

Cover Interposer Tray CI4030
Machine Code: D3D7

Field Service Manual

May, 2016

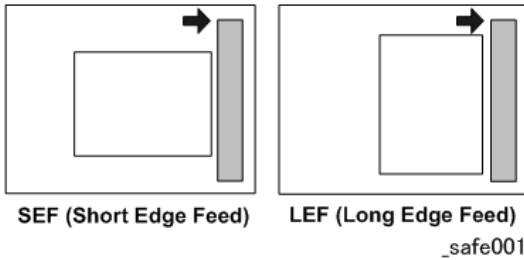
Safety, Conventions, Trademarks

Conventions

Common Terms

This is a list of symbols and abbreviations used in this manual.

Symbol, Abbreviation	Meaning
	Blue screw
	Bushing
	C-ring
	Connector
	E-ring
	Flexible film cable
	Harness clamp
	Hook
	Screw
	Spring
	Timing belt
JG	Junction Gate
LEF	Long Edge Feed
SEF	Short Edge Feed
TE	Trailing Edge of paper



Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

WARNING

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

CAUTION

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the finisher or other property.

Important

- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.

Note

- This information provides tips and advice about how to best service the machine.

General Safety Instructions

For your safety, please read this manual carefully before you use this product. Keep this manual handy for future reference.

Safety Information

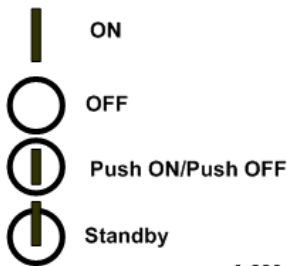
Always obey the following safety precautions when using this product.

Safety During Operation

In this manual, the following important symbols and notations are used.

Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.



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Responsibilities of the Customer Engineer

Reference Material for Maintenance

- Maintenance shall be done using the special tools and procedures prescribed for maintenance of the machine described in the reference materials (service manuals, technical bulletins, operating instructions, and safety guidelines for customer engineers).
- In regard to other safety issues not described in this document, all customer engineers shall strictly obey procedures and recommendations described the “CE Safety Guide”.
- Use only consumable supplies and replacement parts designed for use of the machine.

Before Installation, Maintenance

Power

WARNING

- Always disconnect the power plug before doing any maintenance procedure. After switching off the machine, power is still supplied to the main machine and other devices. To prevent electrical shock, switch the machine off, wait for a few seconds, then unplug the machine from the power source.
- Before you do any checks or adjustments after turning the machine off, work carefully to avoid injury. After removing covers or opening the machine to do checks or adjustments, never touch electrical components or moving parts (gears, timing belts, etc.).
- After turning the machine on with any cover removed, keep your hands away from electrical components and moving parts. Never touch the cover of the fusing unit, gears, timing belts, etc.

Installation, Disassembly, and Adjustments

WARNING

- After installation, maintenance, or adjustment, always check the operation of the machine to make sure that it is operating normally. This ensures that all shipping materials, protective materials, wires and tags, metal brackets, etc., removed for installation, have been removed and that no tools remain inside the machine. This also ensures that all release interlock switches have been restored to normal operation.
- Never use your fingers to check moving parts causing spurious noise. Never use your fingers to lubricate moving parts while the machine is operating.

Special Tools

CAUTION

- Use only standard tools approved for machine maintenance.
- For special adjustments, use only the special tools and lubricants described in the service manual. Using tools incorrectly, or using tools that could damage parts, could damage the machine or cause injuries.

During Maintenance

General

CAUTION

- Before you begin a maintenance procedure: 1) Switch the machine off, 2) Disconnect the power plug from the power source, 3) Allow the machine to cool for at least 10 minutes.
- Avoid touching the components inside the machine that are labeled as hot surfaces.

Safety Devices

WARNING

- Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
- Never do any procedure that defeats the function of any safety device. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.

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- For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.

Organic Cleaners

CAUTION

- During preventive maintenance, never use any organic cleaners (alcohol, etc.) other than those described in the service manual.
- Make sure the room is well ventilated before using any organic cleaner. Use organic solvents in small amounts to avoid breathing the fumes and becoming nauseous.
- Switch the machine off, unplug it, and allow it to cool before doing preventive maintenance. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
- Wash your hands thoroughly after cleaning parts with an organic cleaner to contamination of food, drinks, etc. which could cause illness.
- Clean the floor completely after accidental spillage of silicone oil or other materials to prevent slippery surfaces that could cause accidents leading to hand or leg injuries. Use "My Ace" Silicone Oil Remover (or dry rags) to soak up spills. For more details, please refer to Technical Bulletin "Silicone Oil Removal" (A024-50).

Ozone Filters

CAUTION

- Always replace ozone filters as soon as their service life expires (as described in the service manual).
- An excessive amount of ozone can build up around machines that use ozone filters if they are not replaced at the prescribed time. Excessive ozone could cause personnel working around the machine to feel unwell.

Power Plug and Power Cord

WARNING

- Before servicing the machine (especially when responding to a service call), always make sure that the power plug has been inserted completely into the power source. A partially inserted plug could lead to heat generation (due to a power surge caused by high resistance) and cause a fire or other problems.
- Always check the power plug and make sure that it is free of dust and lint. Clean it if necessary. A dirty plug can generate heat which could cause a fire.

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- Inspect the length of the power cord for cuts or other damage. Replace the power cord if necessary. A frayed or otherwise damaged power cord can cause a short circuit which could lead to a fire or personal injury from electrical shock.
 - Check the length of the power cord between the machine and power supply. Make sure the power cord is not coiled or wrapped around any object such as a table leg. Coiling the power cord can cause excessive heat to build up and could cause a fire.
 - Make sure that the area around the power source is free of obstacles so the power cord can be removed quickly in case of an emergency.
 - Make sure that the power cord is grounded (earthed) at the power source with the ground wire on the plug.
 - Connect the power cord directly into the power source. Never use an extension cord.
 - When you disconnect the power plug from the power source, always pull on the plug, not the cable.

After Installation, Servicing

Disposal of Used Items

CAUTION

- Always dispose of used items (developer, toner, toner cartridges, OPC drums, etc.) in accordance with the local laws and regulations regarding the disposal of such items.
- To protect the environment, never dispose of this product or any kind of waste from consumables at a household waste collection point. Dispose of these items at one of our dealers or at an authorized collection site.

Points to Confirm with Operators

At the end of installation or a service call, instruct the user about use of the machine. Emphasize the following points.

- Show operators how to remove jammed paper and troubleshoot other minor problems by following the procedures described in the operating instructions.
- Point out the parts inside the machine that they should never touch or attempt to remove.
- Confirm that operators know how to store and dispose of consumables.
- Make sure that all operators have access to an operating instruction manual for the machine.
- Confirm that operators have read and understand all the safety instructions described in the operating instructions.

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- Demonstrate how to turn off the power and disconnect the power plug (by pulling the plug, not the cord) if any of the following events occur: 1) something has spilled into the product, 2) service or repair of the product is necessary, 3) the product cover has been damaged.
 - Caution operators about removing paper fasteners around the machine. They should never allow paper clips, staples, or any other small metallic objects to fall into the machine.

Safety Instructions for this Machine

1. The installation must be done by trained service technicians.
2. This machine weighs 92 kg. (202.9 lb.). At least four persons are required to remove the machine from its pallet and position it for installation.
3. To prevent fire hazards never use flammable solvents around the machine.
4. Never place any object on the machine.
5. If anything falls into the machine, turn off the main power switch on the right side of the machine, then disconnect the power cord from the power source.
6. Locate the machine on a sturdy flat surface where it will not be exposed to excessive vibration.
7. To avoid fire hazard, confirm that the ventilation ports are not blocked, so air can flow freely.
8. Gas generated by the molten glue can irritate the eyes, throat, and nose. The machine should always be used in a well ventilated room.
9. To avoid the dangers of fire and electrical shock, make sure that the machine is never exposed to:
 - Excessive high temperatures and/or humidity
 - Dust
 - Water
 - Direct sunlight
 - Open flame
 - Corrosive gases

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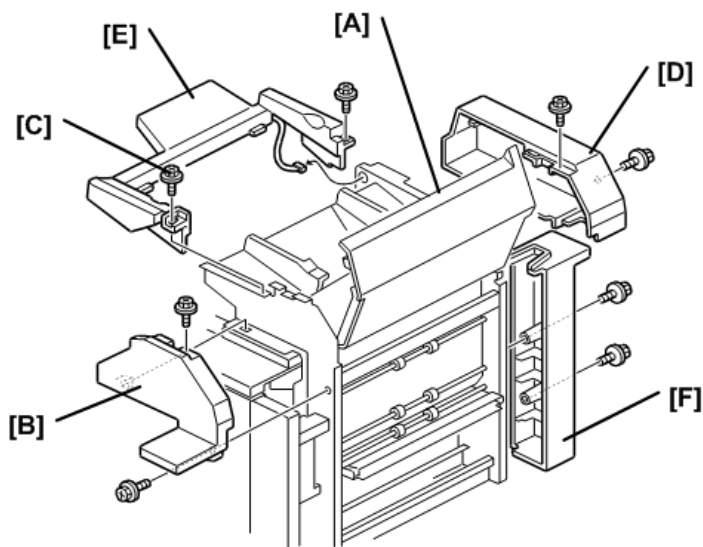
1. Replacement and Adjustment

Covers

1

Covers, Tray

1. Open the feed cover [A].
2. Before you remove upper front cover [B], remove screws [C].
3. Remove:
 - [D] Rear upper cover
 - [E] Slip sheet tray
 - [F] Rear middle cover



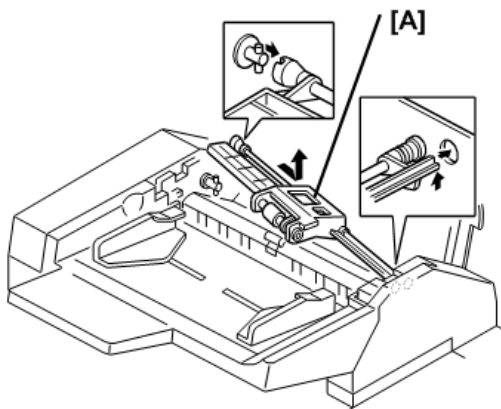
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Feed Unit

1

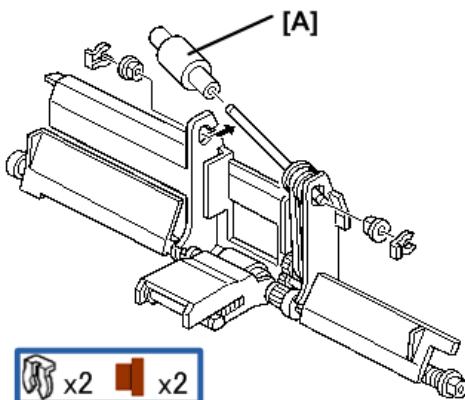
Feed Unit and Pick-up Roller

1. Open the feed cover.
2. Push the feed unit [A] slightly to the right, and then remove it.



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3. Remove pick-up roller [A].

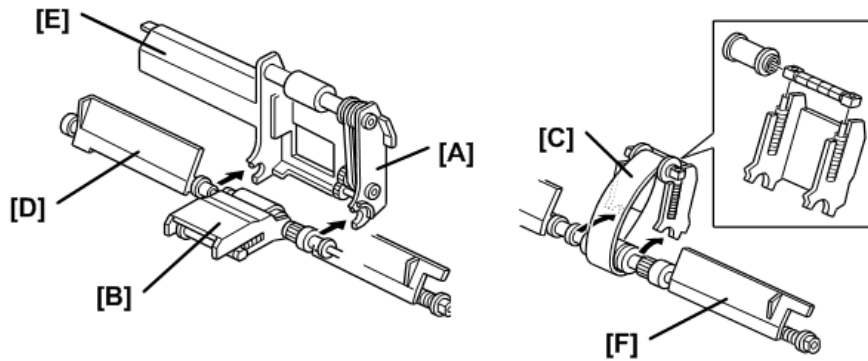


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Feed Belt

1. Remove the feed unit. See above.
2. Pull the unit away from the bushings in the direction of the arrow, and then remove the pick-up roller unit [A].

3. Hold the feed belt holder [B] by the sides, and then lift it up to separate the holder, while pulling slowly to avoid losing the springs.
4. Remove feed belt [C].



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Re-assembly

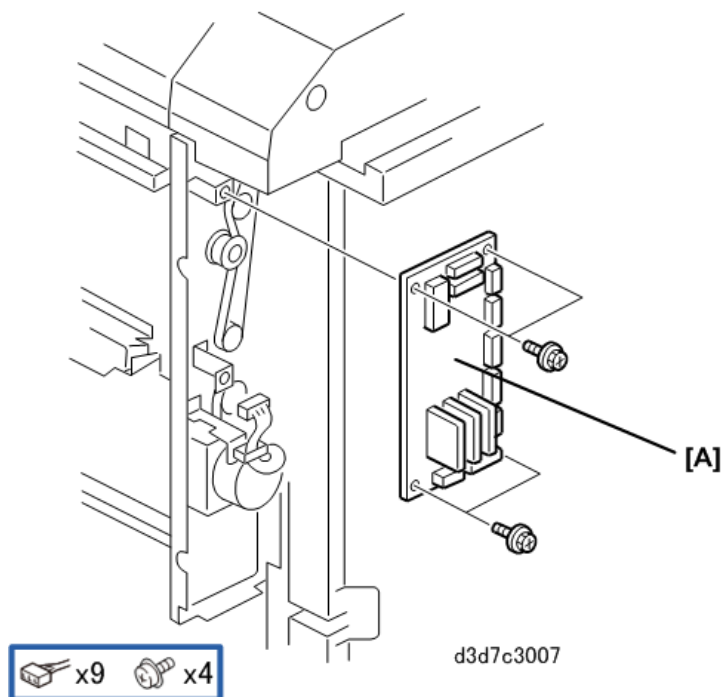
1. Position the pick-up roller unit [A] and feed belt holder [B] as shown above.
2. On the rear side, slide out the bushing, and rotate [D] until its flat side is parallel with [E], then snap it on.
3. On the front side, rotate [F] until its flat side is parallel with [D], then snap it on. Viewed from the bottom, the plates must be aligned.

Main Board

1

Main Board Removal

1. Open the top cover.
2. Remove the rear cover. page 11
3. Remove main board [A].



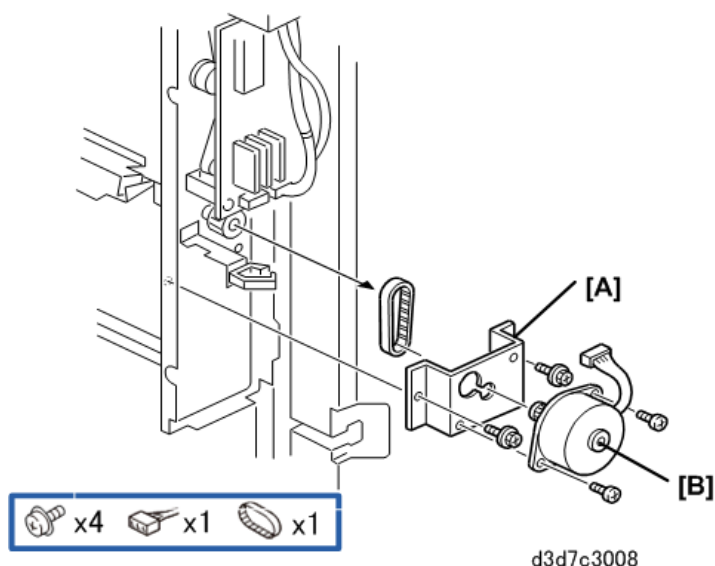
4. Check the DIP switches on the new board before you install it.
5. All DIP switch settings on the main board of the cover sheet unit must be **OFF**.

Motors

Vertical Transport Motor

1

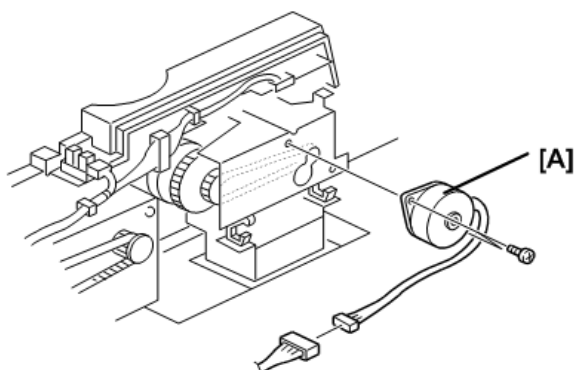
1. Open the top cover.
2. Remove the rear middle cover. page 11
3. Remove motor bracket [A] with the motor attached.
4. Remove motor [B] from the bracket.



Bottom Plate Lift Motor

1. Remove rear upper cover. page 11
2. Remove bottom plate lift motor [A].

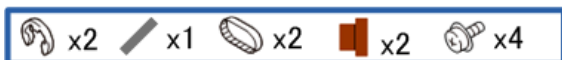
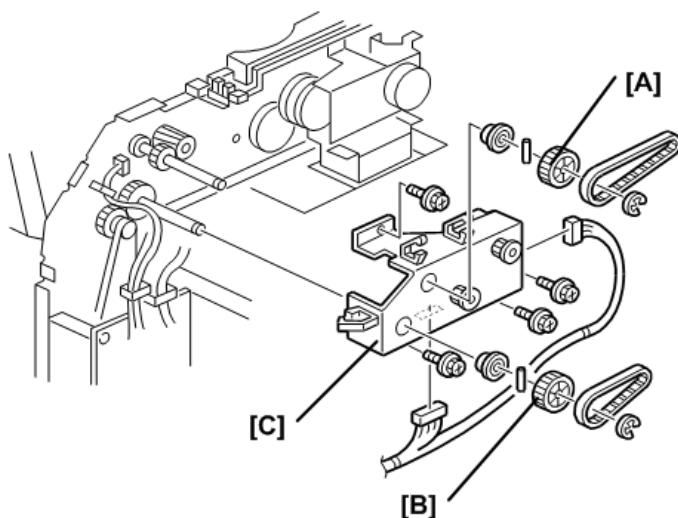
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Feed Motor, Transport Motor

1. Remove rear upper cover. page 11
2. When removing the feed gear [A] and transport gear [B], hold one hand under the gear to catch the pin as it falls from the hole in the shaft.
3. Remove:
 - [A] Feed gear
 - [B] Transport gear
 - [C] Motor bracket

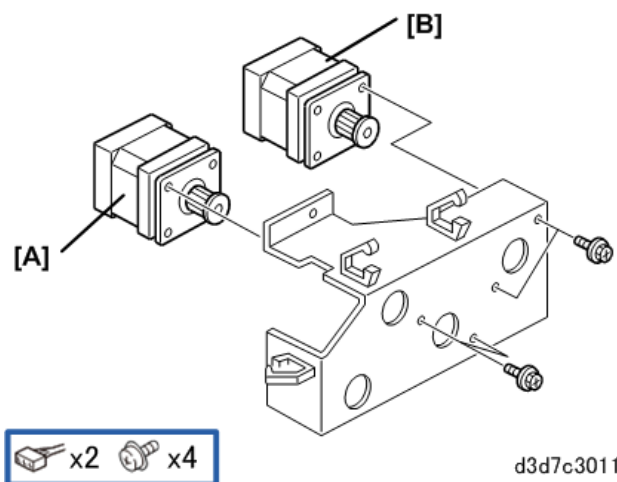


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4. Remove:

[A] Feed motor

[B] Transport motor



2. Detailed Descriptions

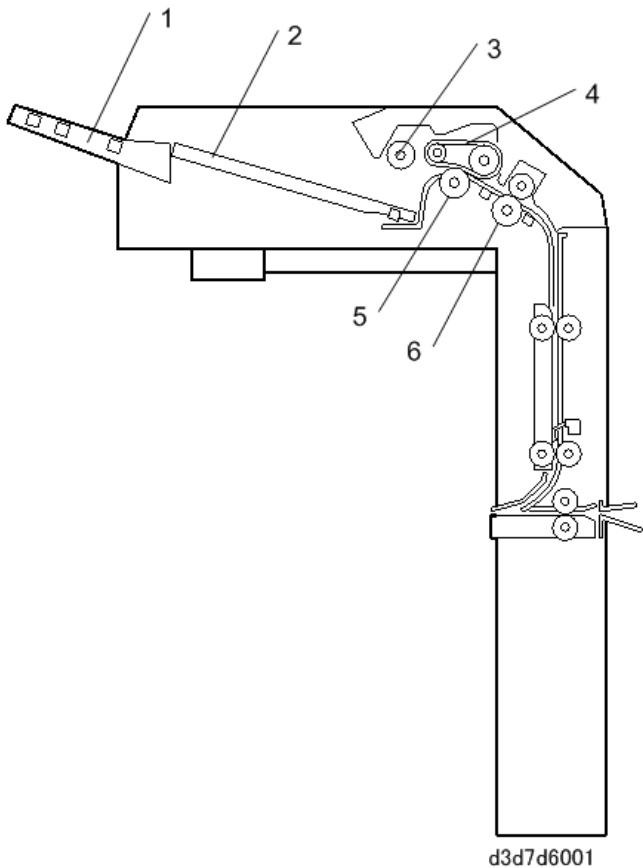
Overview

Specifications

2

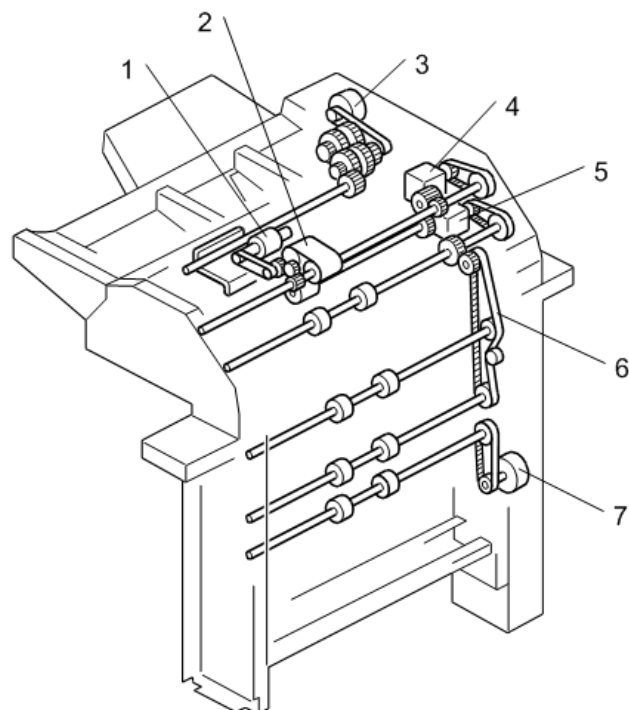
Configuration	Stack cover inserter for finisher
Paper Separation at Feed	Standard FRR
Feed Mechanism	Feed Rollers
Paper Weight	64 to 216 g/m ²
Paper Size	A3 SEF, B4 SEF, A4 LEF/SEF, B5 LEF/SEF, A5 LEF/SEF, 11×17 SEF, 8 ¹ / ₂ ×11 LEF/SEF
Allowed Curl	H: Less than 5 mm
Stack Size	200 sheets
Paper Detection	None
Power Consumption	Less than 43W
Power Supply	Main Machine
Dimension (W x D x H)	500×600×600 mm (20 x 23.5 x 23.5 in.)
Weight	12 kg (35.2 lb.)

Main Layout



No.	Part
1	Support tray
2	Slip sheet tray
3	Pick-up roller
4	Feed belt
5	Separation roller
6	Grip roller

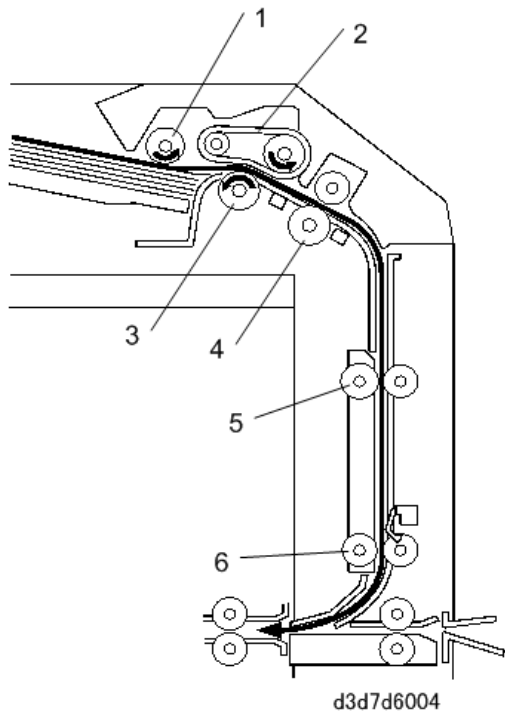
Drive Layout



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No.	Part
1	Pick-up Roller
2	Feed Belt
3	Bottom Plate Lift Motor
4	Feed Motor
5	Transport Motor
6.	Timing Belt
7.	Vertical Transport Motor

Paper Path



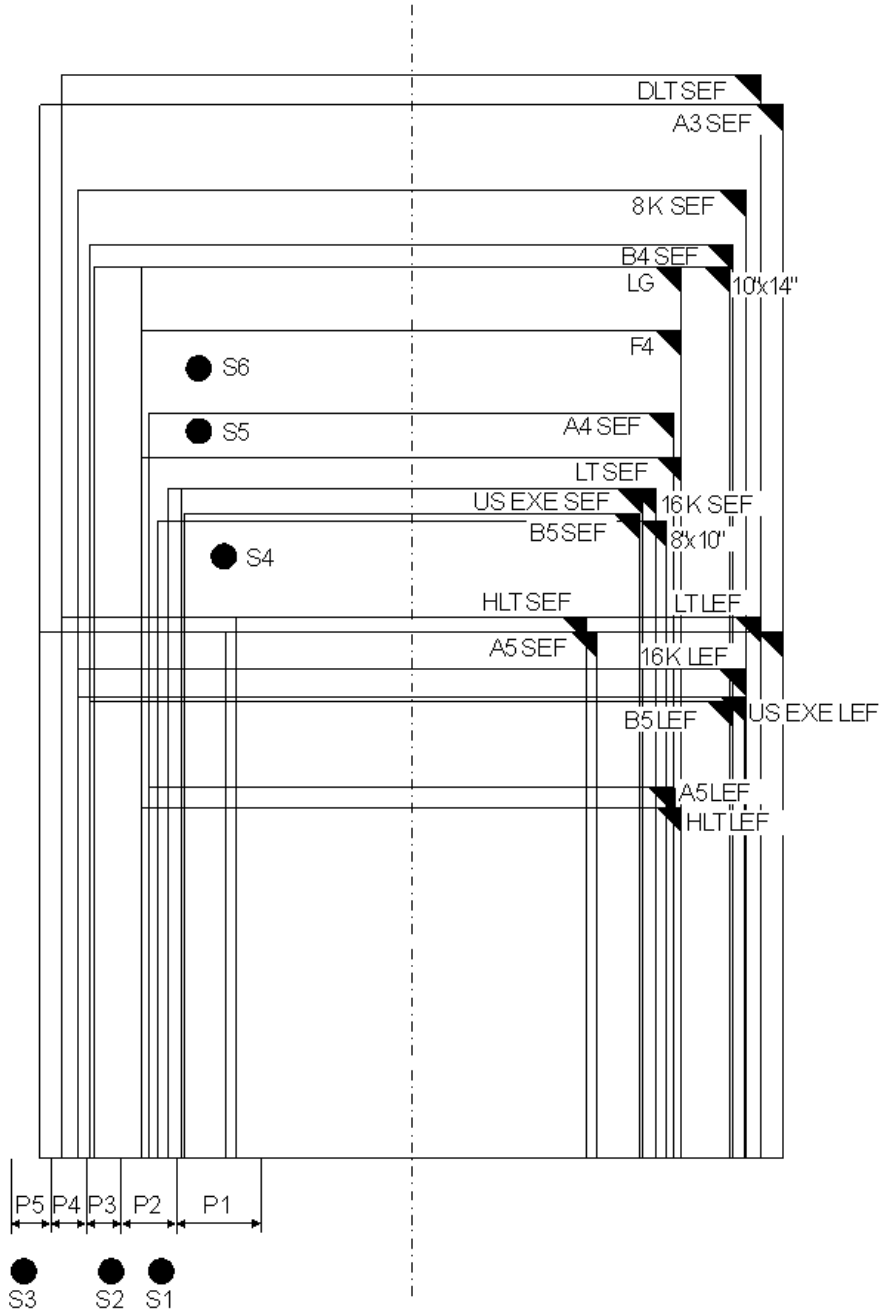
No.	Part
1	Pick-up Roller
2	Feed Belt
3	Separation Roller
4	Grip Roller
5	Transport Roller 1
6	Transport Roller 2

The paper feeds from the tray, to the feed belt, then to the grip roller and down into the paper path to the finisher below.

Mechanisms

Paper Size Detection

The width sensors [A] (S1, S2, S3) and length sensors [B] (S4, S5, S6) detect the width and length of the original on the interposer feed tray.



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The table below lists the sensor output for each paper size.

	S1	S2	S3	S4	S5	S6
--	----	----	----	----	----	----

A3	0	1	1	1	1	1
B4	1	1	0	1	1	1
A4 SEF	1	0	0	1	1	0
A4 LEF	0	1	1	0	0	0
B5 SEF	0	0	0	1	0	0
B5 LEF	1	1	0	0	0	0
A5 SEF	0	0	0	0	0	0
A5 LEF	1	0	0	0	0	0
11" x 17"	1	1	1	1	1	1
10" x 14" SEF	1	1	0	1	1	1
8 1/2" x 14"	1	0	0	1	1	1
8 1/2" x 13"	1	0	0	1	1	1
8 1/2" x 11"	1	0	0	1	0	0
11" x 8 1/2"	1	1	1	0	0	0
8" x 10"	1	0	0	1	0	0
5 1/2" x 8 1/2"	0	0	0	0	0	0
8 1/2" x 5 1/2"	1	0	0	0	0	0
7 1/2" x 10 1/2" (US Exec.)	0	0	0	1	0	0
10 1/2" x 7 1/2" (US Exec.)	1	1	1	0	0	0
8 K	1	1	1	1	1	1
16 K SEF	1	0	0	1	0	0
16 K LEF	1	1	1	0	0	0

The cover interposer tray detects all the paper sizes listed above. However, there are some limitations on the display of the correct paper size.

		North America	Europe/Asia
B4 SEF	257 x 364 mm	Displays 10"x14" *1	
B5 SEF	182 x 257	Displays "US Exec." *1	
A5 SEF	148 x 210	Displays "HLT SEF" *1	
A5 LEF	210 x 148	Displays "HLT LEF" *1	
DLT SEF	11" x 17"		Displays "8K LEF" *2
LG SEF	8 1/2" x 14"		Displays "F4 SEF" *2
LT SEF	8 1/2" x 11"		Displays "16 K SEF" *2
LT LEF	11" x 8 1/2"		Displays "16 K LEF" *2

*1: Cannot be corrected.

*2: Can be corrected with SP5158

North America

Execute **SP5959 006** and enter the correct number for the size of the paper loaded for feeding from the cover interposer tray.

Loaded	Display (Default)	To Select for Display	Enter
8 1/2" x 13"	8 1/2" x 14"	8 1/2" x 13"	165
10 1/2" x 7 1/2"	8 1/2" x 11"	10 1/2" x 7 1/2"	173
8" x 10"	8 1/2" x 11"	8" x 10"	171

Europe/Asia

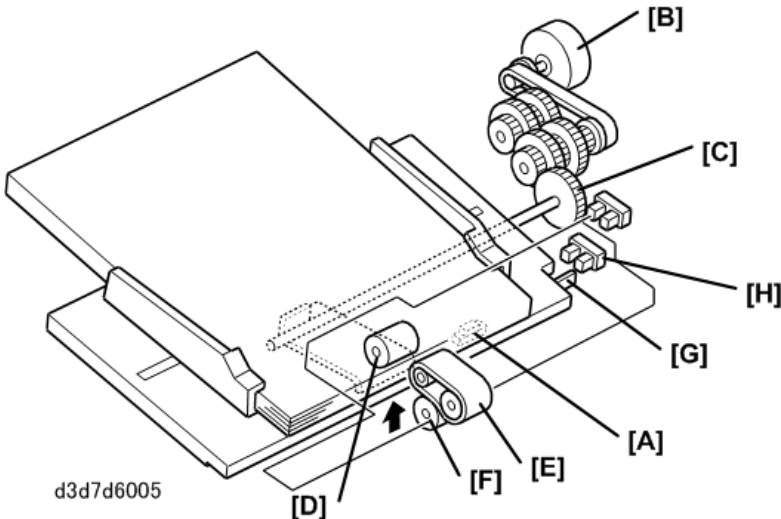
Execute SP5959 006 and enter the correct number for the size of the paper loaded for feeding from the cover interposer tray.

Loaded	Display (Default)	To Select for Display	Enter
11" x 17"	8 K	11" x 17"	160
8 1/2" x 11"	16 K SEF	8 1/2" x 11"	166
11" x 8 1/2"	16 K LEF	11" x 8 1/2"	38

81/4" x 13"	81/2" x 13" SEF	81/4" x 13"	168
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Paper Feed

2



Power On

When paper is placed on the tray, the paper set sensor [A] in the tray actuates and switches on the bottom plate lift motor [B]. The top of the stack raises the pick-up roller unit until the actuator on this unit actuates the pick-up roller position sensor [C] and switches the motor off.

Paper Separation and Feed

The pick-up roller [D] picks up the original, and the feed belt [E] feeds the sheet to the grip roller. The separation roller [F] reverses if more than one sheet is fed

Bottom Tray Lift

As sheets feed from the top of the stack:

- The pick-up roller unit descends until the actuator on the pick-up roller unit drops out of the pick-up roller position sensor [C].
- The bottom plate lift motor switches on to raise the stack until the actuator enters the pick-up roller unit position sensor again and switches the motor off.
- This repeats until the end of the job or until paper runs out.

Paper Near-end

Near-end is detected when the actuator [G] on the bottom plate enters the near-end sensor [H].

Paper End

After the last sheet feeds the paper set sensor [A] goes off and signals paper out.

MEMO