



DP-100

SERVICE MANUAL

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Safety precautions

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

Safety warnings and precautions

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

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

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

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

Symbols

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



General warning.



Warning of risk of electric shock.



Warning of high temperature.

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



General prohibited action.



Disassembly prohibited.

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



General action required.



Remove the power plug from the wall outlet.



Always ground the copier.

1. Installation Precautions

WARNING

• Do not use a power supply with a voltage other than that specified. Avoid multiple connections to one outlet: they may cause fire or electric shock. When using an extension cable, always check that it is adequate for the rated current.



• Connect the ground wire to a suitable grounding point. Not grounding the copier may cause fire or electric shock. Connecting the earth wire to an object not approved for the purpose may cause explosion or electric shock. Never connect the ground cable to any of the following: gas pipes, lightning rods, ground cables for telephone lines and water pipes or faucets not approved by the proper authorities.



CAUTION:

• Do not place the copier on an infirm or angled surface: the copier may tip over, causing injury.



• Do not install the copier in a humid or dusty place. This may cause fire or electric shock.



• Do not install the copier near a radiator, heater, other heat source or near flammable material. This may cause fire.



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



• Always handle the machine by the correct locations when moving it.



• Always use anti-toppling and locking devices on copiers so equipped. Failure to do this may cause the copier to move unexpectedly or topple, leading to injury.



• Avoid inhaling toner or developer excessively. Protect the eyes. If toner or developer is accidentally ingested, drink a lot of water to dilute it in the stomach and obtain medical attention immediately. If it gets into the eyes, rinse immediately with copious amounts of water and obtain medical attention.













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








2. Precautions for Maintenance

WARNING

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

CAUTION

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

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



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



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



• Remove toner completely from electronic components.



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



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



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



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



- Use only a small amount of solvent at a time, being careful not to spill. Wipe spills off completely.
- Ventilate the room well while using grease or solvents.
- Allow applied solvents to evaporate completely before refitting the covers or turning the main switch on.
- Always wash hands afterwards.

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



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



3. Miscellaneous

WARNING

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



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1-1-1 Specifications

Original feed system	Automatic feed
Originals	Sheets
Original weights	50 – 120 g/m ²
Original sizes	Folio – A5R/8 ¹ / ₂ " × 14" – 5 ¹ / ₂ " × 8 ¹ / ₂ "
No. of originals	Up to 50 sheets (50 – 80 g/m ²)
	For art paper, set one sheet at a time.
Power source	Electrically connected to the copier
Dimensions	455 (W) × 331 (D) × 93 (H) mm
	17 ¹⁵ / ₁₆ " (W) × 13 ¹ / ₁₆ " (D) × 3 ¹¹ / ₁₆ " (H)
Weight	Approx. 2.3 kg/5.06 lbs

1-1-2 Parts names and their functions

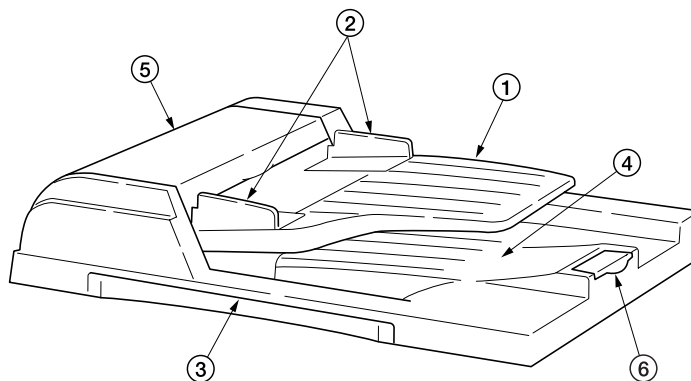


Figure 1-1-1

- ① Original table
- ② Original insert guides
- ③ DP opening/closing lever
- ④ Original eject cover
- ⑤ DP original cover
- ⑥ Ejection extension

1-1-3 Machine cross section

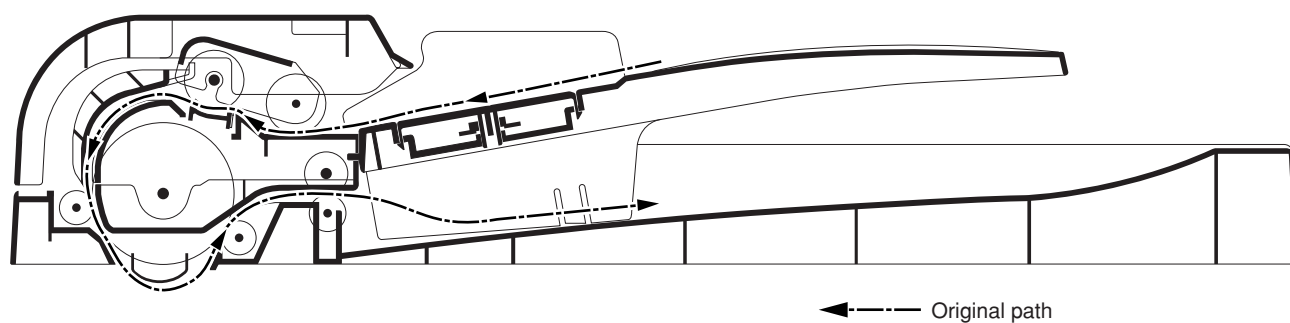
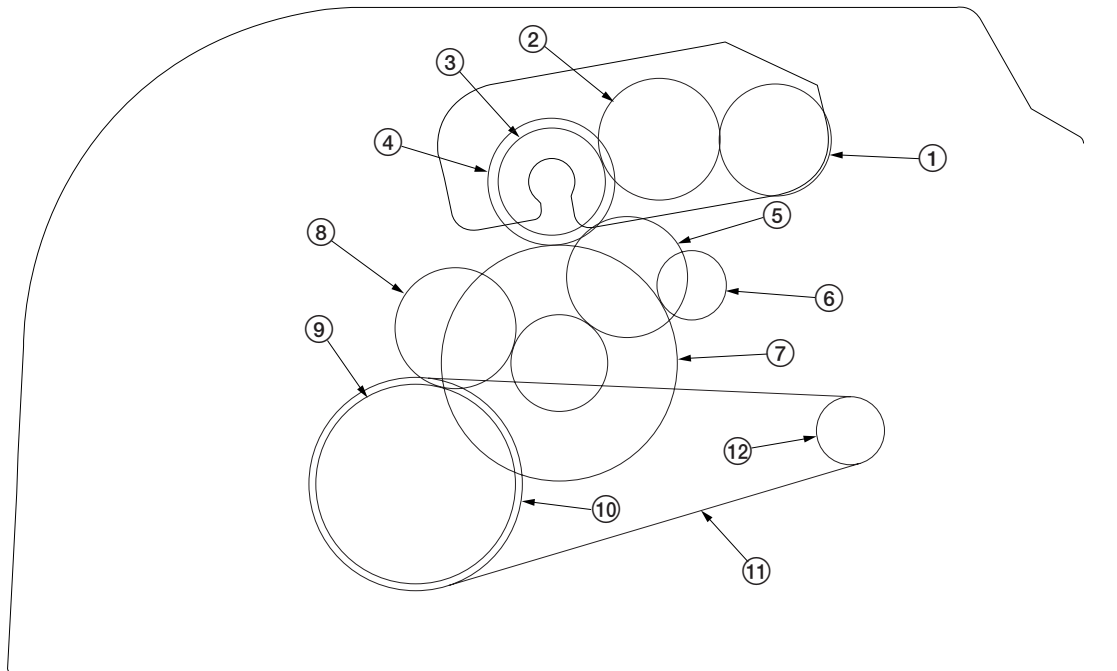


Figure 1-1-2 Machine cross section

1-1-4 Drive system



As viewed from machine front

Figure 1-1-3

- | | |
|------------------------------|----------------------|
| ① Forwarding gear 18 | ⑦ Gear 65/16 |
| ② Feed drive gear 20 | ⑧ Feed drive gear 20 |
| ③ Feed gear 18 | ⑨ Conveying gear 33 |
| ④ Feed gear 20 | ⑩ Conveying V pulley |
| ⑤ Feed drive gear 20 | ⑪ Conveying belt |
| ⑥ Original feed motor (gear) | ⑫ Eject V pulley |

1-2-1 Unpacking and installation

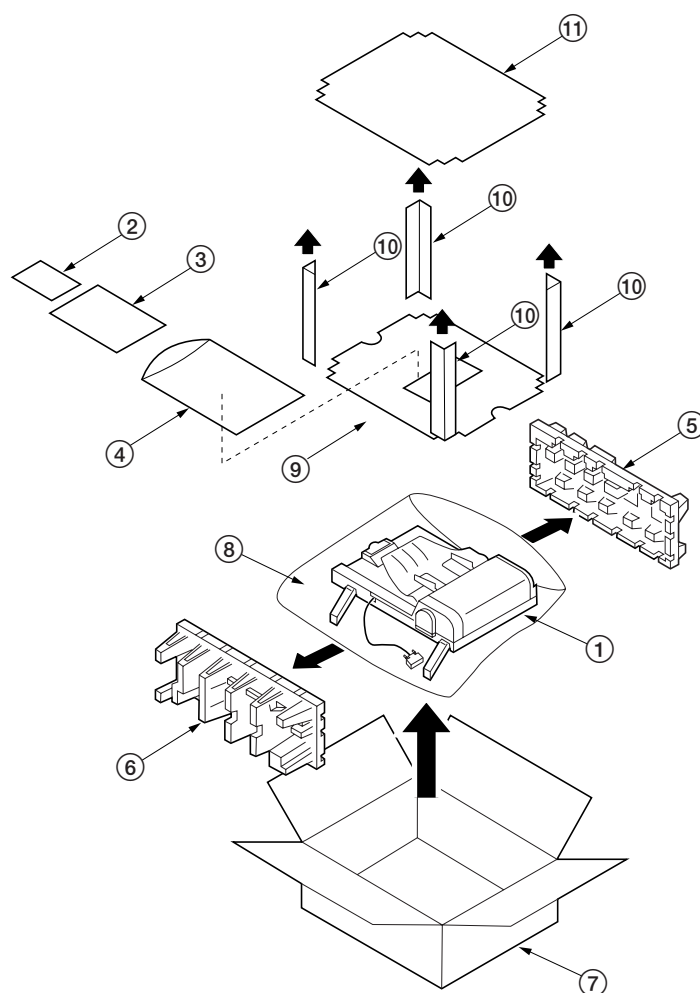


Figure 1-2-1 Unpacking

- ① Document processor
- ② Installation guide
- ③ Caution label
- ④ Plastic bag
- ⑤ Front pad
- ⑥ Rear pad
- ⑦ Outer case
- ⑧ Plastic sheet
- ⑨ Bottom plate
- ⑩ Supports
- ⑪ Upper plate

Procedure

1. Remove all of the components to the document processor from the box.

CAUTION

Be sure to hold both sides of the document processor when carrying it, as shown in the illustration.

Be particularly careful NOT to touch the guide film or the thin white surface indicated by the (A) in the illustration.

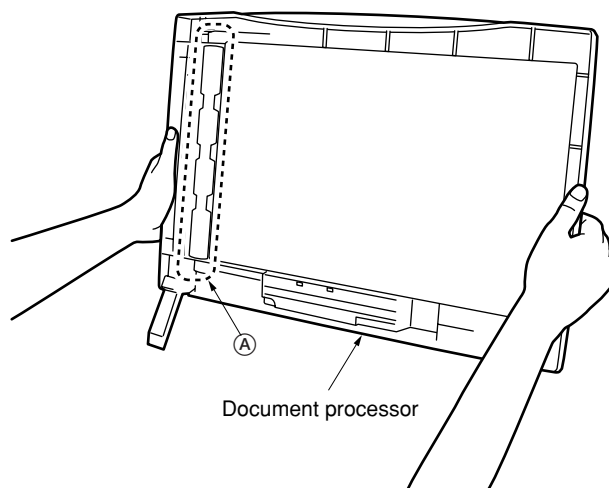


Figure 1-2-2

2. Turn the main switch to the copier OFF (O).

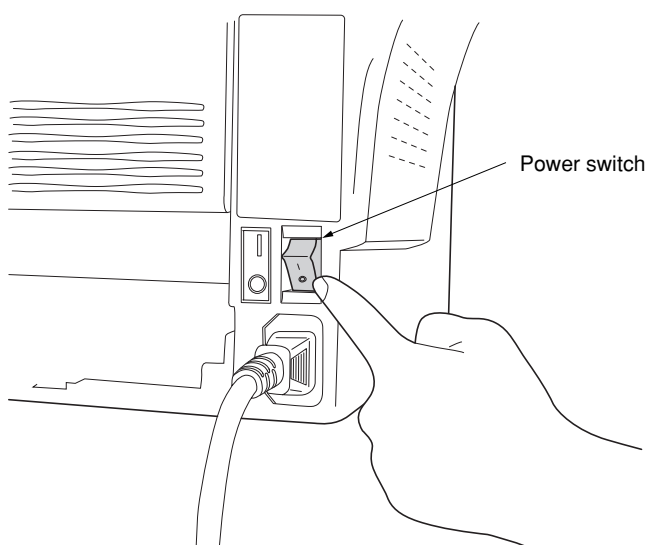


Figure 1-2-3

3. Open the original cover and lift it upward to remove it from the copier.

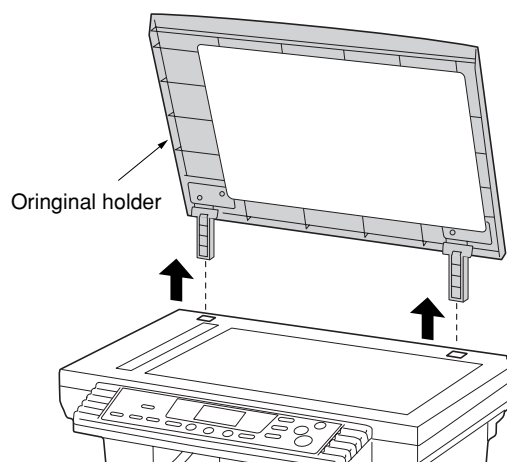


Figure 1-2-4

4. Attach the document processor to the copier.

CAUTION

Be sure that the connection cable does not get caught between the document processor and the copier when attaching the document processor to the copier.

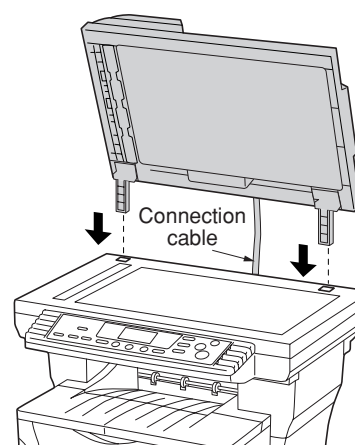


Figure 1-2-5

5. Gently close the document processor.

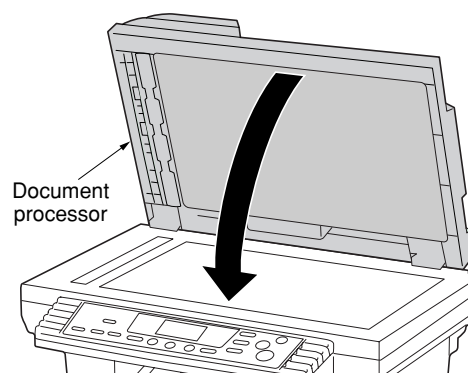


Figure 1-2-6

6. Attached the open end of the connection cable to the connector on the copier.

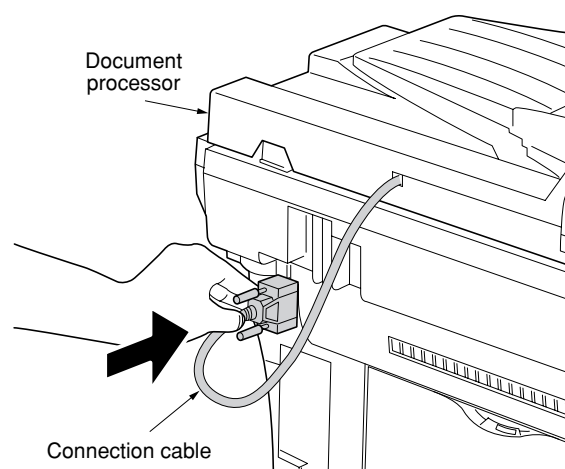


Figure 1-2-7

CAUTION

Be sure to tighten the pins securely when connecting the cable.

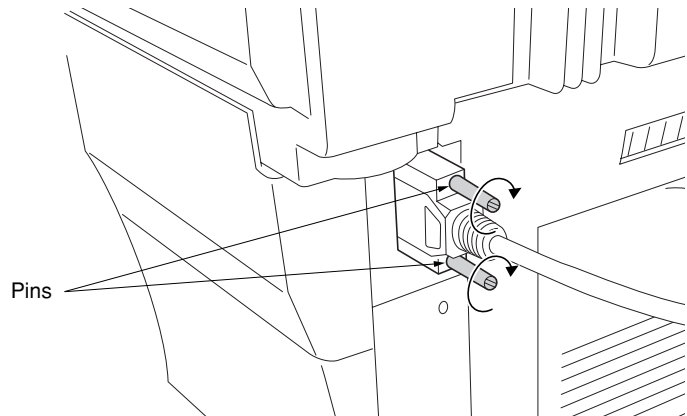


Figure 1-2-8

7. Turn the main switch to the copier back ON (|). Warm up will begin. "1" will appear on the operation panel and the Start indicator will light when the copier is in a copy-ready state.

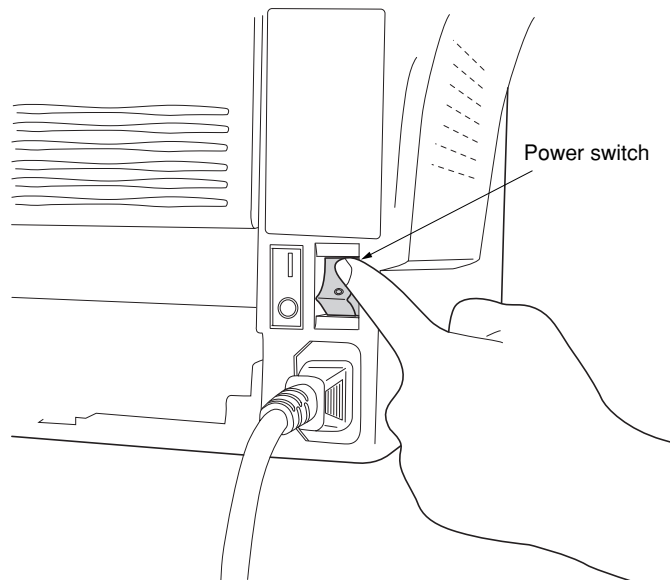


Figure 1-2-9

1-3-1 Original misfeed detection

(1) Original misfeed indication

When an original jams, the machine immediately stops operation and a message is shown on the copier operation panel. To remove the jammed original, open the DP or the DP original cover. Also if the main switch on the copier is turned on with an original set on the original table, the original jam display appears.

To reset the original misfeed detection, open and close the DP or DP original reversing cover to turn DP original detection switch off and on.

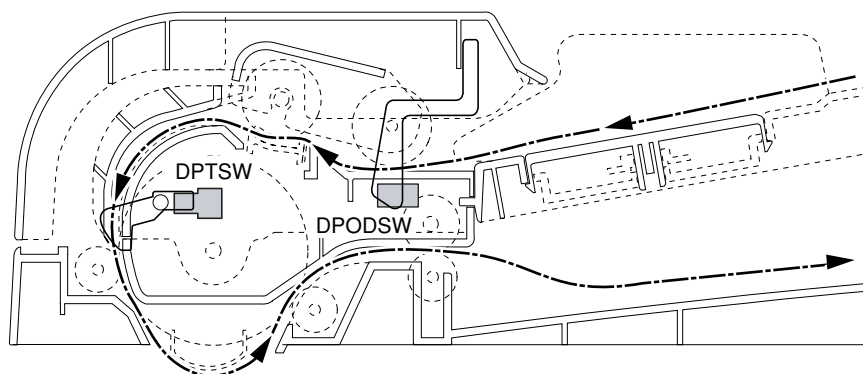


Figure 1-3-1 Original misfeed detection

(2) Paper misfeed detection conditions

Section	Jam code	Description	Conditions
DP	70	No original feed	<p>When the main switch is turned on, the machine detects activation of the DP timing switch.</p> <p>The machine cannot detect activation of the DP timing switch even after 600 ms elapses since the start of primary paper feed and cannot detect it at the same timing even after four times of retry.</p>
	71	An original jam in the original conveying section	The machine cannot detect deactivation of the DP timing switch even after 4100 ms elapses since the start of secondary paper feed.

(3) Original misfeeds

Problem	Causes/check procedures	Corrective measures
(1) An original jams when the main switch is turned on.	A piece of paper torn from an original is caught around the DP timing switch.	Remove any found.
	Defective DP timing switch.	Run maintenance item U244 and turn DP timing switch on and off manually. Replace DP timing switch if indication of the corresponding switch is not light.
(2) An original jams in the DP is indicated during copying (no original feed). Jam code 70	Defective DP timing switch.	Run maintenance item U244 and turn DP timing switch on and off manually. Replace DP timing switch if indication of the corresponding switch is not light.
	Check if the DP forwarding pulley or DP feed pulley is deformed.	Check visually and replace the deformed pulley.
(3) An original jams in the DP during copying (a jam in the original conveying section). Jam code 71	Defective DP timing switch.	Run maintenance item U244 and turn DP timing switch on and off manually. Replace DP timing switch if indication of the corresponding switch is not light.
	Check if the DP conveying roller or DP eject roller is deformed.	Check visually and replace the deformed roller.
(4) Original jams frequently.	An original outside the specifications is used.	Use only originals conforming to the specifications.
	The DP forwarding pulley or DP feed pulley is dirty with paper powder.	Clean with isopropyl alcohol.
	The DP conveying roller and DP conveying pulleys do not contact correctly.	Check and remedy.
	The DP eject roller and eject pulley do not contact correctly.	Check and remedy.

1-3-2 Image formation problems

- (1) There is a regular error between the centers of the original and copy image.
- (2) There is a regular error between the leading edges of the original and copy image.



See page 1-3-5

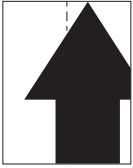


See page 1-3-5

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

Causes

1. Misadjusted DP center line.

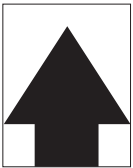


Causes	Check procedures/corrective measures
1. Misadjusted DP center line.	Readjust the DP center line (see page 1-4-10).

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

Causes

1. Misadjusted DP original scanning start position.



Causes	Check procedures/corrective measures
1. Misadjusted DP original scanning start position.	Readjust the DP original scanning start position (see page 1-4-8).

1-3-3 Electrical problems

Problem	Causes	Check procedures/corrective measures
(1) The original feed motor does not operate.	Defective 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 DP driver PCB.	Inspect the continuity between coils of the original feed motor and at the connector terminals. If the continuity is verified, replace the DP driver PCB.
	5 V DC is not input between YC1-16 and 1-4 of the DP driver PCB terminals, or 24 V DC is not input between YC1-2 and 1-3.	Check the connector insertion state of the interface cable and the continuity between the connectors. If any problem is found, repair or replace the interface cable. If no problem is found about the interface cable, check the PCB in the copier.
(2) A table copy starts even if sets an original on DP.	The connector terminals of the DP original cover switch make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	Defective DP original cover switch.	Run maintenance item U244 and turn DP original cover switch on and off manually. Replace DP original cover switch if indication of the corresponding switch is not light.
	Broken DP original detection switch actuator.	Check visually and replace the DP original cover switch if its actuator is broken. Remedy or replace the DP original cover switch.
	The connector terminals of the DP original detection switch make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	Defective DP original detection switch.	Run maintenance item U244 and turn DP original detection switch on and off manually. Replace DP original detection switch if indication of the corresponding switch is not light.
(3) An original jams when the main switch is turned on.	A piece of paper torn from an original is caught around the DP timing switch.	Remove any found.
	Defective DP timing switch.	Run maintenance item U244 and turn DP timing switch on and off manually. Replace DP timing switch if indication of the corresponding switch is not light.
	The connector terminals of the DP original detection switch make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	Defective DP original detection switch.	Run maintenance item U244 and turn DP original detection switch on and off manually. Replace DP original detection switch if indication of the corresponding switch is not light.

1-3-4 Mechanical problems

Problem	Causes/check procedures	Corrective measures
(1) No primary original feed.	The surfaces of the DP forwarding pulley, DP feed pulley or pad are dirty with paper powder.	Check and clean them with isopropyl alcohol if they are dirty.
	Check if the DP forwarding pulley, DP original feed pulley or the pad is deformed.	If so, replace (see page 1-4-3).
	Electrical problem with the original feed motor.	See page 1-3-6.
(2) No secondary original feed.	The DP conveying roller and the DP conveying pulley do not contact each other correctly.	Check visually and remedy if necessary.
	Electrical problem with the original feed 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 DP forwarding pulleys, DP feed pulley or pad are dirty with paper powder.	Check and clean them with isopropyl alcohol if they are dirty.
	The DP conveying roller and DP conveying pulley or eject roller and eject pulley do not contact each other correctly.	Check visually and remedy if necessary.

1-4-1 Precautions for assembly and disassembly

(1) Precautions

- Be sure to turn the main switch off and disconnect the power plug of the copier 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 Assembly and disassembly

(1) Detaching and refitting the original table, front cover, rear cover and DP original cover

Procedure

1. Detach each hook and then remove the original cover, front cover, rear cover and DP original cover.

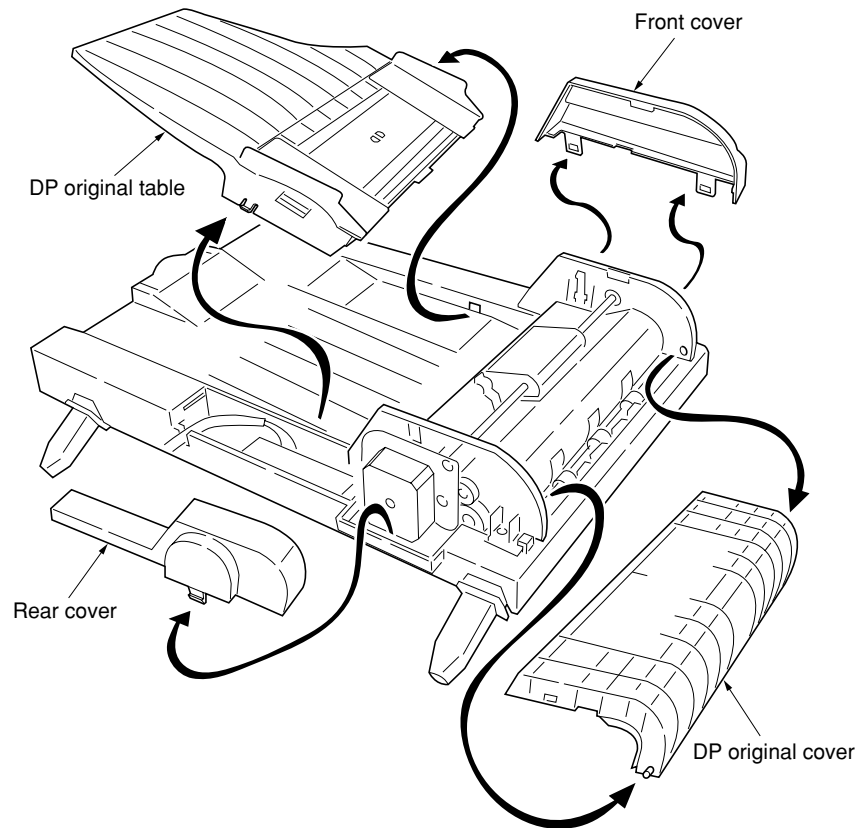


Figure 1-4-1

(2) Detaching and refitting the DP forwarding pulley and DP feed pulley

Follow the procedure below to clean or replace the DP forwarding or DP feed pulley.

Procedure

1. Open the DP original cover.
2. Remove the stopper ring.
3. Remove the bush and then the DP forwarding pulley unit.

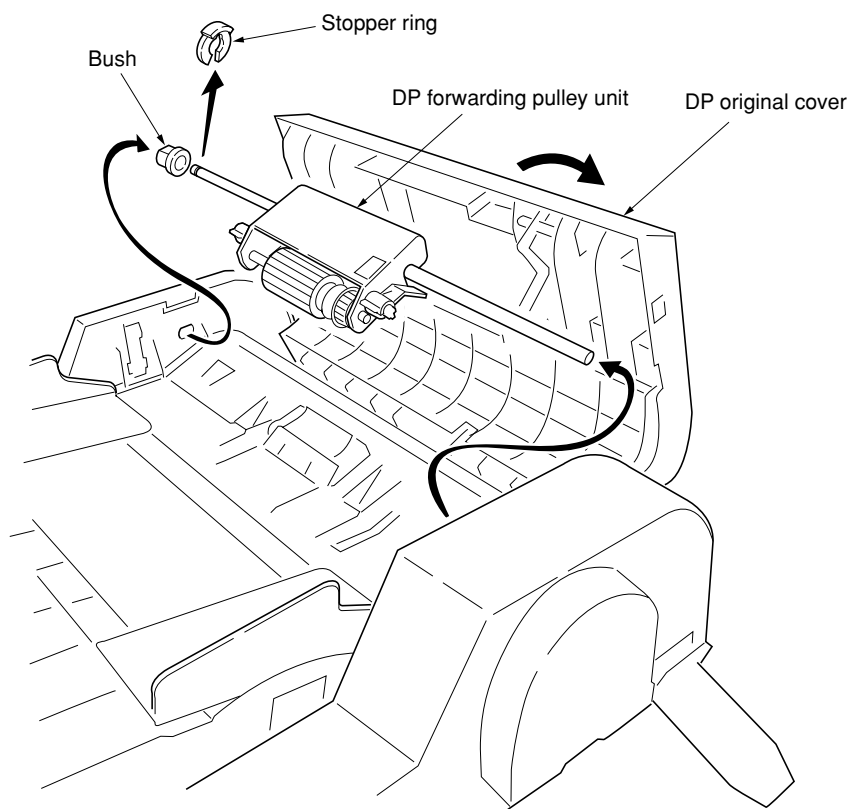


Figure 1-4-2

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- Detaching the DP forwarding pulley
 3. Remove the stopper ring.
 4. Pull out the forwarding shaft and then remove the DP forwarding pulley.
- Detaching the DP feed pulley
 5. Remove the two stopper rings.
 6. Pull out the feed shaft and then remove the DP feed pulley.
 7. Clean or replace the DP forwarding pulley and DP feed pulley.
 8. Refit all the removed parts.

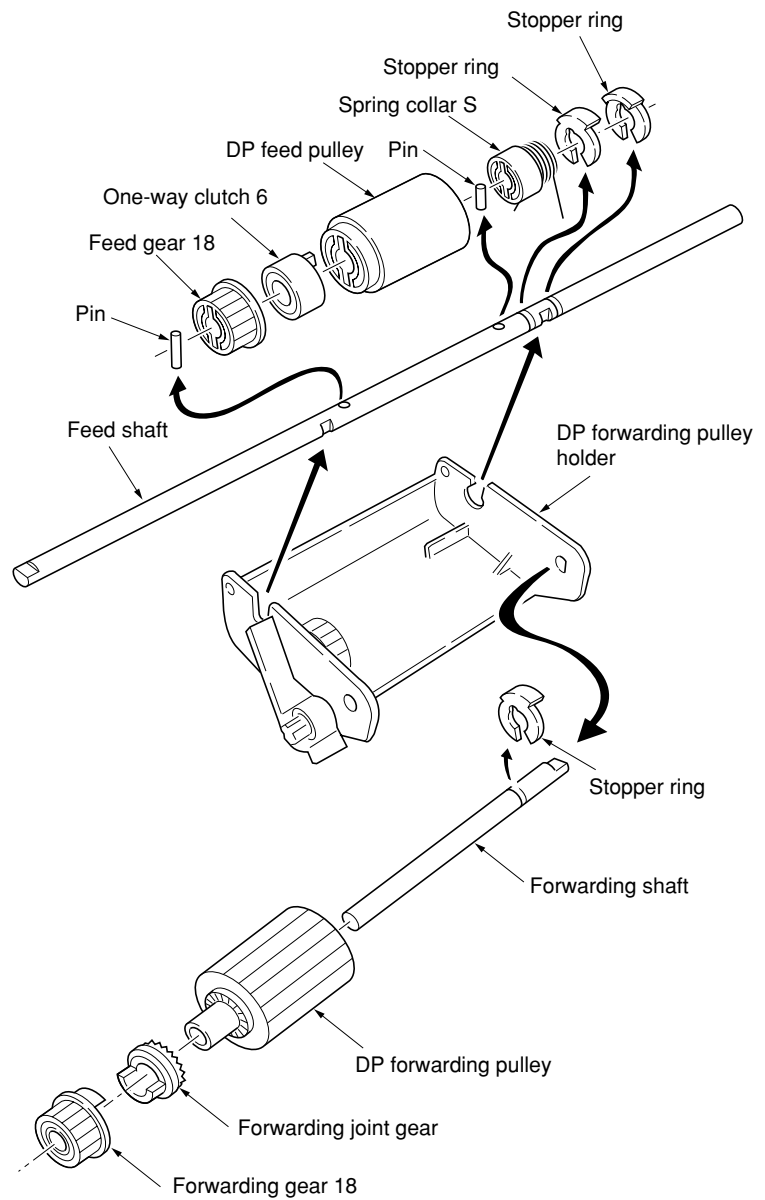


Figure 1-4-3

(3) Detaching and refitting the DP conveying roller and DP eject roller

Follow the procedure below to clean or replace the DP conveying roller and DP eject roller.

Procedure

1. Remove the two connectors.
2. Remove the three screws and the terminal and then remove the paper feed housing.

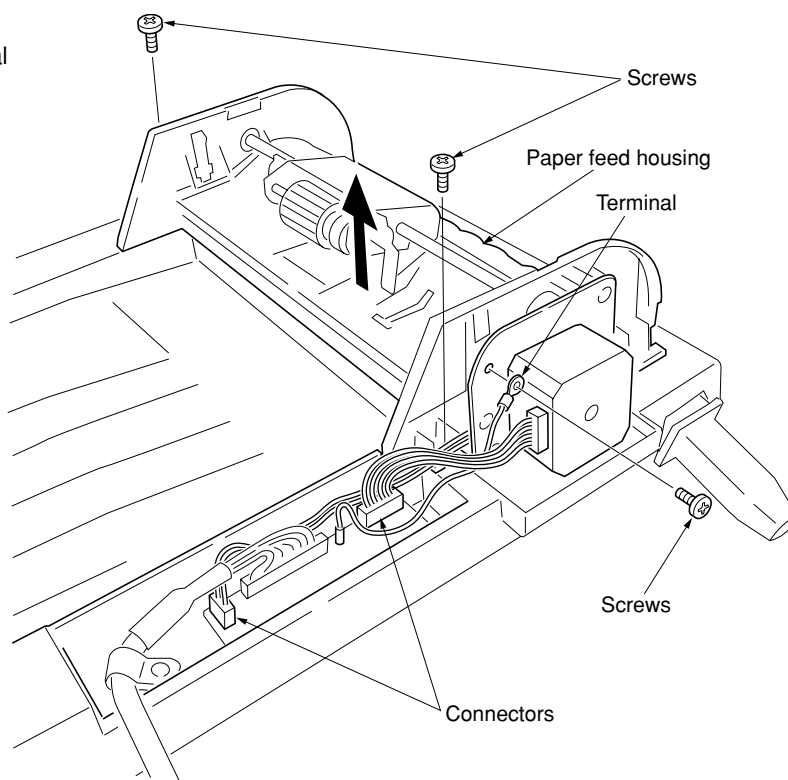


Figure 1-4-4

3. Remove the eject guide from the paper feed housing.

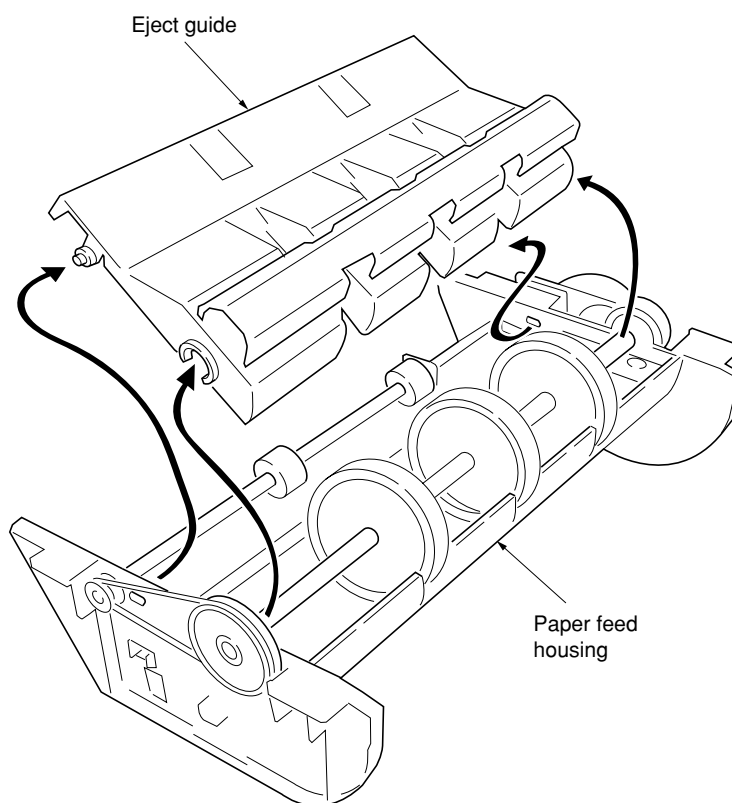


Figure 1-4-5

3HK

4. Remove the conveying belt.
- Detaching the DP conveying roller
5. Remove the conveying V pulley and then remove the bush.
6. Remove the stopper ring and then remove the conveying gear 33 and bush.
7. Remove the DP conveying roller from the paper feed housing.
- Detaching the DP eject roller
8. Remove the eject V pulley and then remove the bush.
9. Remove the stopper ring and then remove the bush.
10. Remove the DP eject roller from the paper feed housing.
11. Clean or replace the DP conveying roller and DP eject roller.
12. Refit all the removed parts.

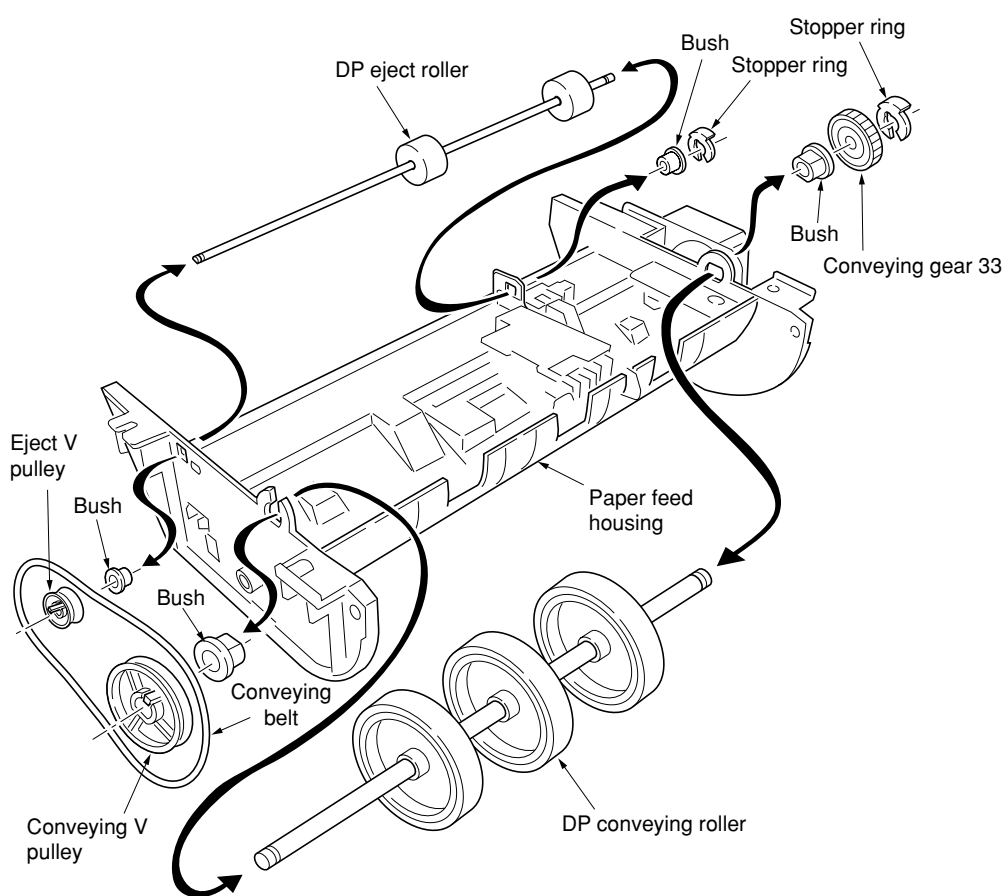
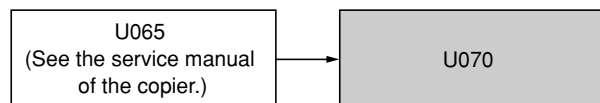


Figure 1-4-6

1-4-3 Adjustment the maintenance mode

(1) Adjusting the DP magnification

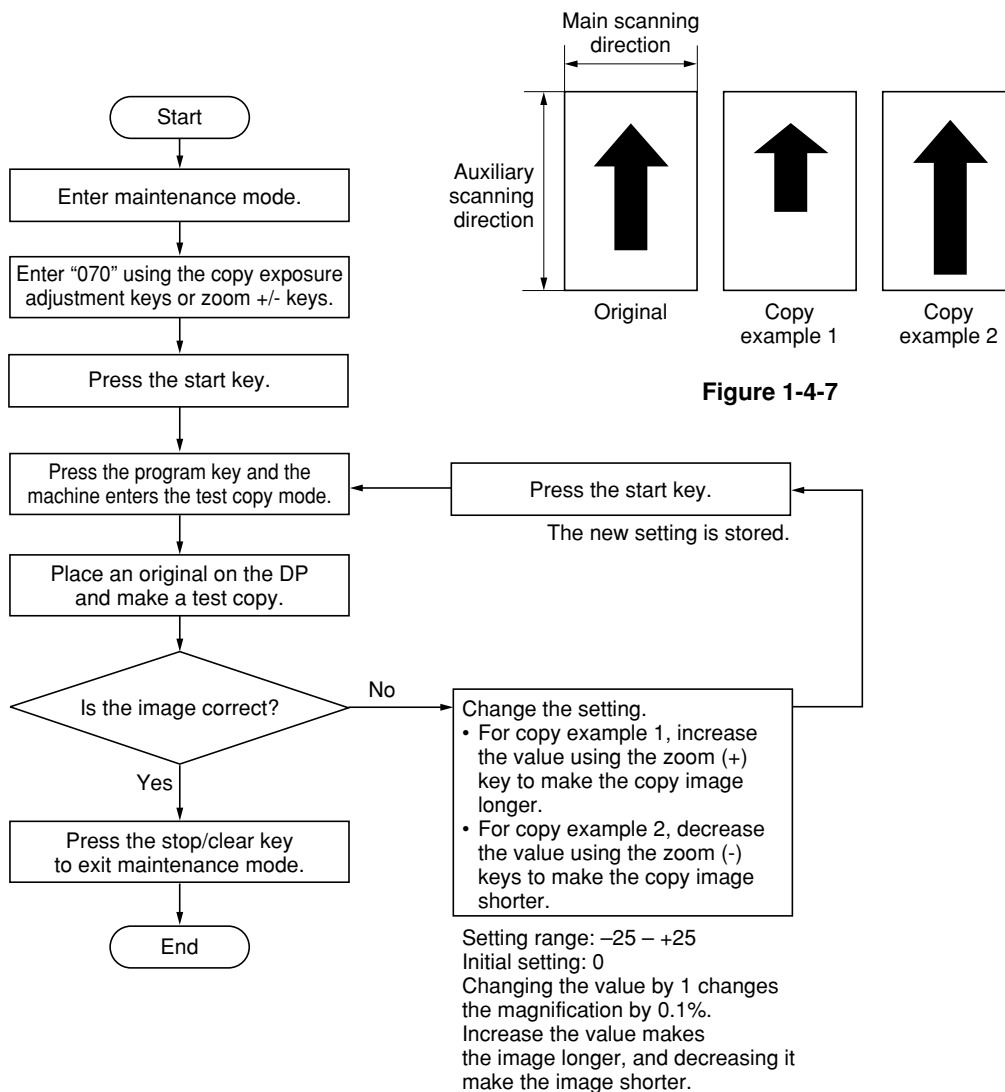
Adjust magnification in the auxiliary scanning direction if magnification is incorrect when the DP is used.



Caution:

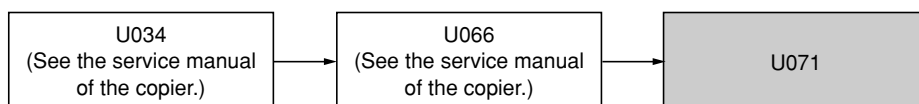
Before making the following adjustment, ensure that the above adjustments have been made in maintenance mode.

Procedure

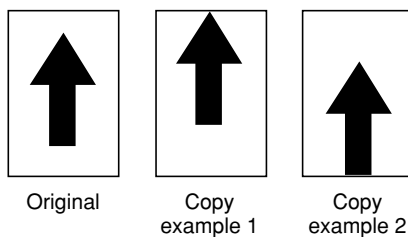
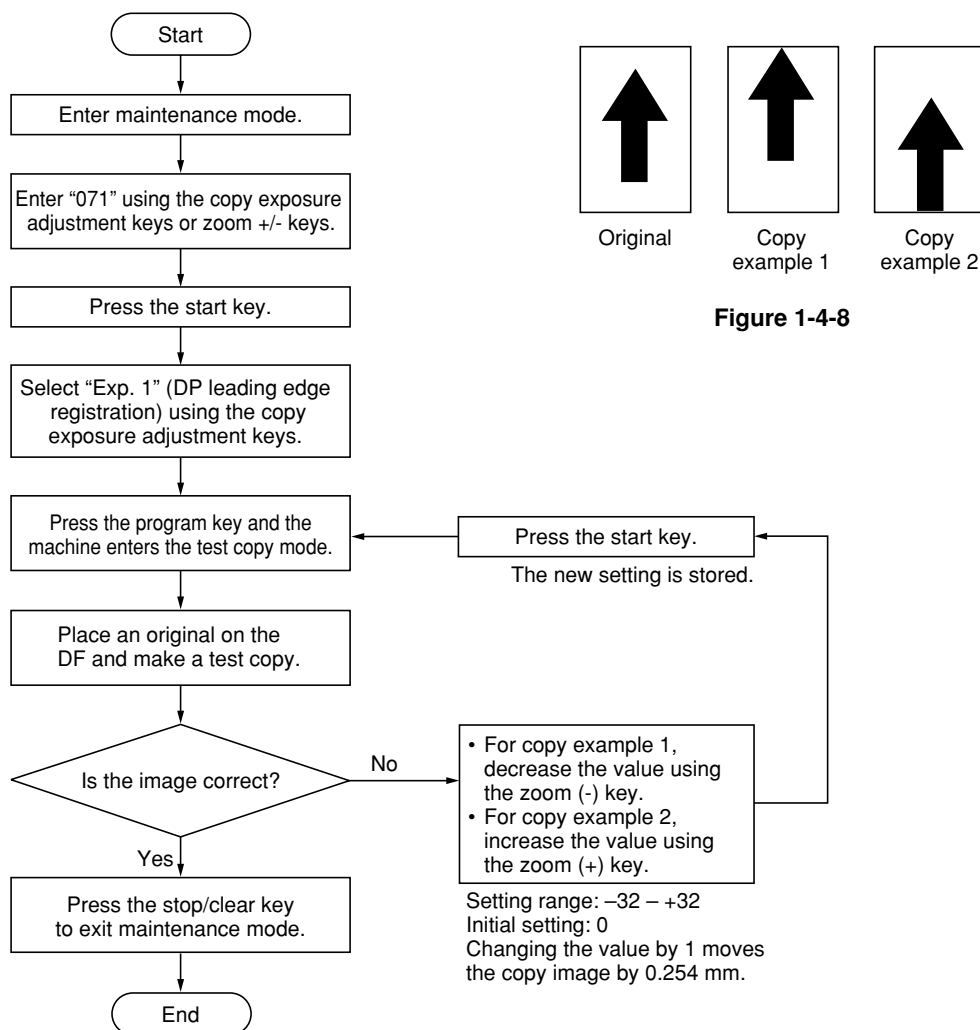


(2) Adjusting the DP leading edge registration

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

**Caution:**

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

Procedure**Figure 1-4-8**

(3) Adjusting the DP trailing edge registration

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

Caution:

If the copy image looks like copy example 2, clean the DP original scanning section.

Procedure

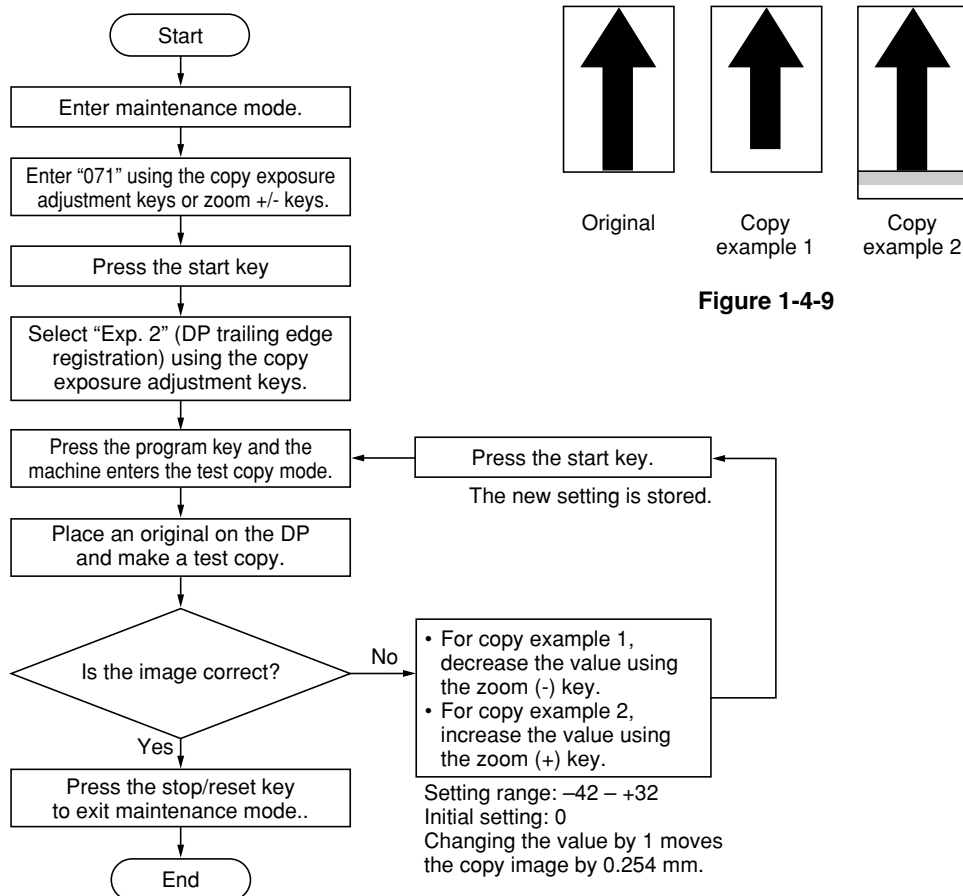
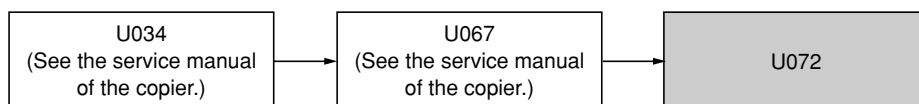


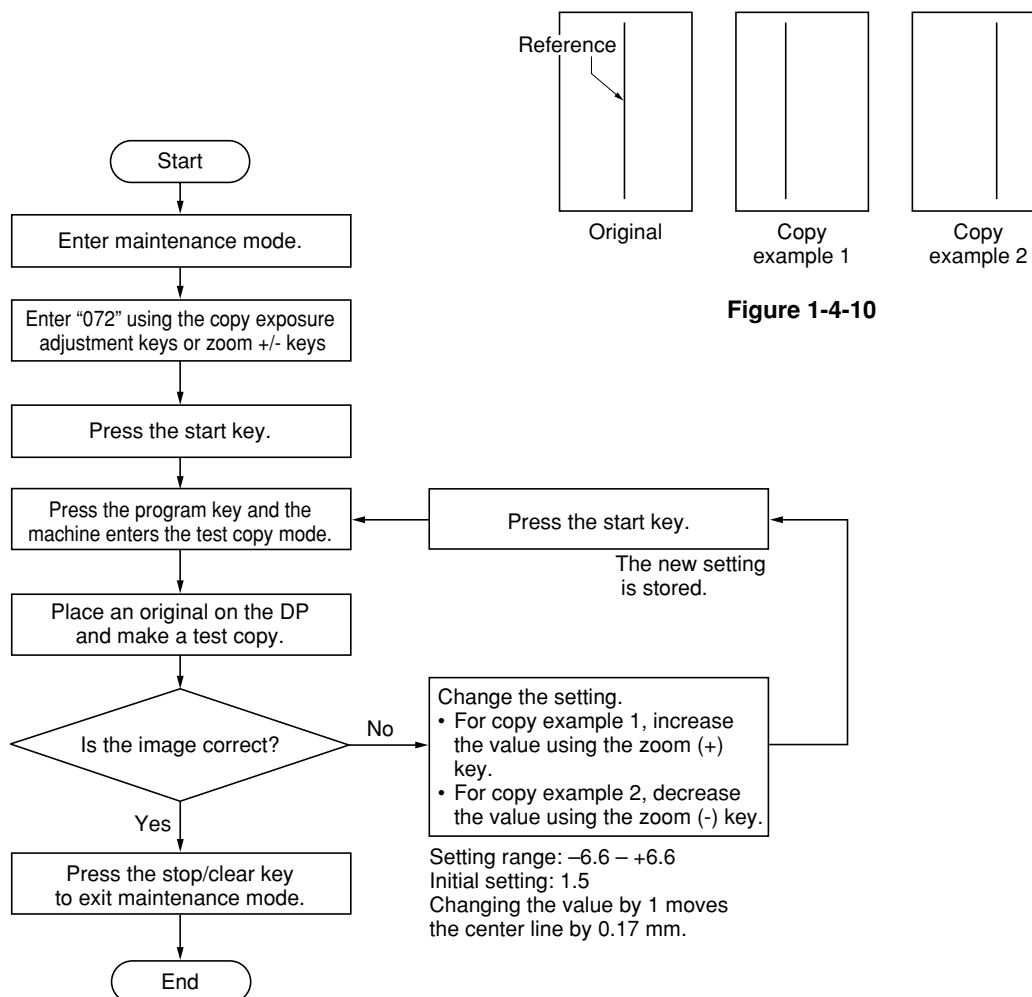
Figure 1-4-9

(4) Adjusting the DP center line

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

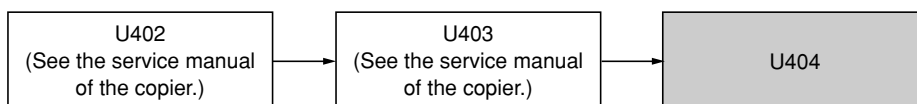
**Caution:**

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

Procedure

(5) Adjusting the margins for scanning the original from the DP

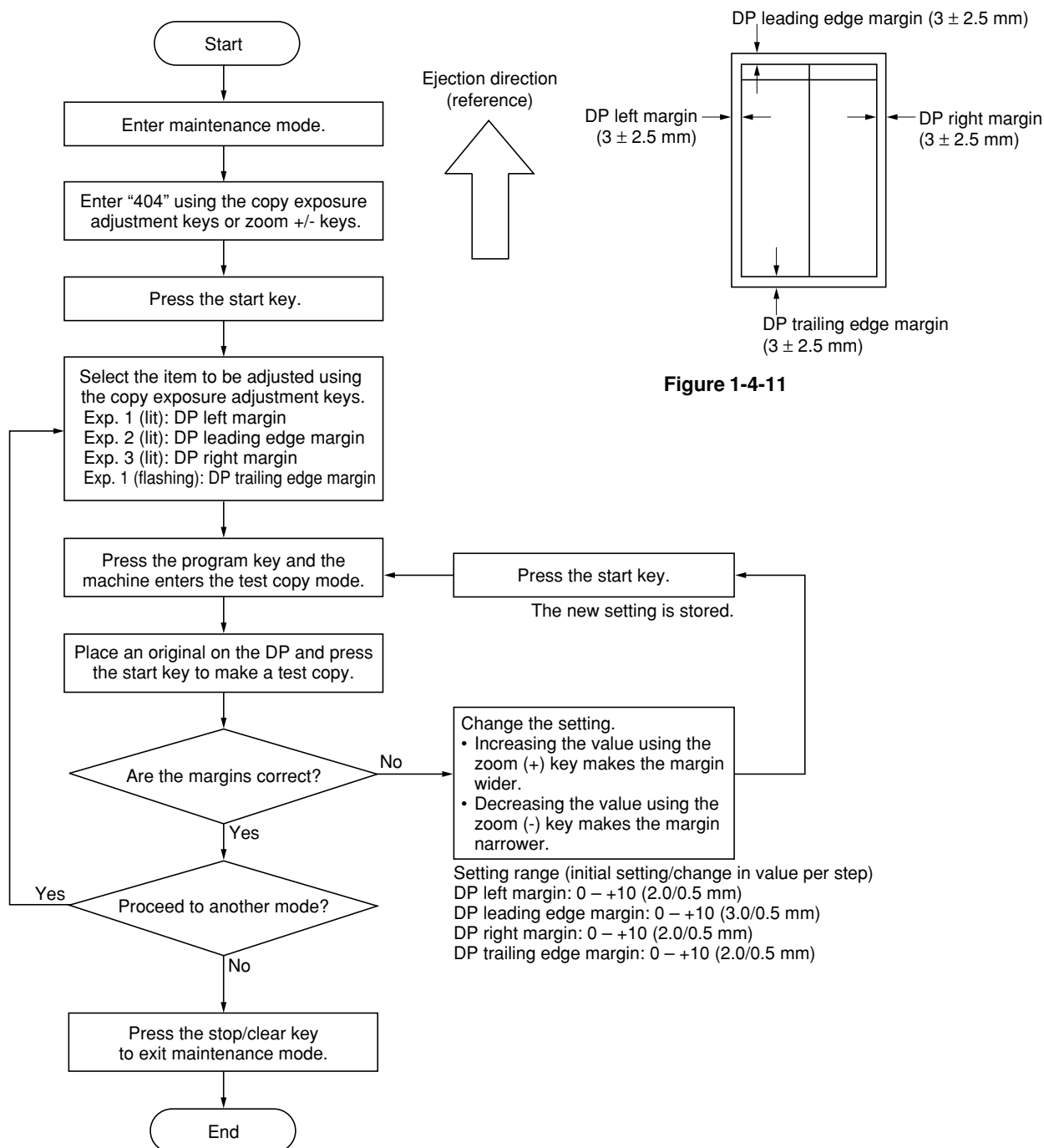
Perform the following adjustment if margins are not correct.



Caution:

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

Procedure



2-1-1 Mechanical construction

(1) Original feed section

The DP consists of the components shown in Figure 2-1-1. An original placed on the original table is conveyed the original across the DP contact glass in synchronization with the copier scanning operation.

When a primary original feed starts, the original feed motor (OFM) is turned on in the forward direction, the DP forwarding pulley rotates to forward an original, and then the DP feed pulley advances original feed. When the leading edge of the original reaches the position that causes the DP timing switch (DPTSW) to be turned on, the primary feed finishes. When the secondary original feed starts, the original feed motor (OFM) is turned on in the reverse direction, and the original is conveyed onto the DP contact glass by rotation of the original feed motor and then ejected to the original eject cover by the DP eject roller.

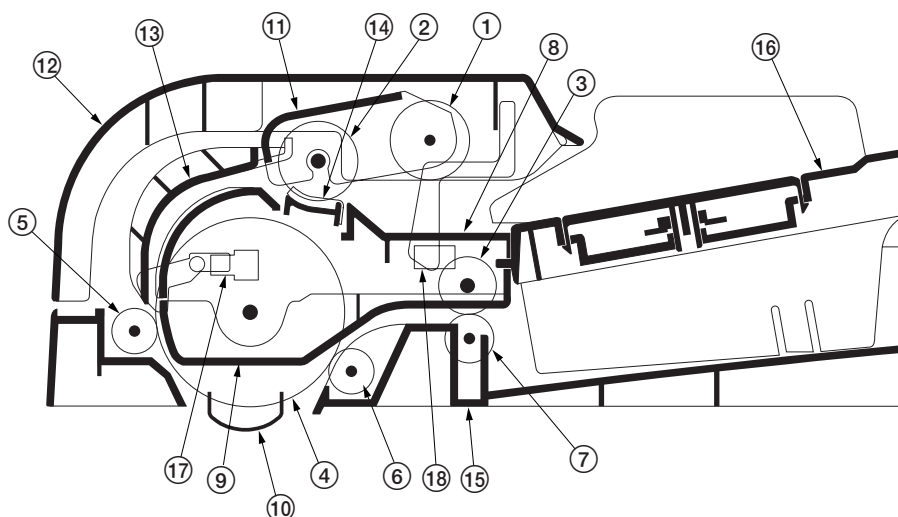


Figure 2-1-1 Original feed section

- | | |
|------------------------|---|
| ① DP Forwarding pulley | ⑩ Scanning guide |
| ② DP feed pulley | ⑪ DP Forwarding pulley holder |
| ③ DP eject roller | ⑫ DP original cover |
| ④ DP conveying roller | ⑬ Paper feed guide |
| ⑤ DP conveying pulley | ⑭ Pad |
| ⑥ DP conveying pulley | ⑮ DP base |
| ⑦ DP eject pulley | ⑯ Original table |
| ⑧ Paper feed housing | ⑰ DP timing switch (DPTSW) |
| ⑨ Eject guide | ⑱ DP original detection switch (DPODSW) |

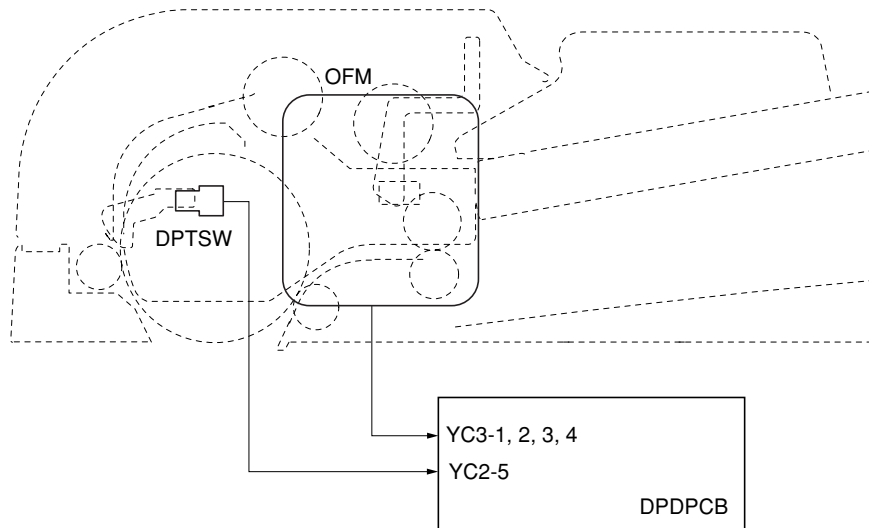
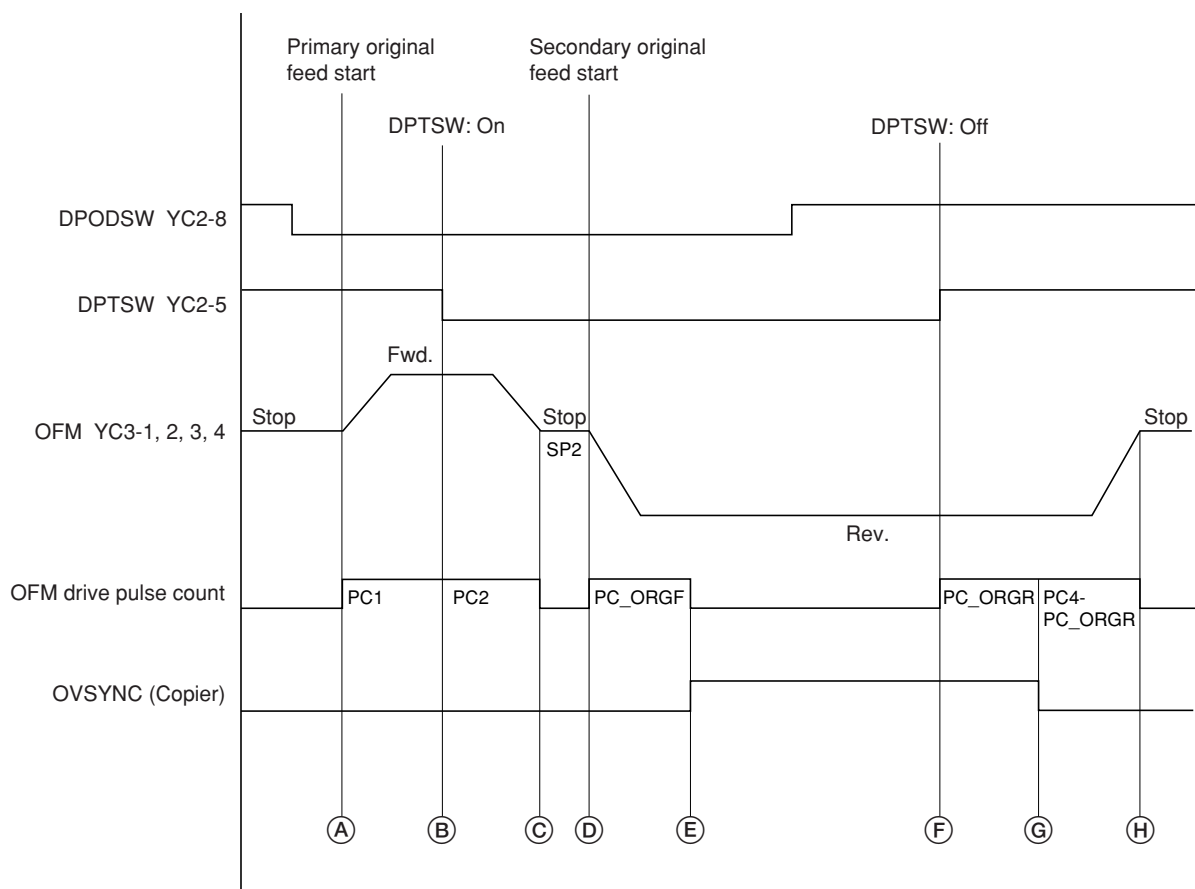


Figure 2-1-2 DP block diagram

(2) Original feed timing



Timing chart 2-1-1

- (A): When a primary feed starts, the original feed motor (OFM) continues forward rotation (slowup) for the period of the specified number of pulses (PC1) to rotate the DP forwarding pulley and the DP feed pulley. The original is fed into the DP through the original table.
- (B): The primary feed advances and then the leading edge of the original turns on the DP timing switch (DPTSW). After the original feed motor (OFM) continues forward rotation for the period of the specified number of pulses (PC2) since the DP timing switch (DPTSW) is turned on, the motor stops (slowdown). The original stops just before the scanning position on the contact glass.
- (C): The original feed motor (OFM) is suspended for the period of scanning processing timing matching (SP2) in the copier.
- (D): When the secondary feed starts, the original feed motor (OFM) continues reverse rotation (slowup) for the period of the specified number of pulses (PC_ORGF) to rotate the conveying roller. Since the original advances a little before scanning operation on the copier starts, the scanning margin at the leading edge of the original is secured.
- (E): Scanning operation (OVSYNC) on the copier starts.
- (F): The secondary feed advances and then the trailing edge of the original turns off the DP timing switch (DPTSW). The original feed motor (OFM) continues reverse rotation for the period of the specified number of pulses (PC_ORGR) since the DP timing switch (DPTSW) is turned off. At the end of the specified number of pulses (PC_ORGR), scanning operation (OVSYNC) on the copier also finishes. Thus, the specified scanning margin at the trailing edge of the original is secured.
- (H): At that time, the original feed motor (OFM) continues reverse rotation for the period of the specified number of pulses (PC4-PC_ORGR) to eject the original and then stops (slowdown).

2-2-1 Electrical parts layout

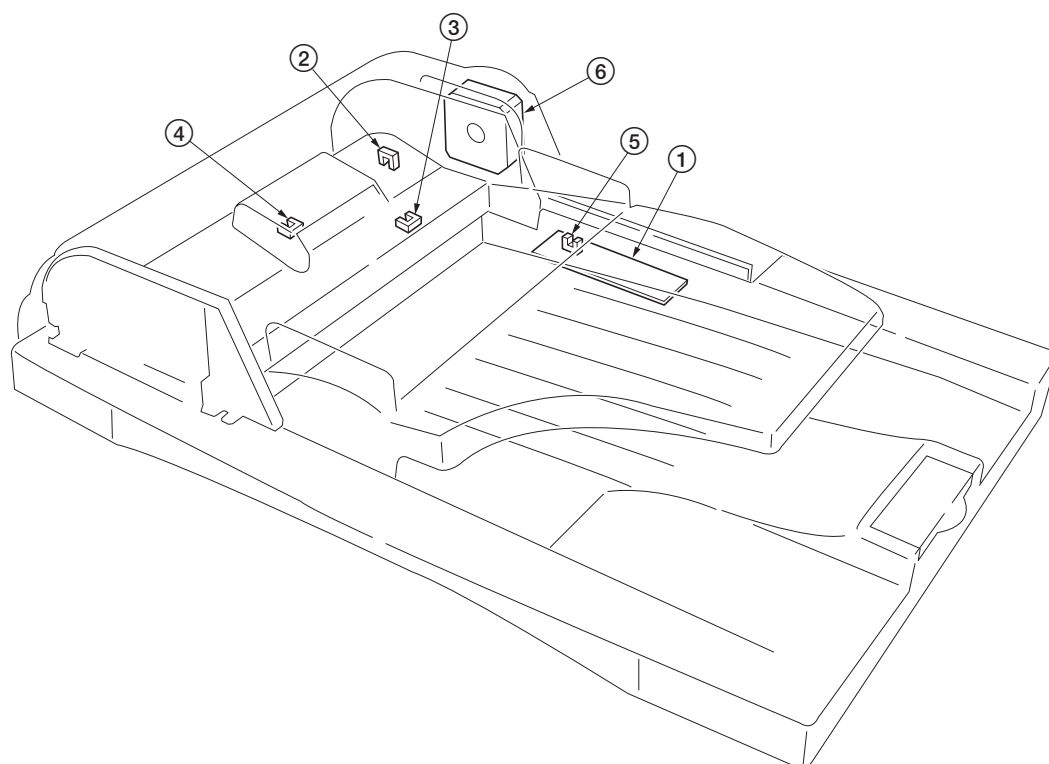


Figure 2-2-1

- | | |
|--|--|
| 1. DP driver PCB (DPDPCB) | Controls electrical components of the DP. |
| 2. DP original cover switch (DPOCSW) | Detects the opening and closing of the DP original cover. |
| 3. DP original detection switch (DPODSW) | Detects the presence of original on the DP; resets original misfeed detection. |
| 4. DP timing switch (DPTSW) | Detects the original scanning timing. |
| 5. DP open/close switch (DPOCDSW) | Detects the opening and closing of the DP. |
| 6. Original feed motor (OFM) | Drives the original feed and conveying sections. |

2-3-1 DP driver PCB

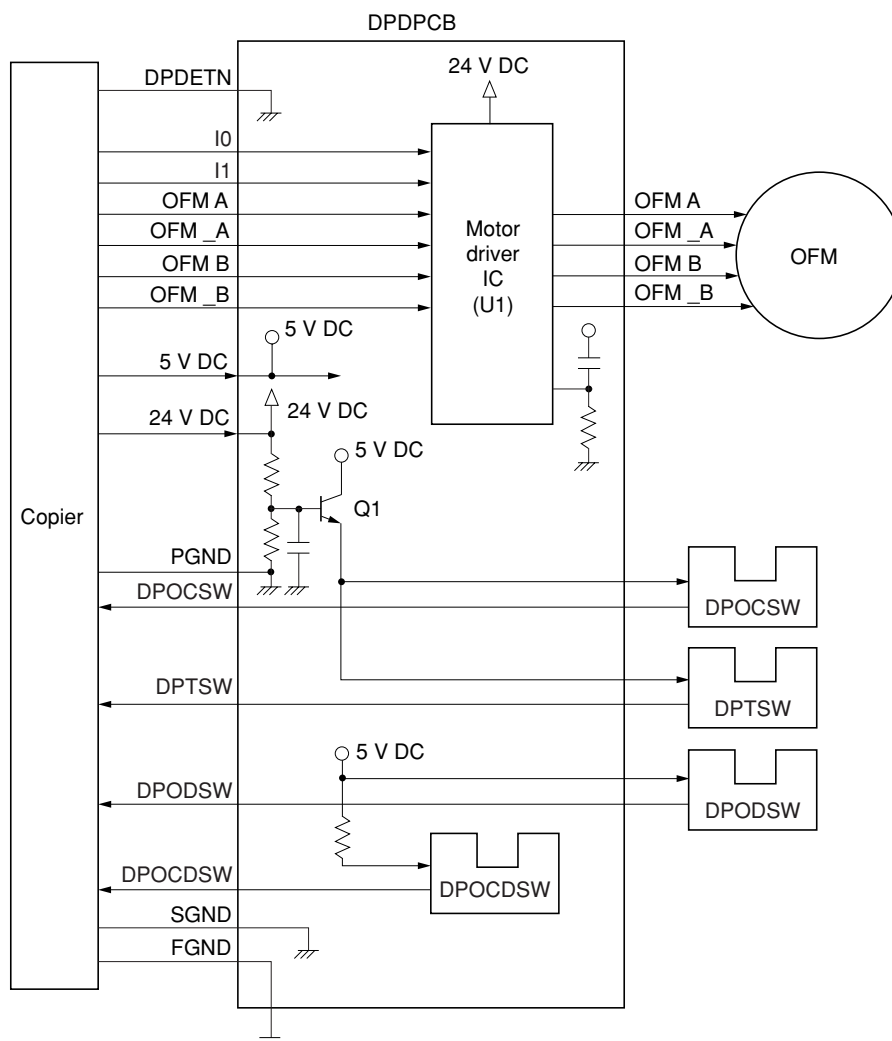


Figure 2-3-1 DP driver PCB block diagram

The DP driver PCB (DPDPCB) consists of a motor driver IC (U1), a DP open/close detection switch (DPCODSW), and so on. The PCB mainly drives the original feed motor (OFM) based on the control signal from the copier and also supplies 5 V DC power to each switch and relays signal lines. Since 5 V DC power to the DP original cover switch (DPOCSW) and the DP timing switch (DPTSW) is supplied through a transistor (Q1), the power is cut when 24 V DC power is cut due to the energy-saving function of the copier.

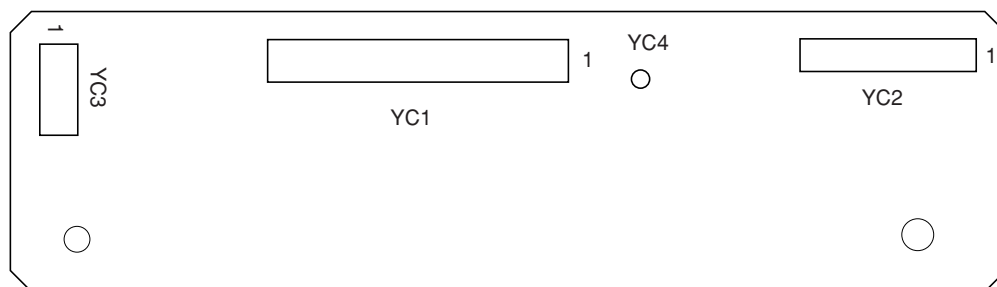
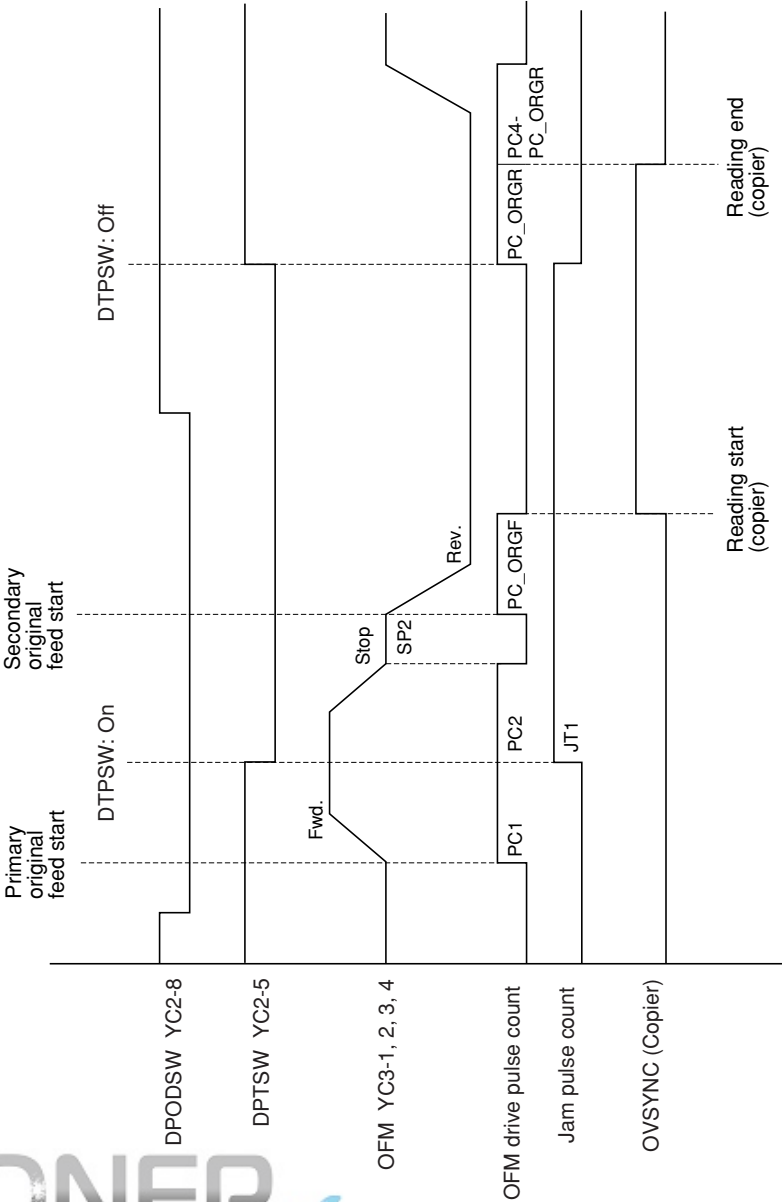


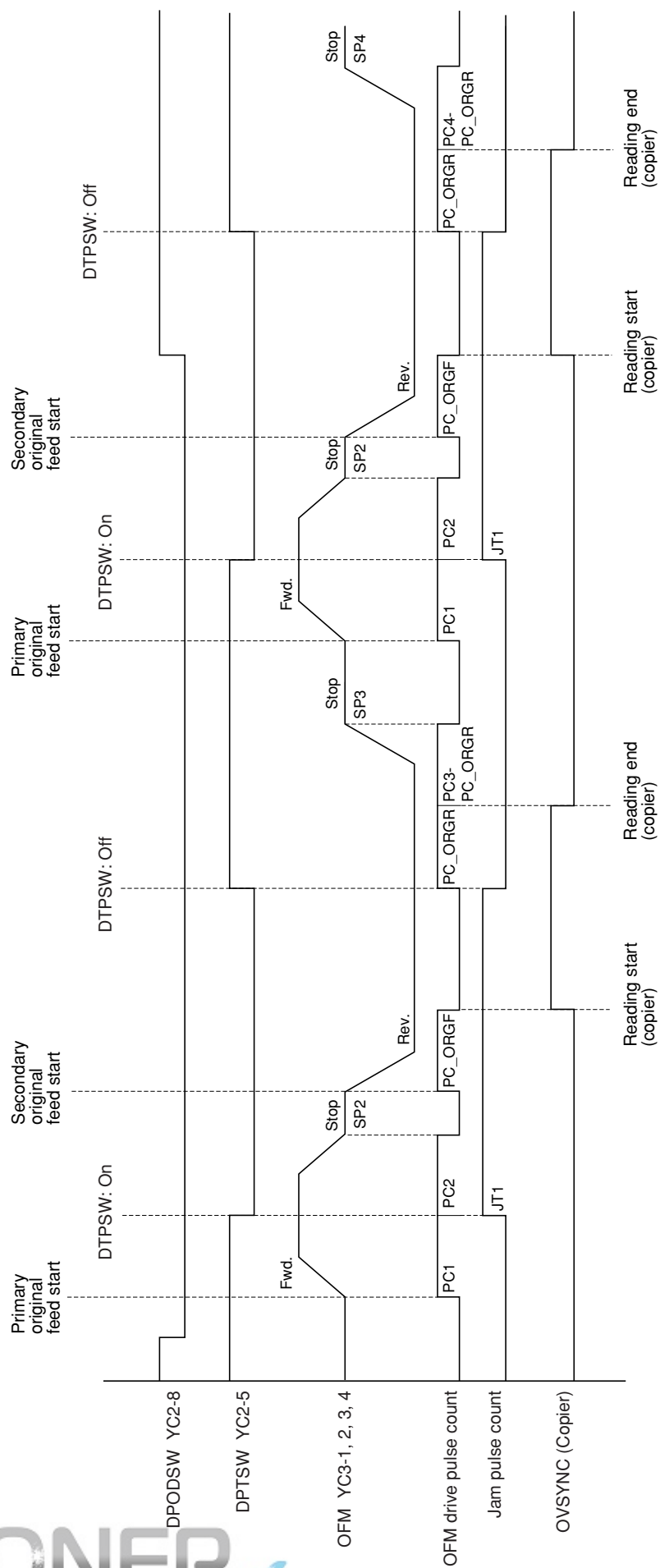
Figure 2-3-2 DP driver PCB silk-screen diagram

Terminals (CN)		Voltage	Remarks
1-1	-	-	Frame ground
1-2	1-3	24 V DC	24 V DC supply
1-5	1-4	5 V/0 V DC	DPOCDSW DP open/close
1-6	1-4	0 V/5 V DC	DPOCSW DP original cover open/close
1-7	1-4	0 V/5 V DC	DPTSW ON/OFF output
1-8	1-4	0 V/5 V DC	DPODSW ON/OFF output
1-9	1-4	0 V DC	DP installed/not installed detection signal
1-10	1-4	0 V DC	OFM drive output current control signal
1-11	1-4	0 V/5 V DC (pulse)	OFM motor coil energization pulse (OFM_A)
1-12	1-4	0 V/5 V DC (pulse)	OFM motor coil energization pulse (OFM A)
1-13	1-4	0 V/5 V DC (pulse)	OFM motor coil energization pulse (OFM_B)
1-14	1-4	0 V/5 V DC (pulse)	OFM motor coil energization pulse (OFM B)
1-15	1-4	0 V DC	OFM drive output current control signal
2-1	2-9	5 V DC	5 V DC supply for DPOCSW
2-2	2-9	0 V/5 V DC	DPOCSW DP original cover open/close
2-4	2-9	5 V DC	5 V DC supply for DPTSW
2-5	2-9	0 V/5 V DC	DPTSW ON/OFF input
2-7	2-9	5 V DC	5 V DC supply for DPODSW
2-8	2-9	0 V/5 V DC	DPODSW ON/OFF input
3-1	1-3	0 V/24 V DC (pulse)	OFM motor coil energization pulse (OFM A)
3-2	1-3	0 V/24 V DC (pulse)	OFM motor coil energization pulse (OFM B)
3-3	1-3	0 V/24 V DC (pulse)	OFM motor coil energization pulse (OFM_A)
3-4	1-3	0 V/24 V DC (pulse)	OFM motor coil energization pulse (OFM_B)
4-1	-	-	Frame ground

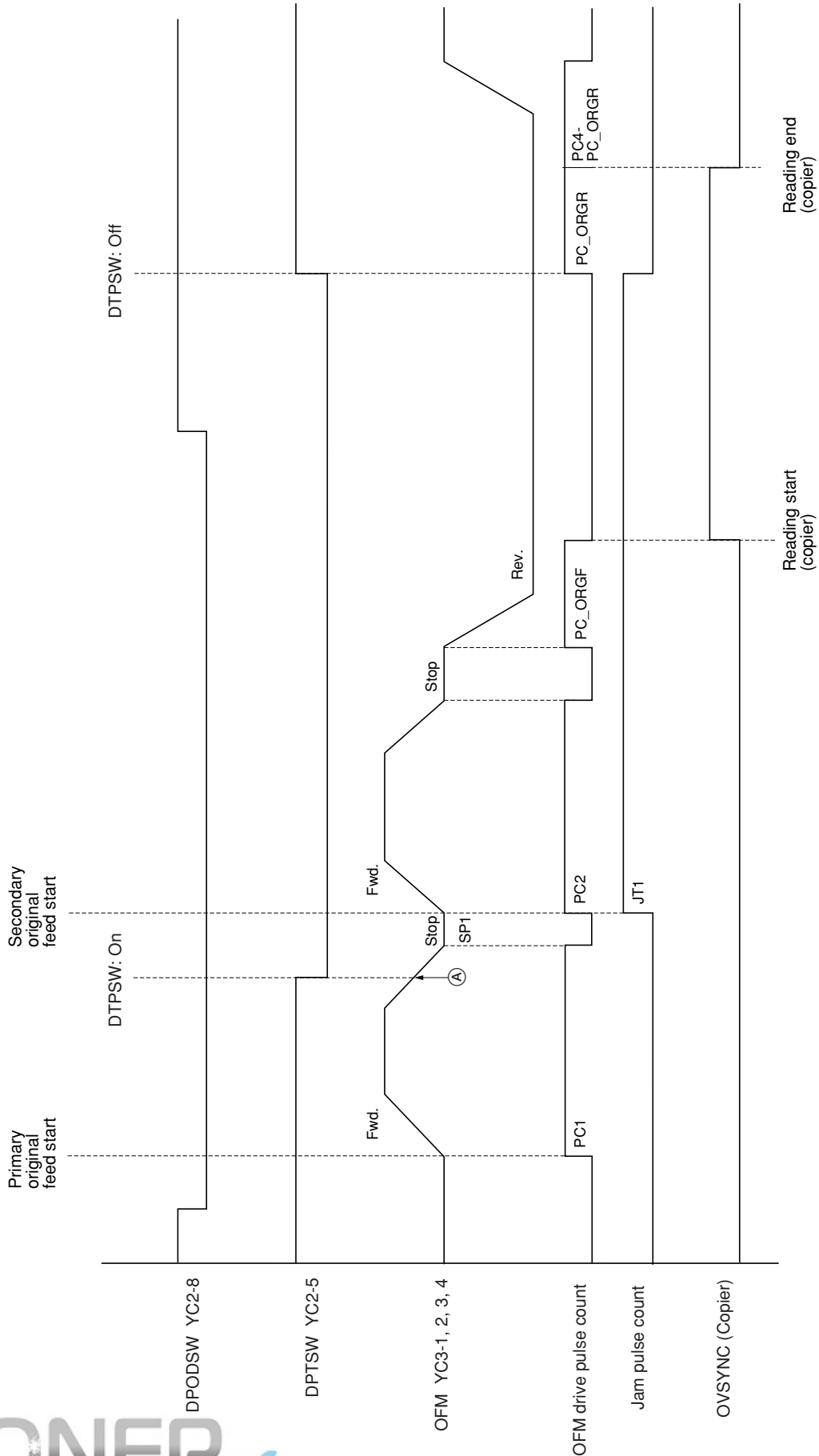
Timing chart No. 1 Feeding an A4R/8 1/2" x 11" original



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

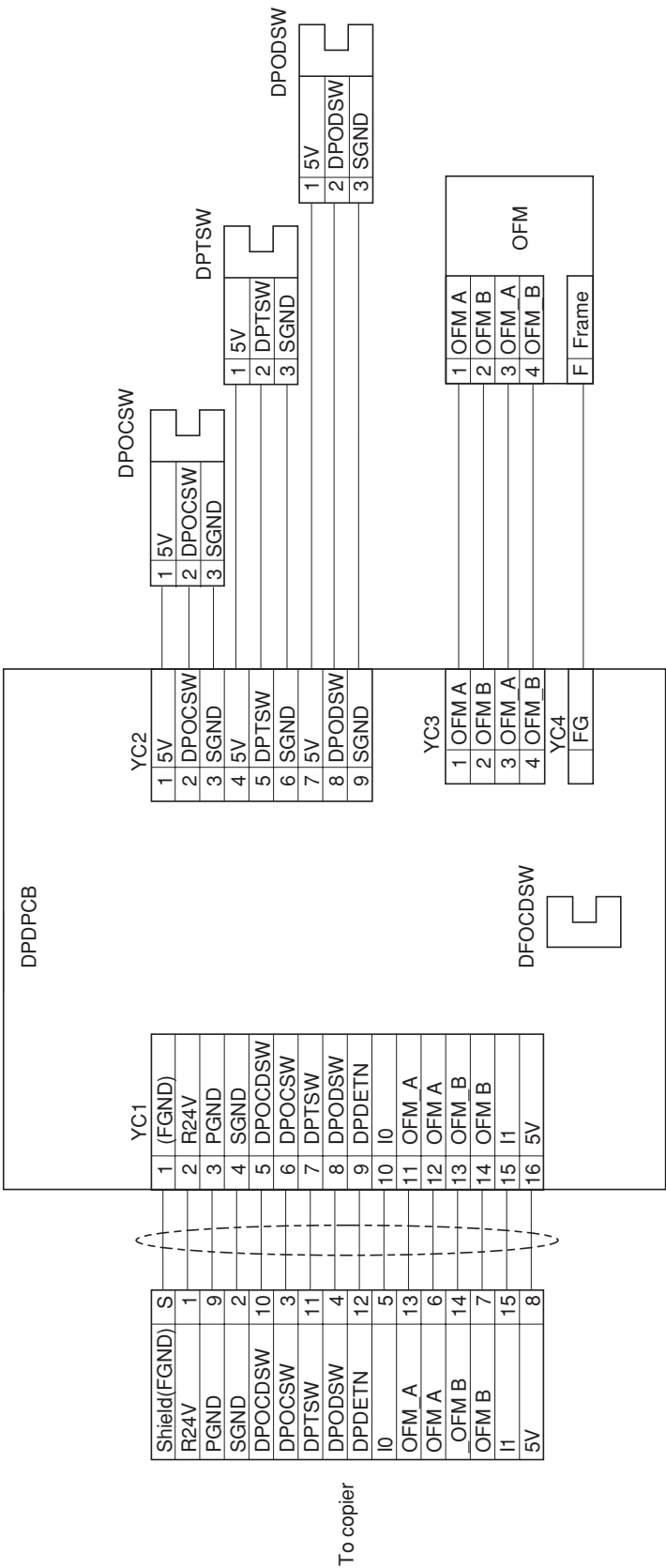


Timing chart No. 3 Feeding two A4R/8 1/2" x 11" originals (retry of primary original feed)



Ⓐ: In the primary feed, advance of an original is delayed for some reason and the DTPSW is turned on by the leading edge of the original after slowdown starts. PC2 pulse count, therefore, cannot be performed.

Connection diagram



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