Duplo

from print to documents

INSTRUCTION MANUAL

SLITTER / CUTTER / CREASER

DC - 648

Be sure to read this manual prior to use.
Please leave this manual at the site of use for easy reference.

Introduction

Thank you for your purchase of the DC-648.
To ensure safe and efficient prolonged use of this machine, read and thoroughly understand this manual before using the machine.
After using this manual, be sure to keep it in a handy place to reference.

Pictorial Symbols and Other Notations Used in This Manual

IMPORTANT : Introduces instructions for correct operation of the machine.
If these instructions are ignored, the machine may not be able to operate at optimum performance or may break down.

REFERENCE : Introduces information that is useful for operation and maintenance of the machine, or information about the machine's performance, etc.

(→ P.00 xxxx) : Indicates the page number and item containing related information.

The English version of DC-648 Instruction Manual is original instructions.

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PLEASE NOTE

In the interests of upgrading our product, specifications and other data given in this manual are subject to change without notice.
If the manual contains anything that you do not understand, contact the dealer for clarification.

CE

For EU

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Low Voltage Directive 2014/35/EU **Machinery Directive 2006/42/EC** **Electromagnetic Compatibility Directive 2014/30/EU** **Restriction of Hazardous Substances Directive 2011/65/EU**

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Niederspannungsrichtlinie 2014/35/EU **Maschinenrichtlinie 2006/42 EG** **Richtlinie 2014/30/EU zur elekt romagnetischen Verträglichkeit** **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe**

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Directive 2014/35/UE relative au matériel électrique destiné à être employé dans certaines limites de tension **Directive 2006/42/CE relative aux machines** **Directive 2014/30/UE concernant la compatibilité électromagnétique** **Directive 2011/65/UE relative à la limitation de l'utilisation de certaines substances dangereuses**

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Direttiva 2014/35/UE relativa alle apparecchiature a bassa tensione **Direttiva 2006/42/CE sui macchinari** **Direttiva 2014/30/UE di compatibilità elettromagnetica** **Direttiva 2011/65/UE sulla restrizione dell'uso di sostanze pericolose**

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Directiva 2014/35/UE sobre baja tensión **Directiva 2006/42/CE sobre máquinas** **Directiva 2014/30/UE sobre compatibilidad electromagnética** **Directiva 2011/65/UE de restricción de sustancias peligrosas**

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Sp

Disposal of Old Electrical & Electronic Equipment

This symbol (the symbol of the crossed out wheeled bin) indicates that in European countries this product should not be disposed of as household waste.

Please recycle where facilities exist by checking with your local authority or supplier for recycling advice.

By ensuring this product is disposed of correctly through proper treatment, recovery and recycling, you will help prevent potential negative effects on the environment and human health.

En

Entsorgung von alten elektrischen und elektronischen Ausrüstungsteilen

Dieses Symbol (das Symbol mit dem durchgekreuzten fahrbaren Müllbehälter) zeigt an, dass dieses Produkt in europäischen Länden nicht als Haushaltsmüll entsorgt werden darf. Bitte informieren Sie sich bei Ihren örtlichen Behörden oder bei Ihrem Händler hinsichtlich einer Empfehlung für die Entsorgung und führen Sie die betreffenden Teile dort, wo solche Einrichtungen vorhanden sind, einem Recycling-Prozess zu.

Indem sie sicherstellen, dass das betreffende Produkt durch richtige Behandlung, Rückführung und Recycling entsorgt wird, tragen Sie dazu bei, möglichen negativen Auswirkungen auf die Umwelt und die menschliche Gesundheit vorzubeugen.

Ge

Elimination du matériel électronique et électrique usagé

Ce symbole (une poubelle marquée d'une croix) indique que dans les pays européens, ce produit ne doit pas être éliminé comme des ordures ménagères.

Recyclez-le dans les sites adaptés qui vous seront indiqués par les autorités locales ou renseignez-vous auprès de votre fournisseur.

En veillant à ce que ce produit soit éliminé correctement avec un traitement, une collecte et un recyclage adaptés, vous contribuez à éviter son action nocive potentielle sur l' environnement et la santé humaine.

Fr

Smaltimento di attrezzature elettriche ed elettroniche consumate

Questo simbolo (il simbolo della pattumiera con rotelle barrata) indica che nei paesi europei questo prodotto non deve essere buttato nei rifiuti domestici.

Per favore smaltire in luogo addetto al riciclo, dove esistente, chiedendo informazioni alle autorità locali o a chi fornisce consulenza a proposito.

Garantendo uno smaltimento adeguato di questo prodotto (trattamento, recupero e riciclo corretto), aiuterete a prevenire effetti negativi sull'ambiente e sulla salute dell'uomo.

It

Eliminación de residuos de aparatos eléctricos y electrónicos

Este símbolo (un cubo de basura tachado) indica que en los países europeos este producto no deberá eliminarse como si se tratara de un residuo doméstico. Solicite asesoramiento sobre reciclaje a las autoridades locales o a su distribuidor, y siga la normativa en materia de gestión medioambiental y reciclaje de este tipo de residuos.

Si toma las medidas pertinentes para que este producto se elimine mediante un tratamiento, recuperación y reciclaje adecuados, contribuirá a evitar posibles efectos negativos en el medio ambiente y la salud humana.

Sp

Notes on Safety (Please Read and Observe)

Safety Precautions

Various symbols and pictures are used in this manual and on the labels affixed to the machine. These symbols and pictures provide warnings and instructions to prevent danger to you or other person, and to prevent damage to office property.
The meanings of these symbols and pictures are explained below.

⚠ WARNING Indicates a high degree of potential danger. Failure to heed the warning may lead to death or serious injury.

⚠ CAUTION Indicates a medium degree of potential danger. Failure to heed the caution may lead to injury or damage to property.

<Examples of Pictorial Symbols>

⃠ A circle with a line through it indicates a prohibited action.
The particular act prohibited is indicated by a picture inside the circle. (In the example shown here, the prohibited act is disassembly.)

● A black disc indicates an instruction, or sometimes a prohibited action.
The instruction itself is indicated by pictorial symbols drawn in white on the disc. (In the example shown here, the instruction is **Remove the plug from the outlet**.)

● Precautions for Use

⚠ WARNING	
	● If the machine is used after foreign matter (metal fragments, water, or liquid) has entered the machine, this may result in fire or electric shock. → Turn the main unit's power switch OFF, and then remove the power plug from the outlet. Contact the sales distributor.
	● If the machine is used after heat, smoke, a strange smell, or other abnormality has been detected, this may result in fire or electric shock. → Turn the power switch OFF, and then remove the power plug from the outlet. Contact the sales distributor.
	● Do not insert or drop metal, flammable material, or any other materials through the ventilation holes into the interior of the machine. → Doing so may result in fire or electric shock.
	● Keep the machine away from a pin, wire, or other metallic or foreign objects. Do not allow liquid to enter the machine through its openings or gaps. → Malfunctions and a fire or electric shock may result.
	● Do not place flower vases, flowerpots, cups, or water containers (including metal containers) on top of the machine. → Fire or electric shock may result if liquid spills inside the machine.

● Caution for Grounding

⚠ WARNING

● Use only the power cord that is provided among the accessories.
Insert the power cord plug firmly into the socket, so that proper electrical contact is effected.
→ Use of any other power cord could result in imperfect grounding.
If grounding is imperfect and electrical leakage occurs, fire or electric shock could result.

● Caution for Power Supply and Power Cord

⚠ WARNING

● Use only the power cord that is provided among the accessories. The power cord is only for this product. Never use it for another product.
● Do not use a source voltage other than that specified.
Do not connect two or more loads to a single outlet.
→ Doing so may result in fire or electric shock.

● Be sure to remove dust from the power plug and/or the outlet.
Using these without removing dust may have minute electric current flow to the surface due to the humidity and cause a fire due to the heat.
→ It may cause a fire or electric shock.

● Do not remove or insert the power plug with wet hands.
→ Doing so may result in electric shock.

● Do not damage, break, or modify the power cord.
Do not place heavy objects on, tug or bend it unnecessarily.
→ Doing so may result in fire or electric shock.

● Remove the power plug itself, not the cord.
→ Tugging the cord may damage it (expose conductors, or cause disconnections, etc.), resulting in fire or electric shock.

● Prohibition of Disassembly or Modification

⚠ WARNING

● Do not modify the machine.
→ Doing so may result in fire or electric shock.

● Do not remove the rear lid or covers from the machine.
→ The inside of the machine contains high-voltage parts, which may cause electric shock.

● Caution for Location

⚠ WARNING

● Do not place the machine in a humid or dusty area.
→ Doing so may result in fire or electric shock.

● The machine is not suitable for use in locations where children are likely to be present.

⚠ CAUTION

● Before moving the machine, remove the power plug from the outlet.
→ If the power cord is damaged, this may result in fire or electric shock.

● Do not place the machine in an unstable position such as on an unsteady floor or a sloping area.
→ If the machine drops or falls over, it may result in injury.

● Avoid placing the machine in a place subject to direct sunlight or heating equipment such as a stove.
● Avoid placing the machine in a place subject to high or low temperature or high humidity.
→ The document absorbs moisture and it may cause document jam or wrinkles.

● Leave the power cord unplugged when the machine is not used for a long period.
→ The insulation may deteriorate and cause an electrical fire.

● Caution for Cleaning

⚠ CAUTION

● Before cleaning the machine, turn off the power switch and unplug the power cord.
→ If the machine is activated accidentally, it may cause injury.

● Do not use flammable sprays or solvents inside or near the machine.
→ Gas may accumulate inside the machine causing a fire or explosion.

● Preventing Injury to Hands or Fingers

⚠ WARNING

● There are tools of the slitter modules inside the machine. Keep your fingers away from those.

● Use tweezers or a similar tool to remove a jammed document.
Be sure to unplug the power cord before removing a jammed document in order to prevent electric shock.

⚠ CAUTION

● When opening or closing the top cover, be sure to hold the handle on it.
→ If you do not use the handle to open/close the top cover, your hands or fingers may be caught in the machine.

● Caution for Installation

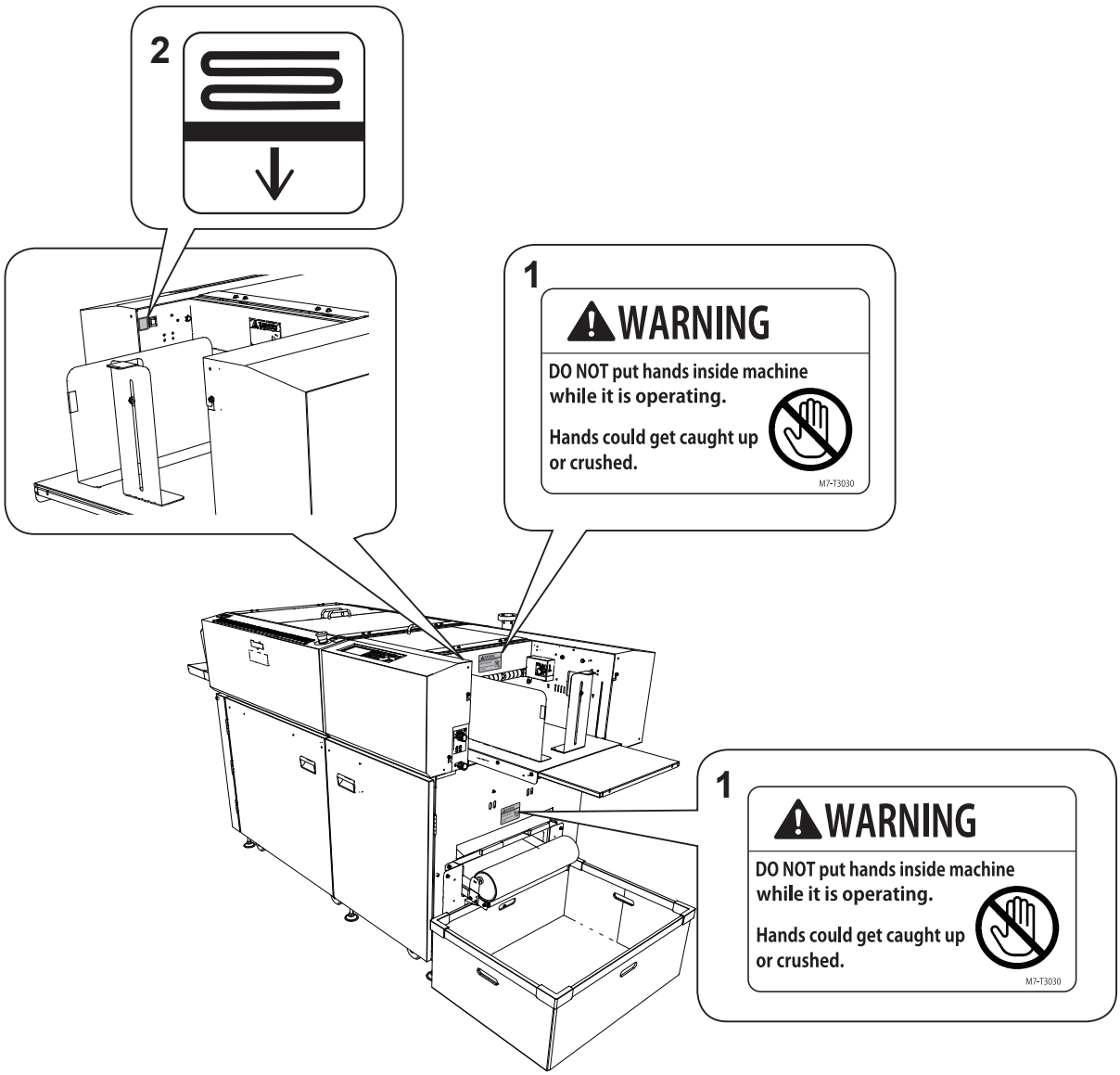
⚠ WARNING

● The machine must be installed by service person only.
→ If you want to change installation location, contact our service person.
(Changing location requires precise adjustment.)

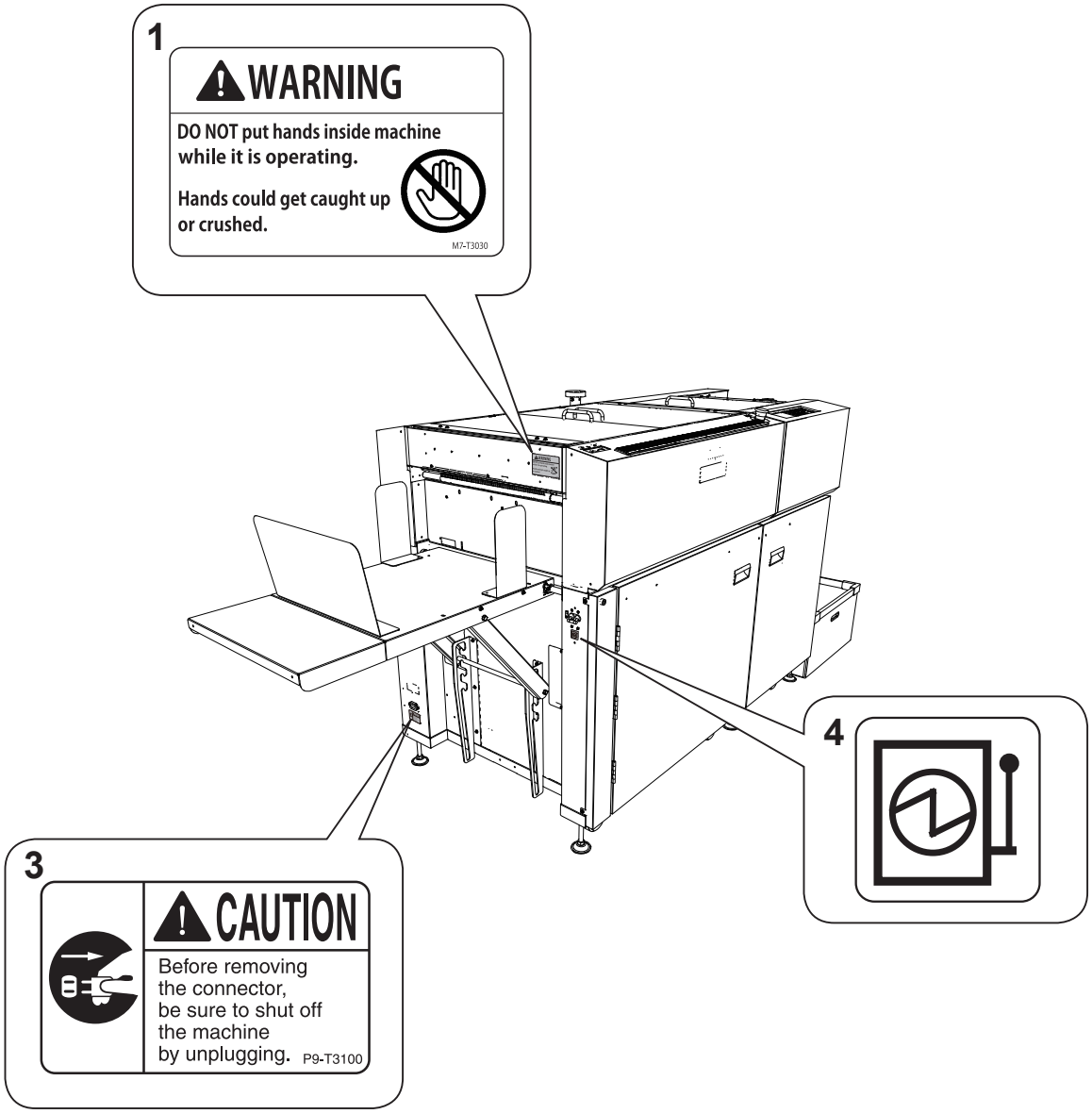
● Once the machine is in position, secure in place using the casters.
→ If the machine falls over, this may result in personal injury.

Locations of Safety Labels

Keep the safety labels clean at all times.
If labels become damaged or come off, contact our service person.

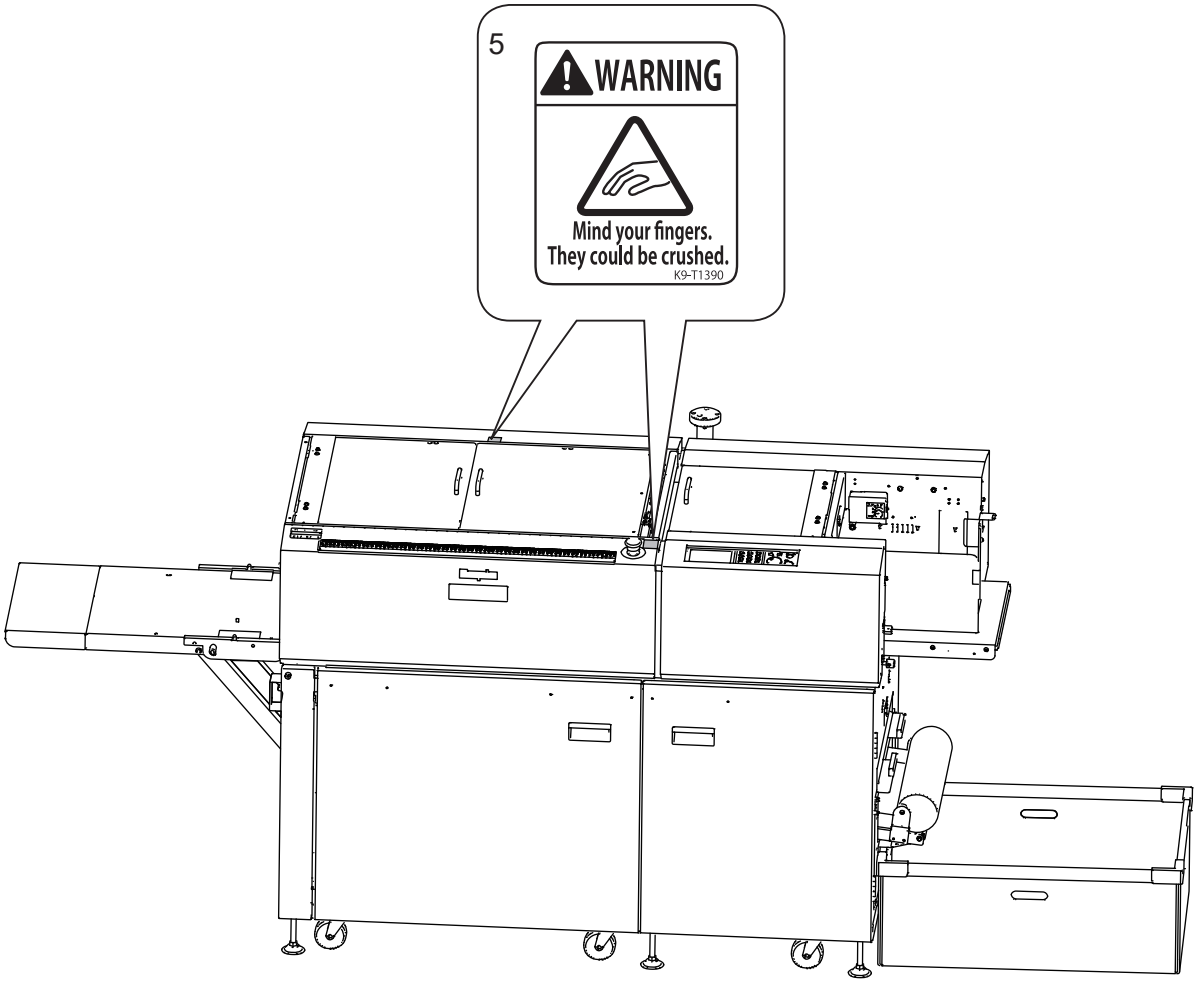


No.	Part No.	Name	Q'ty
1	M7-T303*	WARNING LABEL	2
2	U7-T109*	LABEL	1
	● The symbol in the LABEL indicates the elevator down switch.		



No.	Part No.	Name	Q'ty
1	M7-T303*	WARNING LABEL	2
3	P9-T310*	CAUTION LABEL	1
4	U7-T108*	LABEL	1
	● The symbol in the LABEL indicates the power switch.		

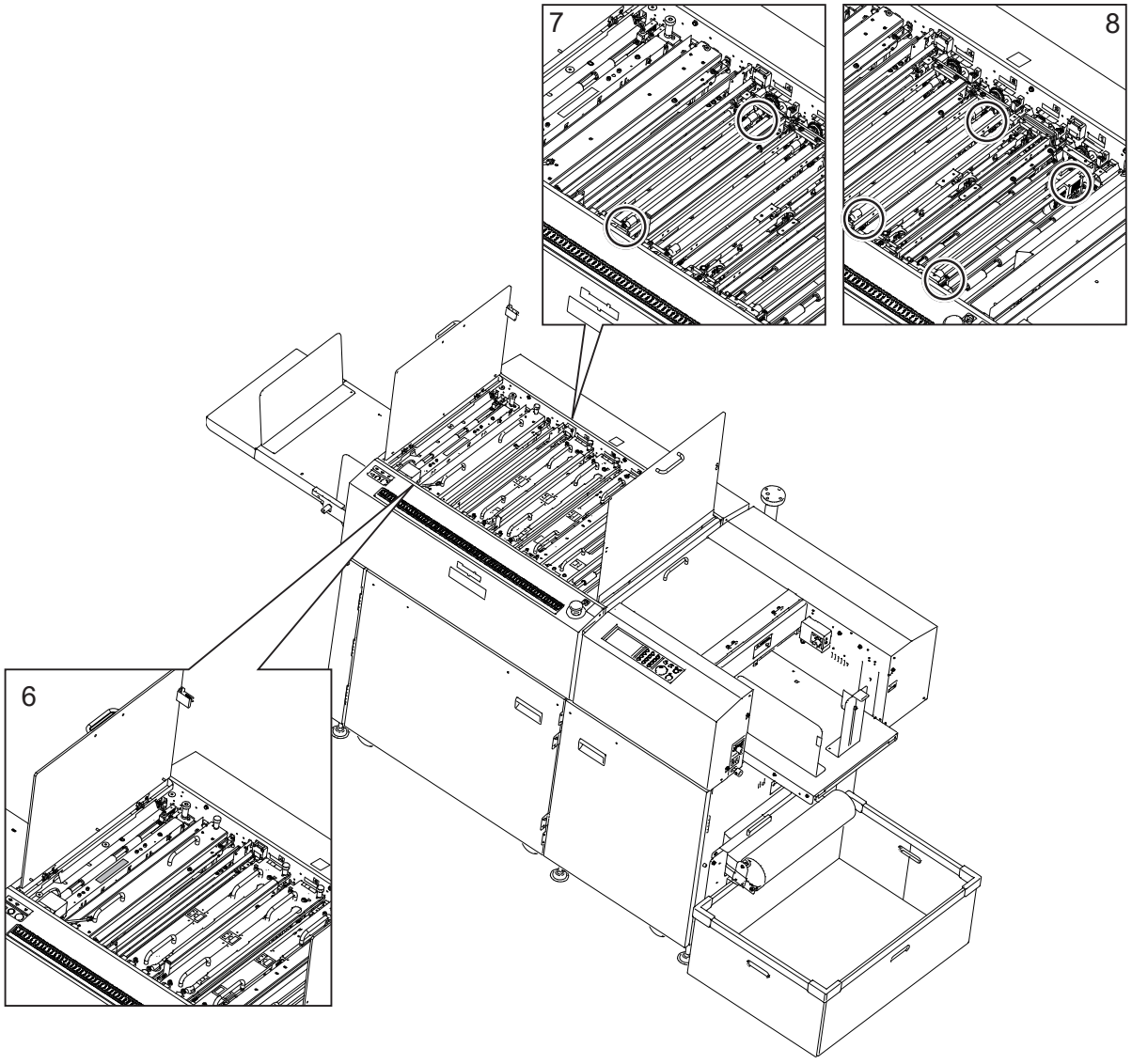
Notes on Safety (Please Read and Observe)



No.	Part No.	Name	Q'ty
5	K9-T139*	WARNING LABEL	2

7

8

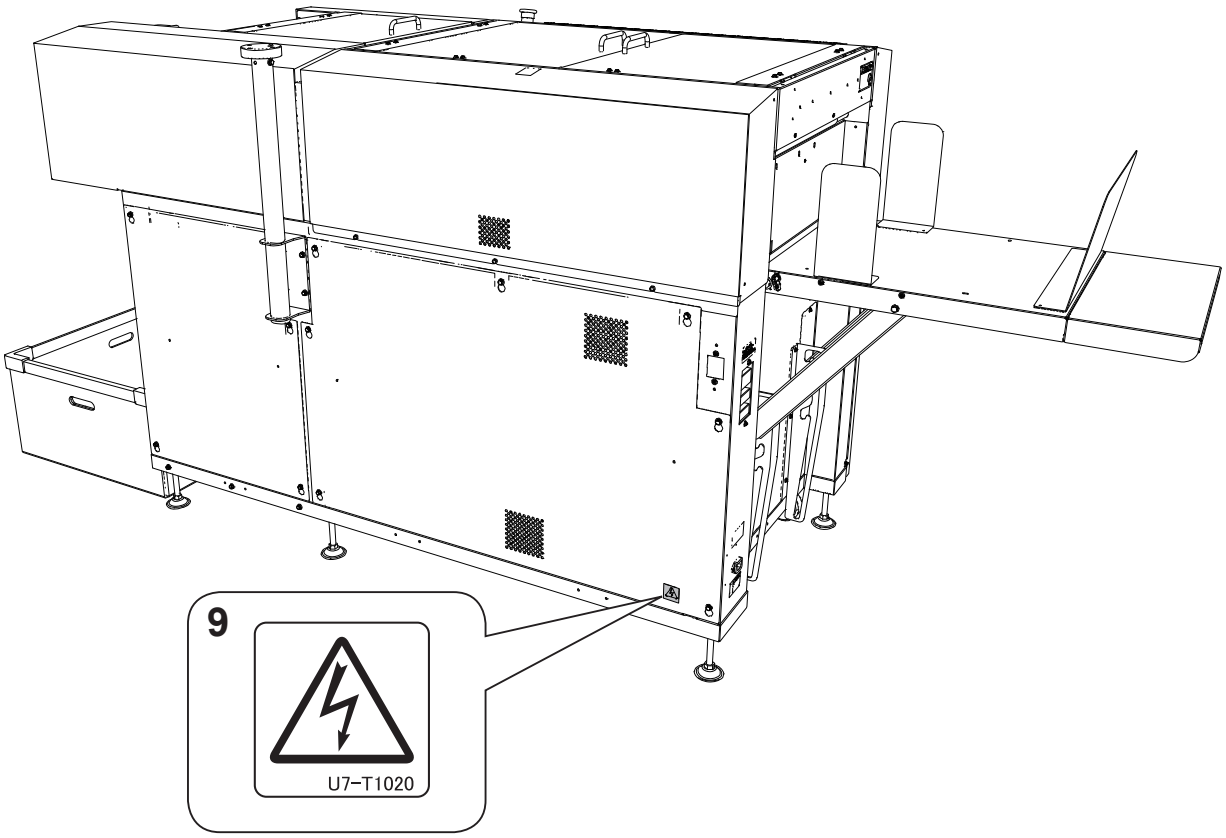


6

No.	Part No.	Name	Q'ty
6	L8-T107*	WARNING LABEL	1
7	Y2-T129*	WARNING LABEL	2
8	S2-T105*	WARNING LABEL	4

Labels of High-Voltage Warning

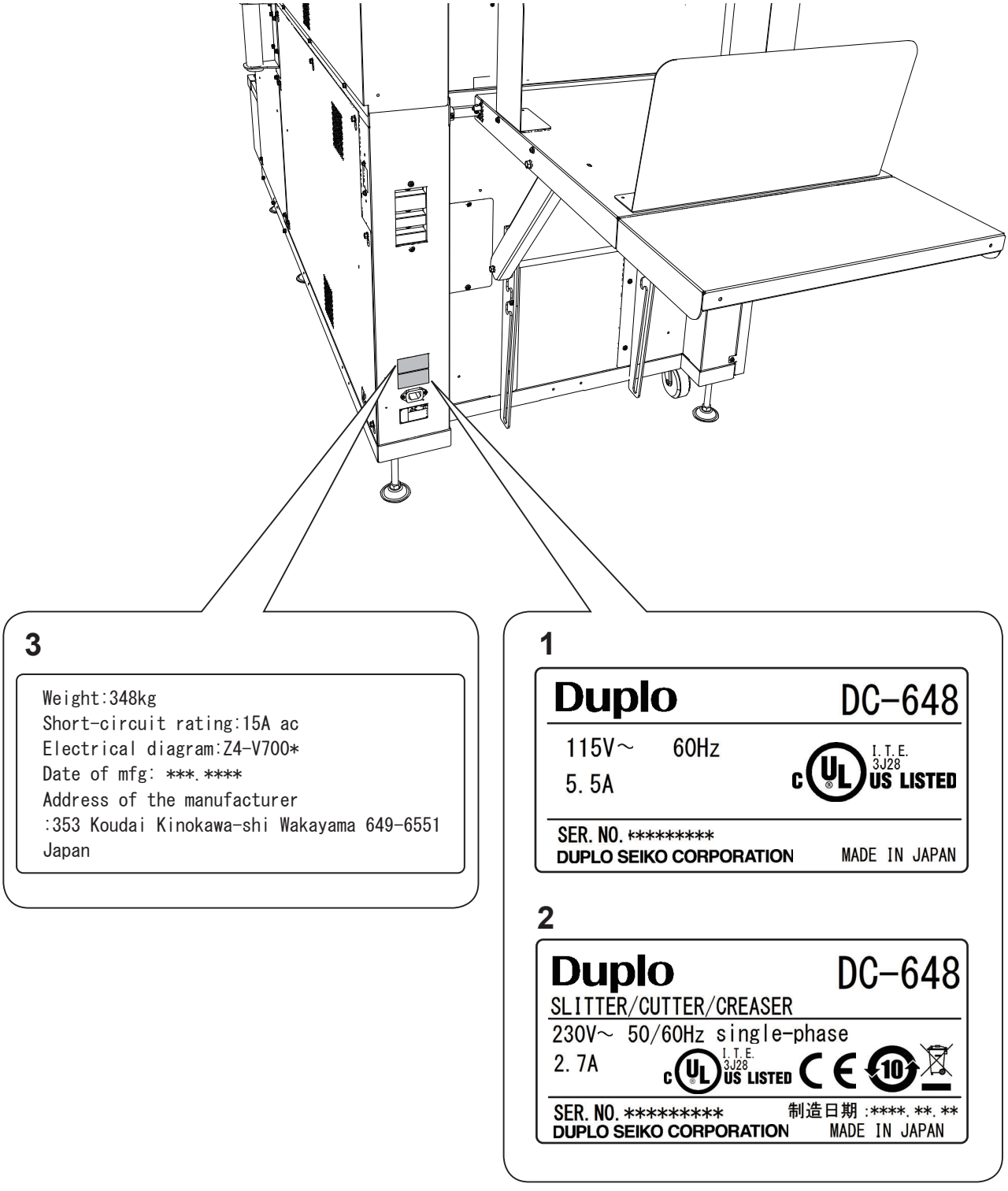
There is a high-voltage area inside the machine.



No.	Part No.	Name	Q'ty
9	U7-T102*	WARNING LABEL	1
	● The safety symbol in the WARNING LABEL indicates risk of electric shock inside the machine.		

Location of Rating Labels

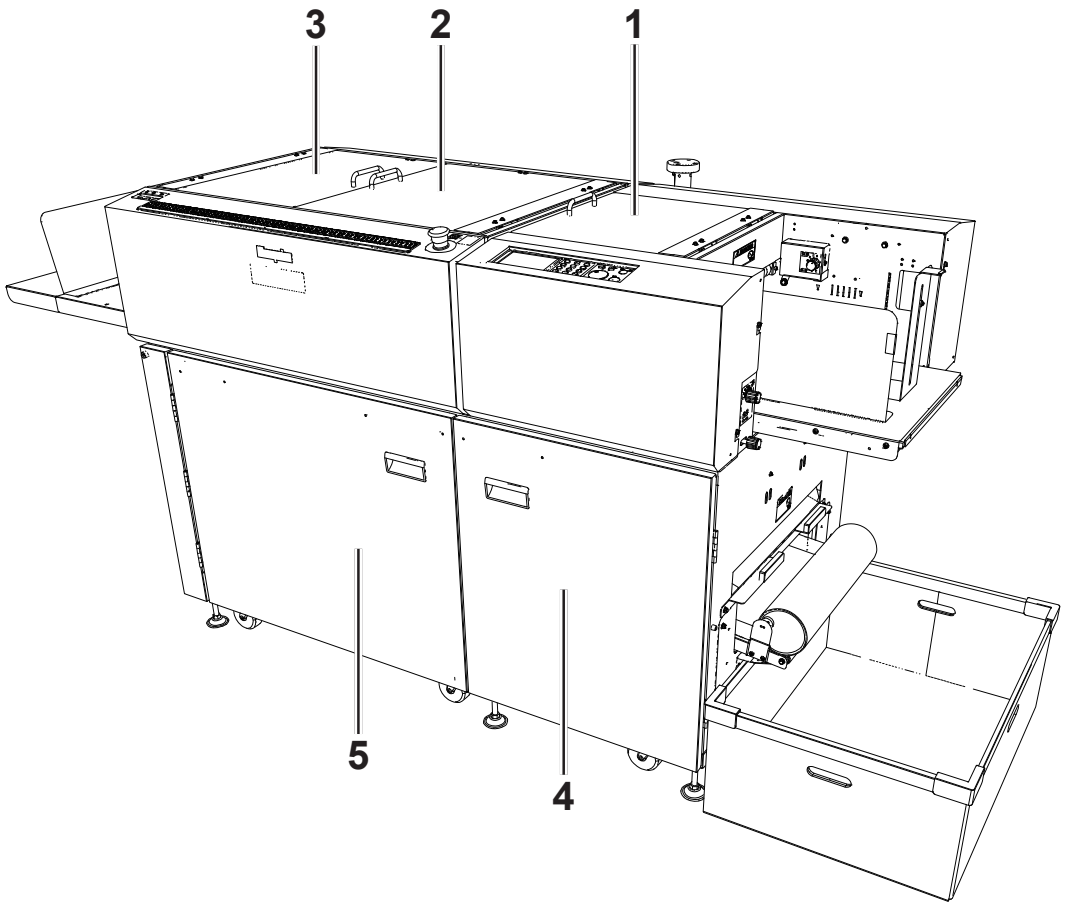
Rating labels are located as shown below.



Model	Rating label
DC-648 115V	1
DC-648 230V	2,3

Interlock System for Safety

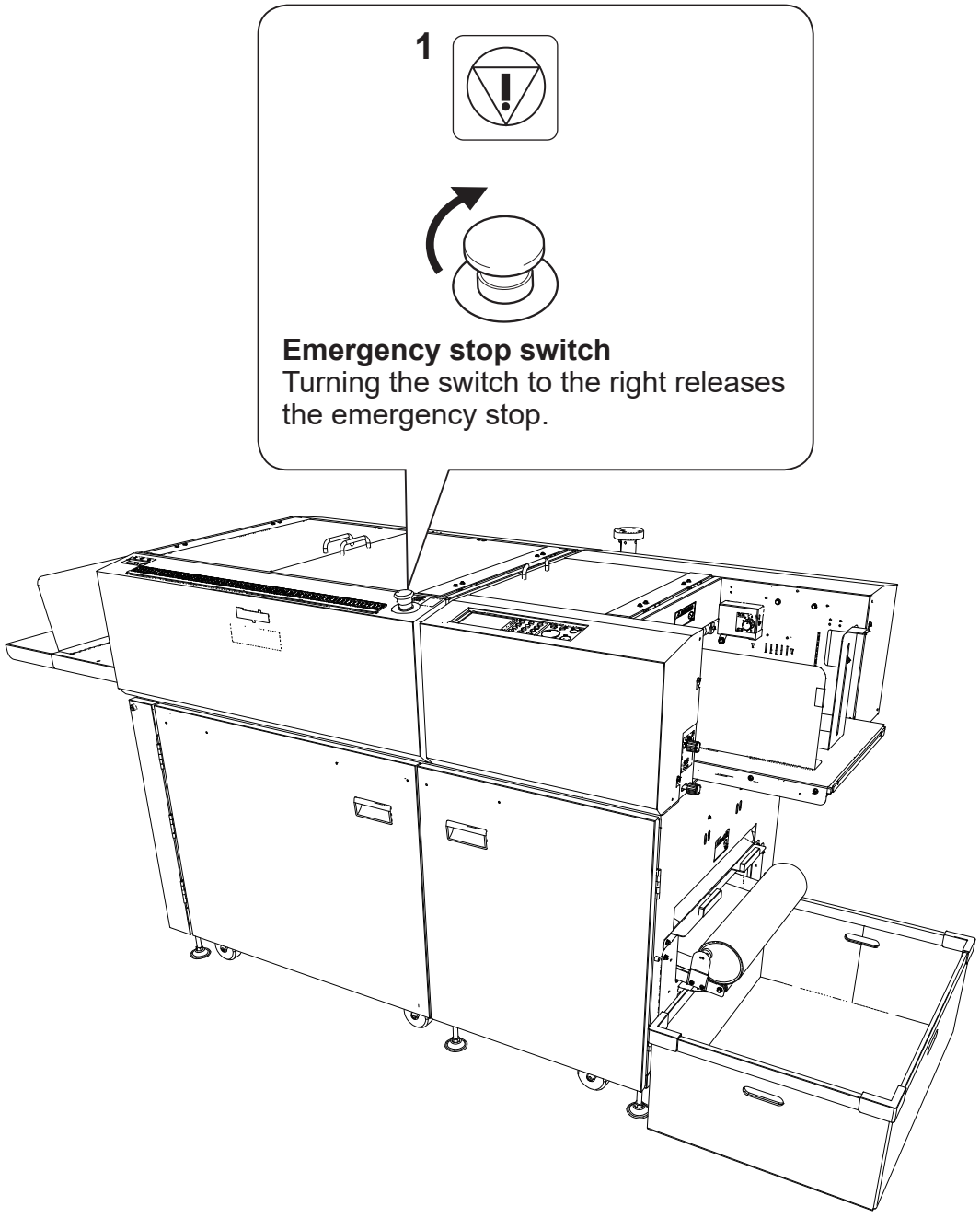
● What is the interlock system for safety?
It is the function for keeping you safe and for avoiding any dangerous operations or situations by the limitation of operation which may cause a damage to the machine or other surrounding facilities.
The DC-648 is equipped with various safety functions for the case of causing any dangerous operations or situations, and it stops running the operation in those cases.



No.	Name	Equipment for safety
1	Top cover 1	The DC-648 stops running when the interlock switch detects the cover opened.
2	Top cover 2	The DC-648 stops running when the interlock switch detects the cover opened.
3	Top cover 3	The DC-648 stops running when the interlock switch detects the cover opened.
4	Front door 1	The DC-648 stops running when the interlock switch detects the cover opened.
5	Front door 2	The DC-648 stops running when the interlock switch detects the cover opened.

Emergency Stop Function

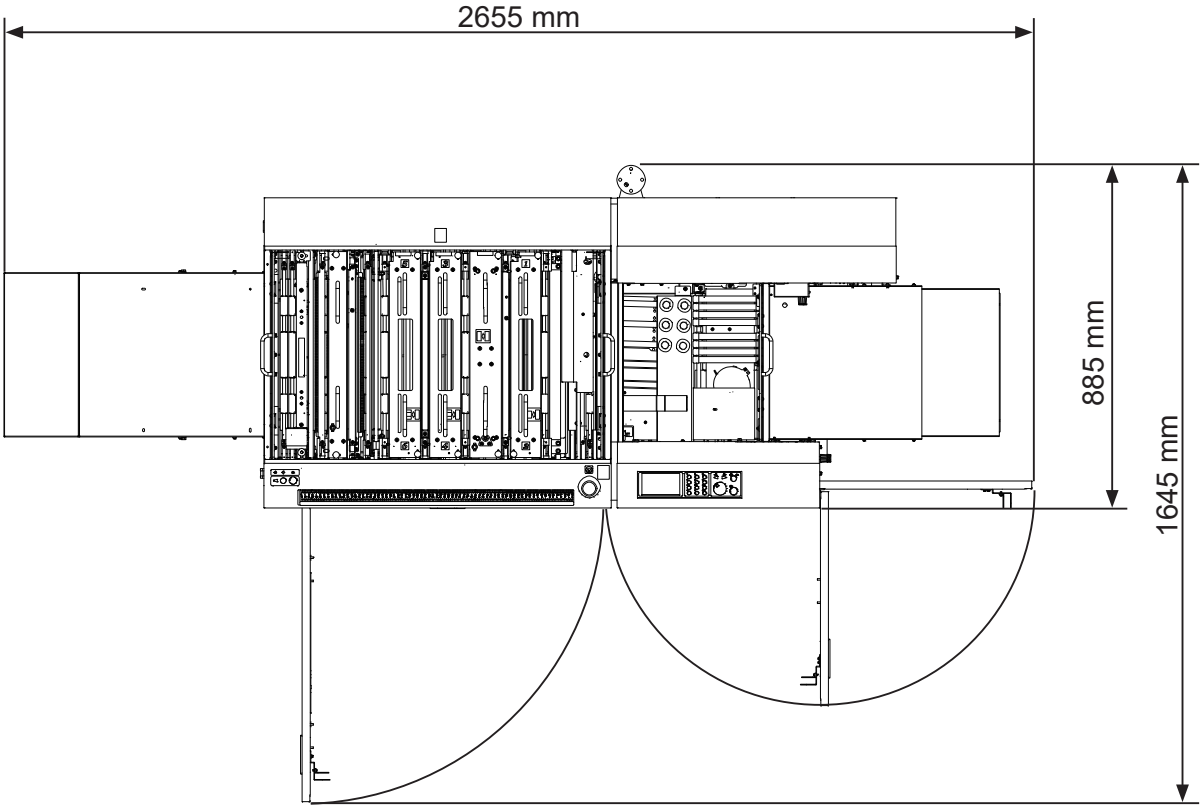
The machine is equipped with the emergency stop functions for the safety of an operator.
When you need to stop the machine for emergency, press the emergency stop switch.
Turning the switch to the right releases the emergency stop.
To stop the machine normally, press the STOP key of this machine.

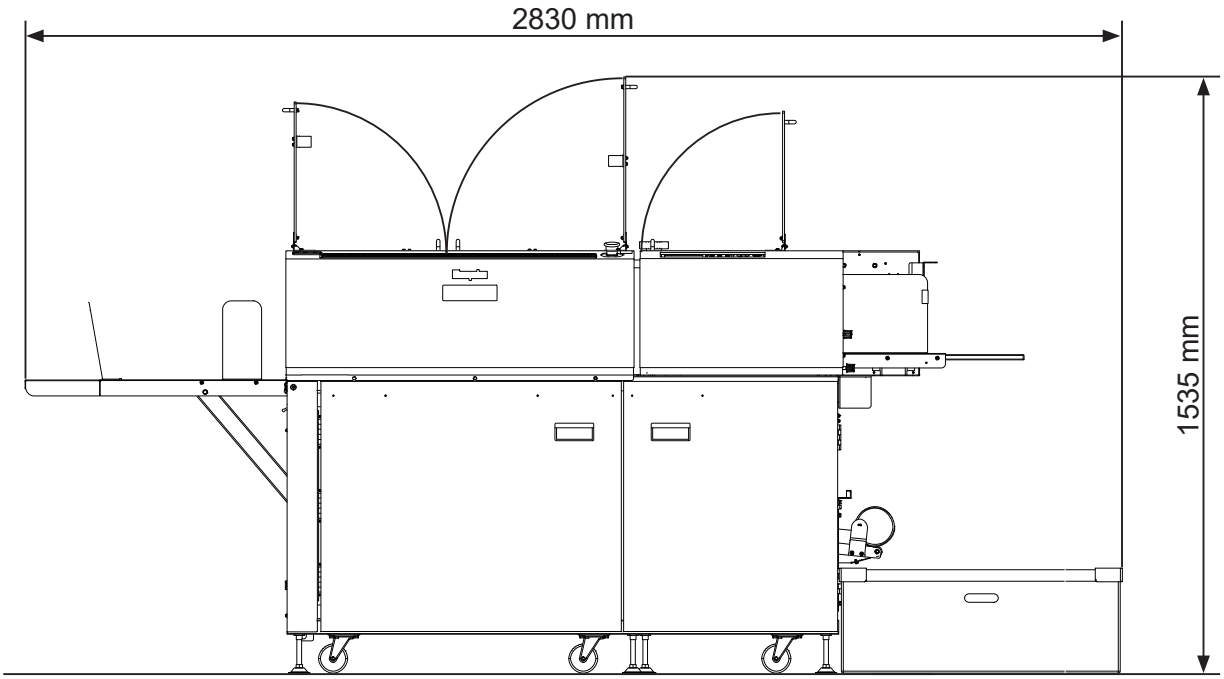


No.	Part No.	Name	Q'ty
1	U7-T107*	LABEL	1

Machine Dimensions and Required Space for Operation

* With the PC arm amount attached





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MEMO

Chapter 1

Before Using This Machine

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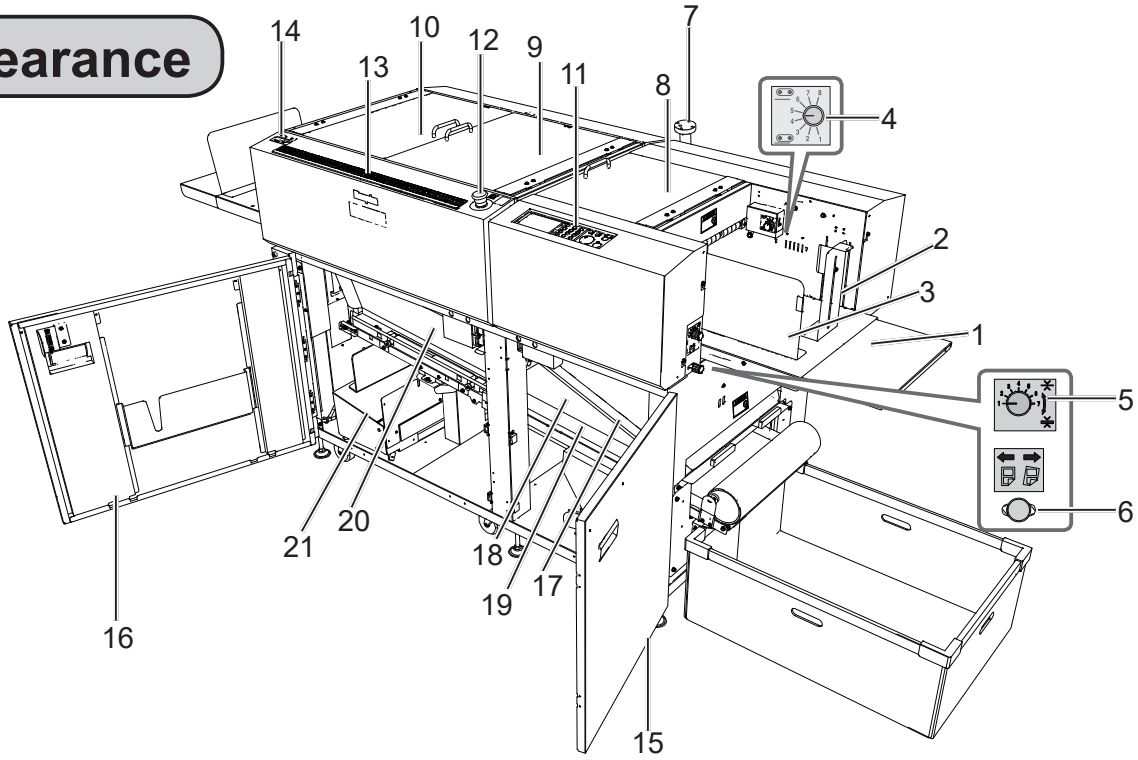
Part Names and Their Functions

Appearance

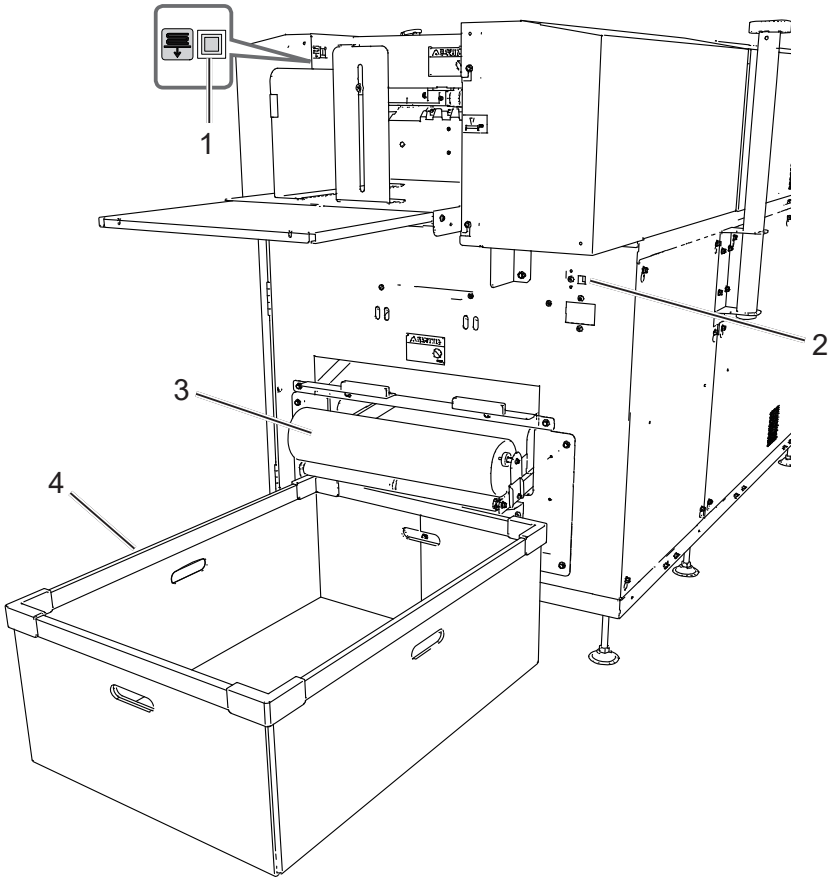


No.	Item	Function
1	Feed tray	Place original documents here.
2	Back guide (for feed tray)	Set this according to the length of a document.
3	Side guide (for feed tray)	Set this according to the width of a document.
4	Level adjustment knob	Adjusts the height of the **feed tray**.
5	Separator adjustment knob	Adjusts the distance between the separator and the conveyance belt.
6	Skew adjustment knob	Adjusts a document skew.
7	PC arm mount	Install a commercial monitor arm for placing a laptop computer. (Model: 115V (USA), 230V (UK))
8	Top cover 1	Open this to move the **fan reg upper guide** or to remove a jammed document from the **fan register section**. When this is opened, the DC-648 stops operating with the interlock system.
9	Top cover 2	Open this to remove a jammed document from the **camera section**, the **reject section**, or the **slot1/2/3 section** or to replace the optional module. When this is opened, the DC-648 stops operating with the interlock system.
10	Top cover 3	Open this to remove a jammed document from the **slot4 section**, the **gutter deflector section**, the **cutter section**, or the **creaser section** or to replace the optional module. When this is opened, the DC-648 stops operating with the interlock system.
11	Control panel	Displays the status of the DC-648. Use this to set functions for a JOB.
12	Emergency stop switch	Press this to stop the DC-648 from operating in an emergency. To release the emergency stop, turn this to the right while this is pressed.
13	Scale	Measures cut positions, slit positions, and finished products.
14	Sub control panel	The START key, the STOP key, and the JOG (FWD) key are available on the exit side.
15	Front door 1	Open this to remove a document from the **waste conveyor** or the **reject tray**. When this is opened, the DC-648 stops operating with the interlock system.

No.	Item	Function
16	Front door 2	Open this to remove a document from the **waste conveyor** or to take out the **card stacker** from inside or put it back. When this is opened, the DC-648 stops operating with the interlock system.
17	Reject tray	Rejected sheets* will be ejected here.
18	Waste conveyor	Conveys pieces of waste paper to the **waste box**.
19	Guide	To remove a document from the **waste conveyor**, open the **front door 1** and remove this.
20	Guide	To remove a document from the **waste conveyor**, open the **front door 2** and remove this.
21	Card stacker	Place this on the **exit tray** to process a document into cards. (→P.5 Appearance (Exit Side: With the Drop Card Stacker Attached)) (→P.6 Appearance (Exit Side: With the Elevator Card Stacker Attached))

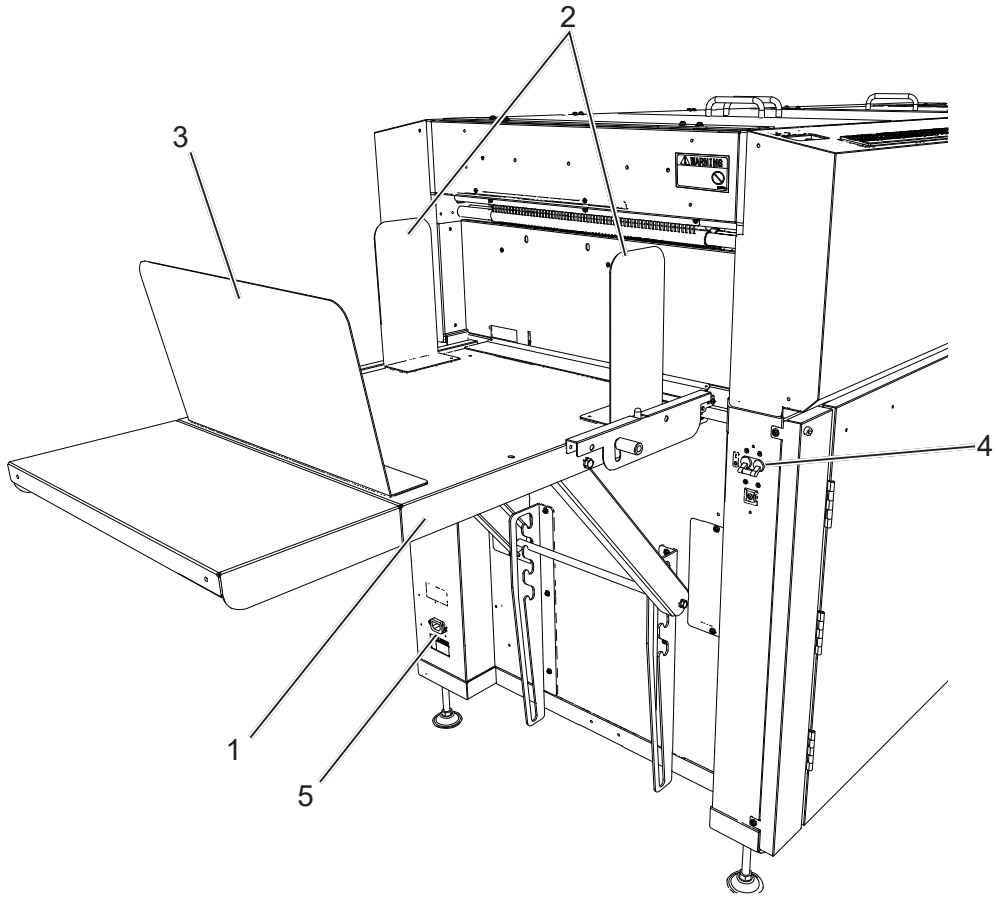
* Rejected sheets: Double-fed documents, a document on which the DC-648 failed to read a REG mark or a barcode, a document on which a shrink mark was detected, or a document the processing of which was canceled will be ejected on the **reject tray**.

Appearance (Feed Side)



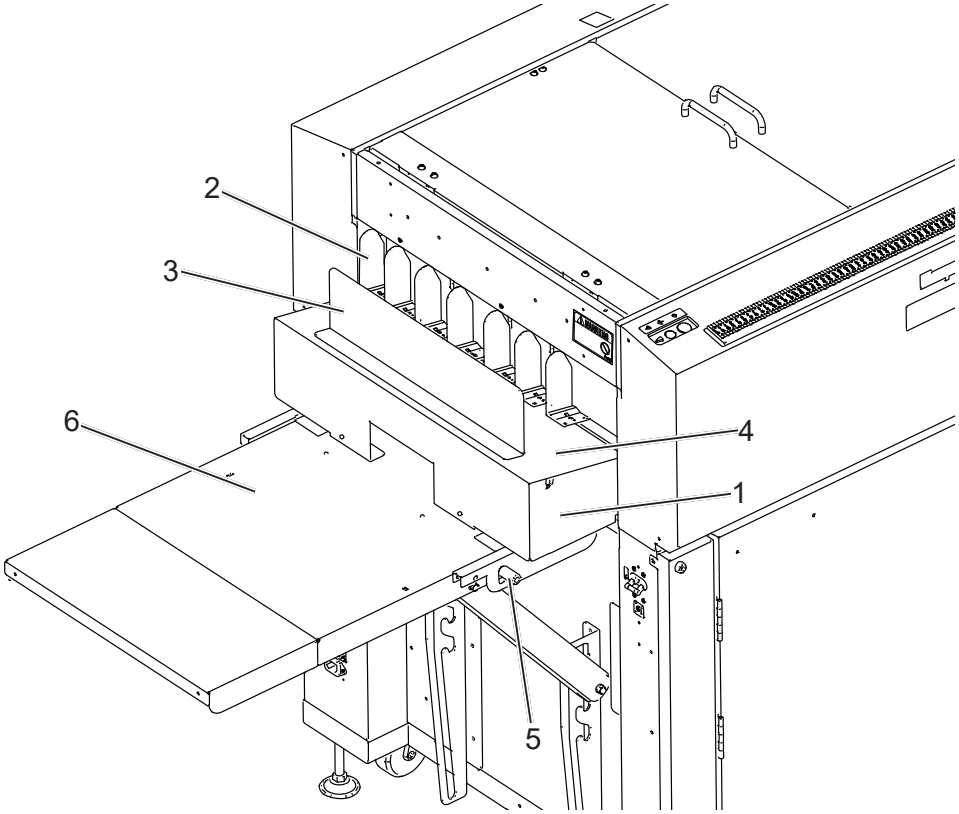
No.	Item	Function
1	Elevator down switch	Press this to lower the **feed tray**.
2	USB terminal	Connect a computer with this to use the PC Controller.
3	Roller	Ejects waste paper from the **waste conveyor** to the **waste box**.
4	Waste box	Receives pieces of waste paper conveyed with the **waste conveyor**.

Appearance (Exit Side)



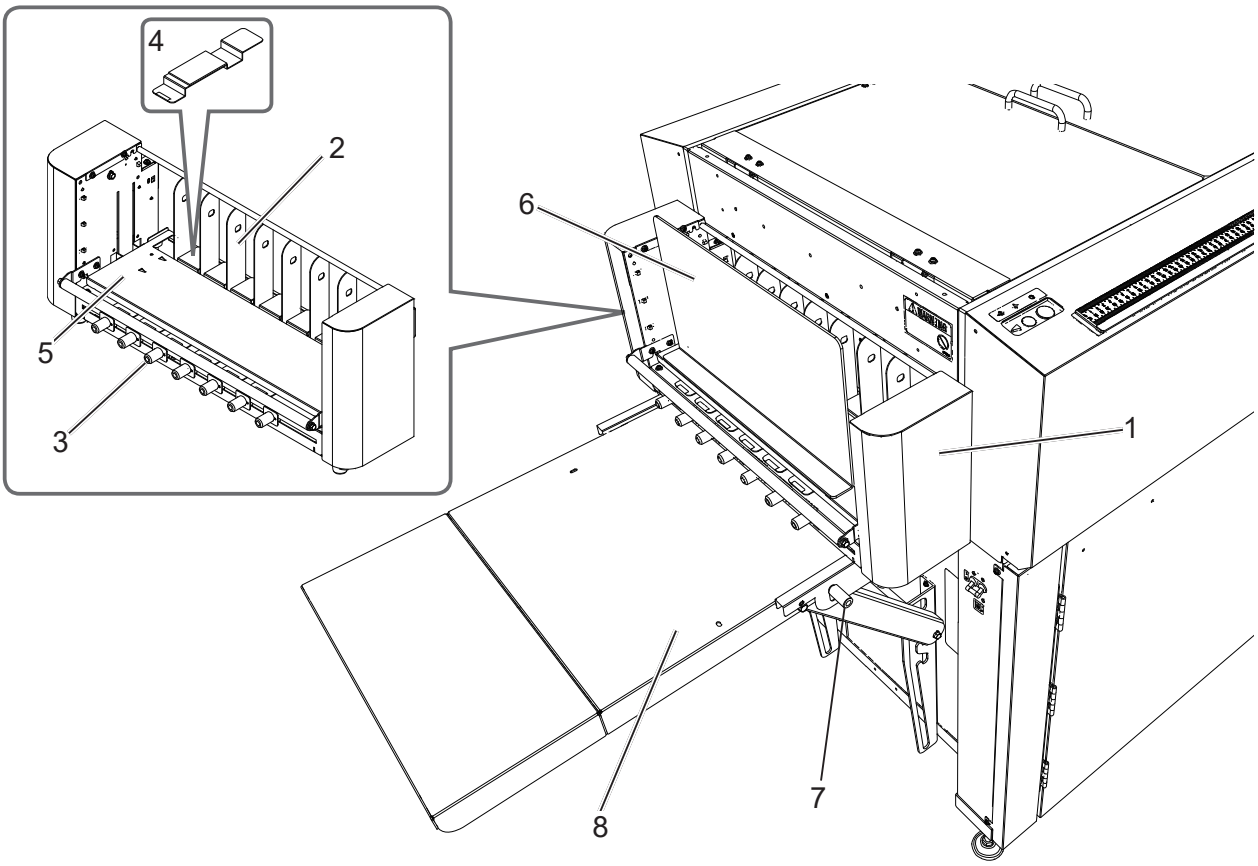
No.	Item	Function
1	Exit tray	Receives finished products.
2	Side guide (for exit tray)	Set this according to the width of a finished product.
3	Back guide (for exit tray)	Set this according to the length of a finished product.
4	Power switch	Turns ON/OFF the DC-648.
5	AC inlet	Connect the power cord here.

Appearance (Exit Side: With the Drop Card Stacker Attached)



No.	Item	Function
1	Drop card stacker	Receives card-sized finished products aligned.
2	Guide	Set this according to the width of a finished product.
3	Stopper	Set this according to the length of a finished product.
4	Exit tray	Receives finished products.
5	Release lever	Use this to remove the **drop card stacker**.
6	Exit tray (for DC-648)	Place the **drop card stacker** here.

Appearance (Exit Side: With the Elevator Card Stacker Attached)

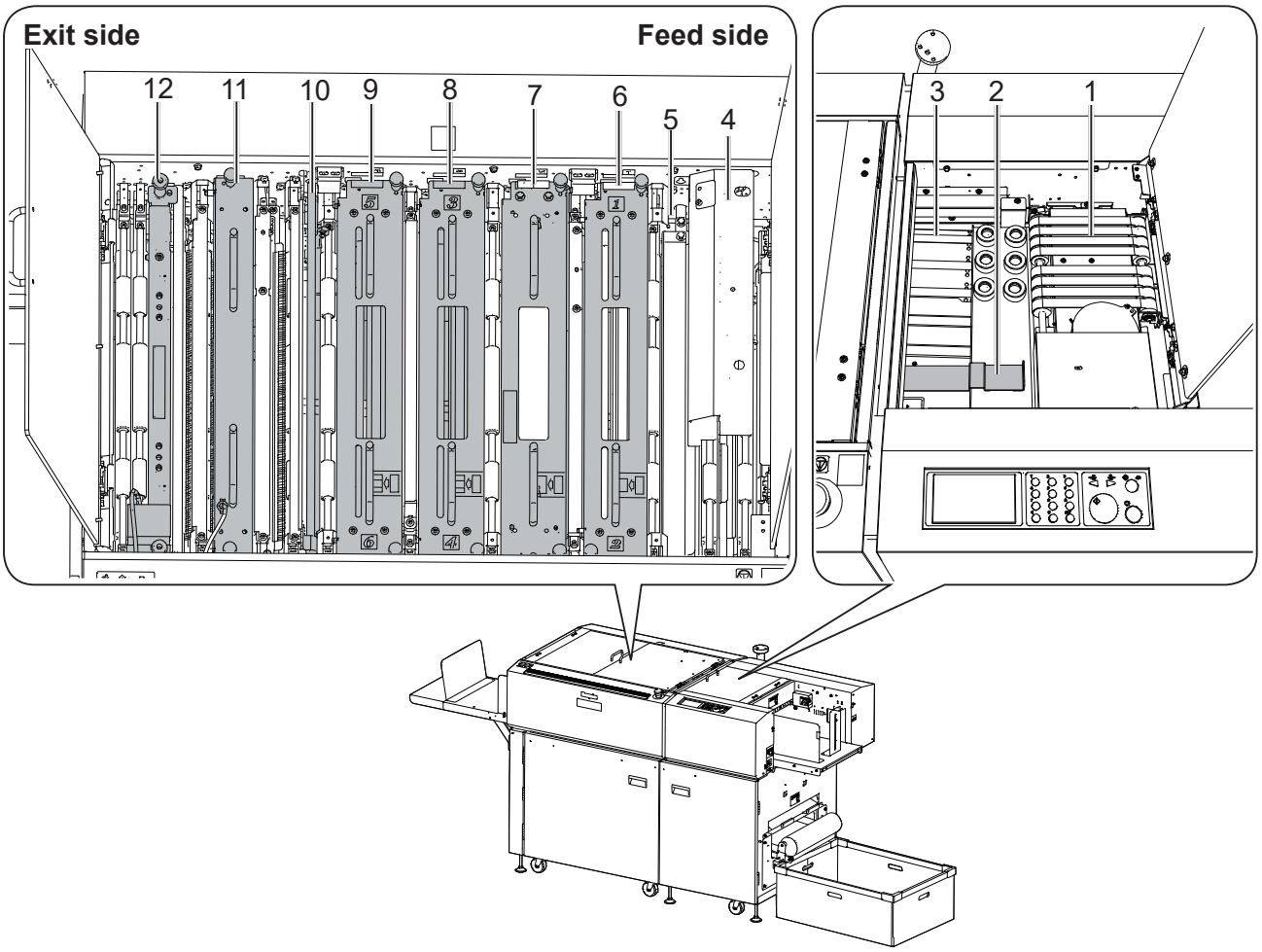


No.	Item	Function
1	Elevator card stacker	Receives card-sized finished products aligned.
2	Guide	Set this according to the width of a finished product.
3	Guide adjustment knob	Slide this to set the **guide**.
4	Plate	Covers the opening of the **exit tray** after the **guide** was set and receives finished products.
5	Exit tray	Receives finished products.
6	Stopper	Set this according to the length of a finished product.
7	Release lever	Use this to remove the **elevator card stacker**.
8	Exit tray (for DC-648)	Place the **elevator card stacker** here.

Inside

When the top cover 2 and 3 are open:

When the top cover 1 is open:



No.	Item	Function
1	Belt suction unit	The **suction fan** sucks up documents one by one and the **feed belts** feed each of them.
2	Fan reg upper guide	Use this to process light weight documents.
3	Fan register section	Adjusts a document skew with the **fan register belts** arranged diagonally.
4	Camera section	Reads a REG mark, a skew mark, a shrinkage mark, an end mark, and a barcode printed on a document with the camera.
5	Reject section	Ejects a document/documents to the **reject tray** if a double feed was detected, the DC-648 failed to read a REG mark or a barcode, a shrinkage mark was detected, or processing of a document was canceled.
6	Slot1	Install the **margin slitter module** here to cut off margins on the operator's side and the non-operator's side.
7	Slot2	When you do not use an option module, install the **standard module** here. *You can install the **CPM (Cross Tool Module)** (option) or the **RTM (Rotary Tool Module)** (option) here.
8	Slot3	For the standard machine, install the **center slitter module 3&4** here to cut a document parallel to the feed direction. *You can install the **standard module** or the **RTM (Rotary Tool Module)** (option) here.

Part Names and Their Functions

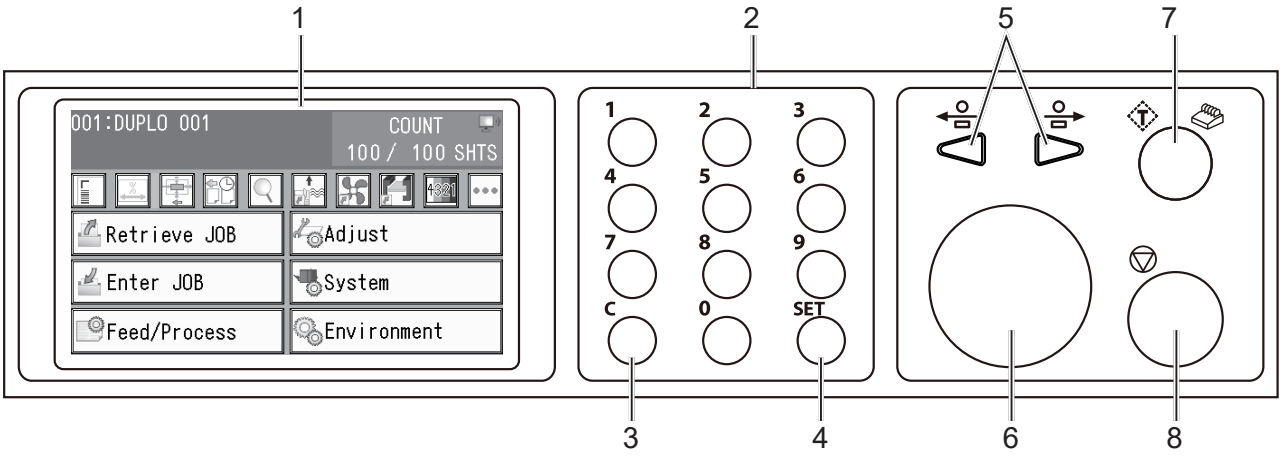
No.	Item	Function
9	Slot4	For the standard machine, install the **center slitter module 5&6** here to cut a document parallel to the feed direction. *You can install the **standard module** or the **RTM (Rotary Tool Module)** (option) here.
10	Gutter deflector section	Drops waste that was cut off into the **waste box**.
11	Creaser module	Creases a document perpendicularly to the feed direction.
12	Cutter module	Cuts a document perpendicularly to the feed direction.

IMPORTANT

- When removing and reattaching a module, make sure that it is installed in the correct slot in the correct orientation.
- No module designated for other DC machines is compatible with the DC-648.

Control Panel

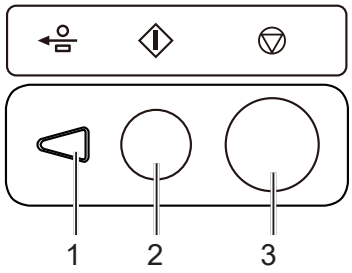
● Feed side



No.	Item	Function
1	Touch panel	Displays operation or status of the DC-648 and sets functions. Displays a message if an error has occurred. Touch the key/icon displayed on this to operate the DC-648.
2	NUMERIC key	Use this to program a JOB or to enter values for how many sheets of documents to be processed.
3	CLEAR key	When programming a JOB: Press this to clear the entered value. In **count-up mode,**[*1] pressing this clears the count of sheets that were processed. In **preset count mode,**[*2] pressing this clears the count of sheets to be processed and switches to **count-up mode**.
4	SET key	Press this to switch functions or to set JOB programming.
5	JOG (FWD/REV) key	Press this to eject a document from the machine or to remove a jammed document.
6	START key	Press this to start processing documents. The light turns green when the DC-648 is in standby mode. When the light is red, the DC-648 is in operation or may be having an error and this key is not available. Pressing and holding this enters **pause feeding mode**.
7	TEST key	Press this to process one sheet of documents for a test run or to check if the document is processed as it is programmed. *When the **drop card stacker** is attached: Pressing and holding this enters **stacker setup mode**. *When the **elevator card stacker** is attached: Pressing this enters **stacker setup mode**.
8	STOP key	Press this to switch the current screen to the **standby** screen or to stop processing a document. *Pressing this while the DC-648 is stopped in **stacker setup mode** restarts the document processing and stops it after the documents were ejected.

[*1] Count-up mode: Displays how many sheets of documents were processed in order from 0 (zero).
[*2] Preset count mode: You can set in advance how many sheets of documents will be processed.

● Exit side (Sub control panel)

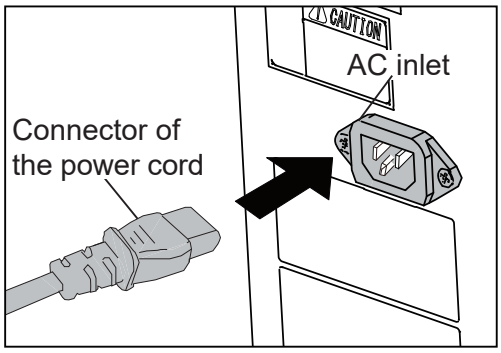


No.	Item	Function
1	JOG (FWD) key	Press this to eject a document from the machine or to remove a jammed document.
2	START key	Press this to start processing documents. Pressing and holding this enters **stacker setup mode**.
3	STOP key	Press this to switch the current screen to the **standby** screen or to stop processing a document. *Pressing this while the DC-648 is stopped in **stacker setup mode** restarts the document processing and stops it after the documents were ejected.

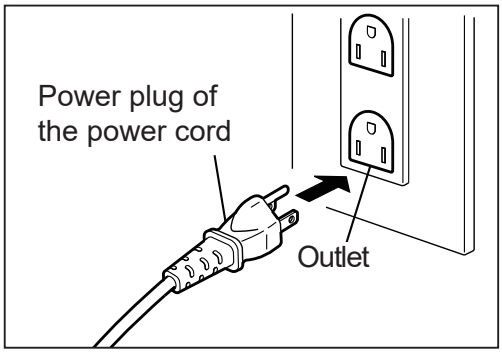
Turning Power ON / OFF

Turning Power ON

1 Connect the **connector** of the power cord to the **AC inlet**.



2 Connect the **power plug** of the power cord to the **outlet**.



⚠ WARNING

- Insert the power plug securely so that proper electrical contact is effected.
  If grounding is imperfect and electrical leakage occurs, fire or electric shock may result.

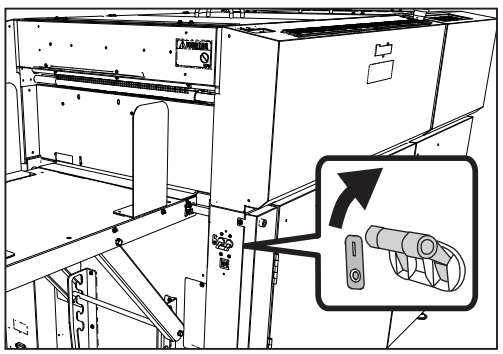
⚠ WARNING

- Unplug the power cord in an emergency situation.

⚠ CAUTION

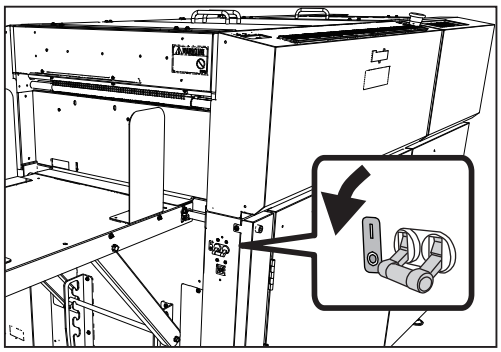
- Use an access-friendly outlet so that an operator easily plugs and unplugs the power cord after the DC-648 was installed.

3 Push the **power switch lever** upward to turn the power **ON** .
Duplo will be displayed on the touch panel and the DC-648 will enter warm-up mode.



Turning Power OFF

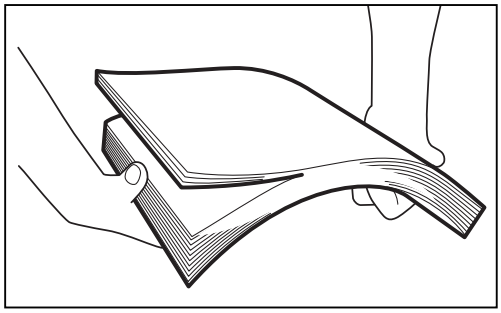
1 Push the **power switch lever** downward to turn the power **OFF**.
The display on the touch panel will disappear.



Preparation Before Use

Loading Documents

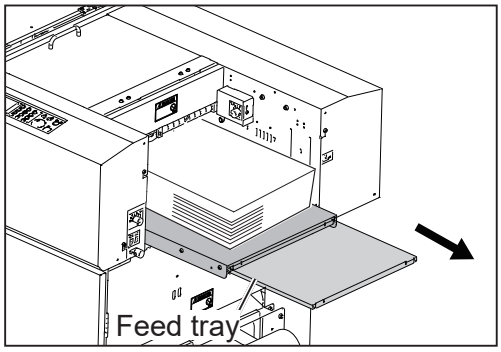
1. Prepare documents proper for the selected JOB. Loosen the stack of documents by flipping through the sheets and align them.



2. Load documents on the **feed tray** and gently push them toward the inside of the machine.

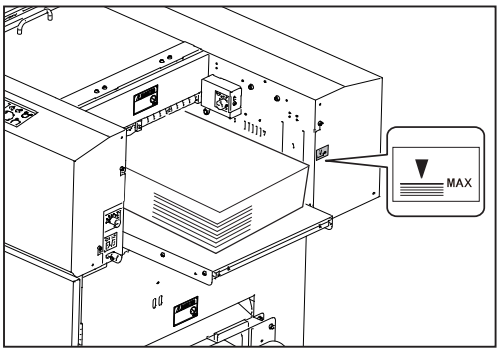
REFERENCE

To process vertically long documents, fully extend the **feed tray** in the direction of the arrow.

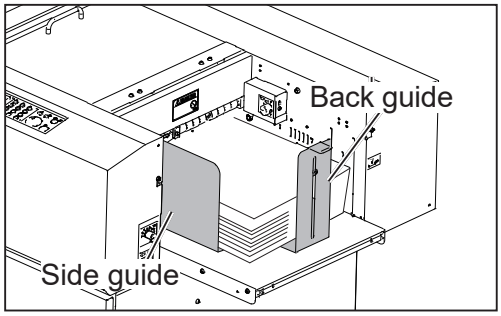


IMPORTANT

Make sure that the height of the document stack does not exceed the **MAX** level.

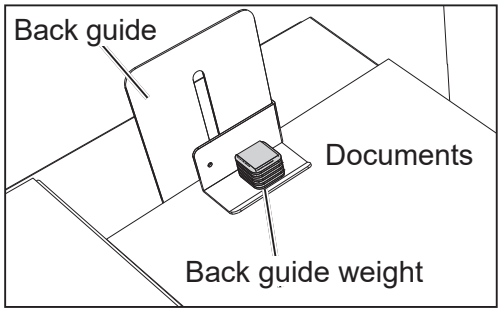


3. Attach the **side guide(s) (for feed tray)** and the **back guide (for feed tray)** according to the document size.



REFERENCE

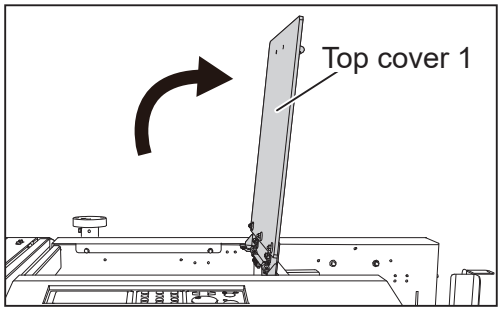
If it often occurs that the second and/or the subsequent sheet(s) of documents move as the first sheet is fed, place the **back guide weight** on the stack of the documents to prevent it.



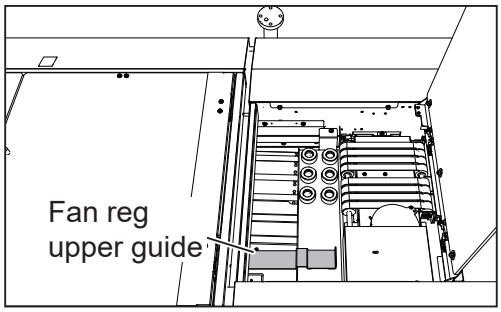
Attaching the Fan Reg Upper Guide

To process light weight documents, use the **fan reg upper guide** to keep the document feed stable.

1 Open the **top cover 1**.

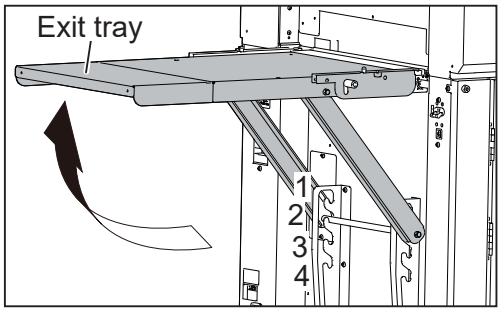


2 Attach the **fan reg upper guide** and adjust it to the position where the left edge of a document (operator's side) passes.

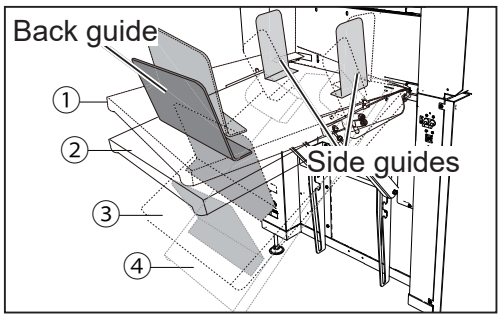


Setting the Exit Tray

1 Set the **exit tray** by lifting it upward as shown in the figure on the right.
* You can adjust the **exit tray** in four levels.
(The figure on the right shows when the **exit tray** is set horizontally (in the second level).)



2 Attach the **back guide (for exit tray)** and the two **side guides (for exit tray)**.



REFERENCE

The orientation to attach the **back guide** differs depending on the angle to set the **exit tray**.

- Setting at the uppermost level (1) / horizontally (2): Attach the **back guide** oriented in the shape of **L**.
- Setting at the lower level (3) / lowermost level (4): Attach the **back guide** oriented in the shape of ⌋.

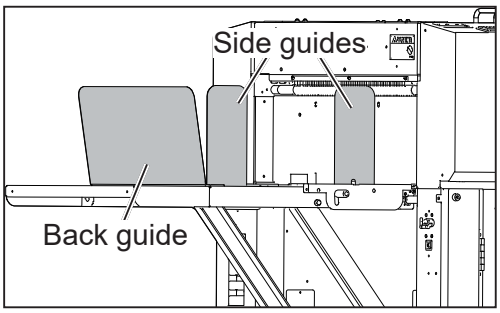
Attaching the Card Stacker

To make card-sized products, attach the **card stacker**.

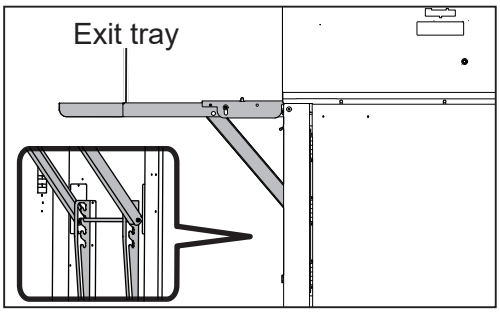
REFERENCE

- Attach the **card stacker** to make a finished product with the length of 150 mm or shorter.
- If finished products are not aligned (turned over) on the **exit tray** even the length of the finished product is 150 mm or more, attach the **card stacker**. In that case, place the **stopper** on the **exit tray** and adjust it according to the length of the finished product.

1 Remove the **side guides (for exit tray)** and the **back guide (for exit tray)**.

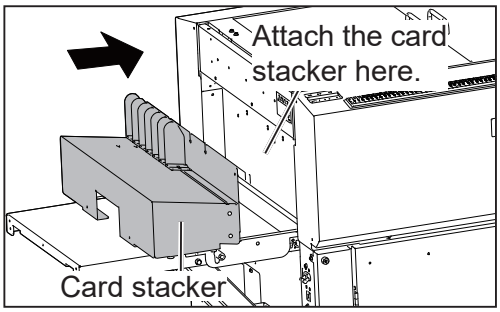


Make sure that the **exit tray** is set horizontally (in the second level).
(→P.14 Setting the Exit Tray)

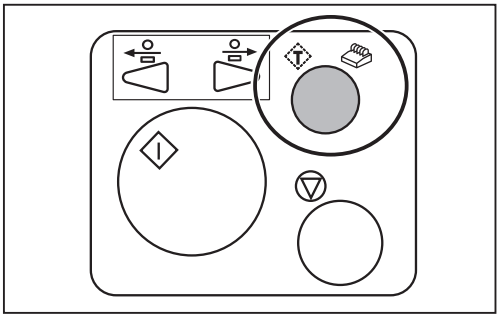


● To attach the **drop card stacker**:

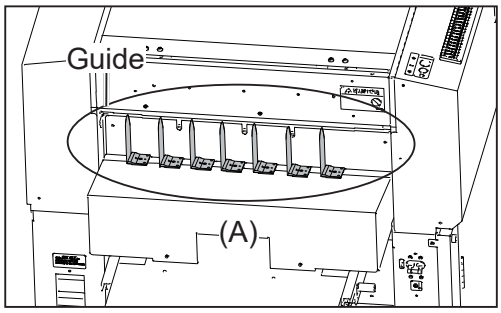
2 Place the **card stacker** on the **exit tray**. Move it in the direction of the arrow to attach it to the DC-648. (It will be attached by magnet.)



3 Press and hold the TEST key to perform a test run for one sheet.



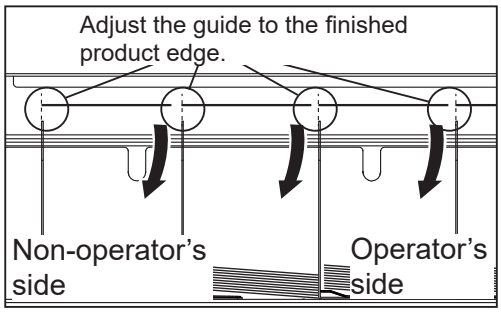
4 The DC-648 temporarily stops for about three minutes when the finished products have reached the document-ejecting point.
During this, slide the **guide** to the point at which the finished products will be ejected.



5 Adjust each **guide** on the non-operator's side to appropriate position so that it comes into contact with the edge of the finished product.
*The finished products will incline and smoothly drop off.

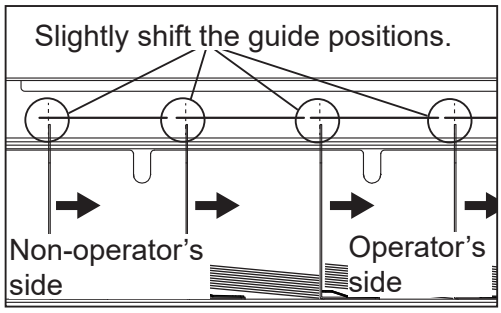
REFERENCE

The figure on the right shows the front view of (A) in step 4.

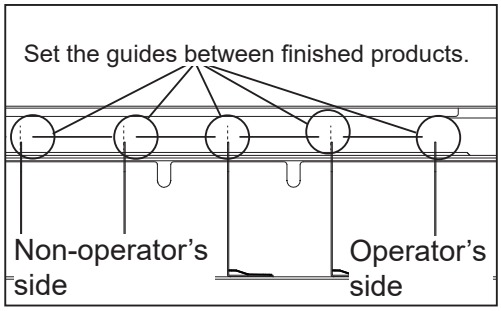


REFERENCE

- If the document alignment is poor, slightly shifting the **guide** to the position as shown in the figure on the right may improve it.



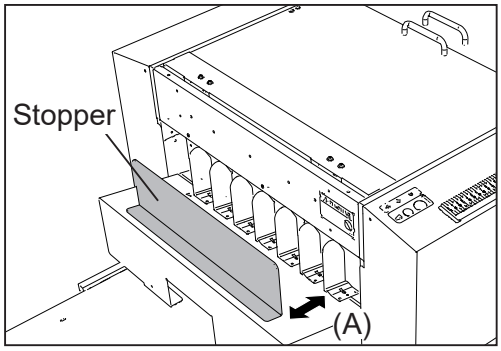
- If a document is processed with gutter slits and the finished products are long, setting the **guide** to a position as shown in the figure on the right may improve it.



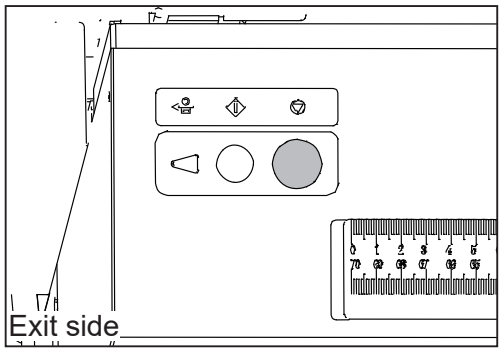
6 Set the **stopper** by adjusting the position according to the finished product length so that it is positioned vertically to the ground.

REFERENCE

Adjust the distance (A) between the **guide** and the **stopper** according to the document length.



7 If the STOP key or the TEST key is pressed or when three minutes have elapsed, the finished products will be ejected on the **card stacker**.

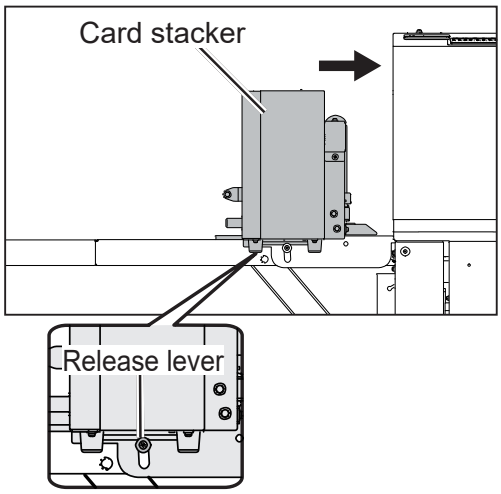


REFERENCE

- To release the temporary stop before about three minutes elapse, press the STOP key on the exit side of the DC-648.
- You can also release the temporary stop by pressing the STOP key or TEST key of the control panel on the feed side.
- If you press the START key, the finished products temporarily stopped at the exit section will be ejected and all the documents on the **feed tray** will be processed continuously.

● To attach the **elevator card stacker**:

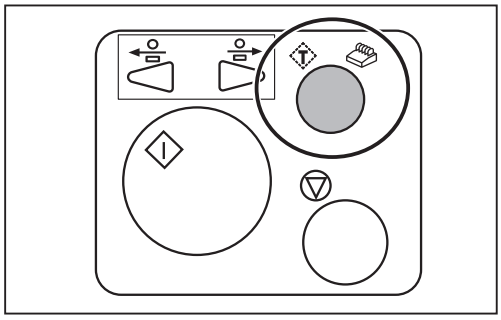
2 Place the **card stacker** on the **exit tray**. Move it in the direction of the arrow to attach it to the DC-648.



REFERENCE

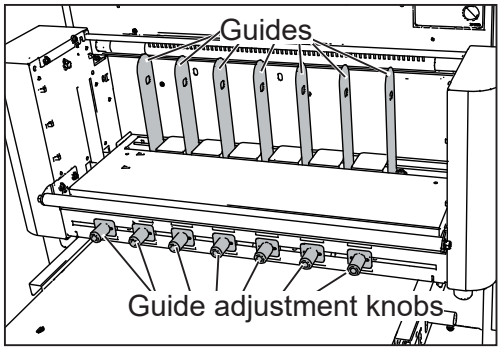
The **card stacker** is properly attached if the **release lever** is at the uppermost position as shown in the figure on the right.

3 Press the TEST key to perform a test run for one sheet.

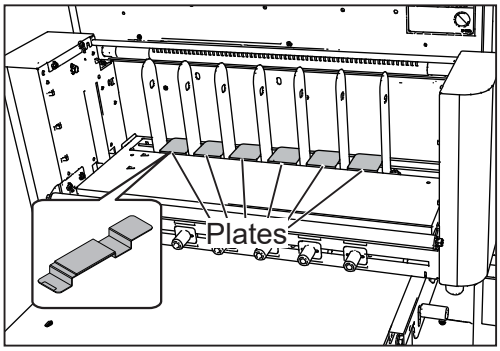


4 The DC-648 temporarily stops for about three minutes when the finished products have reached the document-ejecting point.

1. During this, slide each **guide** by holding the **guide adjustment knob** to the point at which the finished products will be ejected.



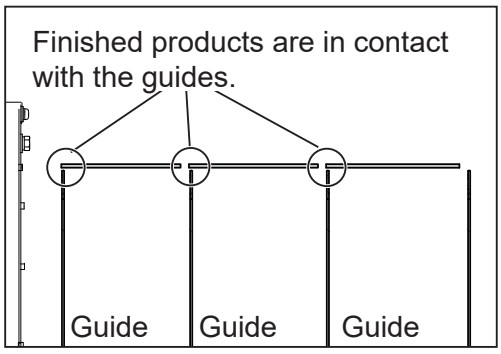
2. Adjust the **plates** according to the **guides**.



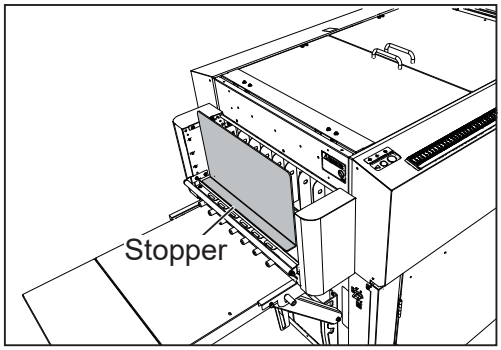
REFERENCE

- Make sure that the **plates** and the **guides** are not in contact with each other.

- If the document alignment is poor, slightly shifting the **guides** to the position as shown in the figure on the right may improve it.



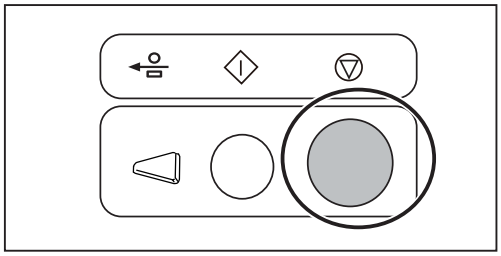
5 Set the **stopper** by adjusting the position according to the finished product length so that it is positioned vertically to the ground.



6 If the STOP key or the TEST key is pressed or when three minutes have elapsed, the finished products will be ejected on the **card stacker**.

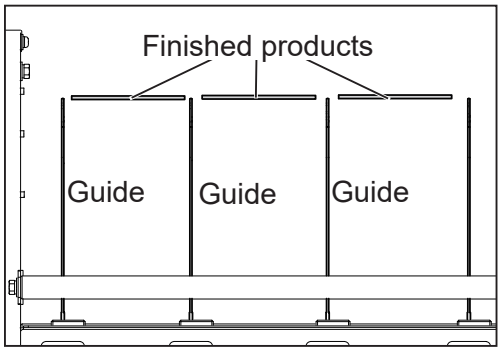
REFERENCE

- To release the temporary stop before about three minutes elapse, press the STOP key on the exit side of the DC-648.
- You can also release the temporary stop by pressing the STOP key or TEST key of the control panel on the feed side.
- If you press the START key, the finished products temporarily stopped at the exit section will be ejected and all the documents on the **feed tray** will be processed continuously.



REFERENCE

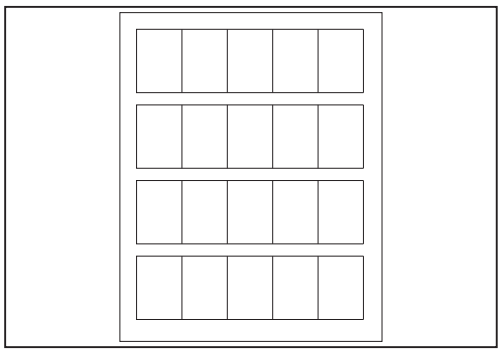
To process a document with gutter slits, adjust the **guides** to the middle between the finished products.



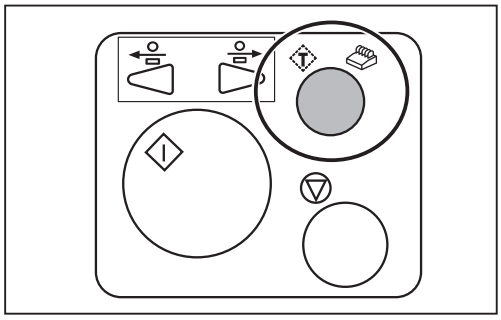
REFERENCE

To program a JOB with no gutter slit, adjust the **guide** positions according to the following procedure.

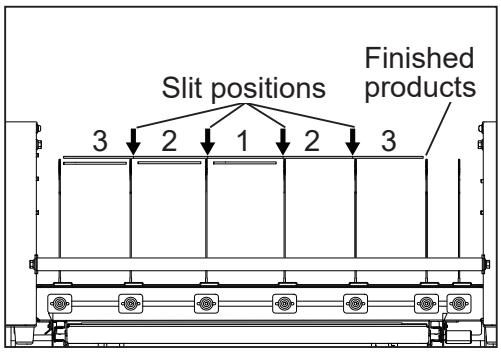
1. Attach the **card stacker** according to steps ❶ to ❷ in ● To attach the drop card stacker: (P.15) or ● To attach the elevator card stacker: (P.17).
   Adjust the **guides** to process documents as below:
   • Document size: 297×420 mm (A3)
   • Business card (55×85 mm), 5 (horizontally) × 4 (vertically) cards on a document, no gutter slit (It is not possible to set any gutters because of five horizontal cards.)



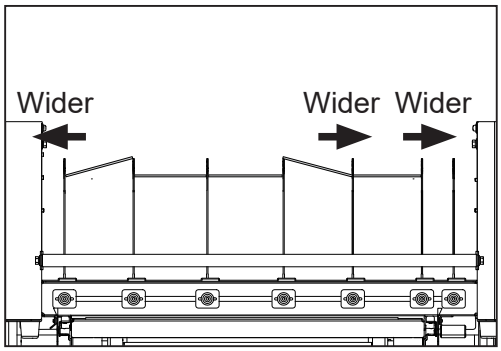
2. Press the TEST key to perform a test run for one sheet.



3. The DC-648 temporarily stops for about three minutes when the finished products have reached the ejected point.
   During this, slide each **guide** to the ejected point by holding the **guide adjustment knob**.
   3-1. Adjust the **guide** for the finished product in the center. Make sure that there is a space of 1 to 2 mm between the finished product and the **guides**.
   3-2. Adjust the rest of the **guides** on both sides with reference to the **guides** for the finished product in the center.
   3-3. Set the **plates**.
   3-4. Set the **stopper** according to the length of the finished products.



4. The finished products will automatically be ejected to the **card stacker** in about three minutes.
   If the finished products are skewed and stacked on the **card stacker**, re-adjust the **guide** positions.



IMPORTANT

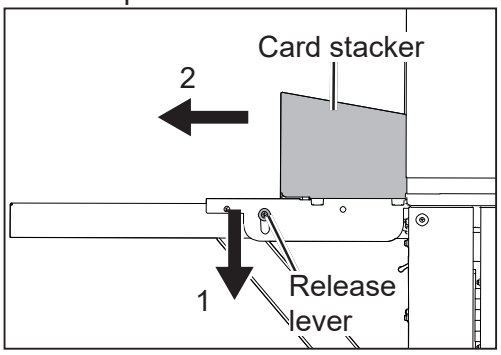
To program a JOB without gutter slits to process a light weight document, select **SLOW** for **Speed**.

Removing the Card Stacker

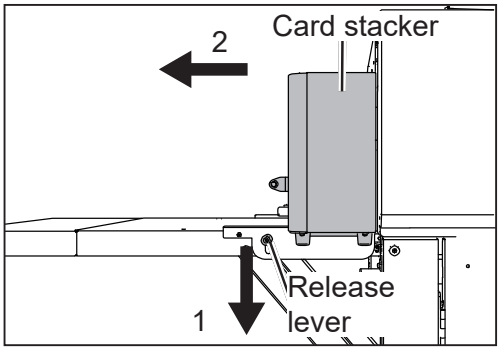
1. Remove the **stopper** from the **card stacker**.

2. While pushing down the **release lever** on the operator's side of the **exit tray** (1), remove the **card stacker** by sliding it toward the exit side (2).

< For drop card stacker>



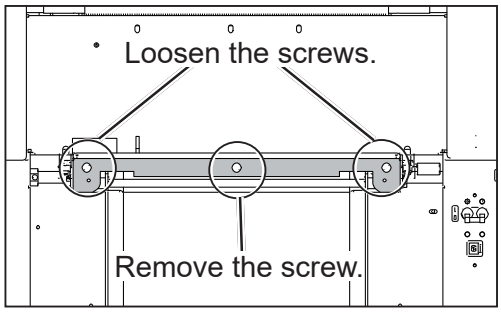
<For elevator card stacker>



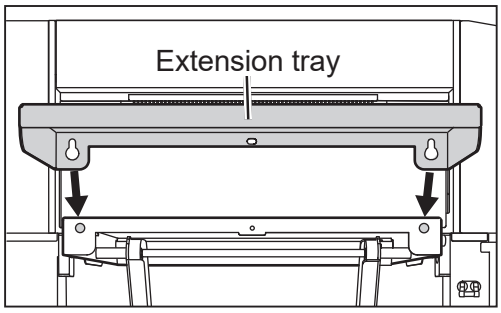
Attaching the Extension Tray

When the whole length of a finished product is more than 460.0 mm, attach the **extension tray** to the **exit tray** in the procedure below:

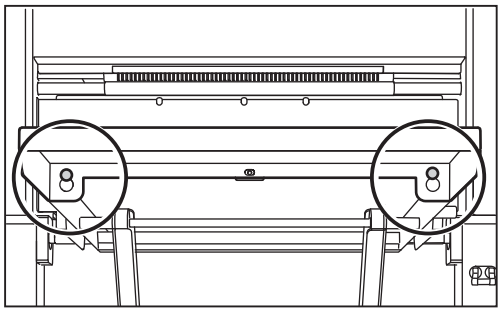
1. 1. Loosen the two screws on the both sides of the **exit tray**.
   *Do not fully remove the screws.
   2. Remove the screw in the center.



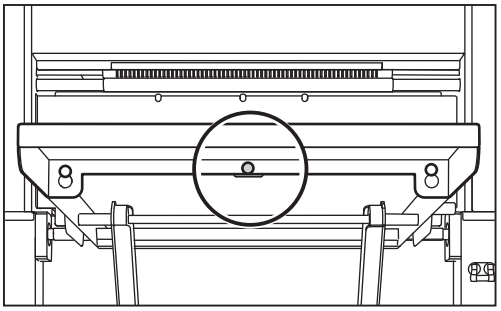
2 Hook the **extension tray** on the loosened screws.



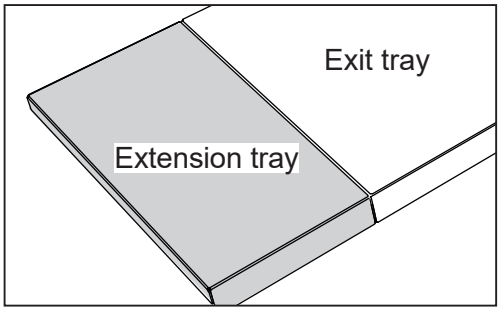
3 Tighten the two screws loosened in step ❶.



4 Secure the **extension tray** with the screw removed in step ❶.



5 The figure on the right shows the **extension tray** attached to the **exit tray**.



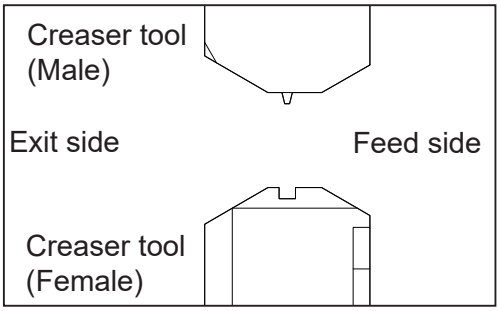
Changing the Width of the Creaser Tool

Change the position to attach the **creaser tool (Female)** (wider groove or narrower groove) of the creaser section according to documents to be used.

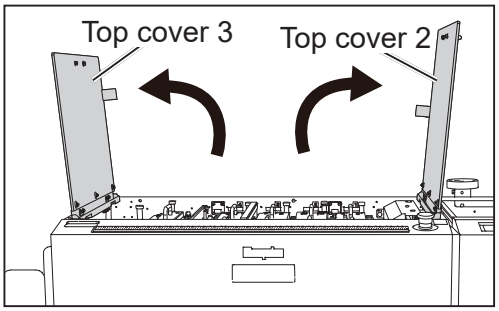
To process heavy weight documents: Wider groove side (1.4 mm)
To process normal documents: Narrower groove side (1.2 mm)

REFERENCE

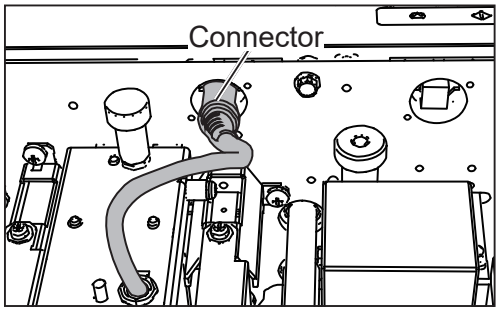
The figure on the right shows a sectional view of the **creaser tool (Male)** and the **creaser tool (Female)**.



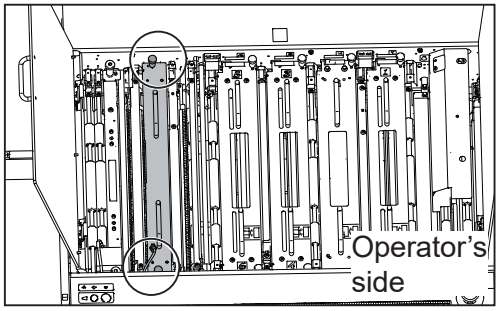
1 Open the **top cover 2** and the **top cover 3**.



2 Disconnect the **connector** of the **creaser module**.

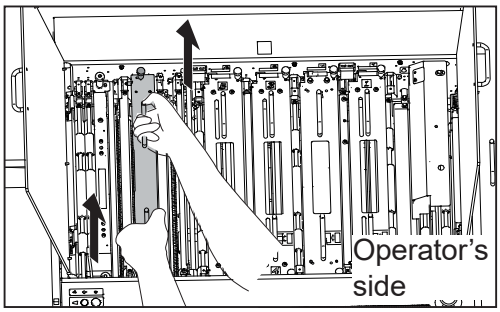


3 Remove the two **fixing screws** on the **creaser module**.

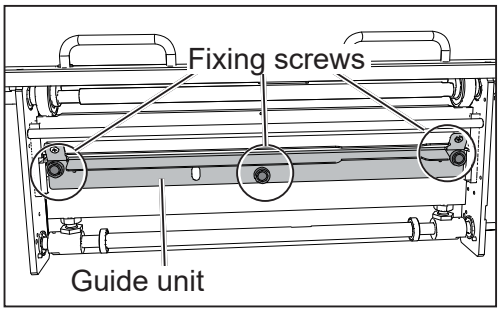


4 Remove the **creaser module**.

*Make sure to grasp the **handles** and lift the module upward.
*Place the removed **creaser module** on a flat surface.



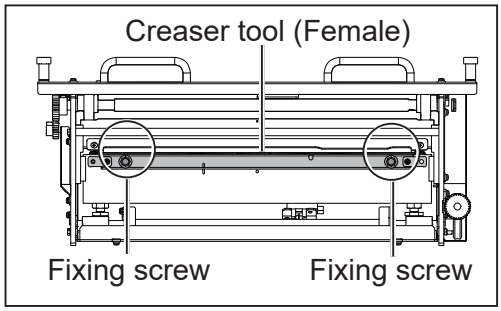
5 Remove the three **fixing screws** to detach the **guide unit**.



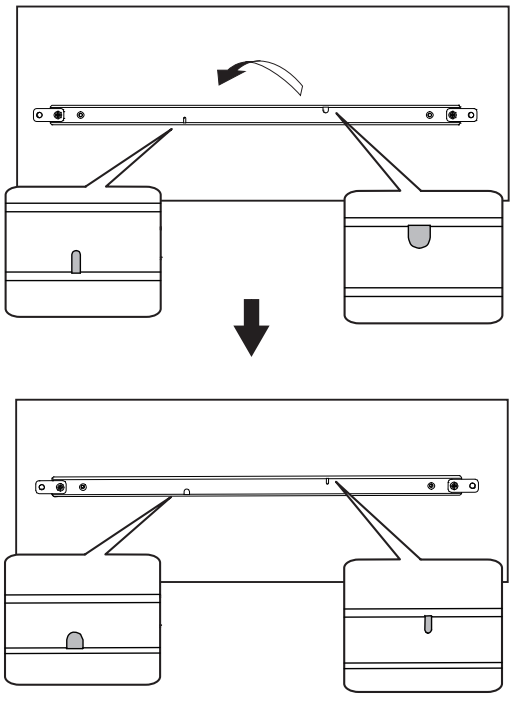
6 Attach the two **fixing screws** removed in step ❺ to the **creaser tool (Female)**.
Grasp the **fixing screws** to remove the **creaser tool (Female)**.

IMPORTANT

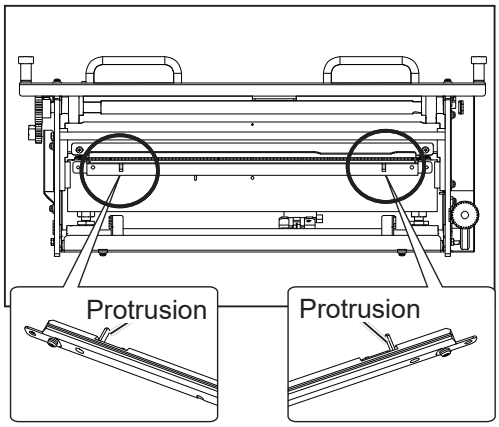
Take extreme care for handling the **creaser tool (Female).**
If the tool receives a strong impact by being dropped, it may affect the accuracy of processing creases on a document.



7 Turn the **creaser tool (Female)** 180 degrees in the direction of the arrow.



8 Reattach the **creaser tool (Female)** to its original position (step ❻) with its protrusion fitted into the groove as shown in the figures on the right.

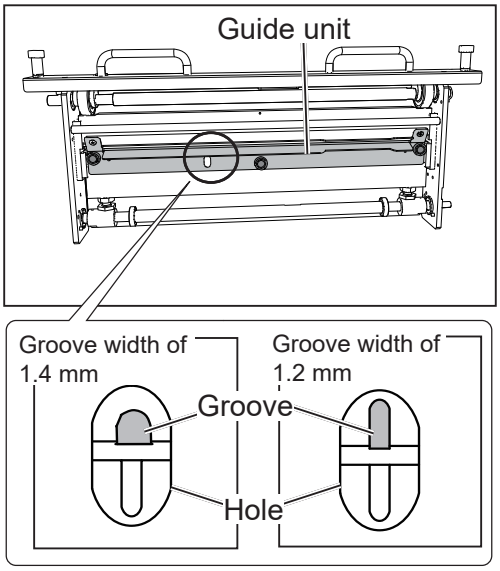


To process with the groove width of 1.4 mm.

To process with the groove width of 1.2 mm.

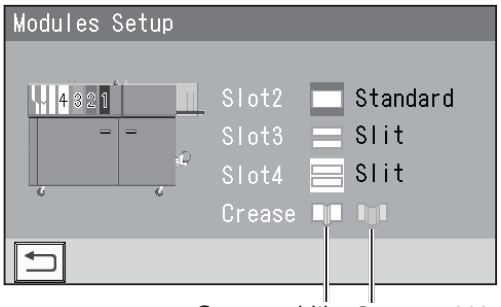
REFERENCE

Make sure that the groove of the **creaser tool (Female)** is at the position as shown in the figrue on the right by looking at it through the hole in the **guide unit**.



You can also check the groove width of the **creaser tool (Female)** currently set on the **control panel**.

1. Touch 4321 on the **standby** screen. (→P.40 Standby Screen)
2. The **Modules Setup** screen appeares. The groove width currenlty set is displayed for **Crease**. (The figure on the right shows that the groove width of 1.2 mm is set.)



Groove width of 1.2 mm

Groove width of 1.4 mm

9 Reattach the **creaser module** to its original position in the procedure below:

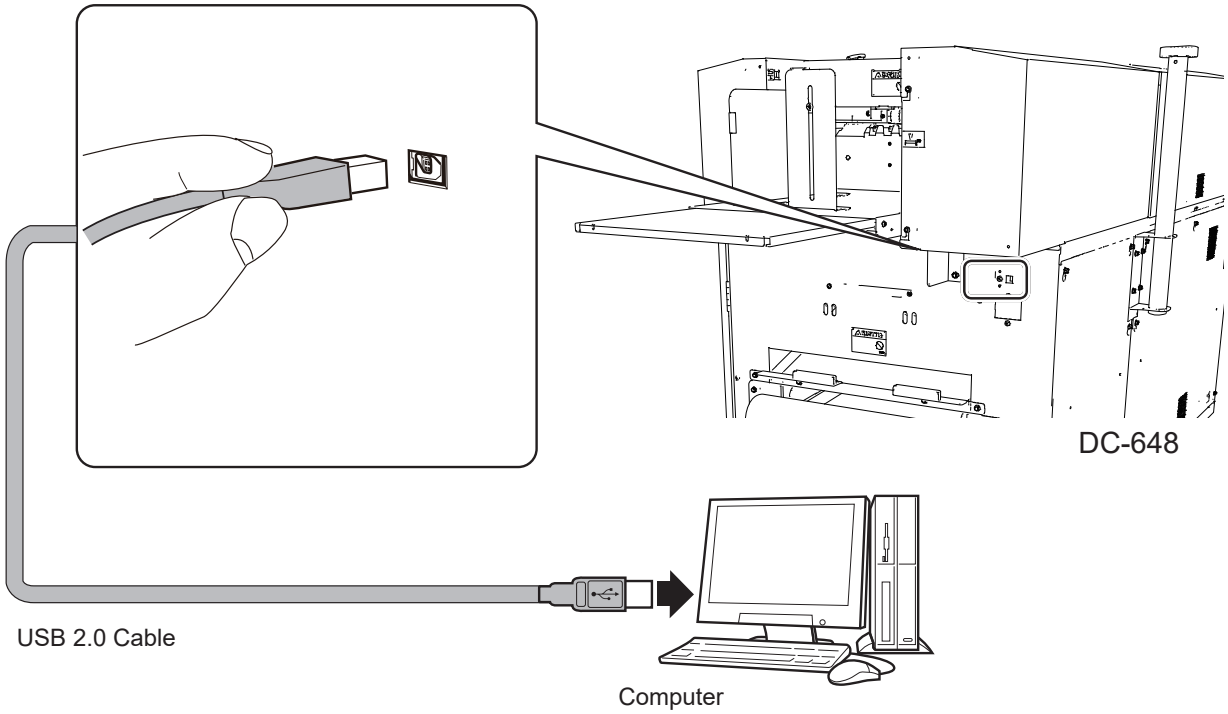
1. Remove the two **fixing screws** attached in step ❻ from the **creaser tool (Female)**.
2. Attach the two **fixing screws** removed in step 1 above and the other **fixing screw** removed in step ❺ to the **guide unit** and secure them.
3. Grasp the **handles** on the **creaser module** and place it in its original position (step ❸). Tighten the two **fixing screws** to secure the **creaser module**.
4. Close the **top cover 2** and the **top cover 3**.

How to Connect the DC-648 to a Computer

Prepare an USB 2.0 cable (AB type connector, 4-pin). Plug the USB terminals into the USB port of the DC-648 and the USB port on your computer.
A USB cable must be within 3 m long.

REFERENCE

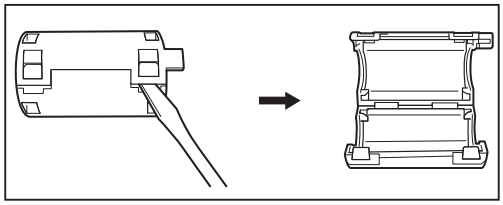
Make sure to install the driver of the **PC Controller** first and then connect the DC-648 to your computer.



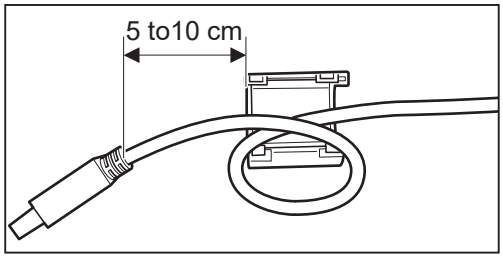
● Attaching the ferrite core

Attach the **ferrite core** that came with the USB cable as follows:

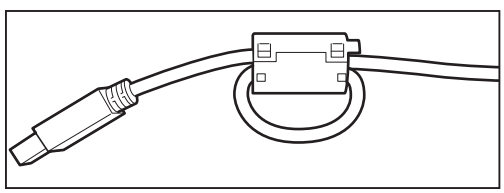
1. Release the lock of the **ferrite core** with a flat-head screwdriver.



2. Attach the **ferrite core** to the USB cable at a location of 5 to 10 cm (2 to 4 inches) from the base of the plug that connects to the DC-648 as shown in the figure on the right.



3. Close the **ferrite core** so that it securely locks.



Before Using This Machine

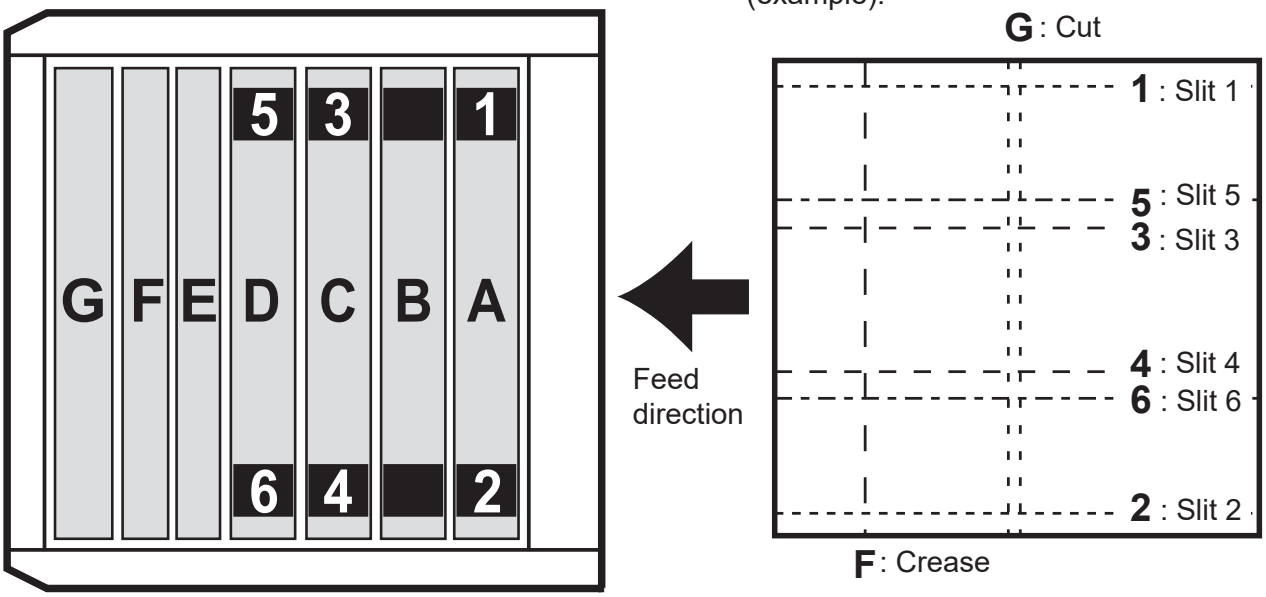
The DC-648 can save up to 250 patterns of JOBs. You can program JOB contents either via a computer or on the **control panel**. This section describes items required to program a JOB.

Slit: The DC-648 is equipped with six slitters. Two slitters on the both ends (1, 2) are for the margins and the remaining four slitters are for the center area of the document.

Cut: The **cutter** with which the DC-648 is equipped cuts documents.

Crease: The **creaser** creases documents.

Document and processing positions (example):

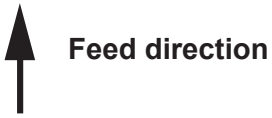


Number		Item	Function
A	1 2	Slot1 (Margin slitter module)	Cuts off margins on the operator's side and on the non-operator's side.
B	-	Slot2 (Standard module, CPM (Cross Tool Module), RTM (Rotary Tool Module)	Perforates a document parallel to the feed direction (perpendicularly with the **CPM (Cross Tool Module)** (option).
C	3 4	Slot3 (Standard module, center slitter module 3&4, RTM (Rotary Tool Module)	Cuts or perforates a document parallel to the feed direction.
D	5 6	Slot4 (Standard module, center slitter module 5&6, and RTM (Rotary Tool Module)	Cuts or perforates a document parallel to the feed direction.
E	-	Gutter deflector	Waste cut off by module C or D will be dropped into the waste box.
F	-	Creaser module	Creases a document perpendicularly to the feed direction.
G	-	Cutter module	Cuts a document perpendicularly to the feed direction.

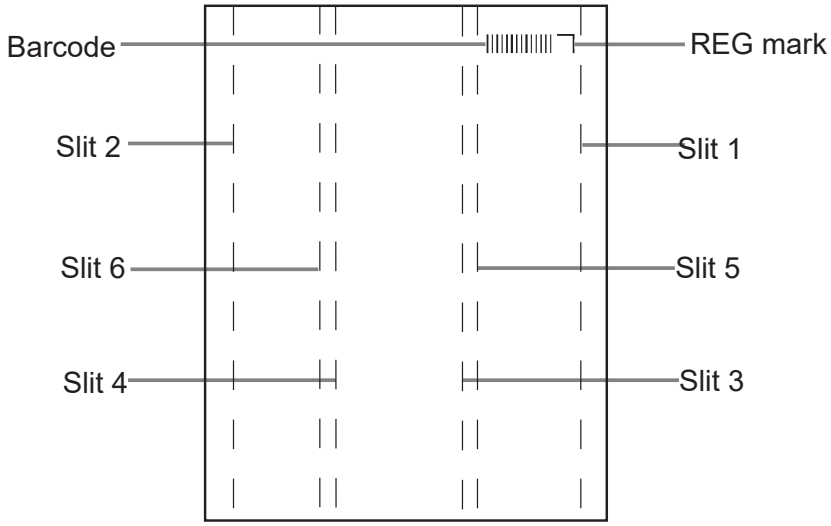
IMPORTANT

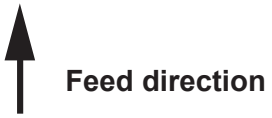
When removing and reattaching a module, make sure that it is installed in the correct slot in the correct orientation.

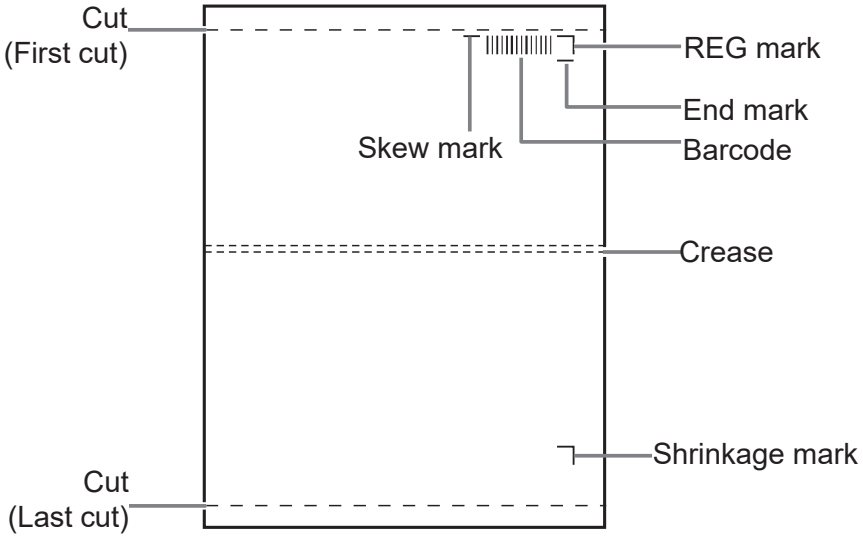
Terms for Programming a JOB



*The allocations of slits below are an example.







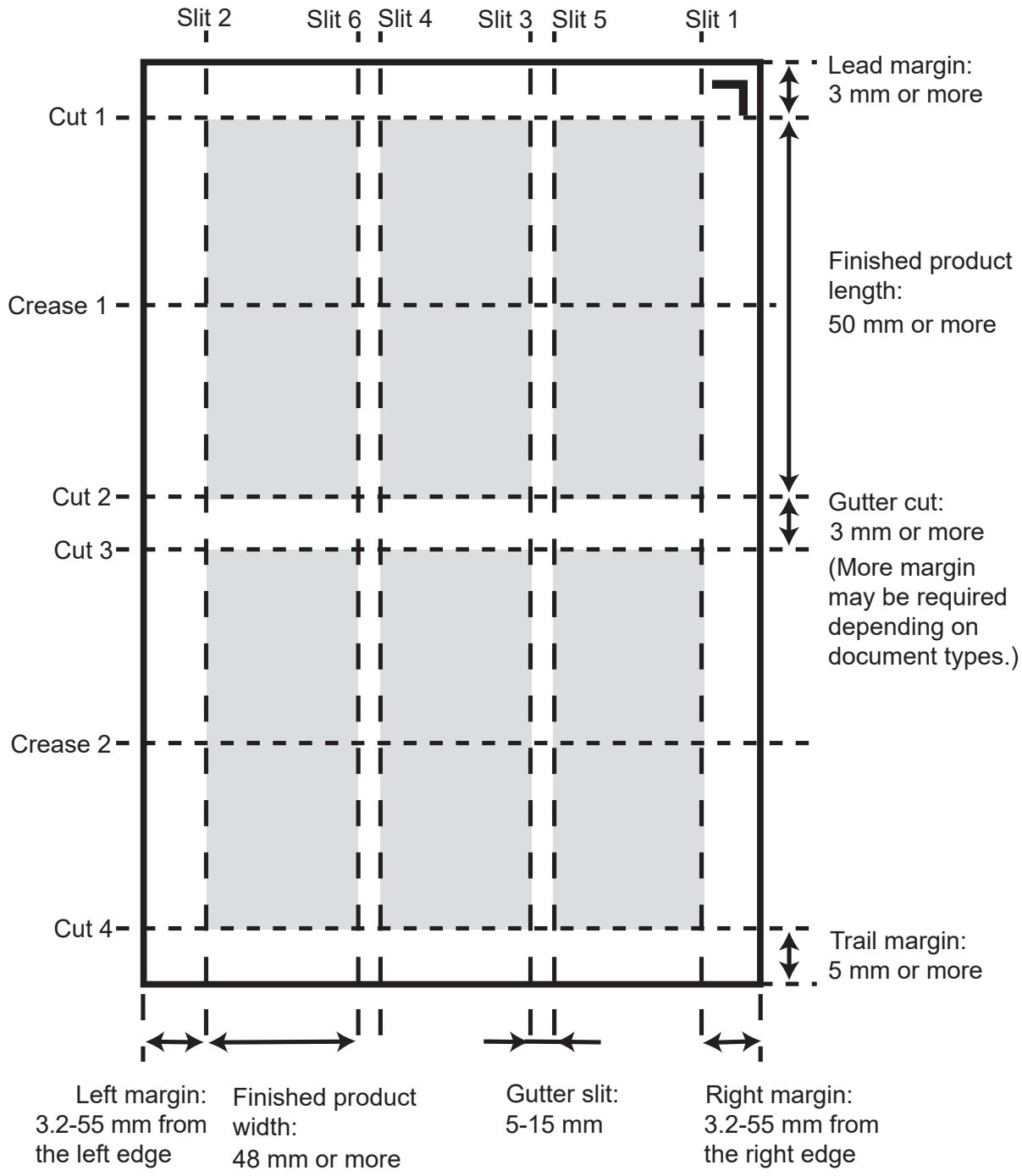
Slit/Cut/Crease Limitations

The description below is limitations for slit/cut/crease processing on the DC-648.

Slit: Up to six slits can be made on one document.
Slit 1 and Slit 2 in the figure below are for cutting the margins off at the both ends.
Cut: Up to 30 cuts can be made on one document.
Crease: Up to 20 creases can be made on one document.

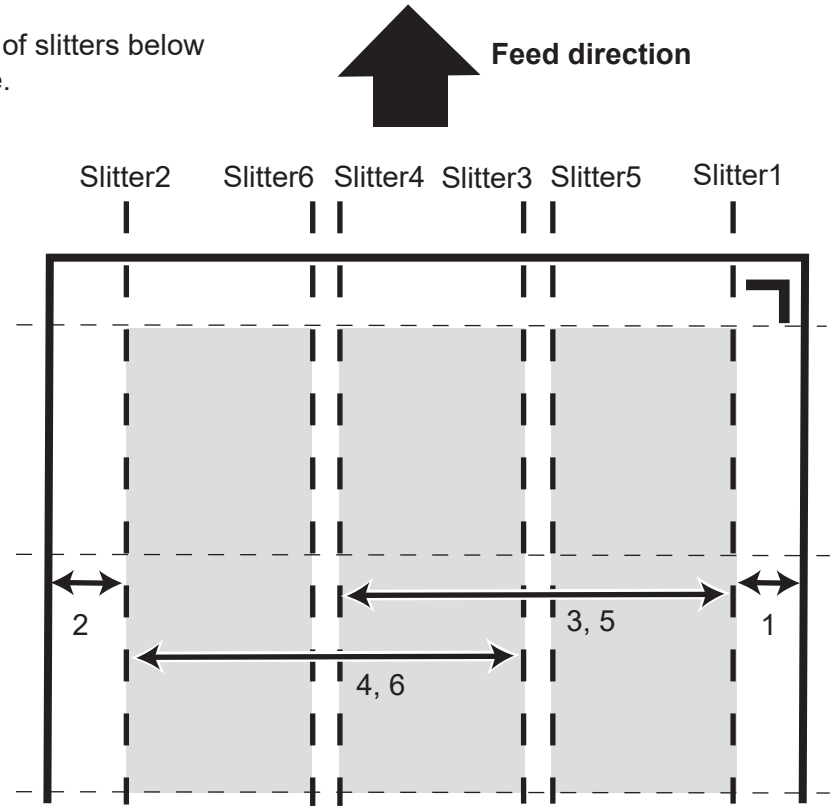
*The allocations of slits below are an example.

Feed direction



Moving range of slitters

*The allocations of slitters below are an example.



1. **Moving range of slitter1**
   3.2 to **55** mm (0 (zero) when it is not specified.)
2. **Moving range of slitter2**
   Document width minus **(3.2 to 55)** mm (0 (zero) when it is not specified.)
3. **Moving range of slitter3**
   48 to **(document width minus 48)** mm (0 (zero) when it is not specified.)
   *A distance of 48 mm or more is required between entered values for **slitter3** and for **slitter4**.
4. **Moving range of slitter4**
   48 to **(document width minus 48)** mm (0 (zero) when it is not specified.)
   *A distance of 48 mm or more is required between entered values for **slitter3** and for **slitter4**.
5. **Moving range of slitter5**
   48 to **(document width minus 48)** mm (0 (zero) when it is not specified.)
   *A distance of 5 mm or more is required between entered values for **slitter5** and for **slitter6**.
   *A distance of 5 mm or more is required between entered values for **slitter3** and for **slitter5**.
6. **Moving range of slitter6**
   48 to **(document width minus 48)** mm (0 (zero) when it is not specified.)
   *A distance of 5 mm or more is required between entered values for **slitter5** and for **slitter6**.
   *A distance of 5 mm or more is required between entered values for **slitter4** and for **slitter6**.

*Limitation of the range for each slitter varies depending on entered values for other slitters.

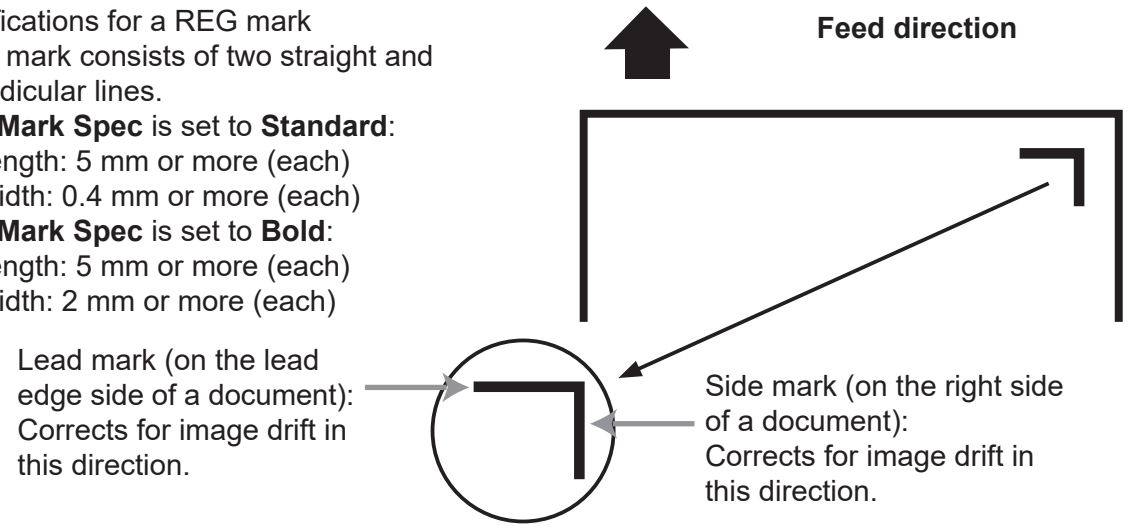
● REG Mark (For image shift compensation)

The built-in camera in the DC-648 detects the image drift caused on each page when printed with a digital printer and automatically compensates for image drift by reading a REG mark and adjusts the print position accordingly.

For the procedure for setting the REG mark reading function, refer to Chapter 2 Programming a JOB.
To use this function, a REG mark is required to be correctly printed on each document. Refer to the following descriptions for the specifications and a position of a REG mark.

1. Specifications for a REG mark
   A REG mark consists of two straight and perpendicular lines.

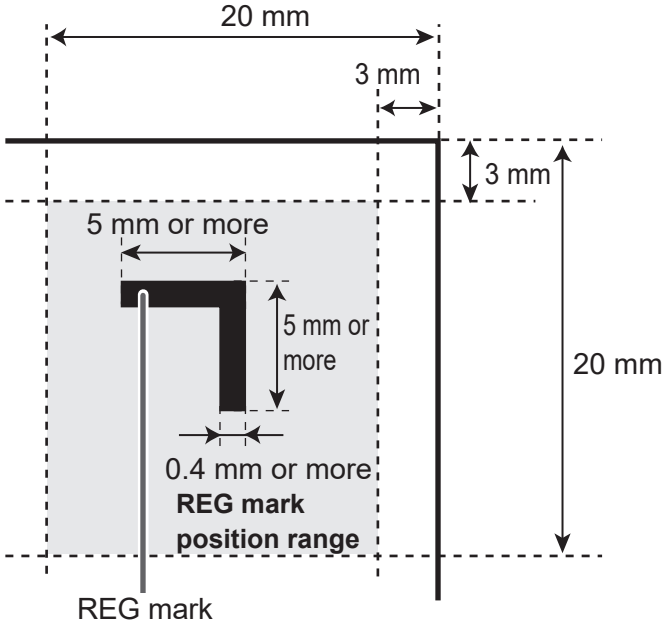
- When **Mark Spec** is set to **Standard**:
  Line length: 5 mm or more (each)
  Line width: 0.4 mm or more (each)
- When **Mark Spec** is set to **Bold**:
  Line length: 5 mm or more (each)
  Line width: 2 mm or more (each)



2. Position of a REG mark
   *Use a pen tool of your software application to draw two straight and perpendicular lines.

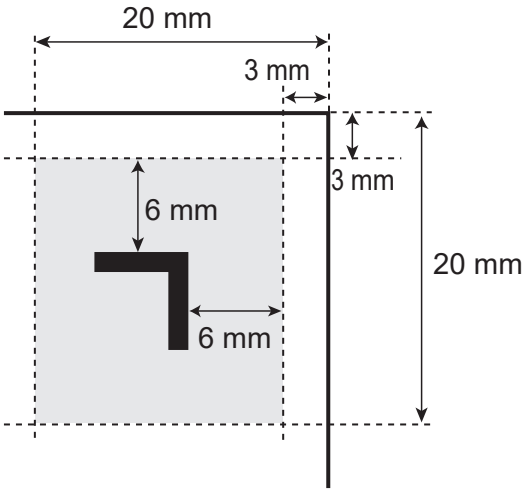
- When **Mark Spec** is set to **Standard**:

Feed direction: A whole REG mark is required to be positioned within 3 to 20 mm from the lead edge of the document.
Document width direction: A whole REG mark is required to be positioned within 3 to 20 mm from the side edge of the document.

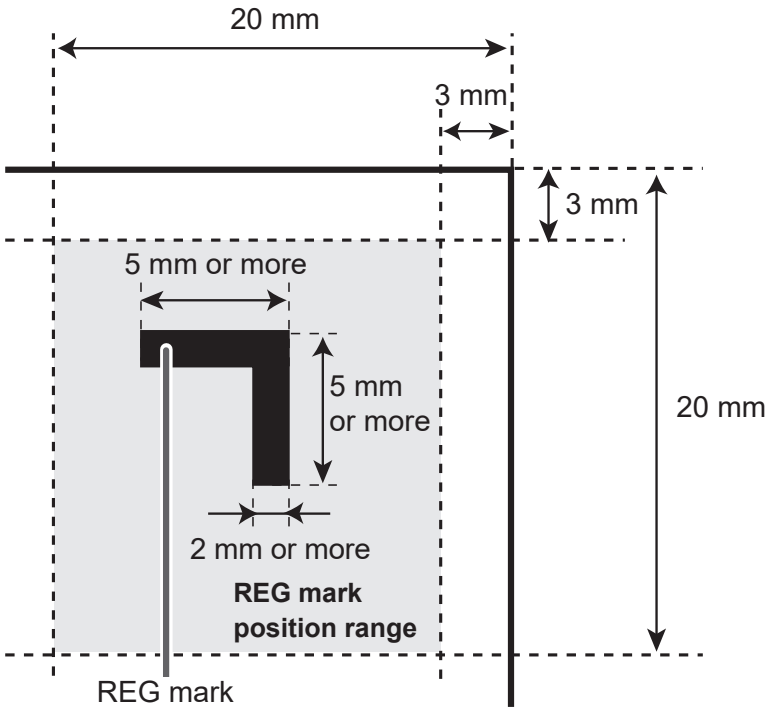


REFERENCE

The figure below shows the optimum position to print a REG mark.



● When **Mark Spec** is set to **Bold**:
Feed direction: A whole REG mark is required to be positioned within 3 to 20 mm from the lead edge of the document.
Document width direction: A whole REG mark is required to be positioned within 3 to 20 mm from the side edge of the document.



IMPORTANT

If there is a scratch or a stain in the printing range of a mark, the position may not be corrected.
Also if the read side of a document is rough and glossy, the camera may not be able to read a mark or a barcode. (The document may diffusely reflect light.)
To process specially treated documents (glossy documents), print a bold mark on them in advance. Then, select **Bold** for **Mark Spec**.

●Shrinkage Mark / Skew Mark

When valid values are entered both for the **lead mark** and the **side mark**, you can set a skew mark and a shrinkage mark.

Skew mark: Detects skew of a print automatically.

Shrinkage mark: Detects shrinkage of a print automatically. It consists of two straight and perpendicular lines.

(→Chapter 3 Basic Operations - Detecting Print Shrinkage with a Shrinkage Mark (P.101))

If a printed document is shrunk by the heat from the digital printer and the shrinkage mark reading function is enabled, the DC-648 reads the REG mark and the shrinkage mark, which automatically detects the expansion or the shrinkage of the print, and calculates it.
(→P.80 7. Read Shrink Mark)

REFERENCE

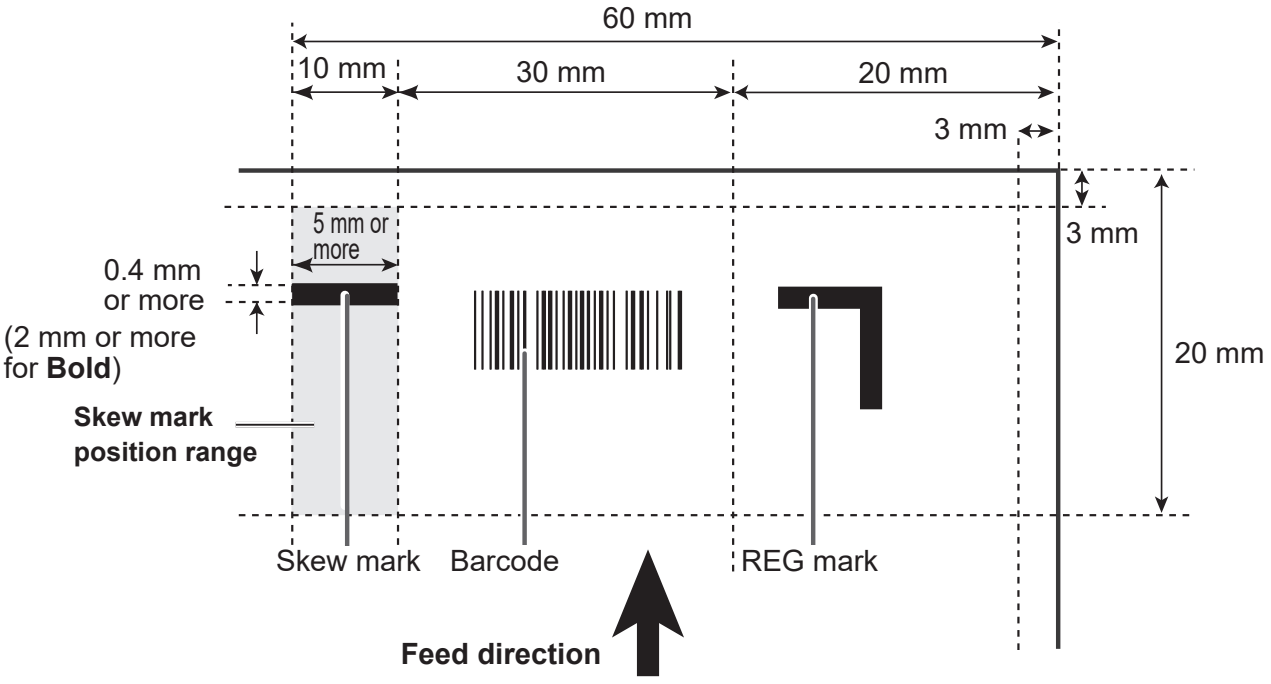
- For the procedure for setting a skew mark and a shrinkage mark, refer to Chapter 2 Programming a JOB.
- You can program or process a JOB without a skew mark/shrinkage mark printed on a document.

1. Specifications for a skew mark
   A skew mark is printed in one horizontal line.

● When **Mark Spec** is set to **Standard**:
Line length: 5 mm or more
Line width: 0.4 mm or more

● When **Mark Spec** is set to **Bold**:
Line length: 5 mm or more
Line width: 2 mm or more

2. Position of a skew mark
   Use a pen tool of your software application to draw one horizontal line.
   Feed direction: A whole skew mark is required to be positioned within 3 to 20 mm from the lead edge of the document.
   Document width direction: A whole skew mark is required to be positioned within 50 to 60 mm from the right edge of the document.
   *Make sure that **the distance between the document lead edge and the shrinkage mark** and that **between the document lead edge and the REG mark** are the same.



3. Specifications for a shrinkage mark
A shrinkage mark consists of two straight and perpendicular lines.

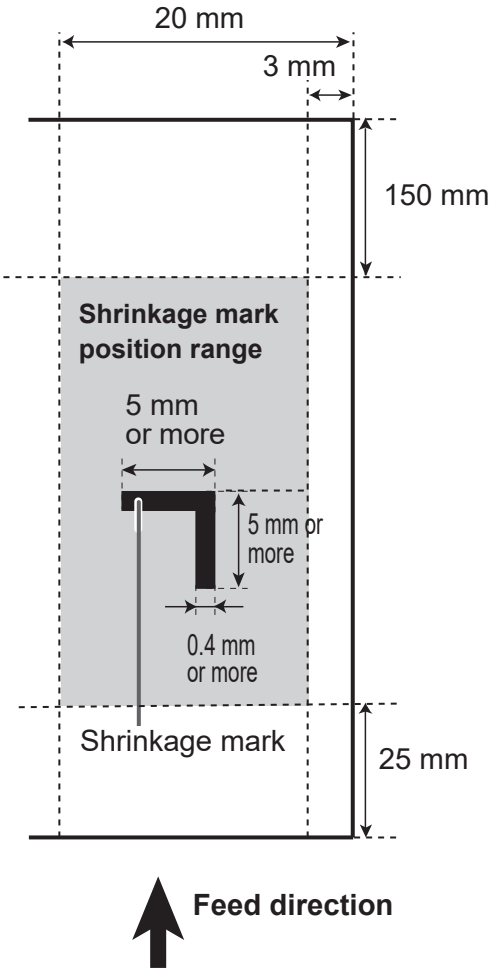
- When **Mark Spec** is set to **Standard**:
  Line length: 5 mm or more (each)
  Line width: 0.4 mm or more (each)
- When **Mark Spec** is set to **Bold**:
  Line length: 5 mm or more (each)
  Line width: 2 mm or more (each)

4. Position of a shrinkage mark
Use a pen tool of your software application to draw two straight and perpendicular lines.

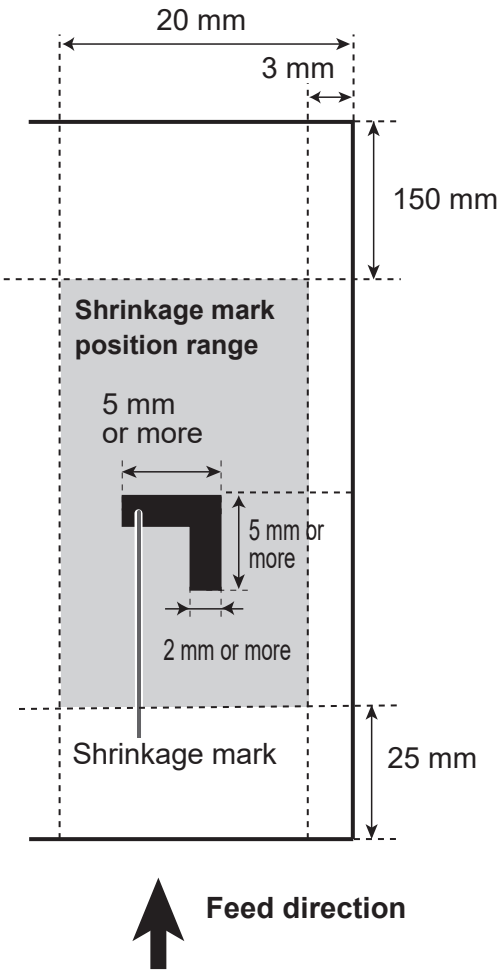
- When **Mark Spec** is set to **Standard**:
  Feed direction: A whole shrinkage mark is required to be positioned at 150 mm or more from the lead edge and at 25 mm or more from the trail edge of the document.
  Document width direction: A whole shrinkage mark is required to be positioned within 3 to 20 mm from the right edge of the document.
  *Make sure that **the distance between the document right edge and the shrinkage mark** and that **between the document right edge and the REG mark** are the same.

- When **Mark Spec** is set to **Bold**:
  Feed direction: A whole shrinkage mark is required to be positioned at 150 mm or more from the lead edge and at 25 mm or more from the trail edge of the document.
  Document width direction: A whole shrinkage mark is required to be positioned within 3 to 20 mm from the right edge of the document.
  *Make sure that **the distance between the document right edge and the shrinkage mark** and that **between the document right edge and the REG mark** are the same.

Standard:



Bold:



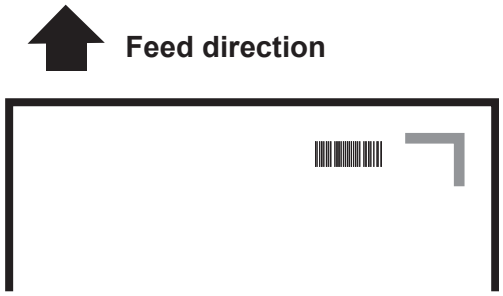
● Barcode (Automatic JOB selection)

With a barcode which indicates a JOB number printed on each document, when the START key is pressed, the DC-648 will automatically be set up.
Even if documents with multiple types of JOBs are loaded on the **feed tray** at one time, the built-in camera in the DC-648 reads a barcode on them. The DC-648 is automatically set up and finishes processing all the JOBs.

To use this function, a barcode is required to be printed on each document.
Refer to the following descriptions for the specifications and a position of a barcode.

1. Specifications for a barcode

Barcode type	CODE-39
Start/Stop code	Required
Minimum line thickness	0.254 mm
Thin bar: Thick bar	1:2.5
Bar height	4 mm or more



IMPORTANT

Make sure to use a CODE-39 barcode.

REFERENCE

The camera may fail to read a barcode even if it is printed within the specifications depending on the quality of a print or the document type.
In that case, enlarging the barcode vertically or horizontally may improve it.

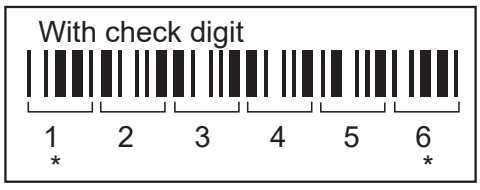
Use the barcode generator function equipped on your software application or use barcode generator software.

2. Position of a barcode

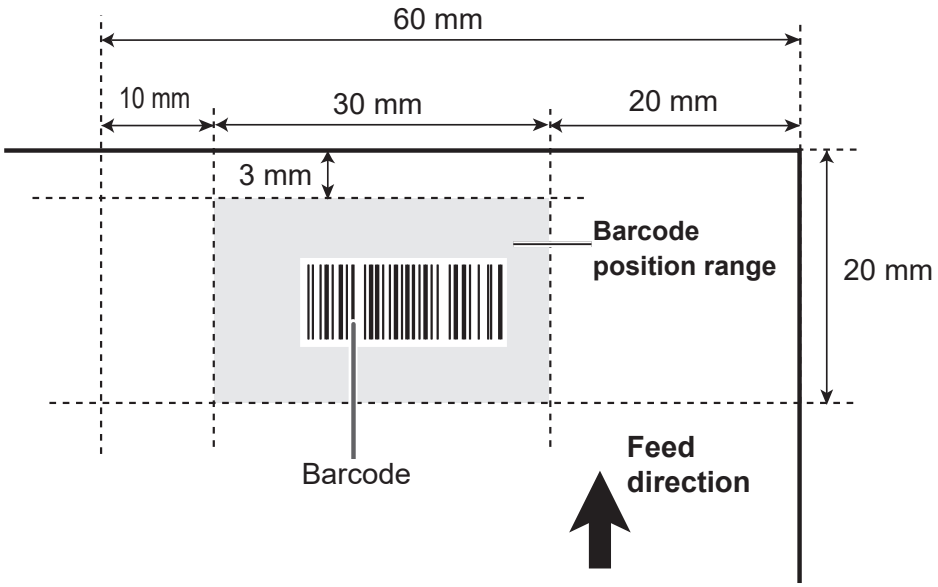
Feed direction: A whole barcode is required to be positioned within 3 to 20 mm from the lead edge of the document.

Document width direction: A whole barcode is required to be positioned within 20 to 50 mm from the side edge of the document.

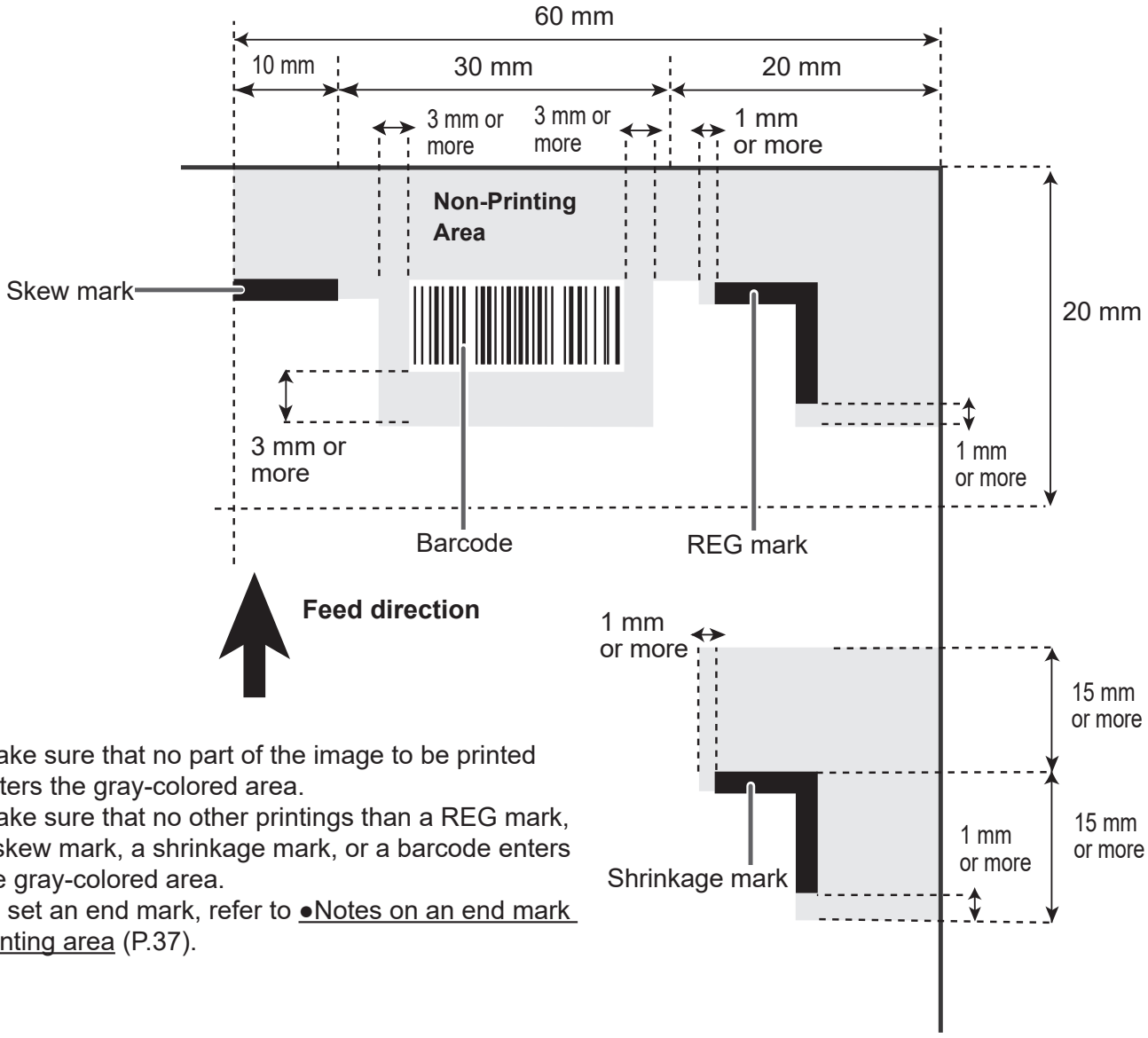
1. Enter *. (The start code designator for CODE-39)
2. The hundreds place data of the JOB number
   (e.g.: When the JOB number is 250, the data is 2.)
3. The tens place data of the JOB number
   (e.g.: When the JOB number is 250, the data is 5.)
4. The ones place data of the JOB number
   (e.g.: When the JOB number is 250, the data is 0 (zero).)
5. The check digit
   (Corresponds to with or without)
6. Enter *. (The stop code of CODE-39)



<Position of a barcode>



<To print REG mark, skew mark, shrinkage mark, and barcode on one document>
A REG mark, a skew mark, a shrinkage mark, or a barcode located out of the specified printing area will not be read correctly. To arrange them on a document, take account of the possible variation in the printed position of them.



- Make sure that no part of the image to be printed enters the gray-colored area.
- Make sure that no other printings than a REG mark, a skew mark, a shrinkage mark, or a barcode enters the gray-colored area.
- To set an end mark, refer to ●Notes on an end mark printing area (P.37).

● End Mark

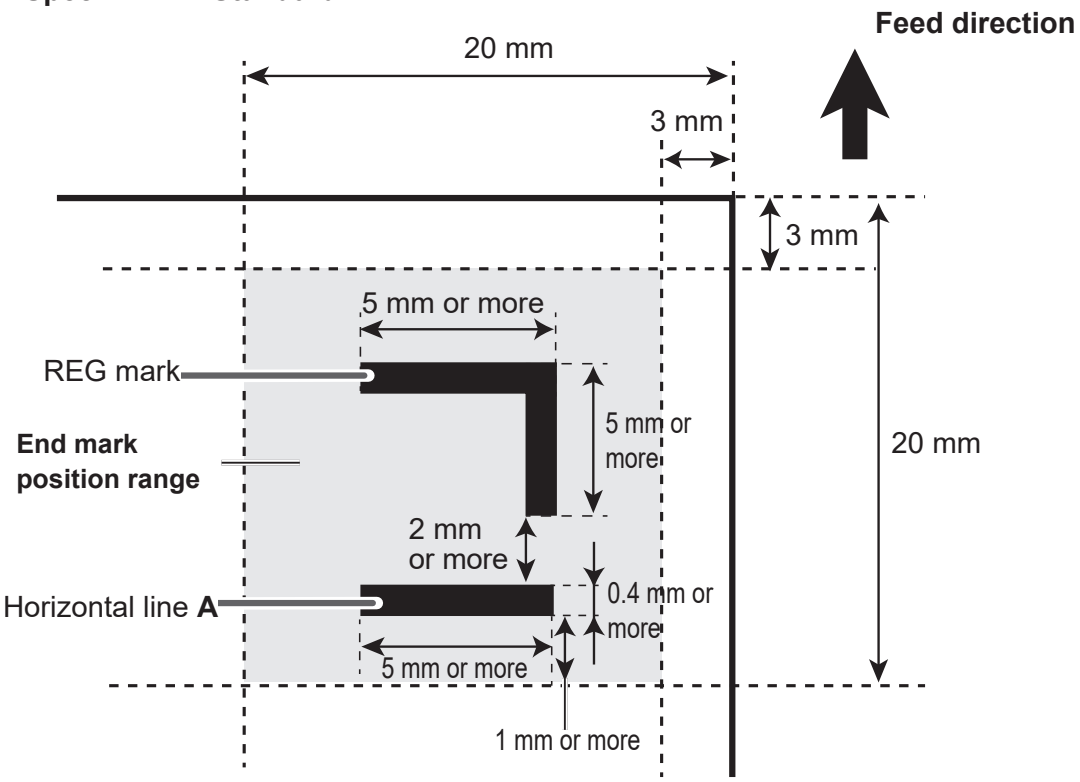
An end mark consists of a REG mark from the lead edge of the document and a horizontal line **A** as shown in the figure below.

REFERENCE

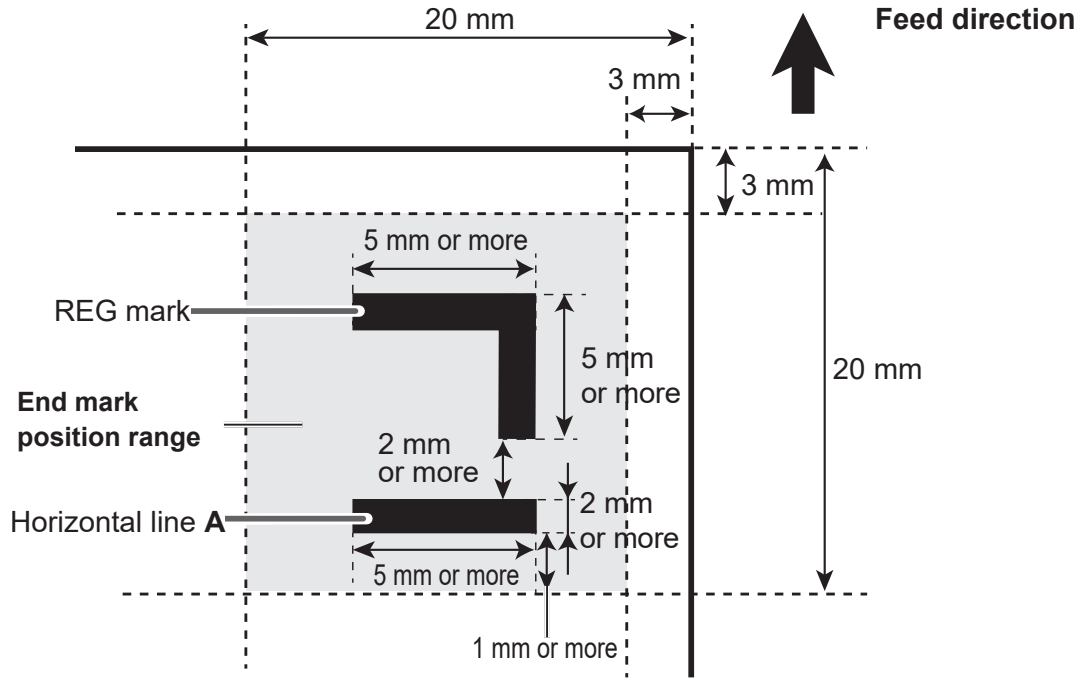
- Draw an end mark and print it on a document in a similar way to 2. Position of a REG mark (P.30).
- You can program or process a JOB without an end mark printed on a document.

<Position of an end mark>

● When **Mark Spec** is set to **Standard**:



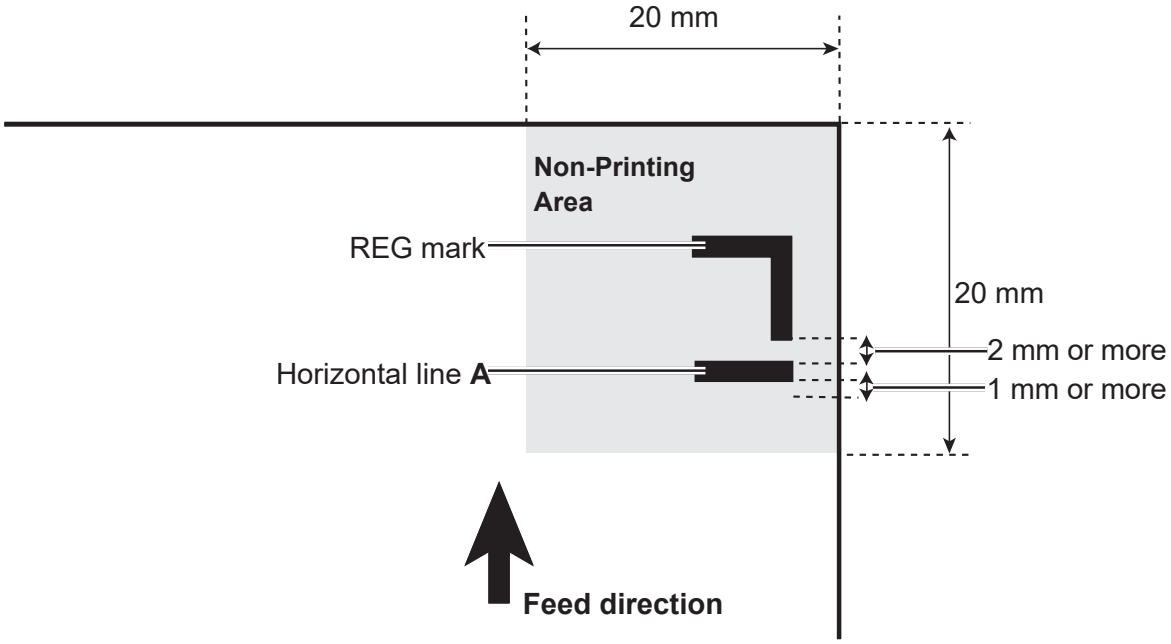
● When **Mark Spec** is set to **Bold**:



●Notes on an end mark printing area

Make sure that nothing is printed in the following range:
- Between the lead edge of the document and the REG mark
- Between the REG mark and the horizontal line **A** (2 mm or more)
- 1 mm or more after the horizontal line **A**

Make sure that no printing enters the gray-colored area as shown below:



MEMO

Chapter 2

Programming a JOB

This chapter describes how to program a JOB, make function settings, and adjust each function.

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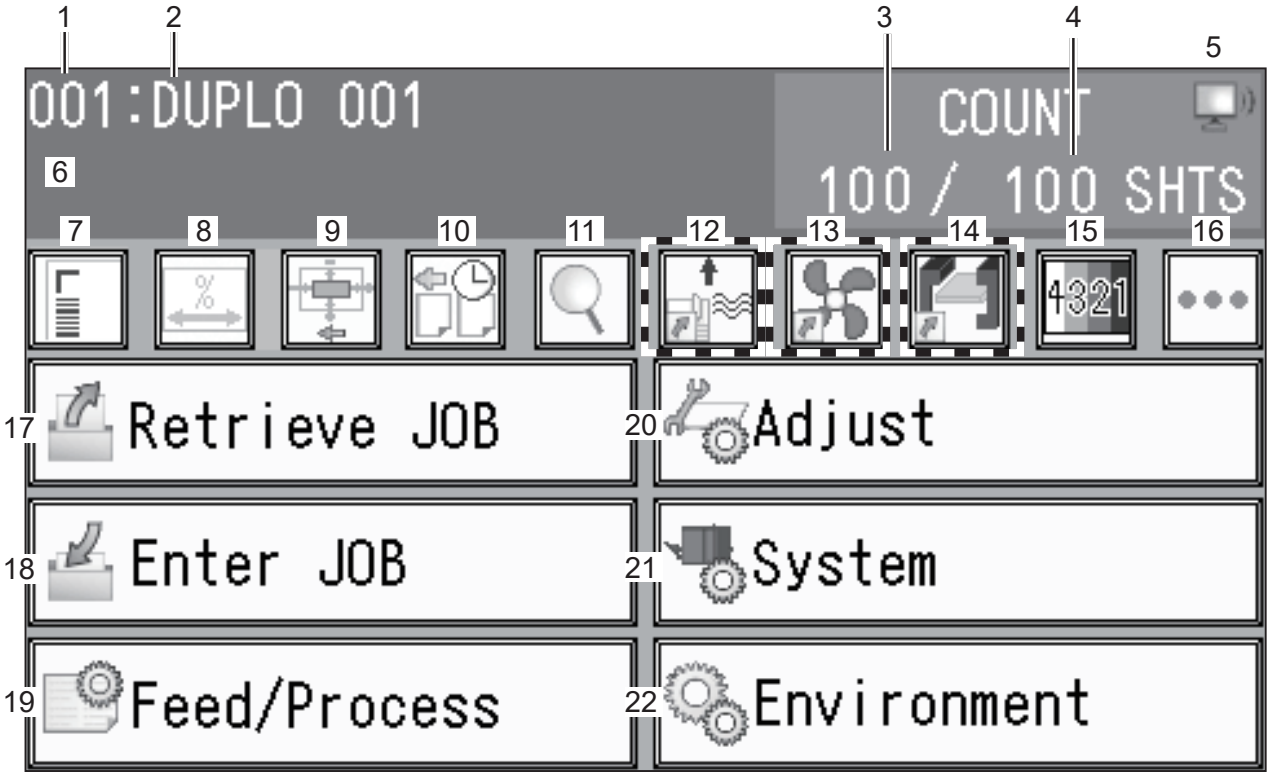
Before Programming a JOB

Standby Screen



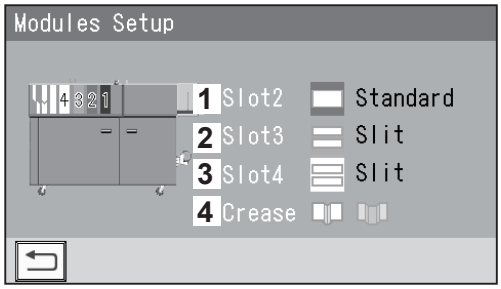
No.	Name	Function
1	JOB number	Displays the JOB number currently selected.
2	JOB name	Displays the JOB name currently selected.
3	Counter	Displays the number of document sheets processed with the JOB (Continuous processing). Displays the number of document sheets to be processed when the **preset number of sheets** is displayed (Preset processing). * The screen above shows when the **preset processing** is being performed.
4	Preset number of sheets	Displays the maximum number of document sheets to be processed with the JOB. Processing documents with this value displayed is called **preset processing**. Processing documents without this value displayed is called **continuous processing**.
5	PC Controller connection	Displayed when the **PC Controller** is connected to the DC-648.
6	Machine status	Displays the status of the DC-648 after it started operation. (**In Operation**/**Pause Feeing**/**Separating**/**Stacker Setup**/**Stacker Full**)
7	Read REG Mark Read Barcode	Displays when **Read REG Mark**, **Read Skew Mark**, **Read Shrink Mark**, and/or **Read Barcode** are set. Touching this icon displays **Read REG Mark**/**Read Skew Mark**/**Read Shrink Mark** on the **Feed - Feed** screen. (→P.79)
8	Apply Shrinkage	Displayed when **Apply Shrinkage** is set. Touching this icon displays **Apply Shrinkage** on the **Adjust** screen. (→P.85)
9	Adjust All	Displayed when **Adjust All** is set. Touching this icon displays **Adjust All Pos.** on the **Adjust** screen. (→P.85)

No.	Name	Function
10	Batch Separation	Displayed when **Batch Separation** is set. Touching this icon displays **Batch Separation** on the **System - Exit** screen. (→P.89)
11	Details	Touching this icon displays the details of the JOB. (→P.44)
12	Shortcut 1	Displays an icon the function of which is set in **Shortcut**. Touching this icon displays the screen on which the function is set. (→P.96)
13	Shortcut 2	
14	Shortcut 3	
15	Modules setup	Displays the type and the crease depth (Standard/Wide) of the modules that are installed in **slot2**, **slot3**, and **slot4**.
16	Other functions	Enables you to select **Cleaning Mode** and **Cleaning Sheet**. (→P.154) (→P.158)
17	Retrieve JOB	Retrieves a saved JOB. (→P.72)
18	Enter JOB	Enter and change settings for a JOB with this. (→P.47)
19	Feed/Process	Makes settings for the followings: **Cut Trim Setting**, **Trail Cut Mode**, **Crease Depth**, **Slitter Guide**, **Air Knife**, **Fan Register**, **Blow Fan**, **Side Air** (option), **Read REG Mark**, **Read Skew Mark**, **Read Shrink Mark**, **Mark Spec**, **Detection Setting, Read Barcode** (→P.78)
20	Adjust	Makes settings for the followings: **Cutter Speed**, **Speed**, **Apply Shrinkage**, **Adjust All Pos.**, **Cut 1 Adj.**, **Last Cut Adj.** (→P.84)
21	System	Makes settings for the followings: **Double Feed Detection**, **Feeder Capacity**, **Detect document skew**, **Batch Separation**, **Gap Timing**, **Waste Box Full**, **Conveyor**, **Reject** (→P.88)
22	Environment	Makes settings for the followings: **Buzzer**, **LCD Luminance**, **Unit**, **Basic Mode**, **Language**, **Modules (Default)**, **Category Name**, **User Size**, **Shortcut** (→P.92)

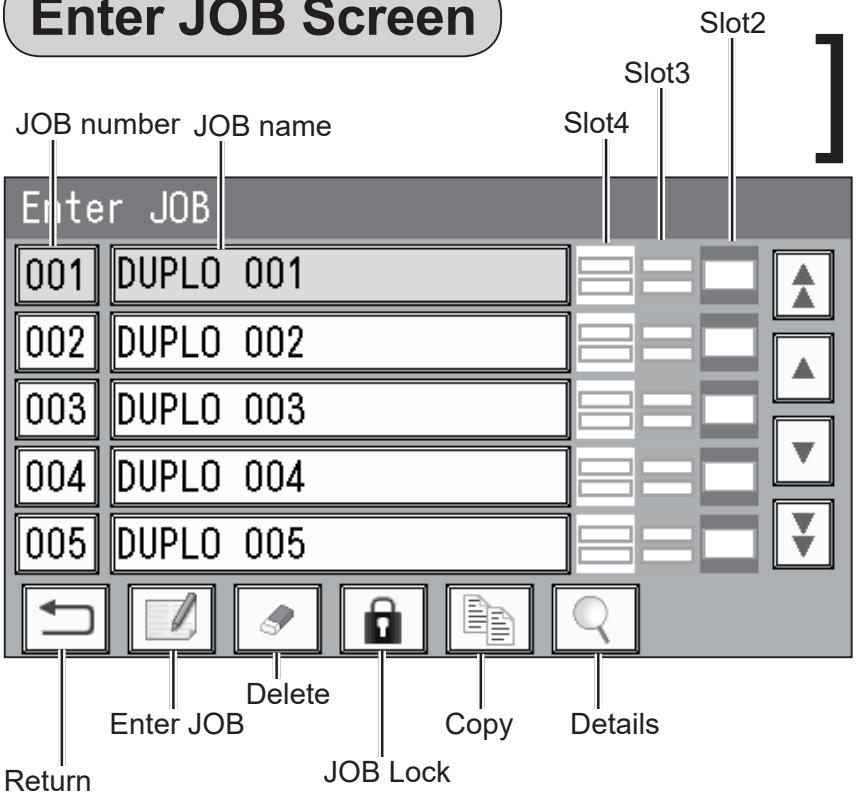
- To check a module in each slot, touch 4321 (15 Modules setup).

  The module installed in each slot is displayed in **1** to **3** in the figure on the right.
  The crease depth (standard/wide) in the **creaser** is displayed in **4** in the figure on the right. (→P.24)

  To return to the **standby** screen, touch ⮌.



Enter JOB Screen



Displays a module in each slot when a saved JOB is processed.

REFERENCE

: Standard module

: Slitter module

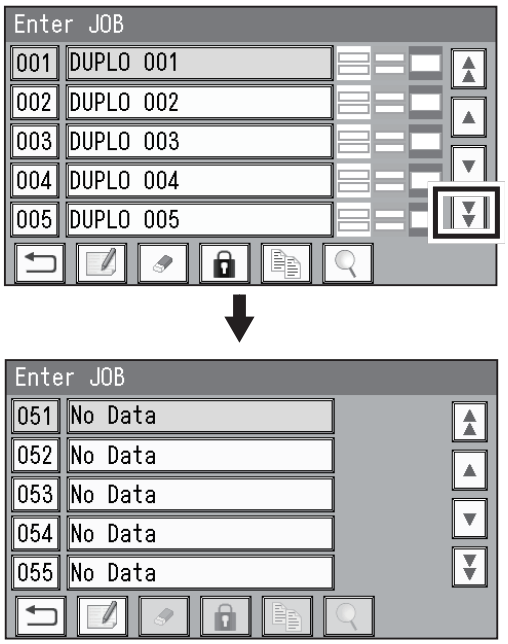
- : Enter JOB

  Touch this to program a new JOB or to change the settings of the JOB saved.
  (→P.47 Programming a JOB)

- Display switch

  : JOBs of the 50th to 55th behind are displayed.
  : The previous five JOBs are displayed.
  : The next five JOBs are displayed.
  : JOBs of the 50th to 55th ahead are displayed.

  e.g. If you touch while JOB001-JOB005 are displayed, JOB051-JOB055 will be displayed.



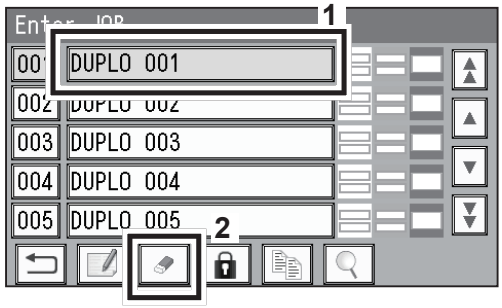
- : Return

  The **standby** screen reappears.

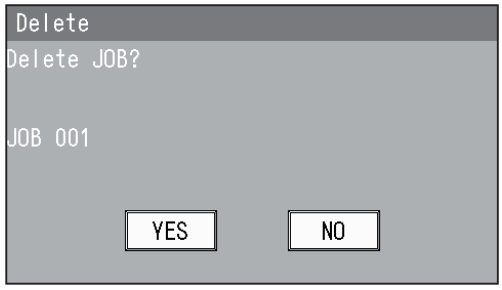
● : Delete

This function deletes a JOB from the memory.

1. Select a JOB name to delete and touch .



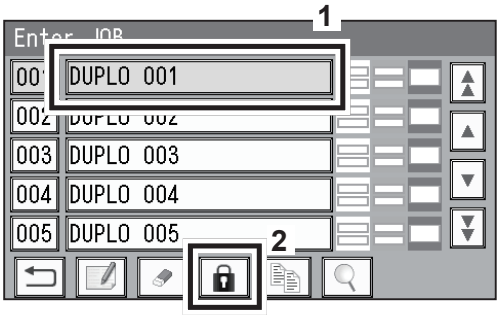
2. To delete a JOB, touch **YES**.
   To not delete it, touch **NO**.



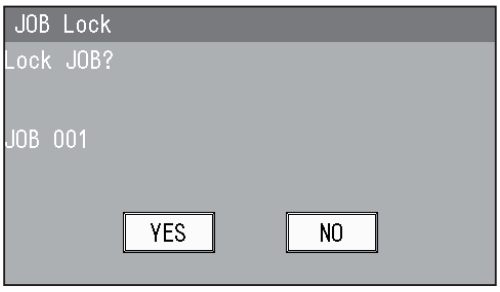
● : JOB Lock

This function locks a JOB so that the selected JOB is not overwritten or deleted.

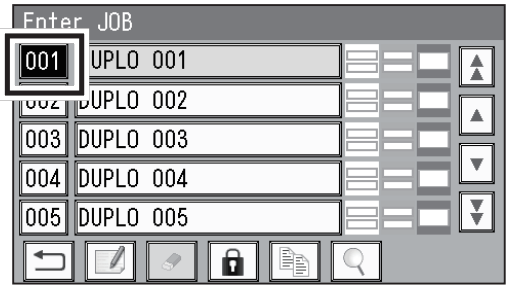
1. Select a JOB name to lock and touch .
   (e.g.: When JOB001 is locked)



2. To lock a JOB, touch **YES**.
   To not lock it, touch **NO**.



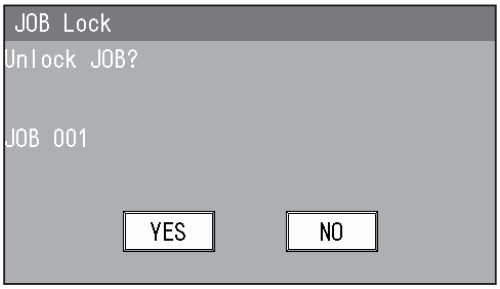
3. JOB001 is locked.
   * The number of the locked JOB is highlighted.



REFERENCE

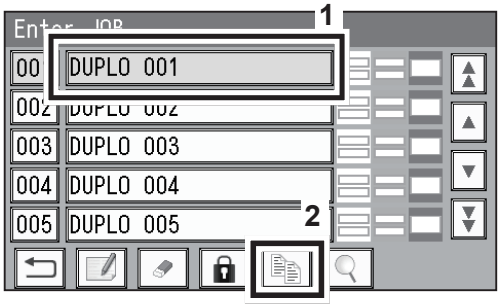
To unlock the JOB:

1. Select a JOB on the **Enter JOB** screen and touch .
2. Touch **YES** in the screen on the right.
   To not unlock the JOB, touch **NO**.



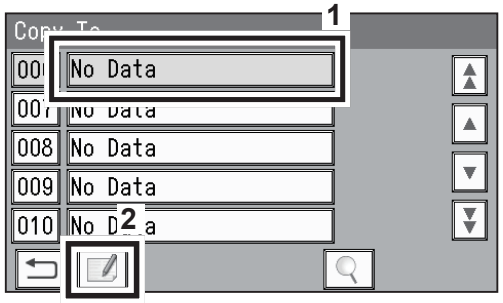
● : Copy
This function copies a JOB.

1. Select a JOB name and touch .
(e.g.: When JOB001 is copied to JOB006)

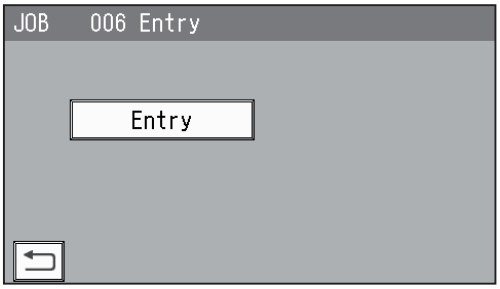


2. Select a JOB name as which to save a copy of a JOB and touch .
***No Data** is displayed for the JOB in which no settings are programmed.

Alternatively, select a JOB number to display the screen in step 3.

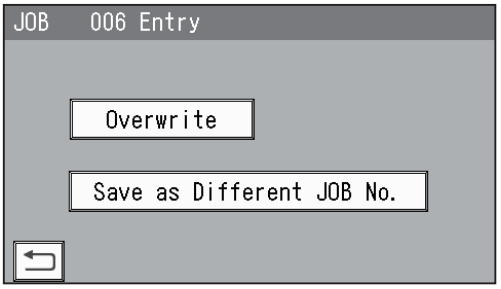


3. Touch **Entry**.
To cancel the entry, touch .



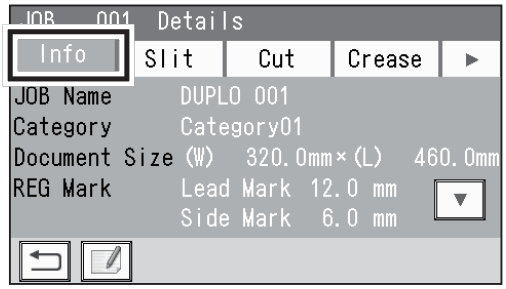
REFERENCE

If you select a saved JOB number as which to save a copy to, the figure on the right appears.
To overwrite the selected JOB number, touch **Overwrite**. To save the settings as a different JOB number, touch **Save as Different JOB No.**



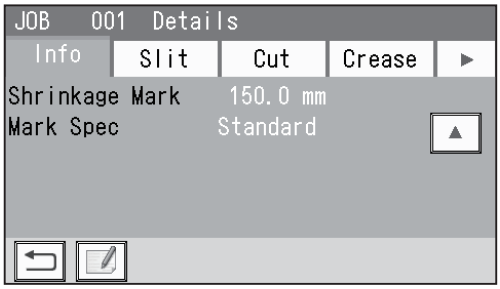
● : JOB Details
This icon displays the details of the JOB currently selected.
Touch an item to display.

1. **Info**
JOB Name: A name of a JOB
Category: A group in which a JOB is saved
Document Size: A document size saved
REG Mark: Positions of the lead mark and the side mark

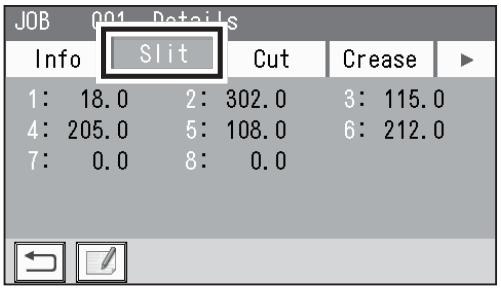


Touching ▼ displays the following items on the next page.

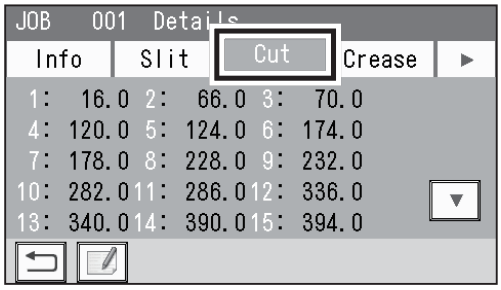
Shrinkage Mark: Position of a mark for document rear edge
Mark Spec: Thickness of a mark to be read



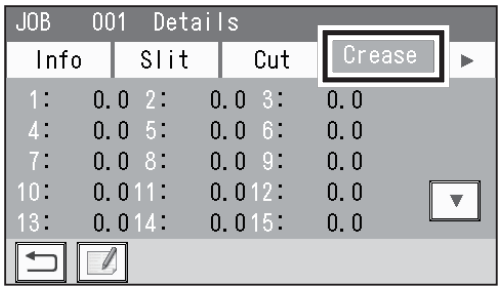
2. **Slit**
Slit details (slit positions) are displayed.



3. **Cut**
Cut details (cut positions) are displayed.
* To display the following items (Cut16 to Cut30), touch ▼.

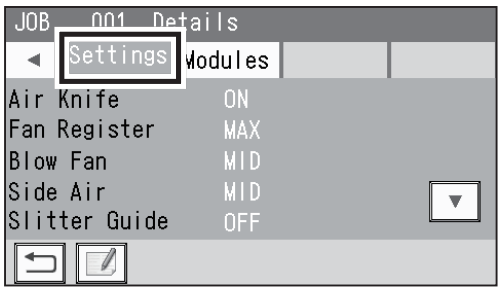


4. **Crease**
Crease details (crease positions) are displayed.
* To display the following items (Crease16 to Crease20), touch ▼.

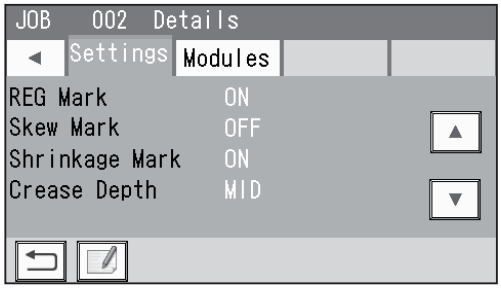


* To proceed to the next page (**Settings**), touch ▶.

5. **Settings**
The details of the function settings saved in the JOB are displayed.
Air Knife
Fan Register
Blow Fan
Side Air (option)
Slitter Guide

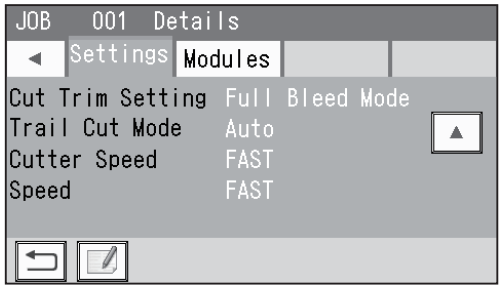


Touching ▼ displays the following items on the next page.
REG Mark
Skew Mark
Shrinkage Mark
Crease Depth



* To return to the previous screen, touch ▲.

Touching ▼ displays the following items on the next page.
Cut Trim Setting
Trail Cut Mode
Cutter Speed
Speed

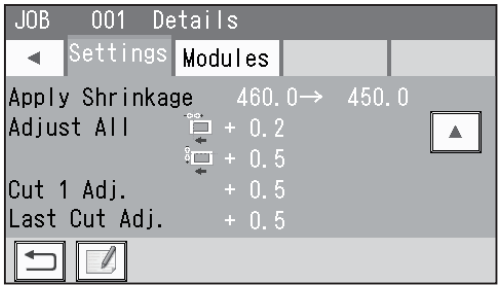


* To return to the previous screen, touch ▲.

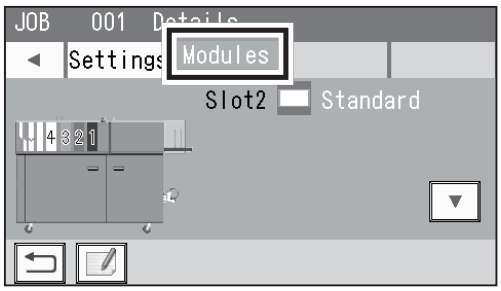
REFERENCE

When either of **Apply Shrinkage**, **Adjust All**, **Cut 1 Adj.**, and/or **Last Cut Adj.** is programmed in the JOB with **Adjust** (→P.84), the following items are displayed.

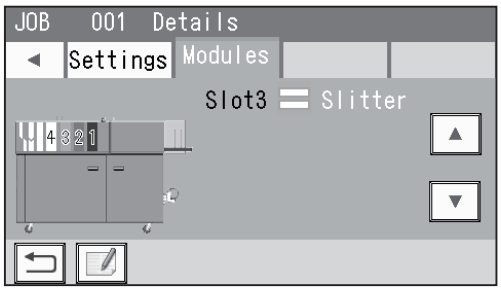
Apply Shrinkage
Adjust All
Cut 1 Adj.
Last Cut Adj.



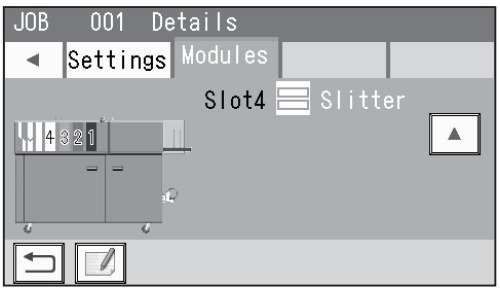
6. **Modules**
The module installed in slot2 for the JOB selected is displayed.



Touching ▼ displays the module installed in slot3 for the JOB selected.
* To return to the previous screen, touch ▲.



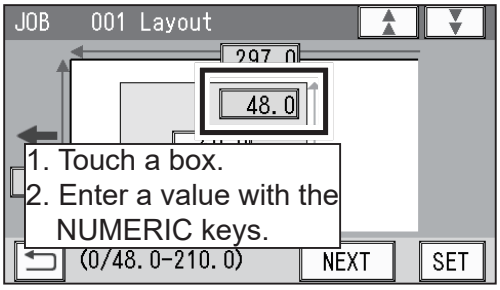
Touching ▼ displays the module installed in slot4 for the JOB selected.
* To return to the previous screen, touch ▲.



Programming a JOB

The DC-648 can save up to 250 JOBs.
Familiarize yourself with the following figures and instructions to properly program a JOB.
Before programming a JOB, precisely measure processing positions in mm or inch.

* To enter a value, touch the box to be entered and enter a value with the NUMERIC keys.

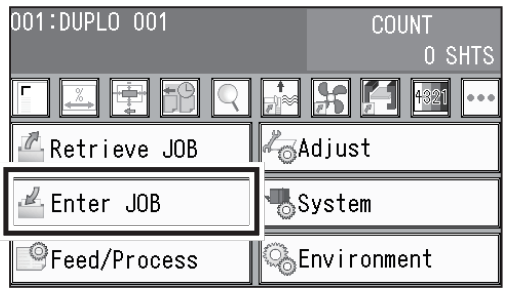


Wizard

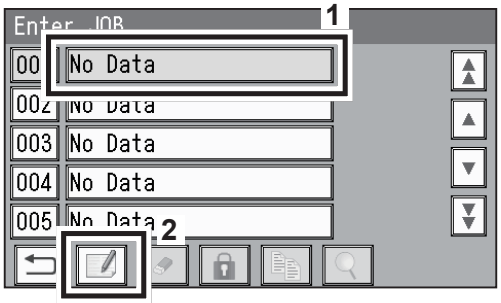
This section describes **Wizard mode** to enter a document size and a size of finished product, and then crease positions, cut positions, and so on, on a finished product basis.

● How to make settings for a JOB

1. Make sure that the **standby** screen is displayed on the touch panel and touch **Enter JOB**.

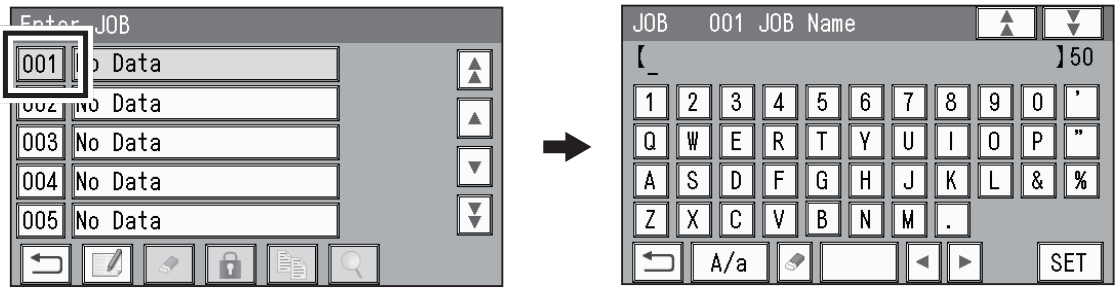


2. Touch the **JOB name** of a **JOB number** to be programmed and touch [edit].



REFERENCE

One touch of the JOB number proceeds to the JOB name entering screen (step ❸).



3 JOB Name

1. Enter a JOB name by touching numerals and letters.

   A/a: This switches between the capital letters and the small letters.

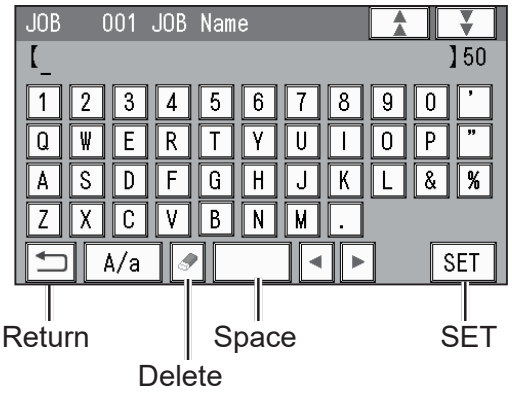
   : This deletes one character.

   ◀: This moves the cursor leftward.

   ▶: This moves the cursor rightward.

   : This makes a space between characters/ letters.

   : This redisplays the previous screen.



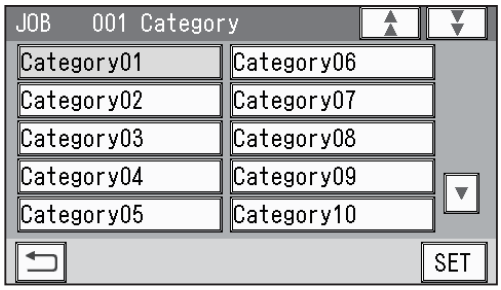
2. When you have finished entering a JOB name, touch SET.

4 Category

Select a category in which to save the JOB.

REFERENCE

You can retrieve a saved JOB by **Category** under **Retrieve JOB**.
You can change the category name in **Environment**.
(→P.92 Environment)



5 JOB Programming

Touch **Wizard**.

REFERENCE

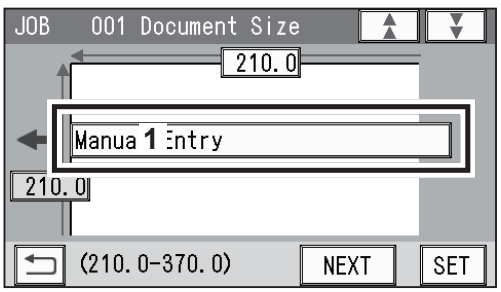
You cannot edit the following JOBs in **Wizard mode**:

- A JOB programmed in **Direct mode**
- A JOB saved in **Wizard mode** and edited in **Direct mode**
- A JOB saved in **Wizard mode** by using the PC Controller

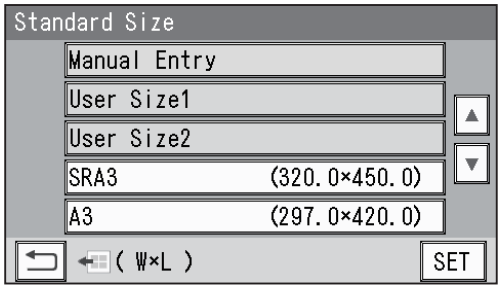
Save a new JOB as a different JOB number or clear the JOB already saved and then save the new one.

6 Document Size

1. Touch **1** in the figure on the right.



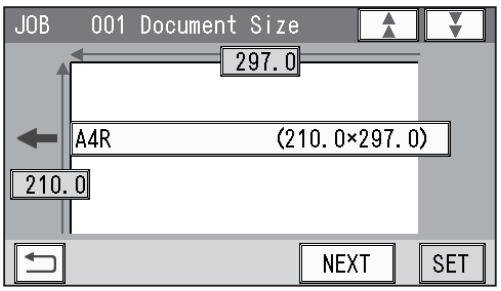
2. Select a document size.
   * Touching ▼ displays the following items.
3. Touch SET.



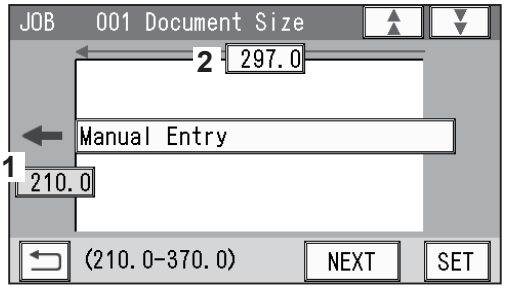
REFERENCE

To select **User Size1** or **User Size2**, set **User Size** under **Environment** in advance.
(→P.92 Environment)

4. Touch NEXT.
   * To change the document size, touch the document size name again.

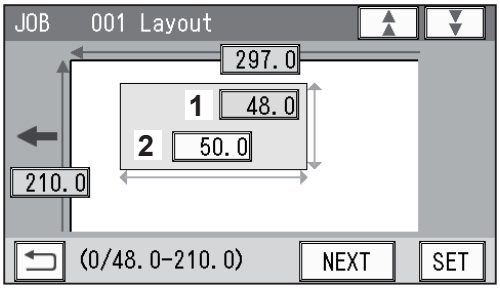


5. When you have selected **Manual Entry** in step 2, follow these steps to set the document size.
   5-1. Enter a value for the document width in **1**.
   5-2. Enter a value for the document length in **2**.
   5-3. Touch NEXT.

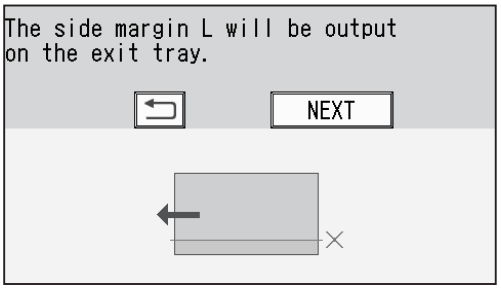


7 Layout

1. Enter a value for the width of the finished product in **1** and touch SET.
2. Enter a value for the length of the finished product in **2** and touch NEXT.



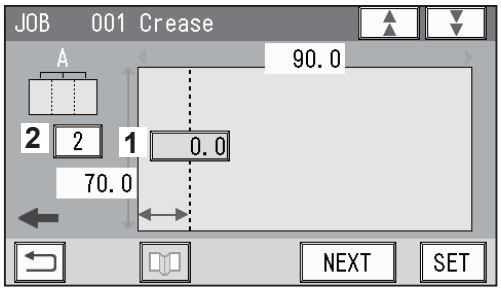
* The message as shown on the right may appear during the JOB settings in the following steps. Perform a solution according to the display.
(→P.59 Messages (Wizard))



8 Crease

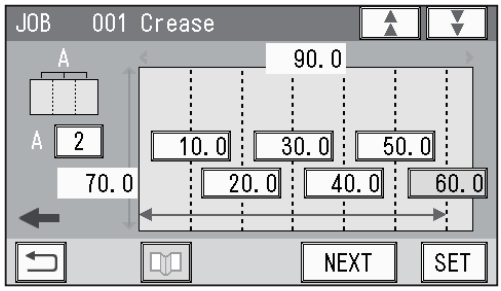
Enter a distance between the lead edge of the finished product and the first crease (Crease1) in **1** and touch NEXT.

* To allocate creases evenly on finished products: Enter the number of creases in **2** and touch SET. (You can set two to seven creases evenly.)



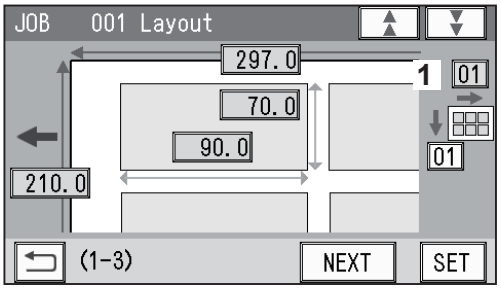
REFERENCE

- You can set up to six creases on one finished product. (The figure on the right shows when six creases are set.)
- You can set up to 20 creases on one document.
- To set seven or more creases on one finished product, select **Direct** under **JOB Programming** in step ❺.

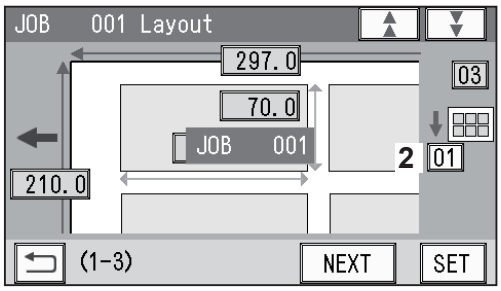


9 Layout

1. Enter the number of finished products in a length direction in **1** and touch SET.



2. Enter the number of finished products in a width direction in **2** and touch NEXT.

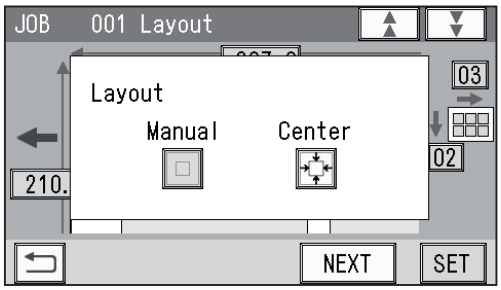


10 Layout - Layout

Select a layout of the finished product from **Manual** and **Center**.

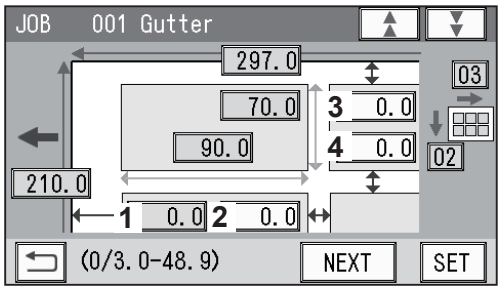
Manual: Enables you to manually enter values of the lead margin, a gutter cut, a gutter slit, and the right margin to set a layout of the finished product.
Go to step ⓫.

Center: Automatically makes settings for the lead margin and the right margin by entering values for a gutter cut and a gutter slit.
Go to step ⓫.



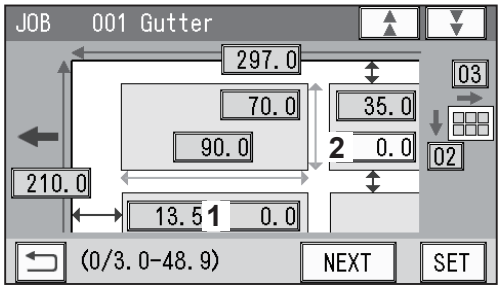
⓫ Gutter (**Layout** - **Manual**)

1. Enter a value for the lead margin in **1** and touch [SET].
2. Enter a value for a gutter cut in **2** and touch [SET].
3. Enter a value for the right margin in **3** and touch [SET].
4. Enter a value for the gutter slit in **4** and touch [SET].
5. Touch [NEXT].



Gutter (**Layout** - **Center**)

1. Enter a value for a gutter cut in **1** and touch [SET].
2. Enter a value for the gutter slit in **2** and touch [SET].
3. Touch [NEXT] .



⓬ Finished Product (**Free entry screen**)

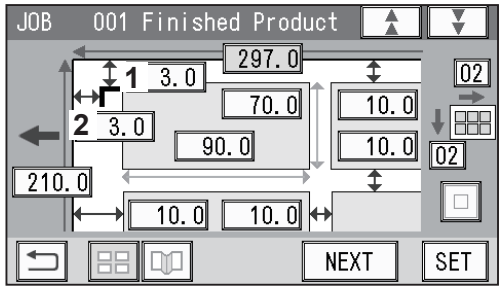
1. Touching [SET] moves the cursor sequentially to the items set in steps ❻ to ⓫.
   Check the values. You can re-enter values if necessary.

* To use **Read REG Mark**:

1-1. Enter the distance between the right edge of the document and the side mark in **1**. Touch [SET].

1-2. Enter the distance between the lead edge of the document and the lead mark in **2**. Touch [SET].

(→P.30 ● REG Mark (For image shift compensation))



* To change **Layout** setting (**Manual**/**Center**), touch [□].
(→P.50 Layout - Layout)

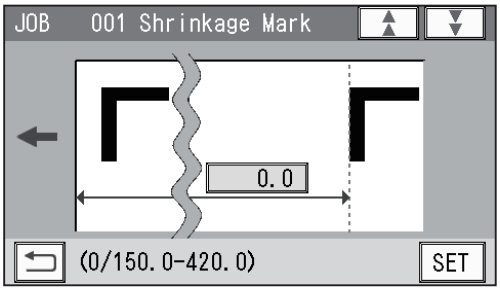
* To correct the values for creases, touch [📖].
(→P.50 Crease)

2. Touch [NEXT].

⓭ Shrinkage Mark

When valid values are entered for the side mark and the lead mark in step ⓬, you can set a shrinkage mark.

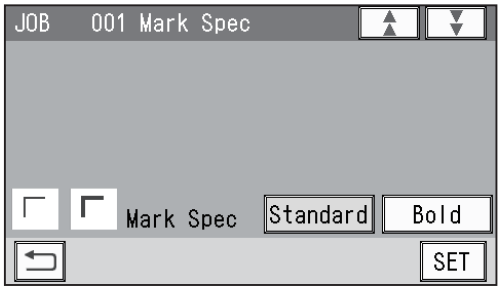
Shrinkage Mark: Detects shrinkage of a print on a document automatically.



To use this function, enter the distance between the lead edge of the document and the shrinkage mark. Touch [SET].

⑭ Mark Spec

When valid values are entered for the side mark and the lead mark in step ⑫, select a mark type.
Touch [SET].
Standard/**Bold**
*Normally select **Standard**.



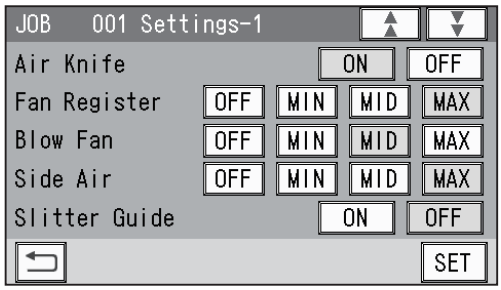
REFERENCE

Standard: Select this when processing normal documents with a mark of standard thickness printed on them.

Bold: Select this when processing specially treated documents (glossy documents).
Print a bold mark on them in advance and then select this.
* If it fails to read a mark, select **Bold**.

⑮ Settings-1

1. Make function settings for the JOB.



Air Knife
Compressed air is blown out from the front to the corner of the document, which prevents a double feed.
To use this function, select **ON**. To not use this, select **OFF**.

REFERENCE

- To process light weight documents, select **OFF**.
- To process documents with excessive static electricity or heavy weight documents, select **ON**.

Fan Register
A document is fed by being suctioned to the **conveyance belt**.
Select the level of the suction power.
MAX/**MID**/**MIN**/**OFF**

REFERENCE

When processing light weight documents, select **MIN** to prevent a document jam.

Blow Fan
Air is blown out from the lead edge side of a document to loosen the documents when they are fed.
Select the level of the air.
MAX/**MID**/**MIN**/**OFF**

REFERENCE

If the DC-648 does not feed a document, set the level of the air higher.

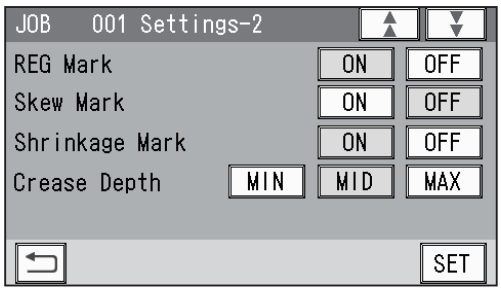
Side Air (option)
This blows air out from the side of documents to loosen them, preventing a double feed.
Select the level of the air.
MAX/**MID**/**MIN**/**OFF**

Slitter Guide
This function enables you to use the **slitters** that you do not use to process a JOB as document guides to stabilize document conveyance.
To use this function, select **ON**. To not use this function, select **OFF**.

REFERENCE
It is recommended that you select **ON** when processing light weight documents.

2. When you have completed the setting in **Settings-1**, touch [SET].

⑯ **Settings-2**
1. Make function settings for the JOB.



REG Mark
This function detects a REG mark and then reads the image drift and compensates it.
To use this function, select **ON**. To not use this function, select **OFF**.
* This setting is available only when valid values are entered for the side mark and the lead mark in step ⑫.

Skew Mark
This function detects skew of a print on a document automatically. If the skew is above a certain level, the DC-648 notifies you of it.
To use this function, select **ON**. To not use this function, select **OFF**.
* This setting is available only when valid values are entered for the side mark and the lead mark in step ⑫.

Shrinkage Mark
This function detects shrinkage of a print on a document automatically.
To use this function, select **ON**. To not use this function, select **OFF**.
* This setting is available only when valid values are entered for **Shrinkage Mark** in step ⑬.

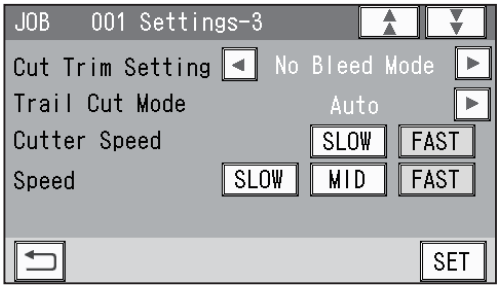
Crease Depth
Select the depth of a crease when a document is creased.
MAX/**MID**/**MIN**
* You can select a crease depth only when crease positions are set in step ⑧.

REFERENCE
To process heavy weight documents, select **MAX**. To process light weight documents, select **MIN**.

2. When you have completed the setting in **Settings-2**, touch [SET].

17 Settings-3

1. Make function settings for the JOB.



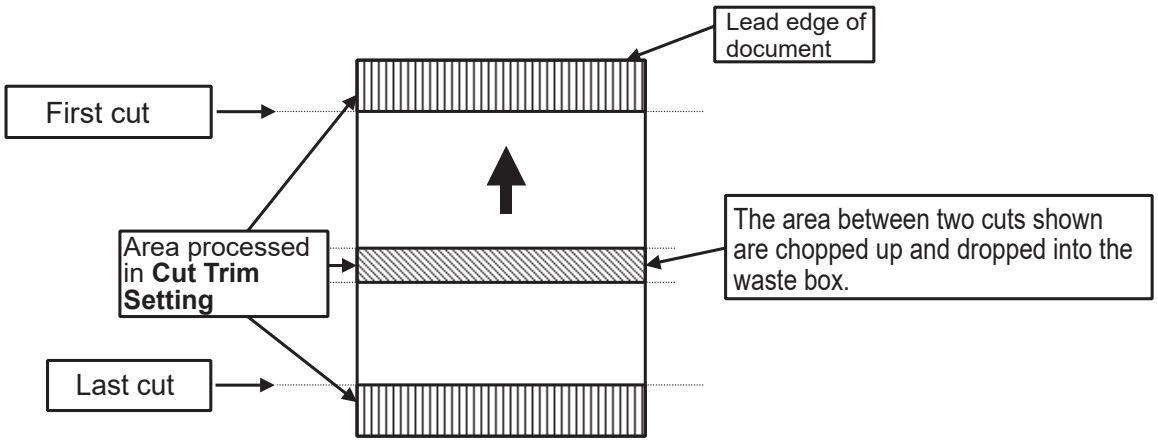
Cut Trim Setting

The lead margin, the trail margin, and any gutter cuts are chopped up and dropped into the waste box.

Touch ▶ to select a proper mode to process the JOB.

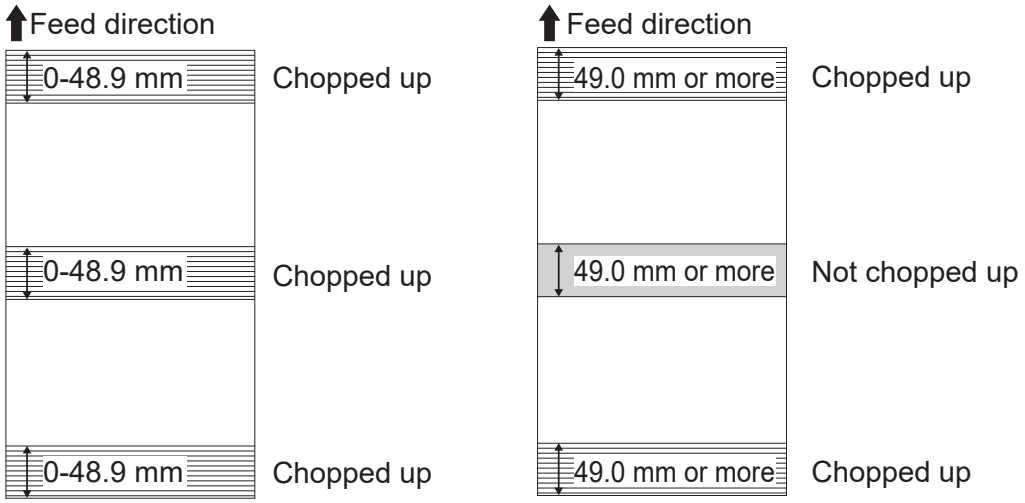
Full Bleed Mode/No Bleed Mode/Process All

* You can select an item only when cut position(s) is(are) set.



Full Bleed Mode

The lead margin and the trail margin are chopped up and dropped into the waste box. Any other gutter cuts shorter than 49.0 mm in width are also chopped up and dropped into the waste box.



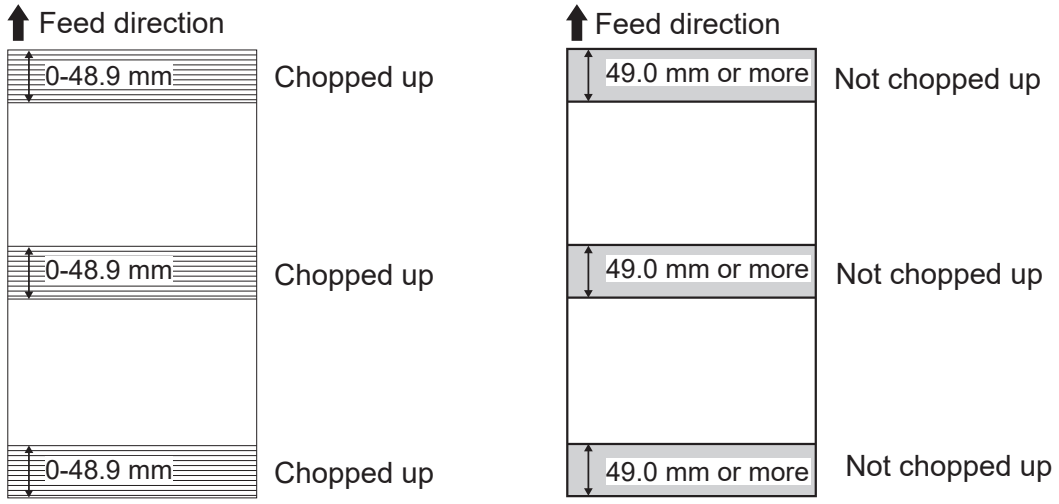
REFERENCE

Chops up the area ahead of the first cut position, the area behind the last cut position, and gutters of 48.9 mm or shorter, then drops them into the waste box.

No Bleed Mode

Gutter cuts shorter than 49.0 mm in width are chopped up and dropped into the waste box. The lead margin and the trail margin shorter than 49.0 mm are also chopped up and dropped into the waste box.

* If a document is processed without either of the lead margin or the trail margin, make sure to select **No Bleed Mode**.



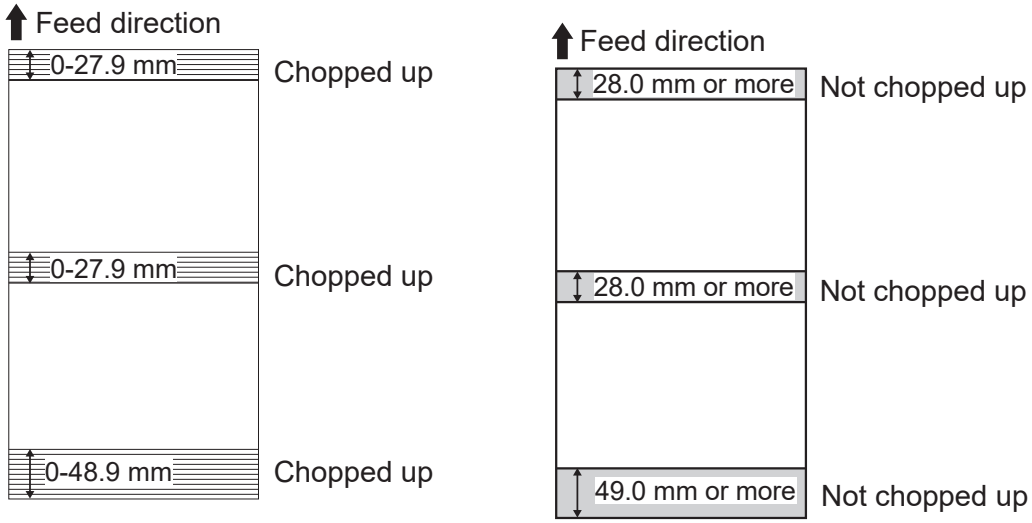
REFERENCE

Chops up gutters of 48.9 mm or shorter and drops them into the waste box.

Process All

All of the cut pieces are ejected to the **exit tray**.

Gutter cuts shorter than 28.0 mm in width are chopped up and dropped into the waste box. Trail margin shorter than 49.0 mm is chopped up and dropped into the waste box.



REFERENCE

If the distance between the last cut and the trail edge of the document is less than 49.0 mm with **Read REG Mark** or the adjustment with **Adjust All** performed, it is also regarded as margin and chopped up.

(→P.51 * To use Read REG Mark:)
(→P.85 Adjust All Pos.)

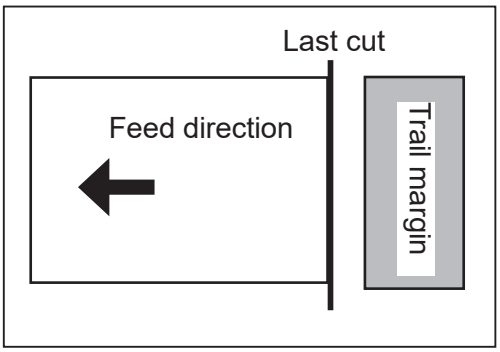
Trail Cut Mode

This function sets whether dummy cut for the trail margin is processed or not.
To use this function, select **Auto** by touching ▶. To not use this function, select **OFF**.
* You can select an item only when cut position(s) is(are) set.

REFERENCE

• Dummy Cut:
The DC-648 performs cutting operation without a document to be cut at the position where the document is fed for the distance of the trail margin plus extra length.
This is effective for dropping a document, such as when the trail margin is jammed between the roller and the lower tool in the cutter section.

• Trail margin:
Means a margin of the trail edge of a document produced when the last cut is processed.



Cutter Speed

Select speed of cutting a document.
* You can select an item only when cut position(s) is(are) set.
FAST/**SLOW**

REFERENCE

If it fails to cut the document with **FAST**, select **SLOW**.

Speed

Select processing speed.
FAST/**MID**/**SLOW**

REFERENCE

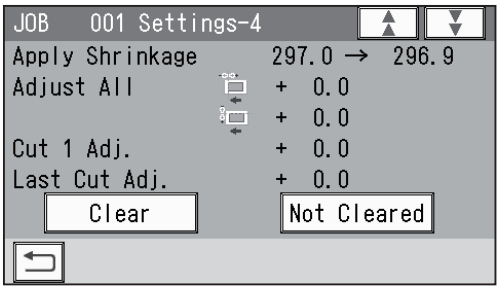
Select **Slow** for the conditions below:
• To improve finishing accuracy
• If it cannot obtain finishing accuracy because of roller slip due to slippery documents such as UV coated documents.

2. When you have completed the setting in **Settings-3**, touch SET.
Go to step ⑲.

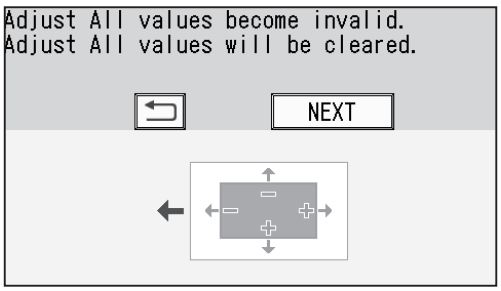
⑱ **Settings-4**

The details of **Apply Shrinkage**, **Adjust All**, **Cut 1 Adj.**, and/or **Last Cut Adj.** are displayed only when either of them is programmed in the JOB. (→P.84 Adjust)

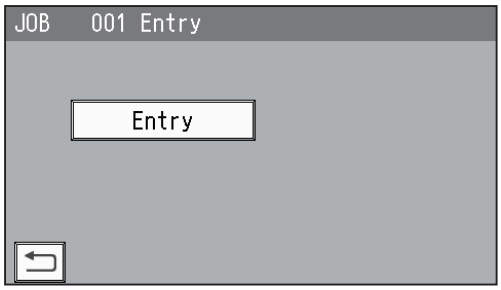
To clear the setting, touch **Clear**. To not clear it, touch **Not Cleared** or touch ▼▼.



* As the result of selecting **Not Cleared**, if the values for **Adjust All** were invalid, the message as shown on the right appears.
To correct the slit positions, cut positions and/or crease positions, touch ⮌.
To clear the values for **Adjust All**, touch NEXT.

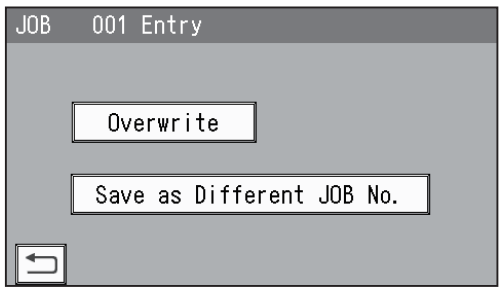


⑲ Touch **Entry**.
To cancel the entry, touch ⮌.

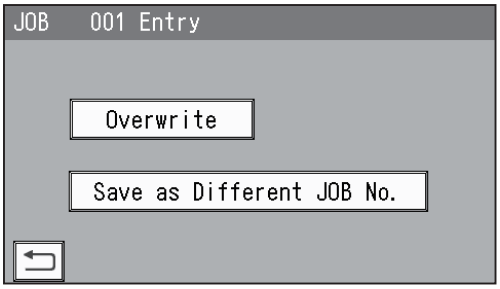


REFERENCE

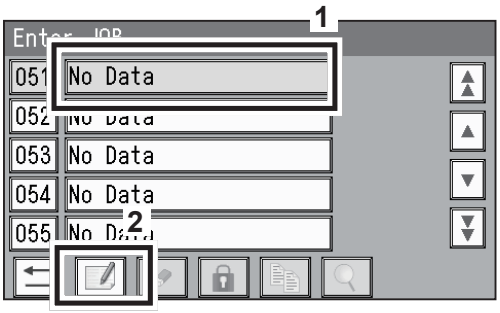
- If you are selecting an already saved JOB and overwrite it, touch **Overwrite**.



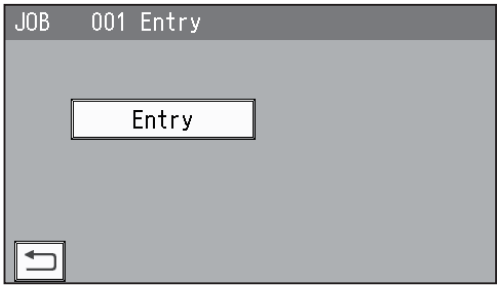
• To save the settings as a different JOB number:
1. Touch **Save as Different JOB No.**



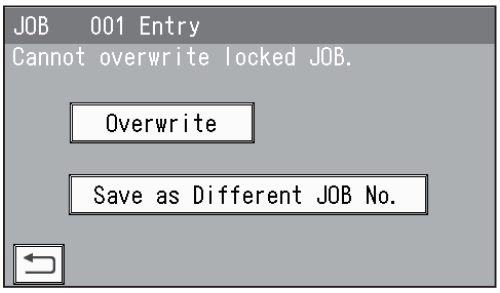
2. Touch a JOB name to save and touch [✎].



3. Touch **Entry**.

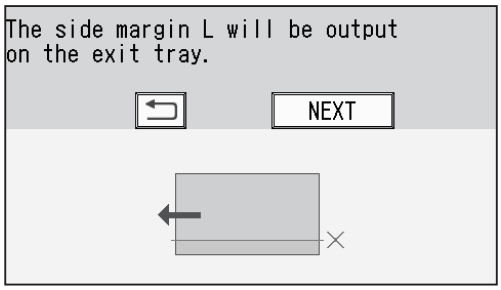


• If you try to overwrite the locked JOB, the message as shown on the right appears. Unlock the locked JOB first.
(→P.43 ● [🔒]: JOB Lock)



Messages (Wizard)

The message as shown on the right may appear during the JOB settings.
Perform a solution according to the display.



Message	Status and Solution
Number of slits exceeds the number of slitters usable.	Status: Seven or more slits were entered. Alternatively, five or more center slitters are required. Solution: Reduce the number of cards in a width direction. Delete values for gutter slits.
No slit within 3.2 mm from the edge Change the slitter position.	Status: The slit position is less than 3.2 mm from the document edge. Solution: Re-enter values for slit positions.
The side margin L will be output on the exit tray.	Status: The left margin exceeds the limit (3.2 to 55.0 mm) that a gutter can be dropped. Solution: Re-enter a value for the left margin position. If you do not change the position, the left margin will not be dropped in the waste box but will be ejected to the exit tray.
The side margin R will be output on the exit tray.	Status: The right margin exceeds the limit (3.2 to 55.0 mm) that a gutter can be dropped. Solution: Re-enter a value for the right margin position. If you do not change the position, the right margin will not be dropped in the waste box but will be ejected to the exit tray.
Cannot position specified number of cards crosswise	Status: The number of the finished products in a width direction exceeds the limit. The number of the card that can be entered is displayed. Solution: Re-enter values within the displayed number of the cards that can be entered.
The gutter slit wastes come out on the stacker.	Status: The gutter slit exceeds the limit (5.0 to 15.0 mm) that a gutter can be dropped. Solution: Re-enter values for gutter slits within the limit. If you do not change the position, the gutter slit will not be dropped in the waste box but will be ejected to the exit tray.

Message	Status and Solution
There is no gutter slit. The gutter slit value will not be applied in the JOB.	Status: The value for the gutter slit was entered when the number of cards in a width direction is 1. Solution: Re-enter the number of cards in a width direction. If you do not change the number of cards, the JOB will be processed without the gutter slit value applied in it.
Number of cuts exceeds the spec.	Status: The number of cuts exceeds 30. Solution: Re-enter the number of cards in a length direction.
The bottom margin length is outside spec	Status: A cut position was set shorter than 5.0 mm from the trail edge of the document. Solution: Re-enter values for cut positions so that it is outside of 5.0 mm from the trail edge of the document.
Gutter cut(s) will be output on the exit tray	Status: The size(s) of gutter cut(s) is/are not proper to be ejected to the waste box. Solution: Re-enter a size(s) of the gutter cut(s). Alternatively, select **Full Bleed Mode** for **Cut Trim Setting**.
Cannot position specified number of cards lengthwise	Status: The number of the finished products in a length direction exceeds the limit. The number of the card that can be entered is displayed. Solution: Re-enter values within the displayed number of the cards that can be entered.
There is no gutter cut. The gutter cut value will not be applied in the JOB.	Status: The value for the gutter cut was entered when the number of cards in a length direction is 1. Solution: Re-enter the number of cards in a length direction. If you do not change the number of cards, the JOB will be processed without the gutter cut value applied in it.
Number of creases exceeds the spec	Status: The number of creases exceeds 20. Solution: Re-enter the number of creases of 20 or less.

Direct - Advanced Mode

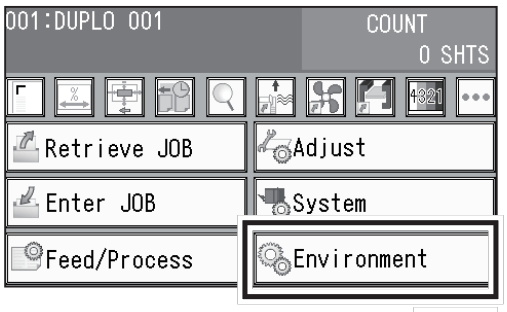
This section describes **Direct mode** to enter a document size and then each processing position from the edge of the document to program a JOB.

There are two programming modes in **Direct mode**: **Advanced Mode** and **Simple Mode**.
This section describes how to program a JOB in **Advanced Mode**.

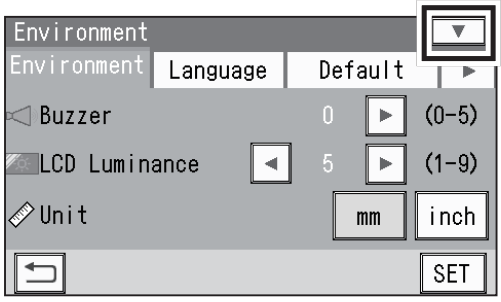
Advanced Mode:
Specify modules to install in slot2 to slot4 and set processing positions of each module.

● Before programming a JOB

1. Make sure that the **standby** screen is displayed on the touch panel and touch **Environment**.

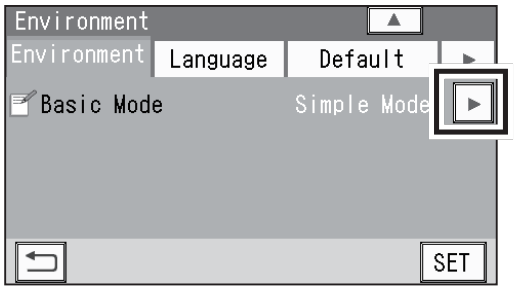


2. Touch ▼.



3. Touch ▶ to select **Advanced Mode** for **Basic Mode**.

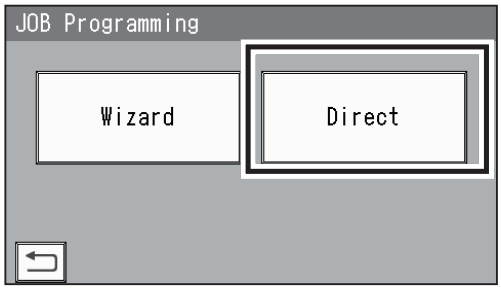
4. Touch SET.



● How to make settings for a JOB

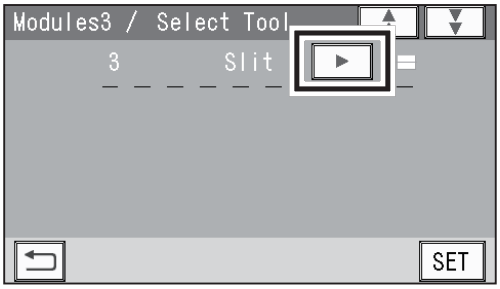
1 Follow steps ❶ to ❹ in **Wizard** (P.47).

2 **JOB Programming**
Touch **Direct**.



3 Module3 / Select Tool

1. Touch ◄ / ► to select a module in slot3.
   Standard/Slit
2. Touch SET.

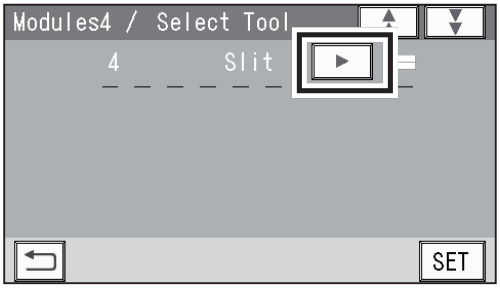


REFERENCE

No module which was not programmed by a service person when installed will be displayed.

4 Module4 / Select Tool

1. Touch ◄ / ► to select a module in slot4.
   Standard/Slit
2. Touch SET.

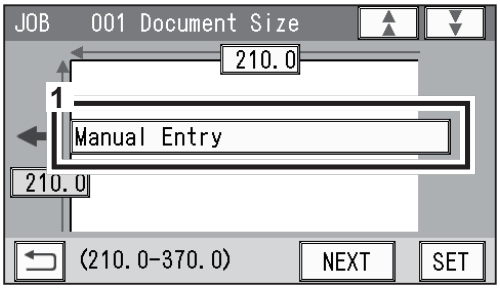


REFERENCE

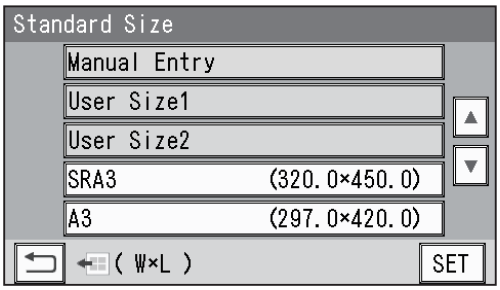
No module which is not programmed by a service person when installed is displayed.

5 Document Size

1. Touch **1** in the figure on the right.



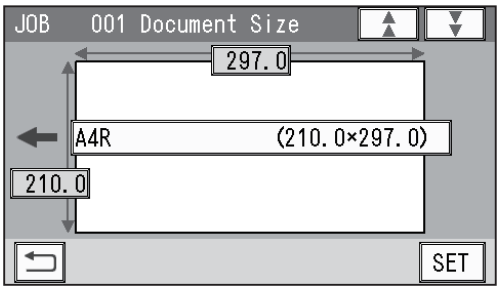
2. Select and touch a document size, and then touch SET to confirm.
   * Touching ▼ displays the following pages.



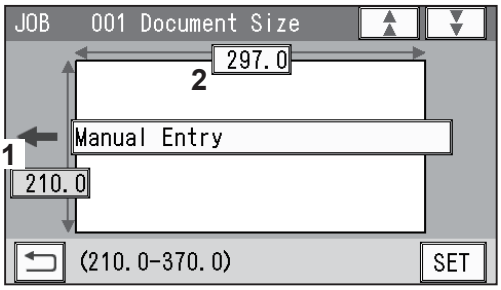
REFERENCE

To select **User Size1** or **User Size2**, set **User Size** under **Environment** in advance.
(→P.92 Environment)

3. Touch SET.
   * To change the document size, touch the document size name.



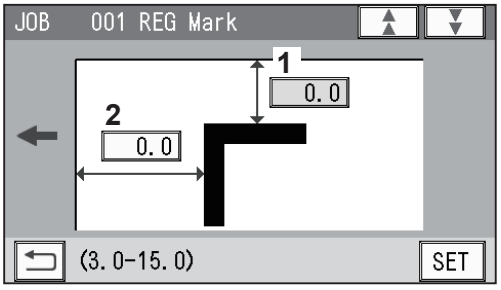
3. When you have selected **Manual Entry** in step 2, follow these steps to set the document size:
   3-1. Enter a value for the document width in **1**.
   3-2. Enter a value for the document length in **2**.
   3-3. Touch [SET].



6 REG Mark

1. Enter the distance between the right edge of the document and the side mark in **1**.

2. Enter the distance between the lead edge of the document and the lead mark in **2**. Touch [SET].

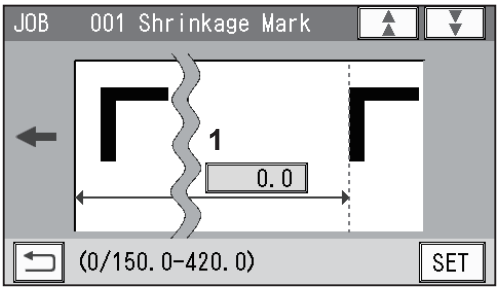


7 Shrinkage Mark

When valid values are entered for the side mark and the lead mark in step 6, you can set a shrinkage mark.

Shrinkage Mark: Detects shrinkage of a print on a document automatically.

To use this function, enter the distance between the lead edge of the document and the shrinkage mark in **1**. Touch [SET].

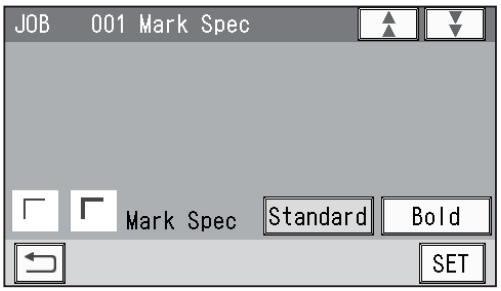


8 Mark Spec

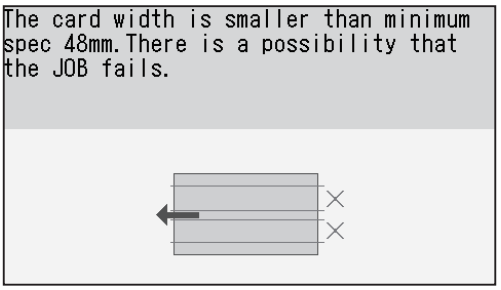
When valid values are entered for the side mark and the lead mark in step 6, select a mark type.
Touch [SET].

Standard/**Bold**

* Normally select **Standard**.
(→P.52 Mark Spec)

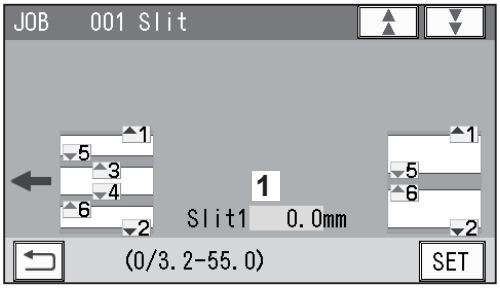


* The message as shown on the right may appear during the JOB settings in the following steps.
  Perform a solution according to the display.
(→P.67 Messages (Direct))



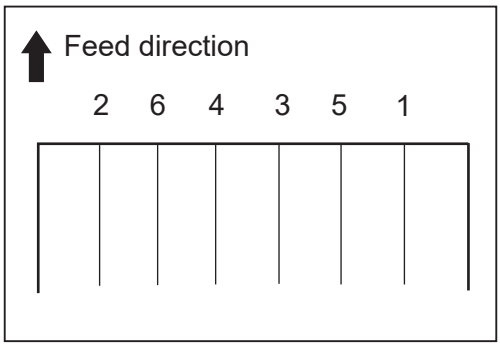
9 Slit

Enter values for the distances between the right edge of the document and each slit position in **1**.
Touch [SET].



* The screen displays **Slit1** to **Slit6**. You may not be able to enter some slits depending on the modules installed in slot3 and/or slot4.

* Enter slit positions alternately side to side in order of slitters along the feed direction.
When no slitter is used, enter **0** (zero).



* If gutter slits are programmed in a JOB, enter slit positions so that the tips of the ▲ and the ▼ marks face each other sandwiching the gutters as shown on the screen above. If the ▲ and the ▼ marks do not face each other, the gutters cannot be dropped in the waste box.

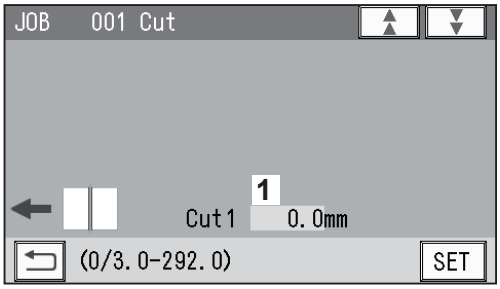
* The value limit appears on the bottom of the screen.

REFERENCE

- A **margin slitter** is selected for slot1.
- When **slitter modules** are installed in slot3 and slot4, the DC-648 can process up to six slits on a document.

10 Cut

Enter values for the distances between the lead edge of the document and each cut position in **1**.
Touch [SET].
* You can set up to 30 cuts.

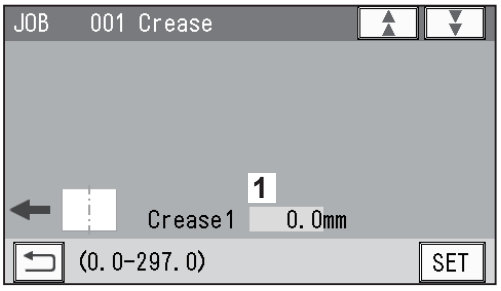


* The value limit appears on the bottom of the screen.

To finish the setting fewer than 30 cuts:
1. Enter the last cut position and touch [SET].
2. Enter **0** (zero) in the next cut position and touch [SET].

11 Crease

Enter values for the distances between the lead edge of the document and each crease position in **1**.
Touch [SET].
* You can set up to 20 creases.



* The value limit appears on the bottom of the screen.

To finish the setting with fewer than 20 creases:
1. Enter the last crease position and touch [SET].
2. Enter **0** (zero) in the next crease position and touch [SET].

⑫ Follow step ⑮ (P.52) and the subsequent steps in Wizard.

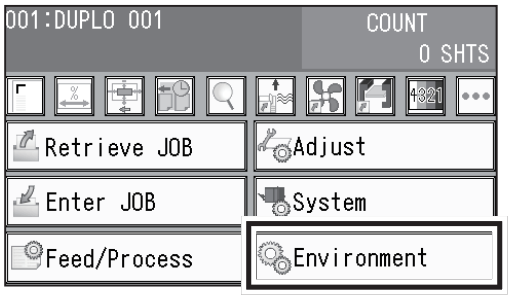
Direct - Simple Mode

This section describes how to program a JOB in **Simple Mode** in **Direct mode**.

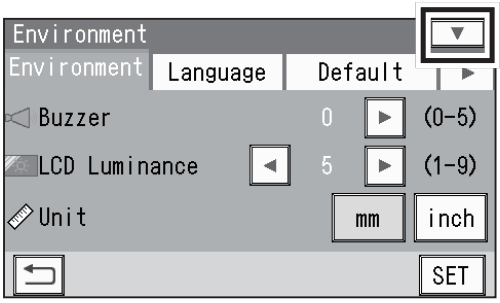
Simple Mode:
When processing positions are entered, optimum slits are automatically programmed according to modules installed in slot1 to slot4.

● Before programming a JOB

1. Make sure that the **standby** screen is displayed on the touch panel and touch **Environment**.

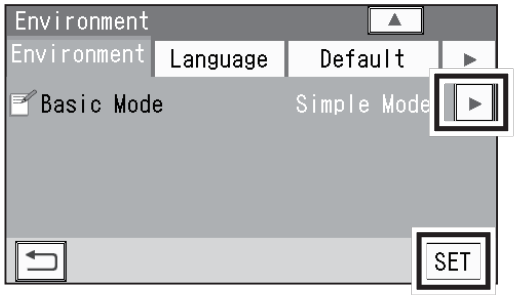


2. Touch [▼].



3. Touch [▶] to select **Advanced Mode** for **Basic Mode**.

4. Touch [SET].

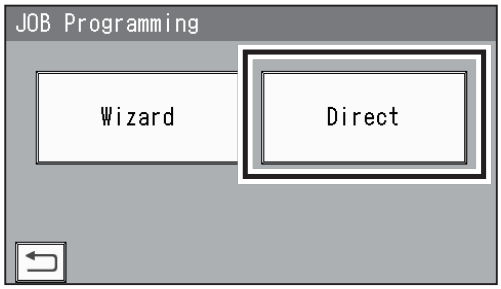


Programming a JOB

● How to make settings for a JOB

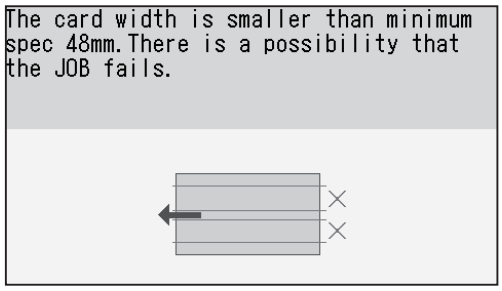
1 Follow steps ❶ to ❹ in Wizard (P.47).

2 **JOB Programming**
Touch **Direct**.



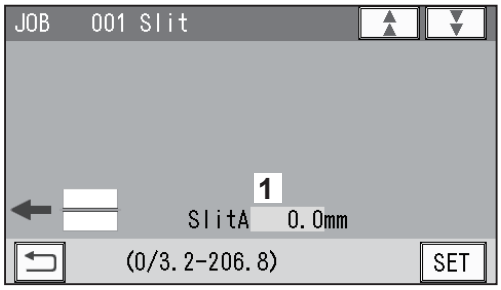
3 Follow steps ❻ (P.63) to ❾ in Direct - Advanced Mode.

* The message as shown on the right may appear during the JOB settings in the following steps.
Perform a solution according to the display.
(→P.67 Messages (Direct))

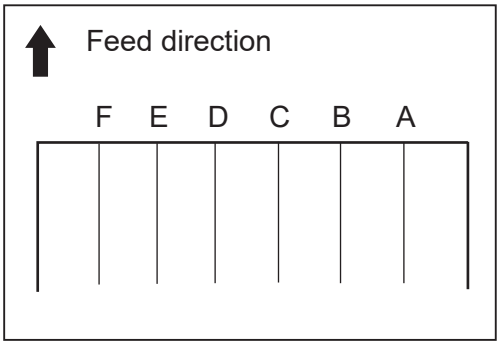


4 **Slit**
Enter values for the distances between the right edge of the document and each slit position in **1**.
Touch [SET].

*The screen displays **SlitA** to **SlitF**. Enter slit positions sequentially from the right side along the feed direction.

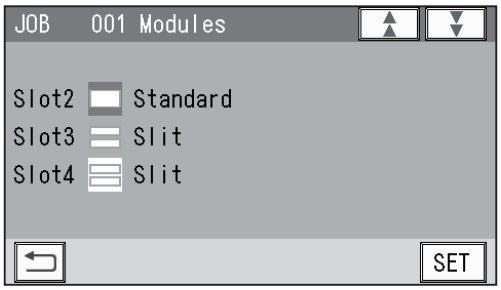


* The value limit appears on the bottom of the screen.



5 Follow step ⓫ (P.64) and the subsequent steps in Wizard.

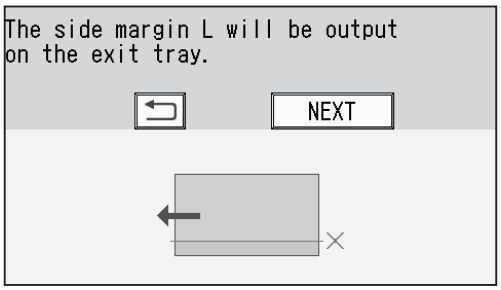
6 Confirm module names used in slot2 to slot4 and touch [SET].



7 For the steps after this, follow step ⑮ (P.52) and the subsequent steps in Wizard.

Messages (Direct)

The message as shown on the right may appear during the JOB settings.
Perform a solution according to the display.

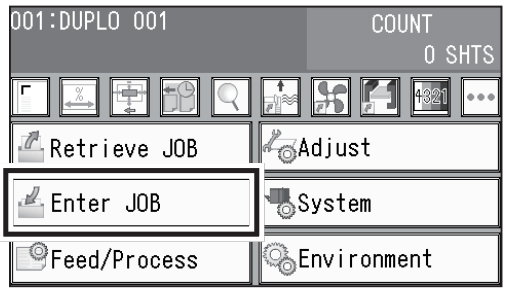


Message	Status and Solution
The card width is smaller than minimum spec 48mm. There is a possibility that the JOB fails.	Status: The slit positions that make a finished width shorter than 48.0 mm were entered. Solution: Re-enter a value for the finished product. Although you can continue to process the JOB, a document jam may occur depending on the type of a document.
The gutter slit wastes come out on the stacker.	Status: The slitters allocations disable the gutter deflector to drop gutter slits. Solution: Although you can continue to process the JOB, the gutter slits will not be ejected to the waste box but will be ejected on the exit tray.
The gutter slit width is less than 5mm. The gutter slit wastes come out on the stacker.	Status: The slit positions that make a gutter slit width shorter than 5.0 mm were entered. Solution: Re-enter values for slit positions so that the gutter slit width is 5.0 mm or more.
The selected slitter allocation are not recommended. Optimize choice of slitters?	Status: The entered slitter allocations are not recommended. Solution: To optimize the slit positions and the tool positions, touch **YES**. To process slits as entered, touch **NO**.
Slit/perf is programmed both between 55.1-60mm and between 95.1-100mm. Change slit/perf position.	Status: A gutter slit, slit, or perforation (RTM (rotary tool module) (option)) was programmed both between 55.1 to 60.0 mm and between 95.1 to 100.0 mm. Solution: Re-enter gutter slit, slit, or perforation (RTM (rotary tool module) (option)) positions so that they will be out of the range of 55.1 to 60.0 mm or 95.1 to 100.0 mm.

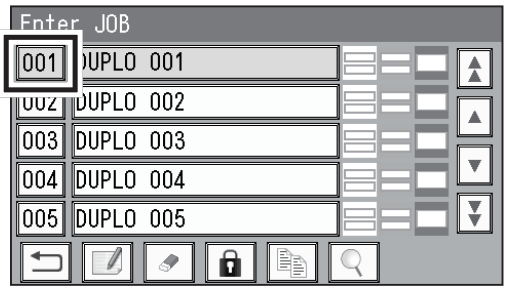
Changing a Saved JOB

This section describes how to change the settings in a saved JOB.

1. Make sure that the **standby** screen is displayed on the touch panel and touch **Enter JOB**.

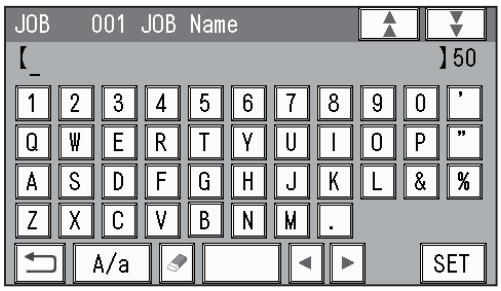


2. Touch a JOB number to change.

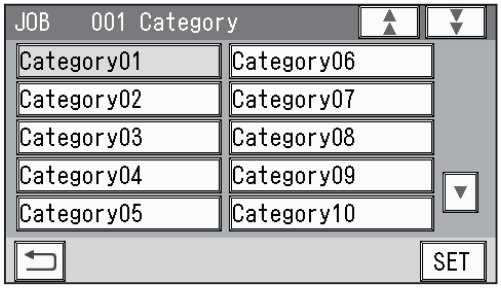


3. To change a JOB name, follow **JOB Name**. (→P.48)

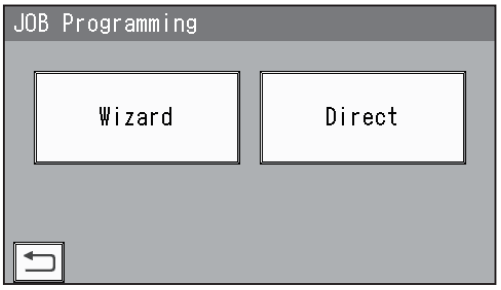
   To not change a JOB name, touch SET.



4. Select a category.



5. Select a JOB programming mode.
   Wizard: This mode programs a JOB by entering a document size and a size of finished product, and then crease positions, cut positions, and so on, on a finished product basis.
   Direct: This mode programs a JOB by entering a value for each item.
   * For how to set a programming mode in **Direct mode**, refer to the followings:



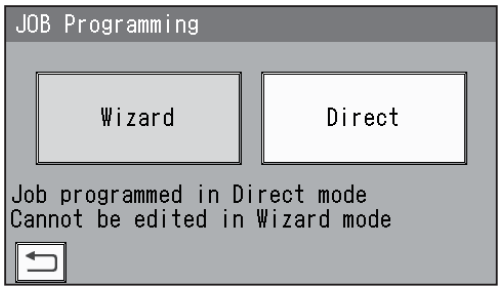
Advanced Mode: ● How to make settings for a JOB (P.61)
Simple Mode: ● How to make settings for a JOB (P.66)

REFERENCE

You cannot edit the following JOBs in **Wizard mode**:

- A JOB programmed in **Direct mode**
- A JOB saved in **Wizard mode** and edited in **Direct mode**
- A JOB saved in **Wizard mode** by using the PC Controller

Clear the JOB first and then save the new one.



6 For editing each of the following items, follow the procedure in Programming a JOB.
(→P.47 Programming a JOB)

MEMO

Chapter 3

Basic Operations

This chapter describes the operating sequence from turning on the DC-648 to completing process.

Processing Documents by Retrieving a Saved JOB ····· 72
Retrieving a Saved JOB by JOB No. (JOB Number) ····· 72
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Feed/Process ····· 78
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System ····· 88
Environment ····· 92
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Adjusting Document Feed ····· 99
Adjusting the Elevator Height ····· 99
Adjusting the Height of the Separator ····· 99
Adjusting Skew of a Print ····· 99
Detecting Print Shrinkage with a Shrinkage Mark ····· 101
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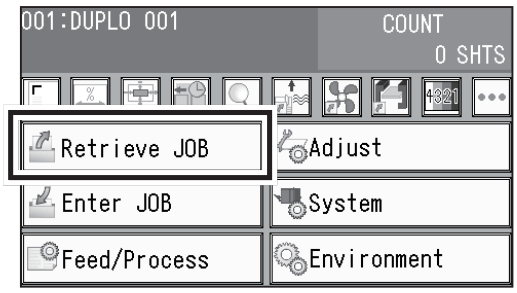
Processing Documents by Retrieving a Saved JOB

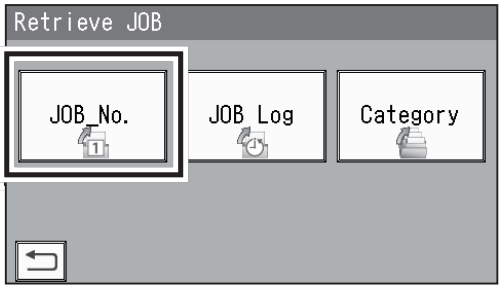
This section describes how to retrieve a JOB from **JOB No.** (JOB number), **JOB Log**, or **Category**.

Retrieving a Saved JOB by JOB No. (JOB Number)

1 Make sure that the **standby** screen is displayed on the touch panel and touch **Retrieve JOB**.



2 Touch **JOB No.**

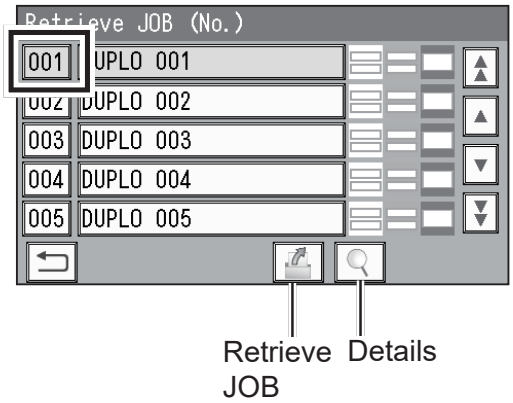


3 Select a JOB number.

REFERENCE

: JOBs of the 50th to 55th behind will be displayed.
: The previous five JOBs will be displayed.
: The next five JOBs will be displayed.
: JOBs of the 50th to 55th ahead will be displayed.

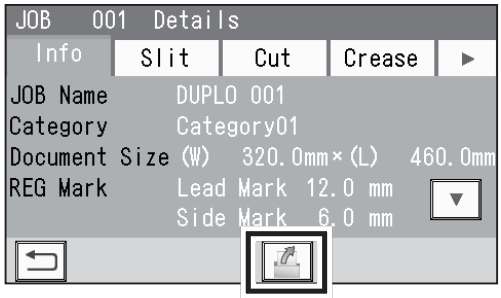
e.g. If you touch while JOB001-JOB005 are displayed, JOB051-JOB055 will be displayed.



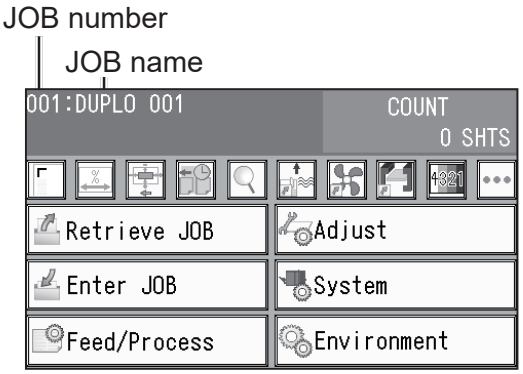
*You can also retrieve a JOB by entering the JOB number with the NUMERIC keys and then pressing the SET key on the **control panel**.

*Selecting a JOB name and then touching displays the **JOB *** Details** screen.
(→P.44 ● : JOB Details)

*Touching selects the JOB and redisplays the **standby** screen.



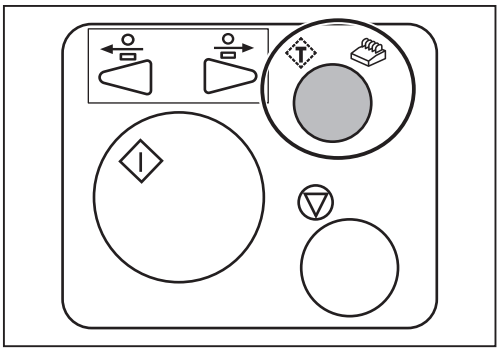
4 The JOB number and the JOB name selected in step ❸ are displayed on the upper left part of the **standby** screen.



5 Prepare documents proper for the selected JOB and load them on the **feed tray**.
(→P.13 Loading Documents)

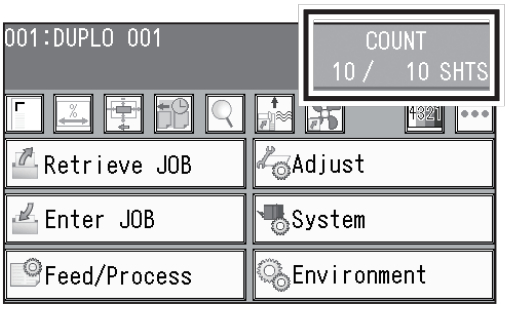
6 Set the **exit tray**.
(→P.14 Setting the Exit Tray), (→P.15 Attaching the Card Stacker)

7 Press the TEST key to perform a test run for one sheet and check if the finished product is processed as it is programmed.
*To fine-adjust the processing positions, program them in **Feed/Process** or in **Adjust**.
(→P.78 Feed/Process), (→P.84 Adjust)

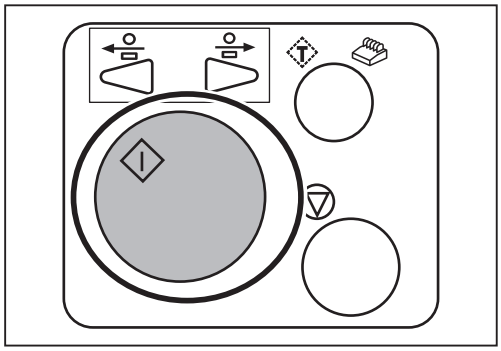


REFERENCE

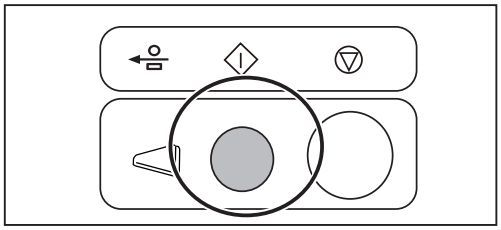
To set the number of sheets to be processed (in **preset mode**), enter the number of them with the NUMERIC keys.



8 Make sure that the LED on the START key is green and press the START key.
*If it is red, an error is occurring in the DC-648. Follow the instruction displayed on the touch panel.



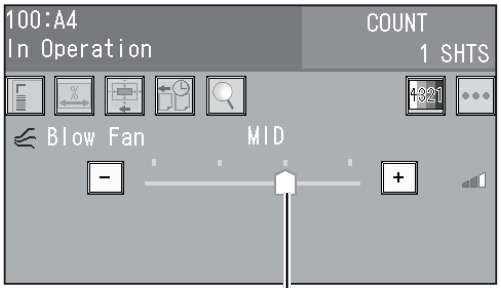
*The START key on the **sub control panel** on the exit side is also available.



REFERENCE

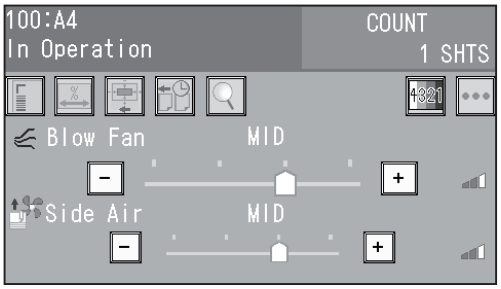
1. You can adjust the level of the air of the **blow fan** during operation.
   Blow Fan:
   Air is blown out from the lead edge side of a document to loosen the documents when they are fed.

   To adjust the level of the air, touch [+] / [−] or the **slider** .
   *If the DC-648 does not feed a document, set the level of the air higher.

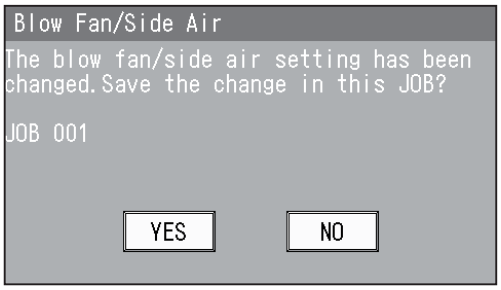


Slider

*When the **side air** (option) is installed, the screen as shown on the right appears.
Adjust the level of the air in the same way as above.

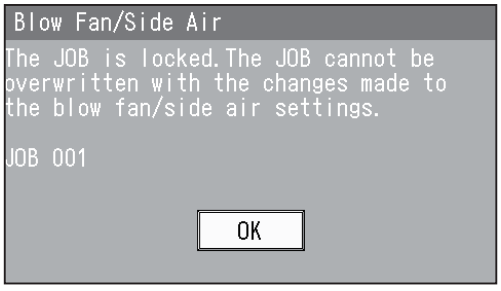


2. If you adjust the level of the air of the **blow fan** and/or the **side air** (option) during operation, the message as shown on the right appears.
   To save the setting adjusted, touch **YES**. If not, touch **NO**.



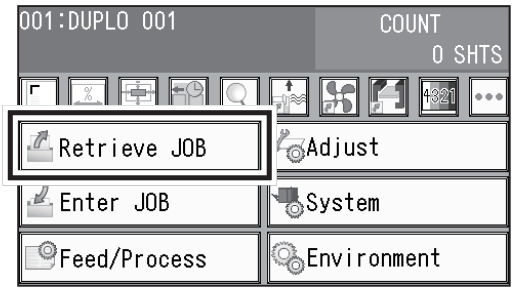
REFERENCE

If the JOB is locked, the message as shown on the right appears.
Unlock the JOB first and then overwrite it.
(→P.43● [🔒]: JOB Lock)

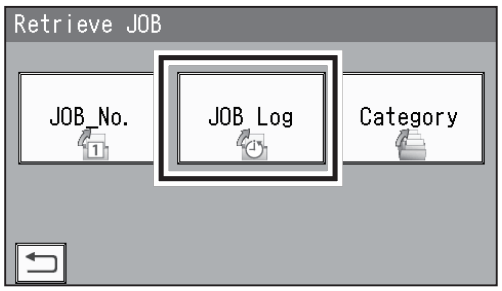


Retrieving a Saved JOB by JOB Log

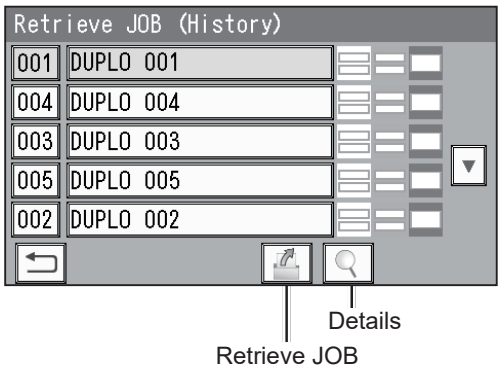
1 Make sure that the **standby** screen is displayed on the touch panel and touch **Retrieve JOB**.



2 Touch **JOB Log**.



3 The log of processed JOBs appears.
Select a JOB to be retrieved.
*The latest 10 JOBs processed will be displayed.
*If no JOB has been processed, **NO DATA** will be displayed.



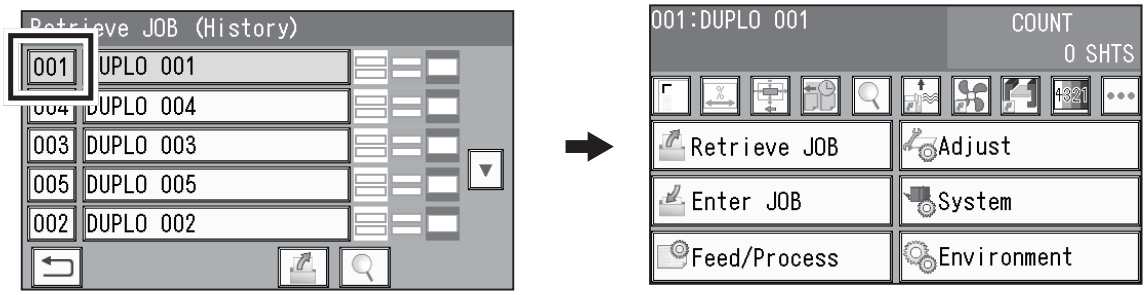
REFERENCE

▲: The previous five JOBs will be displayed.
▼: The next five JOBs will be displayed.

*Touching a JOB name and then [edit] selects the JOB and the **standby** screen appears.

*Selecting a JOB name and then touching [search] displays the **JOB *** Details** screen.
(→P.44 ● [search]: JOB Details)

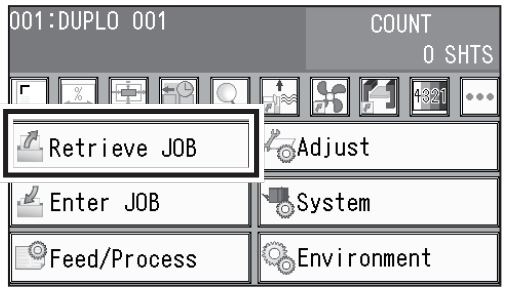
*A single touch on a JOB number selects the JOB and the **standby** screen appears.
(The figure below shows when JOB001 is selected.)



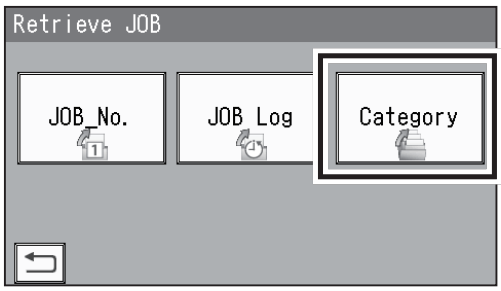
4 For the steps after this, follow step ❹ and the subsequent steps in Retrieving a Saved JOB by JOB No. (JOB Number) (P.72).

Retrieving a Saved JOB by Category

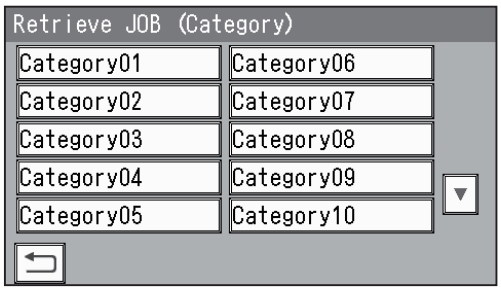
1 Make sure that the **standby** screen is displayed on the touch panel and touch **Retrieve JOB**.



2 Touch **Category**.



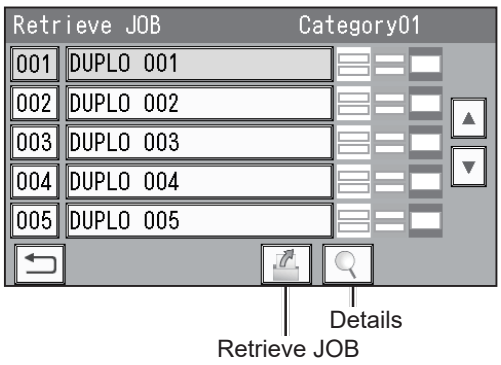
3 Select a category in which the JOB to be selected is saved.



4 JOBs programmed in the selected category are displayed. (The figure on the right shows when **Category01** is selected.)
Select a JOB to be retrieved.

REFERENCE

▲: The previous five JOBs will be displayed.
▼: The next five JOBs will be displayed.



*Touching a JOB name and then [Retrieve JOB] selects the JOB and the **standby** screen appears.

*Touching a JOB name and then [Details] displays the **JOB *** Details** screen.
(→P.44 ● [Details]: JOB Details)

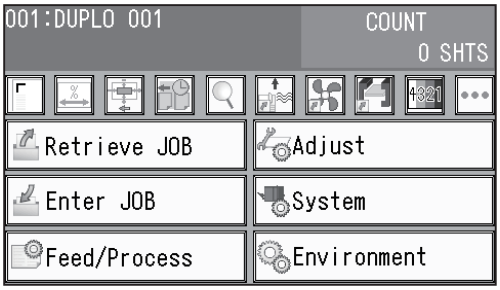
*A single touch on a JOB number selects the JOB and the **standby** screen appears.
(→P.75)

5 For the steps after this, follow step ❹ and the subsequent steps in Retrieving a Saved JOB by JOB No. (JOB Number) (P.72).

Processing a JOB in Pause Feeding Mode

This section describes how to process a JOB in **pause feeding mode**.
Use this mode to stop processing documents temporarily for checking finished products or adjusting the level of the air of the **blow fan**.

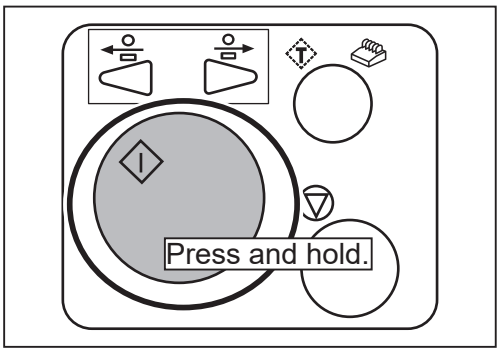
1 Make sure that the **standby** screen is displayed on the touch panel.



2 Press and hold the START key to enter **pause feeding mode**.

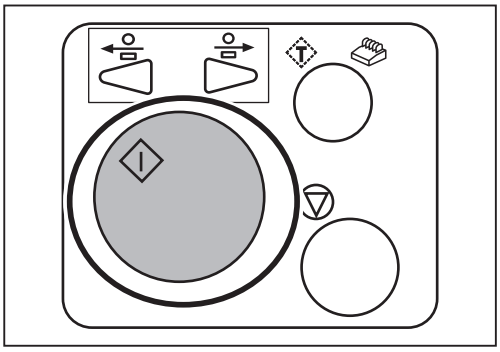
REFERENCE

- In **pause feeding mode**, the **feed tray** rises and stops with the **feed tray** kept its level.
- Pressing and holding the START key during the operation enters **pause feeding mode** as well.
- You can adjust the level of the air of the **blow fan** during operation. (→P.52 Blow Fan)

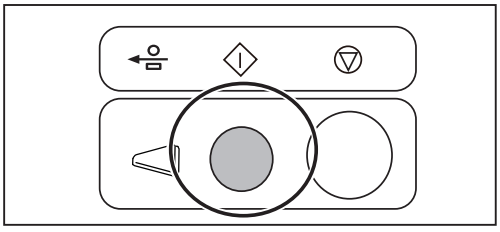


3 To restart the JOB processing, press the START key in **pause feeding mode**.

<In pause feeding mode>



*The START key on the **sub control panel** on the exit side is also available.



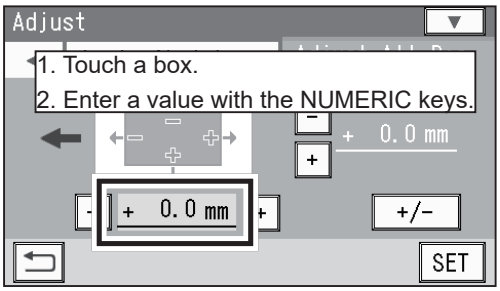
Feed/Process

IMPORTANT

Settings for **Air Knife**, **Fan Register**, **Blow Fan**, **Side Air** (option), **Slitter Guide**, **Crease Depth**, **Cut Trim Setting**, and **Trail Cut Mode** are normally valid for a JOB to be processed right after that and will not be saved in the JOB.
Normally set those when programming a JOB. (→P.47 Programming a JOB)

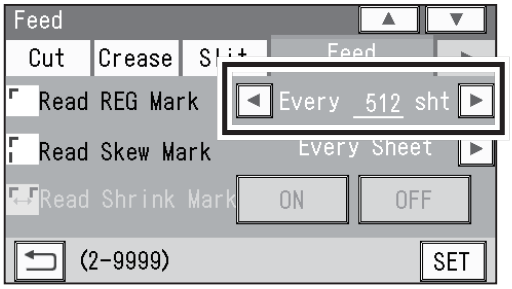
<Reprogramming a saved JOB>
a: Touch a box to enter a value and then enter a value with the NUMERIC keys.

a



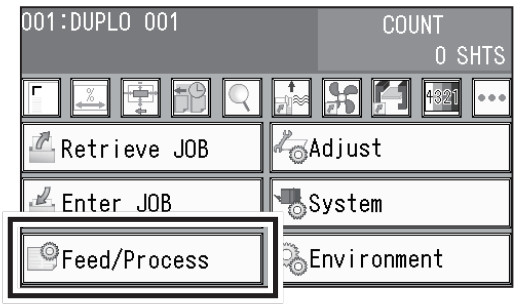
b. Touch ◀ / ▶ to select a mode.

b



*To save the settings, touch SET .

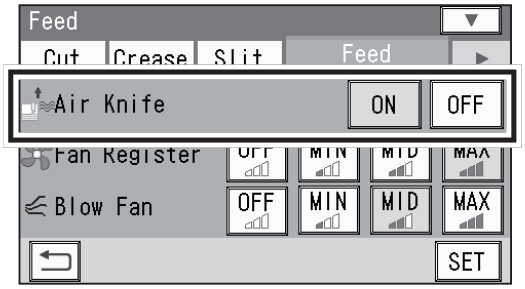
1 Make sure that the **standby** screen is displayed on the touch panel and touch **Feed/Process**.



2 Touch an item to display.
Feed/Slit/Crease/Cut

Feed

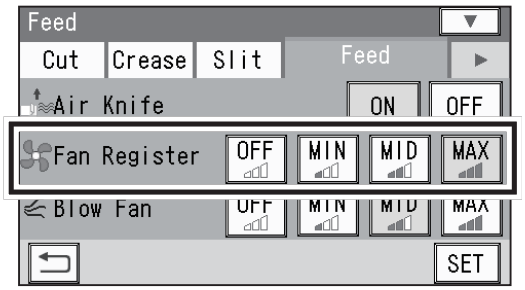
1. **Air Knife**
   Compressed air is blown out from the front to the corner of a document. This prevents a double feed. To use this function, touch **ON**. To not use this function, touch **OFF**.



REFERENCE

- To process light weight documents, select **OFF**.
- To process documents with excessive static electricity or process heavy weight documents, select **ON**.

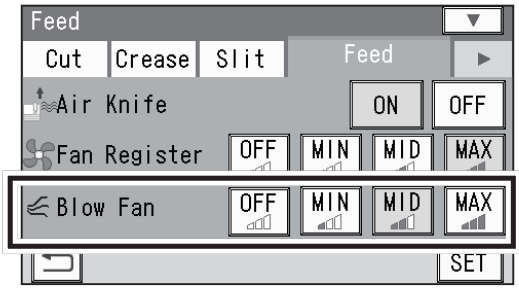
2. **Fan Register**
A document skew is adjusted with a document suctioned to the **conveyance belt**.
Select suction power.
MAX/MID/MIN/OFF



REFERENCE

To process light weight documents, select **MIN** to prevent document jams.

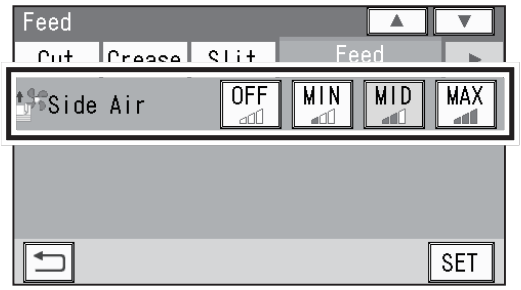
3. **Blow Fan**
Air is blown out from the lead edge side of a document to loosen the documents when they are fed. Select the level of the air.
MAX/MID/MIN/OFF



REFERENCE

If the DC-648 does not feed a document, set the level of the air higher.

4. **Side Air** (option)
Air is blown out from the side to loosen the documents, preventing a double feed.
Select suction power.
MAX/MID/MIN/OFF



Touching ▼ displays the following items on the next page.

5. **Read REG Mark**
This function detects a REG mark and then reads the image drift to compensates it.
Select a setting.

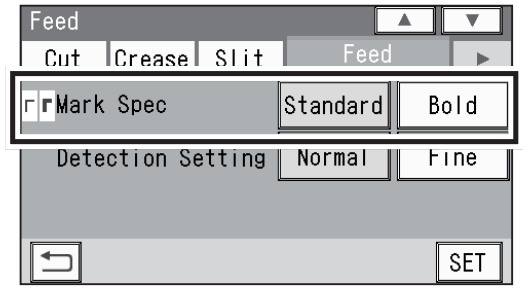
Every Sheet: Reads a REG mark on every sheet of documents and compensates processing positions of the JOB.
Every ** sht: Sets the number of each sheet to be read.
You can set the value in the range of 2 to 9999.
****.*mm or more**: Compensates a processed position of a JOB if it needs to be compensated for **.* mm or more against a JOB currently set.
If the image drift is less than the set value, the processed position is not compensated.
1st Sheet Only: Reads a REG mark on the first sheet of documents and compensates a processing position of a JOB.
OFF: Does not compensate a processing position of a JOB.

6. **Read Skew Mark**
This function detects skew of a print on a document automatically. You will be notified if it is skewed more than the certain level.
To use this function, select a setting.
*This setting is available only when valid values are entered for the side mark and th lead mark.

Every Sheet: Reads a skew mark on every sheet of documents to detect skew of a print.
1st Sheet Only: Reads a skew mark on the first sheet of documents to detect skew of a print.
OFF: Does not detect skew of a print.

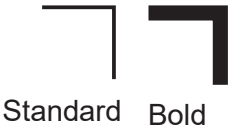
7. **Read Shrink Mark**
This function detects shrinkage of a print on a document automatically.
To use this function, select **ON**. To not use this function, select **OFF**.
*This setting is available only when a valid value is entered for **Shrinkage Mark**.
(→P.101 Detecting Print Shrinkage with a Shrinkage Mark)

8. **Mark Spec**
Select a mark type.
Standard/Bold
*Normally select **Standard**.



REFERENCE

Standard: Select this to process normal documents with a mark of standard thickness printed on them.
Bold: Select this to process specially treated documents (glossy documents).
In that case, print a bold mark on them in advance and then select **Bold**.
*If it fails to read a mark, select **Bold**.

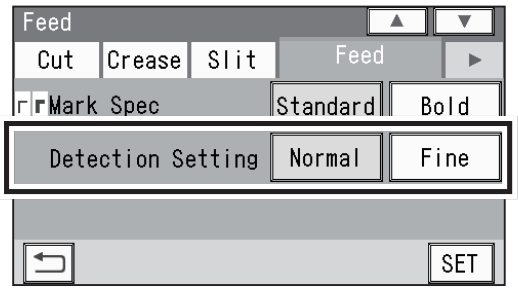


IMPORTANT

If there are scratches or stains in the printing range of a mark, the position may not be corrected.

If the read side of a document is rough and glossy, the camera may not be able to read a mark or a barcode. (The document may diffusely reflect light.)
To process specially treated documents (glossy document), print a bold mark on them in advance, and then select **Bold** for **Mark Spec**.

9. **Detection Setting**
   Select accuracy for reading a REG mark or a shrinkage mark.
   Normal: Reads a mark with normal accuracy.
   Fine: Improves mark reading accuracy and corrects the image drift.
   Changing the setting from **Normal** to **Fine** for higher reading accuracy decreases processing speed as compared with **Normal**.



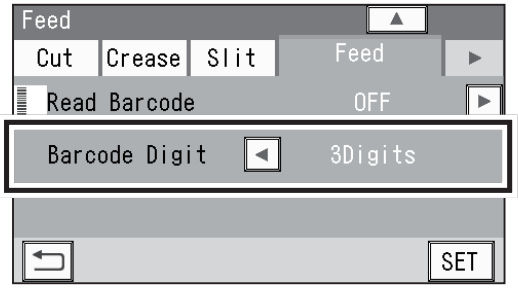
Touching ▼ displays the following items on the next page.

10. **Read Barcode**
    This function reads a barcode and then sets a JOB automatically. Select a setting.
    1st Sheet Only: Reads a barcode on the first document and sets a JOB.
    Every Sheet: Reads a barcode on every document and sets a JOB.
    OFF: Does not read a barcode.

IMPORTANT

For customers who replaced the conventional DC machine with the DC-648, you can set the screen that enables the DC-648 to read a 2-digit barcode.
For detailed information, contact our dealer.

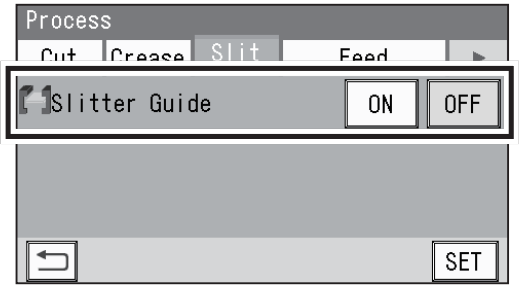
11. **Barcode Digit**
    The figure on the right appears only when the DC-648 is set so that a 2-digit barcode can be read as mentioned in **IMPORTANT** above.
    Select a digit to be retrieved.
    2Digits/3Digits



*To retun to the previous screen, touch ▲.

3 Slit

1. **Slitter Guide**
   When no slitters are used to process a JOB, these slitters act as document guides to stabilize the document conveyance.
   To use this function, select **ON**. To not use this function, select **OFF**.



REFERENCE

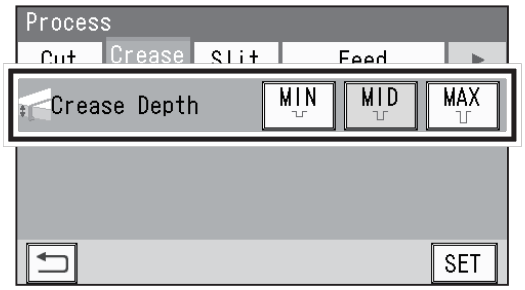
It is recommended that you select **ON** to process light weight documents.

4 Crease

1. **Crease Depth**

This function sets the depth of a crease to process a document with a crease.

MIN/MID/MAX



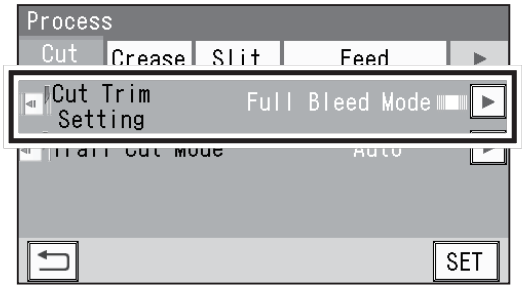
REFERENCE

To process heavy weight documents, select **Max**.
To process light weight documents, select **Min**.

5 Cut

1. **Cut Trim Setting**

The lead margin, the trail margin, and any gutter cuts will be chopped up and dropped into the waste box.
Select a setting.



Full Bleed Mode: The lead margin and the trail margin are chopped up and dropped into the waste box. Any other gutter cuts shorter than 49.0 mm in width are also chopped up and dropped into the waste box.

No Bleed Mode : Gutter cuts shorter than 49.0 mm in width are chopped up and dropped into the waste box.

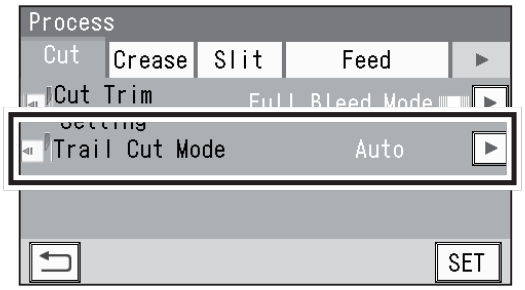
Process All: All of the cut pieces are ejected to the **exit tray**. Gutter cuts shorter than 28.0 mm in width are chopped up and dropped into the waste box. The trail margin shorter than 49.0 mm are chopped up and dropped into the waste box.

REFERENCE

- If a document is processed without either of the lead margin or the trail margin, make sure to select **No Bleed Mode**.
- If the distance between the last cut and the trail edge of the document is less than 49.0 mm with REG mark reading or the adjustment with **Adjust All** performed, it will also be regarded as margin and chopped up.

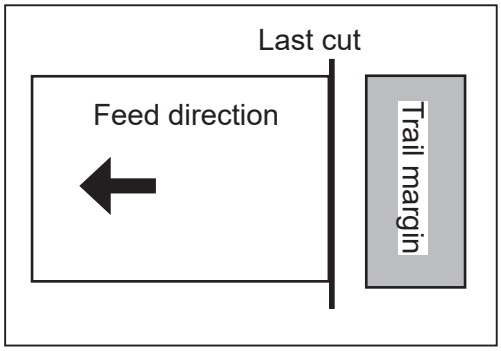
2. **Trail Cut Mode**

This function sets whether to process dummy cut for the trail margin or not.
To use this function, select **Auto**. To not use this function, select **OFF**.

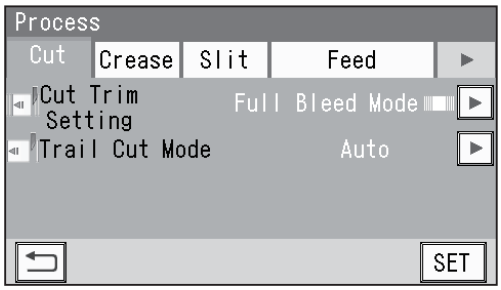


REFERENCE

- Dummy cut:
  The DC-648 performs cutting operation without a document to be cut at the position where the document is fed for the distance of the trail margin plus extra length.
  This is effective for dropping a document, such as when the trail margin is jammed between the roller and the lower tool in the **cutter section**.
- Trail margin:
  Means margin of the trail edge of the document produced when the last cut is performed.



6 When you have finished all the settings, touch SET to save them.

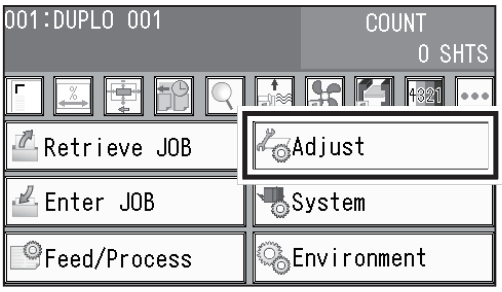


Adjust

IMPORTANT

Settings for **Cutter Speed** and **Speed** are valid only for a JOB to be processed right after that and will not be saved in the JOB.
Normally set those when programming a JOB. (→P.47 Programming a JOB)

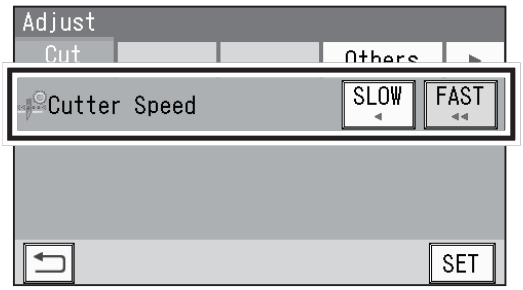
1 Make sure that the **standby** screen is displayed on the touch panel and touch **Adjust**.



2 Touch an item to display.
Cut/Others/Apply Shrinkage/Adjust All Pos./Cut 1 Adj./Last Cut Adj.

Cut

1. **Cutter Speed**
   This is displayed when a JOB in which the cutter is used is selected. Select cutter speed.
   FAST/SLOW

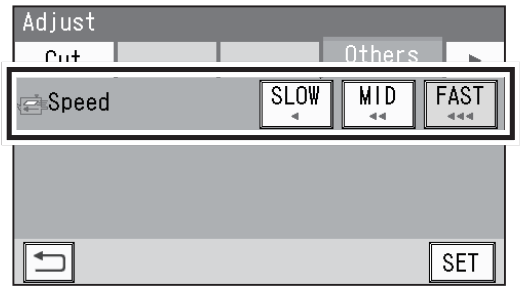


REFERENCE

To process a document that cannot be cut with **FAST**, select **SLOW**.

3 **Others**

1. **Speed**
   Select processing speed.
   FAST/MID/SLOW



REFERENCE

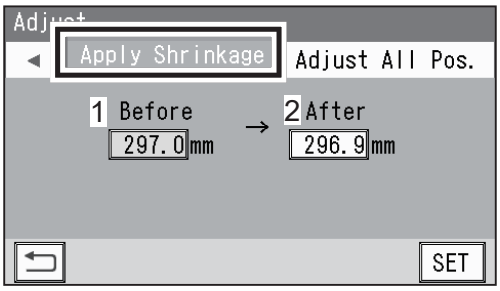
Select **Slow** for the conditions below:
- To improve finishing accuracy
- If it cannot obtain finishing accuracy because of roller slip due to slippery documents such as UV coated documents.

Touching ▶ displays the next page.

4 Apply Shrinkage

If printed documents are shrunk by heat generated on a digital printer, adjust it in the procedure below:

*The DC-648 automatically calculates the shrinkage ratio and adjusts cutting and creasing positions accordingly. This function compensates for the shrinkage or expansion in the feed direction.



*It is recommended that you use this function when finished documents are shrunk or expanded due to document types or document surface status.

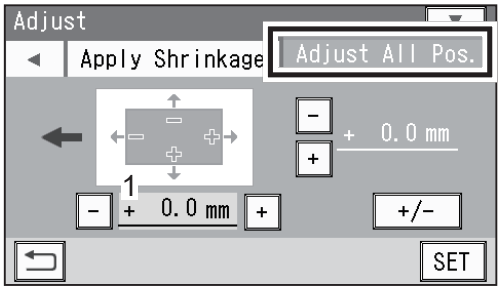
1. Enter the size of the document before it was shrunk in **1**.
2. Enter the size of a document after it was shrunk in **2**.
3. Touch [SET].

(→P.101 Detecting Print Shrinkage with a Shrinkage Mark)

5 Adjust All Pos.

This function compensates a document position in a vertical and horizontal direction against the JOB set.

*You can adjust the position up to 20.0 mm.

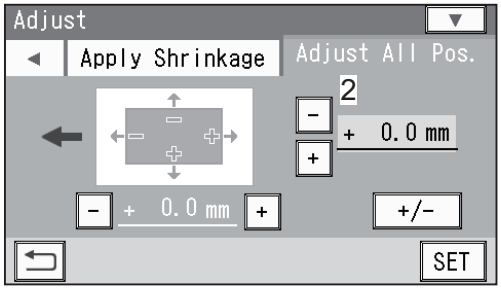


● Adjusting the positions lengthwise
Touch **1** and enter a value to adjust the positions lengthwise.

REFERENCE

[+]: Shifts a processing position toward the document trail edge from its reference position by 0.1 mm.
[−]: Shifts a processing position toward the document lead edge from its reference position by 0.1 mm.
[+/-]: Switches between **+** and **-** of the selected value.

● Adjusting the positions widthwise
Touch **2** and enter a value to adjust the positions widthwise.



REFERENCE

[+]: Shifts a processing position toward the operator's side from its reference position by 0.1 mm.
[−]: Shifts a processing position toward the non-operator's side from its reference position by 0.1 mm.
[+/-]: Switches between **+** and **-** of the selected value.

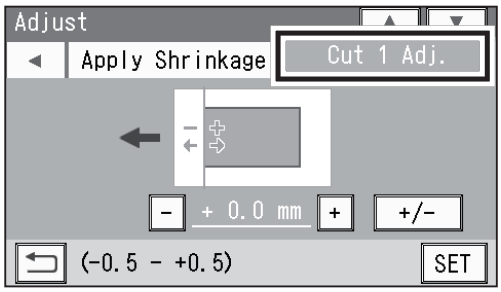
Touching [▼] displays the following item on the next page.

Cut 1 Adj.

This function corrects the first cut position of the finished product processed first.

*This is displayed only when a JOB in which the cutter is used is selected.

*You can adjust the position in the range of -0.5 to +0.5 mm.



REFERENCE

[+]: Shifts a processing position backward from its reference position by 0.1 mm.

[−]: Shifts a processing position forward from its reference position by 0.1 mm.

[+/-]: Switches between **+** and **-** of the selected value.

Touching [▼] displays the following item on the next page.

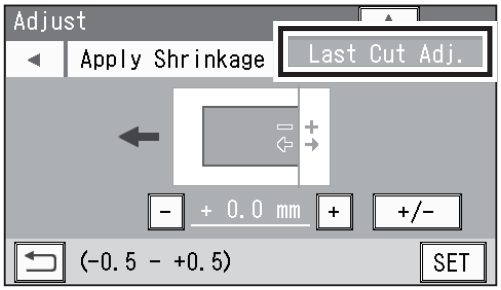
*To retun to the previous screen, touch [▲].

Last Cut Adj.

This function adjusts the last cut position of the finished product processed last.

*This is displayed only when a JOB in which the cutter is used is selected.

*You can adjust the position in the range of -0.5 to +0.5 mm.



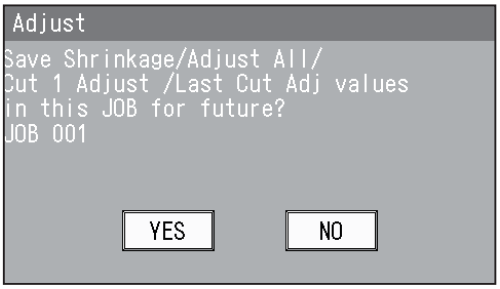
REFERENCE

[+]: Shifts a processing position backward from its reference position by 0.1 mm.

[−]: Shifts a processing position forward from its reference position by 0.1 mm.

[+/-]: Switches between **+** and **-** of the selected value.

*If you enter values to adjust for **Apply Shrinkage**, **Adjust All Pos.**, **Cut 1 Adj.**, and/or **Last Cut Adj.** and then touch [SET], the messages as shown on the right appears.
Select **YES** or **NO**.

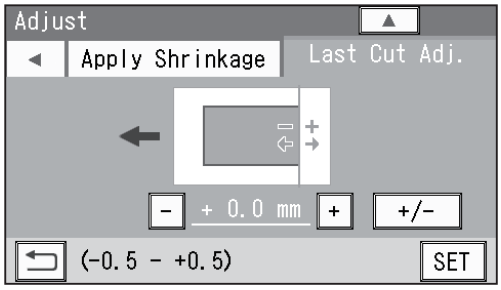


YES: Saves the adjusted value in the JOB. The saved settings will be valid even if the DC-648 is turned **OFF** or the JOB is reprogrammed.

NO: The adjusted values are valid only for the JOB to be processed right after this. The saved settings will no more be valid if the DC-648 is turned **OFF** or the JOB is reprogrammed.

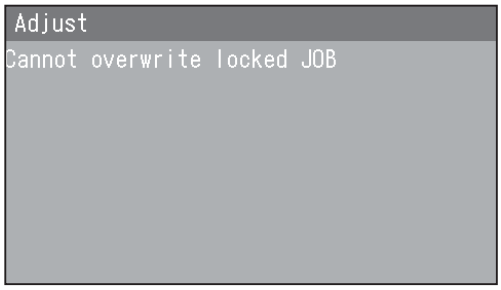
*To retun to the previous screen, touch [▲].

6 When you have finished all the settings, touch [SET] to save them.



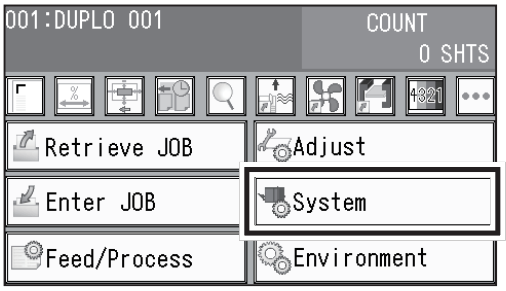
REFERENCE

If you try to overwrite a locked JOB, the message as shown on the right appears.
Unlock the JOB first and then overwrite it.
(→P.43● [🔒]: JOB Lock)



System

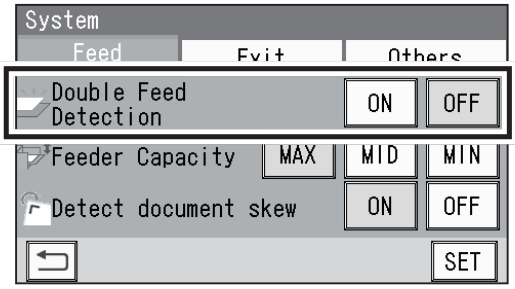
1 Make sure that the **standby** screen is displayed on the touch panel and touch **System**.



2 Touch an item to display.
Feed/Exit/Others

Feed

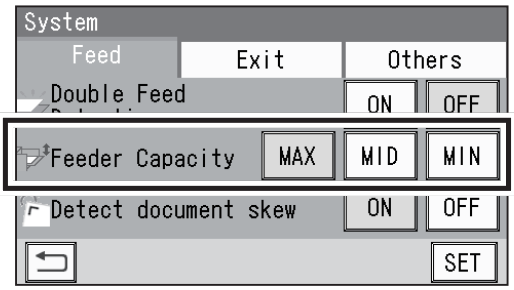
1. **Double Feed Detection**
   This function detects a double feed (two or more sheets are fed at once).
   To use this function, select **ON**. To not use this function, select **OFF**.
   *When it is set to **ON**, double feed will be detected and **Double feed** will appear on the touch panel.



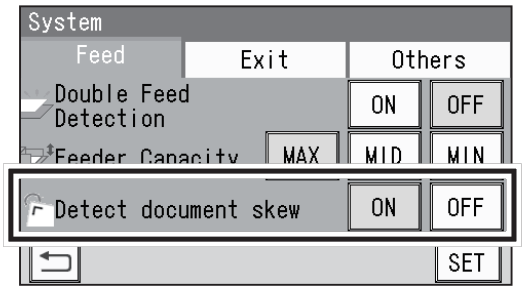
IMPORTANT

Double feed may not be detected if the surface of the document is rough or a document that is inconsistent in material was processed.

2. **Feeder Capacity**
   Select the elevator height from three levels according to the amount of documents to be processed.
   MAX/MID/MIN
   *Normally select **MID**.
   *To process a little amount of documents, select **MIN**. To process a large amount of documents, select **MAX**.

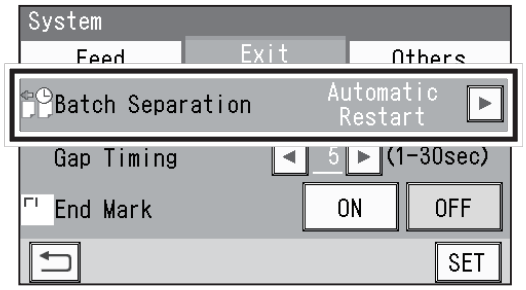


3. **Detect document skew**
   This function detects a document skew.
   To use this function, select **ON**. To not use this function, select **OFF**.



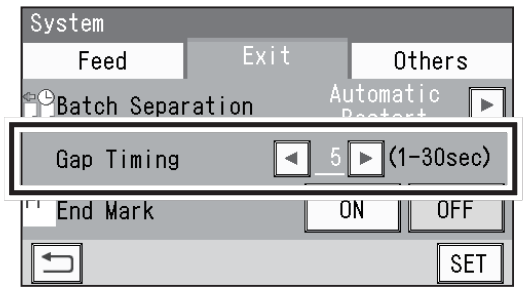
3 Exit

1. **Batch Separation**
   Select a setting for the operation in the interval after a few documents preset were processed or after the end mark was read until the next document is processed.



●**Automatic Restart**: When preset count processing is finished and the count becomes **0** (zero) or when **End Mark** is set to **ON**, the DC-648 reads an end mark and processes the documents inside the machine, which will display **Separating** on the touch panel.
The DC-648 restarts operation automatically after the elapse of time set in **Gap Timing**. Even when the set time has not elapsed, pressing the START key cancels batch separation and resumes the operation.

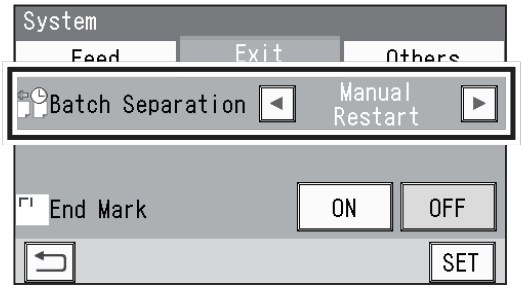
*If you have selected **Automatic Restart**, enter a value for **Gap Timing** to set the time interval.



REFERENCE

- You can set the time interval in the range of 1 to 30 seconds.
- Pressing and holding the CLEAR key resets the value to the default (5 seconds).

●**Manual Restart**: When preset count processing is finished and the count becomes **0** (zero) or when **End Mark** is set to **ON**, the DC-648 reads an end mark and processes the documents inside the machine, which will display **Separating** on the touch panel.
To restart operation, press the START key.
When 30 minutes have elapsed without the START key pressed while **Separating** is being displayed, the DC-648 stops operation.



*The START key on the **sub control panel** on the exit side is also available.

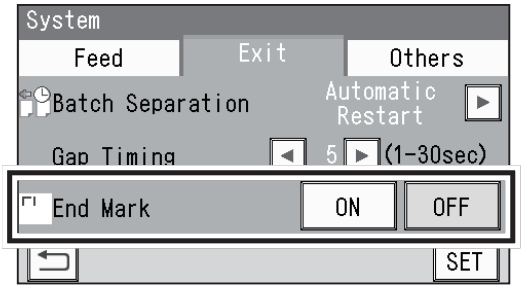
IMPORTANT

When not using the barcode reading function:
When **Batch Separation** is set to **Automatic Restart** or **Manual Restart**, make sure that the **standby** screen of the JOB selected after **Batch Separation** was set is displayed and then enter the number of sheets of documents to process with the batch separation.
If the number of sheets of documents (in **preset count mode**) with the batch separation is not entered, **Batch Separation** will not be enabled even if the START key is pressed to start document processing.
Note that it keeps processing documents without time intervals.

IMPORTANT

When using the barcode reading function:
With **Batch Separation** set to **Automatic Restart** or **Manual Restart** while the preset count is not set, when a barcode was read and the JOB number that is being processed has turned into another JOB number, **Separating** will be displayed on the touch panel.
With the preset count set, when a barcode was read and the JOB number has turned into another JOB number before the count shows **0** (zero), **Separating** will be displayed and the count of the processed documents will be reset.

● **End Mark**
This function is available only when **Automatic Restart** or **Manual Restart** is selected for **Batch Separation**.
To use this function, select **ON**. To not use this function, select **OFF**.

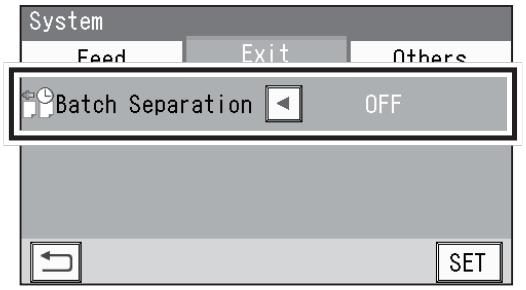


*When this is set to **ON**, the DC-648 enters **pause feeding mode** after a document with an end mark printed on was processed.
Document feeding will be restarted according to the setting for **Batch Separation** (**Automatic Restart**/**Manual Restart**).

REFERENCE

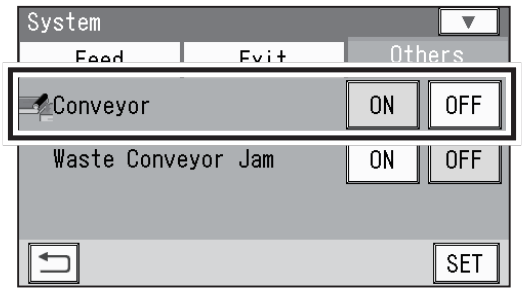
When this is set to **ON**, you cannot specify the number of sheets to be processed.

● **OFF:** When the count of sheets to be processed in **preset count mode** becomes **0** (zero), the DC-648 stops processing documents.



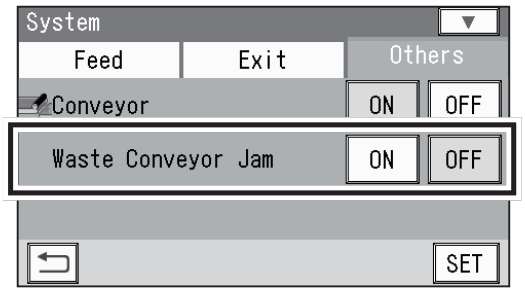
4 Others

1. **Conveyor**
This function makes settings for the conveyor that conveys margins cut off or paper waste to the waste box.
To activate the conveyor, select **ON**. To not activate it, select **OFF**.



2. **Waste Conveyor Jam**
   This function displays the message if a document jam has occurred in the **waste conveyor section**. To use this function, select **ON**. To not use this function, select **OFF**.

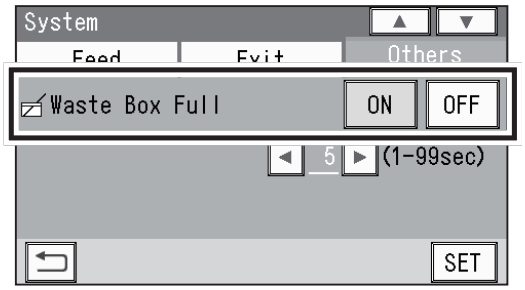
   *If you have selected **ON**, set the timing to detect a document jam from 1 to 99 seconds.
   *If you have selected **OFF** for **Conveyor**, this function is not available.



Touching ▼ displays the following item on the next page.

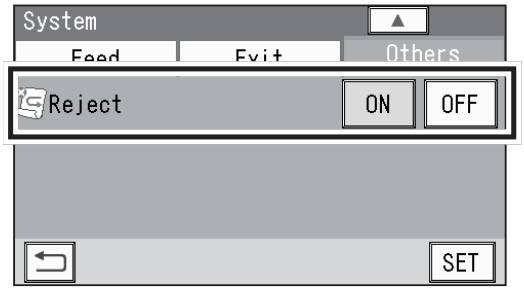
3. **Waste Box Full**
   This function detects the amount of waste accumulated in the waste box. If waste box full was detected, a message appears on the touch panel. To use this function, select **ON**. To not use this function, select **OFF**.

   *If you have selected **ON**, set the timing to detect waste box full from 1 to 99 seconds.

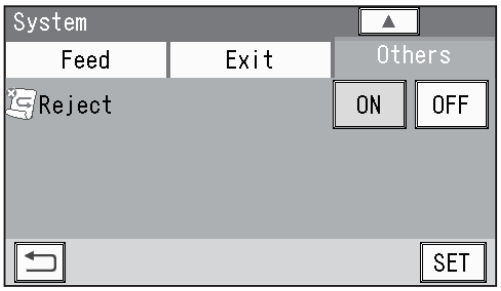


Touching ▼ displays the following item on the next page.

4. **Reject**
   Double-fed documents, a document on which the DC-648 had failed to read a REG mark or a barcode, a document on which a shrinkage mark was detected are ejected to the **reject tray** automatically.
   To use this function, select **ON**. To not use this function, select **OFF**.

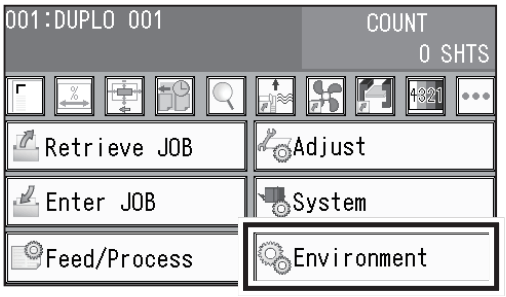


5 When you have finished all the settings, touch [SET] to save them.



Environment

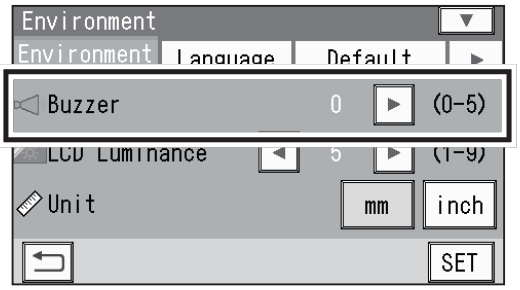
1 Make sure that the **standby** screen is displayed on the touch panel and touch **Environment**.



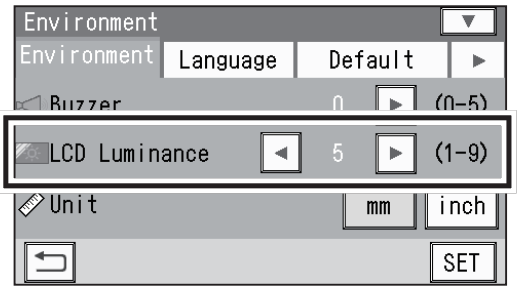
2 Touch an item to display.
Environment/Language/Default/Category Name/User Size/Shortcut

Environment

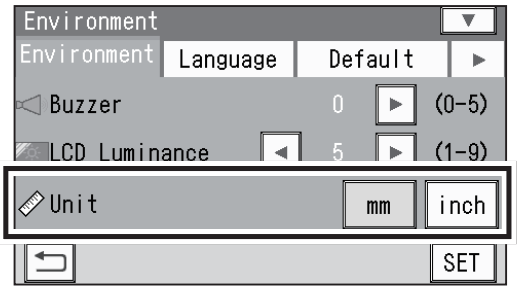
1. **Buzzer**
   Select a volume of buzzer.
   *You can adjust the value in the range of 0 to 5.
   (**0**: Mute)
   The smaller the value is, the smaller the buzzer sound becomes. The larger the value is, the bigger the buzzer sound becomes.



2. **LCD Luminance**
   Select brightness of the LCD (touch panel).
   *You can adjust the value in the range of 1 to 9.
   The smaller the value is, the darker the LCD becomes. The larger the value is, the brighter the LCD becomes.

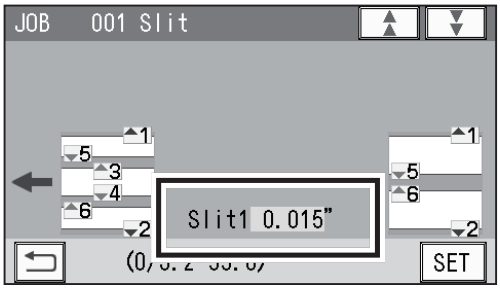


3. **Unit**
   Select **mm** (millimeters) or **inch** (inches) as a unit of document dimensions to program a JOB.



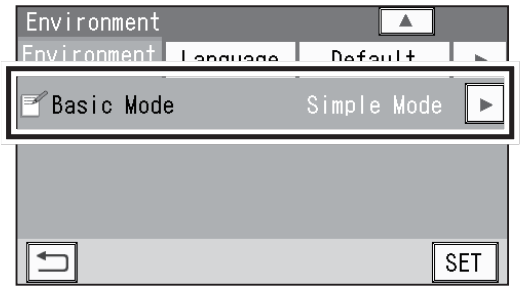
REFERENCE

If you select **inch**, **mm** displayed on the screen will be replaced with **"**.
If you set values entered in inches, they will be converted to the values in millimeters and displayed.
(The figure on the right shows the display on the **Slit** screen.)

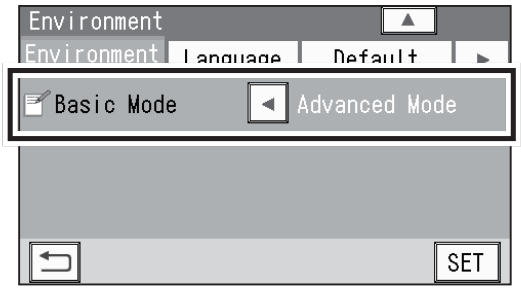


4. **Basic Mode**
Select a JOB entry mode for **Direct mode**.

Simple Mode: The screens to enter processing positions of each module will be displayed in order.
(→P.65 Direct - Simple Mode)



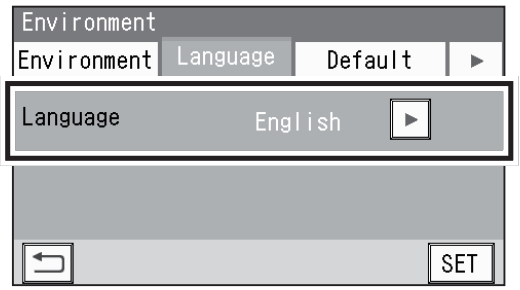
Advanced Mode: Specify modules to install in slot2 to slot4 and set processing positions of each module.
(→P.61 Direct - Advanced Mode)



3 Language

1. Select a language to be displayed on the touch panel.

*You can select a language from the eight languages below:
English, French, Italian, German, Spanish, Japanese, Polish, Russian



2. Touching [SET] displays **Please Wait.→ Setting is completed. Turn power off**. Turn the power **OFF** and then **ON** again. The selected language will be displayed.

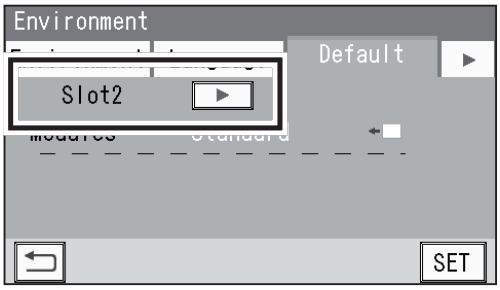
4 Default

This function sets default modules for slot2 to slot4 to program a JOB.

1. Select from **Slot2** to **Slot4**.

REFERENCE

If a service person installed other module(s) than the slitter when installing the DC-648, the icon to select a module will be displayed.

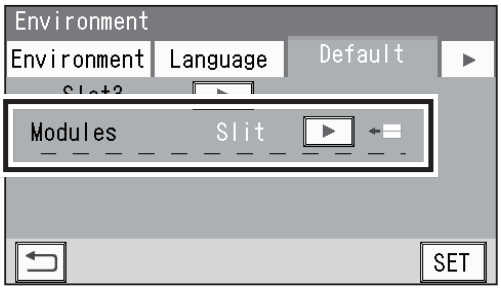


2. Select a module.

REFERENCE

- The module programmed here will be displayed in the first place for **Modules** on the display to program a new JOB in **Advanced Mode** in **Direct mode**.

- When you program a JOB in **Wizard mode** or in **Simple Mode** in **Direct mode**, the default module will be set automatically for the slot in which no module is set.



Touching ▶ displays the next page.

5 Category Name

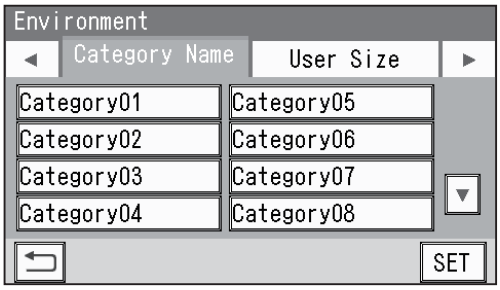
You can program or change a category name that is grouped and saved.
*You can set up to 20 categories.

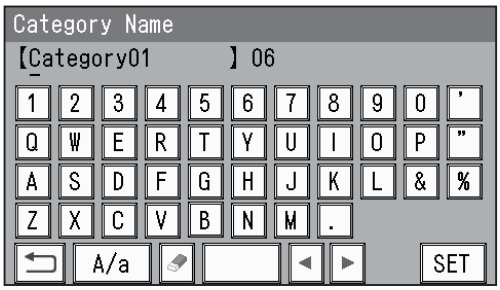
1. Touch a category name to be saved or changed.

*To display the continuity of the items, touch ▼.

2. Touch ◀ / ▶ to move the cursor to the character/ letter to be changed and enter a new category name.

3. When you have finished entering a JOB name, touch SET.

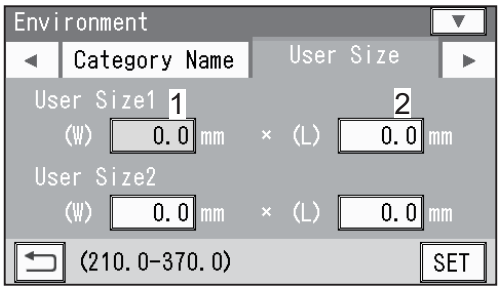




6 User Size

1. To customize a document size, enter a value of the width for **1** and the length for **2**.

*The user size that you set here will be displayed on the **JOB *** Document Size** screen to program a JOB.
(The figure on the right shows when **width: 210.0 mm** and **length: 450.0 mm** are set for **User Size1**.)

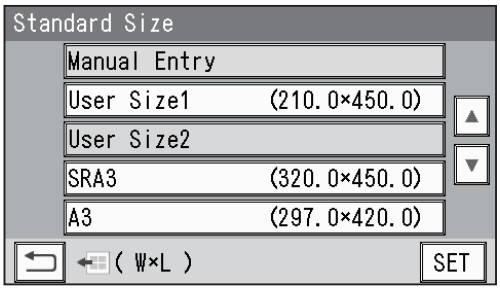


REFERENCE

- It is recommended that you set the user size if you frequently use documents of other size than the standard size.
- You can save up two document sizes as **User Size1** or **2**.

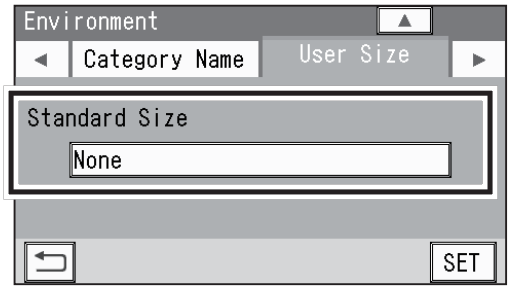
2. When you have finished entering values, touch SET.

<JOB programming screen>

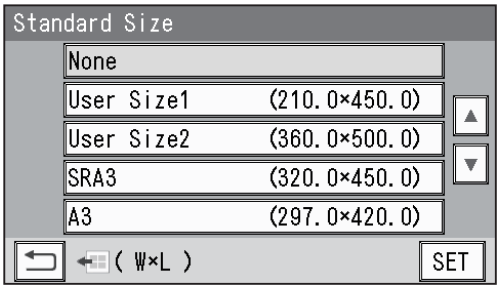


*To display the standard sizes, touch ▼.

3. To display the document size of the standard size in the first place on the display to program a new JOB, follow the procedure below:
*It is recommended that you register the document size that you use the most frequently as the default.
3-1. Touch **None**.

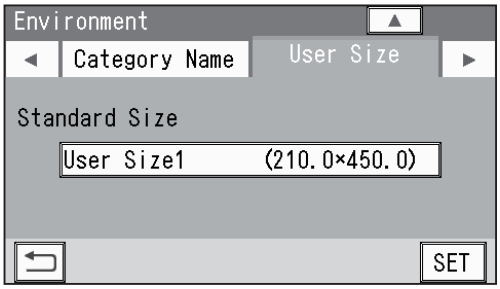


3-2. Select a standard size that you want to display in the first place on the display to program a new JOB. (The figure on the right shows when **User Size1** is selected.)



3-3. Touch [SET].

3-4. The document size selected in step 3-2. will be displayed under **Standard Size**.



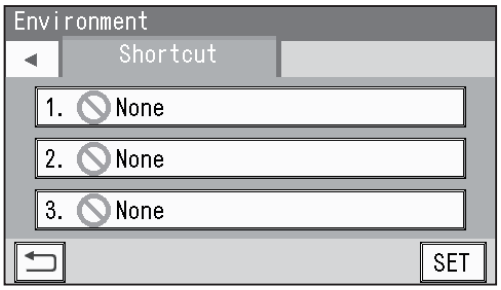
REFERENCE

- To select another document size, touch the displayed size and then perform from step 3-2.
- If you have selected **None**, **Manual Entry** will be displayed in the first place on the **JOB *** Document Size** screen.

Touching [▶] displays the next page.

7 Shortcut

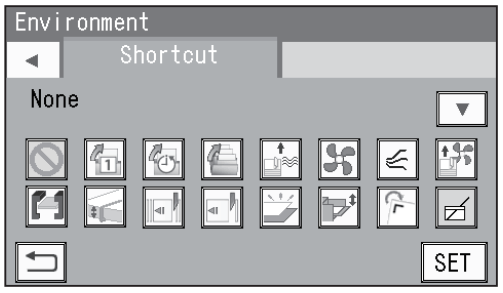
To display a shortcut of the function that you use frequently on the **standby** screen, follow the procedure below:
*You can set up to three shortcuts.



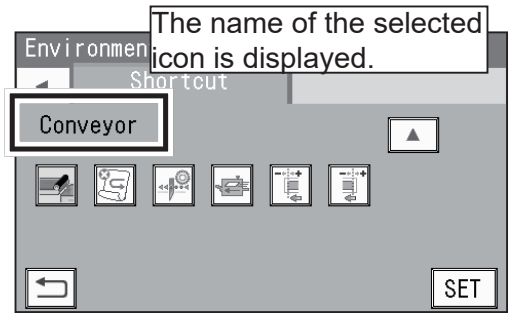
1. Select from **1** to **3**.

2. Select an icon of the function the shortcut of which to set and then touch [SET].

*The icon of the function the shortcut of which is already set will be displayed in a grayout state.



*To display the continuity of the items, touch [▼].



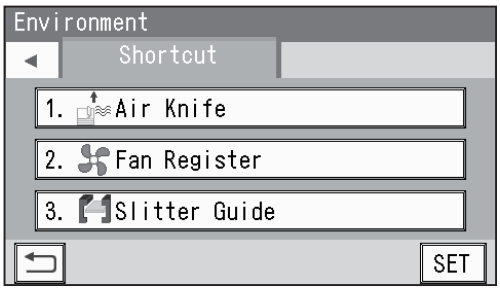
*To retun to the previous screen, touch [▲].

Environment

●List of shortcut icons

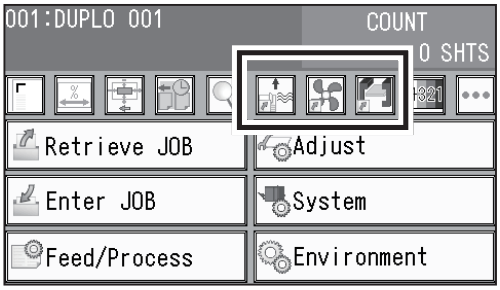
Icon	Shortcut item	Screen
	Retrieve JOB (No.)	Retrieve JOB - JOB No.
	Retrieve JOB (Log)	Retrieve JOB - JOB Log
	Retrieve JOB (Category)	Retrieve JOB - Category
	Air Knife ON/OFF	Feed - Feed
	Fan Register OFF/MIN/MID/MAX	Feed - Feed
	Blow Fan OFF/MIN/MID/MAX	Feed - Feed
	Side Air (option) OFF/MIN/MID/MAX	Feed - Feed
	Slitter Guide ON/OFF	Process − Slit
	Crease Depth MIN/MID/MAX *The shortcut is available only when crease processing is programmed in the selected JOB.	Process - Crease
	Cut Trim Setting Full Bleed Mode/No Bleed Mode/Process All *The shortcut is available only when cut processing is programmed in the selected JOB.	Process − Cut
	Trail Cut Mode OFF/Auto *The shortcut is available only when cut processing is programmed in the selected JOB.	Process − Cut
	Double Feed Detection ON/OFF	System − Feed
	Feeder Capacity MIN/MID/MAX	System − Feed
	Detect document skew ON/OFF	System − Feed
	Waste Box Full ON/OFF	System - Others
	Conveyor ON/ OFF	System - Others
	Reject ON/OFF	System - Others
	Cutter Speed SLOW/FAST	Adjust − Cut
	Speed SLOW/MID/FAST	Adjust − Others
	Cut 1 Adj.	Adjust − Cut 1 Adj.
	Last Cut Adj.	Adjust − Last Cut Adj.
	None	No shortcut will be displayed.

3. The figure on the right shows when **Air Knife** is selected for **1**, **Fan Register** for **2**, and **Slitter Guide** for **3**.
   To continue shortcut setting, go back to step 1.



8 When you have finished all the settings, touch [SET] to save them.

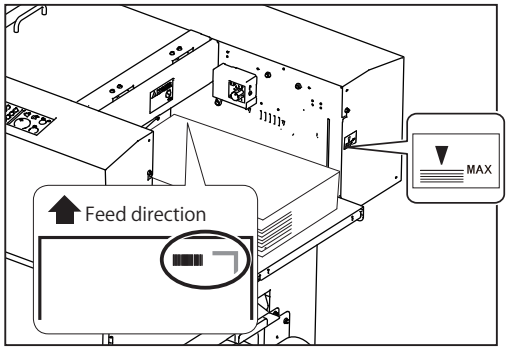
The **standby** screen reappears and the shortcut(s) set in step ❼-3 is(are) displayed.



Processing a JOB with a Barcode

This section describes how to read a JOB number on a barcode to process the JOB.
If a barcode which indicates a JOB number is printed on each document, the built-in camera in the DC-648 reads the JOB number and the JOB will be processed.

1. Prepare documents proper for the selected JOB. Loosen to separate the documents and load them on the **feed tray**.
*Make sure that the side on which a barcode or a REG mark is printed is facing upward and is located at the upper right to the feed direction.



IMPORTANT

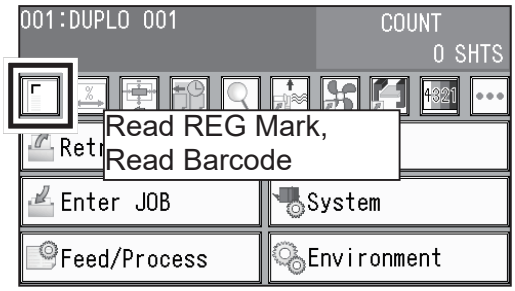
Make sure that the height of the document stack does not exceed the **MAX** level.

2. Follow steps ❸ to ❺ in Loading Documents (P.13) in Before Operation in Chapter 1 Before Using This Machine.

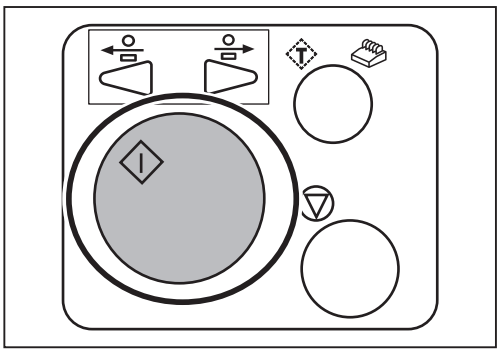
3. Follow steps ❶ to ❷ in Setting the Exit Tray (P.14) in Before Operation in Chapter 1 Before Using This Machine.

4. Follow the procedure in 10. Read Barcode (P.81) in Feed/Process.

Make sure that ⌜ is displayed on the **standby** screen.



5. Press the START key.



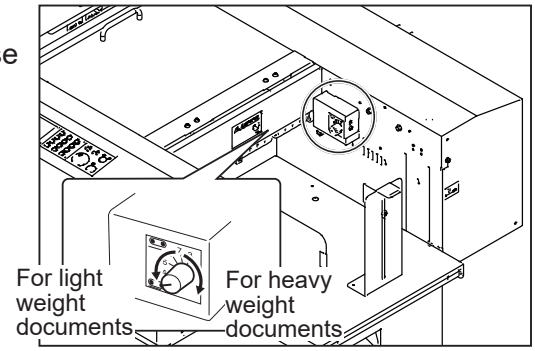
Adjusting Document Feed

Adjusting the Elevator Height

Adjust the height of the elevator in the following cases:

1. 1. A document is not fed:
   Turn the **level adjustment knob** counterclockwise (to a lower number) to raise the elevator.

   2. Multiple sheets are fed at once (double feed):
   Turn the **level adjustment knob** clockwise (to a higher number) to lower the elevator.

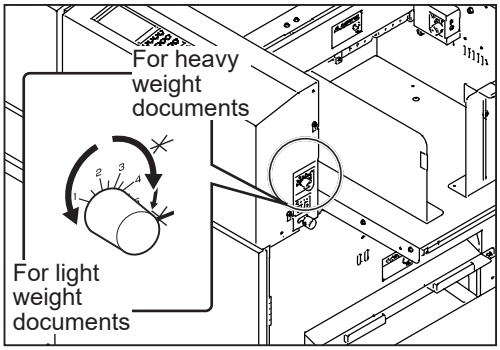


Adjusting the Height of the Separator

Adjust the height of the separator in the following cases:

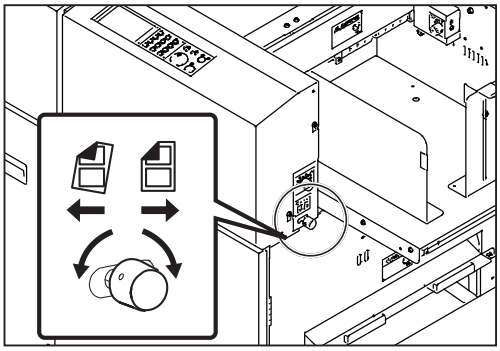
1. 1. A document is not fed:
   Turn the **separator adjustment knob** clockwise (to a higher number) to lower the separator.

   2. Multiple sheets are fed at once (double feed):
   Turn the **separator adjustment knob** counterclockwise (to a lower number) to raise the separator.



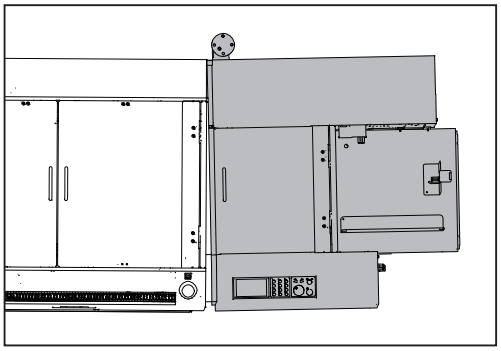
Adjusting Skew of a Print

1. Skew of a print is detected:
   Turn the **skew adjustment knob** to adjust the skew of the print.

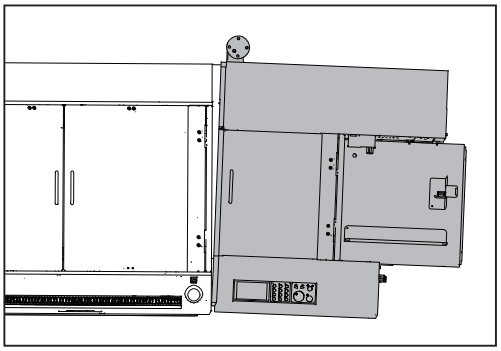


Adjusting Document Feed

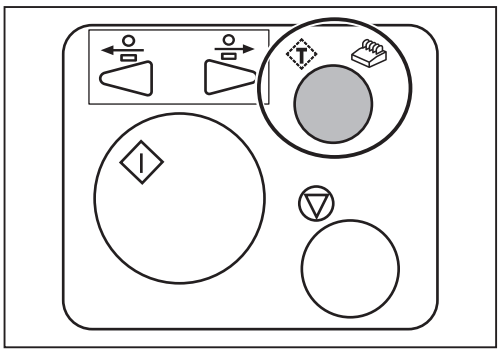
Clockwise : Turning the **knob** shifts the lead edge of the document slightly toward the operator's side.



Counterclockwise : Turning the **knob** shifts the lead edge of the document slightly toward the non-operators side.



2 Press the TEST key to process a test run for one sheet.
Check if the finished product is processed as it is programmed.



3 If the skew of the print is still detected, repeat steps ❶ to ❷ again.

Detecting Print Shrinkage with a Shrinkage Mark

If a printed document is shrunk by heat from the digital printer, enable the shrinkage mark reading function so that printed marks on the lead edge and the trail edge of the document will be read to detect the shrinkage or expansion of the print.
(→●Shrinkage mark / Skew mark (P.32) in Chapter 1 Before Using This Machine)

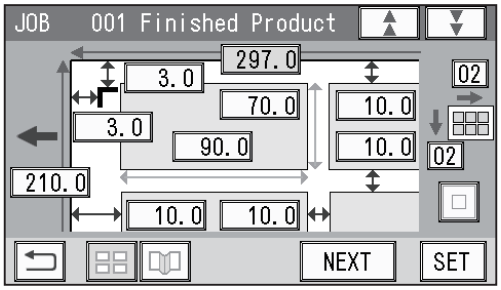
IMPORTANT

Shrinkage may not accurately be detected on a document with a rough surface.

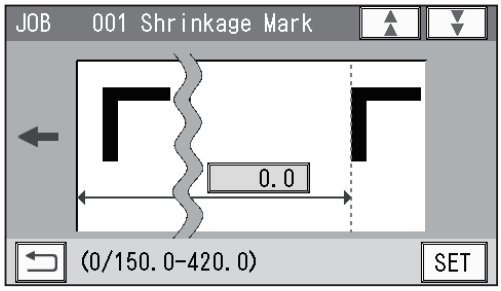
<To enable the shrinkage mark reading function when programming a JOB>

1. Enter valid values for the side mark and the lead mark, and then touch [NEXT].

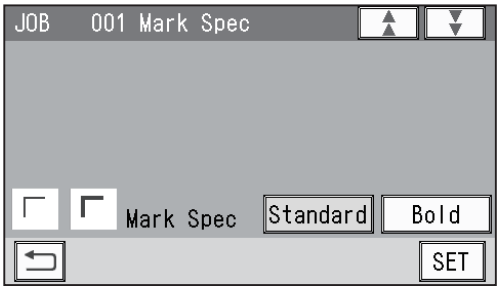
   *For the details of programming a JOB, refer to Chapter 2 Programming a JOB.



2. Enter a value of the distance between the lead edge of the document and the shrinkage mark, and then touch [SET].



3. Select a mark type and touch [SET].
   Standard/Bold
   *Normally select **Standard**.
   (→Mark Spec (P.52))



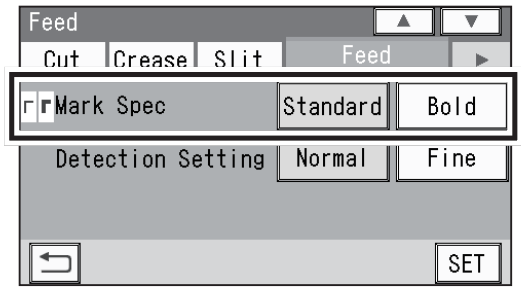
<To enable the shrinkage mark reading function for a saved JOB>

1. Follow steps ❶ to ❷ in Feed/Process (P.78) to display the **Feed** - **Feed** screen.
   *This setting is available only when a valid value is entered for the shrinkage mark.

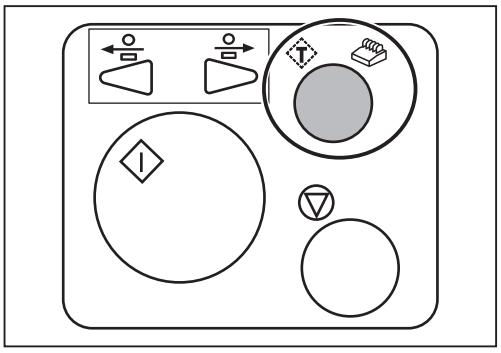
2. Touch **ON** and then [SET].

Detecting Print Shrinkage with a Shrinkage Mark

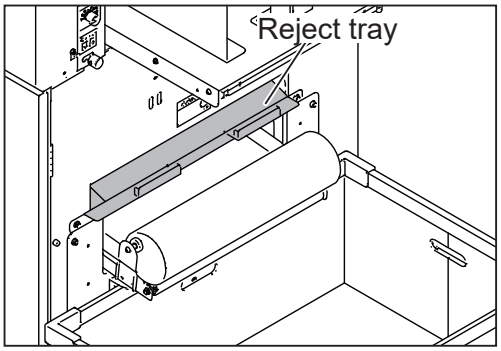
3 Select a mark type and touch [SET].
Standard/Bold
*Normally select **Standard**.
(→Mark Spec (P.52))



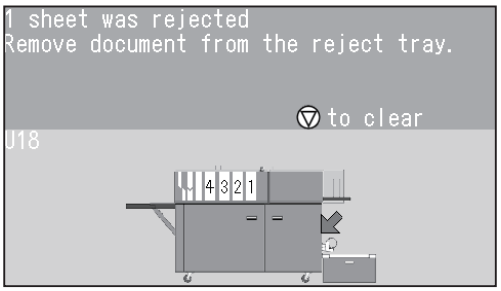
4 Press the TEST key to process a test run for one sheet.

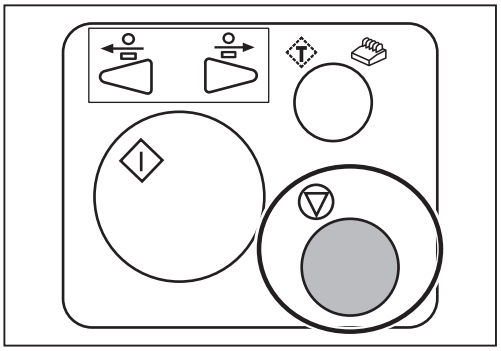


5 If a shrinkage mark on a document is detected, the document will be ejected on the **reject tray**.
*If a document longer than 670.0 mm is processed or **OFF** is set for **Reject** in **System** - **Others**, the document will be ejected on the **exit tray**.
(→P.91 4. Reject)

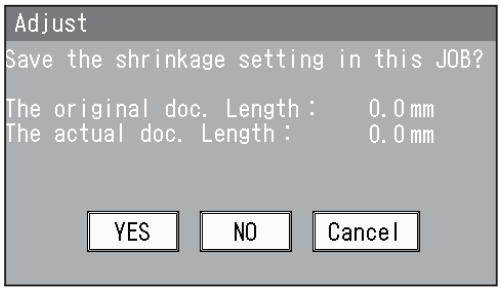


6 The message as shown on the right appears.
Press the STOP key.
*If the document was ejected on the **exit tray** in step ❺, this message does not appear.



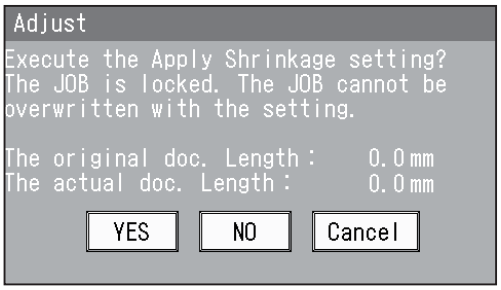


7 The message as shown on the right appears.
To save the detected shrinkage, touch **YES**. To not save it, touch **NO**.
To read the shrinkage mark again, click **Cancel**.
*If you touch **YES** or **NO**, the shrinkage mark reading function automatically turns **OFF**.

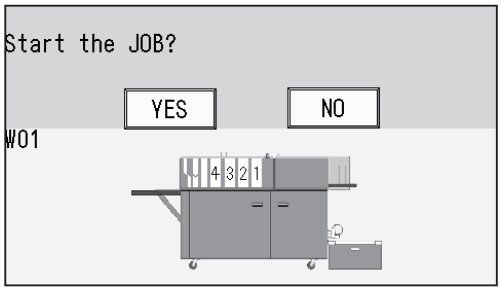


REFERENCE

If the JOB is locked, the message as shown on the right appears.
To reflect the detected shrinkage, touch **YES**. To not reflect it, touch **NO**.
To read the shrinkage mark again, click **Cancel**.
*The setting will not be saved in the JOB.
To save the setting in the JOB, unlock the JOB first and then overwrite it.
(→P.43 ● [🔒]: JOB Lock)



8 The message as shown on the right appears.
To continue processing documents, touch **YES**. To not continue it, touch **NO**.



Processing Curled / Light Weight Documents

If a document is not fed because it is light weight or curled, use the **fan reg upper guide**.

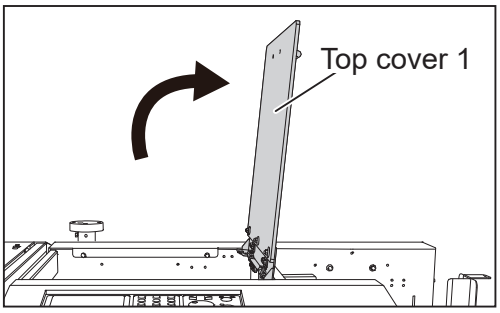
IMPORTANT

To process light weight documents, make the following settings to stabilize the document feed when programming a JOB:

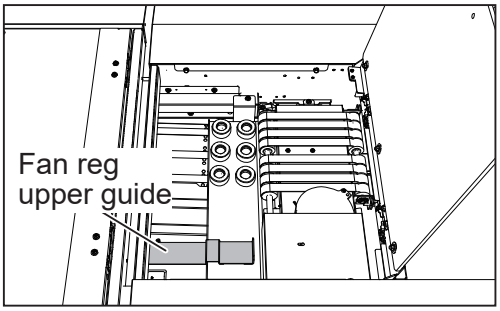
- **Slitter Guide**: **ON**
- **Fan Register**: **MIN** or **OFF**.
- **Side Air** (option): **MIN** or **OFF**

(→P.78 Feed/Process)

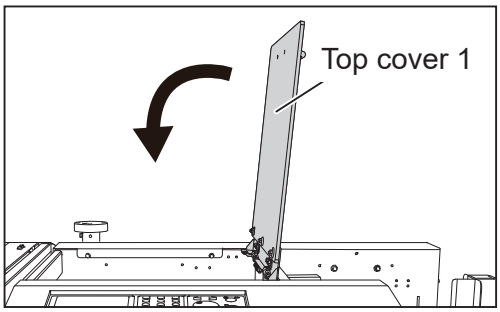
1 Open the **top cover 1**.



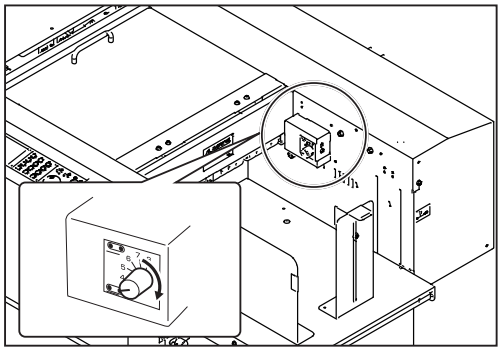
2 Attach the **fan reg upper guide** and adjust it to the position where the left edge of a document (operator's side) passes.



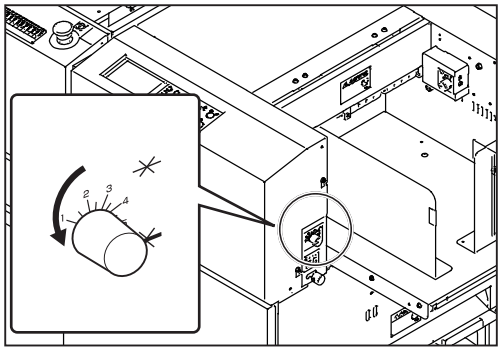
3 Close the **top cover 1**.



4 Turn the **level adjustment knob** clockwise to lower the uppermost position of the elevator.



5 Turn the **separator adjustment knob** counterclockwise to raise the separator.



MEMO

Chapter 4

Troubleshooting

This chapter describes what to do when an error has occurred and how to deal with document jams and messages.

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U06: Check feed tray ····· 118
J01: Feed error ····· 119
J02: Check the fan reg. section ····· 120
J03: Check the camera section ····· 122
J05: Check the reject section ····· 124
J11: Check slot1/2 ····· 127
J12: Check slot3/4 ····· 130
J18: Check the creaser/cutter section ····· 133
J19: Check the exit ····· 137
J20: Check the waste conveyor ····· 138
U19: The waste box is full ····· 141
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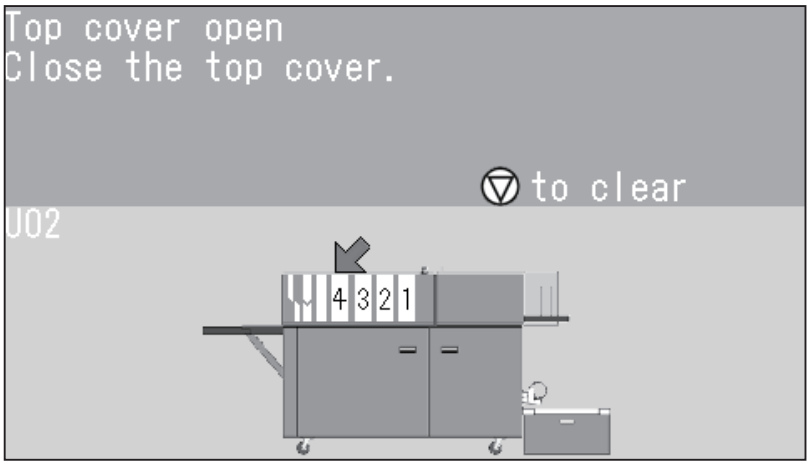
If a Message Appears

If an error has occurred, a figure and a message appear on the touch panel.
A confirmation message may also appear.
In such a case, follow the procedure below to clear the error.

● **Display on the touch panel**

An arrow points at the position where the error is occurring in the figure of the DC-648 displayed in the lower part of the screen.
The error status and the solution are displayed in the upper part of the screen.
e.g.: **U02 Top cover open**

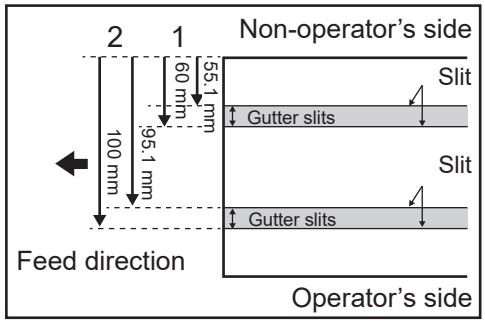


Message	Status and Solution
Emergency stop Release emergency stop switch to clear. U01	Status: The DC-648 is brought to an emergency stop. Solution: Turn the **emergency stop switch** to the right to release the emergency stop. (→P.xv Emergency Stop Function) If this message remains displayed even after the **emergency stop switch** was released, contact our service person.
Top cover open Close the top cover. to clear U02-*	Status: The **top cover 1/2/3** is open. Solution: Close the **top cover 1/2/3**. If this message remains displayed even after the **top cover** was closed, contact our service person.
Front door open Close the front door. to clear U03-*	Status: The **front door 1/2** is open. Solution: Close the **front door 1/2**. If this message remains displayed even after the **front door** was closed, contact our service person.
Interlock Press the emergency switch and then release it. to clear U04-*	Status: **Interlock 1/2** was detected. Solution: Press the **emergency stop switch** to release the emergency stop.

Message	Status and Solution
No documents Set documents on the feed tray. ▽ to clear U05	Status: There is no document on the **feed tray**. Solution: Load a document on the **feed tray**. (→P.13 Loading Documents)
Check feed tray Feed tray overload. ▽ to clear U06	Status: Too many documents are loaded on the **feed tray**. Solution: Make sure that the height of the document stack does not exceed the **MAX** level which is indicated on the right side of the **feed tray**. Remove the documents and press the STOP key. (→P.118 U06: Check feed tray)
Documents in the feeder Remove documents from the feeder. ▽ to clear U07-*	Status: A document remains in the **feed section**. Solution: Remove the document from the **feed section** and press the STOP key. (→P.119 J01: Feed error)
Document remains in the fan reg. section Remove the document from the fan reg. section. ▽ to clear U08-*	Status: A document remains in the **fan register section**. Solution: Remove the document from the **fan register section** and press the STOP key. (→P.120 J02: Check the fan reg. section)
Documents in the camera section Remove documents from the camera section. ▽ to clear U09-*	Status: A document remains in the **camera section**. Solution: Remove the document from the **camera section** and press the STOP key. (→P.122 J03: Check the camera section)
Check the reject section Remove documents from the reject section. ▽ to clear U10	Status: A document remains in the **reject section**. Solution: Remove the document from the **reject section** and press the STOP key. (→P.124 J05: Check the reject section)
Documents in slot1/2 Remove documents from slot1/2. ▽ to clear U11	Status: A document remains in the **slot 1/2 section**. Solution: Remove the document from the **slot1/2 section** and press the STOP key. (→P.127 J11: Check slot1/2)
Documents in slot3/4 Remove documents from slot3/4. ▽ to clear U12	Status: A document remains in the **slot3/4 section**. Solution: Remove the document from the **slot3/4 section** and press the STOP key. (→P.130 J12: Check slot3/4)

If a Message Appears

Message	Status and Solution
Documents in the creaser section Remove documents from the creaser section. ▽ to clear U14	Status: A document remains in the **creaser section**. Solution: Remove the document from the **creaser section** and press the STOP key. (→P.133 J18: Check the creaser/cutter section)
Documents at the exit section Remove documents from the exit section. ▽ to clear U15	Status: A document remains on the **exit tray**. Solution: Remove the document from the **exit tray** and press the STOP key. (→P.137 J19: Check the exit)
** sheet was rejected Remove document from the reject tray. ▽ to clear U18-*-*	Status: ** sheet was ejected on the **reject tray**. Solution: Remove the document from the **reject tray**. (→P.124 J05: Check the reject section)
The waste box is full Remove wastes from the waste box. ▽ to clear U19-*	Status: The **waste box** has become full during the JOB processing. Solution: Remove the waste from the **waste box** and press the STOP key. (→P.141 U19: The waste box is full)
Print images are skewed Turn the skew adjustment knob counterclockwise to adjust to the print skew. ▽ to clear U20-1	Status: Skew of the print image was detected. Solution: Turn the **skew adjustment knob** counterclockwise to adjust to the skew of the print.
Print images are skewed Turn the skew adjustment knob clockwise to adjust to the print skew. ▽ to clear U20-2	Status: Skew of the print image was detected. Solution: Turn the **skew adjustment knob** clockwise to adjust to the skew of the print.
Invalid JOB data Check JOB detail. ▽ to clear U21-*-*	Status: The DC-648 cannot process the JOB because of invalid data. Solution: Press the STOP key and then check the JOB contents.
Invalid JOB data Check JOB detail. ▽ to clear U21-3	Status: All the cut pieces will be chopped up and dropped into the **waste box** as gutter cuts. The finished product will not be ejected on the **exit tray**. Solution: Press the STOP key and reprogram the JOB so that the finished product will be ejected on the **exit tray**.

Message	Status and Solution
Invalid JOB data Slit/perf is programmed both between 55.1-60mm and between 95.1-100mm. Change slit/perf position. ▽ to clear U21-4-1	Status: Gutter slits and slits are allocated to the locations that prevent the sensor from detecting a document. The message appears when the conditions of 1 and 2 below are met simultaneously.  Solution: Press the STOP key to clear the error, then change the JOB details so that the gutter slits, the slits, or the perforations of the **RTM (rotary tool module (option))** are not overlapped with either range of 55.1–60 mm and 95.1–100 mm.
Fine adjustment error The current fine adjustment interfere with other part of the JOB. Review the adjustment value or the print. ▽ to clear U22-*-*	Status: The current fine adjustment interferes with other part of the JOB. Solution: Press the STOP key and check the settings for positions in **Adjust All**/**REG Mark** and the printing position of the REG mark.
Double Feed Remove documents from inside the machine. ▽ to clear U23	Status: A double feed has occurred. Solution: Remove the jammed document from the inside of the machine and press the STOP key. Loosen and separate the documents, and check the settings for **Feed**.
Barcode error Cannot read barcode. ▽ to clear U24-1	Status: The DC-648 failed to read a barcode. Solution: Press the STOP key to clear the error. If the barcode is printed out of the specifications, print it on an appropriate position. (For the barcode specifications, see P.34.) **REFERENCE** A barcode may not be read depending on the print quality of the printer and the document type even it is within the specifications. In that case, enlarging the barcode vertically/horizontally may improve it.

If a Message Appears

Message	Status and Solution
Barcode error The JOB number of the barcode is not used. ▽ to clear U24-2	Status: The JOB number of the barcode is not used. Solution: Press the STOP key to clear the error and check the barcode. (For the barcode specifications, see P.34.)
Barcode error The JOB number of the barcode is invalid. ▽ to clear U24-3	Status: The JOB number of the barcode is invalid. Solution: Press the STOP key to clear the error and check the barcode. Print a correct barcode on a document. (For the barcode specifications, see P.34.)
Barcode error The barcode digits exceed the limit. ▽ to clear U24-4	Status: The barcode digits exceed the limit. Solution: Press the STOP key STOP key to clear the error and check the barcode. Print a correct barcode on a document.
Barcode error Check digit error. ▽ to clear U24-5	Status: Check for a digit error or a barcode error. Solution: Press the STOP key to clear the error and check the barcode. Print a correct barcode on a document.
Barcode error Check if there are any spots around barcode. ▽ to clear U24-6	Status: The DC-648 failed to read a barcode because of spots on the document. Solution: Press the STOP key to clear the error and check if any spots are on the document.
REG Mark error Cannot find REG Mark. ▽ to clear U25-*	Status: The DC-648 failed to read a REG mark. Solution: Press the STOP key to clear the error. Check if the REG mark is printed correctly. (For the REG mark specifications, see P.30)
Skew Mark error Cannot read the Skew Mark. ▽ to clear U26-*	Status: The DC-648 failed to read a skew mark. Solution: Press the STOP key to clear the error and check if the skew mark is printed correctly. (For the skew mark specifications, see P.32.)
Shrinkage Mark error Cannot read the Shrinkage Mark. ▽ to clear U27-*	Status: The DC-648 failed to read a shrinkage mark. Solution: Press the STOP key to clear the error and check if the shrinkage mark is printed correctly. (For the shrinkage mark specifications, see P.32.)

<table>
<tr><th>Message</th><th>Status and Solution</th></tr>
<tr><td>Slot1 no module
Set the module in slot1 properly.

▽ to clear
U28</td><td>Status: The module in slot1 is not installed properly.
Solution: Install the module in slot1 properly and press the STOP key.</td></tr>
<tr><td>Slot2 no module
Set the module in slot2 properly.

▽ to clear
U29-*</td><td>Status: The module in slot2 is not installed properly.
Status: Install the module in slot2 properly and press the STOP key.</td></tr>
<tr><td>Slot3 no module
Set the module in slot3 properly.

▽ to clear
U30-*</td><td>Status: The module in slot3 is not installed properly.
Status: Install the module in slot3 properly and press the STOP key.</td></tr>
<tr><td>Slot4 no module
Set the module in slot4 properly.

▽ to clear
U31-*</td><td>Status: The module in slot4 is not installed properly.
Status: Install the module in slot4 properly and press the STOP key.</td></tr>
<tr><td>Slot wrong
<table><tr><td>Slot4</td><td>Slot3</td><td>Slot2</td></tr><tr><td>OK</td><td>Slitter3&4</td><td>OK</td></tr></table>▽ to clear
U33-*</td><td>Status: The module installed does not match a JOB to be processed. The module name that is not used for the JOB is displayed.
Status: Install the module correctly according to the module name displayed and press the STOP key. Clear the error and then restart the JOB processing.
(The left figure is an example showing that other slitter module than the one for the JOB is installed in slot3. It differs depending on specifications.)</td></tr>
<tr><td>Remove modules from slots 1/2/3/4.

▽ to clear
U34-*</td><td>Status: To use the cleaning sheet, it is required that all the modules in slot1 to slot4 be removed.
Status: Remove all the modules from slot1 to slot4 and press the STOP key.</td></tr>
</table>

If a Message Appears

Message	Status and Solution
No creaser module Set the creaser module properly. ▽ to clear U35-1	Status: The **creaser module** is not installed properly. Solution: Install the **creaser module** properly and press the STOP key.
No creaser module Check the creaser tool (Female) is set properly. ▽ to clear U35-2	Status: The **creaser tool** is not installed properly. Solution: Attach the **creaser tool** properly and press the STOP key. (→P.22 Changing the Width of the Creaser Tool)
No cutter Set the cutter module properly. ▽ to clear U36-*	Status: The **cutter module** is not installed properly. Solution: Install the **cutter module** properly and press the STOP key.
Card stacker error Set the card stacker. ▽ to clear U37-1	Status: The **card stacker** is not attached properly. Solution: Attach the **card stacker** properly and press the STOP key. (→P.15 Attaching the Card Stacker)
The card stacker is full Remove cards from the card stacker. ▽ to clear U37-2	Status: The **card stacker** has become full during the JOB processing. Solution: Remove the cards from the **card stacker** and press the STOP key. (→P.142 U37-2: The card stacker is full)
The counter has reached the upper limit. Clear the counter? YES NO U39	Status: The counter for the number of sheets has reached the upper limit. Solution: To clear the counter, touch **YES**. To not clear the counter, touch **NO**.
Feed error Remove documents from the feeder. ▽ to clear J01	Status: A document jam has occurred in the **feed section**. Solution: Remove the jammed document from the **feed section** and press the STOP key. (→P.119 J01: Feed error)
Check the fan reg. section Remove the document from the fan reg. section. ▽ to clear J02	Status: A document jam has occurred in the **fan register section**. Solution: Remove the jammed document from the **fan register section** and press the STOP key. (→P.120 J02: Check the fan reg. section)

Message	Status and Solution
Check the camera section Remove documents from the camera section. ▽ to clear J03-*	Status: A document jam has occurred in the **camera section**. Solution: Remove the jammed document from the **camera section** and press the STOP key. (→P.122 J03: Check the camera section)
The document skewed Remove documents from inside the machine. ▽ to clear J04	Status: A document skew was detected. Solution: Remove the document from the inside of the machine and press the STOP key.
Check the reject section Remove documents from the reject section. ▽ to clear J05	Status: A document jam has occurred in the **reject section**. Solution: Remove the jammed document from the **reject section** and press the STOP key. (→P.124 J05: Check the reject section)
Check slot1 Remove documents from slot1. ▽ to clear J06	Status: A document jam has occurred in the **slot1 section**. Solution: Remove the jammed document from the **slot1 section** and press the STOP key. (→P.127 J11: Check slot1/2)
Check slot2 Remove documents from slot2. ▽ to clear J07-*	Status: A document jam has occurred in the **slot2 section**. Solution: Remove the jammed document from the **slot2 section** and press the STOP key. (→P.127 J11: Check slot1/2)
Check slot3 Remove documents from slot3. ▽ to clear J08-*	Status: A document jam has occurred in the **slot3 section**. Solution: Remove the jammed document from the **slot3 section** and press the STOP key. (→P.130 J12: Check slot3/4)
Check slot4 Remove documents from slot4. ▽ to clear J09-*	Status: A document jam has occurred in the **slot4 section**. Solution: Remove the jammed document from the **slot4 section** and press the STOP key. (→P.130 J12: Check slot3/4)
Check slot1/2 Remove documents from slot1/2. ▽ to clear J11-*	Status: A document jam has occurred in the **slot1/2 section**. Solution: Remove the jammed document from the **slot1/2 section** and press the STOP key. (→P.127 J11: Check slot1/2)

If a Message Appears

Message	Status and Solution
Check slot3/4 Remove documents from slot3/4. ▽ to clear J12-*	Status: A document jam has occurred in the **slot3/4 section**. Solution: Remove the jammed document from the **slot3/4 section** and press the STOP key. (→P.130 J12: Check slot3/4)
Check the gutter deflector section Remove documents from the deflector section. ▽ to clear J14	Status: A document jam has occurred in the **gutter deflector section**. Solution: Remove the jammed document from the **gutter deflector sectio**n and press the STOP key.
Check the creaser section Remove documents from the creaser section. ▽ to clear J16	Status: A document jam has occurred in the **creaser section**. Solution: Remove the jammed document from the **creaser section** and press the STOP key. (→P.133 J18: Check the creaser/cutter section)
Check the cutter section Remove documents from the cutter section. ▽ to clear J17	Status: A document jam has occurred in the **cutter section**. Solution: Remove the jammed document from the **cutter section** and press the STOP key. (→P.133 J18: Check the creaser/cutter section)
Check the creaser/cutter section Remove documents from the creaser/cutter section. ▽ to clear J18	Status: A document jam has occurred in the **creaser/ cutter section**. Solution: Remove the jammed document from the **creaser/cutter section** and press the STOP key. (→P.133 J18: Check the creaser/cutter section)
Check the exit Remove documents from the exit. ▽ to clear J19	Status: A document jam has occurred in the **exit tray**. Solution: Remove the jammed document from the **exit tray** and press the STOP key. (→P.137 J19: Check the exit)
Check the waste conveyor Remove documents from the waste conveyor. ▽ to clear J20	Status: A document jam has occurred in the **waste conveyor section**. Solution: Remove the jammed document from the **waste conveyor section** and press the STOP key. (→P.138 J20: Check the waste conveyor)
Start the JOB? YES NO W01	Status: The JOB processing was stopped and the DC-648 is in standby mode. Solution: Touch **YES** to restart the JOB processing.

Message	Status and Solution
The gutter slits are output on the exit tray. OK W02	Status: The gutter slit has exceeded the limit (5.0 to 15.0 mm) in which a gutter can be dropped. Solution: Re-enter values for gutter slits positions within the limit. If the positions are not changed, the gutter slits will not be dropped in the **waste box** but ejected to the **exit tray**.
The card stacker is full Remove cards from the card stacker. OK W04-2	Status: The **card stacker** has become full. Solution: Remove the cards from the **card stacker** and touch **OK**.
********** Contact service person. E**	Status: An error has occurred inside the machine. Solution: Turn **OFF** the power and then turn **ON** again in a few seconds. If this message remains displayed, write down the contents of the message and contact our service person.

If a Document Jam Has Occurred

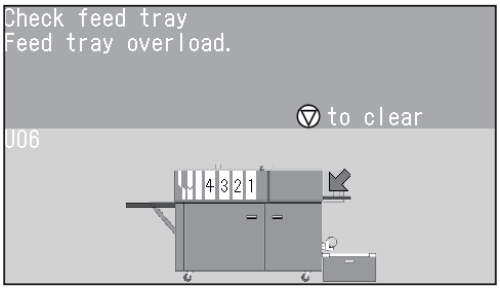
If a document jam has occurred, a message appears on the touch panel and an arrow displayed there points at the position where the error is occurring in the figure of the DC-648.
Follow the procedure below to remove the jammed document.

⚠ WARNING

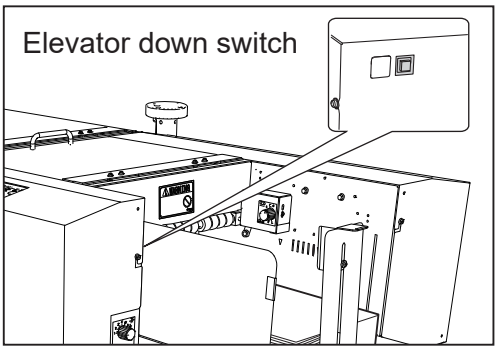
- Do not touch the tool. Doing so may cause injury.
- Before removing a jammed document, make sure that the machine is fully stopped. Use tweezers or pliers to prevent your hands or fingers from being caught in the machine.

U06: Check feed tray

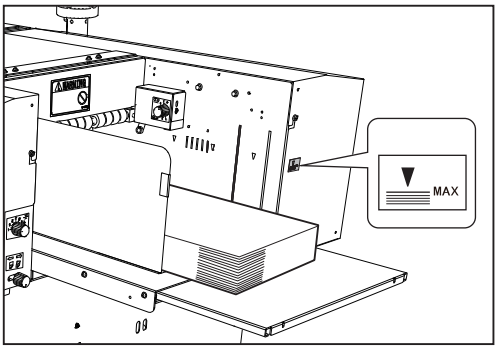
Too many documents are loaded on the **feed tray**.
Follow the procedure below to process the proper amount of documents.



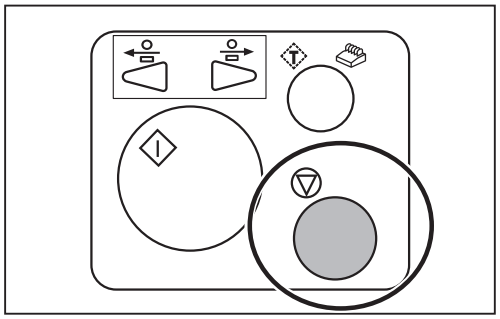
1. Press the **elevator down switch** to lower the **feed tray** to the bottommost position.



2. Remove some documents so that the height of the document stack does not exceed the **MAX** level.

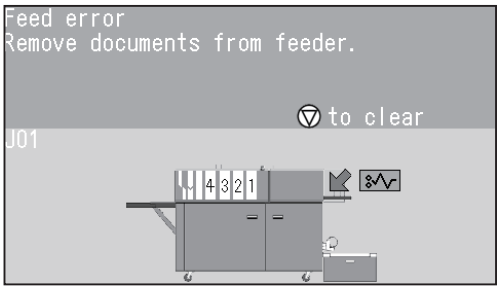


3. Press the STOP key to clear the error.
The message will be cleared.



J01: Feed error

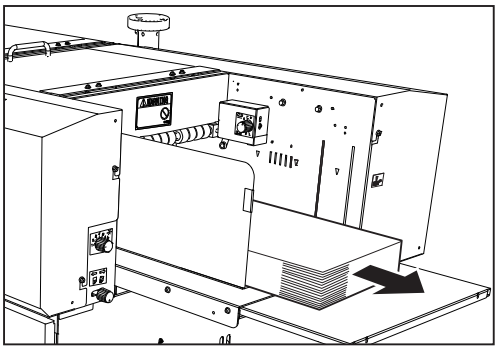
A document jam has occurred in the **feed section**. Follow the procedure below to remove the jammed document.



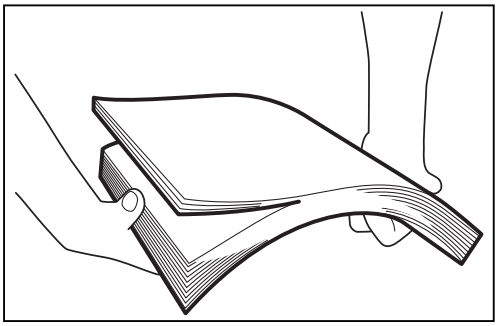
REFERENCE

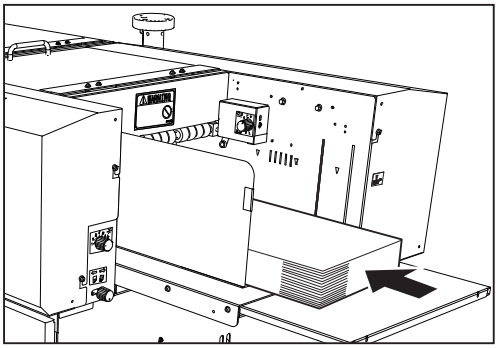
If **U07 Documents in the feeder** appears, follow the procedure below as well.

1. Remove the jammed document from the **feed tray**.

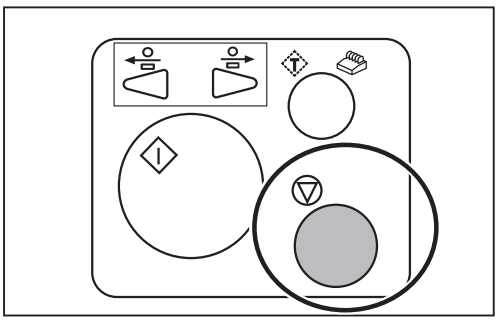


2. Loosen the stack of documents by flipping through the sheets and align them.
   Load them on the **feed tray**.



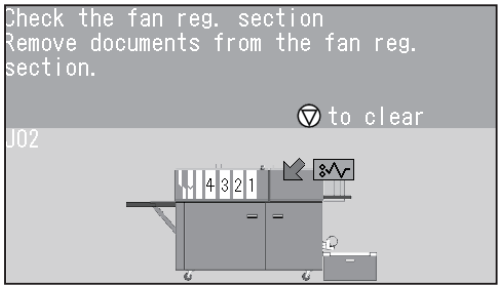


3. Press the STOP key to clear the error.
   The message will be cleared.



J02: Check the fan reg. section

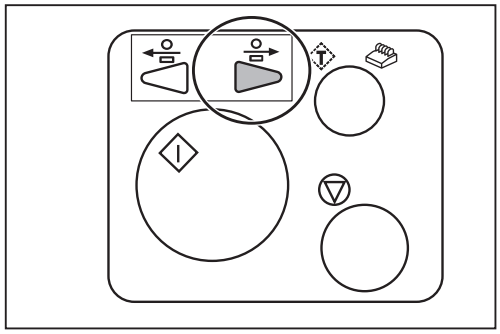
A document jam has occurred in the **fan register section**.
Follow the procedure below to remove the jammed document.



REFERENCE

If **U08 Documents in the fan reg. section** appears, follow the procedure below as well.

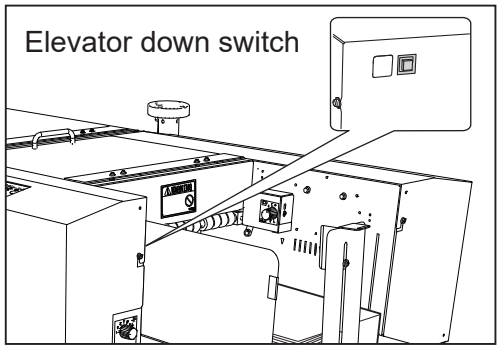
1 Press the JOG (REV) key to eject the document.



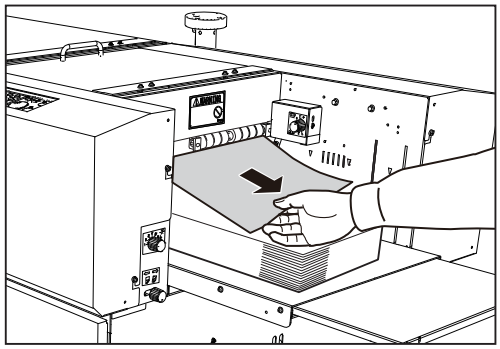
IMPORTANT

Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.

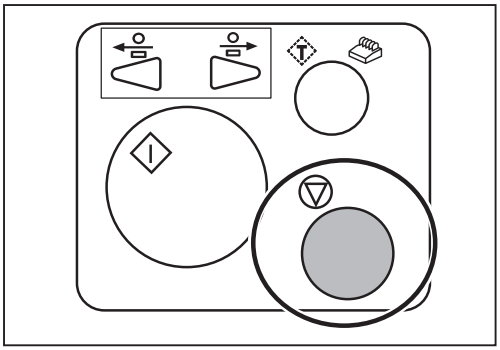
2 Press the **elevator down switch** to lower the **feed tray** to the bottommost position.



3 Remove the jammed document.

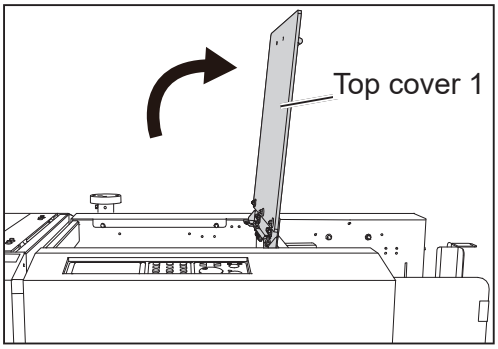


4 Press the STOP key to clear the error.
The message will be cleared.

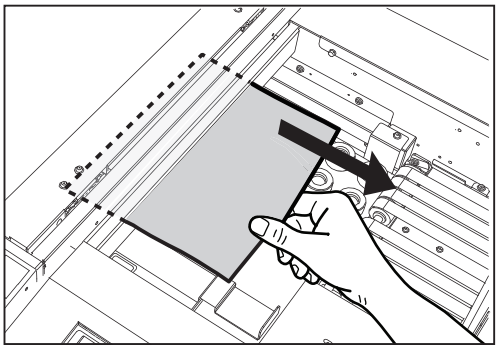


If you cannot remove the jammed document in the procedure on the previous page, follow the procedure below.

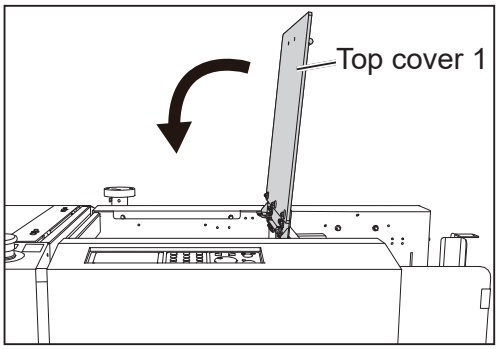
1. Open the **top cover 1**.



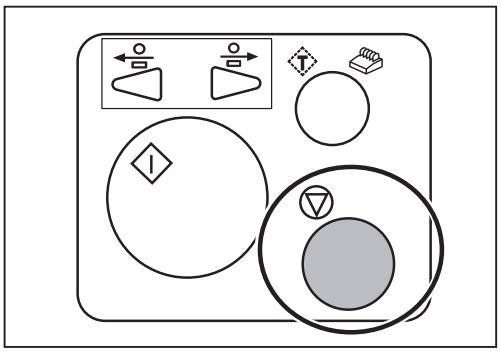
2. Remove the jammed document from the **fan register section.**



3. Close the **top cover 1**.

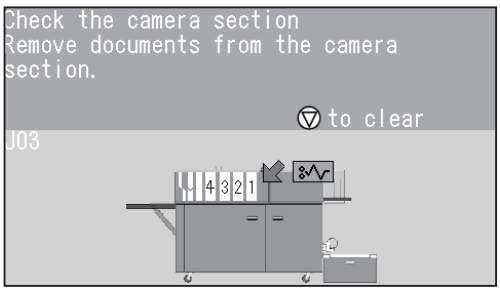


4. Press the STOP key to clear the error.
The message will be cleared.



J03: Check the camera section

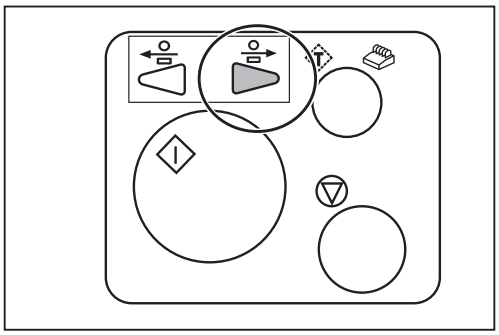
A document jam has occurred in the **camera section**. Follow the procedure below to remove the jammed document.



REFERENCE

If **U09 Documents in the camera section** appears, follow the procedure below as well.

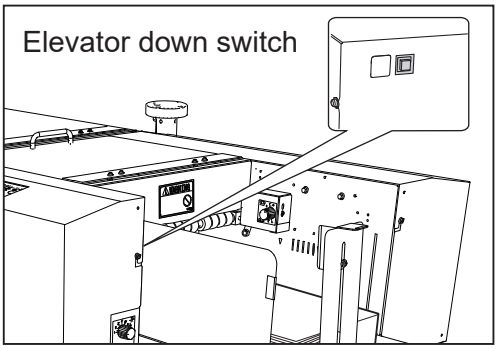
1 Press the JOG (REV) key to eject the document.



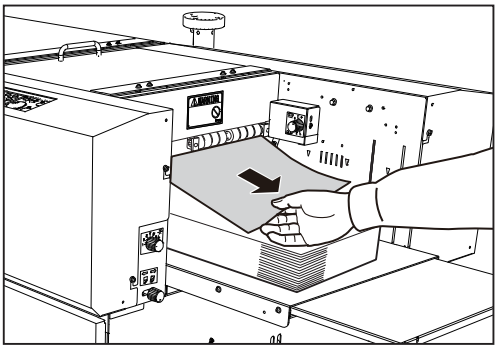
IMPORTANT

Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.

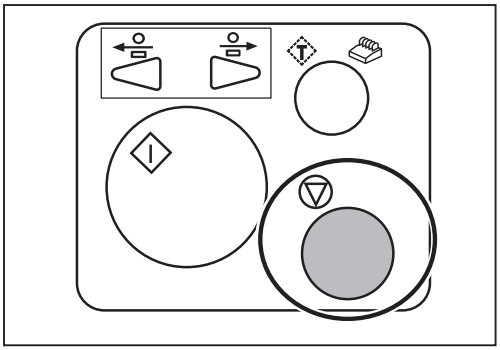
2 Press the **elevator down switch** to lower the **feed tray** to the bottommost position.



3 Remove the jammed document.

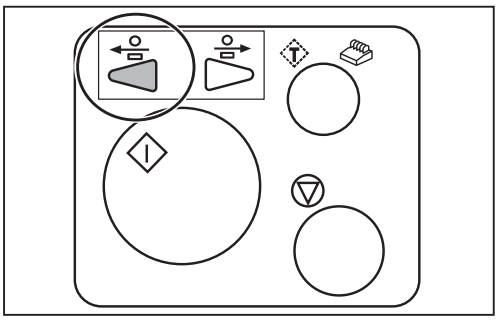


4 Press the STOP key to clear the error.
The message will be cleared.



If you cannot remove the jammed document in the procedure on the previous page, follow the procedure below.

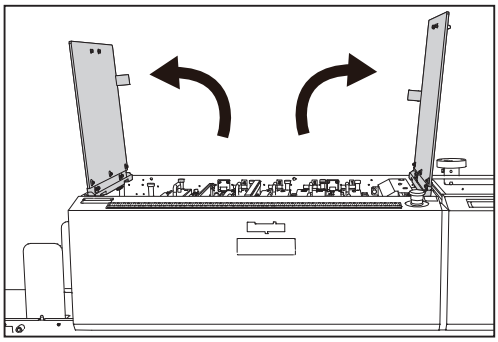
1. Press the JOG (FWD) key to eject the document.



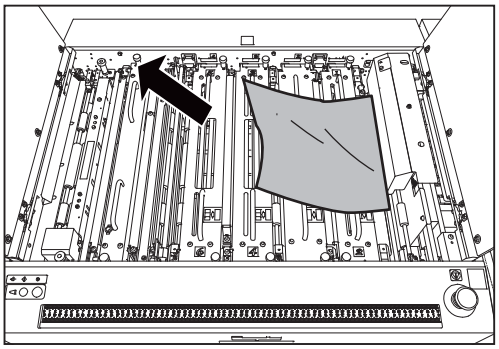
IMPORTANT

Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.

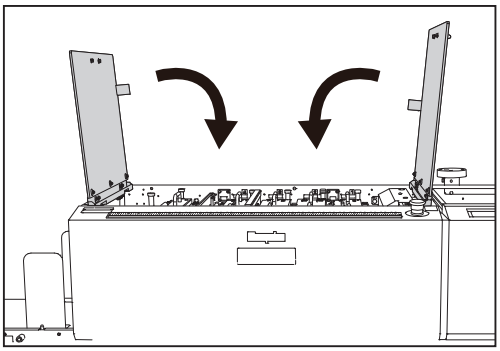
2. Open the **top cover 2** and the **top cover 3**.



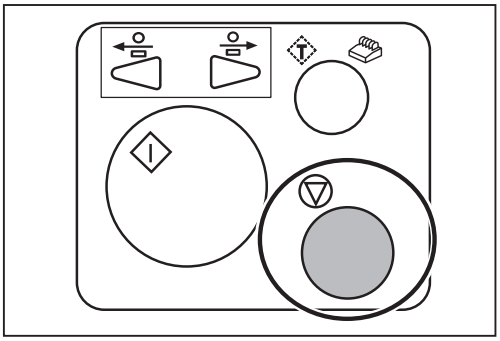
3. Remove the jammed document from the **camera section**.



4. Close the **top cover 2** and the **top cover 3**.

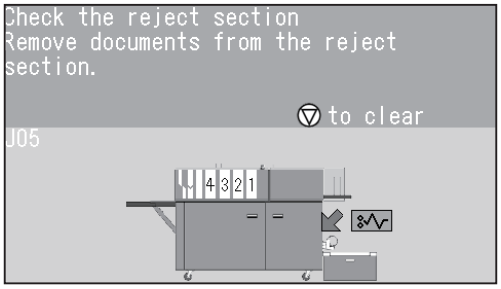


5. Press the STOP key to clear the error.
The message will be cleared.



J05: Check the reject section

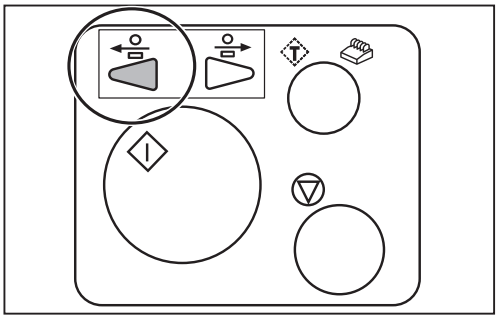
A document jam has occurred in the **reject section**. Follow the procedure below to remove the jammed document.



REFERENCE

If **U10 Check the reject section** appears, follow the procedure below as well.

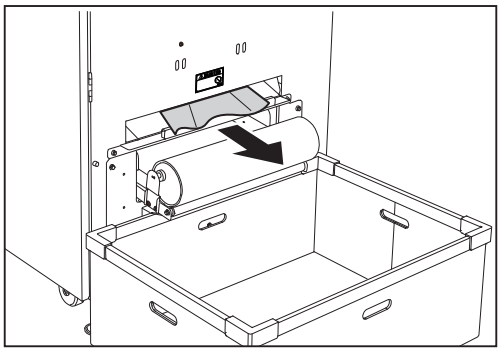
1 Press the JOG (FWD) key to eject the document.



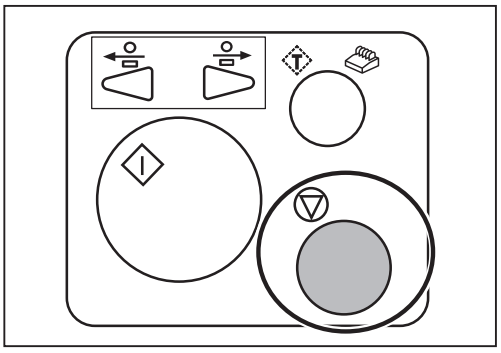
IMPORTANT

- Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.
- The JOG (REV) key is not available if a document is jammed or remains in the **reject section**.

2 Remove the document from the **reject tray**.



3 Press the STOP key to clear the error.
The message will be cleared.

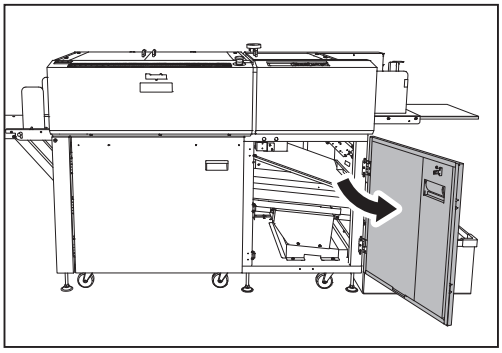


If the message is not cleared or the number of finished products is not consistent with the set one, open the **front door 1** and remove the document.

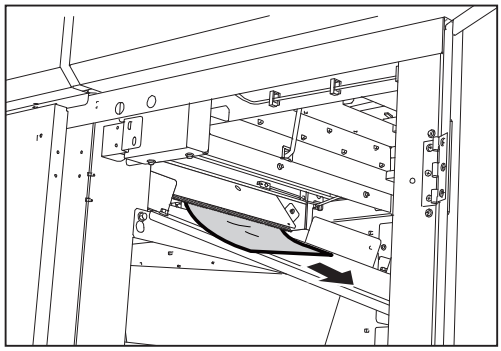
If you cannot remove the jammed document in the procedure on the previous page, follow the procedure below.

• To remove a document from the inside of the machine

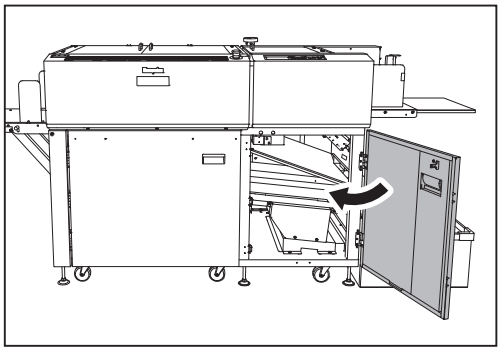
1 Open the **front door 1**.



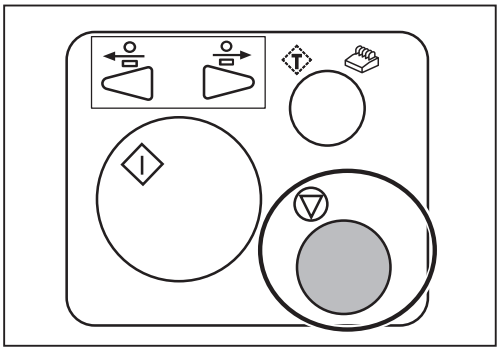
2 Remove the document from the **reject section**.



3 Close the **front door 1**.

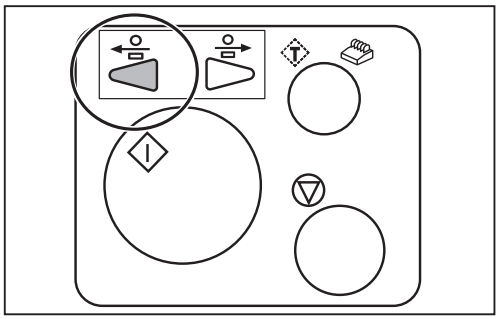


4 Press the STOP key to clear the error.
The message will be cleared.



• To remove a document from the reject section

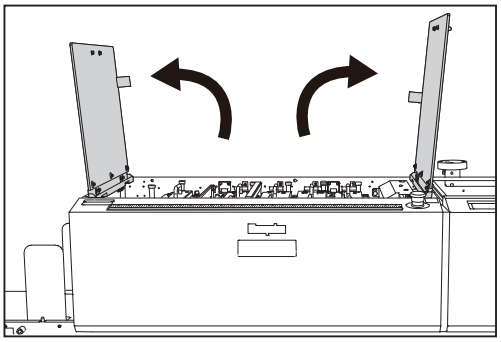
1 Press the JOG (FWD) key to eject the document.



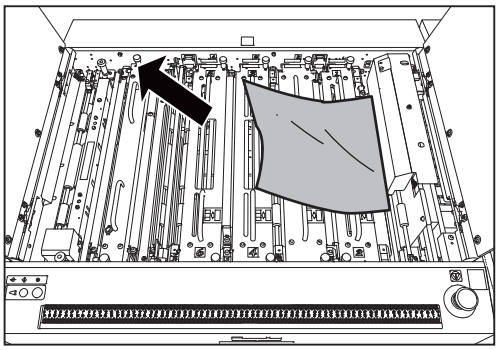
IMPORTANT

Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.

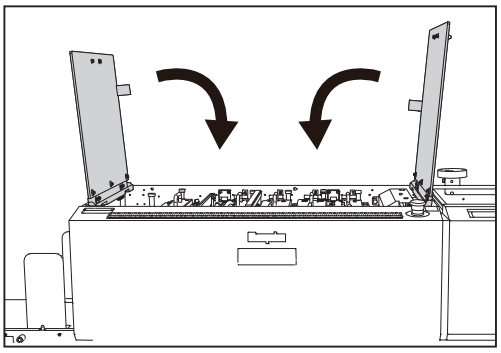
2 Open the **top cover 2** and the **top cover 3**.



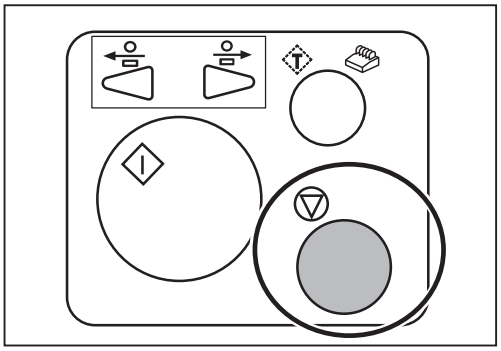
3 Remove the jammed document from the **reject section**.



4 Close the **top cover 2** and the **top cover 3**.

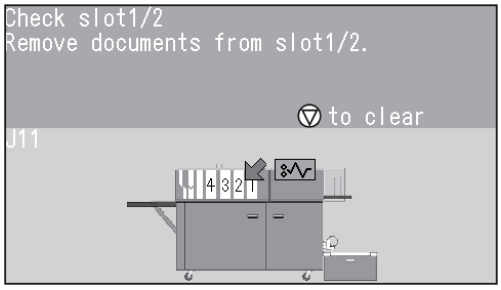


5 Press the STOP key to clear the error.
The message will be cleared.



J11: Check slot1/2

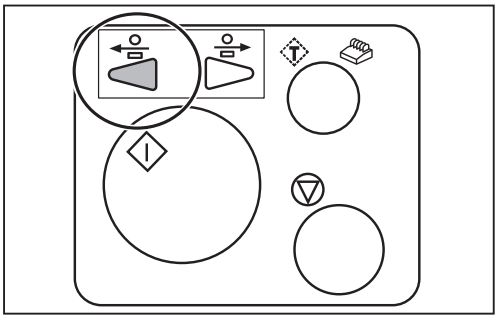
A document jam has occurred in the **slot 1/2 section**. Follow the procedure below to remove the jammed document.



REFERENCE

If **U11 Documents in slot1/2**, **J06 Check slot1**, or **J07 Check slot2** appears, follow the procedure below as well.

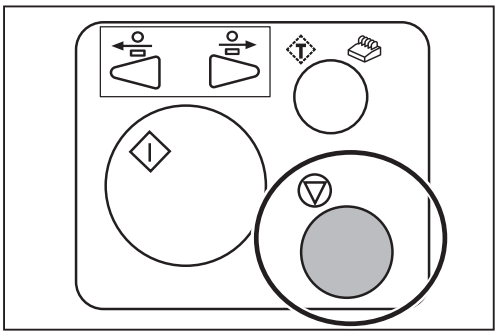
1. Press the JOG (FWD) key to eject the document.



IMPORTANT

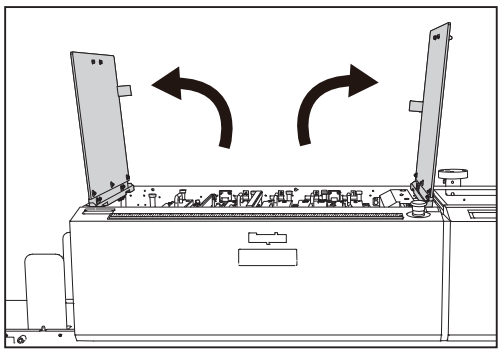
- Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.
- The JOG (REV) key is not available if a document is jammed or remains in the **slot1/2 section**.

2. Press the STOP key to clear the error. The message will be cleared.

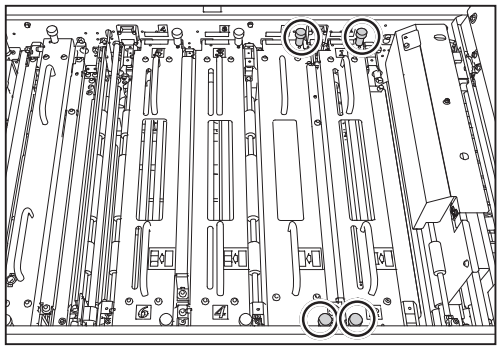


If you cannot remove the jammed document in the procedure above, follow the procedure below.

1. Open the **top cover 2** and the **top cover 3**.

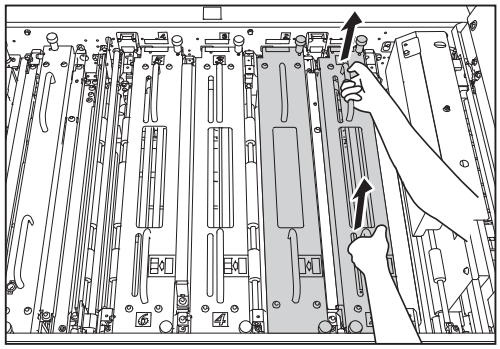


2 Loosen the **fixing screws** (two each) on the **modules** in slot1 and slot2.



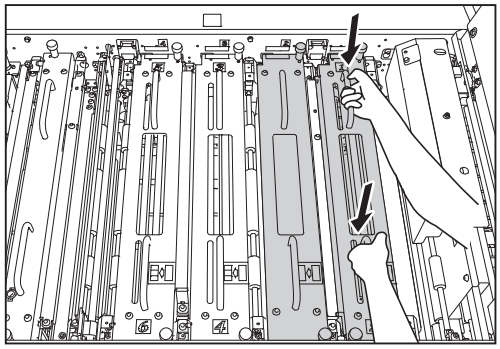
3 Take out the **modules** in slot1 and slot2.

*Make sure to grasp the **handles** on each **module** to lift it upward.
*Make sure to place the removed module on a flat, stable surface.

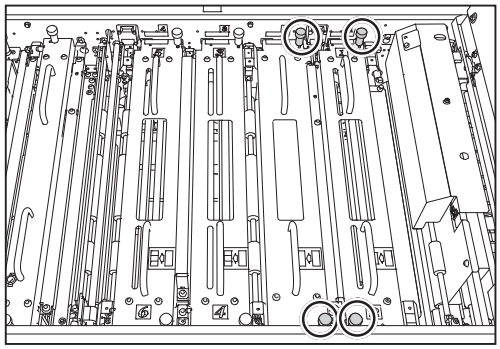


4 Remove the jammed document with tweezers or pliers.

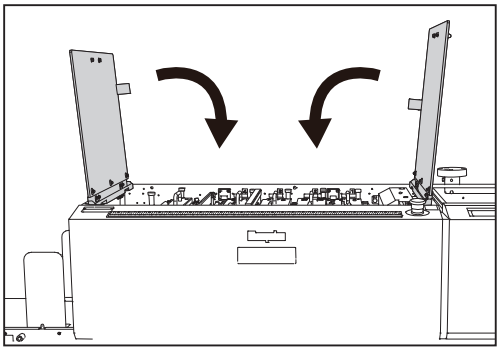
5 Reinstall the **modules** removed in step ❸ according to the **positioning pins** in their original positions.



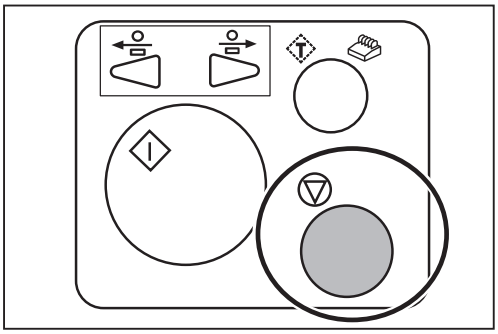
6 Tighten the **fixing screws** (two each) loosened in step ❷ to secure the **modules**.



7 Close the **top cover 2** and the **top cover 3**.

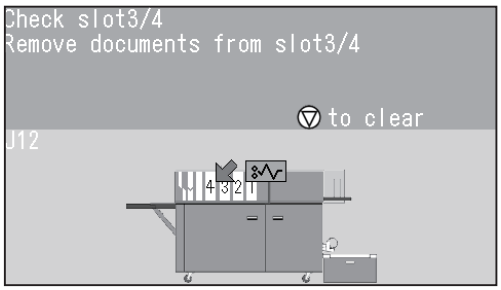


8 Press the STOP key to clear the error.
The message will be cleared.



J12: Check slot3/4

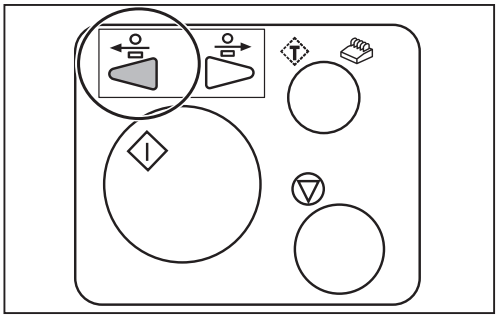
A document jam has occurred in the **slot 3/4 section**. Follow the procedure below to remove the jammed document.



REFERENCE

If **U12 Documents in slot3/4**, **J08 Check slot3**, or **J09 Check slot4** appears, follow the procedure below as well.

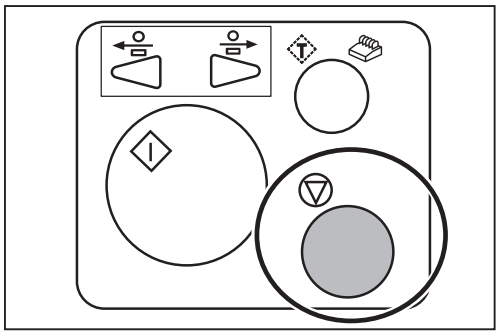
1. Press the JOG (FWD) key to eject the document.



IMPORTANT

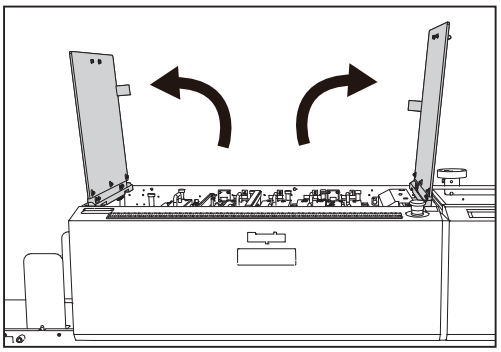
- Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.
- The JOG (REV) key is not available if a document is jammed or remains in the **slot3/4 section**.

2. Press the STOP key to clear the error. The message will be cleared.

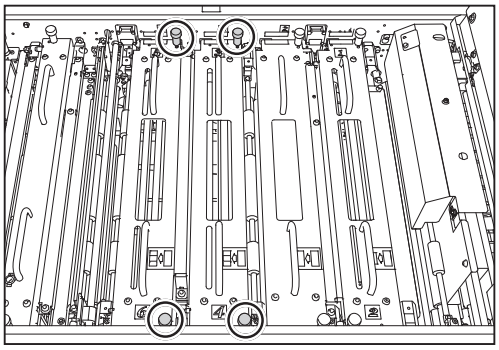


If you cannot remove the jammed document in the procedure above, follow the procedure below.

1. Open the **top cover 2** and the **top cover 3**.

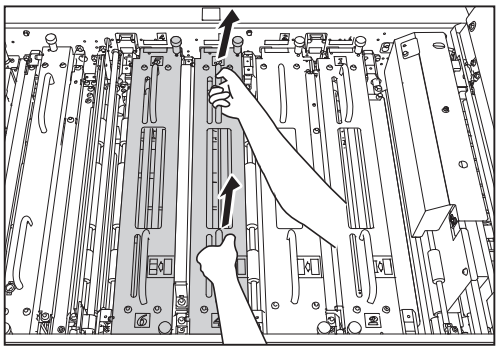


2 Loosen the **fixing screws** (two each) on the **modules** in slot3 and slot4.



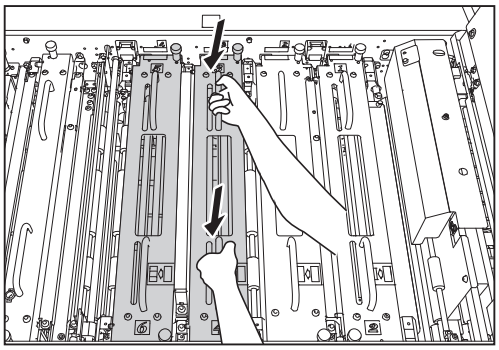
3 Take out the **modules** in slot3 and slot4.

*Make sure to grasp the **handles** on each **module** to lift it upward.
*Make sure to place the removed module on a flat, stable surface.

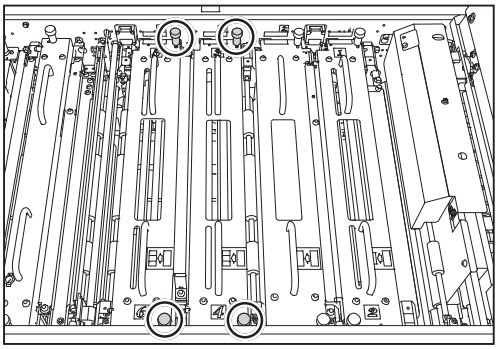


4 Remove the jammed document with tweezers or pliers.

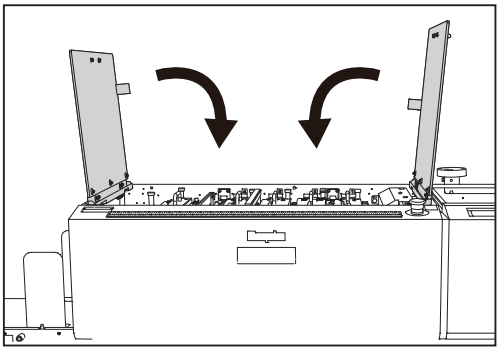
5 Reinstall the **modules** removed in step ❸ according to the **positioning pins** in their original positions.



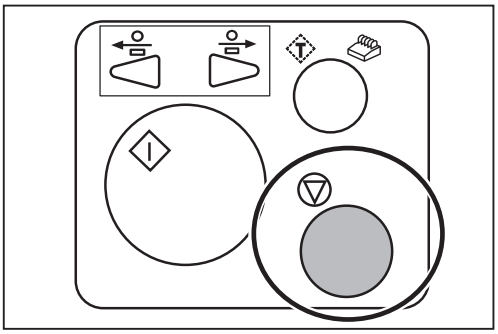
6 Tighten the **fixing screws** (two each) loosened in step ❷ to secure the **modules**.



7 Close the **top cover 2** and the **top cover 3**.

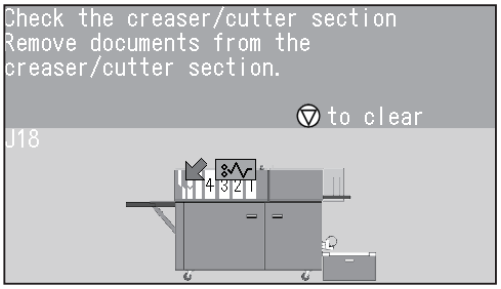


8 Press the STOP key to clear the error.
The message will be cleared.



J18: Check the creaser/cutter section

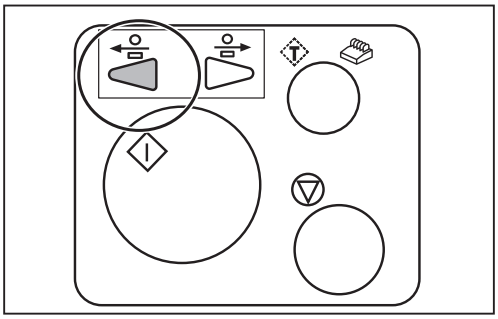
A document jam has occurred in the **creaser/cutter section**.
Follow the procedure below to remove the jammed document.



REFERENCE

If **U14 Documents in the creaser section**, J**16 Check the creaser section**, or **J17 Check the cutter section** appears, follow the procedure below as well.

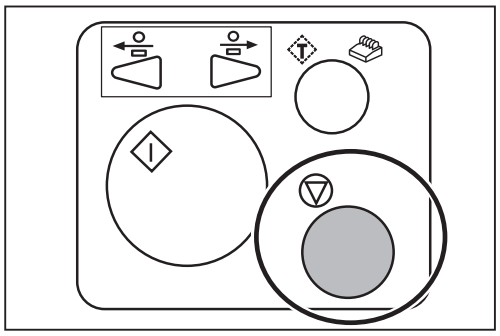
1. Press the JOG (FWD) key to eject the document.



IMPORTANT

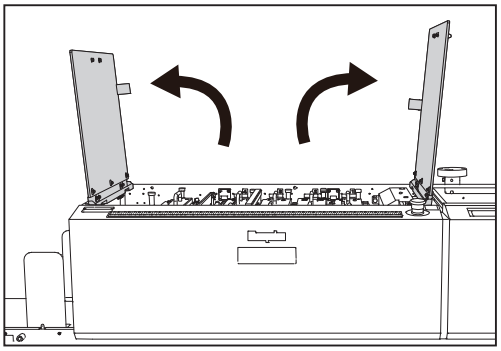
- Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.
- The JOG (REV) key is not available if a document is jammed or remains in the **creaser/cutter section**.

2. Press the STOP key to clear the error.
The message will be cleared.



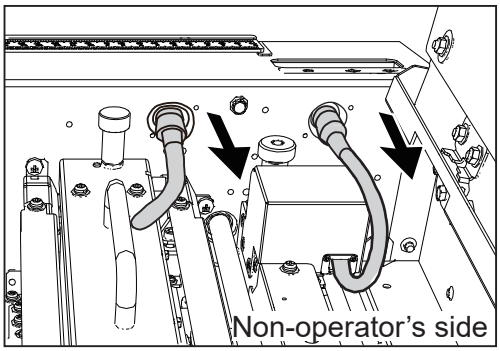
If you cannot remove the jammed document in the procedure above, follow the procedure below.

1. Open the **top cover 2** and the **top cover 3**.



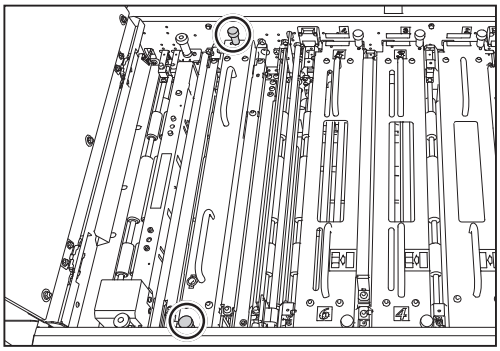
2 Disconnect the **connector** of the **creaser module** or the **cutter module**.

The figure on the right shows a view from the non-operator's side.
Connector on the left: **Creaser module**
Connector on the right: **Cutter module**



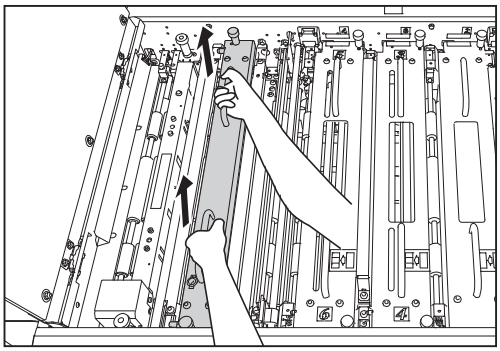
3 Loosen the two **fixing screws** on the **creaser module**.

*To take out the **cutter module**, go to step 5.

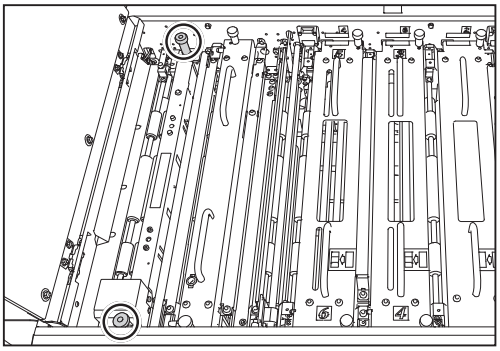


4 Take out the **creaser module**.

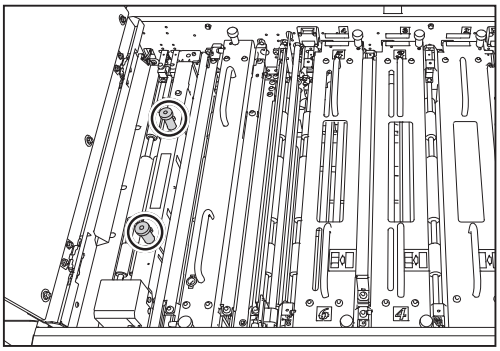
*Make sure to grasp the **handles** on the **creaser module** to lift it upward.
*Make sure to place the removed **creaser module** on a flat, stable surface.



5 Remove the two **fixing screws** on the both sides of the **cutter module**.



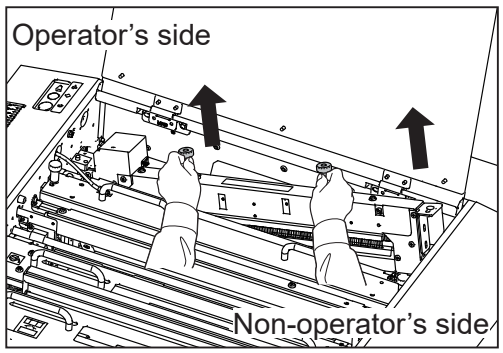
6 Attach the two **fixing screws** on the **cutter module** removed in step 5 to the circled parts in the figure on the right.



7 Grasp the two **fixing screws** attached to lift the **cutter module** upward.

REFERENCE

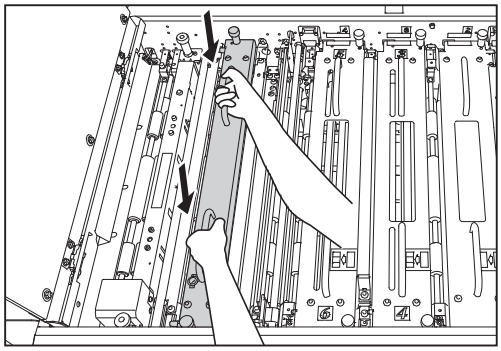
Slightly tilt the non-operator's side of the **cutter module** upward so that the side will be removed first.



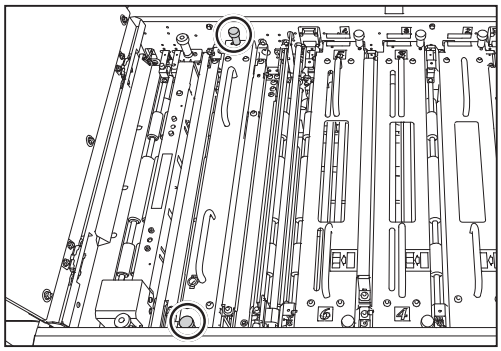
8 Remove the jammed document with tweezers or pliers.

9 Reinstall the **creaser module** according to the **positioning pins** in its original position.

*To install the **cutter module**, go to step ⓫.



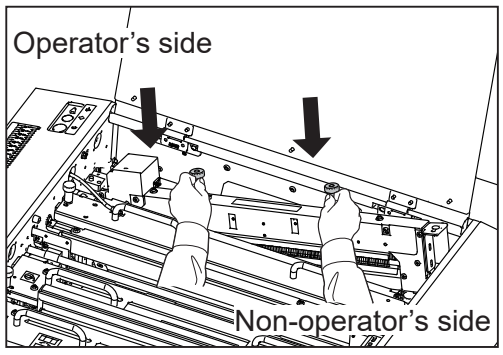
10 Tighten the two **fixing screws** loosened in step ❸ to secure the **creaser module**.



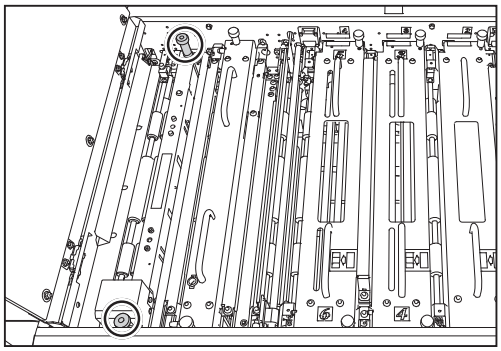
11 Reinstall the **cutter module** removed in step ❼ according to **the positioning pins** in its original position.

REFERENCE

Slightly tilt the non-operator's side of the **cutter module** upward so that its operator's side will be attached first.

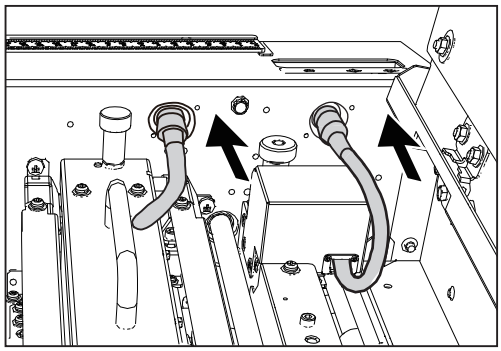


12 Attach the two **fixing screws** on the **cutter module** to the circled parts in the figure on the right.

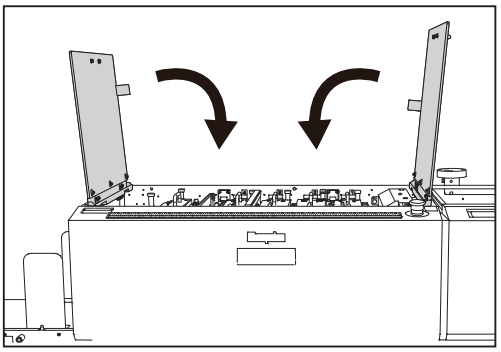


13 Connect the **connector** of the **creaser module** or of the **cutter module**.

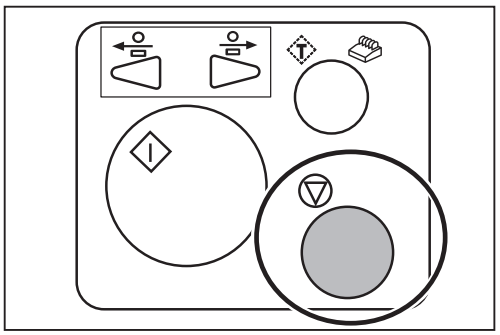
The figure on the right shows a view from the non-operator's side.
Connector on the left: **Creaser module**
Connector on the right: **Cutter module**



14 Close the **top cover 2** and the **top cover 3**.

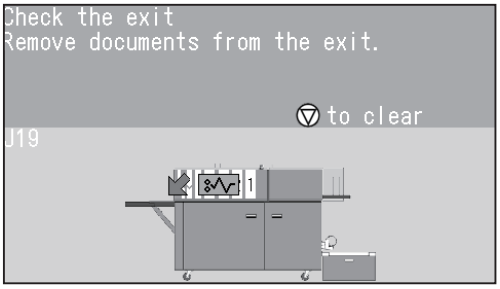


15 Press the STOP key to clear the error.
The message will be cleared.



J19: Check the exit

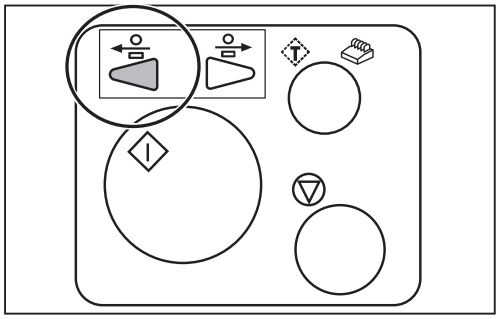
A document jam has occurred in the **exit section**. Follow the procedure below to remove the jammed document.



REFERENCE

If **U15 Documents at the exit section** appears, follow the procedure below as well.

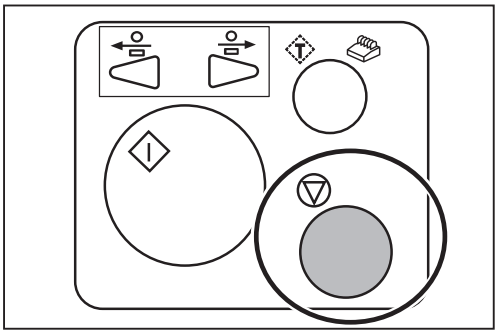
1 Press the JOG (FWD) key to eject the document.



IMPORTANT

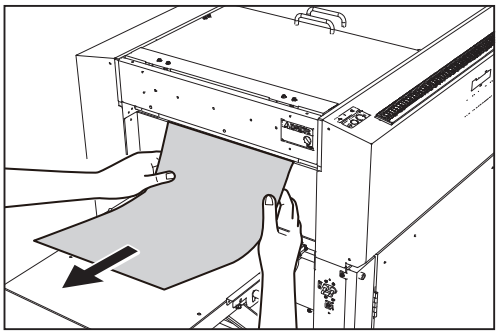
- Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.
- The JOG (REV) key is not available if a document is jammed or remains in the inside of the machine.

2 Press the STOP key to clear the error.
The message will be cleared.



If you cannot remove the jammed document in the procedure above, follow the procedure below.

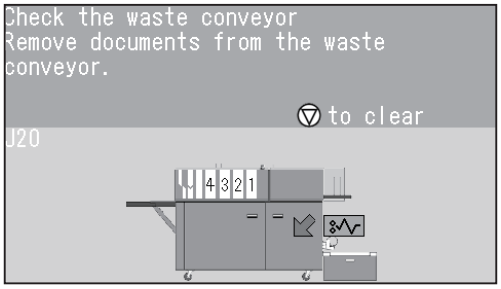
1 Remove the jammed document.



2 Press the STOP key to clear the error.
The message will be cleared.

J20: Check the waste conveyor

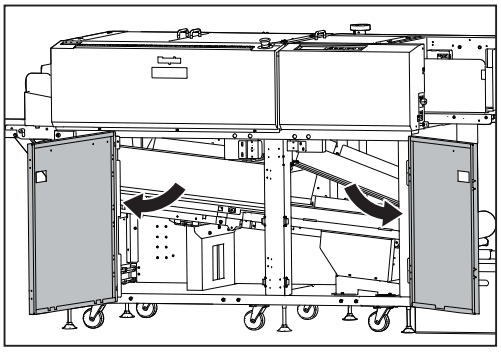
A document jam has occurred in the **waste conveyor section**.
Follow the procedure below to remove the jammed document.



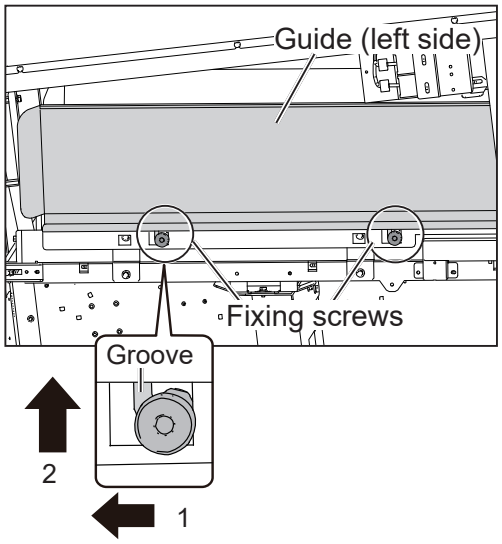
REFERENCE

If **U16 Documents on the waste conveyor** appears, follow the procedure below as well.

1 Open the **front door 1** and the **front door 2**.

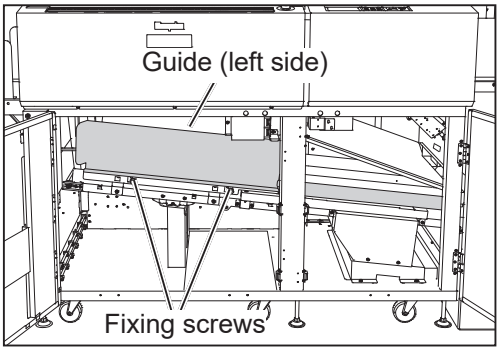


2 1. Loosen the **two fixing screws** on the **guide** on the left side.



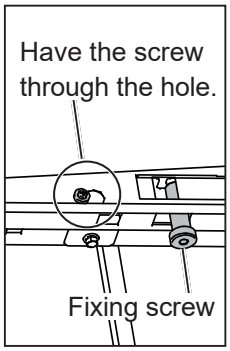
2. Slide the **fixing screws** in the direction of the arrow (1) according to the groove of the frame. Lift them upward in the direction of the arrow (2).

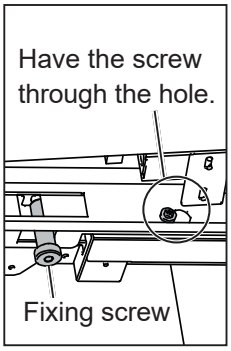
3. While grasping the two **fixing screws**, lift the **guide** on the left side upward. Slightly tilt the **guide** toward you to remove it.



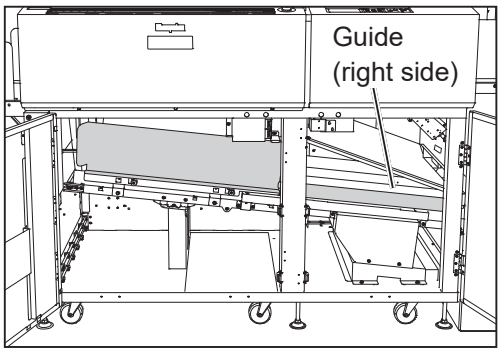
REFERENCE

While having the two screws through the holes as shown in the figures on the right, lift the **guide** upward.

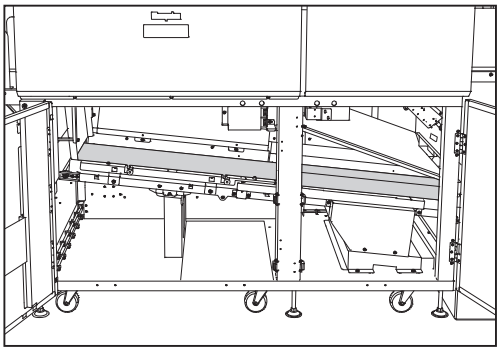




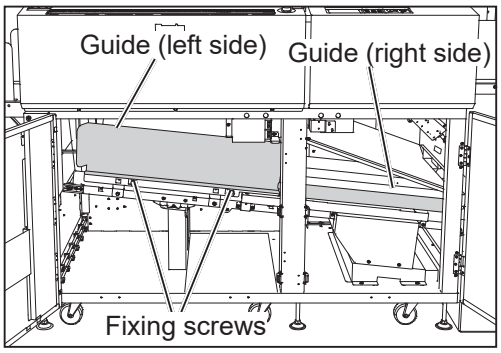
4. Remove the **guide** on the right side.
   (The **guide** is attached with the magnet.)



3 Remove the jammed document from the **waste conveyor section**.

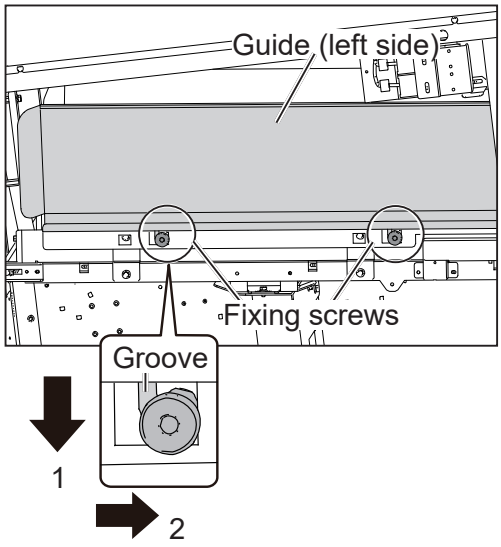


4 Reattach the **guides** to their original positions (step ❷).



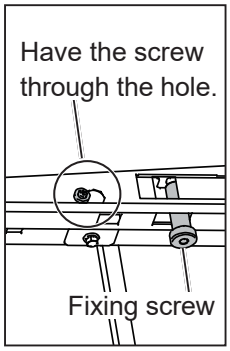
Reattach the **guide** on the left side in the following procedure:

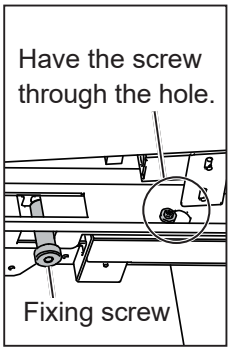
1. Lower the two **fixing screws** in the direction of the arrow (1) according to the groove of the frame.
2. Slide the **fixing screws** in the direction of the arrow (2).
3. Tighten the **fixing screws** to screw the **guide**.



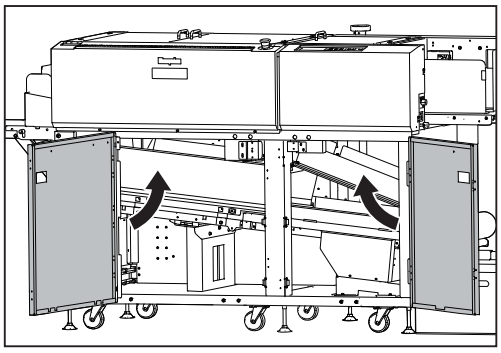
REFERENCE

While having the two screws through the holes as shown in the figures on the right, attach the **guide**.

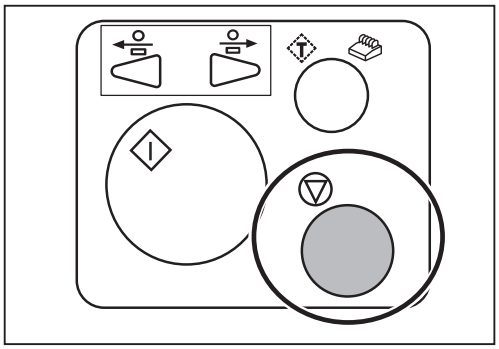




5 Close the **front door 1** and the **front door 2**.

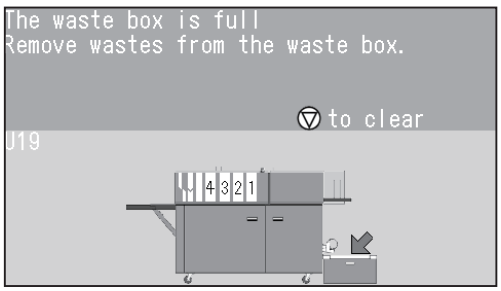


6 Press the STOP key to clear the error.
The message will be cleared.



U19: The waste box is full

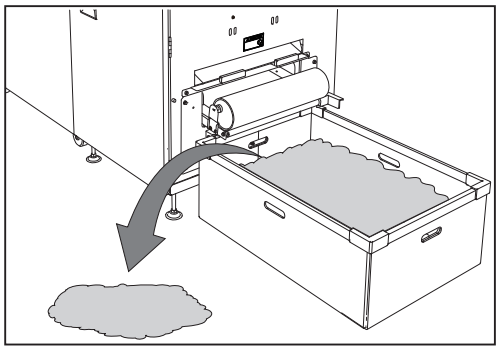
The **waste box** is full of waste.
Accumulation of waste may cause a document jam.



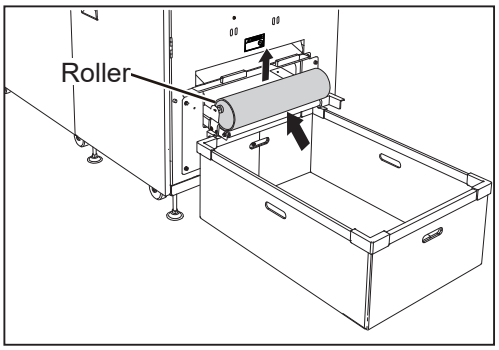
⚠ WARNING

Before removing the waste, make sure that the machine is fully stopped.
Otherwise, your hands or fingers may get caught and injured.

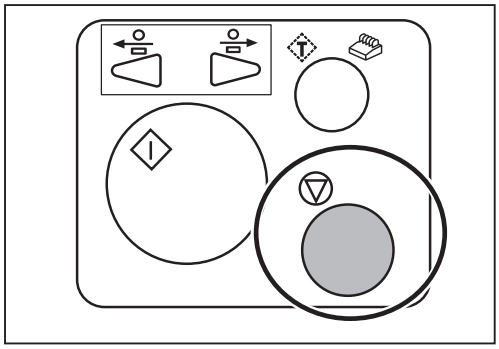
1. Dispose of the waste in the **waste box**.



Lift the **roller** upward and make sure that there is no waste around the section that the arrow points at in the figure on the right.

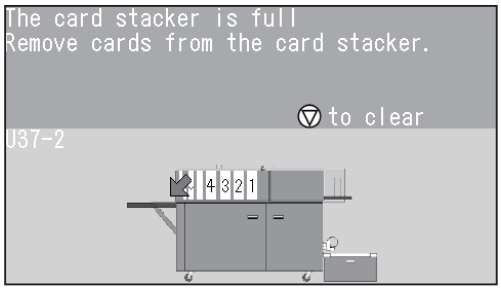


2. Press the STOP key to clear the error.
The message will be cleared.



U37-2: The card stacker is full

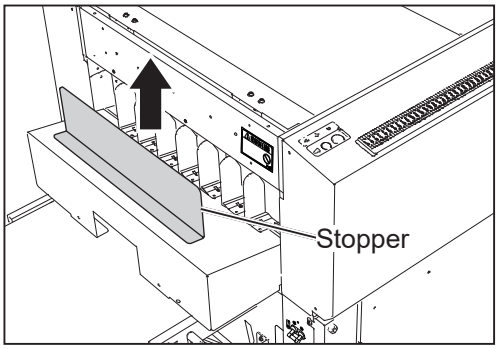
The **card stacker** has become full during the JOB processing.
Follow the procedure below to remove the cards.



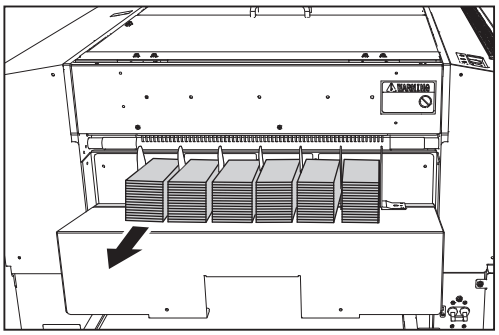
REFERENCE

If **W04-2 The card stacker is full** appears, follow the procedure below as well.

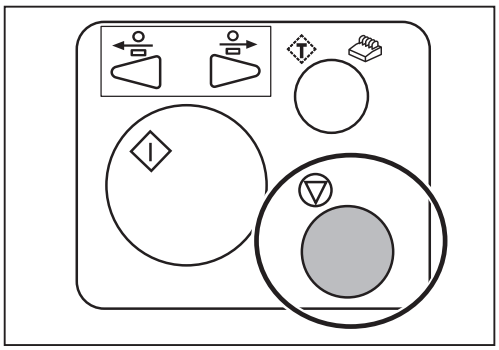
1. Remove the **stopper**.



2. Remove the cards from the **card stacker**.

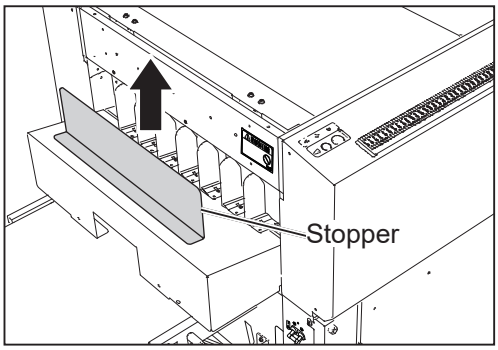


3. Press the STOP key to clear the error.
The message will be cleared.



If you cannot remove the jammed card in the procedure on the previous page, follow the procedure below.

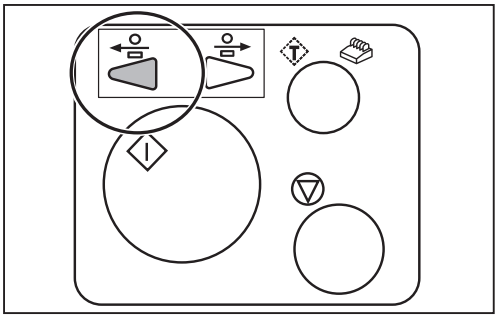
1 Remove the **stopper**.



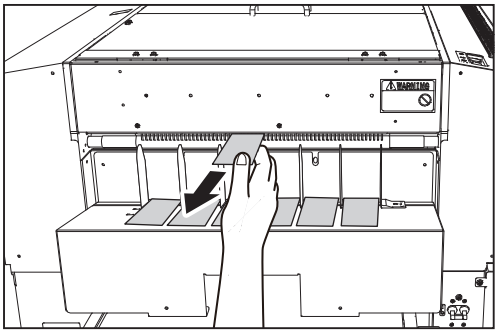
2 Press the JOG (FWD) key to eject the card.

IMPORTANT

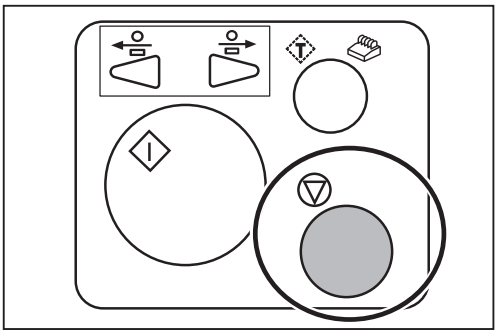
Make sure that the **top cover** is closed. The DC-648 does not operate if the **top cover** is open.



3 Remove the jammed card from the **card stacker**.



4 Press the STOP key to clear the error.
The message will be cleared.



MEMO

Chapter 5

Daily Maintenance

This chapter describes daily maintenance for the machine.

Daily Maintenance ····· 146
- Cleaning the Slitters ····· 146
- Cleaning the Sensors ····· 149
- Cleaning with Cleaning Mode ····· 154
- Cleaning with the Cleaning Sheet (Separately Sold) ····· 158
- Cleaning the Waste Conveyor Belt ····· 160
- Correcting the Intersection of Slitter Tools ····· 163
- Waste Box ····· 166

About Protection of Press Rollers ····· 167

Daily Maintenance

Clean the machine periodically to maintain its performance.

⚠ WARNING

- Before cleaning, make sure to turn the power **OFF**, wait until the machine cools off and unplug the power cord.
  Otherwise, fire or electric shock may occur.
- Never remove the covers on the machine or modify them.
- Do not spill water or any liquid inside the machine.
  It may cause fire or electric shock.
  If it happens, contact our service person.

Clean the exterior in the following procedure:
1. Tightly wring a soft cloth that has been moistened with water or mild detergent.
2. Wipe the exterior.
3. Wipe off the excess moisture on the exterior with a dry, soft cloth.

⚠ WARNING

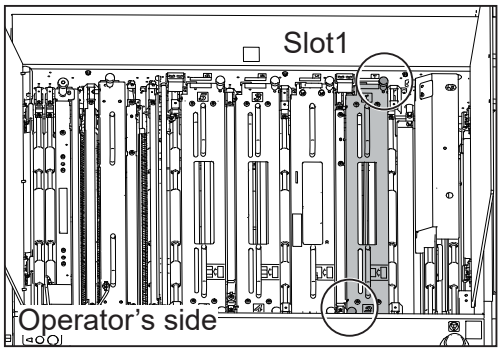
- Never use alcohol or solvent cleaner.
  It may tarnish or damage the exterior finish.
- Do not put diluted petroleum or insecticide.
  It may cause fire.

Dust accumulation may cause the machine to malfunction.
Clean it periodically.
Contact our service person as for cleaning of the inside of the machine.

Cleaning the Slitters

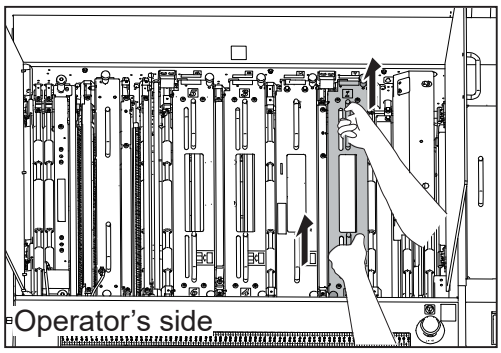
<For the margin slitter module>

1 Loosen the **two fixing screws** on the **module** in slot1.



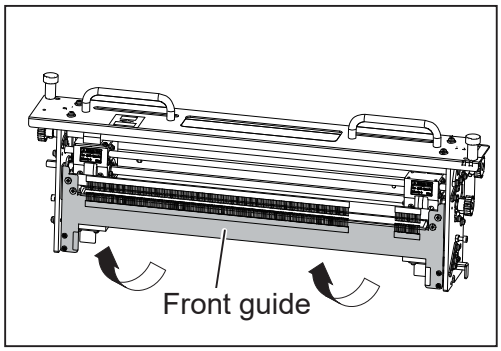
2 Take out the **margin slitter module** from slot1.

*Make sure to grasp the **handles** on the **module** to lift it upward.
*Make sure to place the removed **module** on a flat, stable surface.



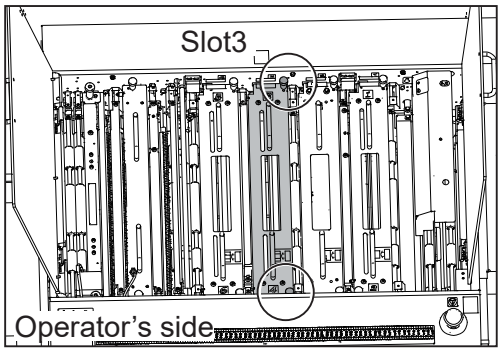
3 Remove the **front guide** in the direction of the arrows.

Go to step ❹.



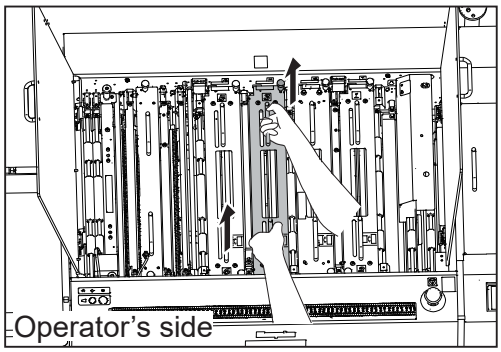
<For the center slitter module 3&4>

1 Loosen the two **fixing screws** on the module in **slot3**.

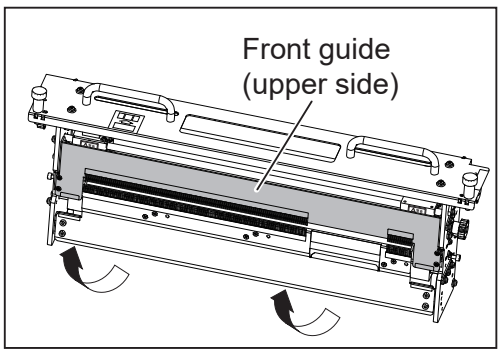


2 Take out the **center slitter module 3&4** from slot3.

*Make sure to grasp the **handles** on the **module** to lift it upward.
*Make sure to place the removed **module** on a flat, stable surface.

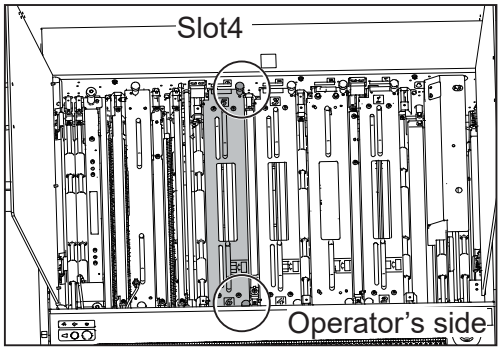


3 Remove the **front guide (upper side)** in the direction of the arrows.



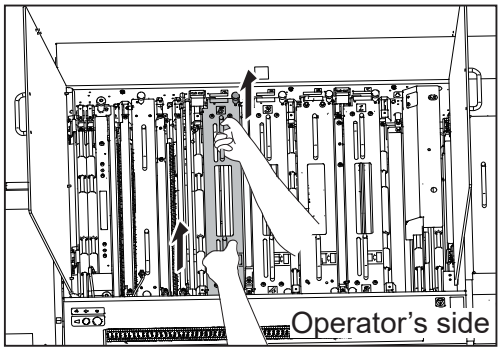
<For the center slitter module 5&6>

1 Loosen the two **fixing screws** on the **module** in slot4.

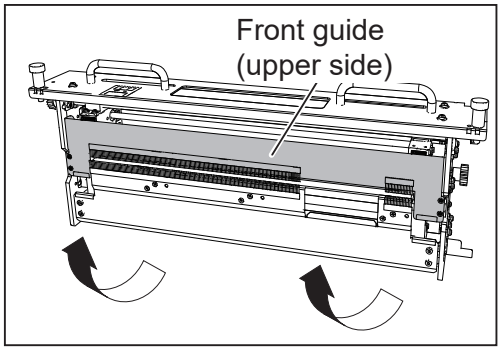


2 Take out the **center slitter module 5&6** from slot4.

*Make sure to grasp the **handles** on the **module** to lift it upward.
*Make sure to place the removed **module** on a flat, stable surface.

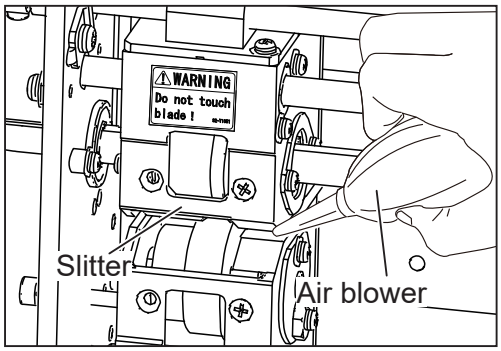


3 Remove the **front guide (upper side)** in the direction of the arrows.

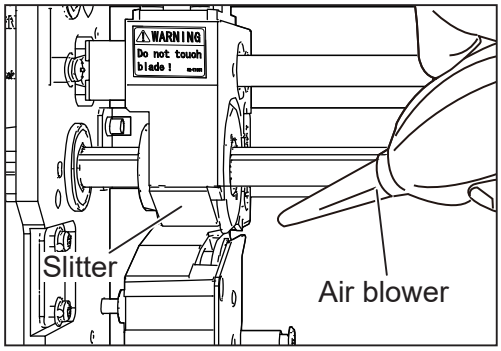


4 If a document is slit by the **slitter** after a long period of use of the machine, finished products may get dirty.
Before starting operation, clean the **slitter too**l with an air blower that you have, then perform test runs several times to check the finished products for any blot.

<Margin slitter module/
Center slitter module 3&4>



< Center slitter module 5&6>

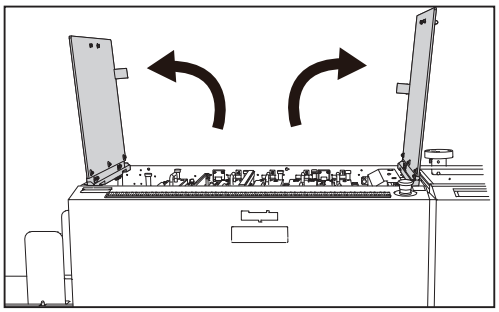


5 Attach the **front guide**/**front guide (upper side)** to its original position (step ❸).

Cleaning the Sensors

- Sensor on the right before slot2

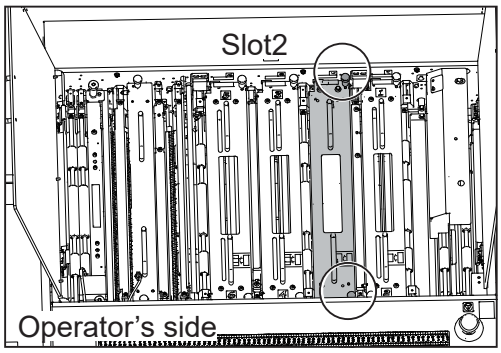
1 Open the **top cover 2** and the **top cover 3**.



2 Loosen the two **fixing screws** on the **module** in slot2.

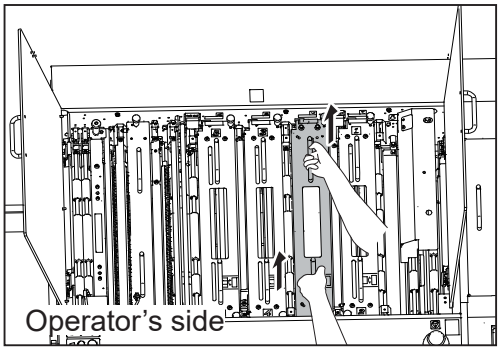
REFERENCE

When the **RTM (Rotary Tool Module)** or the **CPM (Cross Tool Module)** is installed, disconnect the connector first.

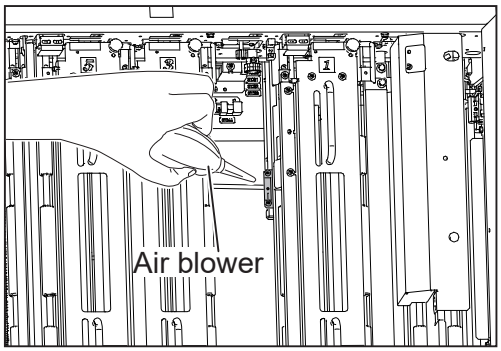


3 Take out the **module** from slot2.

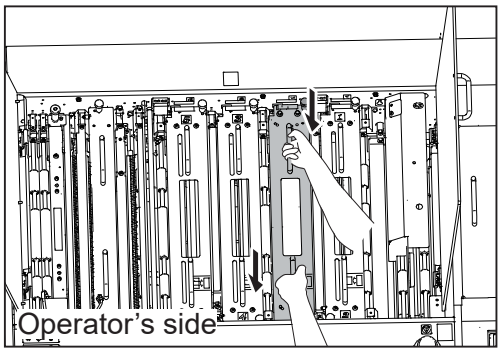
*Make sure to grasp the **handles** on the **module** to lift it upward.
*Make sure to place the removed **module** on a flat, stable surface.



4 Clean the sensor on the right before slot2 with an air blower that you have.



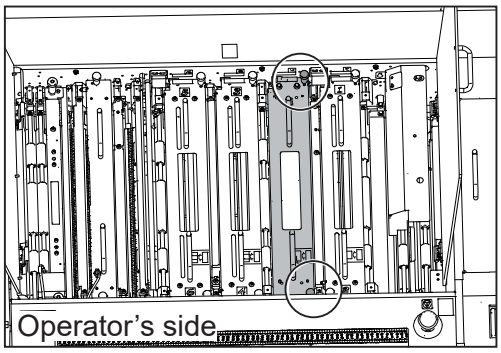
5 Reinstall the **module** according to the **positioning pins** in its original position.



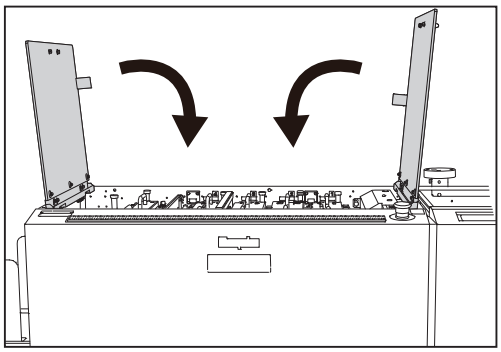
6 Tighten the two **fixing screws** to secure the **module** in slot2.

REFERENCE

To install the **RTM (Rotary Tool Module)** or the **CPM (Cross Tool Module)**, connect the connector first.

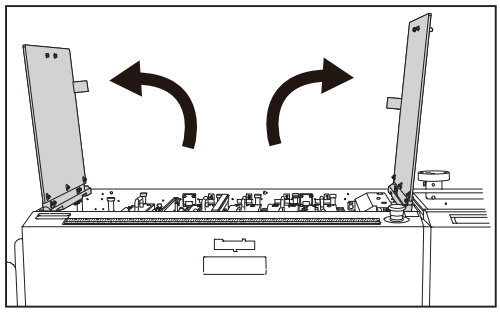


7 Close the **top cover 2** and the **top cover 3**.



● Sensor on the right before slot4

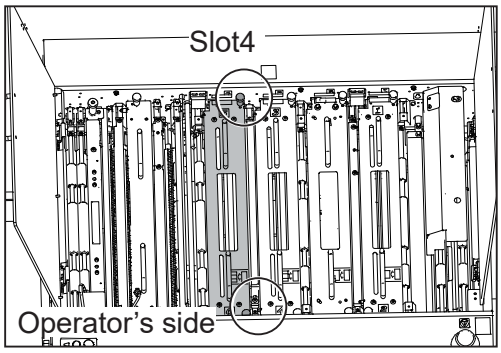
1 Open the **top cover 2** and the **top cover 3**.



2 Loosen the two **fixing screws** on the **module** in slot4.

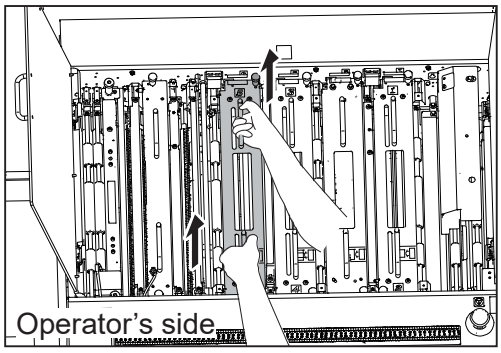
REFERENCE

When the **RTM (Rotary Tool Module)** is installed, disconnect the connector first.

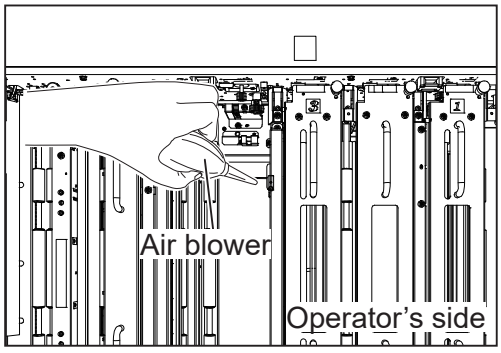


3 Take out the **module** from slot4.

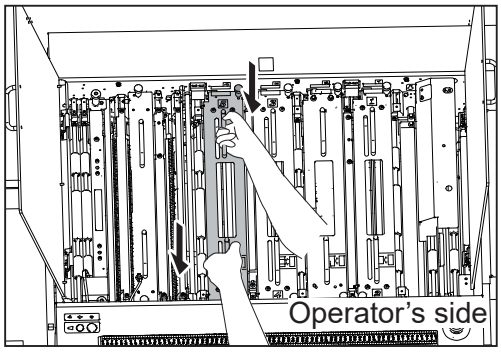
*Make sure to grasp the **handles** on the **module** to lift it upward.
*Make sure to place the removed module on a flat, stable surface.



4 Clean the sensor on the right before slot4 with an air blower that you have.



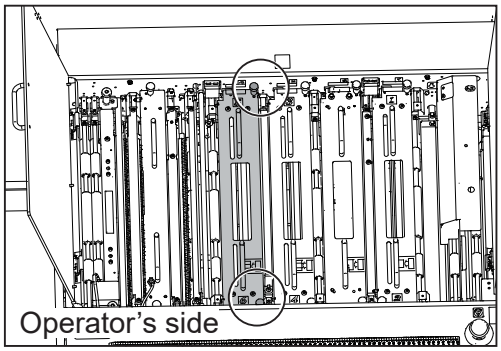
5 Reinstall the **module** according to the **positioning pins** in its original position.



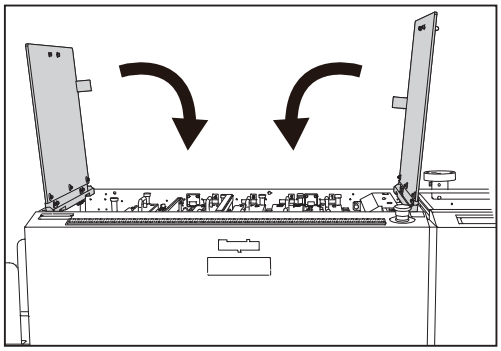
6 Tighten the two **fixing screws** to secure the **module** in slot4.

REFERENCE

To install the **RTM (Rotary Tool Module)**, connect the connector.

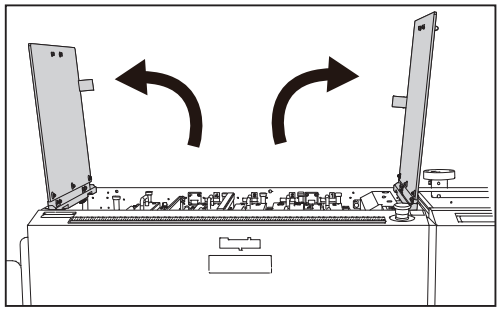


7 Close the **top cover 2** and the **top cover 3**.



● Sensor on the right before the creaser

1 Open the **top cover 2** and the **top cover 3**.

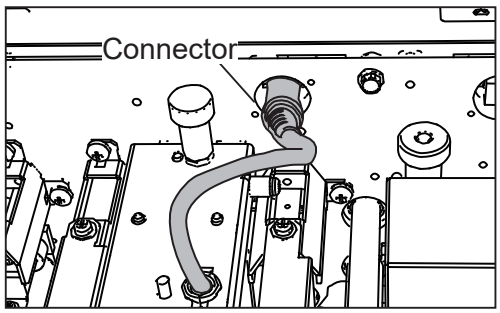


2 Disconnect the **connector** of the **creaser module**.

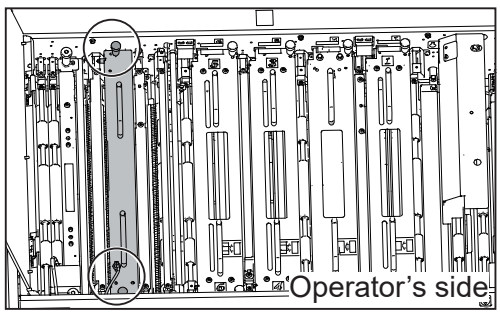
REFERENCE

The figure on the right shows a view from the non-operator's side.

Operator's side

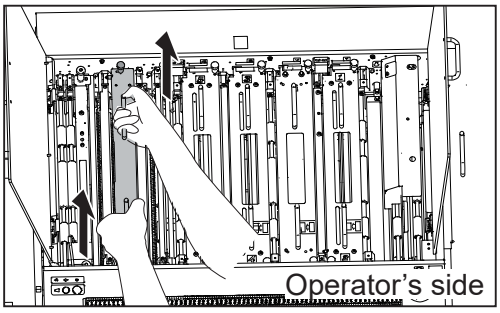


3 Loosen the two **fixing screws** on the **creaser module**.

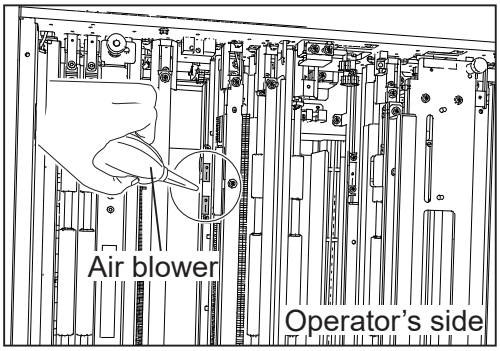


4 Take out the **creaser module**.

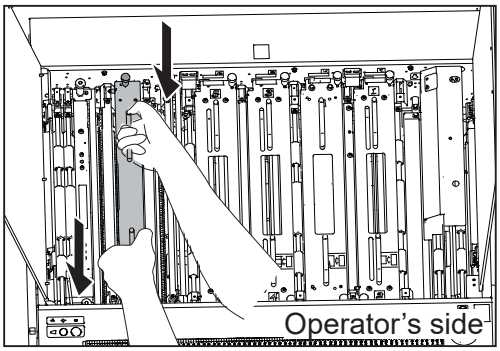
*Make sure to grasp the **handles** on the **creaser module** to lift it upward.
*Make sure to place the removed **creaser module** on a flat, stable surface.



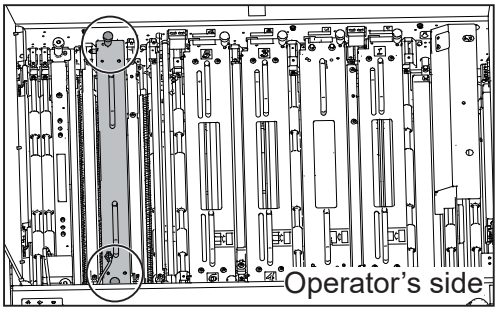
5 Clean the sensor on the right before the **creaser** with an air blower that you have.



6 Reinstall the **creaser module** according to the **positioning pins** in its original position.

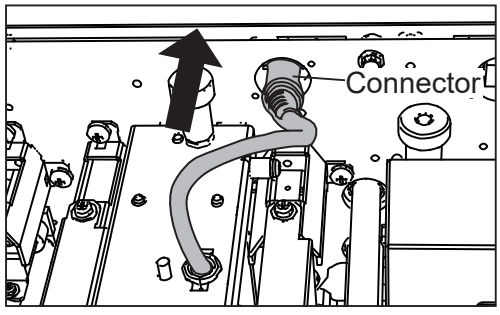


7 Tighten the two **fixing screws** to secure the **creaser module**.

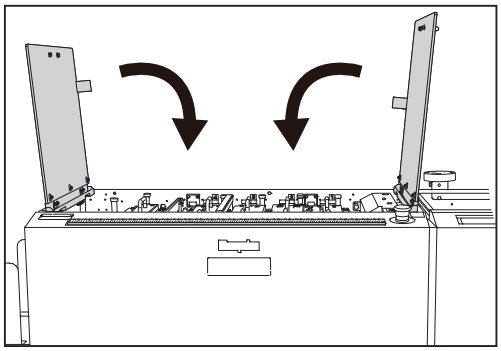


8 Connect the **connector** of the **creaser module**.

Operator's side

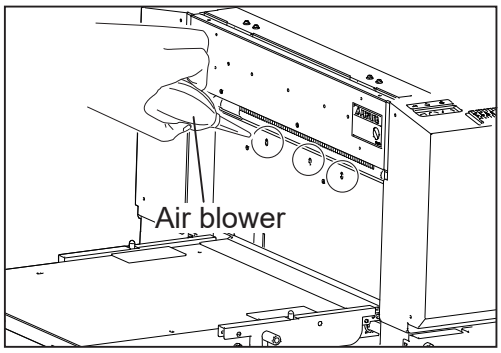


9 Close the **top cover 2** and the **top cover 3**.



● Sensors at the exit section

1 Clean the sensors at the **exit section** with an air blower that you have.



Cleaning with Cleaning Mode

As the DC-648 processes digital color outputs, toner on the documents may adhere to the surface of the conveyance rollers of the DC-648.
Also, long hours of machine use result in accumulation of paper dust on the **feed belt** or the **fan reg belt**.
Accumulation of toner or paper dust may affect the performance of the DC-648. To prevent this, clean them according to the following procedure.

1 Take out every **module** including the **cutter module** and the **creaser module** from each slot.

*Make sure to grasp the **handles** on each **module** to lift it upward.
*Make sure to place the removed module on a flat, stable surface.

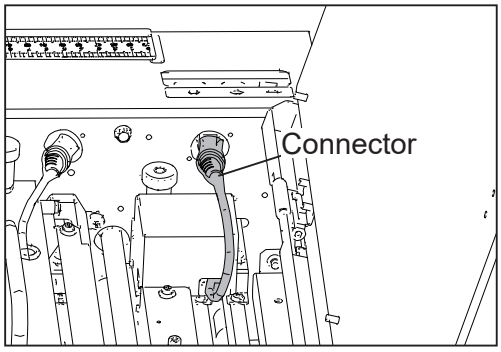
*Remove the **cutter module** in the following procedure:

1. Disconnect the **connector** of the **cutter module**.

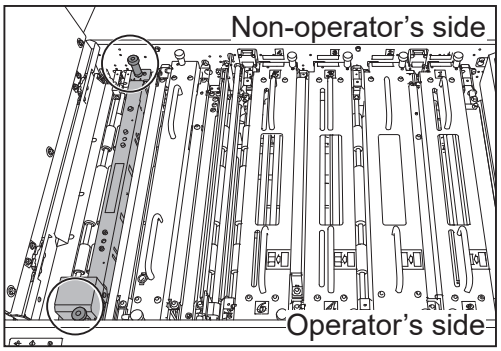
REFERENCE

The figure on the right shows a view from the non-operator's side.

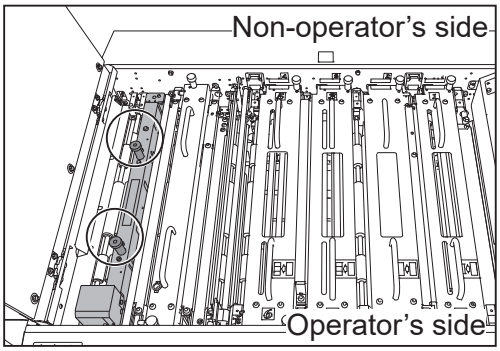
Operator's side



2. Remove the two **fixing screws** on the **cutter module**.



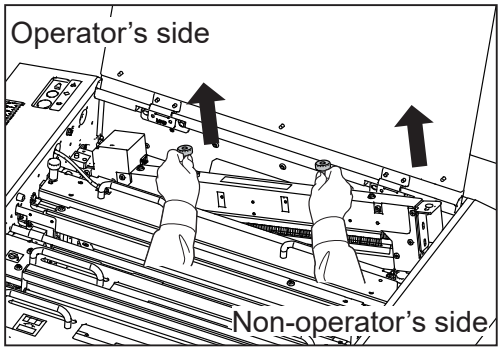
3. Attach the two **fixing screws** removed to the circled parts on the **cutter module**.



4. Grasp the two **fixing screws** attached to lift the **cutter module** upward.

REFERENCE

Slightly tilt the non-operator's side of the **cutter module** upward so that the side will be removed first.

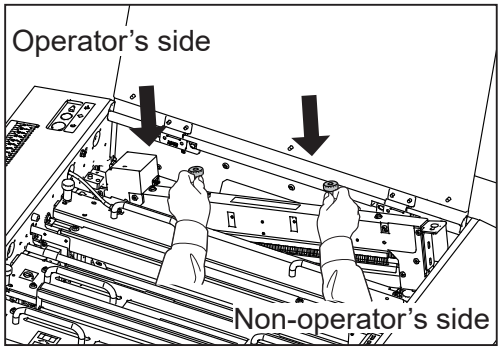


*Reinstall the **cutter module** in the following procedure:

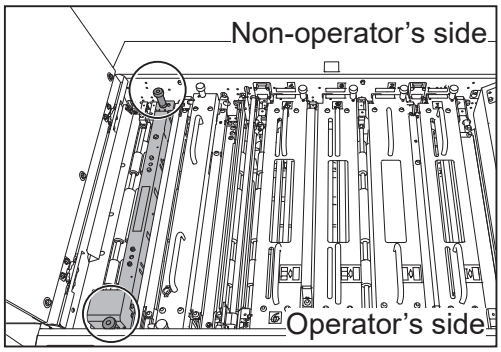
1. Grasp the two **fixing screws** and reinstall the **cutter module** according to the **positioning pins** in its original position.

REFERENCE

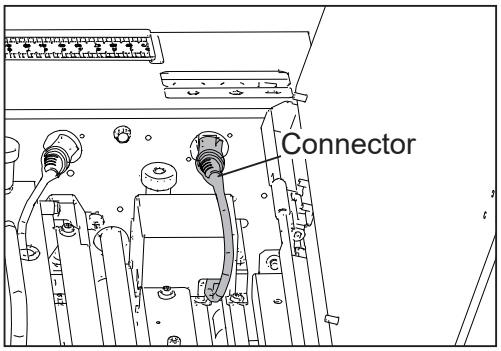
Slightly tilt the non-operator's side of the **cutter module** upward so that the operator's side of it will be attached first.



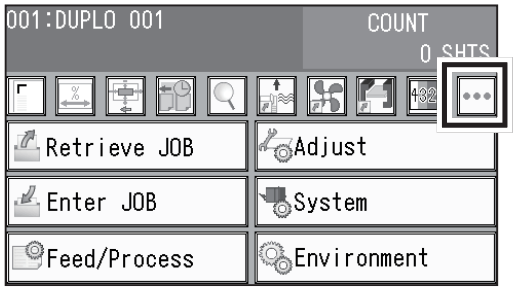
2. Remove the two **fixing screws**. Attach them to their original positions as shown in the figure on the right and secure them.



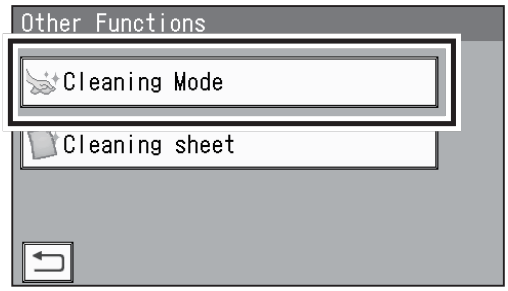
3. Connect the **connector** of the **cutter module**.



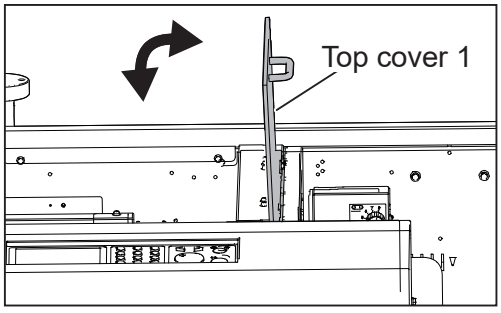
2 Make sure the **standby screen** is displayed on the LCD panel and touch ⋯.



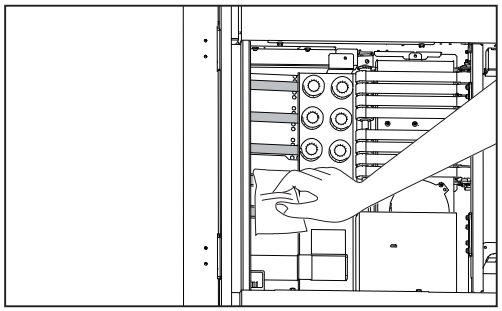
3 Touch **Cleaning Mode**.



4 Open and close either of the **top cover 1**, the **top cover 2**, or the **top cover 3** to rotate the **conveyance rollers**, the **feed belt**, and the **fan reg belt**.
*The figure on the right shows the **top cover 1** opening/closing.



5 While the rollers and the belts are rotating, wipe off the debris and the toner on the rollers and the belts with a soft cloth that is moistened with water and is tightly wrung.
*The figure on the right shows the **fan reg belt**.



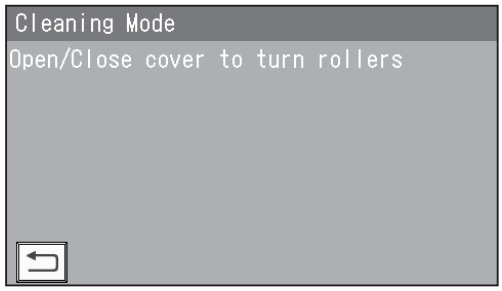
IMPORTANT

Do not wipe the rollers or the belts with anything other than what is specified above.
Use of anything else may result in mechanical malfunction.

⚠ WARNING

Do not put your hands or fingers in the feed section when cleaning it.
Otherwise, your hands or fingers may be caught and injured.

6 After the cleaning is completed, touch ⮌ or press the STOP key.



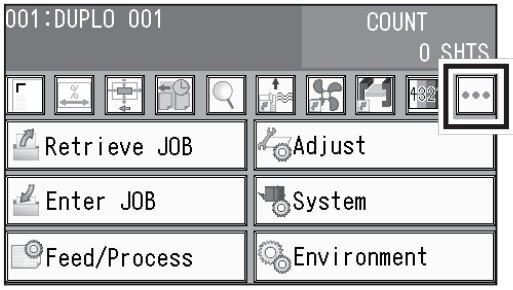
Cleaning with the Cleaning Sheet (Separately Sold)

This section describes the procedure for cleaning the **conveyance rollers** with the **cleaning sheet** that is separately sold.

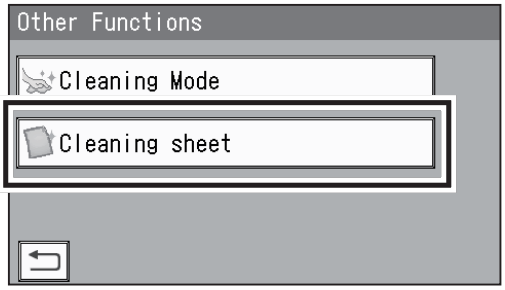
1. Take out all the **modules** from slot1 to slot4.

   *Make sure to grasp the **handles** on each **module** to lift it upward.
   *Make sure to place the removed module on a flat, stable surface.

2. Make sure the **standby screen** is displayed on the LCD panel and touch ⋯.

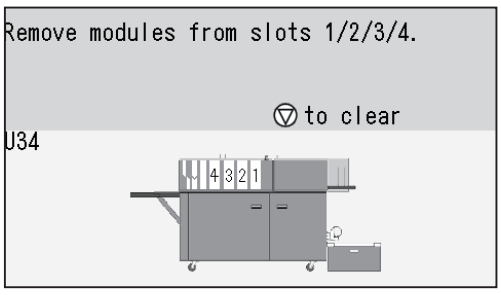


3. Touch **Cleaning sheet**.

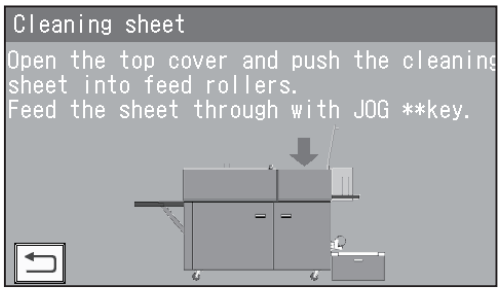


REFERENCE

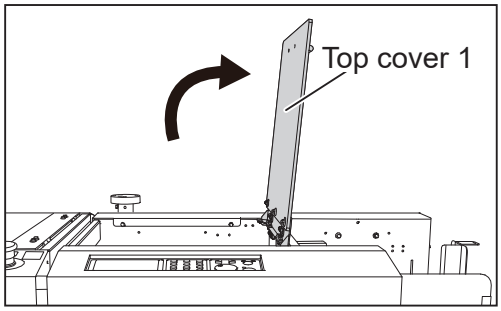
If any module(s) is/are installed, the message as shown on the right appears.
1. Take out the **module(s)** from slot1 to slot4.
2. Press the STOP key.
3. Touch **Cleaning sheet** on the **Other Functions** screen.



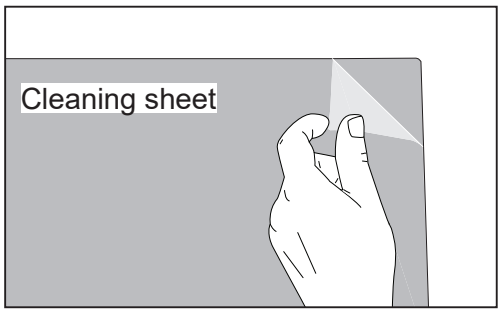
4. The message as shown on the right appears. Insert the **cleaning sheet** in the following procedure:



1. Open the **top cover 1**.



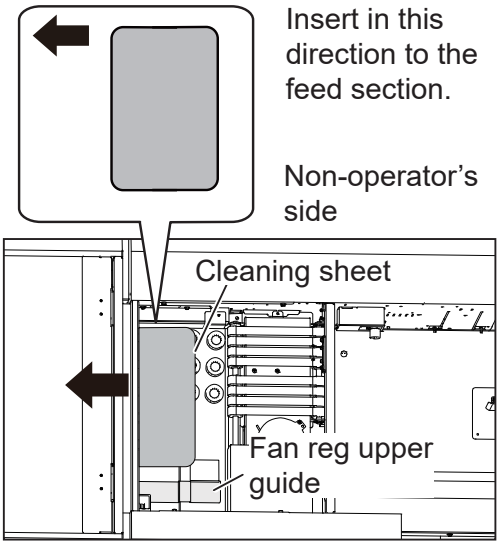
2. Remove the film on the both sides of the **cleaning sheet**.



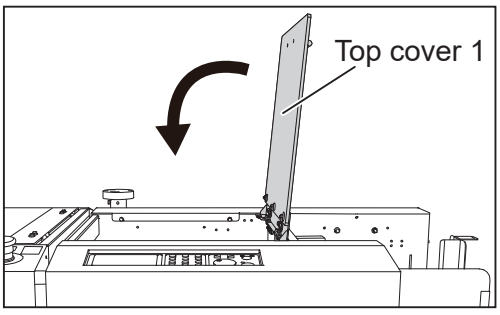
3. Insert the **cleaning sheet** inside of the machine.

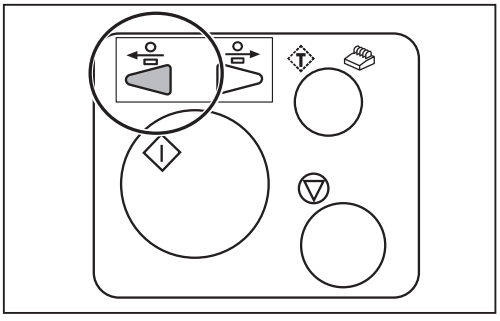
REFERENCE

- With the **cleaning sheet** in contact with the non-operator's side of the machine, insert it until it touches the first roller.
- Move the **fan reg upper guide** so that it does not come into contact with the **cleaning sheet**.

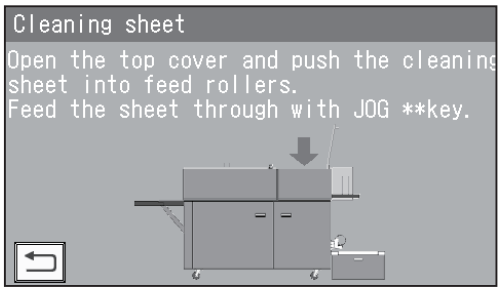


5 Close the **top cover 1** and press the JOG (FWD) key.



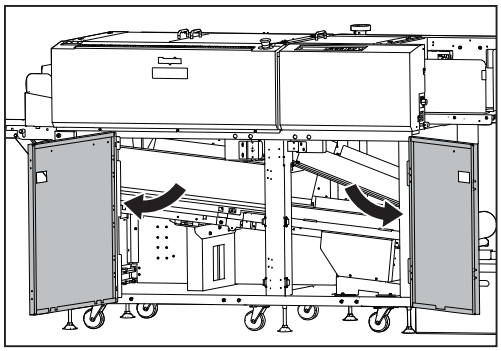


6 When the **cleaning sheet** is ejected to the **exit tray**, touch ⮌ or press the STOP key.

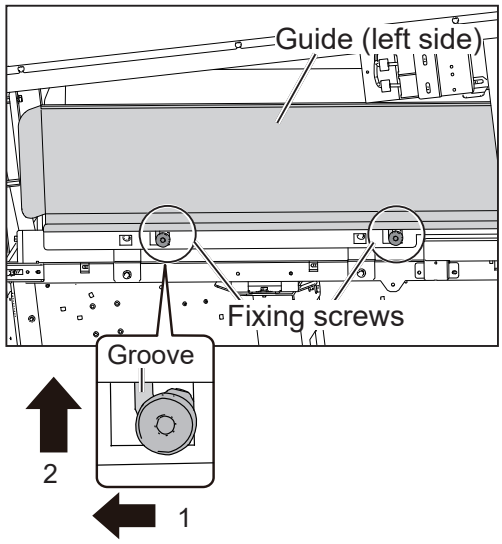


Cleaning the Waste Conveyor Belt

1 Open the **front door 1** and the **front door 2**.

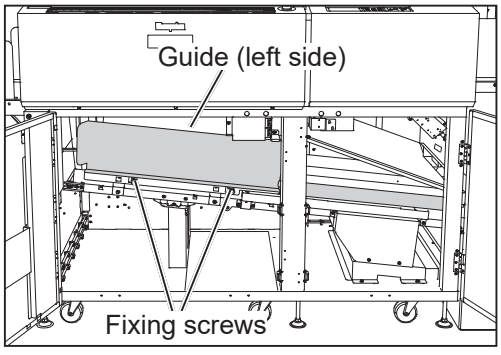


2 1. Loosen the **two fixing screws** on the **guide** on the left side.



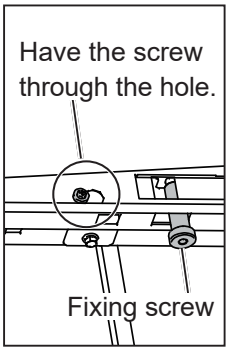
2. Slide the **fixing screws** in the direction of the arrow (1) according to the groove of the frame. Lift them upward in the direction of the arrow (2).

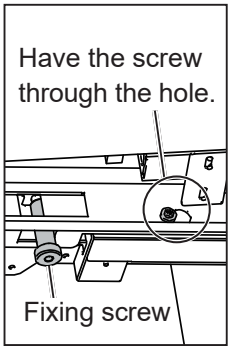
3. While grasping the two **fixing screws**, lift the **guide** on the left side upward. Slightly tilt the **guide** toward you to remove it.



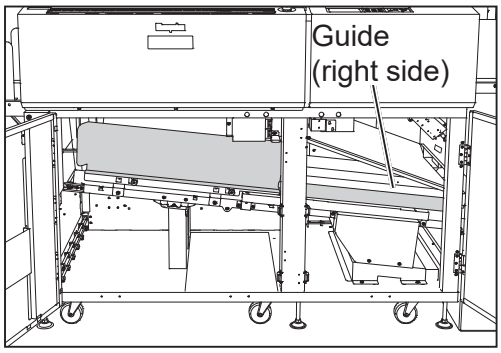
REFERENCE

While having the two screws through the holes as shown in the figures on the right, lift the **guide** upward.

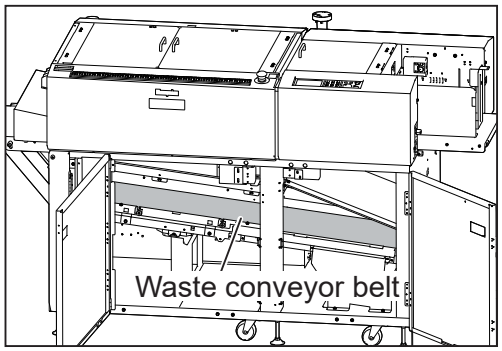




4. Remove the **guide** on the right side.
   (The **guide** is attached with the magnet.)



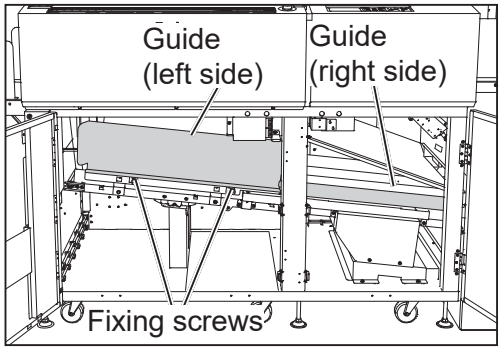
3 If paper dust is on the **waste conveyor belt**, wipe it off with a tightly wrung cloth.
After cleaning it, apply silicon to a dry cloth and wipe the surface of the **waste conveyance belt** with it.



IMPORTANT

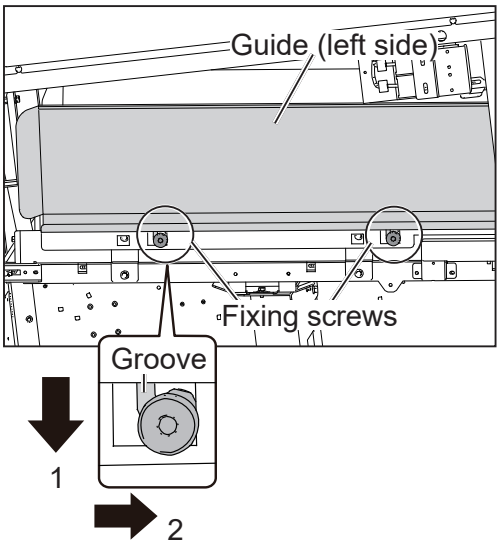
Applying silicon oil on the surface of the **waste conveyance belt** helps reduce wear of it.
Never use flammable spray for this, or gas may accumulate inside the machine causing fire or explosion.

4 Reattach the **guides** to their original positions (step ❷).



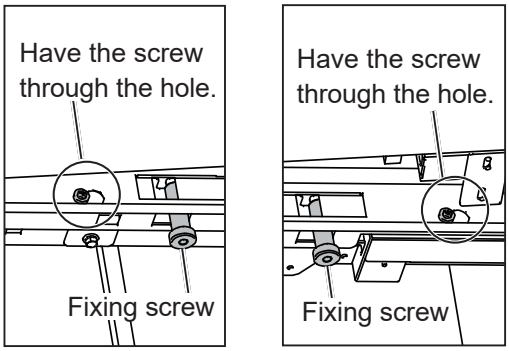
Reattach the **guide** on the left side in the following procedure:

1. Lower the two **fixing screws** in the direction of the arrow (1) according to the groove of the frame.
2. Slide the **fixing screws** in the direction of the arrow (2).
3. Tighten the **fixing screws** to secure the **guide**.

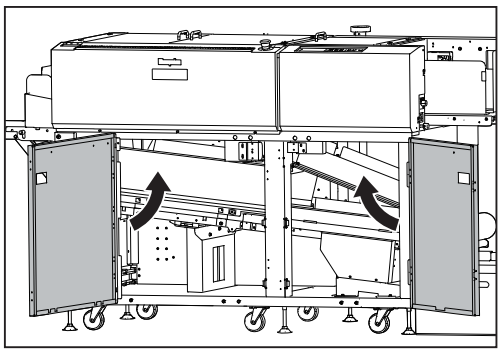


REFERENCE

While having the two screws through the holes as shown in the figures on the right, attach the **guide**.



5 Close the **front door 1** and the **front door 2**.



Correcting the Intersection of Slitter Tools

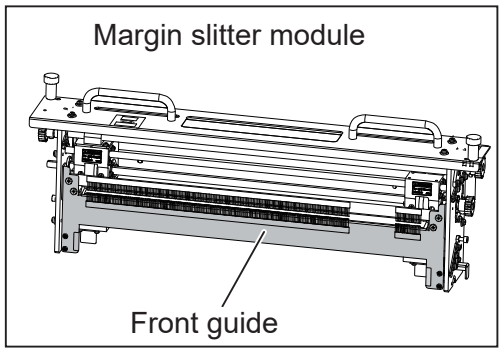
If a heavy weight document is jammed in the slitter area and is pulled out by force, the **upper tool** and the **lower tool** of the slitter may intersect each other.
Also, if a document cannot be slit or conveyed, the tools may have intersected. In that case, follow the procedure below to correct the **upper tool** or the **lower tool** position.

REFERENCE

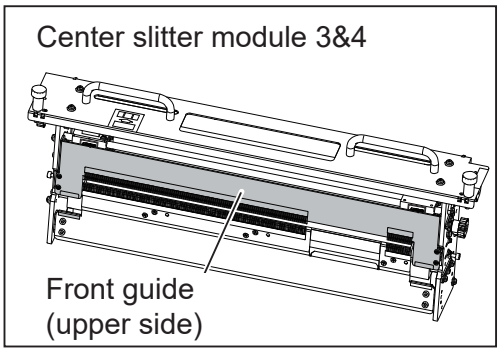
Slitters differ in shape depending on modules.
The **slitter 1** and the **slitter 4** are the same in shape.
*For correcting the slitter tool intersection for the **slitter 5** and the **slitter 6**, contact our service person.

1 Remove the **front guide**/**front guide (upper side)** on the **slitter module** referring to steps ❶ to ❸ in Cleaning the Slitters (P.146).

<For slitter 1 and slitter 2>



<For slitter 3 and slitter 4>

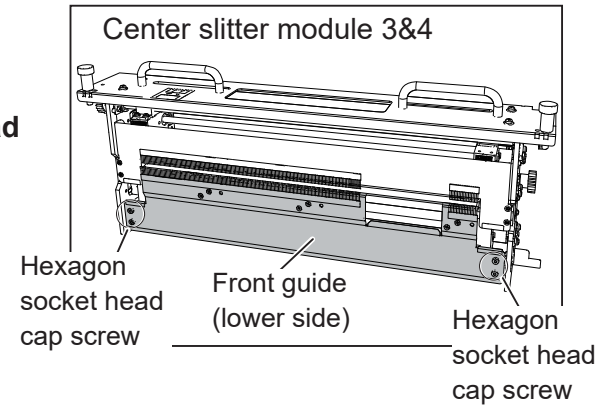


REFERENCE

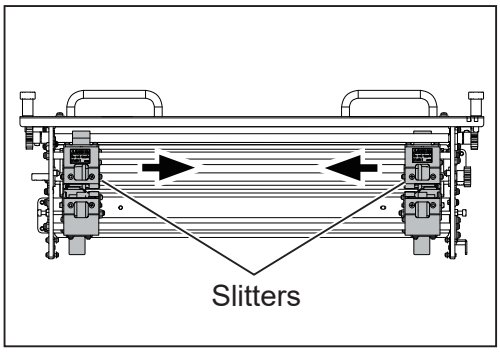
Remove the **front guide** (lower side) on the **center slitter module 3&4** in the following procedure:

1. Remove the four **hexagon socket head cap screws** with the supplied hexagon wrench to detach the **front guide** (lower side).

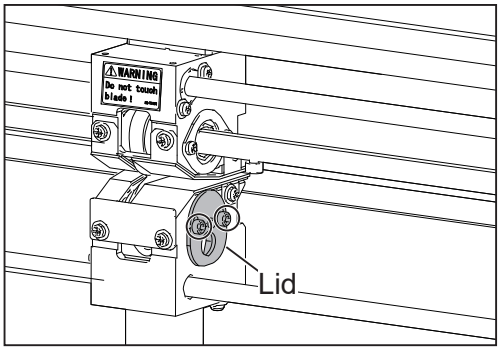
* Make sure not to lose the **hexagon socket head cap screws** removed.



2 Move the **slitters** to the center of the module.
(The figure on the right shows **slitter 3** and **slitter 4**.)



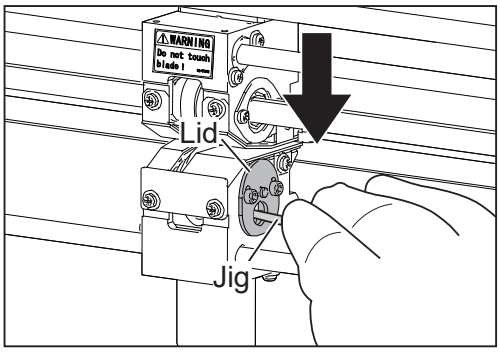
3 1. Loosen the two **hexagon socket head cap screws** securing the **lid** of the **slitter** with the intersecting tools.
(The figure on the right shows the **slitter 3**.)



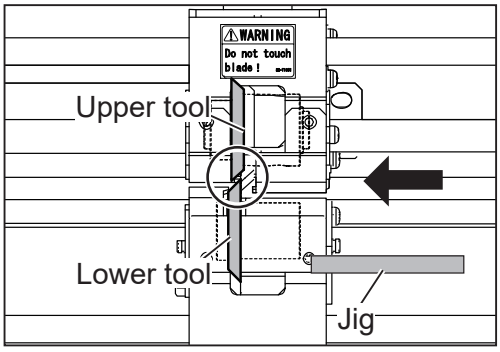
REFERENCE

Lay the **slitter module** on its side if it is easier for you to carry out the work smoothly.

2. While sliding the **lid** downward, insert the **jig** into the hole of the **lid**.



3. Push the **jig** in the direction of the arrow to correct the intersected **lower tool**.
*The figure on the right shows the **upper tool** and the **lower tool** intersecting each other.

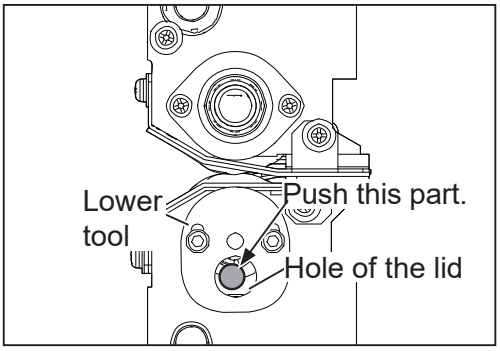


IMPORTANT

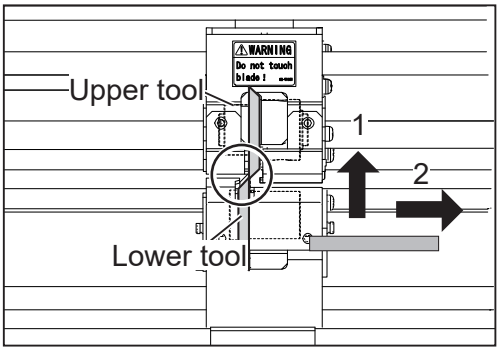
Pushing the **jig** in without sliding the **lid** downward may damage the **upper tool** and the **lower tool**.

REFERENCE

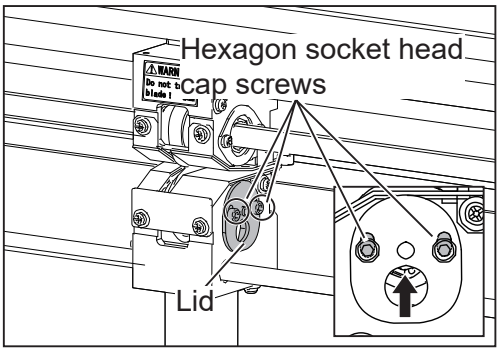
Push the indicated part in the figure on the right with the **jig**.



4. While pushing the **lid** upward, remove the **jig**. Make sure that the tool intersection is corrected.
   *The figure on the right shows that the tool intersection is corrected and the tools are in the proper positions.

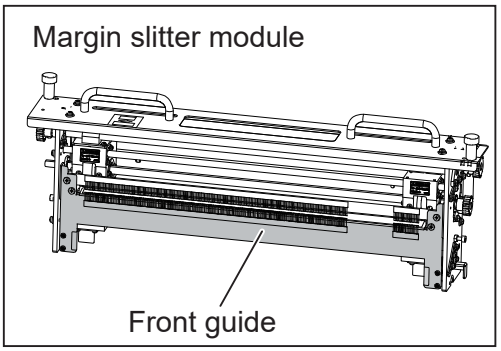


5. While lifting the **lid** upward, tighten the two **hexagon socket head cap screws** to secure the **lid**.

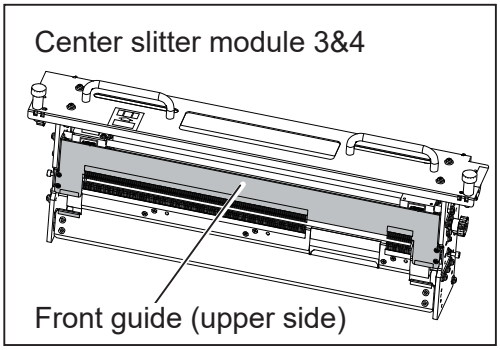


4 Reattach the **front guide**/**front guide** (upper side) on the **slitter module** in the reverse procedure to steps ❶ to ❸ in Cleaning the Slitters (P.146).

<For slitter 1 and slitter 2>



<For slitter 3 and slitter 4>

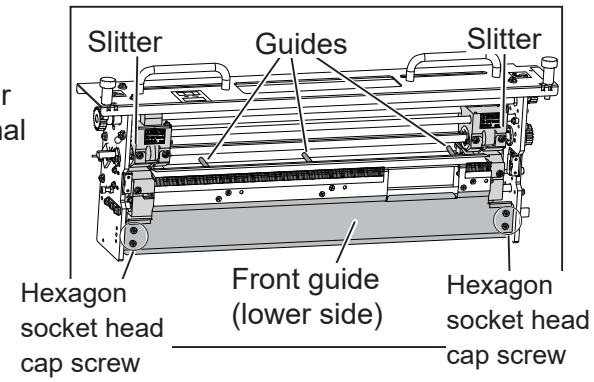


REFERENCE

Reattach the **front guide** (lower side) on the **center slitter module 3&4** in the following procedure:

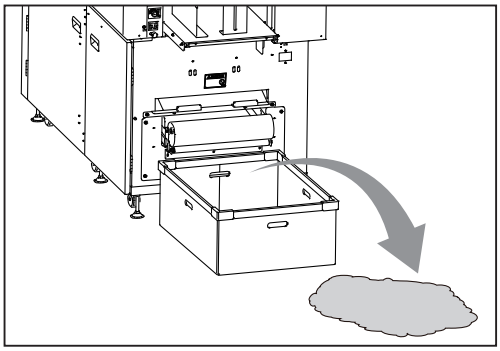
1. Move the **slitters** so that they do not come into contact with the three **guides**.
2. Attach the **front guide** (lower side) with the four **hexagon socket head cap screws** to its original position.

Center slitter module 3&4



Waste Box

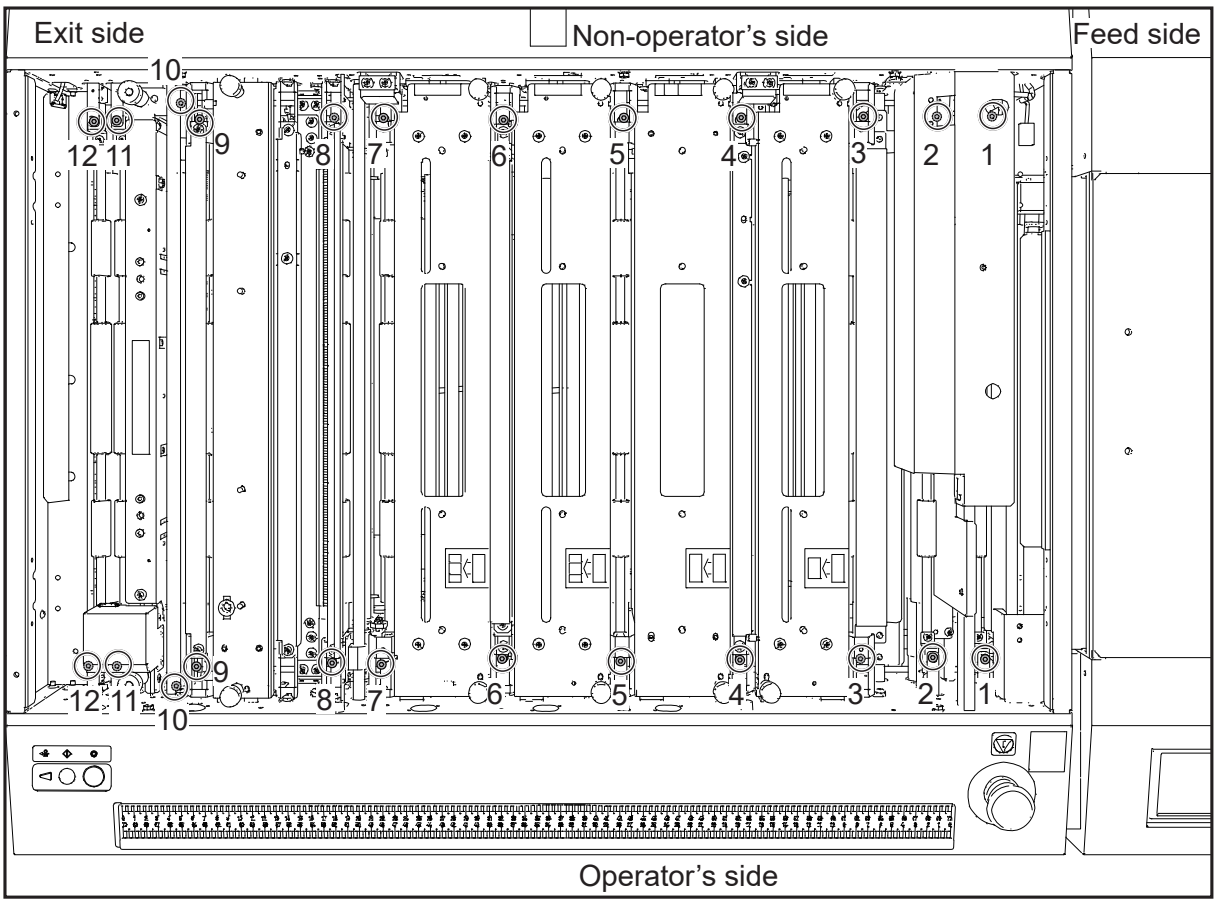
1 Waste accumulates in the waste box. Remove it periodically.



About Protection of Press Rollers

If the **press rollers** stay at the same position for a long time, they may be deformed by the pressure from the **back-up rollers**.
To prevent them from being deformed, if the DC-648 does not operate for one hour with the power **ON**, the rollers automatically rotate at low speed. (When the DC-648 is turned **ON**, the rollers rotate in about five minutes.)
If you do not operate the DC-648 for a long period of time (about one week), release the contact of the **back-up rollers** and the **press rollers** according to the following procedure.

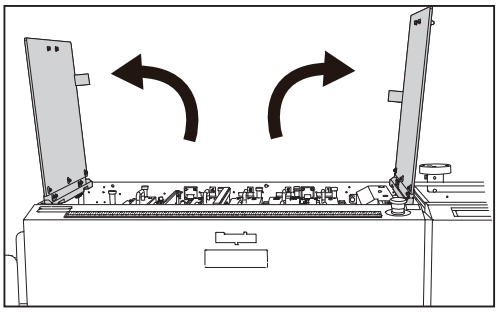
The **hexagon socket head cap screws** to release the contact of the **back-up rollers** and the **press rollers** are located at 12 places on the operator's side and the non-operator's side as shown in the figure below.
Loosen them with the supplied hexagon wrench.



*The screws 1 to 9 and 11 to 12 are located at the upper side of the inside of the machine and can be loosened directly. The screw 10 is located at the lower side of the inside of the machine.

About Protection of Press Rollers

1 Open the top **cover 2** and the **top cover 3**.

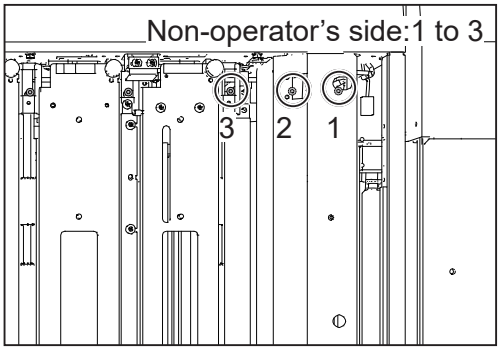


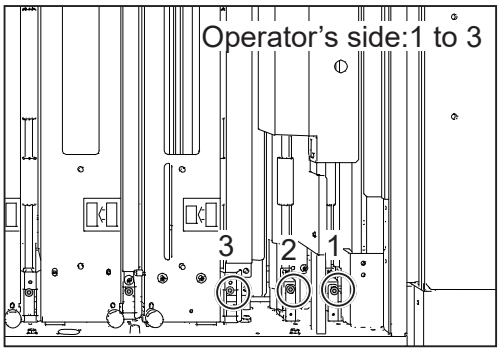
2 Releasing the back-up roller pressure of 1 to 9 and 11 to 12:

Turn the **hexagon socket head cap screws** of 1 to 9 and 11 to 12 counterclockwise with the supplied hexagon wrench to adjust the pressure of the **back-up roller**.

*The figures on the right show screws 1 to 3.

*For the screw 10, see step 3.

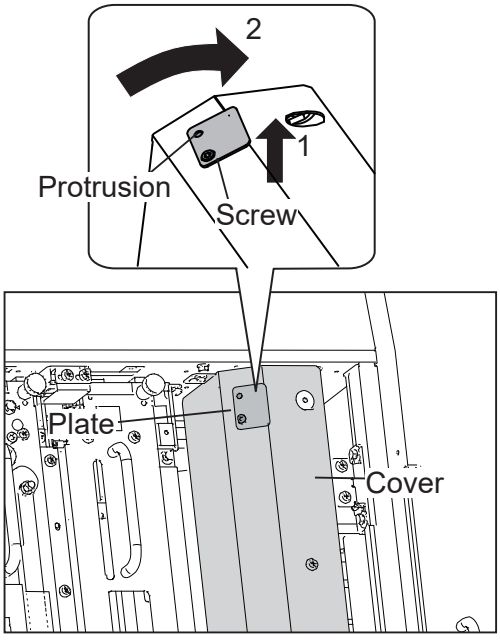




*To adjust the screw 2 on the non-operator's side, open the **plate** on the **cover** in the following procedure:

1. Loosen the screw on the **plate** with the supplied hexagon wrench.
   *Do not remove the screw.

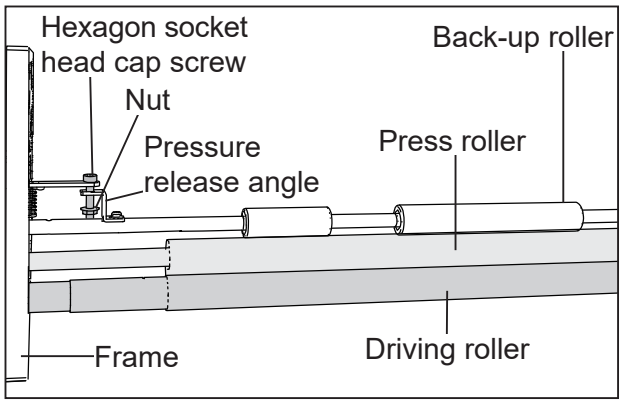
2. Lift the **plate** upward (1) so that the **protrusion** passes through its hole. Rotate the **plate** in the direction of the arrow (2).



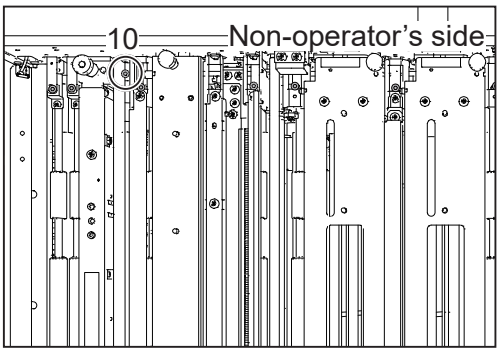
*To adjust the **hexagon socket head cap screw**, remove the **cutter module** first.
(→P.154)

REFERENCE

Turn the **hexagon socket head cap screws** counterclockwise until they stop to loosen them.

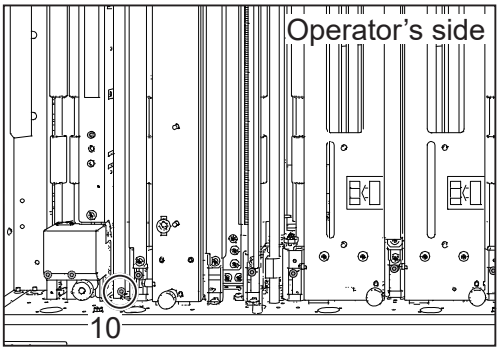


3 Releasing the back-up roller pressure of 10:
Turn the **hexagon socket head cap screws** of 10 clockwise with the supplied hexagon wrench to adjust the pressure of the **back-up roller**.



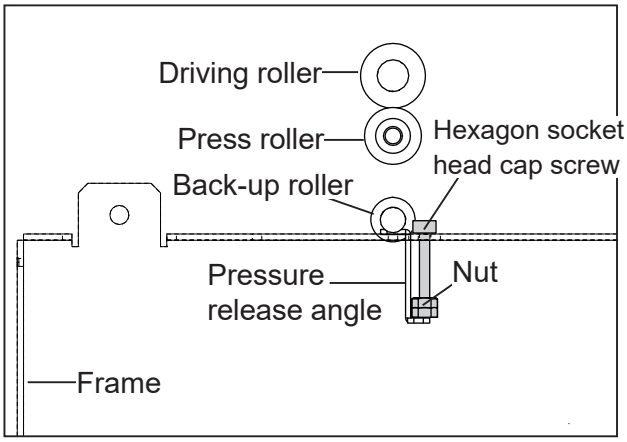
REFERENCE

You can turn the **hexagon socket head cap screws** without removing the **cover**.



REFERENCE

Turn the **hexagon socket head cap screws** clockwise until they stop to loosen them.



4 When you operate the DC-648 again, make sure to tighten the loosened **hexagon socket head cap screws** to bring the **back-up rollers** into contact with the **press rollers**.

MEMO

Chapter 6

Specifications

This chapter lists the machine specifications.

Specifications ····· 172
About Open Source Software ····· 176

Specifications

<table>
<tr><th>Model name</th><th colspan="3">DC-648</th></tr>
<tr><td>Product category</td><td colspan="3">DC-648 Slitter/Cutter/Creaser Floor stand model</td></tr>
<tr><td>Feeding method</td><td colspan="3">Belt suction</td></tr>
<tr><td>Feed tray</td><td colspan="3">Elevator</td></tr>
<tr><td>Infeed document size</td><td colspan="3">Width: 210.0−370.0 mm
Length: 210.0−1000.0 mm

• Max length with the standard feed tray and the exit tray: 710.0 mm
• With long sheet, the waste box may need to be cleared frequently.</td></tr>
<tr><td>Minimum finishing size</td><td colspan="3">Width: 48.0 mm
Length: 50.0 mm</td></tr>
<tr><td>Document type</td><td colspan="3">Uncoated, Coated, Laminated, UV coated</td></tr>
<tr><td>Document weight</td><td colspan="3">110 gsm−400 gsm
• Laminated/UV coated stock: within the above range including lamination/coating layer.</td></tr>
<tr><td>Document curl</td><td colspan="3">No curl (within 5 mm, no bent)</td></tr>
<tr><td rowspan="9">Process speed</td><td colspan="3">Specification speed</td></tr>
<tr><td>Job</td><td>With REG off</td><td>With REG on</td></tr>
<tr><td>A4 SEF
2cut 1 crease</td><td>40 ppm</td><td>38 ppm</td></tr>
<tr><td colspan="3">Reference speed
(Measurements from the manufacturer testing)</td></tr>
<tr><td>Job</td><td>With REG off</td><td>With REG on</td></tr>
<tr><td>A4 SEF
2cut 1crease</td><td>43.16 ppm</td><td>41.63 ppm</td></tr>
<tr><td>SRA3
2up A4</td><td>30.25 ppm</td><td>30.20 ppm</td></tr>
<tr><td>SRA3
21up business card</td><td>13.39 ppm</td><td>12.79 ppm</td></tr>
<tr><td colspan="3">• With REG mark on, process speed may be effected by the image shifts and/or the REG mark setting.
• With software update, the reference speed may change.</td></tr>
<tr><td>Tolerance</td><td colspan="3">±0.2 mm on programmed position (business card: ±0.3 mm)
• The tolerance of creasing may be effected depending on the number of creases and/or their depths.
• With the documents longer than 670.0 mm:
Slit tolerance: ±0.6 mm
Cut/Crease tolerance: ±1.4 mm</td></tr>
<tr><td>Feeder capacity</td><td colspan="3">120 mm
• With the documents longer than 670.0 mm: 30 mm</td></tr>
<tr><td>Double feed detection</td><td colspan="3">Ultrasonic sensor</td></tr>
<tr><td>Number of slits</td><td colspan="3">6 slits/sheet (Standard)</td></tr>
<tr><td>Margin slit width</td><td colspan="3">0.0 mm/3.2−55.0 mm</td></tr>
</table>

Model name	DC-648
Gutter slits deflectors	Automatic control, Max 2/sheet
Gutter slits width	5.0-15.0 mm • Gutter slits wider than 15.0 mm are output on the exit tray.
Number of cuts	Max 30 cuts/sheet
Minimum cutting length	3.0 mm (lead cuts) 3.0 mm (gutter cuts) 5.0 mm (trail cut)
Number of creases	Max 20 creases/sheet
Crease width	2 types: 1.2 mm/1.4 mm, operator changeable
Crease depth adjustment	3 steps
Exit tray	Drop down tray
Exit tray height	150 mm
Card stacker capacity	Drop Card Stacker: 60 mm Elevator Card Stacker: 90 mm
Control panel	Touch panel color LCD
Job program	From the control panel or from the PC Controller
Panel languages	Japanese, English, French, German, Italian, Spanish, Polish, Russian
Standard functions	• Air knife • Fan register • 250 job memory • Job lock • Batch separation • Test feed • Preset counter • Emergency stop switch • Apply shrinkage • Feed skew adjustment • Program by inch/mm • Image shift compensation by reading REG mark • Automatic job setup by reading Barcode • End mark detection • Image skew detection • Paper skew detection • Shrinkage detection • Double feed detection • Reject (Document length: 670.0 mm or shorter) • PC Controller USB 2.0 connection (B type connector) Compatible OS: ● Windows 8.1 (32bit/64bit) ● Windows 10 (32bit/64bit) • PDF template creator • PDF import • XML file creator
Option (Standard on some models. Refer to the system setup chart for details.)	• Rotary Tool Module (RTM-09) • Cross Tool Module (CPM-09) • Optional PCB Kit (OPK-03) • Side Air (AIR-05)

Specifications

<table>
<tr><td>Model name</td><td colspan="5">DC-648</td></tr>
<tr><td>Option
(Standard on some models. Refer to the system setup chart for details.)</td><td colspan="5">• Banner Feeder Extension (LPT-50)
• PC Arm Mount (PCM-03)
• Drop Card Stacker
• Elevator Card Stacker</td></tr>
<tr><td>Power supply</td><td colspan="5">100 VAC, 50/60 Hz
115 VAC, 60 Hz
230 VAC, 50/60 Hz</td></tr>
<tr><td rowspan="5">Power consumption</td><td colspan="2"></td><td>100 V</td><td>115 V</td><td>230 V</td></tr>
<tr><td rowspan="2">In operation</td><td>Current</td><td>6.2 A</td><td>5.5 A</td><td>2.7 A</td></tr>
<tr><td>Power</td><td>574 W</td><td>577 W</td><td>560 W</td></tr>
<tr><td rowspan="2">Standby</td><td>Current</td><td>1.1 A</td><td>1.0 A</td><td>0.8 A</td></tr>
<tr><td>Power</td><td>95 W</td><td>93 W</td><td>94 W</td></tr>
<tr><td rowspan="3">Weight</td><td></td><td>100 V</td><td>115 V</td><td>230 V</td><td>230 V AP</td></tr>
<tr><td>Net</td><td>341 kg</td><td>344 kg</td><td>348 kg</td><td>341 kg</td></tr>
<tr><td>Gross</td><td>398 kg</td><td>401 kg</td><td>405 kg</td><td>398 kg</td></tr>
<tr><td>Dimension</td><td colspan="5">• In use
115 V/230 V: 2430 (W) × 885 (D) × 1120 (H) mm
100 V/230 V AP: 2430 (W) × 805 (D) × 1120 (H) mm
• In use with long sheet
115 V/230 V: 2830 (W) × 885 (D) × 1120 (H) mm
100 V/230 V AP: 2830 (W) × 805 (D) × 1120 (H) mm
• In use (Max)
115 V/230 V: 2830 (W) × 1645 (D) × 1535 (H) mm
100 V/230 V AP: 2830 (W) × 1560 (D) × 1535 (H) mm
• Stored:
115 V/230 V: 1720 (W) × 885 (D) × 1120 (H) mm
100 V/230 V AP: 1720 (W) × 805 (D) × 1120 (H) mm
• Packed: 1860 (W) × 1020 (D) × 1330 (H) mm</td></tr>
<tr><td>Operating temperature/ humidity</td><td colspan="5">10°C–30°C, 40%RH−70%RH (No condensation)</td></tr>
<tr><td>Storing temperature/ humidity</td><td colspan="5">0°C–50°C, 10%RH−80%RH (No condensation, No exposure to salt)</td></tr>
<tr><td>Noise level</td><td colspan="5">In operation: less than 80 dB</td></tr>
<tr><td rowspan="7">Safety standard</td><td></td><td colspan="2">100 V</td><td>115 V</td><td>230 V</td></tr>
<tr><td>PSE</td><td colspan="2">Yes</td><td>-</td><td>-</td></tr>
<tr><td>VCCI</td><td colspan="2">Yes</td><td>-</td><td>-</td></tr>
<tr><td>FCC</td><td colspan="2">-</td><td>Yes</td><td>-</td></tr>
<tr><td>UL</td><td colspan="2">-</td><td>Yes</td><td>Yes</td></tr>
<tr><td>CE</td><td colspan="2">-</td><td>Yes</td><td>Yes</td></tr>
<tr><td>RoHS</td><td colspan="2">-</td><td>-</td><td>Yes</td></tr>
<tr><td>Operating altitude</td><td colspan="5">Max 1000 m a.s.l.</td></tr>
<tr><td>Overvoltage category</td><td colspan="5">Category II according to IEC60664-1</td></tr>
<tr><td>Environmental pollution</td><td colspan="5">Pollution degree: degree 3 according to IEC60664-1</td></tr>
</table>

● The specifications are subject to change without prior notice.

Option	100 V	115 V DUC	230 V DIL	230 V AP
Rotary Tool Module (RTM-09)	Option	Option	Option	Option
Cross Tool Module (CPM-09)	Option	Option	Option	Option
Optional PCB Kit (OPK-03)	Option	Option	Yes	Yes
Side Air (AIR-05)	Option	Yes	Yes	Option
Banner Feeder Extension (LPT-50)	Option	Option	Option	Option
PC Arm Mount (PCM-03)	-	Yes	Yes	Option
Drop Card Stacker	Yes	Yes	Option	Yes
Elevator Card Stacker	Option	Option	Yes	Option

About Open Source Software

The DC-648 contains the open source software program.
The license terms on the open source software are on LICENSE.TXT of the PC Controller.

Appendix

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Duplo Corporation www.duplo.com

4-1-6 Oyama, Chuo-ku, Sagamihara-shi, Kanagawa 252-5280, Japan

TEL: +81-42-775-3602

FAX: +81-42-775-3606

E-mail: info@duplo.com

Duplo

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