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***STDF-3***

# CONTENTS

<b>1-1 Specifications</b>	
1-1-1 Specifications .....	1-1-1
1-1-2 Part names and their functions .....	1-1-2
1-1-3 Machine cross section .....	1-1-3
1-1-4 Drive system .....	1-1-4
<b>1-2 Installation</b>	
1-2-1 Unpacking .....	1-2-1
<b>1-3 Troubleshooting</b>	
1-3-1 Original misfeed detection .....	1-3-1
(1) Original misfeed indication .....	1-3-1
(2) Original misfeed detection condition .....	1-3-2
(3) Original misfeeds .....	1-3-3
(1) An original jams when the main switch is turned on. ....	1-3-3
(2) An original jams during continuous copying of multiple originals. ....	1-3-3
(3) An original jams in the DF during copying (no original feed). ....	1-3-3
(4) An original jams in the DF during copying (an original jam in the original feed and conveying sections). ....	1-3-3
(5) Original jams frequently. ....	1-3-3
1-3-2 Image formation problems .....	1-3-4
(1) There is a regular error between the centers of the original and copy image when the DF is used. ....	1-3-5
(2) There is a regular error between the leading edges of the original and copy image when the DF is used. ....	1-3-5
1-3-3 Electrical problems .....	1-3-6
(1) The original feed motor does not operate. ....	1-3-6
(2) The original conveying motor does not operate. ....	1-3-6
(3) The copier scans the contact glass when originals are loaded on the DF. ....	1-3-6
(4) An original jams when the main switch is turned on. ....	1-3-6
1-3-4 Mechanical problems .....	1-3-7
(1) No primary original feed. ....	1-3-7
(2) No secondary original feed. ....	1-3-7
(3) Originals jam. ....	1-3-7
<b>1-4 Assembly and Disassembly</b>	
1-4-1 Precautions for assembly and disassembly .....	1-4-1
(1) Precautions .....	1-4-1
1-4-2 Procedure for assembly and disassembly .....	1-4-2
(1) Detaching and refitting the DF forwarding pulley and DF original feed pulley .....	1-4-2
(2) Detaching and refitting the DF separation pulley .....	1-4-3
(3) Adjusting the lateral squareness of the DF .....	1-4-4
(4) Adjusting the DF magnification .....	1-4-5
(5) Adjusting the DF center line .....	1-4-7
(6) Adjusting the scanning start position when the DF is used .....	1-4-9
(6-1) Adjusting the DF leading edge registration .....	1-4-9
(6-2) Adjusting the DF trailing edge registration .....	1-4-11
(7) Adjusting the margins for scanning the original from the DF .....	1-4-13
<b>2-1 Mechanical construction</b>	
2-1-1 Mechanical construction .....	2-1-1
(1) Original feed mechanism .....	2-1-1
(2) Original feed timing .....	2-1-3
<b>2-2 Electrical Parts Layout</b>	
2-2-2 Electrical parts layout .....	2-2-1

**2-3 Operation of the PCBs**

2-3-1 DF driver PCB .....	2-3-1
2-3-2 Original size detection PCB .....	2-3-4

**2-4 Appendixes**

Timing chart No. 1 .....	2-4-1
Timing chart No. 2 .....	2-4-2
Periodic maintenance procedures .....	2-4-3
Wiring diagram .....	2-4-4

## 1-1-1 Specifications

Original feed system .....	Automatic feed
Originals .....	Sheets
Original weights .....	35 – 160 g/m <sup>2</sup>
Original sizes .....	A3 – A5R, folio/11" × 17" – 5 <sup>1</sup> / <sub>2</sub> " × 8 <sup>1</sup> / <sub>2</sub> "
Number of originals .....	Up to 70 sheets (A4 or smaller paper of 80 g/m <sup>2</sup> , or 11" × 8 <sup>1</sup> / <sub>2</sub> " or smaller paper of 75 g/m <sup>2</sup> ) Up to 50 sheets (B4, folio or larger paper of 80 g/m <sup>2</sup> , or 8 <sup>1</sup> / <sub>2</sub> " × 14" or larger paper of 75 g/m <sup>2</sup> ) Up to 30 sheets in the auto selection mode Thermal and art paper must be fed individually.
Power source .....	Electrically connected to the copier
Machine dimensions .....	553 (W) × 478 (D) × 121 (H) mm 21 <sup>3</sup> / <sub>4</sub> " (W) × 18 <sup>13</sup> / <sub>16</sub> " (D) × 4 <sup>3</sup> / <sub>4</sub> " (H)
Weight .....	Approx. 6.9 kg/15.18 lbs

## 1-1-2 Part names and their functions

1-1

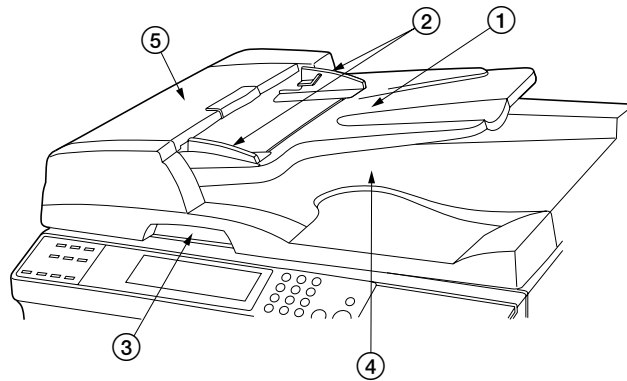


Figure 1-1-1

- ① Original table
- ② Original insertion guides
- ③ DF open/close handle
- ④ Original eject cover
- ⑤ DF original cover

1-1-3 Machine cross section

1-1

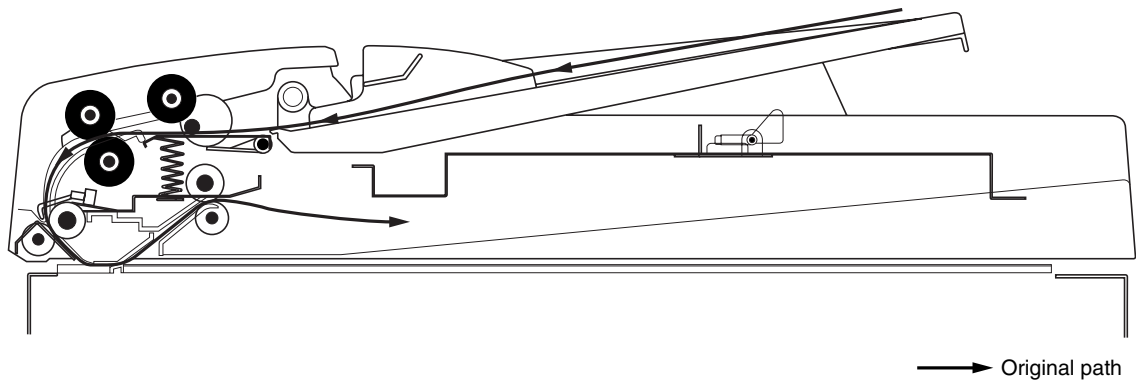


Figure 1-1-2 Machine cross section

1-1-4 Drive system

1-1

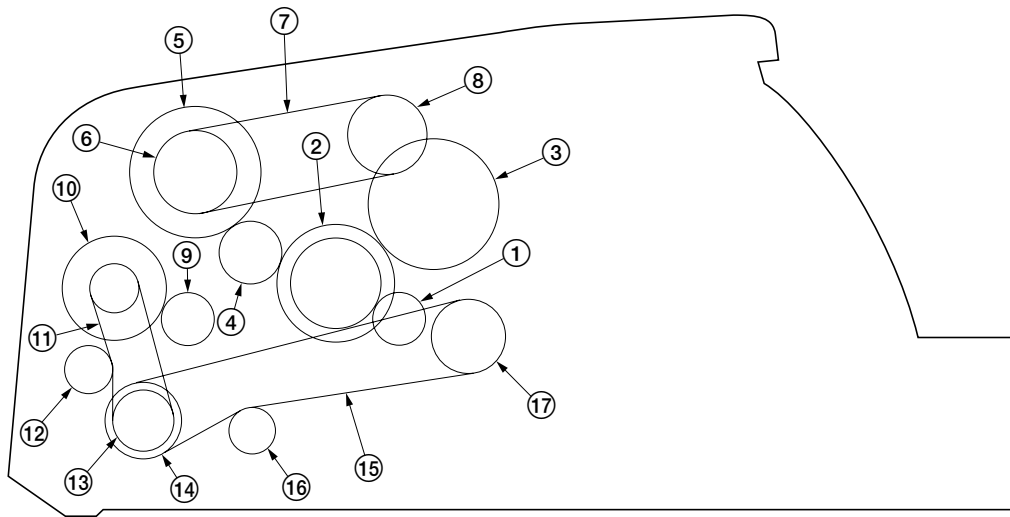


Figure 1-1-3

- ① Original feed motor gear
- ② Gear 42/29
- ③ Lift gear 38
- ④ Idle gear 20
- ⑤ Original feed gear 30
- ⑥ Original feed pulley
- ⑦ Forwarding belt
- ⑧ Forwarding pulley 20
- ⑨ Original conveying motor gear
- ⑩ Idle gear Z45/B16
- ⑪ Original conveying belt 92
- ⑫ Tension pulley
- ⑬ Registration pulley 19
- ⑭ Original conveying pulley 24
- ⑮ Original conveying belt 190
- ⑯ Tension pulley
- ⑰ Original conveying pulley 24

## 1-2-1 Unpacking

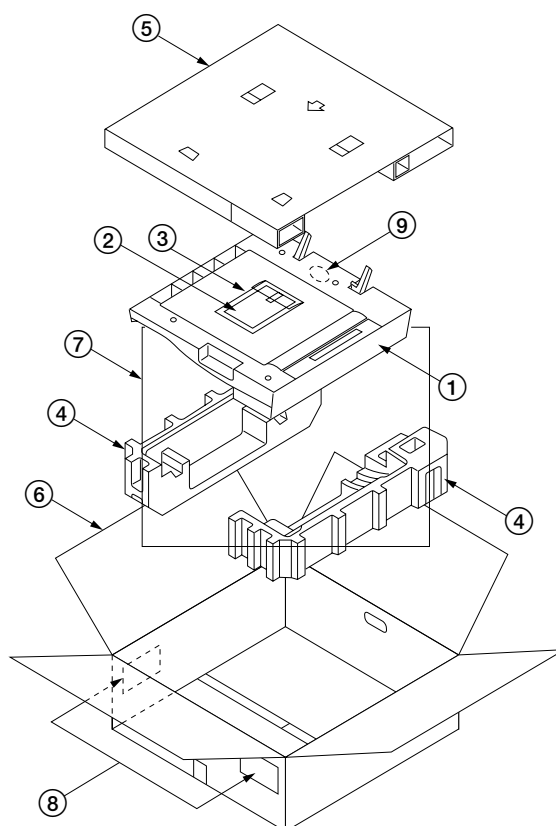


Figure 1-2-1 Unpacking

- ① Sheet through DF
- ② Installation manual
- ③ Plastic bag
- ④ Bottom pads
- ⑤ Upper pad
- ⑥ Outer case
- ⑦ Plastic sheet
- ⑧ Bar-code labels
- ⑨ Plastic bag



## 1-3-1 Original misfeed detection

### (1) Original misfeed indication

When an original jams, the machine immediately stops operation and the occurrence of an original jam is indicated on the copier operation panel.

To remove the jammed original, open the DF or the DF original cover.

To reset the original misfeed detection, open and close the DF or the DF original cover to turn DF safety switch 1 or 2 off and on.

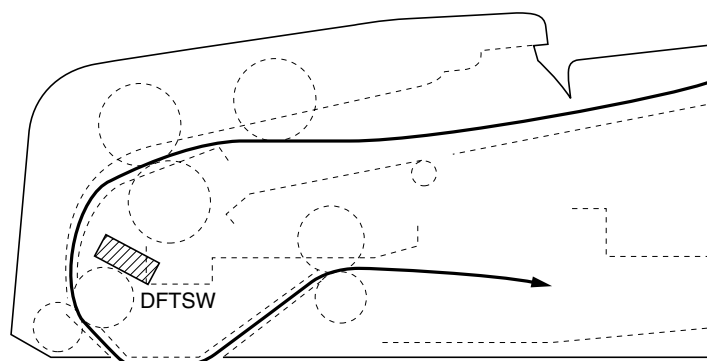
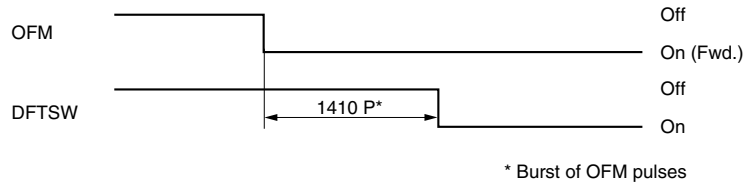


Figure 1-3-1 Original misfeed detection

**(2) Original misfeed detection condition**

- No original feed (jam code 70)

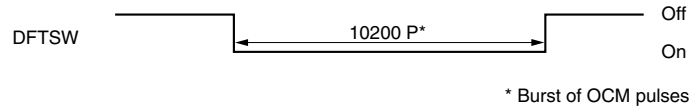
During the primary feed of the second or later original, the DF timing switch (DFTSW) does not turn on within 1410 original feed motor (OFM) pulses of the start of forward rotation of the original feed motor (OFM). After up to five retries, the DF timing switch (DFTSW) still fails to turn on.



**Timing chart 1-3-1**

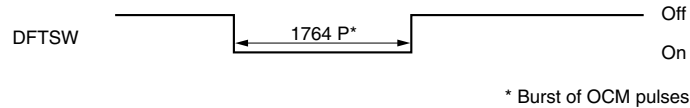
- An original jam in the original feed and conveying sections (jam code 73)

During the secondary original feed, the DF timing switch (DFTSW) does not turn off within 10200 original conveying motor (OCM) pulses of the DF timing switch (DFTSW) turning on.



**Timing chart 1-3-2**

During the secondary original feed, the DF timing switch (DFTSW) turns off within 1764 original conveying motor (OCM) pulses of the DF timing switch (DFTSW) turning on.



**Timing chart 1-3-3**

1-3

**(3) Original misfeeds**

<b>Problem</b>	<b>Causes</b>	<b>Check procedures/corrective measures</b>
(1) An original jams when the main switch is turned on.	A piece of paper torn from an original is caught around the actuator of the original size detection PCB.	Remove any found.
	Defective original size detection PCB.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-3 on the DF driver PCB remains low when the actuator on the machine front side of the original size detection PCB is turned on and off. If it does, replace the original size detection PCB.
	A piece of paper torn from an original is caught around the DF timing switch.	Remove any found.
	Defective DF timing switch.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-1 on the DF driver PCB remains low when the DF timing switch is turned on and off. If it does, replace the DF timing switch.
(2) An original jams during continuous copying of multiple originals.	Defective original size detection PCB.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-3 on the DF driver PCB remains low when the actuator on the machine front side of the original size detection PCB is turned on and off. If it does, replace the original size detection PCB.
	Check if the original feed motor or original conveying motor is malfunctioning.	Check and remedy.
(3) An original jams in the DF during copying (no original feed).	Defective DF timing switch.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-1 on the DF driver PCB remains high when the DF timing switch is turned on and off. If it does, replace the DF timing switch.
	Check if the original feed motor is malfunctioning.	Check and remedy.
	Check if the DF forwarding pulley, DF original feed pulley or DF separation pulley is deformed.	Check visually and replace the pulley if deformed (see pages 1-4-2 and 3).
(4) An original jams in the DF during copying (an original jam in the original feed and conveying sections).	Defective DF timing switch.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-1 on the DF driver PCB remains high or low when the DF timing switch is turned on and off. If it does, replace the DF timing switch.
	Check if the DF forwarding pulley, DF original feed pulley or DF separation pulley is deformed.	Check visually and replace the pulley if deformed (see pages 1-4-2 and 3).
	Check if the upper or lower DF registration roller is deformed.	Check visually and replace the roller if deformed.
(5) Original jams frequently.	An original outside the specifications is used.	Use only originals conforming to the specifications.
	The DF forwarding pulley, DF original feed pulley or DF separation pulley is soiled with paper powder.	Clean with isopropyl alcohol.
	The DF original feed pulley and DF separation pulley do not contact correctly.	Remedy.

### 1-3-2 Image formation problems

(1) There is a regular error between the centers of the original and copy image when the DF is used.



See page 1-3-5.

(2) There is a regular error between the leading edges of the original and copy image when the DF is used.



See page 1-3-5.

1-3

(1) There is a regular error between the centers of the original and copy image when the DF is used.

**Causes**

- 1. Misadjusted DF center line.

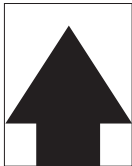


Causes	Check procedures/corrective measures
1. Misadjusted DF center line.	Readjust the DF center line (see page 1-4-7).

(2) There is a regular error between the leading edges of the original and copy image when the DF is used.

**Causes**

- 1. Misadjusted DF original scanning start position.



Causes	Check procedures/corrective measures
1. Misadjusted DF original scanning start position.	Readjust the DF original scanning start position (see page 1-4-9).

### 1-3-3 Electrical problems

Problem	Causes	Check procedures/corrective measures
(1) The original feed motor does not operate.	Broken original feed motor coil.	Check for continuity across the coil. If none, replace the original feed motor.
	The connector terminals of the original feed motor make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	Defective DF driver PCB.	Check for continuity across the coil and connector terminals of the original feed motor. If present, replace the DF driver PCB.
(2) The original conveying motor does not operate.	Broken original conveying motor coil.	Check for continuity across the coil. If none, replace the original conveying motor.
	The connector terminals of the original conveying motor make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	Defective DF driver PCB.	Check for continuity across the coil and connector terminals of the original conveying motor. If present, replace the DF driver PCB.
(3) The copier scans the contact glass when originals are loaded on the DF.	The connector terminals of DF safety switch 1 make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	Defective DF safety switch 1.	Check for continuity across the contacts of DF safety switch 1. If none when the switch is on, replace DF safety switch 1.
	Defective original size detection PCB.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-3 on the DF driver PCB remains high when the actuator on the machine front side of the original size detection PCB is turned on and off. If it does, replace the original size detection PCB.
(4) An original jams when the main switch is turned on.	A piece of paper torn from an original is caught around the actuator of the original size detection PCB.	Remove any found.
	Defective original size detection PCB.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-3 on the DF driver PCB remains low when the actuator on the machine front side of the original size detection PCB is turned on and off. If it does, replace the original size detection PCB.
	A piece of paper torn from an original is caught around the DF timing switch.	Remove any found.
	Defective DF timing switch.	With 5 V DC present at CN5-8 on the DF driver PCB, check if CN5-1 on the DF driver PCB remains low when the DF timing switch is turned on and off. If it does, replace the DF timing switch.

## 1-3-4 Mechanical problems

Problem	Causes/check procedures	Corrective measures
(1) No primary original feed.	The surfaces of the DF forwarding pulley, DF original feed pulley or DF separation pulley are soiled with paper powder.	Check and clean them with isopropyl alcohol if they are soiled.
	Check if the DF forwarding pulley, DF original feed pulley or DF separation pulley is deformed.	Check visually and replace the deformed pulley (see pages 1-4-2 and 3).
	Electrical problem with the original feed motor.	See page 1-3-6.
(2) No secondary original feed.	The upper and lower DF registration rollers do not contact each other correctly.	Remedy.
	Electrical problem with the original conveying motor.	See page 1-3-6.
(3) Originals jam.	Originals outside the specifications are used.	Use only originals conforming to the specifications.
	The surfaces of the DF forwarding pulley, DF original feed pulley or DF separation pulley are soiled with paper powder.	Check and clean them with isopropyl alcohol if they are soiled.
	The DF original feed pulley and DF separation pulley, or the upper and lower DF eject roller do not contact each other correctly.	Remedy.

## 1-4-1 Precautions for assembly and disassembly

### (1) Precautions

- Be sure to turn the main switch off and disconnect the power plug before starting disassembly.
- When handling PCBs, do not touch connectors with bare hands or damage the board.
- Do not touch any PCB containing ICs with bare hands or any object prone to static charge.
- Use the following testers when measuring voltages:

Hioki 3200

Sanwa MD-180C

Sanwa YX-360TR

Beckman TECH300

Beckman DM45

Beckman 330\*

Beckman 3030\*

Beckman DM850\*

Fluke 8060A\*

Arlec DMM1050

Arlec YF1030C

\* Capable of measuring RMS values.

- Prepare the following as test originals:
  1. NTC (new test chart)
  2. NPTC (newspaper test chart)



## 1-4-2 Procedure for assembly and disassembly

### (1) Detaching and refitting the DF forwarding pulley and DF original feed pulley

Clean or replace the DF forwarding pulley and DF original feed pulley as follows.

#### Procedure

1. Open the DF original cover.
2. Remove the original feed pulley guide.

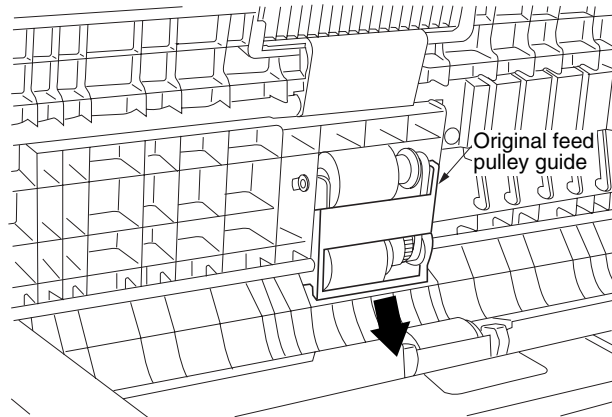


Figure 1-4-1

- Detaching the DF forwarding pulley
  3. Remove the stop ring at the machine front.
  4. Pull the forwarding shaft out and remove the DF forwarding pulley.

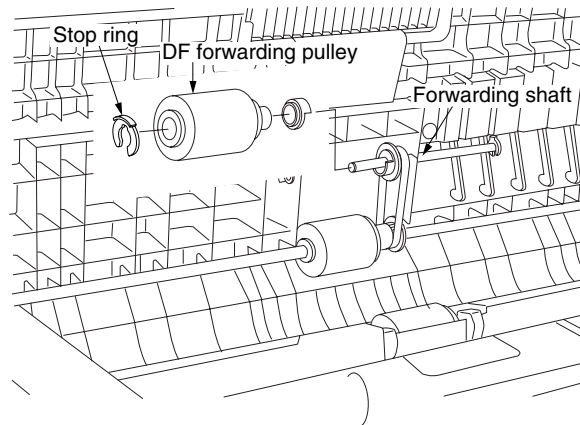


Figure 1-4-2

- Detaching the DF original feed pulley
  5. Remove the stop ring at the machine front and remove the bushing.
  6. Pull the original feed shaft toward the machine rear and shift the rear bushing toward the machine rear.
  7. Remove the DF original feed pulley.
  8. Clean or replace the DF forwarding pulley and DF original feed pulley.
  9. Refit all the removed parts.

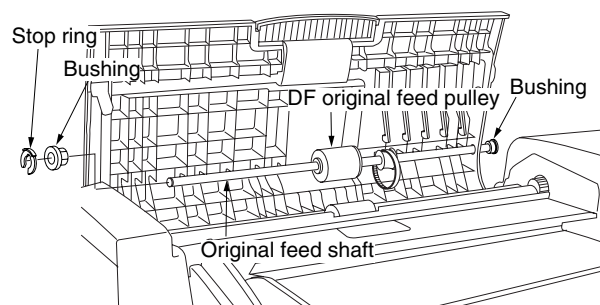


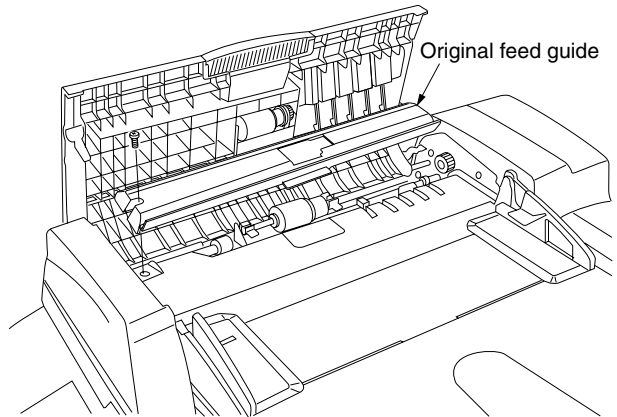
Figure 1-4-3

**(2) Detaching and refitting the DF separation pulley**

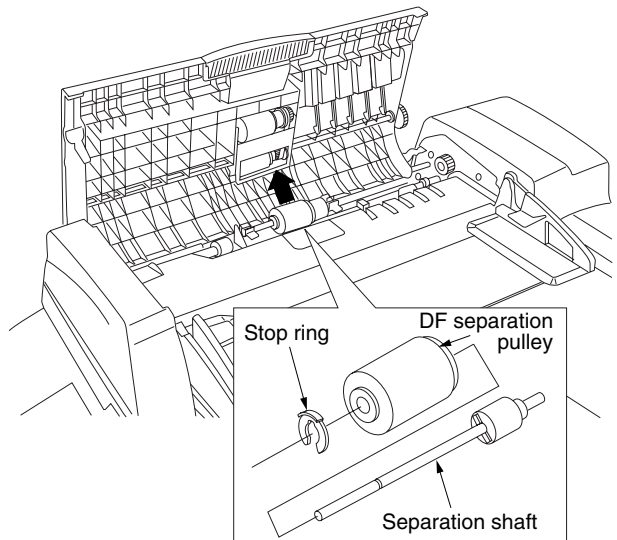
Clean or replace the DF separation pulley as follows.

**Procedure**

1. Open the DF original cover.
2. Remove the screw securing the original feed guide and then the guide.

**Figure 1-4-4**

3. Remove the stop ring, pull the separation shaft out and remove the DF separation pulley.
4. Clean or replace the DF separation pulley.
5. Refit all the removed parts.

**Figure 1-4-5**

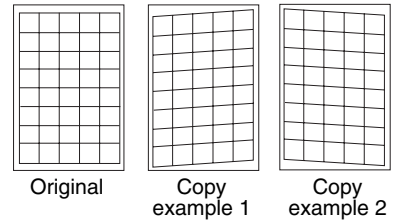
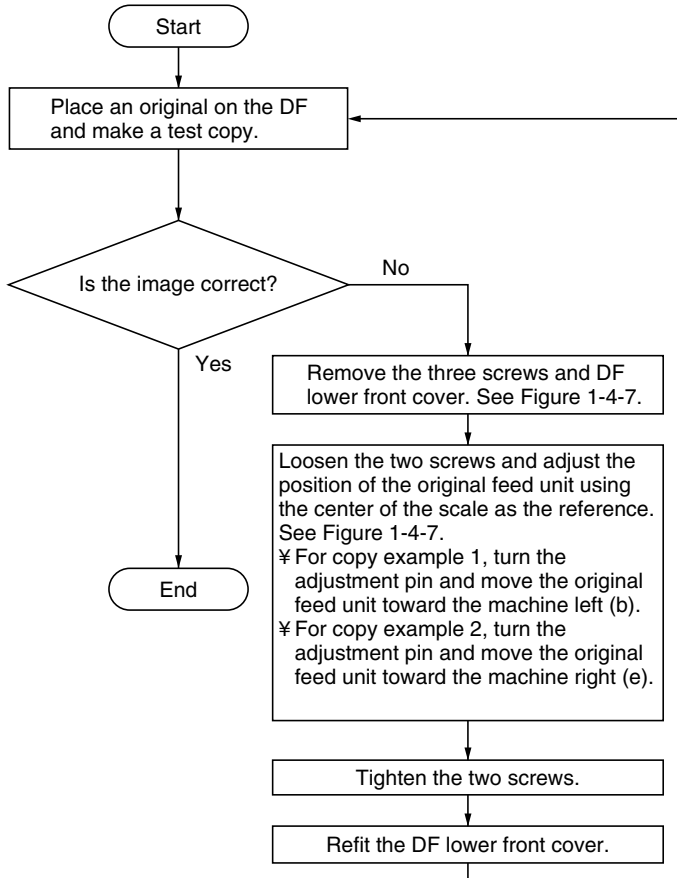
**(3) Adjusting the lateral squareness of the DF**

Perform the following adjustment if the leading edge or trailing edge of the copy image is laterally skewed (lateral squareness not obtained).

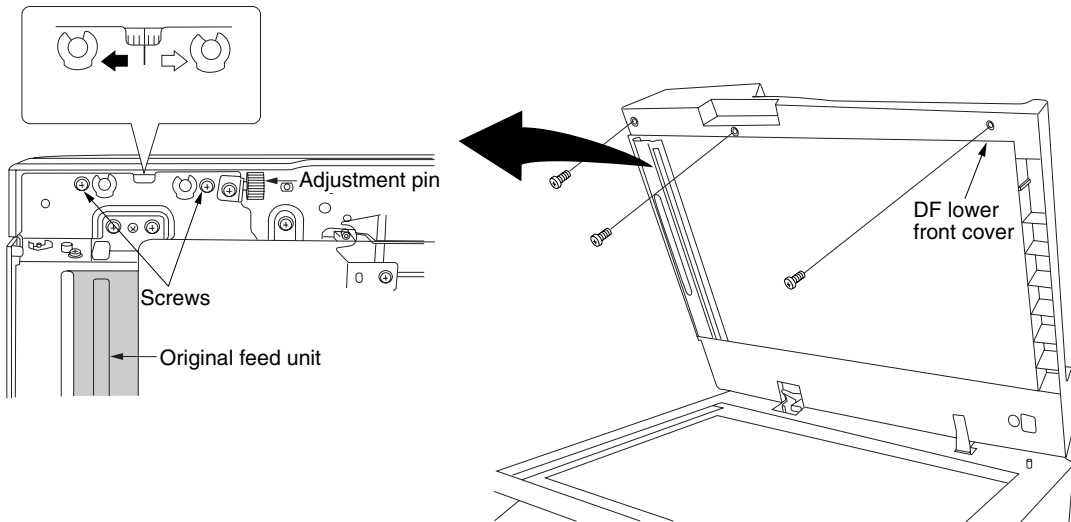
**Caution:**

Before adjusting the lateral squareness of the DF, adjust the amount of slack in the paper at the registration roller and scanner image lateral squareness at the copier first and check the lateral squareness of the copy image by copying using the DF. If squareness is still not obtained, perform the following adjustment.

**Procedure**



**Figure 1-4-6**

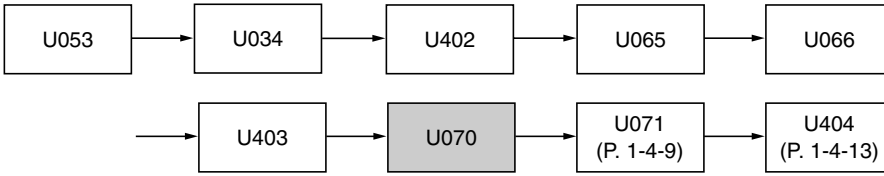


**Figure 1-4-7**

1-4

**(4) Adjusting the DF magnification**

Adjust magnification in the auxiliary scanning direction if magnification is incorrect when the DF is used.



**Caution:**

Before making the following adjustment, ensure that the above adjustments have been made in maintenance mode.

**Procedure**

- 20 cpm copier

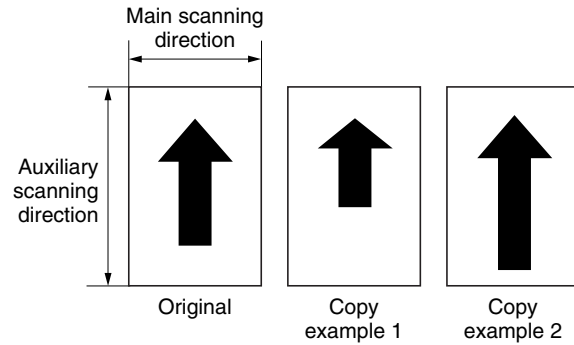
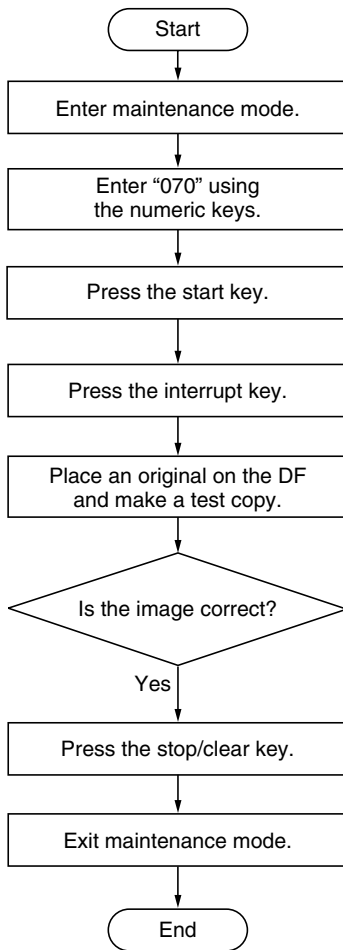


Figure 1-4-8

Setting range: -25 to +25  
 Changing the value by 1 changes the magnification by 0.1%.  
 Reference: 0

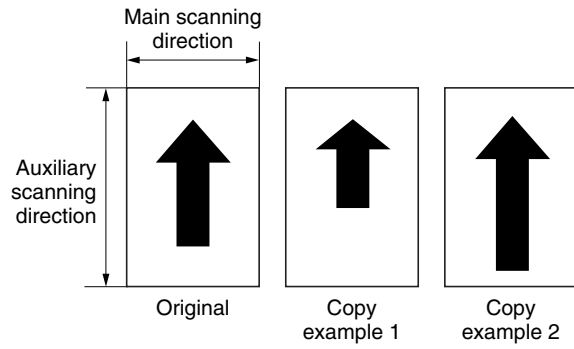
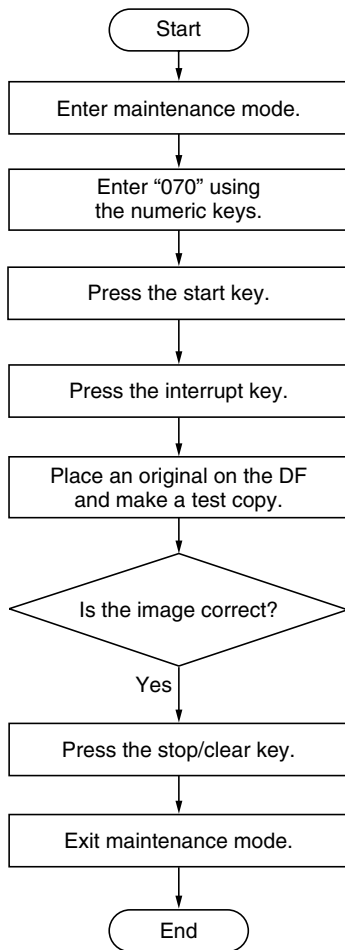


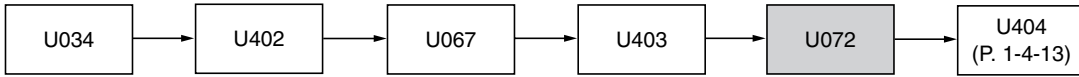
Figure 1-4-9

1-4

Setting range: -25 to +25  
 Changing the value by 1 changes the magnification by 0.1%.  
 Reference: 0

**(5) Adjusting the DF center line**

Perform the following adjustment if there is a regular error between the centers of the original and the copy image when the DF is used.



**Caution:**

Before making the following adjustment, ensure that the above adjustments have been made in maintenance mode.

**Procedure**

- 20 cpm copier

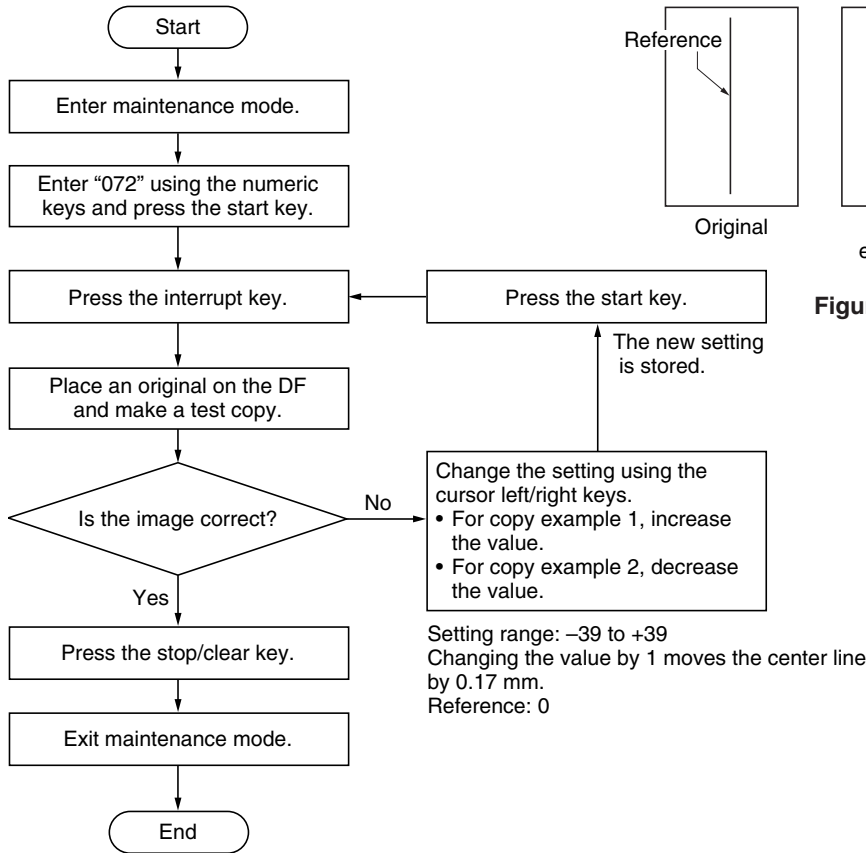


Figure 1-4-10

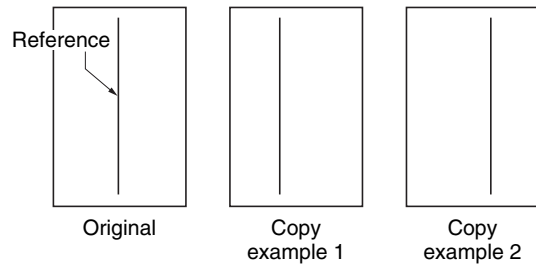
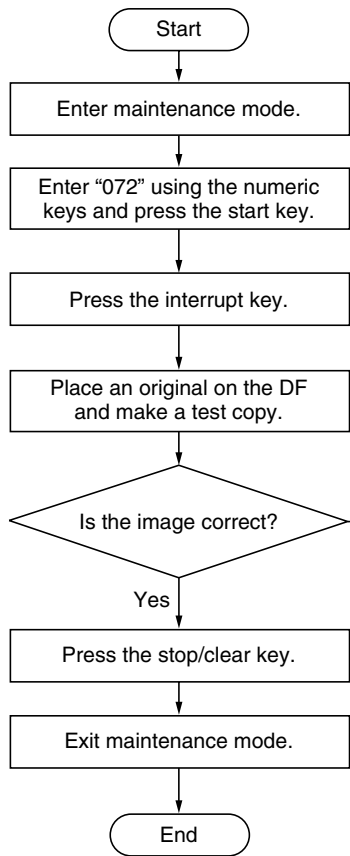


Figure 1-4-11

Change the setting using the zoom +/- keys.

- For copy example 1, increase the value.
- For copy example 2, decrease the value.

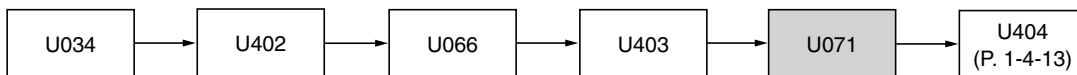
Setting range: -39 to +39  
Changing the value by 1 moves the center line by 0.17 mm.  
Reference: 0

The new setting is stored.

1-4

**(6) Adjusting the scanning start position when the DF is used**

Perform the following adjustment if there is a regular error between the leading or trailing edges of the original and the copy image.



**Caution:**

Before making the following adjustment, ensure that the above adjustments have been made in maintenance mode.

**(6-1) Adjusting the DF leading edge registration**

**Procedure**

- 20 cpm copier

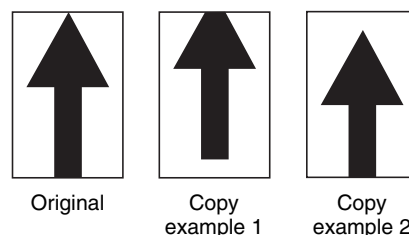
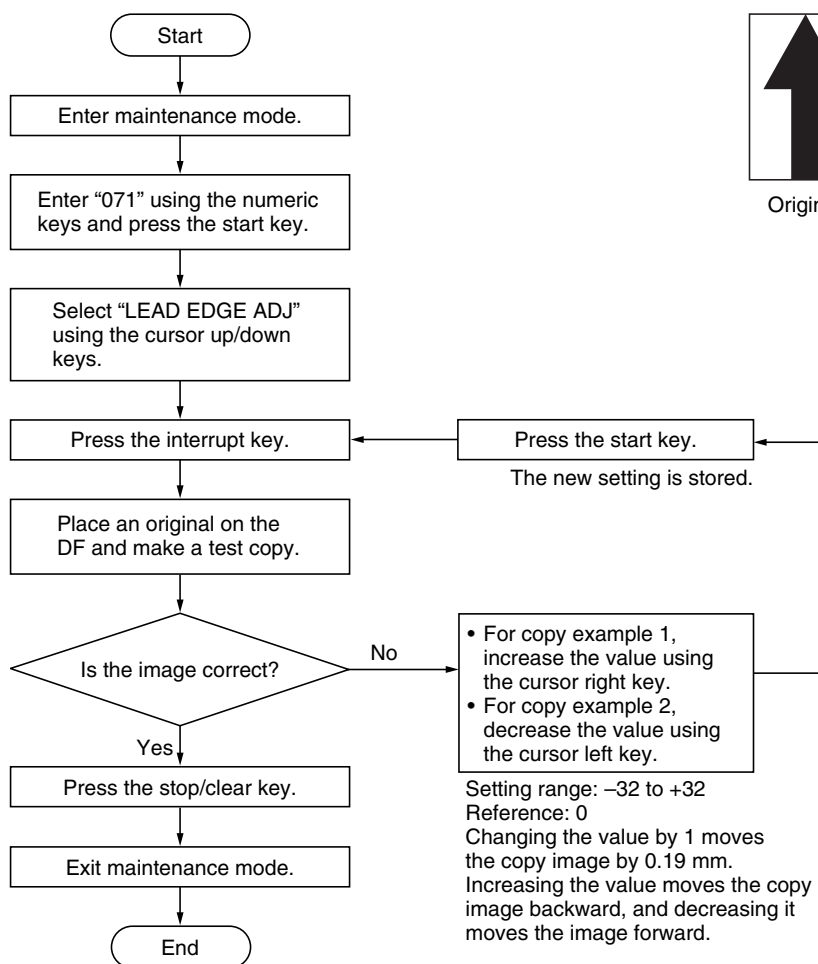


Figure 1-4-12



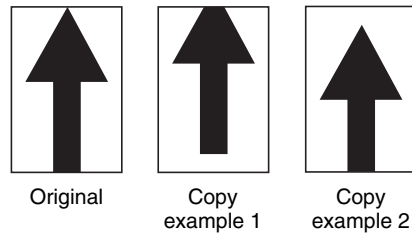
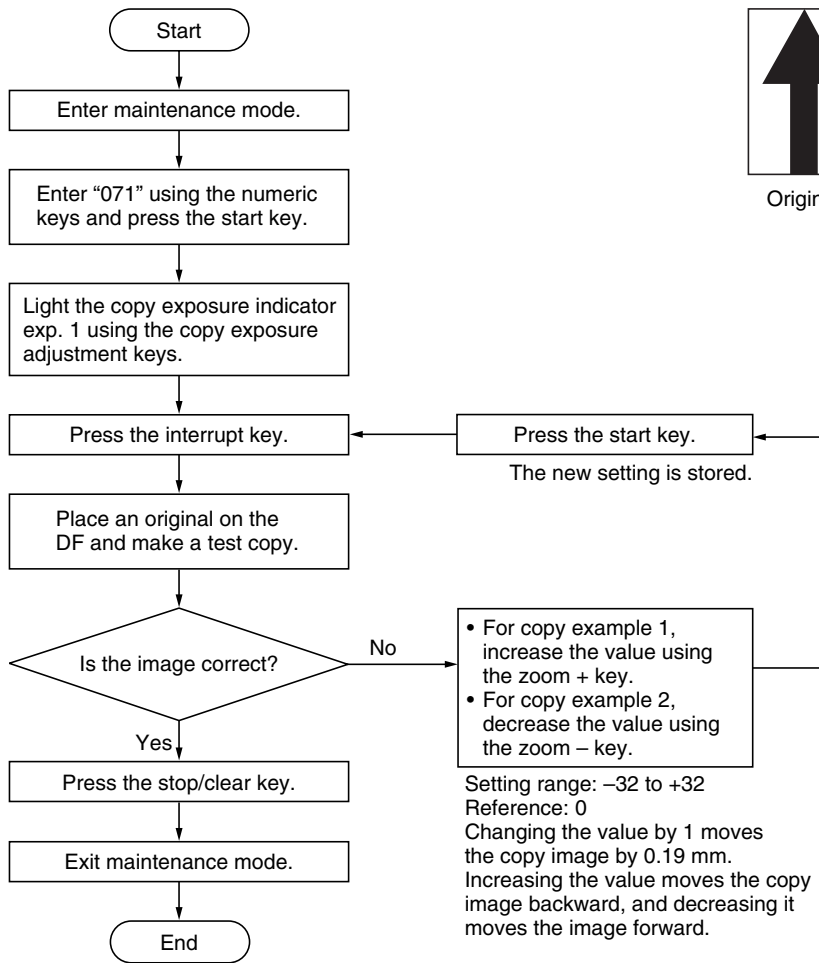


Figure 1-4-13

1-4

• For copy example 1, increase the value using the zoom + key.  
• For copy example 2, decrease the value using the zoom - key.

Setting range: -32 to +32  
Reference: 0  
Changing the value by 1 moves the copy image by 0.19 mm.  
Increasing the value moves the copy image backward, and decreasing it moves the image forward.

**(6-2) Adjusting the DF trailing edge registration**

Perform the following adjustment if the original scanning end position is not correct.

**Caution:**

If the copies look like copy example 2, clean the DF original scanning section.

**Procedure**

- 20 cpm copier

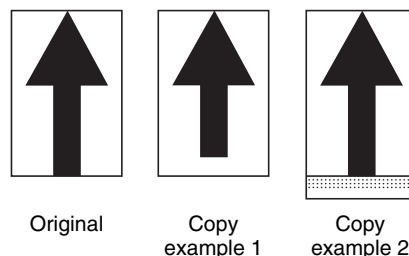
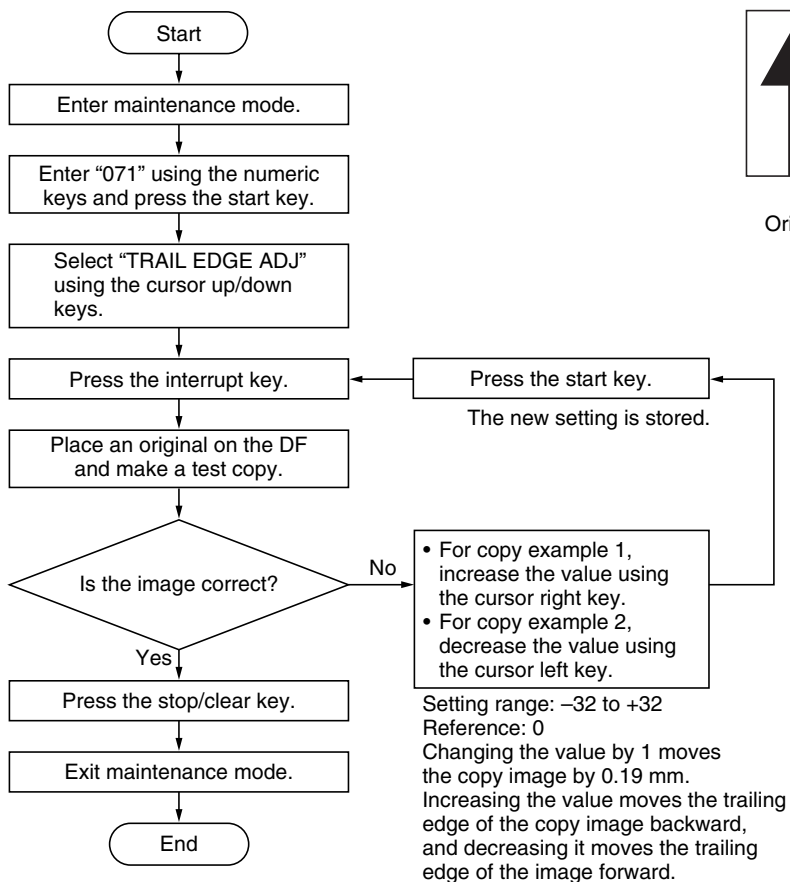


Figure 1-4-14

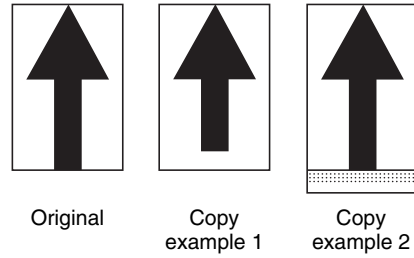
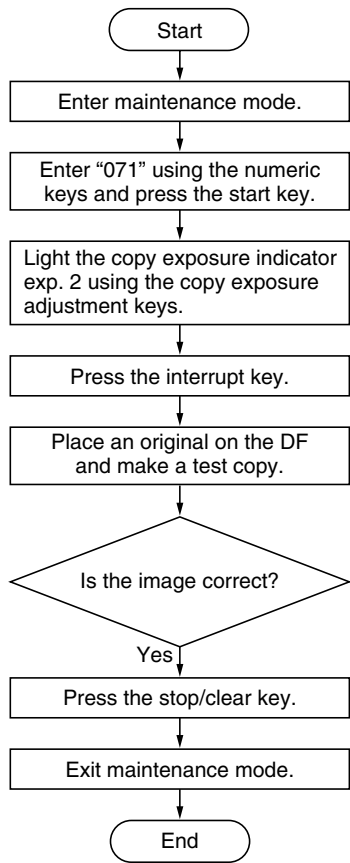


Figure 1-4-15

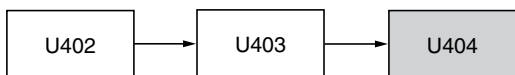
- For copy example 1, increase the value using the zoom + key.
- For copy example 2, decrease the value using the zoom - key.

Setting range: -32 to +32  
 Reference: 0  
 Changing the value by 1 moves the copy image by 0.19 mm.  
 Increasing the value moves the trailing edge of the copy image backward, and decreasing it moves the trailing edge of the image forward.

1-4

**(7) Adjusting the margins for scanning the original from the DF**

Perform the following adjustment if margins are not correct.



**Caution:**

Before making the following adjustment, ensure that the above adjustments have been made in maintenance mode.

**Procedure**

• 20 cpm copier

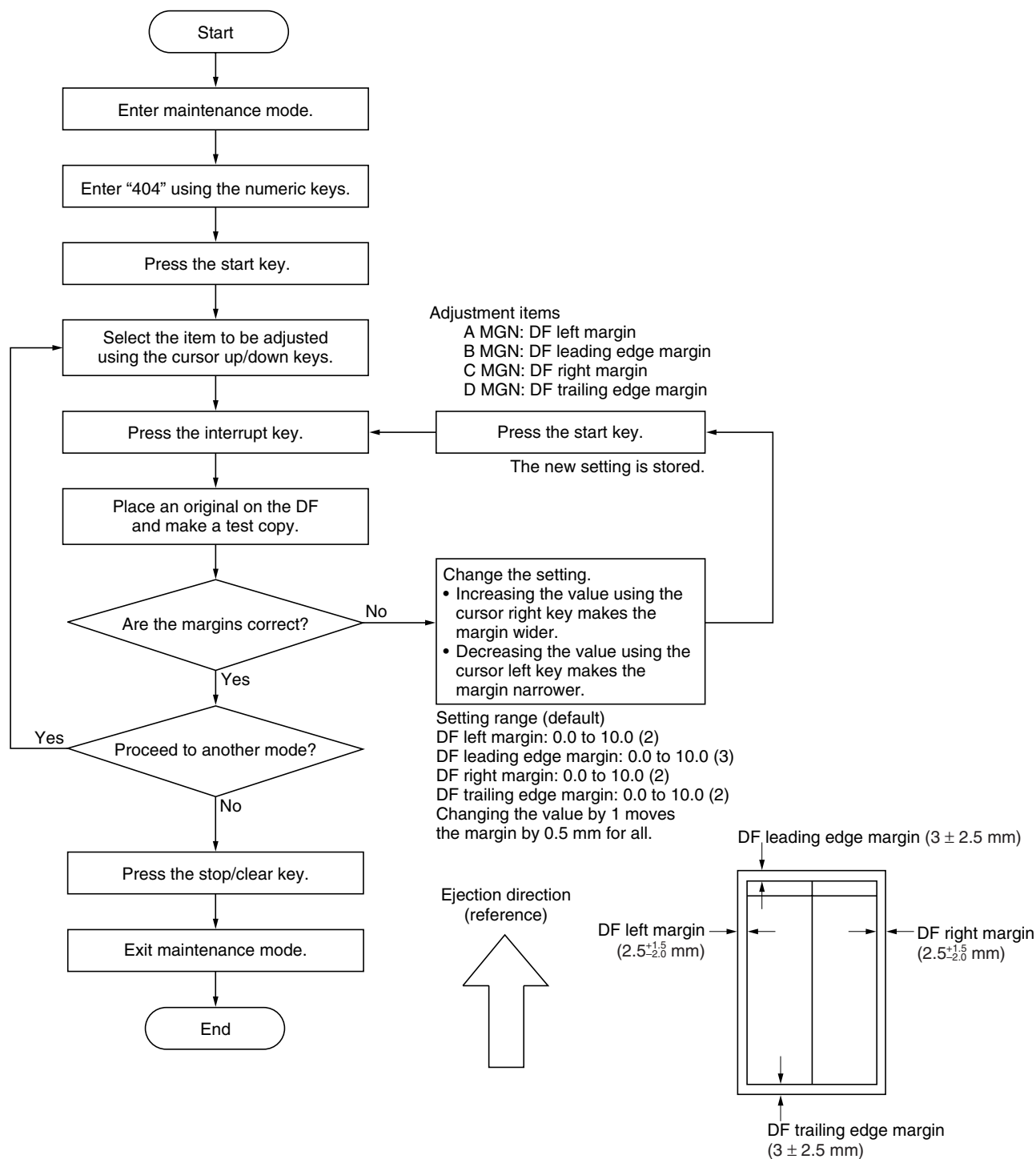


Figure 1-4-16

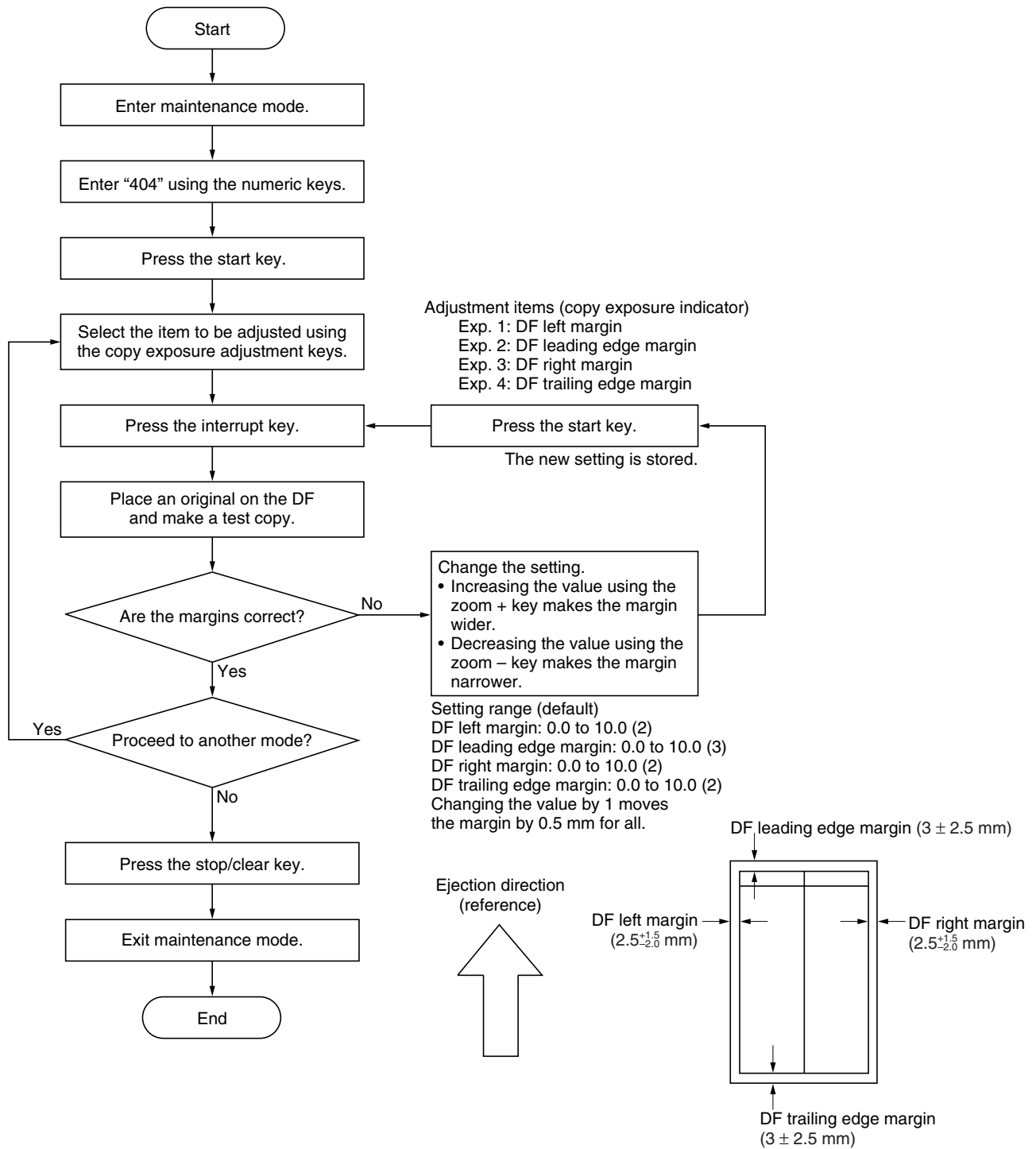


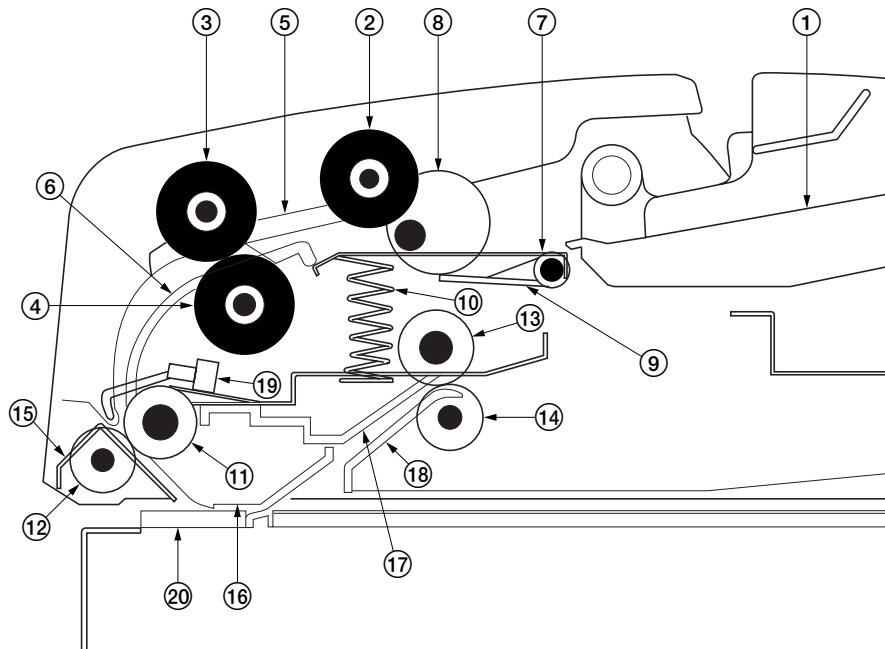
Figure 1-4-17

**2-1-1 Mechanical construction**

**(1) Original feed mechanism**

The DF consists of the components shown in Figure 2-1-1. It conveys the original across the DF contact glass in synchronization with the copier scanning operation.

During primary original feed, the original feed motor (OFM) turns on and the lift cam starts rotating, moving the lift guide up until the originals make contact with the DF forwarding pulley. The DF forwarding pulley feeds the originals one by one and the DF original feed pulley conveys the original further into the DF. During secondary original feed, the original conveying motor (OCM) turns on and the DF upper registration roller and DF lower registration roller convey the original onto the DF contact glass. The DF upper eject roller and DF lower eject roller then eject the original to the original eject cover.



**Figure 2-1-1 Original feed mechanism**

- |                              |                                |
|------------------------------|--------------------------------|
| ① Original table             | ⑪ DF upper registration roller |
| ② DF forwarding pulley       | ⑫ DF lower registration roller |
| ③ DF original feed pulley    | ⑬ DF upper eject roller        |
| ④ DF separation pulley       | ⑭ DF lower eject roller        |
| ⑤ Original feed pulley guide | ⑮ Original conveying guide     |
| ⑥ Original feed guide        | ⑯ Scanning guide               |
| ⑦ Lift guide                 | ⑰ Upper eject guide            |
| ⑧ Lift cam                   | ⑱ Lower eject guide            |
| ⑨ Lift lever                 | ⑲ DF timing switch (DFTSW)     |
| ⑩ Lift spring                | ⑳ DF contact glass (copier)    |

2-1

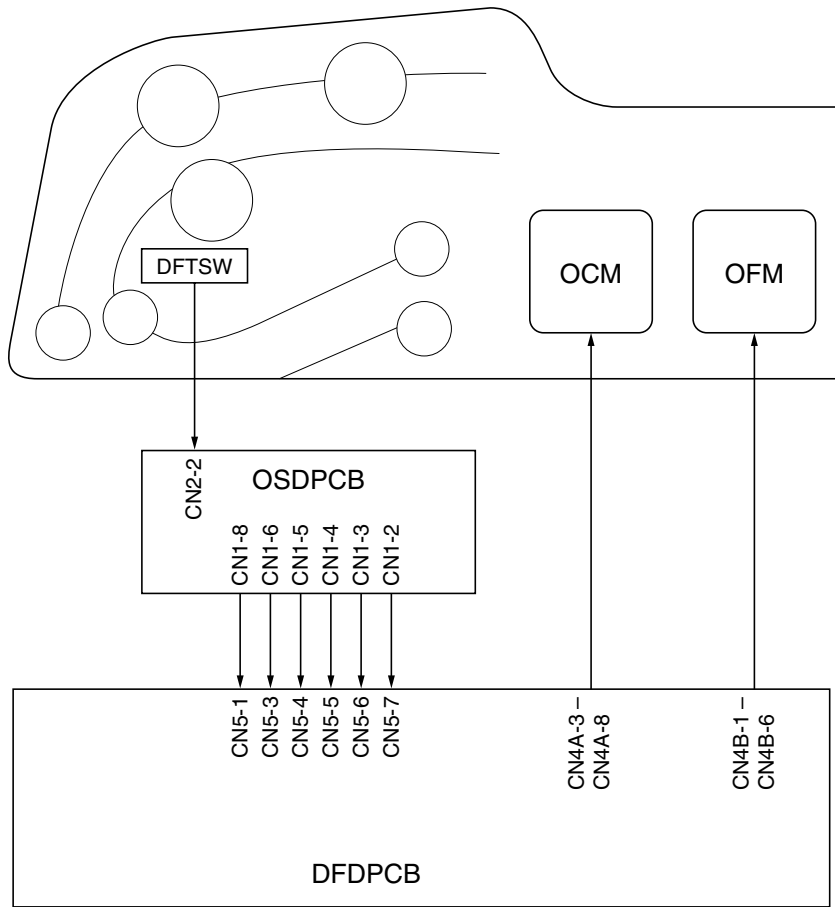
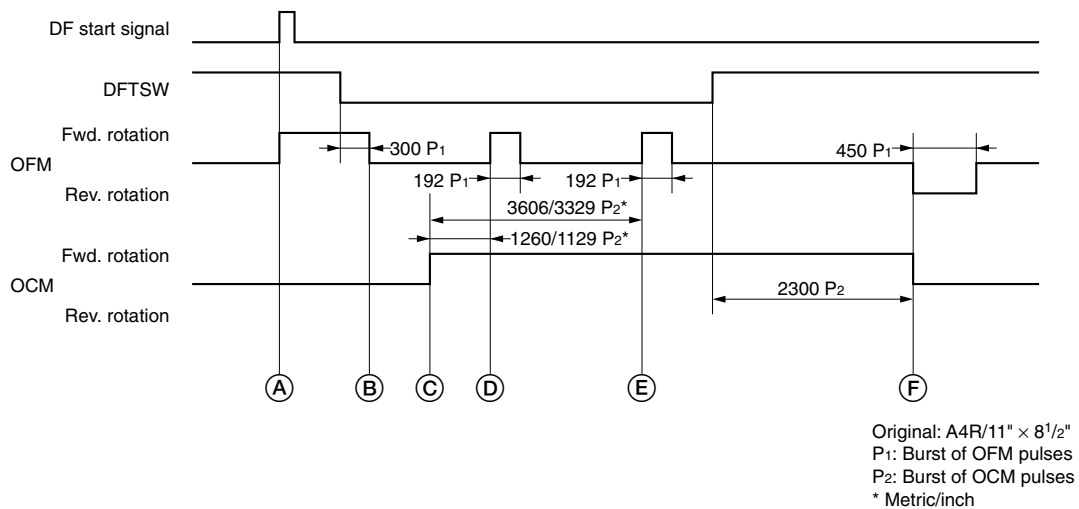


Figure 2-1-2 DF block diagram

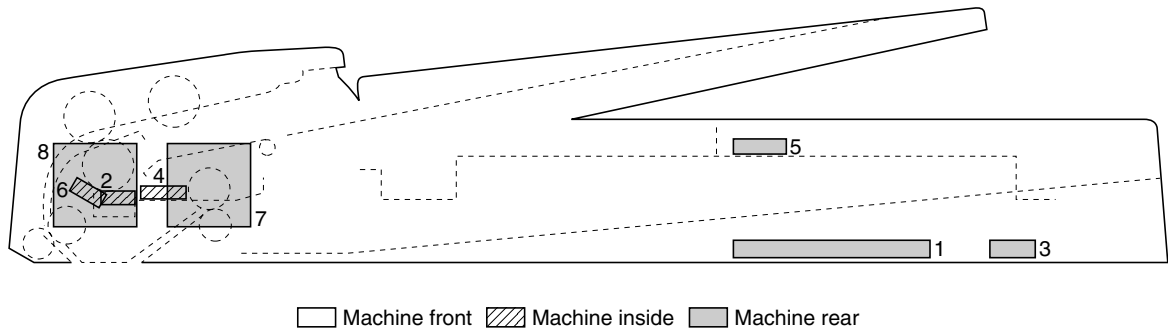
2-1

**(2) Original feed timing****Timing chart 2-1-1**

- Ⓐ When the DF start signal turns on, the original feed motor (OFM) starts rotating forward, driving the DF forwarding pulley and DF paper feed pulley to start primary original feed.
- Ⓑ 300 OFM pulses after the leading edge of the original turns the DF timing switch (DFTSW) on, the original feed motor (OFM) turns off to complete the primary original feed.
- Ⓒ The original conveying motor (OCM) starts rotating forward, driving the DF upper registration roller and DF upper eject roller to start secondary original feed.
- Ⓓ 1260/1129 OCM pulses after the original conveying motor (OCM) turns on, the original feed motor (OFM) rotates forward for 192 pulses.
- Ⓔ 3606/3329 OCM pulses after the original conveying motor (OCM) turns on, the original feed motor (OFM) rotates in reverse direction for 192 pulses.
- Ⓕ 2300 OCM pulses after the trailing edge of the original turns the DF timing switch (DFTSW) off, the original conveying motor (OCM) turns off to complete the secondary original feed. At the same time, the original feed motor (OFM) starts rotating in reverse direction for 450 pulses.



**2-2-2 Electrical parts layout**



**Figure 2-2-1**

- 1. DF driver PCB (DFDPCB) ..... Controls electrical components.
- 2. DF safety switch 1 (DFSSW1) ..... Breaks the safety circuit when the DF original cover is opened; resets original jam detection.
- 3. DF safety switch 2 (DFSSW2) ..... Breaks the safety circuit when the DF is opened; resets original jam detection.
- 4. Original size detection PCB (OSDPCB) ..... Detects the presence and width of the original.
- 5. Original size length switch (OSLSW) ..... Detects the length of the original.
- 6. DF timing switch (DFTSW) ..... Detects the original scanning timing.
- 7. Original feed motor (OFM) ..... Drives the original feed section.
- 8. Original conveying motor (OCM) ..... Drives the original conveying section.

### 2-3-1 DF driver PCB

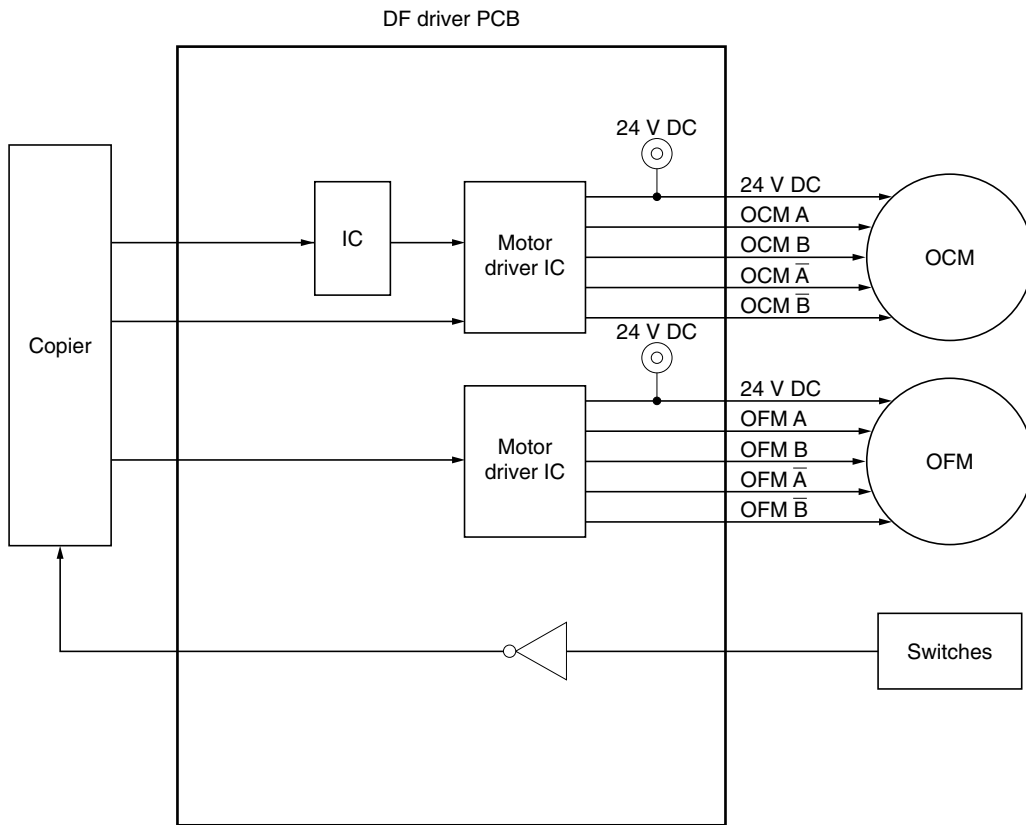


Figure 2-3-1 DF driver PCB block diagram

The DF driver PCB (DFDPCB) consists mainly of the motor driver ICs. It drives the original feed motor (OFM) and original conveying motor (OCM) with control signals from the copier. It also relays 5 V DC supply and signals to each switch.

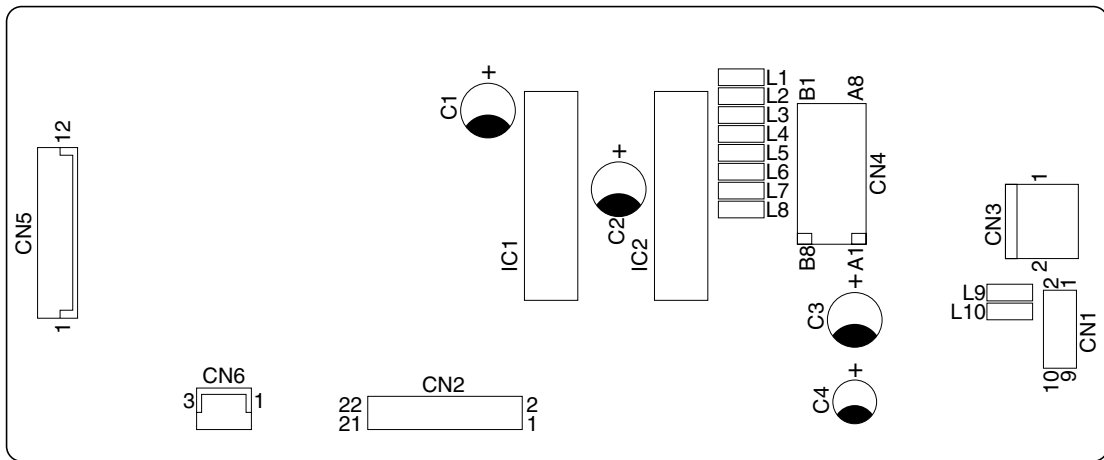
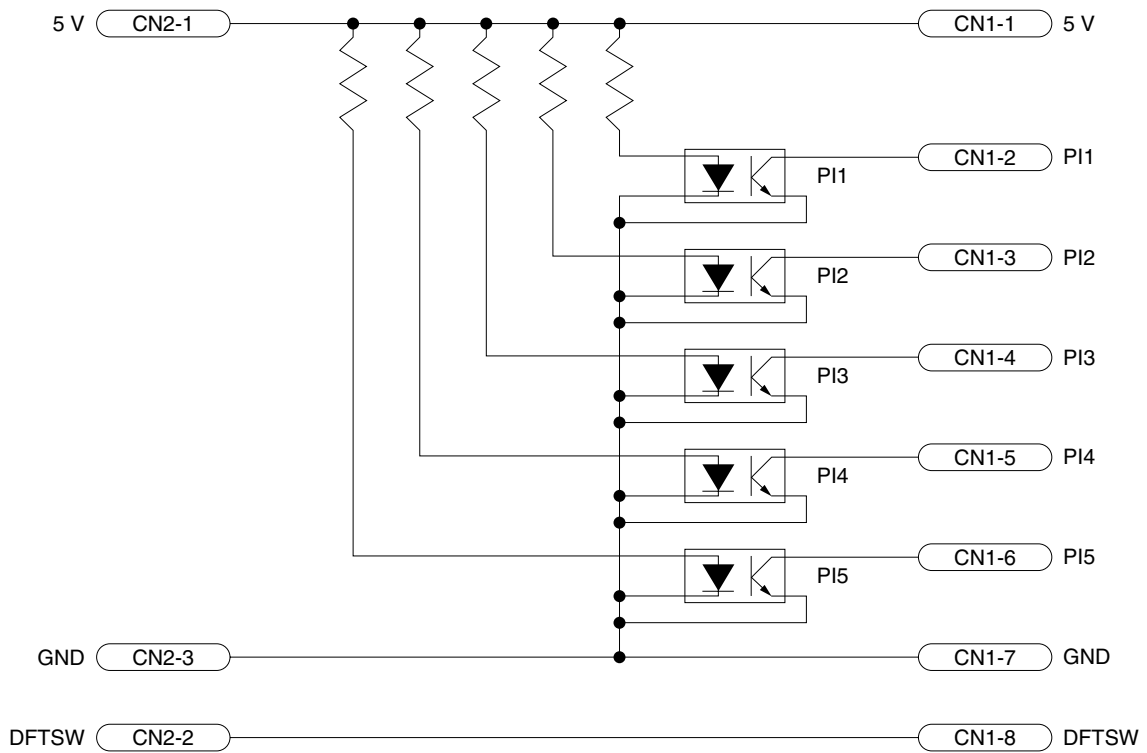


Figure 2-3-2 DF driver PCB silk-screen diagram

Terminals (CN)		Voltage	Remarks
1-1	1-3, 4	24 V DC	24 V DC supply, input
1-2	1-3, 4	24 V DC	24 V DC supply, input
1-7	1-9, 10	5 V DC	5 V DC supply, input
1-8	1-9, 10	5 V DC	5 V DC supply, input
2-1	1-3, 4	24/0 V DC	DFSSW2 off/on, output
2-2	1-9, 10	5/0 V DC	DFSSW1 off/on, output
2-4	1-9, 10	0/5 V DC	OFM ENABLE signal, input
2-5	1-9, 10	0/5 V DC	OFM energization mode signal, input (OFM RET)
2-6	1-9, 10	0/5 V DC (pulse)	OFM drive clock pulse, input
2-7	1-9, 10	0/5 V DC	OFM rotational direction switching signal, input
2-8	1-9, 10	0/5 V DC	OCM ENABLE signal, input
2-9	1-9, 10	0/5 V DC	OCM energization mode signal, input (OCM M1)
2-10	1-9, 10	0/5 V DC (pulse)	OCM drive clock pulse, input
2-11	1-9, 10	0/5 V DC	OCM rotational direction switching signal, input
2-12	1-9, 10		OCM current control voltage, input
2-16	1-9, 10	0/5 V DC	OSLSW original size detection (length) signal, output
2-17	1-9, 10	0/5 V DC	OSDPCB original size detection (width) signal, output (B)
2-18	1-9, 10	0/5 V DC	OSDPCB original size detection (width) signal, output (C)
2-19	1-9, 10	0/5 V DC	OSDPCB original size detection (width) signal, output (D)
2-20	1-9, 10	0/5 V DC	OSDPCB original size detection (width) signal, output (E)
2-21	1-9, 10	0/5 V DC	OSDPCB original present/not present detection signal, output
2-22	1-9, 10	0/5 V DC	DFTSW on/off, output
3-1	3-2	24/0 V DC	DFSSW2 off/on, input
4-A3	1-9, 10	24 V DC	24 V DC supply for OCM, output (A)
4-A4	1-9, 10	24 V DC	24 V DC supply for OCM, output (B)
4-A5	1-9, 10	0/24 V DC (pulse)	OCM motor coil energization pulse, output (A)
4-A6	1-9, 10	0/24 V DC (pulse)	OCM motor coil energization pulse, output (B)
4-A7	1-9, 10	0/24 V DC (pulse)	OCM motor coil energization pulse, output (A)
4-A8	1-9, 10	0/24 V DC (pulse)	OCM motor coil energization pulse, output (B)
4-B1	1-9, 10	24 V DC	24 V DC supply for OFM, output (A)
4-B2	1-9, 10	24 V DC	24 V DC supply for OFM, output (B)
4-B3	1-9, 10	0/24 V DC (pulse)	OFM motor coil energization pulse, output (A)
4-B4	1-9, 10	0/24 V DC (pulse)	OFM motor coil energization pulse, output (B)
4-B5	1-9, 10	0/24 V DC (pulse)	OFM motor coil energization pulse, output (A)
4-B6	1-9, 10	0/24 V DC (pulse)	OFM motor coil energization pulse, output (B)
5-1	5-2	0/5 V DC	DFTSW on/off, input
5-3	5-2	0/5 V DC	OSDPCB original present/not present detection signal, input
5-4	5-2	0/5 V DC	OSDPCB original size detection (width) signal, input (B)
5-5	5-2	0/5 V DC	OSDPCB original size detection (width) signal, input (C)
5-6	5-2	0/5 V DC	OSDPCB original size detection (width) signal, input (D)
5-7	5-2	0/5 V DC	OSDPCB original size detection (width) signal, input (E)
5-8	5-2	5 V DC	5 V DC supply for OSDPCB, output
5-10	5-9	5/0 V DC	DFSSW1 off/on, input
5-11	5-9	5 V DC	5 V DC supply for DFSSW1, output
6-2	6-1	0/5 V DC	OSLSW on/off, input
6-3	6-1	5 V DC	5 V DC supply for OSLSW, output

**2-3-2 Original size detection PCB**



**Figure 2-3-3 Original size detection circuit**

The original size detection PCB (OSDPCB) consists of five transmission-type photointerrupters, the original set switch (PI5) and original size width switches B to E (PI4 to PI1). It determines the presence of the original on the original table by the on/off status of the original set switch (PI5) and the width of the original by the combination of the on/off status of original size width switches B to E (PI4 to PI1), and then sends these detection signals to the DF driver PCB (DFDPCB).

2-3

• Original size detection

Original size width switches B to E (PI4 to PI1) are arranged from the inner side to the outer side of the PCB as shown in Figure 2-3-4. When an original is placed on the original table, the original size is determined by the turning on of the original size width switches and the on/off status of the original size length switch (OSLSW) on the original table.

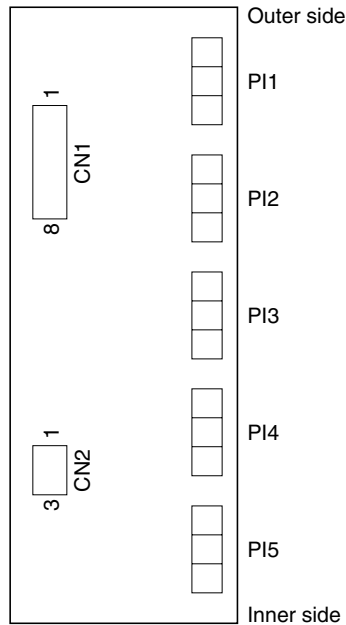


Figure 2-3-4 Original size detection PCB

Table 2-3-1 Original size detection

Metric specifications

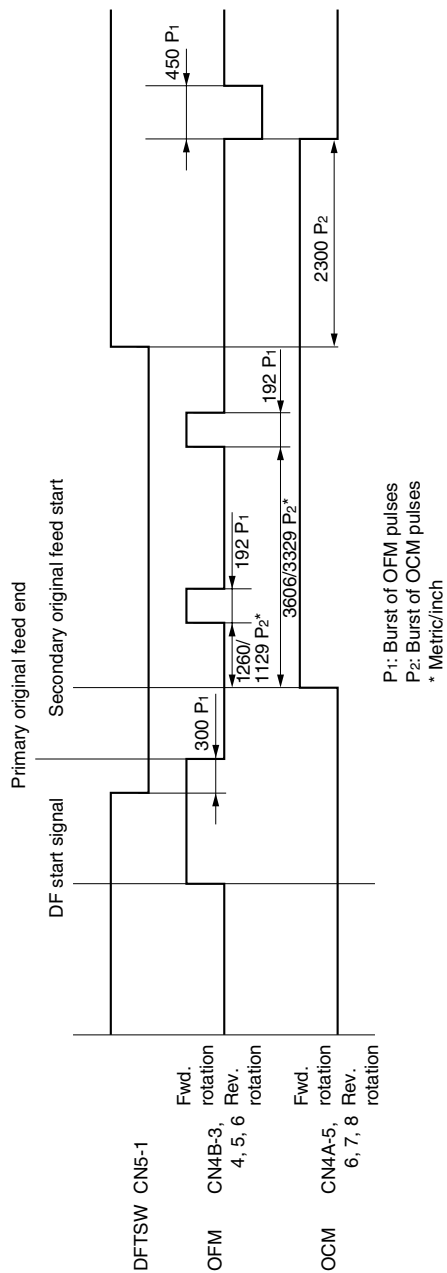
Original size	Original size width switch				Original size length switch
	B (PI4)	C (PI3)	D (PI2)	E (PI1)	OSLSW
A3	On	On	On	On	On
11" × 15"	On	On	On	On	On
B4	On	On	On	Off	On
Folio	On	On	Off	Off	On
A4R	On	On	Off	Off	Off
B5R	On	Off	Off	Off	Off
A4	On	On	On	On	Off
A5R	Off	Off	Off	Off	Off
B5	On	On	On	Off	Off

Inch specifications

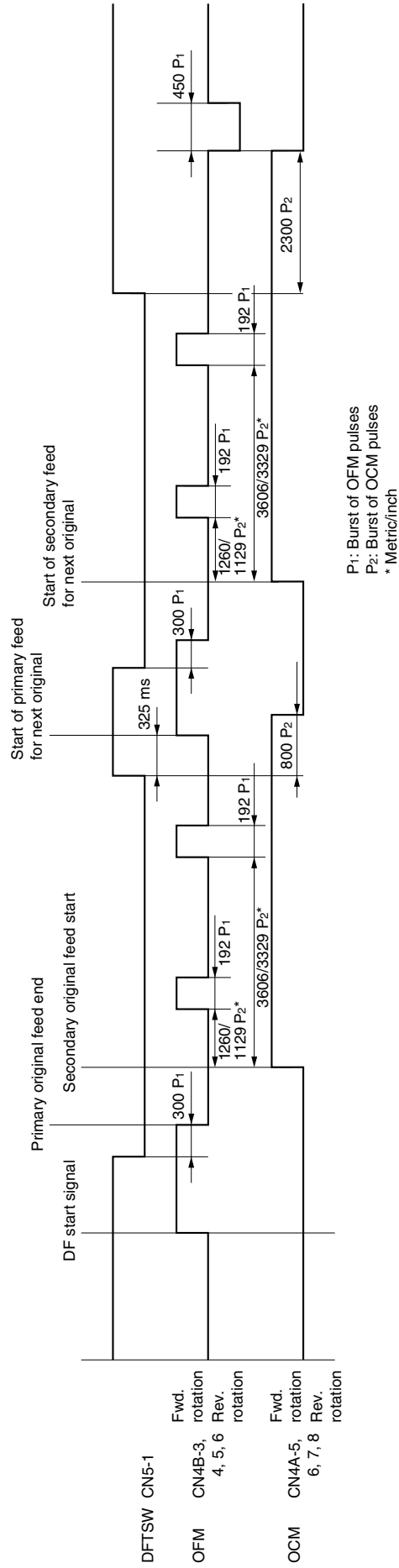
Original size	Original size width switch				Original size length switch
	B (PI4)	C (PI3)	D (PI2)	E (PI1)	OSLSW
11" × 17"	On	On	On	On	On
11" × 15"	On	On	On	On	On
8½" × 14"R	On	On	Off	Off	On
8½" × 11"	On	On	Off	Off	Off
11" × 8½"	On	On	On	On	Off
5½" × 8½"R	Off	Off	Off	Off	Off

2-3

Timing chart No. 1 Feeding an A4R/8 1/2" x 11" original



Timing chart No. 2 Feeding two A4R/8 1/2" x 11" originals continuously





## Periodic maintenance procedures

Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Original feed section	DF original feed pulley and DF separation pulley	Replace	Every service	Airbrush. Replace if damaged.	1-4-2, 3
	DF forwarding pulley	Replace	Every service		1-4-2
	Original size detection PCB	Clean	Every service		
	DF timing switch	Clean	Every service		
	Original feed lift friction plate	Check and replace	Every service		



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Original conveying section	DF upper registration roller	Clean	Every service	Clean with alcohol or a dry cloth.	
	DF lower registration roller	Clean	Every service	Clean with alcohol or a dry cloth.	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Original eject section	DF upper eject roller	Clean	Every service	Clean with alcohol or a dry cloth.	
	DF lower eject roller	Clean	Every service	Clean with alcohol or a dry cloth.	
	Eject section static eliminator	Check and replace	Every service	Replace if damaged.	

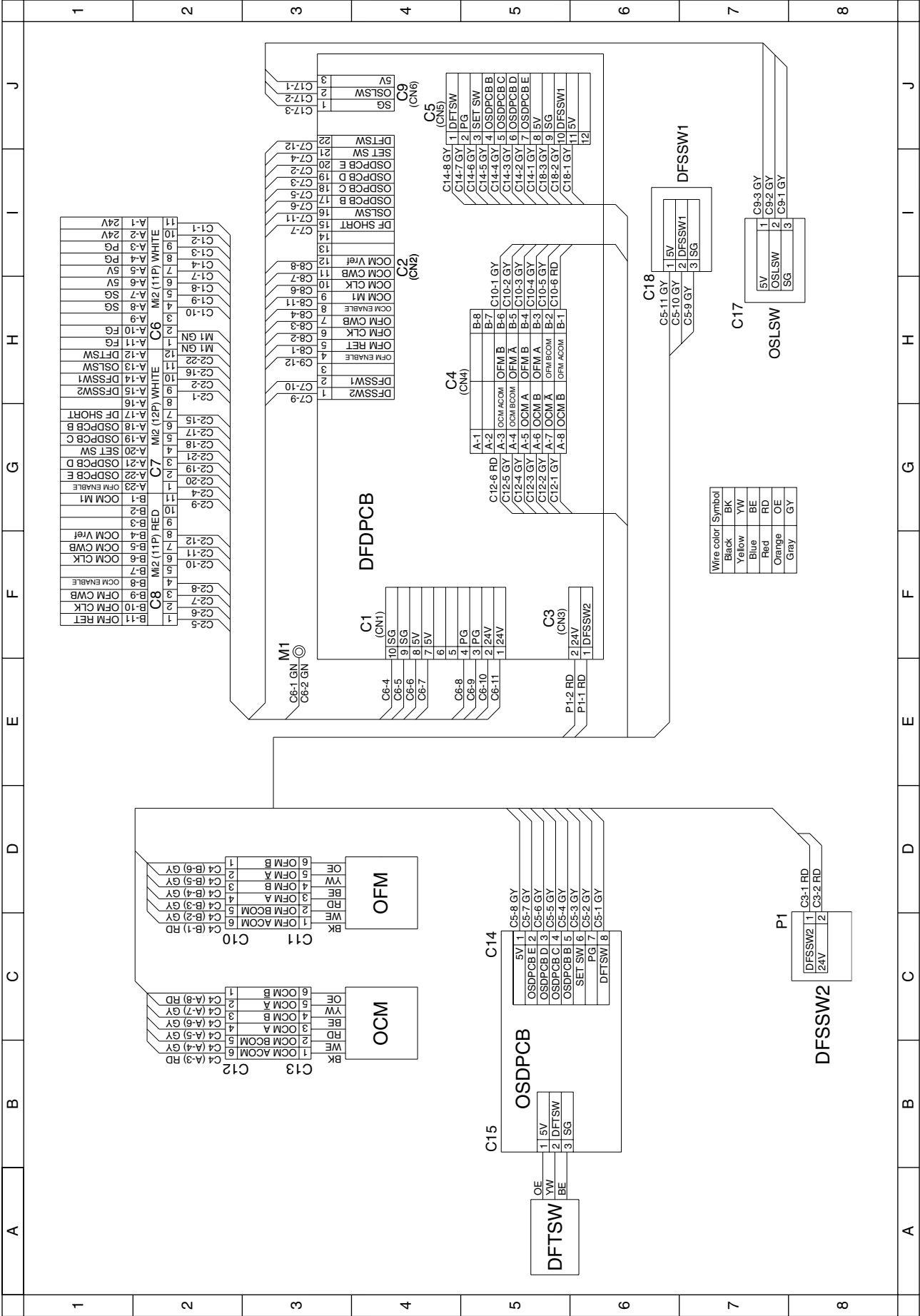


Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Covers	DF contact glass	Clean	Every service	Clean both sides of the glass with alcohol or a dry cloth.	
	Covers	Clean	Every service	Clean with alcohol or a dry cloth.	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Others	Original holder sheet	Clean	Every service	Clean with alcohol or a dry cloth.	
	Scanning sheet	Clean	Every service	Clean with alcohol or a dry cloth.	
	Indication plate sponge	Clean	Every service	Clean with alcohol or a dry cloth.	

Wiring diagram



Wire color	Symbol
Black	BK
Yellow	YW
Blue	BE
Red	RD
Orange	OE
Gray	GY