



---

# PF-110

# SERVICE MANUAL

Published in April 2009  
845JK210  
5JKSM160  
First Edition

## **CAUTION**

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

It may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for proper disposal.

## **ATTENTION**

IL Y A UN RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UN MODÈLE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES UTILISÉES SELON LES INSTRUCTIONS DONNÉES.

Il peut être illégal de jeter les batteries dans des eaux d'égout municipales. Vérifiez avec les fonctionnaires municipaux de votre région pour les détails concernant des déchets solides et une mise au rebut appropriée.

**Revision history**

Revision	Date	Replaced pages	Remarks

This page is intentionally left blank.

---


# Safety precautions


---


This booklet provides safety warnings and precautions for our service personnel to ensure the safety of their customers, their machines as well as themselves during maintenance activities. Service personnel are advised to read this booklet carefully to familiarize themselves with the warnings and precautions described here before engaging in maintenance activities.

## Safety warnings and precautions


Various symbols are used to protect our service personnel and customers from physical danger and to prevent damage to their property. These symbols are described below:

 **DANGER:** High risk of serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

 **WARNING:** Serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

 **CAUTION:** Bodily injury or damage to property may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

### Symbols

The triangle () symbol indicates a warning including danger and caution. The specific point of attention is shown inside the symbol.



General warning.



Warning of risk of electric shock.



Warning of high temperature.

 indicates a prohibited action. The specific prohibition is shown inside the symbol.



General prohibited action.



Disassembly prohibited.

 indicates that action is required. The specific action required is shown inside the symbol.



General action required.



Remove the power plug from the wall outlet.



Always ground the copier.

## 1.Installation Precautions

### WARNING

- Do not use a power supply with a voltage other than that specified. Avoid multiple connections to one outlet: they may cause fire or electric shock. When using an extension cable, always check that it is adequate for the rated current. ....
- Connect the ground wire to a suitable grounding point. Not grounding the copier may cause fire or electric shock. Connecting the earth wire to an object not approved for the purpose may cause explosion or electric shock. Never connect the ground cable to any of the following: gas pipes, lightning rods, ground cables for telephone lines and water pipes or faucets not approved by the proper authorities. ....



### CAUTION:

- Do not place the copier on an infirm or angled surface: the copier may tip over, causing injury. ....
- Do not install the copier in a humid or dusty place. This may cause fire or electric shock. ....
- Do not install the copier near a radiator, heater, other heat source or near flammable material.



This may cause fire. ....



- Allow sufficient space around the copier to allow the ventilation grills to keep the machine as cool as possible. Insufficient ventilation may cause heat buildup and poor copying performance. ....



- Always handle the machine by the correct locations when moving it. ....
- Always use anti-toppling and locking devices on copiers so equipped. Failure to do this may cause the copier to move unexpectedly or topple, leading to injury. ....
- Avoid inhaling toner or developer excessively. Protect the eyes. If toner or developer is accidentally ingested, drink a lot of water to dilute it in the stomach and obtain medical attention immediately. If it gets into the eyes, rinse immediately with copious amounts of water and obtain medical attention. ....













- Advice customers that they must always follow the safety warnings and precautions in the copier's instruction handbook. ....







## 2.Precautions for Maintenance

### WARNING

- Always remove the power plug from the wall outlet before starting machine disassembly. .... 
- Always follow the procedures for maintenance described in the service manual and other related brochures. .... 
- Under no circumstances attempt to bypass or disable safety features including safety mechanisms and protective circuits. .... 
- Always use parts having the correct specifications. .... 
- Always use the thermostat or thermal fuse specified in the service manual or other related brochure when replacing them. Using a piece of wire, for example, could lead to fire or other serious accident. .... 
- When the service manual or other serious brochure specifies a distance or gap for installation of a part, always use the correct scale and measure carefully. .... 
- Always check that the copier is correctly connected to an outlet with a ground connection. .... 
- Check that the power cable covering is free of damage. Check that the power plug is dust-free. If it is dirty, clean it to remove the risk of fire or electric shock. .... 
- Never attempt to disassemble the optical unit in machines using lasers. Leaking laser light may damage eyesight. .... 
- Handle the charger sections with care. They are charged to high potentials and may cause electric shock if handled improperly. .... 

### CAUTION

- Wear safe clothing. If wearing loose clothing or accessories such as ties, make sure they are safely secured so they will not be caught in rotating sections. .... 
- Use utmost caution when working on a powered machine. Keep away from chains and belts. .... 
- Handle the fixing section with care to avoid burns as it can be extremely hot. .... 
- Check that the fixing unit thermistor, heat and press rollers are clean. Dirt on them can cause abnormally high temperatures. .... 



• Do not remove the ozone filter, if any, from the copier except for routine replacement. ....



• Do not pull on the AC power cord or connector wires on high-voltage components when removing them; always hold the plug itself. ....



• Do not route the power cable where it may be stood on or trapped. If necessary, protect it with a cable cover or other appropriate item. ....



• Treat the ends of the wire carefully when installing a new charger wire to avoid electric leaks. ....



• Remove toner completely from electronic components. ....



• Run wire harnesses carefully so that wires will not be trapped or damaged. ....



• After maintenance, always check that all the parts, screws, connectors and wires that were removed, have been refitted correctly. Special attention should be paid to any forgotten connector, trapped wire and missing screws. ....



• Check that all the caution labels that should be present on the machine according to the instruction handbook are clean and not peeling. Replace with new ones if necessary. ....



• Handle greases and solvents with care by following the instructions below: ....



Use only a small amount of solvent at a time, being careful not to spill. Wipe spills off completely. Ventilate the room well while using grease or solvents.

Allow applied solvents to evaporate completely before refitting the covers or turning the power switch on. Always wash hands afterwards.

• Never dispose of toner or toner bottles in fire. Toner may cause sparks when exposed directly to fire in a furnace, etc. ....



• Should smoke be seen coming from the copier, remove the power plug from the wall outlet immediately. ....



### 3.Miscellaneous

#### WARNING

• Never attempt to heat the drum or expose it to any organic solvents such as alcohol, other than the specified refiner; it may generate toxic gas. ....



This page is intentionally left blank.

Read This First .....	2
Safety and Symbols .....	2
Replacement Procedure Safety .....	2
Replacement and Adjustment .....	3
Paper Feed Unit .....	3
Top Cover .....	3
Paper Feed and Relay Clutch .....	3
Paper End and Relay Sensor .....	4
Paper Feed Roller .....	4
Friction Pad .....	6
Detailed Section Descriptions .....	7
Overview .....	7
Component Layout .....	7
Basic Operation .....	8
Paper Separation and Feed .....	8
Paper Lift .....	8
Paper End Detection .....	9

# Read This First

---

## Safety and Symbols

---

---

### Replacement Procedure Safety

---

#### **CAUTION**

- Turn off the main power switch and unplug the machine before beginning any of the replacement procedures in this manual.

#### Symbols Used in this Manual

This manual uses the following symbols.

\*: See or Refer to

$\sigma$ : Screws

$\eta$ : Connector

$\chi$ : Clip ring

$\varepsilon$ : E-ring

# Replacement and Adjustment

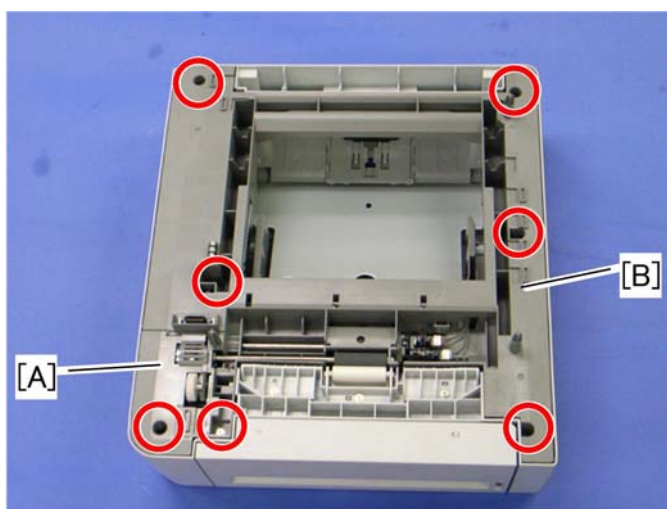
---

## Paper Feed Unit

---

### Top Cover

---



g849r501

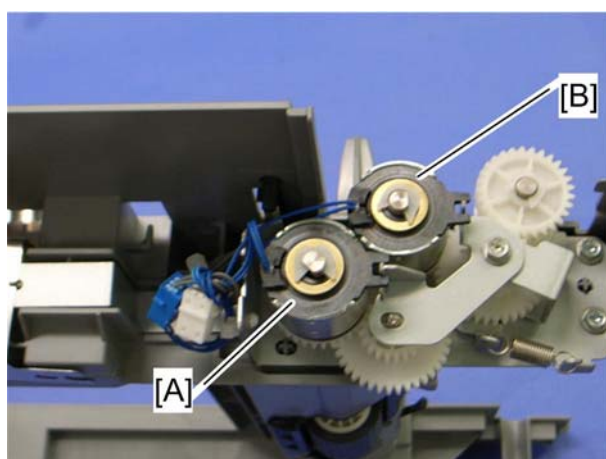
1. Top left cover [A] ( $\sigma \times 1$ )
2. Top cover [B] ( $\sigma \times 6$ )

---

### Paper Feed and Relay Clutch

---

1. Top cover (\* Top Cover)



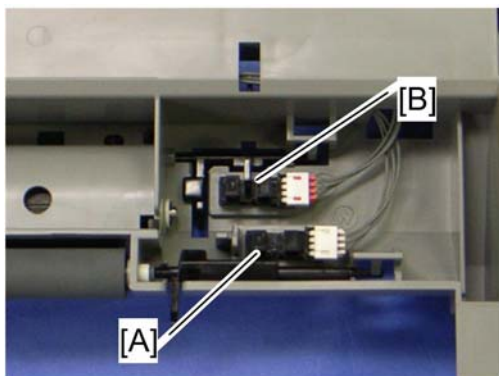
g849r504

2. Paper feed clutch [A] ( $\chi \times 1$ ,  $\eta \times 1$ )
3. Relay clutch [B] ( $\chi \times 1$ ,  $\eta \times 1$ )

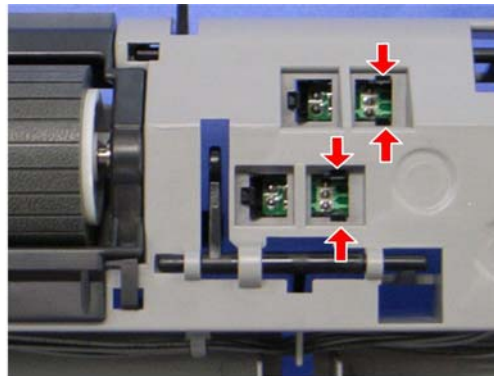
## Replacement and Adjustment

### Paper End and Relay Sensor

1. Top cover (\* Top Cover)



g849r505

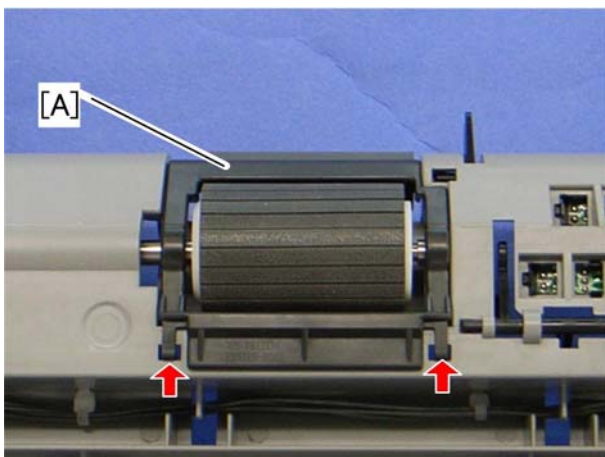


g849r506

2. Paper end sensor [A] (hooks, η x 1)
3. Relay sensor [B] (hooks, η x 1)

### Paper Feed Roller

1. Top cover (\* Top Cover)
2. Paper feed clutch (\* Top Cover)

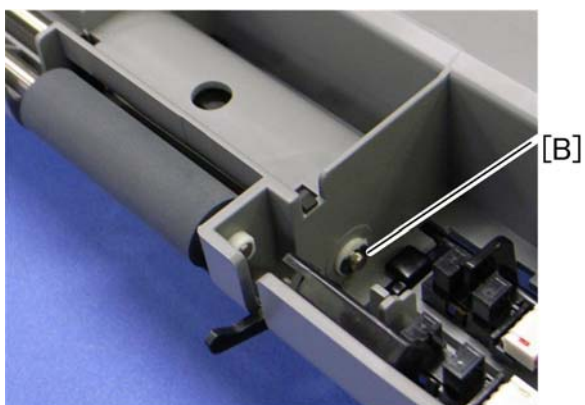


g849r502

3. Paper guide [A] (hooks)

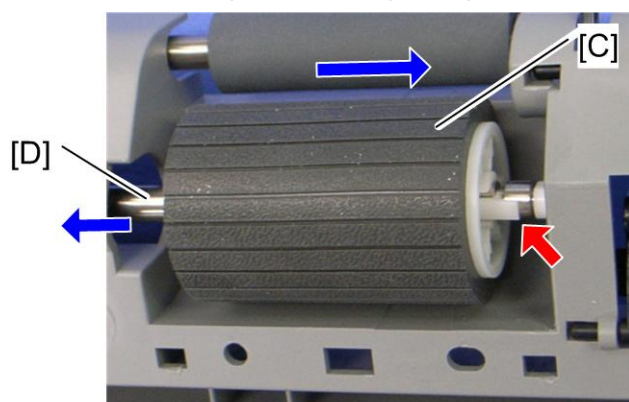
## Replacement and Adjustment

---



g849r503

4. Remove the e-ring [B] at the right edge of the feed roller shaft.

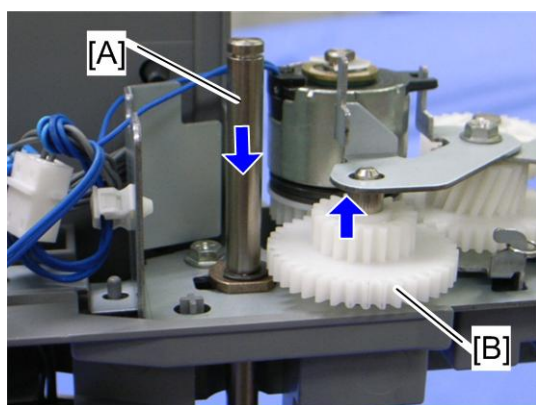


g849r506

5. Slide the paper feed roller [C] to the right side (hook).
6. Pull out the feed roller shaft [D] to the left side (bushing x 1).

## When reassembling

---

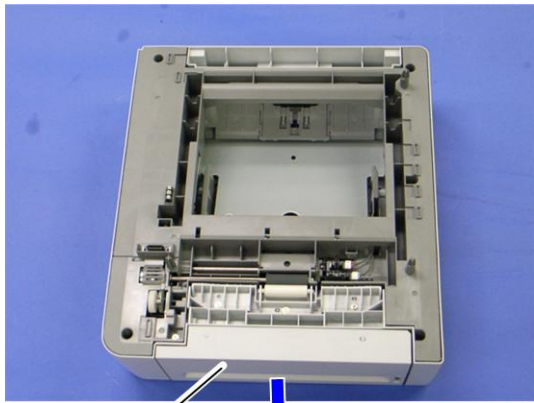


g849r507

If the feed roller shaft [A] cannot be inserted easily, pull the gear [B], and then insert the feed roller shaft.

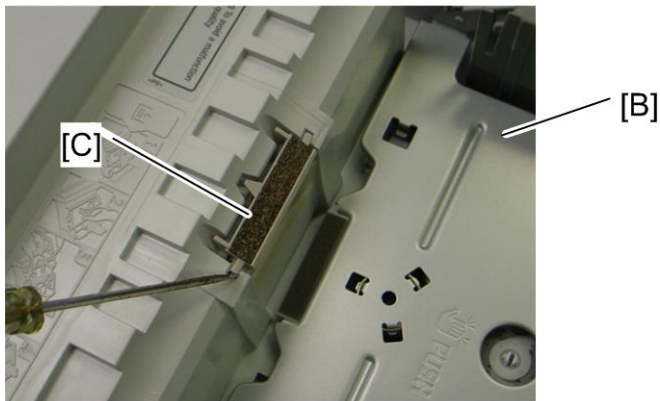
## Replacement and Adjustment

### Friction Pad



g849r501a

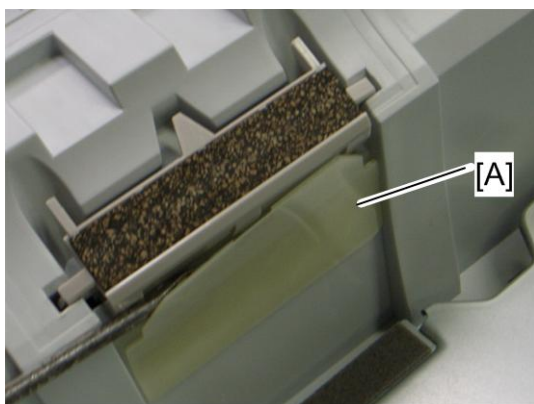
1. Pull out the tray [A]



g849r508

2. Press down the bottom plate [B]
3. Friction pad [C] (hooks, spring x 1)

### When reassembling



g849r509

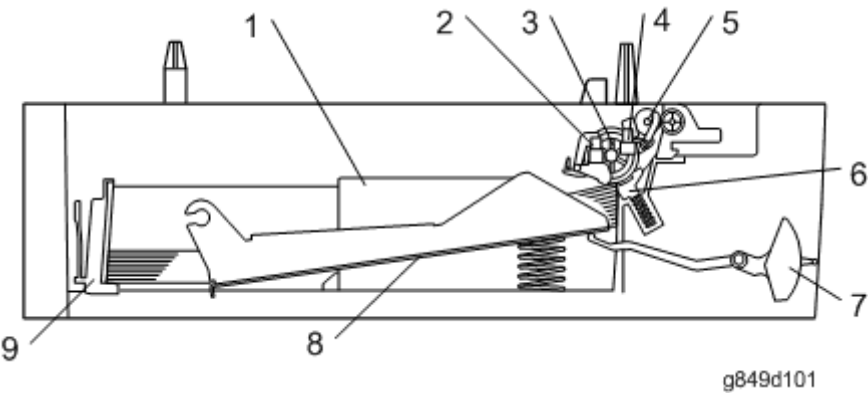
When re-installing the friction pad, make sure that the mylar [A] does not go under the friction pad.



# Detailed Section Descriptions

## Overview

## Component Layout



1. Side Fence	6. Friction Pad
2. Paper End Sensor	7. Paper Height Lever
3. Paper Feed Roller	8. Bottom Plate
4. Relay Sensor	9. Rear Fence
5. Relay Roller	

---

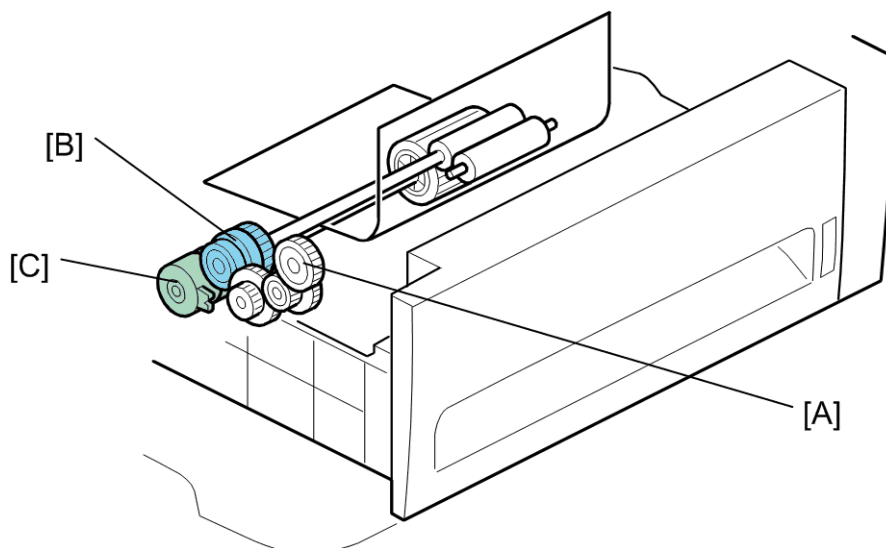
## Basic Operation

---

---

### Paper Separation and Feed

---



g849d102

The paper tray holds 500 sheets of paper.

The paper feed unit uses a friction pad system.

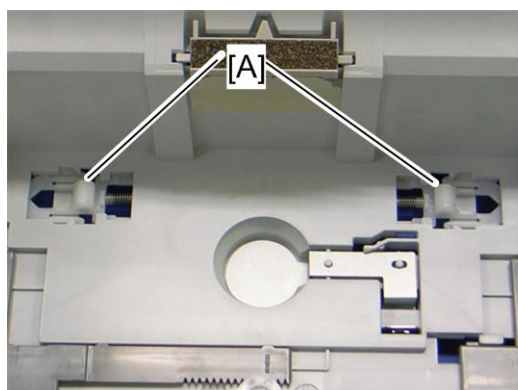
The gear [A] is driven by the transport/fusing motor in the mainframe.

The relay clutch [B] and paper feed clutch [C] control drive from the mainframe. When the optional tray is selected as the feed tray, the relay clutch and paper feed clutch transmit drive power to the relay roller and paper feed roller.

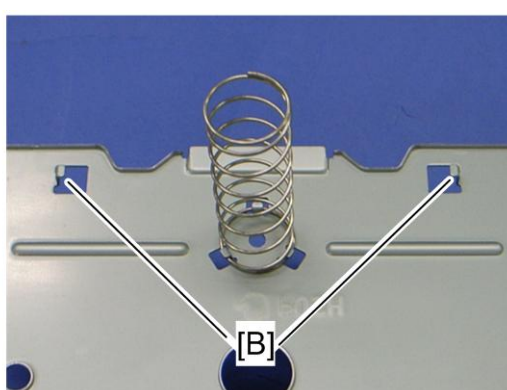
---

### Paper Lift

---



g849d501



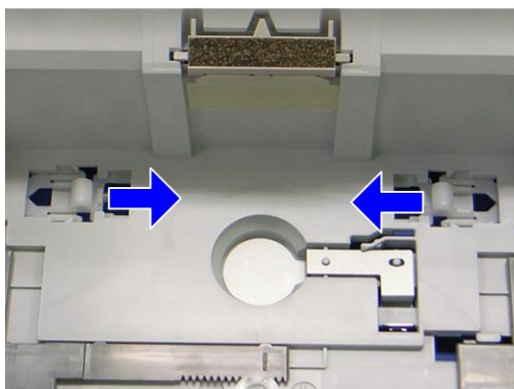
g849d502

The bottom plate is always pressed up by the spring in the tray. Therefore, you must press down the bottom plate when you insert the tray in the machine.

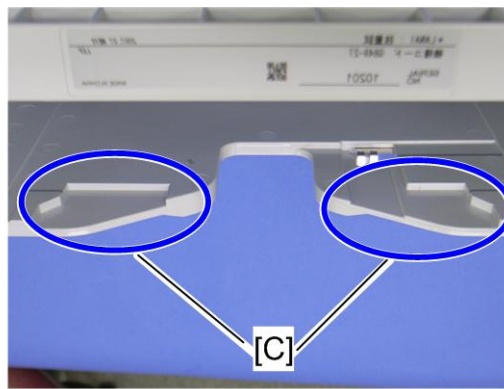
## Detailed Section Descriptions

---

The bottom tray lock levers [A] hold the tabs [B] under the bottom plate after the bottom plate is pressed down.



g849d501

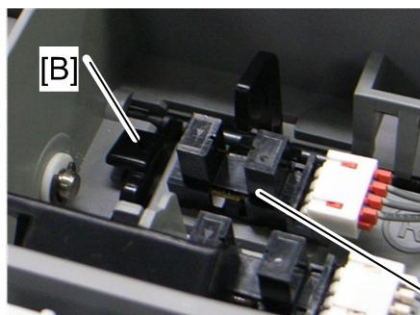


g849d503

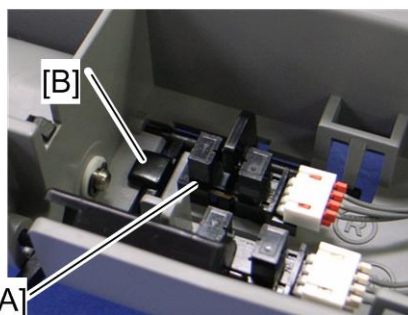
When the tray is inserted in the machine, the lock lever guides [C] in the paper feed unit push the bottom plate lock levers, and then the lock levers release the tabs under the bottom plate. As a result, the bottom plate is lifted by the spring.

## Paper End Detection

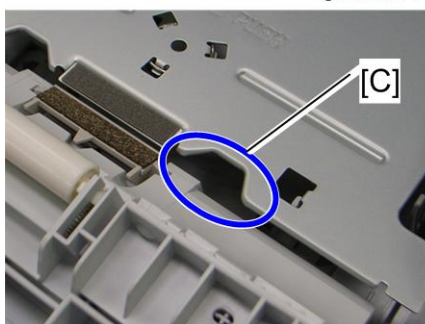
---



g849d504



g849d505



g849d506

There is a paper end sensor [A] in the tray. The feeler [B] drops into the cutout [C] in the bottom plate and the actuator interrupts the paper end sensor. This sensor also detects whether the tray is set.

## KYOCERA MITA EUROPE B.V.

Hoeksteen 40, 2132 MS Hoofddorp,  
The Netherlands  
Phone: +31.20.654.0000  
Home page: <http://www.kyoceramita-europe.com>  
Email: [info@kyoceramita-europe.com](mailto:info@kyoceramita-europe.com)

KYOCERA MITA NEDERLAND B.V.  
Beechavenue 25, 1119RA Schiphol-Rijk  
The Netherlands  
Phone: +31.20.58.77.200

KYOCERA MITA (UK) LTD  
8 Beacontree Plaza  
Gillette Way Reading Berks RG2 OBS,  
U.K.  
Phone: +44.1189.311.500

KYOCERA MITA ITALIA S.p.A.  
Via G. Verdi, 89 / 91, 20063 Cernusco s/N  
Milano, Italy  
Phone: +39.02.92179.1

S.A. KYOCERA MITA BELGIUM N.V.  
Hermestraat 8A, 1930 Zaventem,  
Belgium  
Phone: +32.2.720.9270

KYOCERA MITA FRANCE S.A.  
Parc Les Algorithmes Saint Aubin  
91194 GIF-SUR-YVETTE,  
France  
Phone: +33.1.6985.2600

KYOCERA MITA ESPAÑA S.A.  
Edificio Kyocera, Avda de Manacor No. 2,  
28290 Las Matas (Madrid),  
Spain  
Phone: +34.91.631.8392

KYOCERA MITA FINLAND OY  
Kirvesmiehenkatu 4, 00880 Helsinki,  
Finland  
Phone: +358.9.4780.5200

KYOCERA MITA (SCHWEIZ)  
Hohlstrasse 614, 8048 Zürich  
Switzerland  
Phone: +41.1.908.4949

KYOCERA MITA DEUTSCHLAND GMBH  
Otto-Hahn-Str. 12 D-40670 Meerbusch,  
Germany  
Phone: +49.2159.918.0

KYOCERA MITA GMBH AUSTRIA  
Eduard-Kittenberger-Gasse 95,  
1230 Wien,  
Austria  
Phone: +43.1.86338.210

KYOCERA MITA SVENSKA AB  
Esbogatan 16B 164 75 Kista,  
Sweden  
Phone: +46.8.546.55000

KYOCERA MITA NORGE  
Postboks 150 Oppsal, NO 0619 Oslo  
Olaf Helsetsvai 6, NO 0694 Oslo,  
Norway  
Phone: +47.22.62.73.00

KYOCERA MITA DANMARK A/S  
Ejby Industrivej 1, DK-2600 Glostrup,  
Denmark  
Phone: +45.5687.1100

KYOCERA MITA PORTUGAL LDA.  
Rua do Centro Cultural, 41 (Alvalade) 1700-106 Lisbon,  
Portugal  
Phone: +351.21.842.9100

KYOCERA MITA SOUTH AFRICA (PTY) LTD.  
527 Kyalami Boulevard,  
Kyalami Business Park Midrand,  
South Africa  
Phone: +27.(0)11.540.2600

## KYOCERA MITA AMERICA, INC.

Headquarters:  
225 Sand Road,  
Fairfield, New Jersey 07004-0008,  
U.S.A.  
Phone: (973) 808-8444

KYOCERA MITA AUSTRALIA PTY. LTD.  
Level 3, 6-10 Talavera Road, North Ryde,  
N.S.W. 2113 Australia  
Phone: (02) 9888-9999

KYOCERA MITA NEW ZEALAND LTD.  
1-3 Parkhead Place, Albany  
P.O. Box 302 125 NHPC, Auckland,  
New Zealand  
Phone: (09) 415-4517

KYOCERA MITA (THAILAND) CORP., LTD.  
9/209 Ratchada-Prachachem Road,  
Bang Sue, Bangkok 10800, Thailand  
Phone: (02) 586-0320

KYOCERA MITA SINGAPORE PTE LTD.  
121 Genting Lane, 3rd Level,  
Singapore 349572  
Phone: 67418733

KYOCERA MITA HONG KONG LIMITED  
11/F., Mita Centre,  
552-566, Castle Peak Road,  
Tsuen Wan, New Territories,  
Hong Kong  
Phone: 24297422

KYOCERA MITA TAIWAN Corporation.  
7F-1~2, No.41, Lane 221, Gangchi Rd.  
Neihu District, Taipei, Taiwan, 114. R.O.C.  
Phone: (02) 87511560

## KYOCERA MITA Corporation

2-28, 1-chome, Tamatsukuri, Chuo-ku  
Osaka 540-8585, Japan  
Phone: (06) 6764-3555  
<http://www.kyoceramita.com>

## KYOCERA MITA AMERICA, INC.

### **Headquarters:**

225 Sand Road,  
Fairfield, New Jersey 07004-0008  
TEL : (973) 808-8444  
FAX : (973) 882-6000

### **New York Branch:**

1410 Broadway 23rd floor  
New York, NY 10018  
TEL : (917) 286-5400  
FAX : (917) 286-5402

### **Northeastern Region:**

225 Sand Road,  
Fairfield, New Jersey 07004-0008  
TEL : (973) 808-8444  
FAX : (973) 882-4401

### **Midwestern Region:**

201 Hansen Court Suite 119  
Wood Dale, Illinois 60191  
TEL : (630) 238-9982  
FAX : (630) 238-9487

### **Western Region:**

14101 Alton Parkway,  
Irvine, California 92618-7006  
TEL : (949) 457-9000  
FAX : (949) 457-9119

### **Southeastern Region:**

1500 Oakbrook Drive,  
Norcross, Georgia 30093  
TEL : (770) 729-9786  
FAX : (770) 729-9873

### **Southwestern Region:**

2825 West Story Road,  
Irving, Texas 75038-5299  
TEL : (972) 550-8987  
FAX : (972) 252-9786

### **National Operation Center & National Training Center:**

2825 West Story Road,  
Irving, Texas 75038-5299  
TEL : (972) 659-0055  
FAX : (972) 570-5816

### **Latin America Division:**

8240 N.W. 52nd. Terrace Dawson Building,  
Suite 108 Miami, Florida 33166  
TEL : (305) 421-6640  
FAX : (305) 421-6666

## KYOCERA MITA CANADA, LTD.

6120 Kestrel Road, Mississauga,  
Ontario L5T 1S8, Canada  
TEL : (905) 670-4425  
FAX : (905) 670-8116

## KYOCERA MITA MEXICO, S.A. DE C.V.

Av. 16 de Septiembre #407  
Col. Santa Inés,  
Azcapotzalco México,  
D.F. 02130, México  
TEL : (55) 5383-2741  
FAX : (55) 5383-7804