instructions below:

- 1 Press **Menu, 1, 6, 1**.

```

16.Tray Use
 1.Copy
  ▲ MP>T1
  ▼ T1>MP
Select ▲▼ or OK
  
```

- 2 Press **▲** or **▼** to choose **Tray#1 Only**, **Tray#2 Only**<sup>1</sup>, **MP Only**, **MP>T1>T2**<sup>1</sup> or **T1>T2>MP**<sup>1</sup>. Press **OK**.

<sup>1</sup> Tray#2 Only or T2 appears only if the optional tray is installed.

- 3 Press **Stop/Exit**.



### Note

- The ADF can detect the document size . When loading the documents from the ADF and **MP>T1>T2** or **T1>T2>MP** is selected, the machine looks for the tray with the most suitable paper size and pulls paper from that tray. If no tray has suitable paper, the machine pulls paper from the higher priority tray.
- When using the scanner glass, your document is always copied from the higher priority tray even if more suitable paper is in another paper tray.

## Tray use in print mode

You can change the default tray the machine will use for printing from your computer.

- 1 Press **Menu, 1, 6, 2**.

```

16.Tray Use
 2.Print
  ▲ MP>T1
  ▼ T1>MP
Select ▲▼ or OK
  
```

- 2 Press **▲** or **▼** to choose **Tray#1 Only**, **Tray#2 Only**<sup>1</sup>, **MP Only**, **MP>T1>T2**<sup>1</sup> or **T1>T2>MP**<sup>1</sup>. Press **OK**.

<sup>1</sup> Tray#2 Only or T2 appears only if the optional tray is installed.

- 3 Press **Stop/Exit**.



### Note

- The setting in the printer driver will take priority over the setting made on the control panel.
- If the control panel is set to **Tray#1 Only**, **MP Only** or **Tray#2 Only**<sup>1</sup> and you choose **Auto Select** in the printer driver, the machine loads the paper from that tray.

<sup>1</sup> Tray#2 Only appears only if the optional tray is installed.

## Volume settings

### Beeper volume

When the beeper is on, the machine will beep when you press a key or make a mistake. You can choose a range of volume levels, from High to Off.

- 1 Press **Menu**, **1**, **3**.

```
13.Beeper
▲ Low
  Med
▼ High
Select ▲▼ or OK
```

- 2 Press **▲** or **▼** to choose Off, Low, Med or High.  
Press **OK**.

- 3 Press **Stop/Exit**.

## Automatic daylight savings time

You can set the machine to change automatically for Daylight Savings Time. It will set itself forward one hour in the Spring, and back one hour in the Autumn.

- 1 Press **Menu**, **1**, **4**.

```
14.Auto Daylight
▲ On
▼ Off
Select ▲▼ or OK
```

- 2 Press **▲** or **▼** to choose On (or Off).  
Press **OK**.

- 3 Press **Stop/Exit**.

## Ecology features

### Toner save

You can save toner using this feature. When you set toner save to On, print appears lighter. The default setting is Off.

- 1 Press **Menu**, **1**, **5**, **1**.

```
15.Ecology
  1.Toner Save
▲ On
▼ Off
Select ▲▼ or OK
```

- 2 Press **▲** or **▼** to choose On (or Off).  
Press **OK**.

- 3 Press **Stop/Exit**.



#### Note

We DO NOT recommend Toner Save for printing Photo or Greyscale images.

## Sleep time

Setting the sleep time reduces power consumption by turning off the fuser while the machine is idle.

You can choose how long the machine must be idle (from 000 to 240 minutes) before it goes into sleep mode. When the machine receives computer data or makes a copy, the timer will be reset. The default setting is 005 minutes.

While the machine is in sleep mode the LCD will display *Sleep*. When printing or copying in sleep mode, there will be a short delay while the fuser warms up.

- 1 Press **Menu**, **1**, **5**, **2**.

15.Ecology
2.Sleep Time
005Min
Enter & OK Key

- 2 Enter the length of time the machine is idle before entering sleep mode (000 to 240).  
Press **OK**.

- 3 Press **Stop/Exit**.

## Turning off the scanner lamp

The scanner lamp stays on for 30 minutes before automatically switching off to preserve the life of the lamp and reduce power consumption.

To turn the scanner lamp off manually press the **◀** and **▶** keys simultaneously. The scanner lamp will remain turned off until the next time you use the scanning feature.



### Note

Turning the lamp off regularly will reduce the lamp's life.

## LCD contrast

You can change the contrast to make the LCD look lighter or darker.

- 1 Press **Menu**, **1**, **7**.

17.LCD Contrast
-□□■□□+
Select ◀ ▶ & OK

- 2 Press **▶** to make the LCD darker. Or, press **◀** to make the LCD lighter. Press **OK**.

- 3 Press **Stop/Exit**.

## User Settings List

You can print a list of the settings you programmed including the network configuration.

- 1 Press **Menu**, **6**, **4**.

64.User Settings
Press Start

- 2 Press **Mono Start** or **Colour Start**.
- 3 Press **Stop/Exit**.

## Security

### Secure Function Lock

Secure Function Lock lets you restrict Public access to certain machine functions (Copy, Scan and Print).

This feature also prevents users from changing the Default settings of the machine by limiting access to the Menu settings.

Disabling at least one function is required to turn on Secure Function Lock for the Public user.

Access to restricted operations can be enabled by creating a restricted user. Restricted users must select the stored name and enter a password to use the machine.

Make a careful note of your password. If you forget it, please call your Brother dealer.



#### Note

- You can set up to 25 individual users and one Public user.
- When you set up a Public user, you can restrict one or more of the machine's functions to all users who do not have a password.
- Only administrators can set limitations and make changes for each user.
- When Print is disabled, PC print jobs will be lost without notification.

### Setting the password for the administrator

The password you set in these steps is for the administrator. This password is used to set up users and to turn Secure Function Lock on or off. (See *Setting up restricted users* on page 25 and *Turning Secure Function Lock on* on page 26.)

- 1 Press **Menu, 1, 8**.

18.Function Lock
New Passwd:XXXX
Enter & OK Key

- 2 Enter a four-digit number for the password using numbers 0-9, \* or #.  
Press **OK**.
- 3 Re-enter the password when the LCD shows *Verify:*. Press **OK**.
- 4 Press **Stop/Exit**.

## Setting up the Public user

You can set up the Public user. Public users do not need to enter a password.



### Note

You must disable at least one function to turn on Secure Function Lock for Public user.

- 1 Press **Menu, 1, 8**.

```
18.Function Lock
▲ Lock Off-On
  Set Password
▼ Setup User
Select ▲▼ or OK
```

- 2 Press **▲** or **▼** to select **Setup User**. Press **OK**.

- 3 Enter the administrator password. Press **OK**.

```
18.Function Lock
  Setup User
    Public
  ▼ User01
Select ▲▼ or OK
```

- 4 Press **▲** or **▼** to select **Public**. Press **OK**.
- 5 Press **▲** or **▼** to select **Enable** or **Disable** for **Copy (Color)**. Press **OK**. After you have set **Copy (Color)**, repeat this step for **Copy (B&W)** **Scan** and **Print**. Press **OK**.



### Note

You can set PC print for only the Public user. When Print is disabled for the Public user, all restricted users will be unable to use the Print function.

- 6 Press **Stop/Exit**.

## Setting up restricted users

You can set up users with restrictions and a password.

- 1 Press **Menu, 1, 8**.

```
18.Function Lock
▲ Lock Off-On
  Set Password
▼ Setup User
Select ▲▼ or OK
```

- 2 Press **▲** or **▼** to select **Setup User**. Press **OK**.

- 3 Enter the administrator password. Press **OK**.

```
18.Function Lock
  Setup User
    Public
  ▼ User01
Select ▲▼ or OK
```

- 4 Press **▲** or **▼** to select **User01**. Press **OK**.

- 5 Use the numeric keys to enter the user name. (See *Entering text* on page 158.) Press **OK**.

- 6 Enter a four-digit password for the user. Press **OK**.

- 7 Press **▲** or **▼** to select **Enable** or **Disable** for **Copy (Color)**. Press **OK**. After you have set **Copy (Color)**, repeat this step for **Copy (B&W)** **Scan**. Press **OK**.

- 8 Repeat 4 to 7 for entering each additional user and password.

- 9 Press **Stop/Exit**.



### Note

You cannot use the same password as another user's password.

## Turning Secure Function Lock on/off

If you enter the wrong password when following the instructions below, the LCD will show **Wrong Password**. Re-enter the correct password.

### Turning Secure Function Lock on

- 1 Press **Menu**, **1**, **8**.

```
18.Function Lock
▲ Lock Off-On
  Set Password
▼ Setup User
Select ▲▼ or OK
```

- 2 Press **▲** or **▼** to select **Lock Off-On**. Press **OK**.
- 3 Enter your four-digit administrator password. Press **OK**.

### Turning Secure Function Lock off

- 1 Press **Menu**, **1**, **8**.

```
18.Function Lock
▲ Lock On-Off
▼ Change User
Select ▲▼ or OK
```

- 2 Press **▲** or **▼** to select **Lock On-Off**. Press **OK**.
- 3 Enter your four-digit administrator password. Press **OK**.

## Switching Users

This setting allows a restricted user to log on the machine when Secure Function Lock is turned on.



### Note

After a restricted user has finished using the machine, it will return to the Public setting in one minute.

- 1 Hold down **◀** as you press **Secure**.

```
Function Lock
Change User

PIN:XXXX
Pls enter PIN
```

- 2 Enter your four-digit password. Press **OK**.

### When Copy mode is disabled:

- 1 Press **Duplex**, one of Copy setting buttons, **Start** or numeric key.

```
Access Denied

PIN:
Pls enter PIN
```

- 2 Enter your four-digit password. Press **OK**.

### When Scan mode is disabled:

- 1 Press **Scan** key.

```
Access Denied

PIN:
Pls enter PIN
```

- 2 Enter your four-digit password. Press **OK**.



# Copy

---

**Making copies**

**28**

# 5

## Making copies

### How to copy

#### LCD display for Copy mode

```

1 — Contrast:- □□■□□+
2 — Quality :Auto
3 — Enlg/Red:100%
4 — Tray    :MP>T1
                                01 — 5
Press ▲▼ or Start
  
```

```

Quality :Auto
Enlg/Red:100%
Tray    :MP>T1
6 — Bright :- □□■□□+
Select ◀▶ & OK
                                01
  
```

- 1 Contrast
- 2 Quality
- 3 Copy ratio
- 4 Tray selection
- 5 Number of copies
- 6 Brightness

#### Making a single copy

- 1 Load your document.
- 2 Press **Mono Start** or **Colour Start**.

### Making multiple copies

- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **Mono Start** or **Colour Start**.



#### Note

- (To sort your copies, see *Sorting copies using the ADF* on page 34.)
- If the LCD shows “Please Wait” and the machine stops copying while you are making multiple copies, please wait for 30 to 40 seconds until the machine finishes the colour registration and cleaning process of the belt unit.

### Stop copying

To stop copying, press **Stop/Exit**.



## Copy options (temporary settings)

When you want to quickly change the copy settings temporarily for the next copy, use the temporary **Copy** keys. You can use different combinations. You can also use the Duplex key to change the duplex (2-sided) copy settings.



The machine returns to its default settings 60 seconds after copying.

## Changing copy quality

You can choose from a range of quality settings. The default setting is *Auto*.

### ■ Auto

Auto is the recommended mode for ordinary printouts. Suitable for documents that contain both text and photographs.

### ■ Text

Suitable for documents containing only text.

### ■ Photo

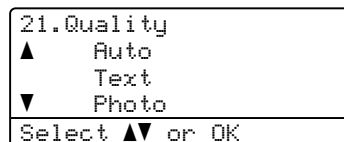
Suitable for copying photographs.

To *temporarily* change the quality setting, follow the steps below:

- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **Contrast/Quality**.  
Press ▲ or ▼ to choose *Quality*.  
Press **OK**.
- 4 Press ◀ or ▶ to choose *Auto*, *Text* or *Photo*.  
Press **OK**.
- 5 Press **Mono Start** or **Colour Start**.

To change the *default* setting, follow the steps below:


- 1 Press **Menu**, **2**, **1**.



- 2 Press ▲ or ▼ to choose the copy quality.  
Press **OK**.
- 3 Press **Stop/Exit**.

# Enlarging or reducing the image copied

You can choose the following enlargement or reduction ratios:

<div>Press</div> <div><div>Enlarge/Reduce</div></div>	100%*
	104% EXE→LTR
	141% A5→A4
	200%
	Custom (25-400%)
	50%
	70% A4→A5
	78% LGL→LTR
	83% LGL→A4
	85% LTR→EXE
	91% Full Page
	94% A4→LTR
	97% LTR→A4

Custom (25-400%) allows you to enter a ratio from 25% to 400%.

To enlarge or reduce the next copy follow the instructions below:

- 1

Load your document.
- 2

Use the numeric keys to enter the number of copies (up to 99).
- 3

Press **Enlarge/Reduce**.
- 4


Press **Enlarge/Reduce** or **▶**.
- 5

Do one of the following:

■ Press **▲** or **▼** to choose the enlargement or reduction ratio you want.  
Press **OK**.

■ Press **▲** or **▼** to choose Custom (25-400%) .  
Press **OK**.  
Use the numeric keys to enter an enlargement or reduction ratio from 25% to 400%. (For example, press **5 3** to enter 53%.)  
Press **OK**.
- 6

Press **Mono Start** or **Colour Start**.



**Note**

Page Layout Options 2 in 1 (P), 2 in 1 (L), 4 in 1 (P) or 4 in 1 (L) are *not* available with Enlarge/Reduce.

## Making N in 1 copies (page layout)

You can reduce the amount of paper used when copying by using the N in 1 copy feature. This allows you to copy two or four pages onto one page, which lets you save paper.

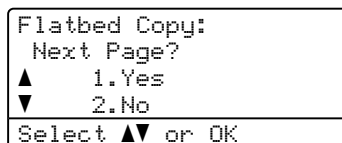
### Important

- Please make sure the paper size is set to Letter, A4, Legal or Folio.
- (P) means Portrait and (L) means Landscape.
- You cannot use the Enlarge/Reduce setting with the N in 1 feature.

- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **N in 1**.
- 4 Press ▲ or ▼ to choose 2 in 1 (P), 2 in 1 (L), 4 in 1 (P), 4 in 1 (L) or Off (1 in 1). Press **OK**.
- 5 Press **Mono Start** or **Colour Start** to scan the page.  
If you placed the document in the ADF, the machine scans the pages and starts printing.

**If you are using the scanner glass, go to 6.**

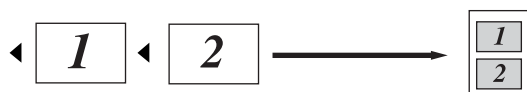
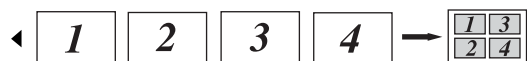
- 6 After the machine scans the page, press **1** to scan the next page.



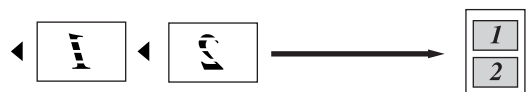
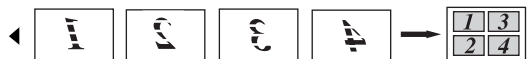
- 7 Place the next page on the scanner glass.  
Press **OK**.  
Repeat 6 and 7 for each page of the layout.
- 8 After all the pages have been scanned, press **2** in 6 to finish.

**If you are copying from the ADF:**

Insert your document face up in the direction shown below:

■ **2 in 1 (P)**■ **2 in 1 (L)**■ **4 in 1 (P)**■ **4 in 1 (L)****If you are copying from the scanner glass:**

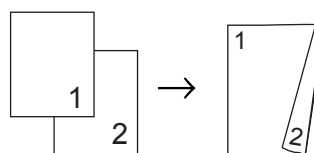
Insert your document face down in the direction shown below:

■ **2 in 1 (P)**■ **2 in 1 (L)**■ **4 in 1 (P)**■ **4 in 1 (L)****Duplex (2-sided) copying**

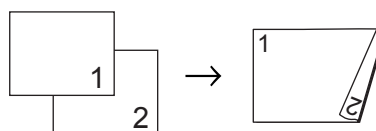
If you want to use the “2 sided → 2 sided” or “2 sided → 1 sided” copy feature, load your document in the ADF. If you get an Out of Memory message while you are making duplex copies, try installing extra memory. (See *Out of memory message* on page 36)

**Duplex copy (long edge)**■ **1 sided → 2 sided**

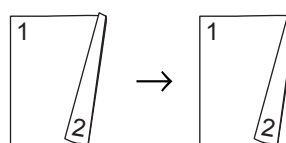
Portrait



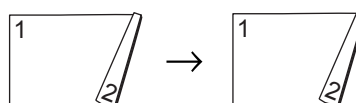
Landscape

■ **2 sided → 2 sided**

Portrait

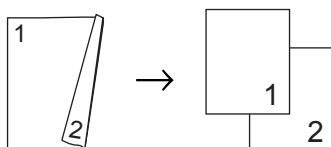


Landscape

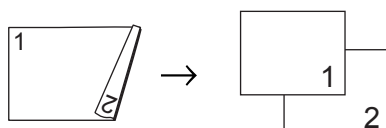


## ■ 2 sided → 1 sided

Portrait



Landscape



- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **Duplex** and ▲ or ▼ to select  
1sided → 2sided,  
2sided → 2sided or  
2sided → 1sided.

```
Duplex
▲1sided → 2sided
 2sided → 2sided
▼2sided → 1sided
Select ▲▼ or OK
```

Press **OK**.

- 4 Press **Mono Start** or **Colour Start** to scan the document.



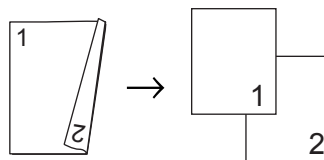
### Note

Duplex copy using a 2-sided legal size document is not available.

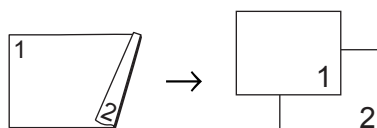
## Advanced Duplex copy (short edge)

### ■ Advanced 2 sided → 1 sided

Portrait

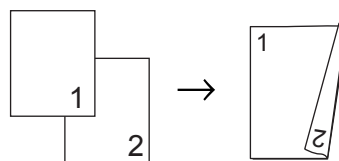


Landscape

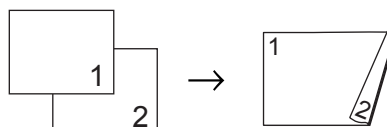


### ■ Advanced 1 sided → 2 sided

Portrait



Landscape



- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **Duplex** and ▲ or ▼ to select  
Advanced.

```
Duplex
▲1sided → 2sided
 2sided → 2sided
▼2sided → 1sided
Select ▲▼ or OK
```

Press **OK**.

- 4 Press ▲ or ▼ to select  
2sided → 1sided or  
1sided → 2sided.  
Press **OK**.

```
Duplex Advanced
▲2sided → 1sided
▼1sided → 2sided
Select ▲▼ or OK
```

- 5 Press **Mono Start** or **Colour Start** to scan the document.

**Note**

Duplex copy using a 2-sided legal size document is not available.

## Sorting copies using the ADF

You can sort multiple copies. Pages will be stacked in the order 1 2 3, 1 2 3, 1 2 3, and so on.

- 1 Load your document in the ADF.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **Sort**.
- 4 Press **Mono Start** or **Colour Start**.

## Adjusting brightness, contrast and colour

### Brightness

Adjust the copy brightness to make copies darker or lighter.

To *temporarily* change the copy brightness setting, follow the steps below:

- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press ▲ or ▼ to choose **Bright**.

```
Quality :Auto
Enlg/Red:100%
Tray    :MP>T1
Bright  :-□□□□+▶
Select ◀▶ & OK
```

- 4 Press ▶ to make a lighter copy or press ◀ to make a darker copy.  
Press **OK**.
- 5 Press **Mono Start** or **Colour Start**.

To change the *default* setting follow the steps below:

- 1 Press **Menu**, **2**, **2**.

```
22.Brightness
      -□□□□+
Select ◀▶ & OK
```

- 2 Press ▶ to make a lighter copy or press ◀ to make a darker copy.  
Press **OK**.
- 3 Press **Stop/Exit**.

## Contrast

Adjust the contrast to help an image look sharper and more vivid.

To *temporarily* change the contrast setting, follow the steps below:

- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **Contrast/Quality**.  
Press ▲ or ▼ to choose **Contrast**.  
Press **OK**.

```

Contrast:-□□□□+►
Quality :Auto
Enlg/Red:100%
Tray    :MP>T1
Select ◀ ▶ & OK
  
```

- 4 Press ◀ or ▶ to increase or decrease the contrast.  
Press **OK**.
- 5 Press **Mono Start** or **Colour Start**.

To change the *default* setting follow the steps below:

- 1 Press **Menu, 2, 3**.

```

23.Contrast
      -□□□□+
Select ◀ ▶ & OK
  
```

- 2 Press ◀ or ▶ to increase or decrease the contrast.  
Press **OK**.
- 3 Press **Stop/Exit**.

## Colour adjust

You can change the default setting for colour saturation.

To change the *default* setting follow the steps below:

- 1 Press **Menu, 2, 4**.

```

24.Color Adjust
  1.Red
  2.Green
  3.Blue
Select ▲▼ or OK
  
```

- 2 Press ▲ or ▼ to choose 1.Red, 2.Green or 3.Blue.  
Press **OK**.
- 3 Press ◀ or ▶ to increase or decrease the colour saturation.  
Press **OK**.
- 4 Return to 2 to choose the next colour.  
Or press **Stop/Exit**.

## Tray selection

You can change the tray use only for the next copy.

- 1 Load your document.
- 2 Use the numeric keys to enter the number of copies (up to 99).
- 3 Press **Tray Select**.
- 4 Press ◀ or ▶ to choose MP>T1, T1>MP, #1 (XXX) <sup>1</sup> or MP (XXX) <sup>1</sup>. Press **OK**.
- 5 Press **Mono Start** or **Colour Start**.

Press <b>Tray Select</b>	MP>T1 or M>T1>T2
	T1>MP or T1>T2>M
	#1 (XXX) <sup>1</sup>
	#2 (XXX) <sup>1</sup>
	MP (XXX) <sup>1</sup>

<sup>1</sup> XXX is the paper size you set in **Menu, 1, 2**.



### Note

- T2 or #2 appears only if the optional paper tray is installed.
- To change the default setting for Tray Select, see *Tray use in copy mode* on page 21.

## Out of memory message

If the memory becomes full while you are making copies, the LCD message will guide you through the next step.

If you get an **Out of Memory** message while scanning a subsequent page, you will have the option to press **Mono Start** or **Colour Start** to copy the pages scanned so far, or to press **Stop/Exit** to cancel the operation.

To make extra memory available you can add an optional memory board. See *Memory board* on page 60.





# Direct printing

---

Printing photos from a digital camera	38
Printing data from a USB flash memory drive	42

# Printing photos from a digital camera



Your Brother machine supports the PictBridge standard, allowing you to connect to and print photos directly from any PictBridge compatible digital camera.

If your camera is using the USB Mass Storage standard, you can also print photos from a digital camera without PictBridge. (See *Connecting a camera as a storage device* on page 40.)

## Before using PictBridge

### PictBridge requirements

To avoid errors, remember the following points:

- The machine and the digital camera must be connected using a suitable USB cable.
- The image file must be taken with the digital camera you want to connect to the machine.

## Using PictBridge

### Setting your digital camera

Make sure your camera is in PictBridge mode. The following PictBridge settings may be available from the LCD of your PictBridge compatible camera.

- Copies
- Quality
- Paper size
- Date print
- File name print
- Layout



#### Note

The names and availability of each setting depends on the specification of your camera.

You can also set the following PictBridge settings by using the control panel.

Menu selections	Options
Paper Size	Letter, A4, B5, A5, B6, A6
Orientation	Portrait, Landscape <sup>1</sup>
Date & Time	Off, On
File Name	Off, On
Print Quality	Normal, Fine

<sup>1</sup> If you choose the paper size Letter, A4 or B5, Portrait will be chosen. If you choose A5, B6 or A6, Landscape will be chosen.

- 1 Press **Menu**, 4, 3.

```

43.PictBridge
 1.Paper Size
 2.Orientation
 3.Date & Time
Select ▲▼ or OK
    
```

- 2 To set the PictBridge settings, press ▲ or ▼ to choose 1.Paper Size, 2.Orientation, 3.Date & Time, 4.File Name, or 5.Print Quality. Press **OK**.
- 3 Press ▲ or ▼ to choose an option for each menu setting. Press **OK**.
- 4 Repeat 2 to 3 for each PictBridge setting. Press **Stop/Exit**.



#### Note

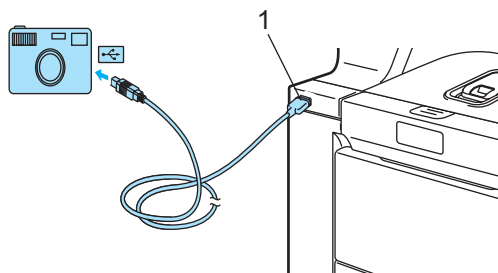
- Camera settings are prioritised as long as your camera is not set to use your machine's settings (default settings). If your camera is set to use your machine's settings, the machine will print your photo using the settings below.

Machine settings	Default settings
Paper Size	A4
Orientation	Portrait
Date & Time	Off
File Name	Off
Print Quality	Normal

- Please refer to the documentation supplied with your camera for more detailed information on changing PictBridge settings.

## Printing images

- 1 Make sure that your camera is turned off. Connect your camera to the USB direct interface (1) on the front of the machine using a suitable USB cable.



- 2 Turn on the camera. Make sure your camera is in PictBridge mode. When the machine has recognized the camera, the LCD shows the following message depending on which mode the machine is in:

```

▲Scan to FTP
  Scan to E-mail
  Scan to Image
▼Scan to OCR
Select ▲▼ or OK
    
```

```

Contrast:-□□■□□+
Quality :Auto
Enlg/Red:100%
Tray      :MP>T1
Camera Connected
    
```

- 3 Set your camera to print an image. Set the number of copies if you are asked.

When the machine starts printing an image, the LCD will show the following message:

```

PictBridge

Printing. Keep...
    
```



#### Note

Please refer to the documentation supplied with your camera for detailed operations how to print using PictBridge.

**! CAUTION**

To prevent damage to your machine, DO NOT connect any device other than a digital camera or USB flash memory drive to the USB direct interface.

DO NOT remove the digital camera from the USB direct interface until the machine has finished printing.

## DPOF printing

DPOF stands for Digital Print Order Format.

Major digital camera manufacturers (Canon Inc., Eastman Kodak Company, Fuji Photo Film Co. Ltd., Matsushita Electric Industrial Co. Ltd. and Sony Corporation) created this standard to make it easier to print images from a digital camera.

If your digital camera supports DPOF printing, you will be able to choose on the digital camera display the images and number of copies you want to print.

The following DPOF settings are available.

- 1 in 1 printing
- Copies

## Connecting a camera as a storage device

Even if your camera is not in PictBridge mode, or does not support PictBridge, you can connect your camera as a normal storage device. This enables you to print photos from your camera.

Follow these steps in *Printing data directly from the USB flash memory drive* on page 43.

(If you would like to print photos in PictBridge mode, see *Setting your digital camera* on page 38.)



### Note

The name of the storage mode and operation differs among digital cameras. Please refer to the documentation supplied with your camera for detailed information, such as how to switch from PictBridge mode to mass storage mode.

## Understanding the error messages

Once you are familiar with the types of errors that can occur while you are using the USB direct interface, you can easily identify and troubleshoot any problems.

### ■ Out of Memory

This message will appear if you are working with files that are too large for the machine's memory.

### ■ Unusable Device

This message will appear if you connect an incompatible or broken device to the USB direct interface. To clear the error, unplug the device from the USB direct interface.

(For more detailed solutions, see *Error and maintenance messages* on page 79.)

# Printing data from a USB flash memory drive

With the direct print feature, you do not need a computer to print data. You can print by just plugging your USB flash memory drive into the machine's USB direct interface.



## Note

Some USB flash memory drives may not work with the machine.

## Supported file formats

Direct print supports the following file formats:

- PDF version 1.6 <sup>1</sup>
- JPEG
- Exif + JPEG
- PRN (created by DCP-9045CDN driver)
- TIFF (scanned by all MFC or DCP Brother models)
- PostScript® 3™ (created by the DCP-9045CDN BRScrip3 printer driver)

<sup>1</sup> The data including JBIG2 image file, JPEG2000 image file and layered files are not supported.

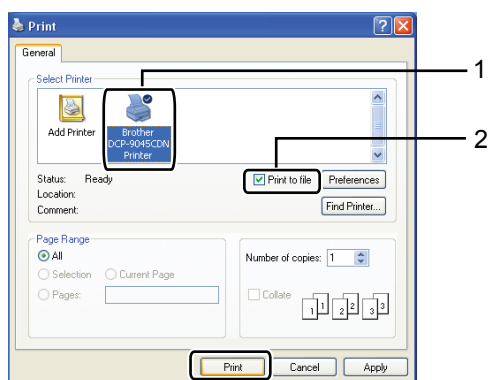
## Creating a PRN or PostScript® 3™ file for direct printing



## Note

The screens in this section may vary depending on your application and operating system.

- 1 From the menu bar of an application, click **File**, then **Print**.
- 2 Choose **Brother DCP-9045CDN Printer** (1) and check the **Print to file** box (2). Click **Print**.



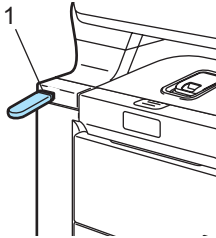
- 3 Choose the folder you want to save the file to and enter the file name if you are prompted to.  
If you are prompted for a file name only, you can also specify the folder you want to save the file in by entering the directory name. For example:

C:\Temp\FileName.prn

If you have a USB flash memory drive connected to your computer, you can save the file directly to the USB flash memory drive.

# Printing data directly from the USB flash memory drive

- 1 Connect your USB flash memory drive to the USB direct interface (1) on the front of the machine.



- 2 When the machine has recognised the USB flash memory drive, the **Direct** LED turns blue. Press the **Direct** key.

```

Direct Print
▲1.FILE0_1.PDF
 2.FILE0_2.PDF
▼3.FILE0_3.PDF
Select ▲▼ or OK

```

- 3 Press ▲ or ▼ to choose the folder name or file name you want to print. Press **OK**.  
If you have chosen the folder name, press ▲ or ▼ to choose the file name you want to print. Press **OK**.



## Note

- If you want to print an index of the files, choose **Index Print**, and then press **OK**. Press **Mono Start** or **Colour Start** to print the data.
- File names containing more than 8 characters will appear on the LCD as the first 6 characters of the file name followed by a tilde mark (~) and a number. For example, "HOLIDAY2007.JPG" would appear as "HOLIDA~1.JPG".
- Only the following characters can be displayed on the LCD :  
A B C D E F G H I J K L M N O P Q R S T  
U V W X Y Z 0 1 2 3 4 5 6 7 8 9 \$ % ' ` - @  
{ } ~ ! # ( ) & \_ ^

- 4 Do one of the following:

- Press ▲ or ▼ to choose a setting you need to change and press **OK**, and then press ▲ or ▼ to choose an option for the setting and press **OK**.
- If you do not need to change the current default setting, go to 5.



## Note

- You can choose the following settings:
  - Paper Size
  - Orientation
  - Multiple Page
  - Duplex
  - Media Type
  - Collate
  - Tray Use
  - Print Quality
  - PDF Option
- Depending on the file type, some of these settings may not appear.

- 5 Press **Mono Start** or **Colour Start** if you have finished.

- 6 Press the numeric keys key to enter the number of copies you want. Press **OK**.

```

Direct Print

FILE0_1.PDF
  No. of Copies:
Press Start

```

- 7 Press **Mono Start** or **Colour Start** to print the data.
- 8 Press **Stop/Exit**.

**! CAUTION**

To prevent damage to your machine, DO NOT connect any device other than a digital camera or USB flash memory drive to the USB direct interface.

DO NOT remove the USB flash memory drive from the USB direct interface until the machine has finished printing.

**Note**

- If you want to change the paper tray to feed paper from, press **Menu**, **1**, **6**, **2** to change the paper tray setting.
- You can change the default settings for direct print by using the control panel when the machine is not in the direct print mode. Press **Menu**, **4** to enter the USB Direct I/F menu. (See *Menu table* on page 147.)

## Understanding the error messages

Once you are familiar with the types of errors that can occur while you print data from the USB flash memory drive with direct print, you can easily identify and troubleshoot any problems.

### ■ Out of Memory

This message will appear if you are working with files that are too large for the machine's memory.

### ■ Unusable Device

This message will appear if you connect an incompatible or broken device to the USB direct interface. To clear the error, unplug the device from the USB direct interface.

(See *Error and maintenance messages* on page 79 for the detailed solution.)





# Software

---

**Software and network features**

**46**

# 8

## Software and network features

The User's Guide on the CD-ROM includes the Software User's Guide and Network User's Guide for features available when connected to a computer (for example, printing and scanning). These guides have easy to use links that, when clicked, will take you directly to a particular section.

You can find information on these features:

- Printing
- Scanning
- ControlCenter3 (for Windows®)
- ControlCenter2 (for Macintosh®)
- Network Printing
- Network Scanning



### Note

See *Accessing the User's Guides* on page 2.

## How to read HTML User's Guides

This is a quick reference for using the HTML User's Guides.

### For Windows®

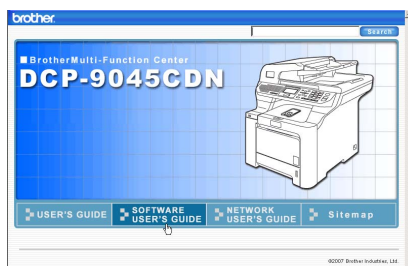


### Note

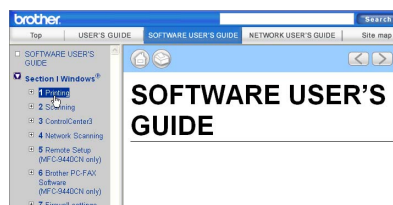
If you have not installed the software, see *Viewing documentation (Windows®)* on page 3.

- 1 From the **Start** menu, point to **Brother**, **DCP-9045CDN** from the programs group, then click **User's Guides in HTML format**.

- 2 Click on the manual you want (**SOFTWARE USER'S GUIDE**, **NETWORK USER'S GUIDE** or **USER'S GUIDE**) from the top menu.



- 3 Click the heading you would like to view from the list at the left of the window.



### For Macintosh®

- 1 Make sure your Macintosh® is turned on. Insert the Brother CD-ROM into your CD-ROM drive.
- 2 Double-click the **Documentation** icon.
- 3 Double-click your language folder, and then double-click the top page file.
- 4 Click on the manual you want (**SOFTWARE USER'S GUIDE**, **NETWORK USER'S GUIDE** or **USER'S GUIDE**) in the top menu, and then click the heading you would like to read from the list at the left of the window.





# Appendixes

---

<b>Safety and legal</b>	<b>48</b>
<b>Options</b>	<b>57</b>
<b>Troubleshooting and routine maintenance</b>	<b>62</b>
<b>Menu and features</b>	<b>147</b>
<b>Specifications</b>	<b>160</b>
<b>Glossary</b>	<b>170</b>

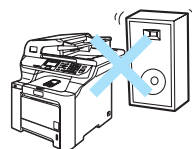
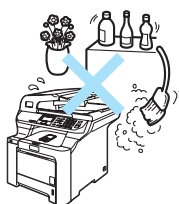
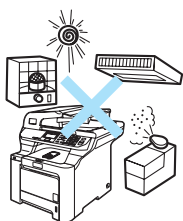
# A

## Safety and legal

### Choosing a location

Place your machine on a flat, stable surface that is free of vibration. Put the machine near a standard, grounded electrical socket. Choose a location where the temperature remains between 10° C and 32.5° C and the humidity is between 20% to 80% (without condensation).

- Make sure cables leading to the machine DO NOT constitute a trip hazard.
- Avoid placing your machine on the carpet.
- DO NOT place the machine near heaters, air conditioners, water, chemicals or refrigerators.
- DO NOT expose the machine to direct sunlight, excessive heat, moisture or dust.
- DO NOT connect your machine to electrical sockets controlled by wall switches or automatic timers, or to the same circuit as large appliances that might disrupt the power supply.



# Important information

## Safety precautions

---

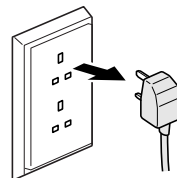
Please read these instructions before attempting any maintenance, and keep them for later reference.

- DO NOT use this product near water, or in a damp environment.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.
- We DO NOT advise using an extension lead.
- If any cables become damaged, disconnect your machine, and contact your Brother dealer.
- DO NOT place any objects on the machine, or obstruct the air vents.
- This product should be connected to an adjacent grounded AC power source within the range indicated on the rating label. DO NOT connect it to a DC power source. If you are not sure, contact a qualified electrician.

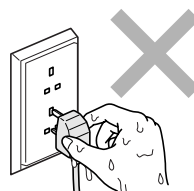
## WARNING



Before cleaning the inside of the machine, unplug the power cord from the electrical socket.



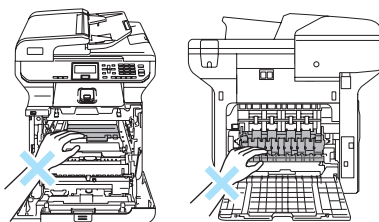
DO NOT handle the plug with wet hands. Doing this might cause an electrical shock.



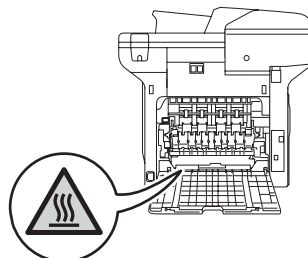
Always make sure the plug is fully inserted.



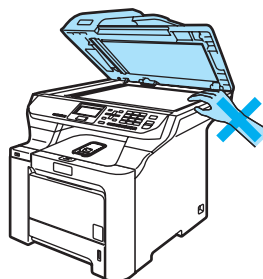
After you have just used the machine, some internal parts of the machine will be extremely hot. When you open the front or back cover of the machine, DO NOT touch the shaded parts shown in the illustration.



The fuser unit is marked with a caution label. DO NOT remove or damage the label.

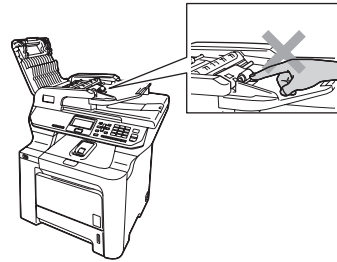


To prevent injuries, be careful not to put your hands on the edge of the machine under the document cover as shown in the illustration.





To prevent injuries, DO NOT put your fingers in the area shown in the illustration.



DO NOT use a vacuum cleaner to clean up scattered toner. Doing this might cause the toner dust to ignite inside the vacuum cleaner, potentially starting a fire. Please carefully clean the toner dust with a dry, lint-free cloth and dispose of it according to local regulations.



If moving your machine, use the handholds provided. First making sure to disconnect any cables. To prevent injuries when moving or lifting this machine, make sure to use at least two people.



DO NOT use flammable substances or any type of spray to clean the inside or outside of the machine. Doing this may cause a fire or electrical shock. Refer to *Routine maintenance* on page 95 for how to clean the machine.



## IEC60825-1+A2:2001 Specification

---

This machine is a Class 1 laser product as defined in IEC60825-1+A2:2001 specifications. The label shown below is attached in countries where required.

This machine has a Class 3B Laser Diode which emits invisible laser radiation in the Scanner Unit. The Scanner Unit should not be opened under any circumstances.



### Laser Diode

Wave length: 780 - 800 nm

Output: 30 mW max.

Laser Class: Class 3B



### WARNING

Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

## Disconnect device

---

This product must be installed near an electrical socket that is easily accessible. In case of emergencies, you must disconnect the power cord from the electrical socket to shut off the power completely.

## Wiring information (U.K. only)

---

If you need to replace the plug fuse, fit a fuse that is approved by ASTA to BS1362 with the same rating as the original fuse.

Always replace the fuse cover. Never use a plug that does not have a cover. If in any doubt, call a qualified electrician.

### Warning - This printer must be earthed.

The wires in the mains lead are coloured in line with the following code:

- Green and Yellow: Earth
- Blue: Neutral
- Brown: Live



## LAN connection

---

### CAUTION

DO NOT connect this product to a LAN connection that is subject to over-voltages.

## Radio interference

---

This product complies with EN55022 (CISPR Publication 22)/Class B. When connecting the machine to a computer, ensure that you use the following interface cables.

A USB cable which must not exceed 2.0 metres in length.

## EU Directive 2002/96/EC and EN50419

---



European  
Union only

A

This equipment is marked with the above recycling symbol. It means that at the end of the life of the equipment, you must dispose of it separately at an appropriate collection point, and not place it in the normal domestic unsorted waste stream. This will benefit the environment for all.  
(European Union only)

## EU Directive 2006/66/EC - Removing or Replacing the Battery

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This product incorporates a battery that is designed to last for the lifetime of the product. It is not to be replaced by the user. It should be removed as part of the machine recycling process at the end of life and appropriate precautions taken by the recycler.

## Important safety instructions

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- 1 Read all of these instructions.
- 2 Save them for later reference.
- 3 Follow all warnings and instructions marked on the product.
- 4 Unplug this product from the wall socket before cleaning inside of the machine. DO NOT use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- 5 DO NOT place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- 6 Slots and openings in the casing at the back or bottom are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heater. This product should never be placed in a built-in installation unless adequate ventilation is provided.
- 7 This product should be connected to an AC power source within the range indicated on the rating label. DO NOT connect it to a DC power source. If you are not sure, contact a qualified electrician.
- 8 This product is equipped with a 3-wire grounded plug. This plug will only fit into a grounded power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, call your electrician to replace your obsolete outlet. DO NOT defeat the purpose of the grounded plug.
- 9 Use only the power cord supplied with this machine.
- 10 DO NOT allow anything to rest on the power cord. DO NOT place this product where people can walk on the cord.
- 11 DO NOT place anything in front of the machine that will block printed pages.
- 12 Wait until pages have exited the machine before picking them up.
- 13 Unplug this product from the power socket and refer all servicing to Brother Authorised Service Personnel under the following conditions:
  - When the power cord is damaged or frayed.
  - If liquid has been spilled into the product.
  - If the product has been exposed to rain or water.
  - If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions. Incorrect adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
  - If the product has been dropped or the casing has been damaged.
  - If the product exhibits a distinct change in performance, indicating a need for service.
- 14 To protect your product against power surges, we recommend the use of a power protection device (Surge Protector).

15 To reduce the risk of fire, electric shock and injury to people, note the following:

- DO NOT use this product near appliances that use water, a swimming pool or in a wet basement.
- DO NOT use the machine during an electrical storm (there is the remote possibility of an electrical shock).

## Legal limitations for copying

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It is an offence to make reproductions of certain items or documents with the intent to commit fraud. This memorandum is intended to be a guide rather than a complete list. We suggest you check with relevant legal authorities if in doubt about a particular item or document.

The following are examples of documents which should not be copied:

- Money
- Bonds or other certificates of indebtedness
- Certificates of Deposit
- Armed Forces Service or Draft papers
- Passports
- Postage Stamps (cancelled or uncanceled)
- Immigration Papers
- Welfare documents
- Cheques or Drafts drawn by Governmental Agencies
- Identification Documents, badges or insignias
- Licences and Certificates of Title to motor vehicles

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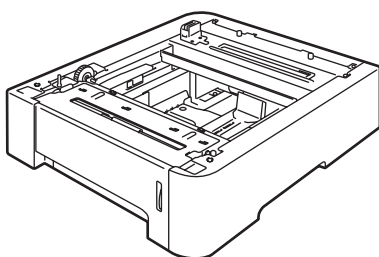
**All other brand and product names mentioned in this User's Guide, the Software User's Guide, and the Network User's Guide are registered trademarks of their respective companies.**

## Optional paper tray

Order Number: LT-100CL

An optional lower tray can be installed, and it can hold up to 500 sheets of 20 lb (80 g/m<sup>2</sup>) paper.

When an optional tray is installed, the machine can hold up to 800 sheets of plain paper.



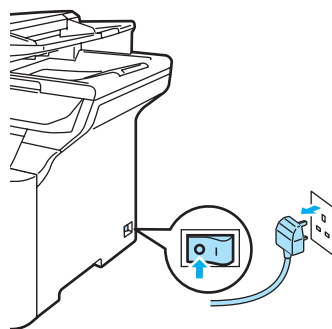
## Installing the optional paper tray



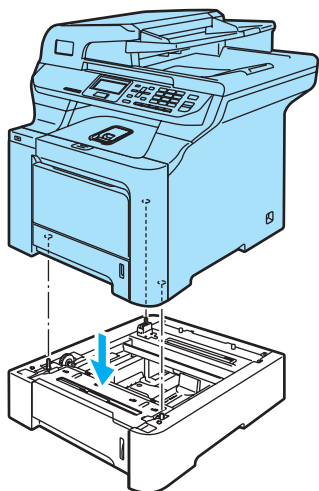
### WARNING

This machine is heavy. To prevent injuries use at least two people to lift the machine. Be careful not to pinch your fingers when you set the machine down.

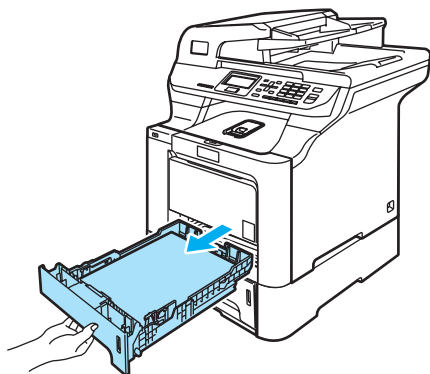
- 1 Turn off the power switch. Unplug the interface cable, and then the power cord from the AC electrical socket.



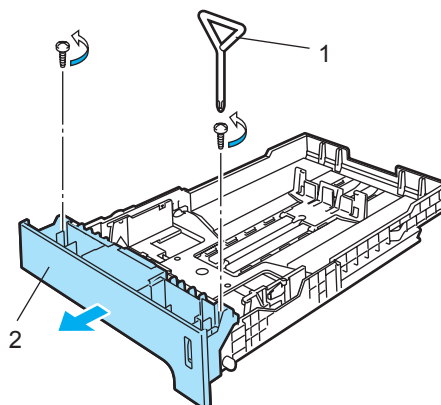
- 2 Using two people, lift the machine carefully and place it onto the optional lower tray unit, so that the alignment pins of the lower tray unit are inserted into the guide holes on the bottom of the machine as shown.



- 3 Pull the standard paper tray completely out of the machine and take the paper out of the paper tray.

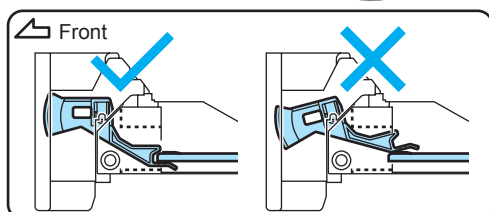
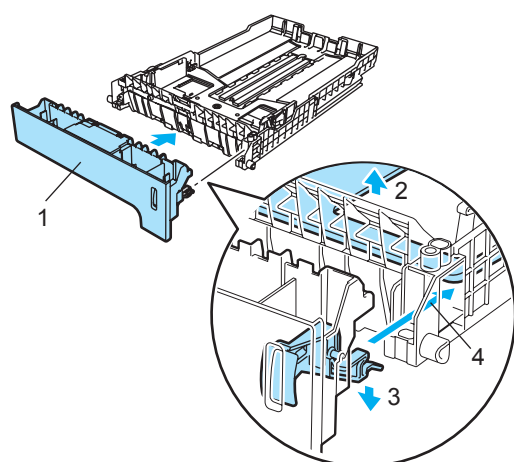


- 4 Using the screwdriver (1), take out the two screws as shown and save them (you will need them for step 6), and then remove the paper tray front (2) from the standard paper tray.

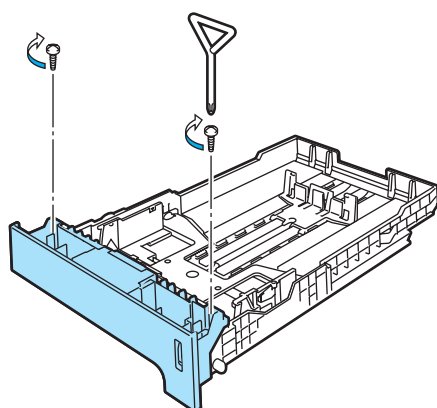


- 5 Follow the steps below to exchange the paper tray front of the standard paper tray to the new one (1).

- 1 Carefully lift up and hold the metal plate inside the paper tray (2).
- 2 While the metal plate is raised, lift the new paper tray front (1) to the front of the paper tray. Make sure that the blue paper indicator lever (3) passes through the hole (4).
- 3 Once the paper tray front is correctly fitted, let go of the metal plate. The blue lever should sit underneath the metal plate.



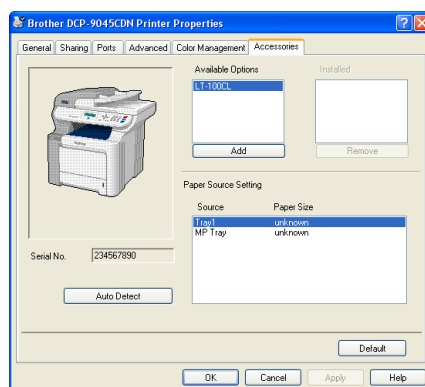
- 6 Fix the new paper tray front to the standard paper tray by putting the two screws back in (taken out in 4). Then put the paper back in the paper tray and put the paper tray firmly back into the machine.



- 7 Plug the machine's power cord back into the AC electrical socket first, and reconnect all cables. Turn on the machine's power switch.

- 8 To set the paper size for the lower tray, press **Menu**, **1**, **2**, **3**. Press **▲** or **▼** to choose **A4**, **Letter**, **Legal**, **Executive**, **A5**, **B5**, **B6** or **Folio**. Press **OK**, and then press **Stop/Exit**.

- 9 **For Windows® users:**  
Go to **Start > Control Panel > Printers and Faxes**. Right-click on your printer icon and choose **Properties**. Choose the **Accessories** tab and click **Auto Detect**. When the optional lower tray and paper size have been detected click **Apply**.



### Note

The **Auto Detect** function is not available under the following machine conditions:

- The machine's power switch is off.
- The machine is in an error state.
- The machine is in a network shared environment.
- The cable is not connected to the machine correctly.

If this situation occurs, you can manually add the options you have installed. In **Available Options** select the option you have installed, click **Add**, and then click **Apply**.

### For Macintosh® users:

The printer driver is already configured for use with the lower paper tray. No additional steps are required.

# Memory board

This machine has 128 MB of standard memory and one slot for optional memory expansion. You can expand the memory up to 640 MB by installing 144 pin small outline dual in-line memory modules (SO-DIMMs). When you add the optional memory, it increases the performance for both copy and print operations.

In general, the machine uses industry-standard SO-DIMM with the following specifications:

Type: 144 pin and 64 bit output

CAS latency: 2

Clock frequency: 100 MHz or more

Capacity: 64 MB, 128 MB, 256 MB or 512 MB

Height: 31.75 mm

Dram Type: SDRAM 2 Bank

For purchasing information and part numbers visit the Buffalo Technology website:  
<http://www.buffalo-technology.com/>

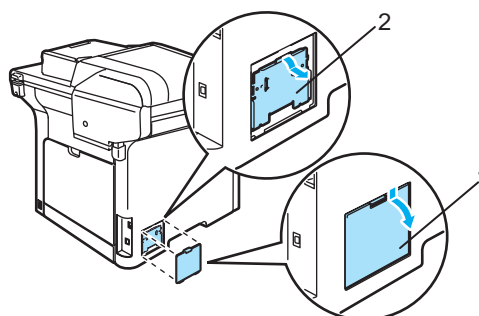


## Note

- There might be some SO-DIMMs that will not work with the machine.
- For more information, call your Brother dealer.

## Installing extra memory

- 1 Turn off the machine's power switch.
- 2 Disconnect the interface cable from the machine, and then unplug the power cord from the electrical socket.
- 3 Remove the DIMM covers (1 and 2).



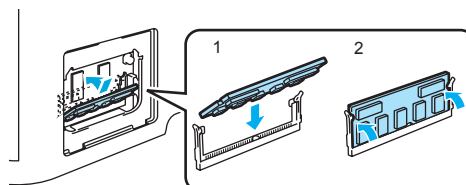
- 4 Unpack the DIMM and hold it by its edges.



## CAUTION

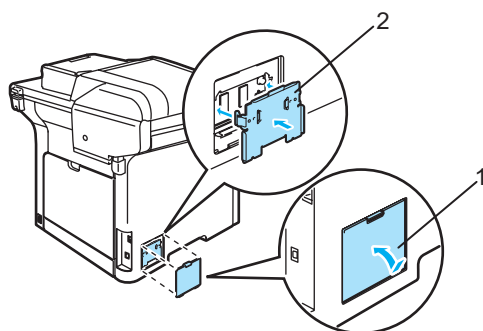
To prevent damage to the machine from static electricity, DO NOT touch the memory chips or the board surface.

- 5 Hold the DIMM by the edges and align the notches in the DIMM with the protrusions in the slot. Insert the DIMM diagonally (1), then tilt it toward the interface board until it clicks into place (2).





- 6 Put the DIMM covers (2 and 1) back on.



- 7 Plug the machine's power cord back into the electrical socket first, and then connect the interface cable.

- 8 Turn on the machine's power switch.

## Troubleshooting

If you think there is a problem with your machine, check the chart below and follow the troubleshooting tips.

Most problems can be easily resolved by yourself. If you need additional help, the Brother Solutions Center offers the latest FAQs and troubleshooting tips.

Visit us at <http://solutions.brother.com>.

## Solutions to common problems

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If you think there is a problem, make a copy first. If the copy looks good, the problem is probably not your machine. Check the chart below and follow the troubleshooting tips. You can solve most problems by yourself.

### Menu access difficulties

Difficulties	Suggestions
Key Operations do not work.	Check that the control panel is fitted correctly on the machine. Reinstall the control panel.

### Copy quality difficulties

Difficulties	Suggestions
Vertical black lines appears in copies.	Black vertical lines on copies are typically caused by dirt or correction fluid on the glass strip, or one of the corona wires for printing is dirty. (See <i>Cleaning the scanner</i> on page 96 and <i>Cleaning the corona wires</i> on page 102.)

## Printing difficulties

Difficulties	Suggestions
No printout.	<ul style="list-style-type: none"> <li>■ Check that the machine is plugged in and the power switch is turned on.</li> <li>■ Check that the toner cartridges and drum unit are installed properly. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Check the interface cable connection on both the machine and your computer. (See <i>the Quick Setup Guide</i>.)</li> <li>■ Check that the correct printer driver has been installed and chosen.</li> <li>■ Check to see if the LCD is showing an error message. (See <i>Error and maintenance messages</i> on page 79.)</li> <li>■ Check the machine is online:                     <p>(For Windows Vista®)</p> <p>Click the <b>Start</b> button, <b>Control Panel</b>, <b>Hardware and Sound</b>, and then <b>Printers</b>. Right-click 'Brother DCP-9045CDN Printer'. Make sure that 'Use Printer Offline' is unchecked.</p> <p>(For Windows® XP and Windows Server® 2003)</p> <p>Click the <b>Start</b> button and select <b>Printers and Faxes</b>. Right-click 'Brother DCP-9045CDN Printer'. Make sure that 'Use Printer Offline' is unchecked.</p> <p>(For Windows® 2000)</p> <p>Click the <b>Start</b> button and select <b>Settings</b> and then <b>Printers</b>. Right-click 'Brother DCP-9045CDN Printer'. Make sure that 'Use Printer Offline' is unchecked.</p> </li> </ul>
The machine prints unexpectedly or it prints garbage.	<ul style="list-style-type: none"> <li>■ Pull out the paper tray and wait until the machine stops printing. Then turn off the machine's power switch and disconnect from the power for several minutes.</li> <li>■ Check the settings in your application to make sure it is set up to work with your machine.</li> </ul>
The machine prints the first couple of pages correctly, then some pages have text missing.	<ul style="list-style-type: none"> <li>■ Check the settings in your application to make sure that it is set up to work with your machine.</li> <li>■ Your computer is not recognising the machine's input buffer's full signal. Make sure that you connected the interface cable correctly. (See <i>the Quick Setup Guide</i>.)</li> </ul>
The headers or footers appear when the document displays on the screen but they do not show up when it is printed.	There is an unprintable area on the top and bottom of the page. Adjust the top and bottom margins in your document to allow for this.
The machine does not print on both sides of the paper even though the printer driver setting is Duplex.	Check the paper size setting in the printer driver. You need to select A4, Legal or Folio.
The machine is not printing or has stopped printing and the machine's Status LED turns yellow.	Press <b>Job Cancel</b> . As the machine cancels the job and clears it from the memory it may produce an incomplete printout.

## Scanning difficulties

Difficulties	Suggestions
TWAIN errors appear while scanning.	Make sure that the Brother TWAIN driver is chosen as the primary source. In PaperPort™ 11SE, click <b>File, Scan or Get Photo</b> and choose the <b>Brother TWAIN driver</b> .
Network scanning does not work.	See <i>Network difficulties</i> on page 65.

## Software difficulties

Difficulties	Suggestions
Cannot install software or print.	Run the <b>Repair MFL-Pro Suite</b> program on the CD-ROM. This program will repair and reinstall the software.
Cannot perform '2 in 1' or '4 in 1' printing.	Check that the paper size setting in the application and in the printer driver are the same.
The machine does not print from Adobe Illustrator.	Try to reduce the print resolution. (See <i>Advanced tab in the Software User's Guide on the CD-ROM</i> .)

## Paper handling difficulties

Difficulties	Suggestions
The machine does not load paper. The LCD shows <b>No Paper</b> or a <b>Paper Jam</b> message.	<ul style="list-style-type: none"><li>■ If there is no paper, load a new stack of paper into the paper tray.</li><li>■ If there is paper in the paper tray, make sure it is straight. If the paper is curled, you should straighten it. Sometimes it is helpful to remove the paper, turn the stack over and put it back into the paper tray.</li><li>■ Reduce the amount of paper in the paper tray, and then try again.</li><li>■ Check that the MP tray mode is not chosen in the printer driver.</li><li>■ If the LCD shows <b>Paper Jam</b> message and you still have a problem, see <i>Paper jams</i> on page 85.</li></ul>
The machine does not feed paper from the MP tray.	<ul style="list-style-type: none"><li>■ Fan the paper well and put it back in the tray firmly.</li><li>■ Make sure that MP tray mode is chosen in the printer driver.</li></ul>
How do I print on envelopes?	You can load envelopes from the MP tray. Your application must be set up to print the envelope size you are using. This is usually done in the Page Setup or Document Setup menu of your application. (See your application's manual for more information.)
Which paper can I use?	You can use plain paper, recycled paper, envelopes and labels that are made for laser machines. (For details, see <i>Acceptable paper and other media</i> on page 10.)
There is a paper jam.	(See <i>Paper jams</i> on page 85.)

## Print quality difficulties

Difficulties	Suggestions
Printed pages are curled.	<ul style="list-style-type: none"><li>■ Low quality thin or thick paper or not printing on the recommended side of the paper could cause this problem. Try turning over the stack of paper in the paper tray.</li><li>■ Make sure that you choose the Paper Type that suits the media type you are using. (See <i>Acceptable paper and other media</i> on page 10.)</li></ul>

## Print quality difficulties (continued)

Difficulties	Suggestions
Printed pages are smeared.	The Paper Type setting may be incorrect for the type of print media you are using, or the print media may be too thick or have a rough surface. (See <i>Acceptable paper and other media</i> on page 10 and <i>Basic tab in the Software User's Guide on the CD-ROM</i> .)
Printouts are too light.	<ul style="list-style-type: none"> <li>■ If this problem occurs when making copies, turn Toner Save mode to off in the machine menu settings. (See <i>Toner save</i> on page 22.)</li> <li>■ Set Toner Save mode to off in the Advanced tab in the printer driver. (See <i>Advanced tab in the Software User's Guide on the CD-ROM</i>.)</li> </ul>

## Network difficulties

Difficulties	Suggestions
Cannot print over a wired Network.	Make sure your machine is powered on and is on-line and in Ready mode. Print the Network Configuration list to see your current Network settings. (See <i>User Settings List</i> on page 23.) Reconnect the LAN cable to the hub to verify that the cable and network connections are good. If possible, try connecting the machine to a different port on your hub using a different cable. If the connections are good, the upper LED of the back panel of the machine will be green.

## Network difficulties (continued)

Difficulties	Suggestions
<p>The network scanning feature does not work.</p> <p>The network printing feature does not work.</p>	<p>(For Windows® only) The firewall setting on your PC may be rejecting the necessary network connection. Follow the instructions below to configure your firewall. If you are using personal firewall software, see the User's Guide for your software or contact the software manufacturer.</p> <p><b>For Windows® XP SP2 users:</b></p> <ol style="list-style-type: none"> <li>1 Click the <b>Start</b> button, <b>Control Panel</b>, <b>Network and Internet Connections</b>, and then <b>Windows Firewall</b>. Make sure that <b>Windows Firewall</b> on the <b>General</b> tab is set to On.</li> <li>2 Click the <b>Advanced</b> tab and <b>Settings...</b> button of the <b>Network Connection Settings</b>.</li> <li>3 Click the <b>Add</b> button.</li> <li>4 To add port 54925, for network scanning, enter the information below:             <ol style="list-style-type: none"> <li>1. In <b>Description of service</b>: Enter any description, for example "Brother Scanner".</li> <li>2. In <b>Name or IP address (for example 192.168.0.12) of the computer hosting this service on your network</b>: Enter "Localhost".</li> <li>3. In <b>External Port number for this service</b>: Enter "54925".</li> <li>4. In <b>Internal Port number for this service</b>: Enter "54925".</li> <li>5. Make sure <b>UDP</b> is selected.</li> <li>6. Click <b>OK</b>.</li> </ol> </li> <li>5 If you still have trouble with your network connection, click the <b>Add</b> button.</li> <li>6 To add port 137 for both network scanning and network printing, enter the information below:             <ol style="list-style-type: none"> <li>1. In <b>Description of service</b>: Enter any description, for example "Brother network scanning".</li> <li>2. In <b>Name or IP address (for example 192.168.0.12) of the computer hosting this service on your network</b>: Enter "Localhost".</li> <li>3. In <b>External Port number for this service</b>: Enter "137".</li> <li>4. In <b>Internal Port number for this service</b>: Enter "137".</li> <li>5. Make sure <b>UDP</b> is selected.</li> <li>6. Click <b>OK</b>.</li> </ol> </li> <li>7 Make sure if the new setting is added and is checked, and then click <b>OK</b>.</li> </ol>

## Network difficulties (continued)

Difficulties	Suggestions
<p>The network scanning feature does not work.</p> <p>The network printing feature does not work.</p> <p>(continued)</p>	<p><b>For Windows Vista® users:</b></p> <ol style="list-style-type: none"> <li>1 Click the <b>Start</b> button, <b>Control Panel</b>, <b>Network and Internet</b>, <b>Windows Firewall</b> and click <b>Change settings</b>.</li> <li>2 When the <b>User Account Control</b> screen appears, do the following. <ul style="list-style-type: none"> <li>■ Users who have administrator rights: Click <b>Continue</b>.</li> <li>■ For users who do not have administrator rights: Enter the administrator password and click <b>OK</b>.</li> </ul> </li> <li>3 Make sure that <b>Windows Firewall</b> on the <b>General</b> tab is set to <b>On</b>.</li> <li>4 Click the <b>Exceptions</b> tab.</li> <li>5 Click the <b>Add port...</b> button.</li> <li>6 To add port 54925 for network scanning, enter the information below: <ol style="list-style-type: none"> <li>1. In <b>Name</b>: Enter any description, for example "Brother Scanner".</li> <li>2. In <b>Port number</b>: Enter "54925".</li> <li>3. Make sure <b>UDP</b> is selected. Then click <b>OK</b>.</li> </ol> </li> <li>7 Make sure that the new setting is added and is checked, and then click <b>Apply</b>.</li> <li>8 If you still have trouble with your network connection such as network scanning or printing, check <b>File and Printer Sharing</b> box in the <b>Exceptions</b> tab and then click <b>Apply</b>.</li> </ol>
<p>Your computer cannot find your machine.</p>	<p><b>For Windows® users:</b> The firewall setting on your PC may be rejecting the necessary network connection. For details, see the instruction above.</p> <p><b>For Macintosh® users:</b> Re-select your machine in the DeviceSelector application located in <b>Macintosh HD/Library/Printers/Brother/Utilities</b> or from the Model pop-up menu of ControlCenter2.</p>

## Other

Difficulties	Suggestions
<p>The machine will not turn on.</p>	<p>Adverse conditions on the power connection (such as lightning or a power surge) may have triggered the machine's internal safety mechanisms.</p> <p>Turn the machine off and unplug the power cord. Wait for ten minutes, then plug in the power cord and turn the machine on.</p>

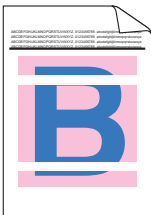
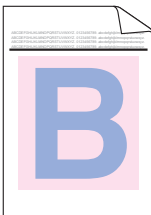
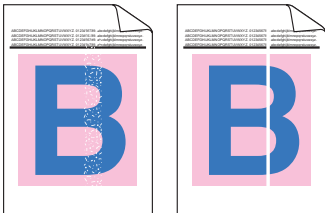
# Improving the print quality

If you have a print quality problem, print a test page first (**Menu, 3, 2, 3**). If the printout looks good, the problem is probably not the machine. Check the interface cable or try the machine on another computer.

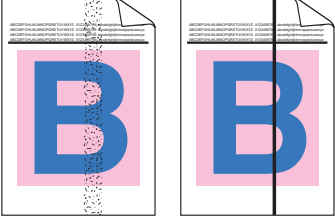
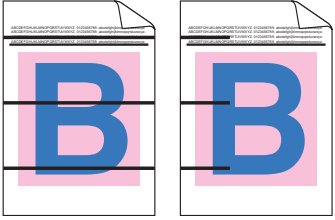

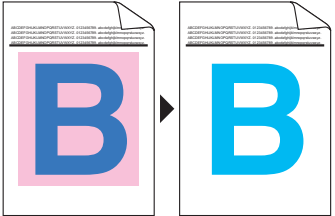


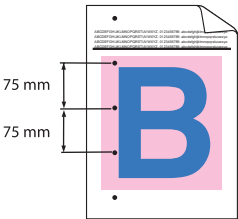

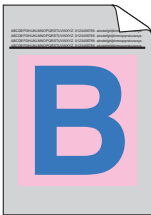
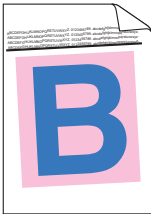
## Note

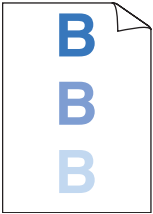

You can resolve a print quality problem by replacing a toner cartridge with a new one when the LCD shows the `Toner Life End` message.

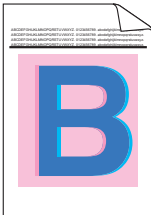
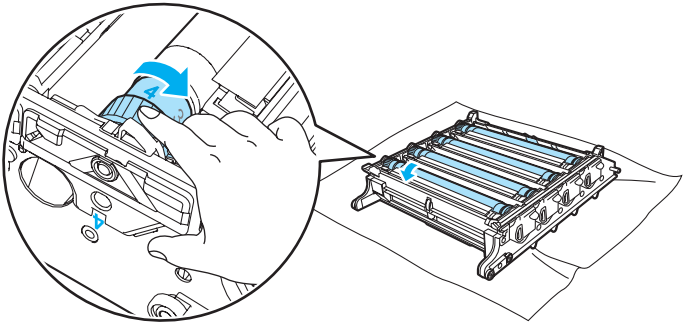
Examples of poor print quality	Recommendation
<p>White lines or bands or ribbing across the page</p> 	<ul style="list-style-type: none"> <li>■ Make sure that the machine is on a solid level surface.</li> <li>■ Make sure that the toner cartridges are installed properly. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ Shake the toner cartridges gently.</li> <li>■ Make sure that the drum unit is installed properly. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Make sure that you use paper that meets our specifications. A rough surfaced paper or thick print media can cause the problem. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Clean the laser scanner windows with a soft cloth. (See <i>Cleaning the laser scanner windows</i> on page 97.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>Colours are light or unclear on the whole page.</p> 	<ul style="list-style-type: none"> <li>■ Make sure that the recommended paper was used.</li> <li>■ Change the paper to freshly unpacked paper.</li> <li>■ Make sure that the front cover is closed properly.</li> <li>■ Shake the toner cartridges gently.</li> <li>■ Clean the laser scanner windows with a soft cloth. (See <i>Cleaning the laser scanner windows</i> on page 97.)</li> <li>■ Turn off Toner Save. (See <i>Toner save</i> on page 22.)</li> </ul>
<p>White streaks or bands down the page</p> 	<ul style="list-style-type: none"> <li>■ Shake the toner cartridges gently.</li> <li>■ Clean the laser scanner windows with a soft cloth. (See <i>Cleaning the laser scanner windows</i> on page 97.)</li> </ul>





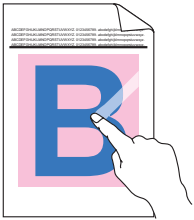
Examples of poor print quality	Recommendation
<p>Coloured streaks or bands down the page</p> 	<ul style="list-style-type: none"> <li>■ One of the toner cartridges may be damaged. Replace the toner cartridge that matches the colour of the streak or band. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ Clean all four corona wires (one for each colour) of the drum unit by sliding the green tab. (See <i>Cleaning the corona wires</i> on page 102.)</li> <li>■ Make sure each corona wire's green tab is at the home position (▼).</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ The fuser unit may have a smudge mark. Call your Brother dealer.</li> </ul>
<p>Coloured lines across the page</p> 	<ul style="list-style-type: none"> <li>■ One of the toner cartridges may be damaged. Replace the toner cartridge that matches the colour of the line. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Clean all four corona wires (one for each colour) of the drum unit by sliding the green tab. (See <i>Cleaning the corona wires</i> on page 102.)</li> <li>■ Clean the laser scanner windows with a soft cloth. (See <i>Cleaning the laser scanner windows</i> on page 97.)</li> </ul>
<p>White spots or hollow print</p> 	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Make sure that the recommended paper was used.</li> <li>■ Choose <b>Thick paper</b> mode in the printer driver or in the machine's Paper Type menu setting, or use thinner paper than you are currently using. (See <i>Paper type</i> on page 20 and <i>Basic tab in the Software User's Guide on the CD-ROM</i>.)</li> <li>■ Change the paper to fresh, unopened paper.</li> <li>■ Check the machine's environment. Conditions such as high humidity can cause hollow print. (See <i>Choosing a location</i> on page 48.)</li> <li>■ Clean all four corona wires (one for each colour) of the drum unit by sliding the green tab. (See <i>Cleaning the corona wires</i> on page 102.) If the print quality has not improved, put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Clean the drum unit. (See <i>Cleaning the drum unit</i> on page 105.)</li> </ul>
<p>Completely blank or some colours are missing.</p> 	<ul style="list-style-type: none"> <li>■ Make sure that the toner cartridges are installed properly. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ One of the toner cartridges may be damaged. Identify the missing colour and put in a new toner cartridge for the colour with the white line. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>

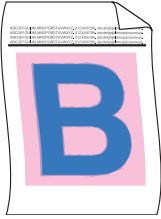
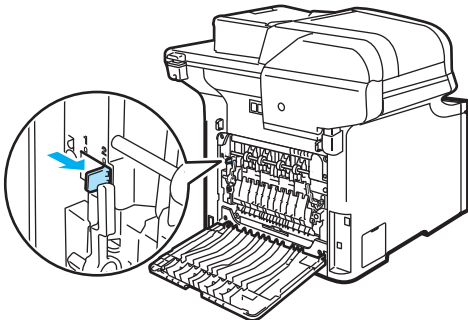

Examples of poor print quality	Recommendation
<p>Coloured spots at 75 mm</p> 	<ul style="list-style-type: none"> <li>■ Dust, paper powder, glue, and so on may stick to the surface of the photosensitive drum (OPC) and cause black or white spots to appear on printed documents.</li> <li>■ Make a few copies of a blank, white sheet of paper. (See <i>Making multiple copies</i> on page 28.)</li> <li>■ If you still see the spots on printed documents after making multiple copies, clean the drum unit. (See <i>Cleaning the drum unit</i> on page 105.)</li> <li>■ If the print quality still has not improved you need to install a new drum. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>Toner scatter or toner stain</p> 	<ul style="list-style-type: none"> <li>■ Check the machine's environment. Conditions such as high humidity and high temperatures may cause this print quality problem. (See <i>Choosing a location</i> on page 48.)</li> <li>■ Make sure that you use paper that meets our specifications. Rough-surfaced paper may cause the problem. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Install a new toner cartridge for the colour causing the problem. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ Clean the corona wires and the drum unit for the colour causing the problem. (See <i>Cleaning the corona wires</i> on page 102 and <i>Cleaning the drum unit</i> on page 105.) If the print quality has not improved, put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>Grey or coloured background</p> 	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Check the machine's environment. Conditions such as high temperatures and high humidity can increase the amount of background shading. (See <i>Choosing a location</i> on page 48.)</li> <li>■ Install a new toner cartridge for the colour causing the problem. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ Clean the corona wires of the drum unit for the colour causing the problem. (See <i>Cleaning the corona wires</i> on page 102.) If the print quality has not improved, put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>Page skewed</p> 	<ul style="list-style-type: none"> <li>■ Make sure the paper or other print media is loaded properly in the paper tray and that the guides are not too tight or too loose against the paper stack.</li> <li>■ Set the paper guides correctly.</li> <li>■ The paper tray may be too full.</li> <li>■ Make sure that you use paper that meets our specifications. (See <i>Acceptable paper and other media</i> on page 10.)</li> </ul>


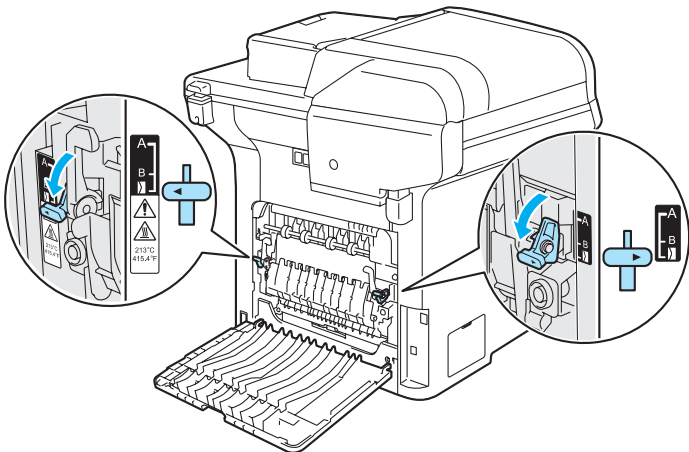

Examples of poor print quality	Recommendation
<p>Ghost</p> 	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications. Rough-surfaced paper or thick paper may cause the problem. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Make sure that you choose the proper media type in the printer driver or in the machine's Paper Type menu setting. (See <i>Acceptable paper and other media</i> on page 10 and <i>Basic tab in the Software User's Guide on the CD-ROM.</i>)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>The colour of your printouts are not what you expected.</p>	<ul style="list-style-type: none"> <li>■ Make sure that the toner cartridges are installed properly. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ Make sure that the toner cartridges are not empty. (See <i>Toner life end message</i> on page 115.)</li> <li>■ Make sure that the drum unit is installed properly. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Make sure that the belt unit is installed properly. (See <i>Replacing the belt unit</i> on page 127.)</li> <li>■ Perform the calibration by using the control panel. Press <b>Menu</b>, <b>3</b>, <b>6</b>.               <ol style="list-style-type: none"> <li>1 Press <b>OK</b> to select <i>Calibrate</i>.</li> <li>2 Press <b>1</b> to select <i>Yes</i>. (For more information, see <i>Software User's Guide on the CD-ROM.</i>)</li> </ol> </li> <li>■ Adjust the colour by using the custom setting in the printer driver. Colours the machine can print and colours you see on a monitor are different. The machine may not be able to reproduce the colours on your monitor.</li> <li>■ Make sure that you use paper that meets our specifications. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Put in a new belt unit. (See <i>Replacing the belt unit</i> on page 127.)</li> </ul>
<p>All one colour</p>	<ul style="list-style-type: none"> <li>■ Clean the corona wires of the drum unit for the colour causing the problem. (See <i>Cleaning the corona wires</i> on page 102.) If the print quality has not improved, put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>Uneven density appears periodically across the page</p> 	<ul style="list-style-type: none"> <li>■ Identify the colour that is uneven and put in a new toner cartridge for that colour. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Make sure that the fuser unit is installed properly.</li> </ul>

Examples of poor print quality	Recommendation
<p>Colour misregistration</p> 	<ul style="list-style-type: none"> <li>■ Make sure that the drum unit is installed properly. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Make sure that the belt unit is installed properly. (See <i>Replacing the belt unit</i> on page 127.)</li> <li>■ Make sure that the waste toner box is installed properly. (See <i>Replacing the waste toner box</i> on page 132.)</li> <li>■ Perform the auto colour registration by using the control panel. Press <b>Menu, 3, 7, 1</b>.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>■ Perform the manual colour registration by using the control panel.</li> </ul> <ol style="list-style-type: none"> <li>1 Print the correction chart by using the control panel. Press <b>Menu, 3, 8, 1</b>.</li> <li>2 Enter the correction value on the chart. Press <b>Menu, 3, 8, 2</b>.</li> </ol> <p>If the colour misregistration is not corrected after registering the colour manually, take all the toner cartridges out of the drum unit and turn the drum unit over, then make sure that four drum unit gears are in the home position. The home position of each drum can be identified by matching the number on the drum unit gear to the same number on the side of the drum unit as shown in the illustration.</p>  <ul style="list-style-type: none"> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Put in a new belt unit. (See <i>Replacing the belt unit</i> on page 127.)</li> <li>■ Put in a new waste toner box. (See <i>Replacing the waste toner box</i> on page 132.)</li> <li>■ If solid areas of colour or images have cyan, magenta or yellow fringes, you can use the auto-registration feature to correct the problem.</li> </ul>


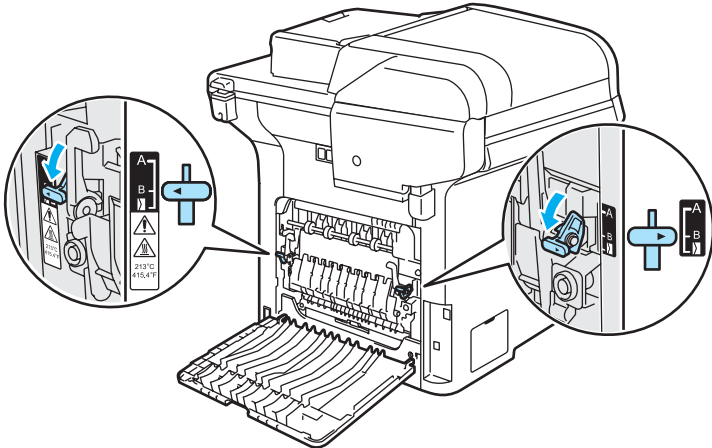
Examples of poor print quality	Recommendation
<p>Missing image at edge</p>	<ul style="list-style-type: none"> <li>■ Make sure that the toner cartridges are installed properly. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ Make sure that the drum unit is installed properly. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ One of the toner cartridges may be damaged. Identify the missing colour and put in a new toner cartridge for the colour with the white line. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>Missing image at thin line</p>	<ul style="list-style-type: none"> <li>■ If you are using a Windows® printer driver, open <b>Properties</b> window, and then click <b>Printing Preferences</b>. Choose the <b>Advanced</b> tab, <b>Device Options</b>, <b>Print Setting</b>, and then check the <b>Improve pattern printing</b> or <b>Improve Thin Line</b> boxes.</li> </ul>
<p>Wrinkle</p> 	<ul style="list-style-type: none"> <li>■ Change to the recommended type of paper. (See <i>Recommended paper</i> on page 10.)</li> <li>■ Check the paper type and quality. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Make sure that the back cover is closed properly.</li> <li>■ Make sure that paper is loaded properly.</li> <li>■ Make sure that you choose the correct media type in the printer driver or in the machine's Paper Type menu setting. (See <i>Acceptable paper and other media</i> on page 10 and <i>Basic tab in the Software User's Guide on the CD-ROM</i>.)</li> <li>■ Turn over the stack of paper in the tray or rotate the paper 180° in the input tray.</li> <li>■ Make sure that the drum unit is installed properly. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Make sure that the fuser unit is installed properly.</li> <li>■ If the problem continues, call your Brother dealer.</li> </ul>
<p>Insufficient gloss</p>	<ul style="list-style-type: none"> <li>■ Change to the recommended type of paper. (See <i>Recommended paper</i> on page 10.)</li> </ul>

Examples of poor print quality	Recommendation
<p>Offset image</p> 	<ul style="list-style-type: none"> <li>■ Check the machine's environment. Conditions such as high temperatures and humidity can cause this problem. (See <i>Choosing a location</i> on page 48.)</li> <li>■ Make sure that you use paper that meets our specifications. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Make sure that you choose the correct media type in the printer driver or in the machine's Paper Type menu setting. (See <i>Acceptable paper and other media</i> on page 10 and <i>Basic tab in the Software User's Guide on the CD-ROM</i>.)</li> <li>■ Change to the recommended type of paper. (See <i>Recommended paper</i> on page 10.)</li> <li>■ The drum unit may be damaged. Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> </ul>
<p>Poor fixing</p> 	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications. (See <i>Acceptable paper and other media</i> on page 10.)</li> <li>■ Make sure that you choose the correct media type in the printer driver or in the machine's Paper Type menu setting. (See <i>Acceptable paper and other media</i> on page 10 and <i>Basic tab in the Software User's Guide on the CD-ROM</i>.)</li> <li>■ Make sure that the release lever of the fuser unit is in the closed position.</li> <li>■ If the problem continues, call your Brother dealer.</li> </ul>
<p>Poor fixing when printed on thick paper</p>	<ul style="list-style-type: none"> <li>■ Choose <b>Thick paper</b> mode in the printer driver or in the machine's Paper Type menu setting. (See <i>Paper type</i> on page 20 and <i>Basic tab in the Software User's Guide on the CD-ROM</i>.)</li> <li>■ Make sure that you use paper that meets our specifications. (See <i>Acceptable paper and other media</i> on page 10.)</li> </ul>

Examples of poor print quality	Recommendation
<p data-bbox="142 293 307 320">Curled or wave</p> 	<ul style="list-style-type: none"> <li data-bbox="504 293 1256 413">■ Make sure that you choose the correct media type in the printer driver or in the machine's Paper Type menu setting. (See <i>Acceptable paper and other media</i> on page 10 and <i>Basic tab in the Software User's Guide on the CD-ROM</i>.)</li> <li data-bbox="504 428 1190 483">■ Check the paper type and quality. High temperatures and high humidity will cause paper to curl.</li> <li data-bbox="504 498 1256 614">■ If you do not use the machine often, the paper may have been in the paper tray too long. Turn over the stack of paper in the paper tray. Also, fan the paper stack and then rotate the paper 180° in the paper tray.</li> <li data-bbox="504 629 740 656">■ Follow these steps:               <ol style="list-style-type: none"> <li data-bbox="535 676 820 710">1 Open the back cover.</li> <li data-bbox="535 730 1103 765">2 Push the grey lever to the right as shown below.</li> </ol> </li> </ul>  <ol style="list-style-type: none"> <li data-bbox="535 1120 1081 1155">3 Close the back cover and resend the print job.</li> </ol> <p data-bbox="504 1178 1256 1286">  <b>Note</b> When you have finished printing, open the back cover and reset the lever back to the original position.         </p>

Examples of poor print quality	Recommendation
<p>Envelope creases</p> 	<ol style="list-style-type: none"> <li data-bbox="467 338 754 376">1 Open the back cover.</li> <li data-bbox="467 396 1226 492">2 Pull down the two grey levers, one on the left-hand side and one on the right-hand side to the envelope position, as shown in the illustration below.</li> </ol>  <ol style="list-style-type: none"> <li data-bbox="467 994 1022 1033">3 Close the back cover and re-send the print job.</li> </ol> <p> <b>Note</b> When you have finished printing, open the back cover and reset the two grey levers back to their original position.</p>



Examples of poor print quality	Recommendation
<p>White lines or ribbing down the page on duplex print</p>  <p><b>Note</b></p> <p>Position B is only for duplex printing with recycled paper when the temperature and humidity are low.</p>	<p>■ Choose <b>Thin Paper</b> mode in the printer driver and re-send the print job.</p> <p>If the problem is not solved after printing a few pages, follow these steps:</p> <ol style="list-style-type: none"> <li>1 Open the back cover.</li> <li>2 Pull down the two grey levers, one on the left-hand side and one on the right-hand side, to position B as shown in the illustration below.</li> </ol>  <ol style="list-style-type: none"> <li>3 Close the back cover.</li> <li>4 Choose <b>Plain Paper</b> mode in the printer driver and re-send the print job.</li> <li>5 If the problem is not solved after printing a few pages, choose <b>Thin Paper</b> mode in the printer driver and re-send the print job.</li> </ol> <p><b>Note</b></p> <p>When you have finished printing, open the back cover and reset the two grey levers back to the original position.</p> <p>■ Use thicker paper than you are now using.</p>

### Examples of poor print quality

Toner scatter or toner stain on the edge of duplex pages



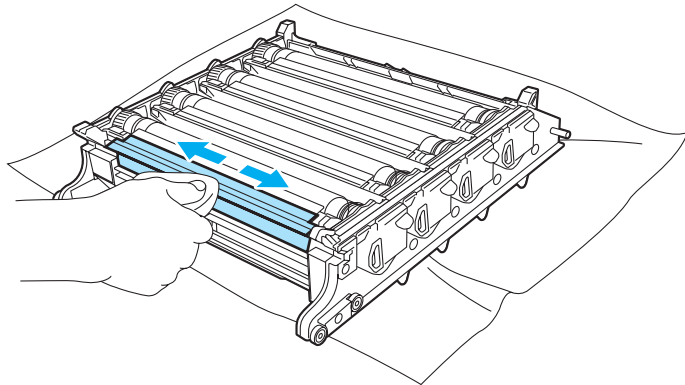
### Recommendation

#### ! CAUTION

We recommend that you place the drum unit and toner cartridges on a clean, flat surface with a piece of disposable paper underneath them in case you accidentally spill or scatter toner.

DO NOT touch the surface of the photosensitive drum.

Take all the toner cartridges out of the drum unit and turn the drum unit over. Wipe the toner on the edge of drum unit with a dry lint free soft cloth as shown in the illustration.



# Error and maintenance messages

As with any sophisticated office product, error and maintenance messages may be displayed. The most common error and maintenance messages are shown below.

Error Message	Cause	Action
Access Error	The device is removed from the USB direct interface while the data is processing.	Press <b>Stop/Exit</b> . Reinsert the device and try to print with direct print or PictBridge.
Calibrate	Calibration failed.	<p>Press <b>Mono Start</b> or <b>Colour Start</b> and try again.</p> <p>Do one of the following:</p> <ul style="list-style-type: none"> <li>■ Turn off the machine's power switch. Wait a few seconds, then turn it on again.</li> <li>■ Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Put in a new belt unit. (See <i>Replacing the belt unit</i> on page 127.)</li> <li>■ Put in a new waste toner box. (See <i>Replacing the waste toner box</i> on page 132.)</li> <li>■ If the problem continues, call your Brother dealer.</li> </ul>
Cartridge Error Put the Black (K) Toner Cartridge back in. <sup>1</sup>  <sup>1</sup> The toner cartridge colour with the problem is shown in the message.	The toner cartridge is not installed properly.	Pull out the drum unit, take out the toner cartridge that is indicated on the LCD, and put it back into the drum unit again.
Change Parts Belt Unit	It is time to replace the belt unit.	Replace the belt unit. (See <i>Replacing the belt unit</i> on page 127.)
Change Parts Drum	The drum unit is near the end of its life.	Use the drum unit until you have a print quality problem; then replace the drum unit with a new one.  (See <i>Replacing the drum unit</i> on page 120.)
	The drum unit counter was not reset when a new drum was installed.	Press <b>Menu</b> , <b>6</b> , <b>6</b> , and then <b>▲</b> or <b>▼</b> to choose <b>Drum</b> . Press <b>OK</b> and press <b>1</b> to reset the drum unit counter.
Change Parts Fuser Unit	It is time to replace the fuser unit.	Call your Brother dealer to purchase the fuser unit.
Change Parts Laser Unit	It is time to replace the laser unit.	Call your Brother dealer to purchase the laser unit.

Error Message	Cause	Action
Change Parts PF kit MP	It is time to replace the paper feeding kit for the MP tray.	Call your Brother dealer to purchase the PF Kit MP.
Change Parts PF kit 1	It is time to replace the paper feeding kit for Tray 1.	Call your Brother dealer Service to purchase the PF Kit 1.
Change Parts PF kit 2	It is time to replace the paper feeding kit for Tray 2.	Call your Brother dealer Service to purchase the PF Kit 2.
Change Parts Waste Toner Box	The waste toner box is almost full.	Be ready to replace the waste toner box. (See <i>Replacing the waste toner box</i> on page 132.)
Check Paper Size Reload correct paper.	The paper in the tray is not the correct size.	Load the correct size of paper in the tray and set the "Paper Size" ( <b>Menu, 1,2</b> ) and "Tray Use" ( <b>Menu, 1,6</b> ). (See <i>Paper size</i> on page 20, <i>Tray use in copy mode</i> on page 21, <i>Tray use in print mode</i> on page 21.)
Cooling Down Wait for a while	The temperature of the drum unit or toner cartridge is too hot. The machine will pause its current print job and go into cooling down mode. During the cooling down mode, you will hear the cooling fan running while the LCD shows <i>Cooling Down</i> , and <i>Wait for a while</i> .	<p>Make sure that you can hear the fan in the machine spinning and that the exhaust outlet isn't blocked.</p> <p>If the fan is spinning, remove any obstacles that surround the exhaust outlet, and then leave the machine turned on but do not use it for several minutes.</p> <p>If the fan is not spinning follow the suggestions below.</p> <p>Turn off the machine's power switch and then turn it on again. If the error message continues leave the machine for several minutes and then try it again.</p>
Cover is Open Close the Front Cover.	The front cover is not closed completely.	Close the front cover of the machine.
Cover is Open Close the Back Cover.	The back cover is not closed completely.	Close the back cover of the machine.
Document Jam	The document was not inserted or fed properly, or the document scanned from the ADF was too long.	See <i>Document jams</i> on page 84 or <i>Using the ADF (automatic document feeder)</i> on page 18.
Drum Error	The corona wires on the drum unit need to be cleaned.	Clean the four corona wires on the drum unit. (See <i>Cleaning the corona wires</i> on page 102.)
EL Error	The machine has a mechanical problem.	Open the front cover and close it again.
Fuser Error	The temperature of fuser unit does not rise at a specified temperature within specified time.	Turn the power switch off, wait a few seconds, and then turn it on again. Leave the machine for 15 minutes with the power on.
	The fuser unit is too hot.	

Error Message	Cause	Action
Init Unable XX	The machine has a mechanical problem.	Turn off the machine's power switch and then turn it on again. If the error message continues leave the machine for several minutes and then try to print, copy or scan again.
Jam Duplex	The paper is jammed in the duplex unit.	(See <i>Paper jams</i> on page 85.)
Jam Rear	The paper is jammed in the back of the machine.	(See <i>Paper jams</i> on page 85.)
Jam Inside	The paper is jammed inside the machine.	(See <i>Paper jams</i> on page 85.)
Jam MP Tray	The paper is jammed in the MP tray of the machine.	(See <i>Paper jams</i> on page 85.)
Jam Tray 1 Jam Tray 2	The paper is jammed in the paper tray of the machine.	(See <i>Paper jams</i> on page 85.)
Low Temperature	The temperature of the machine is too cold.	Increase room temperature to allow the machine to operate.
No Belt Unit	The belt unit is not installed.	Install the belt unit. (See <i>Replacing the belt unit</i> on page 127.)
No Drum Unit	The drum unit is not installed.	Install the drum unit. (See <i>Replacing the drum unit</i> on page 120.)
No Paper	The machine is out of paper or paper is not properly loaded in the paper tray.	Do one of the following: <ul style="list-style-type: none"> <li>■ Refill the paper in the paper tray or MP tray.</li> <li>■ Remove the paper and load it again.</li> </ul>
No Tray	The paper tray is not completely closed.	Close the paper tray properly.
No Waste Toner	The waste toner box is not installed.	Install the waste toner box. (See <i>Replacing the waste toner box</i> on page 132.)
Out of Memory	The machine's memory is full.	<p><b>Copy operation in progress</b></p> <p>Do one of the following:</p> <ul style="list-style-type: none"> <li>■ Press <b>Mono Start</b> or <b>Colour Start</b> to copy the scanned pages.</li> <li>■ Press <b>Stop/Exit</b> and wait until the other operations in progress finish, and then try again.</li> </ul> <p><b>Print operation in process</b></p> <ul style="list-style-type: none"> <li>■ Reduce print resolution. (See <i>Advanced tab in the Software User's Guide on the CD-ROM</i>.)</li> <li>■ Clear the data from the memory by pressing <b>Job Cancel</b>.</li> </ul>

Error Message	Cause	Action
Print Unable XX	The machine has a mechanical problem.	Turn off the machine's power switch and then turn it on again. If the error message continues leave the machine for several minutes and then try to print, copy or scan again.
Protected Device	The protect switch of the USB flash memory drive is on.	Turn off the protect switch of the USB flash memory drive.
Registration	Registration failed.	<p>Press <b>Mono Start</b> or <b>Colour Start</b> and try it again.</p> <p>Do one of the following:</p> <ul style="list-style-type: none"> <li>■ Try Manual Registration, <b>Menu, 3, 8</b>. (See <i>Manual Registration in the Software User's Guide on the CD-ROM</i>.)</li> <li>■ Put in a new belt unit. (See <i>Replacing the belt unit</i> on page 127.)</li> <li>■ Put in a new drum unit. (See <i>Replacing the drum unit</i> on page 120.)</li> <li>■ Replace the empty toner cartridge with a new one. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ Turn off the machine's power switch. Wait a few seconds, then turn it on again.</li> <li>■ If the problem continues, call your Brother dealer.</li> </ul>
Rename the File	There is already a file on the USB flash memory drive with the same name as the file you are trying to save.	Change the file name of the file on the USB flash memory drive or the file you are trying to save.
Scan Unable XX	The machine has a mechanical problem.	Turn off the machine's power switch and then turn it on again. If the error message continues leave the machine for several minutes before you try it again.
	Document is too long for duplex scanning.	Press <b>Stop/Exit</b> . Use a suitable size of paper for duplex scanning. (See <i>Scan</i> on page 164.)
Scanner Locked	The scanner lock is locked.	<p>Open the document cover, and then release the scanner lock lever.</p> <p>Press <b>Stop/Exit</b>.</p>

Error Message	Cause	Action
<p>Toner Life End Replace Black(K) Toner Cartridge. <sup>1</sup></p> <p><sup>1</sup> The toner cartridge colour which is used up is shown in the message.</p>	<p>The drum unit and toner cartridges assembly is not installed properly, or one or more of the toner cartridges are used up and printing is not possible.</p>	<p>Do one of the following:</p> <ul style="list-style-type: none"> <li>■ Re-install the toner cartridges and drum unit assembly.</li> <li>■ Replace the empty toner cartridge with a new one. (See <i>Replacing a toner cartridge</i> on page 115.)</li> <li>■ If one of the colour toner cartridges is empty, choose <b>Mono</b> in the printer driver to be able to continue printing in monochrome.</li> </ul>
<p>Toner Low Prepare New Black(K) Toner Cartridge. <sup>1</sup></p> <p><sup>1</sup> The toner cartridge colour which is near the end of life is shown in the message.</p>	<p>If the LCD shows <b>Toner Low</b>, you can still print; however, the machine is telling you that the toner cartridge is near the end of its life and the toner will soon run out.</p>	<p>Order a new toner cartridge now for the toner cartridge colour that is low.</p>
<p>Too Many Files</p>	<p>There are too many files stored on the USB flash memory drive</p>	<p>Reduce the number of files stored on the USB flash memory drive.</p>
<p>Unusable Device</p>	<p>An incompatible or broken device has been connected to the USB direct interface.</p>	<p>Remove the USB flash memory drive from the USB direct interface. Turn off the machine's power switch, wait a few seconds and turn it on again.</p>
<p>Waste Toner Full</p>	<p>It is time to replace the waste toner box.</p>	<p>Replace the waste toner box. (See <i>Replacing the waste toner box</i> on page 132.)</p>
<p>Wrong Paper Size</p>	<p>The paper in the tray is not the correct size or the tray is empty.</p>	<p>Load the correct size of paper in the tray.</p>

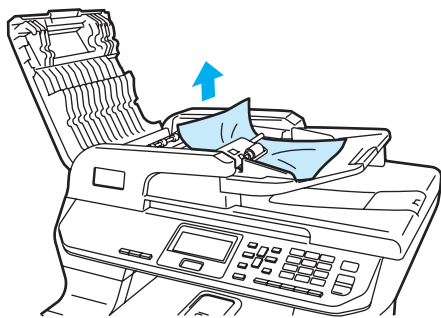
## Document jams

If the document is jammed, follow the steps below.

### Document is jammed in the top of the ADF unit

The document may get jammed if it is not inserted or fed properly, or if it is too long. Follow the steps below to clear a document jam.

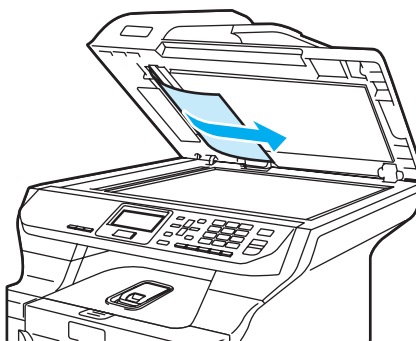
- 1 Take out any paper from the ADF that is not jammed.
- 2 Open the ADF cover.
- 3 Pull the jammed document out to the left.



- 4 Close the ADF cover.
- 5 Press **Stop/Exit**.

### Document is jammed under the document cover

- 1 Take out any paper from the ADF that is not jammed.
- 2 Lift the document cover.
- 3 Pull the jammed document out to the right.



- 4 Close the document cover.
- 5 Press **Stop/Exit**.

### Document is jammed at the output tray

- 1 Take out any paper from the ADF that is not jammed.
- 2 Pull the jammed document out to the right.

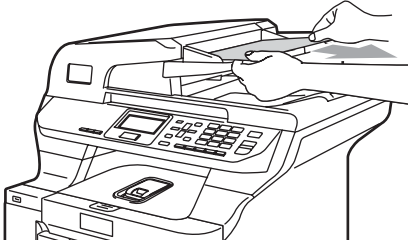


- 3 Press **Stop/Exit**.



## Document is jammed in the duplex slot

- 1 Take out any paper from the ADF that is not jammed.
- 2 Pull the jammed document out to the right.



- 3 Press **Stop/Exit**.

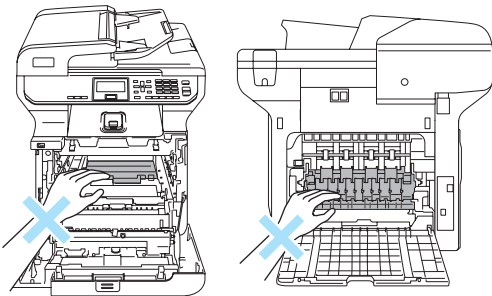
## Paper jams

To clear paper jams, please follow the steps in this section.



### HOT SURFACE

After you have just used the machine, some internal parts of the machine will be extremely hot. When you open the front or back cover of the machine, DO NOT touch the shaded parts shown in the illustration.



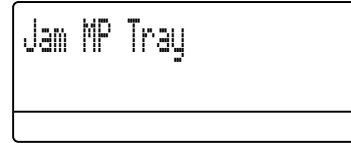
### Note

The LCD names for the paper trays are as follows:

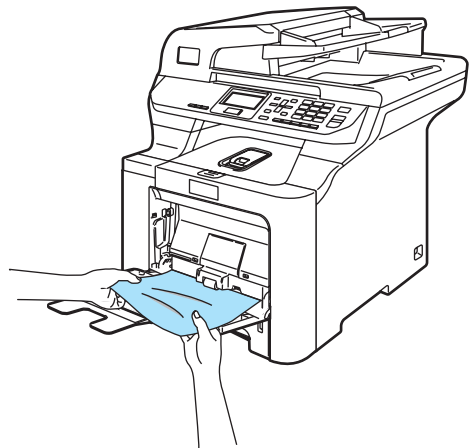
- Standard paper tray: Tray 1
- Optional lower tray: Tray 2
- Multi-purpose tray: MP Tray

## Paper is jammed in the MP tray

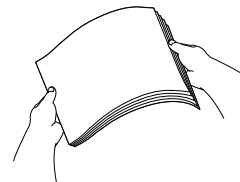
If the LCD shows **Jam MP Tray**, follow these steps:



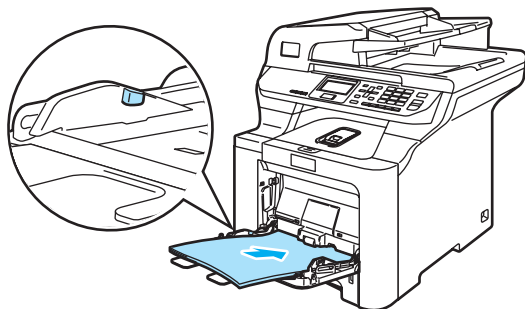
- 1 Remove the paper from the MP tray.
- 2 Remove any jammed paper from in and around the MP tray.



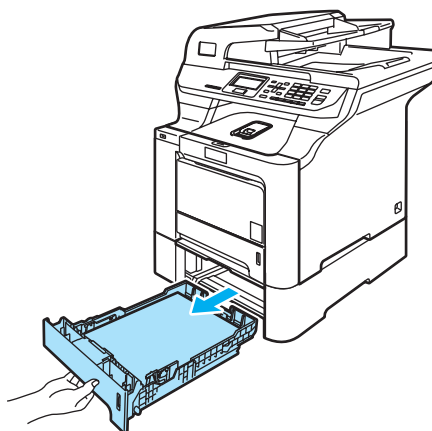
- 3 Close the MP tray. Then, open the front cover and close it to reset the machine. Open the MP tray again.
- 4 Fan the paper stack, and then put it back in the MP tray.



- 5 When loading paper in the MP tray, make sure that the paper stays under the maximum paper height guides on both sides of the tray.

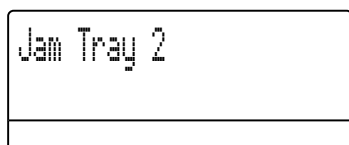
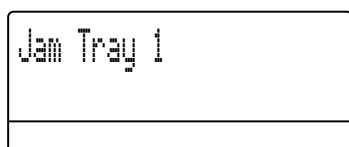


For Jam Tray 2:



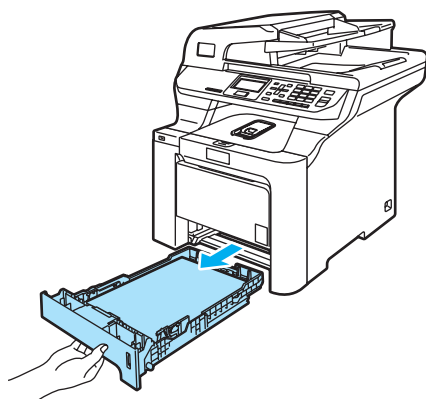
## Paper is jammed in Paper Tray 1 or Tray 2

If the LCD shows Jam Tray 1 or Jam Tray 2, follow these steps:

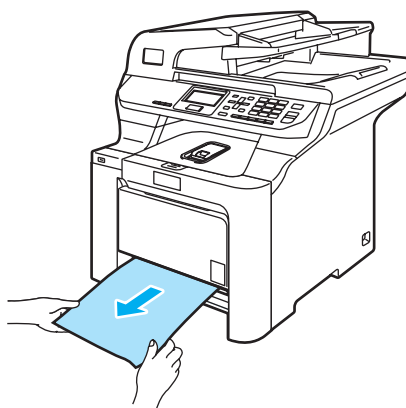


- 1 Pull the paper tray completely out of the machine.

For Jam Tray 1:



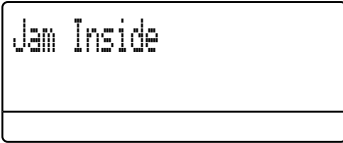
- 2 Use both hands to slowly pull out the jammed paper.



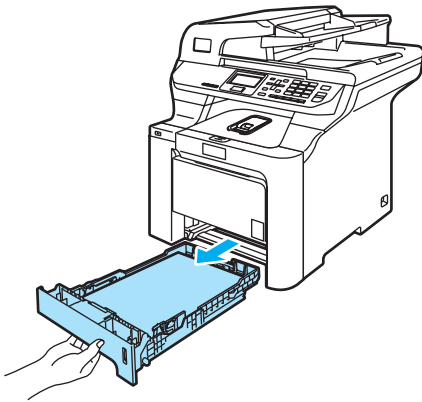
- 3 Make sure the paper is below the maximum paper mark. While pressing the green paper-guide release lever, slide the paper guides to fit the paper size. Make sure that the guides are firmly in the slots.
- 4 Put the paper tray firmly back in the machine.

## Paper is jammed inside the machine

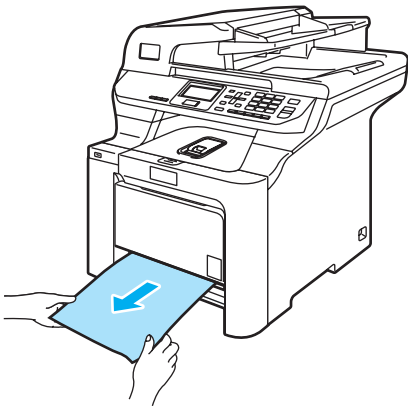
If the LCD shows **Jam Inside**, follow these steps:



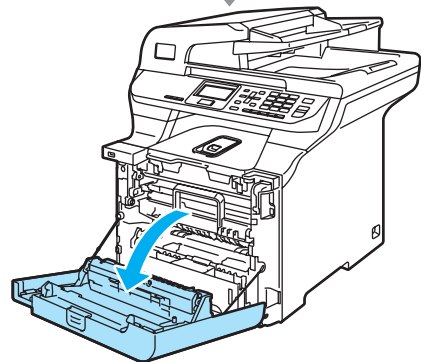
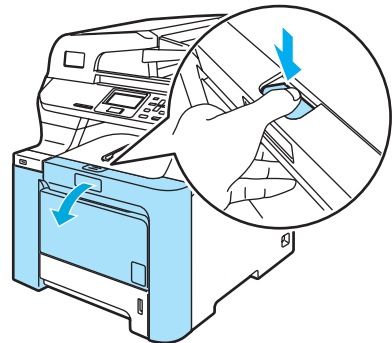
- 1 Pull the paper tray completely out of the machine.



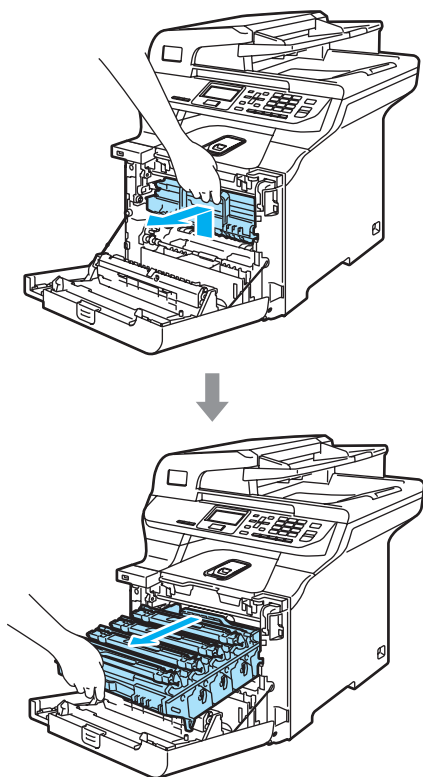
- 2 Use both hands to slowly pull out the jammed paper.



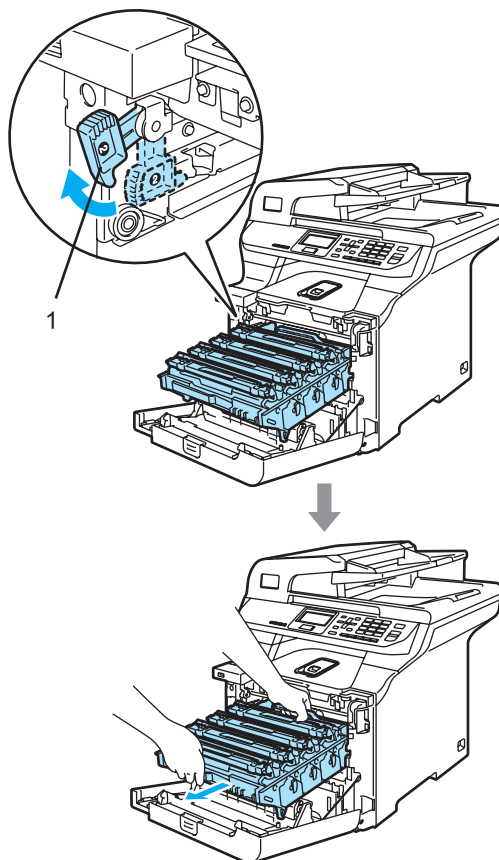
- 3 Press the front cover release button and then open the front cover.



- 4 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



- 5 Release the grey lock lever (1) that is on the left side of the machine. Lift the front of the drum unit up and pull the drum unit completely out of the machine using the green handles on the drum unit.

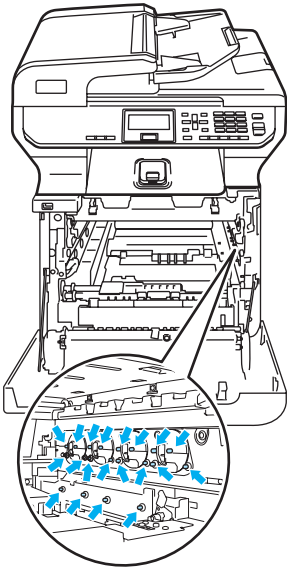


## ! CAUTION

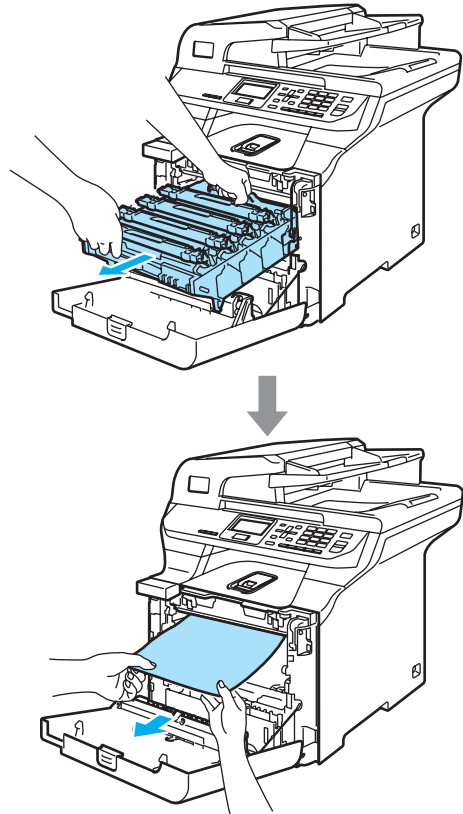
Make sure that you use the drum unit handles when carrying it. DO NOT hold the sides of the drum unit.

We recommend that you place the drum unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.

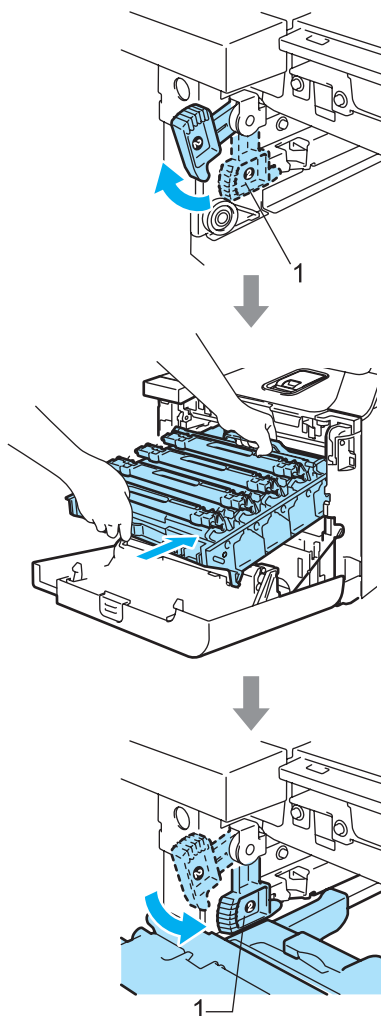


- 6 The jammed paper may be pulled out with the toner cartridge and drum unit assembly, or this may release the paper so you can pull it out of the paper tray opening.



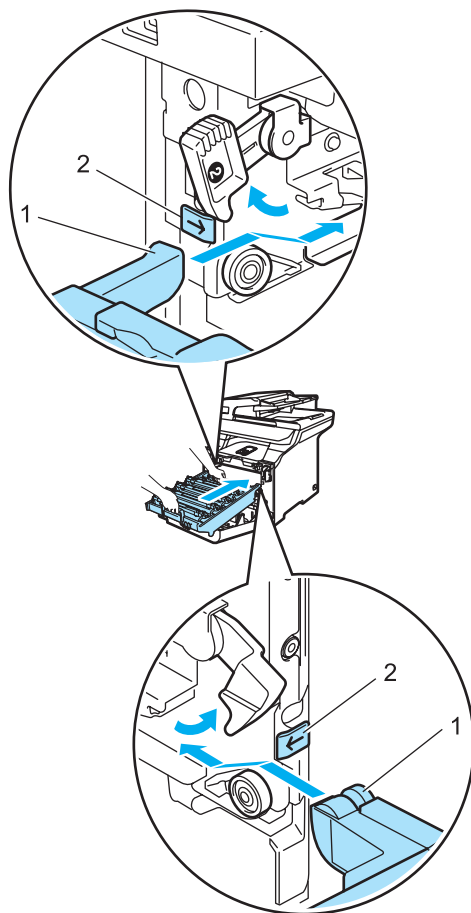
- 7** Put the drum unit back in the machine as follows.

- 1** Make sure that the grey lock lever (1) is in the up position and put the drum unit in the machine. Push down the grey lock lever (1).

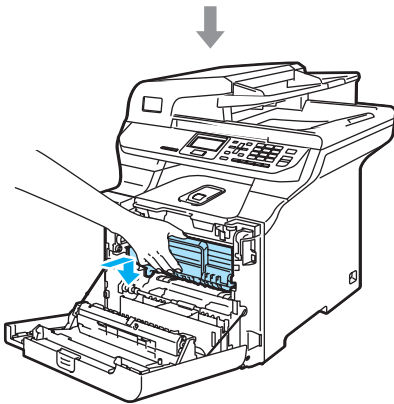
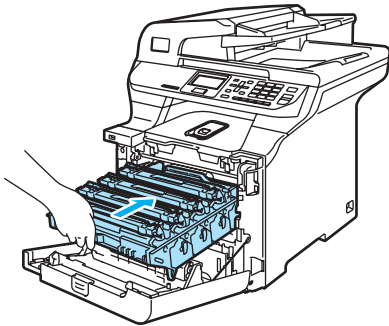


#### Note

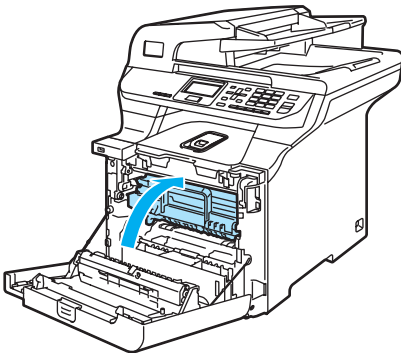
When you put the drum unit in the machine, match the green guides (1) of the drum unit handle to the green arrows (2) on both sides of the machine.



- 2 Push the drum unit in until it stops.



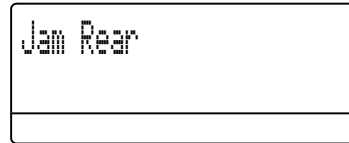
- 8 Close the front cover of the machine.



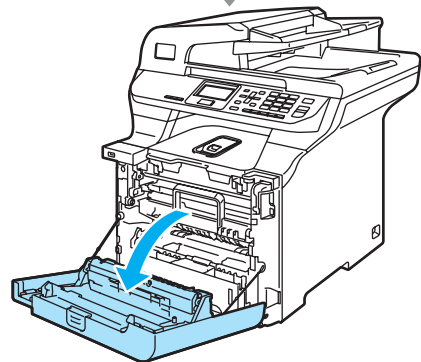
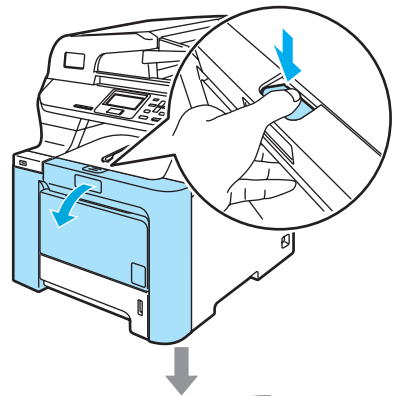
- 9 Put the paper tray firmly back in the machine.

## Paper is jammed at the back of the machine

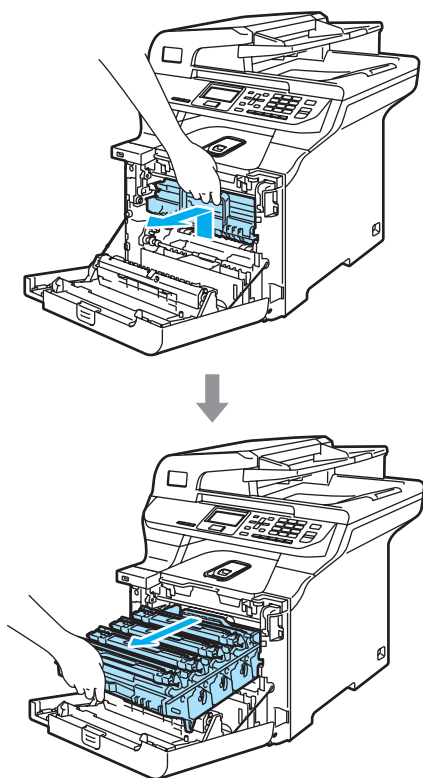
If the LCD shows Jam Rear, follow these steps:



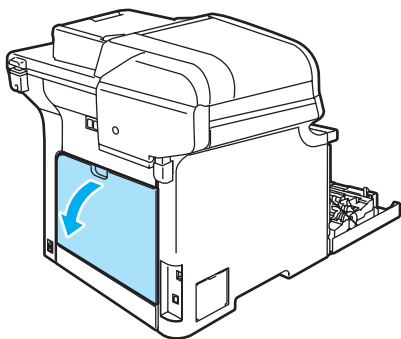
- 1 Press the cover release lever to open the front cover.



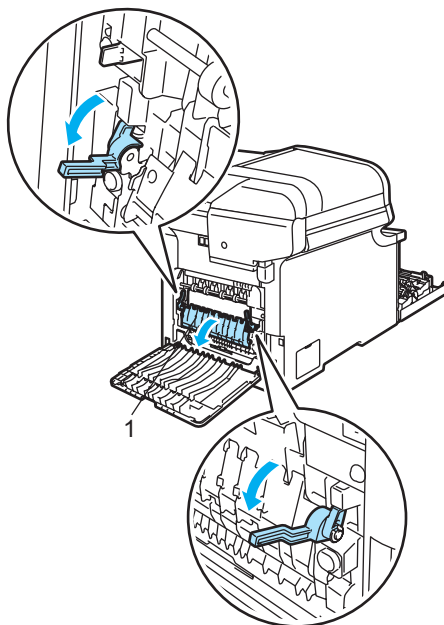
- 2 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



- 3 Open the back cover.

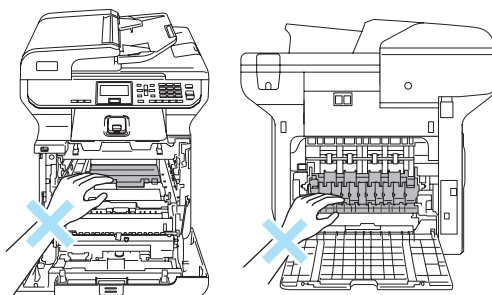


- 4 Pull down the two green levers, one on the left-hand-side and one on the right-hand-side, as shown in the illustration below, and then fold down the fuser cover (1).



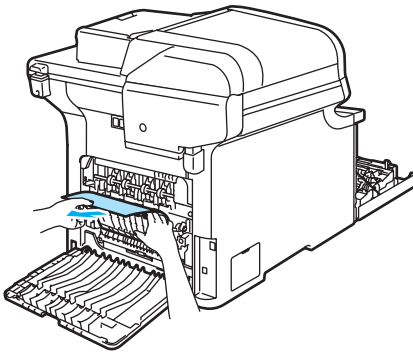
#### HOT SURFACE

After you have just used the machine, some internal parts of the machine will be extremely hot. When you open the front or back cover of the machine, DO NOT touch the shaded parts shown in the illustration.

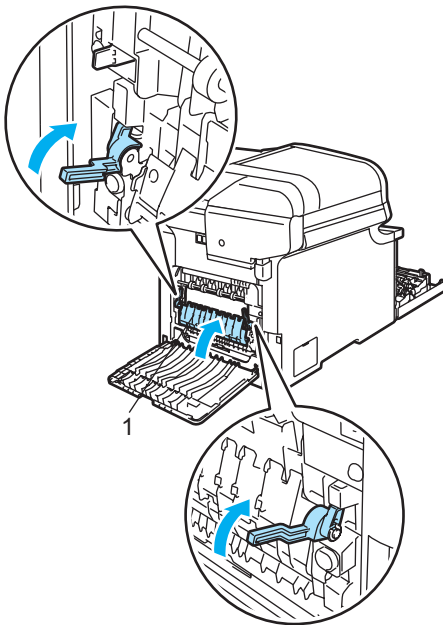




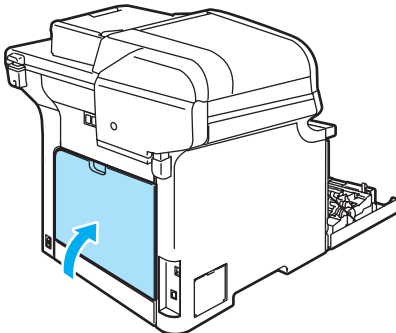
- 5 Using both hands, gently pull the jammed paper out of the fuser unit.



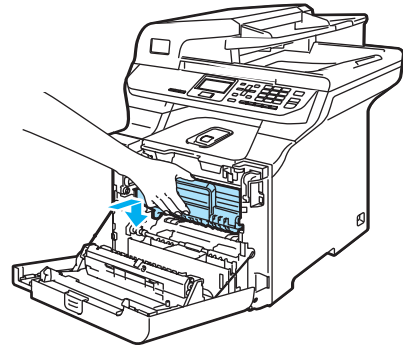
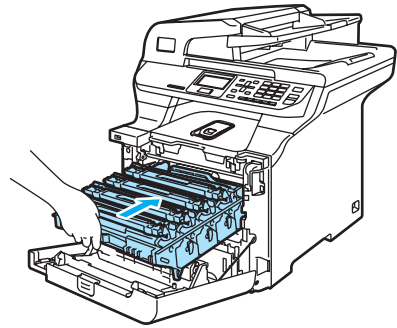
- 6 Close the fuser cover (1) and lift the two green levers at the left and right hand sides.



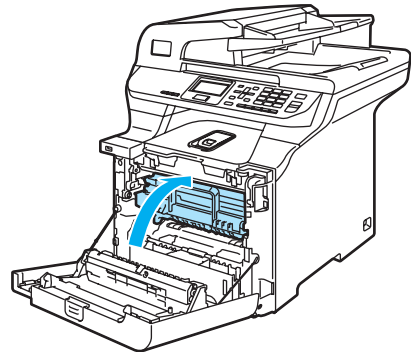
- 7 Close the back cover.



- 8 Put the drum unit and toner cartridge assembly back in the machine.

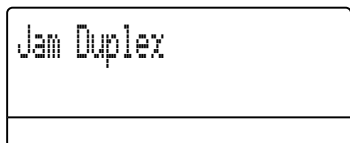


- 9 Close the front cover of the machine.

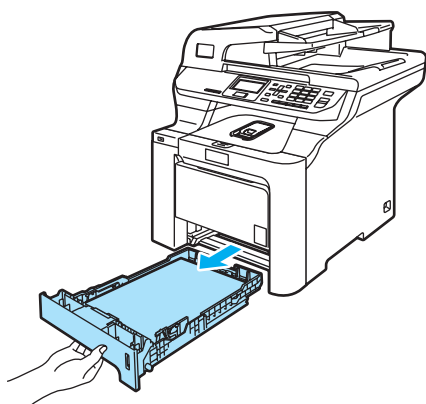


## Paper is jammed underneath Paper Tray 1 or in the fuser unit

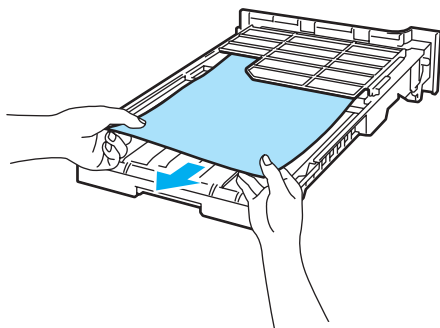
If the LCD shows Jam Duplex, follow these steps:



- 1 Pull the paper tray completely out of the machine and check inside the machine.



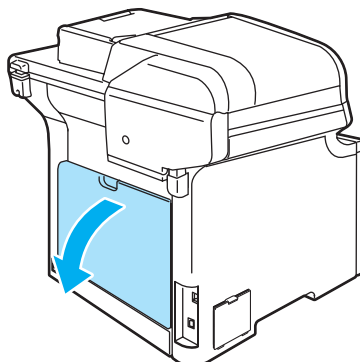
- 2 If paper is not caught inside the machine, check underneath the paper tray.



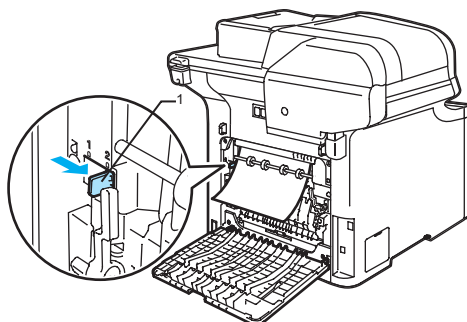
### Note

DO NOT put the paper tray back in at this point.

- 3 If the paper is not caught in the paper tray, open the back cover.

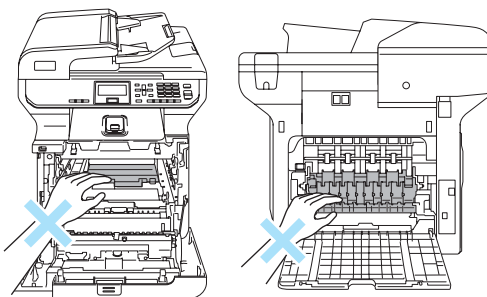


- 4 Push the grey lever on the left hand side (1) to the right.

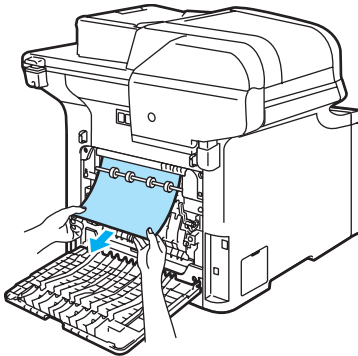


### HOT SURFACE

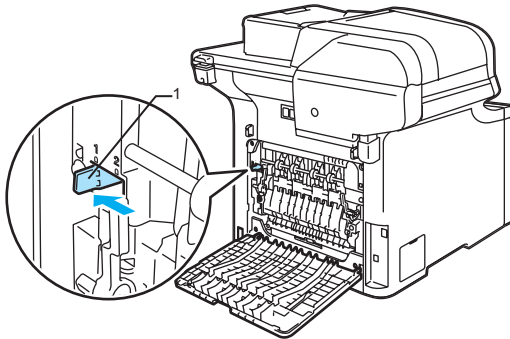
After you have just used the machine, some internal parts of the machine will be extremely hot. When you open the front or back cover of the machine, DO NOT touch the shaded parts shown in the illustration.



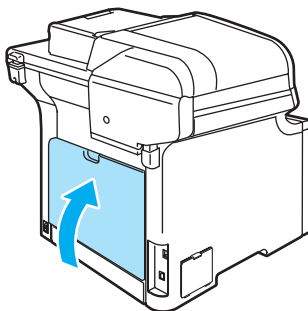
- 5 Pull out the jammed paper slowly.



- 6 Reset the grey lever on the left hand side (1) back to the original position.



- 7 Close the back cover.



- 8 Put the paper tray firmly back in the machine.

## Routine maintenance

### ! CAUTION

The drum unit contains toner, so handle it carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

## Cleaning the outside of the machine

### ! CAUTION

Use neutral detergents. Cleaning with volatile liquids such as thinner or benzene will damage the outside surface of the machine.

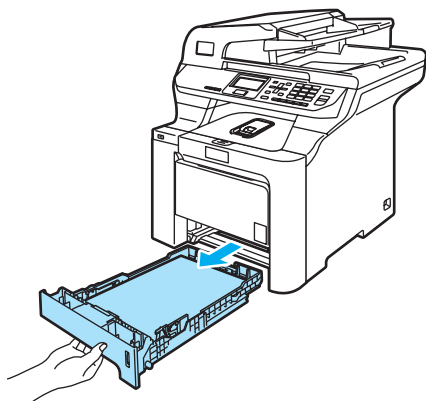
DO NOT use cleaning materials that contain ammonia.

DO NOT use isopropyl alcohol to remove dirt from the control panel. It may crack the panel.

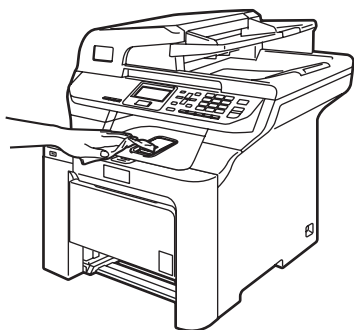
DO NOT use flammable substances or any type of spray to clean the inside or outside of the machine. Doing this may cause a fire or electrical shock. (For more information, See *Important safety instructions* on page 54.)

## Clean the outside of the machine as follows:

- 1 Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the electrical socket.
- 2 Pull the paper tray completely out of the machine.

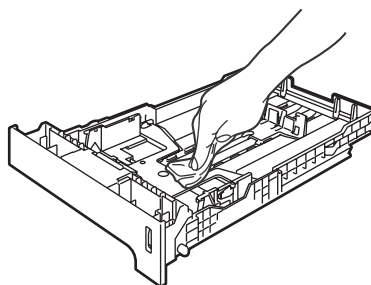


- 3 Wipe the outside of the machine with a dry, lint-free cloth to remove dust.



- 4 Remove anything that is stuck inside the paper tray.

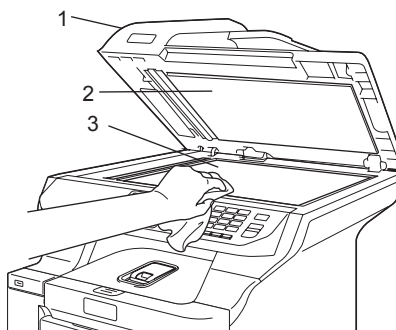
- 5 Wipe the inside of the paper tray with a dry, lint-free cloth to remove dust.



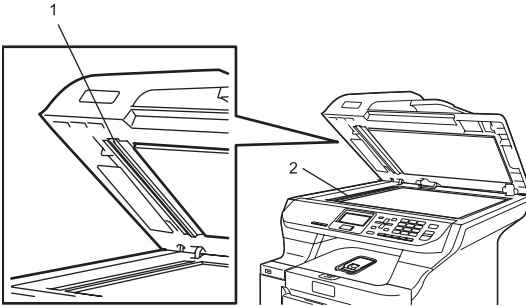
- 6 Re-load the paper and put the paper tray firmly back in the machine.
- 7 Plug the machine's power cord back into the AC electrical socket first, and reconnect all cables. Turn the machine's power switch.

## Cleaning the scanner

- 1 Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the AC electrical socket.
- 2 Lift the document cover (1). Clean the white plastic surface (2) and scanner glass (3) underneath it with a soft lint-free cloth moistened with a non-flammable glass cleaner.



- 3 In the ADF unit, clean the white bar (1) and the scanner glass strip (2) underneath it with a soft lint-free cloth moistened with a non-flammable glass cleaner.



### Note

In addition to cleaning the scanner glass and glass strip with a non-flammable glass cleaner, run your finger tip over the glass strip to see if you can feel anything on it. If you feel dirt or debris, clean the glass strip again concentrating on that area. You may need to repeat the cleaning process three or four times. To test, make a copy after each cleaning.

- 4 Plug the machine's power cord back into the AC electrical socket first, and reconnect all cables. Turn on the machine's power switch.

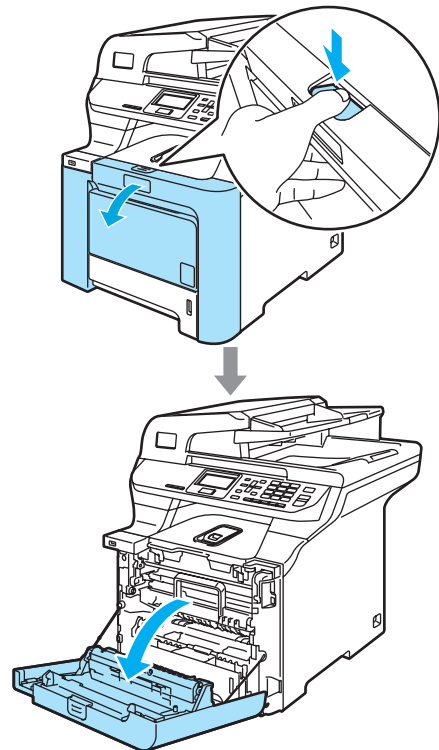
## Cleaning the laser scanner windows

### ! CAUTION

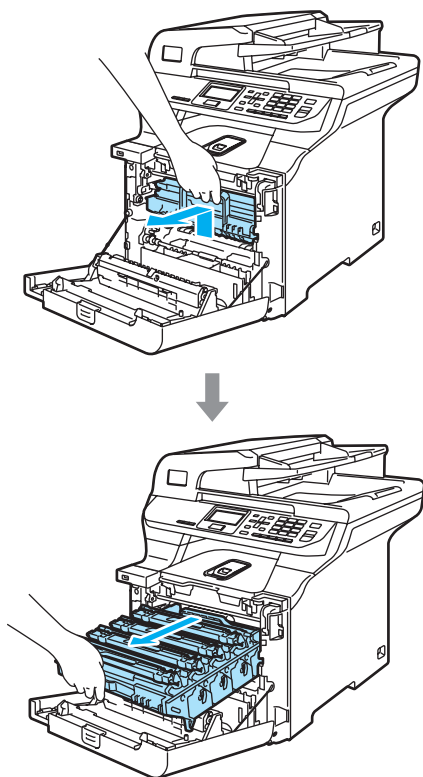
DO NOT use isopropyl alcohol to clean the laser scanner windows.

DO NOT touch the laser scanner windows with your fingers.

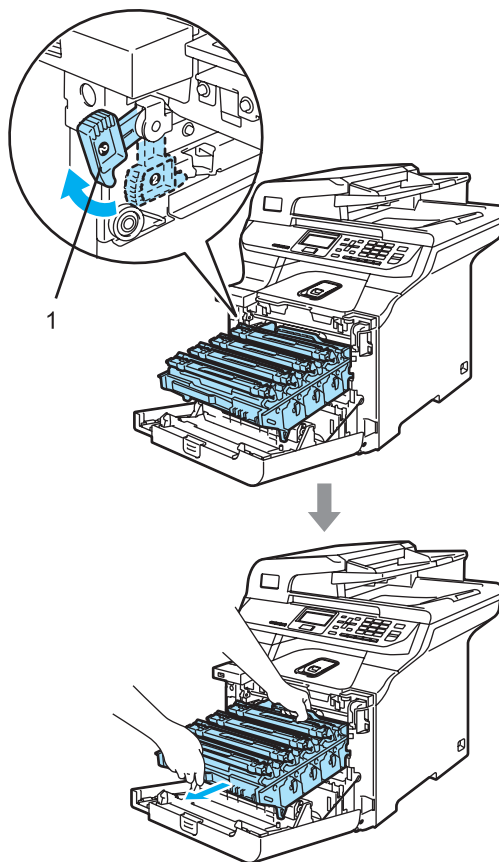
- 1 Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the electrical socket.
- 2 Press the front cover release button and then open the front cover.



- 3 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



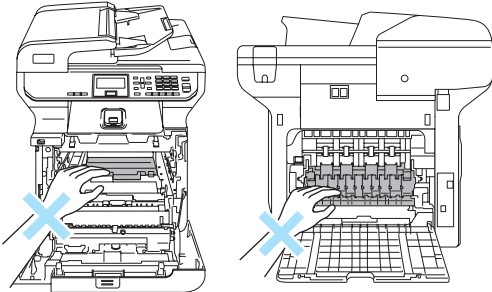
- 4 Release the grey lock lever (1) that is on the left side of the machine. Lift the front of the drum unit and pull the drum unit completely out of the machine using the green handles on the drum unit.





## HOT SURFACE

After you have just used the machine, some internal parts of the machine will be extremely hot. When you open the front cover of the machine, DO NOT touch the shaded parts shown in the illustration.

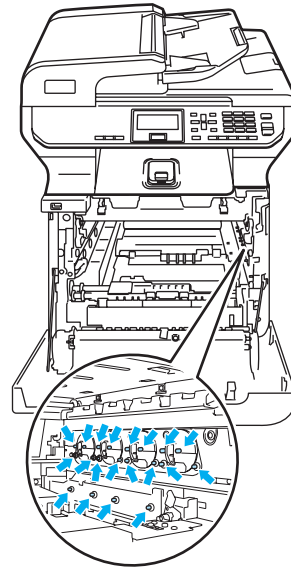


## CAUTION

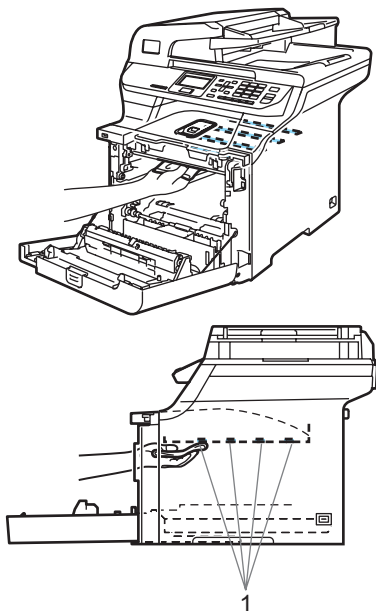
Make sure that you use the drum unit handles when carrying it. DO NOT hold the sides of the drum unit.

We recommend that you place the drum unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.

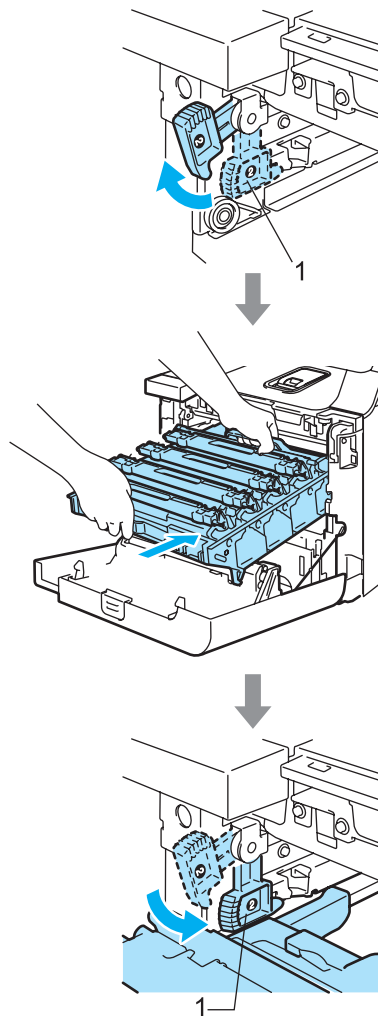


- 5** Wipe the scanner windows (1) with a dry, lint-free cloth.



- 6** Put the drum unit back in the machine as follows.

- 1** Make sure that the grey lock lever (1) is in the up position and put the drum unit in the machine. Push down the grey lock lever (1).

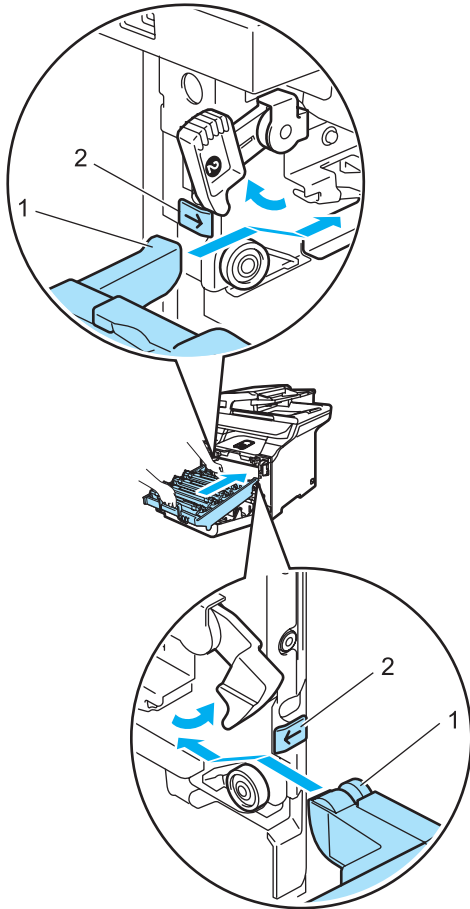




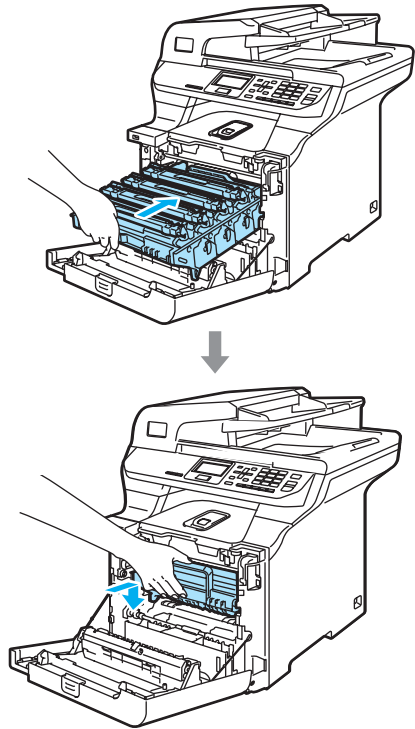


## Note

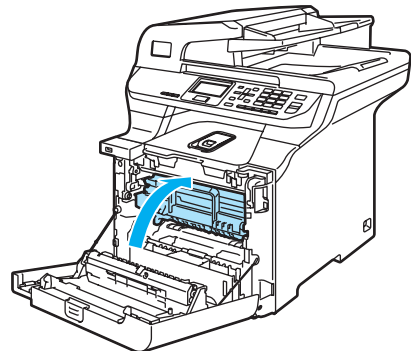
When you put the drum unit in the machine, match the green guides (1) of the drum unit handle to the green arrows (2) on both sides of the machine.



- 2 Push the drum unit in until it stops.



- 7 Close the front cover of the machine.

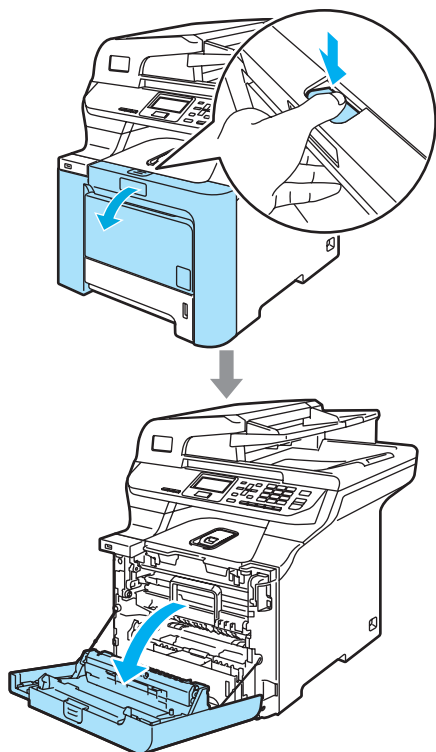


- 8 Plug the machine's power cord back into the AC electrical socket first, and reconnect all cables. Turn on the machine's power switch.

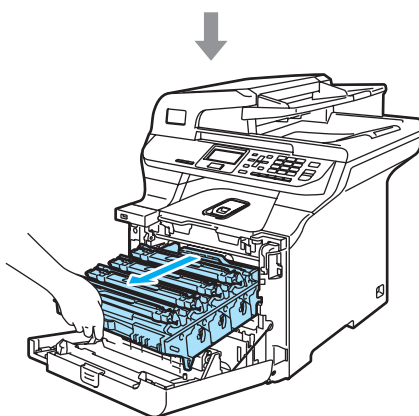
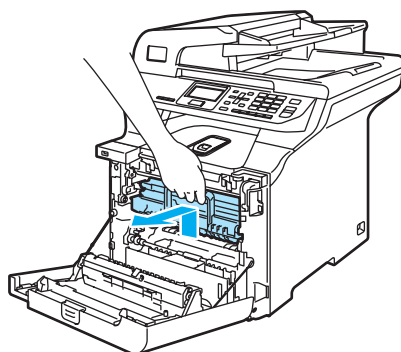
## Cleaning the corona wires

If you have print quality problems, clean the corona wires as follows:

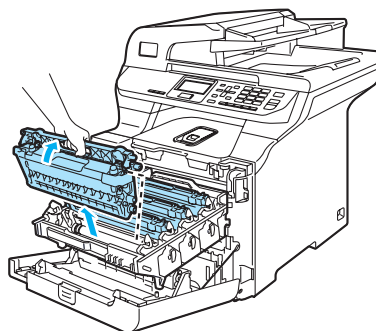
- 1 Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the electrical socket.
- 2 Press the front cover release button and then open the front cover.



- 3 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



- 4 Using their coloured handles to lift them out, remove all four toner cartridges from the drum unit.



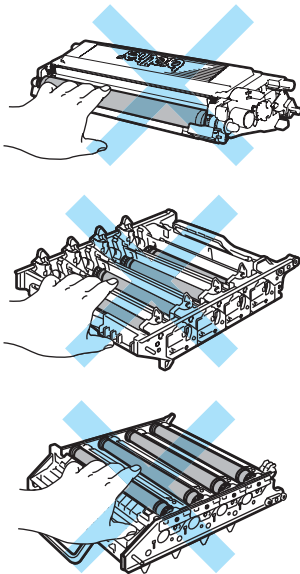
## ! CAUTION

We recommend that you place the toner cartridges on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

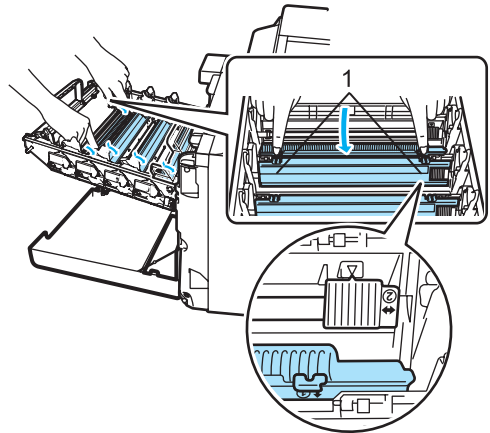
DO NOT put a toner cartridge into a fire. It could explode, resulting in injuries.

Handle the toner cartridges carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.

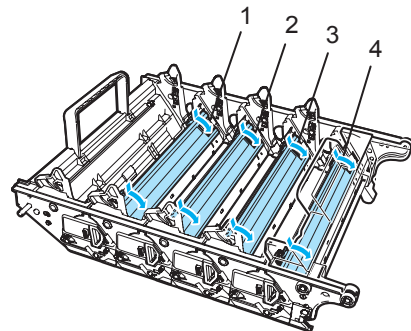


- 5 Unclip and fold back the white corona wire cover(1).



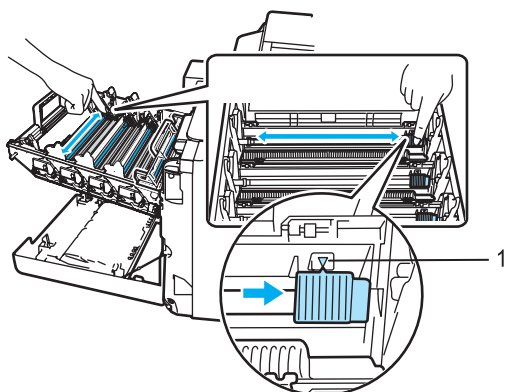
## Note

We recommended that you clean the corona wire for each of the colours. If you want to clean only the corona wire of the colour that caused the print quality problem, see the illustration below to identify the position of each of the corona wires.



- 1 Corona wire cover for Black (K)
- 2 Corona wire cover for Yellow (Y)
- 3 Corona wire cover for Magenta (M)
- 4 Corona wire cover for Cyan (C)

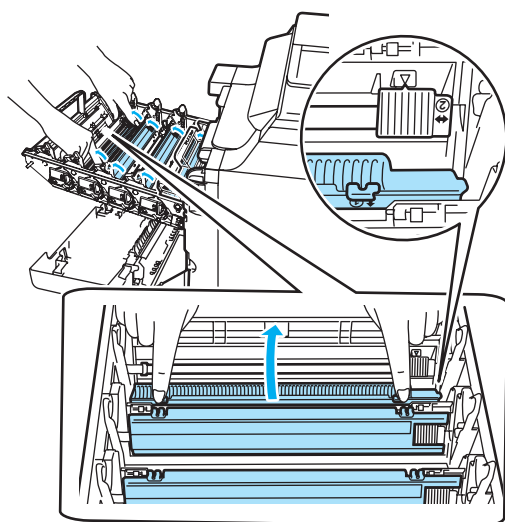
- 6 Clean the corona wire inside the drum unit by gently sliding the green tab from left to right and right to left several times.



### ! CAUTION

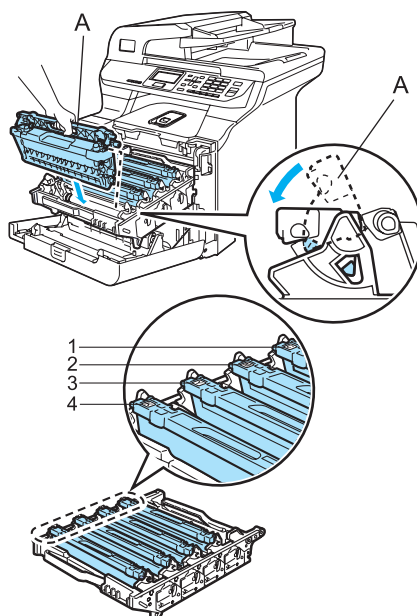
Be sure to return the tab to the home position (▼) (1). If you do not, printed pages may have a vertical stripe.

- 7 Close the corona wire cover.



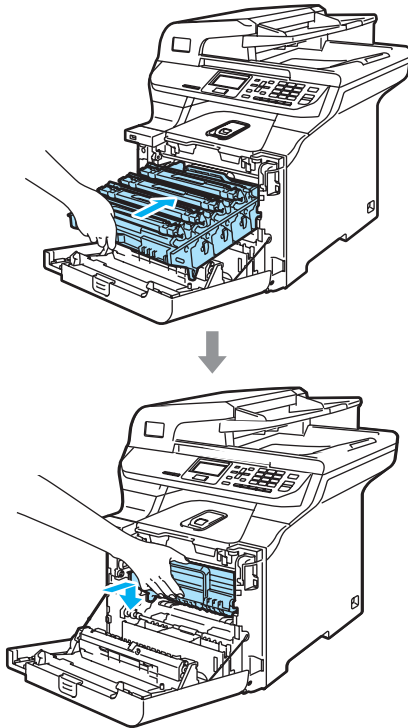
- 8 Repeat 5 to 7 to clean each of the remaining corona wires. There are four corona wires in total.

- 9 Holding the toner cartridges by their coloured handles, insert them one by one back into the drum units as shown. Make sure that you match the toner cartridge colour to the same colour label on the drum unit, and make sure that you fold down the toner cartridge handle (A) once the toner cartridge is in place. Repeat this for all the toner cartridges.

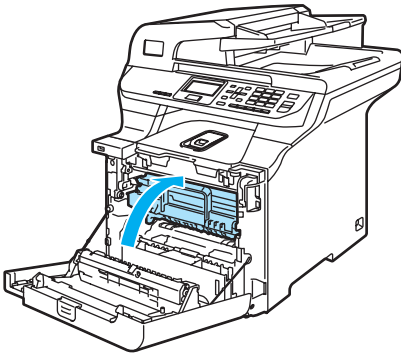


- 1 C - Cyan
- 2 M - Magenta
- 3 Y - Yellow
- 4 K - Black

- 10 Push the drum unit in until it stops.



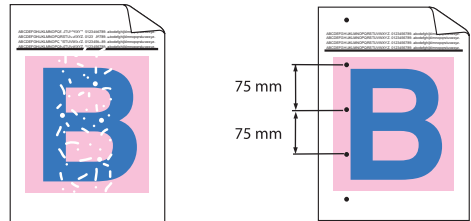
- 11 Close the front cover of the machine.



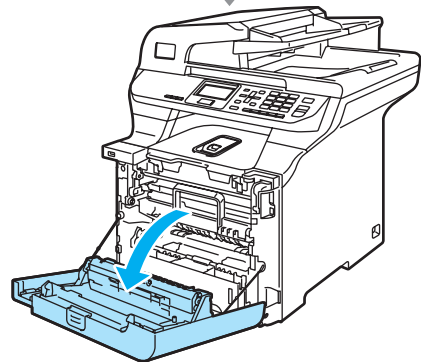
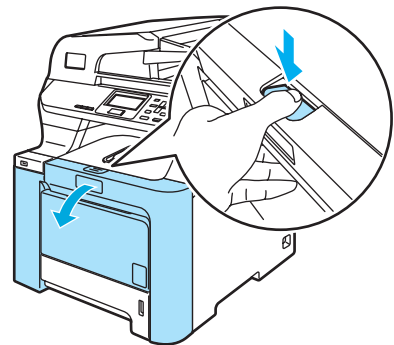
- 12 Plug the machine's power cord back into the AC electrical socket first, and reconnect all cables. Turn on the machine's power switch.

## Cleaning the drum unit

If you have print quality problems caused by repeating marks on the pages, clean the drum unit as follows.

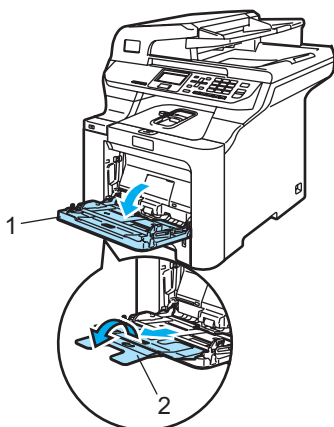


- 1 Press the front cover release button and then open the front cover.



- 2 Close the front cover of the machine. The machine starts warming up, wait until it finishes warming up before going on to step 3.

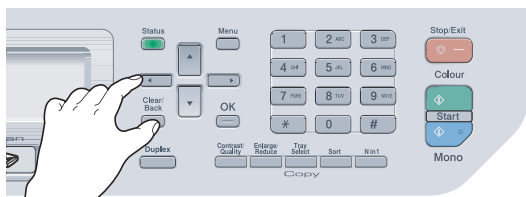
- 3 Pull out the MP tray (1) and unfold the MP tray support flap (2).



- 4 Put a blank sheet of A4 or Letter sized paper in the MP tray.

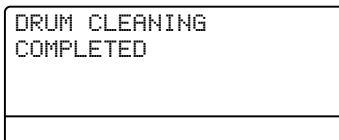


- 5 While pressing and holding down **Clear/Back** press ◀ until **DRUM CLEANING** is displayed on the LCD.

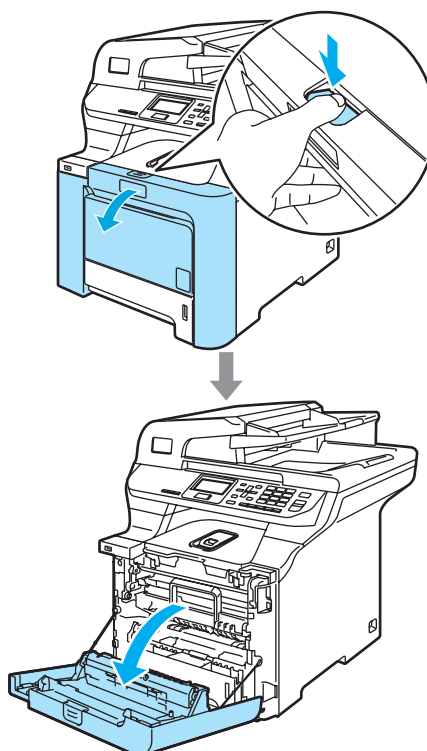


- 6 Press **Mono Start** or **Colour Start**. The paper will feed into the machine to start the drum cleaning.

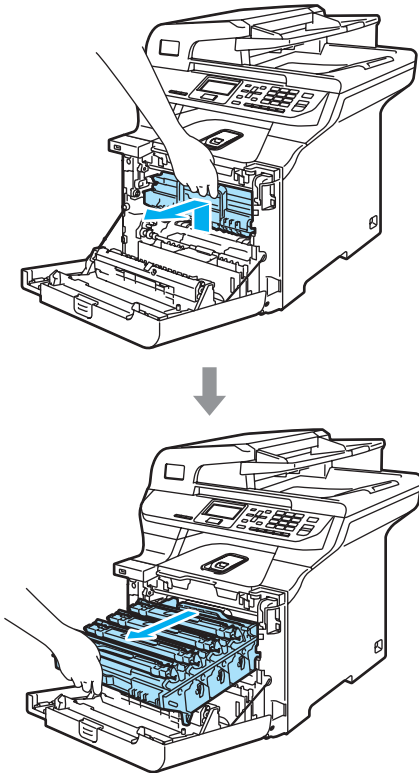
- 7 The following message appears on the LCD when the machine has finished cleaning.



- 8 Press **Stop/Exit** so that the machine returns to the Ready state.
- 9 Try to print again. If this problem still remains, repeat steps 3 to 8 several times.  
If the problem still remains after repeating step 3 to 8 several times, go to step 10.
- 10 Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the electrical socket.
- 11 Press the front cover release button and then open the front cover.

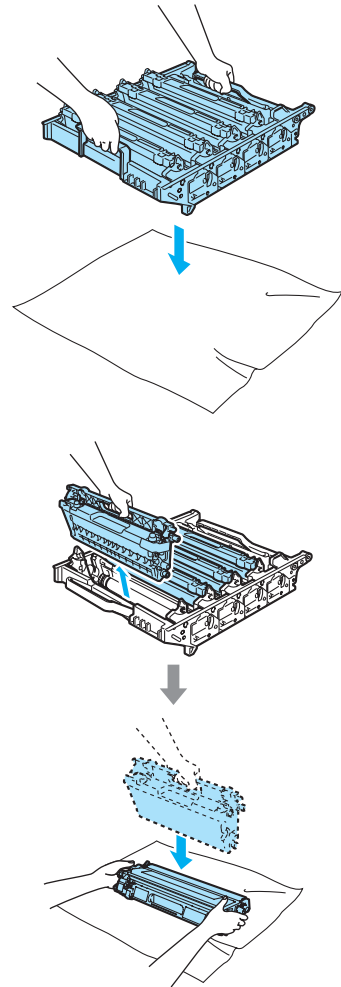


- 12 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



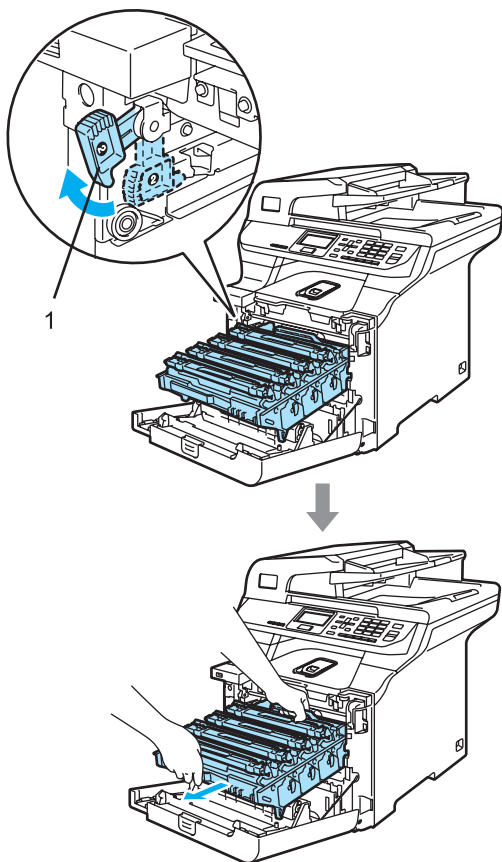
**! CAUTION**

We recommend that you place the drum unit and toner cartridges on a clean, flat surface with a piece of disposable paper underneath them in case you accidentally spill or scatter toner.



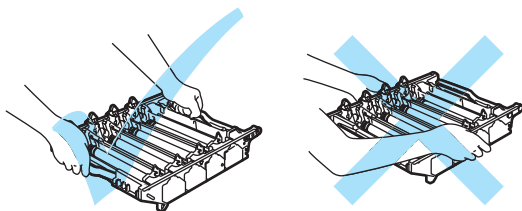


- 13 Release the grey lock lever (1) that is on the left side of the machine. Lift the front of the drum unit and pull the drum unit completely out of the machine using the green handles on the drum unit.

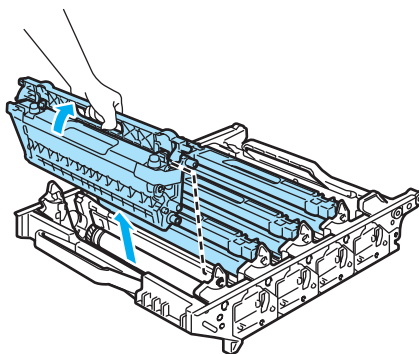


**! CAUTION**

Make sure that you use the drum unit handles when carrying it. DO NOT hold the sides of the drum unit.

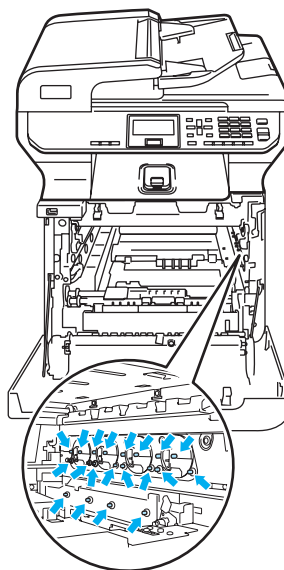


- 14 Hold the handle of the toner cartridge and pull it out of the drum unit. Repeat this for all of the toner cartridges.



**! CAUTION**

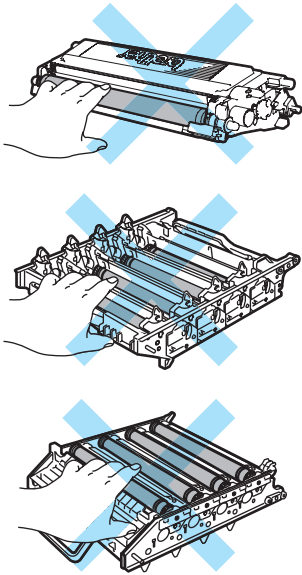
To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.



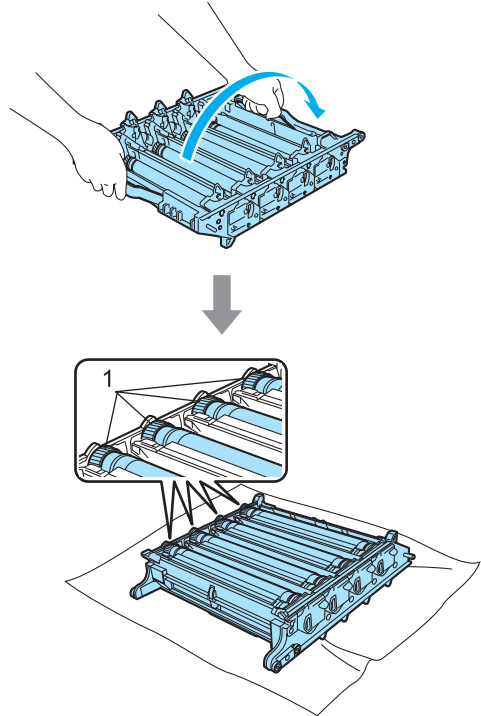
Handle the toner cartridges carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.



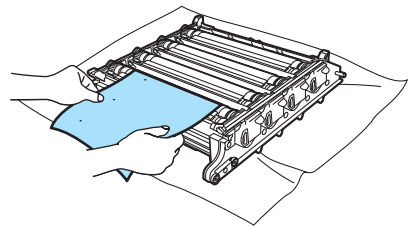
To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.



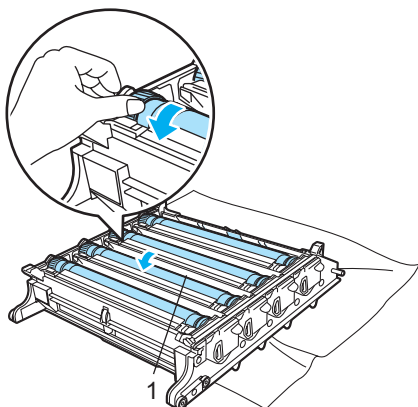
- 15 While holding both hands, turn the drum unit upside down and place on a piece of disposable paper or cloth. Make sure that the drum unit gears (1) are on your left hand side.



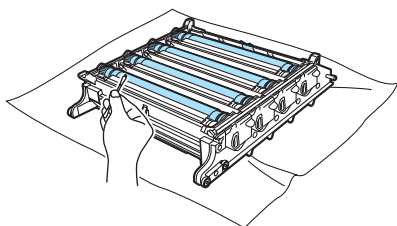
- 16 See the print sample to identify the colour causing the problem. The colour of the spots or toner stain is the colour of the drum you should clean. For example, if the spots are cyan, you should clean the drum for cyan. Put the print sample in front of the drum, and then find the exact position of the poor print.



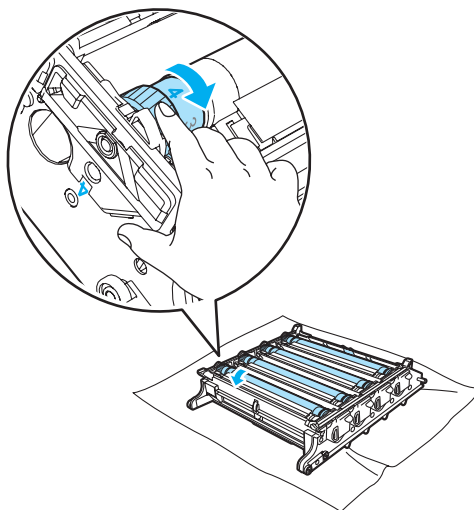
- 17 Turn the drum unit gear on the drum that matches that mark (for example, for a cyan mark, turn the drum for cyan). You should see the mark eventually on the surface of the drum (1).



- 18 When you have found the mark on the drum that matches the print sample, wipe the surface of the drum gently with a cotton swab until the dust or paper powder on the surface comes off.



- 19 Turn the drum unit gear toward you by hand to return it to the home position. The home position of each drum can be identified by matching the number on the drum unit gear to the same number on the side of the drum unit as shown in the illustration. Make sure that the number on each of the four drum unit gears matches the corresponding number on the side of the drum unit.



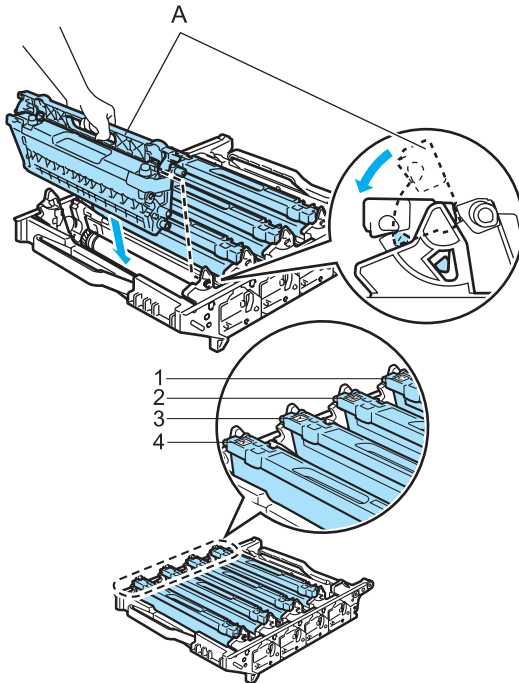
### **! CAUTION**

The drum is photosensitive so **DO NOT** touch it with your fingers.

**DO NOT** clean the surface of the photosensitive drum with a sharp object.

**DO NOT** use excessive force when cleaning the drum surface.

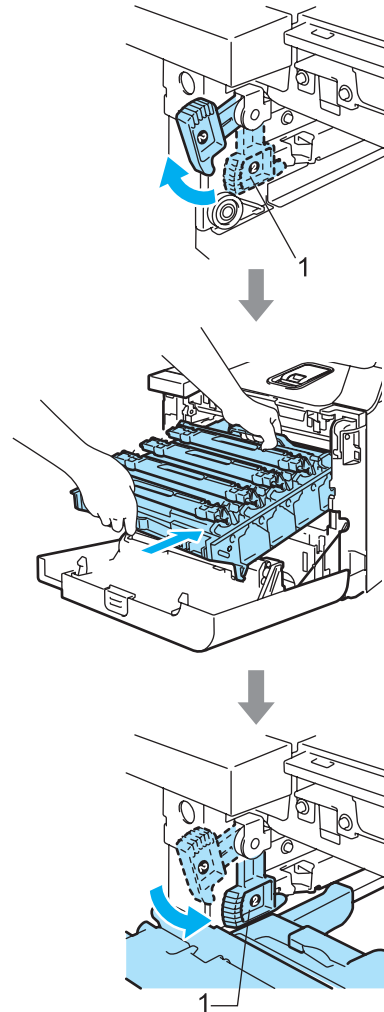
- 20** Holding the toner cartridges by their coloured handles, insert them one by one back into the drum unit as shown. Make sure that you match the toner cartridge colour to the same colour label on the drum unit, and make sure that you fold down the toner cartridge handle (A) once the toner cartridge is in place. Repeat this for all the toner cartridges.



- 1 C - Cyan
- 2 M - Magenta
- 3 Y - Yellow
- 4 K - Black

- 21** Put the drum unit back in the machine as follows.

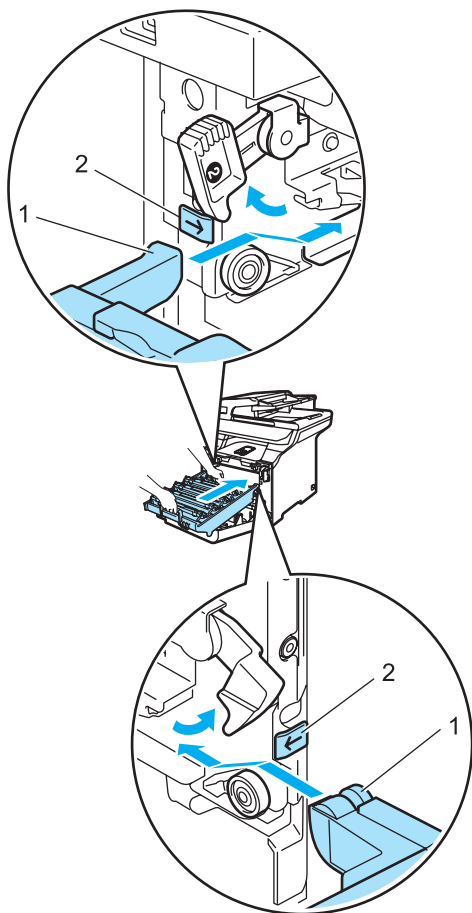
- 1** Make sure that the grey lock lever (1) is in the up position and put the drum unit in the machine. Push down the grey lock lever (1).



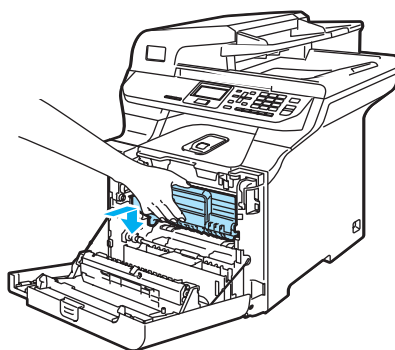
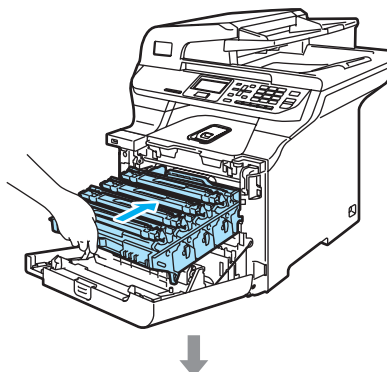


## Note

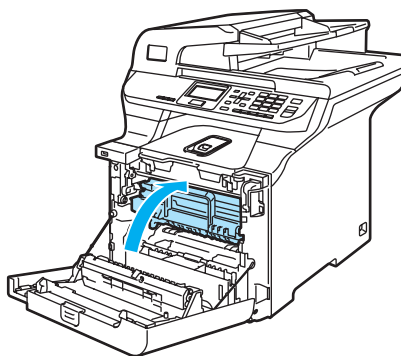
When you put the drum unit in the machine, match the green guides (1) of the drum unit handle to the green arrows (2) on both sides of the machine.



- 2 Push the drum unit in until it stops.



- 22 Close the front cover of the machine.



- 23 Plug the machine's power cord back into the AC electrical socket first, and reconnect all cables. Turn on the machine's power switch.

## Replacing the consumable items

When the time comes to replace consumable items, the following messages will appear on the LCD.

The machine will stop printing when the following maintenance messages appear on the LCD.

LCD messages	Consumable item to replace	Approximate life	How to replace	Order No.
Toner Life End Replace Black(K) Toner Cartridge. <sup>1</sup>	Toner cartridges standard	2,500 pages (Black) <sup>2</sup> 1,500 pages (Cyan, Magenta, Yellow) <sup>2</sup>	See <i>Replacing a toner cartridge</i> on page 115.	TN-130BK TN-130C TN-130M TN-130Y
	Toner cartridges high yield	5,000 pages (Black) <sup>2</sup> 4,000 pages (Cyan, Magenta, Yellow) <sup>2</sup>		TN-135BK TN-135C TN-135M TN-135Y
Waste Toner Full	Waste toner box	20,000 pages <sup>3</sup>	See <i>Waste Toner Box Full message</i> on page 132.	WT-100CL

<sup>1</sup> The toner cartridge colour which is used up is shown in the message.

<sup>2</sup> At 5% print coverage (A4 or Letter size). The actual number of printed pages will vary depending on the print jobs and paper you use.

<sup>3</sup> At 5% print coverage for CMYK each (A4 or Letter size). The actual number of printed pages will vary depending on the print jobs and paper you use.

The following are maintenance messages that appear on the LCD in the Ready mode. These message provide advanced warnings to replace the consumable items before they run out. To avoid any inconvenience, you may wish to buy spare consumable items before the machine stops printing.

LCD messages	Consumable item to replace	Approximate life	How to replace	Order No.
Toner Low Prepare New Black(K) Toner Cartridge. <sup>1</sup>	Toner cartridges standard	2,500 pages (Black) <sup>2</sup> 1,500 pages (Cyan, Magenta, Yellow) <sup>2</sup>	See <i>Replacing a toner cartridge</i> on page 115.	TN-130BK TN-130C TN-130M TN-130Y
	Toner cartridges high yield	5,000 pages (Black) <sup>2</sup> 4,000 pages (Cyan, Magenta, Yellow) <sup>2</sup>		TN-135BK TN-135C TN-135M TN-135Y
Change Parts Waste Toner Box	Waste toner box	20,000 pages <sup>3</sup>	See <i>Replacing the waste toner box</i> on page 132.	WT-100CL

<sup>1</sup> The toner cartridge colour which is used up is shown in the message.

<sup>2</sup> At 5% print coverage (A4 or Letter size). The actual number of printed pages will vary depending on the print jobs and paper you use.

<sup>3</sup> At 5% print coverage for CMYK each (A4 or Letter size). The actual number of printed pages will vary depending on the print jobs and paper you use.

The following are maintenance messages that appear alternately with the normal message on the upper row of the LCD when the machine is in the Ready mode. These messages advise you that you will need to replace each of the consumable items as soon as possible, since the consumable item's end of life has been reached. The machine will continue printing when any of these messages appear on the LCD.

LCD messages	Consumable item to replace	Approximate life <sup>1</sup>	How to replace	Order No.
Change Parts Drum	Drum unit	17,000 pages	See <i>Replacing the drum unit</i> on page 120.	DR-130CL
Change Parts Belt Unit	Belt unit	50,000 pages	See <i>Replacing the belt unit</i> on page 127.	BU-100CL
Change Parts Fuser Unit	Fuser unit	80,000 pages	Call your Brother dealer to purchase the fuser unit.	—
Change Parts Laser Unit	Laser unit	100,000 pages	Call your Brother dealer to replace the laser unit.	—
Change Parts PF kit 1	Paper feeding kit 1 (Paper pick-up roller and Separator pad for Tray 1)	100,000 pages	Call your Brother dealer to purchase the paper feeding kit 1.	—
Change Parts PF kit 2 (when the optional lower tray is installed)	Paper feeding kit 2 (Paper pick-up roller and Separator pad for Tray 2)	100,000 pages	Call your Brother dealer to purchase the paper feeding kit 2.	—
Change Parts PF kit MP	Paper feeding kit MP (Paper pick-up roller and Separator pad for MP tray)	50,000 pages	Call your Brother dealer to purchase the paper feeding kit MP.	—

<sup>1</sup> When printing on Letter or A4 size paper. The actual number of printed pages will vary depending on the print jobs and paper you use.



## Note

- Discard used consumable items according to local regulations, keeping it separate from domestic waste. If you have questions, call your local waste disposal office. Be sure to reseal the consumable items tightly so that the material inside does not spill.
- We recommend placing used consumable items on a piece of paper to prevent accidentally spilling or scattering the material inside.
- If you use paper that is not a direct equivalent for the recommended paper, the life of consumable items and machine parts may be reduced.
- The projected life for toner cartridges and a waste toner box is based on an average 5% coverage of the printable area using any colour toner cartridge. Frequency of replacement will vary depending on the complexity of printed pages, percentage of coverage and type of media used.

## Replacing a toner cartridge

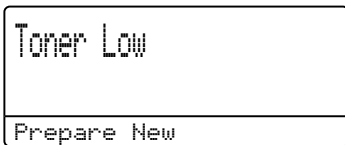
Order Numbers:

Toner Cartridge Standard:  
TN-130 (BK, C, M, Y)

Toner Cartridge High Yield:  
TN-135 (BK, C, M, Y)

The High Yield toner cartridges can print approximately 5,000 pages (Black) and approximately 4,000 pages each (Cyan, Magenta and Yellow). The Standard toner cartridges can print approximately 2,500 pages (Black) and approximately 1,500 pages each (Cyan, Magenta and Yellow). Actual page count will vary depending on your average type of document (i.e., standard letter, detailed graphics).

### Toner low message



The machine is supplied with the Standard TN-130 toner cartridge. When a toner cartridge is running low, the LCD shows Toner Low.



#### Note

It is a good idea to keep a new toner cartridge ready for use when you see the Toner Low warning.

### Toner life end message

When the following message appears on the LCD, you need to replace the toner cartridge. The second line of the LCD indicates which colour you need to replace.



Discard the used toner cartridge according to local regulations, keeping it separate from domestic waste. You can also check our ecology website [www.brothergreen.co.uk](http://www.brothergreen.co.uk) for recycling information. Be sure to seal up the toner cartridge tightly so that toner powder does not spill out of the cartridge. If you have questions, call your local waste disposal office.



#### Note

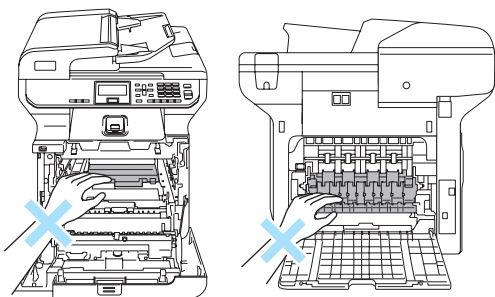
We recommend that you clean the machine and corona wires of the drum unit when you replace a toner cartridge. (See *Cleaning the laser scanner windows* on page 97 and *Cleaning the corona wires* on page 102.)

## Replacing the toner cartridges

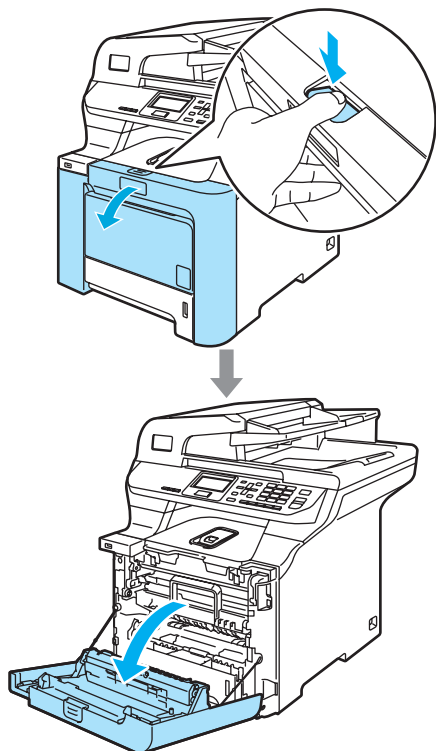


### HOT SURFACE

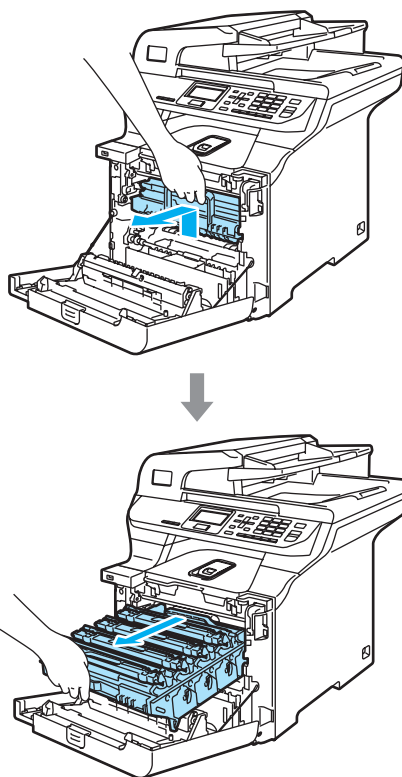
After you have just used the machine, some internal parts of the machine will be extremely hot. When you open the front or back cover of the machine, **DO NOT** touch the shaded parts shown in the illustration.



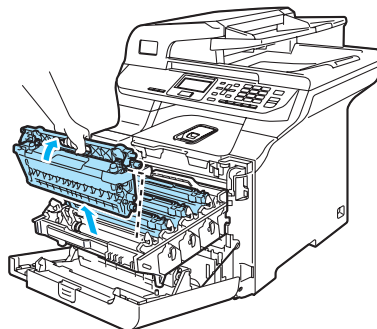
- 1 Turn off the machine's power switch. Press the front cover release button and then open the front cover.



- 2 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



- 3 Hold the handle of the toner cartridge and pull it out of the drum unit. Repeat this for all the toner cartridges.





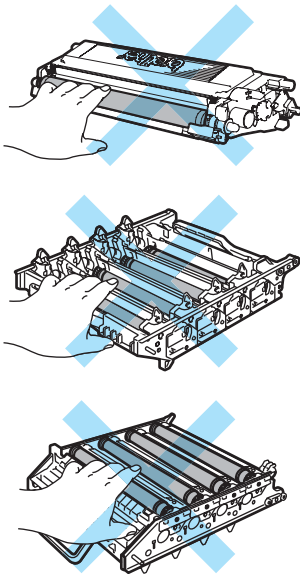
## ! CAUTION

We recommend that you place the toner cartridges on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

DO NOT put a toner cartridge into a fire. It could explode, resulting in injuries.

Handle the toner cartridges carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.



## ! CAUTION

Brother machines are designed to work with toner of a particular specification and will work to a level of optimum performance when used with genuine Brother toner cartridges (**TN-130/TN-135**). Brother cannot guarantee this optimum performance if toner or toner cartridges of other specifications are used. Brother does not therefore recommend the use of cartridges other than genuine Brother cartridges with this machine, or the refilling of empty cartridges with toner from other sources. If damage is caused to the drum unit or other part of this machine as a result of the use of toner or toner cartridges other than genuine Brother products due to the incompatibility or lack of suitability of those products with this machine, any repairs required as a result may not be covered by the warranty.

Unpack the toner cartridge just before you put it in the machine. If a toner cartridge is left unpacked for a long time, the toner life will be shortened.



## Note

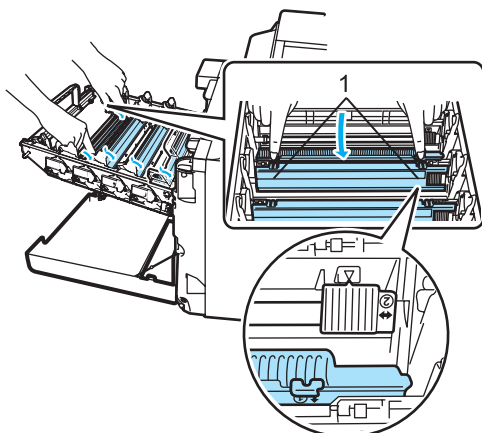
- Be sure to seal up the toner cartridge tightly in a suitable bag so that toner powder does not spill out of the cartridge.
- Discard the used toner cartridge according to local regulations, keeping it separate from domestic waste. If you have questions, call your local waste disposal office.

## ! CAUTION

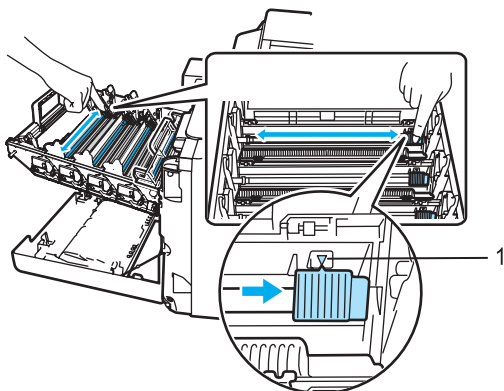
DO NOT use flammable substances near the machine. DO NOT use any type of spray to clean the inside or outside of the machine. Doing this may cause a fire or electrical shock. Refer to *Routine maintenance* on page 95 for how to clean the machine.

### 4 Clean the corona wires as follows.

- 1 Push to release the latches of the white corona wire cover (1), and then open the cover.



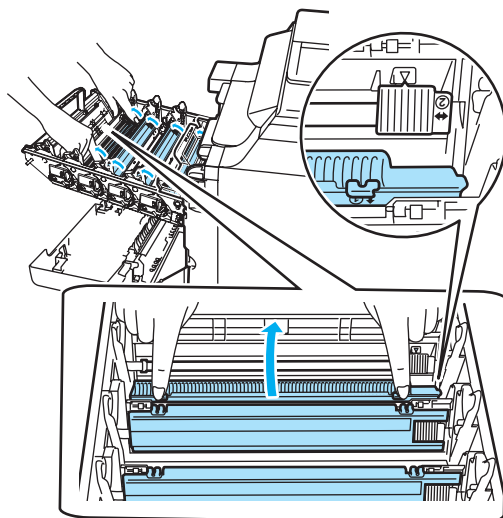
- 2 Clean the corona wire inside the drum unit by gently sliding the green tab from left to right and right to left several times.



## ! CAUTION

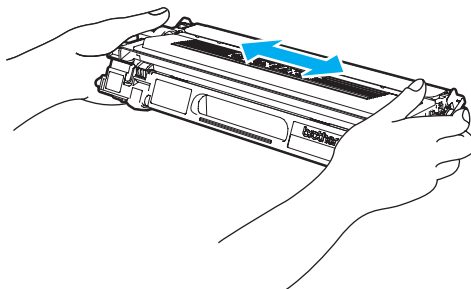
Be sure to return the tab to the home position (▼) (1). If you do not, printed pages may have a vertical stripe

- 3 Close the corona wire cover.

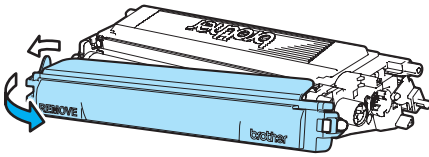


- 4 Repeat step 1 through step 3 to clean each of the remaining three corona wires.

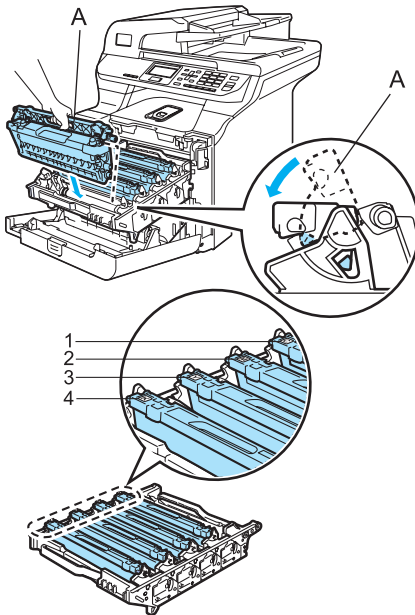
- 5 Unpack the new toner cartridge. Hold the cartridge level with both hands and gently shake it from side to side five or six times to spread the toner evenly inside the cartridge.



- 6 Remove the orange protective cover.

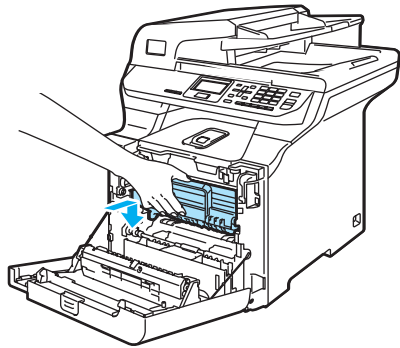
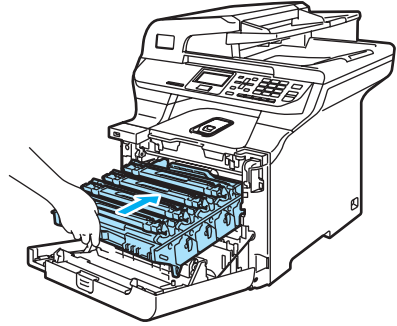


- 7 Holding the toner cartridges by their coloured handles, insert them one by one back into the drum unit as shown. Make sure that you match the toner cartridge colour to the same colour label on the drum unit, and make sure that you fold down the toner cartridge handle(A) once the toner cartridge is in place. Repeat this for all the toner cartridges.

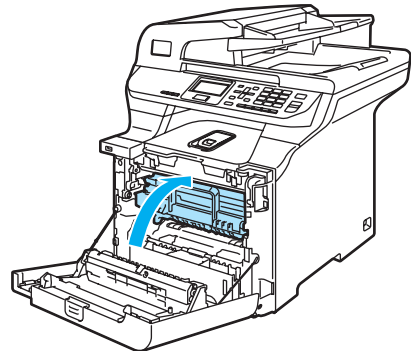


- 1 C - Cyan
- 2 M - Magenta
- 3 Y - Yellow
- 4 K - Black

- 8 Push the drum unit in until it stops.



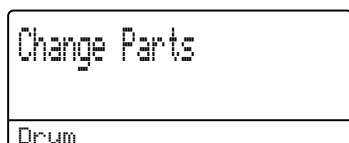
- 9 Close the front cover of the machine.



## Replacing the drum unit

Order Number: DR-130CL

### Change Parts Drum message



The machine uses a drum unit to create print images on paper. If the LCD shows **Change Parts Drum**, the drum unit is near the end of its life and it is time to buy a new one.

Even if the LCD shows **Change Parts Drum**, you may be able to continue printing without having to replace the drum unit for a while. However, if there is a noticeable deterioration in the output print quality (even before **Change Parts Drum** appears), then the drum unit should be replaced. You should clean the machine when you replace the drum unit. (See *Cleaning the laser scanner windows* on page 97.)

#### CAUTION

While removing the drum unit, handle it carefully because it may contain toner. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

#### Note

The drum unit is a consumable item, and it is necessary to replace it periodically. There are many factors that determine the actual drum life, such as temperature, humidity, type of paper and how much toner you use for the number of pages per print job. The estimated drum life is approximately 17,000 pages. The actual number of pages your drum will print may be significantly less than these estimates. Because we have no control over the many factors that determine the actual drum life, we cannot guarantee a minimum number of pages that will be printed by your drum.

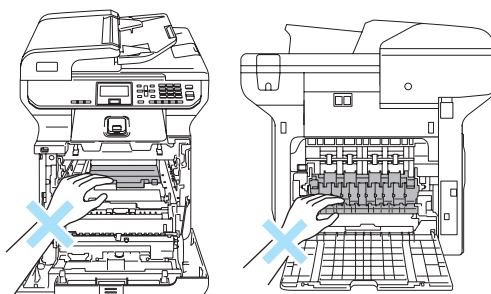
## Replacing the drum unit

#### CAUTION

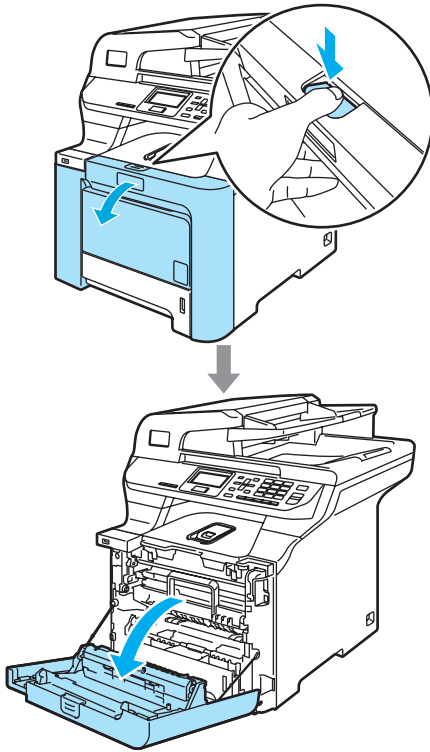
Wait to unpack a new drum unit until immediately before installing it. Put the old drum unit into the plastic bag.

#### HOT SURFACE

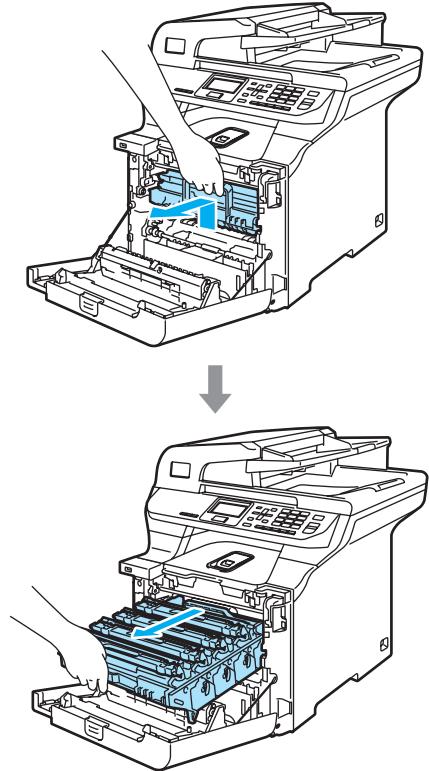
After you have just used the machine, some internal parts of the machine will be extremely hot. When you open the front or back cover of the machine, DO NOT touch the shaded parts shown in the illustration.



- 1 Turn off the machine's power switch. Press the front cover release button and then open the front cover.

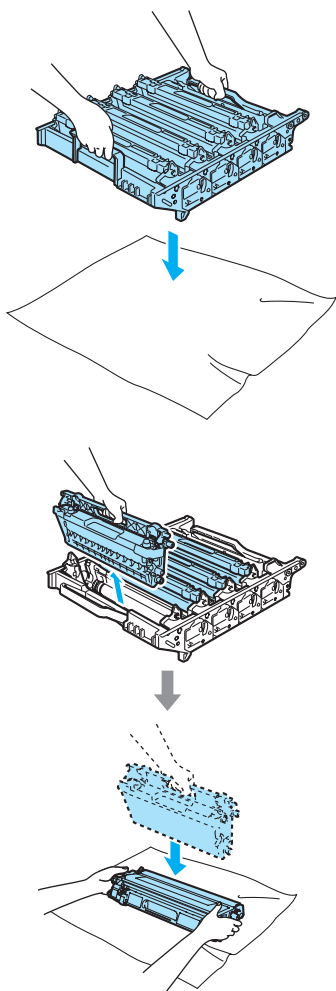


- 2 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



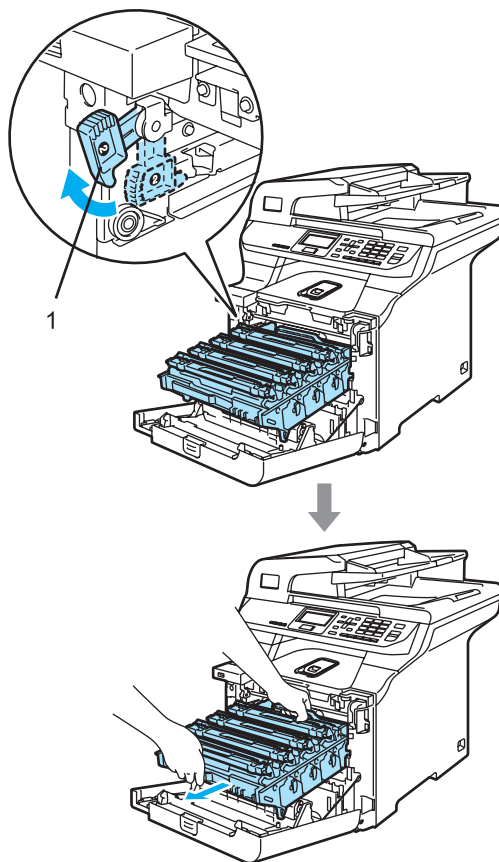
## ! CAUTION

We recommend that you place the drum unit and toner cartridges separately on a clean, flat surface with a piece of disposable paper underneath them in case you accidentally spill or scatter toner.



Handle the toner cartridge carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

- 3 Release the grey lock lever (1) that is on the left side of the machine. Lift the front of the drum unit and pull the drum unit completely out of the machine using the green handles on the drum unit.

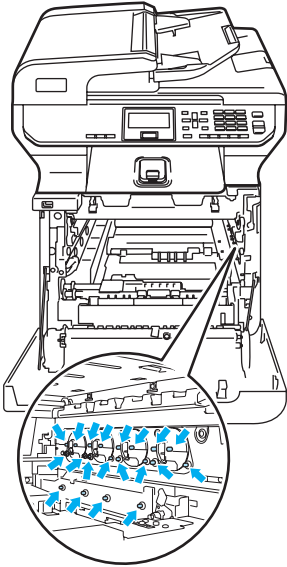


## Note

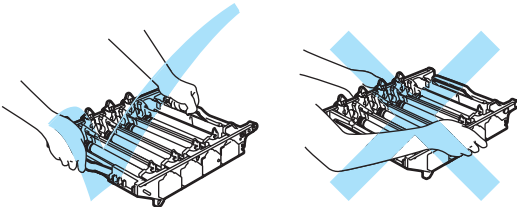
Discard the used drum unit according to local regulations, keeping it separate from domestic waste. Be sure to seal up the drum unit tightly so that toner powder does not spill out of the unit. If you have questions, call your local waste disposal office.

# **! CAUTION**

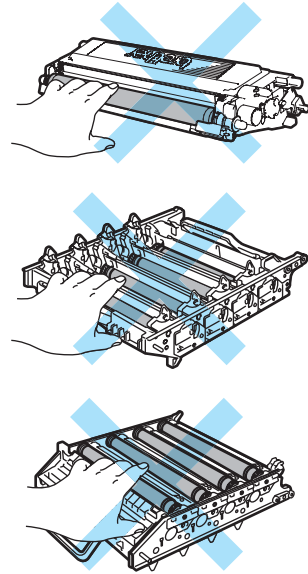
To prevent damage to the machine from static electricity, **DO NOT** touch the electrodes shown in the illustration.



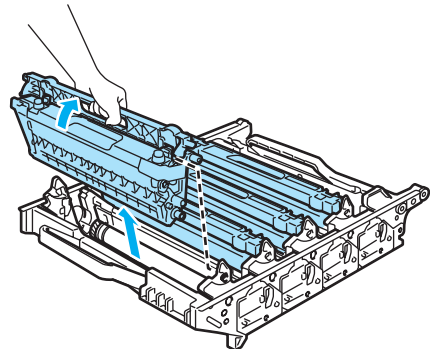
Make sure that you use the drum unit handles when carrying it. **DO NOT** hold the sides of the drum unit.



To avoid print quality problems, **DO NOT** touch the shaded parts shown in the illustrations.



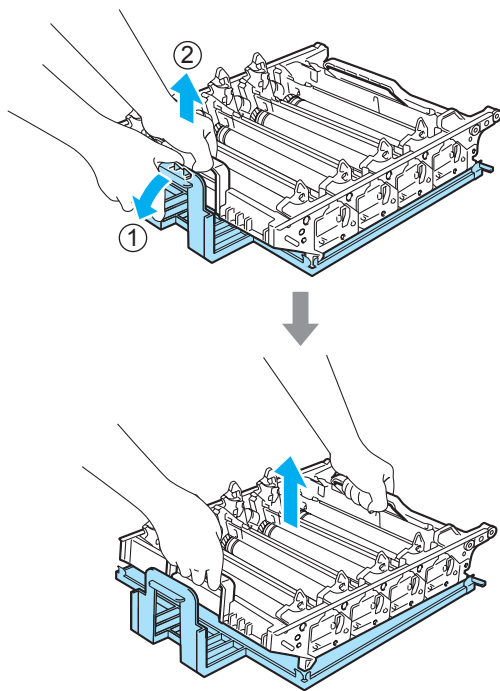
- 4 Using their coloured handles to lift them out, remove all four toner cartridges from the drum unit.



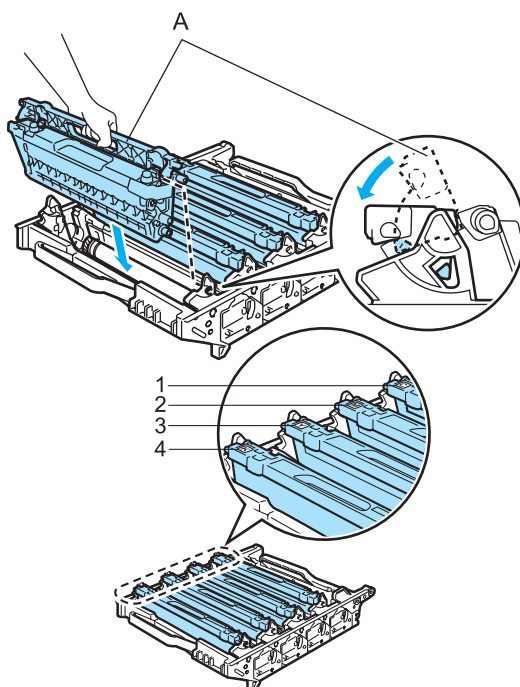
C



- 5 Unpack the new drum unit and remove the protective cover.



- 6 Holding the toner cartridges by their coloured handles, insert them one by one back into the drum units as shown. Make sure that you match the toner cartridge colour to the same colour label on the drum unit, and make sure that you fold down the toner cartridge handle(A) once the toner cartridge is in place. Repeat this for all the toner cartridges.

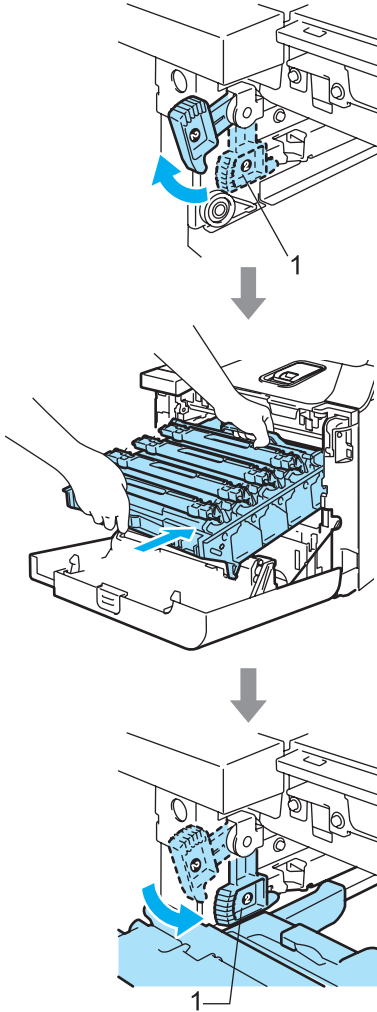


- 1 C - Cyan
- 2 M - Magenta
- 3 Y - Yellow
- 4 K - Black



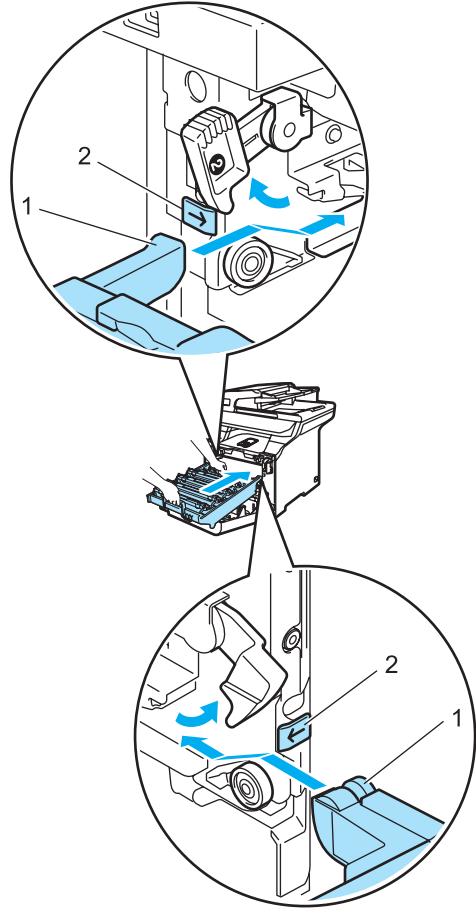
**7** Put the drum unit back in the machine as follows.

- 1** Make sure that the grey lock lever (1) is in the up position and put the drum unit in the machine. Push down the grey lock lever (1).

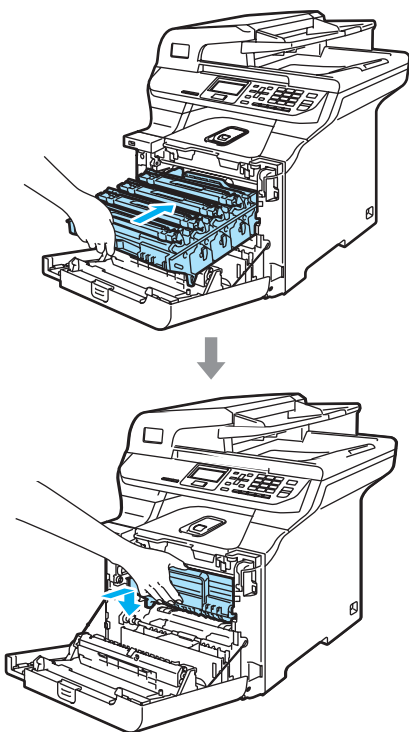


**Note**

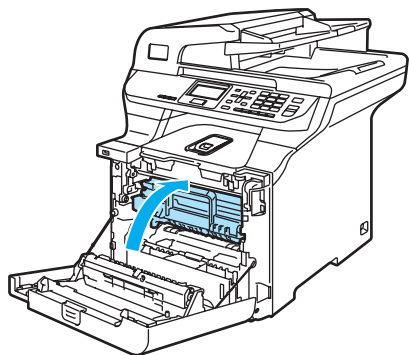
When you put the drum unit in the machine, match the green guides (1) of the drum unit handle to the green arrows (2) on both sides of the machine.



- 2 Push the drum unit in until it stops.



- 8 Close the front cover of the machine.



When you replace the drum unit with a new one, you need to reset the drum unit counter by completing the following steps:

- 9 Turn on the machine's power switch.

- 10 Press **Menu**, **6**, **6**.  
Only the parts counters that need to be reset appear in the menu.



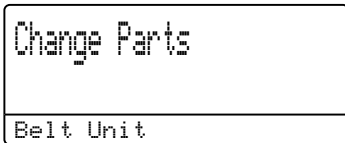
- 11 Press ▲ or ▼ to choose **Drum**.  
Press **OK**.
- 12 Press **1** to reset the drum unit counter.
- 13 Press **Stop/Exit**.

## Replacing the belt unit

Order Number: BU-100CL

### Change Parts Belt Unit message

When the belt unit runs out, the following message appears on the LCD. When you see this message, you must replace the belt unit:



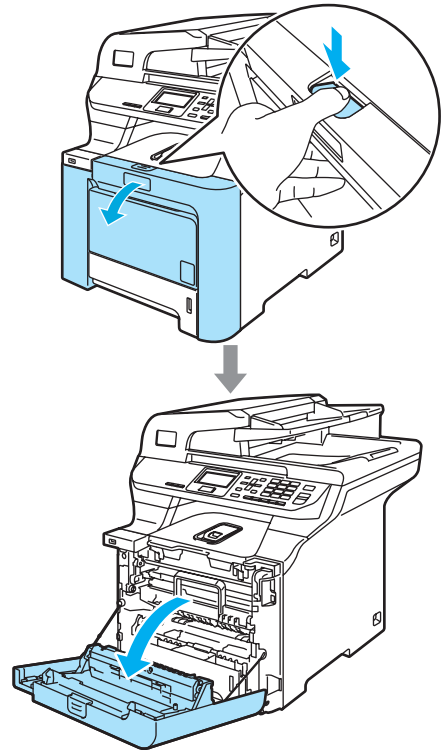
### ! CAUTION

DO NOT touch the surface of the belt unit. If you touch it, it could degrade print quality.

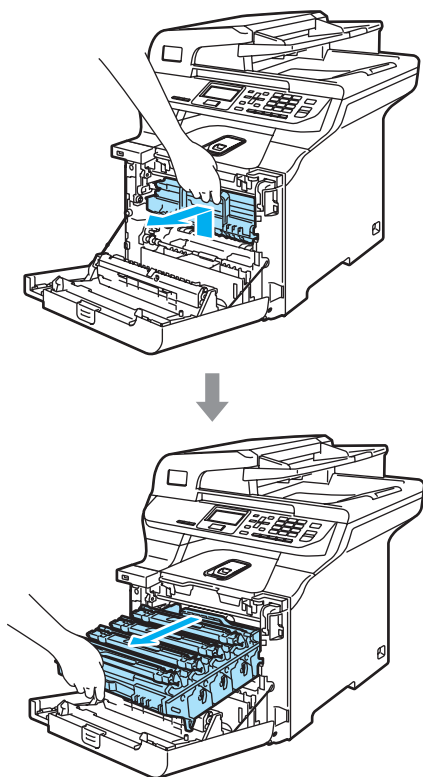
Damage caused by improper handling of the belt unit may void your warranty.

## Replacing the belt unit

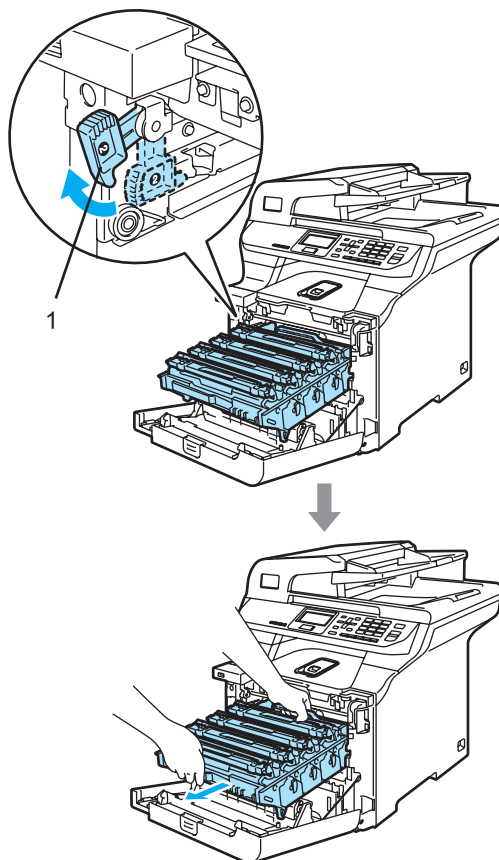
- 1 Turn off the machine's power switch.
- 2 Press the front cover release button and then open the front cover.



- 3 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



- 4 Release the grey lock lever (1) that is on the left side of the machine. Lift the front of the drum unit and pull the drum unit completely out of the machine using the green handles on the drum unit.

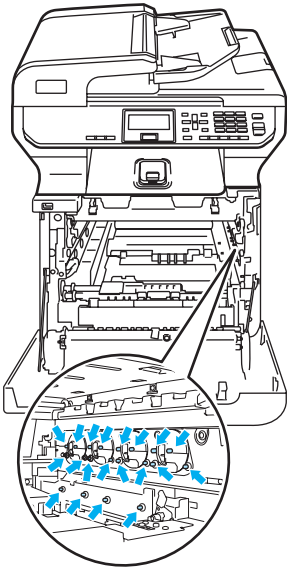


**! CAUTION**

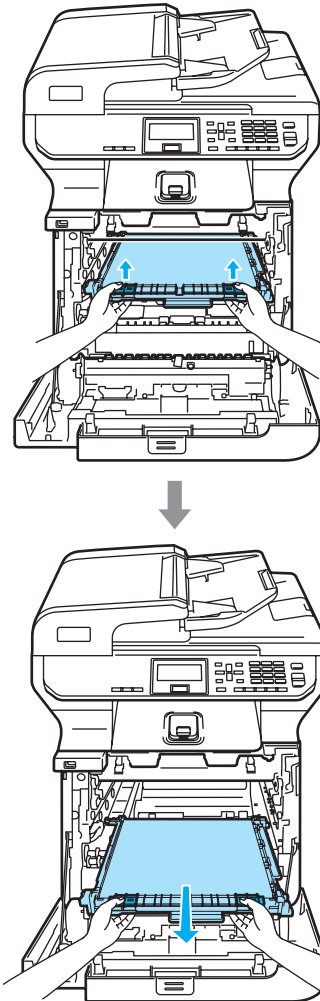
Make sure that you use the drum unit handles when carrying it. **DO NOT** hold the sides of the drum unit.

We recommend that you place the drum unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

To prevent damage to the machine from static electricity, **DO NOT** touch the electrodes shown in the illustration.



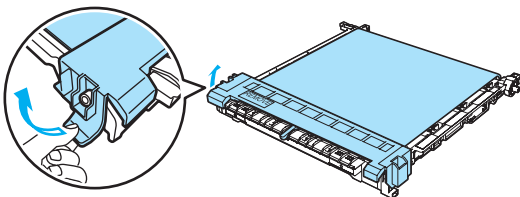
- 5 Hold the green parts of the belt unit with both hands and lift the belt unit up, then pull it out.



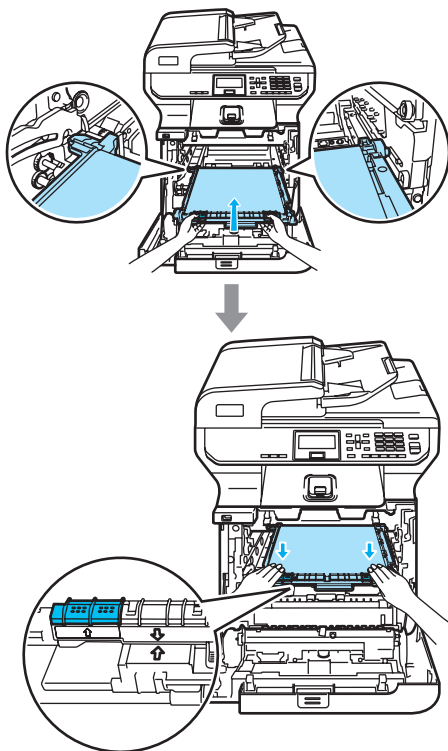
**! CAUTION**

We recommend that you place the belt unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

- 6 Unpack the new belt unit, and remove the protective cover and paper.

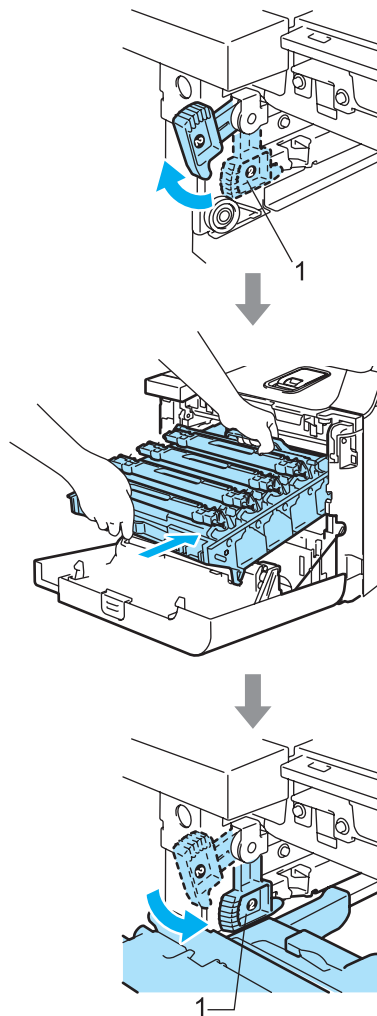


- 7 Put the new belt unit in the machine. Match the ↓ mark on the belt unit to the ↑ mark on the machine. Push down on the green area of the belt unit to lock it in place.



- 8 Put the drum unit back in the machine as follows.

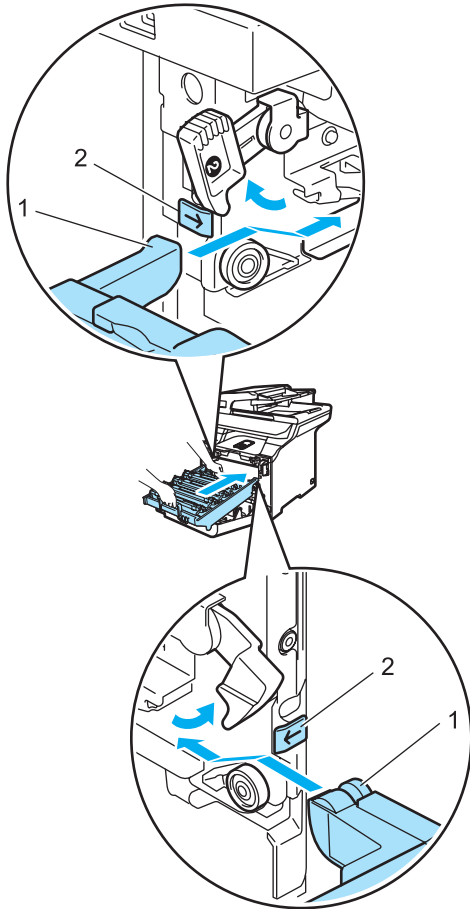
- 1 Make sure that the grey lock lever (1) is in the up position and put the drum unit in the machine. Push down the grey lock lever (1).



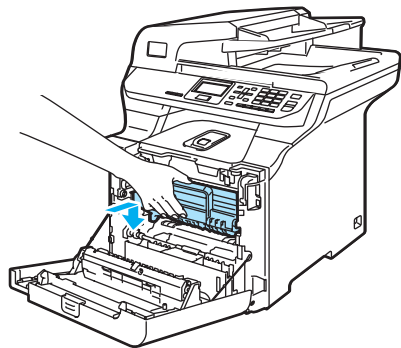
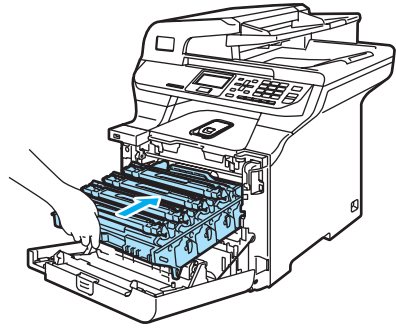


## Note

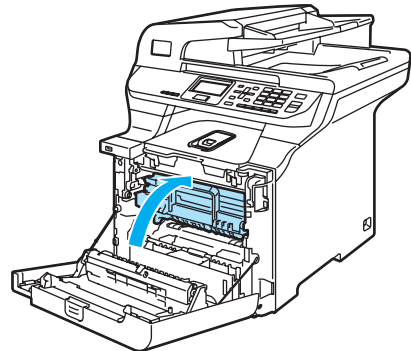
When you put the drum unit in the machine, match the green guides (1) of the drum unit handle to the green arrows (2) on both sides of the machine.



- 2 Push the drum unit in until it stops.



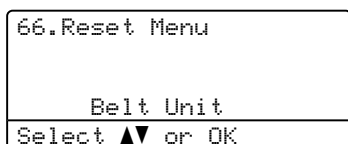
- 9 Close the front cover of the machine.



When you replace the belt unit with a new one, you need to reset the belt unit counter by completing the following steps:

- 10 Turn on the machine's power switch.

- 11 Press **Menu**, **6**, **6**.  
Only the parts counters that need to be reset appear in the menu.



- 12 Press **▲** or **▼** to choose **Belt Unit**. Press **OK**.
- 13 Press **1** to reset the belt unit counter.
- 14 Press **Stop/Exit**.

## Replacing the waste toner box

Order Number: WT-100CL

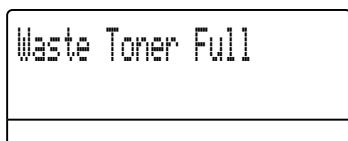
### Change Parts Waste Toner Box message

After you have printed approximately 20,000 images at 5% coverage for CMYK each, you must change the waste toner box. The actual number of printed pages will vary depending on the print jobs and paper you use.



### Waste Toner Box Full message

When the waste toner box is full, the following message appears on the LCD and the machine will stop printing. When you see this message, you must replace the toner box:



## ! WARNING

DO NOT reuse the waste toner box.

## Replacing the waste toner box

## ! WARNING

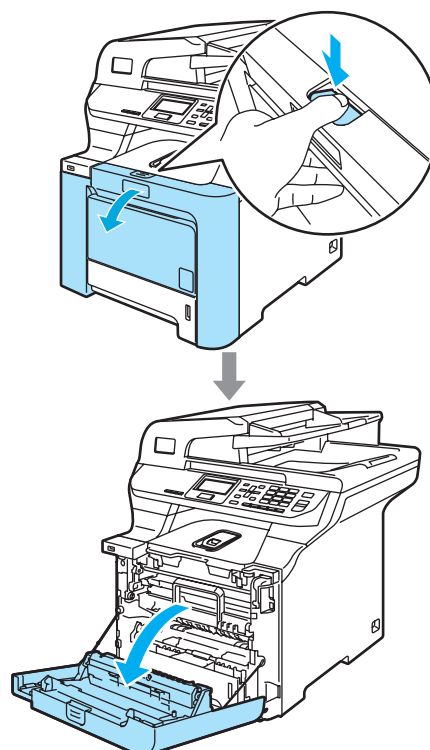
DO NOT put the waste toner box into a fire. It could explode.

Be careful not to spill the toner. DO NOT inhale or allow it to get into your eyes.

## ! CAUTION

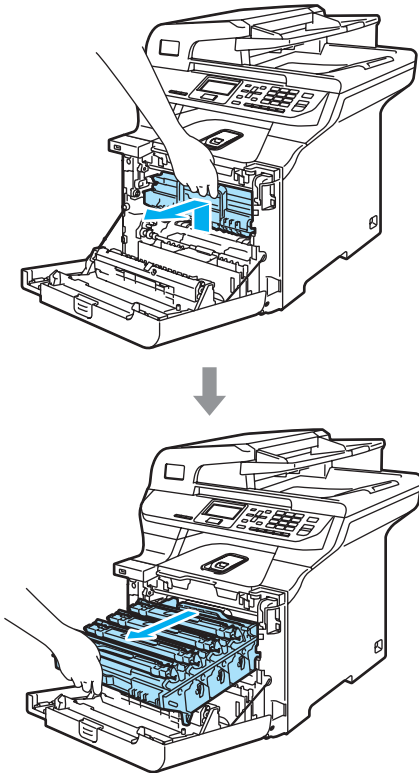
Handle the waste toner box carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

- 1 Press the front cover release button and then open the front cover.

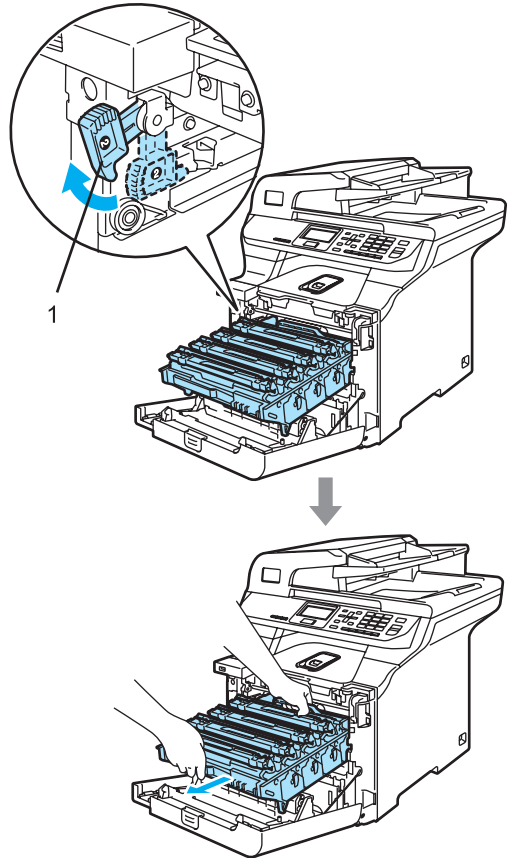




- 2 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



- 3 Release the grey lock lever (1) that is on the left side of the machine. Lift the front of the drum unit and pull the drum unit completely out of the machine using the green handles on the drum unit.



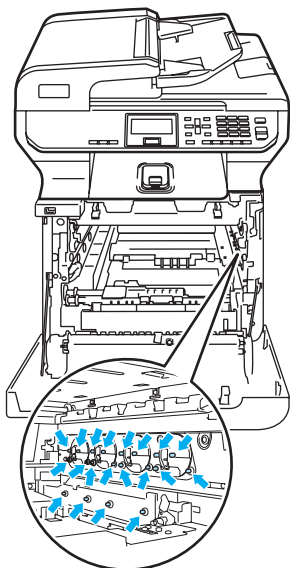
## ! CAUTION

Make sure that you use the drum unit handles when carrying it. DO NOT hold the sides of the drum unit.

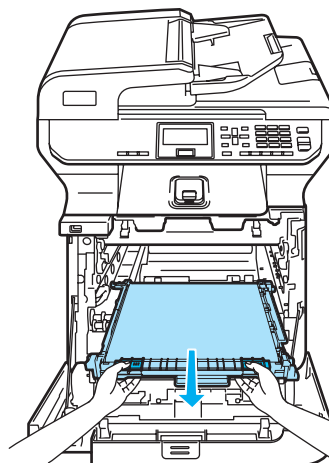
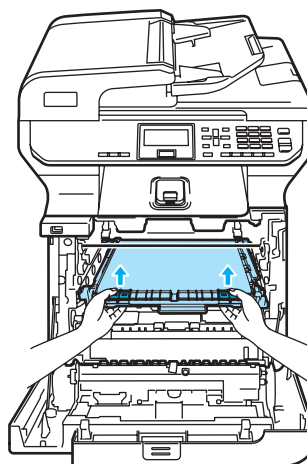
We recommend that you place the drum unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.



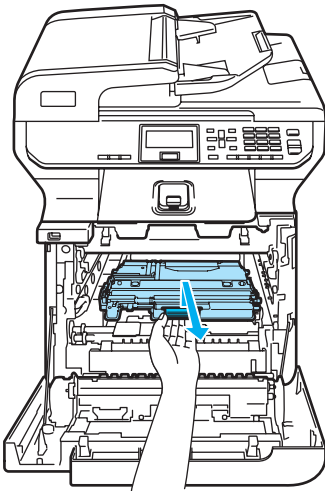
- 4 Hold the green parts of the belt unit with both hands and lift the belt unit up, then pull it out.



## ! CAUTION

We recommend that you place the belt unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

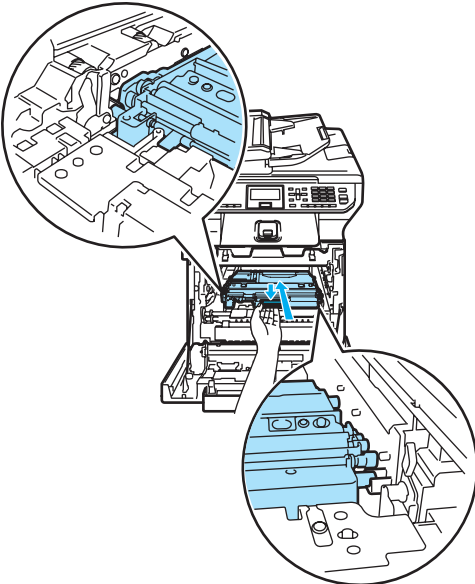
- 5 Remove the waste toner box from the machine using the green handle.



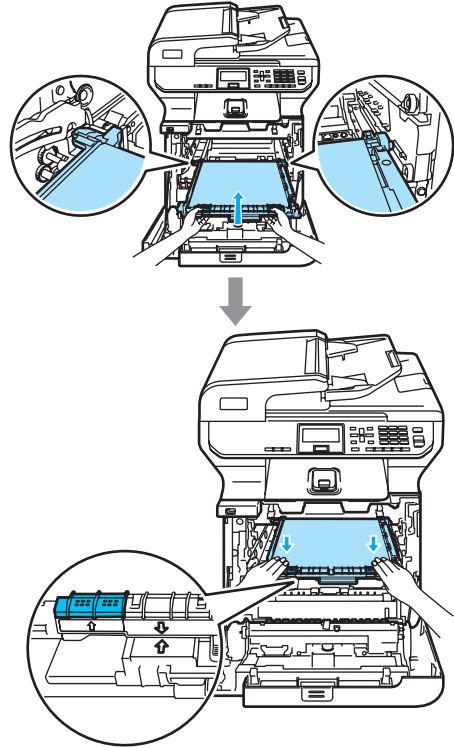
#### Note

Discard the used waste toner box according to local regulations, keeping it separate from domestic waste. If you have questions, call your local waste disposable office.

- 6 Unpack the new waste toner box and put the new one in the machine using the green handle.

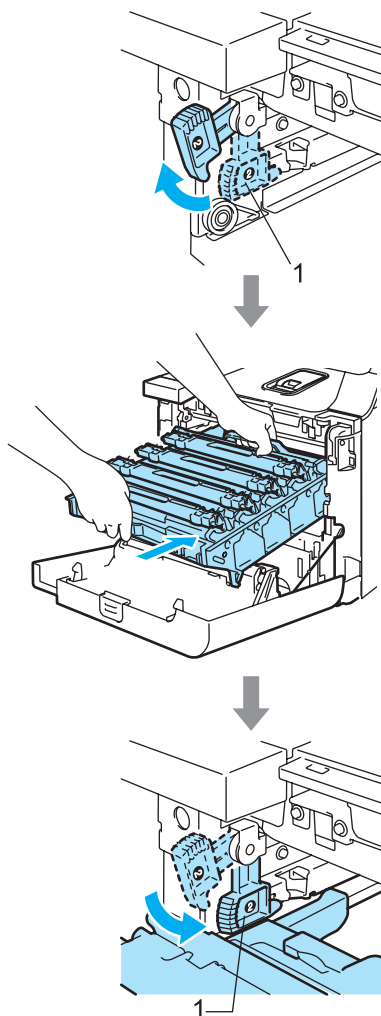


- 7 Put the belt unit back in the machine. Match the ↓ mark on the belt unit to the ↑ mark on the machine. Push down on the green area of the belt unit to lock it in place.



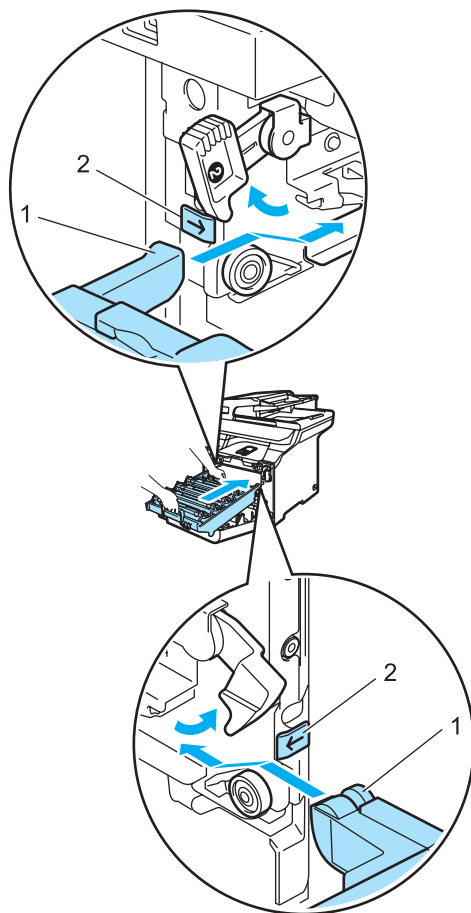
- 8 Put the drum unit back in the machine as follows.

- 1 Make sure that the grey lock lever (1) is in the up position and put the drum unit in the machine. Push down the grey lock lever (1).

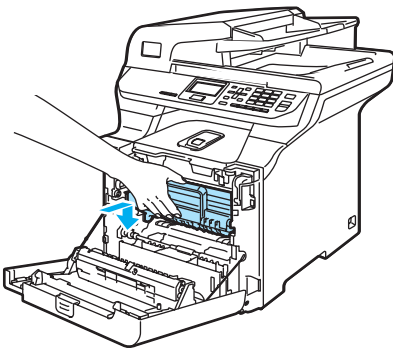
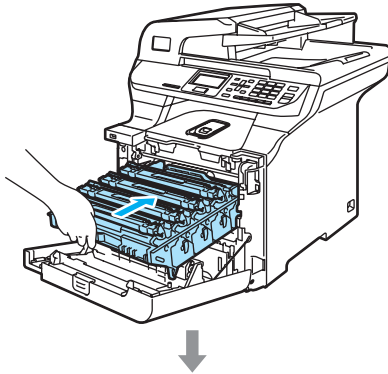


#### Note

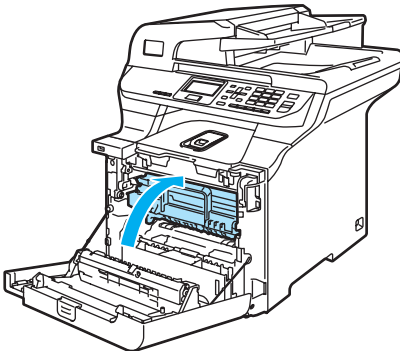
When you put the drum unit in the machine, match the green guides (1) of the drum unit handle to the green arrows (2) on both sides of the machine.



- 2 Push the drum unit in until it stops.



- 9 Close the front cover of the machine.



## How to change the LCD Language

You can change the LCD language.

- 1 Press **Menu**, **1**, **0**.

10. Local Language
▲ English
Frangais
▼ Deutsch
Select ▲▼ or OK

- 2 Press **▲** or **▼** to select your language.  
Press **OK**.

- 3 Press **Stop/Exit**.

# Packing and shipping the machine

If for any reason you must move or ship your machine, carefully re-pack the machine in the original packing material to avoid any damage during transport. If you do not pack the machine properly, you could void your warranty. The machine should be adequately insured with the carrier.

If the machine must be shipped, please read the instructions in this section which explains how to properly prepare your machine for transport.



## WARNING

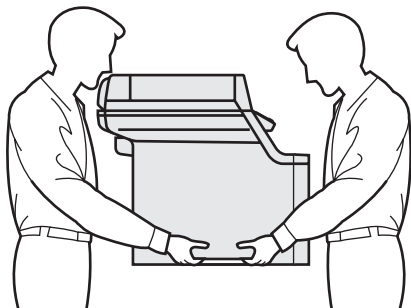
Once your machine has been set up and used, we **DO NOT** recommend that it be moved or shipped unless absolutely necessary.

Colour laser printers are complex printing devices. Moving the machine or shipping it without properly removing the installed supplies can result in **SEVERE** damage to the machine. As a result, your machine may not operate properly afterwards.

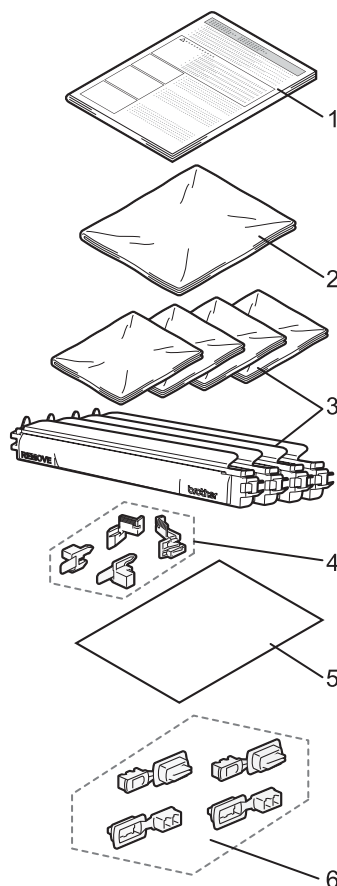
Failure to properly prepare the machine for shipping according to the instructions in this section may

**VOID YOUR WARRANTY.**

To prevent injuries when moving or lifting this machine, make sure at least two people lift the machine together. Be careful not to pinch your fingers when you put the machine down.



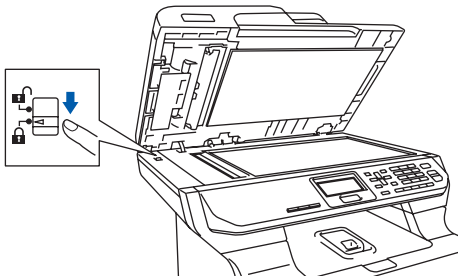
Make sure that you have the following parts for repacking:



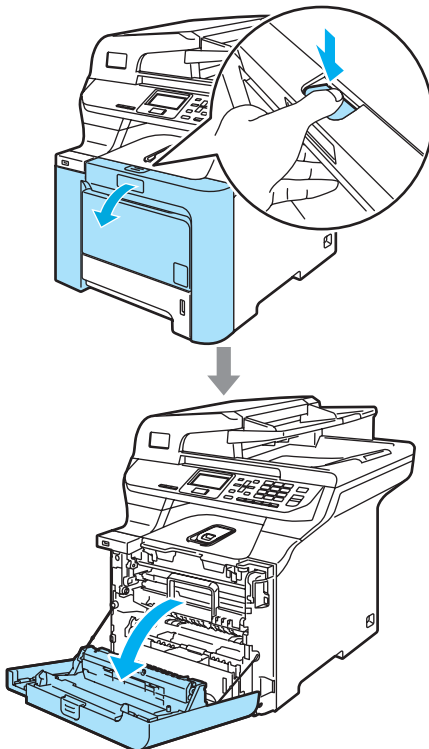
- 1 Insertion sheet for repacking
- 2 Plastic bag for the waste toner box
- 3 Orange protective cover and plastic bag that the toner cartridge originally came in (4 pieces)
- 4 Orange packing material for locking the drum unit and the belt unit (4 pieces)
- 5 A piece of paper (Letter or A4) to protect the belt unit (supplied by the user)
- 6 Joints for attaching cartons (4 pieces)

## Repacking the machine

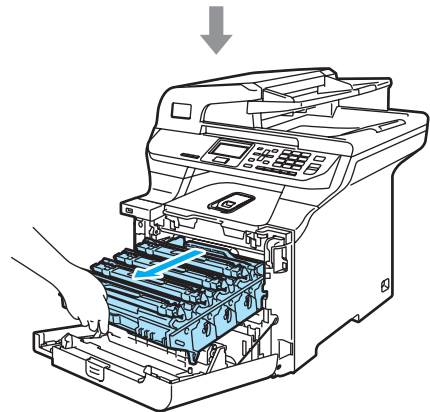
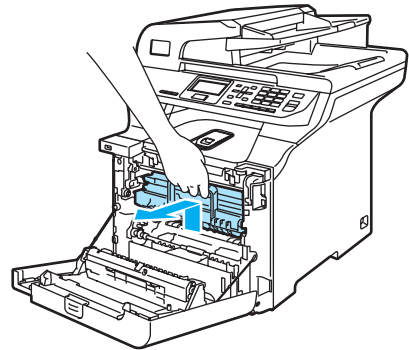
- 1 Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the electrical socket.
- 2 Push the Scanner Lock Lever down to lock the scanner. This lever is located on the left of the scanner glass.



- 3 Press the front cover release button and then open the front cover.



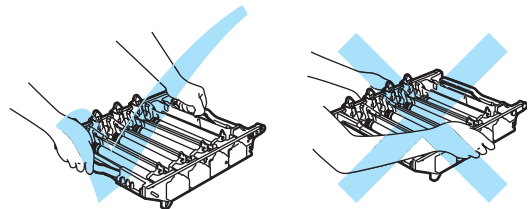
- 4 Hold the green handle of the drum unit. Lift the drum unit up and then pull it out until it stops.



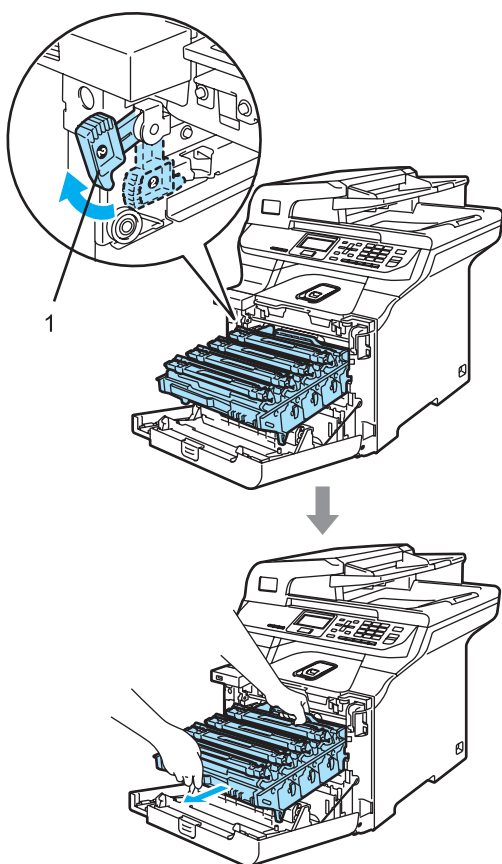
- 5 Release the grey lock lever (1) that is on the left side of the machine. Lift the front of the drum unit and pull the drum unit completely out of the machine using the green handles on the drum unit.

### ! CAUTION

Make sure that you use the drum unit handles when carrying it. DO NOT hold the sides of the drum unit.



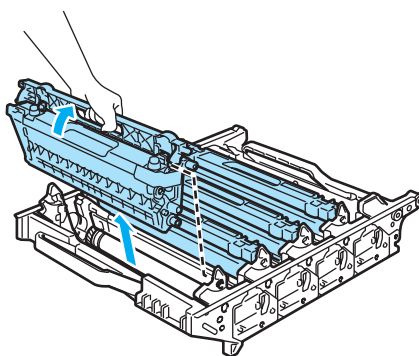




### ! CAUTION

We recommend that you place the drum unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

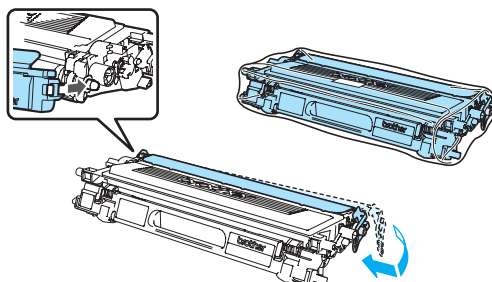
- 6 Hold the handle of the toner cartridge and pull it out of the drum unit. Repeat this for all of the toner cartridges.



### ! CAUTION

We recommend that you place the toner cartridges on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

- 7 Attach the original orange protective cover to each of the toner cartridges. Place each of the toner cartridges into the plastic bag that the cartridge originally came in.

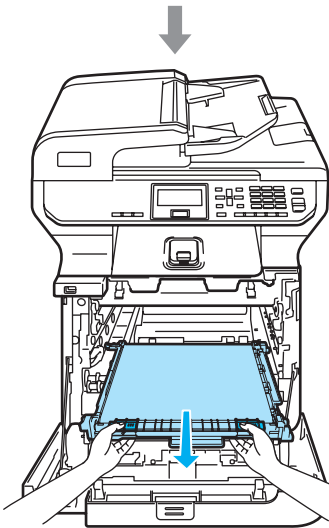
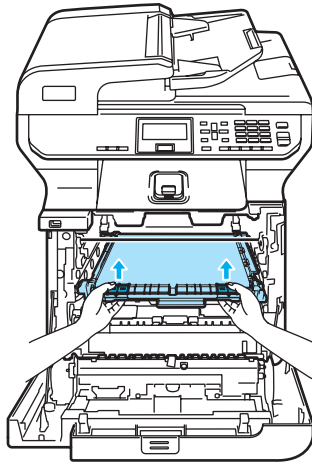


### ! CAUTION

We recommend that you place the toner cartridges on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.



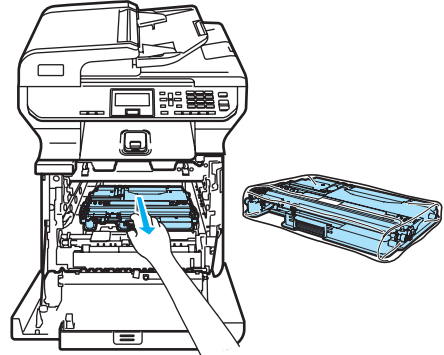
- 8 Hold the green parts of the belt unit with both hands and lift the belt unit up, then pull it out.



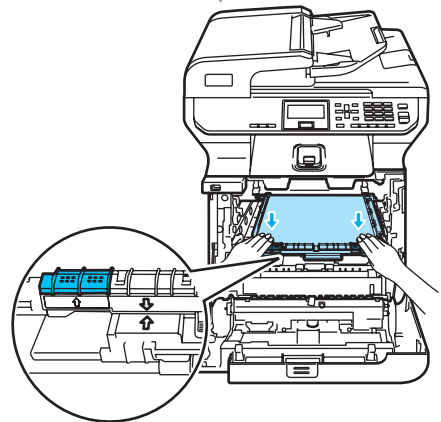
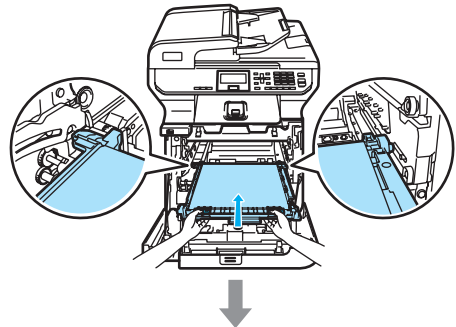
**! CAUTION**

We recommend that you place the belt unit on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.

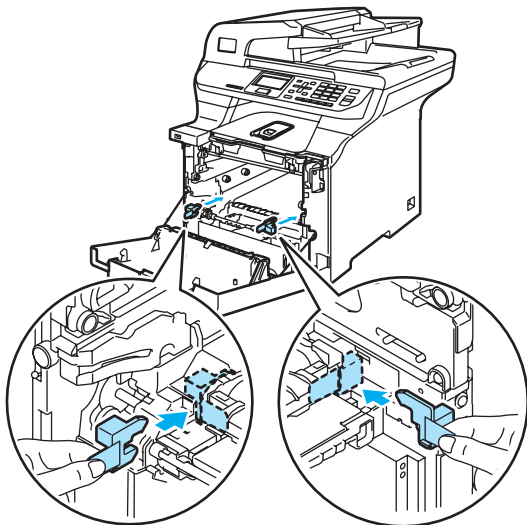
- 9 Remove the waste toner box from the machine using the green handle and place it into the plastic bag included in the carton.



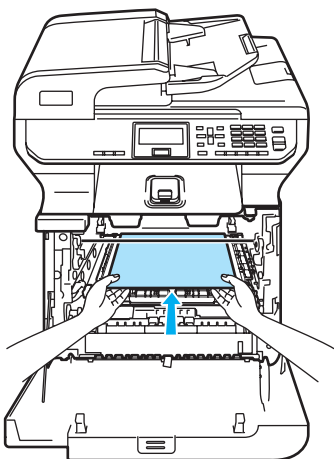
- 10 Put the belt unit back in the machine. Match the ↓ mark on the belt unit to the ↑ mark on the machine. Push down on the green area of the belt unit to lock it in place.



- 11** Insert the original orange packing material for locking the belt unit as shown in the illustration.

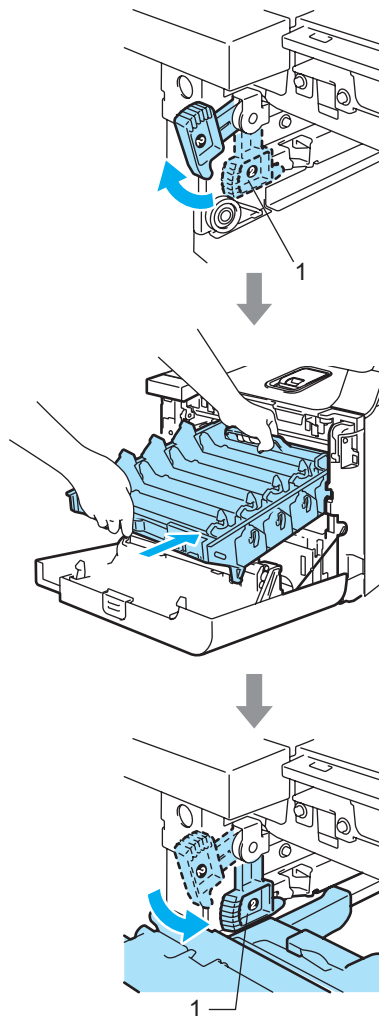


- 12** Put a piece of paper (letter or A4) on the belt unit to prevent damage to the belt unit.



- 13** Put the drum unit back in the machine as follows.

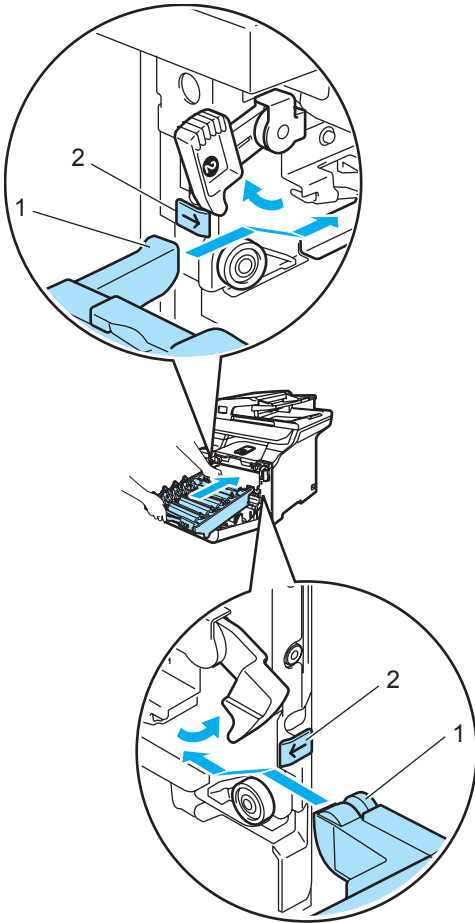
- 1** Make sure that the grey lock lever (1) is in the up position and put the drum unit in the machine. Push down the grey lock lever (1).



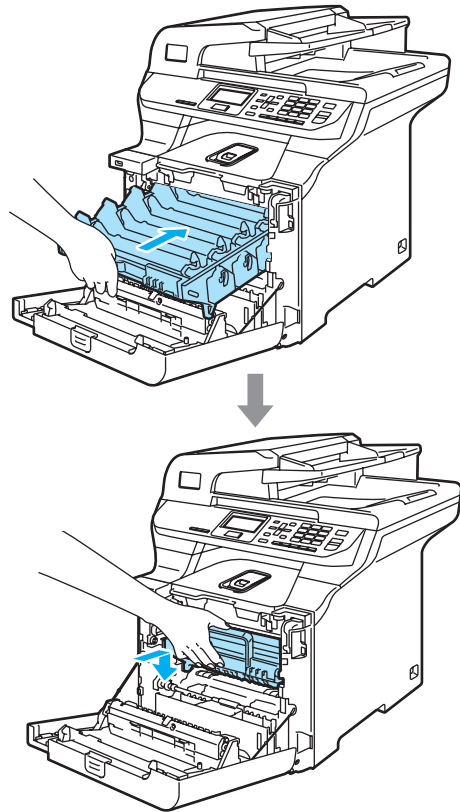


## Note

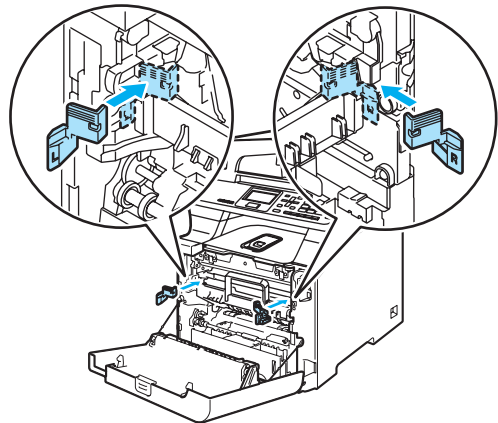
When you put the drum unit in the machine, match the green guides (1) of the drum unit handle to the green arrows (2) on both sides of the machine.



- 2 Push the drum unit back in until it stops.



- 14 Insert the original orange packing material for the drum unit until as shown in the illustration, and then close the front cover.

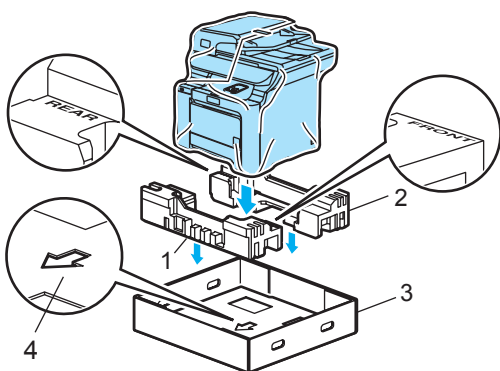


15

**Note**

We recommend you repack the machine on a table or desk.

Put the styrofoam piece marked “FRONT” (1) into the lower carton (3), so that the arrow cutout (4) points toward it. Put the styrofoam piece marked “REAR” into the lower carton so that the arrow cutout (4) points away from it.

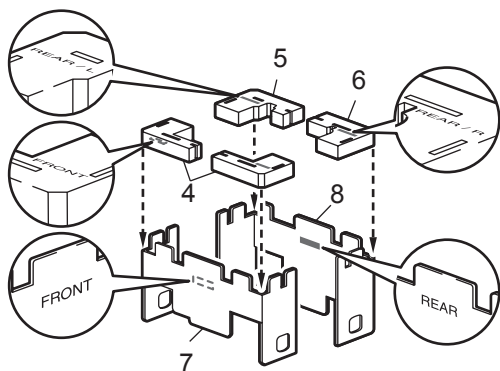


16

Using two people, place the machine into the plastic bag and then into the lower carton, matching the “FRONT” piece to the front of the machine as shown in the illustration in Step 15.

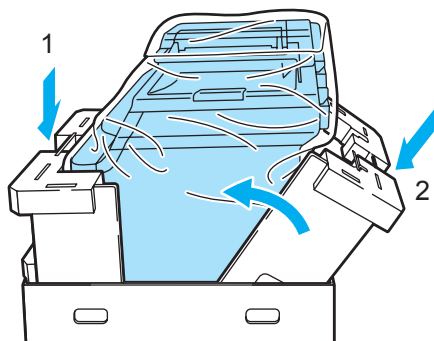
17

As shown in the illustration, fit the two foam pieces marked “FRONT” (4) to the cardboard piece marked “FRONT” (7). Fit the “REAR/L” (5) and “REAR/R” (6) foam pieces to the left and right of the cardboard piece marked “REAR” (8).



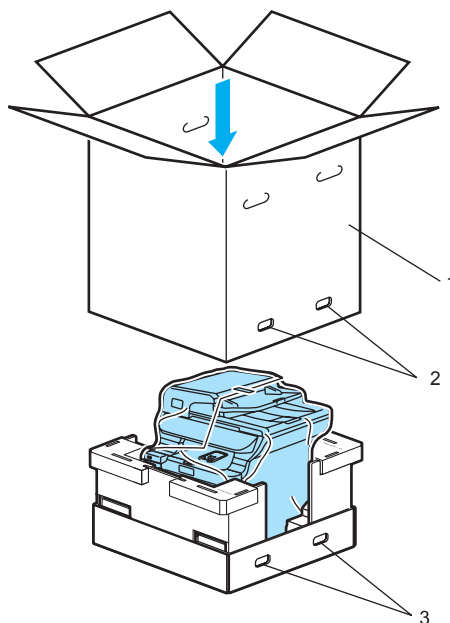
18

Put the assembled “FRONT” (1) and “REAR” (2) cardboard pieces in the lower carton at the front and rear of the machine as shown in the illustration. The foam pads should fit closely to the machine to support it.

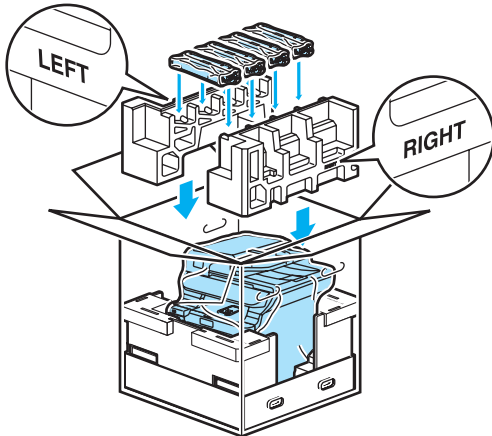


19

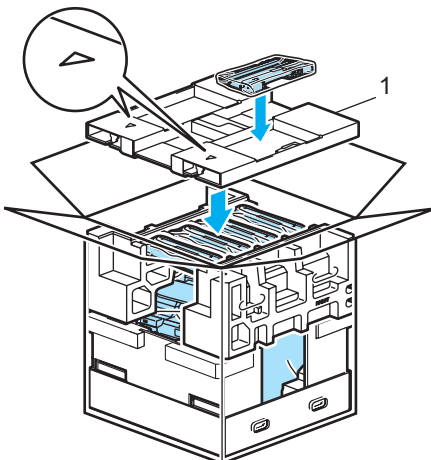
Place the upper carton (1) over the machine and the lower carton. Match the joint holes (2) of the upper carton to the joint holes (3) of the lower carton.



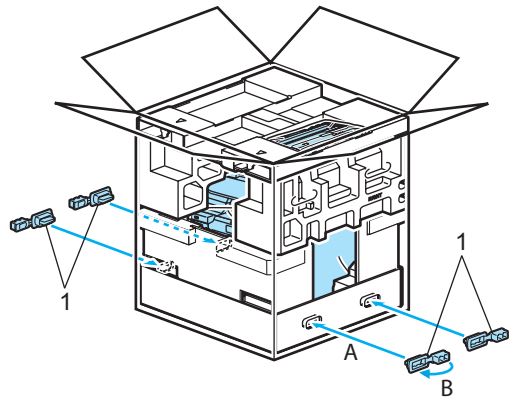
- 20 Put the two styrofoam pieces for the toner cartridges on the top of the machine. Match the right side of the machine to the “RIGHT” mark on one of the styrofoam pieces, and the left side of the machine to the “LEFT” mark on the other styrofoam piece. Put the toner cartridges in the styrofoam.



- 21 Put the carton tray (1) on the top. Match the front side of the machine to the  $\Delta$  marks on the carton tray. Place the waste toner box in the right side of the carton tray.



- 22 Put the four joints (1) into the holes of the carton using steps A and B as shown below.



- 23 Close the carton and tape it shut.

# Machine information

## Checking the serial number

You can see the machine's serial number on the LCD.

- 1 Press **Menu**, **6**, **2**.

62.Serial No.
XXXXXXXXXX

- 2 Press **Stop/Exit**.

## Checking the page counters

You can see the machine's page counters for printed pages, copies, reports and lists or a summary total.

- 1 Press **Menu**, **6**, **3**.  
The LCD shows the number of pages for Total, List and Copy.

63.Page Counter
▲ Total :XXXXXX
List :XXXXXX
▼ Copy :XXXXXX
Select ▲▼ or OK

- 2 Press ▲ or ▼ to see number of pages for Print.

63.Page Counter
▲ List :XXXXXX
Copy :XXXXXX
▼ Print :XXXXXX
Select ▲▼ or OK

- 3 Press ▲ or ▼ to choose the option for which you want to see the machine's page counters for Color and black & white.  
Press **OK**.

63.Page Counter
Total
Color :XXXXXX
B&W :XXXXXX

- 4 Press **Stop/Exit**.

## Checking the remaining life of parts

You can view the remaining life of these parts on the LCD.

- 1 Press **Menu**, **6**, **5**.

65.Parts Life
1.Drum
2.Belt Unit
3.PF kit MP
Select ▲▼ or OK

- 2 Press ▲ or ▼ to choose 1.Drum, 2.Belt Unit, 3.PF kit MP, 4.PF kit 1, 5.PF kit 2<sup>1</sup>, 6.Fuser or 7.Laser.  
Press **OK**.

65.Parts Life
1.Drum
Remaining:100%

<sup>1</sup> PF kit 2 appears only when the optional LT-100CL tray is installed.

- 3 Press **Stop/Exit**.



### Note

The life check of a part will be accurate only if that part's life counter was reset when the new part was installed. It will not be accurate if that part's life counter was reset during the life of the used part.

## On-screen programming

Your machine has been designed to be easy to use. The LCD provides on-screen programming using the menu keys.

We have created step by step on-screen instructions to help you program your machine. Simply follow the steps as they guide you through the menu selections and programming options.

### Menu table

You can program your machine by using the *Menu table* on page 149. These pages list the menu selections and options.

Press **Menu** followed by the menu numbers to program your machine.

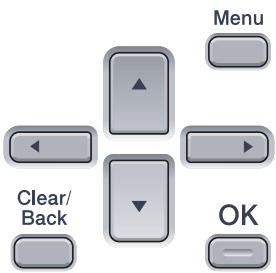








For example, to set **Beeper volume** to **Low**:

- 1 Press **Menu**, 1, 3.
- 2 Press ▲ or ▼ to choose **Low**.
- 3 Press **OK**.

### Memory storage

Your menu settings are stored permanently, and in the event of a power failure will *not* be lost. Temporary settings (for example, Contrast) *will* be lost. Your machine can store the date and time for approximately 60 hours.

## Menu keys

	
Menu 	Access the menu.
OK 	Go to the next menu level. Accept an option.
Clear/Back 	Exit the menu by pressing repeatedly. Go back to the previous menu level.
 	Scroll through the current menu level.
 	Go back to the previous menu level or forward to the next menu level.
Stop/Exit 	Exit the menu.

## How to access the menu mode

---

- 1 Press **Menu**.
- 2 Choose an option.
  - Press **1** for General Setup menu.
  - Press **2** for Copy menu.
  - Press **3** for Printer menu.
  - Press **4** for USB Direct I/F menu.
  - Press **5** for LAN menu.
  - Press **6** for Machine Info. menu.

You can also scroll through each menu level by pressing **▲** or **▼** for the direction you want.
- 3 Press **OK**.

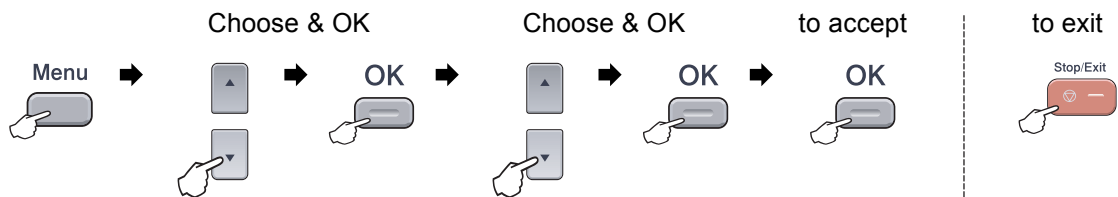
The LCD will then show the next menu level.
- 4 Press **▲** or **▼** to scroll to your next menu selection.
- 5 Press **OK**.

When you have finished setting an option, the LCD shows *Accepted*.
- 6 Press **Stop/Exit** to return to the top menu.



# Menu table

The factory settings are shown in bold with an asterisk.



Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
1.General Setup	1.Paper Type	1.MP Tray	Thin <b>Plain*</b> Thick Thicker Recycled Paper	Sets the type of paper in the MP tray.	20
		2.Tray#1	Thin <b>Plain*</b> Recycled Paper	Sets the type of paper in the paper tray.	20
		3.Tray#2 (This menu only appears if you have the optional tray #2.)	Thin <b>Plain*</b> Recycled Paper	Sets the type of paper in the optional paper tray #2.	20
	2.Paper Size	1.MP Tray	<b>A4*</b> Letter Legal Executive A5 A6 B5 B6 Folio Any	Sets the size of the paper in the MP tray.	20

Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
1.General Setup (continued)	2.Paper Size (continued)	2.Tray#1	<b>A4*</b> Letter Legal Executive A5 A6 B5 B6 Folio	Sets the size of the paper in the paper tray.	20
		3.Tray#2 (This menu only appears if you have the optional tray #2.)	<b>A4*</b> Letter Legal Executive A5 B5 B6 Folio	Sets the size of the paper in the optional paper tray #2.	20
	3.Beeper	—	Off Low <b>Med*</b> High	Adjusts the volume level of the beeper.	22
	4.Auto Daylight	—	<b>On*</b> Off	Changes for Daylight Savings Time automatically.	22
	5.Ecology	1.Toner Save	On <b>Off*</b>	Increases the page yield of the toner cartridge.	22
		2.Sleep Time	(000-240) <b>005Min*</b>	Conserves power.	23
	6.Tray Use	1.Copy	Tray#1 Only Tray#2 Only MP Only <b>MP&gt;T1*</b> T1>MP <b>MP&gt;T1&gt;T2*</b> T1>T2>MP (Tray#2 or T2 appears only if you installed the optional paper tray.)	Selects the tray that will be used for Copy mode.	21

Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
1.General Setup (continued)	6.Tray Use (continued)	2.Print	Tray#1 Only Tray#2 Only MP Only <b>MP&gt;T1*</b> T1>MP <b>MP&gt;T1&gt;T2*</b> T1>T2>MP (Tray#2 or T2 appears only if you installed the optional paper tray.)	Selects the tray that will be used for PC print.	21
	7.LCD Contrast	—	—□□□■+ —□□□■+ —□□■□+* —□■□□+ —■□□□+	Adjusts the contrast of the LCD.	23
	8.Function Lock	—	—	You can restrict selected machine operation for up to 25 individual users and all other non-authorized Public users.	24
	9.Document Scan	1.Glass ScanSize	<b>A4/Letter*</b> Legal/Folio	Adjusts the scan area of the scanner glass to the size of the document.	See Software User's Guide on the CD-ROM.
	0.Local Language	—	Depending on your country.	Allows you to change the LCD language for your country.	137
2.Copy	1.Quality	—	<b>Auto*</b> Text Photo	You can choose the Copy resolution for your type of document.	29
	2.Brightness	—	—□□□■+ —□□□■+ —□□■□+* —□■□□+ —■□□□+	Adjusts the brightness for copies.	34
	3.Contrast	—	—□□□■+ —□□□■+ —□□■□+* —□■□□+ —■□□□+	Adjusts the contrast for copies.	34

Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
2.Copy (continued)	4.Color Adjust	1.Red	-□□□■+ -□□□■+ -□□■□+* -□■□□+ -■□□□+	Adjusts the red colour for copies.	34
		2.Green	-□□□■+ -□□□■+ -□□■□+* -□■□□+ -■□□□+	Adjusts the green colour for copies.	
		3.Blue	-□□□■+ -□□□■+ -□□■□+* -□■□□+ -■□□□+	Adjusts the blue colour for copies.	
3.Printer	1.Emulation	—	Auto* HP LaserJet BR-Script 3	Chooses the emulation mode.	See Software User's Guide on the CD-ROM.
	2.Print Options	1.Internal Font	—	Prints a list of the machine's internal fonts.	
		2.Configuration	—	Prints a list of the machine's printer settings.	
		3.Test Print	—	Prints a test page.	
	3.Duplex	—	Off* On (Long Edge) On (Short Edge)	Enables or disables the duplex printing. You can also choose the format for duplex printing.	
	4.Output Color	—	Auto* Color B&W	Chooses colour or black & white printed documents. If you choose Auto, the machine selects a suitable option for the document (colour or B&W).	
	5.Reset Printer	1.Reset	—	Returns the PCL setting to the default settings.	
2.Exit		—			

Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
3.Printer (continued)	6.Calibration	—	Calibrate  Reset	Adjusts the colour density or returns the colour calibration to the factory setting.	See <i>Software User's Guide on the CD-ROM.</i>
	7.Auto Regist.	1.Registration	1.Start	Adjust the print position of each colour automatically.	
			2.Exit		
		2.Frequency	Low <b>Medium*</b> High Off	Set the interval time you want to carry out the auto registration.	
	8.Manual Regist.	1.Print Chart	—	Print the chart to manually check the registration of the colours.	
		2.Set Regist.	1 Magenta Left 2 Cyan Left 3 Yellow Left 4 Magenta Center 5 Cyan Center 6 Yellow Center 7 Magenta Right 8 Cyan Right 9 Yellow Right	Sets the correction value on the chart you printed from Print Chart.	
4.USB Direct I/F	1.Direct Print	1.Paper Size	<b>A4*</b>  Letter  Legal  Executive  A5  A6  B5  B6  Folio	Sets the paper size when printing directly from the USB flash memory drive.	42
		2.Media Type	Thin <b>Plain*</b> Thick Thicker Recycled Paper	Sets the media type when printing directly from the USB flash memory drive.	42

Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
4.USB Direct I/F (continued)	1.Direct Print (continued)	3.Multiple Page	1in1*  2in1  4in1  9in1  16in1  25in1  1 in 2x2 pages 1 in 3x3 pages 1 in 4x4 pages 1 in 5x5 pages	Sets the page style when printing multiple pages directly from the USB flash memory drive.	42
		4.Orientation	Portrait* Landscape	Sets the page orientation when printing directly from the USB flash memory drive.	42
		5.Collate	On* Off	Enables or disables the page collation when printing directly from the USB flash memory drive.	42
		6.Print Quality	Normal* Fine	Sets the print quality option when printing directly from the USB flash memory drive.	42
		7.PDF Option	Document* Document&Markup Document&Stamps	Sets the PDF option whether to print comments (Markup) or stamps in the PDF file along with the text.	42
		8.Index Print	Simple* Details	Sets the index print option, simple format or details.	42
	2.Scan to USB	1.Resolution	Color 150 dpi* Color 300 dpi Color 600 dpi B&W 200 dpi B&W 200x100 dpi	Sets the resolution to send the scanned data to USB flash memory drive.	See Software User's Guide on the CD-ROM.
		2.File Name	—	Enter the file name of the scanned data.	
	3.PictBridge	1.Paper Size	Letter A4* B5 A5 B6 A6	Sets the paper size when printing data from a camera with using PictBridge.	38

Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
4.USB Direct I/F (continued)	3.PictBridge (continued)	2.Orientation	Letter  A4  B5  A5  B6  A6  Then, you will choose:  Portrait  Landscape	Sets the page orientation when printing data from a camera using PictBridge. If you choose the paper size Letter, A4 or B5, Portrait will be chosen. If you choose A5, B6 or A6, Landscape will be chosen.	38
		3.Date & Time	Off*  On	Prints the date and time the photo is being taken on the photo.	38
		4.File Name	On  Off*	Prints the file name of the data on the photo.	38
		5.Print Quality	Normal*  Fine	Sets the print quality option when printing data from a camera using PictBridge.	38
5.LAN	1.TCP/IP	1.BOOT Method	Auto*  Static  RARP  BOOTP  DHCP	Chooses the BOOT method that best suits your needs.  (If you choose Auto, RARP, BOOTP or DHCP, you will be asked to enter how many times the machine tries to obtain the IP address.)	See Network User's Guide on the CD-ROM.
		2.IP Address	[000-255]. [000-255]. [000-255]. [000-255]	Enter the IP address.	
		3.Subnet Mask	[000-255]. [000-255]. [000-255]. [000-255]	Enter the Subnet mask.	
		4.Gateway	[000-255]. [000-255]. [000-255]. [000-255]	Enter the Gateway address.	
		5.Node Name	BRNXXXXXX	Enter the Node name.	
		6.WINS Config	Auto*  Static	Chooses the WINS configuration mode.	

Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
5. LAN (continued)	1. TCP/IP (continued)	7. WINS Server	(Primary)  000.000.000.000 (Secondary)  000.000.000.000	Specifies the IP address of the primary or secondary WINS server.	See Network User's Guide on the CD-ROM.
		8. DNS Server	(Primary)  000.000.000.000 (Secondary)  000.000.000.000	Specifies the IP address of the primary or secondary DNS server.	
		9. APIPA	On* Off	Automatically allocates the IP address from the link local address range.	
		0. IPv6	On Off*	Sets the IPv6 protocol On.	
	2. Ethernet	—	Auto*  100B-FD  100B-HD  10B-FD  10B-HD	Chooses the Ethernet link mode.	
	3. Scan to FTP	—	Color 150 dpi*  Color 300 dpi  Color 600 dpi  B&W 200x100 dpi  B&W 200 dpi	Sets the resolution to send the scanned data via the FTP server.	
	0. Factory Reset	1. Reset	1. Yes	Restores the network settings to the factory default.	
			2. No		
		2. Exit	—		
	6. Machine Info.	1. Date & Time	—	—	
2. Serial No.		—	—	You can check the serial number of your machine.	146
3. Page Counter		—	Total  List  Copy  Print	You can check the number of total pages the machine has printed during its life.	146
4. User Settings		—	—	You can print a list of your settings including the network configuration.	23



Main Menu	Submenu	Menu Selections	Options	Descriptions	Page
6. Machine Info. (continued)	5. Parts Life	1. Drum 2. Belt Unit 3. PF kit MP 4. PF kit 1 5. PF kit 2 6. Fuser 7. Laser	—	You can check the percentage of a machine part's life that remains available.  PF kit 2 appears only when the optional LT-100CL tray is installed.	146
	6. Reset Menu	—	Drum Belt Unit PF kit MP PF kit 1 PF kit 2	Resets the machine part's life counter. Appears when you replace the machine part.  (PF kit 2 appears only when the optional LT-100CL tray is installed.)	120 127

# Entering text

When setting certain menu selections, you will need to type text characters. The numeric keys have letters printed on them. The keys: **0**, **#** and **\*** do not have printed letters because they are used for special characters.

Press the appropriate numeric keys the required number of times to access the characters below:

- For setting Scan to FTP menu options

Press Key	one time	two times	three times	four times	five times	six times	seven times	eight times
1	@	.	/	1	@	.	/	1
2	a	b	c	A	B	C	2	a
3	d	e	f	D	E	F	3	d
4	g	h	i	G	H	I	4	g
5	j	k	l	J	K	L	5	j
6	m	n	o	M	N	O	6	m
7	p	q	r	s	P	Q	R	S
8	t	u	v	T	U	V	8	t
9	w	x	y	z	W	X	Y	Z

- For setting other menu selections

Press Key	one time	two times	three times	four times
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	Q	R	S
8	T	U	V	8
9	W	X	Y	Z

## Inserting spaces

To enter a space in a name, press ► twice between characters.

## Making corrections

If you entered a letter incorrectly and want to change it, press ◀ to move the cursor to the incorrect character, and then press **Clear/Back**.

## Repeating letters

To enter a character on the same key as the previous character, press ► to move the cursor right before pressing the key again.

### Special characters and symbols

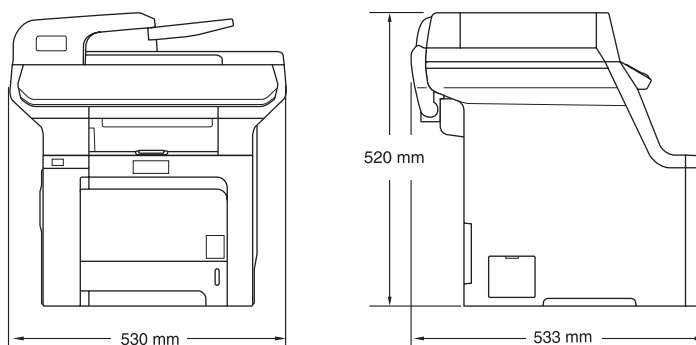
Press **\***, **#** or **0**, then press **◀** or **▶** to move the cursor to the symbol or character you want. Press **OK** to choose it. The symbols and characters below appear depending on the menu selection you choose.

Press <b>*</b>	for	(space) ! " # \$ % & ' ( ) * + , - . / €
Press <b>#</b>	for	: ; < = > ? @ [ ] ^ _ ¥ ~ '   { }
Press <b>0</b>	for	Ä Ê Ö Ü À Ç È É 0

## General

<b>Memory Capacity</b>	128 MB
<b>ADF (automatic document feeder)</b>	Up to 50 pages (Staggered) 80 g/m <sup>2</sup>  Duplex, up to Letter Recommended Environment for Best Results: Temperature: 20 to 30° C Humidity: 50% - 70% Paper: Xerox Premier 80 g/m <sup>2</sup> or Xerox Business
<b>Paper Tray</b>	250 Sheets 80 g/m <sup>2</sup>
<b>Paper Tray 2 (option)</b>	500 Sheets 80 g/m <sup>2</sup>
<b>Printer Type</b>	Laser
<b>Print Method</b>	Electrophotography by semiconductor laser beam scanning
<b>LCD (liquid crystal display)</b>	22 characters × 5 lines
<b>Power Source</b>	220-240 V AC 50/60 Hz
<b>Power Consumption</b>	Peak: Average 1200 W Copying: Average 515 W Sleep: Average 36 W Standby: Average 100 W

## Dimensions



## Weight

Without Drum/Toner Unit: 33.1 kg

<b>Noise level</b>	Sound power	
	Operating (Copying):	LWAd= 6.9 Bell
	Standby:	LWAd = 4.4 Bell
	Sound pressure	
<b>Temperature</b>	Operating (Copying):	LpAm = 54.5 dBA
	Standby:	LpAm = 30 dBA
	Operating:	10 to 32.5° C
	Storage:	5 to 35° C
<b>Humidity</b>	Operating:	20 to 80% (without condensation)
	Storage:	10 to 90% (without condensation)

# Print media

<b>Paper Input</b>	<b>Paper Tray</b>	
	■ Paper Type:	Plain paper, Thin paper or Recycled paper
	■ Paper Size:	A4, Letter, B5, A5, B6, A6, Executive, Legal and Folio
	■ Paper Weight:	60 to 105 g/m <sup>2</sup>
	■ Maximum paper tray capacity:	Up to 250 sheets of 80 g/m <sup>2</sup> plain paper

## Multi-purpose tray (MP tray)

■ Paper Type:	Plain paper, Thin paper, Thick paper, Recycled paper, Bond paper, Envelopes or Labels
■ Paper Size:	Width: 69.9 to 215.9 mm (2.75 to 8.5 in.) Length: 116.0 to 406.4 mm (4.57 to 16 in.)
■ Paper Weight:	60 to 163 g/m <sup>2</sup>
■ Maximum paper tray capacity:	Up to 50 sheets of 80 g/m <sup>2</sup> plain paper Up to 3 envelopes

## Paper Tray 2 (option)

■ Paper Type:	Plain paper, Thin paper or Recycled paper
■ Paper Size:	Letter, A4, B5, A5, B6, Executive, Legal and Folio
■ Paper Weight:	60 to 105 g/m <sup>2</sup>
■ Maximum paper tray capacity:	Up to 500 sheets of 80 g/m <sup>2</sup> plain paper

<b>Paper Output</b>	Up to 150 sheets (face down print delivery to the output paper tray)
---------------------	--

<b>Duplex</b>	Paper Size	Legal, Folio and A4
	Manual Duplex	Yes
	Automatic Duplex	Yes

# Copy

<b>Colour/Monochrome</b>	Yes/Yes	
<b>Single-Sided Document Size</b>	ADF Width:	148 to 215.9 mm (5.8 to 8.5 in.)
	ADF Height:	148 to 355.6 mm (5.8 to 14 in.)
	Scanner Glass Width:	Max. 215.9 mm (8.5 in.)
	Scanner Glass Height:	Max. 355.6 mm (14 in.)
	Copy Width:	Max. 8.26 in. (210 mm)
<b>2-Sided (Duplex) Document Size</b>	ADF Width:	147.3 to 215.9 mm (5.8 to 8.5 in.)
	ADF Height:	147.3 to 297.0 mm (5.8 to 11.7 in.)
<b>Multiple Copies</b>	Stacks or Sorts up to 99 pages	
<b>Reduce/Enlarge</b>	25% to 400% (in increments of 1%)	
<b>Resolution</b>	Up to 1200 × 600 dpi <sup>1</sup>	
<b>First Copy Out Time</b>	Approx. 21 seconds (Black) <sup>2 3</sup>	
	Approx. 23 seconds (Colour) <sup>2 3</sup>	

<sup>1</sup> When making a B&W copy from the scanner glass in text quality mode at the 25 to 150% ratio.

<sup>2</sup> First copy out time may change if the machine is calibrating or registering itself.

<sup>3</sup> First copy out time may vary due to scanner lamp warm up time.

# Scan

<b>Colour/Monochrome</b>	Yes/Yes
<b>Duplex Scanning</b>	Yes
<b>TWAIN Compliant</b>	Yes (Windows® 2000 Professional/XP/ XP Professional x64 Edition/Windows Vista®)  Mac OS® X 10.2.4 or greater
<b>WIA Compliant</b>	Yes (Windows® XP/Windows Vista®)
<b>Colour Depth</b>	24 bit colour
<b>Resolution</b>	Up to 19200 × 19200 dpi (interpolated) <sup>1</sup> Up to 1200 × 2400 dpi (optical) <sup>2</sup> Up to 1200 × 600 dpi (optical) <sup>3</sup>
<b>Single-Sided Document Size</b>	ADF Width: 148.0 to 215.9 mm (5.8 to 8.5 in.) ADF Height: 148.0 to 355.6 mm (5.8 to 14 in.) Scanner Glass Width: Max. 215.9 mm (8.5 in.) Scanner Glass Height: Max. 355.6 mm (14 in.)
<b>2-Sided (Duplex) Document Size</b>	ADF Width: 148.0 to 215.9 mm (5.8 to 8.5 in.)  ADF Height: 148.0 to 297.0 mm (5.8 to 11.7 in.)
<b>Scanning Width</b>	Max. 210 mm (8.26 in.)
<b>Greyscale</b>	256 levels

<sup>1</sup> Maximum 1200 × 1200 dpi scanning with the WIA driver in Windows® XP/Windows Vista®  
(resolution up to 19200 × 19200 dpi can be chosen by using the Brother scanner utility)

<sup>2</sup> When using the scanner glass

<sup>3</sup> When using the ADF



# Print

<b>Emulations</b>	PCL6 BR-Script (PostScript®) Level 3
<b>Printer Driver</b>	Host-Based Driver for Windows® 2000 Professional/XP/XP Professional x64 Edition/ Windows Vista®/ Windows Server® 2003 (print only via network) BR-Script (PPD file) for Windows® 2000 Professional/XP/XP Professional x64 Edition/ Windows Vista® Macintosh® Printer Driver for Mac OS® × 10.2.4 or greater BR-Script (PPD file) for Mac OS® × 10.2.4 or greater
<b>Resolution</b>	600 × 600 dpi, 2400 dpi (2400 × 600 dpi)
<b>Print Speed</b>	Up to 21 pages/minute (Letter size) (Black) <sup>1 2</sup> Up to 21 pages/minute (Letter size) (colour) <sup>1 2</sup>
<b>Print Speed for Duplex Printing</b>	Up to 7 sides/minute (Up to 3.5 pages/minute) (Black) Up to 7 sides/minute (Up to 3.5 pages/minute) (Colour)
<b>First Print Out Time</b>	Less than 16 seconds (Black) <sup>3</sup> Less than 17 seconds (Colour) <sup>3</sup>

<sup>1</sup> The printing speed may change depending on the type of document you print.

<sup>2</sup> From the standard paper tray and optional paper tray.

<sup>3</sup> First print out time may change if the machine is calibrating or registering itself.

# Interfaces

**USB** Use a USB 2.0 interface cable that is no longer than 2.0 m (6 feet).<sup>1 2</sup>

**LAN cable** Use an Ethernet UTP cable category 5 or greater.

<sup>1</sup> Your machine has a Hi-Speed USB 2.0 interface. The machine can also be connected to a computer that has a USB 1.1 interface.

<sup>2</sup> Third party USB ports are not supported.

## PictBridge

**Compatibility** Supports the Camera & Imaging Products Association PictBridge standard CIPA DC-001.

Visit <http://www.cipa.jp/pictbridge> for more information.

**Interface** USB direct interface

## Direct print feature

**Compatibility** PDF version 1.6<sup>1</sup>, JPEG, Exif + JPEG, PRN (created by DCP-9045CDN printer driver), TIFF (scanned by all Brother MFC or DCP models), PostScript® 3™ (created by DCP-9045CDN BR-Script 3 printer driver)

<sup>1</sup> The data including JBIG2 image file, JPEG2000 image file and layered files are not supported.

# Computer requirements

Minimum System Requirements and Supported PC Software Functions								
Computer Platform & Operating System Version		Supported PC Software Functions	PC Interface	Processor Minimum Speed	Minimum RAM	Recommended RAM	Available Hard Disk Space	
							For Drivers	For Applications
Windows® Operating System	Windows® 2000 Professional <sup>3</sup>	Printing, Scanning	USB, Ethernet	Intel® Pentium® or equivalent	64 MB	256 MB	150 MB	310 MB
	Windows® XP Home <sup>1 3</sup> Windows® XP Professional <sup>1 3</sup>				128 MB			
	Windows® XP Professional x64 Edition <sup>1</sup>			AMD Opteron™, AMD Athlon™ 64, Intel® Xeon® with Intel® EM64T, Intel® Pentium® with Intel® EM64T or equivalent	256 MB	512 MB		
	Windows Vista® <sup>1</sup>			Intel® Pentium® or equivalent, 64-bit supported CPU	512 MB	1 GB		
	Windows Server® 2003	Printing	Ethernet	Intel® Pentium® III or equivalent	256 MB	512 MB	50 MB	Not available
	Windows Server® 2003 x64 Edition			AMD Opteron™, AMD Athlon™ 64, Intel® Xeon® with Intel® EM64T, Intel® Pentium® with Intel® EM64T or equivalent	256 MB			
	Macintosh® Operating System	Printing, Scanning	USB <sup>2</sup> , Ethernet	PowerPC G4/G5, Intel® Core™ Solo/Duo, PowerPC G3 350MHz	128 MB	160 MB	80 MB	400 MB

<sup>1</sup> For WIA, 1200x1200 resolution. Brother Scanner Utility enables to enhance up to 19200 x 19200 dpi.

<sup>2</sup> Third party USB ports are not supported.

<sup>3</sup> PaperPort™ 11SE supports Microsoft® SP4 or higher for Windows® 2000 and SP2 or higher for XP.

## Consumable items

<b>Toner Cartridge Life</b>	Standard Toner Cartridges:	
	<b>TN-130BK</b> (Black):	Approx. 2,500 pages <sup>1</sup>
	<b>TN-130C, TN-130M, TN-130Y</b> (Cyan, Magenta, Yellow):	Approx. 1,500 pages <sup>1</sup>
	High-Yield Toner Cartridges:	
	<b>TN-135BK</b> (Black):	Approx. 5,000 pages <sup>1</sup>
	<b>TN-135C, TN-135M, TN-135Y</b> (Cyan, Magenta, Yellow):	Approx. 4,000 pages <sup>1</sup>
<b>Drum Unit Life Expectancy</b>	<b>DR-130CL:</b>	Approx. 17,000 pages <sup>2</sup>
<b>Belt Unit</b>	<b>BU-100CL:</b>	Approx. 50,000 pages <sup>2</sup>
<b>Waste Toner Box</b>	<b>WT-100CL:</b>	Approx. 20,000 pages <sup>3</sup>

<sup>1</sup> When printing on Letter or A4 size paper at 5% print coverage

<sup>2</sup> When printing on Letter or A4 size paper

<sup>3</sup> When printing on Letter or A4 size paper at 5% print coverage for CMYK each.

# Ethernet wired network

<b>Network board model name</b>	NC-6500h
<b>LAN</b>	You can connect your machine to a network for Network Printing and Network Scanning <sup>1</sup>
<b>Support for</b>	Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server® 2003 x64 Edition <sup>1</sup> Mac OS® X 10.2.4 or greater <sup>2</sup>
<b>Protocols</b>	IPv4: TCP/IP ARP, RARP, BOOTP, DHCP, APIPA (Auto IP), WINS, NetBIOS name resolution, DNS resolver, mDNS, LPR/LPD, Custom Raw Port/Port9100, IPP, IPPS, FTP server, SSL/TLS, POP before SMTP, SMTP-AUTH, Telnet, SNMPv1, HTTP/HTTPS server, TFTP client and server, SMTP client, APOP, LLTD responder, Raw Port (PC scanner), FTP client IPv6: TCP/IP (Turned off as default) NDP, RA, DNS, mDNS, LPR/LPD, Custom Raw Port/Port9100, IPP, IPPS, FTP server, SSL/TLS, POP before SMTP, SMTP-AUTH, Telnet, SNMPv1, HTTP/HTTPS server, TFTP client and server, SMTP client, APOP, LLTD responder, Raw Port (PC scanner)
<b>Network type</b>	Ethernet 10/100 BASE-TX Auto Negotiation (Wired LAN)
<b>Management utilities</b> <sup>3</sup>	BRAdmin Light for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003, Windows Server® 2003 x64 Edition and Mac OS® X 10.2.4 or greater BRAdmin Professional for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server 2003 x64 Edition Web BRAdmin for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server 2003 x64 Edition Client computers with a web browser supporting Java™

<sup>1</sup> Printing only for Windows Server® 2003

<sup>2</sup> Mac OS® X 10.2.4 or greater (mDNS)

<sup>3</sup> BRAdmin Professional and Web BRAdmin are available as a download from <http://solutions.brother.com>.

# F

## Glossary

This is a comprehensive list of features and terms that appear in Brother manuals. Availability of these features depends on the model you purchased.

### **ADF (automatic document feeder)**

The document can be placed in the ADF and scanned one page at a time automatically.

### **Beeper Volume**

Volume setting for the beep when you press a key or make an error.

### **Cancel Job**

Cancels a print job and clears the machine's memory.

### **Contrast**

Setting to compensate for dark or light documents, by making copies of dark documents lighter and light documents darker.

### **Greyscale**

The shades of grey available for copying photographs.

### **LCD (liquid crystal display)**

The display screen on the machine that shows interactive messages during On-Screen Programming.

### **Menu mode**

Programming mode for changing your machine's settings.

### **OCR (optical character recognition)**

The bundled ScanSoft™ PaperPort™ 11SE with OCR or Presto!®

PageManager® software application converts an image of text to text you can edit.

### **PictBridge**

Allows you to print photos directly from your PictBridge compatible digital camera at high resolution for photo quality printing.

### **Resolution**

The number of vertical and horizontal lines per inch.

### **Scanning**

The process of sending an electronic image of a paper document into your computer.

### **Temporary settings**

You can select certain options for each copy without changing the default settings.

### **User Settings List**

A printed report that shows the current settings of the machine.

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This machine is approved for use in the country of purchase only, local Brother companies or their dealers will only support machines purchased in their own countries.