Service Manual

Paper Deck
Side Paper Deck-U1

Canon

Mar 22 2004

Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

Corrections

This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products. When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

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Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

Symbols Used

This documentation uses the following symbols to indicate special information:

Symbol	Description
	Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.
	Indicates an item requiring care to avoid electric shocks.
	Indicates an item requiring care to avoid combustion (fire).
	Indicates an item prohibiting disassembly to avoid electric shocks or problems.
	Indicates an item requiring disconnection of the power plug from the electric outlet.
 Memo	Indicates an item intended to provide notes assisting the understanding of the topic in question.
 REF.	Indicates an item of reference assisting the understanding of the topic in question.
	Provides a description of a service mode.
	Provides a description of the nature of an error indication.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.

   In the diagrams, ▬▮▮▮▬ represents the path of mechanical drive; where a signal name accompanies the symbol , the arrow ⟶ indicates the direction of the electric signal.

   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1'is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low".(The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.

   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine."

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Chapter 1 Specifications

Chapter 2 Functions

Chapter 3 Parts Replacement Procedure

Chapter 4 Maintenance

Chapter 5 Service Mode

Chapter 6 Error Code

Chapter 1 Specifications

Contents

1.1 Product Specifications

1.1.1 Specifications

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Item	Description
Method of pickup	by separation roller
Method of paper accommodation	by side tray
Type of copy paper	- plain power (64 to 105 g/m2)
	A4, B5, LTR
	- recycled paper (64 to 80 g/m2)
	A4, B5, LTR
	- eco paper (80 g/m2)
	A4
	- heavy paper (106 to 209 g/m2)
	A4,B5,LTR
Capacity	385 mm (approximate height of stack)
	(about 3,500 sheets of 80 g/m2 or about 4,000 sheets of 64 g/m2)
Switch-over of paper size	by size guide plate in steps and in service mode (OPTION)
Dimensions (approx.)	326.2 (W) x 583 (D) x 574.5 (H) mm
Weight	46 kg (approx.)
Source of power	DC from host machine
Operating environment	same as host machine
Specifications are subject to change for product improvement.	

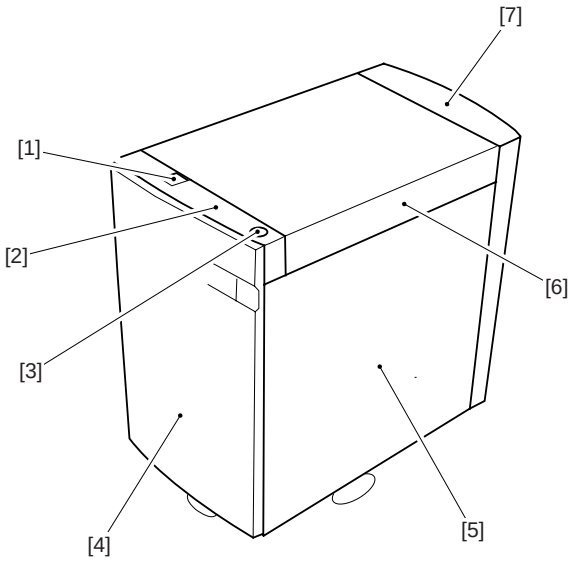
1.2 Names of Parts

1.2.1 Names of Parts

0003-2542

External Covers

1 Deck release grip
2 Upper front cover
3 Compartment open/close switch
4 Front cover
5 Right cover
6 Upper cover
7 Rear cover



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Chapter 2 Functions

Contents

2.1 Basic Construction

2.1.1 Inputs to the Side Paper Deck (1/2)

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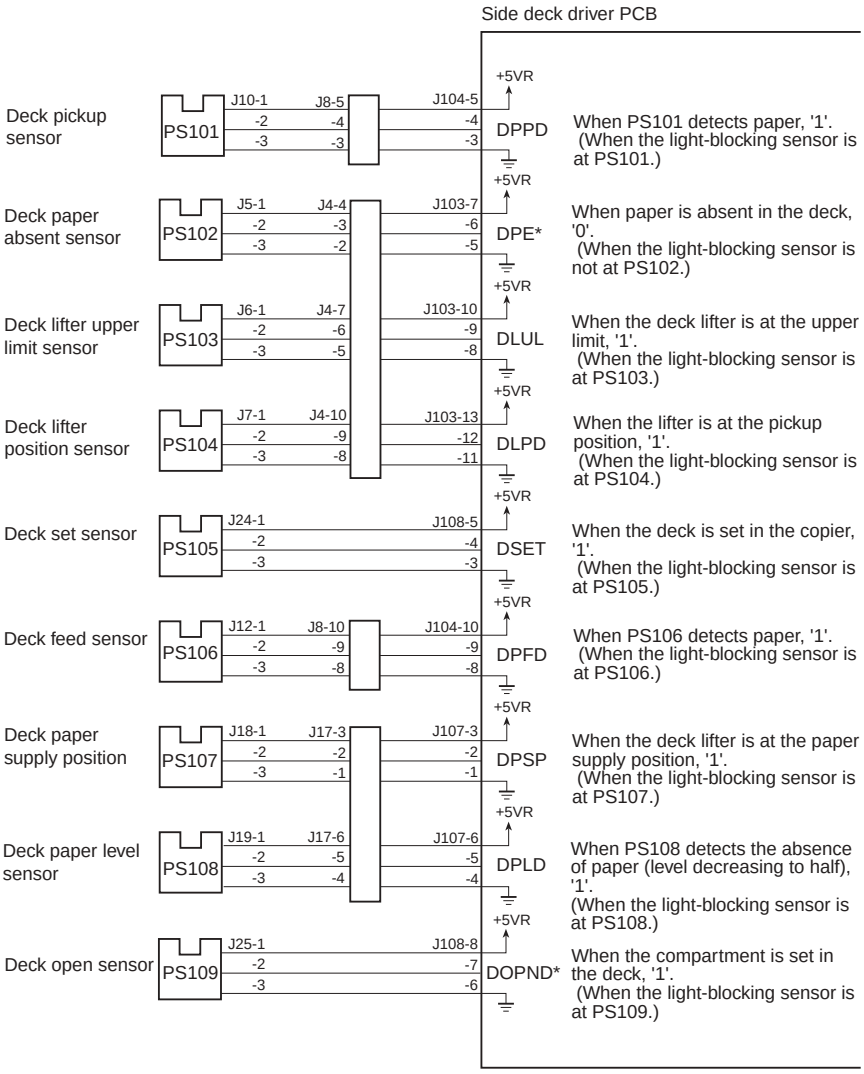

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2.1.2 Inputs to the Side Paper Deck (2/2)

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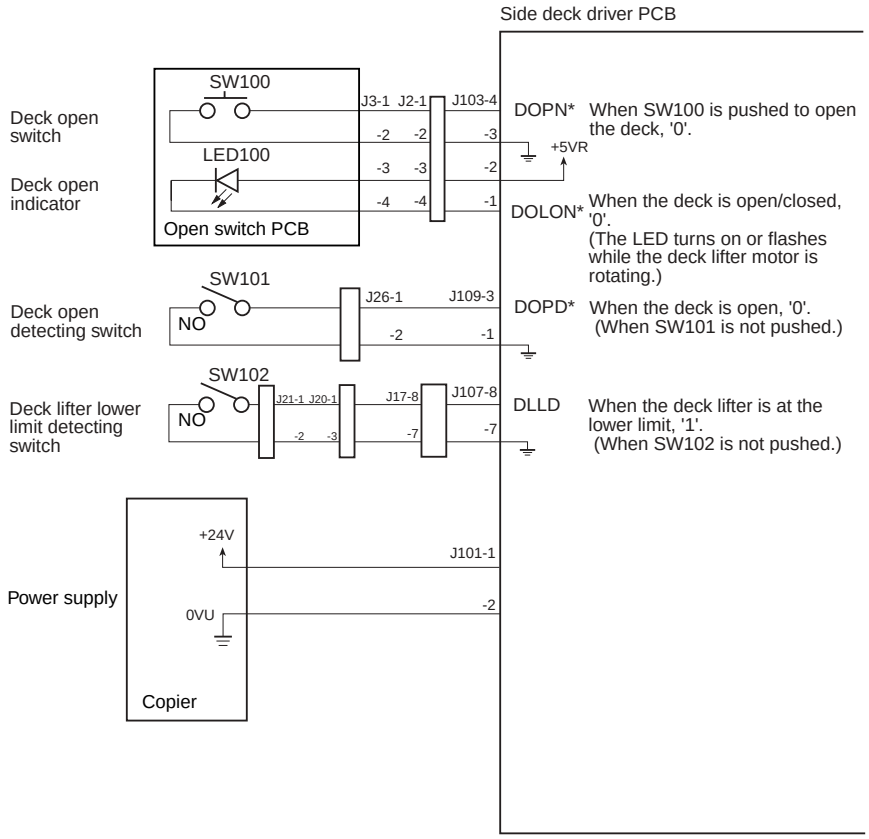

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2.1.3 Outputs from the Side Paper Deck (1/1)

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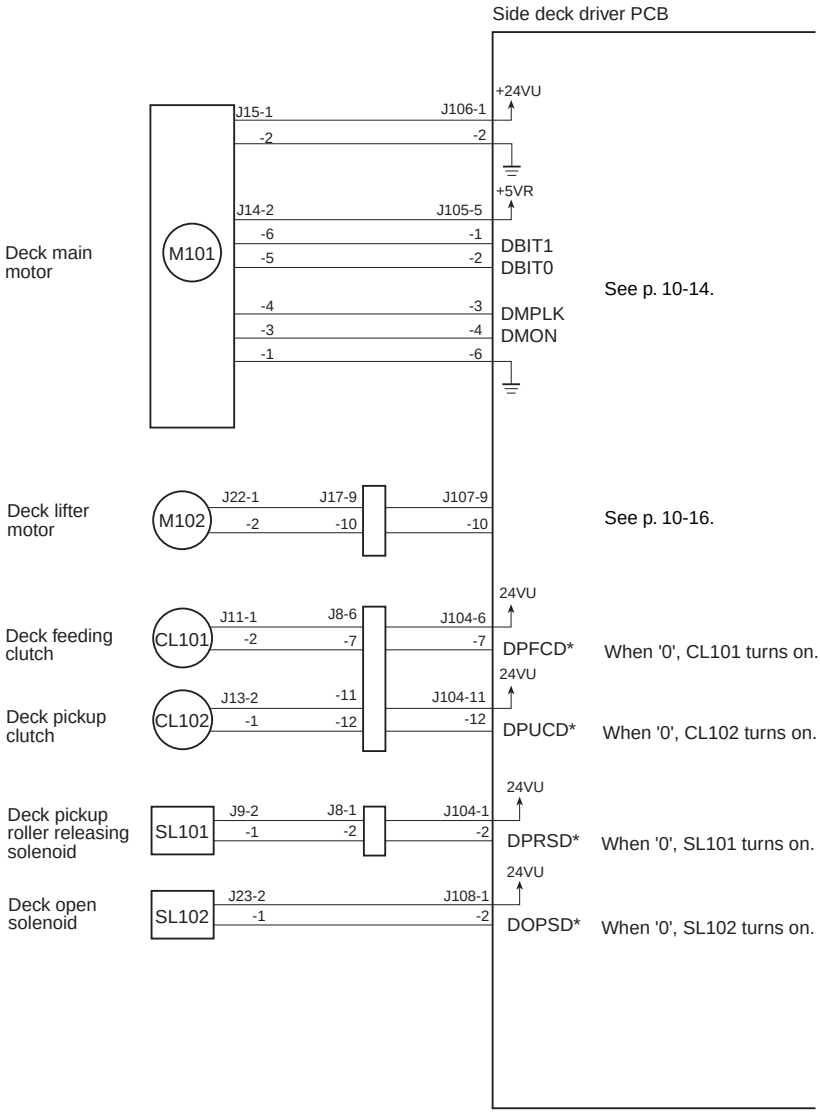

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2.2 Basic Operation

2.2.1 Overview

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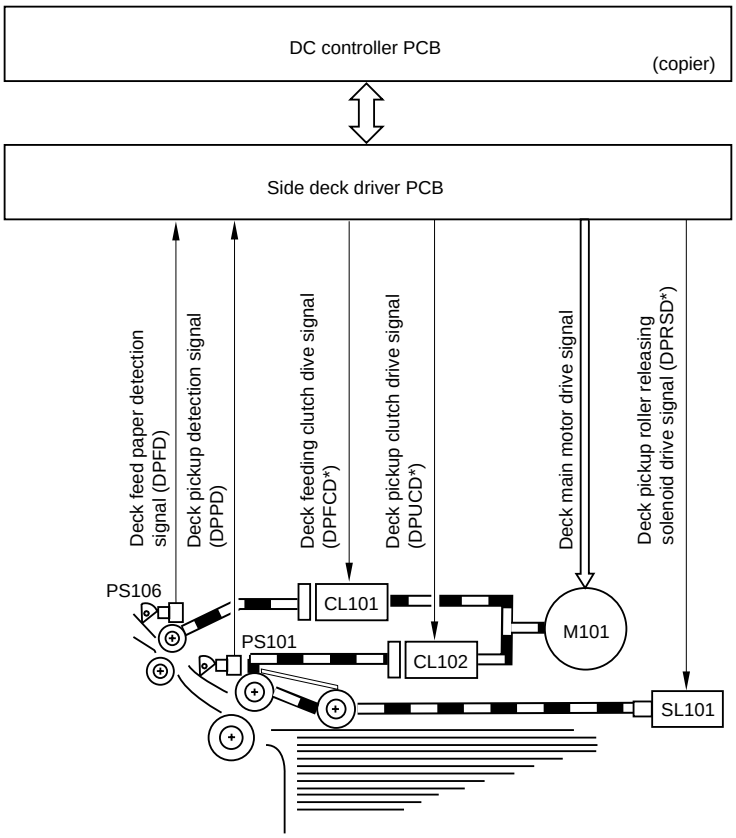
The side paper deck (hereafter, "deck") is capable of accommodating as many as 3500 sheets of paper at a time (A4/ LTR/B5; 80 g/m2), ready to pick up and feed paper in response to control signals from its host machine' s DC controller.
The lifter of the deck is driven by the deck lifter motor (M102), and the pickup operation is executed using the drive from the deck main motor (M101).

2.2.2 Pickup Operation

0003-2616

The paper placed in the deck is held up by the lifter at a specific point of paper pickup.
When the Start key is pressed and the deck pickup clutch (CL102) goes on, the pickup roller starts to rotate by the drive of the deck main motor (M101), thus picking up paper. At this time, the pickup/feed roller ad the separation roller make sure that no more that a single sheet of paper is moved ahead. Thereafter, when the deck pickup sensor (PS101) detects the paper, the deck pickup roller release solenoid (SL101) goes on so that the pickup roller leaves the surface of the stack of paper.
The deck feed roller starts to rotate when the deck feed clutch (CL101) goes on. The paper is then moved to the host machine' s registration roller, where it is arched to remove any skew.
The registration roller serves to control the paper so that its leading edge will match the image on the photosensitive drum.



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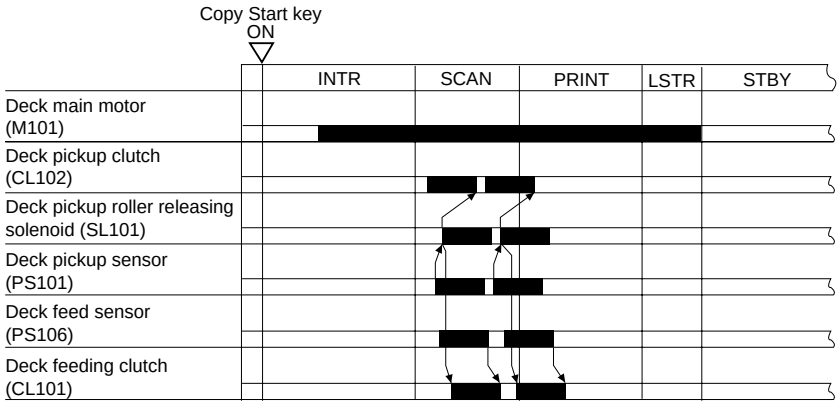

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2.2.3 Controlling the Deck Main Motor (M1D)

0003-2623

1. Controlling the Deck Main Motor (M101)

The deck main motor is controlled by the host machine' s DC controller. The following diagram shows the circuit used to drive the deck main motor, and the circuit has the following functions:

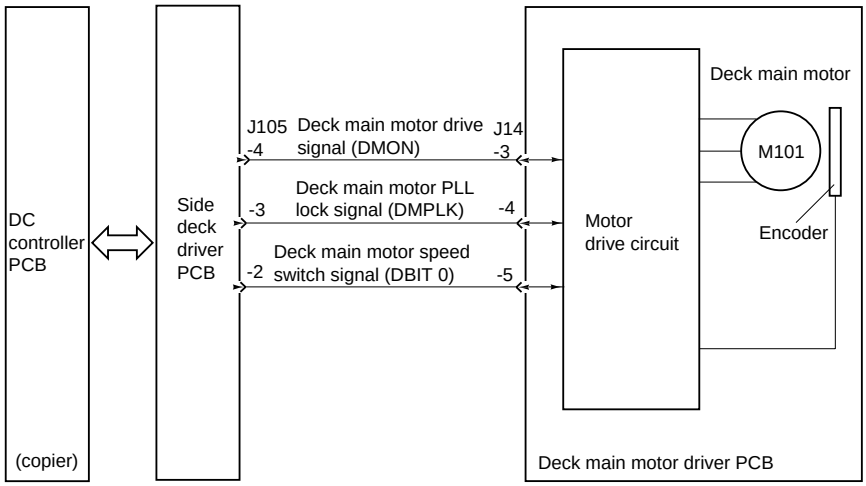
1 turns on/off the deck main motor

2 changes the speed of rotation of the deck main motor

a. Turning On/Off the Motor

When the deck main motor drive signal (DMON) from the host machine goes '1', the motor drive circuit goes on so that the motor starts to rotate at a specific speed. When the deck main motor drive signal (DMON) goes '0' , on the other hand, the motor drive circuit goes off to stop the motor.

The host machine' s DC controller monitors the rotation of the deck main motor with reference to the deck main motor PULL lock signal (DMPLK); if the PULL lock signal remains '1' for 900 msec or more white DMON is '1', it will indicate 'E043' on the host machine' s control panel.



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b. Changing the Speed of Rotation of the Motor

The deck is designed to automatically change the speed of pickup so as to support future host machines. The pickup speed is changed in response to external clock signals (MOTOR CLK) that are sent by the host machine' s DC controller to the side deck drive PCB in keeping with the speed of motor rotation. The relationship between the speed of motor rotation and the frequency of the external clock signals is as follows:

T-2-1

Drive speed	Rotation of motor shaft	External clock setting (Hz)	Drive mode
Speed 1	2885.93	1443	used when picking up plain paper
Speed 2	2308.80	1155	used when picking up H/H color (PS)
Speed 3	1847.05	924	used when picking up heavy paper (1/3 PS)

MEMO

When making color copies/prints, the drive speed is shifted to speed 2 or 3.

2.2.4 Controlling the Deck Lifter Motor (M2D)

0003-2639

2. Controlling the Deck Lifter Motor (M102)

The deck lifter motor control circuit is found as part of the side deck driver PCB. The following is a block diagram of the circuit:

The combination circuit shown in the diagram consists of various logic circuits, and the deck lifter motor is rotated in normal or reverse direction using combinations of the deck lifter drive signal (DLMON*) and the deck lifer ascent signal (DLUP*) from the host machine' s DC controller and the output signals of various sensors.

If, for some reason, the deck lifter position sensor (PS104) does not detect the lifter within 60 sec after the deck lifter ascent signal is generated, an error code (E041) will be indicated on the host machine' s control panel.

1 Conditions Used to Move Up the Lifter

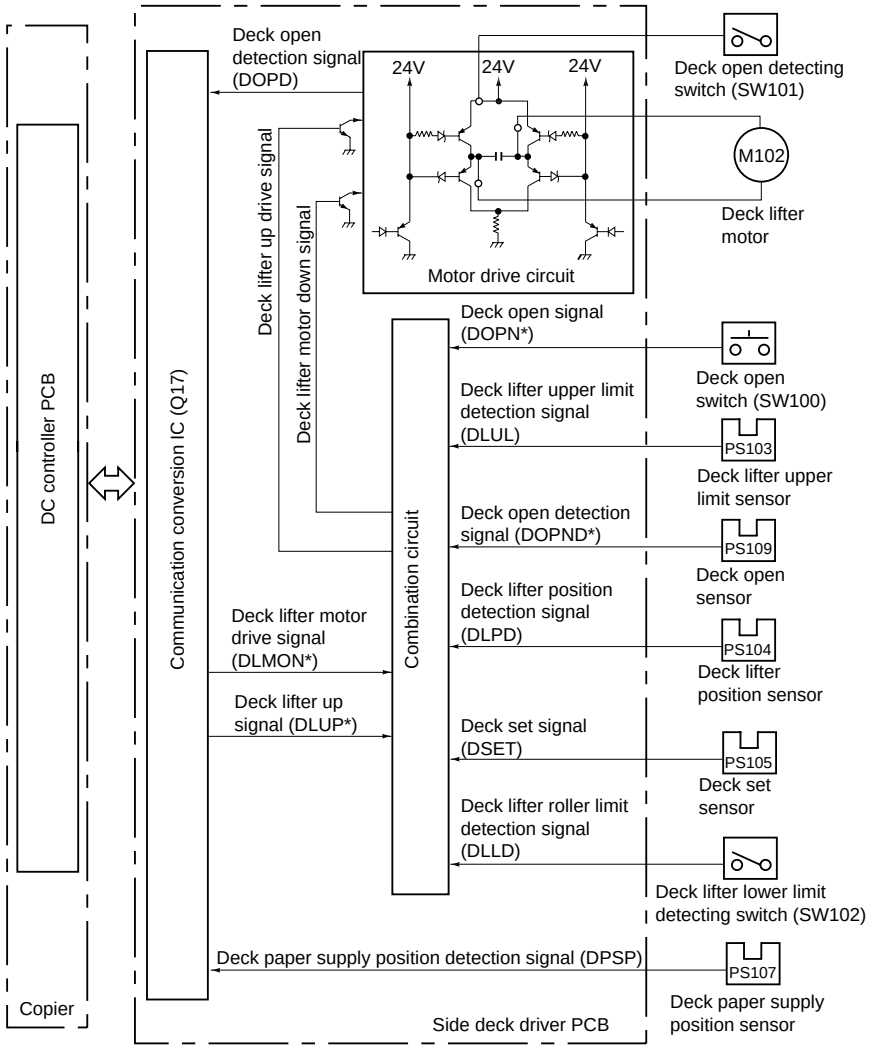
- the deck is joined with its host machine, i.e., the deck set signal (DSET) is '1'.
- the deck (compartment) is closed, i.e., the deck open detection signal (DOPND*) is '1'.
- the deck (compartment) is closed, i.e., the deck open detecting switch is 'on'.
- the deck lifter upper limit signal (DLUL) is '0' and, in addition, the deck lifter position detecting signal (DLPD) is '0'.
- the deck lifer motor drive signal (DLMON*) is '0'.
- the deck lifter ascent signal (DLUP* is '0'.

In the presence of these conditions, the lifter starts to move up.

2 Conditions Used to Move Down the Lifter

- the deck (compartment) is open, i.e., the deck open detection signal (DOPND*) is '0'.
- the deck lower limit detection signal (DLLD) is '0' and, in addition, the deck lifter position detection signal (DLPD) is '0'.
- the deck lifter motor drive signal (DLMON*) is '0'.
- the deck lifter ascent signal (DLUP*) is '1'.

In the presence of these conditions, the lifter starts to move down.



Note: The communications conversion IC (Q17) in the diagram converts serial signals to parallel signals and vice versa.

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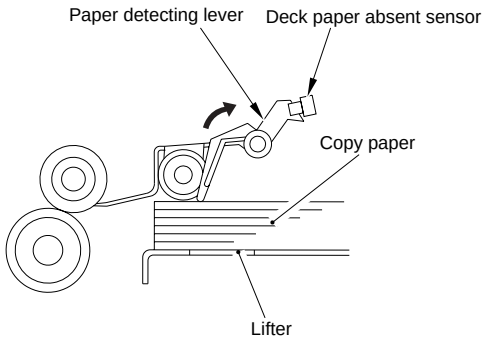
2.3 Paper Detection

2.3.1 Detecting the Presence/Absence of Paper

0003-2817

1. Detecting the Presence/Absence of Paper

The presence/absence of paper inside the deck is checked by the deck paper sensor (PS102). When paper runs out and the paper detecting lever of the pickup roller assembly leaves the deck paper sensor, the host machine indicates the absence of paper on its control panel.



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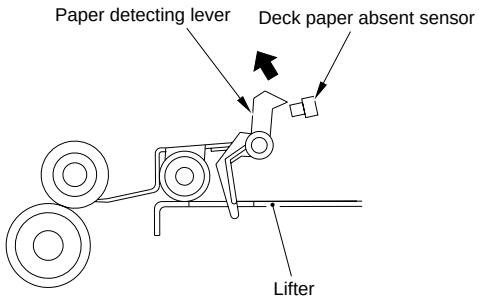

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2.3.2 Changing the Deck Paper Size

0003-2666

2. Changing the Deck Paper Size

To change the paper size of the deck, you must move the guide plate in the deck to suit the user' s needs and then select the correct paper size in service mode: OPTION>ACC>DK-P.

2.3.3 Detecting the Level of Paper

0003-2669

3. Detecting the Level of Paper in the Deck

The deck uses the deck paper supply position sensor (PS107), deck paper level sensor (PS108), and deck paper sensor (PS102) to check the level of paper inside its compartment; the result of the check is indicated on the host machine' s control panel. The following table shows how a check is made with reference to the states of the sensors:

T-2-2

paper level	PS102	PS107	PS108
about 1750 to 3500 sheets	1	1	1
about 500 to 1750 sheets	1	1	0
1 to about 500 sheetssheets	1	0	0
no paper	0	0	0

1: the light-blocking plate is over the sensor.

0: the light-blocking plate is not over the sensor.

2.4 Deck Lifter

2.4.1 Detecting the Presence/Absence of Paper

0003-2819

The lifter of the deck is joined to a reel by means of a cable, and is driven by the deck lifter motor (M102); i.e., the lifter moves up or down depending on the direction of rotation of the motor.

When the deck (compartment) is pushed inside the host machine, the deck open detecting switch (SW101) is pushed. The lifter starts to move up as soon as the deck open sensor (PS109) detects the light-blocking plate; the lifter stops to move up when the deck position sensor (PS104) detects the top of the stack of paper placed on the lifter

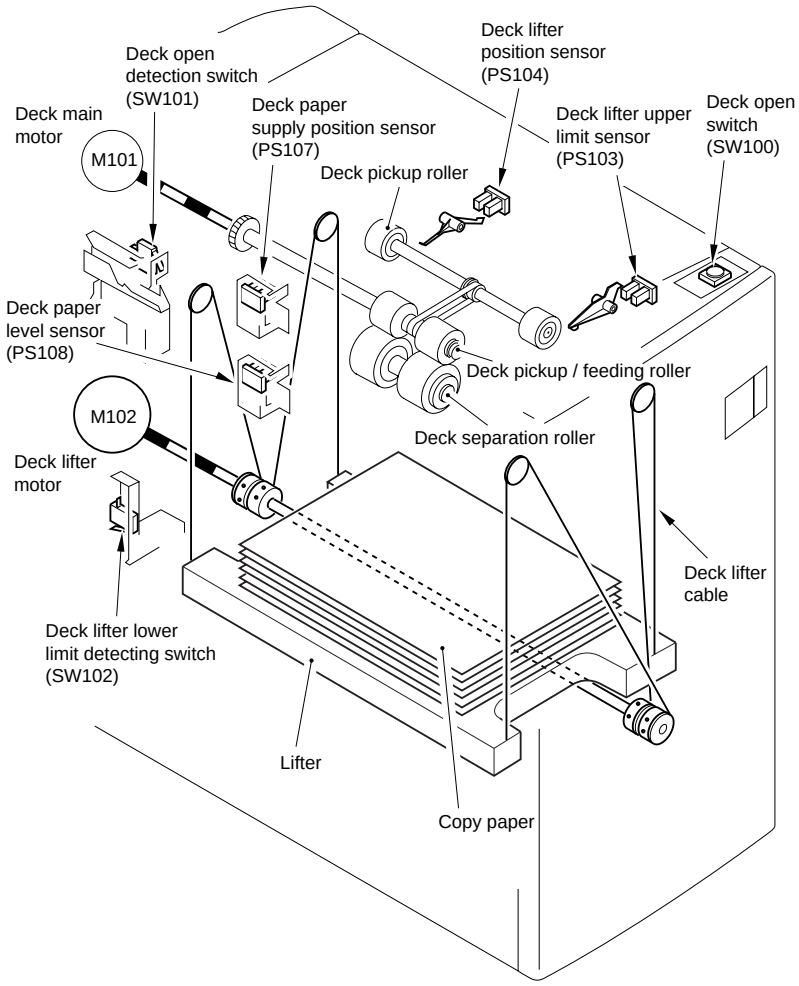
In the rare event that the lifter should fail to stop moving up after the sensor lever blocks the deck lifter position sensor for some reason, the deck lifter upper limit sensor (PS103) will go on to stop the lifter, thereby preventing damage to the deck.

The lifter, on the other hand, starts to move down when the deck open switch (SCREW100) is pushed, and will keep moving down until the lifter moves past the sensor lever of the deck paper supply position sensor (PS107), i.e., falling edge of the sensor output.

The addition of paper in this condition will push the lever of the deck paper supply position sensor, causing the lifter to move farther down until the stack of paper moves past the sensor lever.

The lifter repeats its descent operation each time paper is added until the deck lifter lower limit detecting switch (SW102) is pushed (maximum paper supply position).

The host machine' s DC CPU monitors the timing at which sensors associated with deck lifter operation go on; and, if the deck paper supply position sensor (PS107) is '0' when the deck lifter position sensor (PS104) and the deck level sensor (PS108) are '1' (not a normal combination), it will indicate an error code (E041) on the host machine' s control panel.


Deck open
detection switch
(SW101)
Deck lifter
position sensor
(PS104)
Deck main
motor
M101
Deck paper
supply position sensor
(PS107)
Deck lifter upper
limit sensor
(PS103)
Deck open
switch
(SW100)
Deck pickup roller
Deck paper
level sensor
(PS108)
Deck pickup / feeding roller
M102
Deck separation roller
Deck lifter
motor
Deck lifter
cable
Deck lifter lower
limit detecting switch
(SW102)
Lifter
Copy paper

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2.5 Opening /Closing the Compartment

2.5.1 Opening/Closing the Compartment

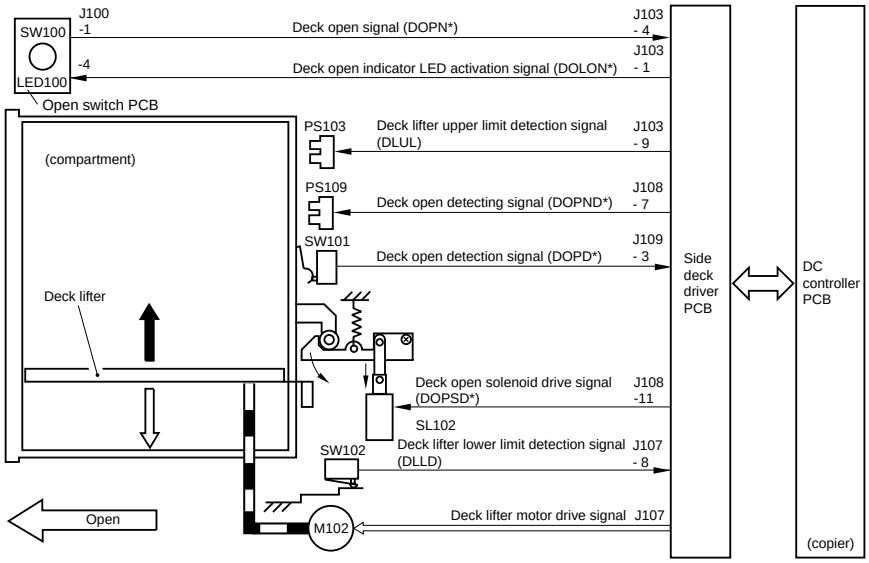
0003-2823

1. Opening/Closing the Deck

When the deck open switch (SW100) is pushed, the deck open solenoid (SL102) goes on to free the lock on the deck (compartment); as a result, the deck is pushed several centimeters to the front by the work of a spring. At the same time, the deck lifter motor (M102) starts to rotate to move down the lifter inside the deck.

When the deck (compartment) is pushed into the host machine, the deck open sensor (PS109) detects the light-blocking plate, permitting the lifter to move up as far as the pickup position.

When the deck lifter motor rotates to open/close the deck, the deck open indicator (LED100) on the open switch PCB goes on or flashes.



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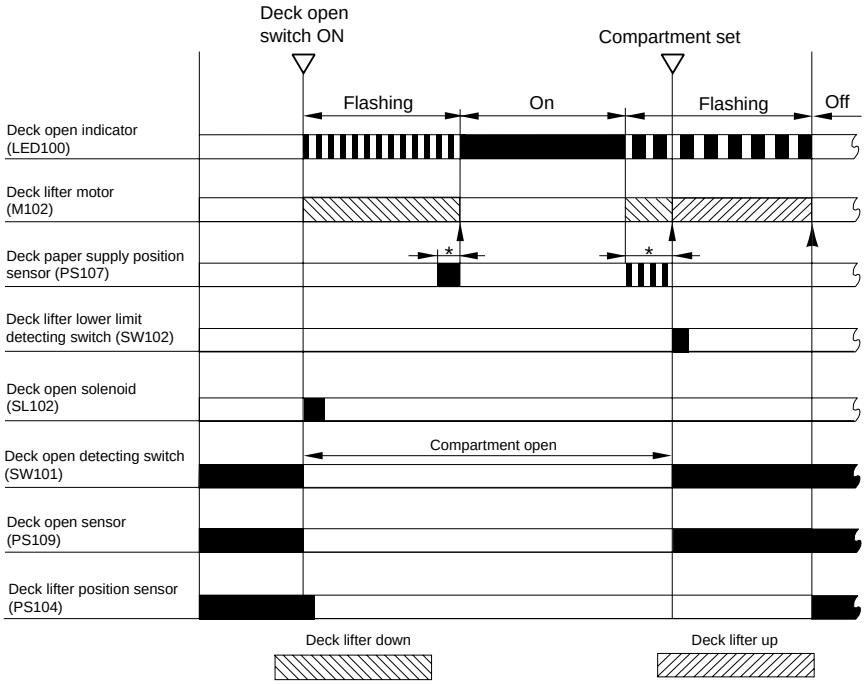
2. Sequence of Operation Used to Open/Close the Deck.



* : Varies according to the level of the stack.

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2.6 Detecting Jams

2.6.1 Overview

0003-2825

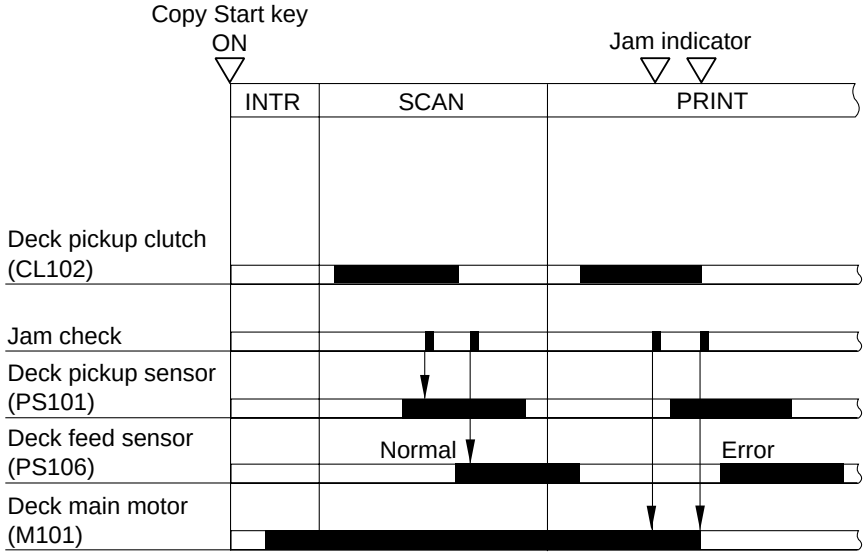
The side paper deck is equipped with the following 2 sensors used to find out whether or not paper is moving smoothly. The machine checks for the presence of a jam at such times as initiated its DC controller PCB and with reference to the signals from these sensors. When the machine's DC controller PCB identifies a jam, it discharges sheets ahead of the jam and stops the ongoing operation, after which it will indicate jam removal instructions on its control panel.

T-2-3

Sensor No.	Name	Principal function
PS106	deck feed sensor	detecting delay jams
PS101	deck pickup sensor	detecting delay jams

1. when the machine's power switch is turned on or at the end of the wait-up period or during standby, the presence of paper is detected over the deck feed sensor (PS106).

2. deck pickup/vertical path delay jam



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2.7 Power Supply

2.7.1 Route of power supply

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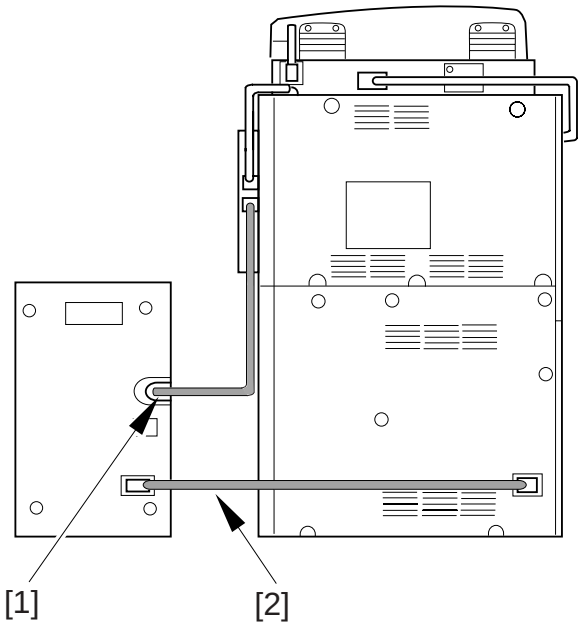

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[1] Side deck I/F cable

[2] Side deck heater cable

Chapter 3 Parts Replacement Procedure

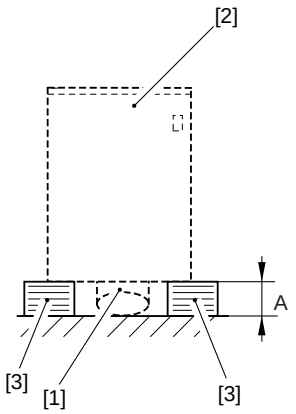
Contents

3.1 Removing from the Host Machine

3.1.1 Compartment

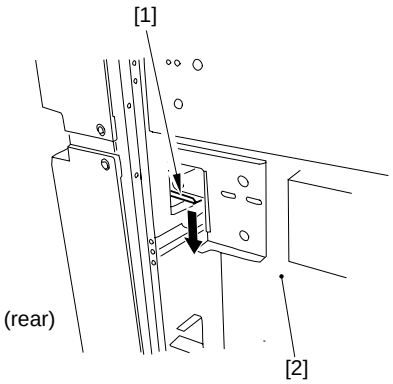
3.1.1.1 Removing the Compartment 0003-8452

1) Place a stack of paper [3] (about 8 cm in height) on the floor on which to place the deck [2], thus preventing damage to the roll support plate [1].



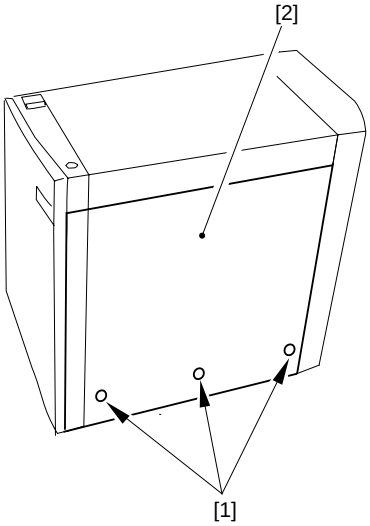
F-3-1

2) Push the deck release grip [1] to detach the deck from its host machine; then, push down the latch plate [2] found at the rear left to open the compartment.



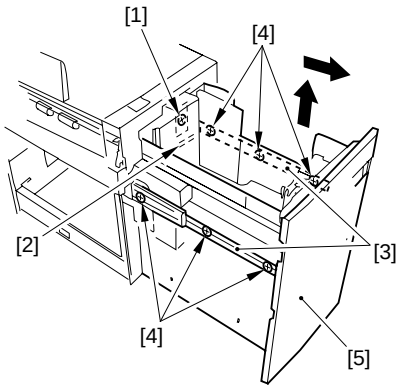
F-3-2

3) Remove the 3 screws [1], and detach the right cover [2].



F-3-3

4) Remove the screw [1] of the harness guide, disconnect the connector [2], and remove the 3 screws each on the right and left of the compartment rail [3]; then, lift the compartment [5] slightly to detach it toward the front.



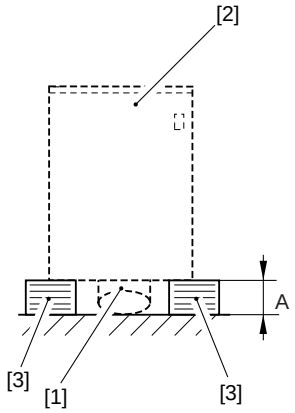
F-3-4

5) Place the compartment [5] on the base you prepared in step 1).

3.1.2 Paper Deck

3.1.2.1 Detaching from the Host Machin 0003-2842

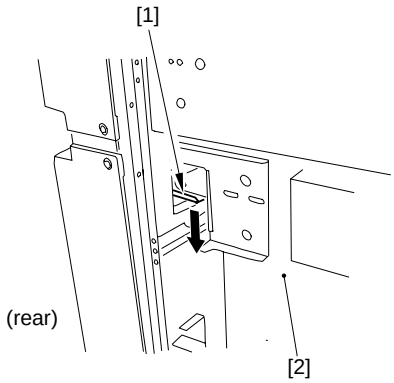
1) Place a stack of sheets [3] (A: about 8 cm in height) on the floor on which to place the deck [2], thus preventing the deformation of the roll support plate [1].



F-3-5

3.1.2.2 Opening the Compartment 0003-2941

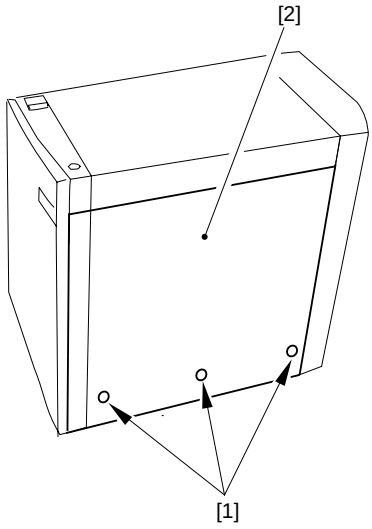
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-6

3.1.2.3 Removing the Right Cover 0003-2906

1) Detach the deck from its host machine; then, remove the 3 screws [1], and detach the right cover [2].



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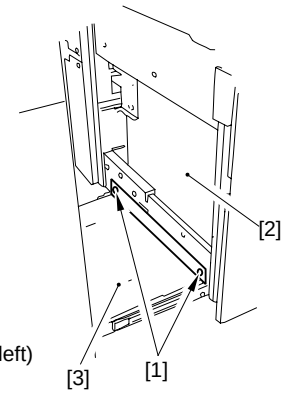
3.1.2.4 Detaching the Deck from the Host Machine 0003-2907

1) Remove the 4 screws [1], and detach the deck [2] from the deck base [3].



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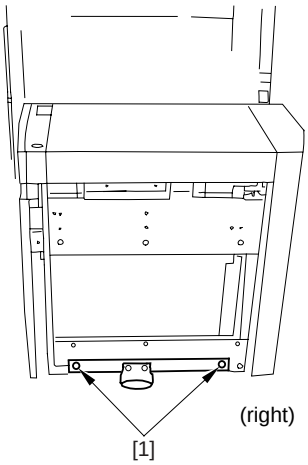

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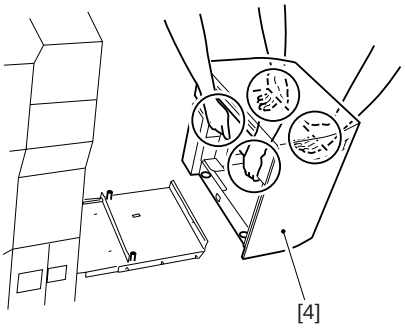
2) Hold the deck by the locations indicated in the figure; then, lift the deck [4], and place it on the base you prepared in "Detaching from the Host Machine".



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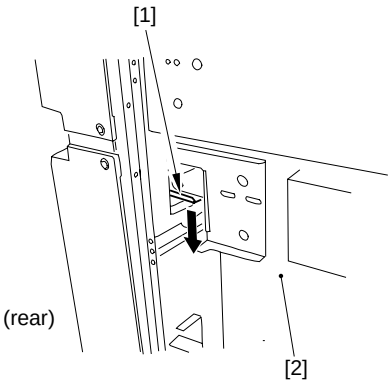
3.2 External Covers

3.2.1 Front Cover

3.2.1.1 Opening the Compartment 0003-2937

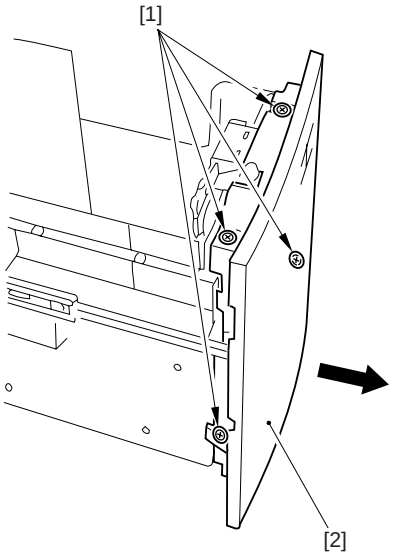
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-11

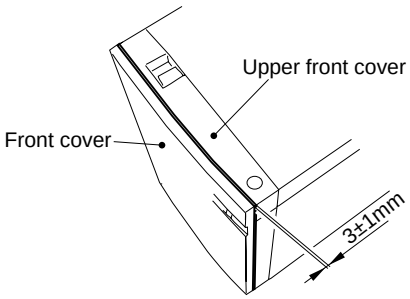
3.2.1.2 Removing the Front Cover 0003-2848

1) Loosen the 4 screws [1], and detach the front cover [2] of the deck toward the front.



F-3-12

⚠ Be sure to mount the front cover so that the gap between the front over and the upper front cover is 3 +/-1 mm.

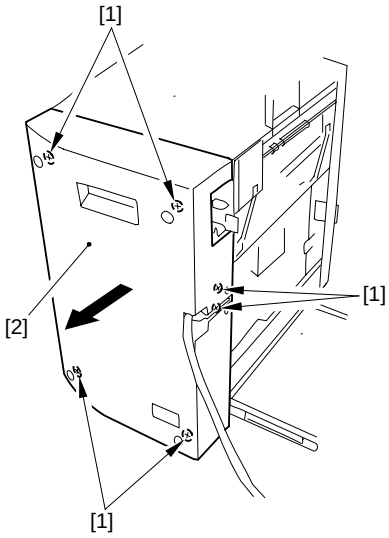


F-3-13

3.2.2 Rear Cover

3.2.2.1 Removing the Rear Cover 0003-2852

1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].

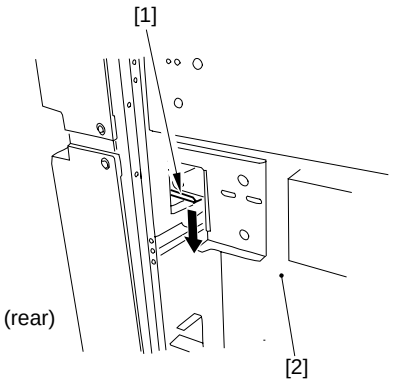


F-3-14

3.2.3 Right Cover

3.2.3.1 Opening the Compartment 0003-9073

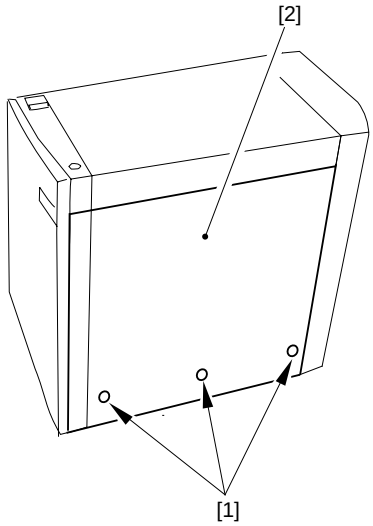
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-15

3.2.3.2 Removing the Right Cover 0003-2866

1) Detach the deck from its host machine; then, remove the 3 screws [1], and detach the right cover [2].

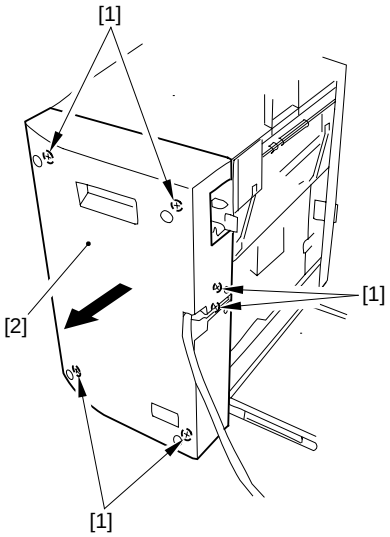


F-3-16

3.2.4 Upper Cover

3.2.4.1 Removing the Rear Cover 0003-2910

1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].

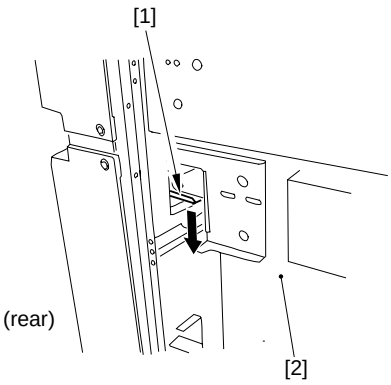


F-3-17

3.2.4.2 Opening the Compartment 0003-2939

1) Push the deck release grip [1] to detach the deck

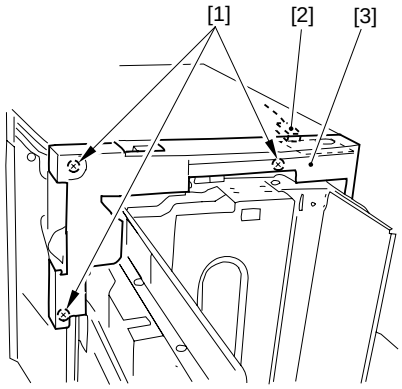
from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-18

3.2.4.3 Removing the Upper Front Cover 0003-2926

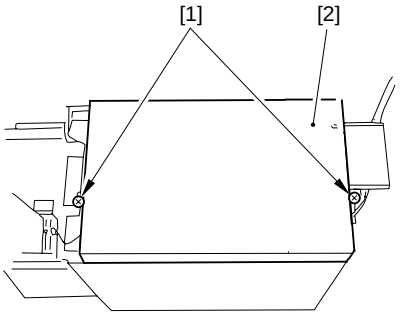
1) Remove the 3 screws [1], and disconnect the connector [2]; then, detach the upper front cover [3].



F-3-19

3.2.4.4 Removing the Upper Cover 0003-2868

1) Remove the 2 screws [1], and detach the upper cover [2].



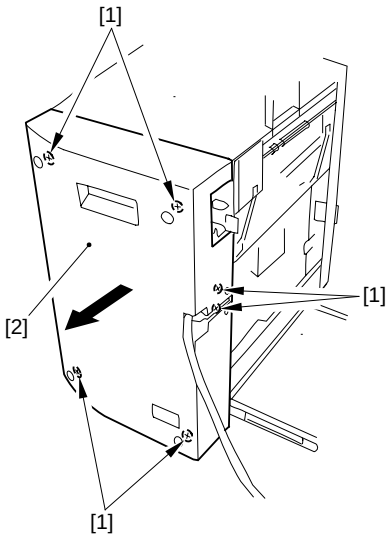
F-3-20

3.3 Drive System

3.3.1 Deck Pickup Clutch

3.3.1.1 Removing the Rear Cover 0003-2929

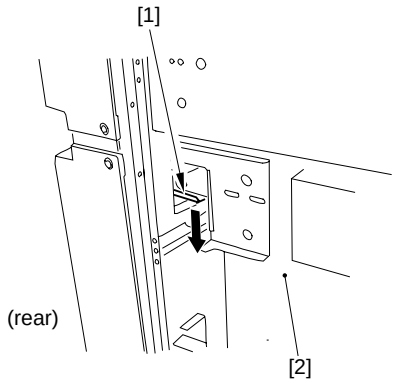
1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].



F-3-21

3.3.1.2 Opening the Compartment 0003-2940

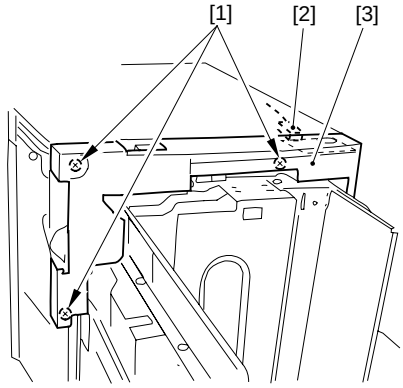
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-22

3.3.1.3 Removing the Upper Front Cover 0003-2931

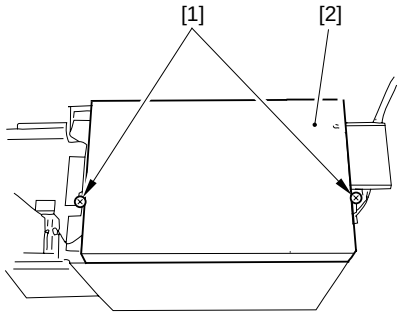
1) Remove the 3 screws [1], and disconnect the connector [2]; then, detach the upper front cover [3].



F-3-23

3.3.1.4 Removing the Upper Cover 0003-2932

1) Remove the 2 screws [1], and detach the upper cover [2].

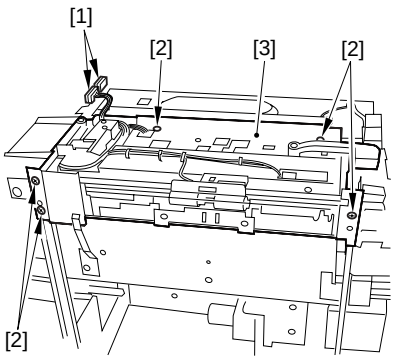


F-3-24

3.3.1.5 Removing the Pickup Unit

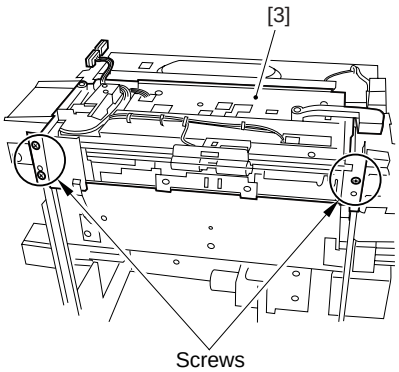
0003-8509

1) Disconnect the 2 connectors [1], and remove the 5 screws [2]; then, detach the deck pickup unit [3].



F-3-25

⚠ When mounting the deck pickup unit [3], be sure to tighten the 3 screws shown in the figure first.

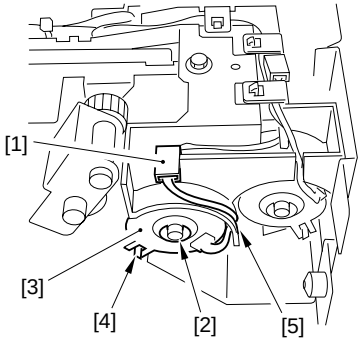


F-3-26

3.3.1.6 Removing the Pickup Clutch

0003-2934

1) Disconnect the connector [1], and remove the E-ring [2]; then, detach the deck pickup clutch [3].



F-3-27

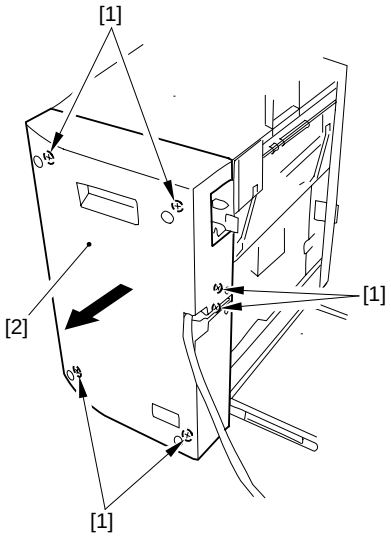
⚠ When mounting the pickup clutch, be sure that the clutch is fitted in the stop [4].
Moreover, be sure that the harness is hooked on the U-groove [5] of the guide.

3.3.2 Deck Feed Clutch

3.3.2.1 Removing the Rear Cover

0003-2936

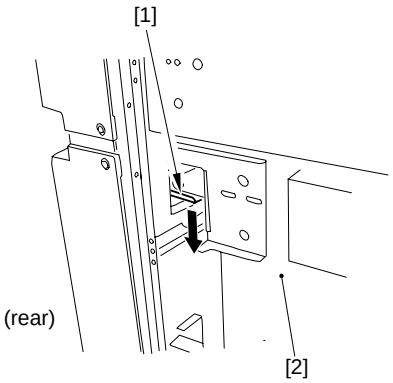
1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].



F-3-28

3.3.2.2 Opening the Compartment 0003-2943

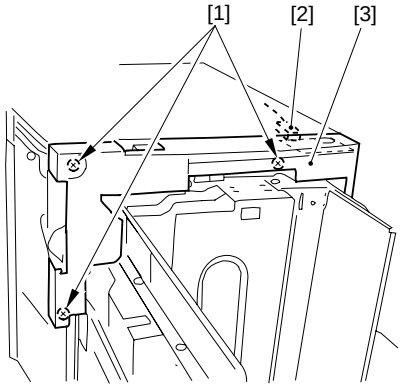
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-29

3.3.2.3 Removing the Upper Front Cover 0003-2944

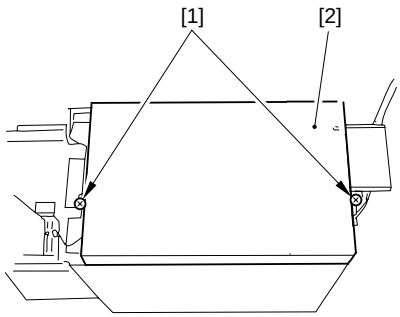
1) Remove the 3 screws [1], and disconnect the connector [2]; then, detach the upper front cover [3].



F-3-30

3.3.2.4 Removing the Upper Cover 0003-2945

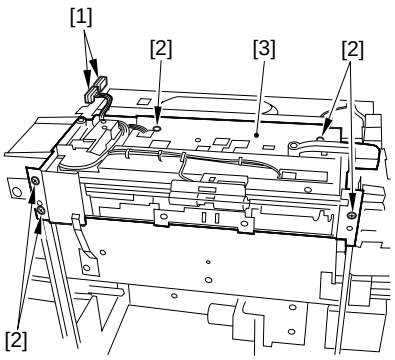
1) Remove the 2 screws [1], and detach the upper cover [2].



F-3-31

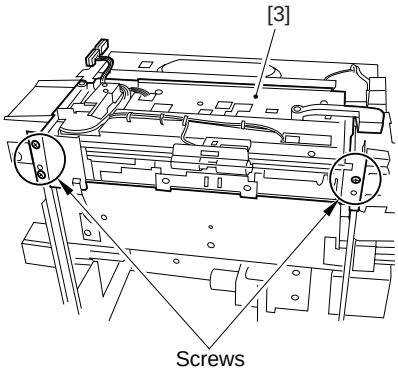
3.3.2.5 Removing the Pickup Unit 0003-8508

1) Disconnect the 2 connectors [1], and remove the 5 screws [2]; then, detach the deck pickup unit [3].



F-3-32

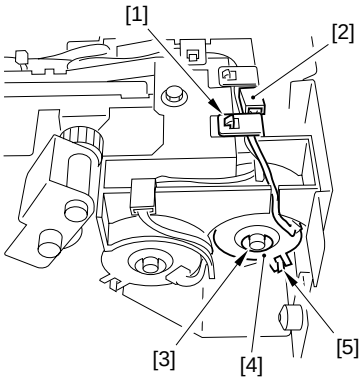
⚠ When mounting the deck pickup unit [3], be sure to tighten the 3 screws shown in the figure first.



F-3-33

3.3.2.6 Removing the Feed Clutch 0003-2948

1) Remove the harness retainer [1], disconnect the connector [2], and remove the E-ring [3]; then, detach the deck feed clutch [4].



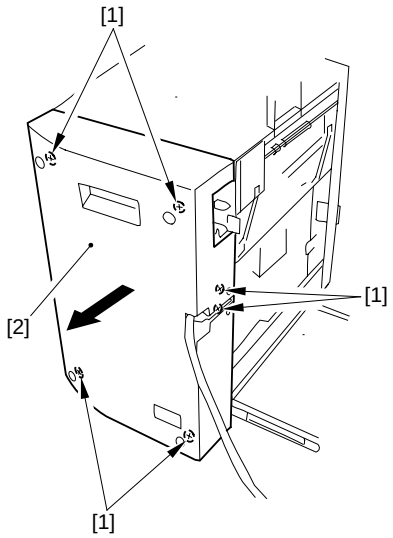
F-3-34

⚠ When mounting the feed clutch, be sure that the clutch is fitted in the stop [5].

3.3.3 Deck Main Motor

3.3.3.1 Removing the Rear Cover 0003-8453

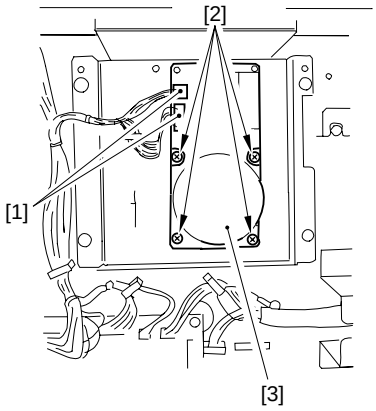
1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].



F-3-35

3.3.3.2 Removing the Deck Main Motor (M101) 0003-8454

1) Disconnect the 2 connectors [1], and remove the 4 screws [2]; then, detach the deck main motor [3]. At this time, be sure to take care not to damage the gear found at the tip of the motor spindle.

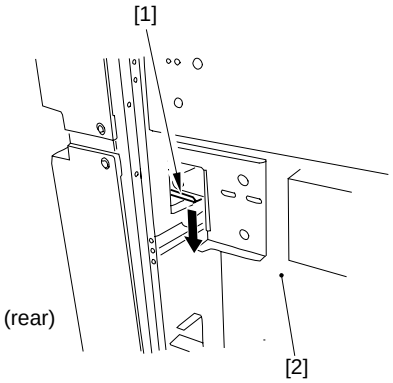


F-3-36

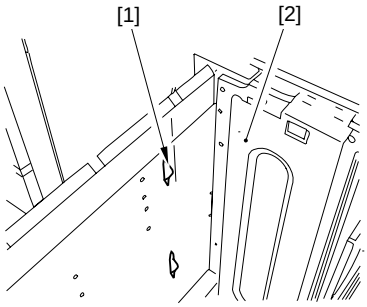
3.3.4 Deck Lifter Motor

3.3.4.1 Opening the Compartment 0003-8466

1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-37

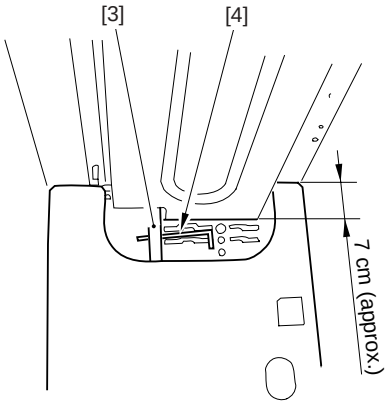


F-3-38

3.3.4.2 Positioning the Deck Lifter 0003-8468

1) If there is any paper, remove all.
2) Turn on the host machine's power switch.
3) If the deck lifter is in its up position, move it so that the distance A from the bottom plate of the compartment of the deck lifter is about 7 cm. Push the sensor flag [2] of the paper supply position sensor found inside the compartment [1] so that the deck lifter moves down. (The deck lifter will stop as soon as you release the flag.)

Insert a hex wrench [3] into the hole of the lifter drive shaft [4] to fix it in place (against turning).

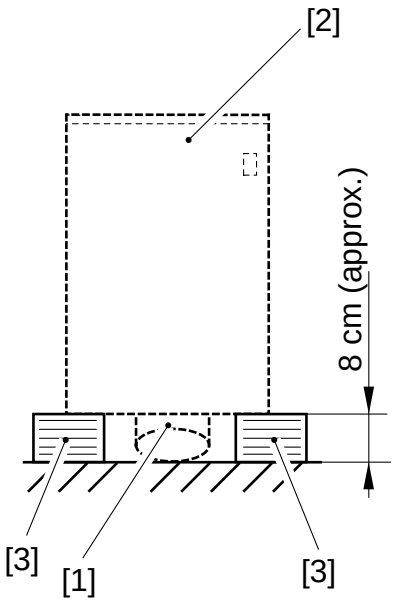


F-3-39

4) Connect the power plug, and turn on the host machine's power switch.

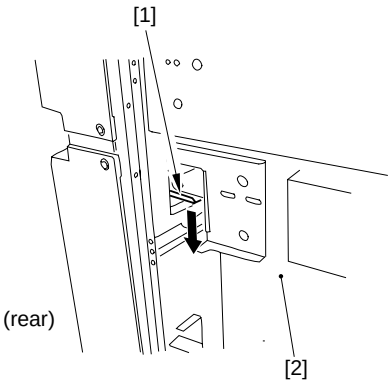
3.3.4.3 Removing the Compartment 0003-9101

1) Place a stack of paper [3] (about 8 cm in height) on the floor on which to place the deck [2], thus preventing damage to the roll support plate [1].



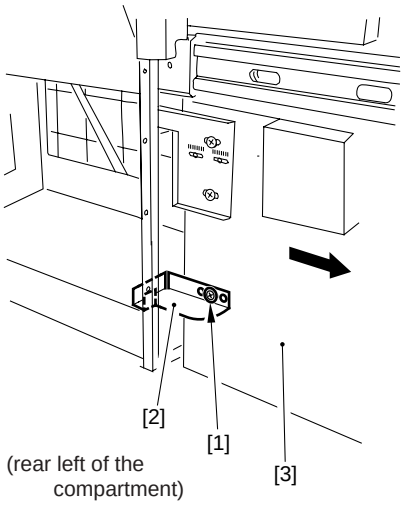
F-3-40

2) Push the deck release grip [1] to detach the deck from its host machine; then, push down the latch plate [2] found at the rear left to open the compartment.



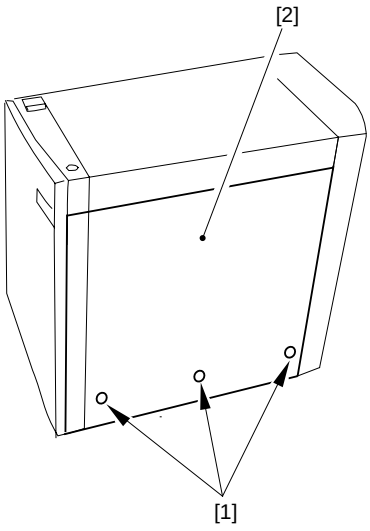
F-3-41

3) Remove the screw [1] and the stopper plate [2]; then, slide father out the compartment [3].



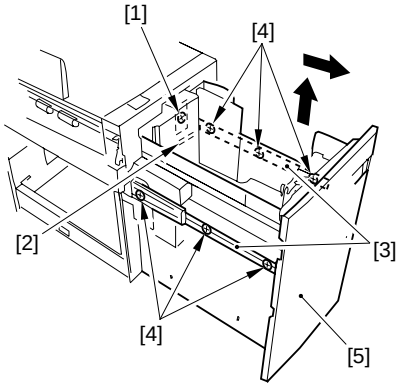
F-3-42

4) Remove the 3 screws [1], and detach the right cover [2].



F-3-43

5) Remove the screw [1] of the harness guide, disconnect the connector [2], and remove the 3 screws each on the right and left of the compartment rail [3]; then, lift the compartment [5] slightly to detach it toward the front.

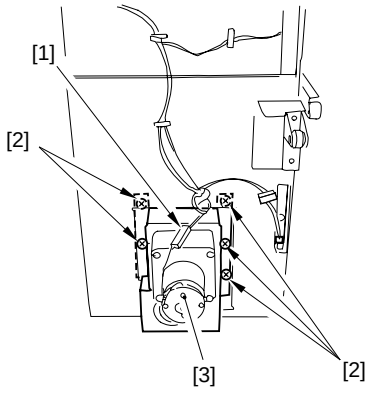


F-3-44

6) Place the compartment [5] on the base you prepared in step 1).

3.3.4.4 Removing the Deck Lifter Motor (M2D) 0003-8470

1) Disconnect the connector [1], and remove the 5 screws [2]; then, detach the deck lifter motor unit [3].

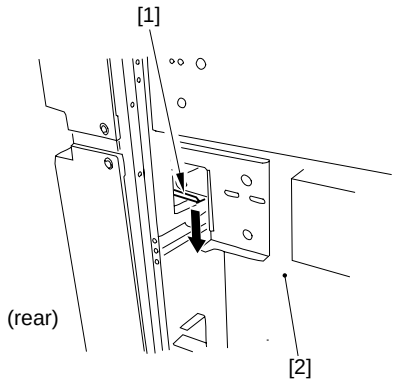


F-3-45

3.3.5 Lifter Cable (Front)

3.3.5.1 Opening the Compartment 0003-8472

1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-46

3.3.5.2 Removing the Lifter Cable (deck front) 0003-8473

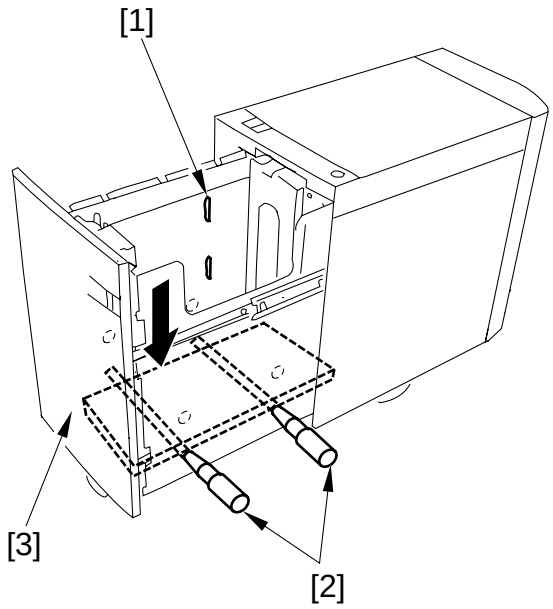
1) If there is any paper, remove all.

2) Insert 2 long screwdrivers [1] to keep the lifter in position.

3) So that the left and right holes of the compartment side plate and the left and right holes of the lifter will match, move down the lifter by pushing the flag [1] of the paper supply position sensor.

- Connect the power plug, and turn on the host machine's power switch.
- Push the flag [2] of the paper position sensor found inside the compartment [3] until the deck lifter comes into contact with the screwdrivers.

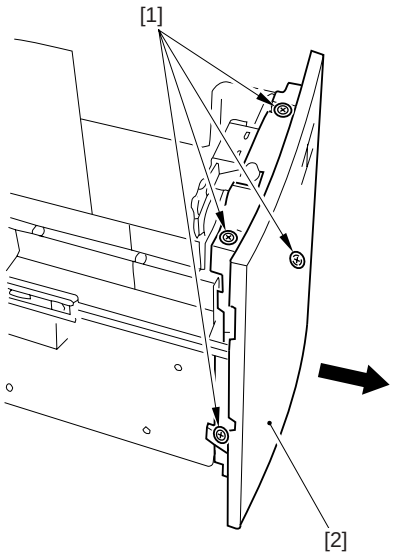
(The deck lifter will stop when you let go of the flag.)



F-3-47

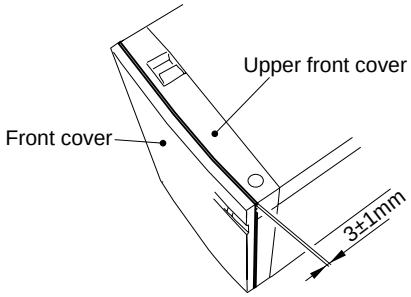
4) Loosen the 4 screws [1], and detach the front cover [2].

Do not remove the screws.



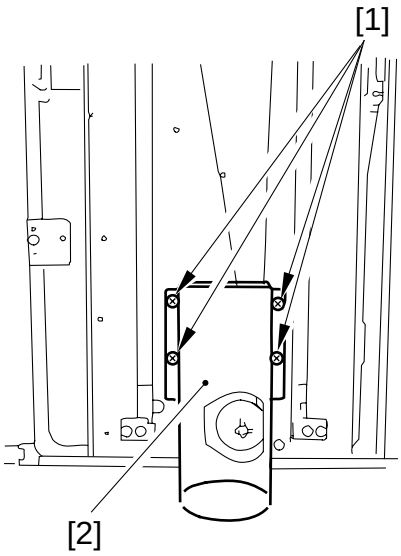
F-3-48

⚠ Use the 4 screws used to keep the front cover in place when adjusting the position of the front cover so that the gap A between the front cover and the upper front cover is 3 +/-1 mm.



F-3-49

5) Remove the 4 screws [1], and detach the roll support plate [2].



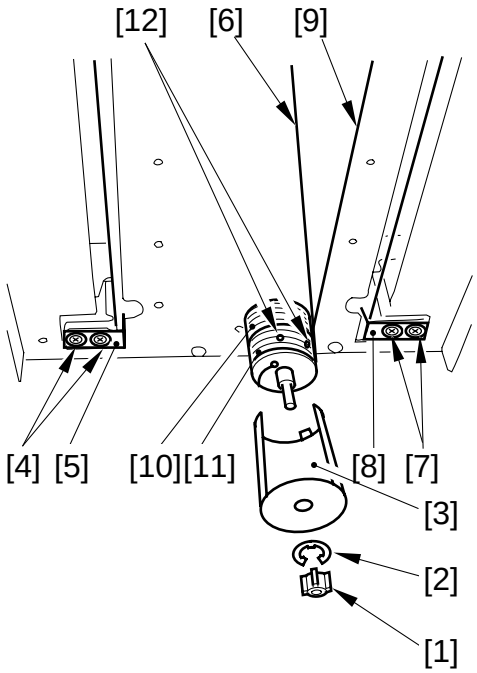
F-3-50

6) Remove the coupling shaft [1] and the E-ring [2]; then, detach the pulley cover [3].

7) Remove the 2 screws [4], and detach the left cable fixing plate [5]; then, detach the outside lifter cable [6].

8) Remove the 2 screws [7], and detach the right cable fixing plate [8]; then, detach the inside lifter cable [9].

9) Remove the 2 set screws [12] and detach the outside pulley [11] to detach the inside lifter cable [9] from the inside pulley [10].



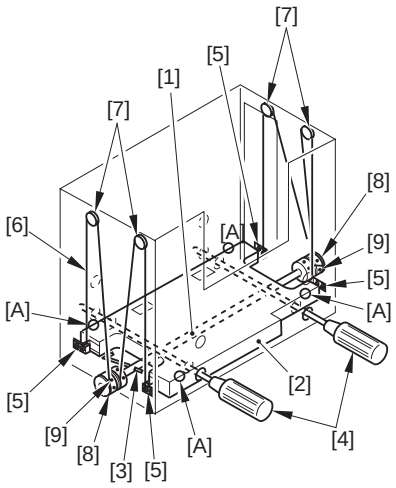
F-3-51

3.3.5.3 Stringing the Lifter Cable 0003-8479

1) Check to make sure that the lifter drive shaft [1] and the lifter [2] are fixed in place using a hex wrench [3] and 2 long screwdrivers [4], respectively.
2) Fix the 4 cable fixing plates [5] in place to the lifter using 2 screws each.
3) Hook the lifer cable [6] on the 4 pulleys [7] above.
4) Hook the ball of the lifter cable on the 2 front/rear pulleys [8] of the lifter drive shaft; then, wind it about 1.5 times along the groove of the pulley.

At this time, be sure to keep the lifter cable taut so that the long drivers used to keep the lifter are slightly lifted by the cable.

5) Fix the 2 pulleys [5] in place to the lifter drive shaft with a set screw [9] (1 pc. each).
6) Fit all removed pulleys to the lifter shaft; then, measure the height A from the base plate of the compartment to the top face of the lifter, thus making sure that the lifter is level.

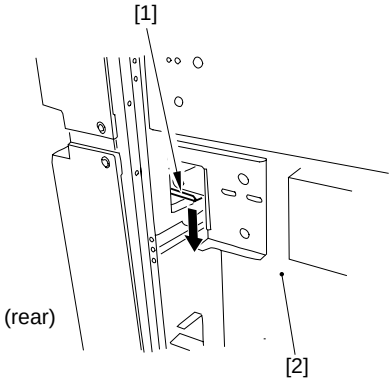


F-3-52

3.3.6 Lifter Cable

3.3.6.1 Opening the Compartment 0003-8480

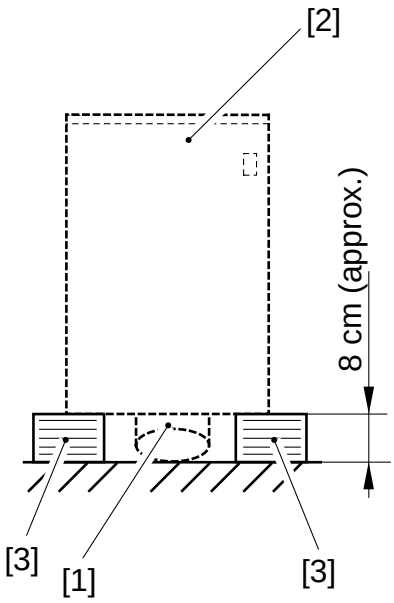
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-53

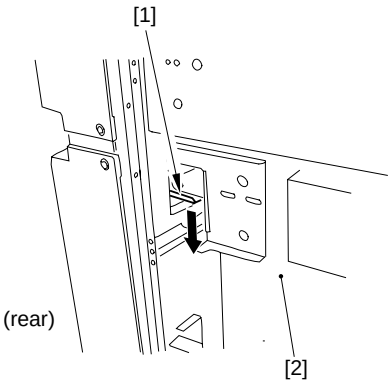
3.3.6.2 Removing the Compartment 0003-9131

1) Place a stack of paper [3] (about 8 cm in height) on the floor on which to place the deck [2], thus preventing damage to the roll support plate [1].



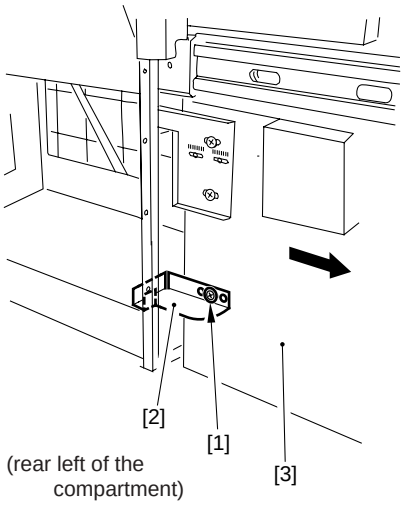
F-3-54

2) Push the deck release grip [1] to detach the deck from its host machine; then, push down the latch plate [2] found at the rear left to open the compartment.



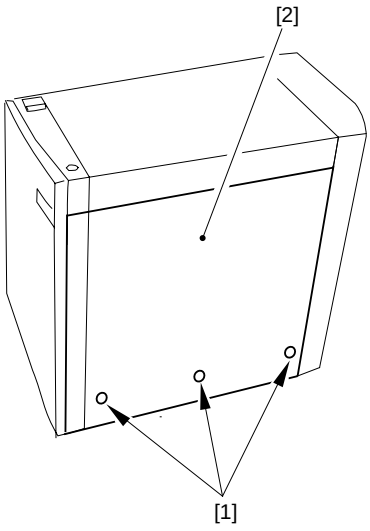
F-3-55

3) Remove the screw [1] and the stopper plate [2]; then, slide father out the compartment [3].



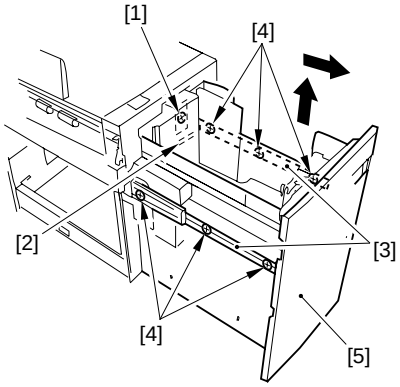
F-3-56

4) Remove the 3 screws [1], and detach the right cover [2].



F-3-57

5) Remove the screw [1] of the harness guide, disconnect the connector [2], and remove the 3 screws each on the right and left of the compartment rail [3]; then, lift the compartment [5] slightly to detach it toward the front.

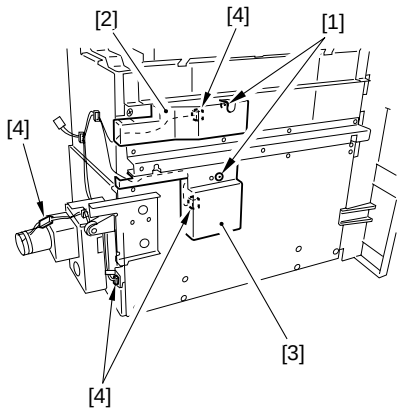


F-3-58

6) Place the compartment [5] on the base you prepared in step 1).

3.3.6.3 Removing the Lifter Cable (deck rear) 0003-8482

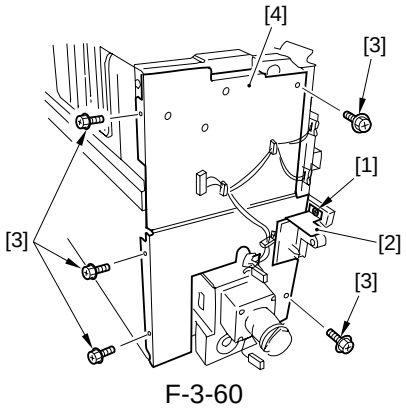
1) Remove the screw [1] (1 pc. each), and remove the upper sensor cover [2] and the lower sensor cover [3].
2) Disconnect the 4 connectors [4].



F-3-59

⚠ There are 2 claws on the upper sensor cover. Be sure to take care not to break the claws when detaching it.

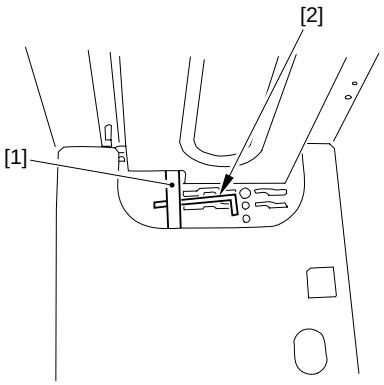
3) Remove the 5 screws [3], and detach the plate [4].



F-3-60

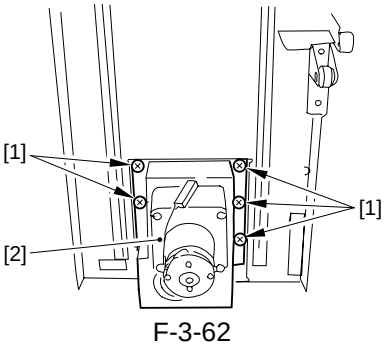
4) Insert a hex wrench [2] into the hole of the lifter drive shaft [1] to keep it from turning.

⚠ If you fail to keep it in place, the lifter cable will become slack when the lifter motor unit is removed.



F-3-61

5) Remove the 5 screws [1], and detach the lifter motor unit [2].



F-3-62

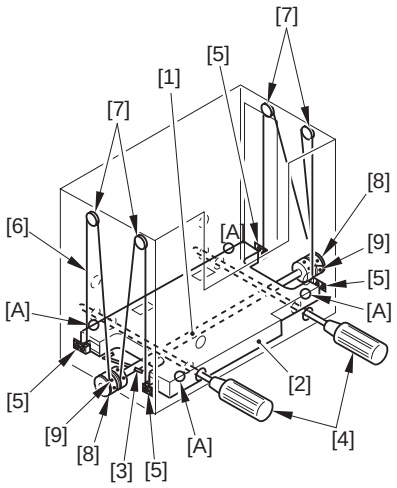
3.3.6.4 Stringing the Lifter Cable

0003-8483

1) Check to make sure that the lifter drive shaft [1] and the lifter [2] are fixed in place by means of a hex wrench [3] and 2 long screwdrivers [4].
2) Fix the 4 cable fixing plates [5] in place to the lifter by 2 screws each.
3) Hook the lifter cable [7] on the 4 pulleys [8] above.
4) Hook the ball of the lifter cable on the 2 pulleys [8] at the front/rear of the lifter drive shaft; then, wind it about 1.5 times along the groove of the pulley.

At this time, see to it that the long screwdrivers used to keep the lifter in place are slightly lifted and the lifter cable becomes taut.

5) Fix the 2 pulleys [5] in place using the set screws (1 pc. each) to the lifter drive shaft.
6) Fix all removed pulleys in place to the lifter drive shaft; then, measure the height A from the base plate of the compartment to the top face of the lifer, thus making sure that the lifer is level.



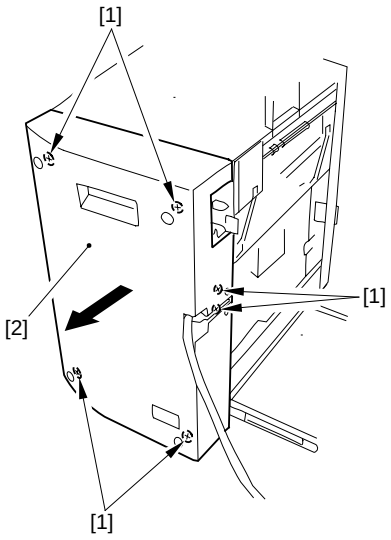
F-3-63

3.4 Document Feeding System

3.4.1 Deck Pickup Unit

3.4.1.1 Removing the Rear Cover 0003-8502

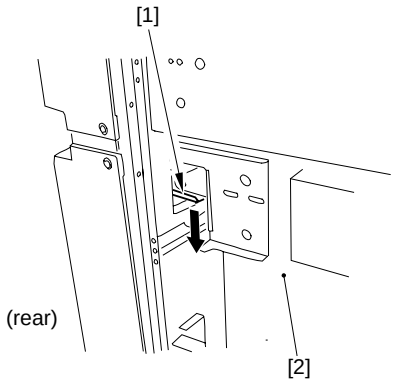
1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].



F-3-64

3.4.1.2 Opening the Compartment 0003-8503

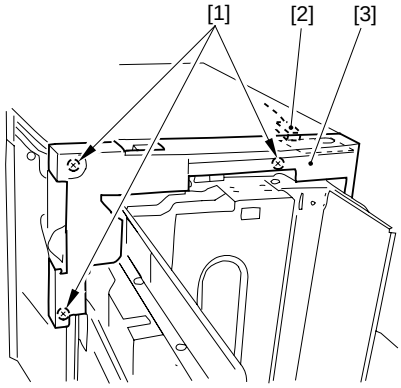
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-65

3.4.1.3 Removing the Upper Front Cover 0003-8504

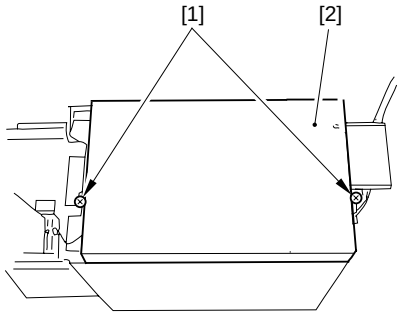
1) Remove the 3 screws [1], and disconnect the connector [2]; then, detach the upper front cover [3].



F-3-66

3.4.1.4 Removing the Upper Cover 0003-8505

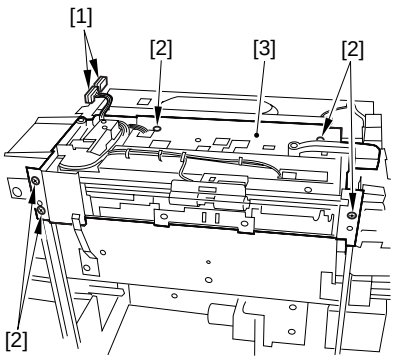
1) Remove the 2 screws [1], and detach the upper cover [2].



F-3-67

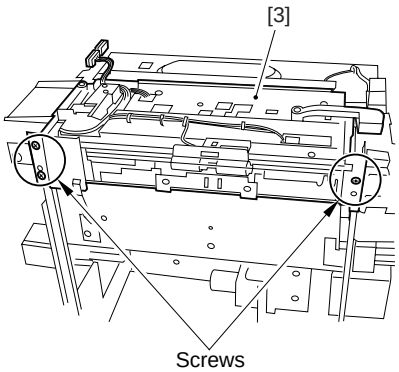
3.4.1.5 Removing the Deck Pickup Unit 0003-8507

1) Disconnect the 2 connectors [1], and remove the 5 screws [2]; then, detach the deck pickup unit [3].



F-3-68

⚠ When mounting the deck pickup unit [3], be sure to tighten the 3 screws shown in the figure first.

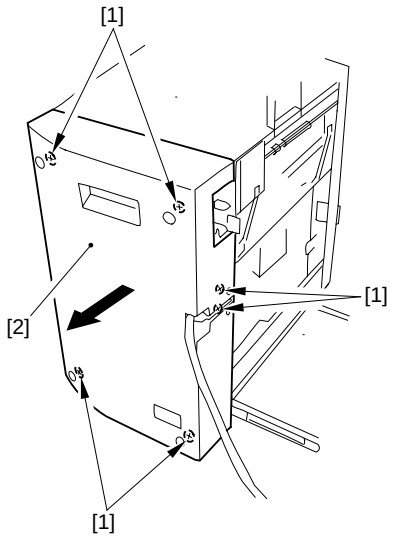


F-3-69

3.4.2 Deck Pickup Roller

3.4.2.1 Removing the Rear Cover 0003-8510

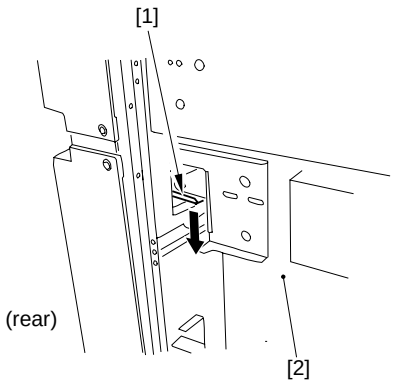
1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].



F-3-70

3.4.2.2 Opening the Compartment 0003-8511

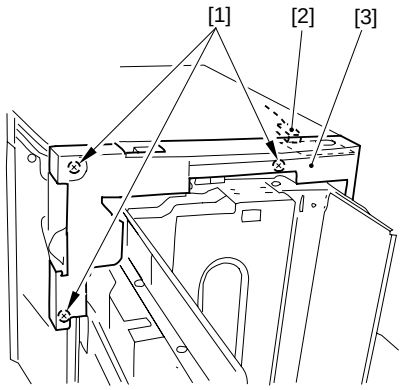
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-71

3.4.2.3 Removing the Upper Front Cover 0003-8513

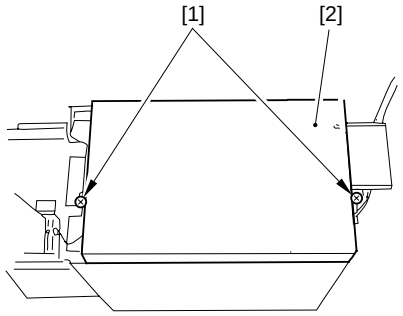
1) Remove the 3 screws [1], and disconnect the connector [2]; then, detach the upper front cover [3].



F-3-72

3.4.2.4 Removing the Upper Cover 0003-8514

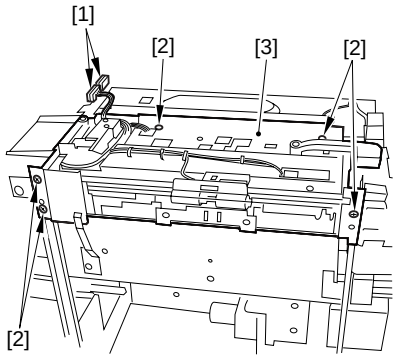
1) Remove the 2 screws [1], and detach the upper cover [2].



F-3-73

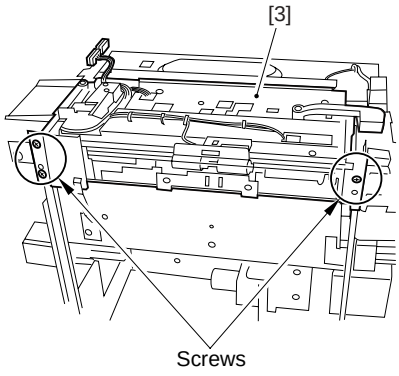
3.4.2.5 Removing the Deck Pickup Unit 0003-8516

1) Disconnect the 2 connectors [1], and remove the 5 screws [2]; then, detach the deck pickup unit [3].



F-3-74

⚠ When mounting the deck pickup unit [3], be sure to tighten the 3 screws shown in the figure first.

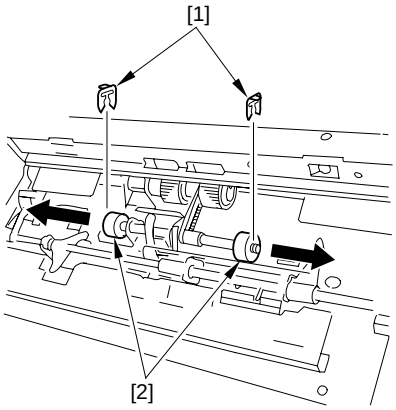


F-3-75

3.4.2.6 Removing the Deck Pickup Roller 0003-8518

1) Turn over the deck pickup unit; then, remove the resin ring [1] (1 pc. each) and the 2 deck pickup rollers [2].

⚠ The deck pickup roller has its own direction of rotation, requiring care when mounting it.



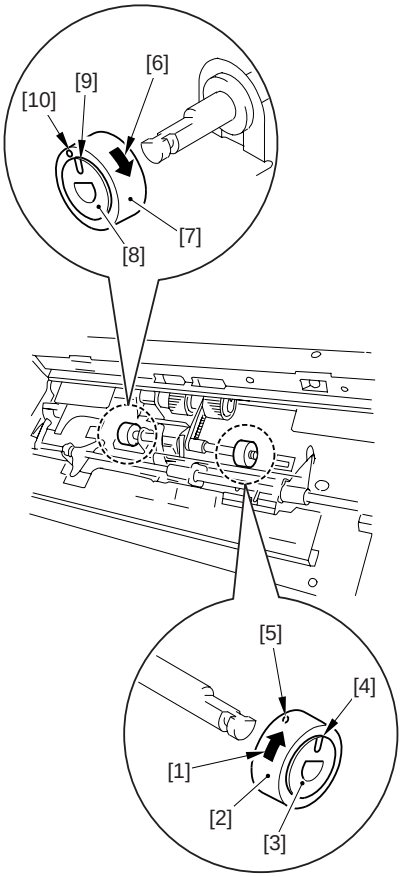
F-3-76

3.4.2.7 Points to Note When Mounting the Deck Pickup Roller

0003-8519

Front of the Machine (collar [3]; silver-colored)
It has its own direction of rotation [1]; when mounting the deck pickup roller [2] to the front of the machine, be sure that the marking [4] found on the collar [3] is to the front of the machine and the marking [5] found on the side of the roller is to the rear of the machine.

Rear of the Machine (collar [8]; gold-cover)
It has its own direction of rotation [6]; when mounting the deck pickup roller [7] to the rear of the machine, be sure that the marking [9] found on the collar [8] and the marking [10] found on the side of the roller are to the rear of the machine.



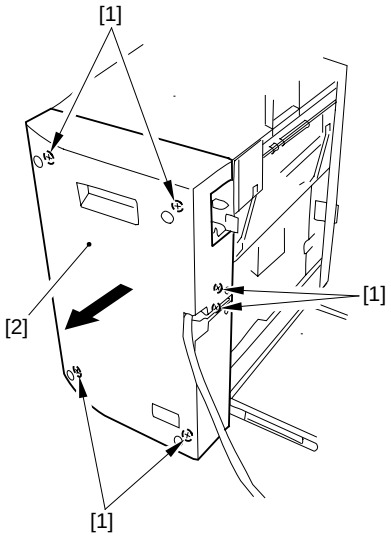
F-3-77

3.4.3 Deck Pickup/Feed Roller

3.4.3.1 Removing the Rear Cover

0003-8520

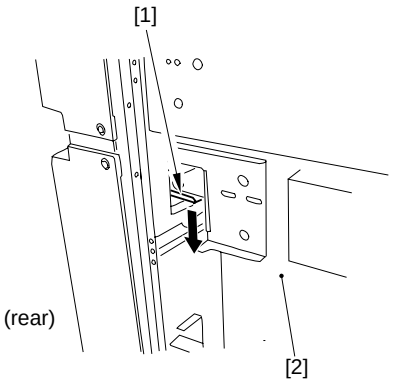
1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].



F-3-78

3.4.3.2 Opening the Compartment 0003-8521

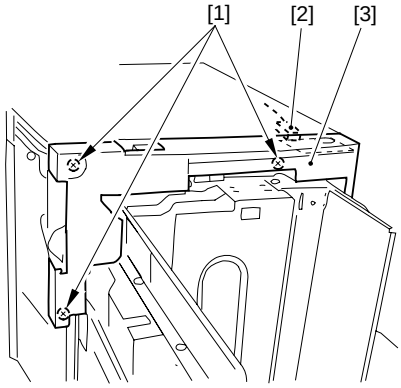
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-79

3.4.3.3 Removing the Upper Front Cover 0003-8522

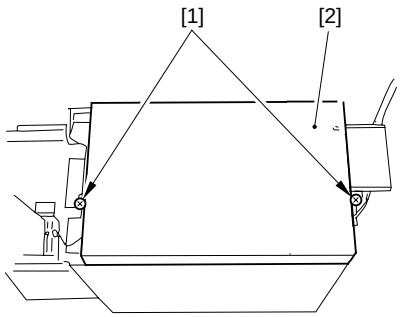
1) Remove the 3 screws [1], and disconnect the connector [2]; then, detach the upper front cover [3].



F-3-80

3.4.3.4 Removing the Upper Cover 0003-8523

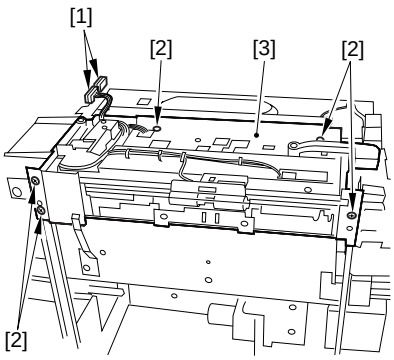
1) Remove the 2 screws [1], and detach the upper cover [2].



F-3-81

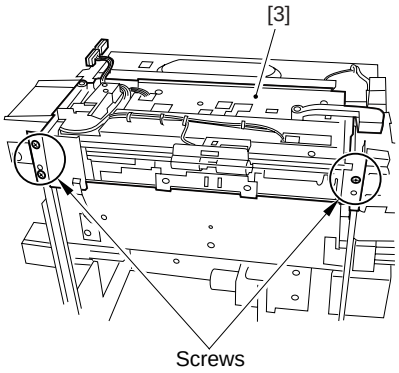
3.4.3.5 Removing the Deck Pickup Unit 0003-8524

1) Disconnect the 2 connectors [1], and remove the 5 screws [2]; then, detach the deck pickup unit [3].



F-3-82

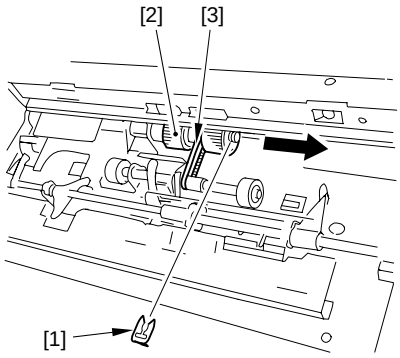
⚠ When mounting the deck pickup unit [3], be sure to tighten the 3 screws shown in the figure first.



F-3-83

3.4.3.6 Removing the Deck Pickup/Feed Roller 0003-8526

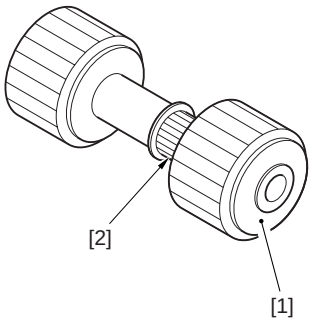
1) Remove the resin ring [1], and detach the deck pickup/feed roller [2] and the drive belt [3] toward the front.



F-3-84

3.4.3.7 Points to Note When Mounting the Deck Pickup/ Feed Roller 0003-8527

When mounting the deck pickup/feed roller [1], be sure so that the belt pulley [2] is to the front oft the machine. The pickup/feed roller rubber may be fitted to the pickup/feed roller shaft in any orientation.

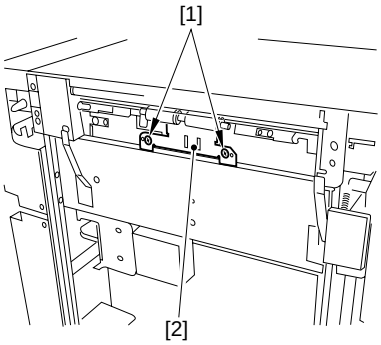


F-3-85

3.4.4 Deck Separation Roller

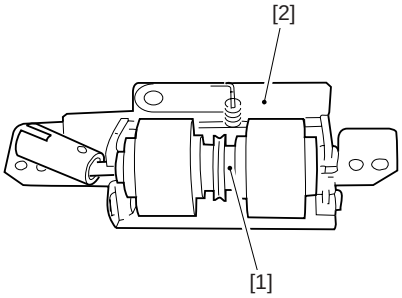
3.4.4.1 Removing the Deck Separation Roller 0003-8528

1) Detach the deck from its host machine; then, remove the 2 screws [1, and detach the separation roller support plate [2].



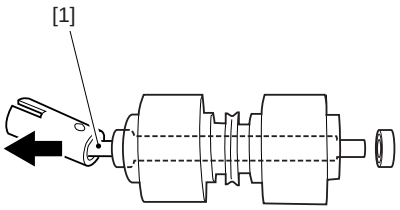
F-3-86

2) Detach the pickup roller [1] from the holder [2]. (snap-on)



F-3-87

3) Detach the shaft [1] in the direction of the arrow.



F-3-88

⚠ The urethane sponge used on the deck separation roller is pink in color immediately after foaming; changing the color to orange and then to yellow (accelerated if exposed to light).

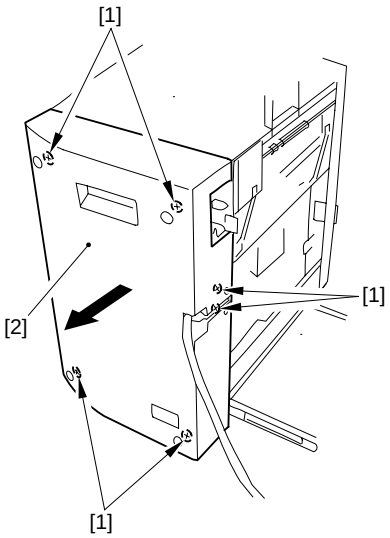
This is a general characteristic of the urethane sponge, and there is no difference in performance because of discoloration. (The part does not come in different types, as according to color.)

3.5 Electrical System

3.5.1 Deck Driver PCB

3.5.1.1 Removing the Rear Cover 0003-8530

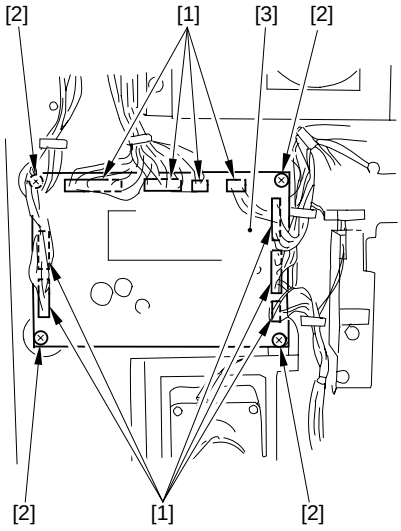
1) Detach the deck from its host machine; then, remove the 6 screws [1], and detach the rear cover [2].



F-3-89

3.5.1.2 Removing the Deck Driver PCB 0003-8531

1) Disconnect the 9 connectors [1], and remove the 4 screws [2]; then, detach the deck driver PCB [3].

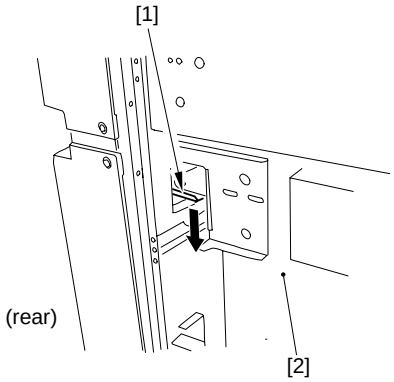


F-3-90

3.5.2 Open Switch PCB

3.5.2.1 Opening the Compartment 0003-8532

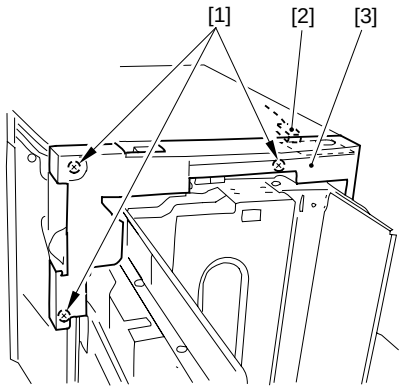
1) Push the deck release grip [1] to detach the deck from its host machine. Then, push down the latch plate [2] found at the rear left to open the compartment.



F-3-91

3.5.2.2 Removing the Upper Front Cover 0003-8533

1) Remove the 3 screws [1], and disconnect the connector [2]; then, detach the upper front cover [3].

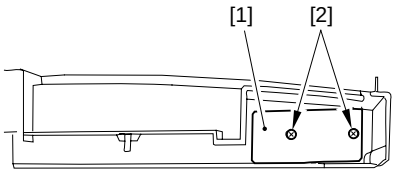


F-3-92

3.5.2.3 Removing the Open Switch PCB

0003-8534

1) Remove the 2 screws [2] from inside the front cover (upper) [1]; then, detach the open switch PCB [3].



F-3-93

⚠ When mounting the upper front cover, be sure not to trap the harness by the open switch and not to forget connecting the connectors.

Chapter 4 Maintenance

Contents

4.1 Maintenance and Inspection

4.1.1 Periodically Replaced Parts

4.1.1.1 Periodically Replaced Parts 0003-8535

The Side Paper Deck-U1 does not have parts that must be replaced on a periodical basis.

4.1.2 Durables

4.1.2.1 List of Durables 0003-8536

T-4-1

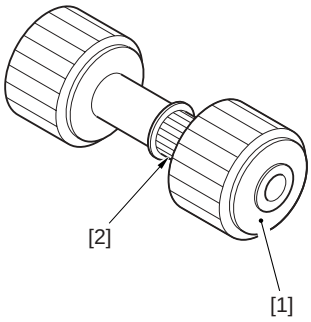
No.	Parts name	Pars No.	Q'ty	Life (in number of sheets)	Remarks
[1]	pickup roller (front)	FF5-7830	1	250,000	Actual number of sheets
[2]	pickup roller (read)	FF5-7829	1	250,000	Actual number of sheets
[3]	feed roller	FF6-1975	1	250,000	Actual number of sheets
[4]	separation roller	FB2-7777	1	250,000	Actual number of sheets

4.2 Adjustment

4.2.1 Basic Adjustment

4.2.1.1 Points to Note When Mounting the Deck Pickup/ Feed Roller 0003-8537

When mounting the deck pickup/feed roller [1], be sure so that the belt pulley [2] is to the front oft the machine. The pickup/feed roller rubber may be fitted to the pickup/feed roller shaft in any orientation.

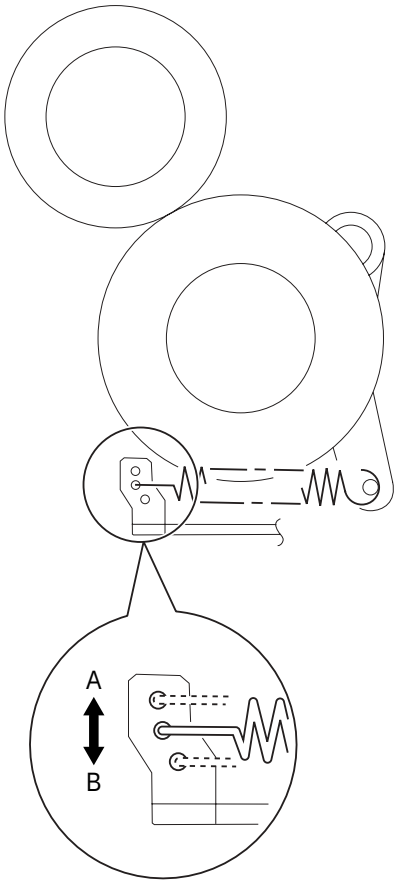


F-4-1

4.2.1.2 Adjusting the Pressure of the Deck Separation Roller 0003-8529

If pickup faults or double feeding occurs when the deck is used as the source of paper, relocate the pressure spring [2] of the deck separation roller [1]:

- if pickup faults occur, move the spring in the direction of arrow A.
- if double-feeding occurs, move the spring in the direction of arrow B.



F-4-2

4.2.1.3 Adjusting the Height of the Side Roll 0003-8539

Before Making the Adjustments

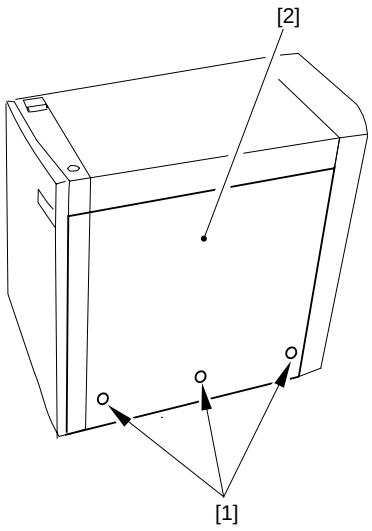
1. Detach the machine from its host machine, and then attach it back again, thereby checking if the machine becomes unstable in response to the impact.
If the machine becomes unstable, adjust the height of the side roll as follows. Otherwise, these adjustments are not needed.

Making Adjustments

1) Connect the machine to its host machine.

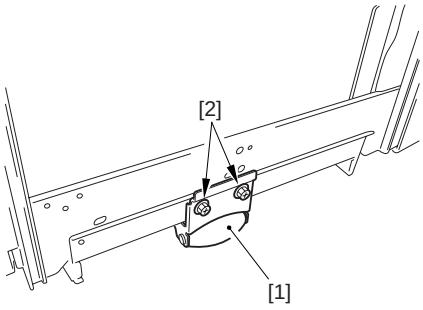
2) Remove all paper from inside the deck.

3) Remove the 3 screws [1], and detach the right cover [2].



F-4-3

4) Loosen the 2 fixing screws [2] of the side roll [1].



F-4-4

5) While keeping the side roll in contact with th floor, tighten the fixing screw.At this time, refer to the index so that the left and right screws are at the same index.

6) Detach the machine from its host machine, and then attach it back on.If it can be attached and detached without extra force, put back the machine's right cover and the paper previously removed to end the adjustment work.If attachment and detachment requires extra force, on the other hand, go through the following:

7) Check the index of the side roll.

8) Loosen the side roll fixing screw.

9) While referring to the index, raise the side roll by 1 mm, and then tighten the fixing screw.

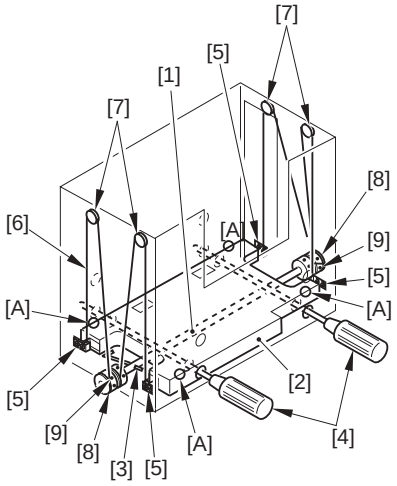
10) Put back the right cover and the paper previously removed.

4.2.1.4 Stringing the lifter Wires 0003-8540

1) Check to make sure that the lifter drive shaft [1] and the lifter [2] are fixed in place using a hex wrench [3] and 2 long screwdrivers [4], respectively.
2) Fix the 4 cable fixing plates [5] in place to the lifter using 2 screws each.
3) Hook the lifer cable [6] on the 4 pulleys [7] above.
4) Hook the ball of the lifter cable on the 2 front/rear pulleys [8] of the lifter drive shaft; then, wind it about 1.5 times along the groove of the pulley.

At this time, be sure to keep the lifter cable taut so that the long drivers used to keep the lifter are slightly lifted by the cable.

5) Fix the 2 pulleys [5] in place to the lifter drive shaft with a set screw [9] (1 pc. each).
6) Fit all removed pulleys to the lifter shaft; then, measure the height A from the base plate of the compartment to the top face of the lifter, thus making sure that the lifter is level.



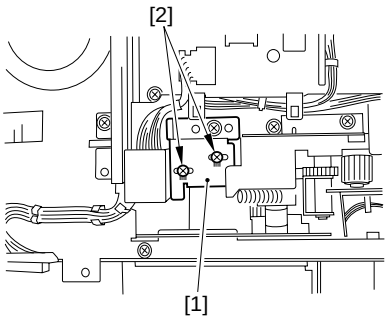
F-4-5

4.2.2 Adjustment at Time of Parts Replacement

4.2.2.1 Adjusting the Position of the Deck Pickup Roller Release Solenoid (SL101) 0003-8542

Before detaching the deck pickup roller release solenoid [1] from the support plate, take note of the position of the 2 fixing screws [2] with reference to the index on the support plate (or, mark the position on the support plate using a scriber).

When mounting the solenoid on its own, be sure that it is mounted back to where the previous solenoid was before removal.



F-4-6

4.3 Outline of Electrical Components

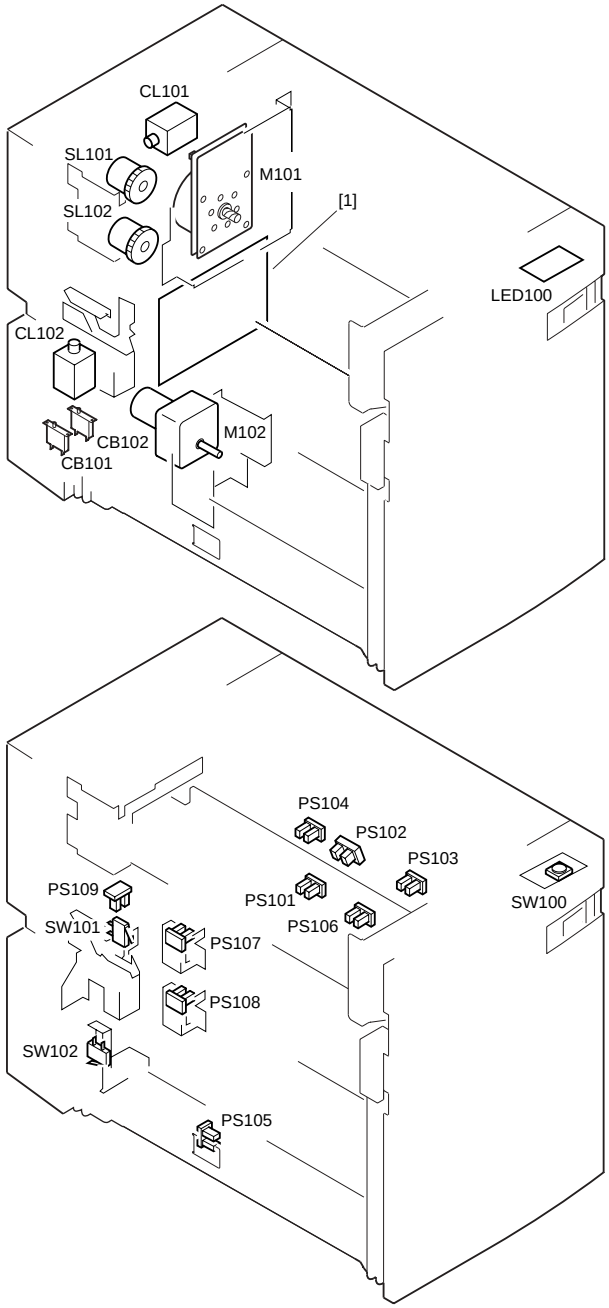
4.3.1 Sensor-Motor-Clutch -Solenoid-PCB-Others

0006-4203

T-4-2

Notation	Name	Description		
	Parts No.	PART-CHK	E code	Connector No.
M101	Deck main motor			
	FK2-0118	MTR>35	E043	J105
M102	Deck lifter motor			
	FH7-1791			J107
CL101	Deck feed clutch			
	FK2-0261	CL>8		J104
CL102	Deck pickup clutch			
	DK2-0261	CL>9		J104
SL101	Deck pickup roller release solenoid			
	FK2-0126	SL>14		J104
SL102	Deck open solenoid			
	FK2-0127	SL>15		J108
SW101	Deck open detecting switch			
	WC4-5153			J109
SW102	Deck lifter lower limit detecting switch			
	WC4-0153			J107
SW100	Deck open switch			
	FB3-9711			
LED100	Deck open indication			
	FM2-0856			J103
PS101	Deck feed sensor			
	FH7-7312			J104
PS102	Deck paper sensor			
	FH7-7312			J103

PS103	Deck lifter upper limit sensor			
	FH7-7312			J103
PS104	Deck lifter position sensor			
	FH7-7312			J103
PS105	Deck placement sensor			
	FH7-7312			J108
PS106	Deck pickup sensor			
	FH7-7312			J104
PS107	Deck paper level sensor			
	FH7-7312			J107
PS108	Deck paper supply position sensor			
	FH7-7312			J107
PS109	Deck open sensor			
	FH7-7312			J108
CB101	Circuit breaker 1 (100V)			
	VD7-0502-001			
CB102	Circuit breaker 2 (200V)			
	WD3-5057			
[1]	Deck driver PCB			
	FM2-0838			


CL101
SL101
M101
SL102
[1]
LED100
CL102
CB102
M102
CB101
PS104
PS102
PS103
PS109
PS101
SW100
SW101
PS106
PS107
PS108
SW102
PS105

F-4-7

Chapter 5 Service Mode

Contents

5.1 Outline

5.1.1 Alarm Code

0003-8543

An alarm code will be issued when the deck detects a specific condition, and such a code may be checked in service mode: COPIER>DISPLAY>ALARM2.

T-5-1

Sensor	Description	Code
PS6D	the pickup signal is not detected.	40018
PS4D	the deck lifter ascent signal is not detected.	40008

Chapter 6 Error Code

Contents

6.1 Overview

6.1.1 Error Code

0003-8544

There is no error code that is unique to the paper deck, and all its error codes comply with those of its host machine.

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Canon