

LASER PRINTER OPTIONS

Duplex Module - B83D

Duplex Module with Bypass Tray - B83DB

Exit Tray

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[1] PRODUCT OUTLINE

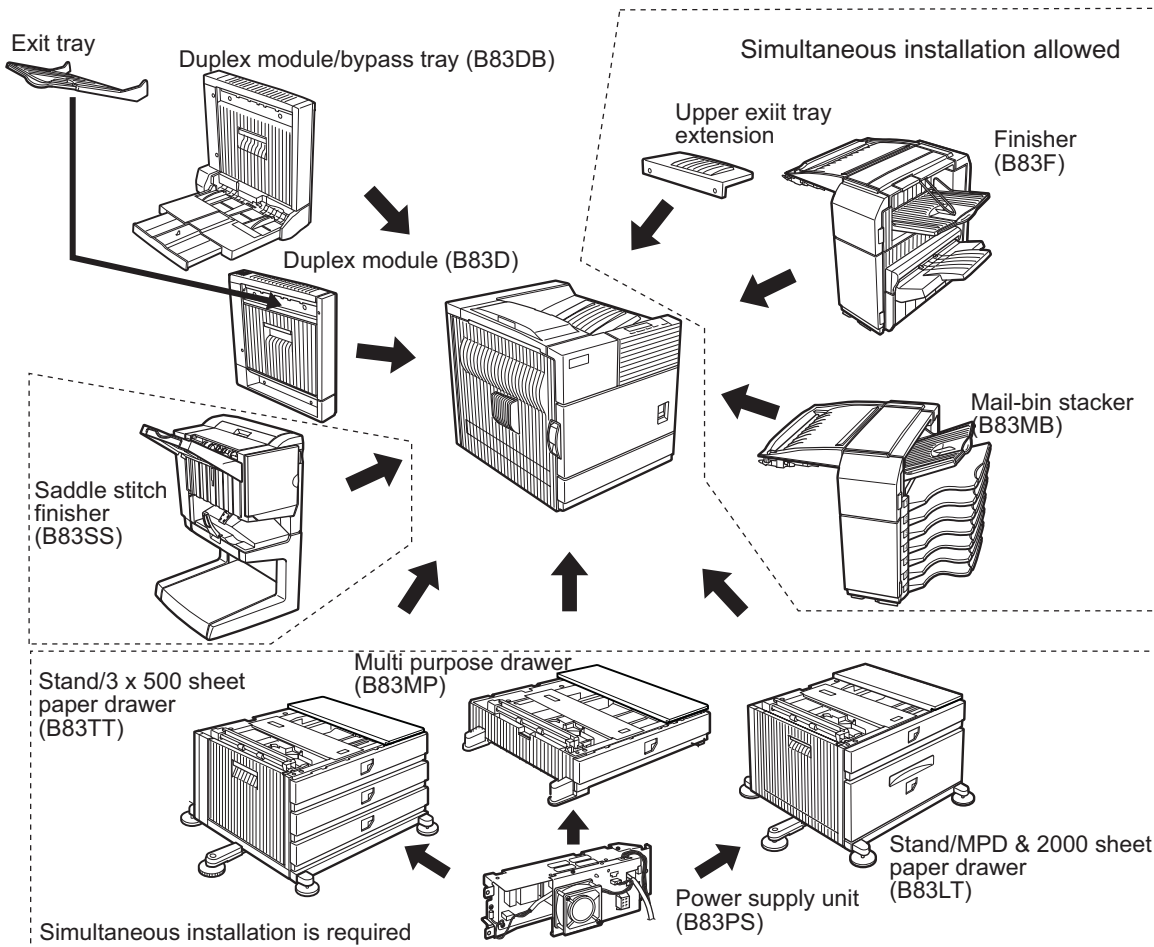
This unit is installed to the following machines to serve as a duplex module.

The B83D is equipped with the duplex feature only, and the B83DB is additionally equipped with the manual paper feed feature.

The Duplexer-only (B83D) model is equipped with the paper exit port, which allows installation of the optional bypass tray. (standard with B83DB).

1. Configuration

1. To use this unit, the multi purpose paper feed tray (B83MP), the 3-stage paper feed drawer (B83TT), or the large capacity paper feed drawer (B83LT) must be installed in advance.
2. When the saddle finisher (B83SS) is installed, the duplex module with the bypass tray cannot be installed.
3. When the saddle finisher (B83SS) is installed, the paper exit tray cannot be installed.



Related to paper feed unit		Multi purpose drawer	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Print server card	Power supply unit	Hard disk drive
Duplex module/bypass tray	B83DB	○ ^{*1}	—	×	×	×				○ ^{*3}	×			○ ^{*2}	
Duplex module	B83D	○ ^{*1}	×	—										○ ^{*2}	

○^{*1} =Any of the units must be installed together. ○^{*2} =Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer. ○^{*3} =Standard. × =Cannot be installed together.

[3] SPECIFICATIONS

1. B83D/B83DB

A. Basic

	B83D	B83DB
Type	Automatic duplex unit	Automatic duplex unit equipped with multi-bypass tray and exit tray
Transport speed	To support 35-45 sheet/minute	
Transport alignment	Center alignment	
Power consumption	Less than about 25W	Less than about 46.6W
Power source	Supplied from main unit	
External dimensions (WxDxH)	4.53"x16.22"x16.37" 115x412x416 (mm)	17.76"x17.28"x16.37" 451x439x416 (mm)
Occupied dimensions (WxD)	4.53"x16.22" 115x412 (mm)	17.76"x17.28" 451x439 (mm)
Weight	Approx. 11lbs / 5kg	Approx. 7.5lbs / 7.5kg

B83DB:When the tray is extended fully.

B83D:The Exit Tray is not installed.

B. Duplex part

Method	Non-stack method
Paper size	A3, B4, A4, A4R, B5, B5R, A5R 11"x17", 8.5"x14", 8.5"x13", 8.5"x11", 8.5"x11"R, 5.5"x8.5"R
Media for paper transfer	Plain 60-105g/m ² / 15-28lbs

C. Exit tray (Exit Tray, B83DB)

Output paper capacity	100 sheets (8.5"x11"/A4 at 21lbs or 80g/m ²)
Output paper delivery	Face-down
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11"x17", 8.5"x14", 8.5"x13", 8.5"x11", 8.5"x11"R, 5.5"x8.5"R, Executive
Media for paper output	Plain paper 60-105g/m ² / 16-28lbs Heavy paper 106-205g/m ² / 29-55lbs Transparency film
Remaining paper detection	Not provided
Exit tray full detection	Not provided

D. Multi-bypass tray part (B83DB only)

Paper size	A3, B4, A4, A4R, B5, B5R, A5R 11"x17", 8.5"x14", 8.5"x13", 8.5"x11", 8.5"x11"R, 5.5"x8.5"R, Executive, Japanese p/c
Media available for paper feeding	Tracing paper 52-59g/m ² / 14 ~ 15lbs (only single feed) Plain paper 60-128g/m ² / 16 ~ 34lbs Index paper 176g/m ² / 47lbs Cover paper 205g/m ² / 54 ~ 55lbs Transparency * Media heavier than 105g/m ² should be A4/ 8.5x11" or smaller. Media heavier than 108g/ m ² should be fed from shorter edge. * Only single paper feed is enabled for overlay copy or copy on back-side of printed paper.
Paper capacity	100 sheets (standard paper:80g/m ²) Post card: 20 sheets Transparency film: 20 sheets
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head, labels, heavy, transparency, Japanese p/c, envelope
Paper size detection	Automatic-inch (100V system) 11"x17", 8.5"x14", 8.5"x13", 8.5"x11", 8.5"x11"R, 7.25"x 10.5 R, 5.5"x 8.5" Manual Post card
Detection ignoring setting	Provided
Remaining paper detection	Not provided

Note: The meaning of "R" in paper size indications

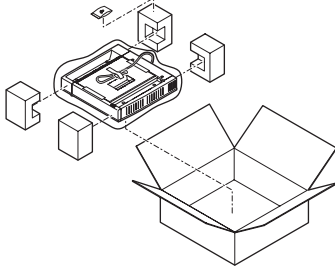
- Some paper sizes can be placed in the printer so that it feeds either long edge first or short edge first.
- To differentiate between the two sizes in the various tables, the short edge first size indication will contain an "R". These are indicated as 8½ x 11R, 5½ x 8½R, A4R, B5R, etc.
- Sizes that can be placed only in the landscape orientation (11 x 17, 8½ x 14, 8½ x 13, A3, B4) do not contain the "R" in their size indication.

[4] UNPACKING AND INSTALLATION

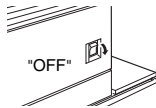
1. B83D - Duplexer Only

A. Before installation

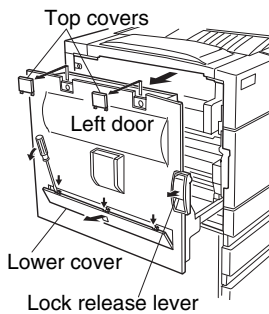
- Carry out the installation after checking that the DATA indicator on the operation panel is neither lit nor blinking.
- For installing B83D, an optional drawer (multi purpose drawer, stand/3 x 500 sheet paper drawer or stand/MPD & 2000 sheet drawer) must be installed.
- Ensure that the front mounting plates and the rear mounting plates included with the optional stand/paper drawer are securely attached.
- Check that the left adjuster supplied with an optional stand/drawer has been attached.



1. Turn the main switch located on the front side of the main unit of the printer to the "OFF" position. Then, remove the power plug of the main unit of the printer from the outlet.

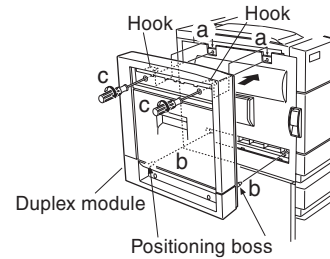


2. Remove the left side cover of the main unit of the printer. Unlock the lock release lever of the main unit of the printer and then pull out the left door. Slide the two upper covers up to remove them. Remove the lower cover by inserting a flat-blade screwdriver at three locations (↓) shown in the illustration. Then, close the left door.

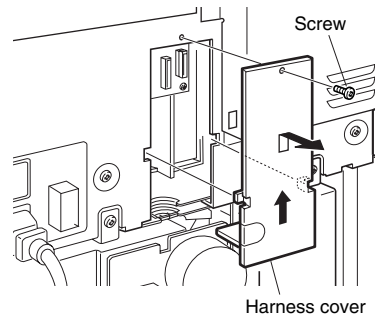


3. Attach the duplex module to the main unit of the printer.
 - a. Hang the hooks located at the upper part of the duplex module on the openings of the left door of the main unit of the printer.
 - b. Push the lower part of the duplex module to insert the positioning bosses securely into the main unit of the printer.

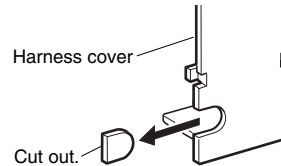
- c. Tighten the two screws built in the duplex module.



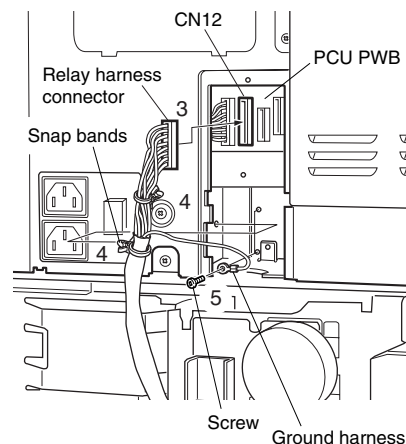
4. Connect the harness to the main unit of the printer.
 - a. Remove the screw that fixes the harness cover of the main unit of the printer and then slide the harness cover up to remove it.



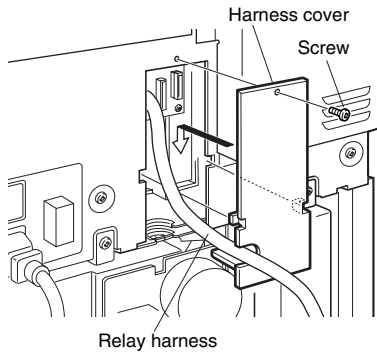
- b. Configure the harness cover as shown in the illustration.



- c. Connect the connector of the relay harness of the duplex module to the CN12 (white connector) of the PCU PWB of the main unit of the printer.
- d. Insert the snap bands to the locations shown in the illustration and fix them.
- e. Secure the earth harness using a supplied M4 screw.



- f. Reattach the harness cover to its original position and fix it with the removed screw.



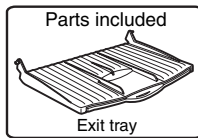
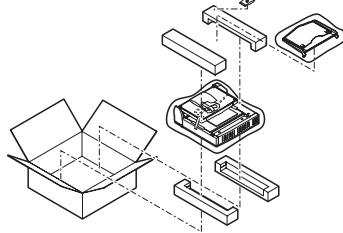
- If another peripheral device must be installed, carry out the following step at the end of the installation work.

5. Carry out the off center adjustment.

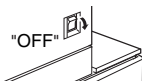
2. B83DB - Duplexer with Bypass Tray

A. Before installation

- Carry out the installation after checking that the DATA indicator on the operation panel is neither lit nor blinking.
- For installing B83DB, an optional drawer (multi purpose drawer, stand/3 x 500 sheet paper drawer or stand/MPD & 2000 sheet drawer) must have been installed.
- Ensure that the front mounting plates and the rear mounting plates included with the optional stand/paper drawer are securely attached.
- Check that the left adjuster supplied with an optional stand/drawer has been attached.

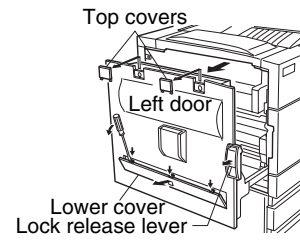


1. Turn the main switch located on the front side of the main unit of the printer to the "OFF" position. Then, remove the power plug of the main unit of the printer from the outlet.

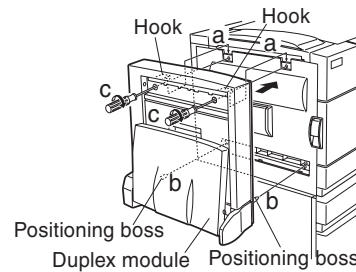


2. Remove the left side cover of the main unit of the printer. Unlock the lock release lever of the main unit of the printer and then pull out the left door. Slide the two upper covers up to remove them. Remove the lower cover by

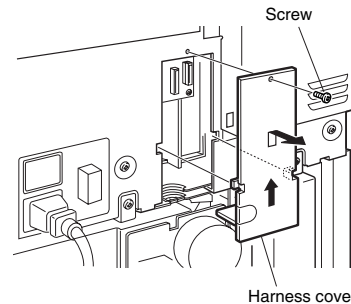
inserting a flat-blade screwdriver at three locations (↓) shown in the illustration. Then, close the left door.



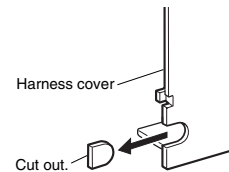
3. Attach the duplex module to the main unit of the printer.
 - a. Hang the hooks located at the upper part of the duplex module on the openings of the left door of the main unit of the printer.
 - b. Push the lower part of the duplex module to insert the positioning bosses securely into the main unit of the printer.
 - c. Tighten the two screws built in the duplex module.



4. Connect the harness to the main unit of the printer.
 - a. Remove the screw that fixes the harness cover of the main unit of the printer and then slide the harness cover up to remove it.

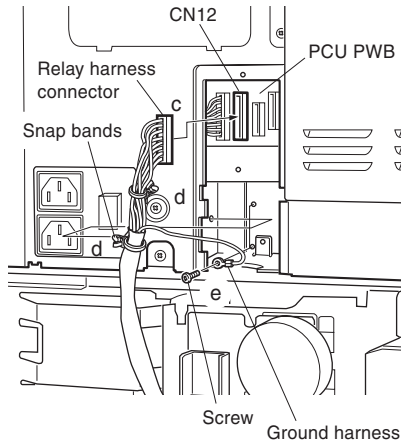


- b. Process the harness cover as shown in the illustration.

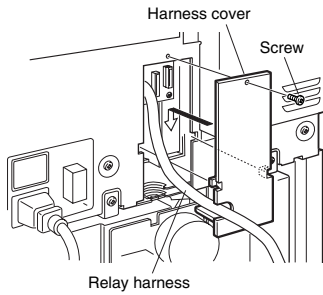


- c. Connect the connector of the relay harness of the duplex module to the CN12 (white connector) of the PCU PWB of the main unit of the printer.
- d. Insert the two snap bands to the locations shown in the illustration and fix them.

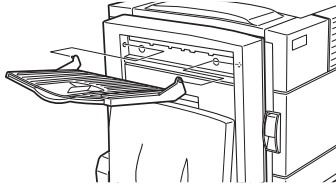
e. Secure the earth harness using a supplied screw.



f. Reattach the harness cover to its original position and fix it with the removed screw.



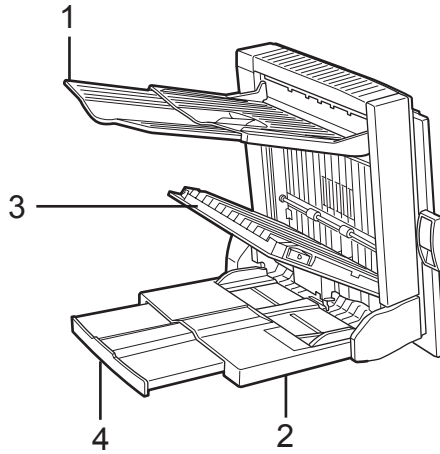
5. Attach the exit tray.



- If another peripheral device must be installed, carry out the following step at the end of the installation work.
6. Adjust the position of the paper guides of the bypass tray. Refer to "Adjustments" described later.
 7. Perform the off center adjustment.

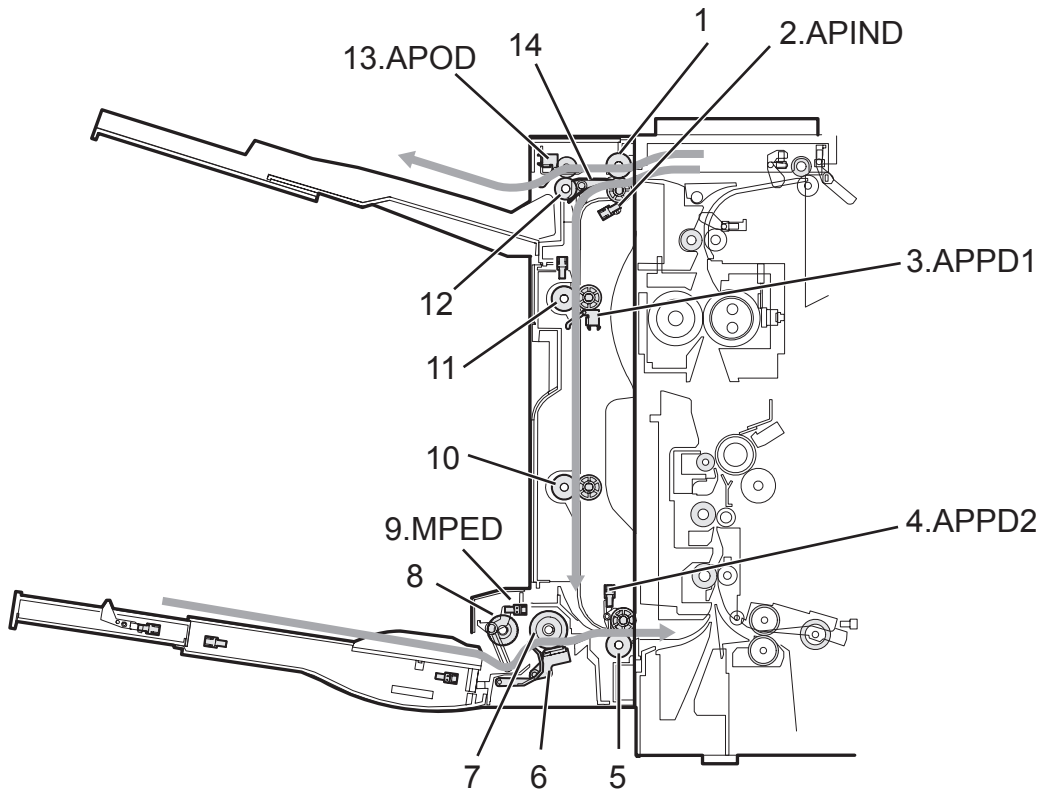
[5] EXTERNAL VIEWS AND INTERNAL STRUCTURES

1. External view



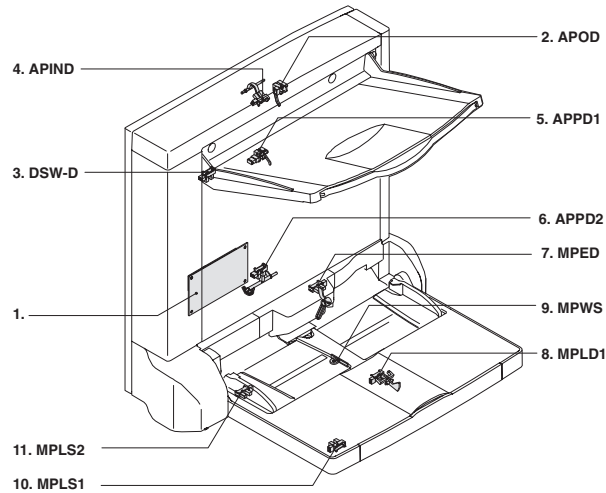
1	Paper exit tray (Exit Tray, B83DB standard)	2	Manual paper feed tray (B83DB only)	3	Paper feed module side cover
4	Manual paper fed extension tray				

2. Internal structure



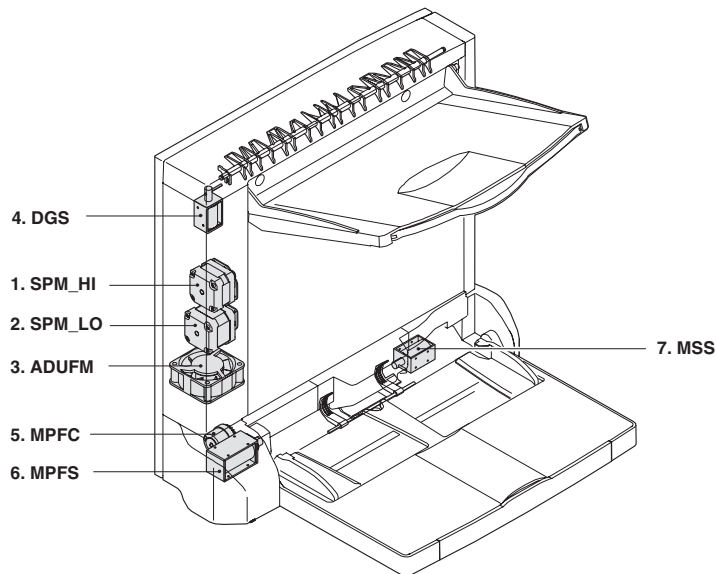
1	ADU paper entry roller	6	Separation pad	11	ADU transport roller 1
2	ADU paper entry sensor (APIND)	7	Manual paper feed roller	12	ADU paper exit roller
3	ADU transport sensor 1 (APPD1)	8	Manual take-up roller	13	ADU paper exit sensor (APOD)
4	ADU transport sensor 2 (APPD2)	9	Manual feed paper sensor (MPED)	14	ADU paper exit gate
5	ADU transport roller 3	10	ADU transport roller 2		

3. PWB, sensor



	Code	Name	Function	Active condition	Remark
1	ADU drive PWB	ADU drive PWB	Communication with the machine, ADU drive, control		
2	APOD	ADU paper exit sensor	Paper exit detection	L : Paper loaded	
3	DSW-D	ADU door sensor	Door open detection	L : Open	
4	APND	ADU paper entry sensor	Paper feed detection	L : Paper loaded	
5	APPD1	ADU transport sensor 1	Paper transport detection	L : Paper loaded	
6	APPD2	ADU transport sensor 2	Paper transport detection	L : Paper loaded	
7	MPED	Manual feed paper sensor	Manual feed tray paper empty detection	L : Paper loaded	B83DB only
8	MPLD1	Manual feed paper length sensor	Manual feed tray paper length detection	H : Paper loaded	B83DB only
9	MPWS	Manual feed paper width sensor	Manual feed tray paper width detection		B83DB only
10	MPLS1	Tray pull-out sensor	Manual feed extension tray pull-out detection	H: Pulled out	B83DB only
11	MPLS2	Tray installation sensor	Manual feed extension tray installation detection	H: Pushed in	B83DB only

4. Motor, clutch, solenoid



	Code	Name	Function	Remark
1	SPM_HI	Upper transport motor	Upper section paper transport	
2	SPM_LO	Lower transport motor	Lower section paper transport	
3	ADUFM	Cooling fan motor	Cooling the ADU	
4	DGS	Gate solenoid upper	Gate select in duplex copy, paper exit	
5	MPFC	Manual paper feed clutch	Paper feed clutch from the manual paper feed tray	B83DB only
6	MPFS	Manual paper feed solenoid	Paper feed solenoid from the manual paper feed tray	B83DB only
7	MSS	Shutter solenoid	Shutter open/close in manual paper feed	B83DB only

[6] MACHINE OPERATION

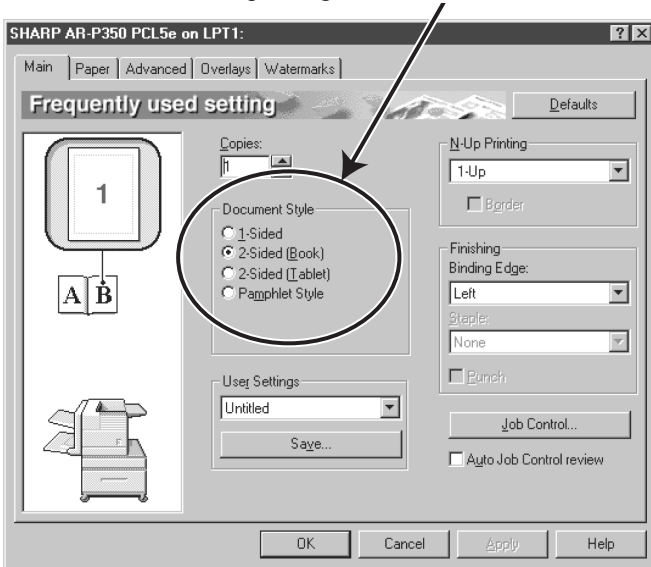
A. Printer driver select

When using the duplex module (including the bypass tray and the exit tray) for printing, select "Properties" and make selections as follows for the print job.

Note: The screens used in the following descriptions are for a PCL driver in the Windows 98 environment.

1. Two-sided printing

- a. Open the "Main" tab and check the radio button of the desired two-sided printing mode.



B. Copying in the duplex mode

For copying in the duplex mode, press the COPY key on the operation panel and make all selections on the copy mode basic screen.

1. Automatic duplex copying

- a. Touch the [2-SIDED COPY] key on the copy mode basic screen.
- b. A selection screen for two-sided copying will appear.

2. Using the bypass tray

- a. Touch the [PAPER SELECT] key on the copy mode basic screen.
- b. A selection screen for paper source will appear. Select the bypass tray on this screen.

3. Using the exit tray

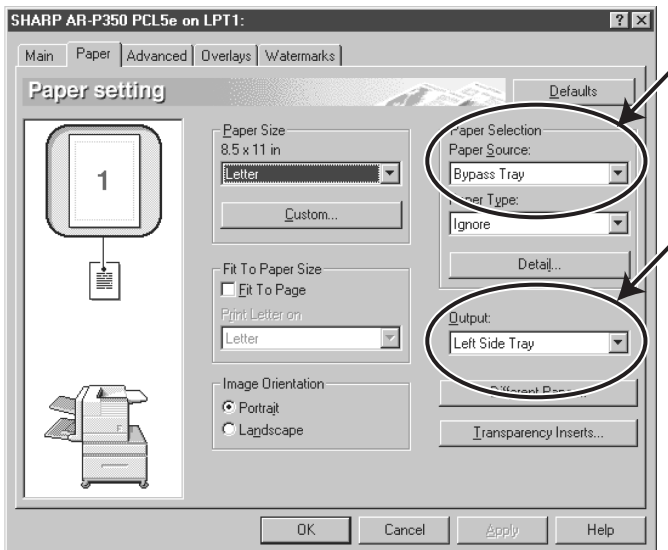
- a. Touch the [OUTPUT] key on the copy mode basic screen. A selection screen for output will appear.
- b. Select the exit tray mounted to the duplex module on this screen.

2. Using the bypass tray

- a. Open the "Paper" tab shown in the illustration below and select "Bypass Tray" in the "Paper Selection" drop down.

3. Using the exit tray mounted to the duplex module

- a. Open the "Paper" tab shown in the illustration below and select "Left Side Tray" in the "Output" drop down.



Note: The settings screens above will appear only if the devices have been set properly in the printer driver configuration

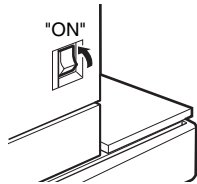
[7] ADJUSTMENTS

1. Paper guide position adjustment for manual paper feed

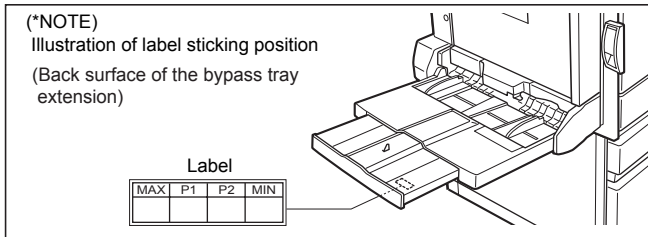
A. Correction value entry procedure

This procedure enters the correct detection level of the printer.

1. Turn the main switch on while pressing the **MENU** key and the **OK** key of the operation panel of the main unit of the printer.



2. After pressing the **MENU** key several times to display "SIZE ADJUSTMENT A" in the message display, press the [Δ] key to display "SIZE ADJUSTMENT B" and press the **OK** key.
3. "MAXIMUM SIZE" is displayed. Since "MAXIMUM SIZE" is displayed with a number, press the [Δ] key or the [∇] key to change the number so that the number is equal to the value of [MAX] written on the label (*NOTE) and then press the **OK** key.

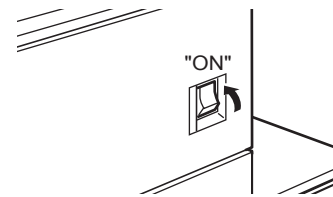


4. To access the label, lift the bypass tray and pull out the bypass tray extension. On the backside of the tray you will find the label.
5. Since "P1 SIZE" is displayed with a number, press the [Δ] key or the [∇] key to change the number so that the number is equal to the value of [P1] written on the label (*NOTE) and then press the **OK** key.
6. Since "P2 SIZE" is displayed with a number, press the [Δ] key or the [∇] key to change the number so that the number is equal to the value of [P2] written on the label (*NOTE) and then press the **OK** key.
7. Since "MINIMUM SIZE" is displayed with a number, press the [Δ] key or the [∇] key to change the number so that the number is equal to the value of [MIN] written on the label (*NOTE) and then press the **OK** key.
8. Turn off the main switch to exit setting mode.

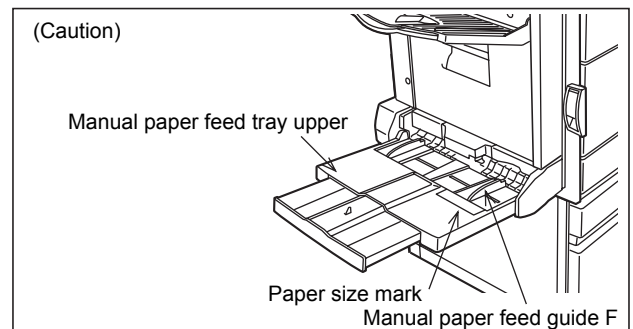
B. Alignment of the guide plate and the size mark

This setup is used when the paper width sensor does not work correctly or when it is replaced with a new one.

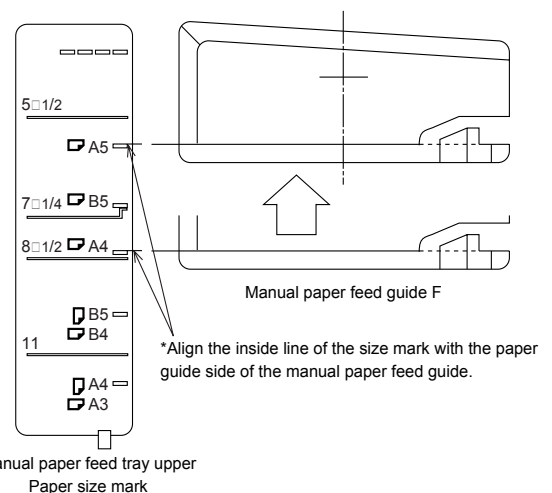
1. Press and hold **MENU** key and **OK** key together, and turn on the main switch.



2. Press **MENU** key several times until "SIZE ADJUSTMENT A" is displayed. Press the [Δ] key to display "SIZE ADJUSTMENT C," and press **OK** key.
3. "MAXIMUM ISZE" is displayed. Move the manual feed guide F to the maximum position, and press **OK** key.
4. "P1 SIZE" is displayed. Move the manual paper feed guide F to the size mark of A4R on the manual paper feed tray upper, and press **OK** key.
5. "P2 SIZE" is displayed. Move the manual paper feed guide F to the size mark of A5R on the manual paper feed tray upper, and press **OK** key.



Position of the manual paper feed guide F in setting of P1 (A4R) and P2 (A5R)



6. "MINIMUM SIZE" is displayed. Move the manual paper feed guide F to the minimum position, and press [OK] key.
7. Turn off the main switch to exit setting mode.

[8] DISASSEMBLY AND ASSEMBLY, MAINTENANCE

1. Maintenance System Table

× Check (Clean, replace, or adjust as necessary.)

○ Clean

▲ Replace

△ Adjust

☆ Lubricate

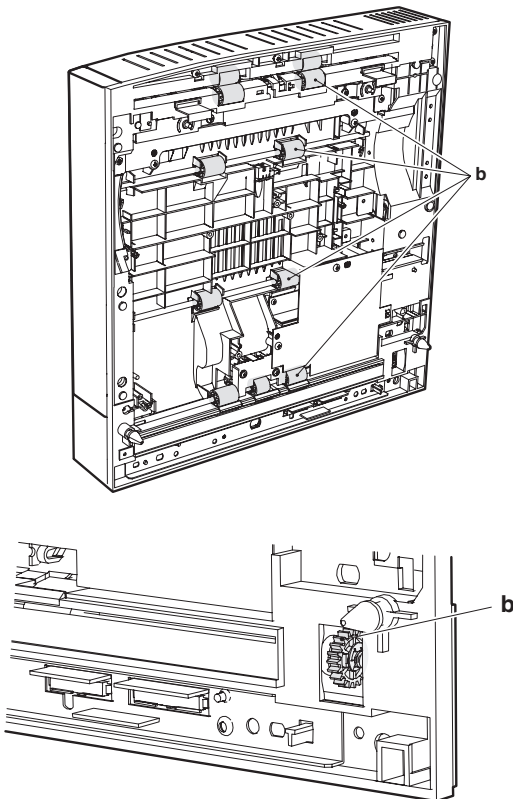
□ Move position

Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Paper feed separation section (B83DB only)	Paper feed rollers	(○)×	○	×	○	×	○	×	○	×	*1
	Separation pad	(○)×	○	×	○	×	○	×	○	×	*1
Transport section	Transport rollers	○	○	○	○	○	○	○	○	○	
	Transport paper guides	○	○	○	○	○	○	○	○	○	
Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
	Belts	×						×			
Other	Sensors	×		×		×		×		×	

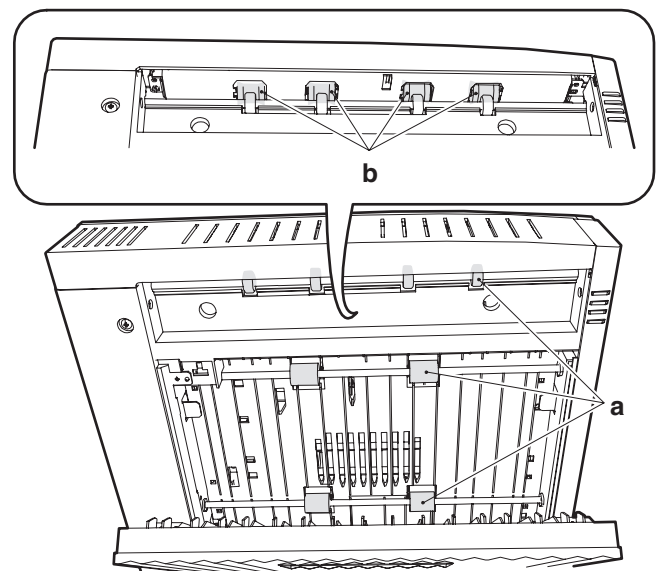
*1: Replacement reference: Use the counter value of each paper feed port.

2. Maintenance

Unit installing side (Back)

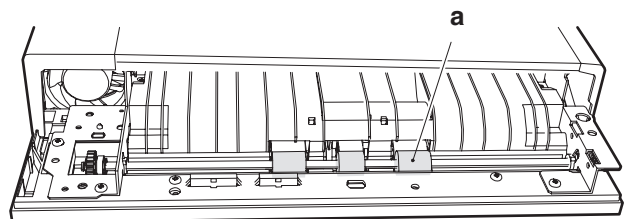


Inside of the paper exit section/ADU side door



After disassembly of the paper feed unit/lower cover

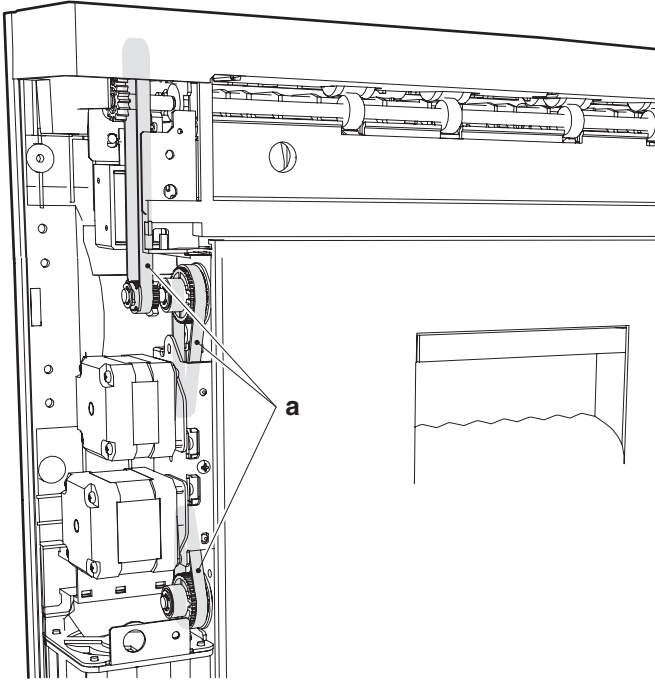
* For disassembly of the paper feed unit and the lower cover, refer to the following descriptions.



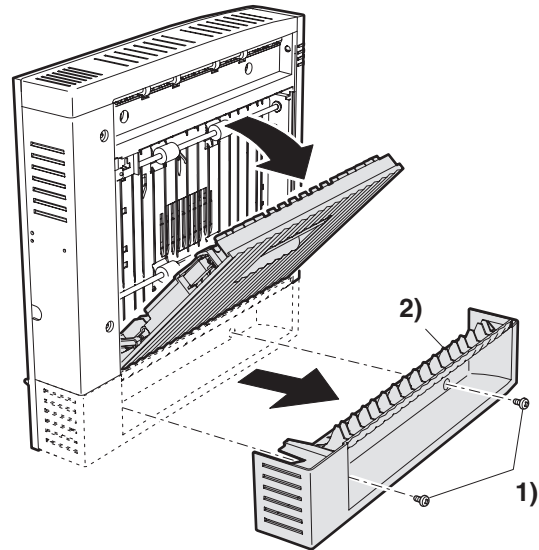
Note: The numbers and letters in illustrations reflect the sequence required for disassembly/assembly.

After disassembly of the rear cabinet

- * For disassembly of the rear cabinet, refer to the following descriptions.

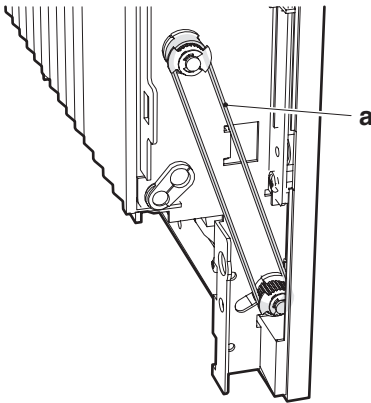


2. Remove the ADU lower cover.



After disassembly of the front cabinet

- * For disassembly of the front cabinet, refer to the following descriptions.



3. Disassembly and assembly

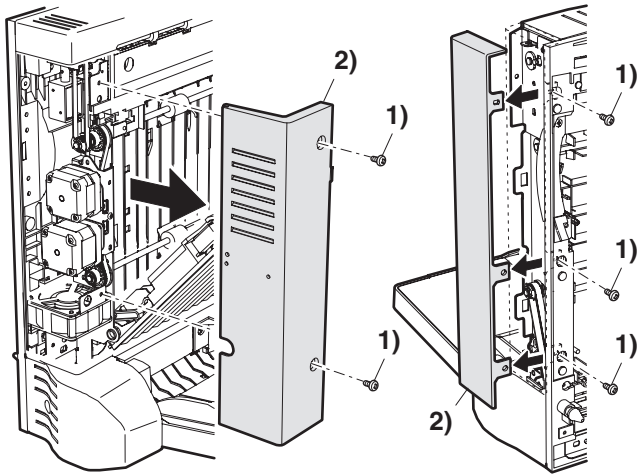
A. External cabinet

ADU lower cover (B83D only)

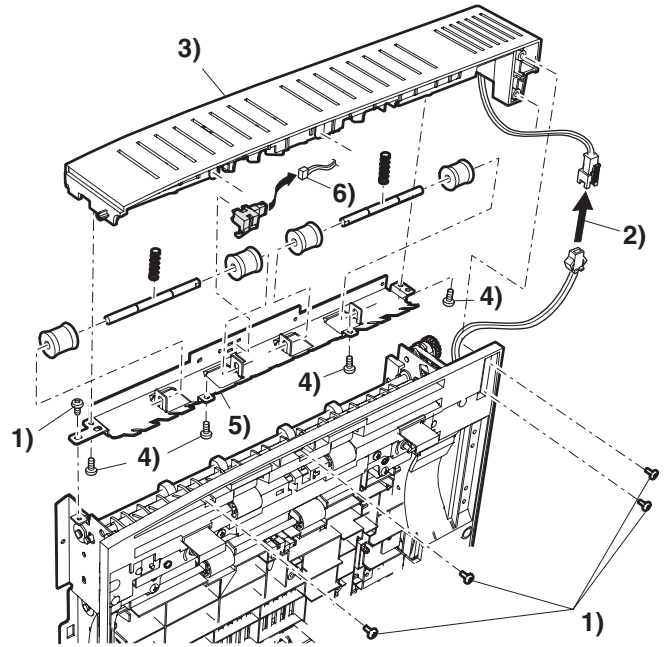
1. Open the ADU cover.

Note: The numbers and letters in illustrations reflect the sequence required for disassembly/assembly.

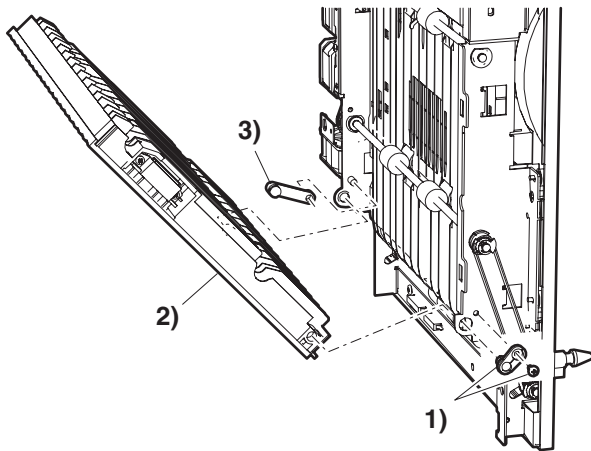
Front and rear cabinets



Upper cabinet/paper exit sensor

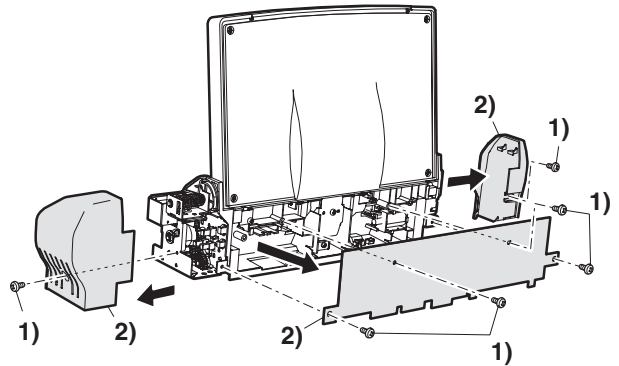


ADU side door

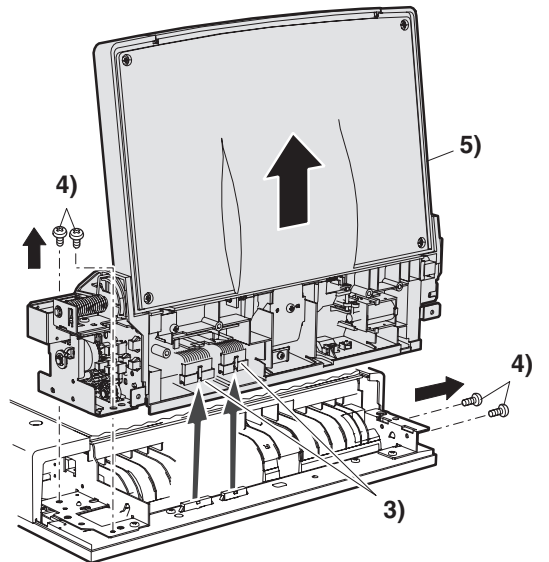
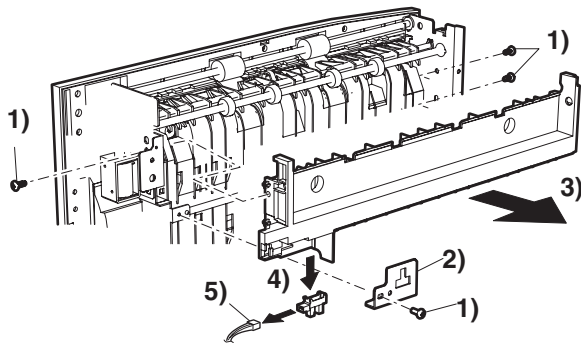


B. Manual paper feed section (B83DB only)

Manual paper feed unit

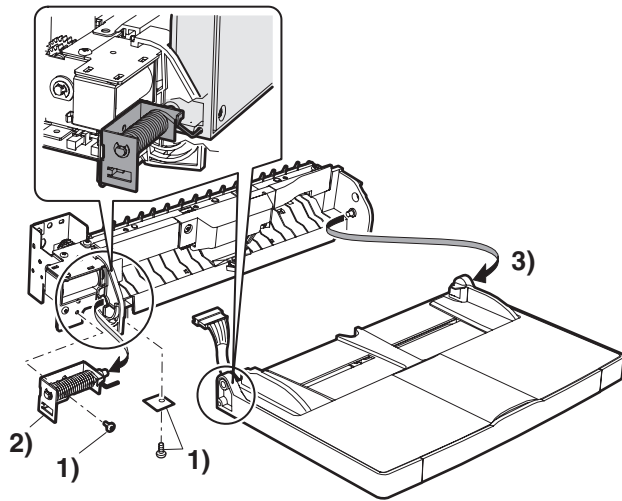


Paper exit section cover/door switch

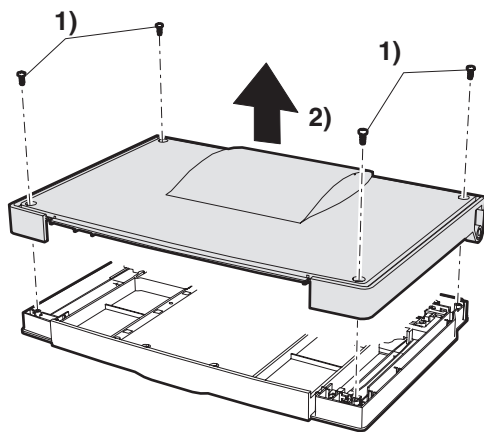
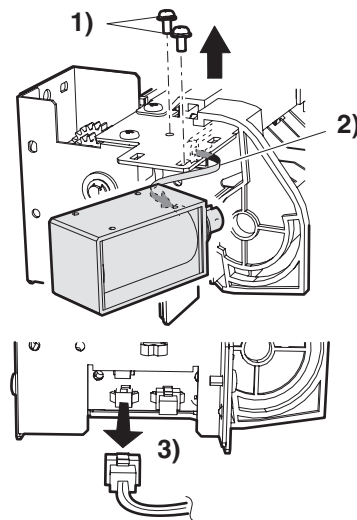


Note: The numbers and letters in illustrations reflect the sequence required for disassembly/assembly.

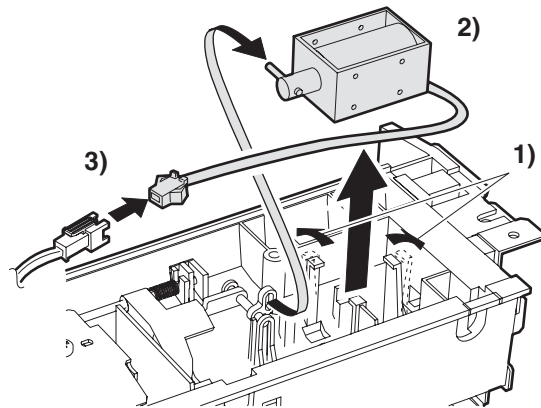
Manual paper feed tray



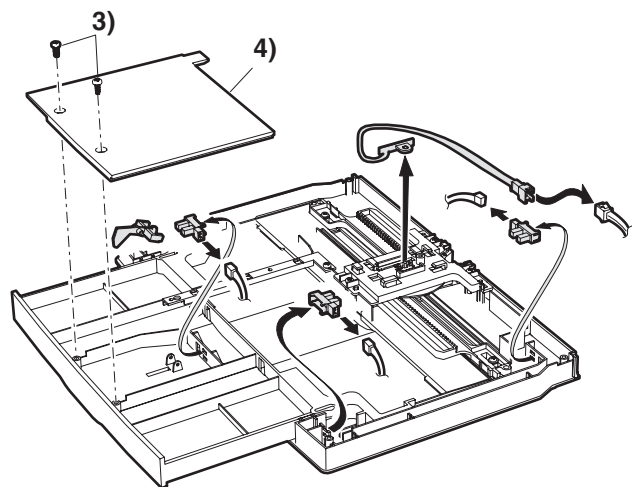
Manual paper feed solenoid



Shutter solenoid



Sensors

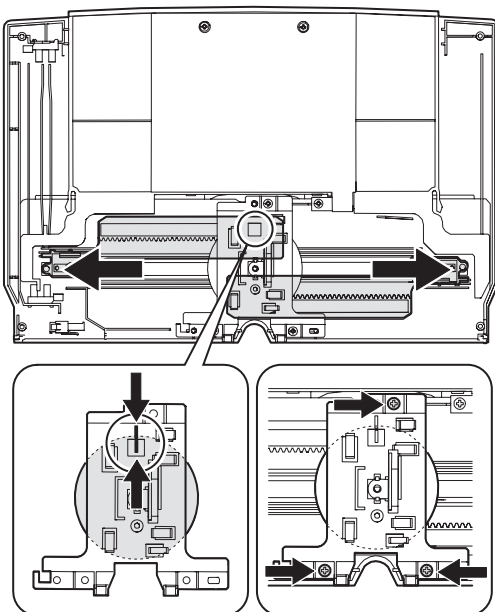


Manual feed paper width sensor

1. Extend the manual paper feed guide to the maximum position.

Note: The numbers and letters in illustrations reflect the sequence required for disassembly/assembly.

2. Fit the mark on the width detection pin on-gear with the mark on the volume mounting plate.

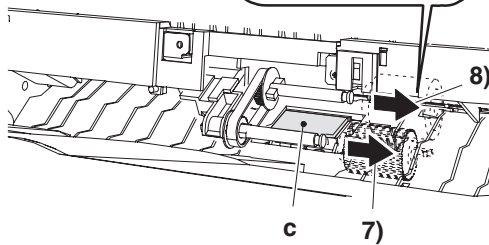
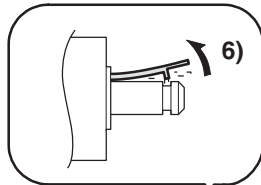
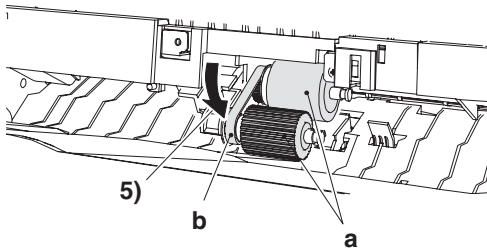
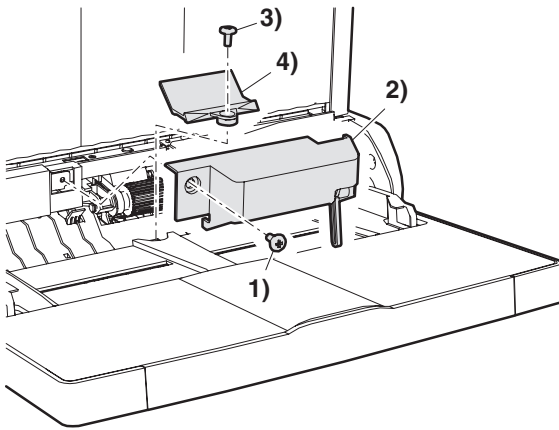


3. Attach the mounting plate with a screw.

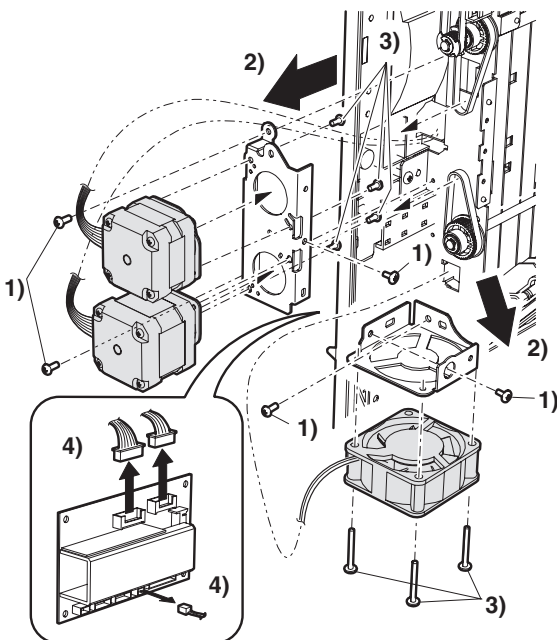
- * When the rotational volume sensor is replaced, the sensor value must be adjusted to the paper size (mark on the tray). (Refer to the previous procedure of "Adjustment.")

Note: The numbers and letters in illustrations reflect the sequence required for disassembly/assembly.

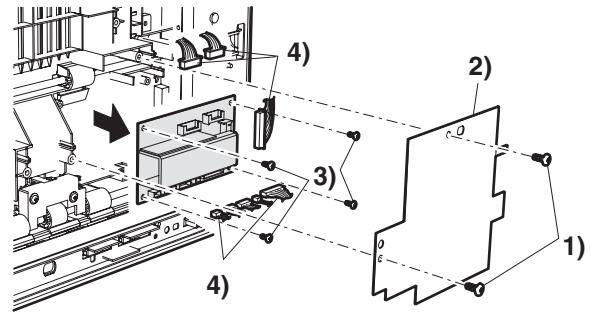
Manual paper feed roller/Take-up roller



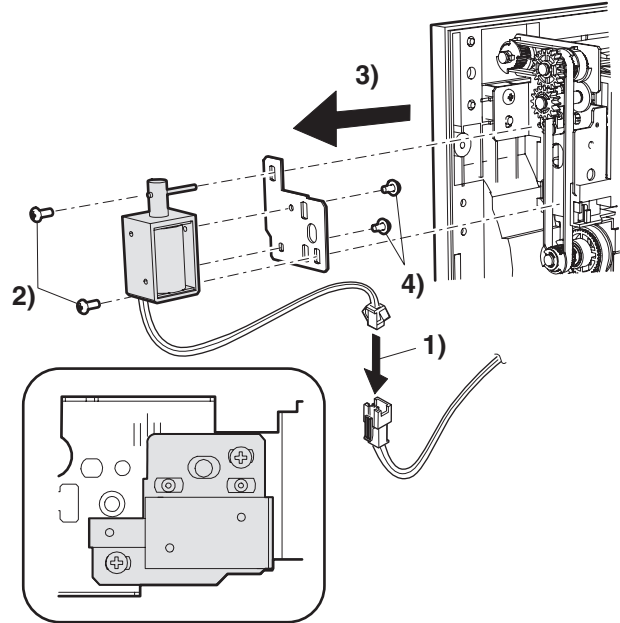
C. Upper transport motor/Lower transport motor/ Fan motor



D. ADU drive PWB



E. ADU gate solenoid

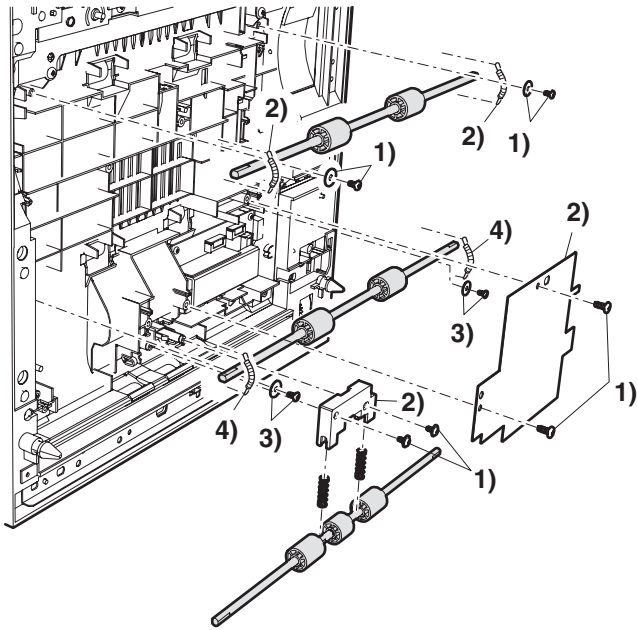


Note: When assembling, fit the edge of the solenoid mounting plate with the center of the mark.

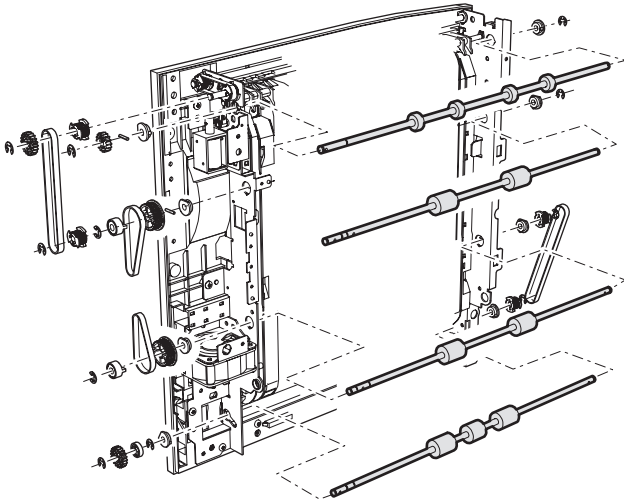
Note: The numbers and letters in illustrations reflect the sequence required for disassembly/assembly.

F. Rollers/Belts/Clutches

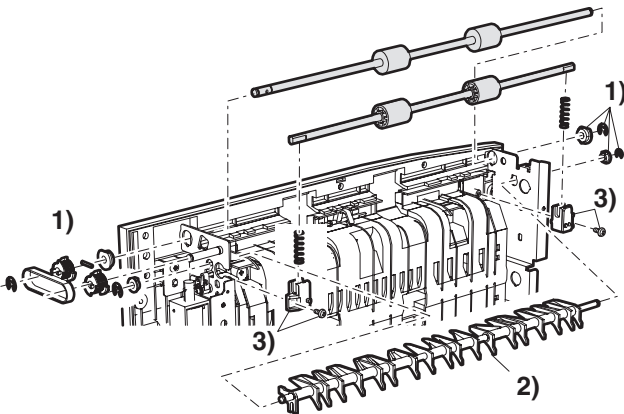
Transport follower roller



Transport roller/belt/clutch/gear

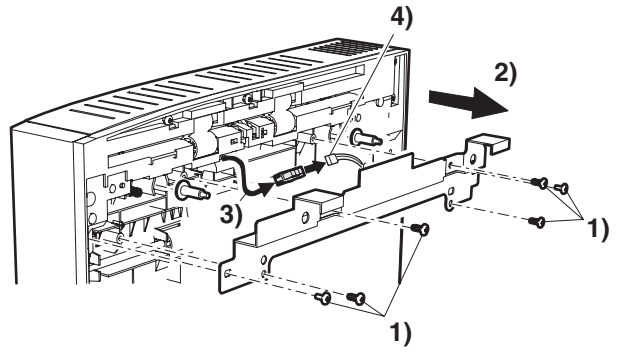


ADU paper entry roller/belt/clutch/gear

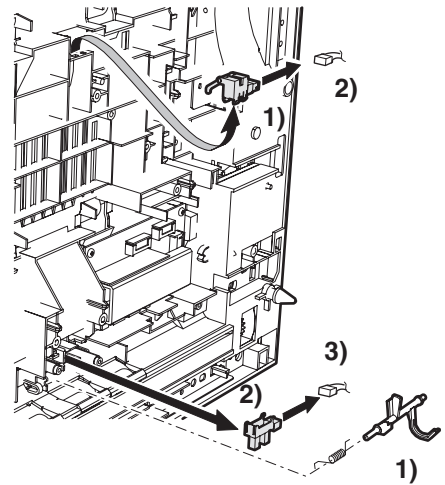


G. Sensors

Paper entry sensor



Transport sensor



Note: The numbers and letters in illustrations reflect the sequence required for disassembly/assembly.