C9XX UCOS Envelope Feeder And Conveyor Maintenance Manual

072017A

PREFACE

This manual describes the procedures for the maintenance of the external feeder and conveyor for envelope exclusive use as optional equipment of C911/ C931/ C941/ C942/ ES9411/ ES9431/ ES9541/ ES9542 series.

The document is produced for maintenance personnel use. For details on the procedures for handling the EnvelopeFeeder-U and Conveyor-U, see its user's manual

Incidentally, the appellations of these apparatuses are to be leaved out in followings at times.

- EnvelopeFeeder-U --> Feeder Unit
- Conveyor-U --> Conveyor Unit

Note! • The descriptions in this manual are subject to change without prior notice.

- In preparing the document, efforts have been made to ensure that the information in it is accurate. However, errors may be crept into the document. Oki Data assumes no responsibility for any damage resulting from, or claimed to be the results of, those repairs, adjustments or modifications to the printers which are made by users using the manual.
- The parts used for the feeders and the conveyors are sensitive and, if handled improperly, may be damaged. It is strongly recommended that the products are maintained by maintenance men registered with Oki Data.
- The maintenance men should be discharged the static electricity before the starting maintenance.

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1. CONFIGURATION

1.1 System configuration

System Configuration of the Envelope Feeder-U and the Conveyor-U.

As the Figure 1-1 shows, for the Envelope Feeder-U is configured by the controller unit and the related units.

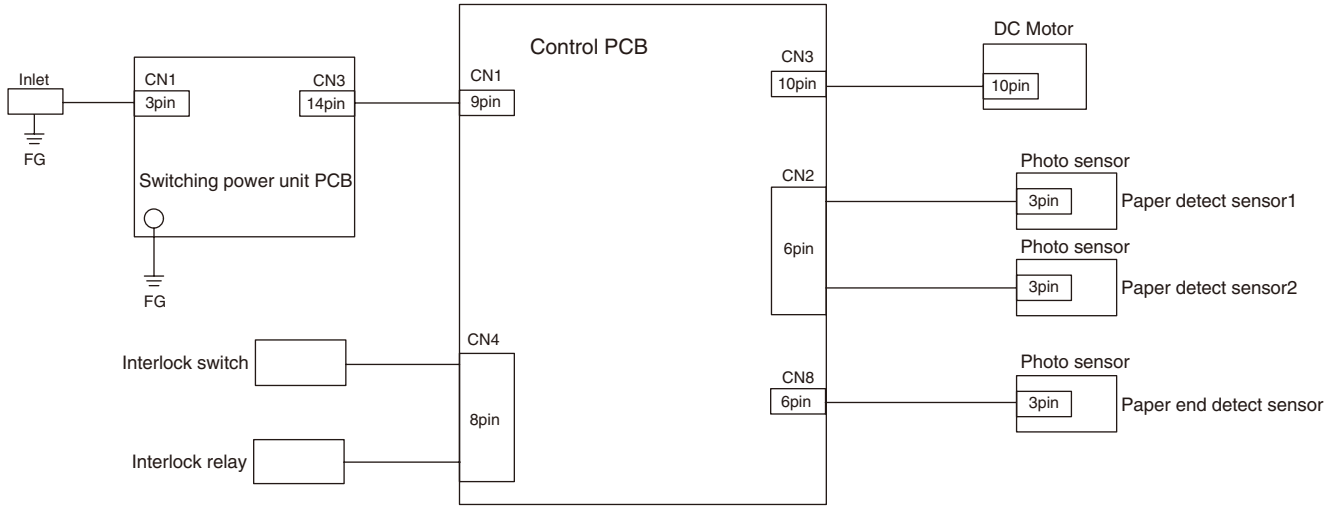


Figure1-1

As the Figure 1-2 shows, for the Conveyor-U is configured by the controller unit and the related units.

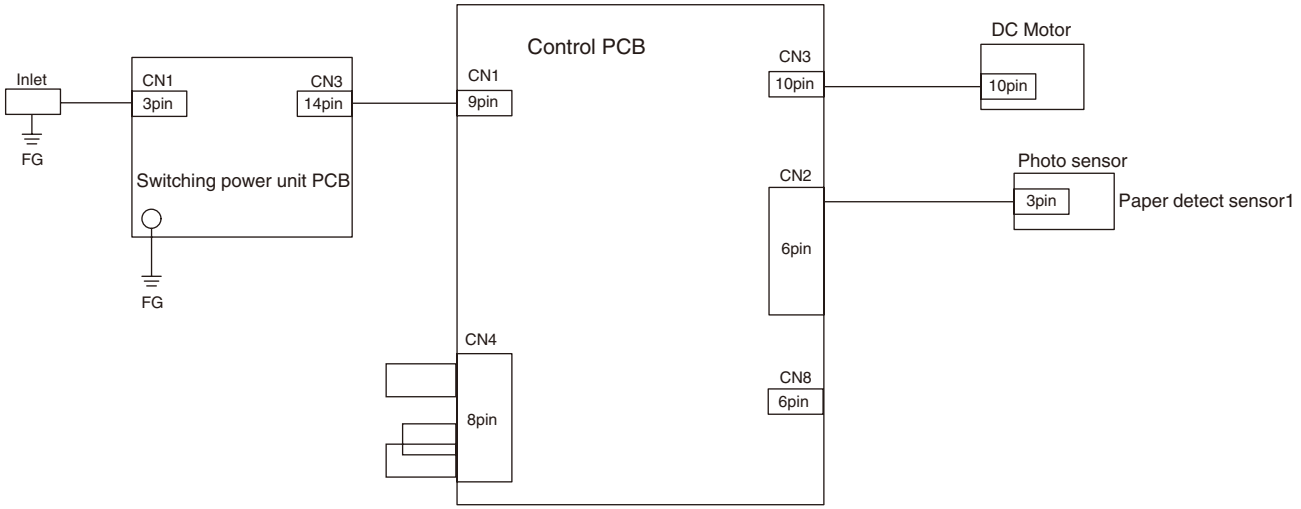
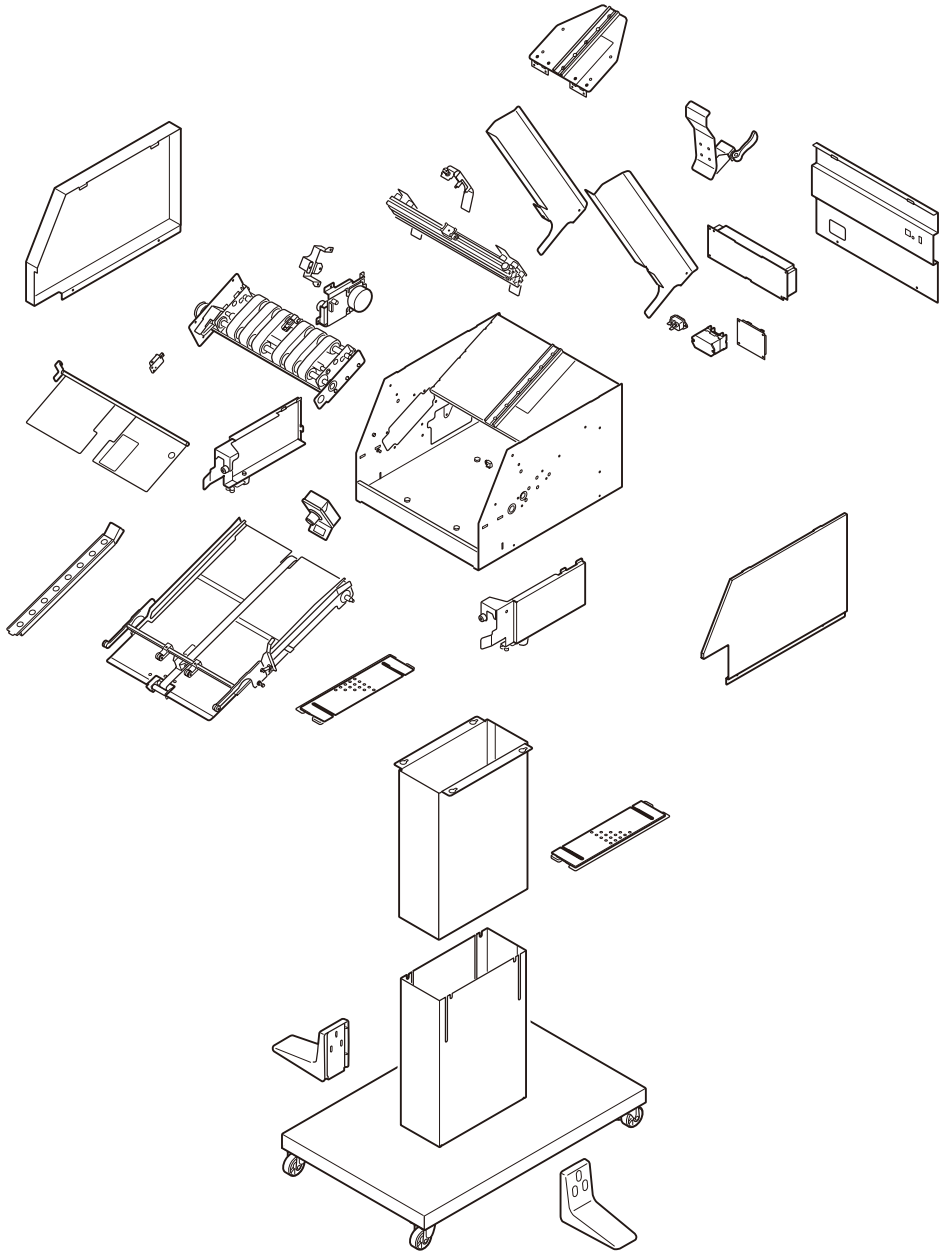


Figure1-2

1.2 Structure

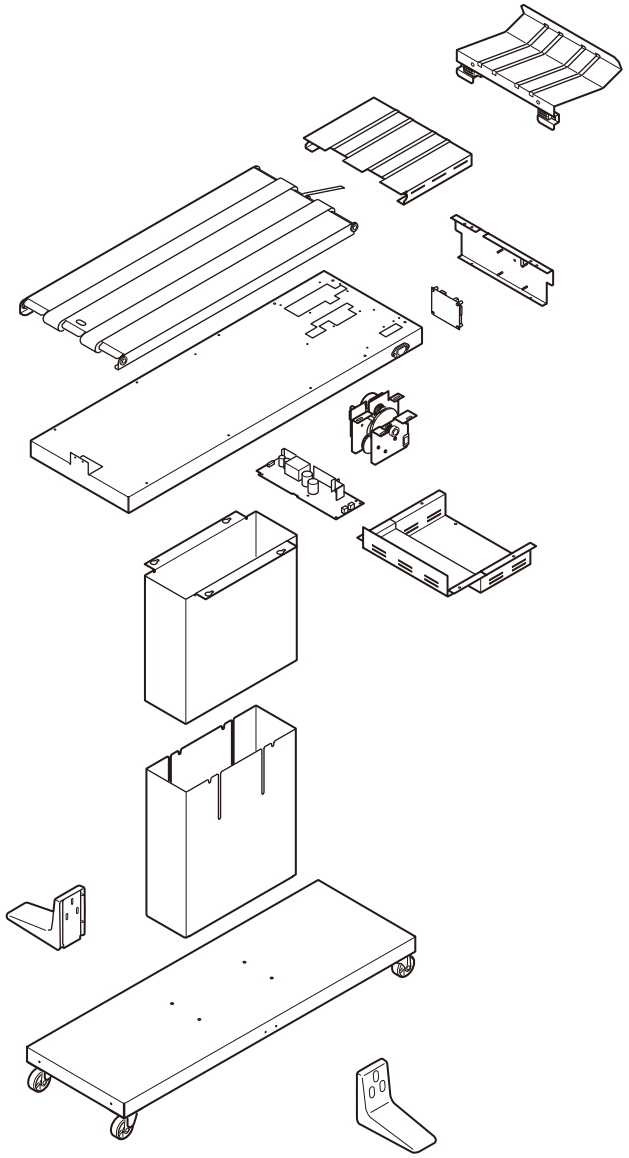
1.2.1 for Feeder Unit

- Paper feeding parts
- Controller
- Power supply unit



1.2.2 for Conveyor Unit

- Paper Conveying parts
- Controller
- Power supply unit



1.3 Specifications

Specifications

item			Envelope Feeder-U	Conveyor-U
Segment			Industry	
Feed Speed	COM-10		50ppm (Printer engine speed :32ppm(A4LEF))	-
	10x13		13ppm (Printer engine speed :18ppm(A4LEF))	-
Feed Width			13 inch	
Warm-up time from power on			less than 1sec	
Paper Handling			Refer to the 'Paper handling' table	
Power consumption	120V	One Cycle	40W (Current 0.7A)	10W (Current 0.25A)
		Stand-by	6W (Current 0.15A)	3W (Current 0.1A)
		Current Peak	Within 1A (50msec mean)	Within 0.5A (50msec mean)
Power Requirement			<Voltage> ODA:120V, AC±10% <Frequency> 50/60Hz ±2%	
Operating temperate			10 - 32 (degrees C) 50 - 90 (degrees F)	
Operating humidity			20 - 80 %	
Operation panel	Switches		Main switch, Start button	Main switch
Buzzer			N/A	N/A
Speed Control			N/A	N/A
JOG			Yes	-
Counter			N/A	-
Paper End Sensor			Yes	-
2nd Paper Sensor			Yes	-
Dimension (mm)	Width		941.5	1128.3
	Depth		795	645
	Height	with 4-stage Tray	1233.6	687.9
		with 5-stage Tray	1344.6	798.9

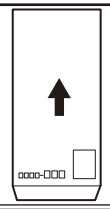
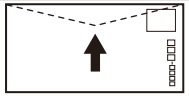
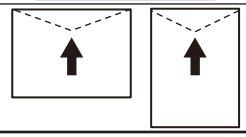
item			Envelope Feeder-U	Conveyor-U
Dimension [inch]	Width		37.1	44.4
	Depth		31.3	25.4
	Height	with 4-Tray	48.7	27.1
		with 5-Tray	52.9	31.5
Weight			39.2 kg	27.5 kg
Caster			4	
Stand Height			Adjustable	
Feeder Life			1,500,000 pages or 5 years	
Max. Monthly Feed duty			300,000 pages	
Recommended Duty Cycle			25,000 pages	

Paper handling

<Envelope Feeder-U / Conveyor-U>

Envelope Type	Size [Width x Length]		Load Capacity Capable of Passing Paper (sheets)	Region
	[mm]	[inch]		
Nagagata #3 (SEF)	120 x 235		300 (85gsm)	JPN
Nagagata #3 (LEF)	235 x 120		400 (85gsm)	JPN
Nagagata #4	90×205		300 (85gsm)	JPN
Nagagata #40	90 × 225		300 (85gsm)	JPN
Yougata #0	235 x 120		400 (85gsm)	JPN
Yougata #2(C6)	162 x 114		400 (85gsm)	JPN
Yougata #4	235 x 105		400 (85gsm)	JPN
Younaga #3	120 x 235		300 (85gsm)	JPN
Kakugata #1	270 x 382		150 (85gsm)	JPN
Kakugata #2	240 x 332		200 (85gsm)	JPN
Kakugata #3	216 x 277		200 (85gsm)	JPN
Kakugata #6	162 x 229		200 (85gsm)	JPN
Kakugata #8	119 x 197		300 (85gsm)	JPN
C4	229 x 324			EU
C5	162 x 229			EU
C6	162 x 114			EU
C7	81 x 114			EU
DL	220 x 110			EU
COM-9	225.4 x 98.4	8.875” x 3.875 “	600 (24lb)	US
COM-10	241.3 x 104.8	9.50” x 4.125”	600 (24lb)	US
Monarch	190.5 x 98.4	7.5” x 3.875”	600 (24lb)	US
A2	146.1 x 111.1	5.75” x 4.375”	600 (24lb)	US
A6	165.1 x 120.7	6.5” x 4.75”	400 (24lb)	US
A6 3/4	165.1 x 92.1	6.5” x 3.625”	400 (24lb)	US
A7	184.2 x 133.4	7.25” x 5.25”	300 (24lb)	US
9x12	228.6 x 304.8	9” x 12”	200 (28lb)	US
10x13	254 x 330.2	10” x 13”	100 (28lb)	US

<Envelope set direction>

Envelope Type	Set direction
Kakugata #1, #2, #3, #8 Nagagata #3, #4, #40	
Nagagata #3, #4, #40, Kakugata #3, #6 ,#8	
Yougata #0, #2, #4, Younaga #3	
COM-9, COM-10, DL, C4, C5, C6, C7, A2, A6, A7, 9x12, 10x13, Monarch	

<Media Size>

	Input		Output	
	Feeder	MPTray	Face Up Conveyor	Face Down
Width	64 – 330.2 mm	64 – 330.2 mm	Same range of MPTray	Same range of Tray1
	2.5 – 13.0 inch	2.5 – 13.0 inch		
Length	89 – 382 mm	89 – 1321 mm		147 – 1321 mm
	3.5 – 15.0 inch	3.5 – 52.0 inch		5.8 – 52.0 inch

2. TROUBLESHOOTING PROCEDURES

2.1 Precautions prior to repair

(1) Confirm the basic check items indicated in the User's Manual.

For Popular technique as the regular maintenances and typical troubleshooting etc., Refer to the [User's Manual] - [5. Troubleshooting].

Especially, for troubleshooting as JAM Recover and Cleaning each parts, read, understand and check following enough the User's Manual before the maintenance working.

(2) Through hearing from the user, obtain information, as far in detail as possible, on the situation concerning the fault.

(3) Inspect the apparatuses in these condition close to the actual situation in which the fault occurred.

2.2 Preparations for troubleshooting

(1) Check to see if the right paper is used. See the paper specifications.

2.3 Precautions when taking action on abnormal motions

(1) Display of LED lamps

The breakdown situation of this machine is appeared at LED lamp.

Do an appropriate trouble repair based on information appeared at LED lamp.

2.4 Troubleshooting method

2.4.1 Method for troubleshooting

2.4.1. (1) LED appears Trouble

(1-1) LED appears nothing

Check item	Checking method	Action in case of NG
(1-1-1) Checking connections		
Connection between the apparatus that is the feeder or the conveyor and each AC power supplied.	Check the connection between the apparatus and AC power supplied.	Connect the AC cable properly.
Cable assembled with connecting the low-voltage power supply unit (OR-Board-30L in Chapter 4) to the control board (Board-Feeder / Board-Conveyor in Chapter 4).	Make sure the low-voltage power supply unit is connected to the POWER connector on the control board properly. Check whether the cable connector is half-connected or tilted.	Connect the cable properly.
	Check whether there is any fault in the cable assembly, e.g., missing wires.	Replace the cable with a good cable.
(1-1-2) Checking power supplies		
AC power supplied to the control board	Check the supplied voltage of the connector on the control board.	Replace the low-voltage power supply. Replace the POWER cable.

2.4.1. (2) Abnormal apparatus (Feeder or Conveyor) operation after powered on

(2-1) No operation

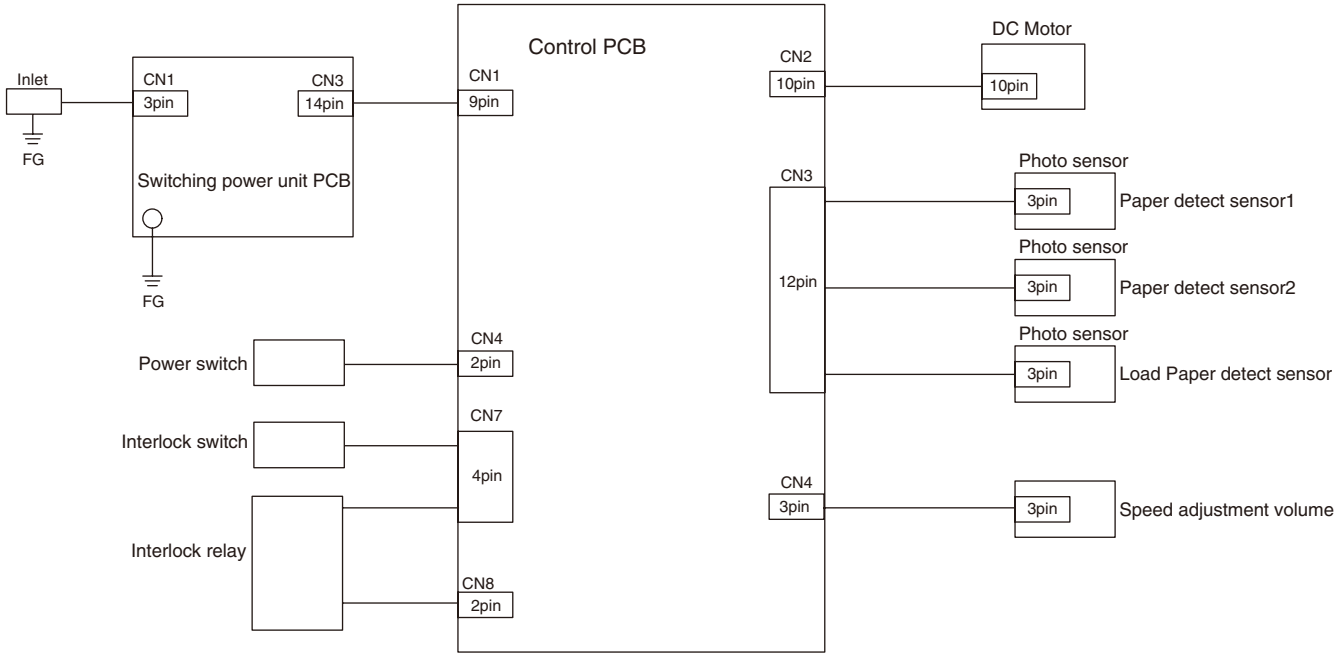
Check item	Checking method	Action in case of NG
(2-1-1) Checking connections		
The same check of (1-1-1)		
(2-1-2) Confirmation of the power switch LED		
Power Switch LED	Confirm whether the LED is off. If the LED blinks at high speed, the apparatus is occurring an error.	Replace either of the low-voltage power supply unit, the Control board, the cables connected to the low-voltage power supply unit and Control board or the cables connected to the Control board and Power SW-board.
(2-1-3) Checking power supplies		
AC power supplied to the apparatus.	Check the supplied voltage of the AC power supplied.	To supplies the AC power.
AC power supplied to the control board	Check the supplied voltage of the connector on the control board.	Replace the low-voltage power supply. Replace the POWER cable.

(2-2) Abnormal sound

Check item	Checking method	Action in case of NG
(2-2-1) Checking for loss of synchronization of motor (driver failure)		
The same check of (1-1-1)		
(2-2-2) Confirmation of the power switch LED		
Condition of each motor cable	Check the wiring of a motor. Check for a short circuit by visual check and using a tester. Disconnect the motor cable from the PCB and check the resistance between the FG and each pin of the disconnected cable.	Replace the motor cable. Correct the wiring.
(2-2-3) Check for gear jumping (related with jam)		
Operation of a motor	Recover the jam for to countermeasure the tooth jump of the timing belt. If the gear occurs the tooth jump, the plate for to hold the gear is miss attached.	Check the timing belt. Check the assembling state of the motor and gears.

(2-3) Abnormal odor

Check item	Checking method	Action in case of NG
(2-3-1) Locate the position with abnormal odor occurred.		
Low-voltage power supply unit (OR-Board-30L in Chapter 4)	Take out the low-voltage power supply unit and confirm the odor.	Exchange low-voltage power supply unit



Wiring diagram (Feeder unit section)

Troubleshooting for the related realistic using

- **Refer to mainly the User's Manual for method of troubleshooting.**

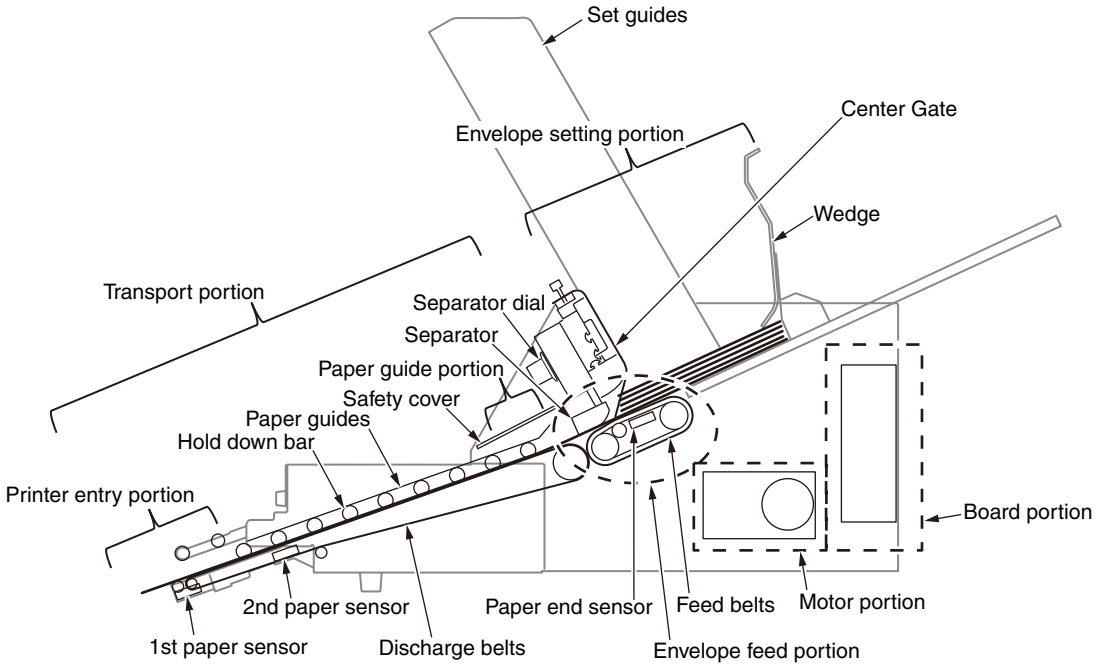
  For more details and technical articles, refer to the following description.

⚠ Warning
• If the printer has turned on, the fuser unit may be hot. This area is cleanly labelled. Do not touch

Memo: For to recover the Paper Jam occurred at the printer side, refer to the manuals for the printer main.

<for Feeder Unit>

Perform the maintenance of the related realistic using the feeder unit with referring to a following figure and table.



Symptom		Occur positions	Cause	Troubleshooting	Check item
Feeder does not work.			The feeder is not turned on.	Check that the power plug is inserted into the power outlet. Check that the status indicator is turned on.	
Feeder emits strange noises and bad smells.			Immediately switch off the power supply, pull the power plug out of the power outlet, and contact the designated customer service center.		
The Feeder does not enter to the printer at the time of the Feeder insertion.		Printer entry portion	The feeder and printer's height positions are not matched.	Adjust these height correctly.	The insertion state to the printer
Paper jams occur.	Envelope does not move It is not send out well	Overall	Feeder is tilted.	Install the feeder on a flat, stable surface.	Installation surface
		Overall		Height adjustment is shifted in right and left. Adjust the height of left and right.	Height adjustment shim. Height adjustment label.
		Envelope setting portion	Too many envelopes are set on the set guides.	Reduce the amount of envelopes.	Set of the envelope
		Envelope setting portion	Envelopes are set too tightly.	Remove the envelopes from the set guides, and then set them again.	Set guide
		Envelope feed portion	Position of the wedge is not aligned.	Adjust the wedge position.	Envelope size and Wedge position.
		Envelope feed portion	The envelopes are not set correctly.	Set envelopes correctly.	Set of the envelope
	The multiplicate envelope caught in the separator and are not feed.	Envelope feed portion	The envelopes are not set correctly.	Set envelopes correctly.	Set of the envelope
		Envelope setting portion	Come off the Center Gate	Attach the Center Gate.	Center Gate
	The envelope caught on the paper guide.	Paper guide portion	Positions of paper guides are not aligned.	Match each paper guide to the envelope size that you have set.	Paper guide
	The envelope caught on the separator. The feeding speed is slow from separator.	Envelope feed portion	Separator is dirty.	Clean the separator.	Separator
	The envelope caught on the separator. The feeding speed is slow from separator. The envelope is rolled up in a separation portion.	Envelope feed portion	Separator's position is too low.	Lift the separator up.	Dial of the separator
		Overall	Envelopes contain moisture.	Use envelopes stored at the appropriate temperature and humidity.	Envelope

Symptom		Occur positions	Cause	Troubleshooting	Check item
Paper jams occur.	The envelope caught on the separator. The feeding speed is slow from separator. The envelope is rolled up in a separation portion. The envelope caught on the paper guide.	Envelope feed portion, paper guide portion	Positions of set guides are not aligned.	Match each set guides to the envelope size that you have set.	Set guide
	Stops in the middle of a transport table	Transport portion	The Hold Down Bar is not set correctly.	Attach the Hold down bar correctly.	Hold Down Bar
		Transport portion	Discharge belt is dirty.	Clean the Discharge belt.	Discharge belt
		Transport portion	Sensor is dirty.	Clean the sensor.	Sensor
	Stops at the position entering the printer	Printer entry portion	Feeder is away from the printer.	Correctly install the feeder to the printer.	The insertion situation to the printer
		Printer entry portion	Discharge belt is dirty.	Clean the Discharge belt.	Discharge belt
		Printer entry portion	The feeder height is low for the printer.	Adjust the height correctly.	The insertion situation to the printer
		Printer entry portion	Don't remove the separator of printer's MPT.	Remove the separator of printer's MPT.	MPT of the printer
		Printer entry portion	Black tape is not placed correctly.	Place the black tape correctly.	MPT of the printer
		Printer entry portion	Black tape is dirty.	Clean the black tape.	MPT of the printer
	The envelope does not feed when sets the small piece of the envelopes.	Envelope feed portion, Envelope setting portion	A few envelopes are not fed.	Prepare additional envelopes and set them again.	Set of the envelope
	Paper does not stop at the printer entry portion.	Printer entry portion	The envelope surface reflectance is low.(Black mat envelope etc)	Product after February, 2017：Stick the black tape to MPT correctly.	MPT of the printer
	The envelope remained at transport portion and 1-2 pieces of the last are not feed, after disappeared the envelope of the set portion.	Envelope setting portion	It stops when detected paper empty.	Set the envelope again, and push the start button.	Set of the envelope

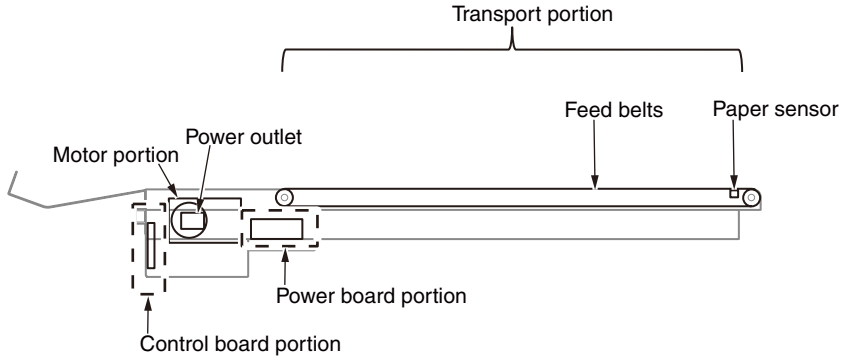
Symptom	Occur positions	Cause	Troubleshooting	Check item
Multiple envelopes are fed simultaneously.	Overall	Envelopes are either too thin or too thick.	Use envelopes compatible with the feeder.	Envelope
	Envelope feed portion	Too many envelopes are set on the set guides.	Reduce the amount of envelopes.	Set of the envelope
	Envelope feed portion	Separator is dirty.	Clean the separator.	Separator
	Envelope setting portion	Envelopes are not set correctly.	Set envelopes correctly.	Set of the envelope
	Envelope feed portion, paper guide portion	Envelopes are set too tightly.	Remove the envelopes from the set guides, and then set them again.	Set guide
	Envelope feed portion, paper guide portion	Position of the separator is not aligned.	Lower the separator to adjust the position again.	Dial of the separator
	Envelope feed portion	Flaps of window envelopes are caught in their windows.	Set the envelopes in the reverse direction (with their flaps directing backward). Change the printing direction to the opposite on the computer.	Envelope
Envelopes are fed in an inclined direction.	Overall	Envelopes contain moisture or static electricity.	Use envelopes stored at the appropriate temperature and humidity.	Envelope
	Overall	Envelopes have creases, folds, or curls.	Use envelopes compatible with the feeder. Correct if there are curls.	Envelope
	Overall	Envelopes are not aligned properly.	Adjust each paper guide to the width of the envelopes.	Paper guide
	Overall	Envelopes are not set straight.	Adjust each paper guide to the width of the envelopes.	Paper guide
	Overall	Envelopes have curls or bulges.	Use envelopes compatible with the feeder. Use envelopes after correcting the curls or bulges.	Envelope
Envelopes are fed folded.	Envelope feed portion, paper guide portion	Separator's position is too low.	Lift the separator up.	Dial of the separator
	Overall	Envelopes contain moisture.	Use envelopes stored at the appropriate temperature and humidity.	Envelope

Symptom	Occur positions	Cause	Troubleshooting	Check item
Envelopes are jammed on the printer side of the feeder.	Transport portion	Too many envelopes are set on the set guides.	Reduce the amount of envelopes.	Set of the envelope
	Transport portion	Position of the wedge is not aligned.	Match the wedge to the envelope size that you have set.	Envelope size and Wedge position.
	Transport portion	Positions of set guides are not aligned.	Match each paper guide to the envelope size that you have set.	Set of the envelope
	Transport portion	Forget to attach the Hold down bar.	Attach the Hold down bar correctly.	Transport portion
	Printer entry portion	Printing speed is too fast for the paper length.	Specify the paper size as an envelope to print envelopes. 1. Set the media type to envelope 2. Set the thickness of the paper to mor thick, when the media type is set at 'Plain'. When the length of the envelope is short : Medium Heavy or more When the length of the envelope is long (12 inch or more): U.Heavy3 or more	Paper setting of the printer
	Printer entry portion	Rollers in the multipurpose tray of the printer are dirty.	Clean the rollers in the multipurpose tray of the printer.	MPT roller of the printer
	Printer entry portion	Feeder is away from the printer.	Correctly install the feeder to the printer.	The insertion situation to the printer
	Printer entry portion	The height of the feeder are not matched.	Adjust the height correctly.	The insertion situation to the printer
Envelopes are jammed inside the printer.		-	1. See "Troubleshooting and Daily Maintenance" in the user's manual provided with the printer to resolve the envelope jam. 2. Remove the envelopes left in the multipurpose tray. 3. Set the envelopes again. 4. Press the start button on the feeder.	
Detected paper size error.	Printer	The setting of the paper size are not matched.	Set the paper size correctly by operation panel of printer or printer driver.	Printer setting
It becomes the intermittent print state when printing the small envelopes.	Printer	The setting of the printer driver are not matched.	Set by operation panel of printer. Select [Menu] > [Print Adjust] > [Narrow Paper Speed] > [Normal2]	Printer setting
After the first envelope was fed, the envelope after the second piece are not feed.	Overall	It takes reset once.	Push the start button once again.	
	Overall	The safety cover is open.	Close the safe cover and push the start button.	

Symptom	Occur positions	Cause	Troubleshooting	Check item
Set the paper correctly, but displayed paper end.	Paper end lever	Paper end lever is not set.	Set the Paper end lever correctly.	Paper end lever
The chatter sound is occurred when rotate the paper end lever.	Printer entry portion	The feeder height is high for the printer.	Adjust the height correctly.	The insertion situation to the printer
Rotate the paper end lever, but return to the former position.	Paper end lever	The magnet of the table bottom position adjustment is not correctly.	Adjust the position of the magnet correctly.	Magnet
	Printer entry portion	Feeder is away from the printer.	Correctly install the feeder to the printer.	The insertion situation to the printer
	Printer entry portion	Locking parts is not set.	Set the Locking parts correctly.	Initial setting
Blink the LED lamp at high speed	Motor, board	Applied high load and stop temporary the operation.	Disconnect the AC cable once and connect it once again.	AC cable
	Motor, board	The motor is broken.	Replace the motor.	Motor
	Motor, board	The board is broken.	Replace the board.	Board
	Motor, board	Cable disconnected.	Connect the cable correctly.	Cable
	Motor, board	The fuse has blown.	Replace the motor or board.	Motor, board
When pull the feeder out of the printer, there is a catch	Printer entry portion	The tape of the roller hold is not stick	Stick the tape correctly.	Initial setting
Occur the print come off the paper (offset printing)	Printer	Printing speed is too fast for the paper length.	Specify the paper size as an envelope to print envelopes. 1. Set the media type to envelope 2. Set the thickness of the paper to mor thick, when the media type is set at 'Plain'. When the length of the envelope is short : Medium Heavy or more When the length of the envelope is long (12 inch or more) : U.Heavy3 or more Setting to the more thicker media type if occur the problem in the envelope length is short and Medium Heavy setting.	Paper setting of the printer
Cannot print, when use the envelope fuser	Printer	The setting of the printer driver are not matched.	When use the envelope fuser, choose the [Envelope] at media type on the printer driver. Select [Menu] > [Tray Configuration] > [MPTray Config] > [Media Type] > [Envelope]	Printer setting
Cannot use the previous custom media file, when update the FW to the envelope fuser and use the envelope fuser.	Printer	Specifications of new FW.	Cannot use the custom media file that support the old version, when use the new FW and envelope fuser.	Printer setting

<for Conveyor Unit>

Perform the maintenance of the related realistic using the conveyor unit with referring to a following figure and table.



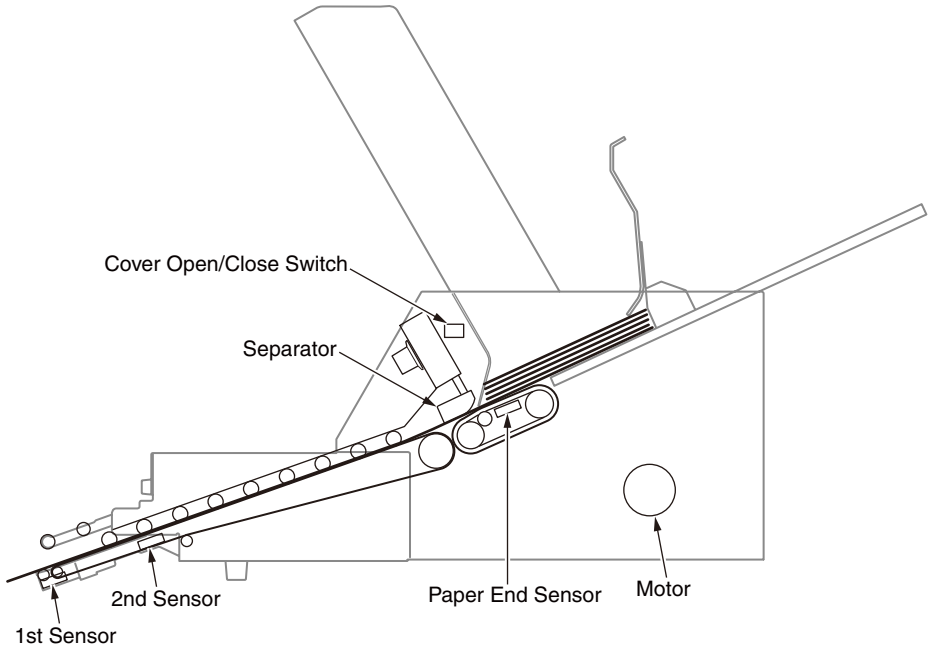
Symptom	Occur positions	Cause	Troubleshooting	Check item
Conveyor does not work.		The conveyor is not turned on.	Check that the power plug is inserted into the power outlet. Check that the status indicator is turned on.	
		Too many envelopes or heavy objects are placed on the belts.	Remove them from the belts.	
		Foreign objects are jammed between the belts and the unit.	Remove the foreign objects. When removing foreign objects is difficult, contact the designated customer service center.	
Conveyor does not stop.		There is something covering the paper sensor are.	Remove the object covering the paper sensor area.	
		Paper sensor is dirty.	Clean the paper sensor are.	
Conveyor emits strange noises and bad smells.		Immediately switch off the power supply, pull the power plug out of the power outlet, and contact the designated customer service center.		
Printer detects that stuck envelopes are full, and stops printing.		Excessive envelopes have accumulated on the conveyor.	Remove the stuck envelopes on the conveyor.	
		Envelopes that tends to be curled are used.	Use the conveyor keeping it a little away from the printer.	
The envelope protrudes from the conveyer, in the state that does not stack in large quantities.		The rear stacker is not set correctly.	Set the rear stacker correctly. Change the set direction of stacker, when large envelopes protrude even if they set it correctly.	

3. MAINTENANCE MENUS

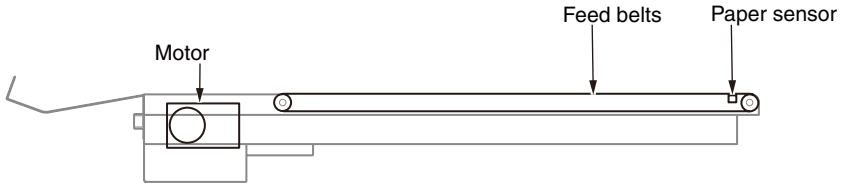
The Printer can be adjusted by using Maintenance Utility, or button operation on its operator panel.
On the panel, maintenance menus are provided in addition to general menus. Select the menu intended for each adjustment purpose.

3.1 Layout of the electronic parts

In the case of occurring the abnormality motion at Feeder unit or conveyor and peculiarly such as it is suspected the electronic parts, refer the following figure and check these abnormality parts.



Feeder unit Motor and sensor layout



Conveyor Motor and sensor layout

3.2 Operating for Firmware of the Feeder unit

3.2.1 Maintenance tool for operating of the related firmware

In the case of the operating for the firmware of the Feeder unit, the Board-Feeder* should be connected to a computer by using the USB cable.
*: Refer to Chapter 4.

Prepare following maintenance tools.

No.	Maintenance Tool		Quantity	Use	Remarks
1		Personal computer (with binary editor)	1		
2		Mini USB Cable	1		Mini-B type

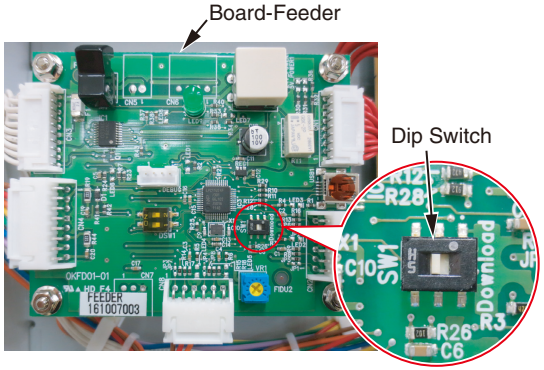
3.2.2 For connecting the Board-Feeder and computer

3.2.2.1 Connecting process

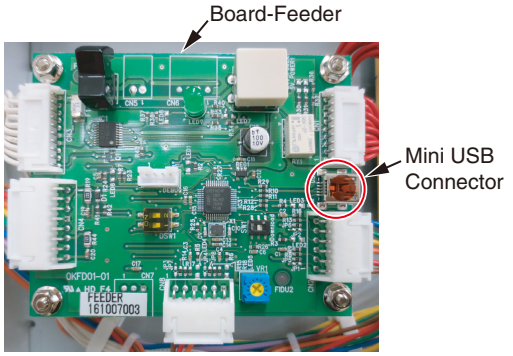
(1) Power off the Feeder unit.

(2) Remove the Power Source Cover and check the Board-Feeder. (Refer to 4.2.4)

(3) Set the dip switch on the Board-Feeder to [Download].



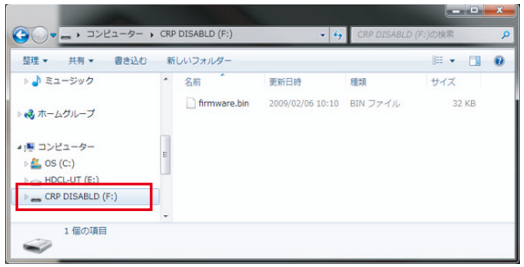
(4) Connect the Feeder unit and the Personal computer by using Mini USB Cable.



(5) Power on the Feeder unit.

(6) The Feeder unit is mounted automatically on the windows personal computer as a mass storage device.

Check the Explore on Windows PC as example.



e.g. : Display of the Explore (Windows _ Japanese Ver.)

--- After made above state, operate for to the purpose with referring to next chapters.

3.2.2.2 Disconnecting process

(1) Dismount the Feeder unit from the personal computer.

(2) Power off the Feeder unit.

(3) Disconnect the USB Cable.

(4) Set the dip switch on the Board-Feeder to the opposite side of the [Download].

3.2.3 For confirming the firmware version (after Ver.1.06)

The firmware version of the firmware binary data can be confirmed by using the binary editor of the personal computer.

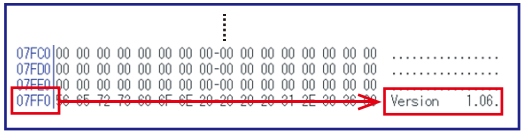
The confirming procedures of the installed firmware to the Feeder unit is explained as a example.

(1) Connect the Feeder unit and the personal computer. (Refer to 3.2.2.1)

(2) Load the binary data named [firmware.bin] connected in the Feeder unit by the binary editor on the personal computer.

e.g. : Display of the Explore (Windows _ Japanese Ver.)

(3) Confirm the firmware version from the address since ' 07FF0' on the binary editor.



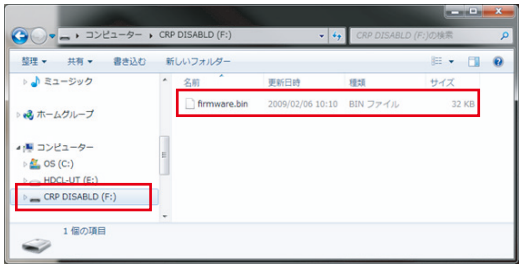
e.g. : Binary editor screen

3.2.4 For updating the firmware version

(1) Connect the Feeder unit and the personal computer. (Refer to 3.2.2.1)

(2) Delete the current firmware file named [firmware.bin] connected in the Feeder unit by the file editor (e.g. Explore in Windows OS) on the personal computer.

(3) Upload the new firmware file named [firmware.bin] connected in the Feeder unit by the file editor on the personal computer.



(4) Disconnect the Feeder unit and the personal computer referring to 3.2.2.2.

(5) The Feeder unit is setup with the new firmware by rebooting it.

4. REPLACEMENT OF PARTS

This chapter describes the procedures of the field replacement of parts, assemblies and units. The procedures are to detach them. Reverse the procedures to attach them.

The reference part numbers used in this manual (such as ① and ②) do not identical to the part numbers in the maintenance disassembly configuration diagram (46561501TL) and RSPL (46561501TR) for the manual.

4.1 Notes on replacement of parts

(1) Before disassembling or reassembling the feeder and the conveyor, remove them from the printer. And before to replacing of parts, unplug the AC cord.

(a) Be sure to use the following procedure to unplug the AC cord:

① Turn off the Power Switch, and check the LED Lamp lights-out.

② Pull out the AC plug of the AC cord from the AC power source.

③ Unplug the AC cord.

⚠ Warning	Electric shock hazard	⚡

Pull out the AC cord from the feeder and the conveyor. Because, in the case of the AC cable connected to the feeder and the conveyor, some circuits are active even if the feeder's and the conveyor's status is ' Power-Off '.

When replacing the power supply, due to potential electric shock. So, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

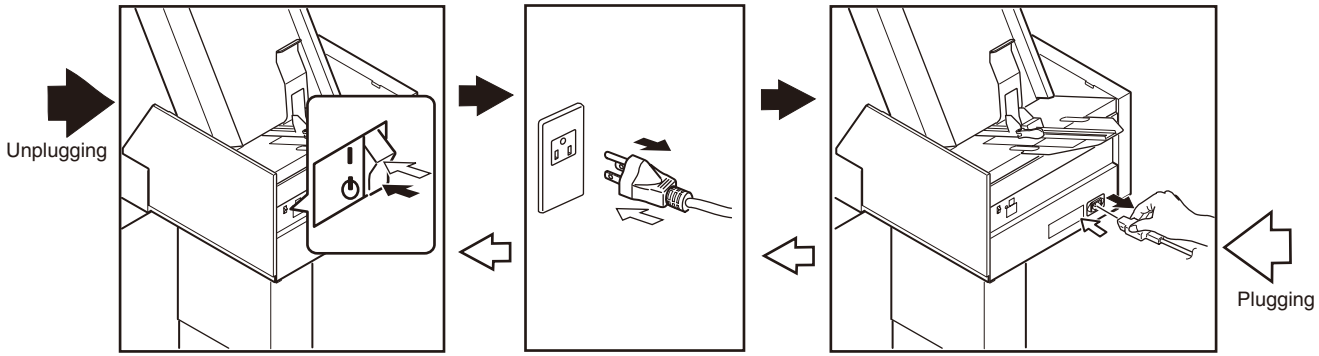
After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

(b) Be sure to use the following procedure to reconnect the feeder and the conveyor:

① Connect the AC cord to the feeder and the conveyor.

② Insert the AC plug into the AC power source.

③ Turn on the feeder and the conveyor, and the LED Lamp lights.



(2) Do not disassemble the Feed Belt unit so long as they operate properly.

(3) Determine the ranges of disassembly according to the purposes of the operations for which the disassembly is done, so as not to do more disassembly than is necessary.

(4) Use designated maintenance tools.

(5) Follow disassembly steps in the orders specified; damage to parts may result.

(6) It is advisable to place and fix temporarily small parts that tend to get lost, such as screws and collars, to their original positions.

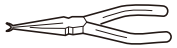
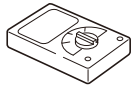
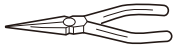
(7) Do not use the gloves that would be easily charged the static electricity in the case of touching the electronic board, and etc.

(8) Do not put directly the printed board on the feeder's main body, the conveyor's main body, floor and etc.

Maintenance Tools:

Table 4-1-1 shows the tools necessary to replace printed-circuit boards and units:

Table 4-1-1: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		Phillips screwdriver with magnetic tip, No. 2-200	1	3- to 5-mm screws	
2		Flat-head Screwdriver No. 3-100	1		
3		Precision screwdriver No.1	1	3mm flat countersunk head screw	
4		Hexagonal wrench 2mm	1		
5		Hexagonal wrench 2.5mm	1		
6		Hexagonal wrench 3mm	1		
7		Nutdriver 5.5mm	1		
8		Circlip pliers	1		
9		Digital multimeter	1		
10		Pliers	1		

4.2 Part replacement procedure for Envelope Feeder Unit

Screws in use:

Following table shows screws for to be used to this apparatus. Confirm the Screw No. with these described peculiarity because screws explained only these No. in next item.

Screw No.	Screw Name	Size	Length (mm)	Designation
01	B3-6ZP	M3	6	Cross recessed head screw with captive washer (M3-6mm)
02	B3-8ZP	M3	8	Cross recessed head screw with captive washer (M3-8mm)
03	B3-10ZP	M3	10	Cross recessed head screw with captive washer (M3-10mm)
04	B5-12ZP	M5	12	Cross recessed head screw with captive washer (M5-12mm)
05	B3-6ZP_R	M3	6	Cross recessed head screw with captive washer (rounded end) (M3-6mm)
06	B3-8ZP_R	M3	8	Cross recessed head screw with captive washer (rounded end) (M3-8mm)
07	B4-8ZP_R	M4	8	Cross recessed head screw with captive washer (rounded end) (M4-8mm)
08	SB5-20	M5	20	Hexagon socket head cap screw (M5-20mm)
09	B3-5P	M3	5	Flat head screw (M3-5mm)
10	B3-6P_F	M3	6	Low flat head screw (M3-6mm)
11	B3-6B	M3	6	Binding head screw (M3-6mm)
12	B3-10B	M3	10	Binding head screw (M3-10mm)
13	B3-12B	M3	12	Binding head screw (M3-12mm)
14	B4-6B	M4	6	Binding head screw (M4-6mm)
15	B4-8B	M4	8	Binding head screw (M4-8mm)
16	B5-10B	M5	10	Binding head screw (M5-10mm)
17	B5-30B	M5	30	Binding head screw (M5-30mm)
18	SS4-3	M4	3	Hexagon socket setscrew (M4-3mm)
19	SS4-6	M4	6	Hexagon socket setscrew (M4-6mm)
20	B4-8TP	M4	8	Tap tight screw (M4-8mm)
21				Decoration screw

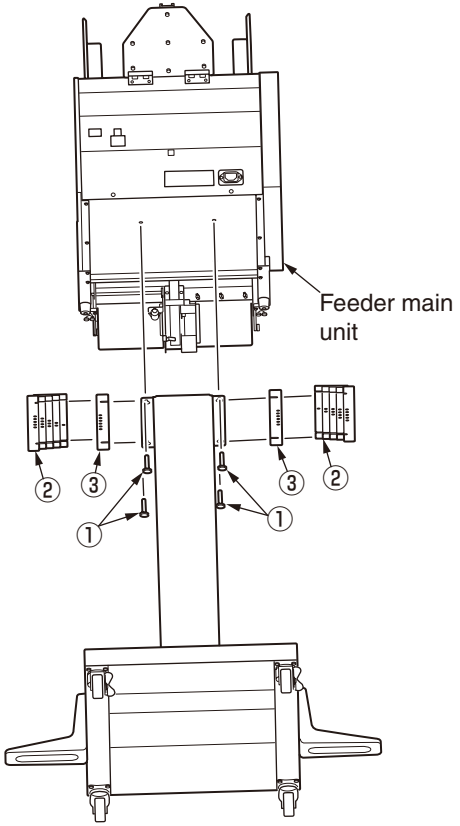
Memo!

This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagrams below.

4.2.1 Stand-Spacer-12345 / Stand-Spacer-6

(1) Remove the four screws (No.17) ① to detach the two Stand-Spacer-12345 ② , the two Stand-Spacer-6 ③ and the Feeder main unit.

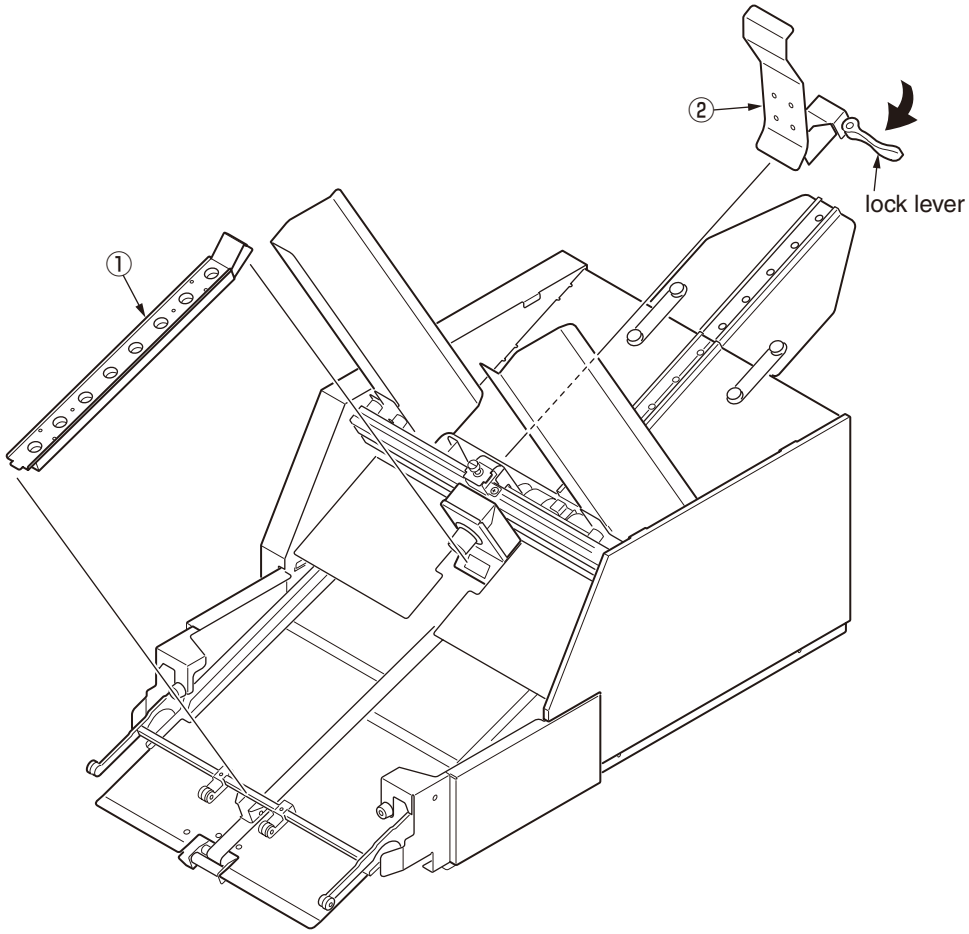
Note!: Be careful to do not drop the Feeder main unit when removing screws and spacers.



4.2.2 Hold Down Bar / Wedge

(1) Remove the Hold Down Bar ① .

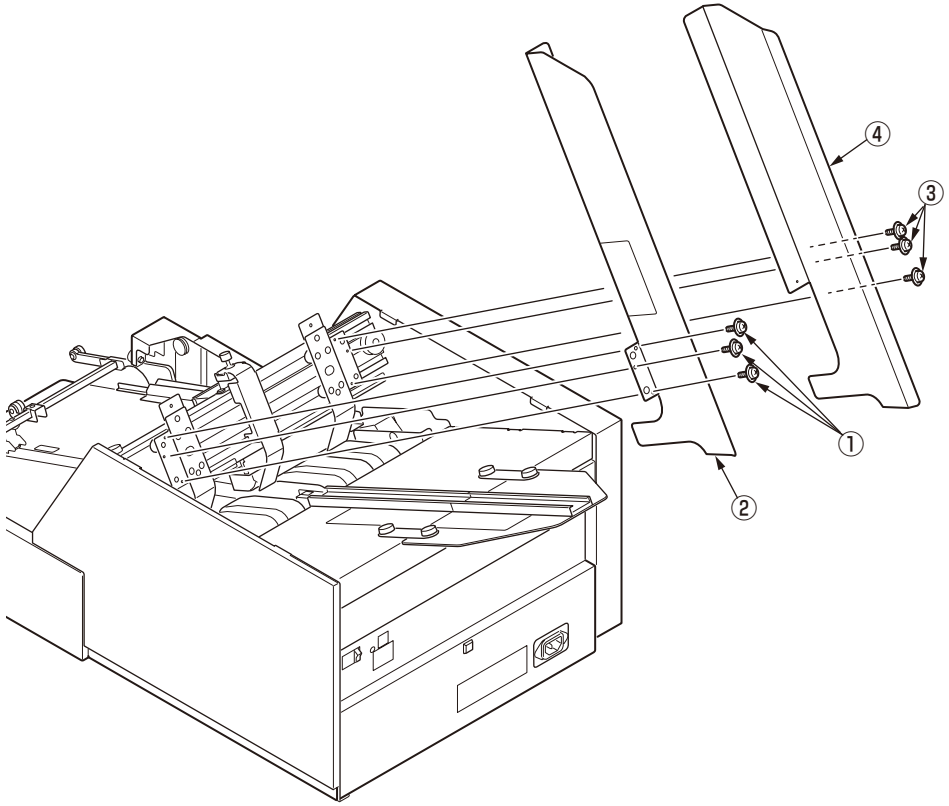
(2) Turn the lock lever to remove the Wedge ② .



4.2.3 Set Guides

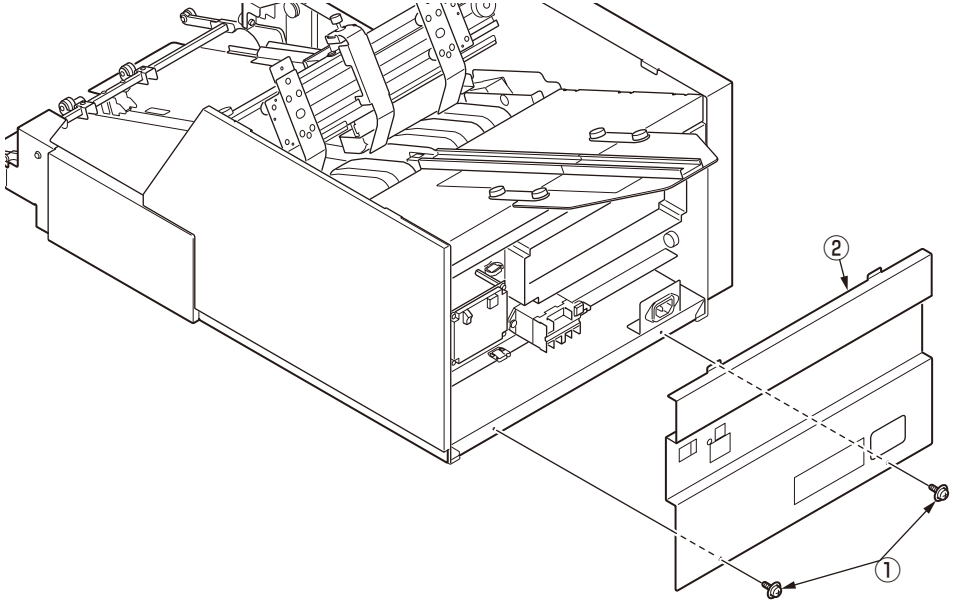
(1) Remove the three screws (No.01) ① to detach the Set Guide-F ② .

(2) Remove the three screws (No.01) ③ to detach the Set Guide-R ④ .

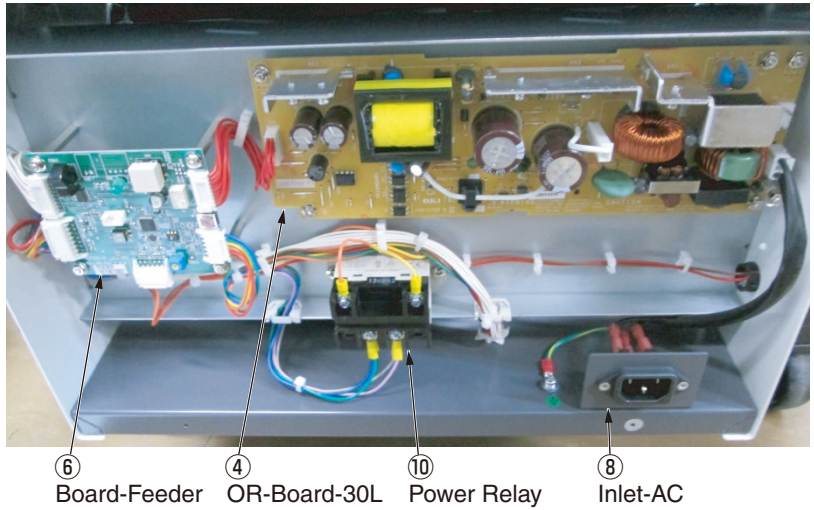


4.2.4 OR-Board-30L / Board-Feeder / Inlet-AC

(1) Remove the two screws (No.05) ① to detach the Power Source Cover ② .



Memo: Arrangement of the boards inside of the Power Source Cover

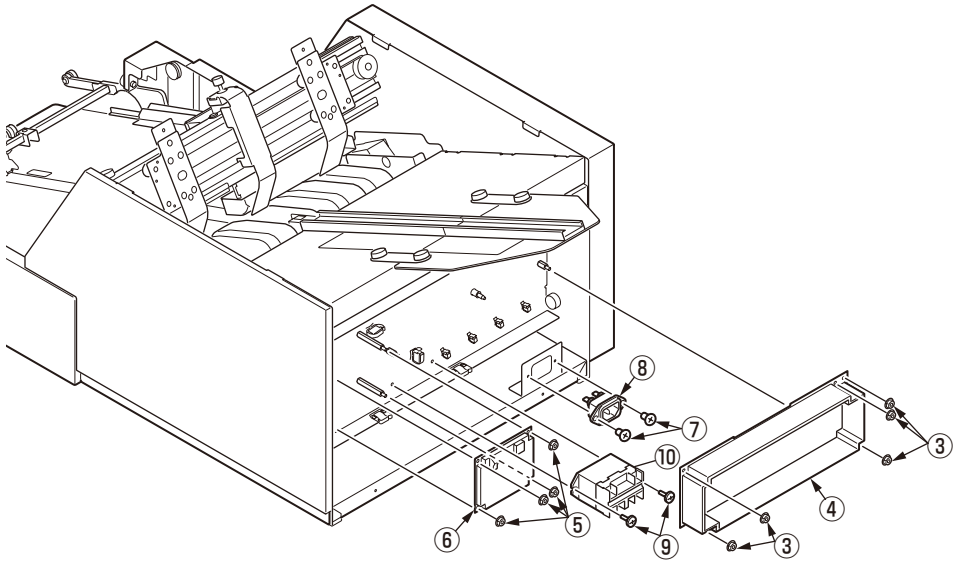


(2) Disconnect cables and remove the five nuts ③ to detach the OR-Board-30L ④ .

(3) Disconnect cables and remove the four nuts ⑤ to detach the Board-Feeder ⑥ .

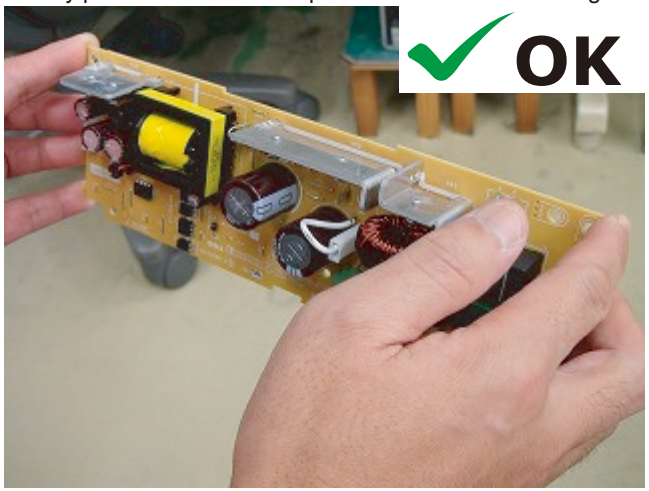
(4) Disconnect cables and remove the two screws (No.09) ⑦ to detach the Inlet-AC ⑧.

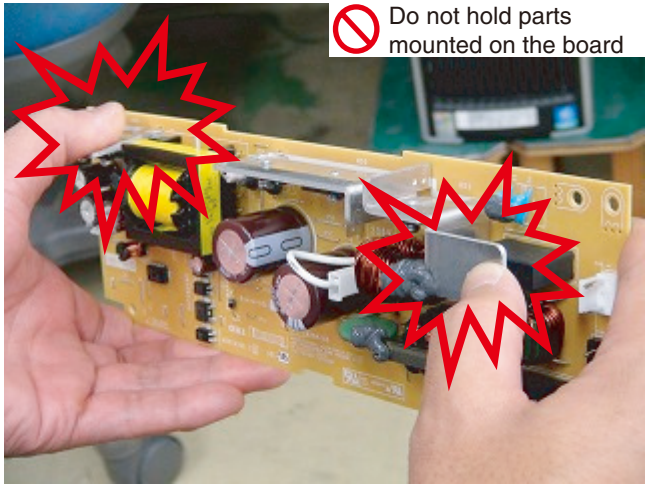
(5) Disconnect cables and remove the two screws (No.14) ⑨ to detach the Power Relay ⑩.



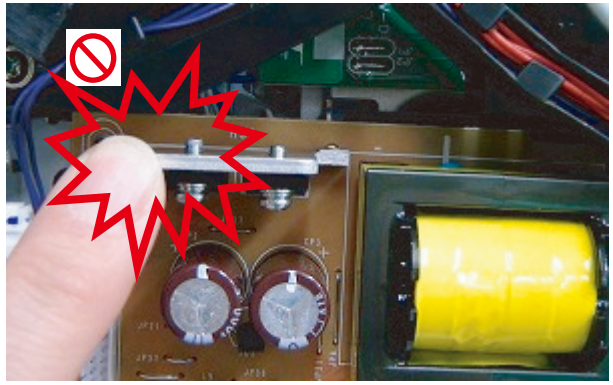
Note!: for the risk of destruction

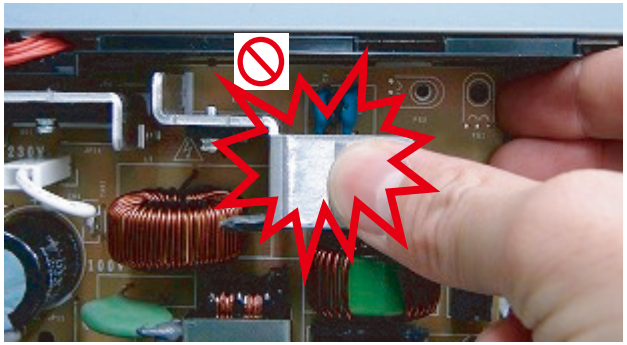
1. Do not hold any parts mounted on the power board when removing the board.

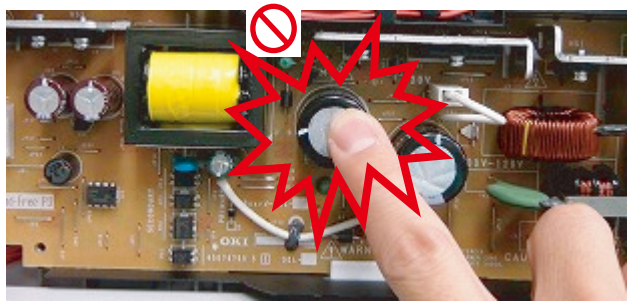




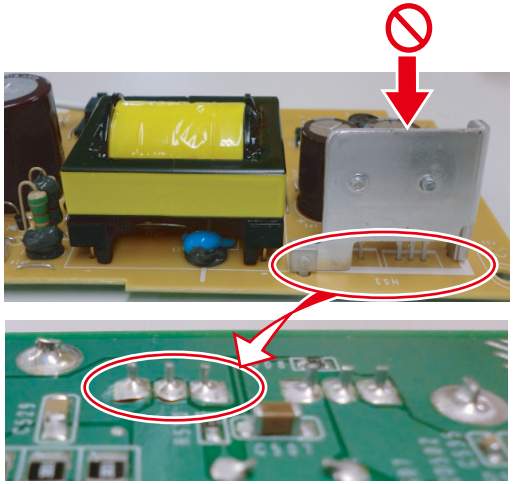
2. Do not push the parts mounted on the parts or push them against another object such as a table.



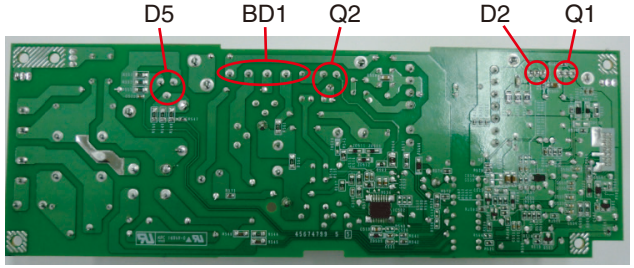




3. Pushing parts causes terminal peeling on the back side.



4. Especially check whether the following D5, BD1, Q2, D2 and Q1 terminals are peeling off when removing the board.



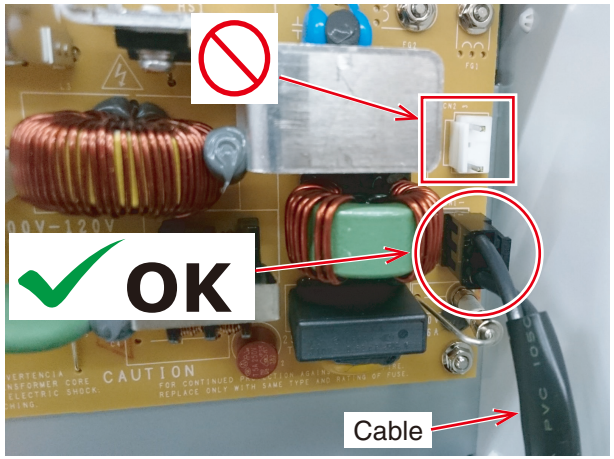
Note!: for connecting a cable

For the production before Oct. / 2016, the colors are mismatched between a cable connector and a socket on OR-Board-30L ④ .

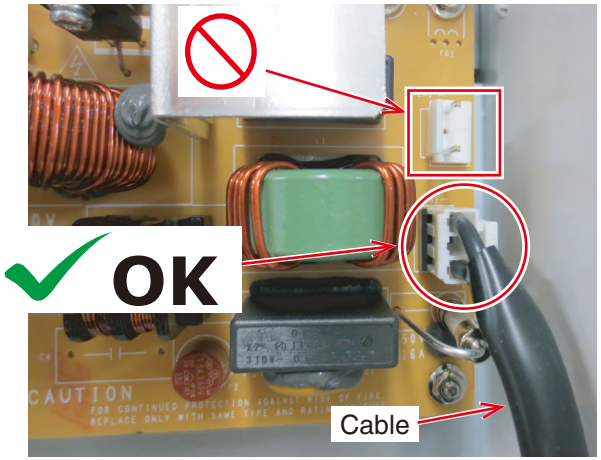
Cable color: white
Socket color: black

So, be careful for to do not connecting to the other wrong connector.

For the production after Dec. / 2016, the cable color is change to black as same as the socket color in following pictures.



<after Dec. / 2016>

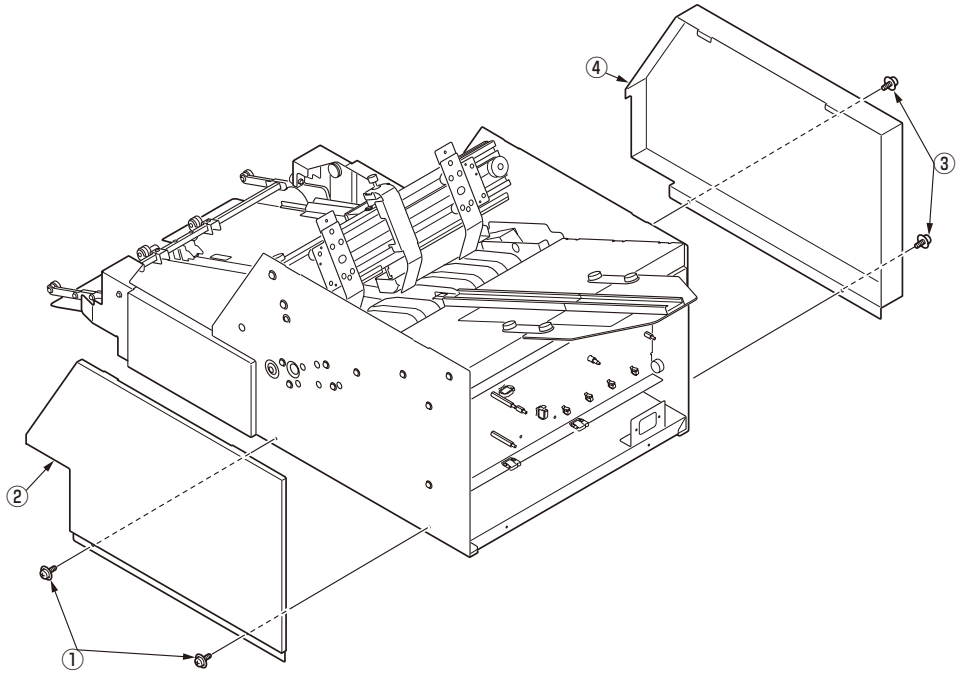


<befor Dec. / 2016>

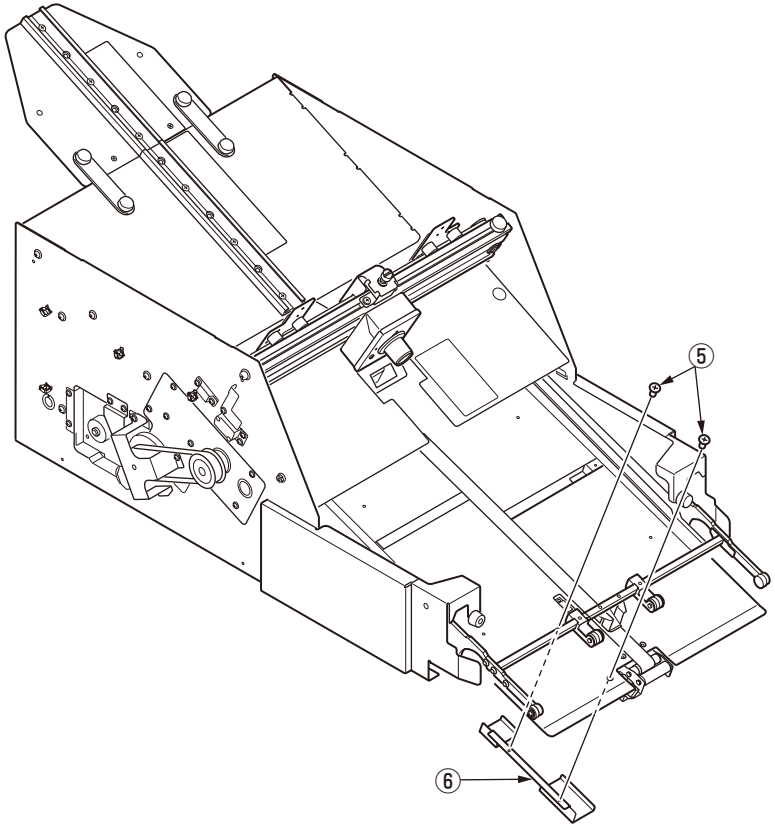
4.2.5 Conn Cord-Paper-SNS

(1) Remove the two screws (No.05) ① to detach the Front Cover ② .

(2) Remove the two screws (No.05) ③ to detach the Rear Cover ④ .

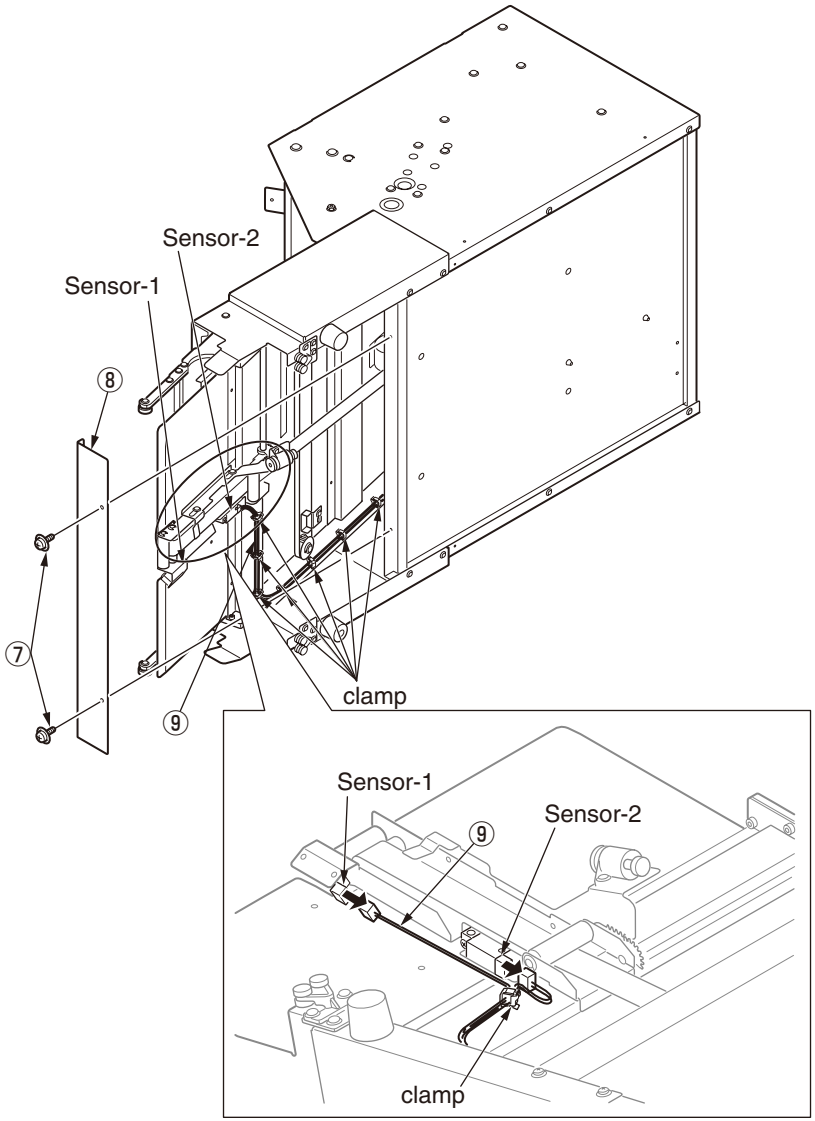


(3) Remove the two screws (No.10) ⑤ to detach the Sensor Cover ⑥ .



(8) Remove the two screws (No.05) ⑦ to detach the Cover ⑧ .

(9) Disconnect the Conn Cord-Paper-SNS ⑨ from the sensors and the clamps.

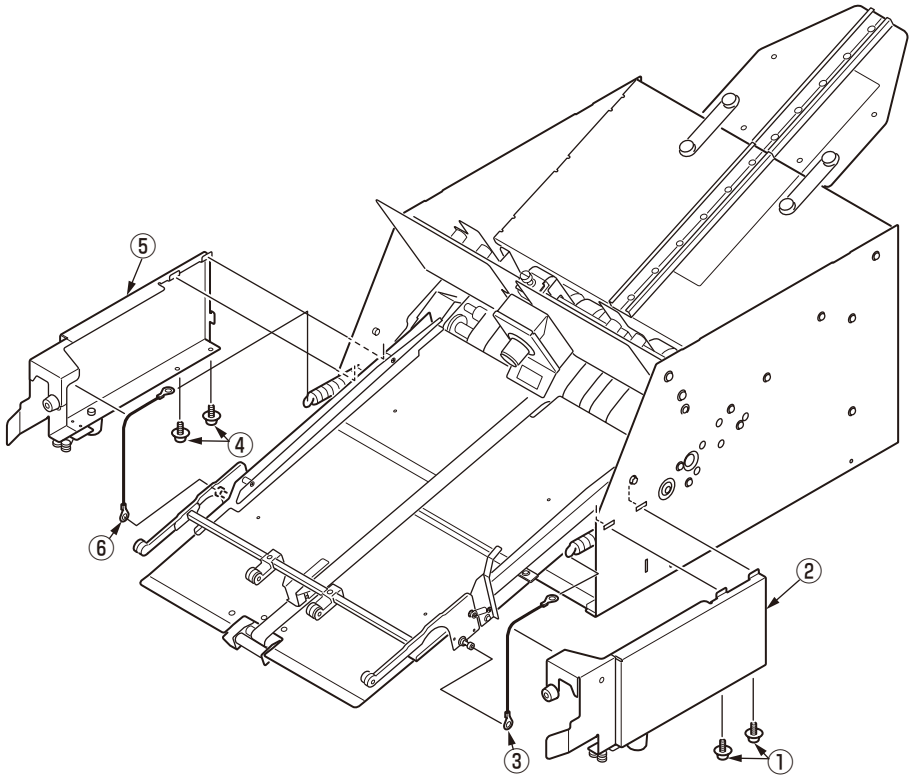


4.2.6 Arm-F-Assy / Arm-R-Assy / Table-Assy

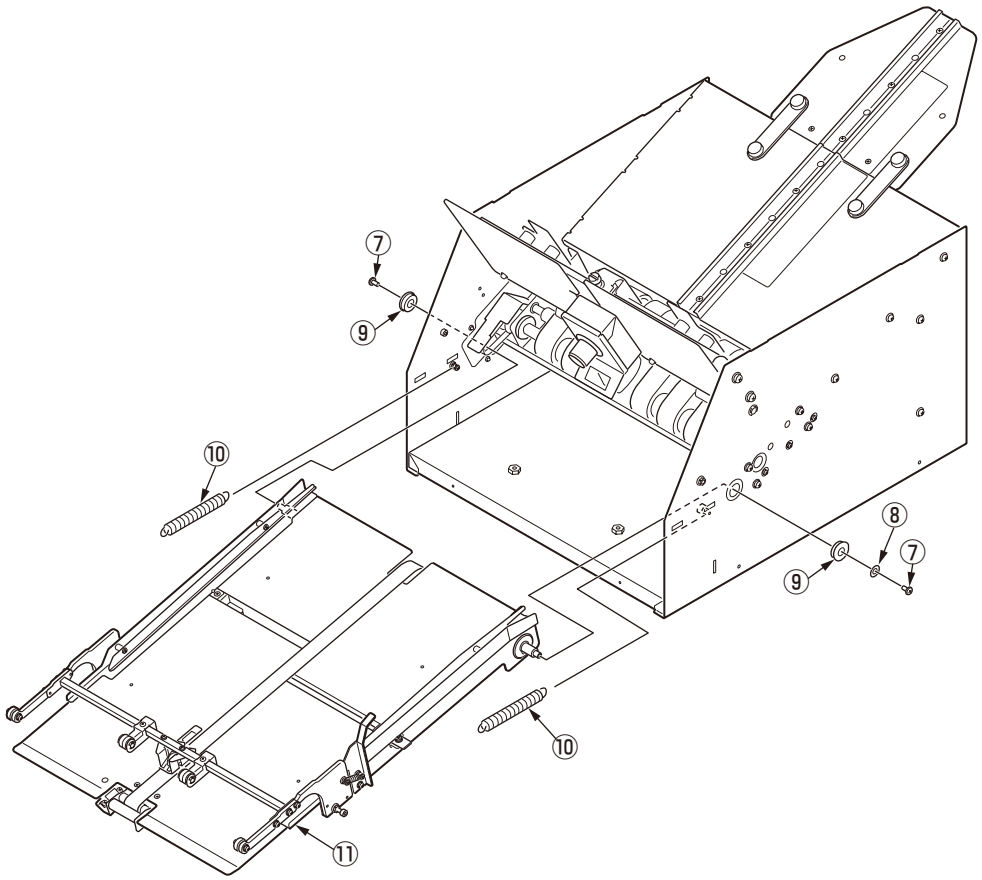
(1) Remove the Conn Cord-Paper-SNS. (Refer to section 4.2.5)

(2) Remove the two screws (No.06) ① to detach the Arm-F-Assy ② with pulling to lower side and a wire ③ .

(3) Remove the two screws (No.06) ④ to detach the Arm-R-Assy ⑤ with pulling to lower side and a wire ⑥ .

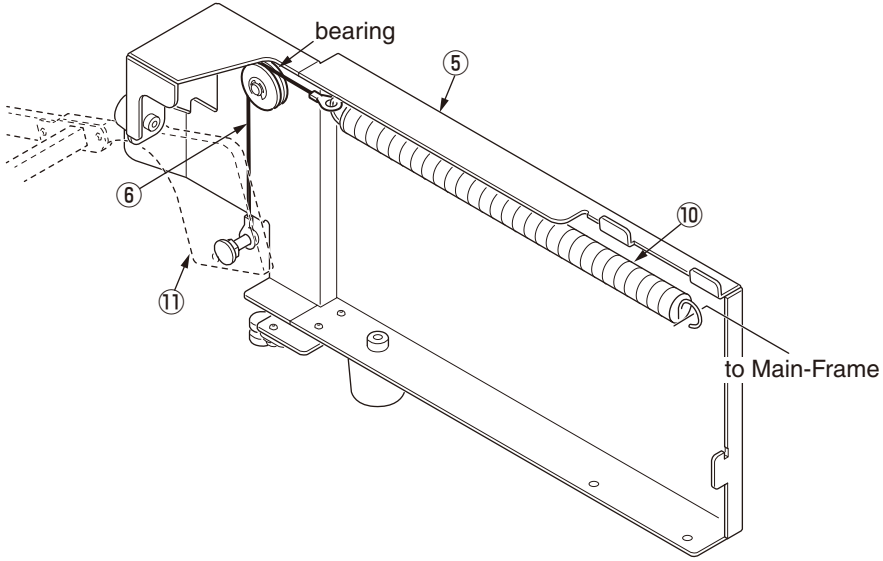


(4) Remove the two screws (No.15) ⑦ , a washer ⑧ , the two ball bearing ⑨ and two tension coil springs ⑩ to detach the Table-Assy ⑪ .



Note for assembling !

When the wire ③ (or ⑥) is assembled, it should be suspended too to a bearing of inside of Arm-F-Assy ② (or Arm-R-Assy ⑤) in it assembled.

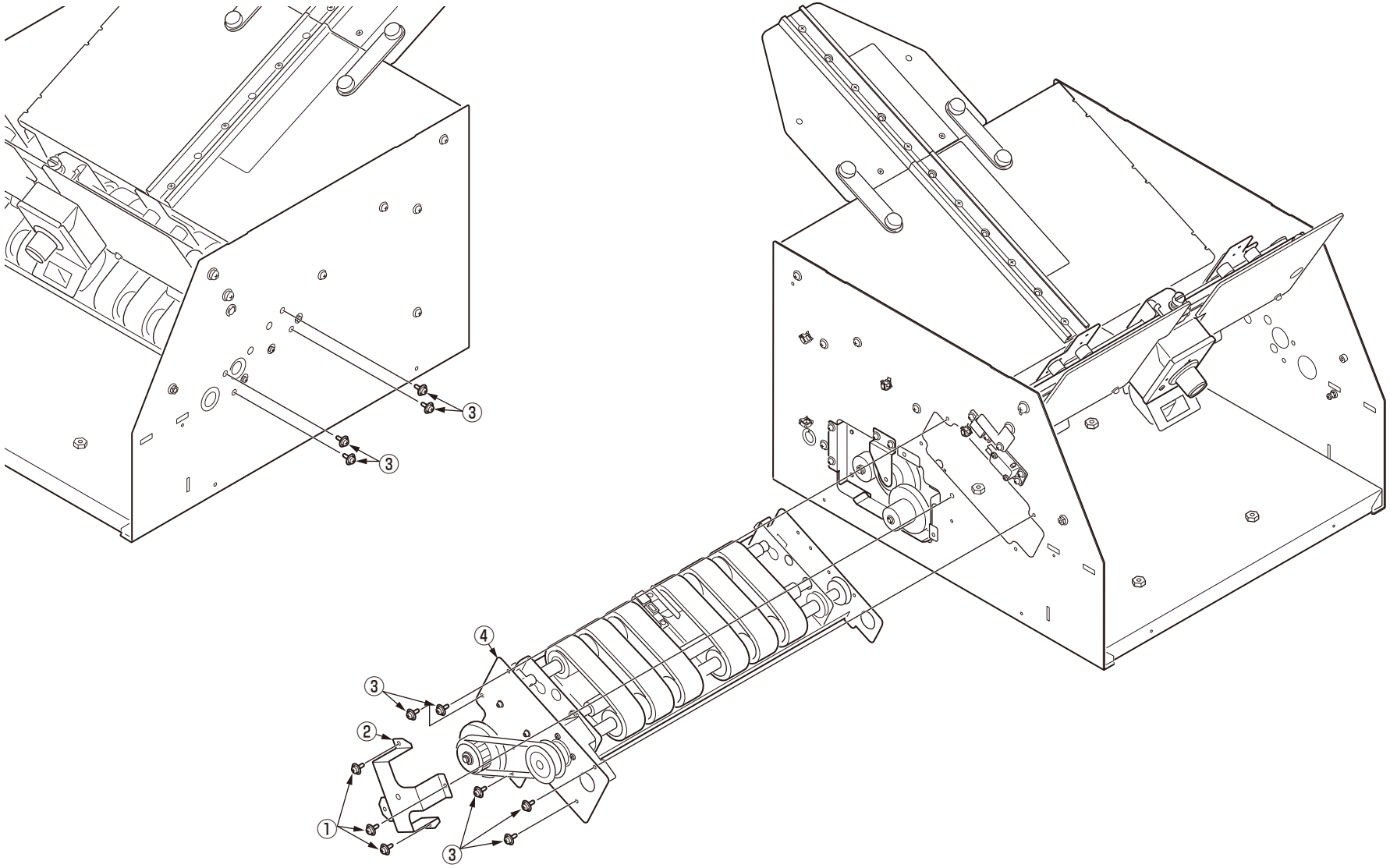


4.2.7 Feed-Drive-Assy / Motor-Assy

(1) Remove the Table-Assy. (Refer to section 4.2.6).

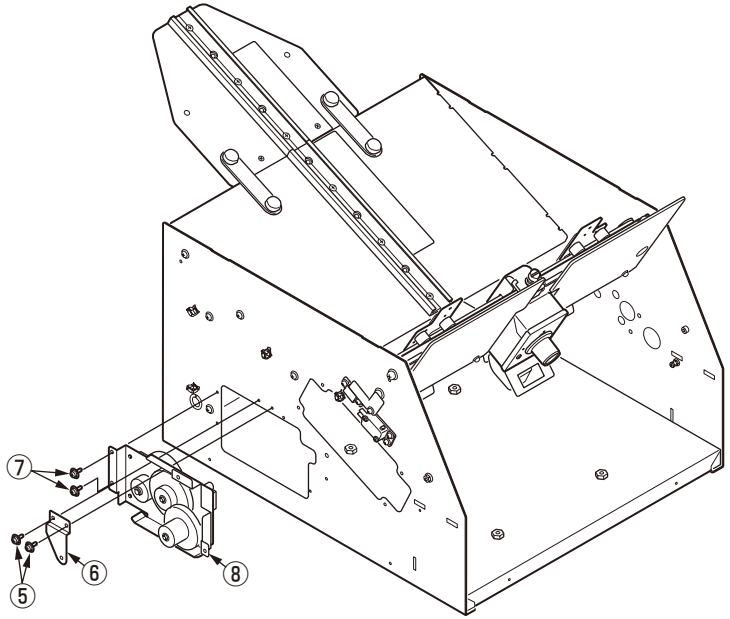
(2) Remove the three screws (No.06) ① to detach the Shaft Support Plate A ② .

(3) Remove the nine screws (No.07) ③ to detach the Feed-Drive-Assy ④ .



(4) Remove the two screws (No.02) ⑤ to detach the Shaft Support Plate B ⑥ .

(5) Remove the two screws (No.02) ⑦ to detach the Fuser-Drive-Assy ⑧ .

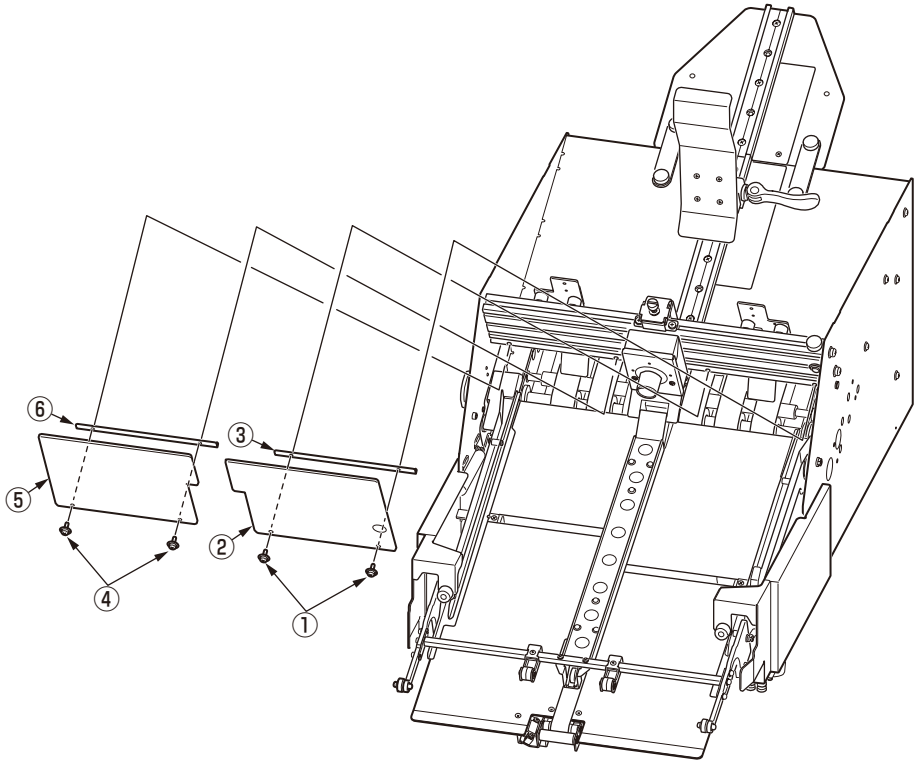


4.2.8 Safety Cover

(1) Remove the Front Cover and the Rear Cover. (Refer to section 4.2.5)

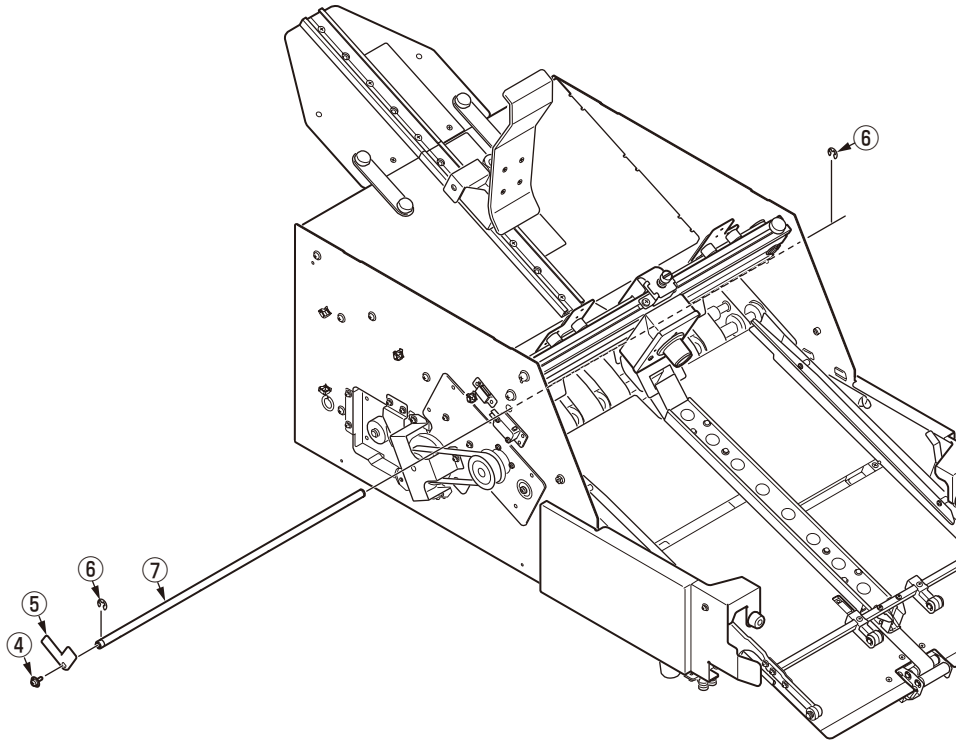
(2) Remove the two screws (No.03) ① to detach the Safety Cover F ② and a Support Plate ③ .

(3) Remove the two screws (No.03) ④ to detach the Safety Cover R ⑤ and a Support Plate ⑥ .



(3) Remove a screw (No.01) ④ to detach the Sensor Lever Plate ⑤ .

(4) Remove the two E-Ring-6 ⑥ to detach the shaft ⑦ .

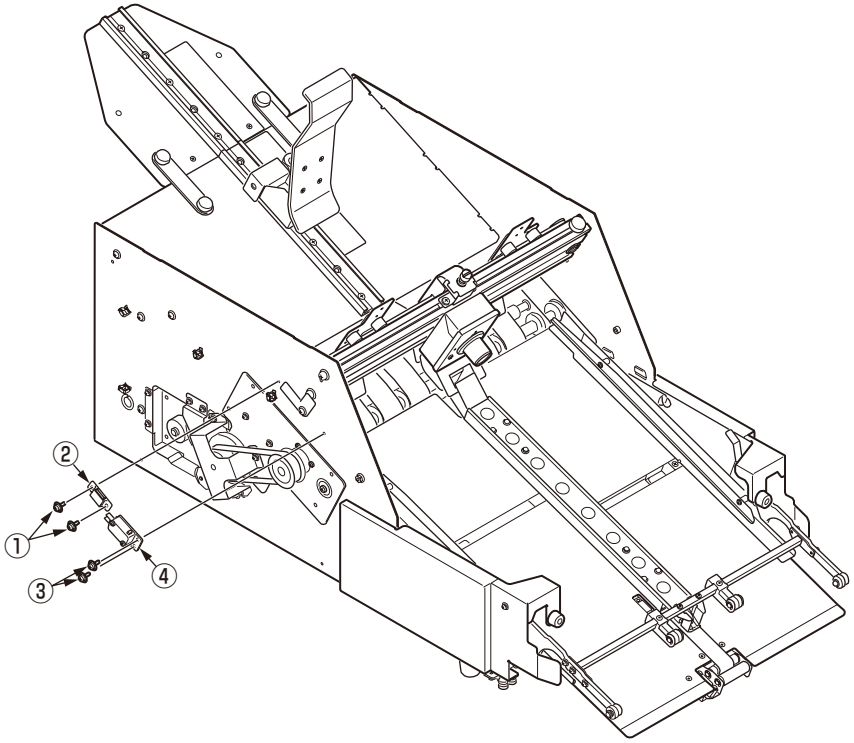


4.2.9 Safety SW Assy

(1) Remove the Rear Cover. (Refer to section 4.2.5)

(2) Remove the two screws (No.05) ① to detach the Magnet ② .

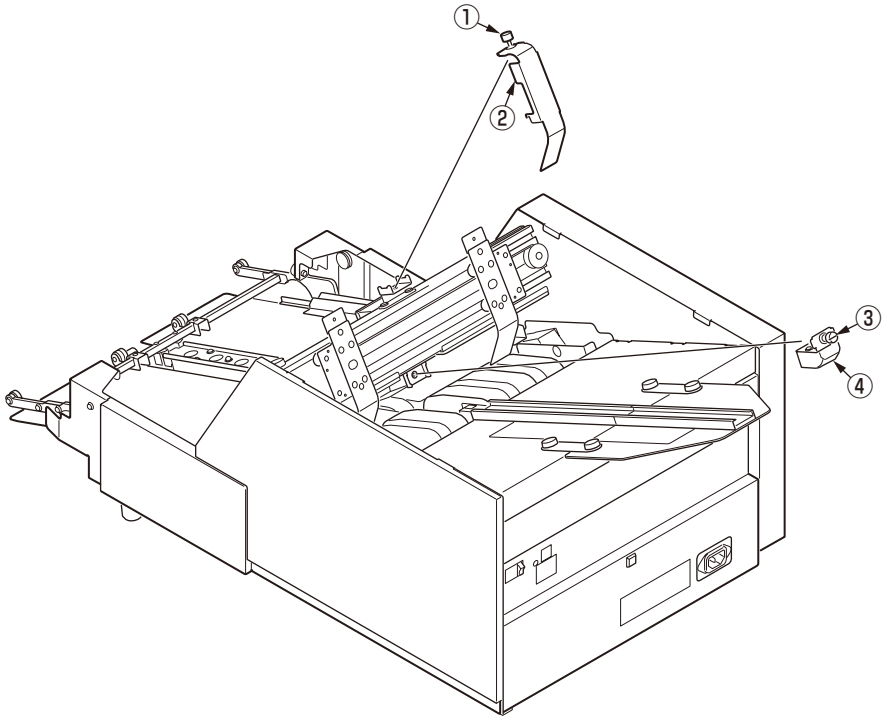
(3) Remove the two screws (No.05) ③ to detach the Safety SW Assy ④ .



4.2.10 Gate-Assy/Separator

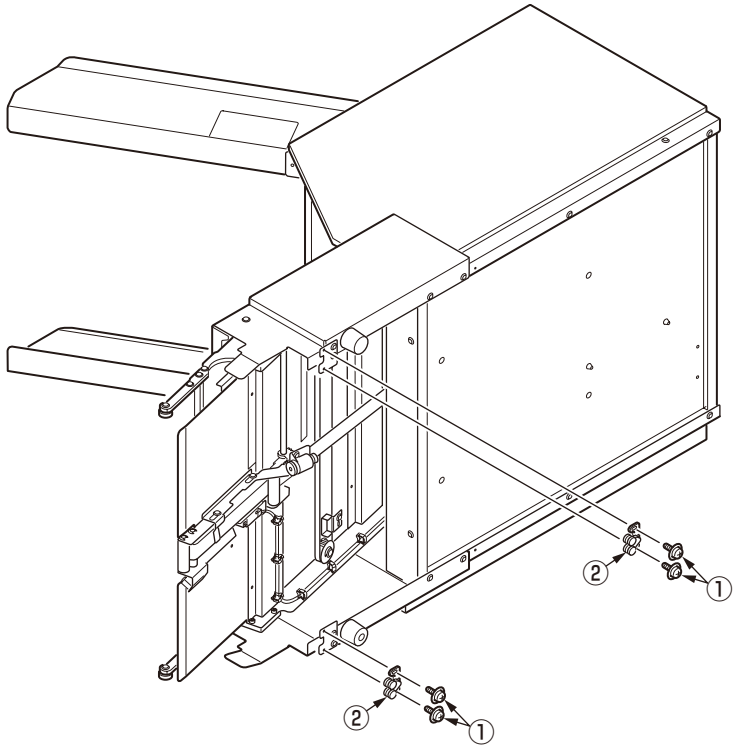
(1) Loosen the thumbscrew ① and remove the Gate-Assy ② .

(2) Loosen the thumbscrew ③ and remove the Separator ④ .

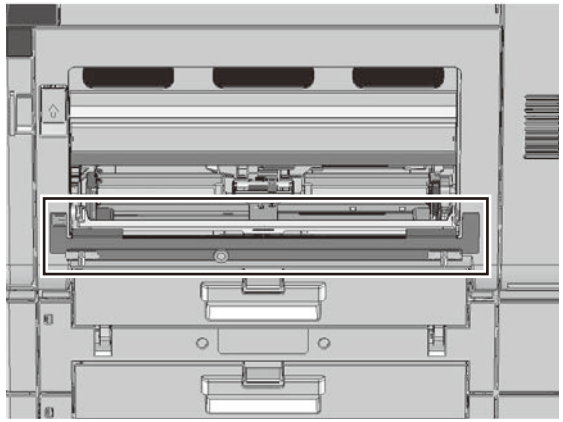


4.2.11 Locking Parts

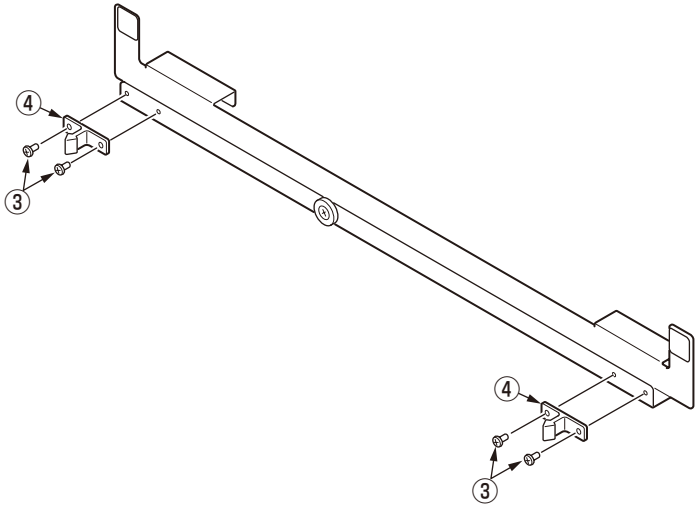
(1) Remove the four screws (No.05) ① to detach the two locking parts A ② .



(2) Remove the lock parts from printer with referring the [User's Manual] - [2.Installation] - [Connecting the Feeder to the Printer].



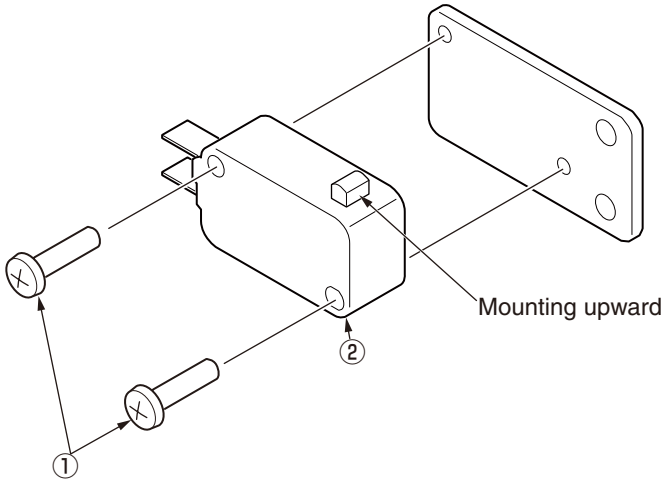
(3) Remove four screws (No.11) ③ to detach the two Locking parts B ④ from the lock parts.



4.2.12 Interlock-SW

(1) Remove the Safety SW Assy. (Refer to section 2.2.9)

(2) Remove the two screws (No.13) ① to detach the Interlock-SW ② .

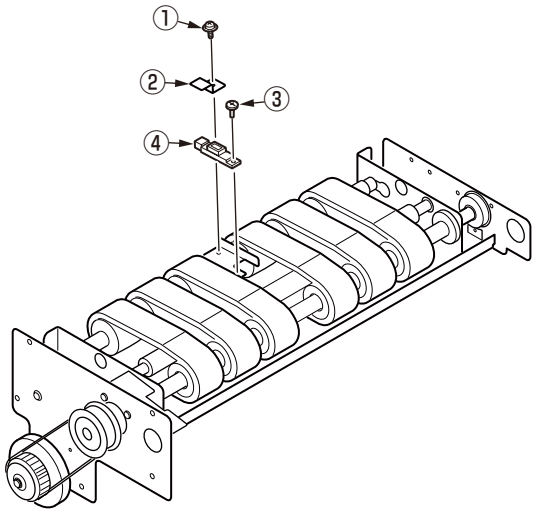


4.2.13 Paper-End-Sensor

(1) Remove the Feed Drive Assy. (Refer to section 2.2.7)

(2) Remove a screw (No.01) ① to detach the connector cover ② .

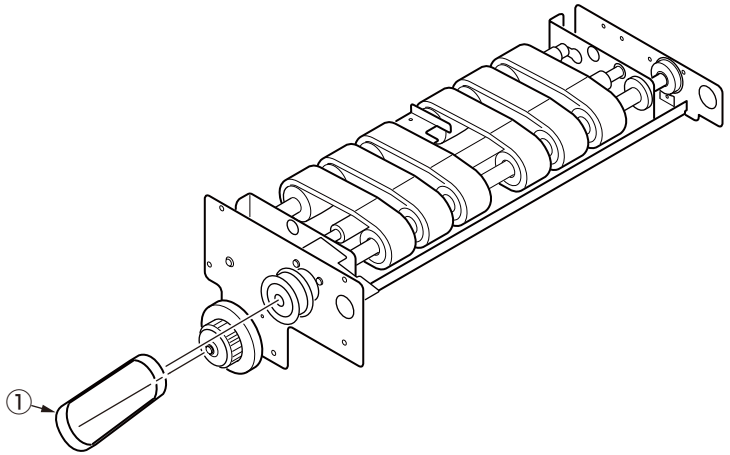
(3) Remove a screw (No.11) ③ to detach the Paper-End-Sensor ④ .



4.2.14 Belt-MiniPitch(XL)-Feed

(1) Remove the Feed Drive Assy. (Refer to section 2.2.7)

(2) Remove the Belt-MiniPitch(XL)-Feed ① .



4.2.15 Feed-Belt

(1) Remove the Feed Drive Assy. (Refer to section 2.2.7)

(2) Remove the Paper-End-Sensor. (Refer to section 2.2.13)

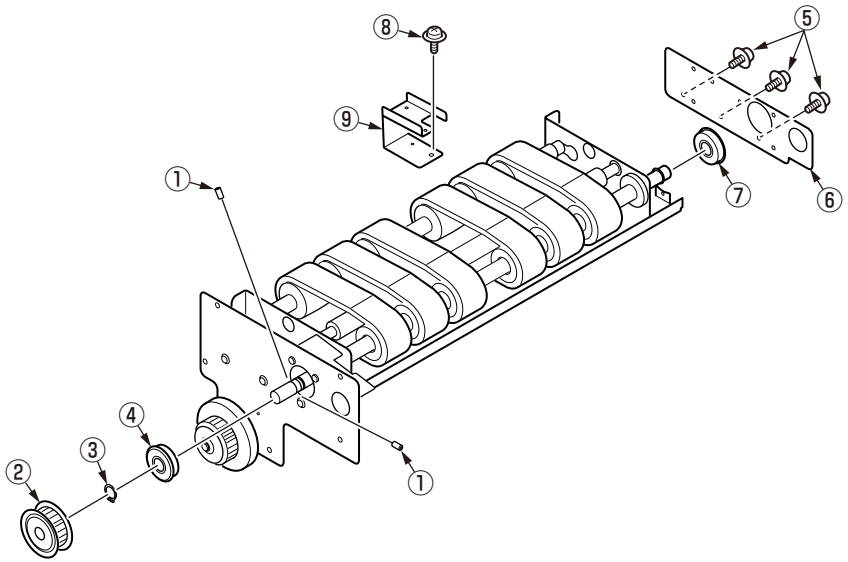
(3) Remove the Belt-MiniPitch(XL)-Feed. (Refer to section 2.1.12)

(4) Remove the two screws (No.19) ① to detach the timing pulley 20XL037 ② .

(5) Remove the circlip STW-10 ③ to detach the ball bearing ④ .

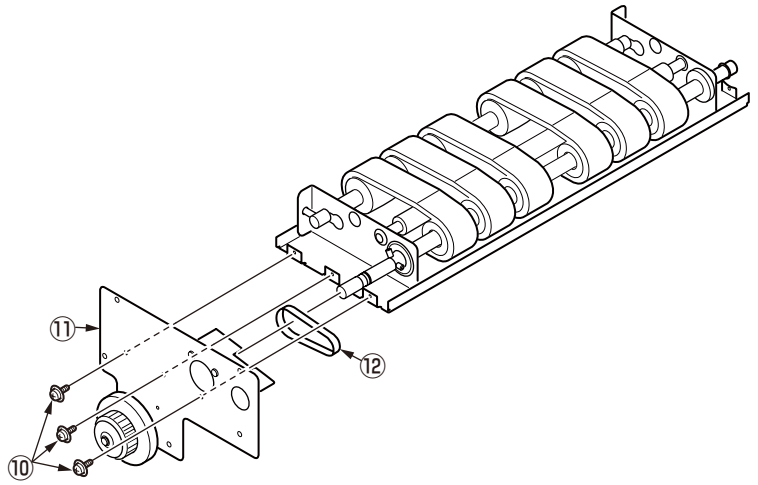
(6) Remove the three screws (No.05) ⑤ to detach the Belt-unit-side-plate-F ⑥ and the ball bearing ⑦ .

(7) Remove a screw (No.01) ⑧ to detach the sensor bracket ⑨ .



(8) Remove the three screws (No.05) ⑩ to detach the Belt-unit-side-plate-R ⑪ .

(9) Remove the Belt-MiniPitch(MXL)-Table ⑫ .

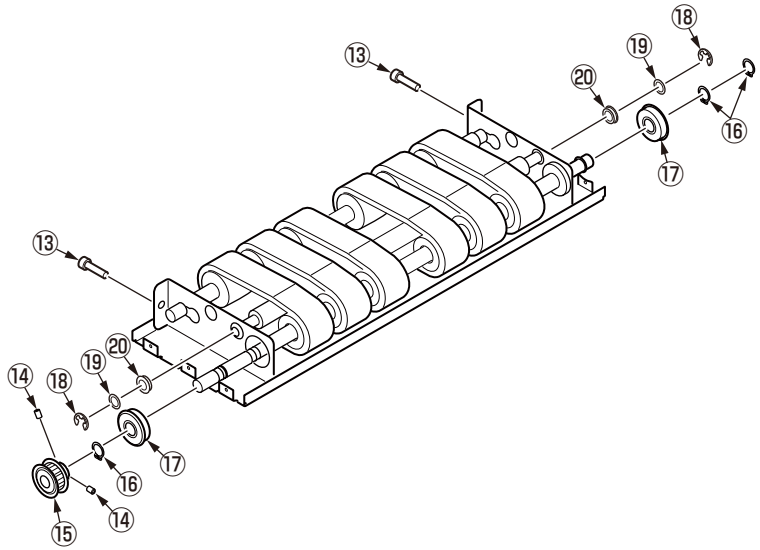


(10) Remove the two screws (No.08) ⑬ .

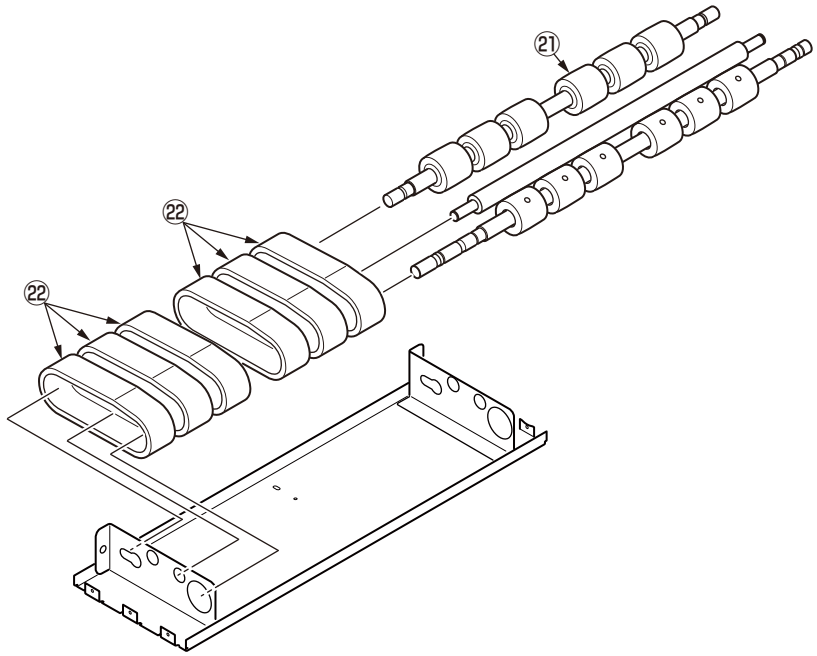
(11) Remove the two screws (No.19) ⑭ to detach the timing pulley 36MXL025 ⑮ .

(12) Remove the three circlips STW-10 ⑯ and the two ball bearings ⑰ .

(13) Remove the two E-Ring-6 ⑱ , the two washer-8 ⑲ and the two bearings ⑳ .



(14) Remove the Rollers ㉑ and the six Feed-Belts ㉒ .

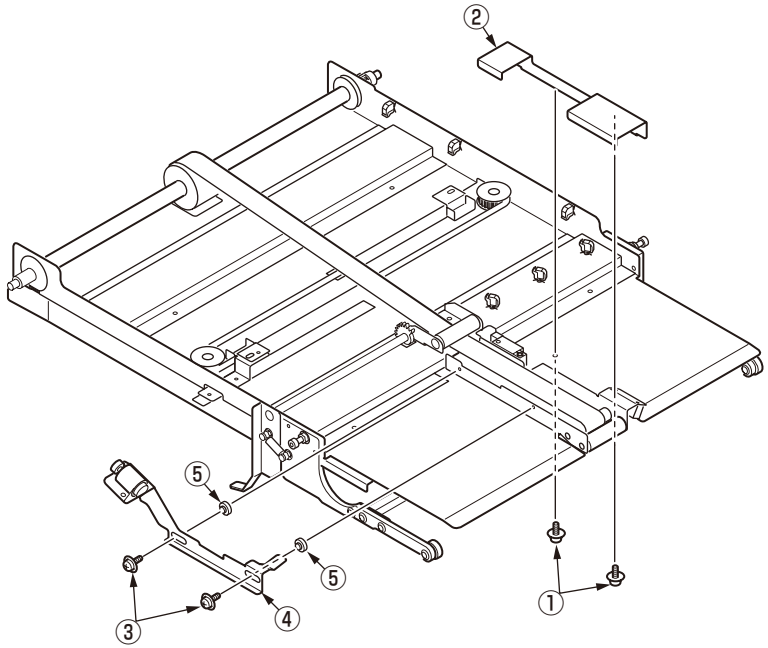


4.2.16 Paper-Sensor/Discharge-Belt

(1) Remove the Table Assy. (Refer to section 2.2.6)

(2) Remove the two screws (No.10) ① to detach the Sensor Cover ② .

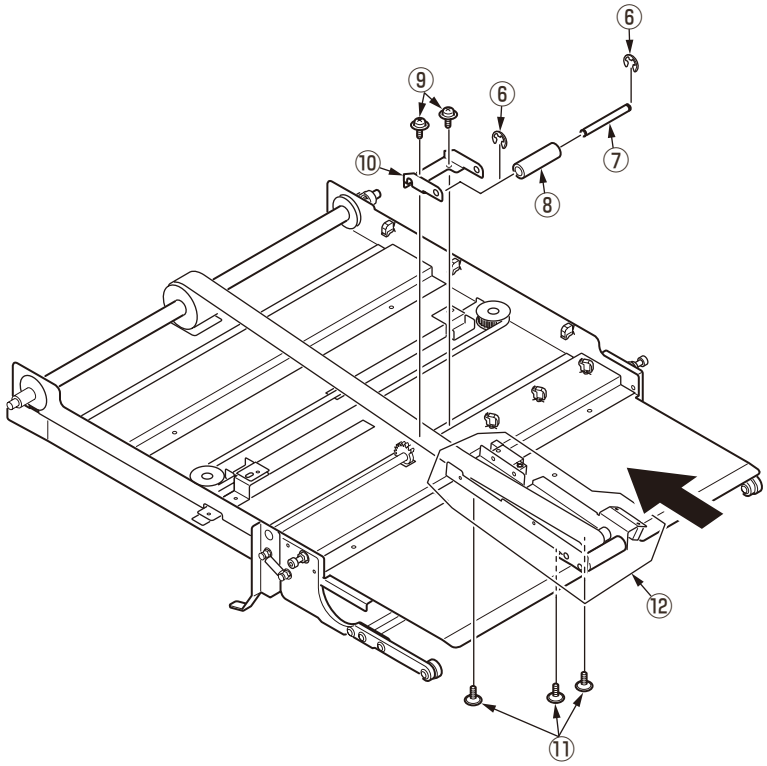
(3) Remove the two screws (No.02) ③ , the sensor-set-lever ④ and the two slide spacers ⑤ .



(4) Remove the two E-Ring-4 ⑥ , the pulley shaft ⑦ and the support-pulley ⑧ .

(5) Remove the two tap tight machine screws (M3-6) ⑨ and the idler-bracket ⑩ .

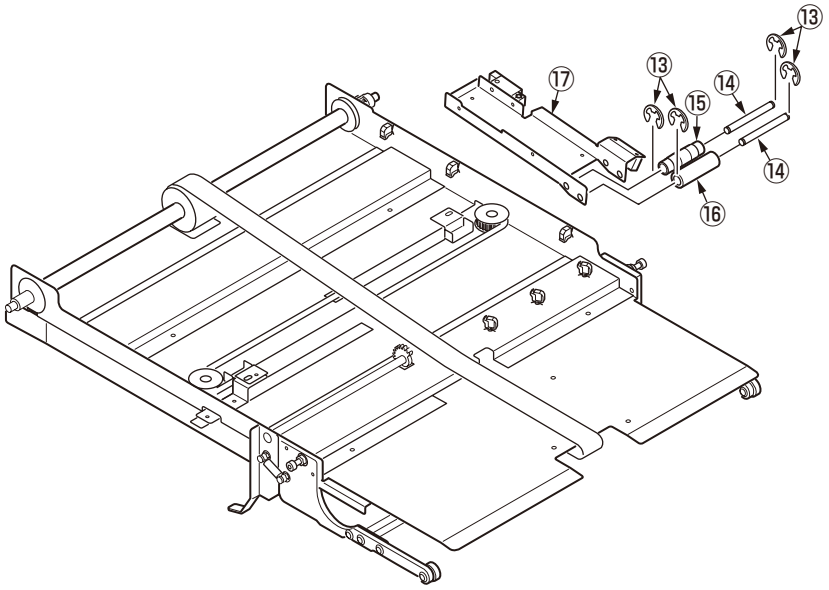
(6) Remove the three screws (No.10) ⑪ and slide the small pulley assy ⑫ in the direction of the arrow.



(7) Remove the four E-Ring-4 ⑬ .

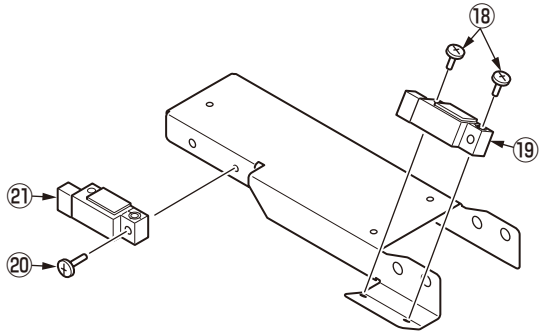
(8) Remove the two pulley shafts ⑭ , the idle-pulley ⑮ and the support-pulley ⑯ .

(9) Remove the pulley-bracket ⑰ .



(10) Remove the two screws (No.13) ⑱ to detach the paper sensor ⑲ .

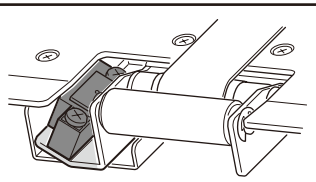
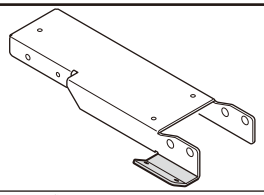
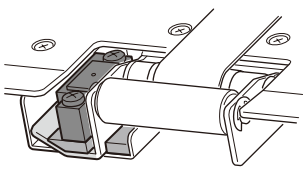
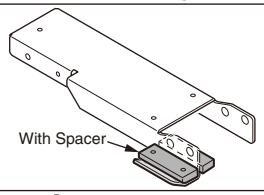
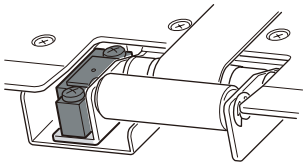
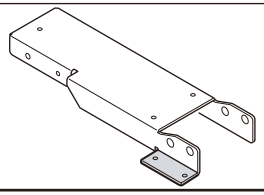
(11) Remove a screw (No.12) ⑳ to detach the paper sensor ㉑ .



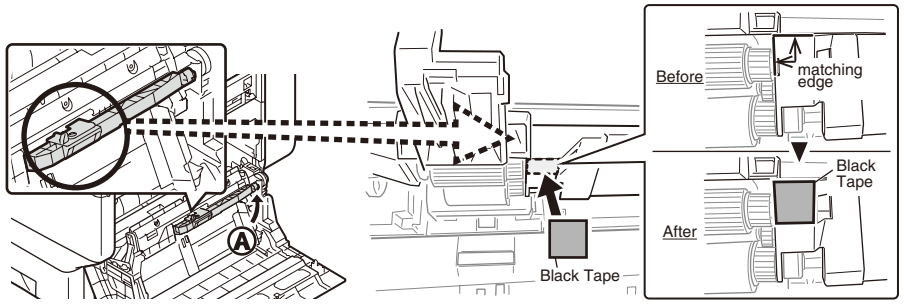
Memo!

The angle of the Sensor-1 is different in the production term.
Refer the following table and check the different points.

Point 1: Shape of the Sensor bracket attended with the assembling angle of the Sensor-1,
Point 2: A black tape is needed to be pasted to the facing position for the direction of the Sensor-1.

No.	Production term	Different points		
		Angle of the Sensor-1		Black tape*1
		Appearance	Shape of the Sensor bracket	
1	Before Jan. / 2017			Unnecessary
2	Feb. / 2017			Necessary
3	After Mar. / 2017			Necessary

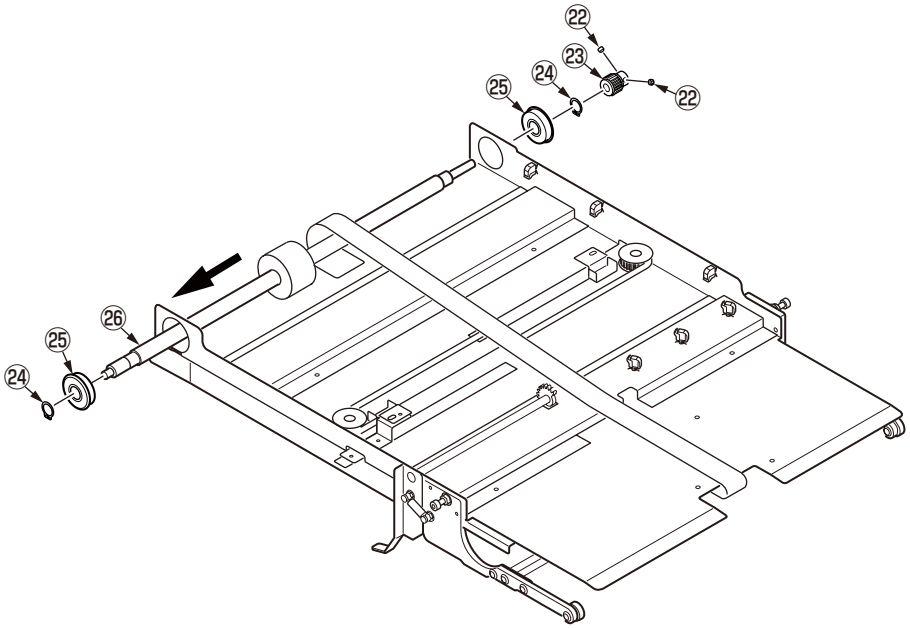
*: The Black tape is supplied with the product of Feeder Unit.
Refer to following figure for the position (MPT of the Printer) of pasting the Black tape.



(12) Remove the two screws (No.18) ㉒ and the timing pulley 24MXL025 ㉓ .

(15) Remove the two circlips STW-10 ㉔ and the two ball bearings ㉕ .

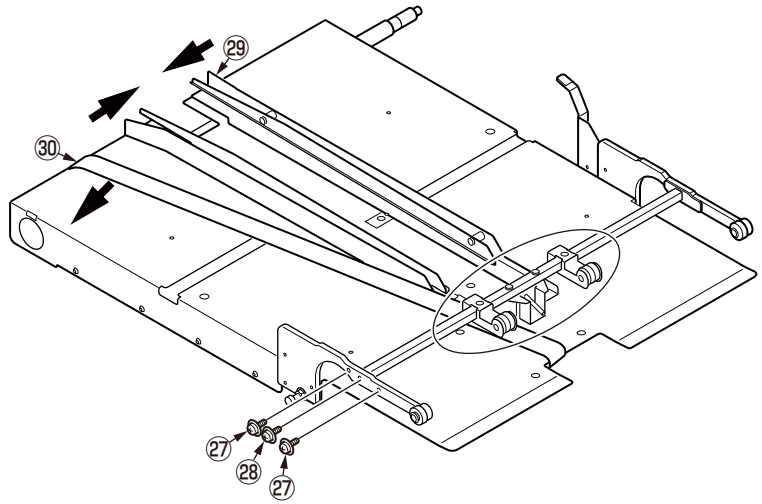
(16) Slide the discharge drive shaft ㉖ .



(17) Remove the two screws (No.06) ㉗ and a screw (No.03) ㉘ .

(18) Close the paper guides ㉙ .

(19) Pass through the Discharge-Belt ㉚ and remove it.

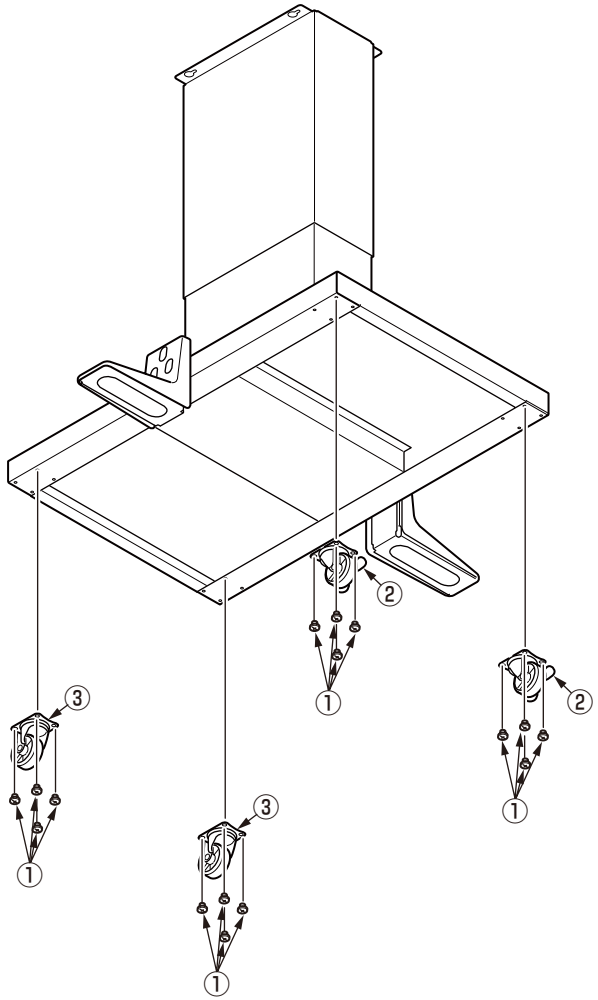


Note! Be careful to tighten the screws (No.06) ㉗ and the screw (No.03) ㉘ with not bending forward or backward the circle marked rollers in following figure.

4.2.17 Caster

(1) Remove the sixteen screws (No.16) ① .

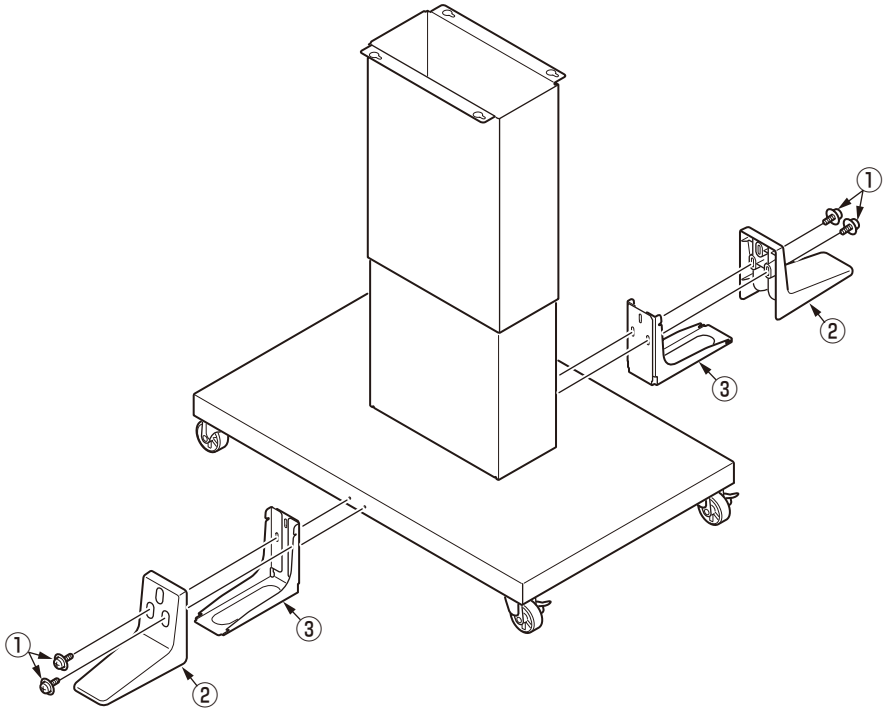
(2) Remove the two casters with lock ② and the two casters without lock ③ .



4.2.18 Cover-Leg-Rear/Plate-Leg-Rear

(1) Remove the four screws (No.20) ① .

(2) Remove the two Cover-Leg-Rear ② and the two Plate-Leg-Rear ③ .



4.3 Part replacement procedure for Conveyor Unit

Screws in use:

Following table shows screws for to be used to this apparatus. Confirm the Screw No. with these described peculiarity because screws explained only these No. in next item.

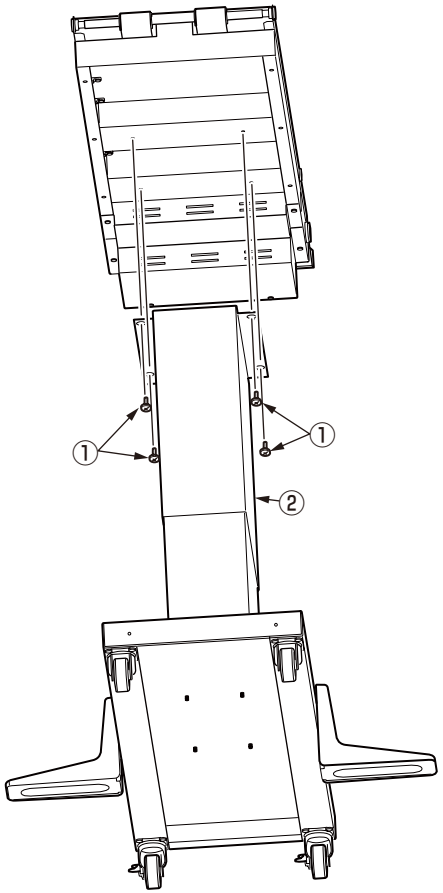
Screw No.	Screw Name	Size	Length (mm)	Designation
31	B3-8ZP	M3	8	Cross recessed head screw with captive washer (M3-8mm)
32	B4-8ZP	M4	8	Cross recessed head screw with captive washer (M4-8mm)
33	B3-6ZPX	M3	6	Cross recessed head screw with small captive washer (M3-6mm)
34	B3-5P	M3	5	Flat head screw (M3-5mm)
35	B3-4B	M3	4	Binding head screw (M3-4mm)
36	B4-6B	M4	6	Binding head screw (M4-6mm)
37	B5-10B	M5	10	Binding head screw (M5-10mm)
38	SB3-12	M3	12	Hexagon socket head cap screw (M3-12mm)

Memo!

This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagrams below.

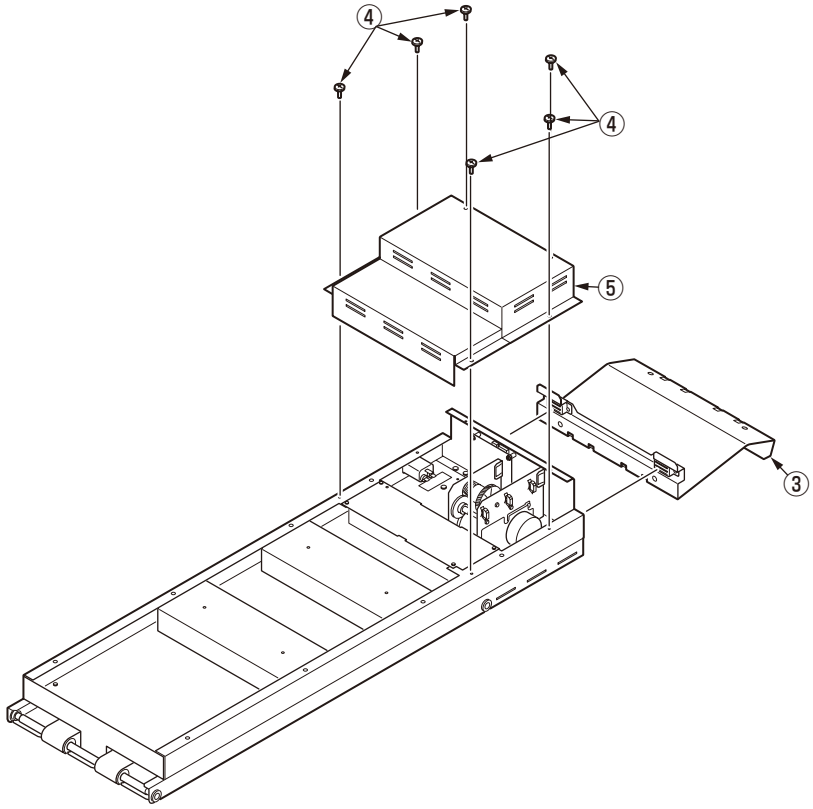
4.3.1 OR-Board-30L

(1) Remove the four screws (No.37) ① to detach the Stand ② .

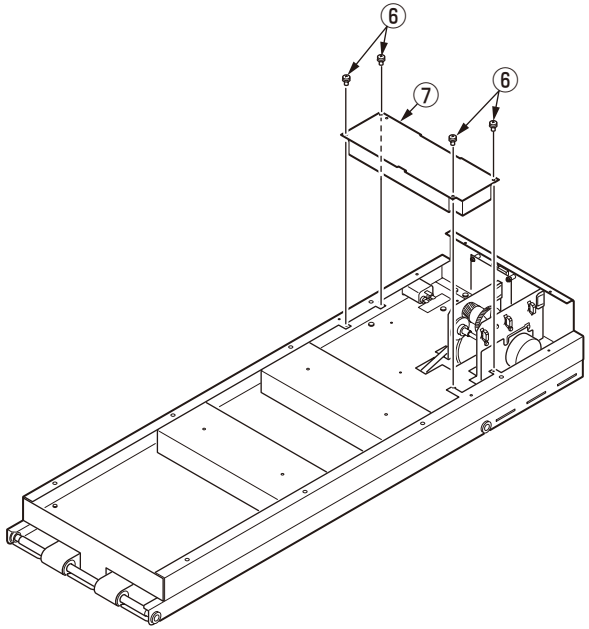


(2) Remove the rear stacker ③ .

(3) Remove the six screws (No.36) ④ to detach the Under-cover ⑤ .



(4) Remove the four screws (No.33) ⑥ to detach the OR-Board-30L ⑦ .



Notes for handring of the OR-Board-30L ⑦

The OR-Board-30L ⑦ is should be handled with carefully for to the holding method and the connecting cables with referring to 4-2-4.

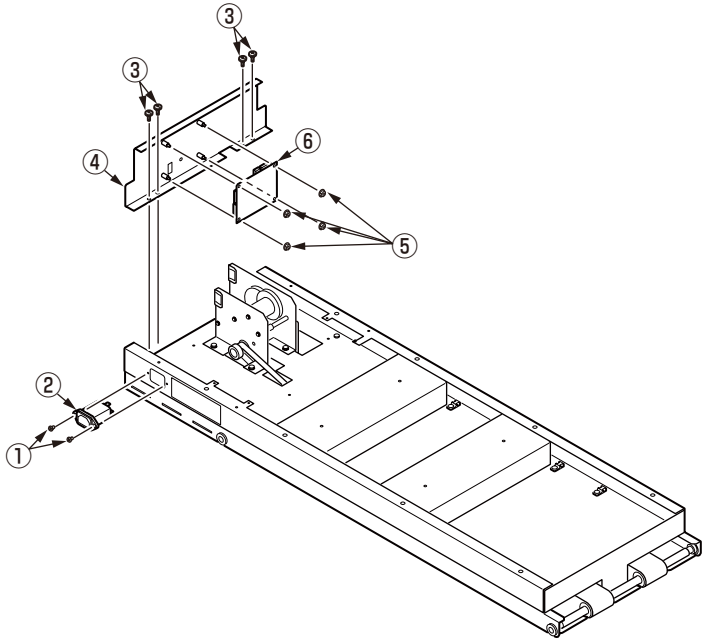
4.3.2 AC-Inlet/Board-Conveyor

(1) Remove the under-cover. (Refer to section 4.3.1)

(2) Remove the two screws (No.34) ① and the AC-Inlet ② .

(3) Remove the four screws (No.36) ③ and the Rear-plate ④ .

(4) Remove the four flange nuts ⑤ and the Board-Conveyor ⑥ .

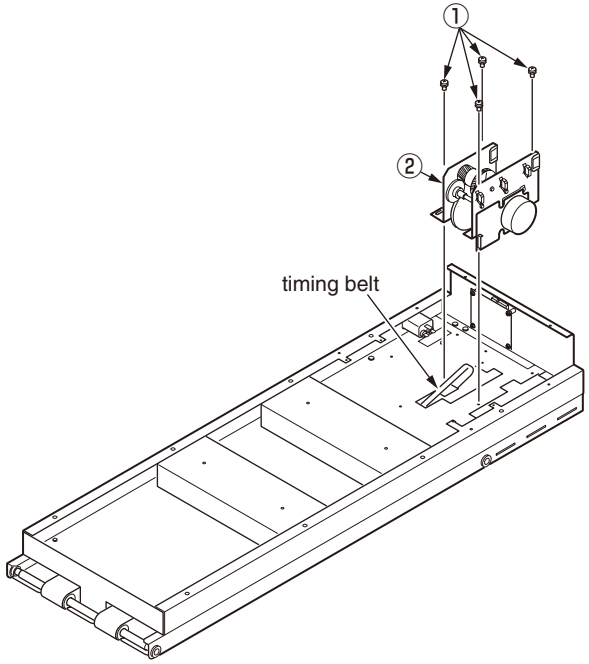


4.3.3 Motor

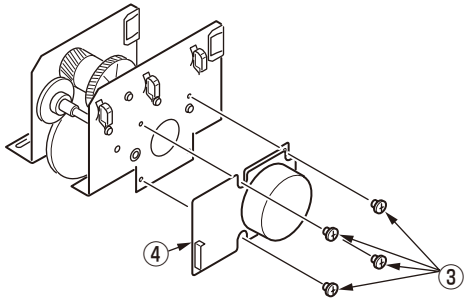
(1) Remove the Under-cover. (Refer to section 2.3.1)

(2) Remove the four (No.32) ① .

(3) Remove the timing belt from the gear, slide the Motor-Drive-Assy ② and remove it.



(4) Remove the four screws (No.36) ③ and the Motor ④ .



4.3.4 Gears

(1) Remove the Motor. (Refer to section 2.3.3)

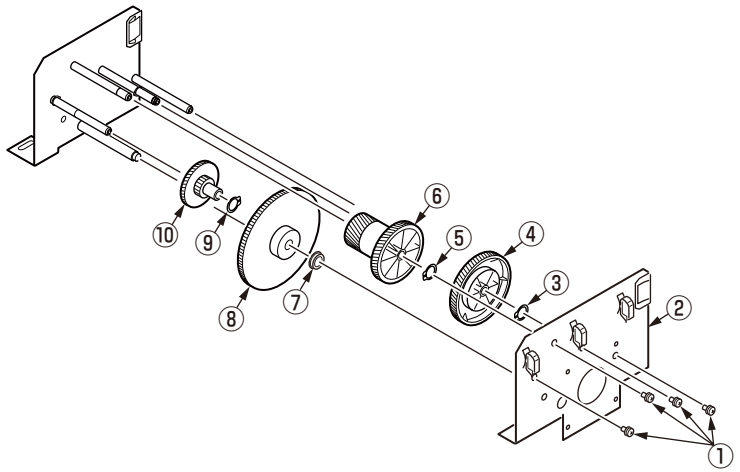
(2) Remove the four screws (No.31) ① to detach the motor-base-plate-1 ② .

(3) Remove the circlips-6 ③ to detach the Gear-Red-Z66-27 ④ .

(4) Remove the circlips-6 ⑤ to detach the Gear-Hopping-B ⑥ .

(5) Remove the bearing ⑦ and the Gear-Z100 ⑧ .

(8) Remove the circlips-6 ⑨ to detach the Gear-Liftup-A ⑩ .



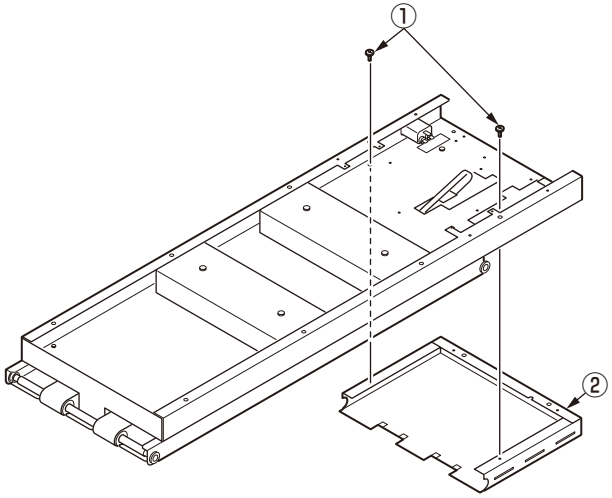
4.3.5 Belt-Conveyor

(1) Remove the OR-Board-30L. (Refer to section 2.3.1)

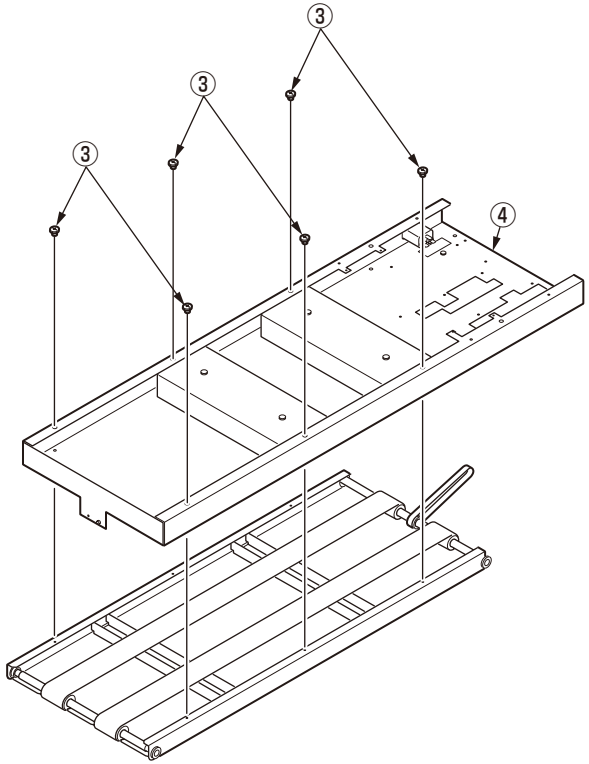
(2) Remove the Rear-plate. (Refer to section 2.3.2)

(3) Remove the Motor-Drive-Assy. (Refer to section 2.3.3)

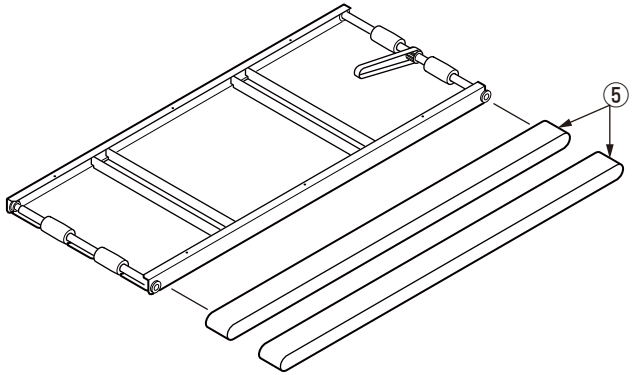
(4) Remove the two screws (No.36) ① to detach the Rear-cover ② .



(5) Remove the six screws (No.35) ③ to detach the Base-Plate ④ .



(6) Remove the two Belt-Conveyor ⑤ .

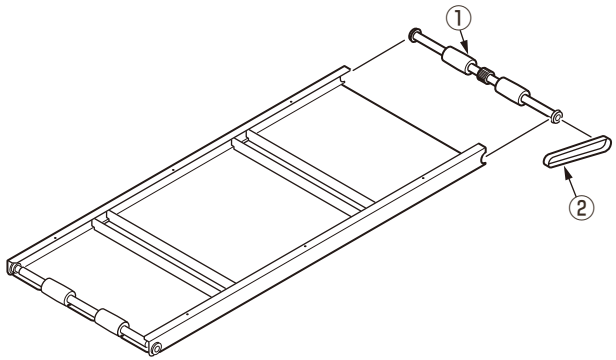


4.3.6 Belt-MiniPitch(S2M)-Conveyor

(1) Remove the Belt-Conveyor. (Refer to section 2.3.5)

(2) Remove the drive roller ① .

(3) Remove the Belt-MiniPitch(S2M)-Conveyor ② .



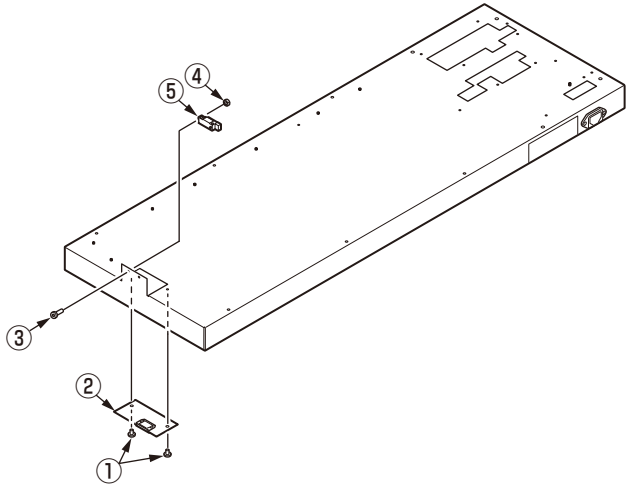
4.3.7 Paper-Sensor

(1) Remove the Base-Plate. (Refer to section 2.3.5)

(2) Remove the two screws (No.36) ① and the sensor cover ② .

(3) Remove the screw (No.38) ③ and the nut ④ .

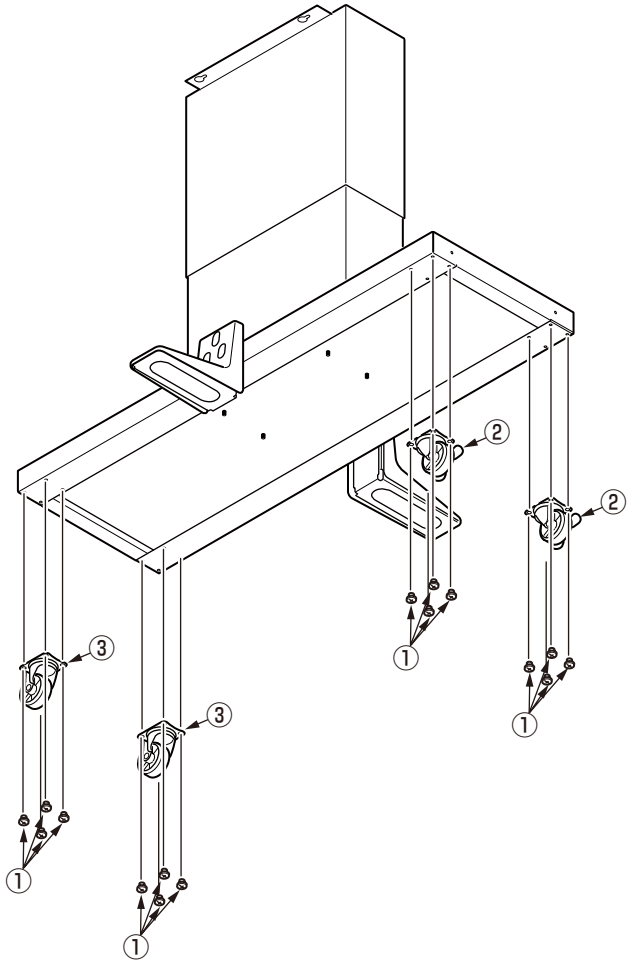
(4) Remove the Paper-Sensor ⑤ .



4.3.8 Caster

(1) Remove the sixteen screws (No.37) ① .

(2) Remove the two casters with lock ② and the two casters without lock ③ .



5. REGULAR MAINTENANCE

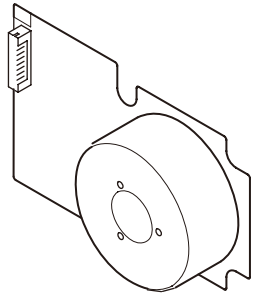
5.1 Cleaning

For the Cleaning of the Feeder unit and the Conveyor unit, refer to the [User's Manual]-[4. Maintenance].

Note! If the printer main body should be needed to operate, refer fully to the User's Manual and the Maintenance Manual of the printer.

6. CONNECTION DIAGRAMS

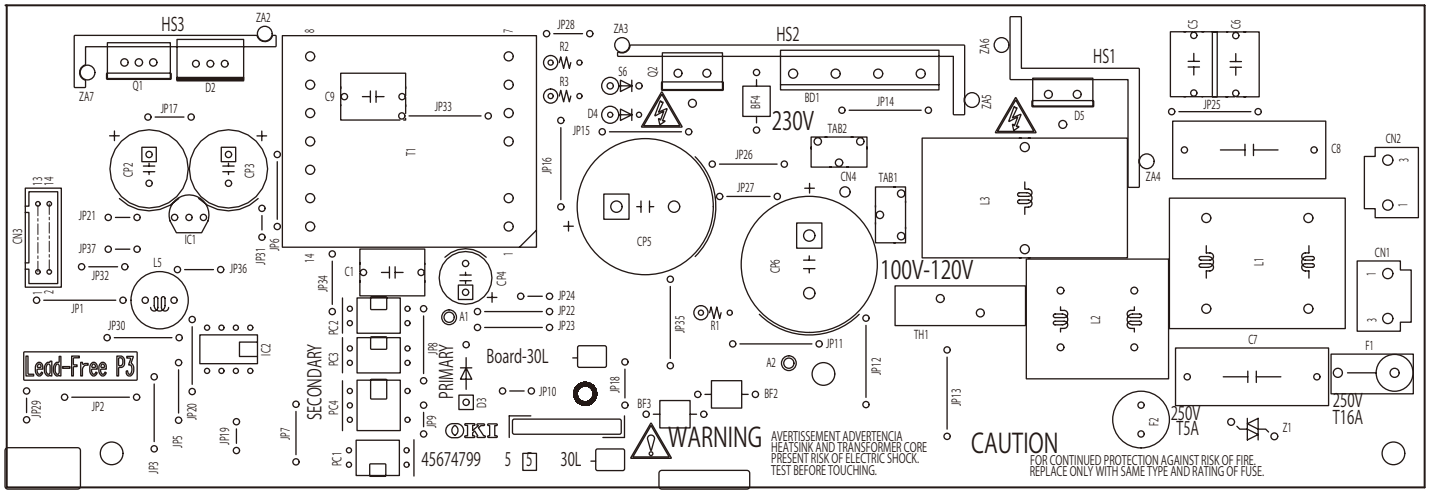
6.1 Check of resistance values

Unit	Circuit diagram and composition	Part drawing	Resistance value
Fuser-Drive	Fuses IP1 and IP2		Across both ends of each fuse: 1 Ω or less

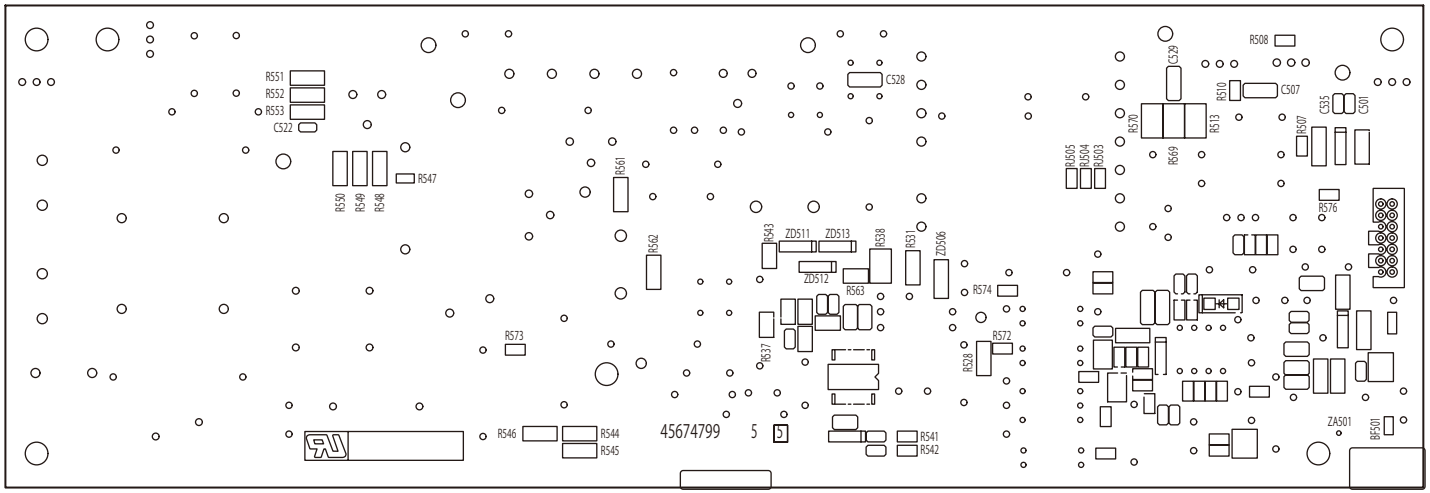
6.2 Layout of parts

(1) OR-Board-30L

Component side

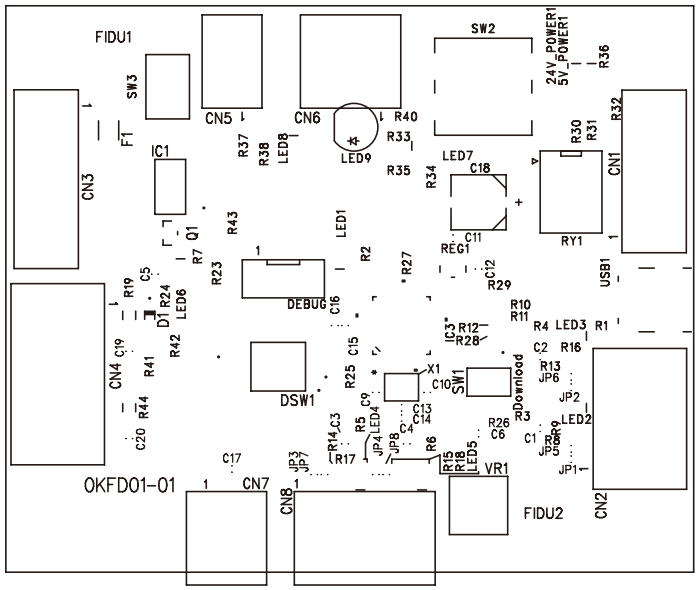


Soldering side



(2) Board-Feeder

Component side



(3) Board-Conveyor

Component side