Advantage M8

Card Printer & Embosser

Operation Manual

MANUAL NO. Advantage M8-UM-153

NBS Technologies Inc.

Essential Safety Precautions

This operating manual provides the safety precautions and the handling methods required to use the product. Before using this machine, be sure to read this operating manual for safe and proper operation. After reading, keep it in a safe place for later reference.
For any questions, contact your distributor.

- **This product is designed to emboss/encode/print specified plastic cards. Do not use this for any other application purposes.**

- **In this operating manual, items to be especially observed are marked with signs or symbols for safe and proper use of the product. As they are important contents, be sure to observe and follow them.**

⚠ Warning	Improper handling may cause death or severe injury.
⚠ Caution	Improper handling may cause injury or property damage.
🚫 Never do this.	
❗ Be sure to follow instructions.	

Product Handling

⚠ **Warning**	
🚫	Do not overload one electrical outlet by using a power strip and multi-outlet adapter. It may cause electric shock or fire.
🚫	Do not disassemble or modify. It may cause an electric shock or fire. If it is necessary to remove a cover for maintenance, inspection, cleaning, or repair, contact your distributor.
🚫	Only use with rated voltage and the rated frequency. Failure to do so may cause an electric shock or fire.
🚫	Do not use a damaged power cord or loose outlet. It may cause an electric shock or fire.
❗	Check that the power plug does not have dust before inserting it into the outlet. Every six months to one year, pull the power plug out of the outlet and inspect the plug for cleanliness. Dust may cause an electric shock or fire.
⛰	Used only at altitudes not more than 2000m above sea level.
♨	Used only in non-tropical conditions. (Operating environment Temperature 10 to 32 degrees Celsius/ Humidity 20 to 65% R.H (non-condensing))

Continued from Product Handling

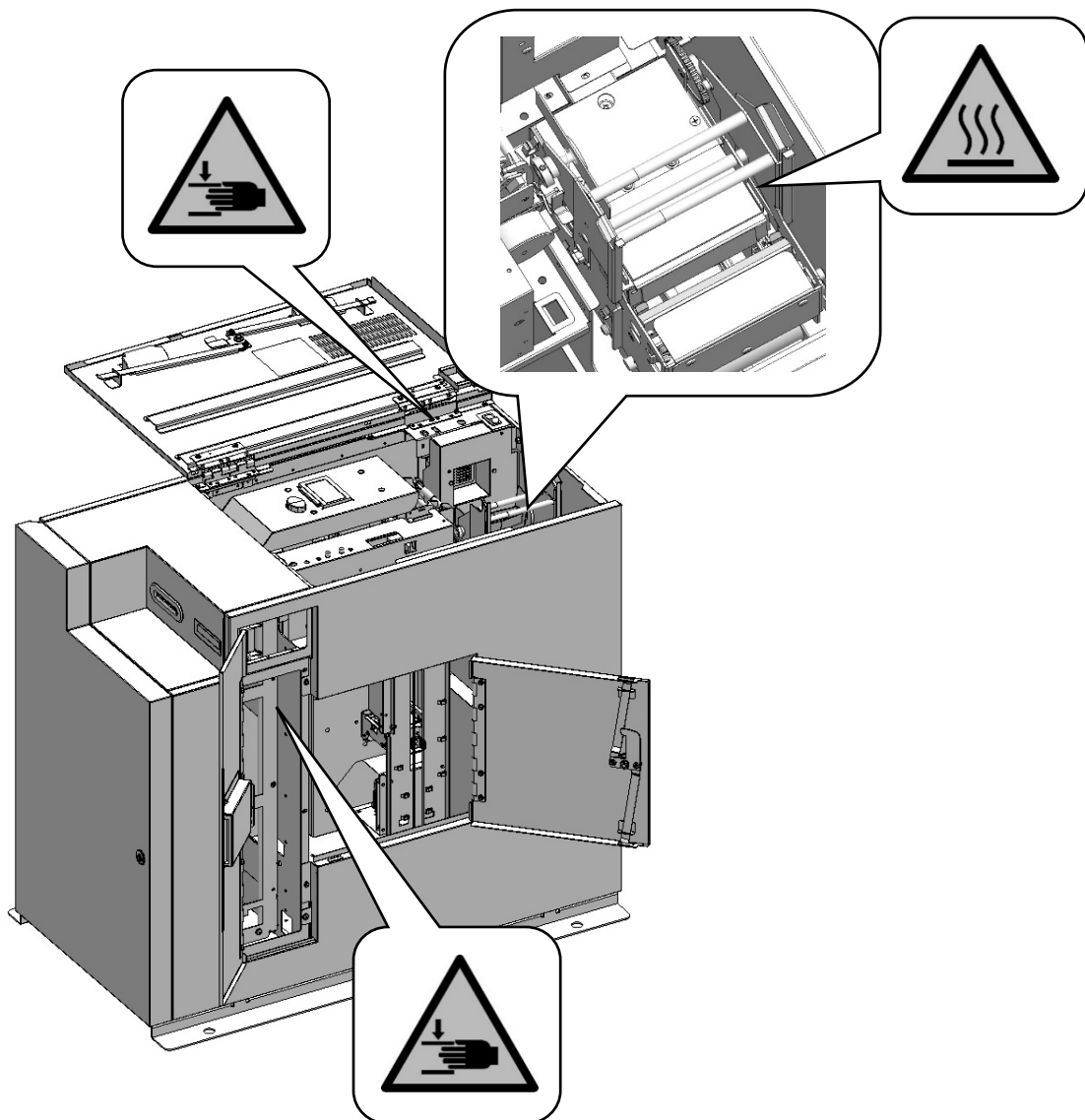| ⚠️ **Warning**	
⚠️	The Tipper Unit might be hot. To reduce the risk of injury from the heat, allow the Tipper Unit to cool before touching.
⚠️	Please take care not to get your hand or finger caught, when you open and close the upper
⚠️	Please take care not to get your hand or finger caught in the moving units, when you take out remaining card or conduct maintenance work. It may cause an injury.

Continued from Product Handling

⚠ Caution

🚫	Do not use a card contaminated with dirt or flaws. It may cause a breakdown.
🚫	Do not wipe with benzene, solvents or thinner. It may cause discoloration or deformation of this machine. For heavy contaminents, apply dilute mild detergent to a cloth, wring it thoroughly, then wipe off the contaminents with it, finally wipe with a dry, soft cloth.
🚫	Never open the covers of this machine during operation. It may cause injury.
❗	When not using for a long period, be sure to pull the power plug out of the outlet. Failure to do so may cause a fire.
❗	When pulling out the power plug, hold the tip of the power plug. Failure to do so may cause an electric shock.

Product Installation

⚠ Caution

🚫	Avoid installing in direct sunlight or near to a bright light source or a window. It may interfere with proper operation.
🚫	Avoid installing in a place with extremely high temperatures/humidity or a place with rapid humidity changes. It may cause condensation, resulting in a breakdown or improper operation.
🚫	Avoid installing in a dusty place. It may cause a breakdown.
🚫	Avoid installing in a place with heavy vibration. It may interfere with proper operation.
🚫	Avoid installing in a place with an unstable base or a where the surface is not flat place. It may interfere with proper operation or fall, resulting in injury.
❗	Power supply connection of this product should be done by a technician with necessary knowledge and qualification. It may cause electric shock or fire.
❗	Ensure a good electrical ground is established. Failure to do so may cause an electric shock.
🚫	Do not insert the power plug into the outlet until the connection is completed.
🚫	Only connect cables when the host computer and this machine are turned off.
🚫	LAN connector and USB connector are sensitive to ESD. Connect these communication cables when the machine is powered off.

Continued from Product Installation

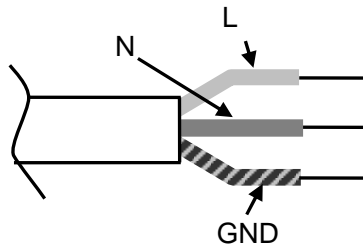| ⚠ **Caution**	
❗	When connecting a cable, be sure to insert it as far as it will go and lock if a lock function is equipped.
❗	Install in a place more than 10 cm away from the side wall.
❗	Use the supplied power cord only for this machine. Power supply connection of this product should be done by a technician with necessary knowledge and qualification. It may cause electric shock or fire.

Connect the supplied power cord to the inlet on the back.

Connect the end of the power cord to the switchboard and use it, or use an appropriate plug to install it. Plug is not included. Please prepare separately the plug which satisfies the laws and regulations of the country/region where this product is installed.

	L	N	GND
1	Brown	Blue	Green/Yellow
2	Black	White	Green

The wire covering color is either 1 or 2.

Card Handling

⚠ **Caution**	
🚫	When you are touching the cards, it is recommendable for you to wear gloves. If finger prints contaminate the surface of the card, it may cause bad print quality. To carry a card it is recommended that it is held by its edges.
🚫	Do not put or store cards in a dusty place, a place with high temperatures or near electric appliances that may emit a strong magnetic field (such as a mobile phone and monitor). It may cause deformation of cards or deletion of magnetic data.
🚫	Do not bend the cards or damage the magnetic strip. It may interfere with proper reading of magnetic information.

Federal Communications Commission (FCC)

Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Caution

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada(IC)

Statement

This device contains license-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Caution:

Exposure to Radio Frequency Radiation. The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca.

Exposition à des radiations de fréquences radio. Cet appareil émettant des ondes radio, l'installateur doit s'assurer que l'antenne est positionnée ou orientée de telle sorte que l'appareil émette des champs RF ne dépassant pas les limites recommandées par Santé Canada pour le grand public; consultez Code de sécurité 6, disponible à Santé Canada ou sur leur site web www.hc-sc.gc.ca.

Table of contents

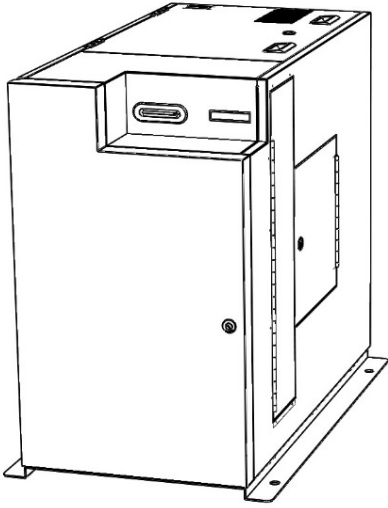**Essential Safety Precautions**
Product Handling
Product Installation
Card Handling

Contents of the package

The package contains the following items.
(Please contact your dealer if you cannot find anything.)

Main Body

Cover key (2 pieces x 3)

Cassette key (2 pieces x 2)
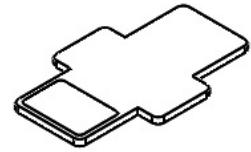
Weight (6 pieces)
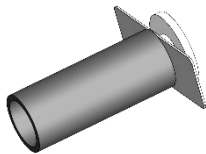
Reel hardware for tipper
(with paper core)
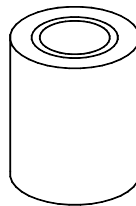
Tipper Foil
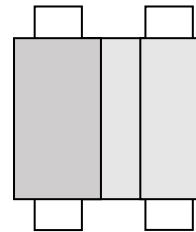
Thermal Transfer Ribbon
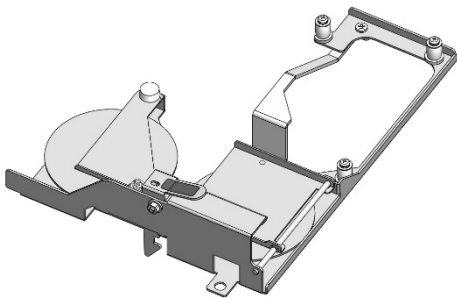
Indent Cassette
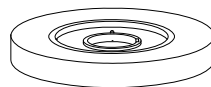
Indent film

Indent film empty core

Cleaning Roller

Power cable
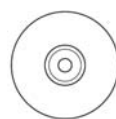
CD (Operation Manual (pdf))

Name of Each Part

Front

Power Switch

Top Cover

Card Insertion /Exit Slot

Main display

Front Cover

Right side door

Back

Circuit Breaker

LAN Connector

USB Connector

AC Inlet

Inside of Front Cover

Output Stacker Unit

Input Hopper

Hopper Cassettes

Reject Stacker Unit

Inside of Top Cover

Print /Encode Unit

Print /Encode Unit display

Tipper Unit
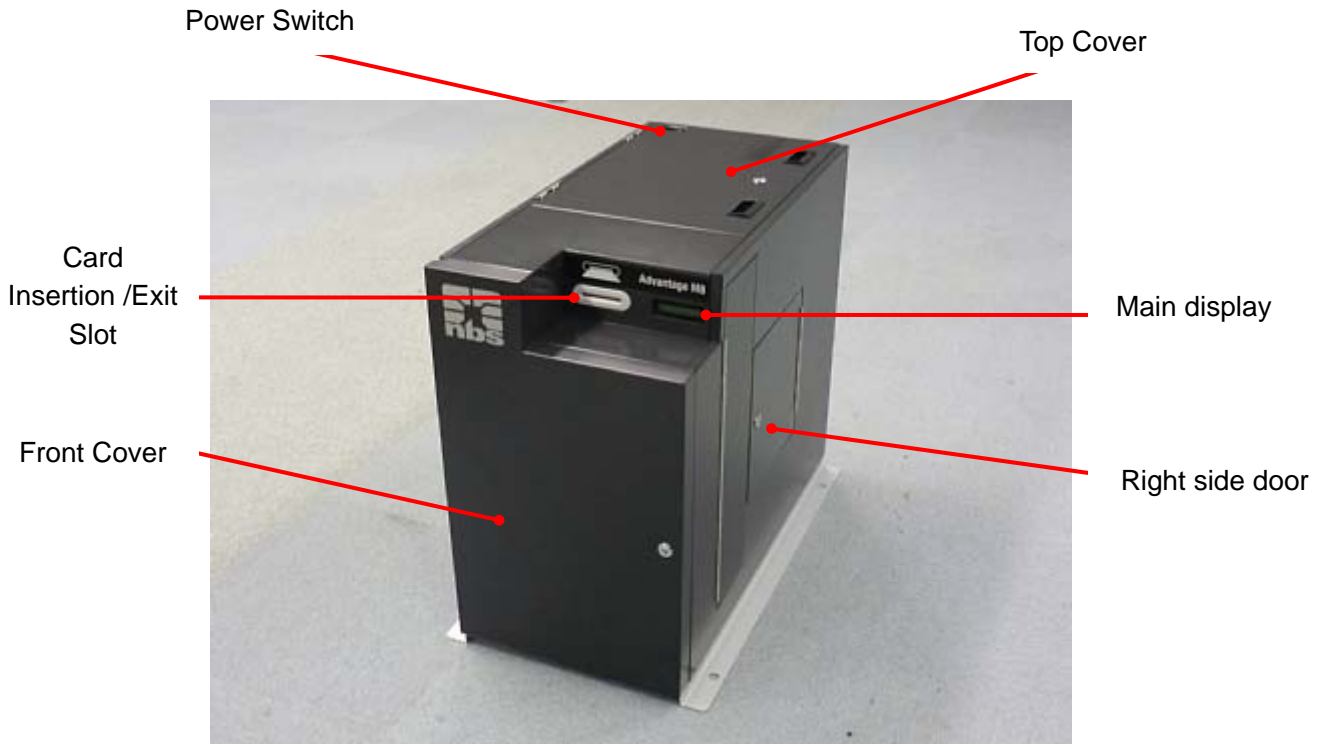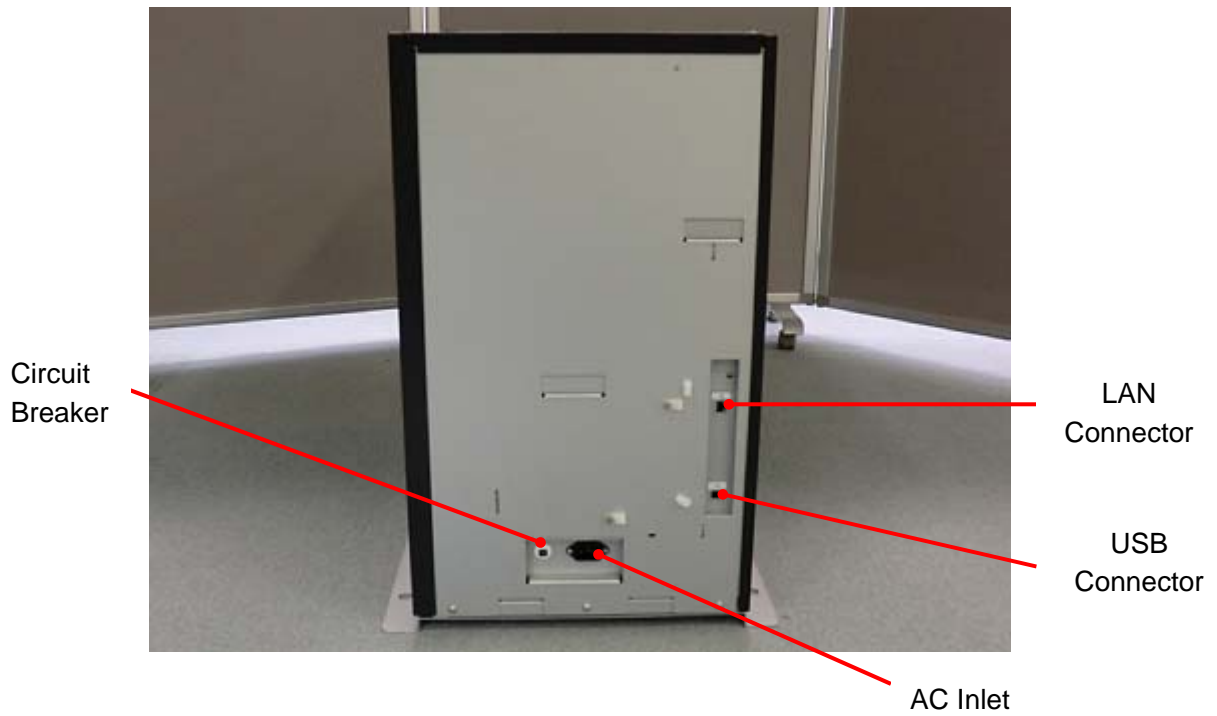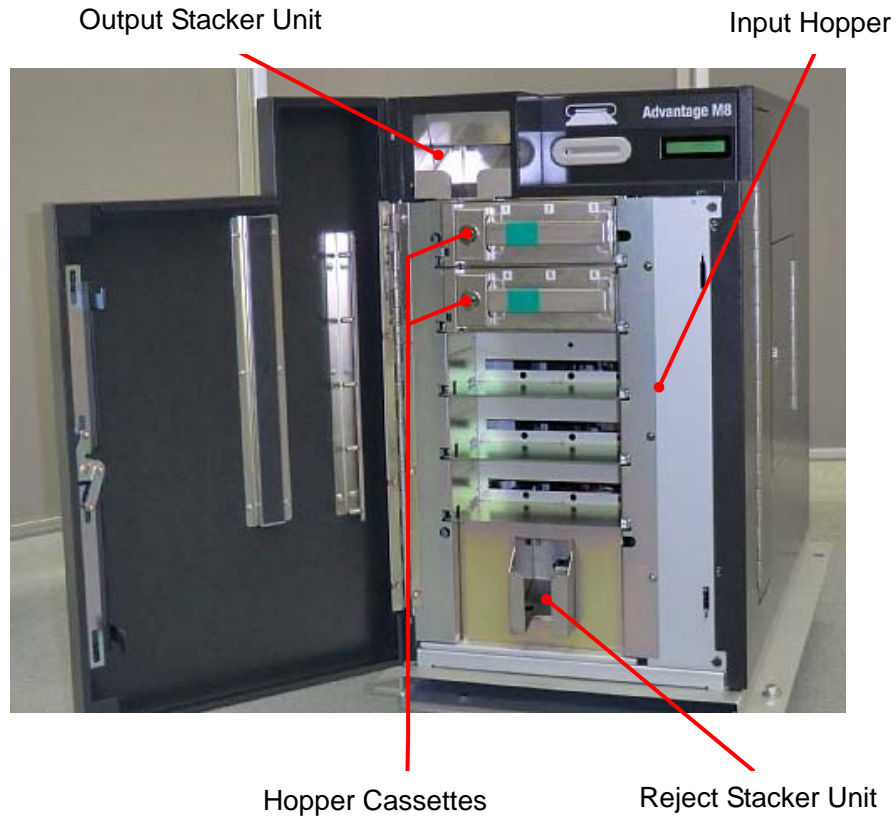
Inside of Right side door

Vertical Rotation unit   Emboss Unit
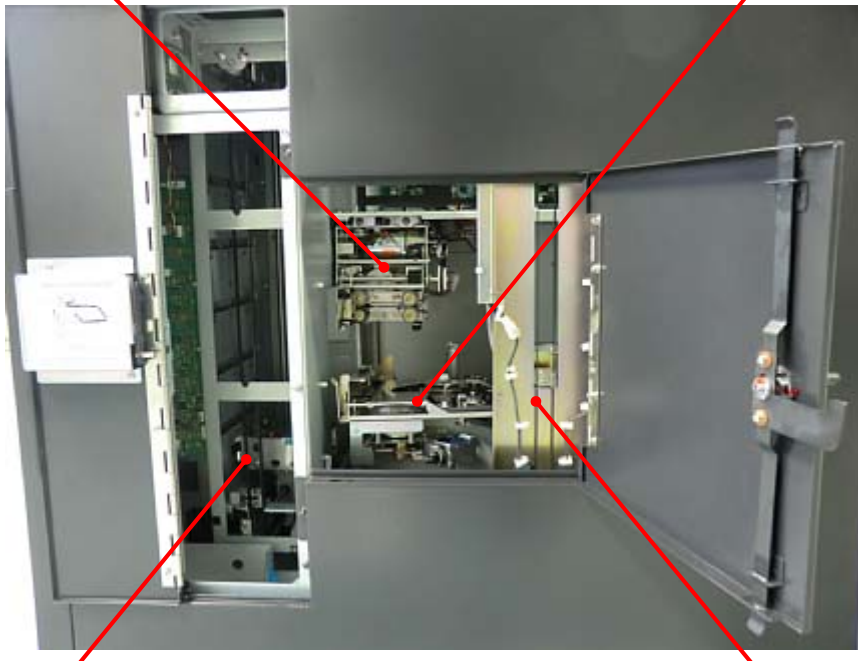
Main Transfer Unit   Carriage Unit

（* Elevator part to be called "Carrier" in this manual.)

（* Transfer unit to carry a card to the Vertical Rotation unit, Emboss Unit and Tipper Unit to be called "Carriage" in this manual.）

Preparation before Use

For installation, please read "Product Installation" in this document in advance.

Installation and connection of the main body

1. Place the main body on the installation space.

2. Install the Tipper Foil according to the procedure "Exchanging Tipper Foil" on page 14.

3. Connect the host computer and the main body with connection cable.

LAN Connector

USB Connector
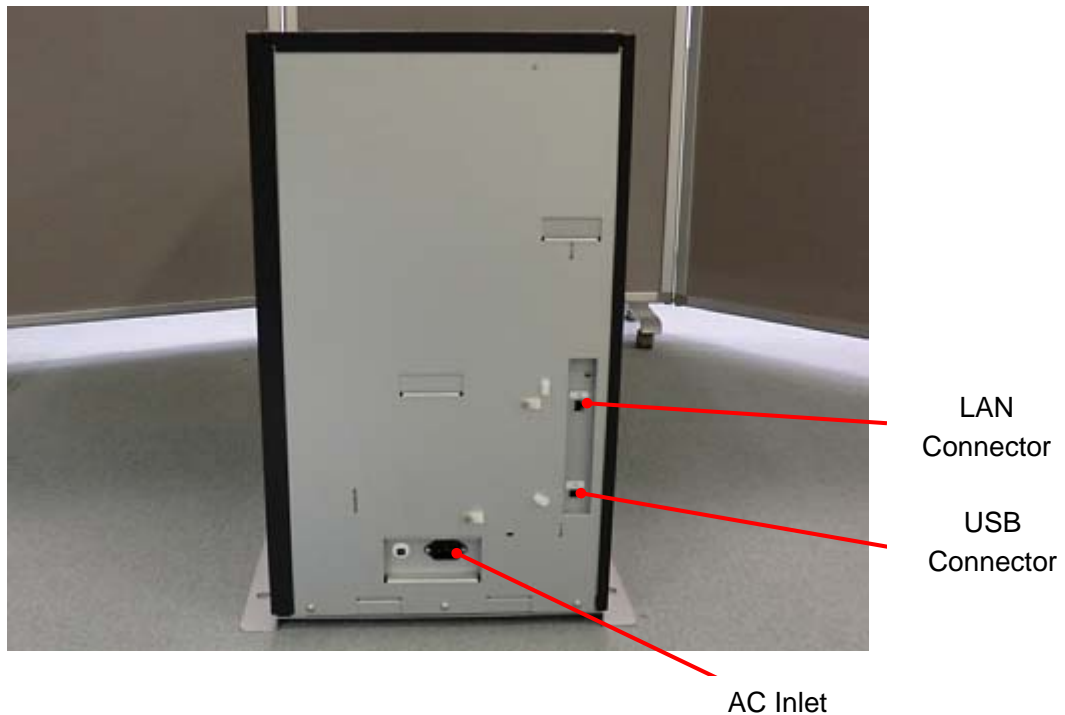
AC Inlet

4. Connect the power cord to the AC inlet and AC outlet.

> **⚠ Caution**
>
> ・ **Communication connectors (LAN, USB) are very sensitive to static electricity.**
>   **You should turn off the power before you connect or remove the cables on the rear side to protect the machine against the static electricity.**

5. Install the ribbon according to the procedure "Exchange of Thermal Transfer Ribbon" on page 12.

Card setting

1. Turn the power ON.
   Unlock the Front cover with the application software and the key turning clockwise. When the Front Cover is opened, the buzzer will beep, and the following error message will be indicated on the Main display.

   CV401 Front
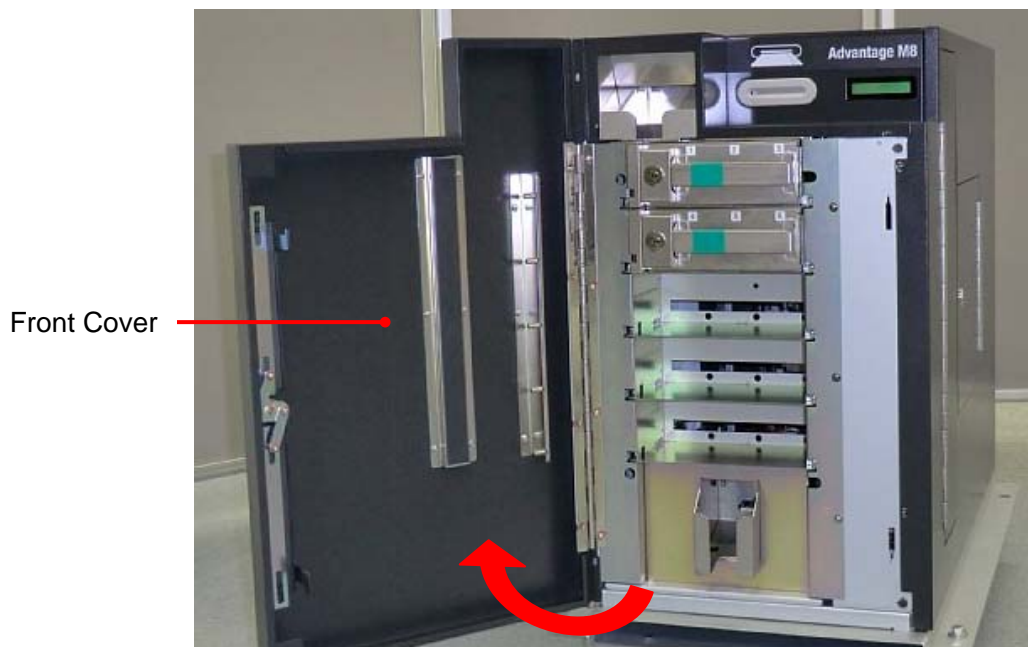
Front Cover

2. Pull out the Hopper Cassette from the main body.

3. Open the Hopper cover by turning the Hopper cassette key clockwise.
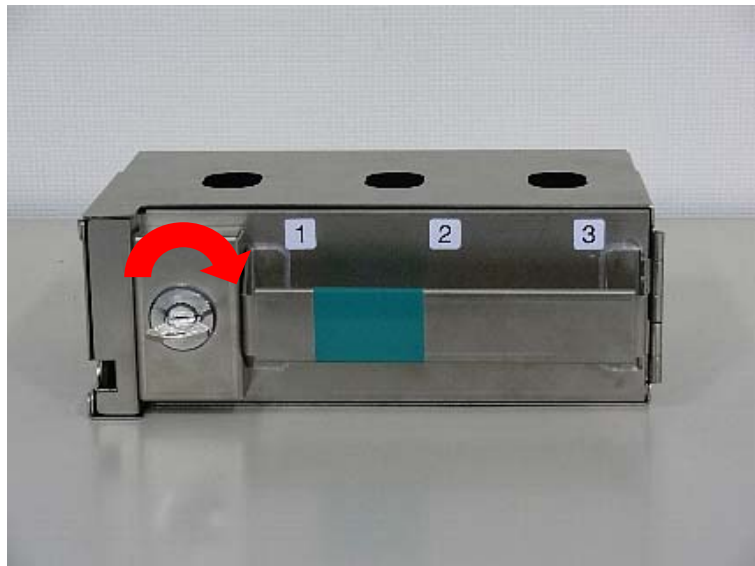
Turn the hopper cassette key clockwise.

Open the Hopper Cover.

4. Before putting cards into the hopper, they must be separated to prevent them from sticking to each other. Then place the cards into the desired Hoppers. Place a weight on top of the cards. Close the Hopper cover and lock by turning the cassette key counterclockwise.

Each Hopper can hold a maximum of 50 cards.

Please refer to the Illustration inside of the cassette to find card setting direction.

Weight

Max 50   Max 50   Max 50
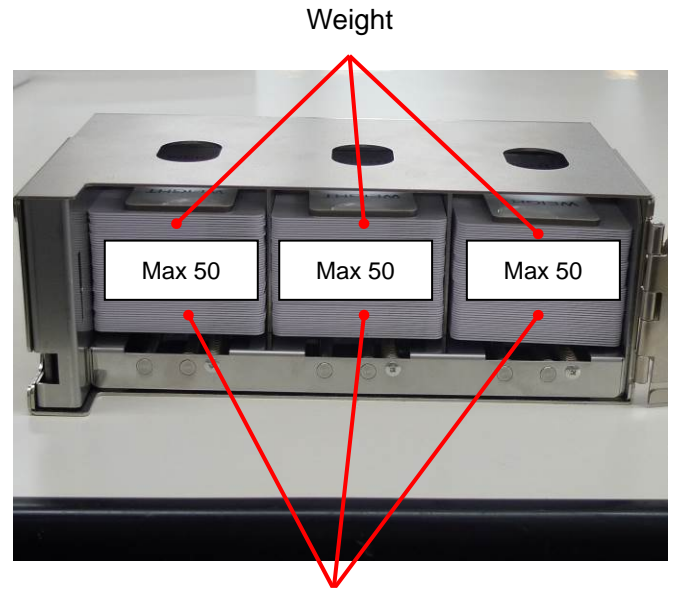
Card

Placing the cards in an extremely skew or acute angle may interfere with proper card seating and cause card jams.

NG
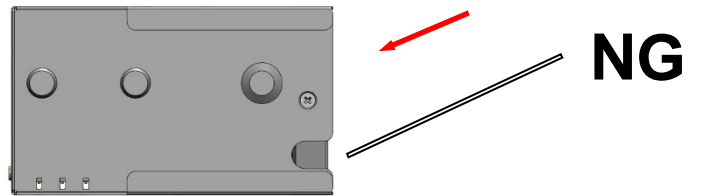
Set the cards on the sensor pin softly while keeping them horizontally.

OK

Sensor pin
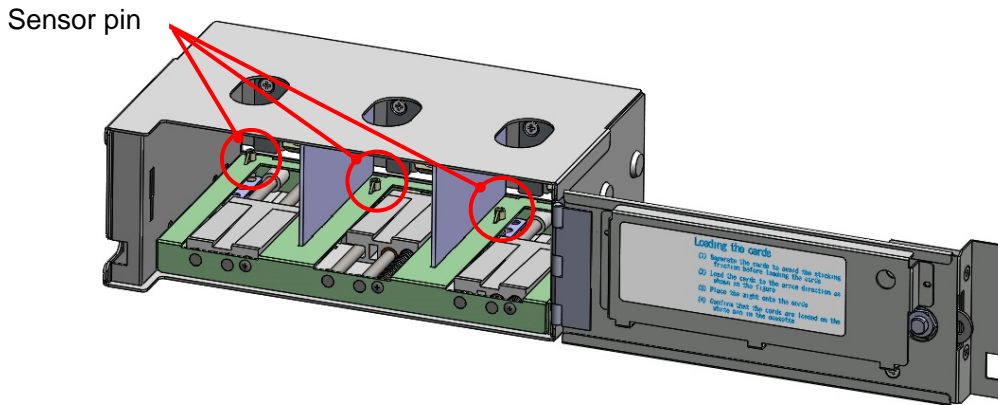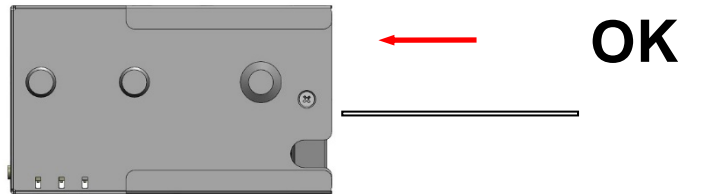
If the edge of a card is out of the Gate, it may cause card jams. In this case, please remove all cards from the cassette temporally and reseat them according to the step 4 as above.

NG   Card comes out of the Gate

Gate

Card

OK   Card is placed in cassette properly
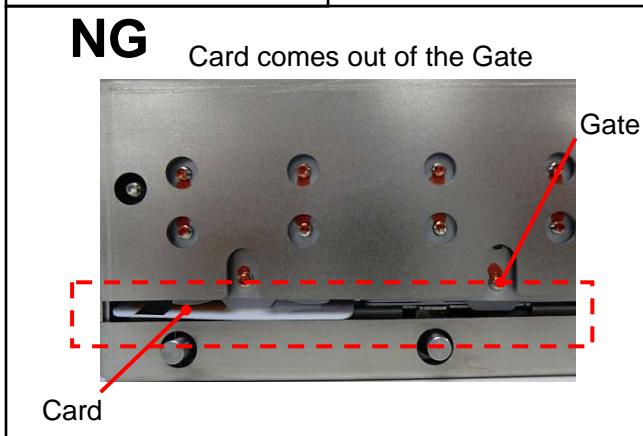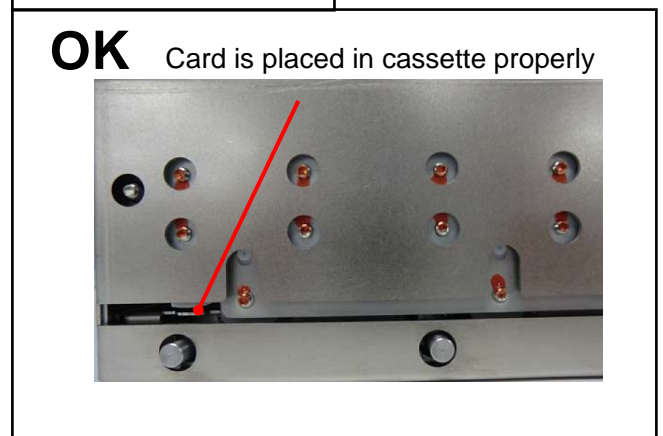
5. Insert the cassette into the main body until it clicks. Close the Front Cover to lock with the key.

> ⚠ **Caution**
>
> - **After separating the cards to prevent them from sticking to each other, check that there is no foreign object in the input hopper, then place the cards into the cassette.**
>
> - **If you see a card edge at the gate, all cards must be taken out from the cassette and reseated again.**

How to use the machine

Setting and Checking the IP Address

For issuing the cards, this product requires being connected to a host computer by LAN and USB.
To connect to a LAN, you need to set up an IP address.

How to check the existing IP address is described as follows.

1. Turn the power OFF, then open the Right side door by turning the key clockwise.

2. While pushing down on the Indent Cassette, turn the power ON.

3. When the buzzer starts beeping, release the Indent Cassette.

4. The IP address, Subnet mask, and Gateway will be displayed on the Main display scrolling every two seconds repeatedly.
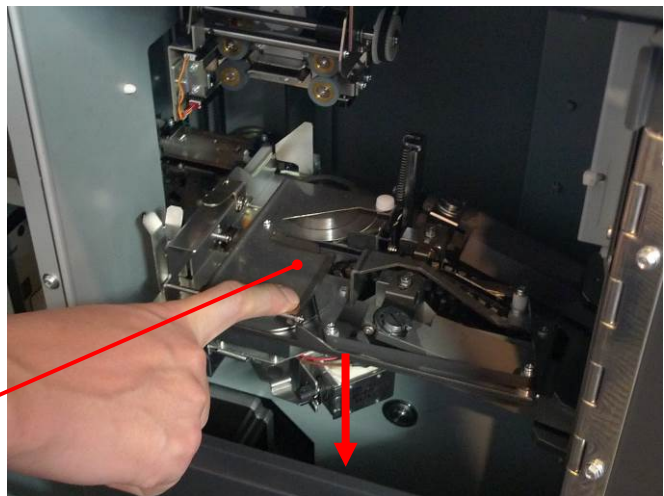
Push the Indent Cassette downward.

Ixxx.xxx.xxx.xxx

Displayed IP address

Sxxx.xxx.xxx.xxx

Displayed Subnet mask

Gxxx.xxx.xxx.xxx

Displayed Gateway

While getting an IP address from DHCP server, the Main display shows as follow.

Please wait...

After received IP address, the address is indicated on the Main display.

5. Close the Right side door and lock by the key, then turn the power OFF.

Card Issuing

1. Turn the power ON after connecting the power cable and the communication cables.

2. The following message will be indicated on the Main display.

> TP Warm-up　　xx%

(Warming up is not completed when using Tipper.)

> Not initialized

(Warming up is completed when using Tipper, or not using Tipper.)

3. Initialization triggered by the host computer.

> Initializing...

(During initialization)

4. When initialization is completed, the message will be changed.

> Issuing Mode

5. When received Issuing data from the host computer, Issuing operation is started.

> Card Issuing

6. Issued card will be stored in the Card Stacker or ejected to the Card Insertion/Exit Slot.

7. Error card will be transferred to the Reject Box.

> **Reference**
>
> - **If any error is detected during initialization, an error message is indicated on the Main display.**
>   **Please refer to "Error message" in this manual about the details and its measures.**

> **⚠ Caution**
>
> - **Do not insert a card or cover the Card Insertion/Exit Slot during the operation.**
>
> - **If you open the Front cover, Side door, or the Top cover during the operation, it will stop issuing the card. Do not reuse the canceled card because the data was not be processed correctly. You can restart the machine by turning off and on.**
>
> - **In the case when the machine got turned off because of power failure or other reasons, open the Front cover to remove the Hopper cassette. Make sure that the card does not come out from the rear side of the Hopper cassette, and then turn on the machine again.**

Exchange of Thermal Transfer Ribbon

1. Unlock the Top Cover by turning the key clockwise during the power ON, and then open the Top Cover.

Turn this key clockwise.

Open Top Cover.

The buzzer will beep, and the following error message will be indicated on the Main display.

```
CV402 Top / Side
```
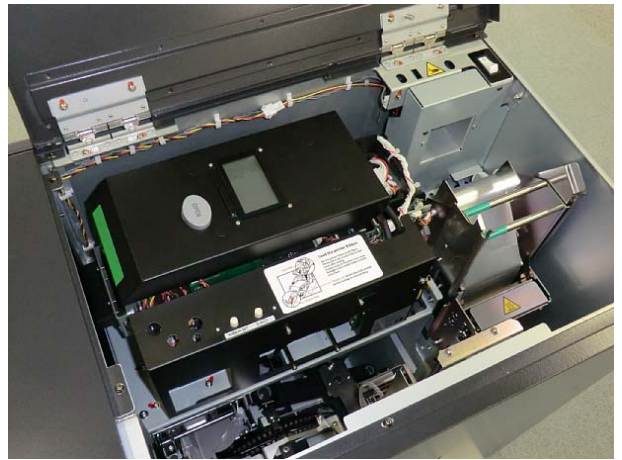
2. Push the Print /Encode Unit Cover Open Button to open the cover.
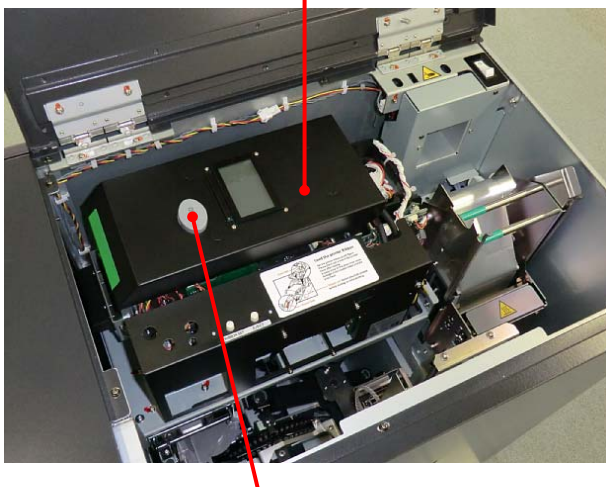
Print /Encode Unit

Open Print /Encode Unit cover.

Print /Encode Unit Cover Open Button

3. Detach the Thermal Transfer Ribbon from the Print /Encode Unit.
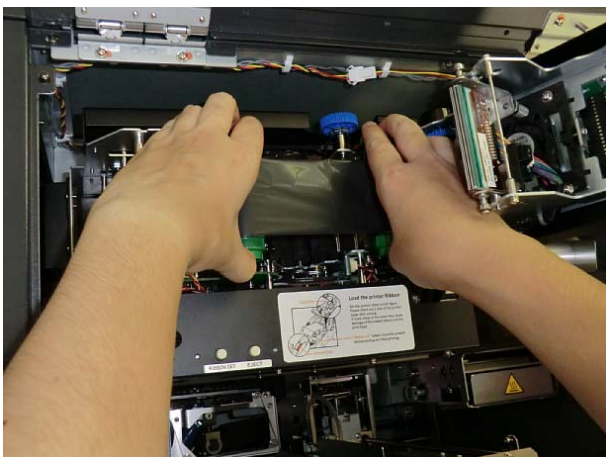
4. Install new Thermal Transfer Ribbon as shown in the picture below, and remove the slack of the ribbon.

Turn the unused side of the ribbon counter-clockwise to remove the slack

Thermal Transfer Ribbon

Unused side

Used side
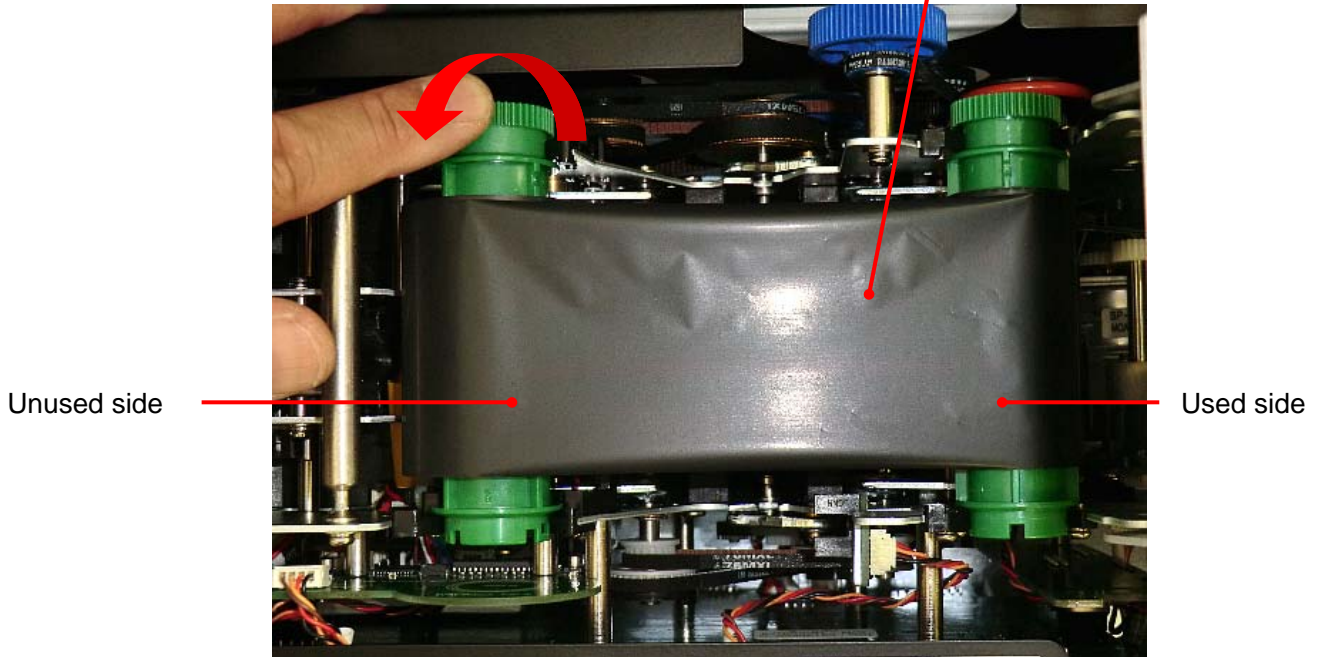
5. Close the Print/Encode Unit cover until it clicks.

6. Push the RIBBON SET button.
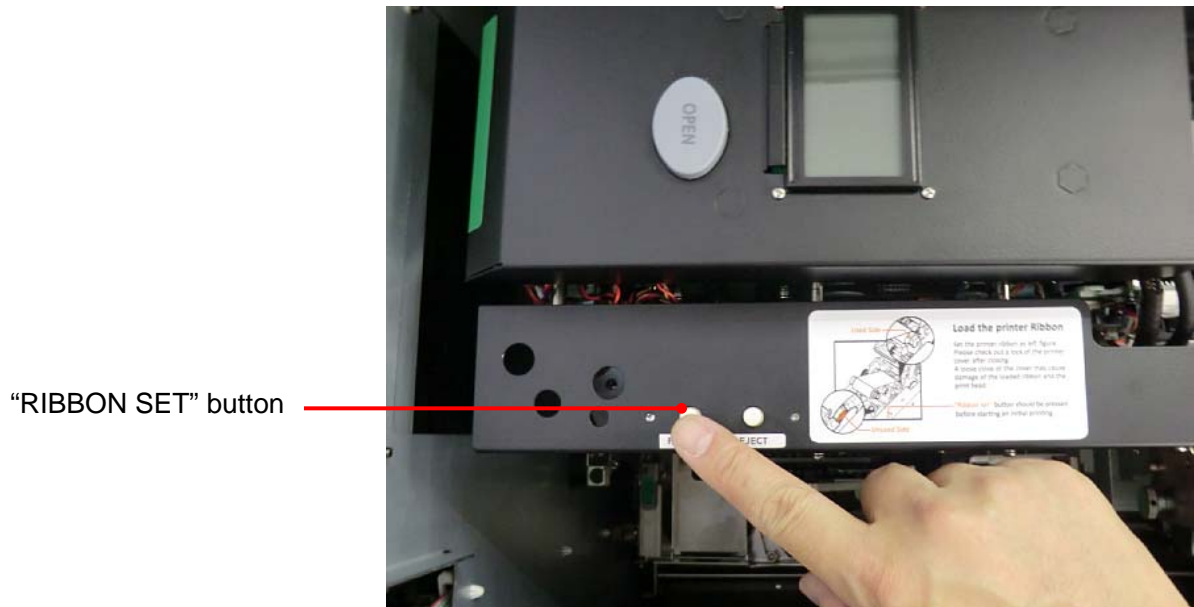
"RIBBON SET" button

7. Close the Top Cover, and then lock the Top Cover key.

⚠ **Caution**

- **Be sure to push the "RIBBON SET" button after installing a new ribbon. Otherwise, a print failure will occur.**
- **Be sure to remove the slack of the Thermal Transfer Ribbon before closing the cover. The slack will adversely affect the print quality.**

Exchanging Tipper Foil

1. Turn off the power, and then open the Top Cover by turning the key clockwise.

Turn this key clockwise.

Open Top Cover.
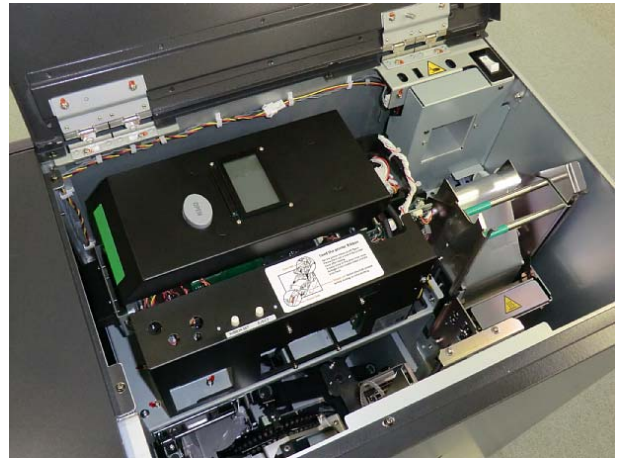
2. Grab the handle of the Tipper Unit to pull out from the main body.

Handle

⚠ **Caution**

- **There is a very high-temperature part in the Tipper Unit.**
  Make sure to grab the handle to avoid a burn when you pull up the Tipper Unit.

3. Remove the used Tipper Foil and paper core from the Tipper Unit. Pull each knob of the reel flange/unreel flange while holding the used tipper foil or the paper core to remove.

Paper Core

Used Tipper Foil

Unreel Flange Knob

Reel Flange Knob
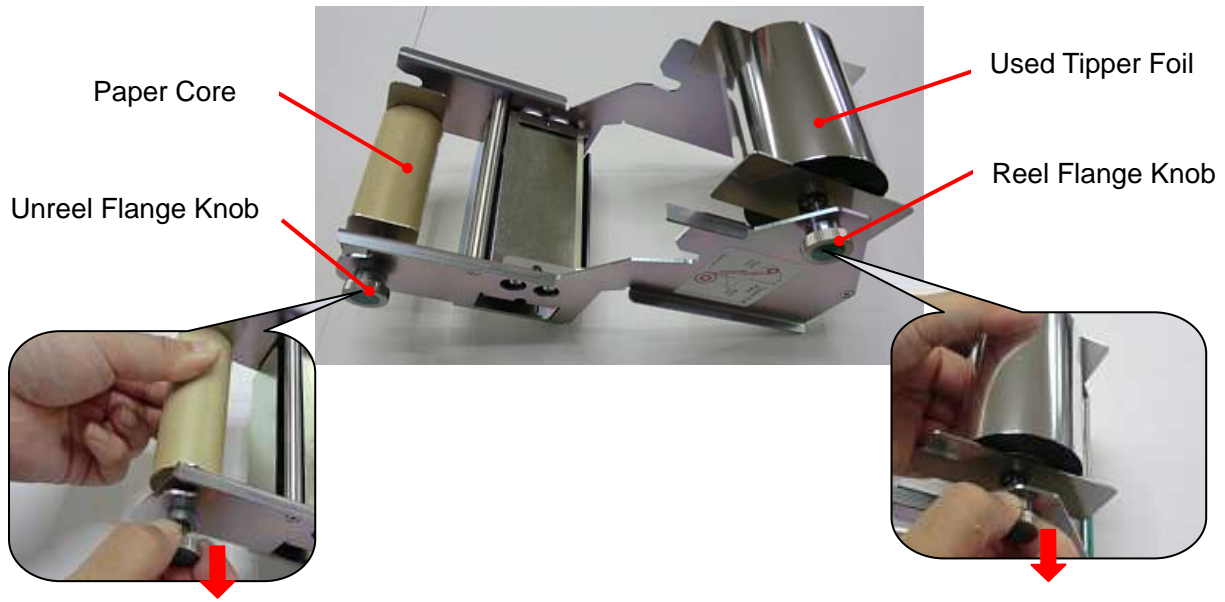
⚠ **Caution**

- **Be sure to exchange the Tipper Foil after it is sufficiently cooled down.**

4. Remove the used Tipper Foil from the reel hardware, then Install the empty paper core to it. Confirm there is no gap between the paper core and the flange of the reel hardware.

Reel Hardware

Paper Core

Confirm there is no gap between the paper core and the Flange of reel hardware
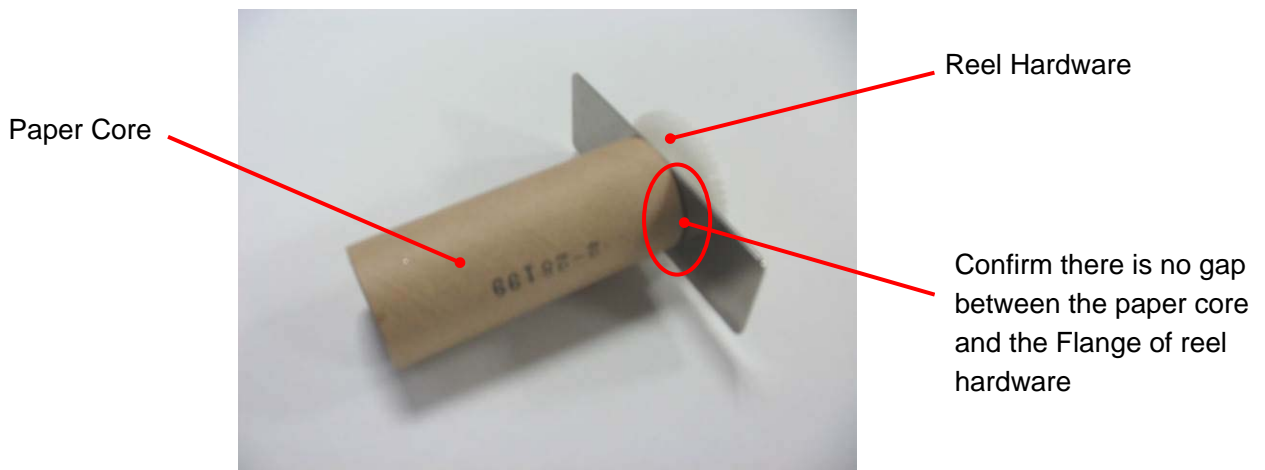
5. Insert the Reel hardware to the Tipper Unit while pulling the knob of reel hardware. At this time, fit a mounting hole of the Reel hardware into a pin on the cassette.
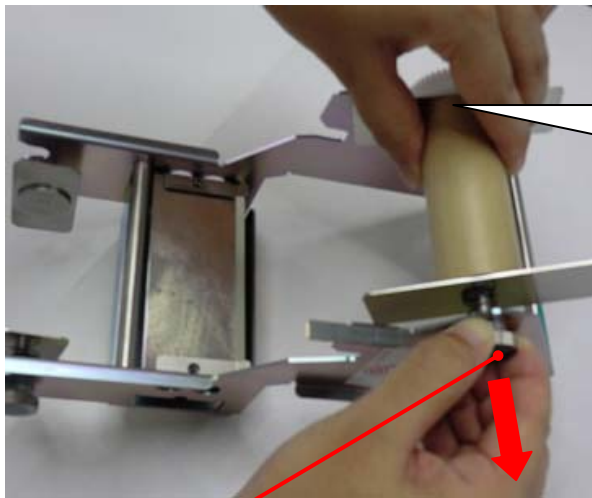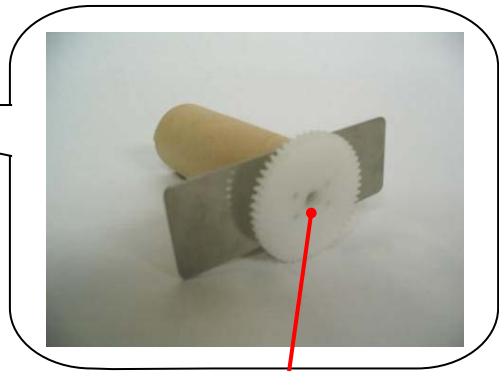
Fit this hole to the pin of Tipper Unit

Knob

6. Insert the Tipper foil into the Unreel flange while pulling the knob in the direction of the arrow.
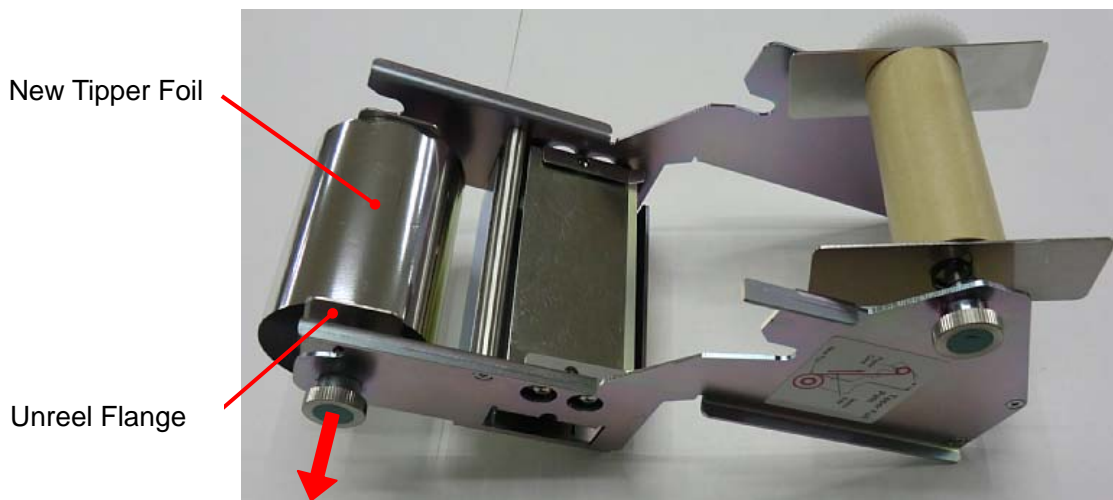
New Tipper Foil

Unreel Flange

7. Pull out the Tipper foil, and fix the edge of the foil to the paper core with an adhesive tape.
    Turn the Reel flange knob counter-clockwise approximately one turn to wind the foil on the reel.

Fix the foil to the Paper Core

Turn the knob one rotation

8. Gently slide the tipper Unit into the tipper holder along the guide rail.

Slide in the Tipper Unit along the guide rail slowly.

Guide Fin
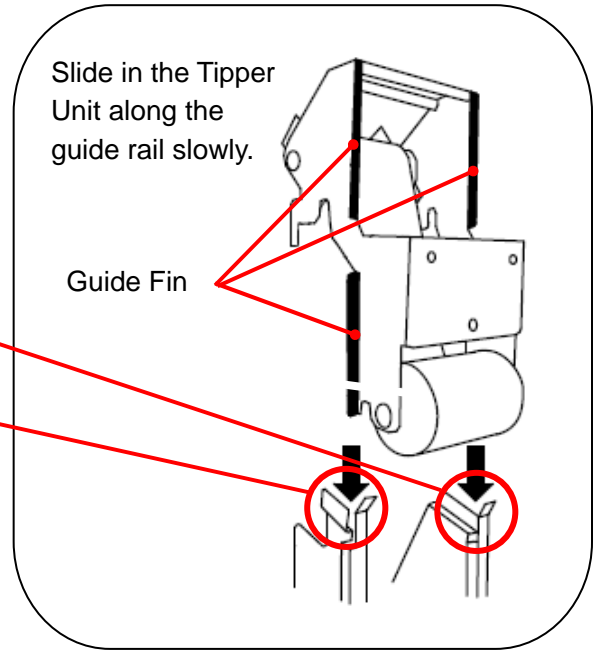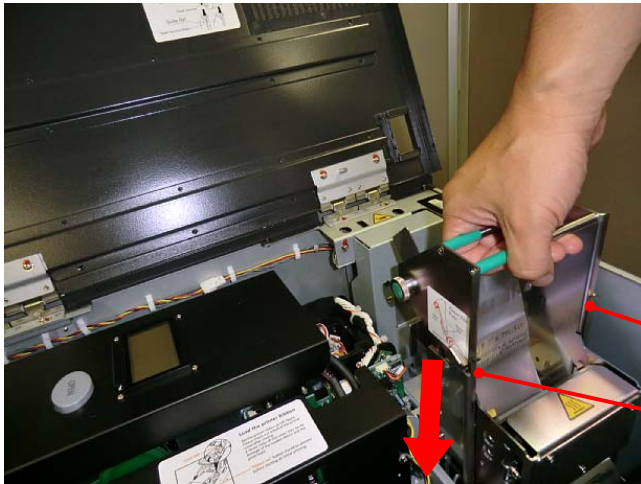
9. Close the Top Cover and lock with the key.

Exchanging Indent Film

1. Turn off the power, then turn the Right side door key clockwise to open. If carriage disturbs your access, push it to the right side.

Emboss Unit

Carriage Unit
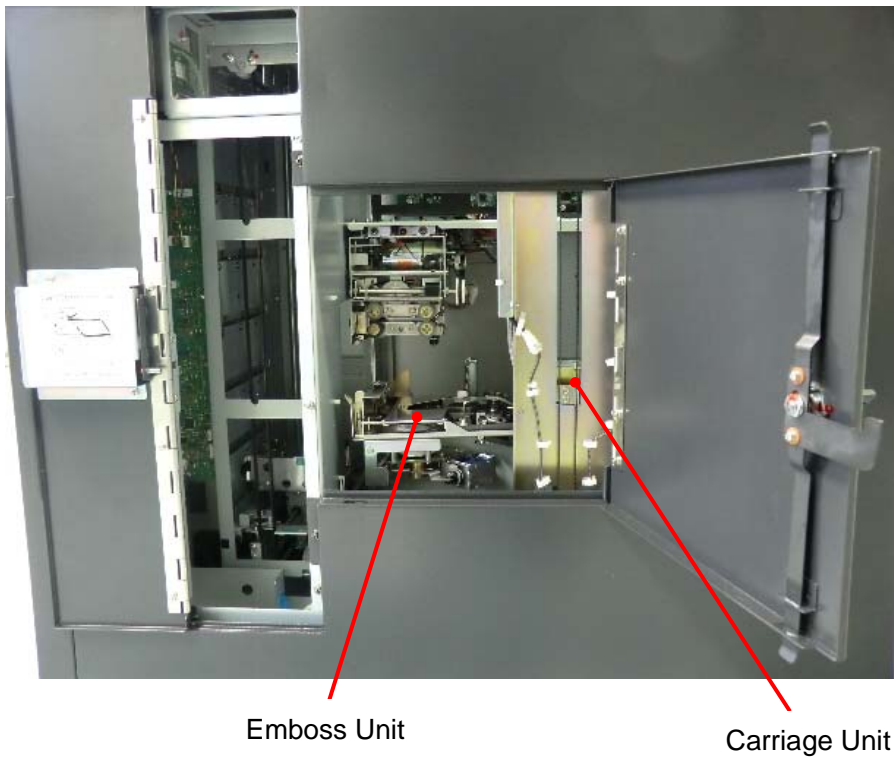
2. Release lock by pushing the lock lever with holding the Indent Cassette handle, and remove Indent Cassette upward and forward from the Emboss Unit.

Lock lever

Handle

Indent Cassette
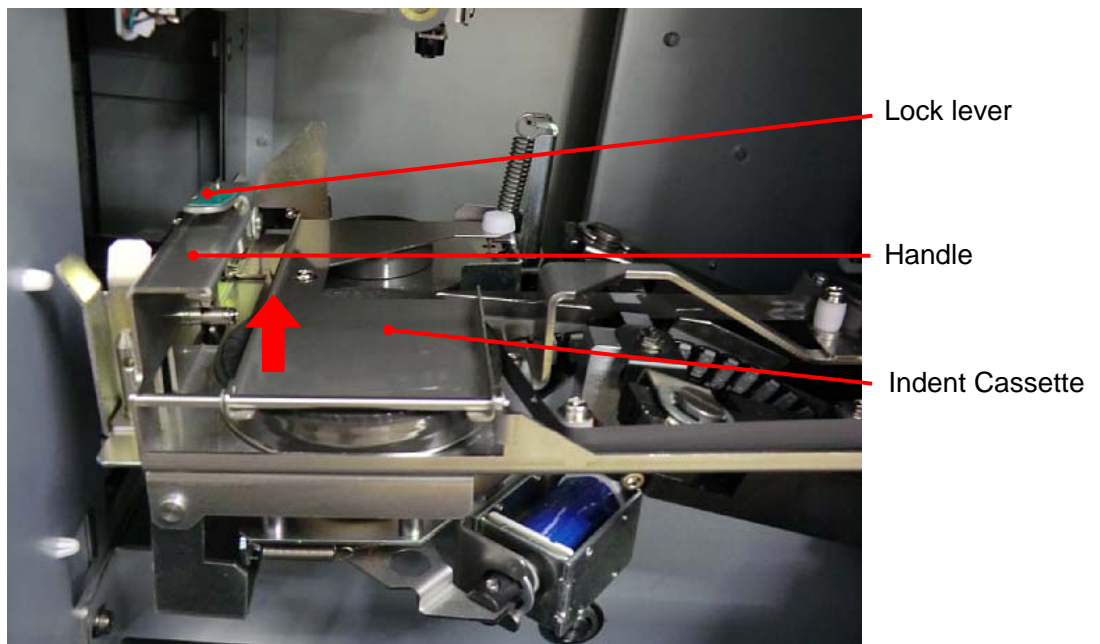
3. Remove a thumb-screw and open the Film Guide.

Thumb- screw

Film Guide

Empty Core
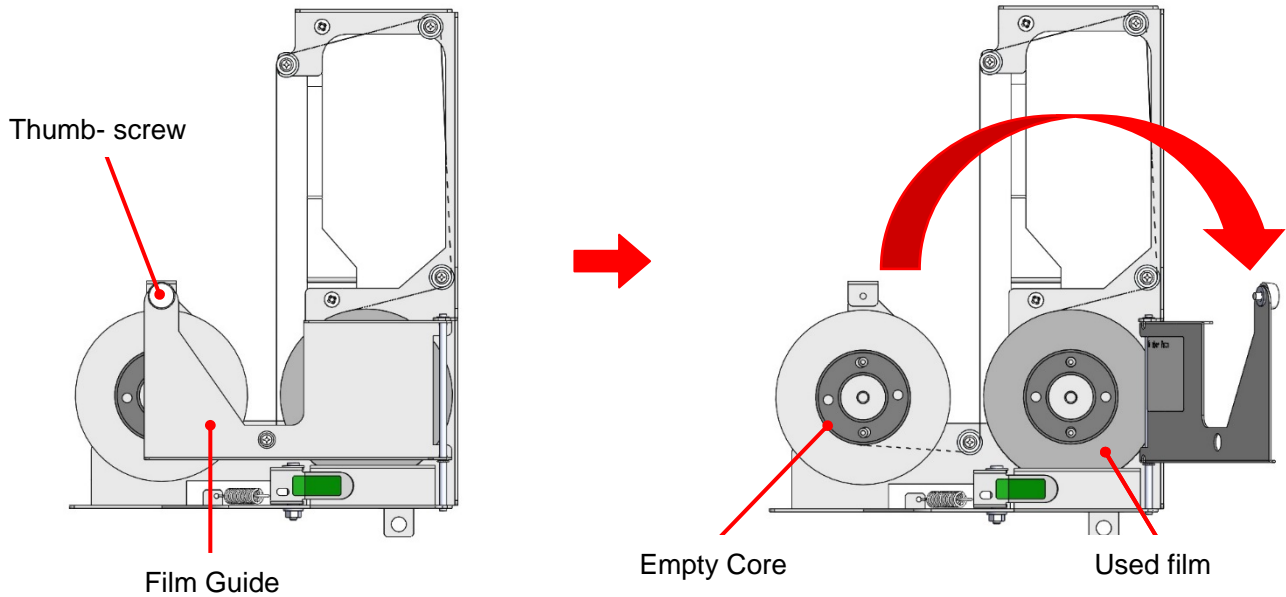
Used film

4. Remove the Empty Core and used film. Then set the new film to the left and the Empty Core to the right.

5. Peel off the fixing tape on the edge of the new film, and set the film according to the guidance figure for "Film Setting". Fix the edge of the film onto the Empty Core with the fixing tape.
   At this time, the film should not lie off the core largely.

Guidance figure for "Film Setting,"

Ribbon Path

New Ribbon Roll

Empty Core

New film
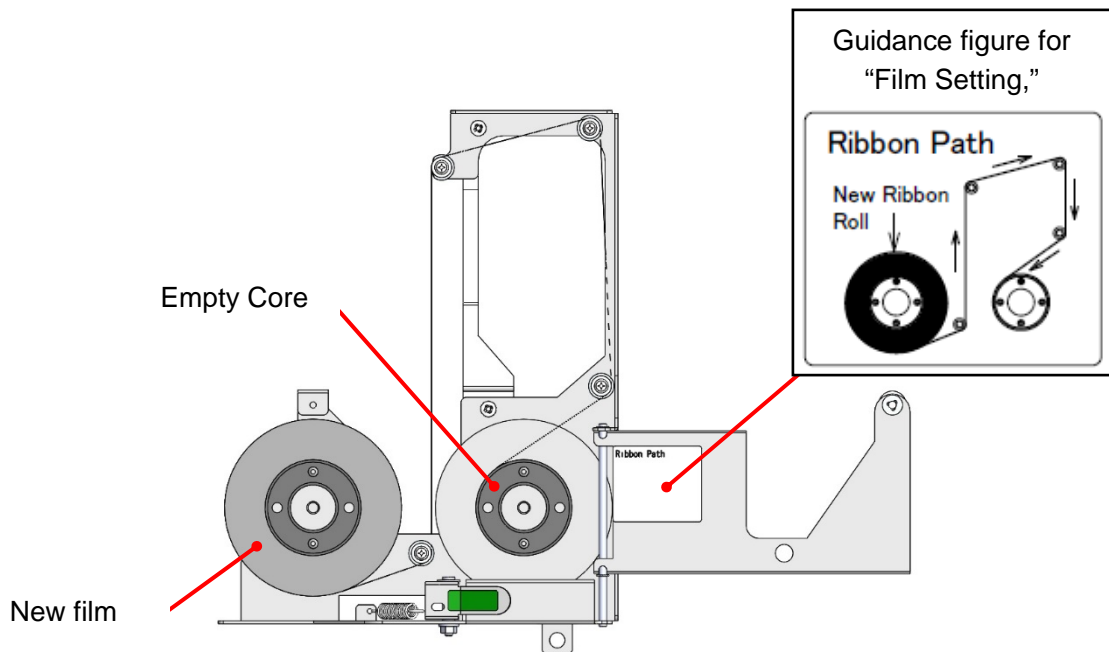
6. Turn the empty core three times counter-clockwise to remove the slack of the indent film.
   Close the Film Guide, and fix the thumb-screw.

7. Install the Indent Cassette to the main body. Insert the Guide shaft into the Guide hole of the cassette while grabbing the lock lever and the handle, and install the cassette until it clicks.
(Refer to the guidance figure for "Indent Cassette Setting" on the Right side door.)

Guide Hole

Guide Shaft
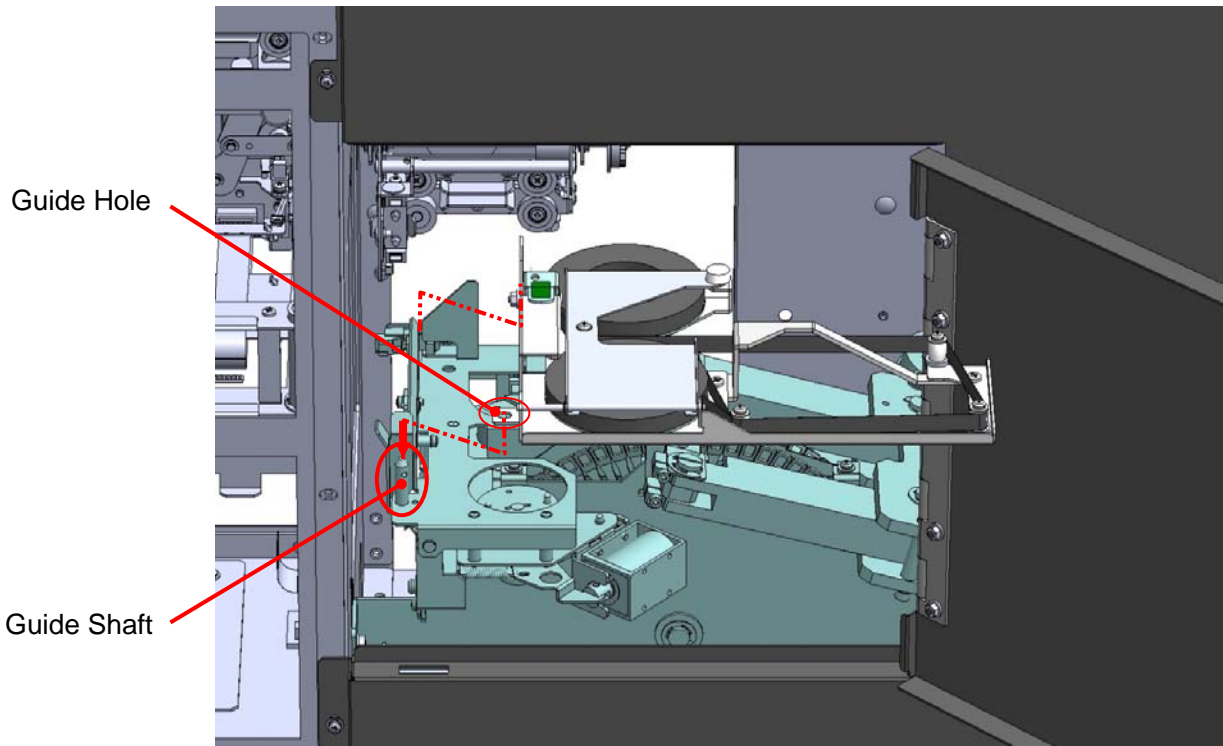
Push down the Indent Cassette until it clicks.

Guide Hole

Guide Shaft
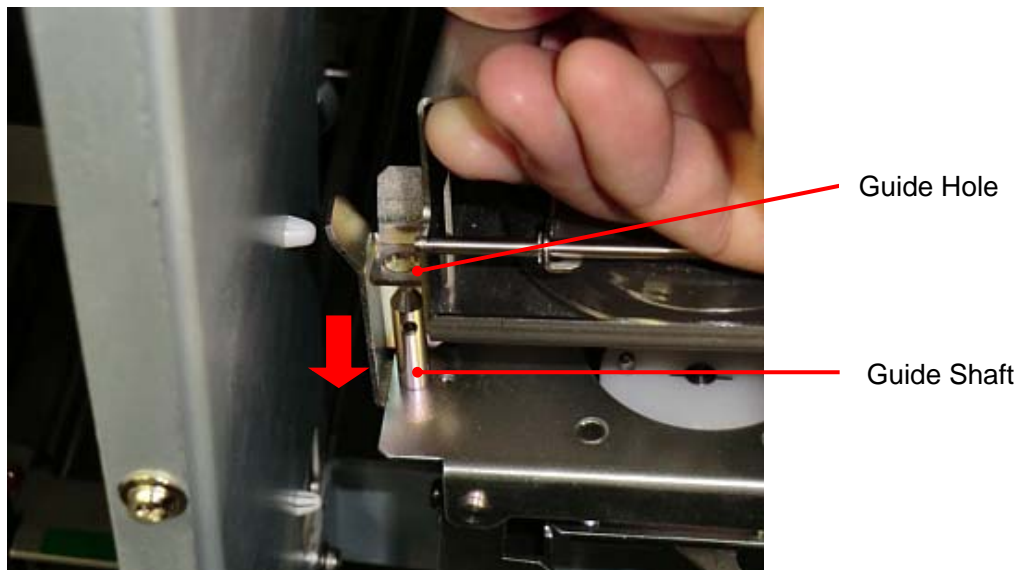
8. After attaching the cassette, check that the film has no slack.
Close the Right side door, and lock with the key.

⚠ **Caution**

- **Be sure to remove the slack of the Indent Film before installing the Indent Cassette. The slack may adversely affect the print quality.**

- **Before installing the halfway used film again, be sure to wind the used part completely.**

Picking up cards from Output Stacker

1. Turn the power ON and unlock the Front cover by application software.
   Then open the Front cover by turning the key clockwise.

Turn this key clockwise.

Open Front Cover.

When the Front Cover is opened, the buzzer will beep and the following error message will be indicated on the Main display.

```
CV401 Front
```

2. Pick up the cards from the Output Stacker.

Output Stacker Unit

3. Close the Front cover, and then lock the Front Cover with the key.

Picking up cards from Reject Stacker

1. Turn the power ON and unlock the Front cover by application software.
   Then open the Front cover by turning the key clockwise.

Turn this key clockwise.   Open Front Cover.

When the Front Cover is opened, the buzzer will beep and the following error message will be indicated on the Main display.

```
CV401 Front
```

2. Pick up the cards from the Reject Stacker.

Reject Stacker Unit

3. Close the Front cover, and then lock the Front Cover with the key.

Eco mode

1. This product has the following two different type Eco (Economy Energy) mode. Each mode can be set independently.
    *   Tipper Heater OFF
    *   Motor OFF

2. Eco mode can be set for the heater and motor as follows:
    i. No (Not change to Eco Mode)
    ii. 10 minutes (When the machine has been kept on standby for 10 minutes or more, it shifts to the Eco mode)
    iii. 30 minutes (When the machine has been kept on standby for 30 minutes or more, it shifts to the Eco mode)
    iv. 60 minutes (When the machine has been kept on standby for 60 minutes or more, it shifts to the Eco mode)
    （Factory default setting is "No" for both of Hopper and Motor）

3. During Eco mode, the following message will be indicated on the Main display.

Eco mode Tipper	Tipper is in Eco mode.

Eco mode Motor	Motor is in Eco mode.

Eco mode Both	Both Tipper and Motor are in Eco mode.

4. Eco mode is canceled by receiving "Clear Eco Mode" command from the host computer.

Error Message

When an error such as operation failure or a malfunction of the machine occurs, the buzzer will beep, and an error message will be indicated on the Main display or the Print /Encode Unit display.
If the same error occurs repeatedly, please contact your distributor.

Error during standby

An error code is indicated on the Main display when a sensor is defective while standby or the machine is not ready for starting operation.
You can check the error message on display and the PC screen either.

Error Message	Details and Countermeasures
CV301 Lock error	Detect electric lock anomaly on Front Cover.
CV302 Unlock err	Detect electric unlock anomaly on Front Cover.
CV401 Front	Detect Front Cover is open(during standby). ＜Close the cover to clear the error＞
CV402 Top / Side	Detect Top / Right side door is open(during waiting). ＜Close the cover to reset the error＞
CV512 Sensor err	Detect cover sensor anomaly. ＜Power OFF and ON＞
EJ101 Card full	Out Stacker is full. ＜Open Front Cover and pick up the cards.＞
IH512 Sensor err	Detect In Hopper sensor error. ＜Power OFF and ON＞
RJ101 Card full	Reject unit is full by cards. ＜Open Front Cover and pick up the cards.＞
SY221 Fan1 error	Detect abnormality of Cooling Fan. ＜Power OFF and ON＞

Consumable error

An error code is indicated on the Main display when a consumable is not set properly or has run out.
Please install the required consumable according to the following messages.

Error Message	Details
ID101 No film	No Indent film.
ID121 No cst	Indent film cassette has not set.
IH101 No card 1	No card in Hopper 1
IH102 No card 2	No card in Hopper 2
IH103 No card 3	No card in Hopper 3
IH104 No card 4	No card in Hopper 4
IH105 No card 5	No card in Hopper 5
IH106 No card 6	No card in Hopper 6
IH107 No card 7	No card in Hopper 7
IH108 No card 8	No card in Hopper 8
IH109 No card 9	No card in Hopper 9
IH110 No card 10	No card in Hopper 10
IH111 No card 11	No card in Hopper 11
IH112 No card 12	No card in Hopper 12
IH113 No card 13	No card in Hopper 13
IH114 No card 14	No card in Hopper 14
IH115 No card 15	No card in Hopper 15
IH121 No cst 1	Hopper cassette 1 is not set.
IH122 No cst 2	Hopper cassette 2 is not set.
IH123 No cst 3	Hopper cassette 3 is not set.
IH124 No cst 4	Hopper cassette 4 is not set.
IH125 No cst 5	Hopper cassette 5 is not set.
TP101 No foil	Nof Tipper Foil
TP121 No cst	Tipper Unit is not set.

Error during operation

An error code is indicated on the Main display when the machine does not run properly during operation or initialization. If the same error occurs repeatedly, please contact your distributor.

Error Message	Details and Countermeasures
CA201 Card jam	Card Jam (caused by malfunction of motor or sensor in Main Transfer Unit) < Power OFF, and remove the card >
CA221 Pusher err	Pusher motor error detected <Power OFF and ON >
CA303 Home err Y	Home detection error.(Carrier vertical direction) <Power OFF and ON >
CA304 Home err Z	Home detection error.(Carrier horizontal direction) <Power OFF and ON>
CA421 Card exist	Detect a card remaining on Carrier. < Power OFF, and remove the card>
CG302 Home err X	Home detection error. (horizontal direction) <Power OFF and ON >
CG303 Home err Y	Home detection error.(vertical direction) <Power OFF and ON >
CG421 Card exist	Detect a card remaining on carriage. < Power OFF, and remove the card>
CM501 Unknown	Receive unknown commands. <Make sure host PC and this product are connected correctly by LAN or USB.>
CM502 Sequence	Detect sequence error. <Make sure host PC and this product are connected correctly by LAN or USB.>
CM503 Parameter	Detect parameter error. <Make sure host PC and this product are connected correctly by LAN or USB.>
CM513 Receive	Detect receiving error. <Make sure host PC and this product are connected correctly by LAN or USB.>
CM514 Send	Detect sending error. <Make sure host PC and this product are connected correctly by LAN or USB.>
CV411 Front	Detect Front Cover open during card issuance operation. <Close Front Cover, initialize from host PC.>
CV412 Top / Side	Detect Top /Right side door open during card issuance operation. <Close Top/Right side door, and initialize from host PC.>
DR307 D Pos err	Home detection error.(Emboss Drum) <Power OFF and ON >
DR401 D Rota err	Detect an error during drum rotation. <Power OFF and ON >
EM211 Press err	Detect an error during embossing operation. < Power OFF, remove the card>

Error Message	Details and Countermeasures
EM501 Area err	The data to emboss outside of emboss available area was sent. <Make sure if emboss data is inside of available area.>
ID401 Cst down	Cassette not moved down position. <Power OFF and ON >
ID402 Cst up	Cassette not moved up position. <Power OFF and ON >
ID403 Feed err	Error detected during film rotate operation. <Power OFF and ON >
ID501 Area err	The data to emboss outside of indent available area was sent. <Make sure if emboss data is inside of indent available area.>
IN201 Card jam	Card Jam. (caused by malfunction of motor or sensor in Input hopper Unit) < Power OFF, and remove the card>
IN401 Card eject	The issued card was not pulled out even after a certain period of time. <Open Front Cover, and remove the card from Reject Unit.>
IN403 Timeout	Insert waiting time out. <Insert card within 30 seconds after starting card issuing by application software.>
IN421 Card exist	Detect a card remaining in Insert slot. < Remove the card.>
SY101 No Card	Not find a card. <Make sure if a card does not fall inside the machine.>
SY501 Not init	Card issuance command was sent before initialization. <Initialize the machine from host PC.>
SY904 FRAM error	Detect FRAM (for data storage) error. <Power OFF and ON >
TP211 Press err	Detect an error during Tipper foil pressing operation. <Power OFF and ON >
TP301 HP err	Detect an error during searching home position. <Power OFF and ON >
TP401 Wup err	Heater temperature does not reach to the established value. <Power OFF and ON >
TP901 Temp err	Heater temperature could not reach to the established value even after the specified time has passed. <Power OFF and ON >
VR201 Card jam	Card Jam.(caused by malfunction of motor or sensor in Vertical Rotation Unit.) < Power OFF, and remove the card.>
VR221 V Rota err	Detect an error during rotating operation. <Power OFF and ON >
VR421 Card exist	Detect a card remaining on Vertical Rotation Unit. < Power OFF, and remove the card>

⚠ **Caution**

- **When serious errors listed above has occurred, be sure to shut down all power before checking and making any countermeasure action.**
- **Be sure to shut down all power and wait more than one hour before checking or making a measure for Tipper Unit. The Tipper Unit has a high-temperature area, and it may be the cause of an injury or a burn.**

Error and warning during printing or encoding operation

If an error or warning is indicated by the application software, and no error or warning is indicated on the Main display, make sure whether it is indicated on the Print /Encode Unit display.
To check the Print /Encode Unit display, please open the Top Cover.
If the same error or warning occurs repeatedly, please contact your distributor.

A. Errors
(1) TPH(Thermal Print Head)

Code	Message	Details and Countermeasures
10	Top Cover (TPH Module)	Print /Encode Unit cover is opened during card printing operation. <Make sure that the cover is closed properly>
11	TPH Up/Down Failure	Up/down movement of the Thermal Print Head is interrupted. <Repair service is required. Contact your distributor>
13	Abnormal TPH Thermistor Temperature	An abnormal temperature of Thermal Print Head is detected. <Repair service is required. Contact your distributor>

(2) Card Feeding

Code	Message	Details and Countermeasures
12	Card Jammed	The card is jammed in Print /Encode Unit. <Remove the card>

(3) Ribbon

Code	Message	Details and Countermeasures
14	Ribbon Encoder Error	Run out of Thermal Transfer Ribbon or encoder error occurs. <Make sure that Thermal Transfer Ribbon is not installed incorrectly, or Thermal Transfer Ribbon has not run out>

(4) Card

Code	Message	Details and Countermeasures
17	IC Module Up/ Down Error	IC Content module position error occurs. <Repair service is required. Contact your distributor>
50	[Changer] Module Response Timeout	Flipper communication error occurs. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
51	[Changer] Module Transmission Timeout	Flipper communication error occurs. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
52	[Changer] Home Position Failure	The Flipper can not be moved back to home position. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
53	[Changer] Card Flipper Failure	An error occurs when the Flipper turn up. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
54	[Changer] Card Input Timeout	The Print /Encode Unit stops when the card is entering the Flipper. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
55	[Changer] Card Input Jam	The card fails to enter the Flipper on time. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
56	[Changer] Card Output Jam	The card is jammed in the Flipper. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
57	[Changer] Card Exist	The card is not ejected from the Flipper. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>

(5) Miscellaneous

Code	Message	Details and Countermeasures
15	Media Error	The media error occurs. <Make sure whether the card is not set in the wrong direction>
16	EEPROM Error	An EEPROM read/ write error occurs. <Turn the power OFF and back ON>

B. Warning

(1) Card

Code	Message	Details and Countermeasures
23	[IC] Contact Error	Print /Encode Unit fails to contact IC chip. <Make sure whether the card is not set in the wrong direction>
24	[MS] Encoder Error	Print /Encode Unit fails to encode magnetic stripes. <Make sure whether the card is not set in the wrong direction>
25	[MS] Read Error	Print /Encode Unit fails to read magnetic stripes. <Make sure whether the card is not set in the wrong direction>
26	[MS] Read STX Error	No STX is found in read data. <Make sure whether the card is not set in the wrong direction>
27	[MS] Read Parity Error	A parity error occurs when Print /Encode Unit read the data from magnetic stripes. <Make sure whether the card is not set in the wrong direction>
28	[MS] Read ETX Error	No ETX is found in read data. <Make sure whether the card is not set in the wrong direction>
29	[MS] Read LRC Error	LRC is inconsistent in data that is read from magnetic stripes. <Make sure whether the card is not set in the wrong direction>
30	IC Module Response Timeout	IC module communication failed. <Make sure whether the card is not set in the wrong direction>
33	Card Eject Error	Flipper module communication failed. <Turn the power OFF, and remove the card from Print /Encode Unit, turn the power ON>
34	Card Input Timeout	The card input is interrupted. <Make sure whether any cards are not jammed in the path from the Input Hopper to Print /Encode Unit>

(2) Ribbon

Code	Message	Details and Countermeasures
35	Ribbon Life Low	Thermal Transfer Ribbon life is reduced to 10% or less. <Prepare to replace Thermal Transfer Ribbon>
36	No Ribbon Life	Thermal Transfer Ribbon is fully consumed. <Replace the Thermal Transfer Ribbon with a new one>
38	RF Tag Ribbon Error	Thermal Transfer Ribbon is not installed properly. <Make sure whether Thermal Transfer Ribbon is not installed in the wrong direction>

(3) Miscellaneous

Code	Message	Details and Countermeasures
20	Command Error	Print /Encode Unit receives non-conforming command. <Contact your distributor>
21	Parameter Error	The parameter is not valid. <Contact your distributor>
22	Main Communication Part Timeout	The command is not sent on time. <Contact your distributor>

C. Trouble shooting

Symptom	Countermeasures
The ribbon is frequently cut, or some part of data is not printed.	Check the X-coordinate in the printer driver. <The recommended starting value for the X- coordinate is 14 ± 2>
The Print /Encode Unit is unable to find the programs.	Make sure host PC and this product are connected correctly by LAN or USB. <Reboot the PC>

Error Reset

Removing the card remaining in Input Hopper

1. Turn the power ON and unlock the Front cover by the application software. Then open the Front cover by turning the key clockwise.

Turn this key clockwise.

Hopper Cassettes

2. Remove the Hopper Cassette that has the remaining card.

3. Remove the card from the rear side of the Hopper Cassette.

Hopper Cassette

Remaining Card

Pull to remove the card

* If the card cannot be pulled out from the rear side of the Hopper Cassette, open the Hopper Cover by turning its key clockwise.

Remove all weight and cards, and pull out the remaining card from the Hopper.

Remaining card

Hopper Cover

Remove the remaining card from the front.
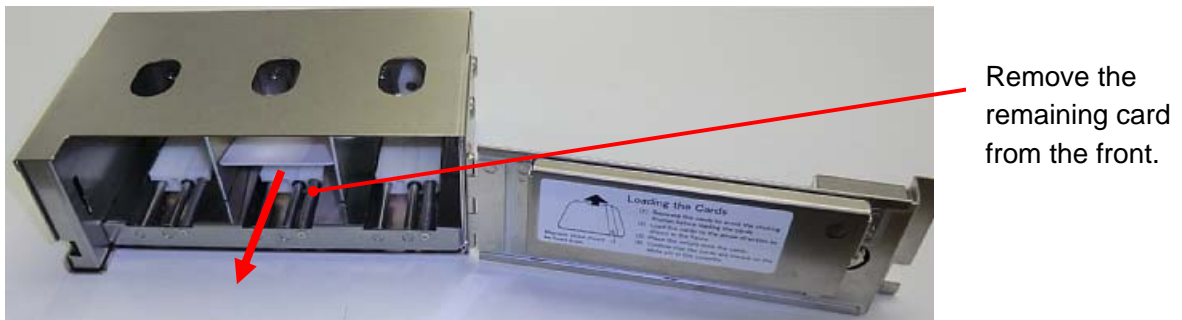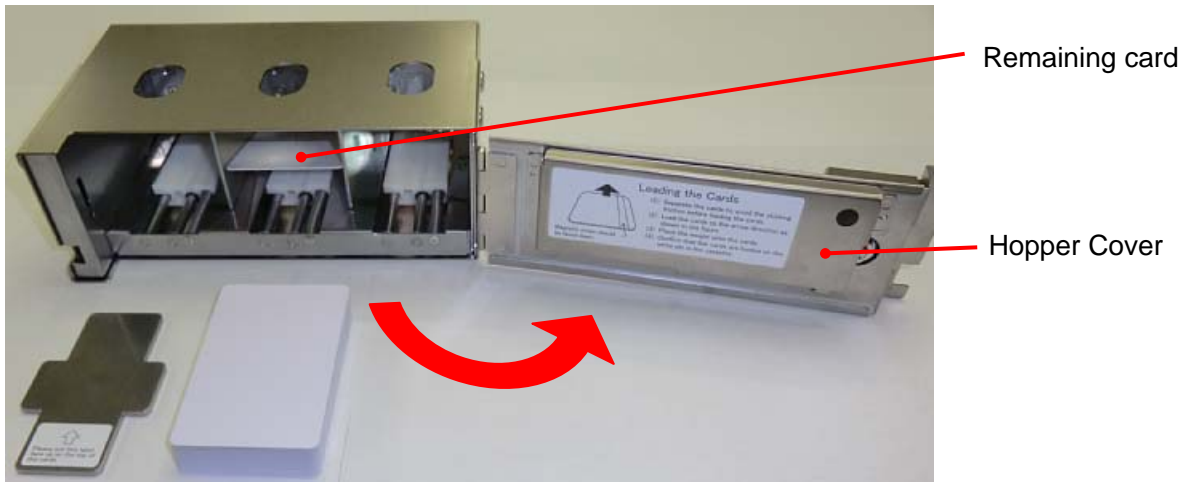
4.   Close the Hopper Cover and install the Hopper Cassette to the machine.
     Close the Front Cover and lock the Key by turning it counterclockwise.

Removing the card remaining in Main Transfer Unit

1. Turn the power OFF, and open the Right side door by turning the key clockwise.

Turn this key clockwise

Open Right side door
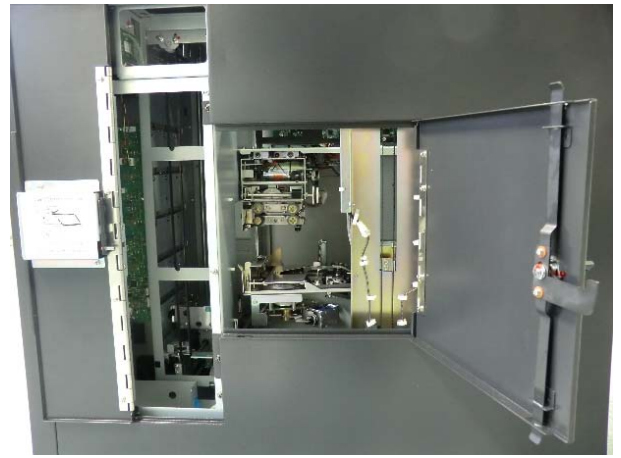
2. Check if any cards are remaining in the Carrier of the Main Transfer Unit.
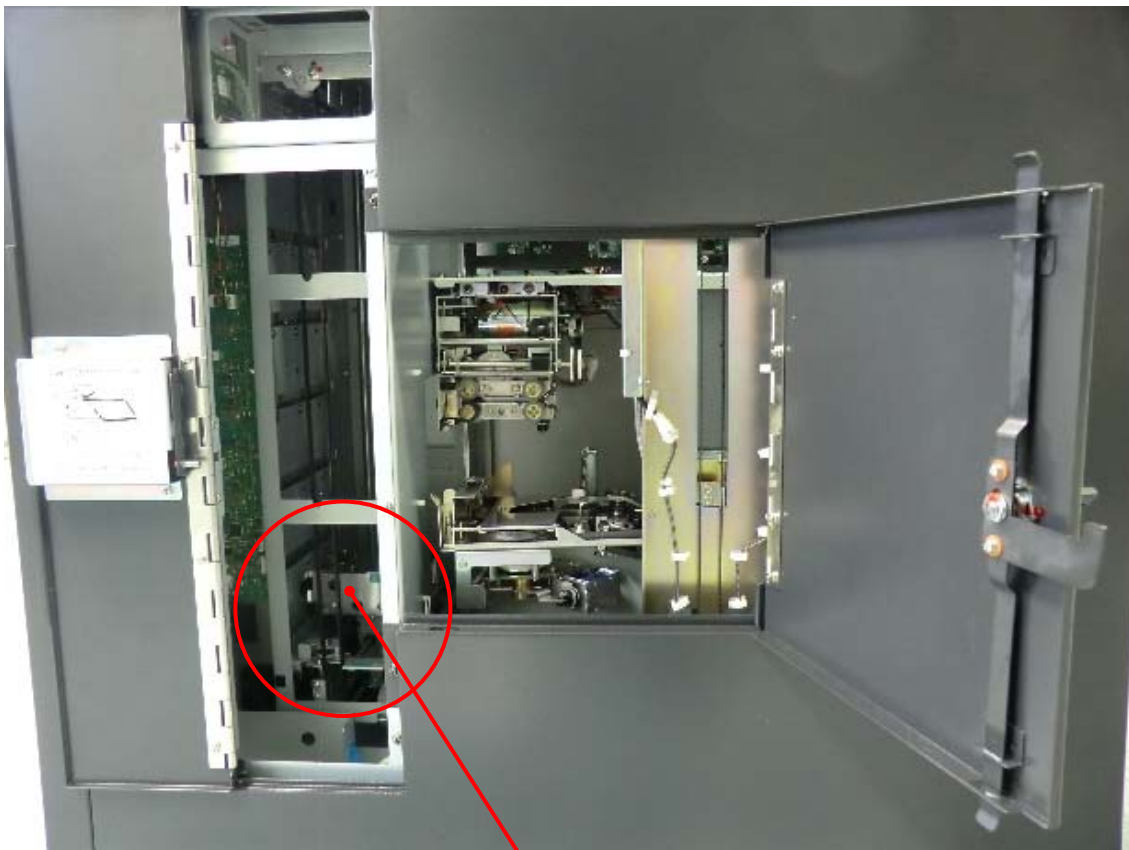
Carrier of the Main Transfer Unit

If the remaining card is not on the Carrier, turn the Knob (X) to carry the card toward the Carrier.
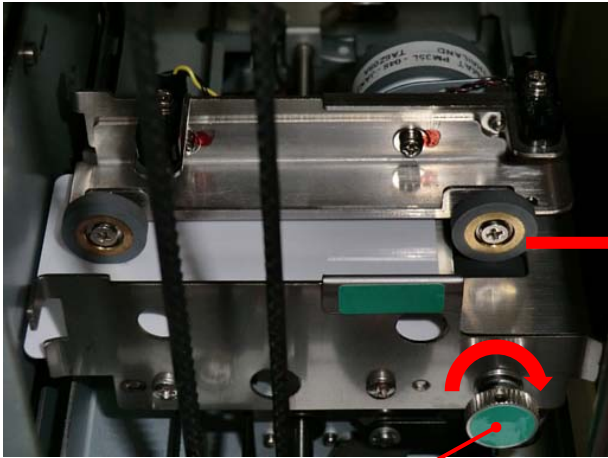
Turn the Knob (X) clockwise to carry the card to the right side.
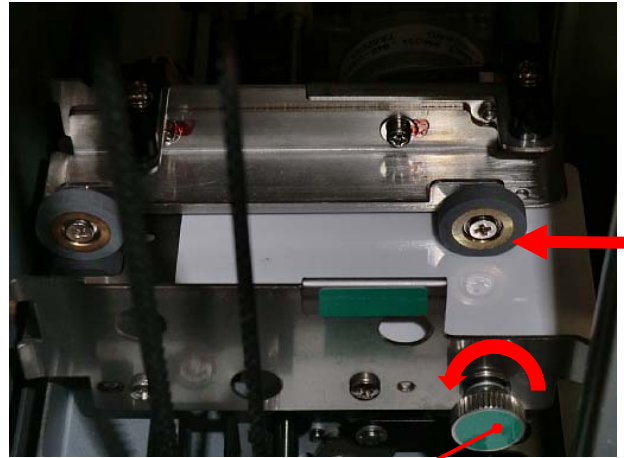
Turn the Knob (X) counter-clockwise to carry the card to the left side.

When you cannot access the Carrier, grip Knob (Z) and pull the Carrier forward.
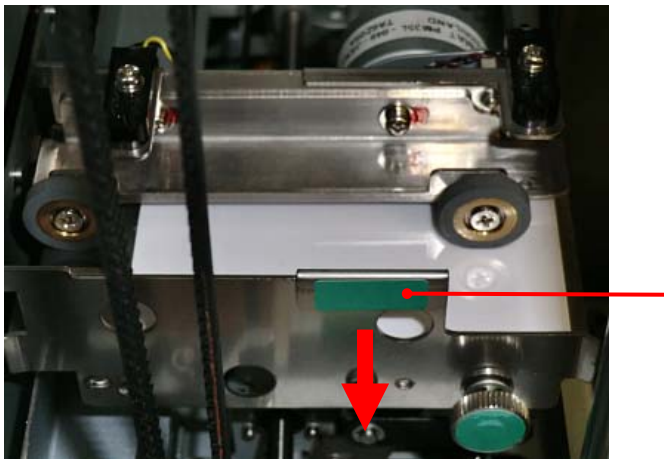
3. Grip the Knob (Y) and move the Carrier to the height between the Vertical Rotation Unit and the Indent Unit.
    While holding the Knob (Y), turn the Knob (X) clockwise to bring out the card from the Carrier. Pull out the card by hand.
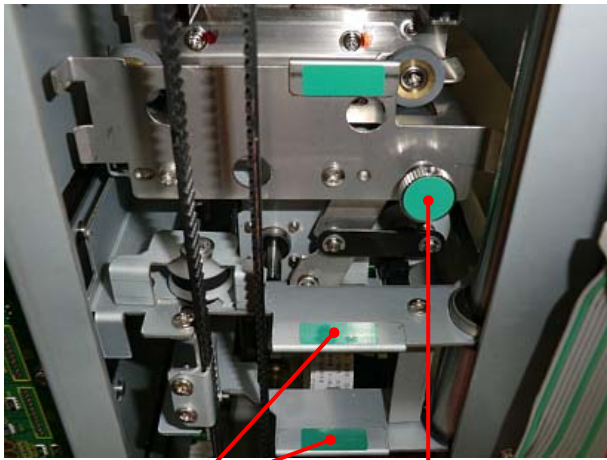
Knob (Y)   Knob (X)
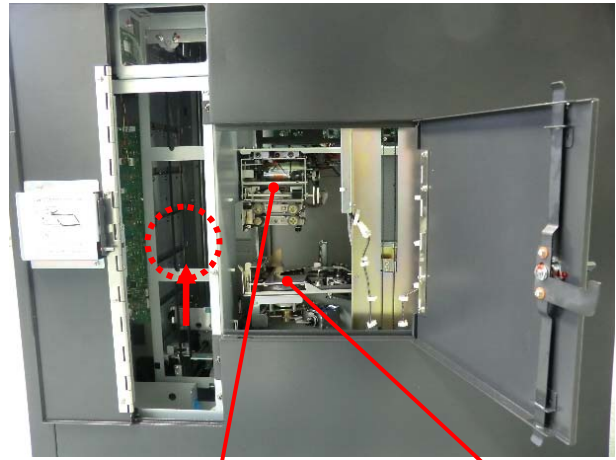
Vertical Rotation Unit   Indent Unit
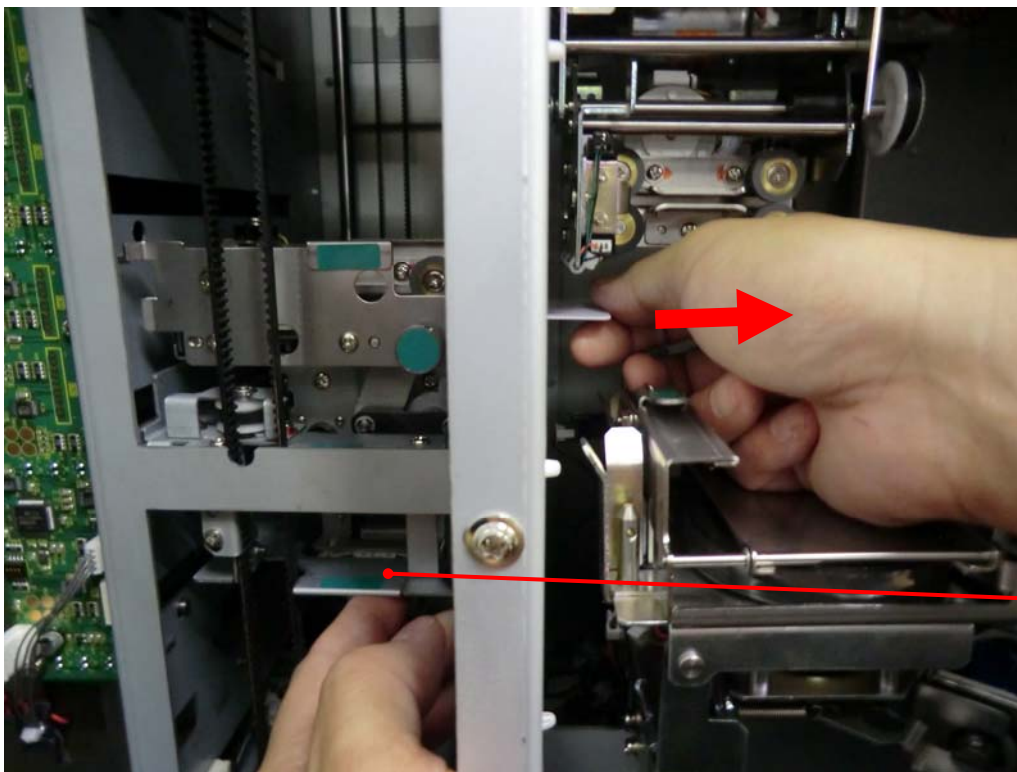
Pull out the card from the Carrier by hand.

Hold the Carrier while removing the card.

4. Close the Right side door and lock with the key.

Removing the card remaining in Print /Encode Unit

1. Turn the power OFF, open Right side door by turning the key clockwise.
   Open Top Cover by turning the key clockwise.

Turn this key clockwise

Open Right side door

Turn this key clockwise.

Open Top Cover.
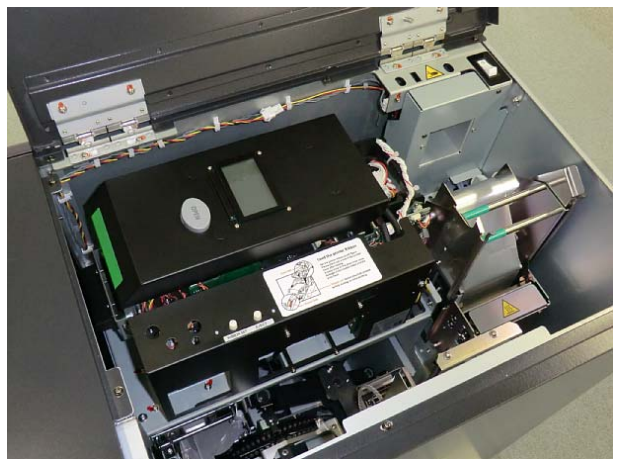
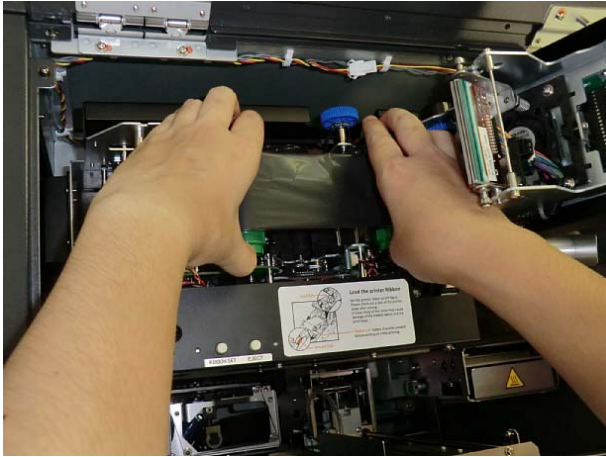2. Push down the button to open the Print /Encode Unit cover.
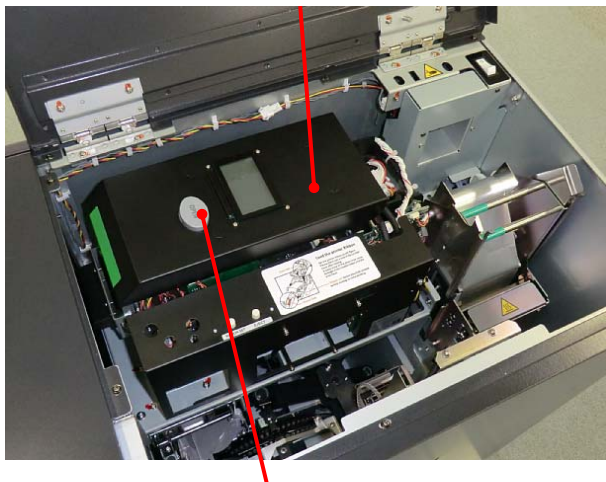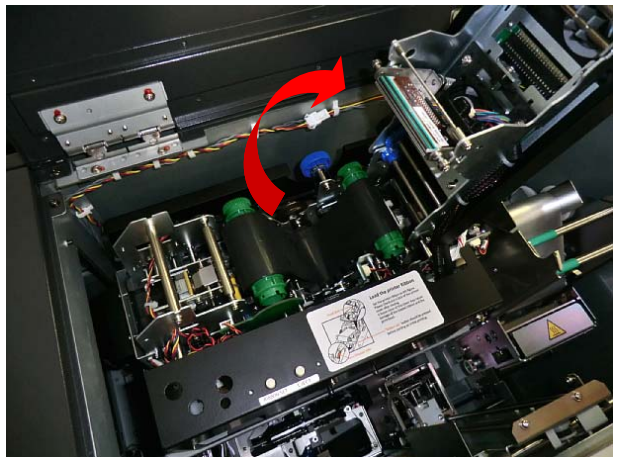
Print /Encode Unit cover

Print /Encode Unit Cover Open Button

Open Print /Encode Unit cover.
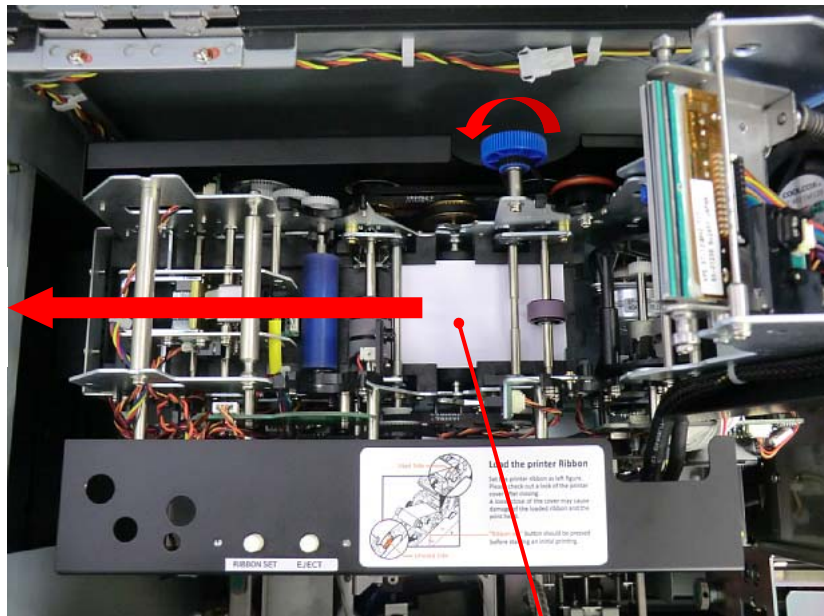
3. Detach the Thermal Transfer Ribbon from the Print /Encode Unit.

4. Transfer the card toward the Main Transfer Unit by turning Knob counterclockwise.

Turning knob counterclockwise
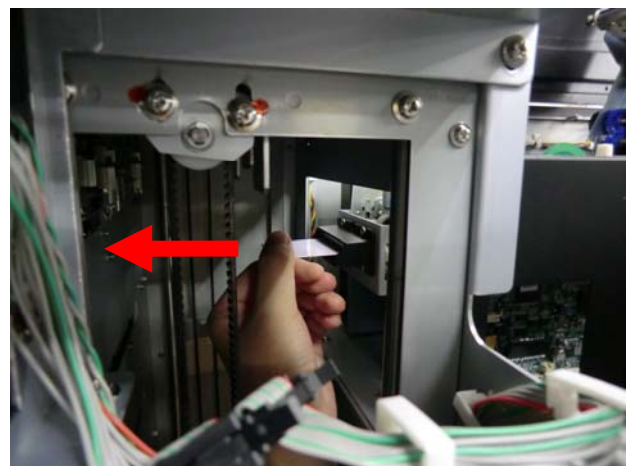

Transfer the remaining card
to Main Transfer Unit

Remaining card

5. Pull out the card from the left side of the Print /Encode Unit.

Remaining Card

Pull out the card from the Print/Encode Unit.

6. Reattach the Thermal Transfer Ribbon as shown in the picture below.
   Remove the slack of the ribbon by turning the unused side of the ribbon counter-clockwise.

Turn the unused side of the
ribbon counter-clockwise.

Thermal Transfer Ribbon
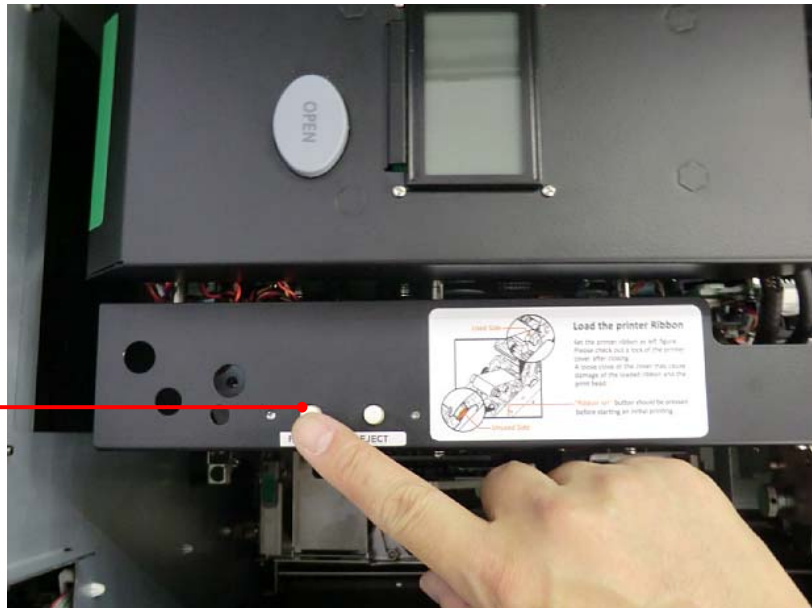

Unused side

Used side
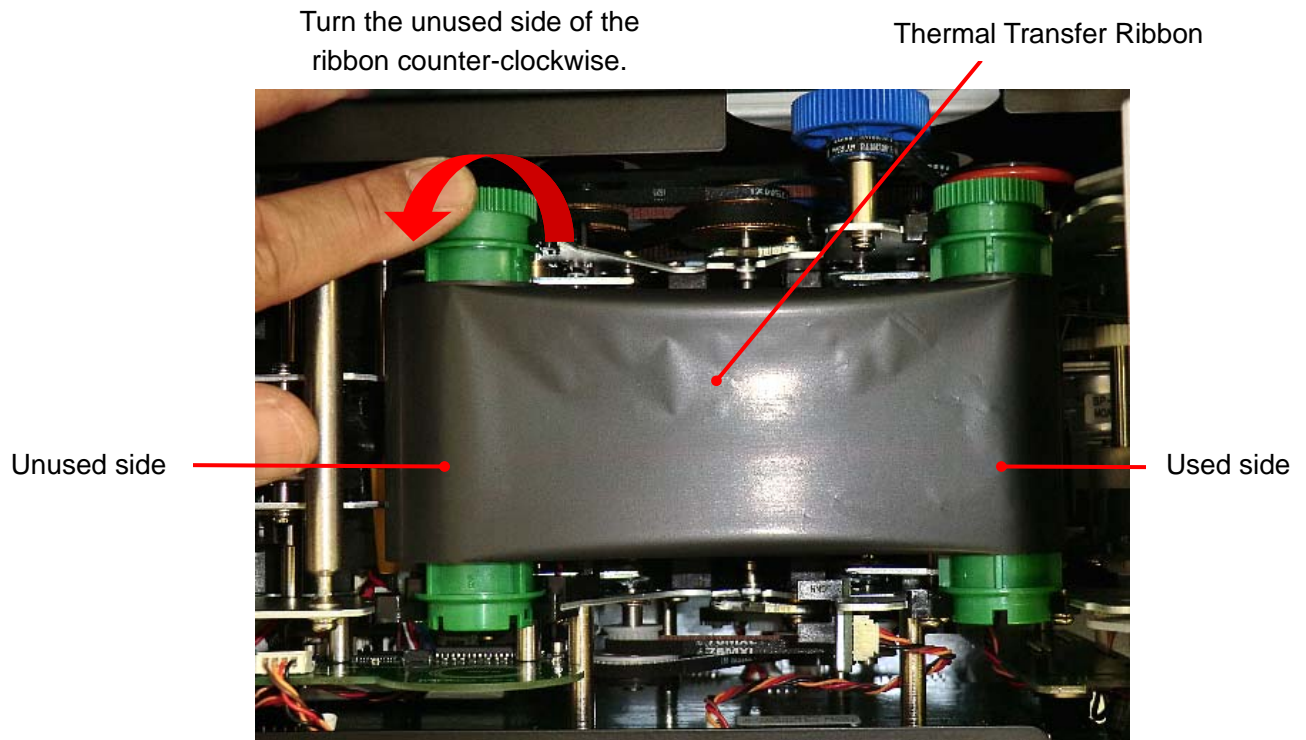
7. Close the Print/Encode Unit cover until it clicks.

8. Close the Top Cover, and then lock the Top Cover with the key.

9. Close the Right side door, and then lock the Right side door with the key.

10. Turn the power ON, and initialize the machine.

11. Open the Top Cover by turning the key clockwise while power ON.

   * Ignore buzzer beeping and the following error message in the Main display to proceed next step.

CV402 Top / Side

12. Push the RIBBON SET button.

"RIBBON SET" button

13. Close the Top Cover, and then lock the Top Cover with the key.

⚠ **Caution**

- **Do not forget to push "RIBBON SET" button after installing a new ribbon. Otherwise, a print failure will occur.**
- **Be sure to remove the slack of the Thermal Transfer Ribbon before closing the cover. The slack will adversely affect the print quality.**

Removing the card remaining in Vertical Rotation Unit

1. Turn the power OFF, and open the Right side door by turning the key clockwise.

Turn this key clockwise   Open Right side door

2. Remove the remaining card from the right side of the Vertical Rotation Unit.

Vertical Rotation Unit
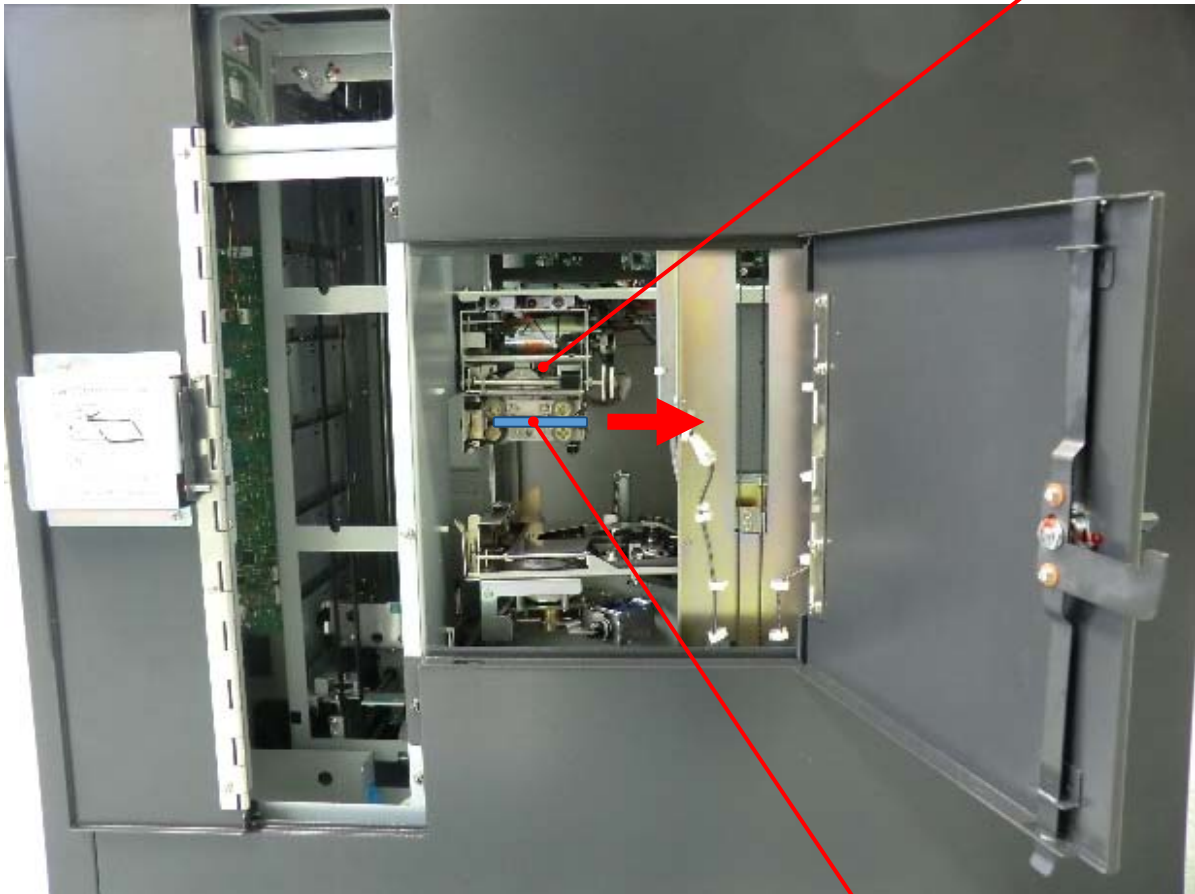
Remaining Card

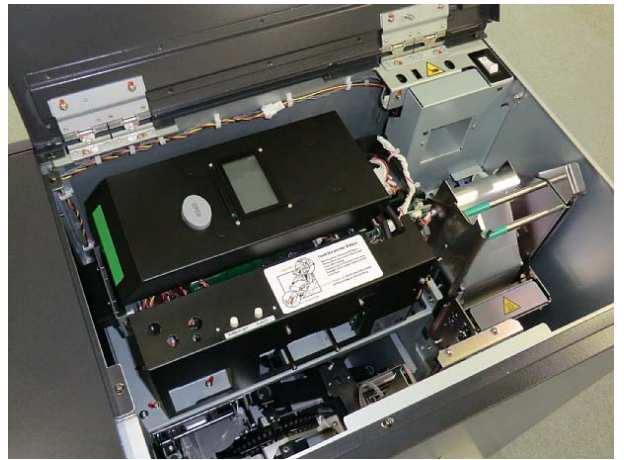3. Close Right side door, and then lock the Right side door with the key.

Removing the card remaining in Carriage Unit

1. Turn the power OFF, and then open the Top Cover by turning the key clockwise.
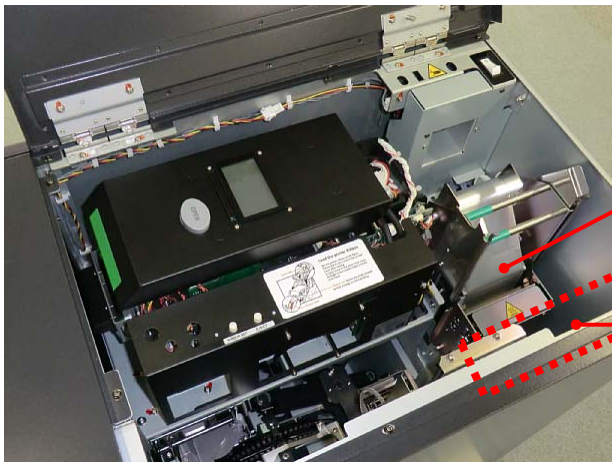
Turn this key clockwise.

Open Top Cover.

2. Check where the Carriage Unit stops.
   In the case when the Carriage Unit stops around the Tipper Unit, wait more than one hour until the Tipper Unit is cooled down.
   After the Tipper Unit has completely cooled down, proceed to the step 3.
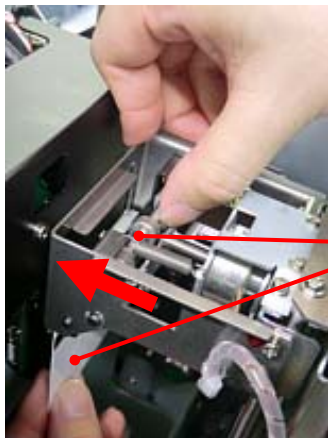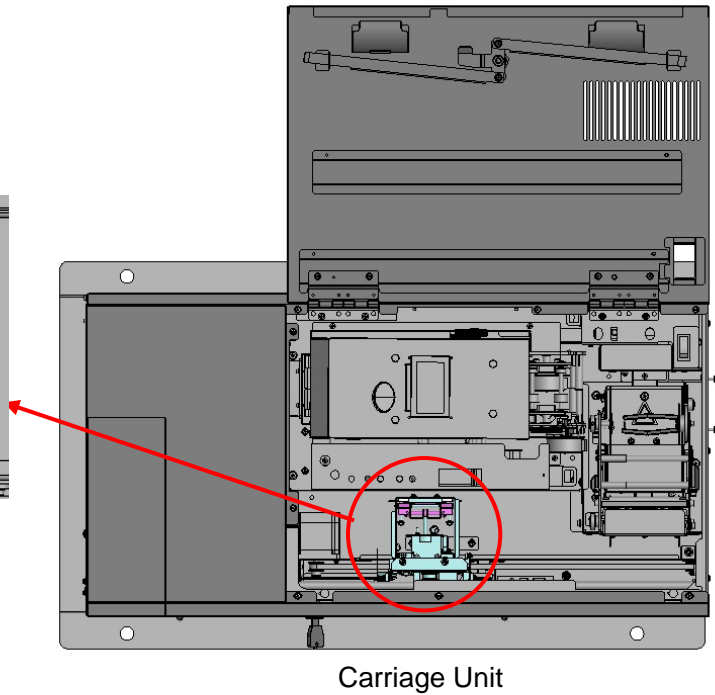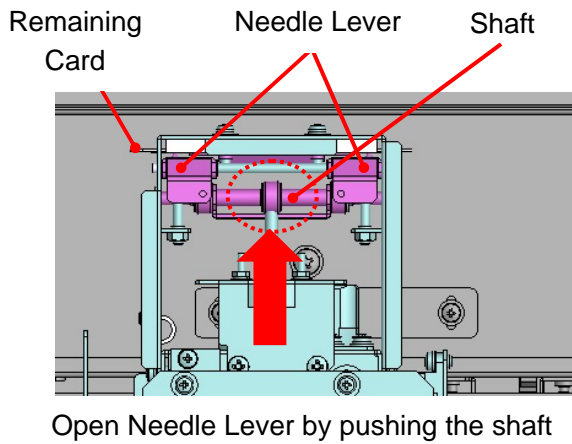

Tipper Unit

If the Carriage Unit stops at the upper right position, wait until the Tipper unit is cooled down.

3. Open needle lever by pushing shaft with holding the remaining card.
   Remove the card from the Carriage Unit.
   * Be careful not to drop the card into the machine (Unless holding the card, it will drop into the machine when needle lever is opened).

Remaining
Card

Needle Lever

Shaft

Open Needle Lever by pushing the shaft

Carriage Unit

Push the shaft backward
with holding the card

4. Close Top Cover and lock by the key.

⚠ **Caution**

- **Tipper Unit has a very high-temperature part.**
  If you make the above process, turn off the power and wait at least 1 hour until the Unit has been completely cooled down to prevent your arms or hands from getting burned.
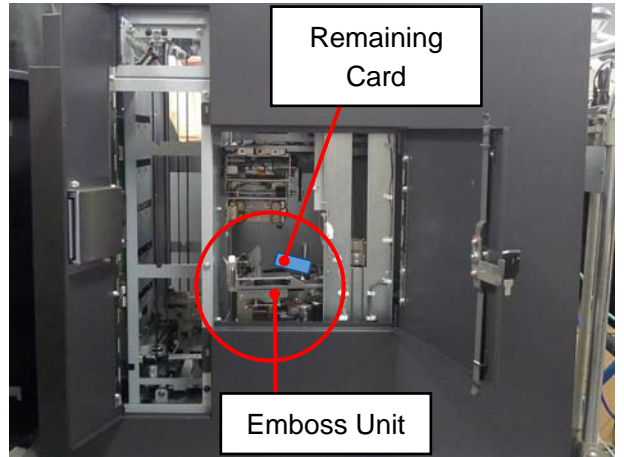
Removing the card remaining in Emboss Unit

1. Turn the power OFF, and open the Right side door by turning the key clockwise.
   Open the Top Cover by turning the key clockwise.
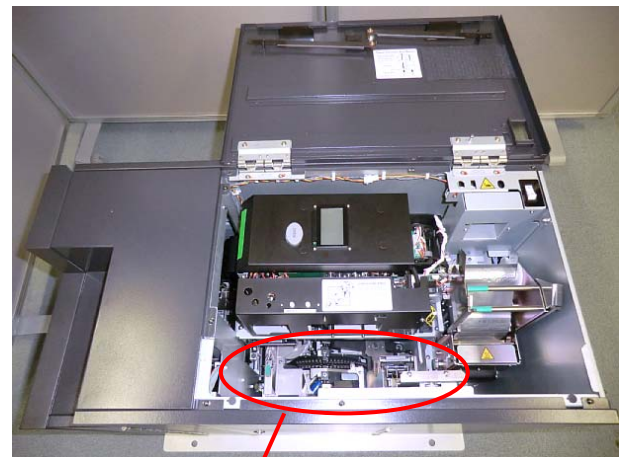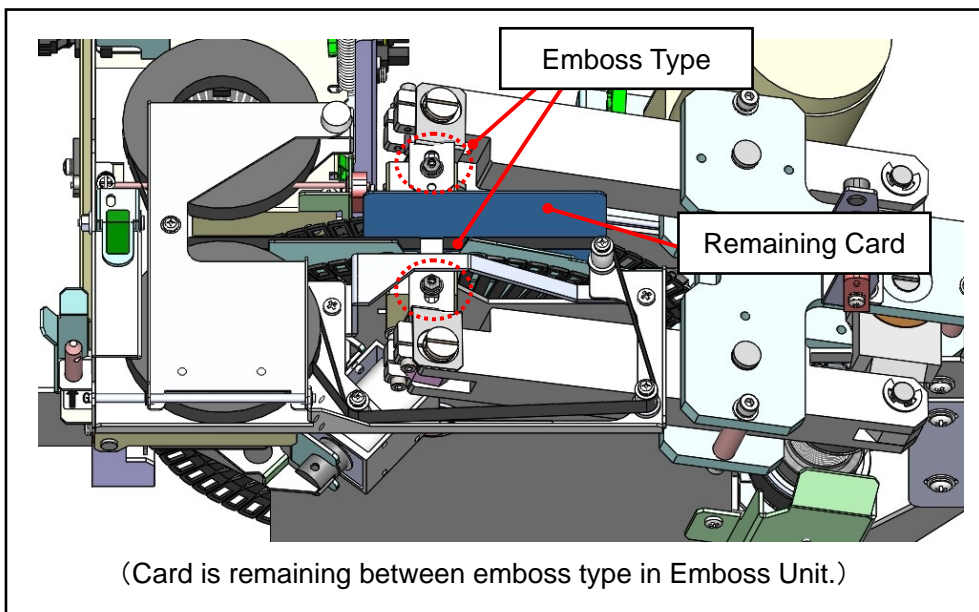
Turn this key clockwise

Open Right side door

Remaining Card

Emboss Unit

Turn this key clockwise

Open Top Cover

Emboss Unit

Emboss Type

Remaining Card

* In the case when the card is remaining in Emboss Unit and held by Needle lever of Carriage Unit, remove the card from the Carriage by opening the needle lever as shown on page 40 in this manual.

（Card is remaining between emboss type in Emboss Unit.）

2. Ensure an Emboss type is aligned to the emboss pin.
    If they are not aligned each other, it may damage the
    Emboss type.

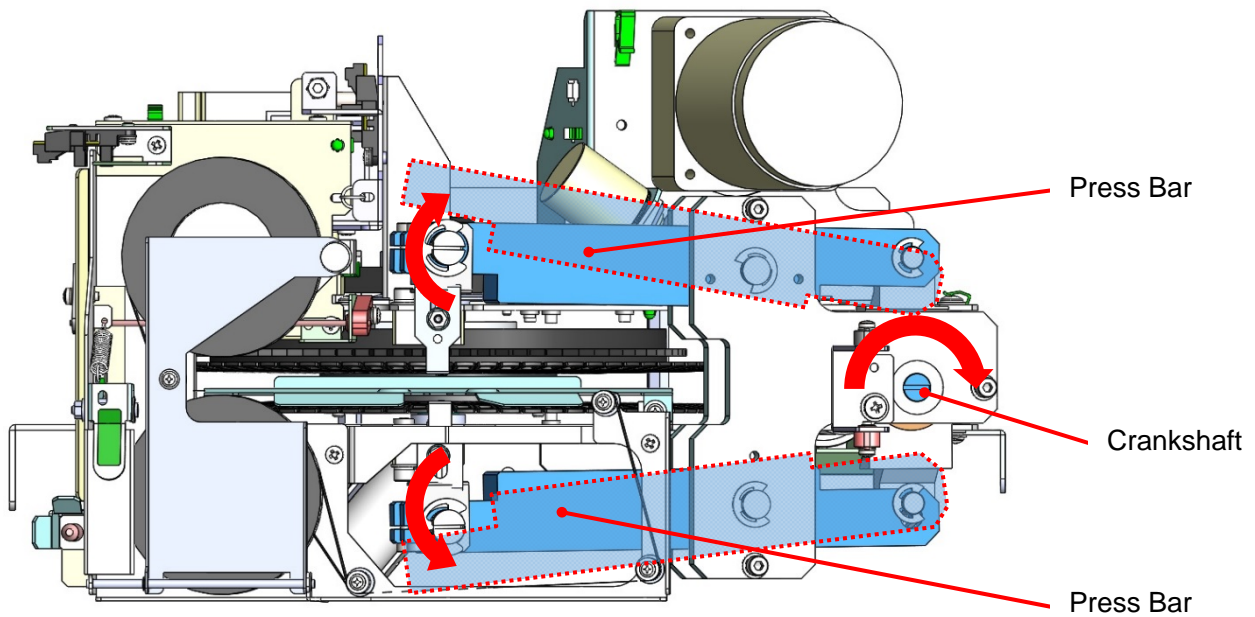Emboss Type

Emboss Pin

Emboss Unit
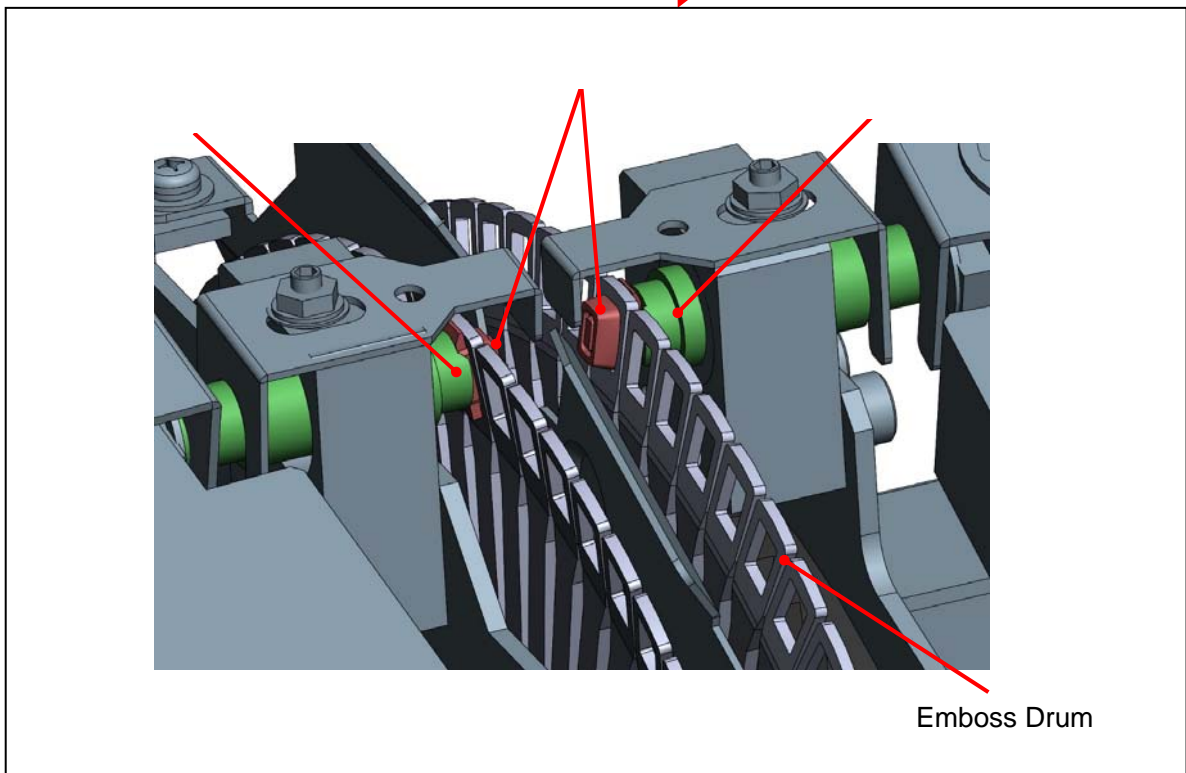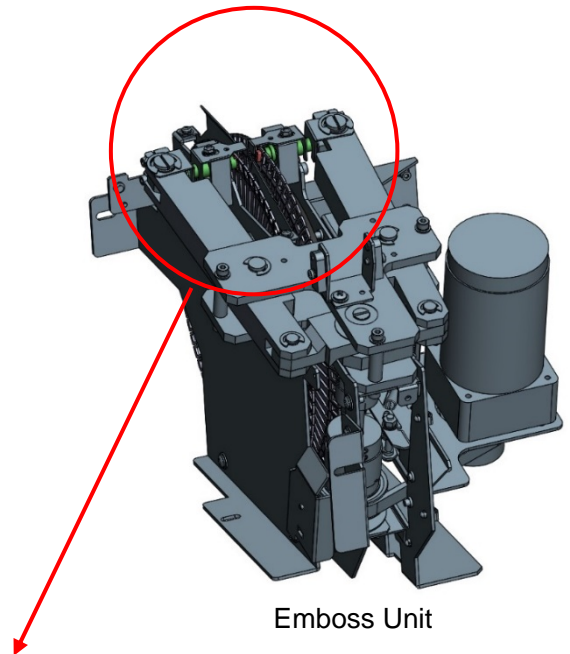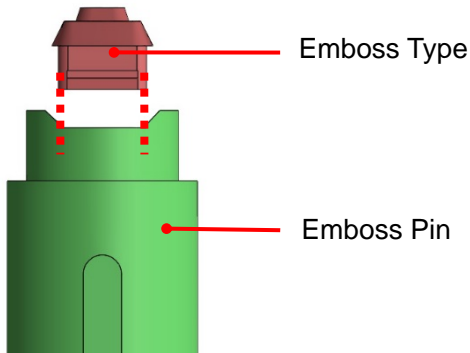
Emboss Drum

・When the Emboss Type is not aligned to the Emboss Pin, rotate the Emboss Drum to set the Emboss Type
   to the right position.
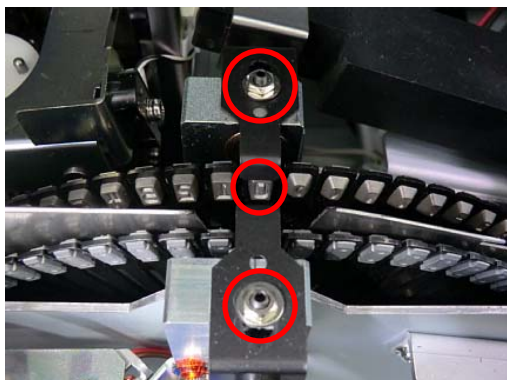
Emboss Type and Emboss Pin are aligned.
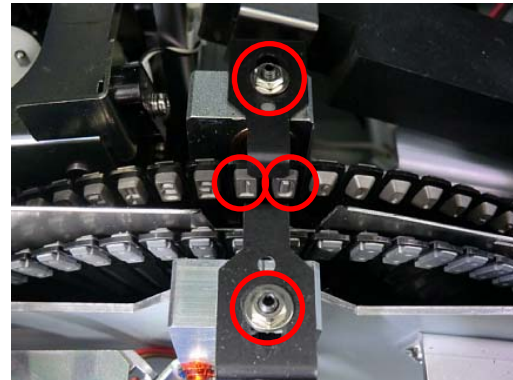
3. Turn the Crankshaft clockwise by a flat-head screwdriver to open the press bars completely while holding the card. Then remove the card.

Press Bar

Crankshaft

Press Bar

If the Crankshaft got turned too much, Press Bars would return to the Press Position. In this case, turn the screwdriver counter-clockwise.

4. Make sure that the Emboss Type is aligned to the Emboss Pin again.
   Keep the Press Bars opening until the Right side door is closed.

5. Close the Right side door, and then lock the Right side door with the key.

⚠ **Caution**

- **There is a high-temperature area in the Tipper Unit.**
  To perform the above process, turn off the power and wait at least 1 hour until the Unit has been completely cooled down to prevent your arms or hands from getting burned.
- **When turning the Crankshaft, make sure the Emboss type is aligned to the Emboss pin. (In the case when the emboss type is in the wrong position, the type may be damaged.)**
- **After completing the above process, make sure the following.**
  "Emboss type is aligned to Emboss pin."
  "Press Bars has left opened."

Removing the card remaining in Card Insertion/Exit Slot

1. If a card was not ejected completely from the Card Insertion/Exit Slot, pull out the card by hand.

Card Insertion/Exit Slot

Remaining Card
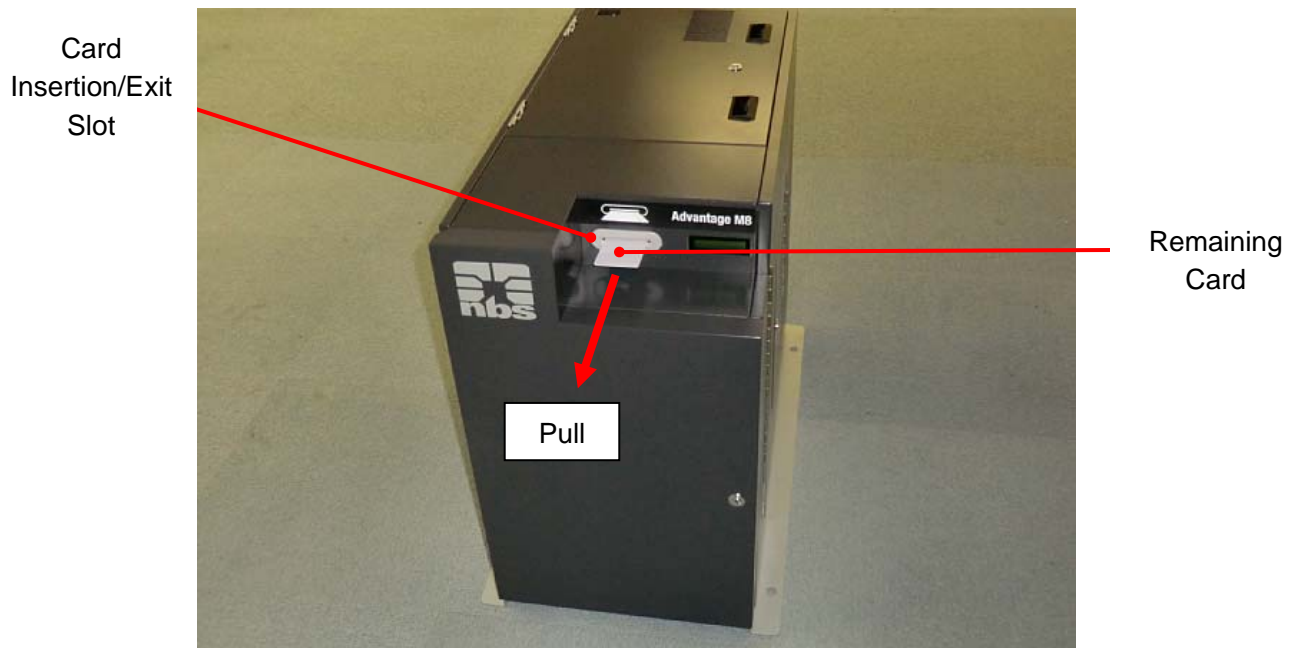
Pull

2. Remove the card according to the procedure "Remove the card in Main Transfer Unit" on page 30 when you cannot pull the card out by hand.
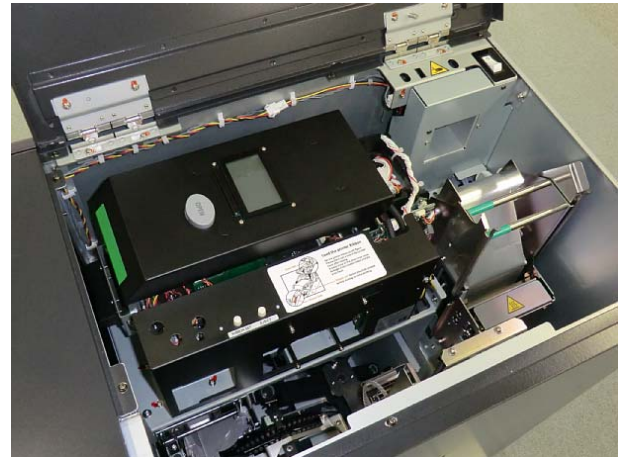
Cleaning

Cleaning Thermal Print Head

If you find stain or contamination on the issued cards, clean the Thermal Print Head with a Cleaning pen (sold separately).

1. Unlock the Top Cover by turning the key clockwise during the power on, and then open the Top Cover.

Turn this key clockwise.   Open Top Cover.
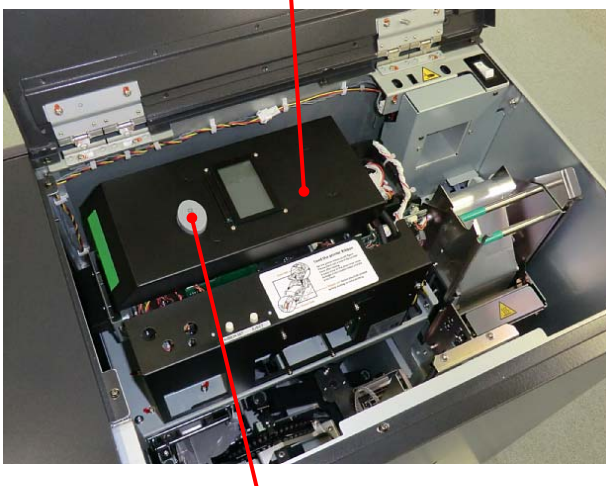

The buzzer will beep, and the following error message will be indicated on the Main display.
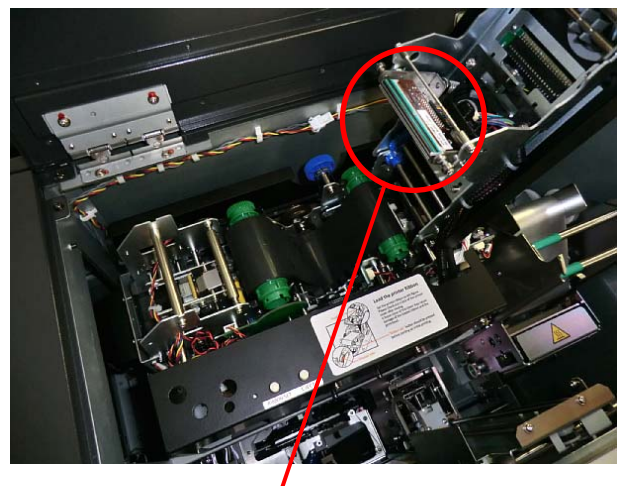
CV402 Top / Side

2. Push the Print /Encode Unit Cover Open Button to open the cover.
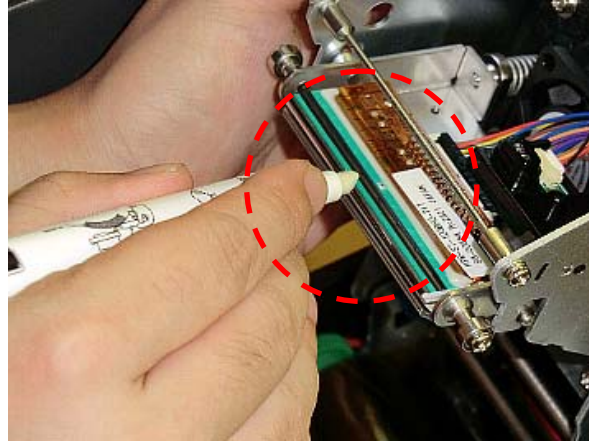
Print /Encode Unit   Open Print /Encode Unit cover.

Print /Encode Unit Cover Open Button   Thermal Print Head

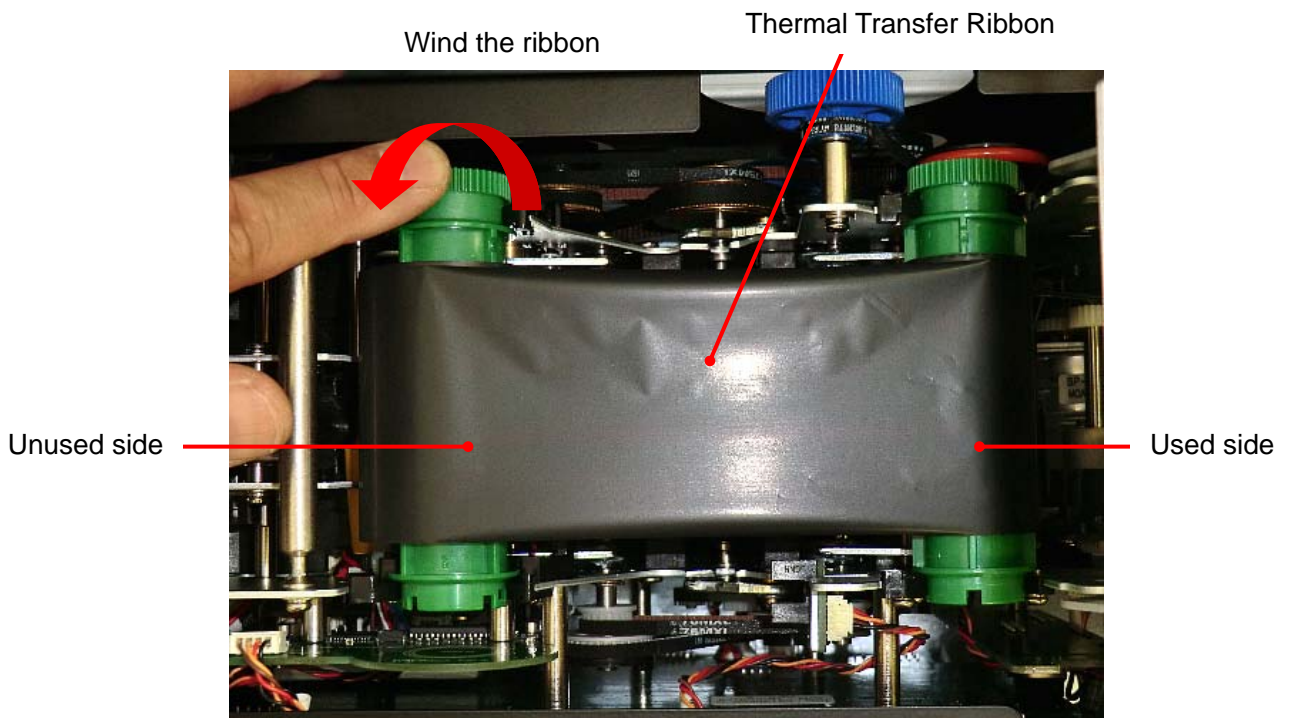3. Clean the Thermal Print Head by using a Cleaning pen.

Reference

- **Recap the pen after cleaning for reuse.**

⚠ Caution

- **Do not touch the Thermal Print Head with your fingers.**

4. Wind the unused side of the Thermal Transfer Ribbon counter-clockwise to remove the slack.

Wind the ribbon   Thermal Transfer Ribbon
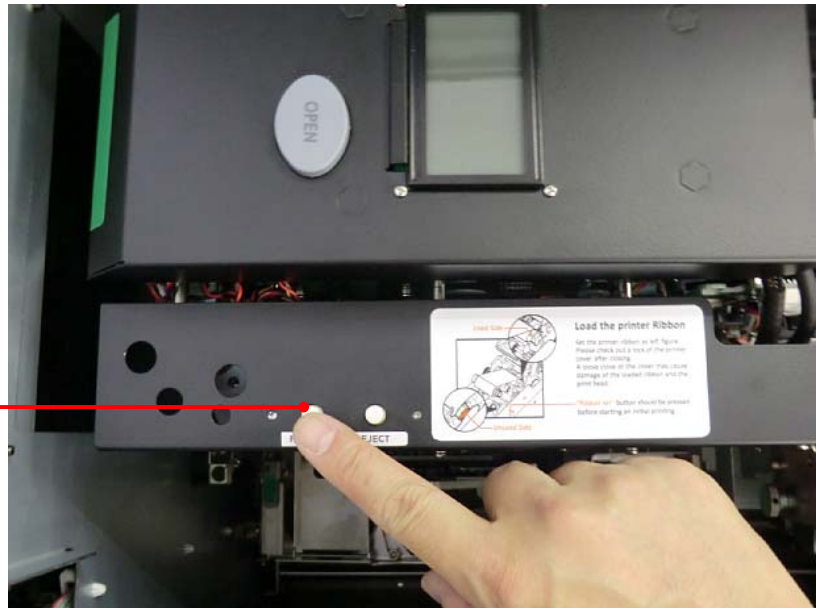

Unused side   Used side

5. Close the Print /Encode Unit cover until it clicks.

⚠ Caution

- **Before closing the Print /Encode Unit cover, make sure the alcohol on the Thermal Print Head has evaporated.**

6. Push the RIBBON SET button.

"RIBBON SET" button

8. Close the top cover, and then lock the top cover with the key.

> ⚠ **Caution**
>
> - **Do not forget to push "RIBBON SET" button after installing a new ribbon. Otherwise, a print failure will occur.**
> - **Be sure to remove the slack of the Thermal Transfer Ribbon before closing the cover. The slack will adversely affect the print quality.**

Washing Cleaning Roller

Cleaning roller will remove stain or contamination on cards and will get dirty gradually. If you find stain or contamination on the issued cards, wash the Cleaning roller. We recommend washing the Cleaning roller when replacing the Thermal Transfer Ribbon.

1. Unlock the Top Cover by turning the key clockwise during the power on, and then open the Top Cover.
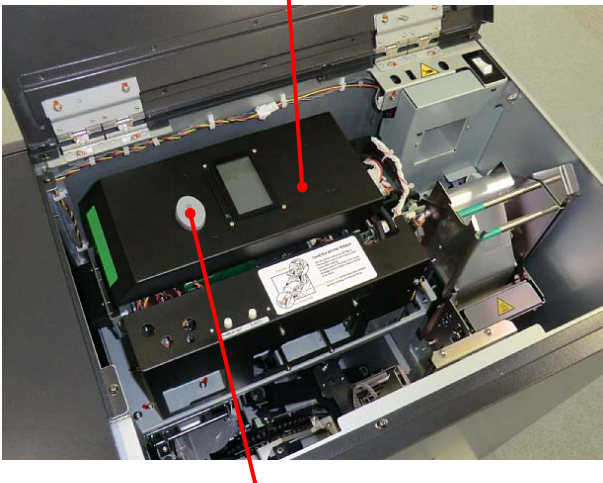
Turn this key clockwise.

Open Top Cover.
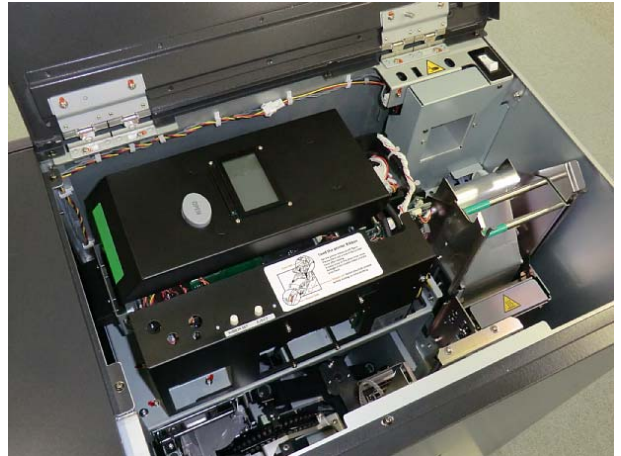
The buzzer will beep, and the following error message will be indicated on the Main display.
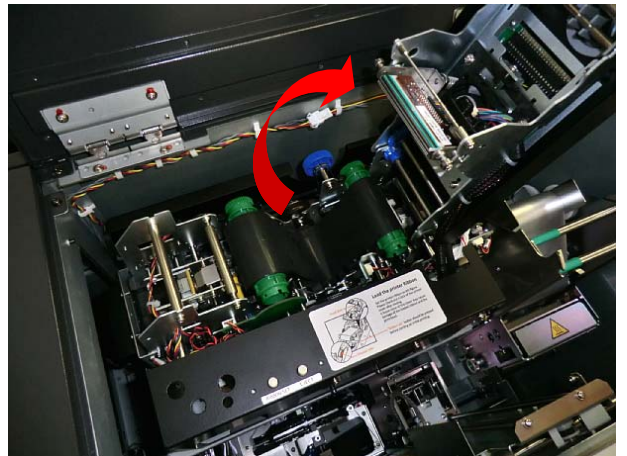
CV402 Top / Side

2. Push the Print/Encode Unit Cover Open Button to open the cover.
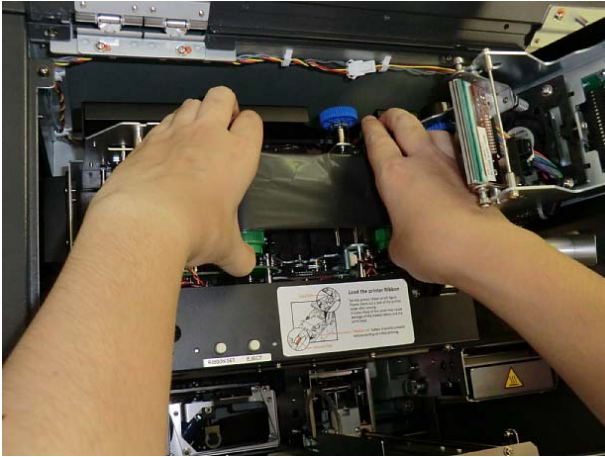
Print /Encode Unit
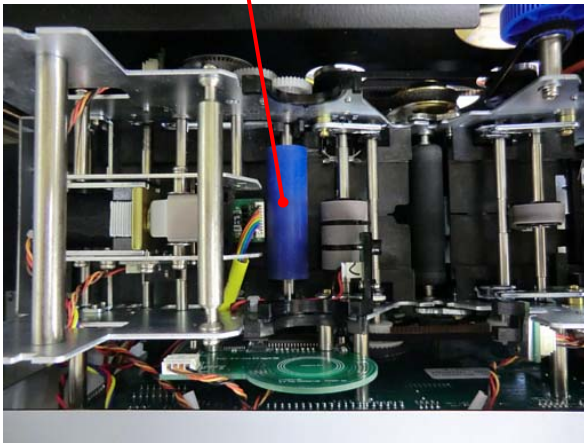
Open Print /Encode Unit cover.

Print /Encode Unit Cover Open Button

3. Detach the Thermal Transfer Ribbon from the Print /Encode Unit.
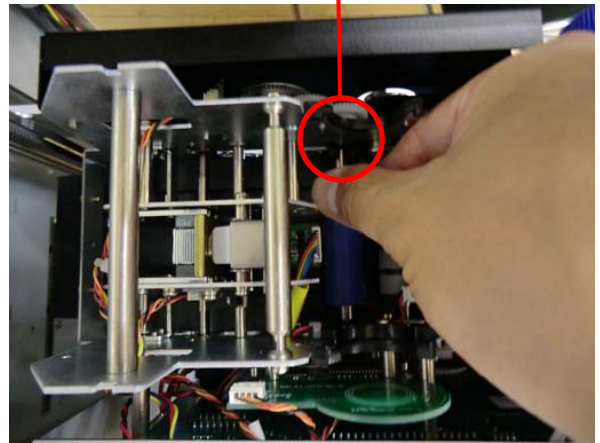

4. Remove the Cleaning roller from the Print /Encode Unit.

Cleaning roller

Detach this side first to take out the Cleaning Roller

5. Wash the Cleaning roller with running water.

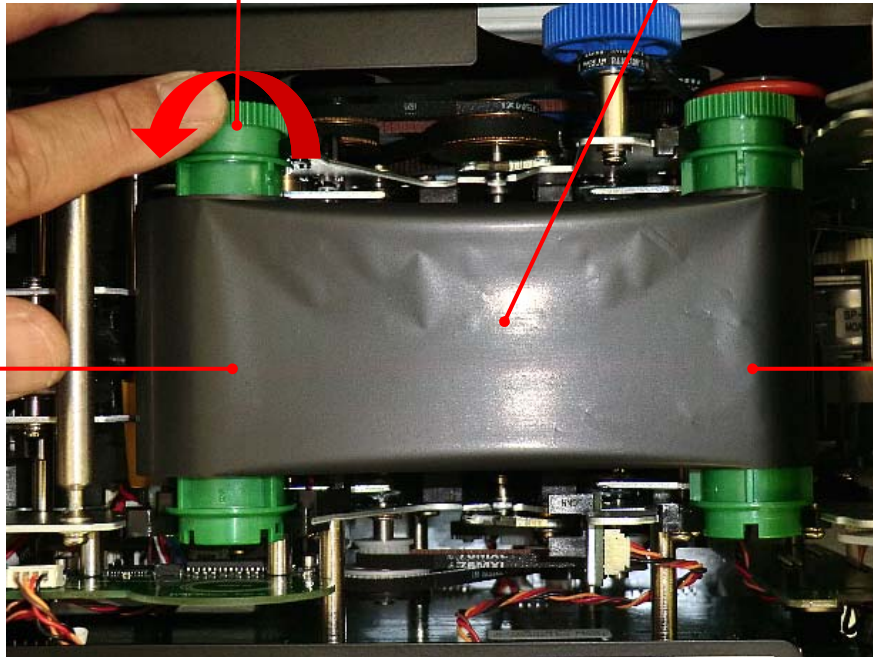6. Install the Cleaning roller to Print /Encode Unit after drying.

7. Reattach the Thermal Transfer Ribbon as shown in the picture below and remove the slack of the ribbon.

Turn unused side of the ribbon counter-clockwise to remove the slack

Thermal Transfer Ribbon

Unused side

Used side

8. Close the Print /Encode Unit cover until it clicks.

9. Push RIBBON SET button.
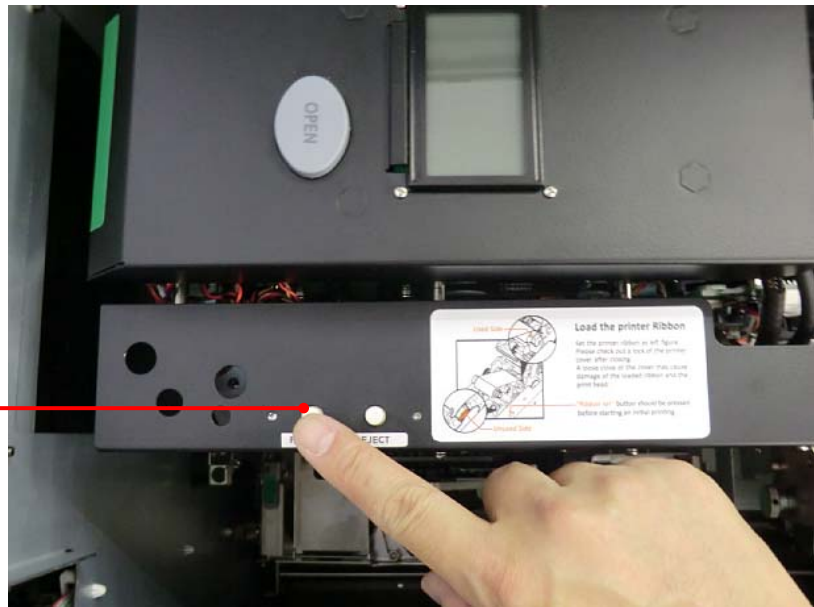
"RIBBON SET" button

10. Close the top cover, and then lock the top cover with the key.

⚠ **Caution**

- **Do not forget to push "RIBBON SET" button after installing a new ribbon. Otherwise, a print failure will occur.**
- **Be sure to remove the slack of the Thermal Transfer Ribbon before closing the cover. The slack will adversely affect the print quality.**

Cleaning Card transfer rollers

1. Turn the power OFF, and open the Right side door by turning the key clockwise.

Turn this key clockwise

Open Right side door

Vertical Rotation Unit

Main Transfer Unit

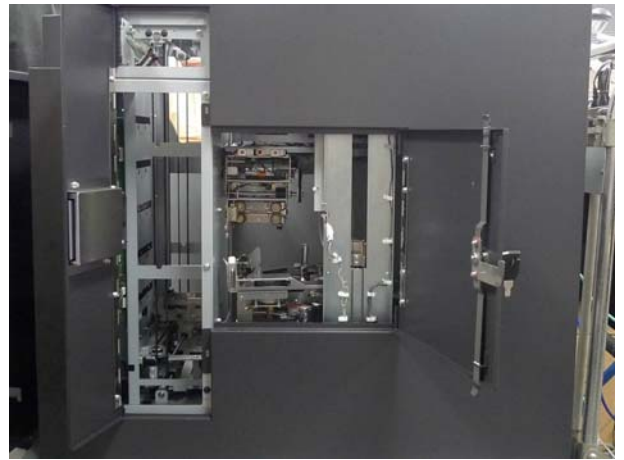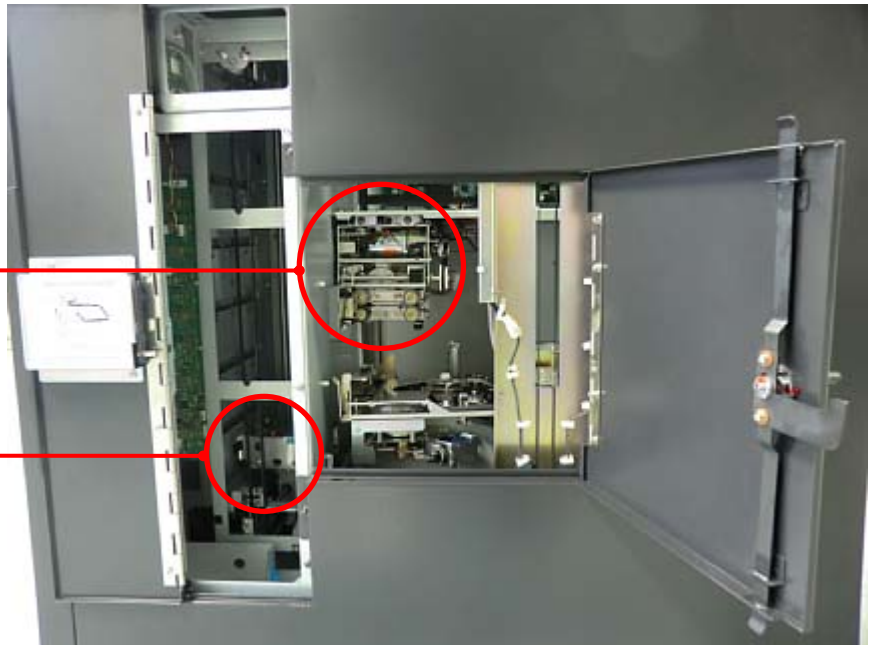2. Clean the Card transfer rollers on the Main Transfer Unit.
Clean the two Drive Rollers (lower side) and the two Passive Rollers (upper side) while turning the knob.
Use a waste cloth or a cotton swab absorbed with Ethanol.

Passive Rollers

Knob
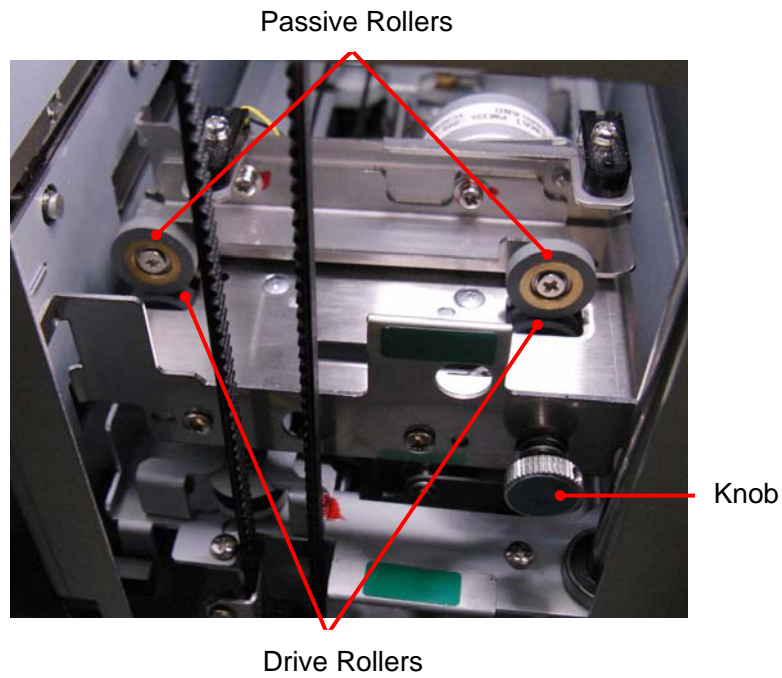
Drive Rollers

3. Clean the Card transfer rollers on the Vertical Rotation Unit.
Clean the Drive Roller and the three Passive Rollers while turning the white gear.
Use a waste cloth or a cotton swab absorbed with Ethanol.

Passive Roller

Drive Roller　　Gear
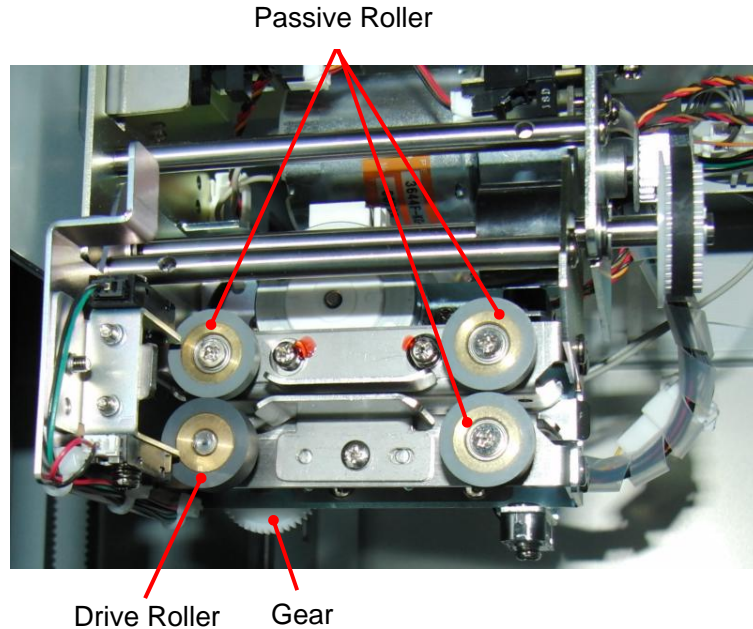
Specifications

The following specifications may be changed without notice.

General Specifications

Name	Card Printer & Embosser	
Model	Advantage M8	
Usable card (Allocable PVC Card)	Magnetic stripe / IC : ISO 7810 ID-1	
	* Height of warped card must be less than 1mm including thickness of the card.	
Connection Interface	USB2.0(Full Speed) (cable 3m in length or less)	
	LAN 10BASE-T/100BASE-TX	
Display	Liquid Crystal Display（16 digits ×1 line）Character back light	
Input Hopper	Number of cassettes	2 (*Option total 5 cassettes are available.)
	Number of hoppers	6 (3 hoppers per cassette) (*When setting optional cassettes: 3 cassettes are set : 9 4 cassettes are set : 12 5 cassettes are set : 15)
	Input Hopper Capacity	300 cards (50 cards per hopper) (*When setting optional cassettes: 3 cassettes are set : 450 cards 4 cassettes are set : 600 cards 5 cassettes are set : 750 cards.)
	Card Presence Detection	Out of Card detection
	Manual insert mode	Available
Out Stacker	Output Stacker Capacity	Approximately 20 cards
	Card presence detection	Card-full detection
Rejected Cards	Reject stacker capacity	Approximately 25 cards
	Card presence detection	Card-full detection
Card Counter	Resettable	Software counter
	Non resettable	Mechanical counter
Dimensions	456mm (W) x 658mm (H) x 771mm (D)	
Weight	81kg（including 2 Hopper cassettes）＊ excluding card weight	
Power voltage	AC220 - 230V 3.0A 50Hz/60Hz	AC100 - 120V 4.5A 50Hz/60Hz
User environment	Operating environment Temperature 10 to 32 degrees Celsius Humidity 20 to 65% R.H（non-condensing）	
	Guaranteed accuracy environment Temperature 18 to 28 degrees Celsius Humidity 40 to 65% R.H.（non-condensing）	
Security	Key lock for Front Cover, Right side door and Top Cover (Same for all key rocks) Software rock (Front) Key lock for Hopper cassette (Same for all key rocks)	
Applicable Standard	Safety : CE marking (Low Voltage), EMC : CE marking(EMC), FCC Class A	

* About option, please contact your distributor.

Embosser Specifications

Emboss	ISO 7811-1
Emboss printing type capacity	54 characters (standard) 80 characters at maximum (Including indent printing types.)
Emboss printing character type	Alphabet (10 CPI) 26 characters "A to Z" Number (10 CPI) 10 characters "0 to 9" Number (7 CPI) 10 characters "0 to 9" (OCR-7B) Symbol (10 CPI) 8 characters "－ / . ' , ( ) &"
Possible emboss area	Lower limit：(5.1 ㎜ from lower end of the card to character center line) Upper limit：(21.4 ㎜ from lower end of the card to character center line) Left limit：(7.7 ㎜ from left end of the card to character center line) Right limit：(75.5 ㎜ from left end of the card to character center line)
Emboss cross-feed pitch	1/7inch（Up to 19 digits can be embossed） 1/10inch（Up to 27 digits can be embossed）
Indent printing character type	10 characters "0 to 9" (OCR-B (14CPI)) (*Option Reverse italic)
Indent Film Detection	Film-end detection
Possible Indent area	Lower limit：(15.2 ㎜ from lower end of the card to character center line) Upper limit：(37.8 ㎜ from lower end of the card to character center line) Left limit：(3.7 ㎜ from left end of the card to character center line) Right limit：(81.3 ㎜ from left end of the card to character center line)
Tipper Foil color	Silver, (Gold)
Tipping Foil Detection	Foil-end detection
Tipper heater warm up time	Within 6 minutes

Encoder Specifications

|	
Magnetic Stripe Encode	ISO 7811-2/-6(Track 1, 2, 3: Hi-Co &Lo-Co)
IC Encode	ISO 7816 , EMV Level 1 and PBOC 3.0
Contactless IC Encode	Mifare® standard, ISO-14443A&B

Printer Specifications

Print Mode	Color（Dye-sublimation）, Mono（Thermal transfer）
Print Side	Dual side
Print resolution	300dpi

Restriction of Usable card

Cannot print on not flat area such as signature panel or hologram sheet.

User environment
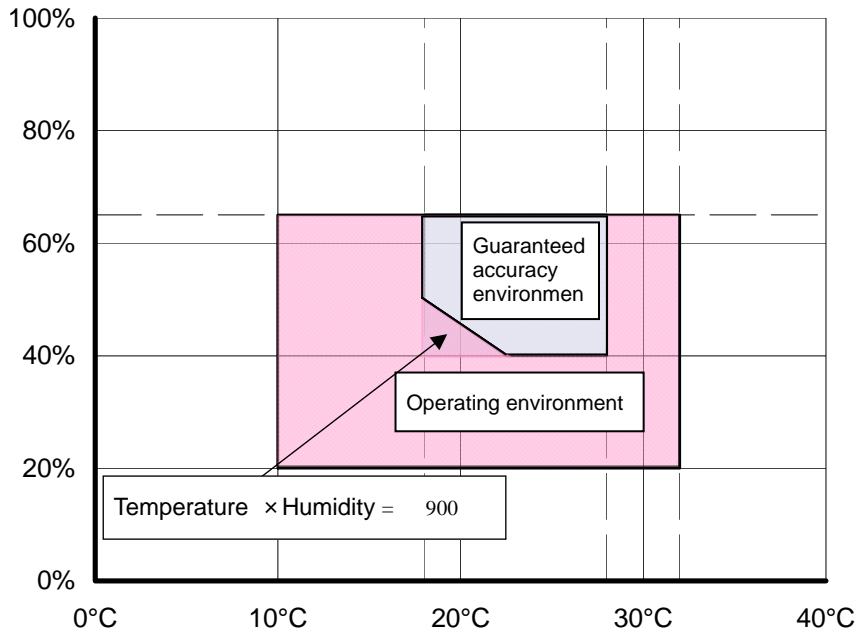
Guaranteed accuracy environment	Temperature	18 to 28 degrees Celsius
	Humidity	40 to 65% R.H.

Operating environment	Temperature	10 to 32 degrees Celsius
	Humidity	20 to 65% R.H.

Graph labels:
- Guaranteed accuracy environmen
- Operating environment
- Temperature × Humidity = 900

Specifications are subject to change without notice.