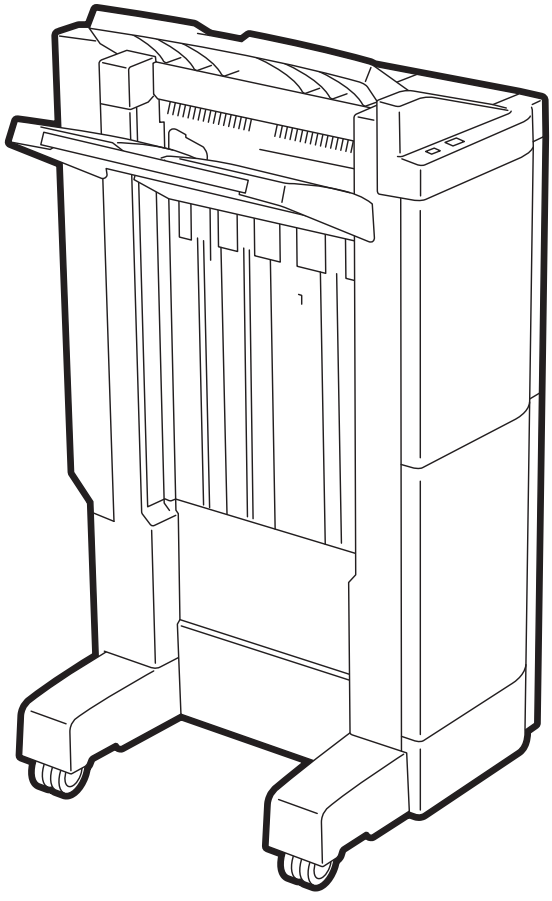
TOSHIBA

SERVICE MANUAL

FINISHER

MJ-1109



Model: MJ-1109
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Trademarks

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General Precautions for Installation/Servicing/Maintenance for this equipment

The installation and service shall be done by a qualified service technician.

1. When installing this equipment to the MFP, be sure to follow the instructions described in the “Unpacking/Set-Up Procedure for this equipment” booklet which comes with each unit of this equipment.

2. This equipment shall be installed by an authorized/qualified person.

3. This equipment is quite heavy and weighs approximately 34 kg (74.96 lb), therefore pay full attention when handling it.

4. Before starting installation, servicing or maintenance work, be sure to turn OFF and unplug the equipment first.

5. The equipment shall be installed near the socket outlet and shall be easily accessible.

6. Be sure to fix and plug in the power cable securely after the installation so that no one trips over it.

7. When this equipment is removed from the equipment due to malfunction or other reasons but no substitute machine is to be installed, be sure to remove all the installation hardware from the equipment as well.

8. When selecting the installation site, avoid placing the finisher / hole punch unit and equipment on different levels or inclined floors.

9. When servicing or maintaining this equipment, be careful about the rotating or operation sections such as gears, pulleys, sprockets, cams, belts, etc.

10. When parts are disassembled, reassembly is basically the reverse of disassembly unless otherwise noted in this manual or other related materials.
    Be careful not to reassemble small parts such as screws, washers, pins, E-rings, toothed washers, harnesses to the wrong places.

11. Basically, the machine should not be operated with any parts removed or disassembled.

12. When servicing the equipment with the power turned ON, be sure not to touch live sections and rotating/operating sections.

13. Delicate parts for preventing safety hazard problems (such as switches, sensors, etc. if any) should be handled/installed/adjusted correctly.

14. Tools and instruments
    - Use designated jigs and tools.
    - Use recommended measuring instruments or equivalents.

15. During servicing or maintenance work, be sure to check the serial No.plate and other cautionary labels (if any) to see if they are clean and firmly fixed.
    If not, take appropriate actions.

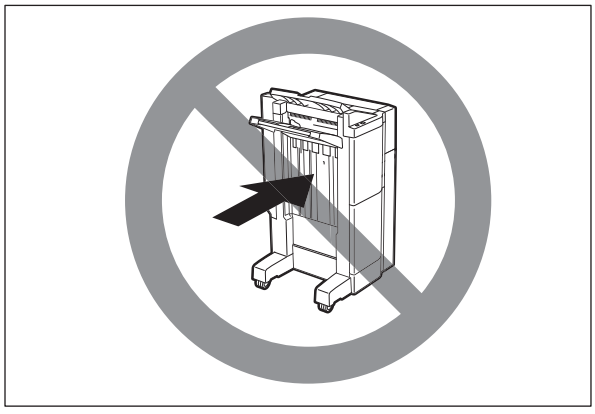
16. The PC board must be stored in antistatic envelope and handled carefully using a wristband, because the ICs on it may be damaged due to static electricity.
    Before using the wrist band, pull out the power cable plug of the equipment and make sure that there is no uninsulated charged objects in the vicinity.

17. For the recovery and disposal of used this equipment, consumable parts and packing materials, follow the relevant local regulations/rules.

18. After completing installation, servicing and maintenance of this equipment, return this equipment to its original state, and check operation.

19. When the equipment is used after the option is removed, be sure to install the parts or the covers which have been taken off so that the inside of the equipment is not exposed.

20. When you move the finisher, do not move it in the direction of the arrow as shown in the figure below otherwise it might topple over.



21. Unplug the power cable and clean the area around the prongs of the plug and socket outlet once a year or more. A fire may occur when dust lies on this area.

22. Check the procedures and perform them as described in the Service Manual.

23. Make sure you do not lose your balance.

24. Avoid exposure to your skin and wear protective gloves as needed.

25. Do not leave plastic bags where children can get at them. This may cause an accident such as suffocation if a child puts his/her head into a bag. Plastic bags of options or service parts must be brought back.

CONTENTS

1. SPECIFICATIONS, ACCESSORY AND CONSUMABLES

1.1 Specifications

- Product Type: Console Type Finisher with 2 trays
- Paper Stacking Device: Stationary Tray or Movable Tray
- Stacking Type: Facedown
- Paper Size: A3, A4, A4-R, A5, A5-R, A6-R, B4, B5, B5-R, FOLIO, A3 wide, LD, LG, LT, LT-R, ST-R, COMPUTER, 13”LG, 8.5”SQ, 8K, 16K, 16K-R
- Paper Basis Weight: 52 - 280g/m^2
  * Thin paper (52 to 59g/m^2) is available when a single sheet is printed out to the upper tray.
  * Regarding the reused paper, only 64 to 80g/m^2 one is available.
- Stacking Mode: Simple, Job Offset, Staple and composite
- Dimensions: with Sub-tray put in: W 535 x D 598 x H 1092 (mm), with Sub-tray drawn out: W 650 x D 598 x H 1092 (mm)
- Gross Weight: Approximately 34kg (74.8 lb)
- Power Supply: DC24V+10/-5% and DC5.1V±4% supplied from the main equipment.
- Power Consumption: DC24V Average 3.2A or less (Peak:10.0A or less), DC5.1V 1.0A or less

- Stacking Height with

<Stationary Tray>

Paper Size		Stacking Height	Number of sheets (reference)		
			60 - 80g/m^2 Paper	81 - 90g/m^2 Paper	91 - 105g/m^2 Paper
Plain Paper, Thick Paper	A4, B5, LT, A5-R, ST-R, 8.5”SQ, 16K, A6-R	36.75mm	250	225	190
	A3, A4-R, B4, FOLIO, LD, LG, LT-R, COMPUTER, B5-R, 13”LG, 8K, 16K-R, A3 wide, 12” x 18”, 320 x 450mm, 320 x460mm, Non-standard	18.4mm	125	112	95
Envelope		18.4mm	50	50	50
Reused Paper	A3, A4, A4-R, A5-R, B4, B5, B5-R, FOLIO, LD, LG, 13"LG, LT, LT-R, ST-R, COMPUTER, 8K	18.4mm	100	-	-

The maximum stacking height is 18.4 mm for mixed size paper.
“Full” status is defined as when the stationary tray paper-full sensor (S18) detected the full status of paper in the size available for feeding.

<Movable tray (in the job offset stack mode)>

Paper Size		Stacking Height	Number of sheets (reference)			
			60 - 80g/m^2 Paper	81 - 90g/m^2 Paper	91 - 105g/m^2 Paper	106 - 256g/m^2 Paper
Plain Paper, Thick Paper	A4, B5, LT, 8.5”SQ, 16K	250mm	2,000	1,800	1,400	550
	A3, A4-R, B4, FOLIO, LD, LG, LT-R, COMPUTER, 13”LG, 8K, 16K-R, A3 wide, 12" x 18"	140mm	1,000	900	700	275
	ST-R, A5-R, B5-R, A6-R, Non-standard	-	500	500	500	450
Reused Paper	A3, A4, A4-R, A5-R, B4, B5, B5-R, FOLIO, LD, LG, 13"LG, LT, LT-R, ST-R, COMPUTER, 8K	58.3mm	400	-	-	-

The maximum stacking height is 140 mm for mixed size paper. However, ST-R, A5-R, B5-R, A6-R and non-standard sizes are not acceptable for mixed size paper.
“Full” status is defined as when the number of paper whose maximum stacking height is 250 mm has reached 2,000 or when the number of paper in other sizes has reached 1,000.

<Movable tray (in the staple stack mode)>

Paper Size		Stacking Height 64 - 105 g/m^2 (reference)
		Front/Rear Single Position Stapling /Two-Position Stapling
Plain Paper, Thick Paper	A3, A4, A4-R, B4, B5, FOLIO, LD, LG, LT, LT-R, COMPUTER, 13”LG, 8K, 16K, 8.5”SQ	30
Reused Paper	-	-

- Stapling Position

Front single position

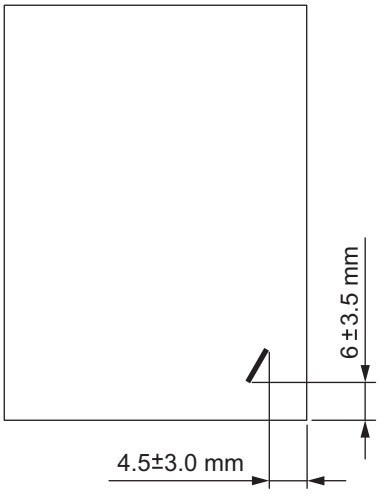


Fig. 1-1

Rear single position

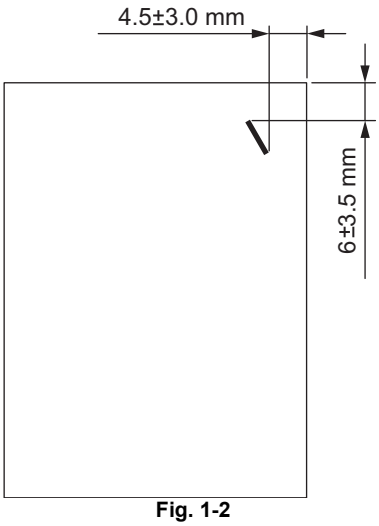


Fig. 1-2

Two Positions Stapling

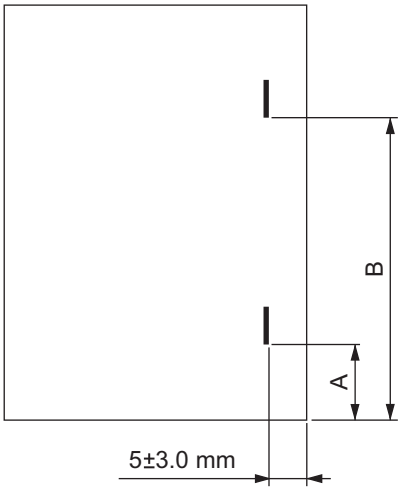


Fig. 1-3

(Unit: mm)

Paper Size	A	B
A3, A4	81±3.5	205±3.5
A4-R, FOLIO	37.5±3.5	161.5±3.5
B4, B5, COMPUTER	61±3.5	185±3.5
LD, LT	72±3.5	196±3.5
LT-R, LG	40.5±3.5	164.5±3.5

- Paper Size for stapling

Stapling Position	Paper Size	
	Plain Paper, Thick Paper	Reused Paper
Front Single	A3, A4, A4-R, B4, B5, FOLIO, LD, LG, LT, LT-R, COMPUTER, 13”LG, 8.5”SQ, 8K, 16K	-
Rear Single	A3, A4, A4-R, B4, B5, FOLIO, LD, LG, LT, LT-R, COMPUTER, 13”LG, 8.5”SQ, 8K, 16K	-
Two Positions	A3, A4, A4-R, B4, B5, FOLIO, LD, LG, LT, LT-R, COMPUTER, 13”LG, 8.5”SQ, 8K, 16K	-

- The number of Stapleable Sheet

Paper Size	Plain Paper, Thick Paper			Reused Paper
	60 - 80g/m^2 Paper	81 - 90g/m^2 Paper	91 - 105g/m^2 Paper	
A4, A4-R, B5, LT, LT-R, 8.5”SQ, 16K	50	50	30	-
A3, B4, FOLIO, LD, LG, COMPUTER, 13"LG, 8K	30	30	15	-

- Paper Basis Weight for stapling 60 - 105g/m^2
  * The stapling for reused paper is not available.
- Staple Loading exclusive cartridge (5,000 staples)
- Manual Stapling available

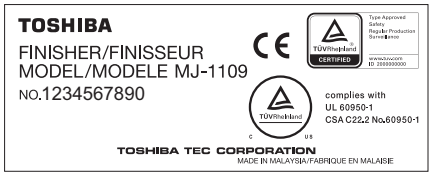
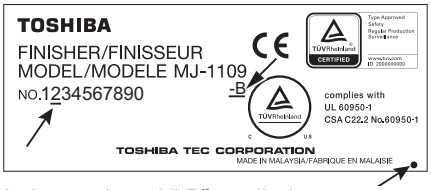
1.2 Accessory

- Unpacking Instruction (1set)
- Tray (1pc)
- Fixing bracket-F (1pc)
- Fixing bracket-R (1pc)
- Caster (1pc)
- Bridge unit fixing bracket (1pc)
- Screw: M4x14 (4pcs)
- Screw: TBID M4x10 (2pcs)
- Screw: M3x8 (3pcs)
- Screw: M3x6 (2pcs)

1.3 Consumables

- Staples exclusive cartridge (STAPLE-2400: 5,000staples X 3 cartridges /box)

1.4 Rating label (Comparison of MJ-1109 and MJ-1109-B)

Model Name	MJ-1109	MJ-1109-B
European safety standards complied with	Safety standard: EN60950-1 RoHS2: 2011/65/EU	Safety standard: EN60950-1, EN62368-1 RoHS2: 2011/65/EU 2011/65/EU+(EU)2015/863
Applicable models	e-STUDIO2505AC/3005AC/3505AC/4505AC/5005AC e-STUDIO2008A/2508A/3008A/3508A/4508A/5008A e-STUDIO3508LP/4508LP/5008LP	e-STUDIO2505AC/3005AC/3505AC/4505AC/5005AC e-STUDIO2008A/2508A/3008A/3508A/4508A/5008A e-STUDIO3508LP/4508LP/5008LP e-STUDIO 2015AC/2515AC/3015AC/3515AC/4515AC/5015AC e-STUDIO2018A/2518A/3018A/3518A/3518A/4518A/5018A
Rating label	 No mark applied	 Black dot mark and “-B” applied The 2nd digit of the serial number differs
Notes	Purchasing this is not possible after June, 2019.	

2. GENERAL DESCRIPTION

2.1 Main Components

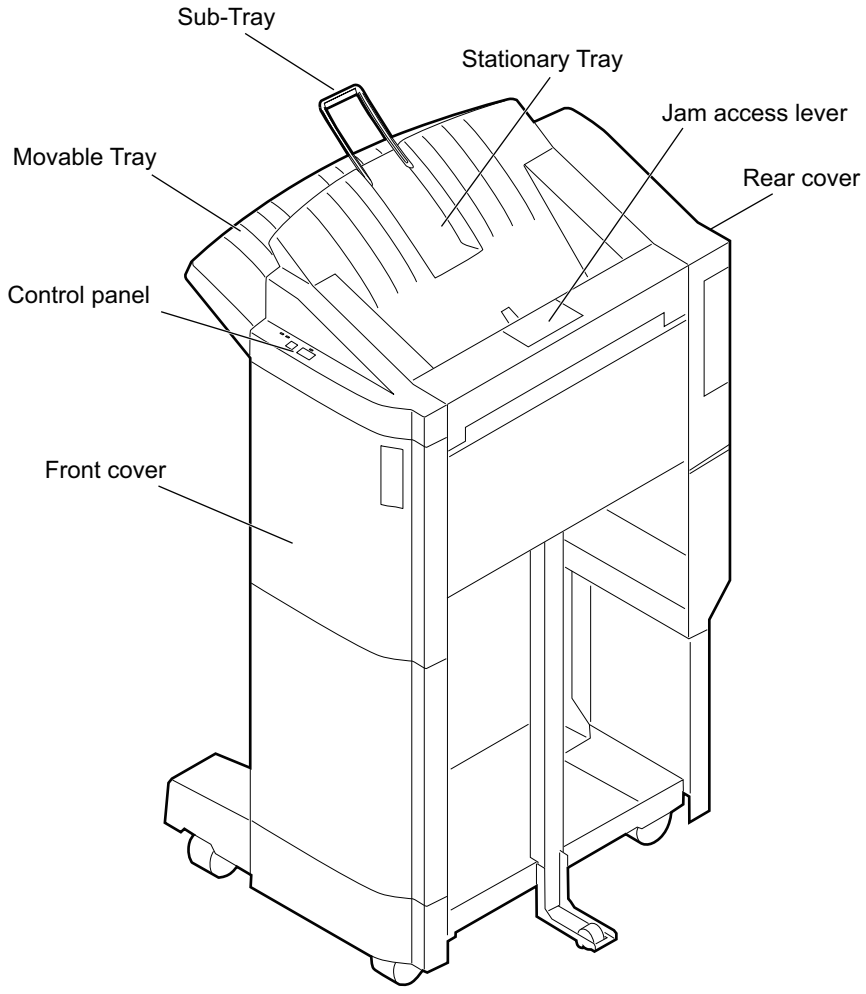


Fig. 2-1

2.2 Sectional View

[A] Front side view

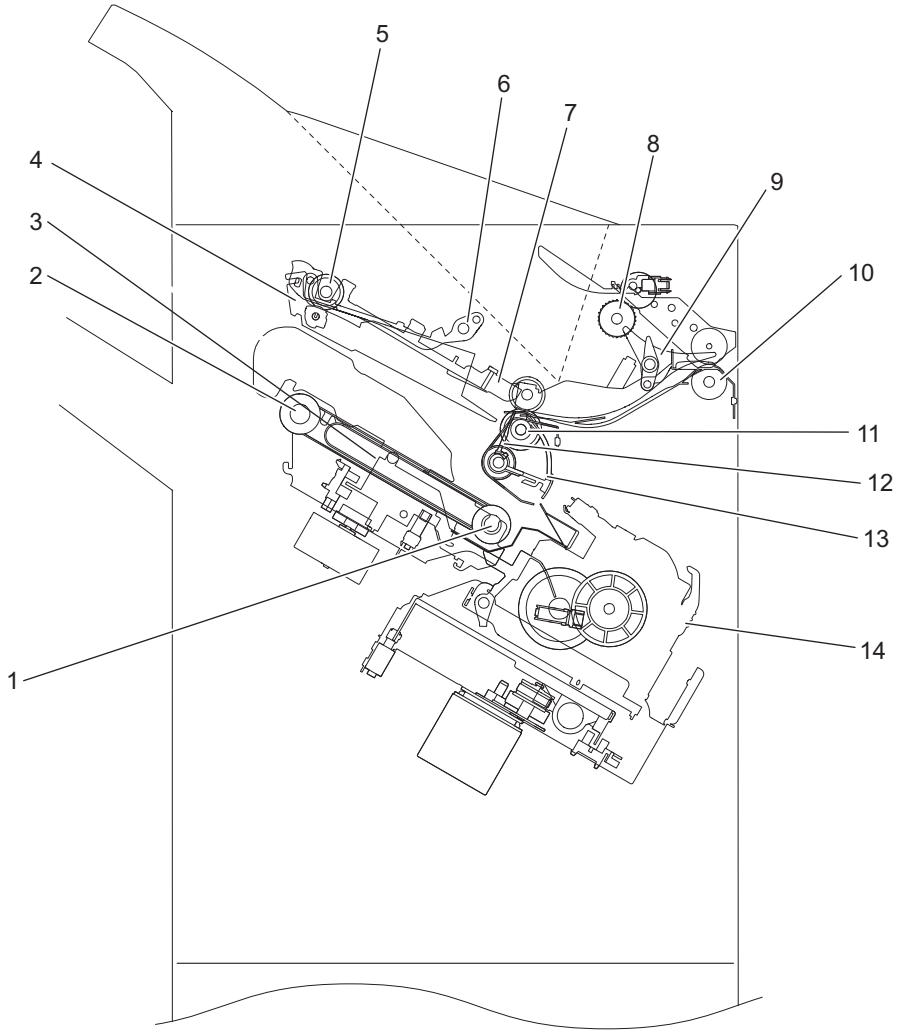


Fig. 2-2

1	Stack transport roller-1
2	Stack transport roller-2
3	Finishing tray
4	Buffer tray
5	Buffer roller
6	Pinch roller arm
7	Assist guide
8	Stationary tray roller
9	Gate flap
10	Entrance roller
11	Exit roller
12	Catching pad
13	Paddle
14	Stapler unit

[B] Rear side view

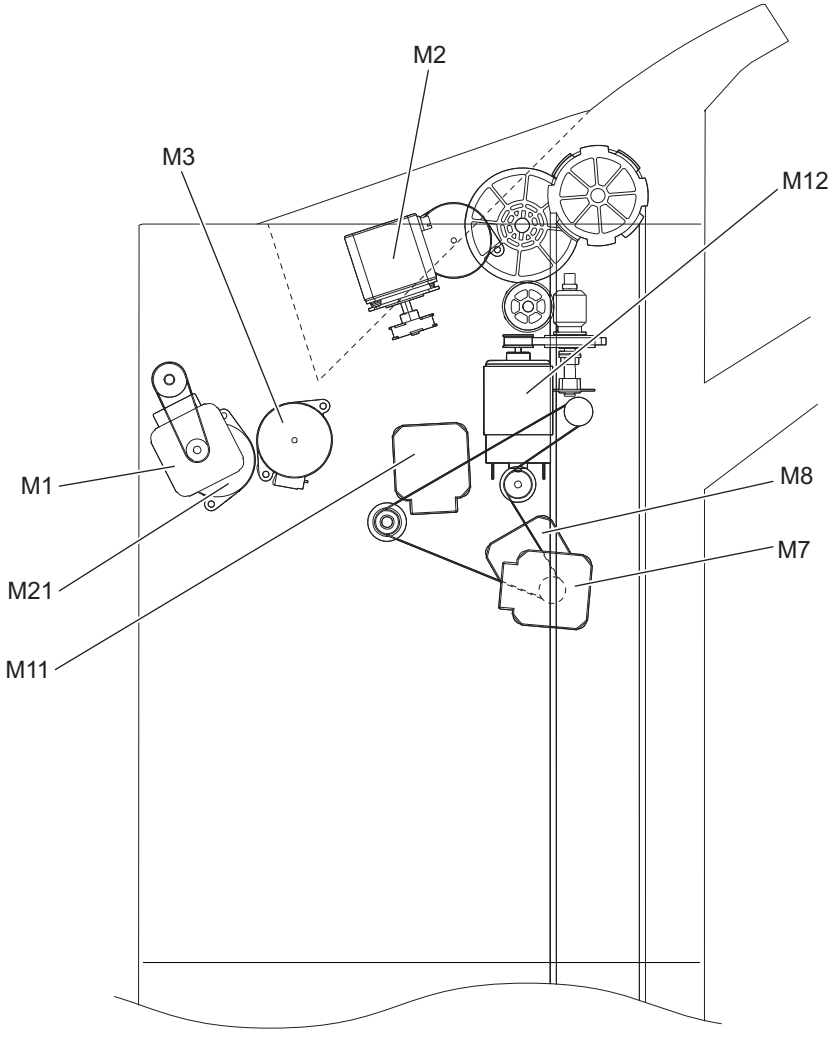


Fig. 2-3

M1	Entrance motor
M2	Buffer tray guide motor
M3	Paddle motor
M7	Transport motor
M8	Stack transport motor
M12	Movable tray shift motor
M21	Catching motor

2.3 Electric Parts Layout

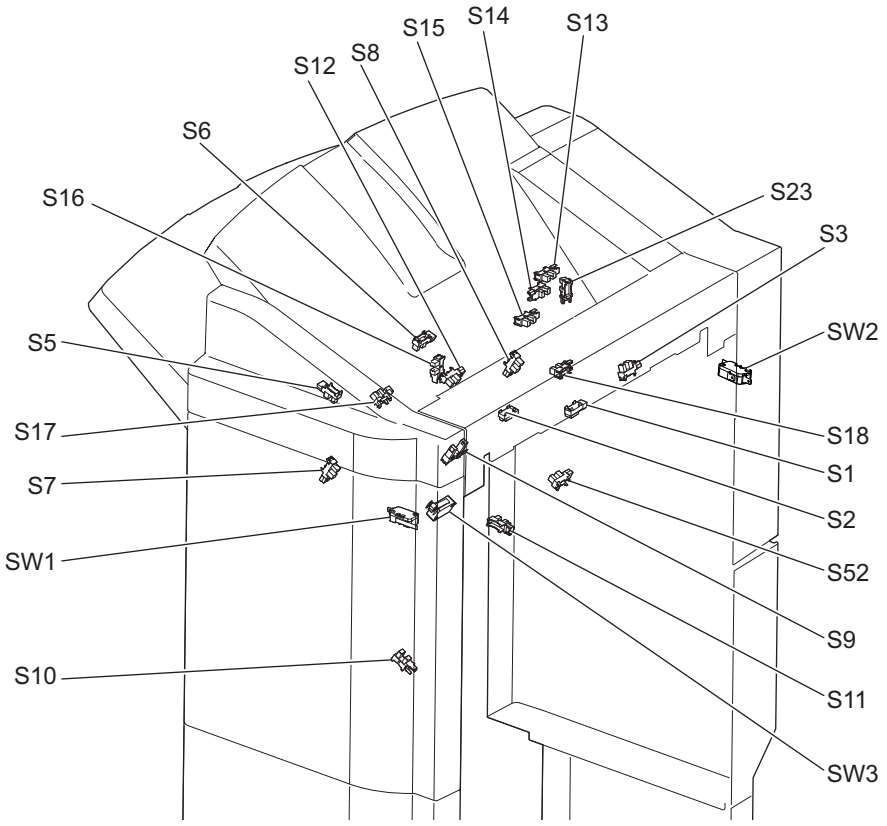


Fig. 2-4

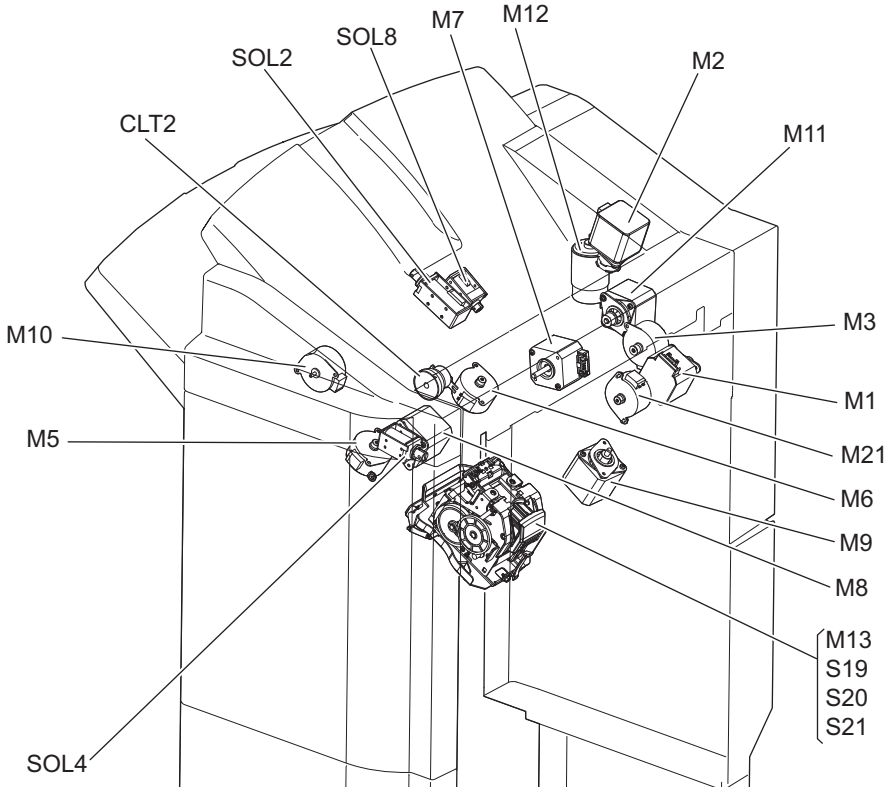


Fig. 2-5

2.4 Symbols and Functions of Various Components

The column <P-I> shows the page and item number in the parts list.

1. Motors

Symbol	Name	Function	P-I	Remarks
M1	Entrance motor	Transports paper from the main equipment to the exit roller or stationary tray roller.	5-26	P. 2-4 "Fig. 2-5"
M2	Buffer tray guide motor	Adjusts the width of the buffer tray guide.	8-1	P. 2-4 "Fig. 2-5"
M3	Paddle motor	Drives the paddle.	6-38	P. 2-4 "Fig. 2-5"
M5	Front alignment motor	Drives the front alignment plate.	10-6	P. 2-4 "Fig. 2-5"
M6	Rear alignment motor	Drives the rear alignment plate.	10-6	P. 2-4 "Fig. 2-5"
M7	Transport motor	Drives the roller of the finishing tray.	3-13	P. 2-4 "Fig. 2-5"
M8	Stack transport motor	Drives the eject arm and the belt exiting stacks of paper to the movable tray.	10-33	P. 2-4 "Fig. 2-5"
M9	Stapler unit shift motor	Shifts the stapler unit right and left.	11-1	P. 2-4 "Fig. 2-5"
M10	Assist guide motor	Drives the assist guide.	8-12	P. 2-4 "Fig. 2-5"
M11	Exit motor	Transports paper from the entrance roller to the buffer tray by driving the exit roller.	5-26	P. 2-4 "Fig. 2-5"
M12	Movable tray shift motor	Lifts up/down the movable tray.	12-33	P. 2-3 "Fig. 2-3"
M13	Stapler motor	Operates the stapler.	11-20	P. 2-4 "Fig. 2-5"
M21	Catching motor	Catching the paper	6-19	P. 2-4 "Fig. 2-5"

2. Sensors and switches

Symbol	Name	Function	P-I	Remarks
S1	Entrance sensor	Detects the paper transported from the main equipment.	7-39	P. 2-4 "Fig. 2-4"
S2	Transport sensor	Detects the paper transported to the entrance of the buffer tray.	7-39	P. 2-4 "Fig. 2-4"
S3	Paddle home position sensor	Detects the home position of the paddle.	5-31	P. 2-4 "Fig. 2-4"
S5	Buffer tray home position sensor	Detects that the buffer tray is at the outermost position.	9-25	P. 2-4 "Fig. 2-4"
S6	Paper holder home position sensor	Detects the home position of the paper holder cam.	9-25	P. 2-4 "Fig. 2-4"
S7	Front alignment plate home position sensor	Detects the home position of the front alignment plate.	10-17	P. 2-4 "Fig. 2-4"
S8	Rear alignment plate home position sensor	Detects the home position of the rear alignment plate.	10-17	P. 2-4 "Fig. 2-4"
S9	Stack exit belt home position sensor	Detects the home position of the stack exit belt.	10-52	P. 2-4 "Fig. 2-4"
S10	Stapler unit home position sensor	Detects if the stapler unit is at the front side (home position).	11-24	P. 2-4 "Fig. 2-4"
S11	Stapler interference sensor	Detects when the stapler unit interferes with other mechanical section.	11-24	P. 2-4 "Fig. 2-4"

Symbol	Name	Function	P-I	Remarks
S12	Finishing tray paper detection sensor	Detects the presence/absence of the paper on the finishing tray.	10-17	P. 2-4 "Fig. 2-4"
S13	Movable tray position A sensor	Detects the movable tray position.	4-15	P. 2-4 "Fig. 2-4"
S14	Movable tray position B sensor	Detects the movable tray position.	4-15	P. 2-4 "Fig. 2-4"
S15	Movable tray position C sensor	Detects the movable tray position.	4-15	P. 2-4 "Fig. 2-4"
S16	Movable tray paper-full sensor	Detects the upper surface of paper set on the movable tray.	4-15	P. 2-4 "Fig. 2-4"
S17	Movable tray paper exist sensor	Detects the presence/absence of the paper on the movable tray.	4-38	P. 2-4 "Fig. 2-4"
S18	Stationary tray paper-full sensor	Detects the paper-full state of the stationary tray.	12-2	P. 2-4 "Fig. 2-4"
S19	Stapler home position sensor	Detects the home position in the stapler for the stapling operation.	11-20	P. 2-4 "Fig. 2-4"
S20	Staple top position sensor	Detects the staple top position in the stapler.	11-20	P. 2-4 "Fig. 2-4"
S21	Staple empty sensor	Detects the empty status of staples in the stapler cartridge.	11-20	P. 2-4 "Fig. 2-4"
S23	Movable tray shift motor sensor	Detects the rotation of the movable tray shift motor.	12-33	P. 2-4 "Fig. 2-4"
S52	Catching home position sensor	Detecting the home position of the catching lever	6-20	P. 2-4 "Fig. 2-4"
SW1	Front cover switch	Cuts off the drive current (+24V) when the opening status of the front cover is detected.	3-46	P. 2-4 "Fig. 2-4"
SW2	Stationary tray opening/closing switch	Detects the opening (lifting) of the stationary tray.	5-32	P. 2-4 "Fig. 2-4"
SW3	Stapler interference switch	Automatically cut off the power supply to the stapler on detecting the no-operation area for the stapler unit.	11-44	P. 2-4 "Fig. 2-4"

3. Electromagnetic spring clutches

Symbol	Name	Function	P-I	Remarks
CLT2	Paper exit guide clutch	Transmits the stack transport motor drive to the paper exit guide.	10-26	P. 2-4 "Fig. 2-5"

4. Solenoids

Symbol	Name	Function	P-I	Remarks
SOL2	Buffer roller lift solenoid	Moves up/down the buffer roller (Turned ON to lift up the roller).	8-19	P. 2-4 "Fig. 2-5"
SOL4	Gate solenoid	Switches paper transport destination (stationary tray / movable tray).	7-19	P. 2-4 "Fig. 2-5"
SOL8	Exit roller solenoid	Contacting the exit roller at paper exiting to the finishing tray	8-20	P. 2-4 "Fig. 2-5"

5. PC board

Symbol	Name	Function	P-I	Remarks
FIN	Finisher control PC board	Controls the Finisher	3-37	

2.5 Diagram of Signal Blocks

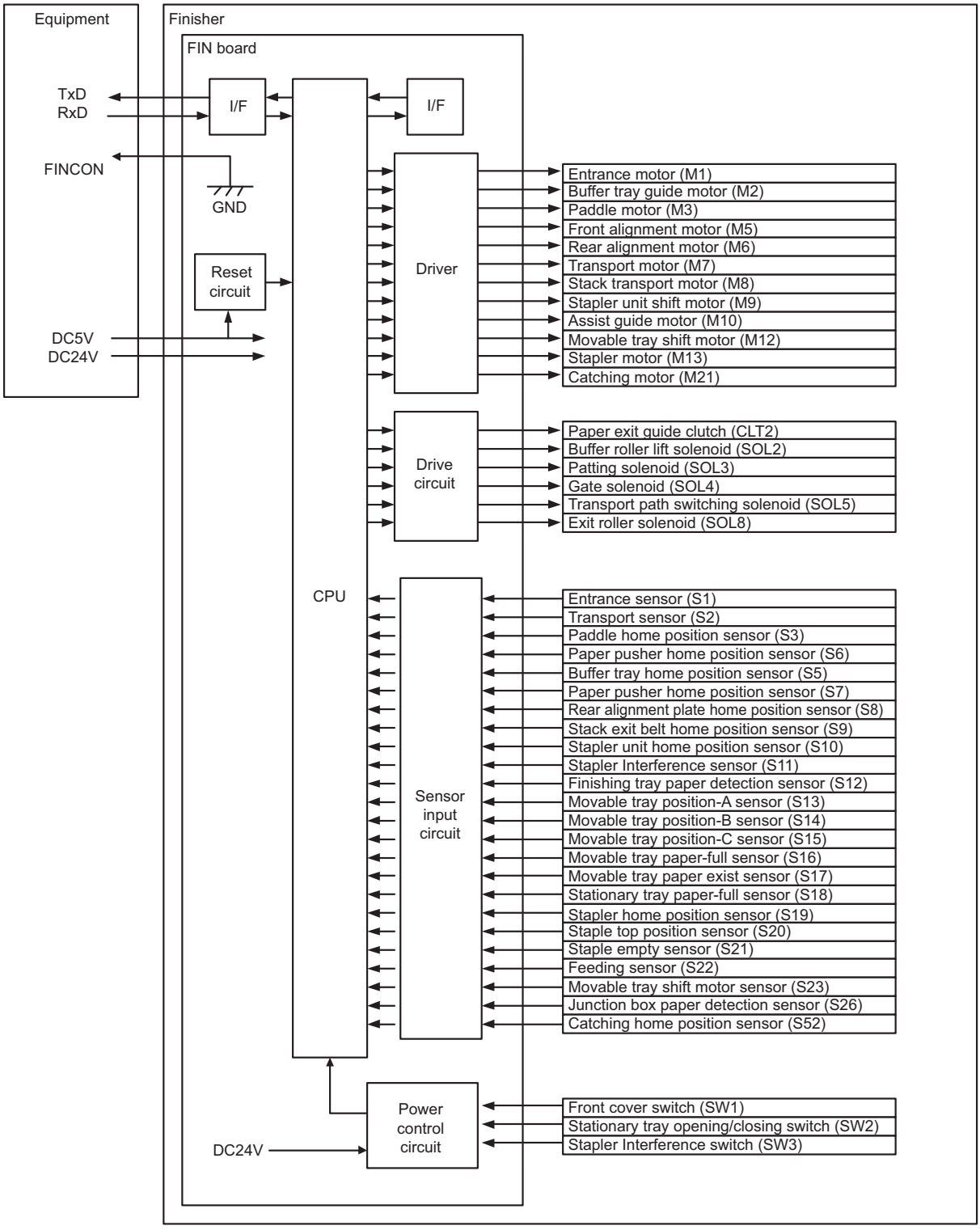


Fig. 2-6

2.6 Description of Interface Signals

The 2 lines; TxD and RxD are used to transmit/receive signals between the equipment and the Finisher. Also, the equipment detects the connection of the Finisher by the FINCON signal sent from the Finisher when it is connected to the equipment.

TXD: Sent data (transmitted from the Equipment to the Finisher)
RXD: Received data (transmitted from the Finisher to the Equipment)
FINCON: Finisher connection signal (Low level: Connected)

Data communication (RxD and TxD) between the equipment and the Finisher has adopted the serial communication system which does not allow checking whether the signals are transmitted/ received properly using testing devices in the field.

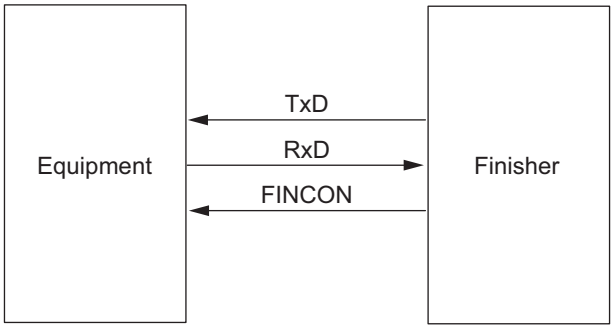


Fig. 2-7

3. DESCRIPTION OF OPERATIONS

3.1 Basic Operations

3.1.1 GENERAL DESCRIPTION

This machine exits paper transported from the main unit to the stationary tray or the movable tray.
Its paper exit procedures are classified to these three types;: (1) simple stack which exits paper directly to the stationary tray or the movable tray, (2) bundle job offset which exits sorted bundles of paper one bundle by one, placing each bundle alternately a little forward and backward, and (3) stapling stack which staples and exits each bundle of paper.
The bundle job offset and the stapling stack exit bundles of paper onto the movable tray.

- Simple stack mode
  When the non-sort mode is set, paper exits in the procedure shown below.
  Ⓐ Paper is output to the stationary tray.
  Ⓑ Paper is output to the movable tray via the buffer tray and finishing tray.

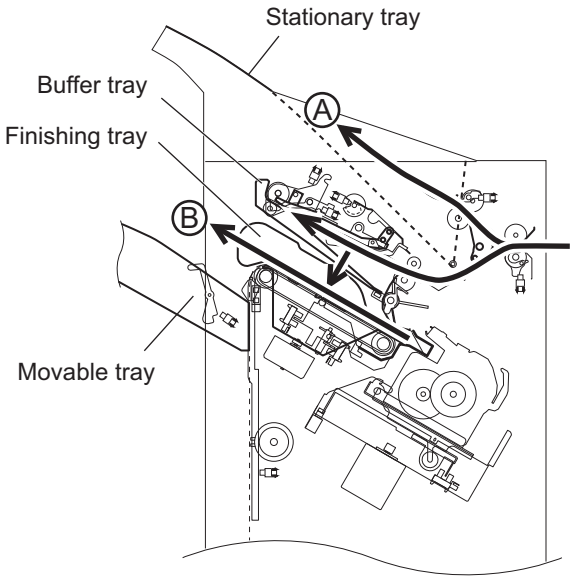


Fig. 3-1

- Bundle job offset mode/ stapling stack mode
  When the sort copying and the stapling function are set, paper exits in the procedure shown below.
  ① Paper is transported to the buffer tray.
  ② Paper is dropped from the buffer tray onto the finishing tray.
  ③ Paper stacked on the finishing tray is aligned and stapled, and then the bundled paper is output to the movable tray.

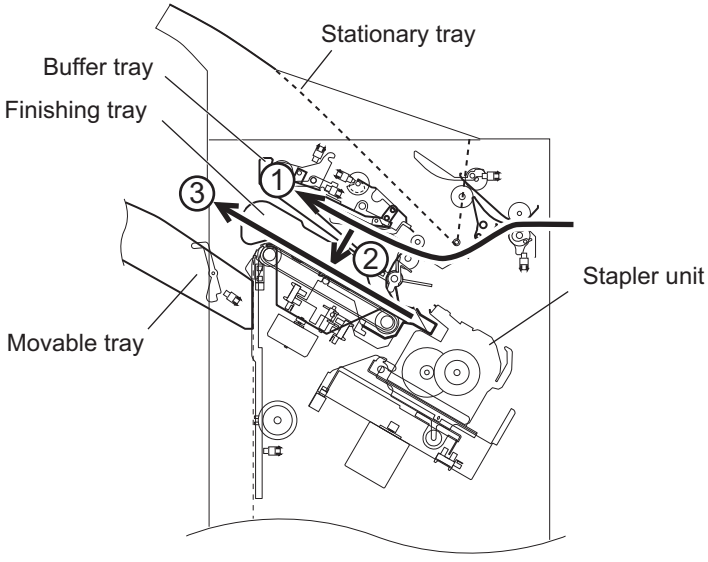


Fig. 3-2

3.1.2 Paper exit to the stationary tray

Paper is exited to the stationary tray without any extra operation.

[A] Finisher paper feeding section

The paper transported from the main unit is pulled in by the entrance roller driven by the entrance motor (M1).
When paper is exited to the stationary tray, the gate solenoid (SOL4) is turned ON to move down the gate flapper. When exited to the movable tray, the gate solenoid (SOL4) is turned OFF to transport the paper to the buffer tray.
The paper transport is detected by the entrance sensor (S1).

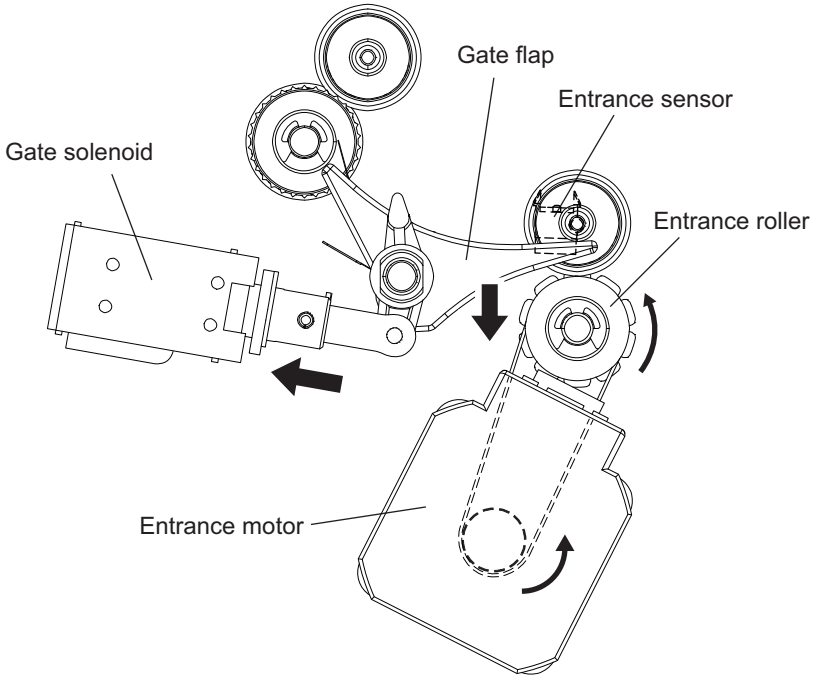


Fig. 3-3

[B] Paper exiting operation

Paper transported from the Finisher feeding section to the stationary tray side is exited to the stationary tray with the stationary tray roller driven by the exit motor (M11).
The entrance sensor (S1) detects the paper transport to the stationary tray.
The stationary tray paper-full sensor (S18) detects the overload of paper on the stationary tray.

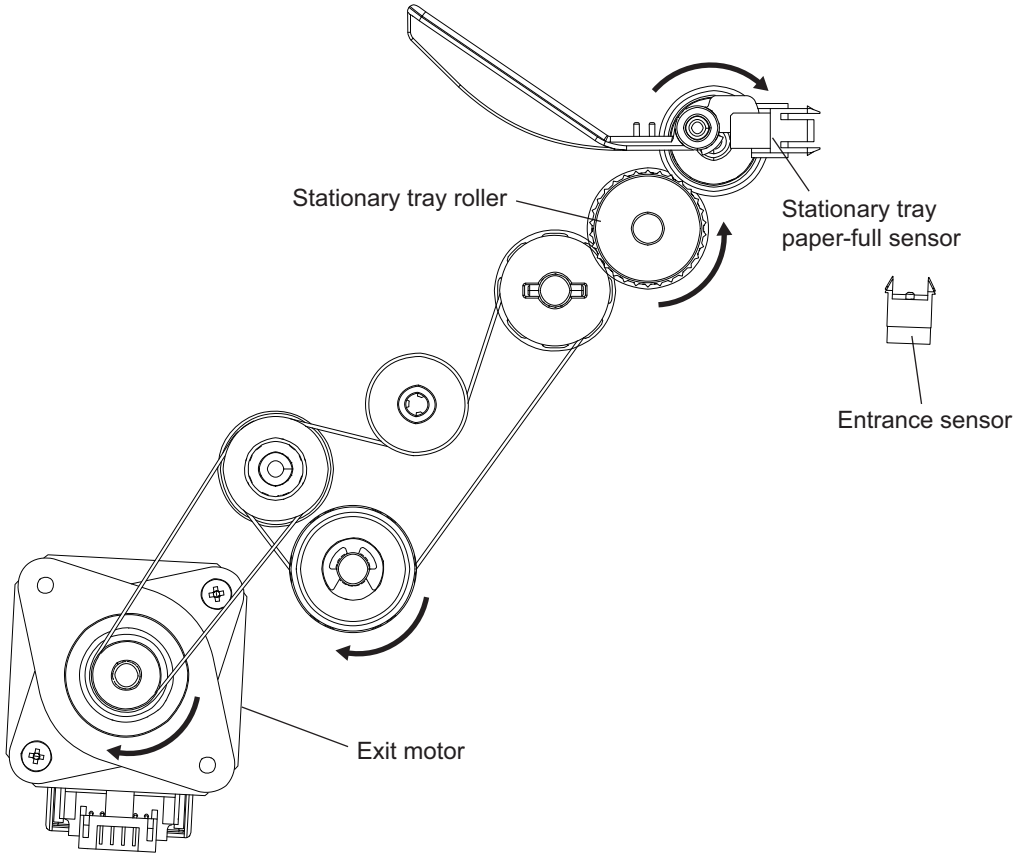


Fig. 3-4

3.1.3 Paper exit to the movable tray

Paper transported from the feeding section is stacked on the buffer tray in a unit of 1 to 3 sheets. The stacked paper is then transported to the finishing tray by a multi-active drop mechanism and next moved to the movable tray in a different way for each mode as below.

- Non-sort mode:
  The stacked paper is moved from the finishing tray to the movable tray.
- Job offset stack mode:
  Alignment and job offsetting of the stacked paper are performed on the finishing tray. The paper is then moved to the movable tray.
- Staple stack mode:
  Stapling is performed after alignment and job offsetting of the stacked paper are carried out on the finishing tray. The paper is then moved to the movable tray.

[A] Buffer tray stack

At this stage, the buffer roller lift solenoid (SOL2) is turned ON to raise the buffer rollers and the buffer tray is moved by the buffer tray guide motor (M2) to the position where it matches the paper width. The catching motor (M21) is driven for every stacking the paper on the buffer tray to prevent the stacked paper from deviating at the trailing edge chuck.
The home position of the buffer tray is detected by the buffer tray home position sensor (S5).

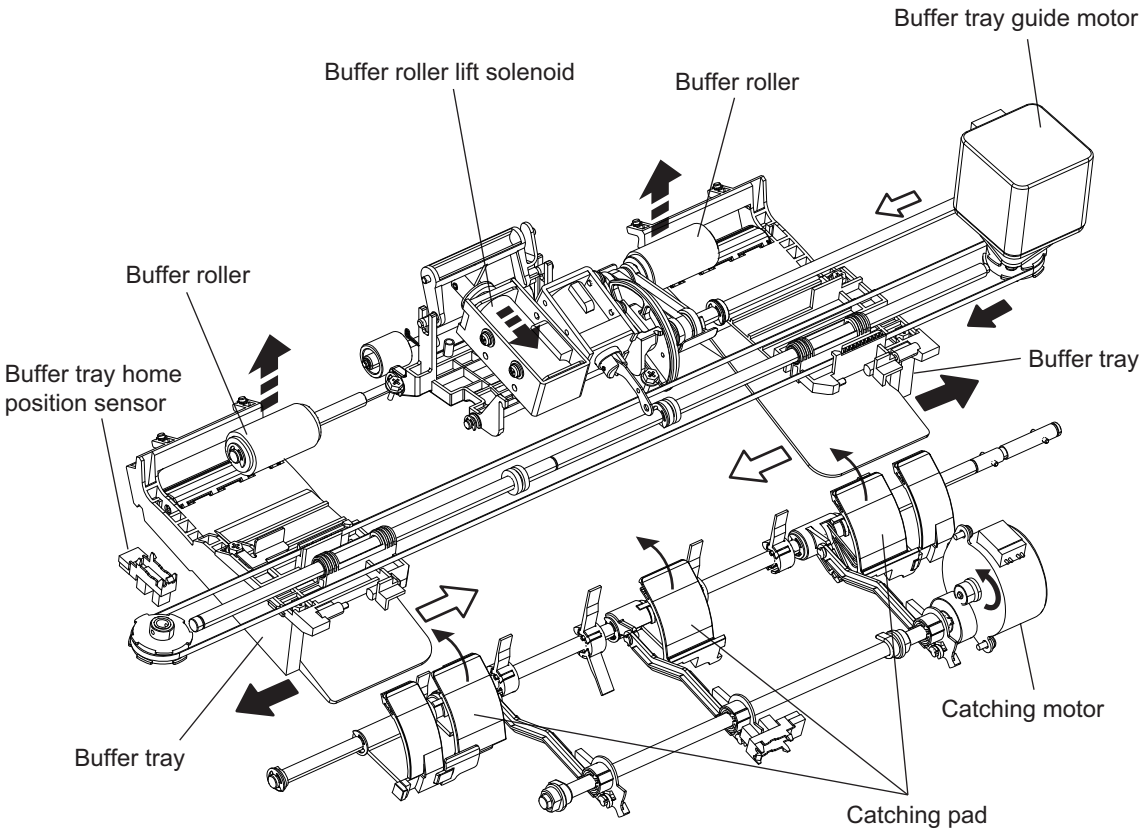


Fig. 3-5

[B] Mulch-active drop mechanism section

The paper transported to the buffer tray is then moved to the finishing tray by the mulch-active drop mechanism to be aligned or stapled.

(1) At this stage, the buffer roller lift solenoid (SOL2) is turned ON to raise the buffer rollers and the buffer tray is opened by the buffer tray guide motor (M2) to drop the paper on the buffer tray onto the finishing tray. The assist guide motor (M10) is driven to lower the assist guide so that the paper will certainly be dropped onto the finishing tray.

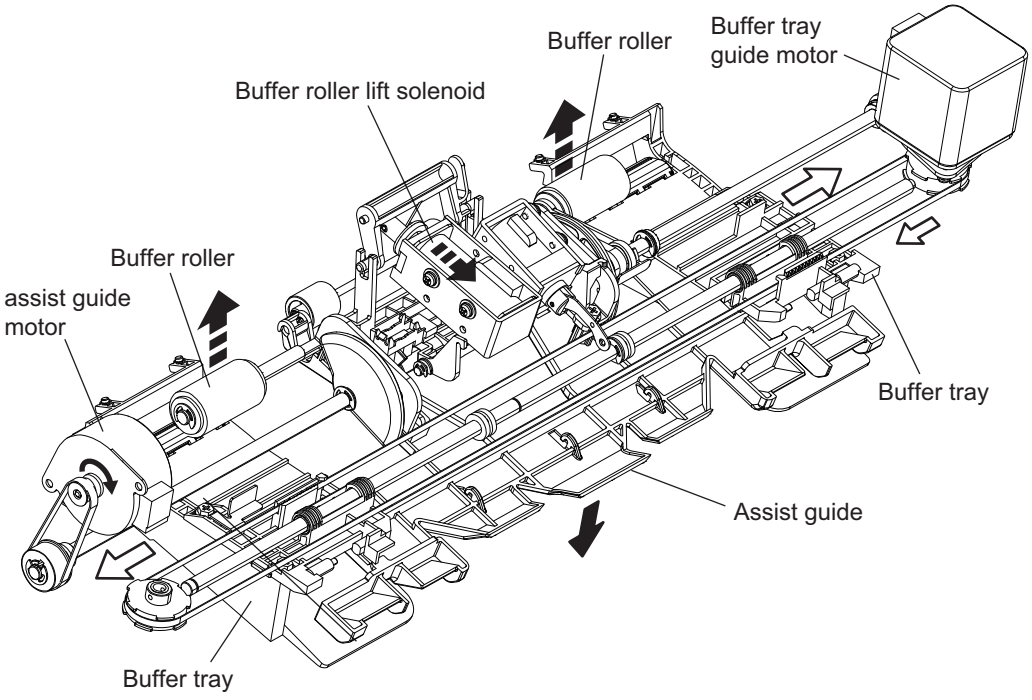


Fig. 3-6

(2) The paper dropped onto the finishing tray is then pulled into the finishing position by the paddles driven by the paddle motor (M3) and the stack transport rollers-1 and -2 driven by the transport motor (M7).
The finishing tray paper detection sensor (S12) detects whether paper is on the finishing tray or not.
The home position of the paddles is detected by the paddle home position sensor (S3).

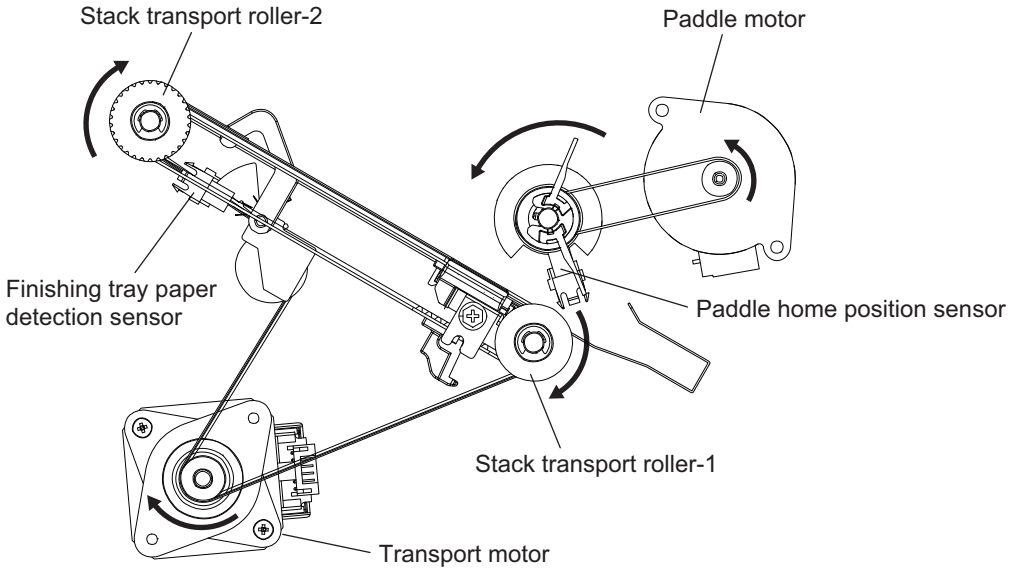


Fig. 3-7

[C] Bundle Job Offset Operation

The bundle job offset operation is to sort bundles of paper by placing the first bundle a little forward and placing the next bundle a little backward, and repeating this set of movement.
The paper transported to the finishing tray is bundled and each bundle is placed by the alignment plates driven by the front alignment motor (M5) and the rear alignment motor (M6).
The home position of each alignment plate is detected by the front alignment plate home position sensor (S7) and the rear alignment plate home position sensor (S8).

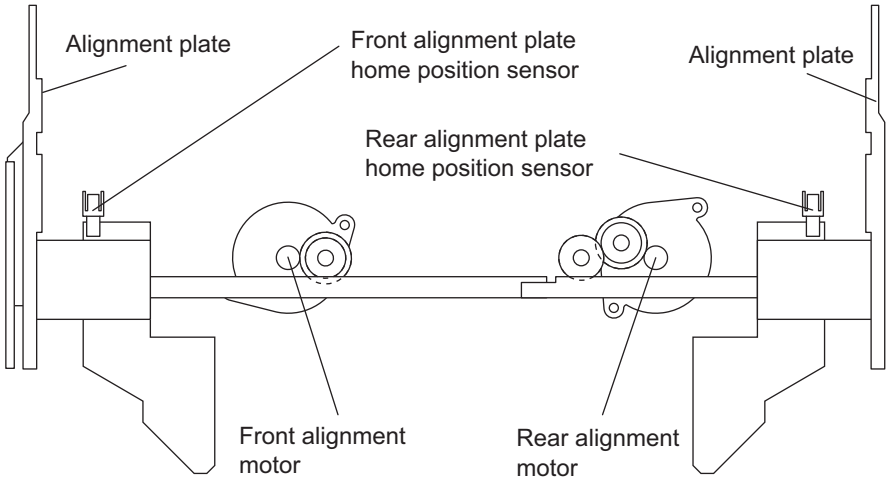


Fig. 3-8

[D] Stapling Operation

The stapling operation is to staple a specified number of paper with the stapler unit.
The stapler unit is moved to the stapling position (the position differs depending on the paper size) by the stapler unit shift motor (M9).
The home position of the stapler unit is detected by the stapler unit home position sensor (S10).
The stapler interference switch (SW3) detects the no-operation area for the stapling operation and cuts off the power supply to the stapler while it is switched ON.
The stapling operation is also stopped in the area where while the stapler interference sensor (S11) is turned ON to prevent the stapler from interfering with other mechanical sections in the equipment.

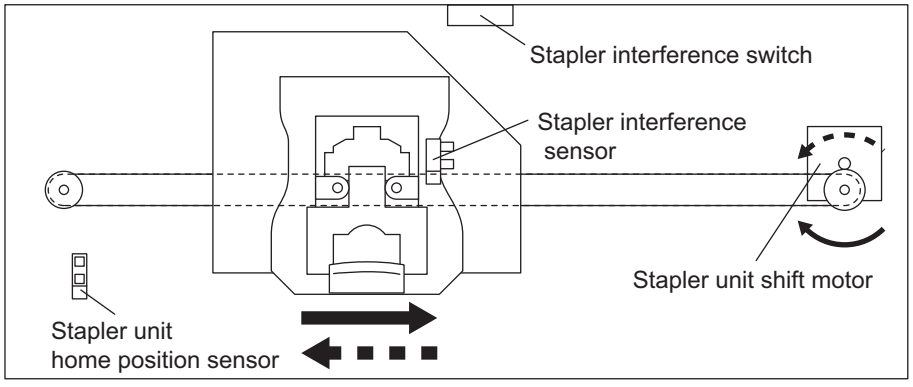


Fig. 3-9

[E] Paper exiting operation

Bundles of the paper aligned or stapled on the finishing tray are then pulled up by the paper exit guide driven by the stack transport motor (M8) with the turning ON of the paper exit guide clutch (CLT2). Then the paper is exited by the paper exit belt driven by the stack transport motor (M8) and the stack transport rollers-1 and -2 driven by the transport motor (M2) onto the movable tray.
The home position of the paper exit belt is detected by the stack exit belt home position sensor (S9).

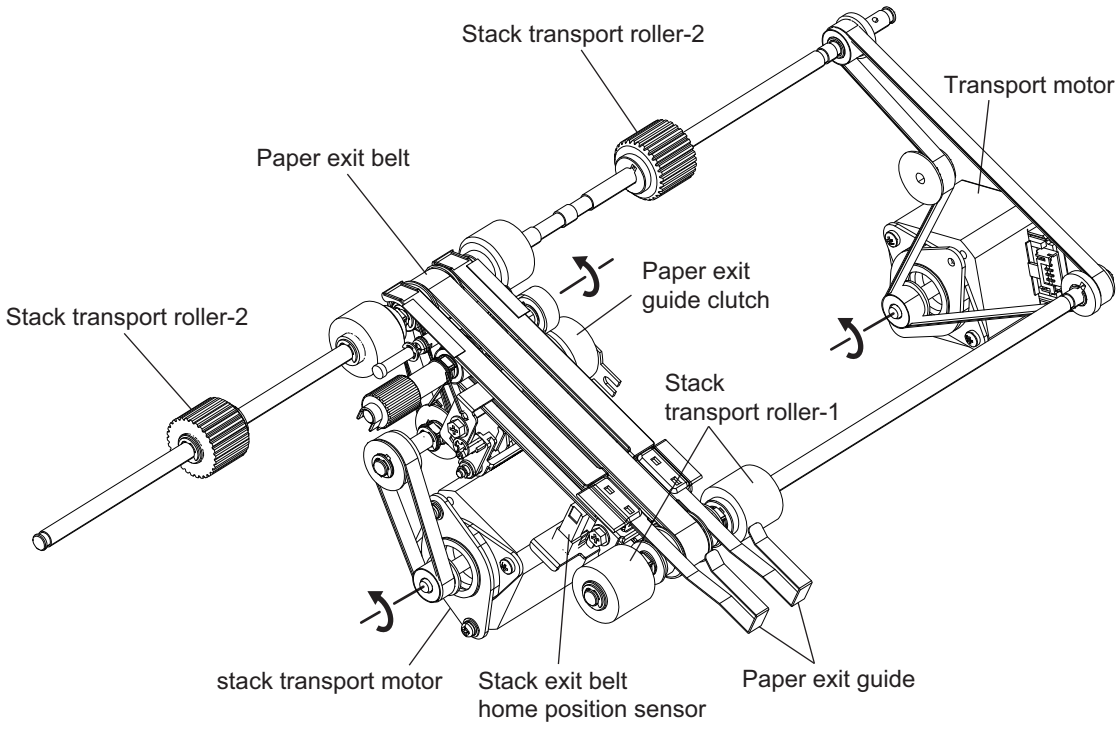


Fig. 3-10

[F] A3 wide / postcard exiting

An A3 wide sheet of paper or a small piece of paper such as a postcard is made to exit to the movable tray by being transported on the finishing tray without being stacked on the buffer tray.
To transport such types of paper, the exit roller lift solenoid (SOL8) is turned ON to lower the pinch roller arm to the stack transport roller-2 and the stack transport motor is driven to raise the tray guides.

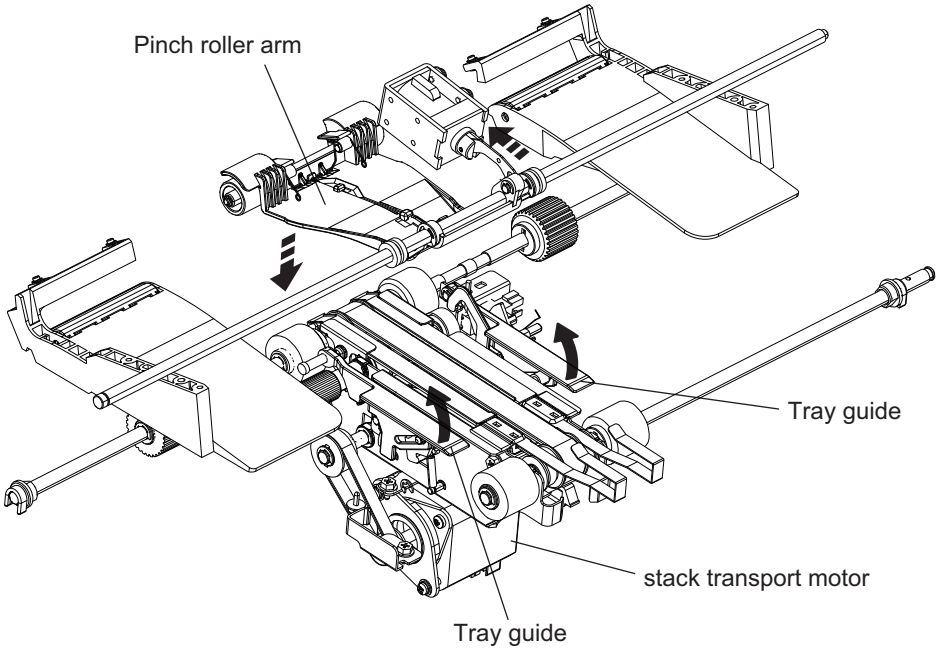


Fig. 3-11

[G] Operation of Movable Tray

The movable tray is shifted up and down by the drive from the movable tray shift motor (M12) according to the paper exit from the buffer tray or finishing tray, and the amount of the paper stack. Rotation of the movable tray shift motor is detected by the movable tray shift motor sensor (S23). Whether paper is set on the movable tray or not is detected by the movable tray paper sensor (S17).

Detecting the position of the movable tray is performed as follows.

1. Home position of the movable tray when the paper is output from the finishing tray
   The movable tray is shifted down from the home position when the paper is output from the buffer tray, and the tray is stopped where the movable tray position-C sensor (S15) is turned ON. This will be the home position.

2. Position of the movable tray when the paper loading capacity is 1,000 to 2,000 sheets
   If the movable tray paper-full sensor (S16) is turned ON when the movable tray is in either the home position when the paper is output from the buffer tray or the home position when the paper is output from the finishing tray, it goes down to the position where the movable tray position-B sensor (S14) is turned ON. This is the position of the movable tray when the paper loading capacity is 1,000 to 2,000 sheets.

3. Position of the movable tray when the paper loading capacity is 2,000 sheets or more
   When the movable tray is in the position of the paper loading capacity of 1,000 to 2,000 sheets, and the movable tray paper-full sensor (S16) is turned ON, the tray is shifted to the position where the movable tray position-A sensor (S13) is turned OFF. This is the position of the movable tray when the paper loading capacity is 2,000 or more.

Movable tray position	Movable tray position A sensor (S13)	Movable tray position B sensor (S14)	Movable tray position C sensor (S15)
(1)	ON	OFF	ON
(2)	ON	ON	ON
(3)	ON	ON	OFF

* ON: The sensor signal is interrupted by the rib of the sensor rail.
OFF: The sensor signal is not interrupted by the rib of the sensor rail.

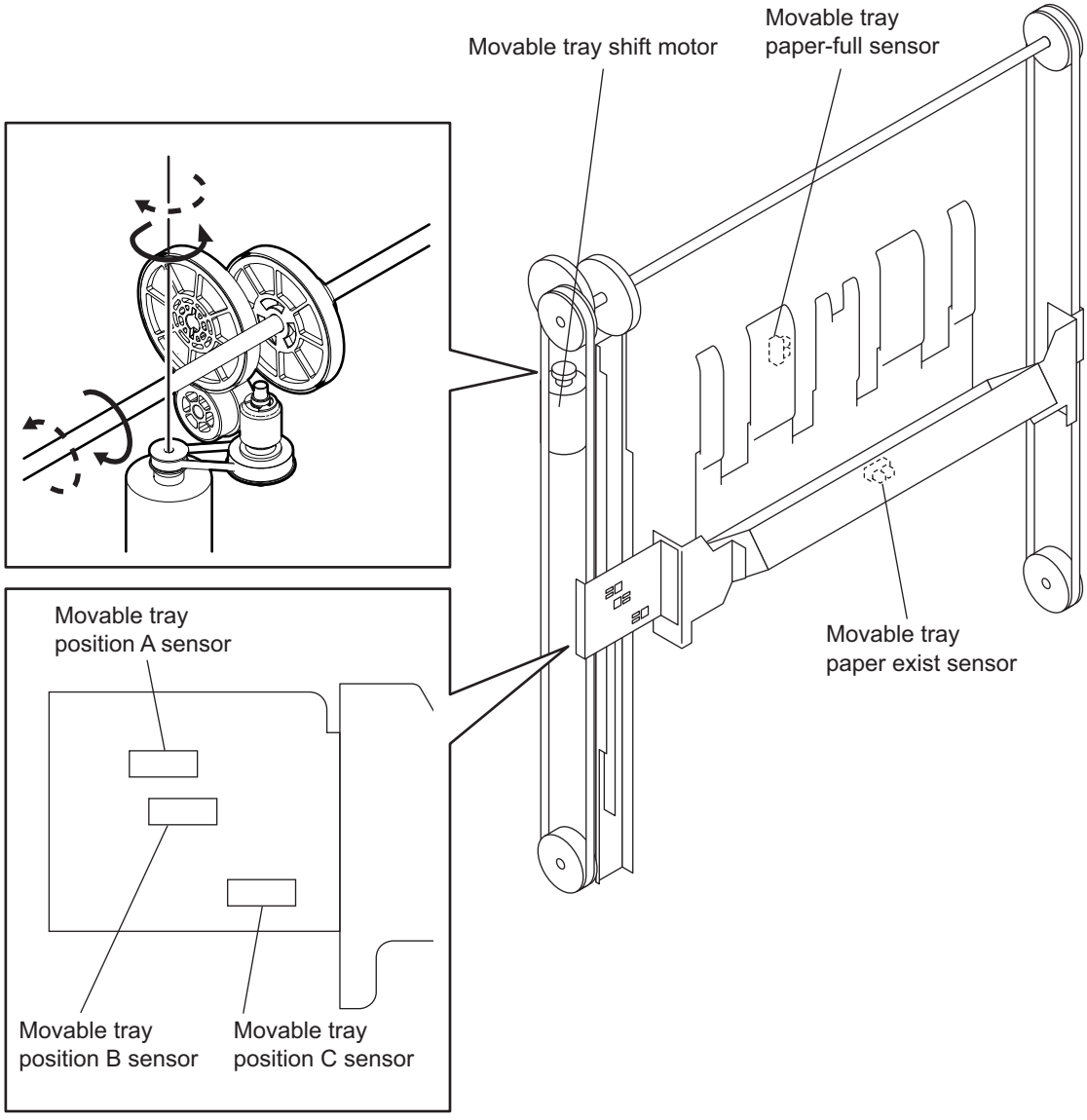


Fig. 3-12

4. DISASSEMBLY AND INSTALLATION

4.1 Covers

[A] Rear upper cover / Rear lower cover

(1) Remove 2 screws, and then take off the rear lower cover.

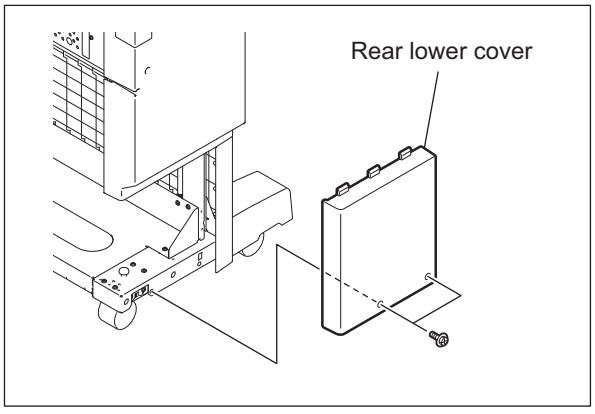


Fig. 4-1

(2) Remove the finisher cable out of the groove of the rear upper cover.
(3) Remove 3 screws, and then take off the rear upper cover by sliding it upward.

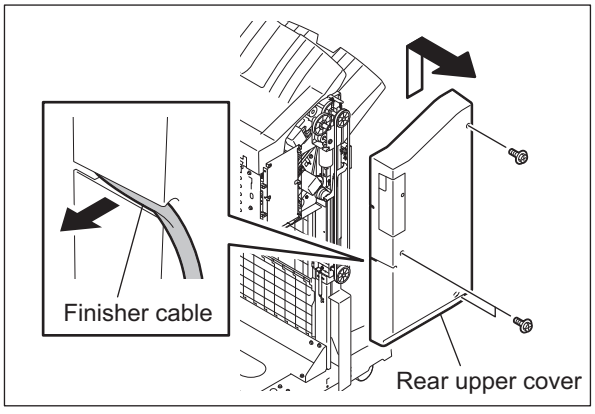


Fig. 4-2

[B] Left upper cover

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Open the stationary tray.
(3) Remove 3 screws, and then take off the left upper cover [1].

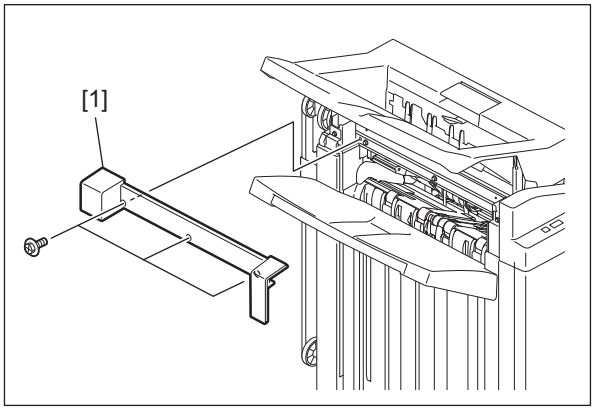


Fig. 4-3

[C] Control panel unit

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Open the front cover assembly.
(4) Remove 3 screws, release the harness [3] from the harness clamp [1], and then disconnect the connector [2] to take off the control panel unit [4].

Notes:

When installing the control panel unit, install the harness as shown in the figure.

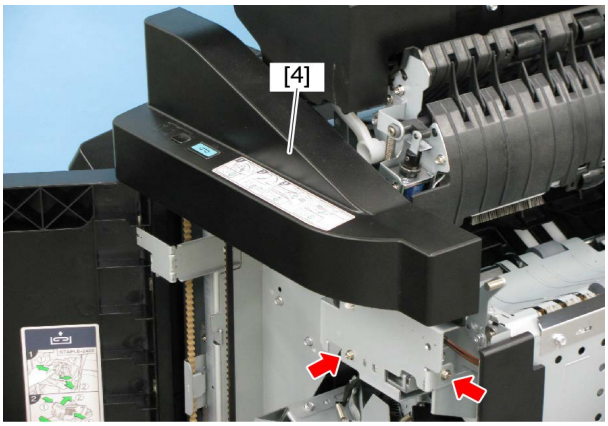


Fig. 4-4

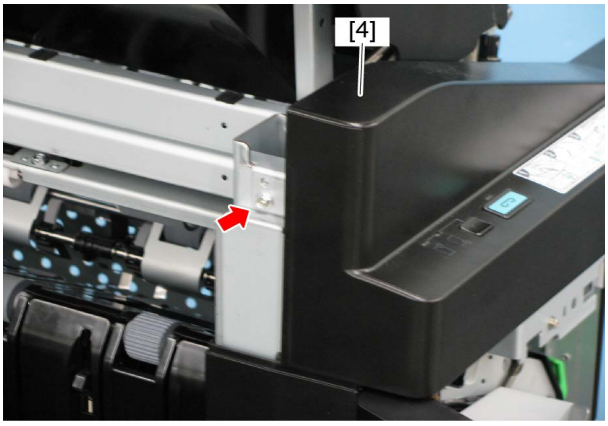


Fig. 4-5

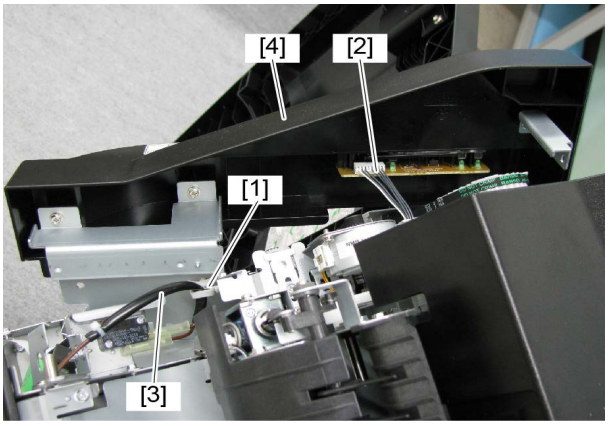


Fig. 4-6

[D] Front upper cover / Front lower cover

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Remove 1 screw, and then remove the lower stay of the front cover assembly by sliding it upward.
(5) Take off the front cover assembly by sliding it upward.

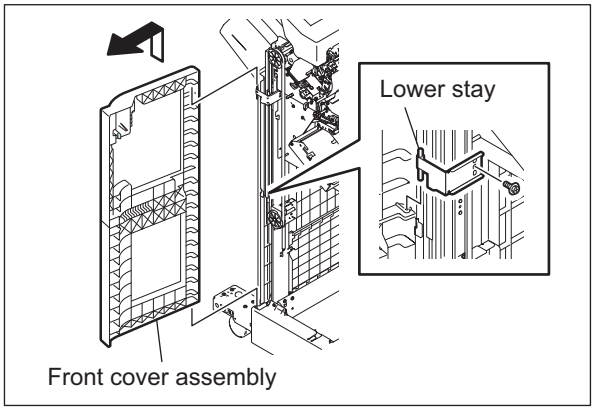


Fig. 4-7

(6) Remove 1 screw, and then separate the front upper cover and the front lower cover of the front cover assembly.

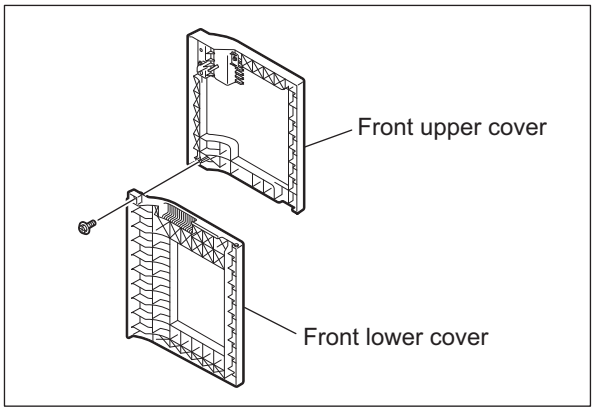


Fig. 4-8

[E] Front foot cover

(1) Remove 1 screw, and then take off the front foot cover by sliding it in the direction of the arrow.

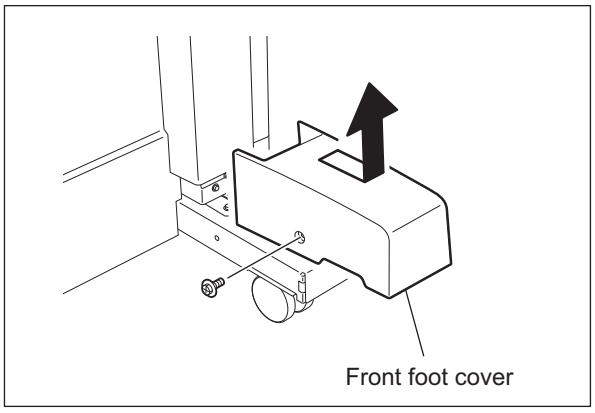


Fig. 4-9

[F] Rear foot cover

(1) Remove 1 screw, and then take off the rear foot cover by sliding it in the direction of the arrow.

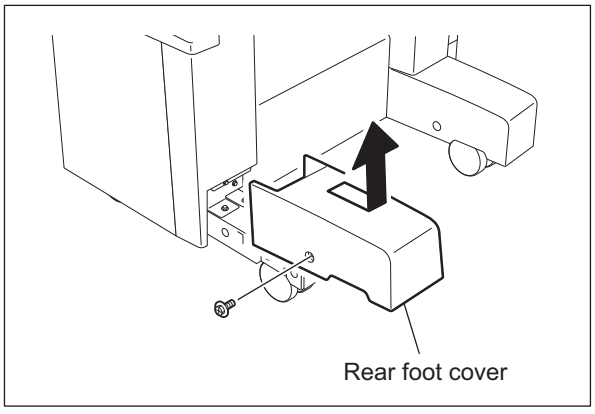


Fig. 4-10

[G] Movable tray cover

(1) Remove 2 screws and slide the movable tray cover [1] obliquely upward to take it off.

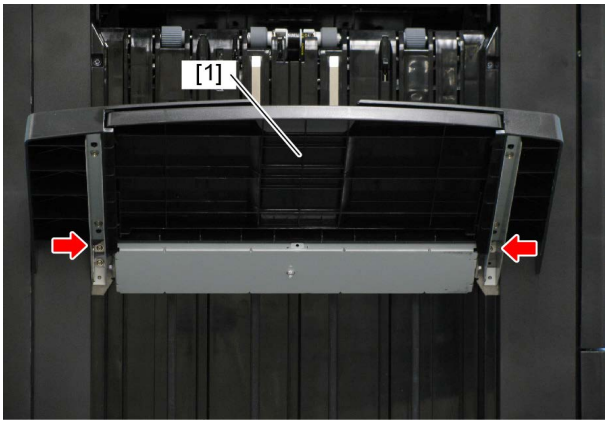


Fig. 4-11

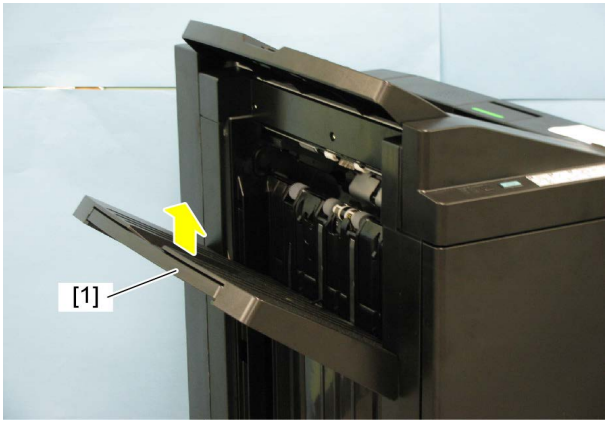


Fig. 4-12

[H] Front rail cover

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the front cover assembly.
🕮 P. 4-4 "[D] Front upper cover / Front lower cover"
(5) Take off the front foot cover.
🕮 P. 4-5 "[E] Front foot cover"
(6) Take off the movable tray cover.
🕮 P. 4-6 "[G] Movable tray cover"

(7) Loosen 1 lower side screw, remove 1 upper side screw, and then take off the front rail cover while sliding it upward.

Notes:

When installing the front rail cover, hang the 3 hooks of the cover on the holes of the frame.

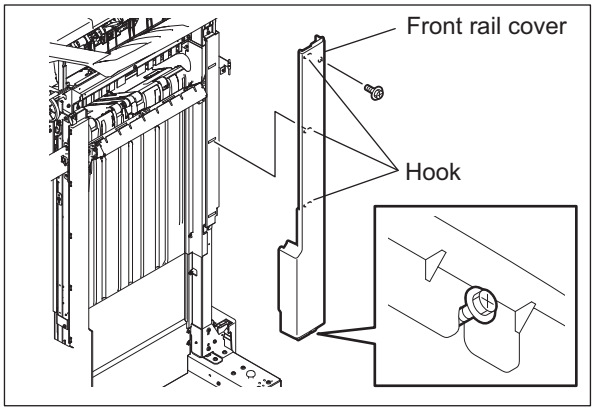


Fig. 4-13

[I] Rear rail cover

(1) Take off the rear upper cover and the rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
📖 P. 4-2 "[B] Left upper cover"
(3) Take off the rear foot cover.
📖 P. 4-5 "[F] Rear foot cover"
(4) Take off the movable tray cover.
📖 P. 4-6 "[G] Movable tray cover"
(5) Loosen 1 lower side screw, remove 1 upper side screw, and then take off the rear rail cover while sliding it upward.

Notes:

When installing the rear rail cover, hang the 3 hooks of the cover on the holes of the frame.

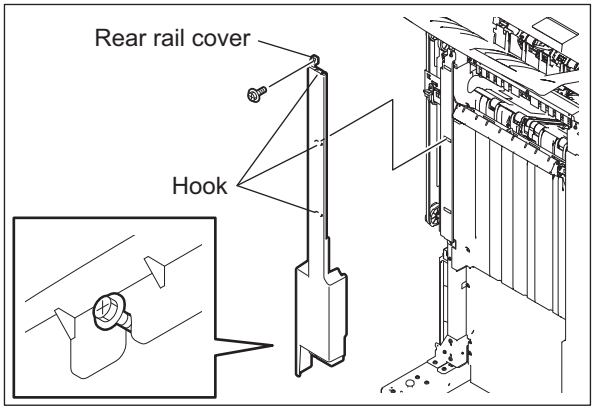


Fig. 4-14

[J] Blind cover

(1) Remove 1 screw, and then take off the blind cover.

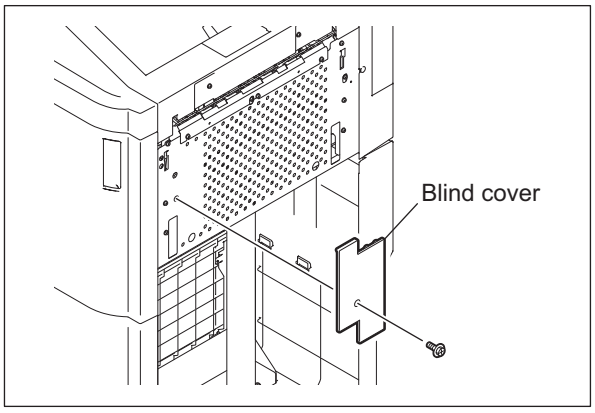


Fig. 4-15

[K] Shield metal plate

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the blind cover.
🕮 P. 4-8 "[J] Blind cover"
(3) Open the stationary tray.
(4) Remove 9 screws to take off the paper feed discharge brush, and then take off the shield metal plate by sliding it upward.

Notes:
When installing the Shield metal plate, hang the 2 hooks of the cover on the holes of the frame.

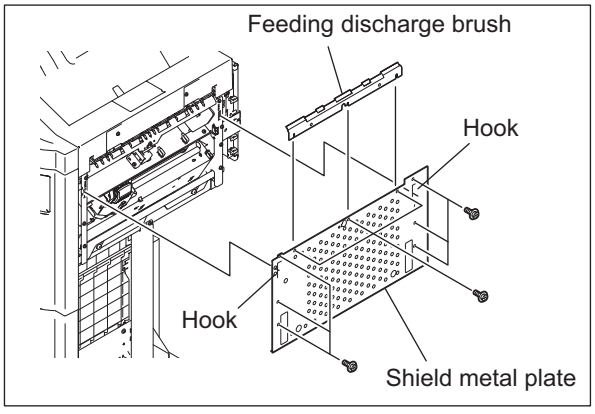


Fig. 4-16

[L] Grate-shaped guide

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the front cover assembly.
🕮 P. 4-4 "[D] Front upper cover / Front lower cover"
(5) Take off the front foot cover.
🕮 P. 4-5 "[E] Front foot cover"
(6) Take off the rear foot cover.
🕮 P. 4-5 "[F] Rear foot cover"
(7) Take off the movable tray cover.
🕮 P. 4-6 "[G] Movable tray cover"
(8) Take off the front rail cover.
🕮 P. 4-6 "[H] Front rail cover"
(9) Take off the rear rail cover.
🕮 P. 4-7 "[I] Rear rail cover"
(10) Take off the movable tray drive unit.
🕮 P. 4-6 "[G] Movable tray cover"
(11) Remove 2 screws, and take off the stopper.

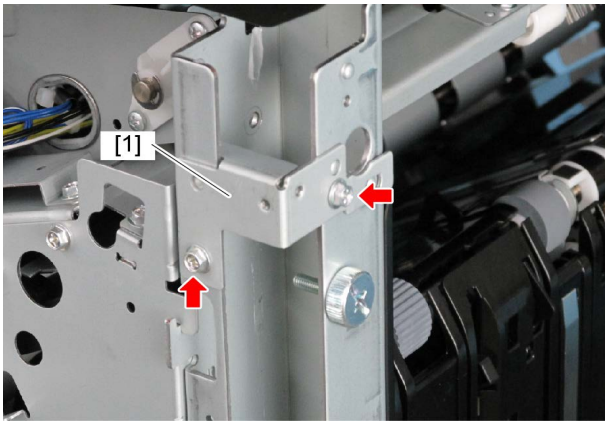


Fig. 4-17

(12) Remove 2 screws.

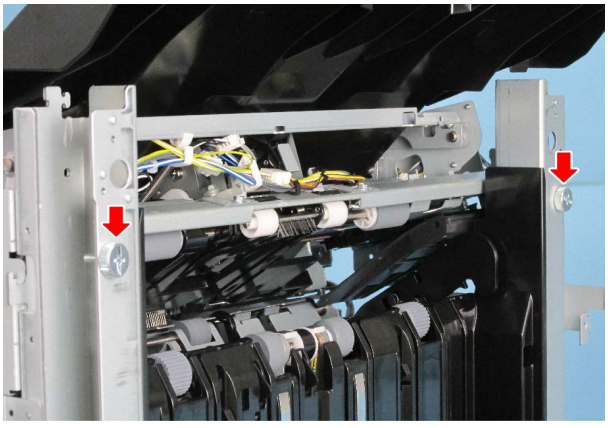


Fig. 4-18

(13) Release the harness out of 2 clamps [1], and then disconnect the connectors [3], [4] of the CN20 and CN22 on the FIN board.
Remove 1 screw and take off the grounding wire [5].

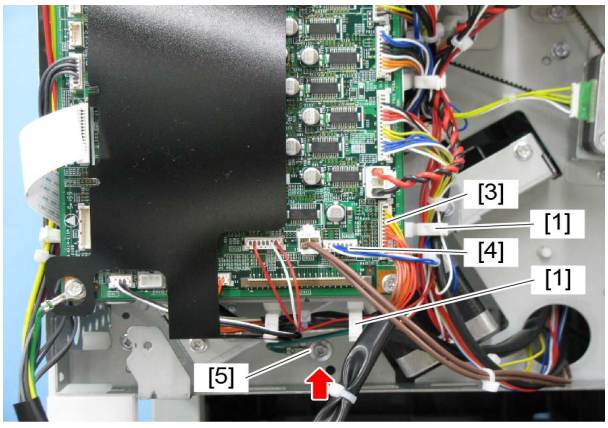


Fig. 4-19

(14) Turn the levers on the alignment plate to unlock. Move the front alignment plate and the rear alignment plate to the center, and then take them off by pulling them out upward.

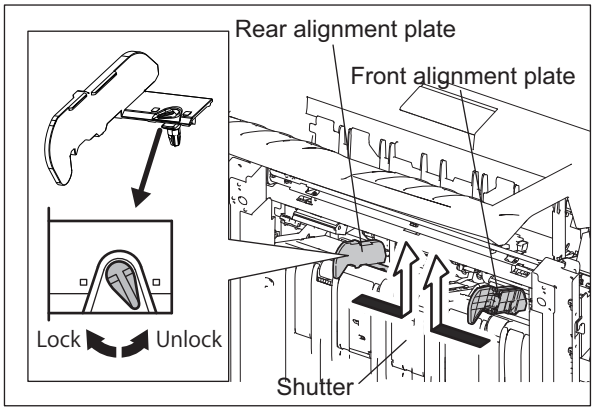


Fig. 4-20

(15) Take off the movable tray shift frame by moving it upward.

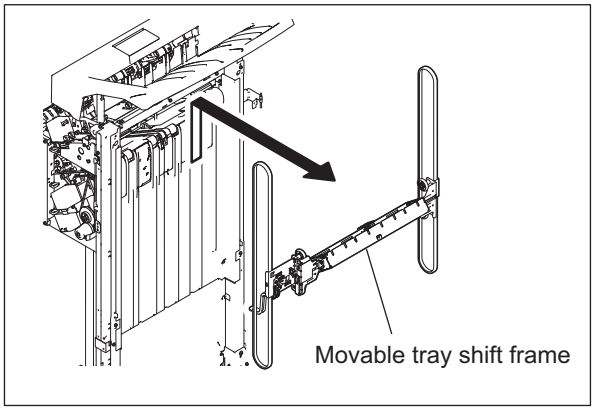


Fig. 4-21

(16) Remove 6 screws, and then take off the grate-shaped guide [6] by sliding it upward.

Notes:

When installing the grate-shaped guide [6], hang the 2 hooks of the cover on the hooks [7] of the frame.

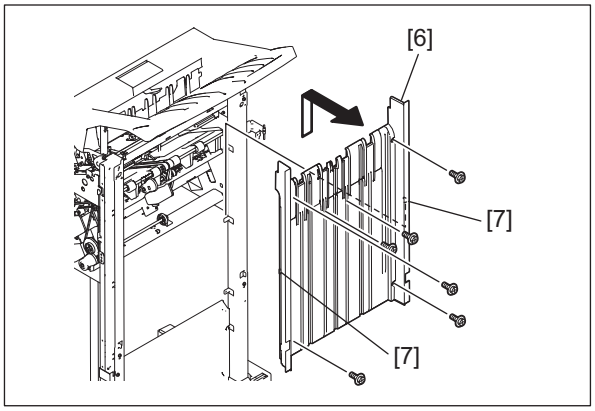


Fig. 4-22

Notes:

When installing the grate-shaped guide, install the harness as shown in the figure.

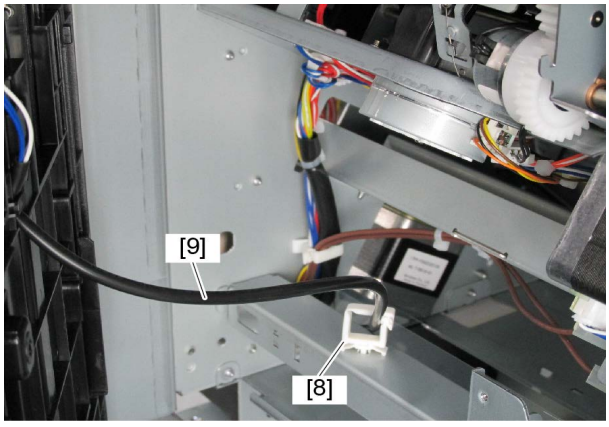


Fig. 4-23

[M] Left lower cover

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the front cover assembly.
🕮 P. 4-4 "[D] Front upper cover / Front lower cover"
(5) Take off the front foot cover.
🕮 P. 4-5 "[E] Front foot cover"
(6) Take off the rear foot cover.
🕮 P. 4-5 "[F] Rear foot cover"
(7) Take off the movable tray cover.
🕮 P. 4-6 "[G] Movable tray cover"
(8) Take off the front rail cover.
🕮 P. 4-6 "[H] Front rail cover"
(9) Take off the rear rail cover.
🕮 P. 4-7 "[I] Rear rail cover"

(10) Remove 4 screws, and take off the left lower cover.

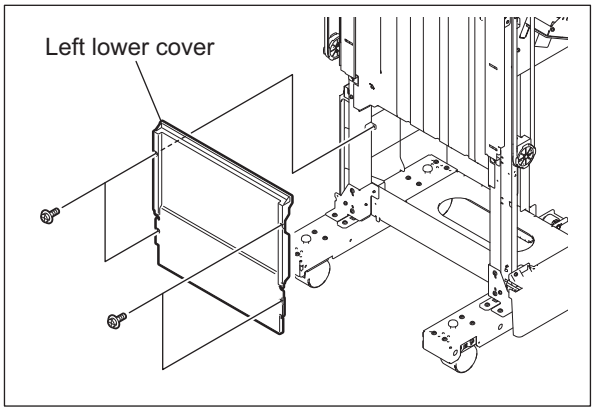


Fig. 4-24

[N] Stationary tray cover

(1) Open the stationary tray.
(2) Loosen 2 screws each from the front and back side cover, and remove 2 right side screws.
(3) Lift the stationary cover upward to take off while pulling the jam access lever.

Notes:

- Be sure to install or remove the stationary tray cover with the stationary tray being opened, otherwise the upper exit roller guide may be damaged.
- Be sure not to damage the actuator of the stationary tray paper-full sensor.

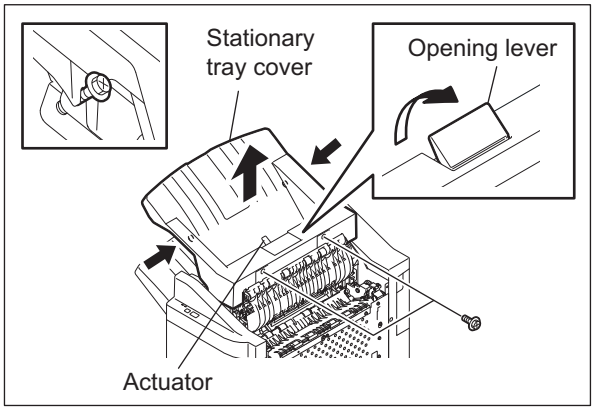


Fig. 4-25

Notes:

- Be sure not to lose 4 pins of the buffer unit-1.
- Before installing the stationary tray cover, adjust the installing positions of the 4 pins of the buffer unit-1 to the center position.

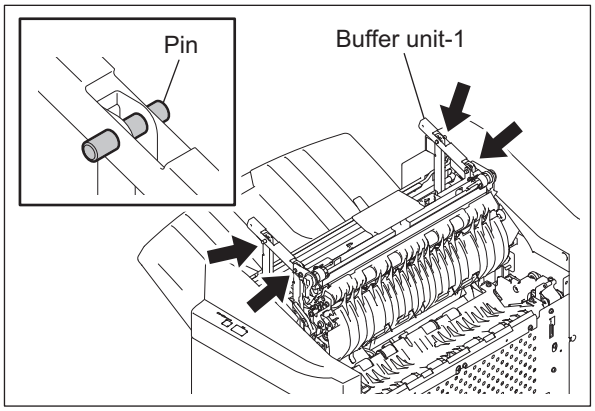


Fig. 4-26

[O] Front lowermost cover

(1) Open the front cover assembly.
(2) Remove 2 screws, and then take off the front lowermost cover.

Notes:

When installing the front lowermost cover, hang the 2 hooks of the cover on the holes of the frame.

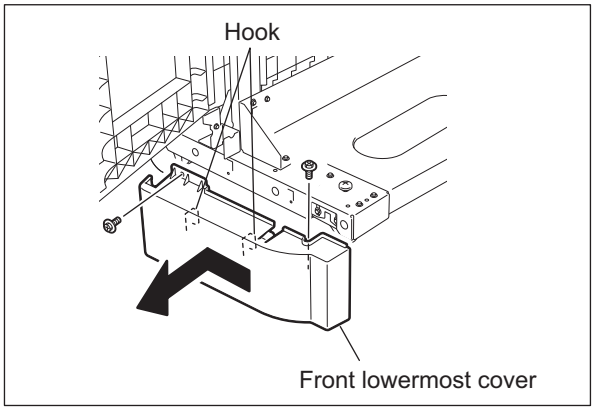


Fig. 4-27

[P] Handle cover

(1) Open the front cover assembly.
(2) Remove 2 screws, and then take off the handle cover.

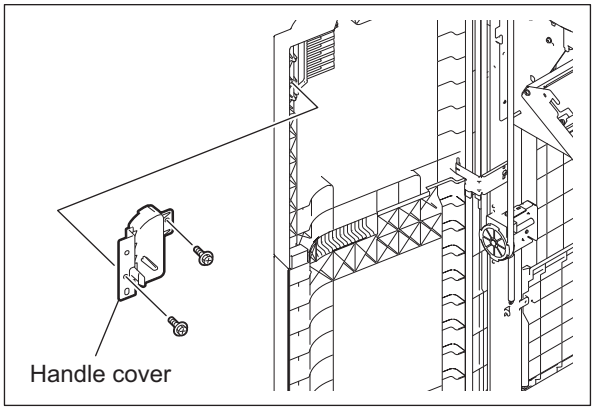


Fig. 4-28

4.2 Units (Finisher section)

[A] Buffer unit

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the front cover assembly.
🕮 P. 4-4 "[D] Front upper cover / Front lower cover"
(5) Take off the front foot cover.
🕮 P. 4-5 "[E] Front foot cover"
(6) Take off the rear foot cover.
🕮 P. 4-5 "[F] Rear foot cover"
(7) Take off the movable tray cover.
🕮 P. 4-6 "[G] Movable tray cover"
(8) Take off the front rail cover.
🕮 P. 4-6 "[H] Front rail cover"
(9) Take off the rear rail cover.
🕮 P. 4-7 "[I] Rear rail cover"
(10) Take off the movable tray drive unit.
🕮 P. 4-6 "[G] Movable tray cover"
(11) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(12) Disconnect 5 connectors [4], [5], [6], [7] and [8] (CN8, CN9, CN10, CN11 and CN14) on the finisher control PC board [3].
(13) Disconnect 1 connector [10] from the buffer tray guide motor [9].
(14) Disconnect 1 connector [12] from the transport motor [11].
(15) Release the harness from 8 harness clamps [15].
(16) Release the harness from 1 binding wire [14].

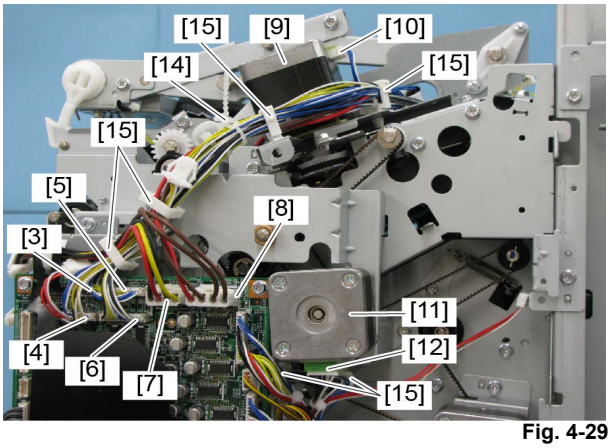


Fig. 4-29

(17) Release the harness [16] of the connector (CN14) of the finisher control PC board from 2 harness clamps [17].

Notes:
When installing, wire the harness [16] as shown below.

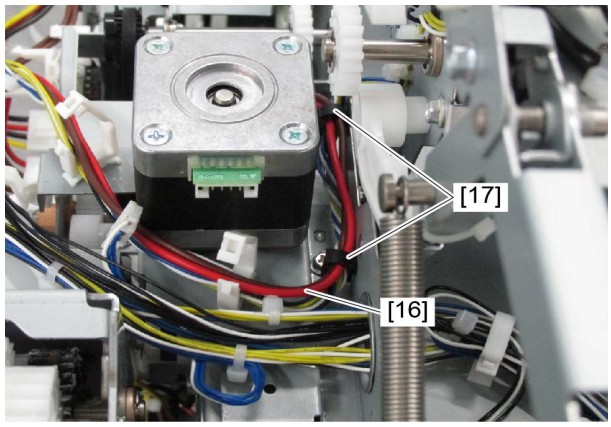


Fig. 4-30

(18) Remove 5 screws and take off the motor bracket [19].

Notes:
Pay full attention not to lose the bushing [20] while taking off the motor bracket [19].

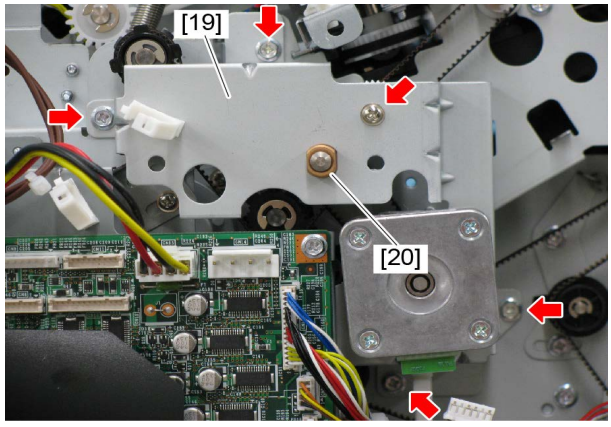


Fig. 4-31

(19) Loosen 1 screw. Push the pulley [21] in the direction indicated by the arrow to loosen the belt tension and tighten the screw.
(20) Remove the belts [22] and [23], the part assembled [24] and the bearing.

Notes:
Pay full attention not to lose the bearing while taking off the part assembled [24].

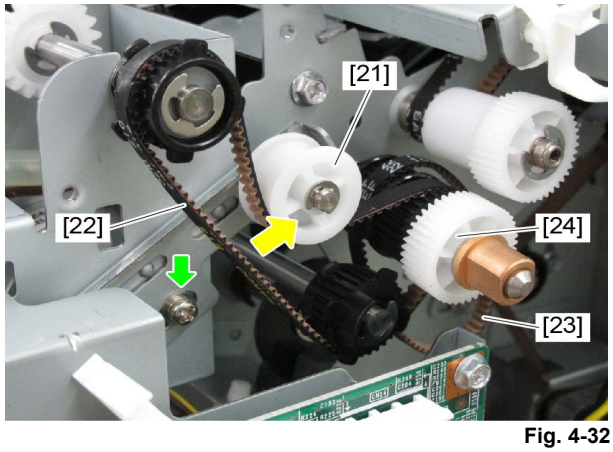


Fig. 4-32

(21) Remove 4 screws, and then take off the buffer unit [27].

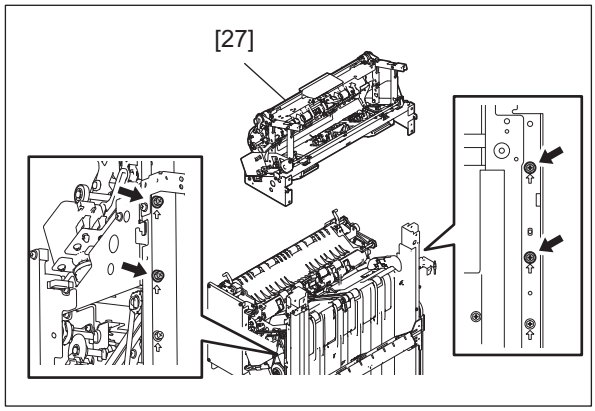


Fig. 4-33

Notes:

Be sure to place the removed buffer unit as shown in the figure below to prevent damaged to the buffer guide [28], assist guide [29] and transport path [30].

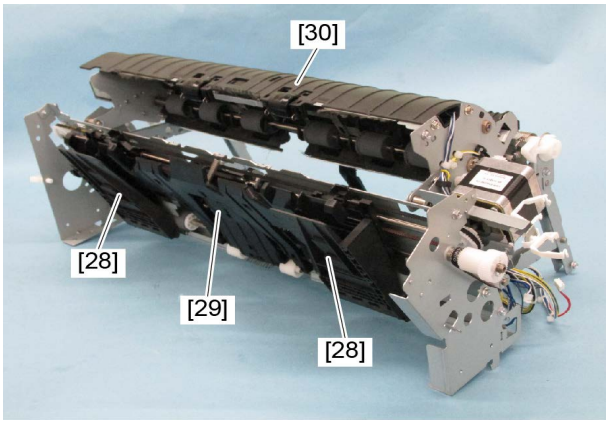


Fig. 4-34

[B] Buffer unit-1

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(5) Disconnect 4 connectors [4], [5], [6] and [7] (CN8, CN9, CN11 and CN12) on the finisher control PC board [3].
(6) Disconnect 1 connector [10] from the buffer tray guide motor [9].
(7) Disconnect 1 connector [14] from the movable tray shift motor sensor [13].
(8) Release the harness from 4 harness clamps [15].
(9) Release the harness from 1 binding wire [8].

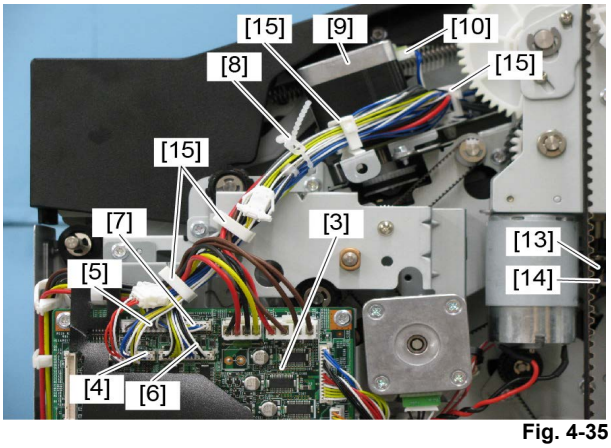


Fig. 4-35

(10) Release the harness [16] of the connector (CN14) of the finisher control PC board from 2 harness clamps [17].

Notes:
When installing, wire the harness [16] as shown below.

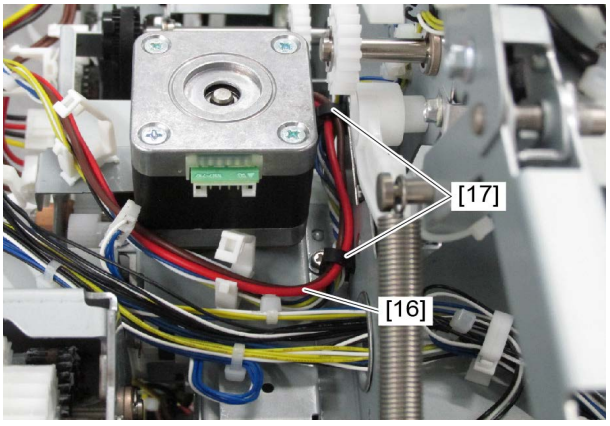


Fig. 4-36

(11) Remove 2 springs [18].

Notes:

Be sure to support the buffer unit-1 with your hand since the frames [19] of the buffer unit are moved in the direction indicated by the arrow to close them when you remove the springs [18].

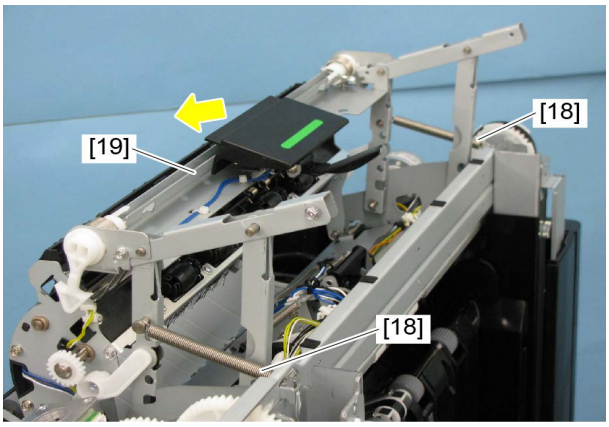


Fig. 4-37

(12) Disconnect 1 connector from the sensor [20]. Release the harness [21] from 1 harness clamp [22].
(13) Release the harness [23] from 1 harness clamp [24].
(14) Release the 1 harness clamp [22] of harness [23] from the frame.
(15) Pull out the harnesses [21] and [23] through the window [25] of the frame.

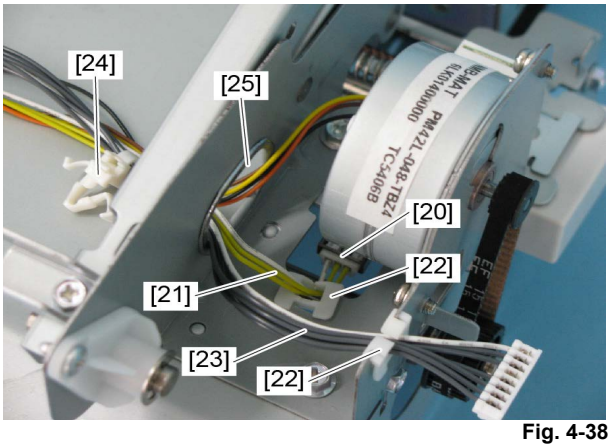


Fig. 4-38

(16) Disconnect 1 relay connector [26] and release the harness [27] from 7 harness clamps [28].
(17) Pull out the harness [27] through the window of the frame.

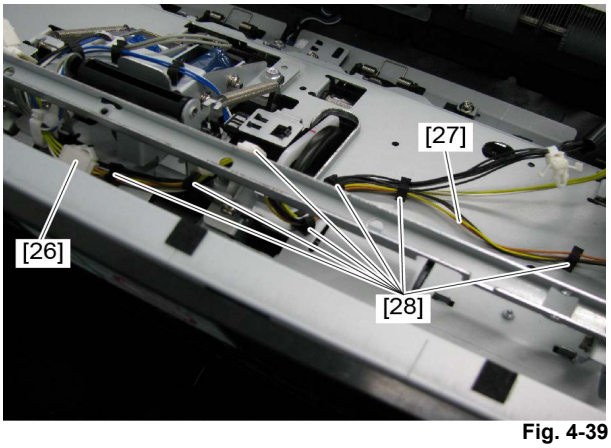


Fig. 4-39

(18) Pull out the harness [29] through the window [30] of the frame.
(19) Release the harness [29] from 1 harness clamp [31].

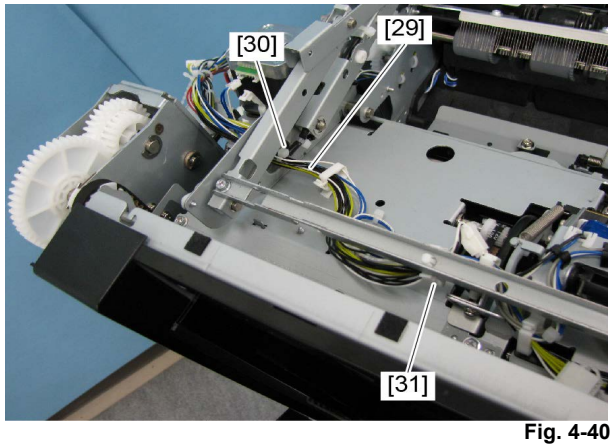


Fig. 4-40

(20) Remove the belt [32].
(21) Release the latch, and then take off the pulley cover [35].

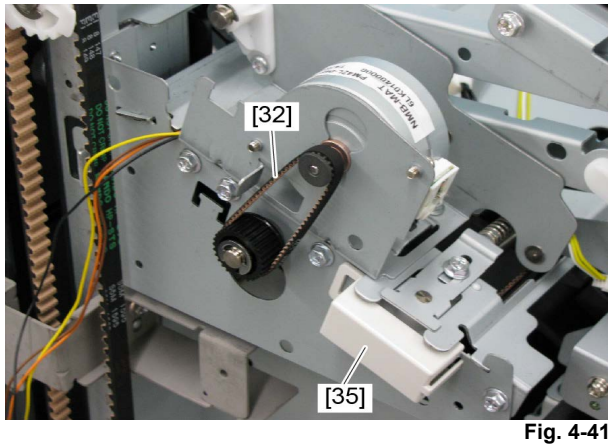


Fig. 4-41

(22) Loosen 1 screw, and then tighten the screw by pushing the plate [33] in the direction of the arrow. (Loosen the belt tension.)

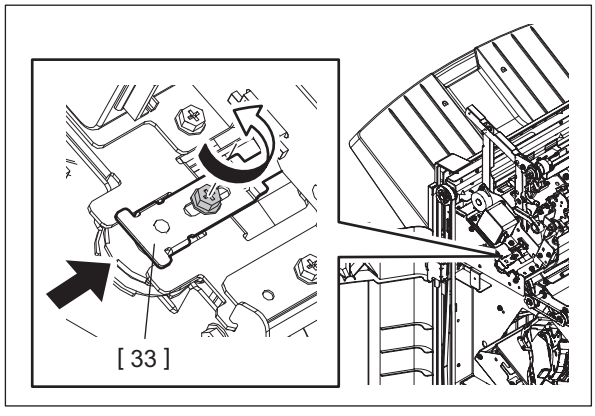


Fig. 4-42

(23) Remove 5 screws and lift the buffer unit-1 [34] upward to take it off.

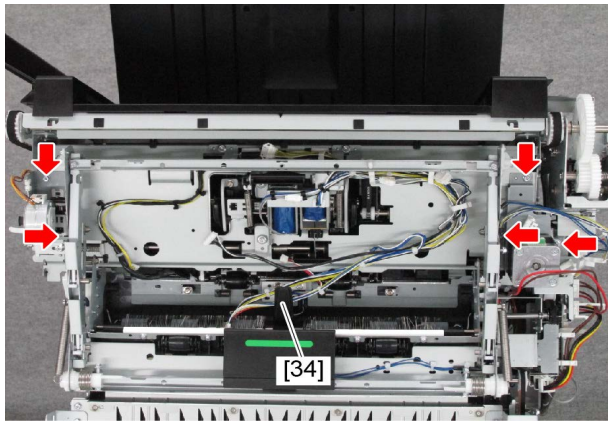


Fig. 4-43

[C] Finishing tray unit

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the front cover assembly.
🕮 P. 4-4 "[D] Front upper cover / Front lower cover"
(5) Take off the front foot cover.
🕮 P. 4-5 "[E] Front foot cover"
(6) Take off the rear foot cover.
🕮 P. 4-5 "[F] Rear foot cover"
(7) Take off the movable tray cover.
🕮 P. 4-6 "[G] Movable tray cover"
(8) Take off the front rail cover.
🕮 P. 4-6 "[H] Front rail cover"
(9) Take off the rear rail cover.
🕮 P. 4-7 "[I] Rear rail cover"
(10) Take off the movable tray drive unit.
🕮 P. 4-6 "[G] Movable tray cover"
(11) Take off the grate-shaped guide.
🕮 P. 4-9 "[L] Grate-shaped guide"
(12) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(13) Take off the buffer unit.
🕮 P. 4-15 "[A] Buffer unit"

(14) Release the harness and PC board cover [27] from 2 harness clamps [1]. Disconnect the connectors [2] and [3] (CN25 and CN18) on the finisher control PC board.

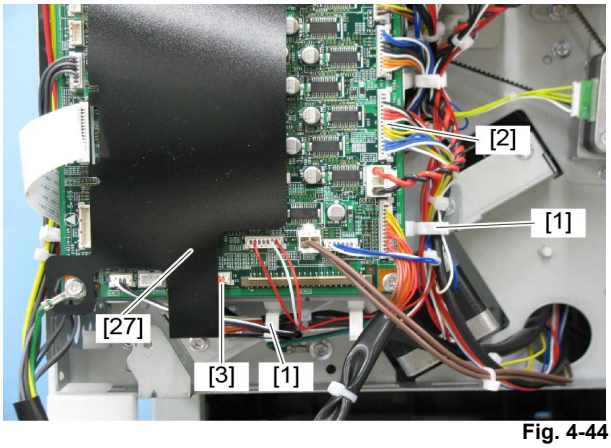


Fig. 4-44

(15) Release the harnesses [4]and [5] from 1 harness clamp [6]. Pull out the harnesses [4] and [5] through the window [7] of the frame.

Notes:

When installing, wire the harnesses [4] and [5] as shown below.

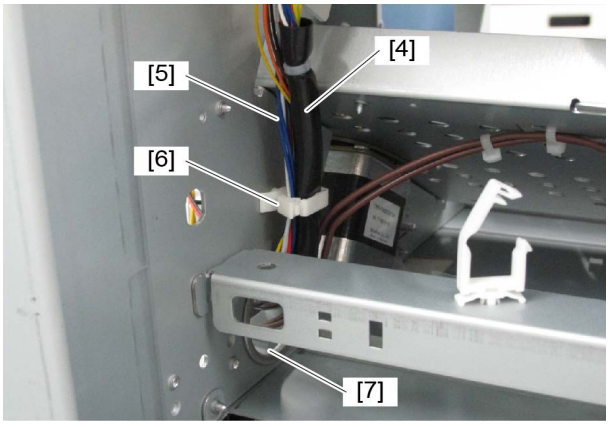


Fig. 4-45

(16) Remove 1 clip [9] on the front side of the stack transport roller-2 [8]. Then remove the bushing [10].

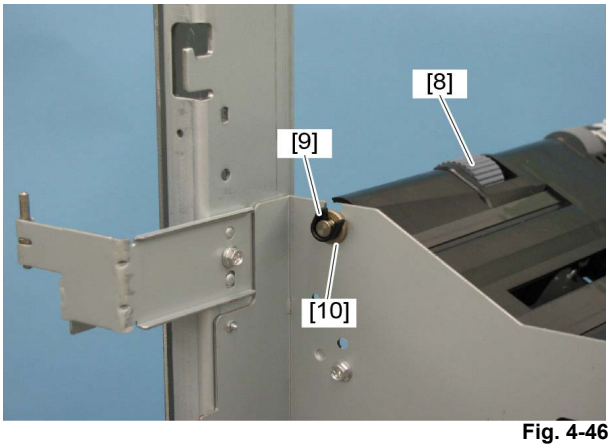


Fig. 4-46

(17) Remove the spring [11], and then loosen 2 screws to free the belt [12] tension.

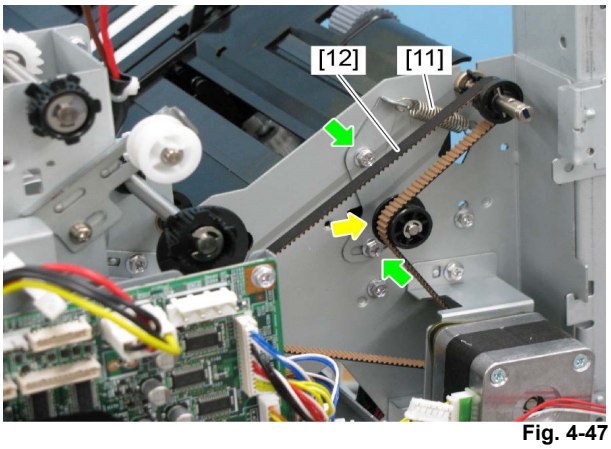


Fig. 4-47

(18) Remove 2 clips [13] at the rear side of the stack transport roller-2 [8]. Remove the transport roller pulley-2 [14], pin [15], bushing [16] and belt [12].

Notes:

- Pay full attention not to lose the pin [15] for fixing the pulley.
- Pay full attention not to lose the belt [12].

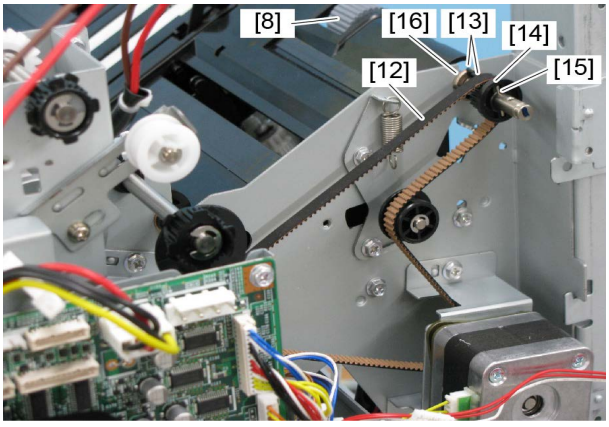


Fig. 4-48

(19) Remove 2 clips [18] on the rear side of the stack transport roller-1 [17]. Then remove the transport roller pulley -3 [19], pin [20] and bushing [21].

Notes:

Be sure not to lose the fixing pins [20] for the pulleys.

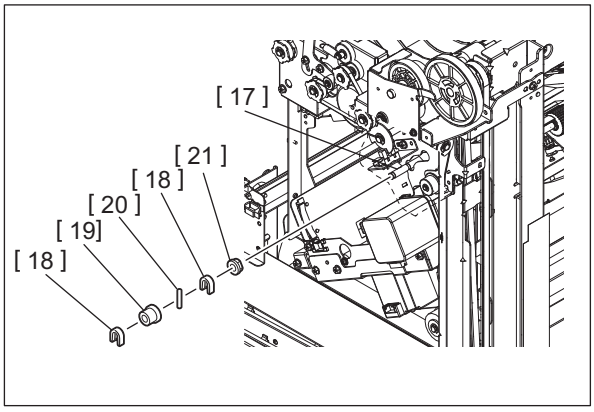


Fig. 4-49

(20) Move the stapler to the staple replacing position (the first position from the front).
(21) Remove 4 screws and take off the stack transport roller-2 [8] in the finishing tray unit [22] from the frame. Move the stack transport roller-1 [17] as shown in the figure, and then lift the front side of the finishing tray unit [22] to take it off.

Notes:
Be sure not to deform the finishing tray guide [26].

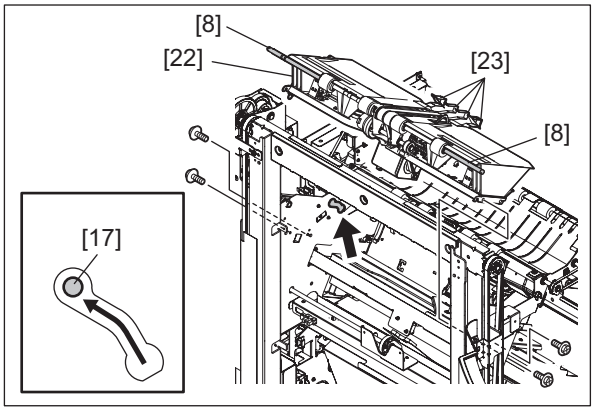


Fig. 4-50

Remarks: Be sure to apply the grease when the spring of the finishing tray unit is replaced.
1. Remove the clip [1], the cap [2] and then the spring [3].

Notes:
Do not remove the polyslider [4]. If it is removed unintentionally, make sure not to lose it.

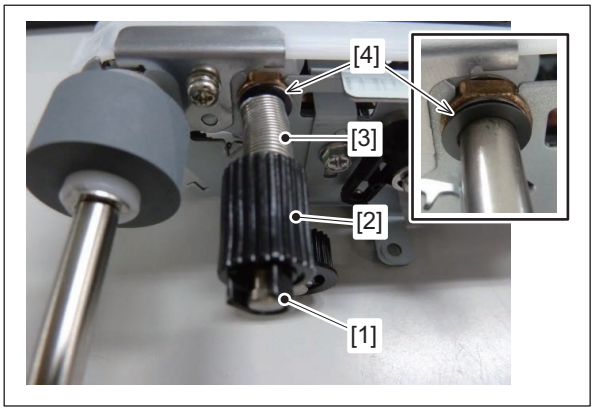


Fig. 4-51

2. Clean the shaft and the hook of the spring. (Properly wipe off the applied grease.)

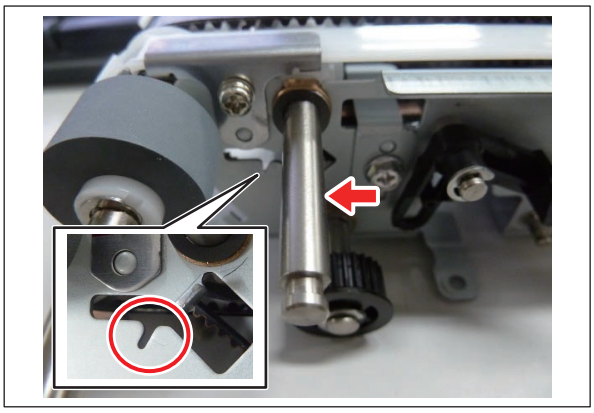


Fig. 4-52

3. Move the ejector [5] to the rear end.

Notes:

Be sure to place the ejector in the state [B]. If the ejector is not aligned to the rear end properly, the spring cannot be installed appropriately. (State [A])

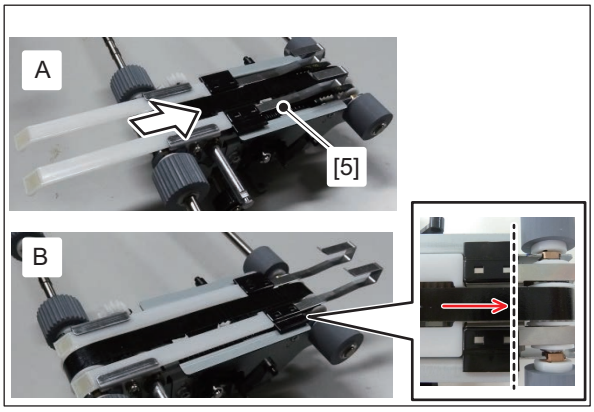


Fig. 4-53

4. Apply the grease (EM-30L) to the shaft. (Amount of grease: 0.3cc)

Notes:

Pay attention not to let the grease adhere to the rollers around the shaft.

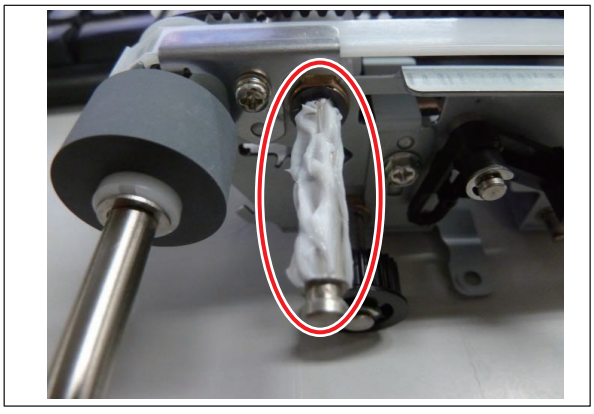


Fig. 4-54

5. Attach the spring. Insert the spring to the shaft as shown in the figure. Be sure to place the arm of the spring so that it will be located on the upper side of the cut and raised portion in the frame as shown in the figure. In addition, be sure to put its tip into the groove of the frame.

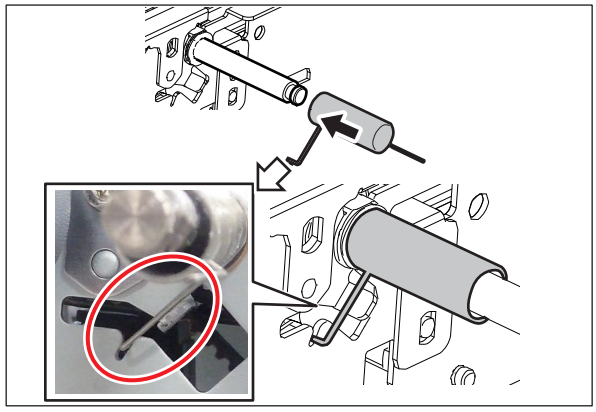


Fig. 4-55

6. Apply the grease to the spring.
   C (Spring surface) Amount of grease: 0.1cc
   D (Spring tip) Amount of grease: 0.015cc

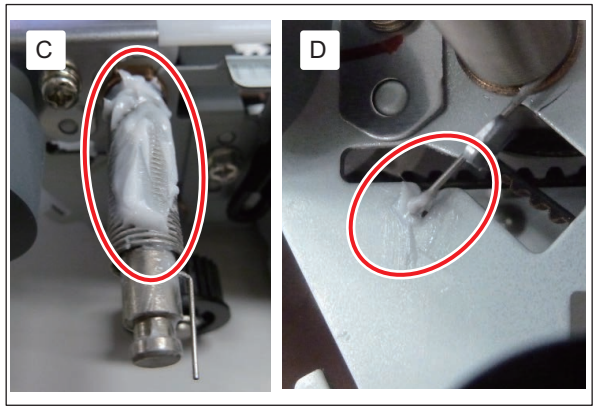


Fig. 4-56

7. Attach the cap by inserting the arm of the spring into its groove.

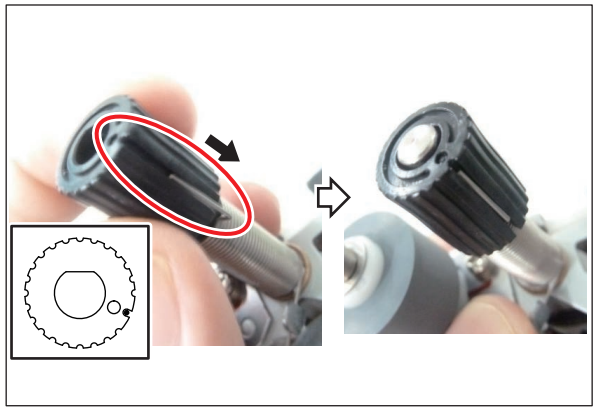


Fig. 4-57

8. Turn the cap counterclockwise by one and half turns.

Notes:

Be sure to turn the cap by one and half turns exactly.

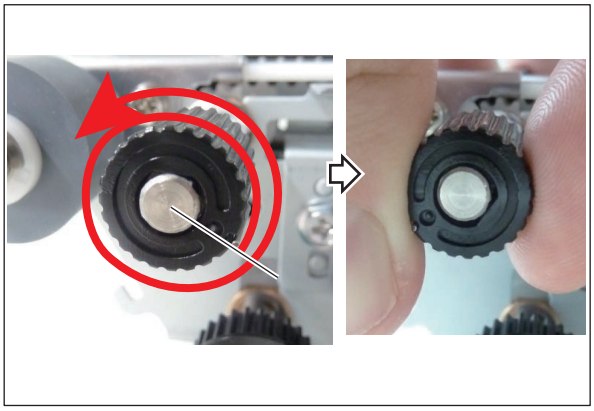


Fig. 4-58

9. By aligning to the D-cut dimension of the shaft, insert the cap to the end.

Notes:

Do not insert the cap to the end by turning it just half a turn.

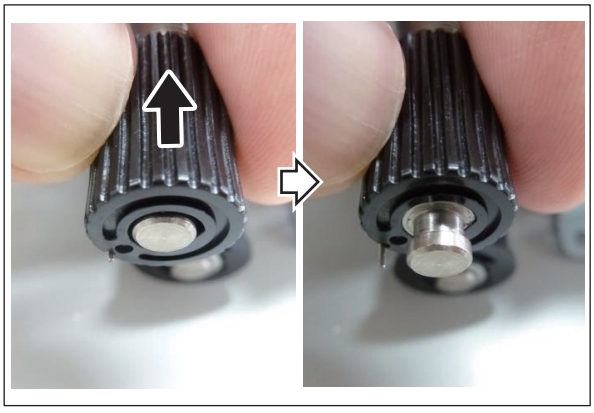


Fig. 4-59

10. Attach the clip.

[D] Stapler unit

(1) Take off the rear upper cover / rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Disconnect the connector [1] (CN23) on the finisher control PC board.
(3) Disconnect the flat cable [2] from the connector (CN2) on the finisher control PC board.
(4) Disconnect the connector [3] from the stapler shift motor.

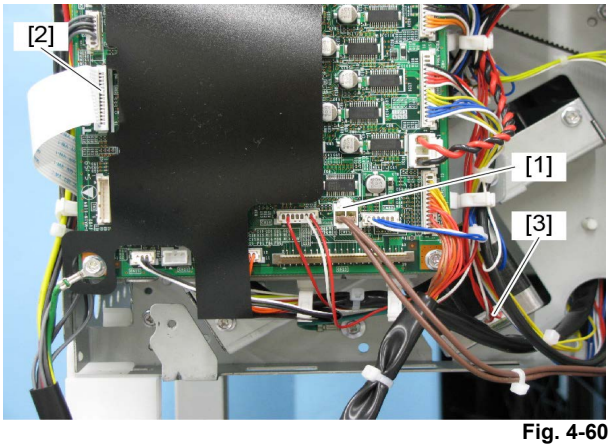


Fig. 4-60

(5) Remove 2 screws of the rear side.

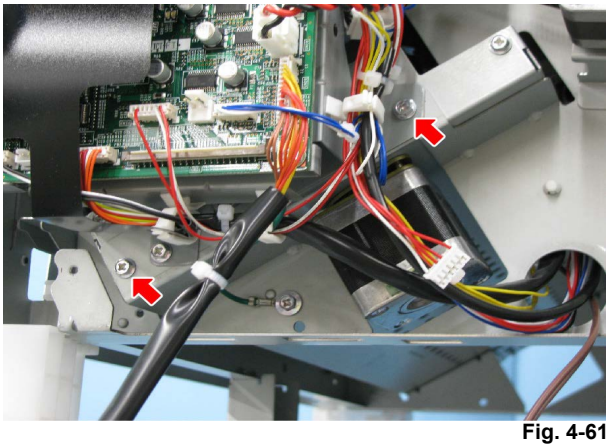


Fig. 4-61

(6) Remove 2 screws of the front side. Slide the stapler unit [6] toward you to take it off.

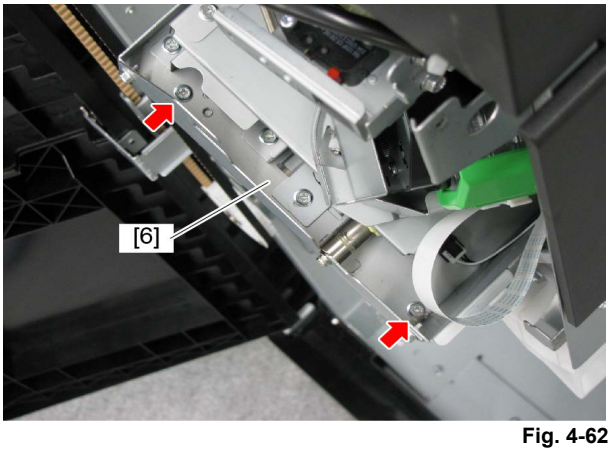


Fig. 4-62

[E] Stapler

(1) Open the front cover assembly.
(2) Move the stapler to the staple replacing position (the first position from the front).
(3) Release the clamp to disconnect the flexible cable out of the connector.

Notes:

When installing the stapler, place the flexible cable on the protrusion of the stapler and fix it with the clamp.

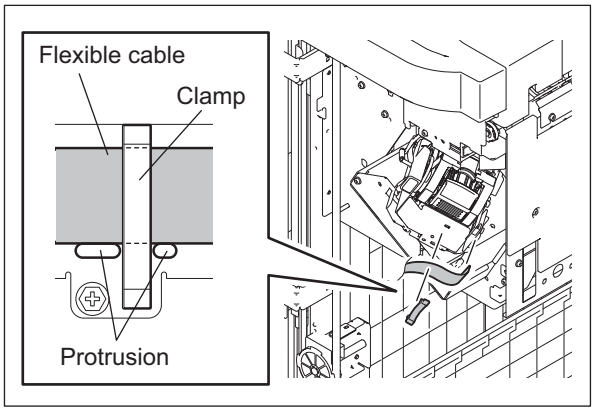


Fig. 4-63

(4) Remove 1 screw, and then take off the staple carrier.

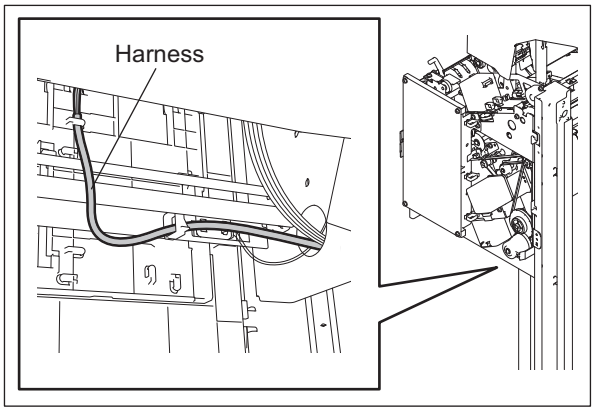


Fig. 4-64

(5) Remove 2 screws, and then disconnect 2 connectors of the stapler to take off the stapler.

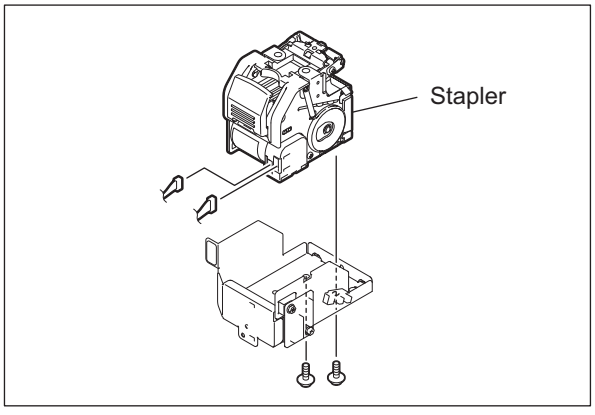


Fig. 4-65

[F] Movable tray drive unit / Movable tray shift motor unit

Notes:

Since the movable tray shift motor unit is assembled using a jig, do not try to disassemble it.

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"

(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"

(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"

(4) Take off the front cover assembly.
🕮 P. 4-4 "[D] Front upper cover / Front lower cover"

(5) Take off the front foot cover.
🕮 P. 4-5 "[E] Front foot cover"

(6) Take off the rear foot cover.
🕮 P. 4-5 "[F] Rear foot cover"

(7) Take off the movable tray cover.
🕮 P. 4-6 "[G] Movable tray cover"

(8) Take off the front rail cover.
🕮 P. 4-6 "[H] Front rail cover"

(9) Take off the rear rail cover.
🕮 P. 4-7 "[I] Rear rail cover"

(10) Move the movable tray shift frame to the middle position. If the movable tray shift frame needs to be lowered, push the gear of the movable tray shift motor unit in the direction of the arrow to unlock the frame. (Be sure to hold the movable tray gear frame with your hands because it may fall when the gear is pushed.)

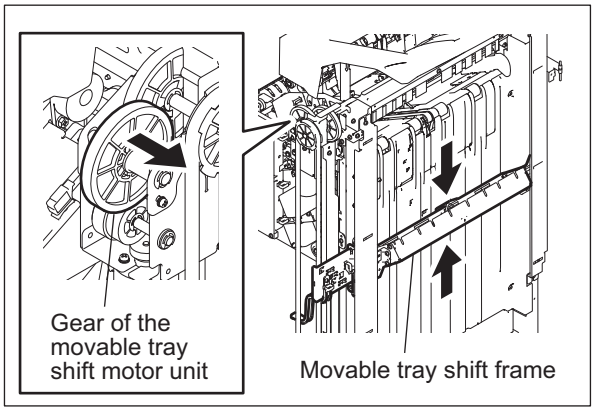


Fig. 4-66

(11) Remove 2 screws, and then take off the sensor rail by sliding it downward.

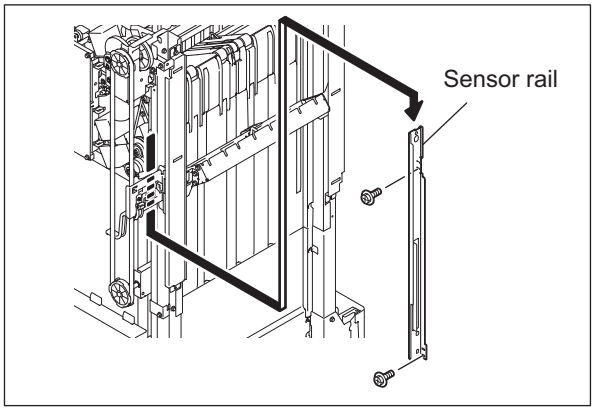


Fig. 4-67

Notes:

When installing the movable tray drive unit, fix it at the position where the gap between the center mark of the scale on the sensor rail and the edge of the movable tray position-A sensor is from 0 to 1 mm. Be sure to adjust the installation position by shifting the movable tray shift frame and measure the positions at the upper and lower measuring points on the sensor rail as shown in the figure.

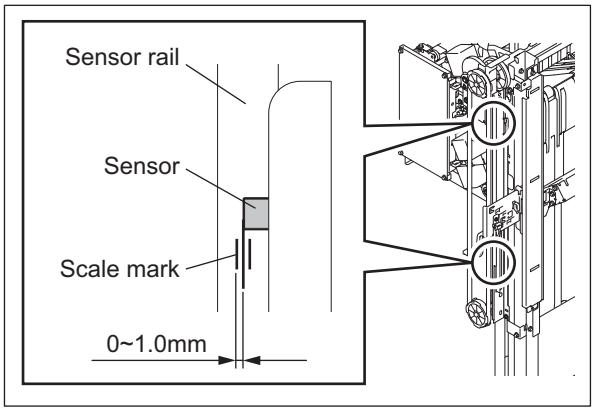


Fig. 4-68

(12) Remove 1 screw, and then take off the front rail guide.
(13) Remove 2 screws, and then take off the rear rail guide.

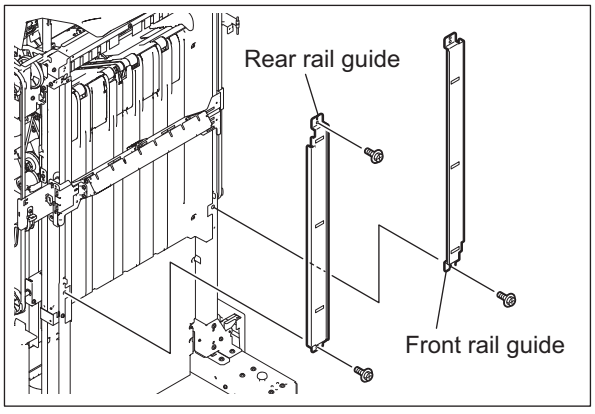


Fig. 4-69

(14) Move the movable tray shift frame to the lowest position.
(15) Remove 2 screws, and then remove the movable tray shift pulley front bracket [1].

Notes:

When assembling, remove the spring [3] attached to the movable tray shift pulley rear bracket [2], and then attach it to the movable tray shift pulley front bracket [1], and then tighten two screws. After attaching the movable tray shift pulley front bracket [1], remove the spring, and then attach it to the movable tray shift pulley rear bracket [2].

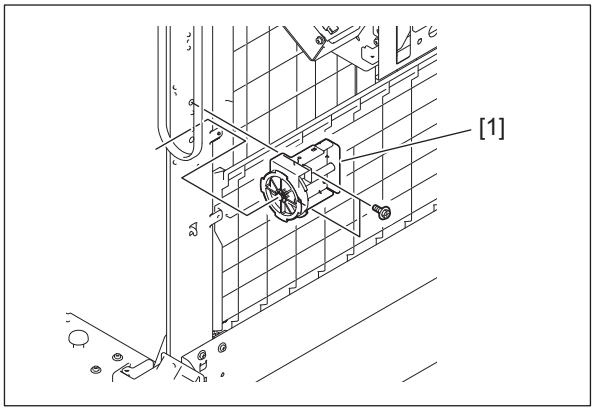


Fig. 4-70

(16) Remove the spring [3], and then remove 2 screws to take off the movable tray shift pulley rear bracket [2].

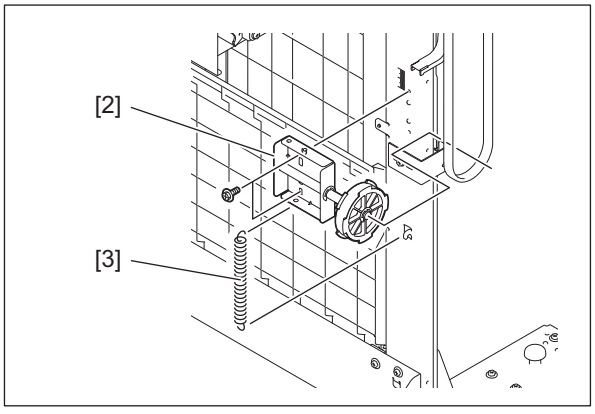


Fig. 4-71

Notes:

When installing the front and rear brackets of the movable tray shift pulley, lower the movable tray shift frame to the lowest position by pushing the gear of the movable tray shift motor unit in the direction of the arrow. Then check if the bottom of the movable tray shift frame is contacting with 2 protrusions. (Be sure to hold the movable tray shift frame with your hands because it may fall when the gear is pushed.)

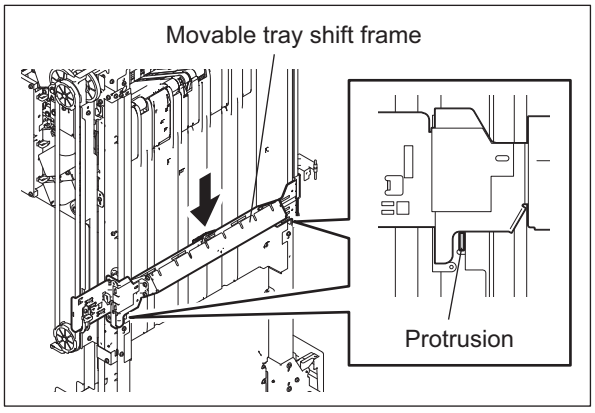


Fig. 4-72

Notes:

If the bottom of the movable tray frame does not contact with either of these protrusions, remove 1 screw of the rear belt fixing stay to take this stay off, and fix the stay at the position where 2 brackets contact with the protrusions.

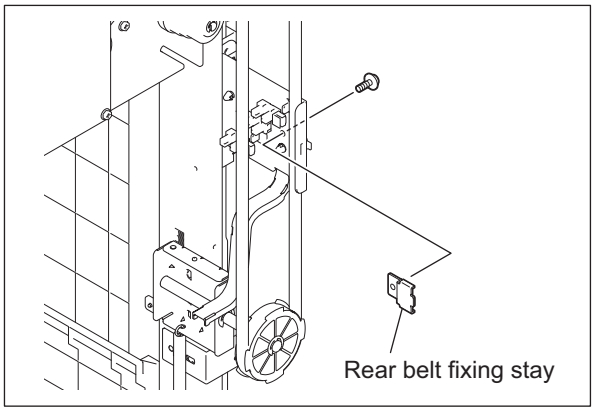


Fig. 4-73

(17) Release the harness out of 1 clamp [4], and then disconnect the connector [5] of CN19 on the FIN board.

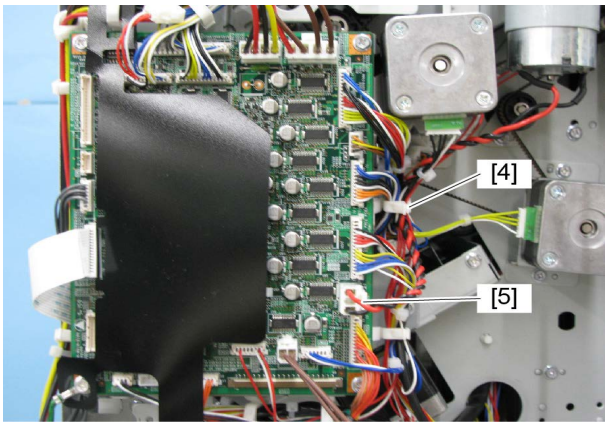


Fig. 4-74

(18) Disconnect the connector [7] of the movable tray shift motor sensor.

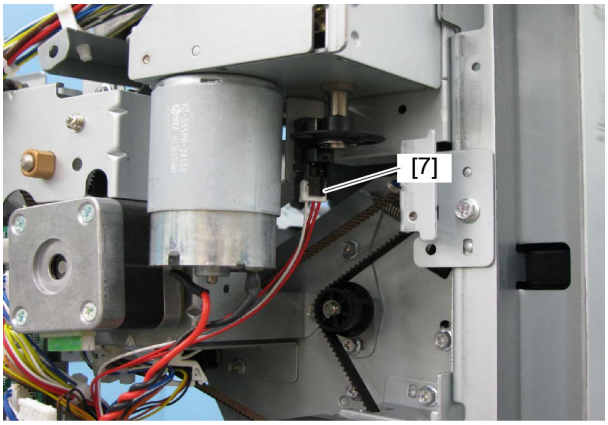


Fig. 4-75

(19) Open the stationary tray cover and then remove the 2 springs [6].

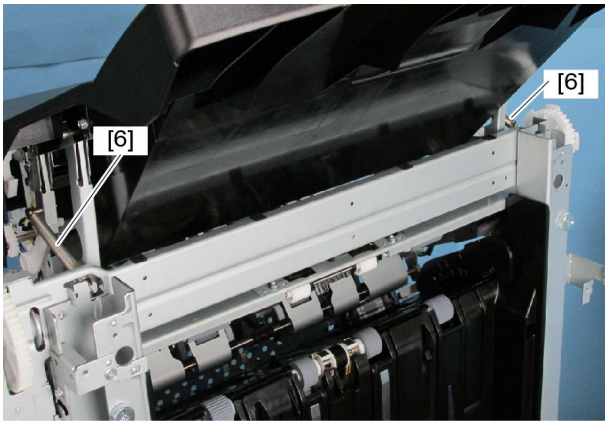


Fig. 4-76

(20) Remove each belt from the 2 pulleys of the movable tray drive unit.
(21) Close the stationary tray cover halfway and leave it, and then remove 4 screws to take off the movable tray drive unit.

Notes:
When installing the movable tray drive unit, slide the unit to the front side of the equipment and fix it at that position.

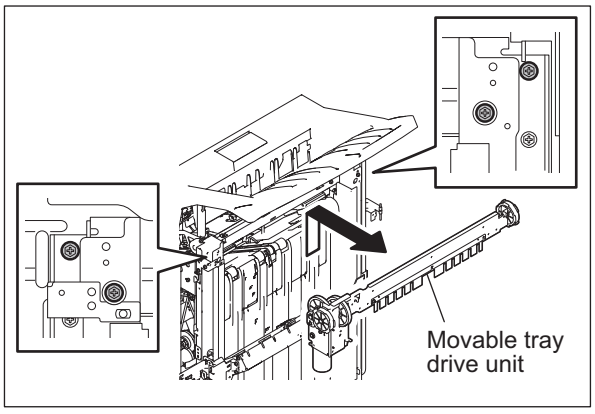


Fig. 4-77

(22) Remove 1 E-ring, 1 pulley and 1 pin.

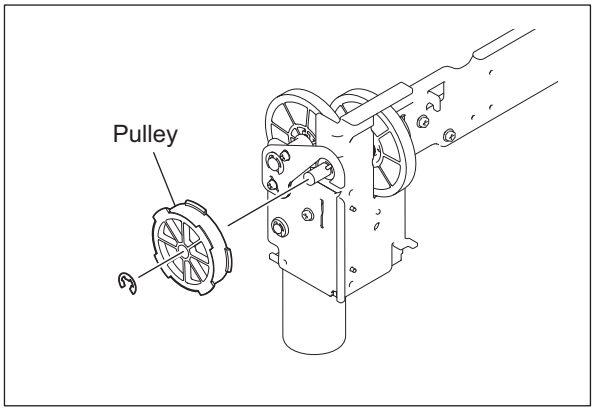


Fig. 4-78

(23) Remove 4 screws.

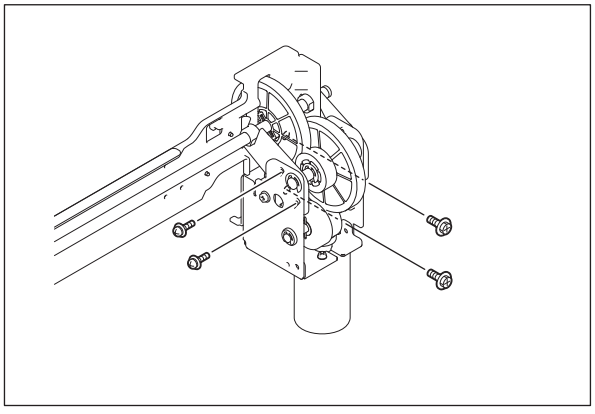


Fig. 4-79

(24) Move the front stay in the direction of the arrow to release from the bushing, and take off the movable tray shift motor unit.

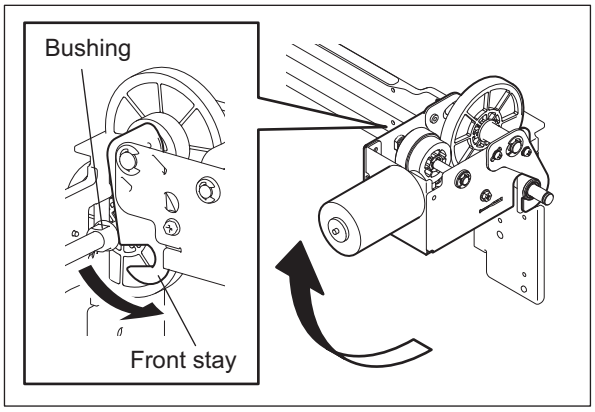


Fig. 4-80

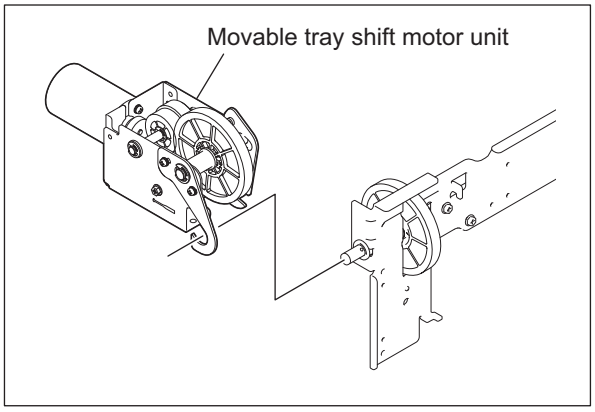


Fig. 4-81

(25) Remove 2 screws and 4 E-rings, and then take off the shaft, rear stay, 2 spacers, spring, 2 gears and the front stay from the movable tray shift motor unit.

Notes:

Since the movable tray shift motor unit is assembled using a jig, do not try to disassemble it.

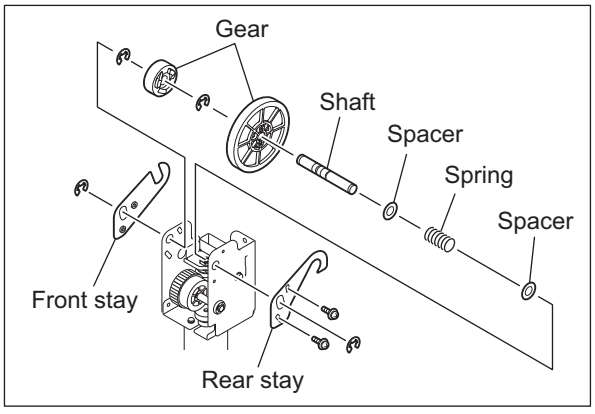


Fig. 4-82

4.3 Rollers (Finisher section)

[A] Paddle-1 / Paddle-2 / Paddle-3 / Catching pad / Paddle-4 / Paddle-5 / Paddle-6

(1) Take off the buffer unit.
🕮 P. 4-15 "[A] Buffer unit"
(2) Rotate the paddle-1 [1], -2 [2], -3 [3], -4 [4], -5 [5] and -6 [6] so that they are positioned as shown below.
(3) Pull out the paddle-1 [1], -2 [2], -3 [3], -4 [4], -5 [5] and -6 [6] to take them off.

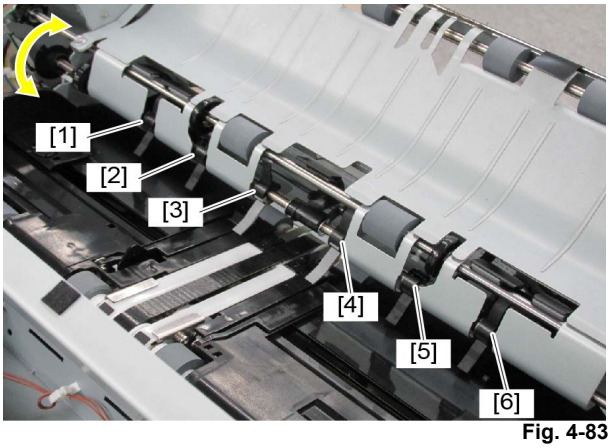


Fig. 4-83

Notes:
When installing them, be sure to place them in their original position and direction.

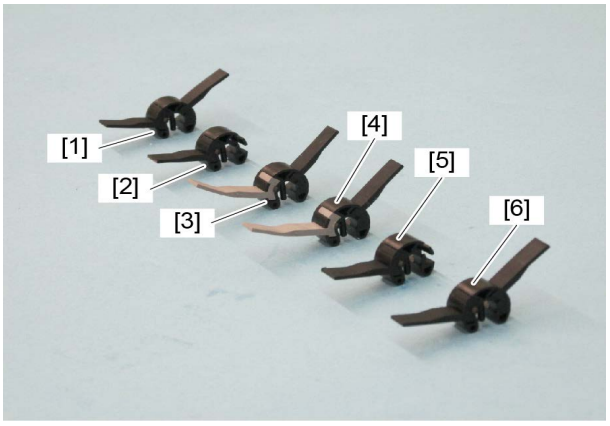


Fig. 4-84

[B] Transport roller

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
🕮 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
🕮 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(7) Disconnect 5 connectors [4], [5], [6], [7] and [8] (CN8, CN9, CN10, CN11 and CN14) on the finisher control PC board [3].
(8) Disconnect 1 connector [10] from the buffer tray guide motor [9].

(9) Disconnect 1 connector [12] from the transport motor [11].
(10) Disconnect 1 connector [14] from the movable tray shift motor sensor [13].
(11) Release the harness from 8 harness clamps [15].

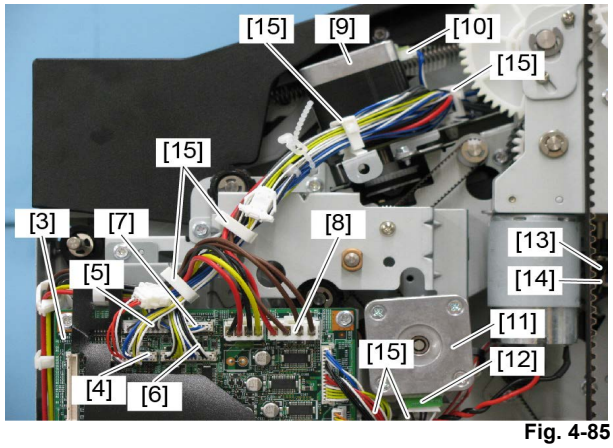


Fig. 4-85

(12) Remove 5 screws and take off the motor bracket [19].

Notes:
Pay full attention not to lose the bushing [20] while taking off the motor bracket [19].

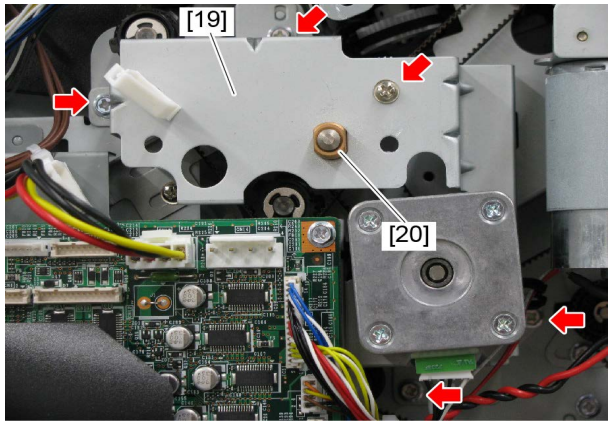


Fig. 4-86

(13) Loosen 1 screw. Push the pulley [21] in the direction indicated by the arrow to loosen the belt tension and tighten the screw.
(14) Remove the belts [22] and [23], the part assembled [24] and the bearing.

Notes:
Pay full attention not to lose the bearing while taking off the part assembled [24].

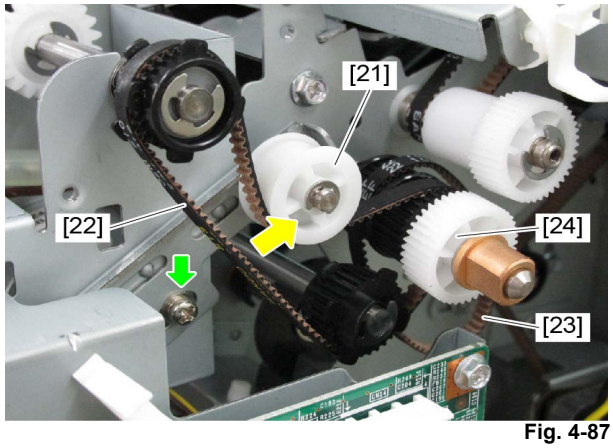


Fig. 4-87

(15) Close the buffer unit-1 [25] halfway and leave it. Then remove 1 screw.

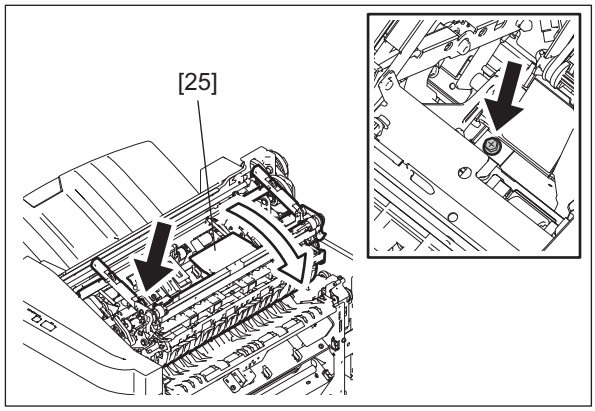


Fig. 4-88

(16) Remove 3 screws, and then take off the transport guide [26].

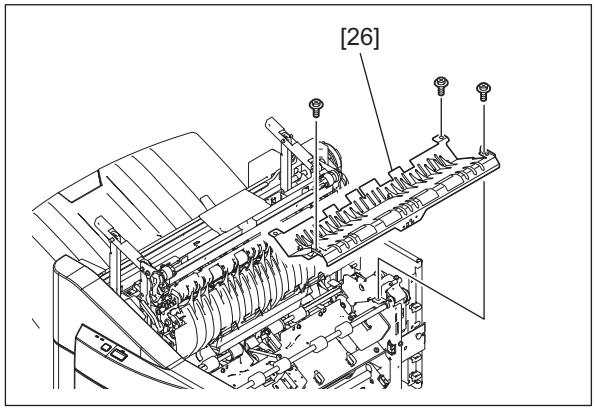


Fig. 4-89

(17) Move each of the buffer guides [27] to each side.

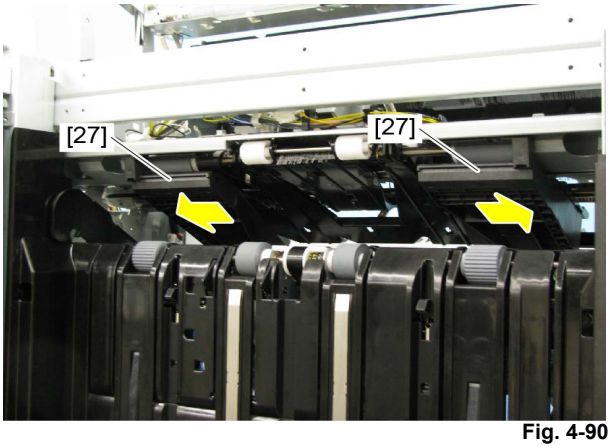


Fig. 4-90

(18) Turn the levers on the alignment plate to unlock. Move the front alignment plate [1] and the rear alignment plate [2] to the center, and then take them off by pulling them out upward.

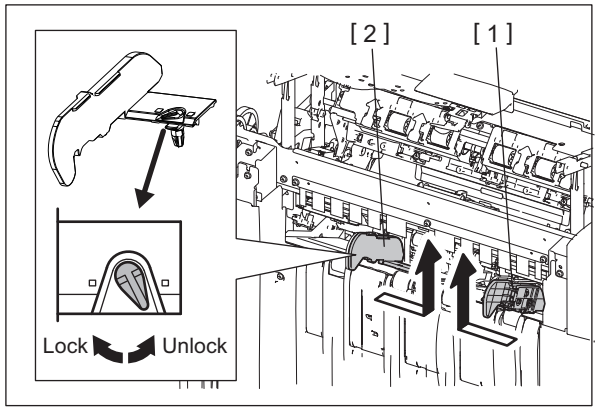


Fig. 4-91

(19) Remove 4 screws of the front pull-in guides [3] and rear pull-in guides [4].

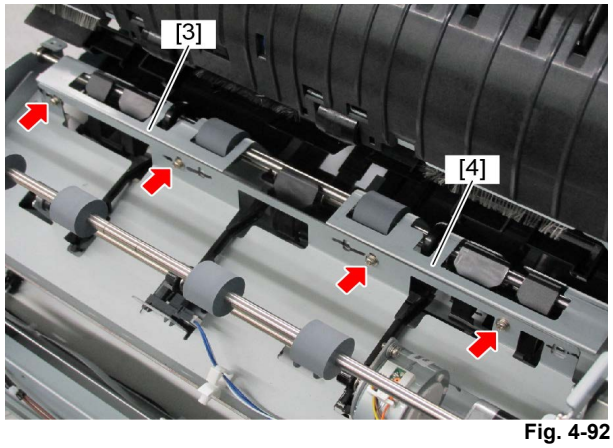


Fig. 4-92

Notes:

When replacing the front and rear pull-in guides, adjust the position with a jig. Install them based on adjustment area B of the jig so that the gap between the front and rear finishing tray covers is more than adjustment area A and less than C.
6LB10056000 JIG-GID-PDL-2

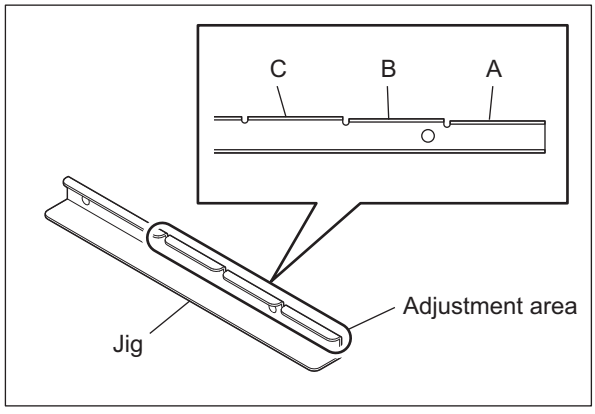


Fig. 4-93

1. Close the buffer unit 1.
2. Place the jig [2] on the rear finishing tray cover [1] and fix the one with the rear pull-in guide [3] by 2 screws at the position of adjustment area B. Measure the height at the 2 measuring points [4] where there are no protrusions of the rear pull-in guide as shown in the figure.

3. After fixing the screws, check that the dimension of the gap is more than adjustment area A and less than C.
4. Adjust the front pull-in guide in the same manner.

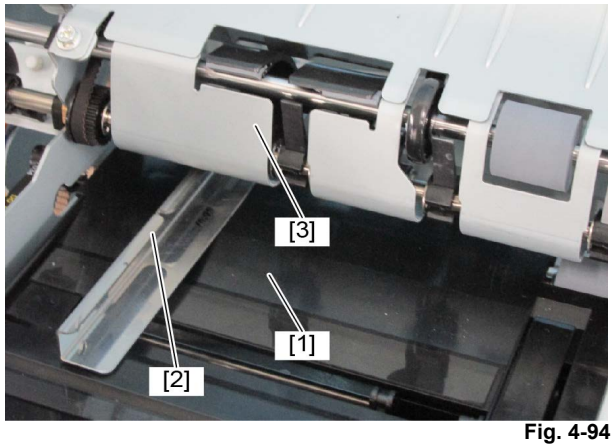


Fig. 4-94

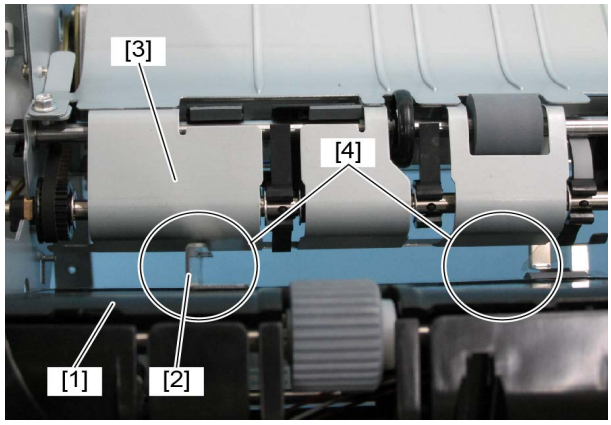


Fig. 4-95

(20) Remove 1 E-ring [5] at the front side of the transport roller and 1 bearing [6].

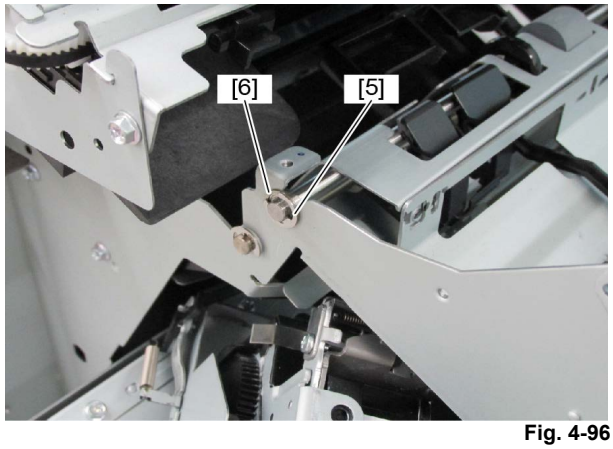


Fig. 4-96

(21) Remove 1 clip [7] at the rear side of the transport roller and slide the bearing [8].

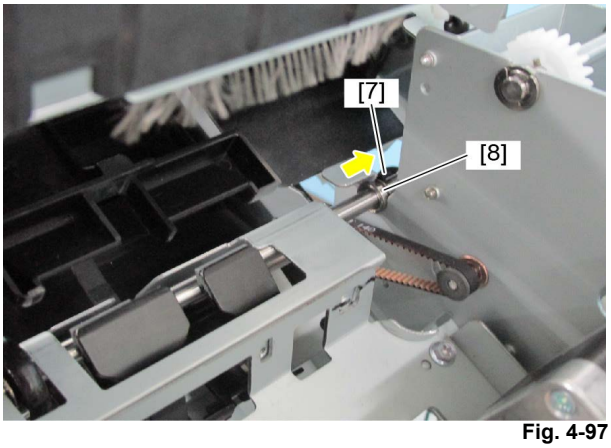


Fig. 4-97

(22) Take off the transport roller [9], front pull-in guide [10] and rear pull-in guide [11].

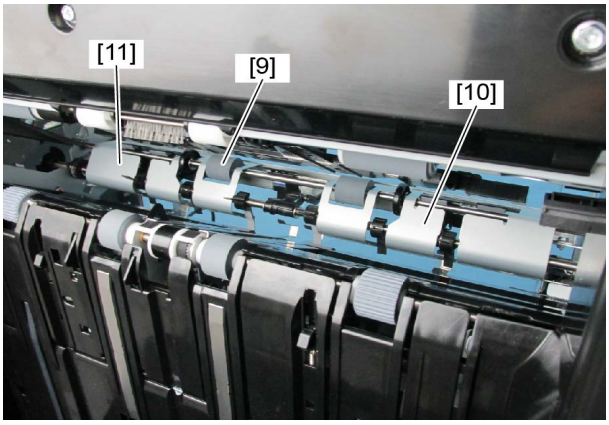


Fig. 4-98

[C] Entrance roller

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the blind cover.
🕮 P. 4-8 "[J] Blind cover"
(3) Take off the shield metal plate.
🕮 P. 4-8 "[K] Shield metal plate"
(4) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(5) Close the buffer unit-1 [1] halfway and leave it. Then remove 1 screw.

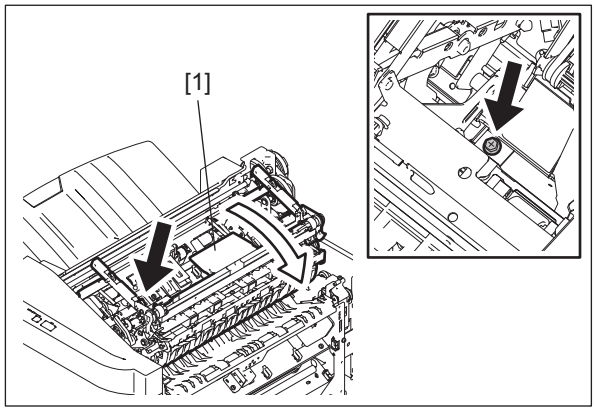


Fig. 4-99

(6) Remove 3 screws, and then take off the transport guide [2].

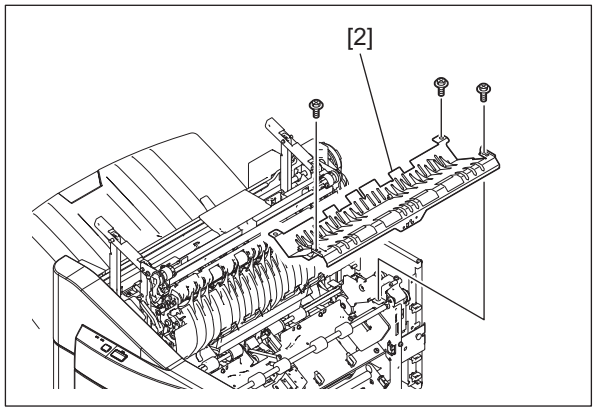


Fig. 4-100

(7) Remove 1 E-ring [1] and 1 bushing [2].

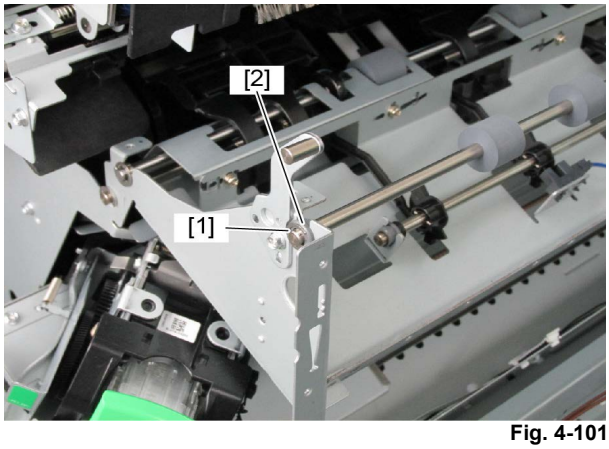


Fig. 4-101

(8) Remove the belt [3].
(9) Slide the entrance roller [4] to take it off.

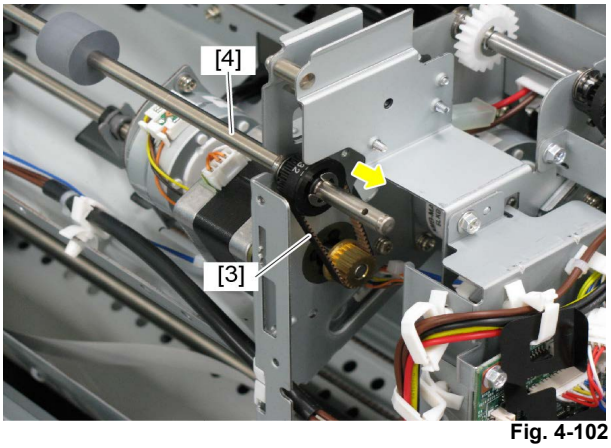


Fig. 4-102

(10) Remove 1 E-ring. Then remove 1 pulley [5], 1 bearing [6] and 2 pins [7] from the entrance roller.

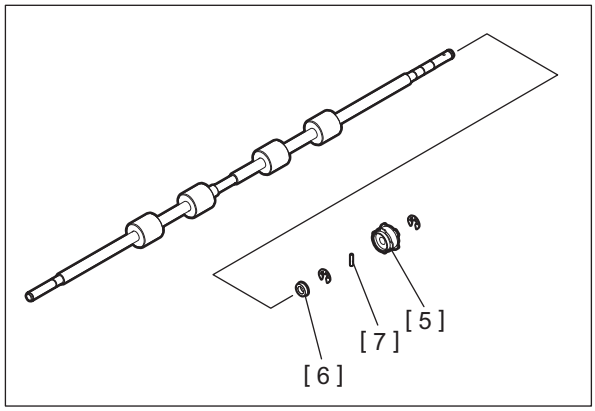


Fig. 4-103

[D] Stack transport roller-1

(1) Take off the finishing tray unit.
📖 P. 4-21 "[C] Finishing tray unit"

(2) Remove 2 screws.

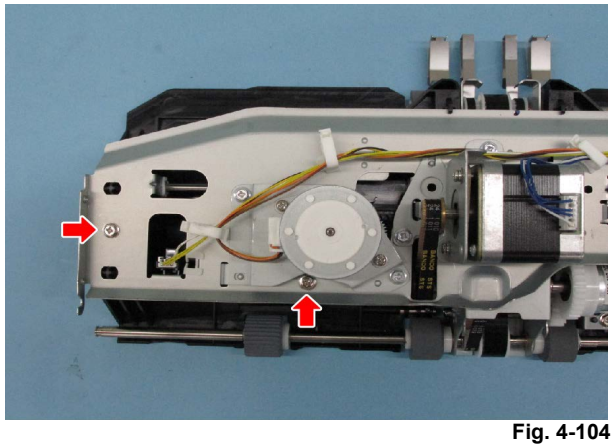


Fig. 4-104

(3) Turn over the finishing tray unit. Slide the front finishing tray cover [1] to outside and lift it up. Release the link portion [2] inside the front finishing tray cover to take it off.

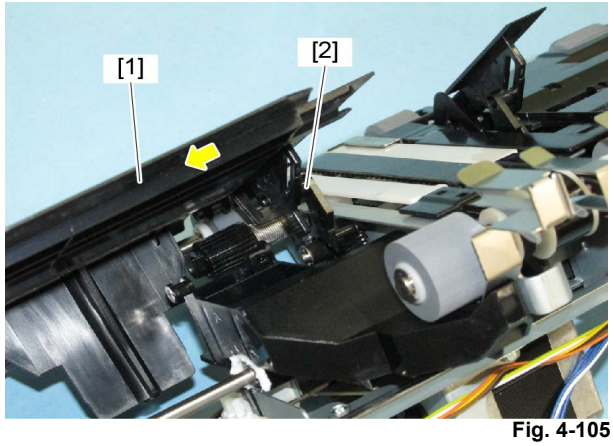


Fig. 4-105

(4) Remove 2 screws.

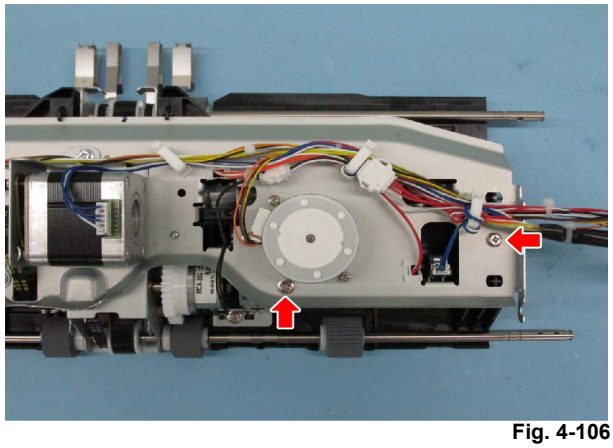


Fig. 4-106

(5) Turn over the finishing tray unit. Slide the rear finishing tray cover [3] to outside and lift it up. Release the link portion [4] inside the rear finishing tray cover.

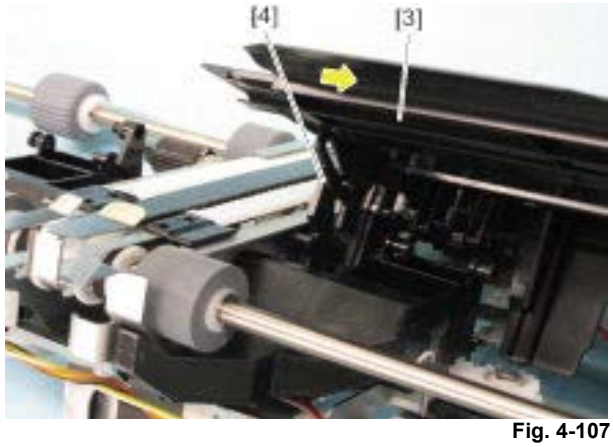


Fig. 4-107

(6) Disconnect the connector from the finishing tray paper detection sensor [5] and take off the rear finishing tray cover [3].

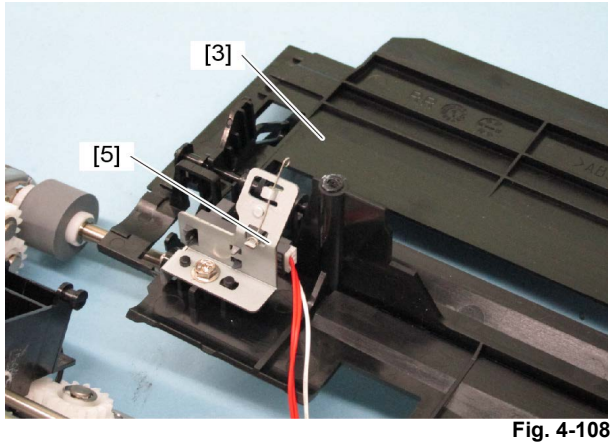


Fig. 4-108

(7) Remove 2 E-rings, and then take off the 2 pins [6] and the 2 stack transport rollers-1 [7].

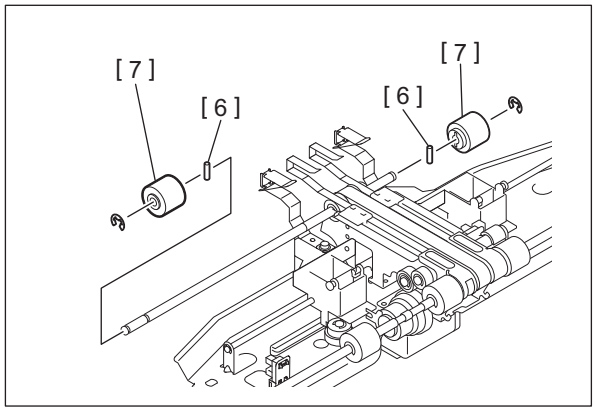


Fig. 4-109

[E] Stack transport roller-2

(1) Take off the finishing tray unit.
📖 P. 4-21 "[C] Finishing tray unit"

(2) Remove 2 screws.

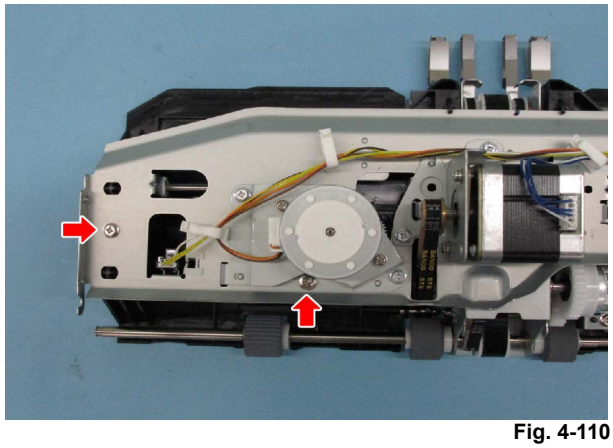


Fig. 4-110

(3) Turn over the finishing tray unit. Slide the front finishing tray cover [1] to outside and lift it up. Release the link portion [2] inside the front finishing tray cover to take it off.

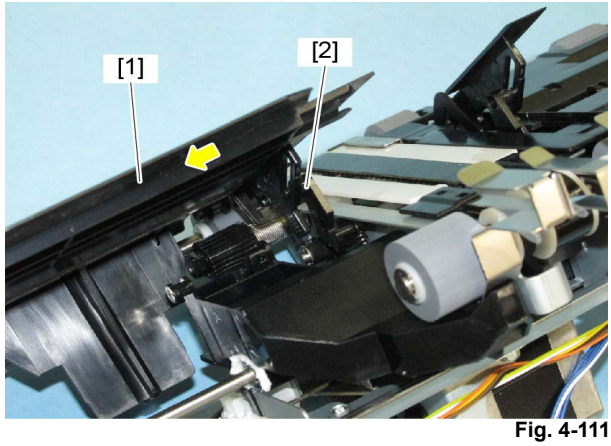


Fig. 4-111

(4) Remove 2 screws.

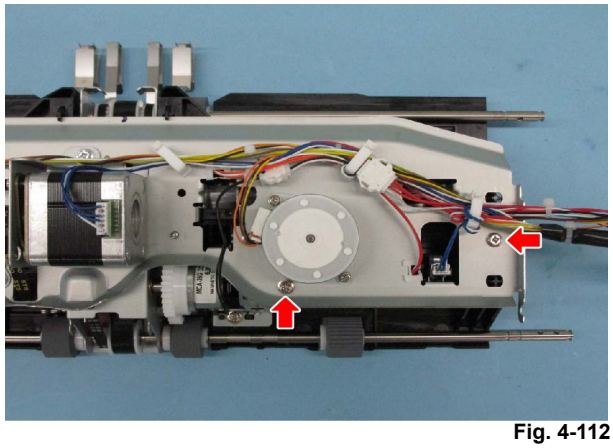


Fig. 4-112

(5) Turn over the finishing tray unit. Slide the rear finishing tray cover [3] to outside and lift it up. Release the link portion [4] inside the rear finishing tray cover.

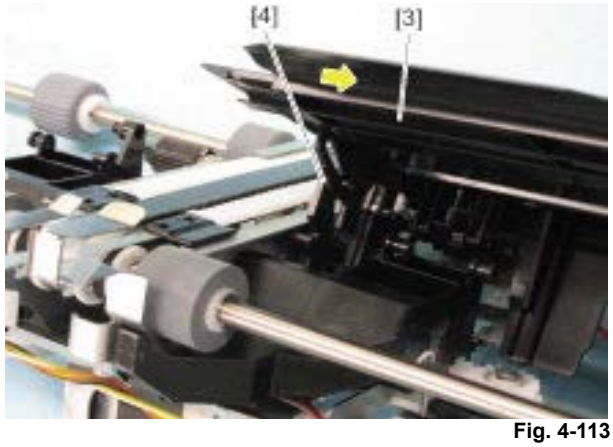


Fig. 4-113

(6) Disconnect the connector from the finishing tray paper detection sensor [5] and take off the rear finishing tray cover [3].

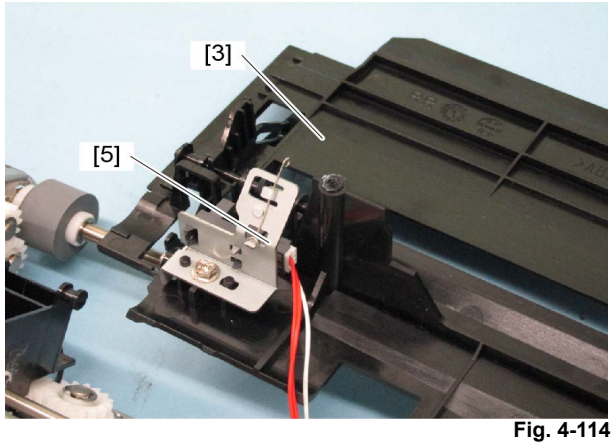


Fig. 4-114

(7) Remove 4 E-rings and 4 pins [6], and then take off 4 stack transport rollers-2 [8].

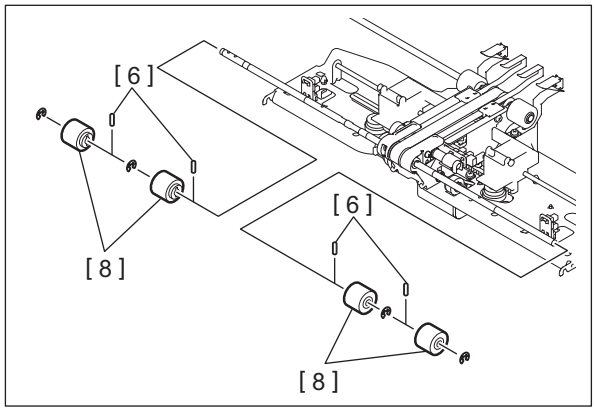


Fig. 4-115

[F] Buffer roller

(1) Take off the buffer unit.
📖 P. 4-15 "[A] Buffer unit"
(2) Disconnect 1 connector from the sensor [1]. Release the harness [2] from 1 harness clamp [3].
(3) Release the 1 harness clamp [5] of harness [4] from the flame.
(4) Release the harness [4] from 1 harness clamp [15].
(5) Pull out the harnesses [2] and [4] through the window [6] of the frame.

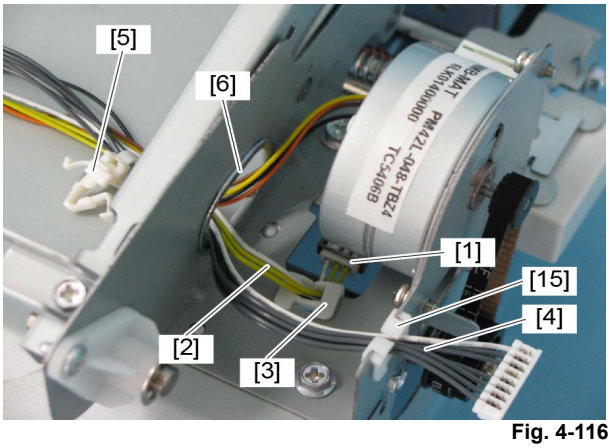


Fig. 4-116

(6) Disconnect 1 relay connector [7] and release the harness [8] from 7 harness clamps [9].
(7) Pull out the harness [8] through the window [6] of the frame.

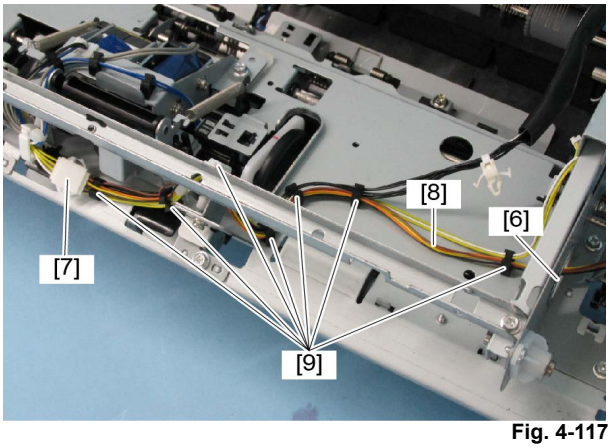


Fig. 4-117

(8) Pull out the harness [10] through the window [11] of the frame.
(9) Release the harness [10] from 1 harness clamp [12].

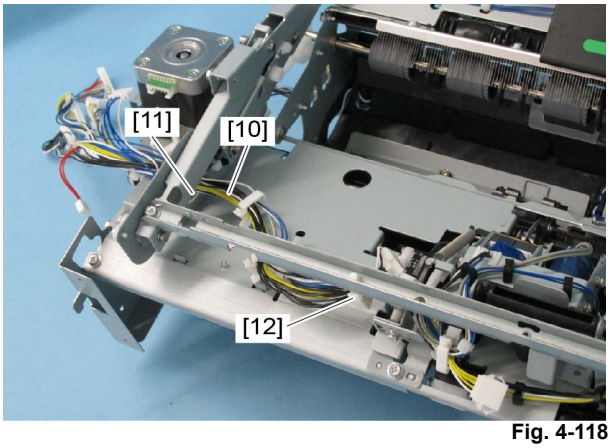


Fig. 4-118

(10) Remove the belt [13].
(11) Release the latch, and then take off the pulley cover [15].

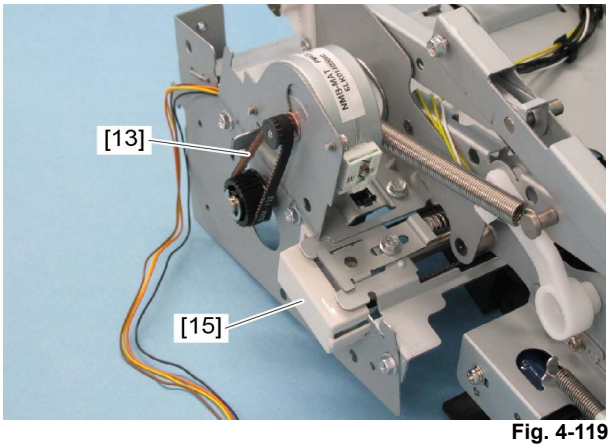


Fig. 4-119

(12) Loosen 1 screw. Push the metal plate [14] in the direction indicated by the arrow to loosen the belt tension and tighten the screw.

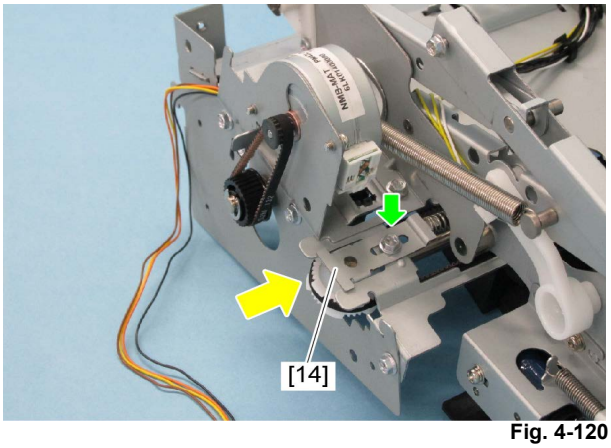


Fig. 4-120

(13) Remove 5 screws and lift the buffer unit-1 [34] upward to take it off.

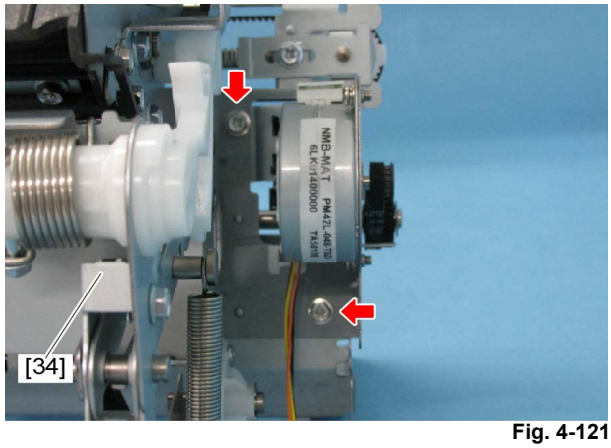


Fig. 4-121

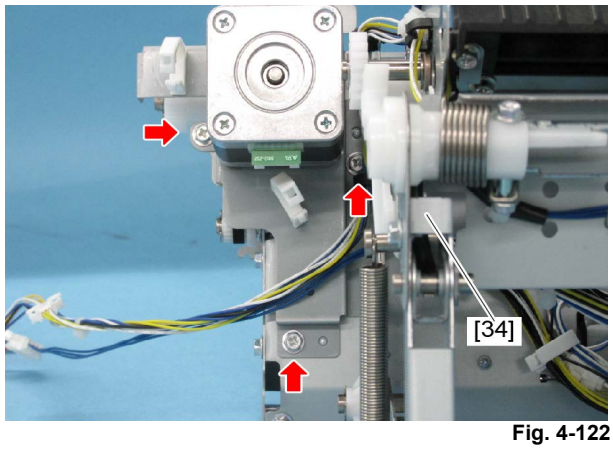


Fig. 4-122

(14) Remove the spring [35].

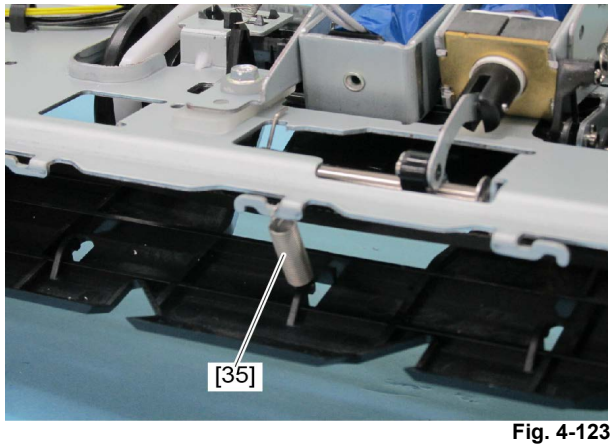


Fig. 4-123

(15) Remove 2 screws and take off 2 assist guide cam guides [36].

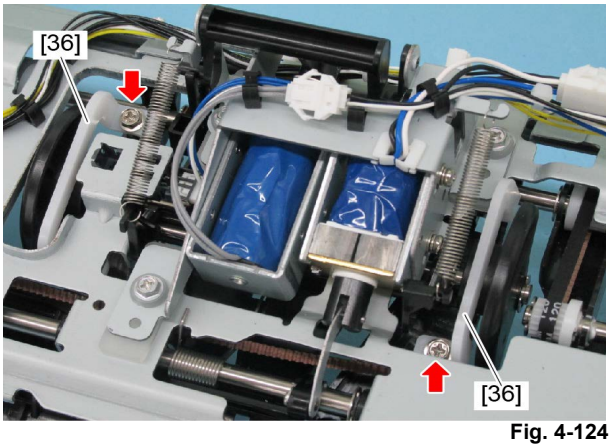


Fig. 4-124

(16) Remove 2 screws, take off 2 assist guide adjustment plates [37] and the assist guide [38].

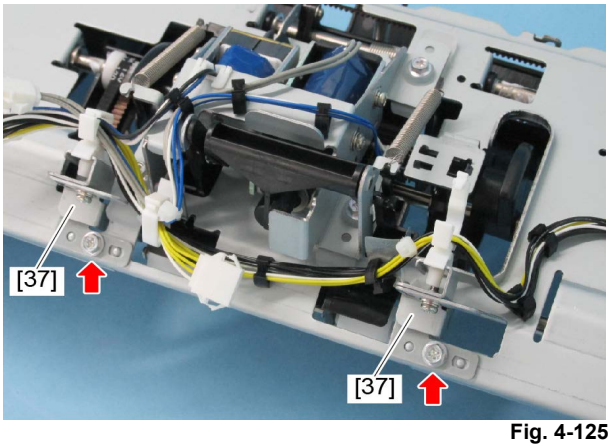


Fig. 4-125

Notes:

When installing, fix the assist guide [38] so that the height between its upper surface and that for the buffer tray is within 18 to 20 mm.

Measure the height at each 1 portion (2 portions in total) at both edges of the assist guide.

1. Move the buffer tray to the position of the rotation roller.
2. Turn the cam of the assist guide so that it comes to the position where it is fixed.
3. By using a scale, measure the height between the upper surface of the assist guide and that for the buffer tray. If adjustment is necessary, loosen the screw of the assist guide adjustment plate and move the assist guide up and down so that the height will become within the specified value.

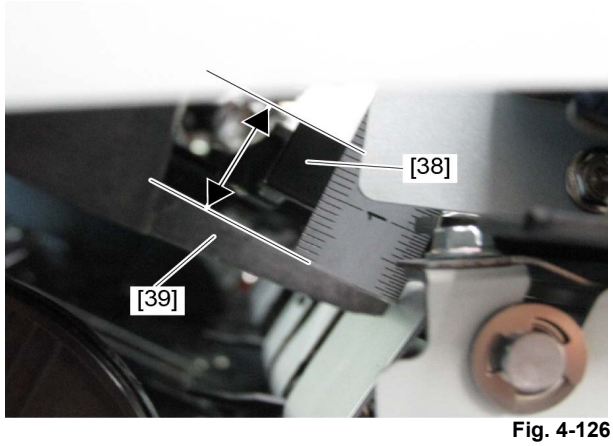


Fig. 4-126

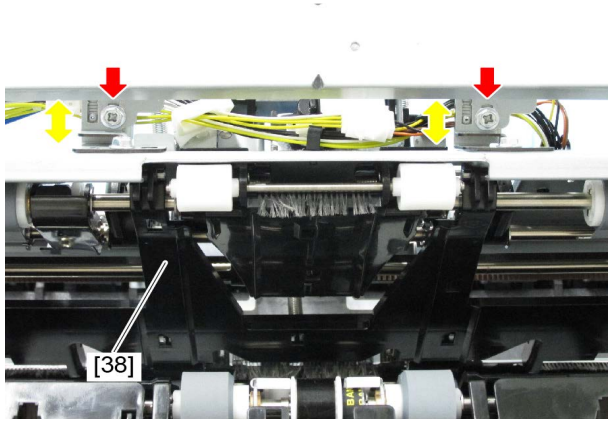


Fig. 4-127

(17) Remove 1 screw. Take off the metal plate [43] and remove the spring [45].

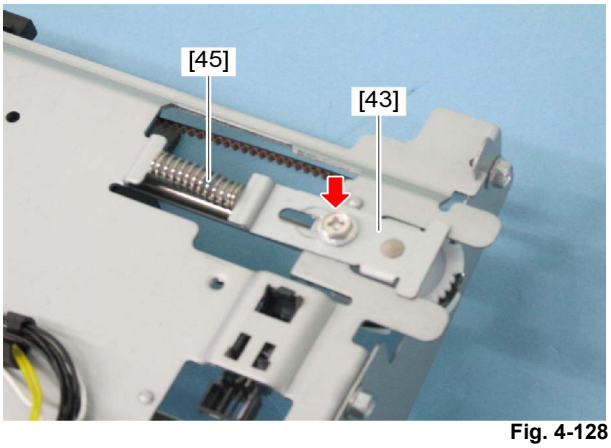


Fig. 4-128

(18) Remove 2 screws.
(19) Remove 3 E-rings [46]. Slide the shaft [47] and take off the left and right buffer guides [48], 2 metal plates [49] and pinch roller arm [50].

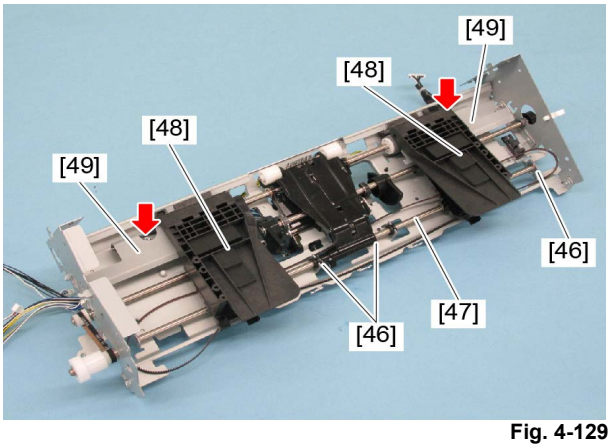


Fig. 4-129

Notes:
When installing, hook the spring [51] of the pinch roller arm [50] to the frame as shown below.

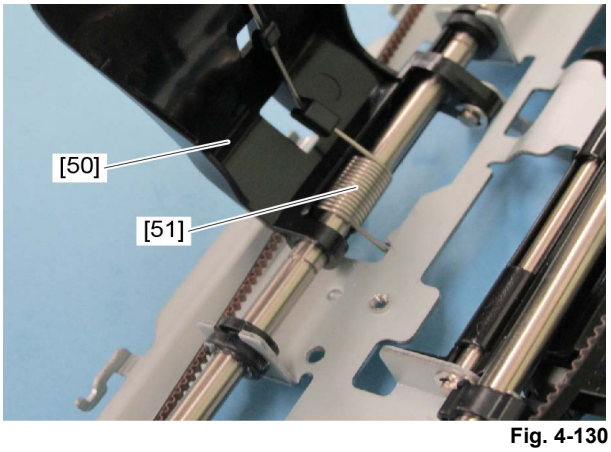


Fig. 4-130

(20) Remove 2 E-rings and 2 pins [51]. Take off 2 buffer rollers [52].

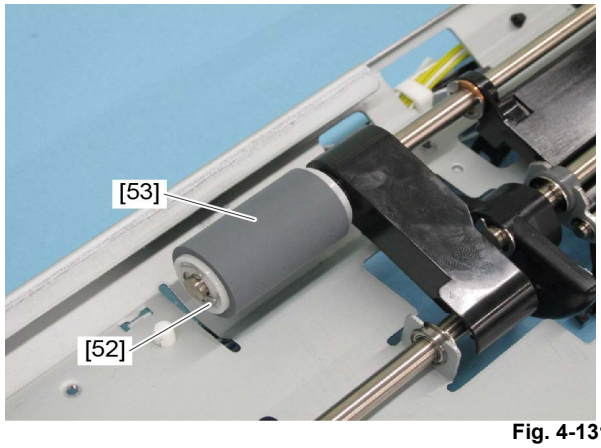


Fig. 4-131

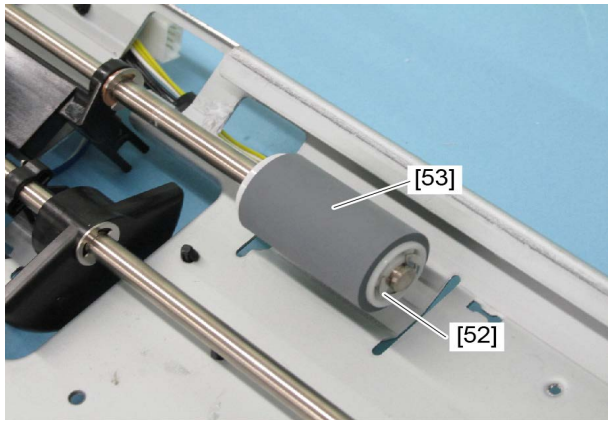


Fig. 4-132

[G] Upper exit roller / Upper exit roller guide

(1) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(2) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(3) Take off the rear upper cover/rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(4) Take off the metal shield plate.
🕮 P. 4-8 "[K] Shield metal plate"

(5) Remove 2 screws, and then take off the front and rear stays [1] and 2 spacers [2].

Notes:

Be careful not to damage the harness connected to the stationary tray transport guides.

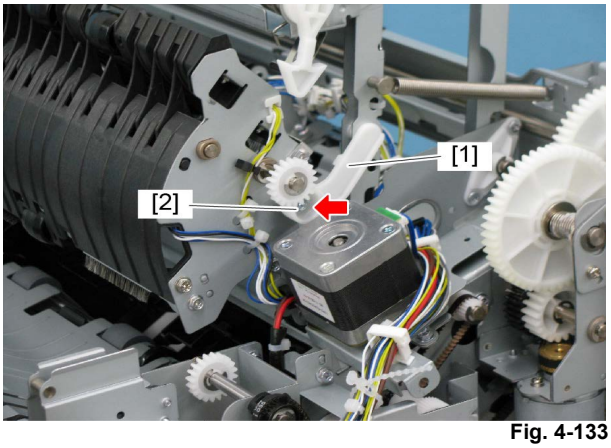


Fig. 4-133

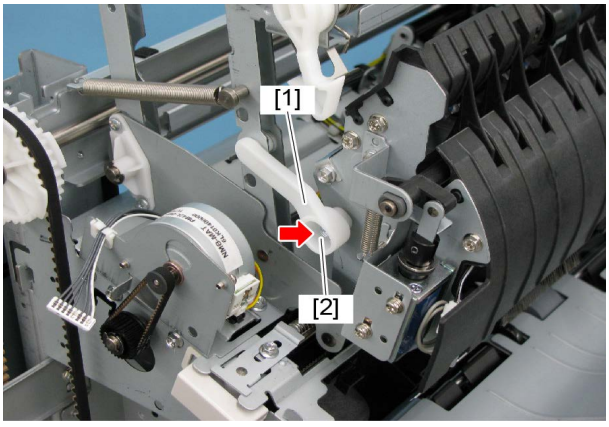


Fig. 4-134

(6) Loosen 2 screws each for the front and rear stationary tray discharge brush [3].

(7) Remove 4 screws and take off the front and rear stationary tray transport guides [4].

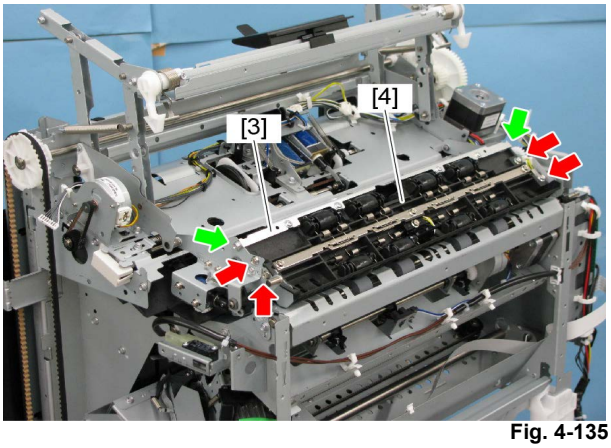


Fig. 4-135

Notes:

Be careful not to damage the harness [5] of entrance sensor.

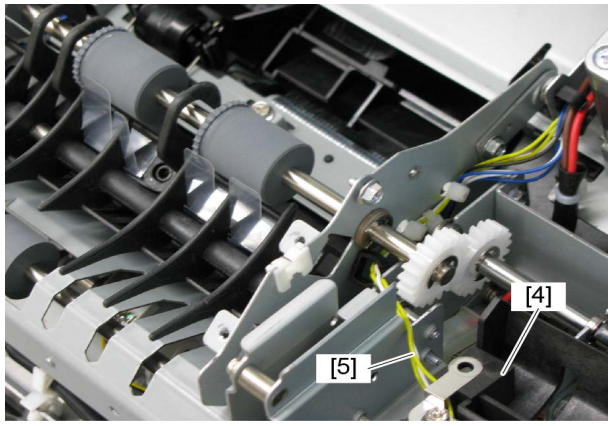


Fig. 4-136

Notes:

When installing the front and rear stationary tray transport guides, fix them at the positions where the gap between the trailing edges of the guides and the frame is 1 mm. Check if the flap and the upper exit roller move smoothly after screws are tightened.

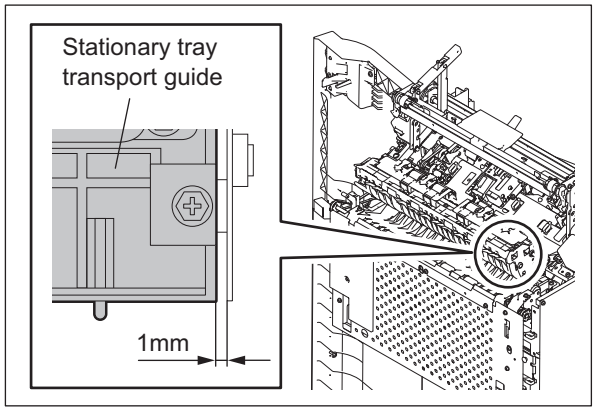


Fig. 4-137

(8) Remove 4 screws of the upper exit roller guide [11].

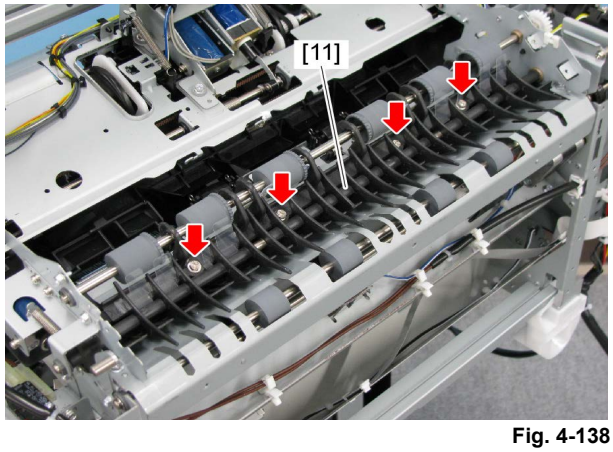


Fig. 4-138

(9) Remove 3 E-rings [6], 1 gear [7], 1 pin [8] and 2 bushings [9].
(10) Take off the upper exit roller [10] and the upper exit roller guide [11].

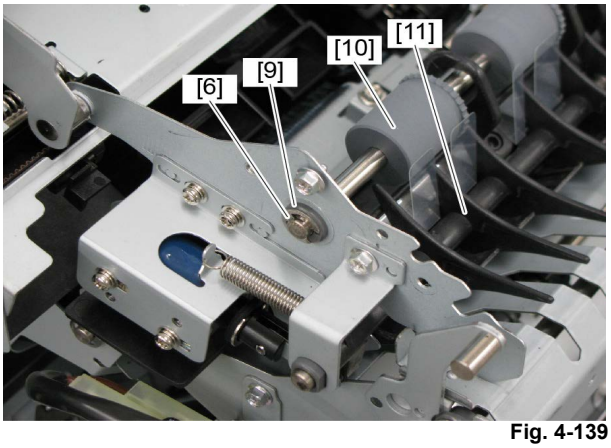


Fig. 4-139

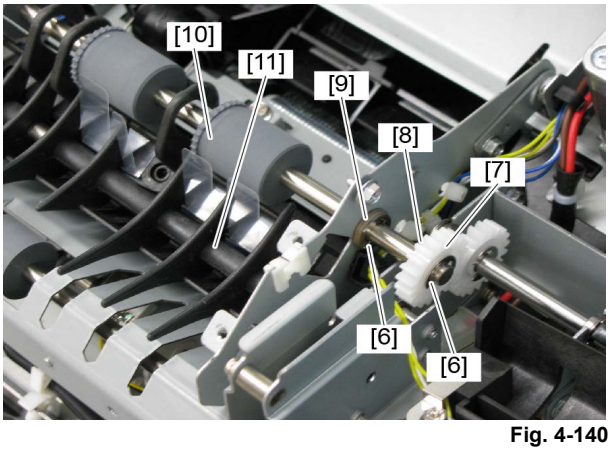


Fig. 4-140

4.4 Motor (Finisher section)

[A] Entrance motor (M1)

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
🕮 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
🕮 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(7) Close the buffer unit-1 [1] halfway and remove 1 screw.

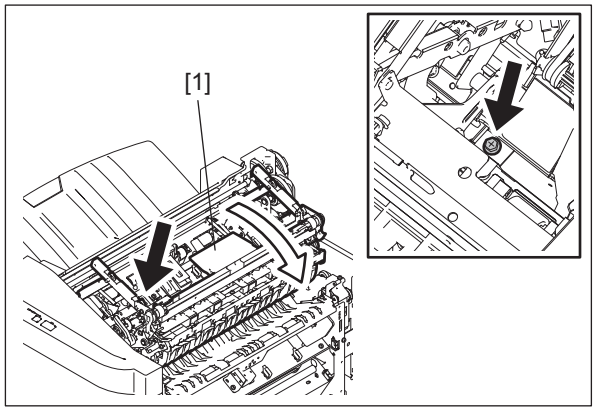


Fig. 4-141

(8) Remove 3 screws, and then take off the transport guide [2].

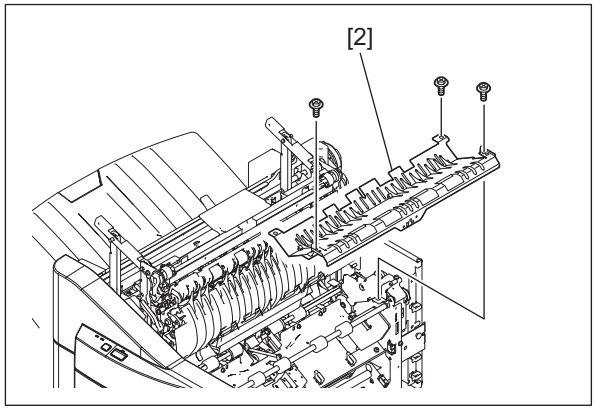


Fig. 4-142

(9) Remove 1 screw and take off the grounding wire [3].
(10) Release the PC board cover [4] from 2 harness clamps [5].

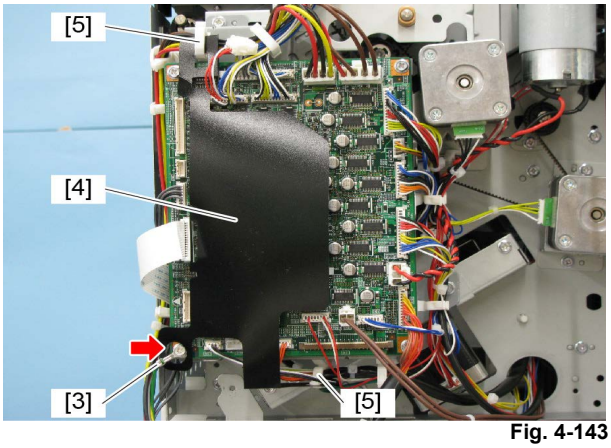


Fig. 4-143

(11) Disconnect all the connectors on the finisher control PC board and release the harness from the harness clamp.
(12) Remove 3 screws and take off the bracket [6] of the finisher control PC board.

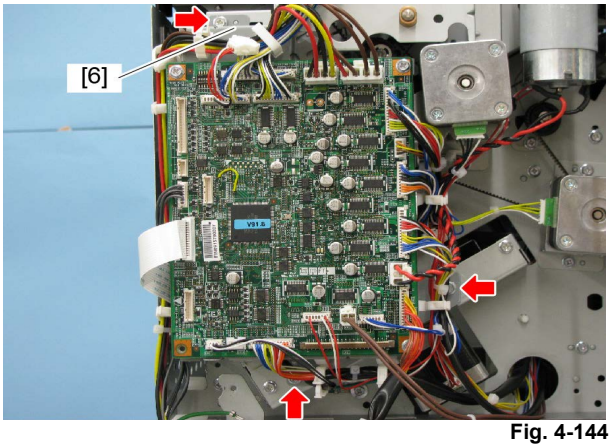


Fig. 4-144

(13) Remove the belt [6] from the pulley of entrance motor.
(14) Remove 2 screws. Then disconnect the connector [7] to take off the entrance motor [5].

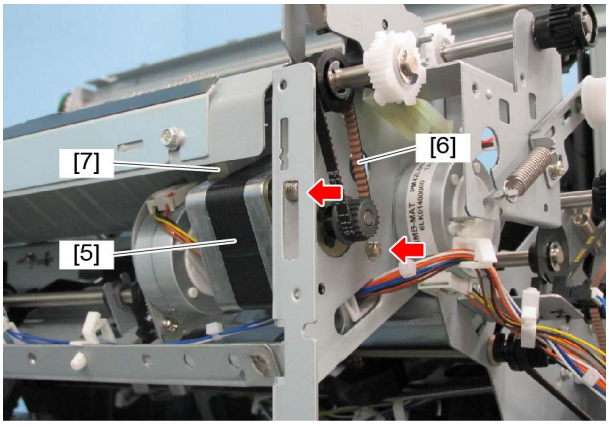


Fig. 4-145

[B] Buffer tray guide motor (M2)

(1) Take off the buffer unit-1.
🕮 P. 4-18 "[B] Buffer unit-1"

(2) Remove 2 screws, and then take off the buffer tray guide motor [1].

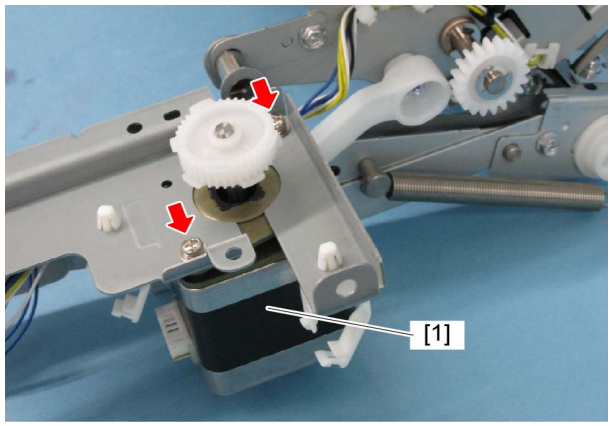


Fig. 4-146

[C] Paddle motor (M3)

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"

(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"

(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"

(4) Take off the blind cover.
🕮 P. 4-8 "[J] Blind cover"

(5) Take off the shield metal plate.
🕮 P. 4-8 "[K] Shield metal plate"

(6) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"

(7) Close the buffer unit-1 [1] halfway and remove 1 screw.

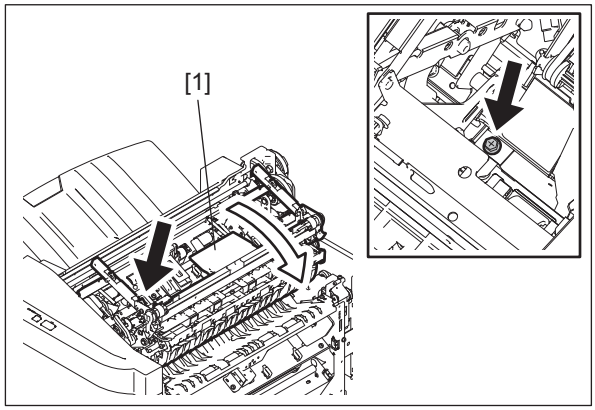


Fig. 4-147

(8) Remove 3 screws, and then take off the transport guide [2].

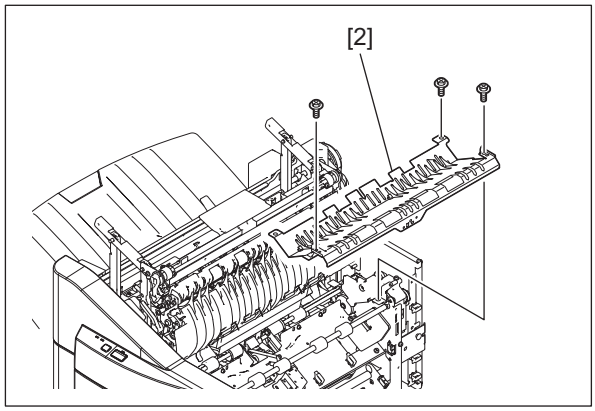


Fig. 4-148

(9) Remove 1 screw and take off the grounding wire [3].
(10) Release the PC board cover [4] from 2 harness clamps [5].

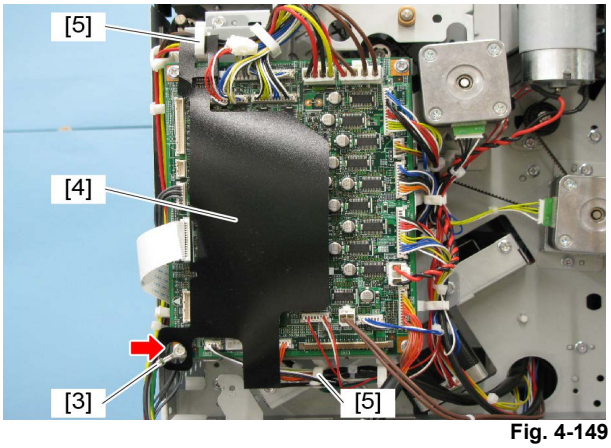


Fig. 4-149

(11) Disconnect all the connectors on the finisher control PC board and release the harness from the harness clamp.
(12) Remove 3 screws and take off the bracket [6] of the finisher control PC board.

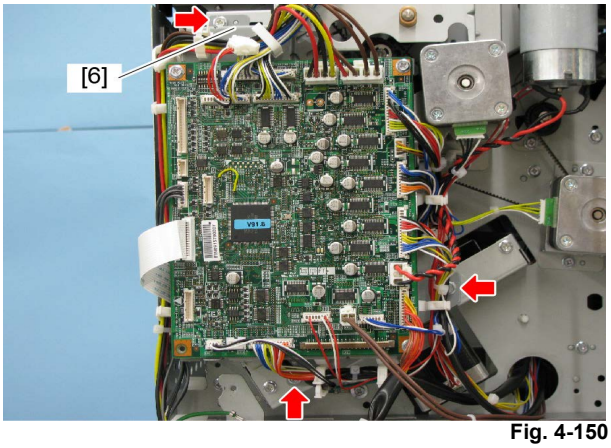


Fig. 4-150

(13) Release the harness of the paddle motor from 2 harness clamps [5].

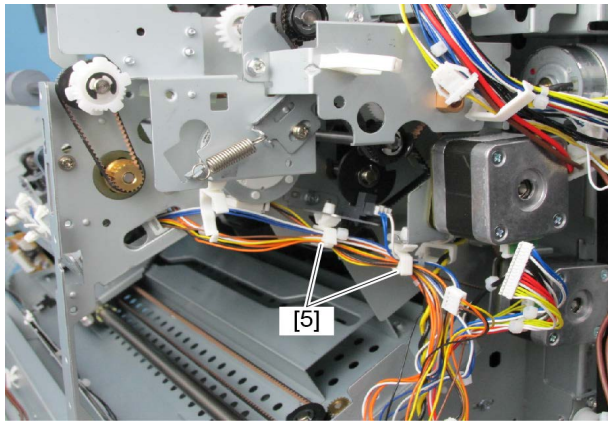


Fig. 4-151

(14) Remove 2 screws and take off the paddle motor [6].

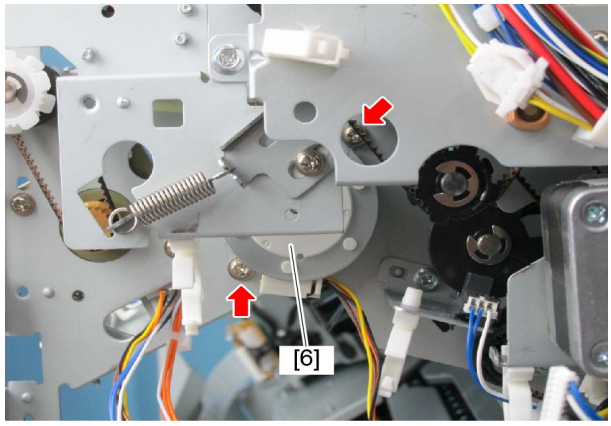


Fig. 4-152

[D] Front alignment motor (M5)

(1) Take off the grate-shaped guide.
📖 P. 4-9 "[L] Grate-shaped guide"
(2) Release the harness out of the clamp [1], and then disconnect the relay connector [2].
(3) Remove 2 screws, and then take off the front alignment motor [3].

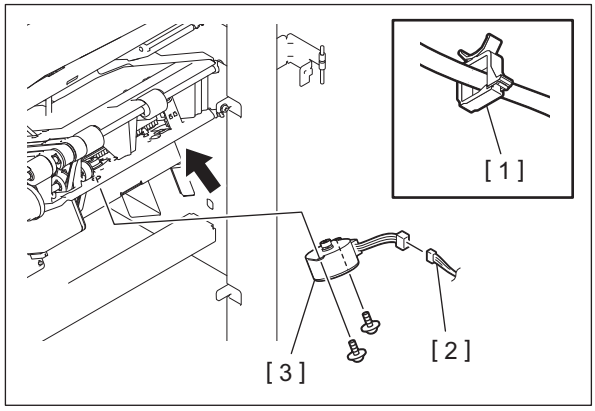


Fig. 4-153

[E] Rear alignment motor (M6)

(1) Take off the grate-shaped guide.
📖 P. 4-9 "[L] Grate-shaped guide"

(2) Remove 2 screws, and then disconnect the relay connector [1] to take off the rear alignment motor [2].

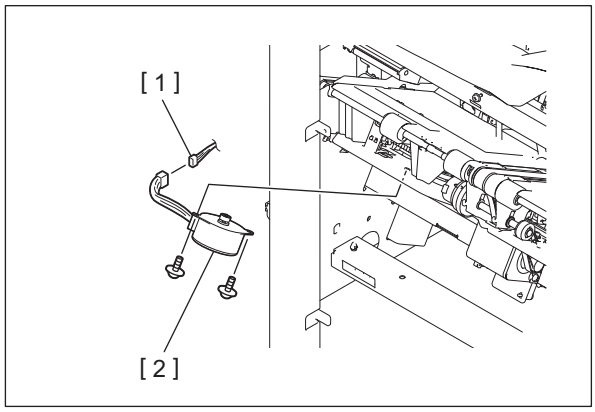


Fig. 4-154

[F] Transport motor (M7)

(1) Take off the rear upper cover and the rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"

(2) Loosen 2 screws. Push the pulley [1] in the direction indicated by the arrow to loosen the belt tension and tighten the screws.

Notes:
When installing, be sure to apply tension to the belt.

(3) Remove 2 screws, and then disconnect the connector and remove the belt to take off the transport motor [2].

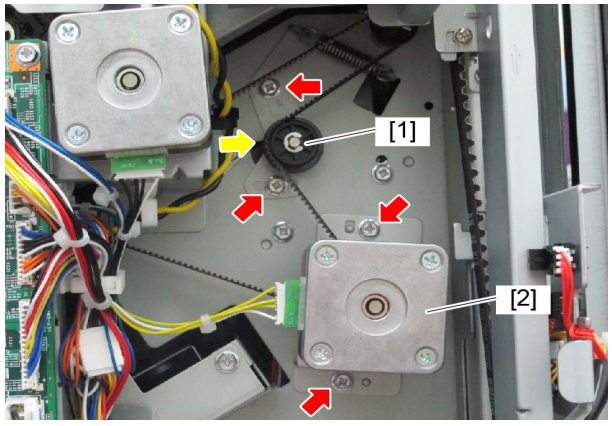


Fig. 4-155

(4) Remove 2 screws and take off the transport motor [2] from the bracket [3].

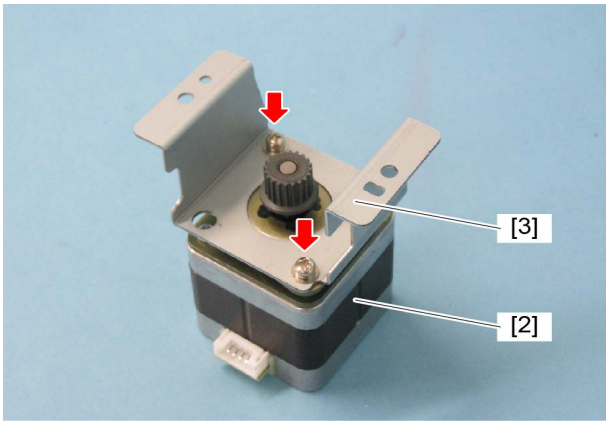


Fig. 4-156

[G] Stack transport motor (M8)

(1) Take off the grate-shaped guide.
📖 P. 4-9 "[L] Grate-shaped guide"
(2) Disconnect the connector and remove the belt [1]. Then remove 2 screws to take off the stack transport motor [2].

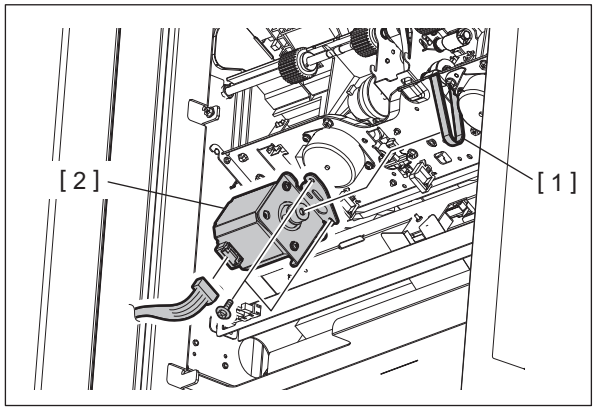


Fig. 4-157

[H] Stapler unit shift motor (M9)

(1) Take off the rear upper cover and the rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
📖 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
📖 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
📖 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
📖 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"

(7) Close the buffer unit-1 [1] halfway and remove 1 screw.

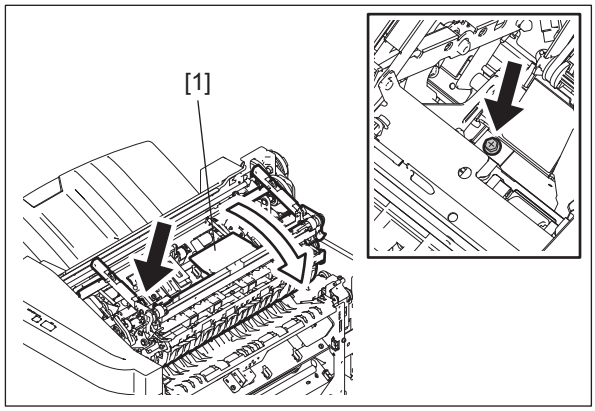


Fig. 4-158

(8) Remove 3 screws, and then take off the transport guide [2].

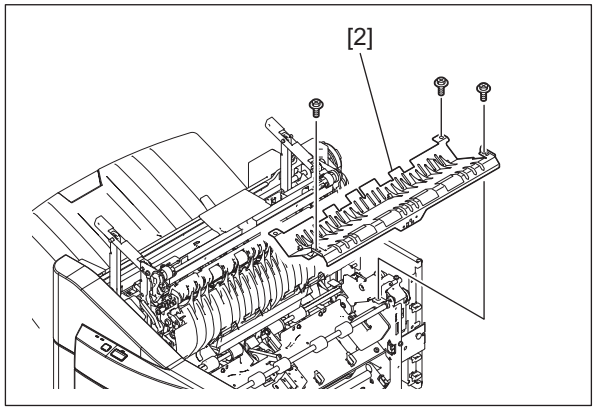


Fig. 4-159

(9) Remove 1 screw and take off the grounding wire [3].
(10) Release the PC board cover [4] from 2 harness clamps [5].

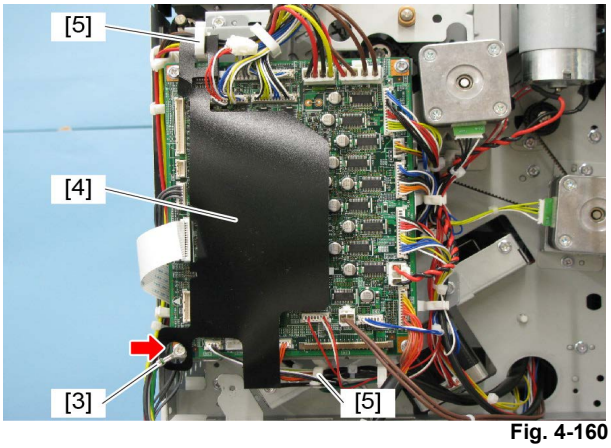


Fig. 4-160

(11) Disconnect all the connectors on the finisher control PC board and release the harness from the harness clamp.
(12) Remove 3 screws and take off the bracket [6] of the finisher control PC board.

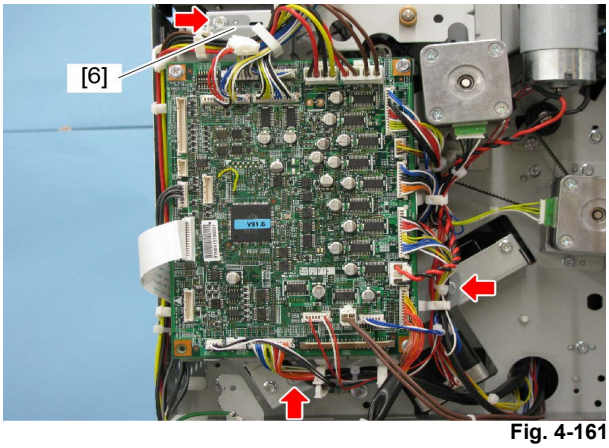


Fig. 4-161

(13) Remove 2 screws, and then disconnect the connector [5] to take off the stapler unit shift motor [6].

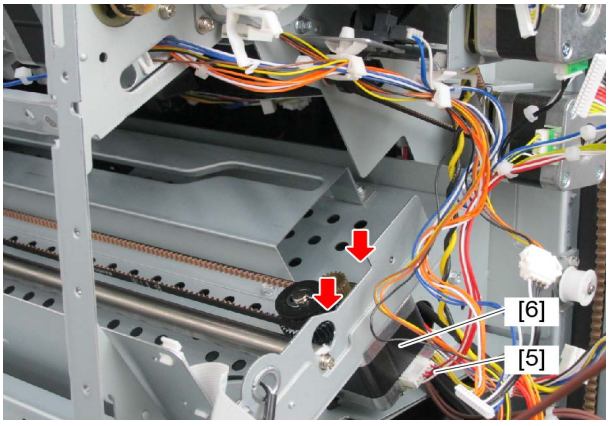


Fig. 4-162

[I] Assist guide motor (M10)

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
🕮 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
🕮 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(7) Close the buffer unit-1.
(8) Disconnect 1 relay connector [1] and release the harness [2] from 5 harness clamps [3].

(9) Pull out the harness [2] through the window [4] of the frame.

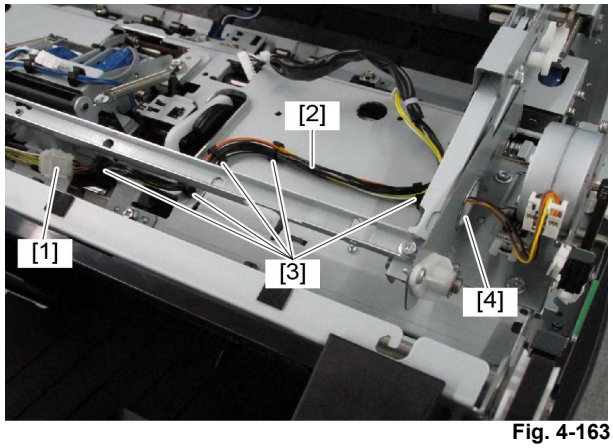


Fig. 4-163

(10) Remove 2 screws, and then take off the assist guide motor [5] and belt [6].

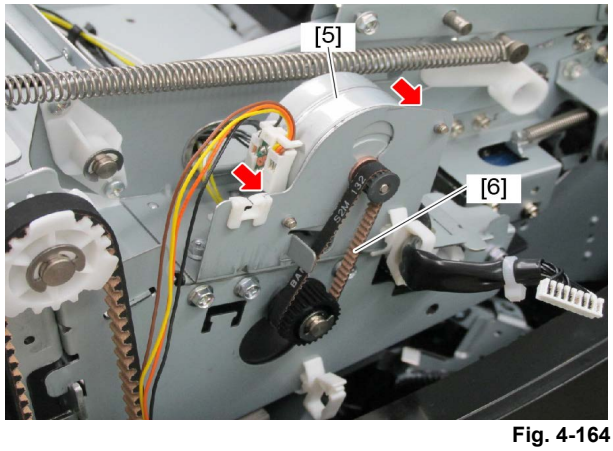


Fig. 4-164

[J] Exit motor (M11)

(1) Take off the rear upper cover and the rear lower cover.
🕮 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
🕮 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
🕮 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
🕮 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
🕮 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"
(7) Disconnect 5 connectors [4], [5], [6], [7] and [8] (CN8, CN9, CN10, CN11 and CN14) on the finisher control PC board [3].
(8) Disconnect 1 connector [10] from the buffer tray guide motor [9].
(9) Disconnect 1 connector [12] from the transport motor [11].
(10) Release the harness from 8 harness clamps [15].

(11) Release the harness from 1 binding wire [14].

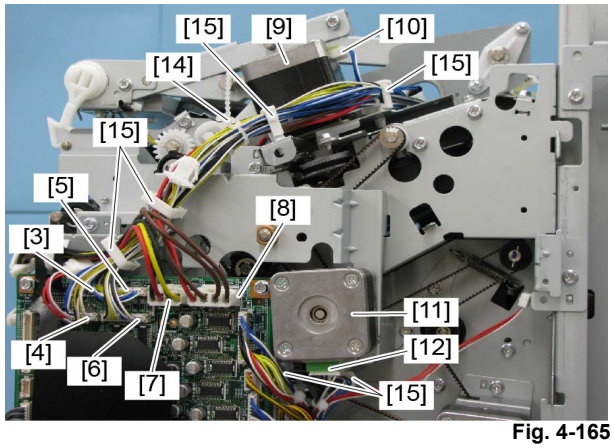


Fig. 4-165

(12) Remove 5 screws and take off the motor bracket [19].

Notes:

Pay full attention not to lose the bushing [20] while taking off the motor bracket [19].

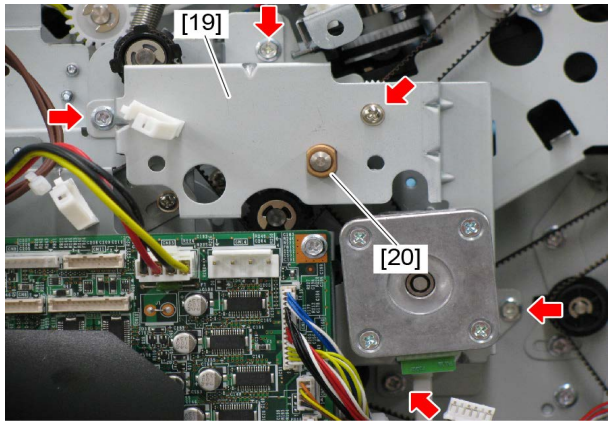


Fig. 4-166

(13) Loosen 1 screw. Push the pulley [21] in the direction indicated by the arrow to loosen the belt tension and tighten the screw.

(14) Remove the belts [22] and [23], the part assembled [24] and the bearing.

Notes:

Pay full attention not to lose the bearing while taking off the part assembled [24].

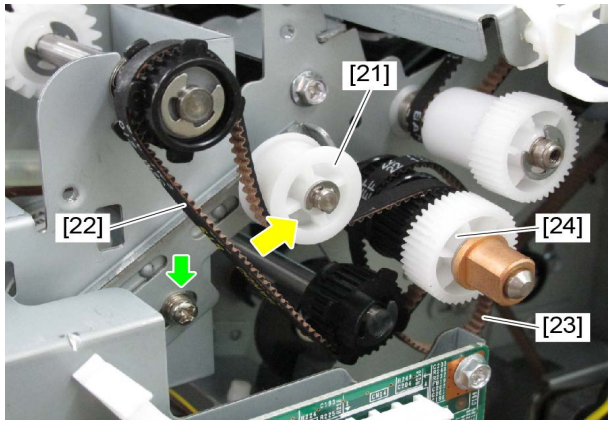


Fig. 4-167

(15) Remove 2 screws, and then take off the exit motor [25].

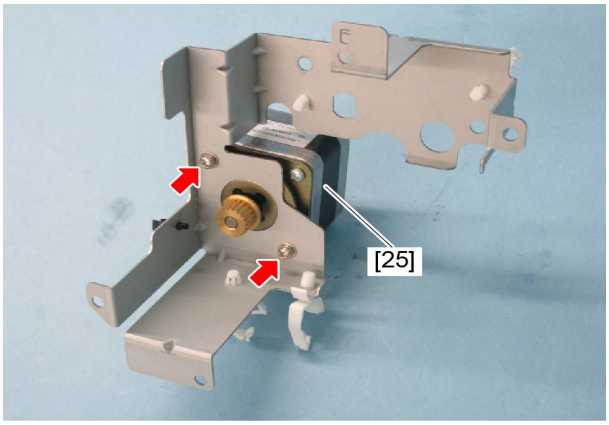


Fig. 4-168

[K] Catching motor (M21)

(1) Take off the rear upper cover and the rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
📖 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
📖 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
📖 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
📖 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"
(7) Close the buffer unit-1 [1] halfway and remove 1 screw.

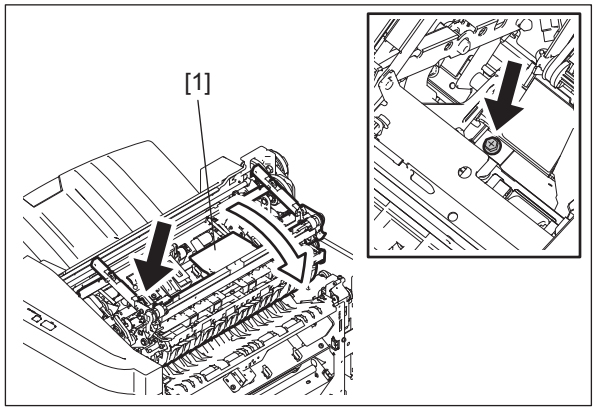


Fig. 4-169

(8) Remove 3 screws, and then take off the transport guide [2].

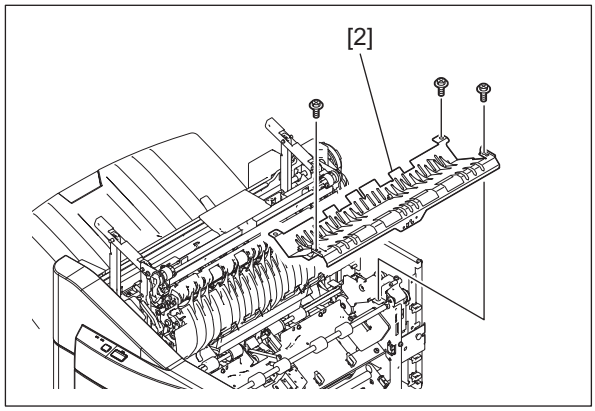


Fig. 4-170

(9) Remove 1 screw and take off the grounding wire [3].
(10) Release the PC board cover [4] from 2 harness clamps [5].

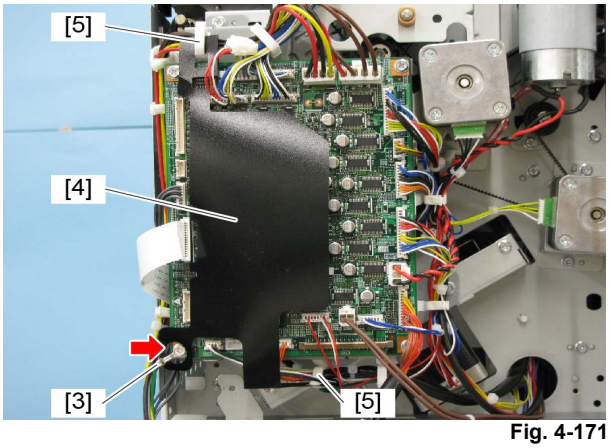


Fig. 4-171

(11) Disconnect all the connectors on the finisher control PC board and release the harness from the harness clamp.
(12) Remove 3 screws and take off the bracket [6] of the finisher control PC board.

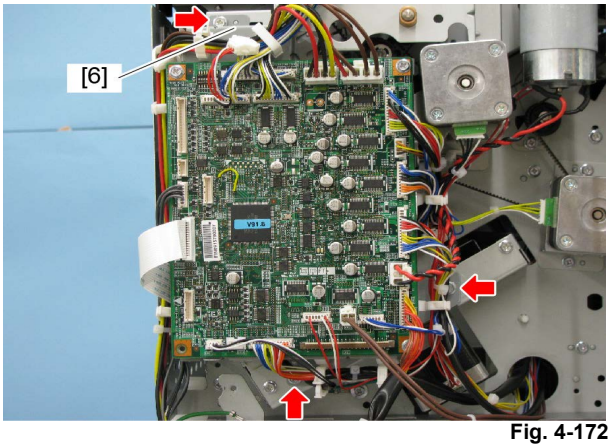


Fig. 4-172

(13) Disconnect the relay connector [5].
(14) Release the harness from 3 harness clamps [6].

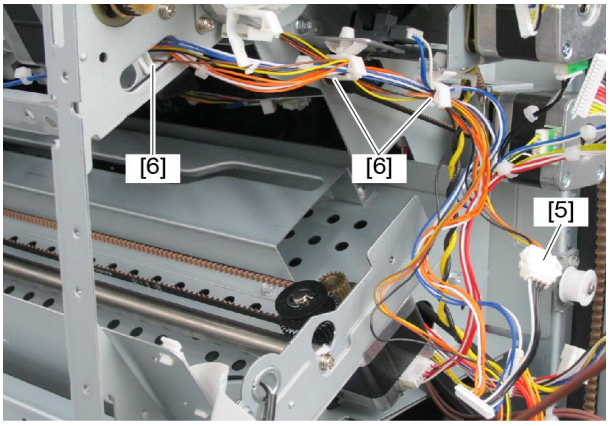


Fig. 4-173

(15) Remove 2 screws and take off the catching motor [7].

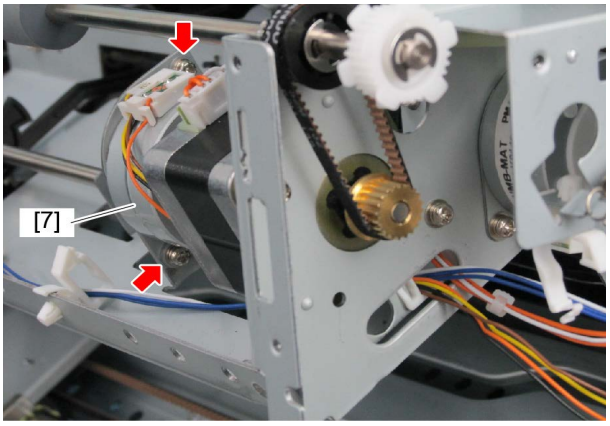


Fig. 4-174

4.5 Electromagnetic spring clutch / Solenoid

[A] Paper exit guide clutch (CLT2)

(1) Take off the grate-shaped guide.
🕮 P. 4-9 "[L] Grate-shaped guide"

(2) Remove 4 E-rings, and then slide the bushing.

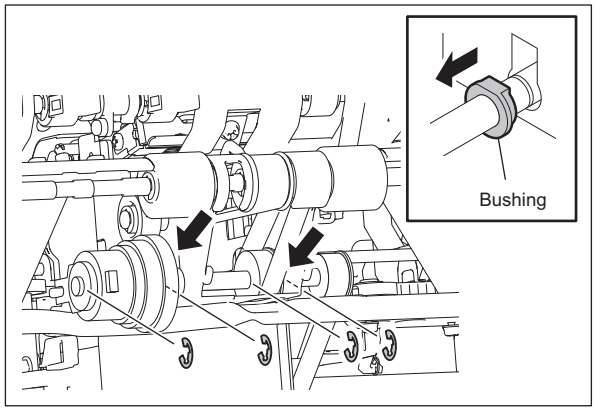


Fig. 4-175

(3) Take off the belt of the stack transport motor.

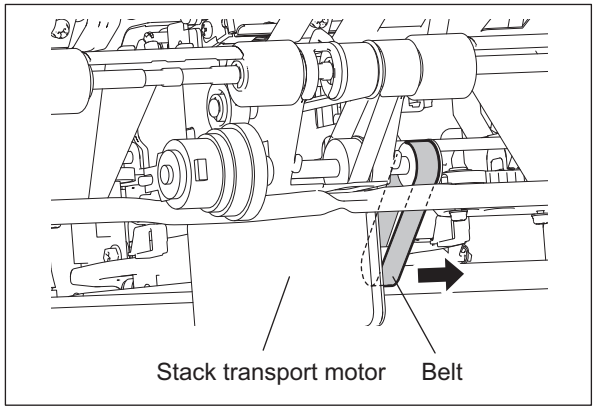


Fig. 4-176

(4) Slide the shaft in the direction of the arrow to remove the pin.

Notes:
- Be sure not to lose the belt.
- When installing the paper exit guide clutch, attach a rotation protection.

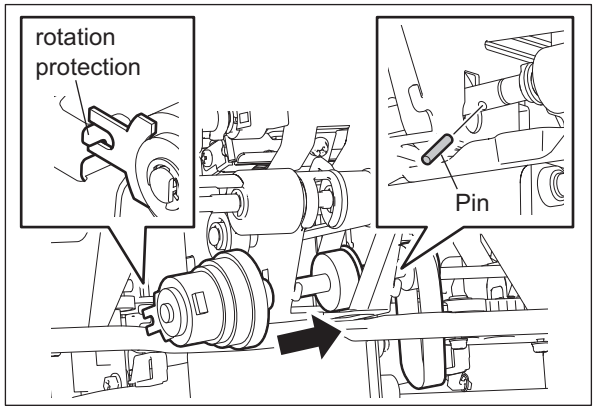


Fig. 4-177

(5) Then take off the paper exit guide clutch by sliding the shaft. Disconnect the relay connector, and then take off the paper exit guide clutch.

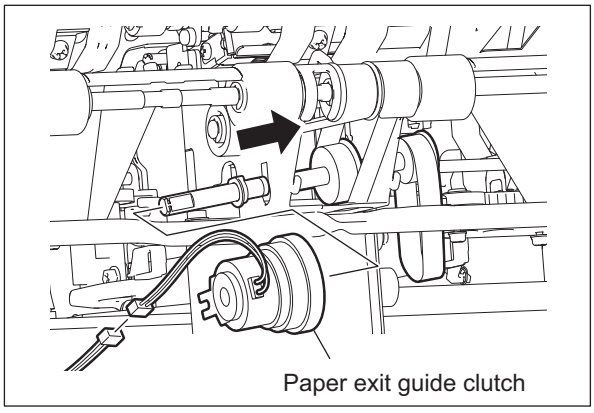


Fig. 4-178

[B] Buffer roller lift solenoid (SOL2) / Exit roller lift solenoid (SOL8)

(1) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"
(2) Close the buffer unit-1.
(3) Remove the 2 springs [1].
(4) Disconnect 2 relay connectors [3] and release the harness from 5 harness clamps [2].

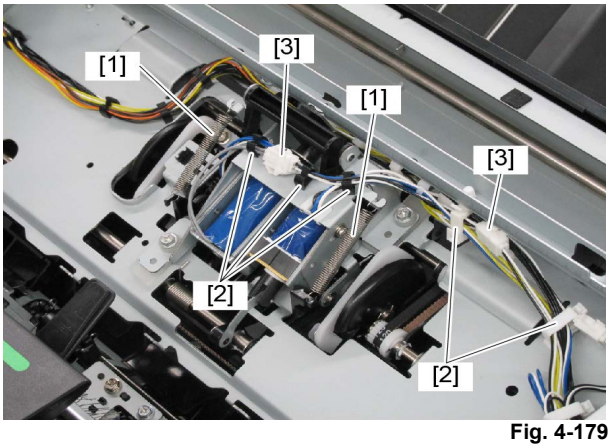


Fig. 4-179

(5) Remove 3 screws and disconnect the plunger of the buffer roller lift solenoid. Remove 3 spacers [4], 3 screw dampers [5], 3 solenoid dampers [6] and take off the roller lift solenoid assembly [7].

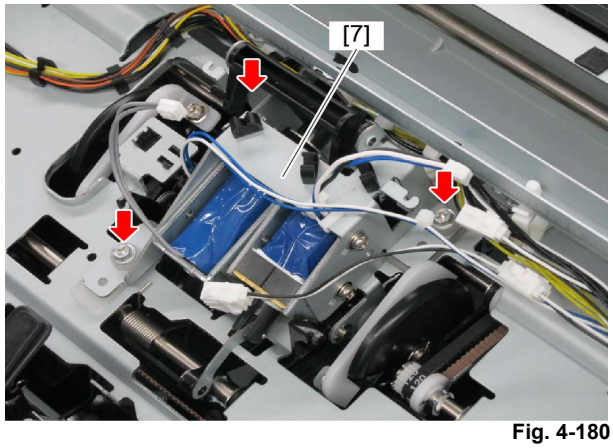


Fig. 4-180

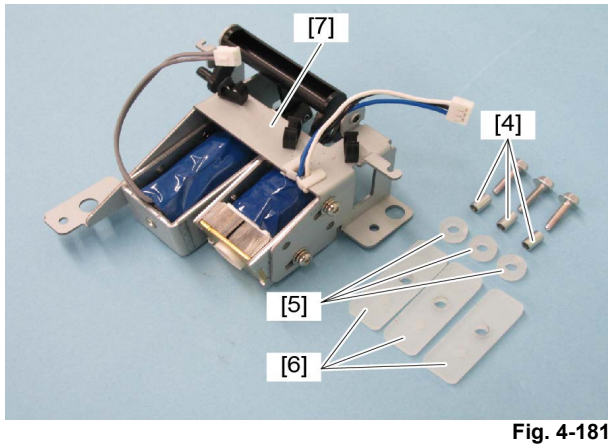


Fig. 4-181

- Exit roller lift solenoid removal procedure:
  - Remove 2 screws. Disconnect the plunger and take off the exit roller solenoid [8].

Notes:

When installing, while the solenoid is turned ON, align the buffer roller and the buffer tray so that their gap will be within 2.0 to 3.5 mm and fix them.

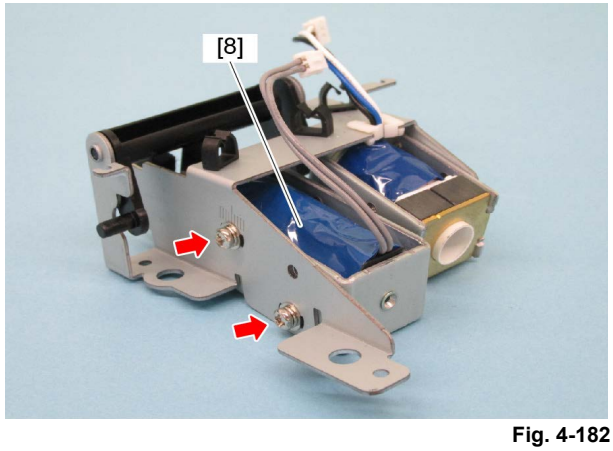


Fig. 4-182

- Buffer roller lift solenoid removal procedure:
  - Remove 2 screws and take off the buffer roller lift solenoid [9].

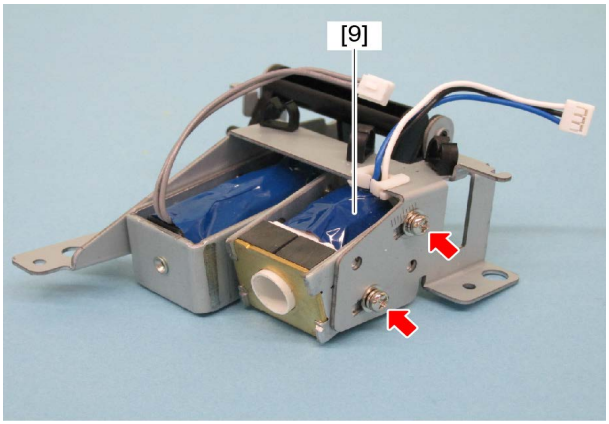


Fig. 4-183

(6) When installing, while the solenoid is turned ON, insert the gap adjustment jig [12] into the gap between the roller [10] of the pinch roller arm and the stack transport roller-2 [11] of the finishing tray unit. Then move the solenoid so that the roller shaft [13] of the pinch roller arm contacts the upper surface of the elongated hole [14] for the bearing to fix them.

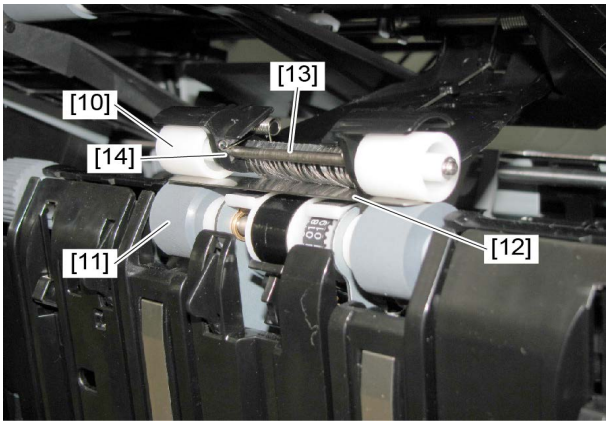


Fig. 4-184

[C] Gate solenoid (SOL4)

(1) Take off the rear upper cover and the rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
📖 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
📖 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
📖 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
📖 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"

(7) Close the buffer unit-1 [1] halfway and leave it. Then remove 1 screw.

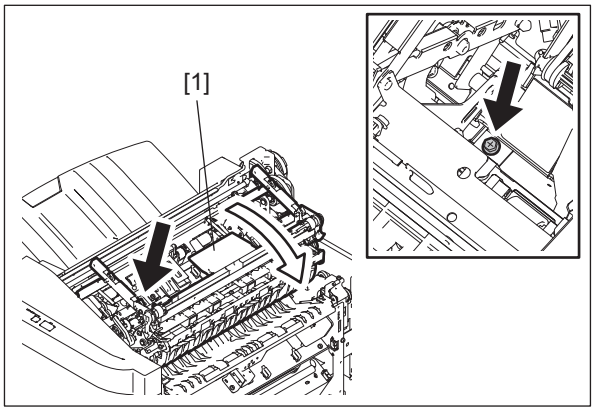


Fig. 4-185

(8) Remove 3 screws, and then take off the transport guide [2].

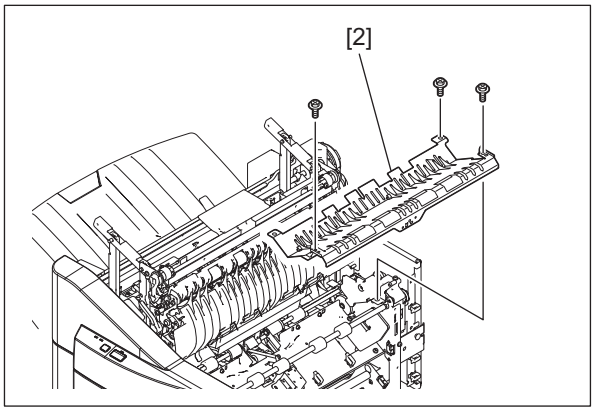


Fig. 4-186

(9) Remove the spring.

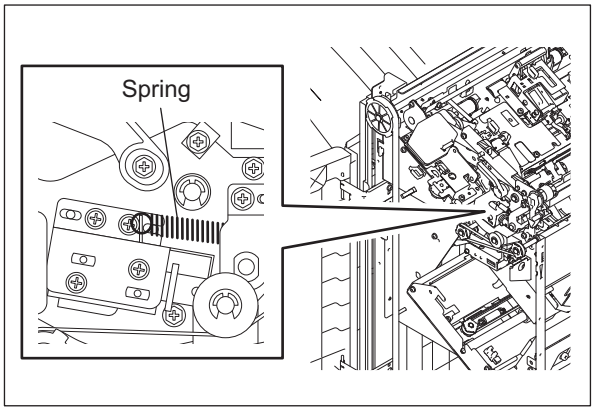


Fig. 4-187

(10) Remove 2 screws, and then disconnect the relay connector and remove the arm to take off the bracket.

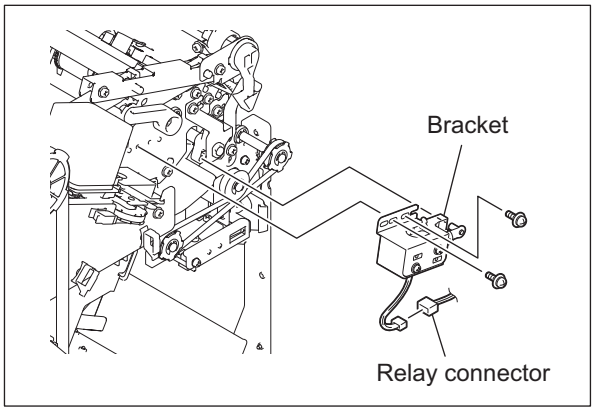


Fig. 4-188

Notes:

When installing the gate solenoid, adjust the edge of the bracket to come at the mark on the scale one step left from the center as shown in the figure and fix it with 2 screws.

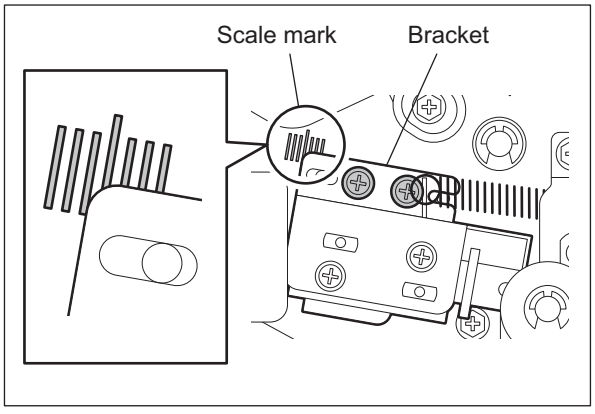


Fig. 4-189

(11) Remove 2 screws, and then take off the gate solenoid.

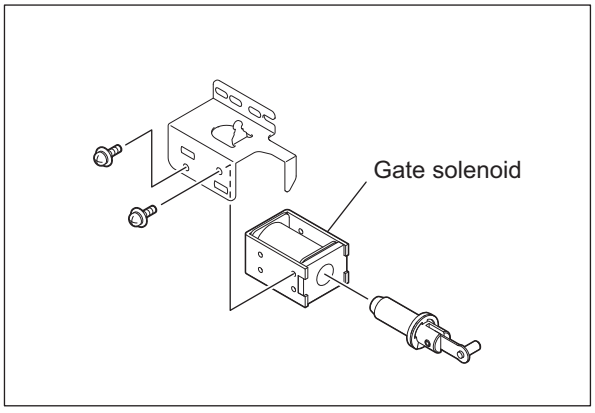


Fig. 4-190

Notes:

When installing the gate solenoid, install the bracket with 2 screws (A) as shown in the figure. When replacing the gate solenoid, install the bracket with 2 screws (B) as shown in the figure, and then fix it at the position where the gap between the gate flap and the shaft of the entrance roller falls within 0.4 to 0.8 mm.

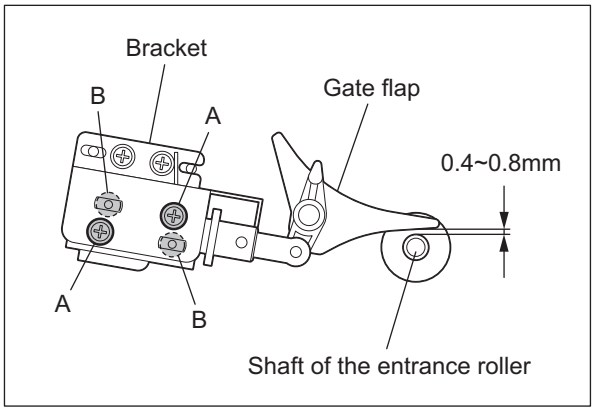


Fig. 4-191

4.6 Sensors / Switches (Finisher section)

[A] Entrance sensor (S1)

(1) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"

(2) Close the buffer unit-1 halfway and leave it.
Then remove 1 screw. Disconnect the connector and take off the sensor bracket [1].

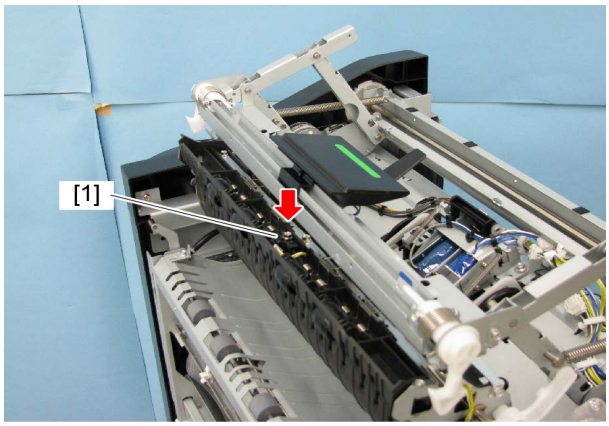


Fig. 4-192

(3) Release the latch, and then take off the entrance sensor [1].

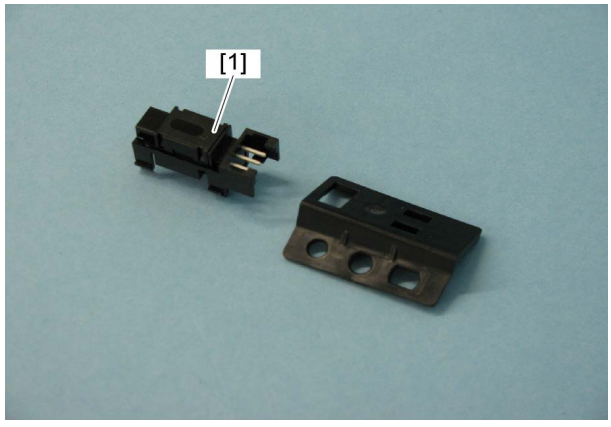


Fig. 4-193

[B] Transport sensor (S2)

(1) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"

(2) Close the buffer unit-1 halfway and leave it.
Then remove 1 screw. Disconnect the connector [2] and take off the sensor bracket [1].

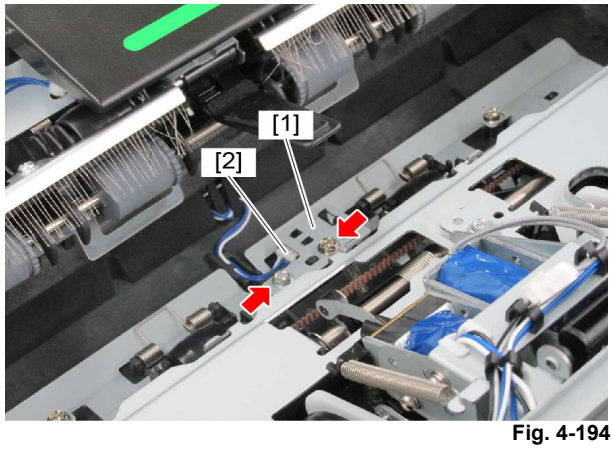


Fig. 4-194

(3) Release the latch, and then take off the transport sensor [3].

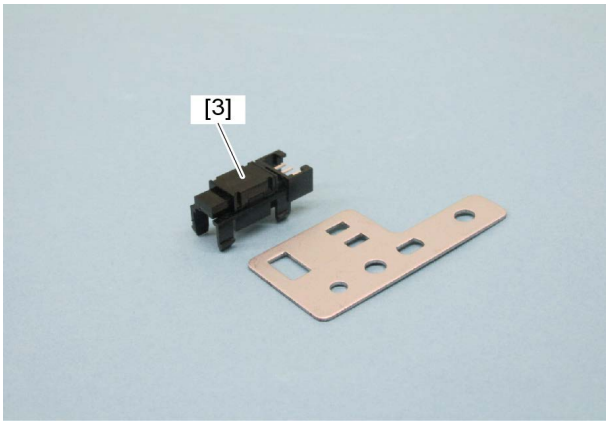


Fig. 4-195

[C] Paddle home position sensor (S3)

(1) Take off the rear upper cover and the rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
📖 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
📖 P. 4-2 "[C] Control panel unit"
(4) Take off the blind cover.
📖 P. 4-8 "[J] Blind cover"
(5) Take off the shield metal plate.
📖 P. 4-8 "[K] Shield metal plate"
(6) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"
(7) Close the buffer unit-1 [1] halfway and remove 1 screw.

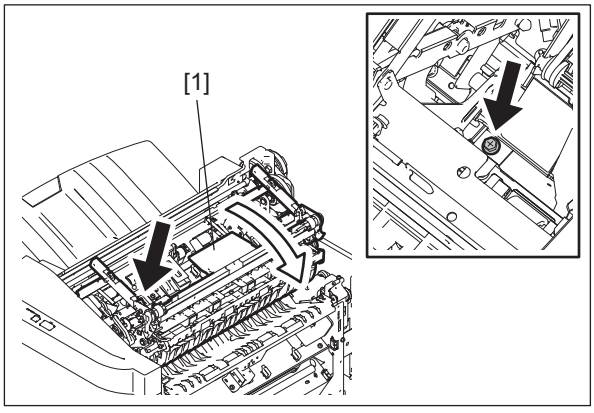


Fig. 4-196

(8) Remove 3 screws, and then take off the transport guide [2].

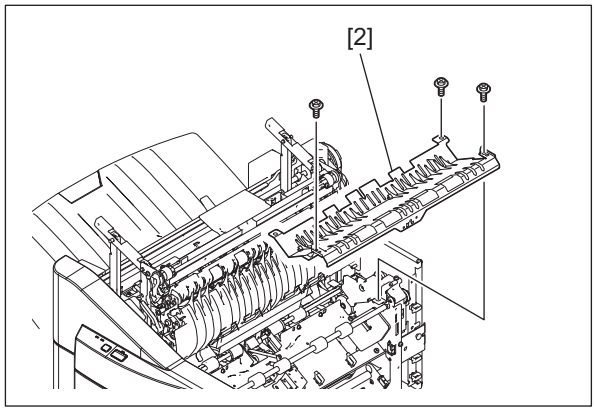


Fig. 4-197

(9) Remove 1 screw and take off the grounding wire [3].
(10) Release the PC board cover [4] from 2 harness clamps [5].

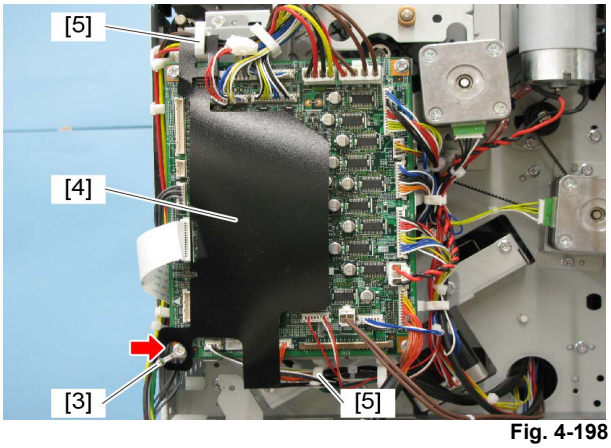


Fig. 4-198

(11) Disconnect all the connectors on the finisher control PC board and release the harness from the harness clamp.
(12) Remove 3 screws and take off the bracket [6] of the finisher control PC board.

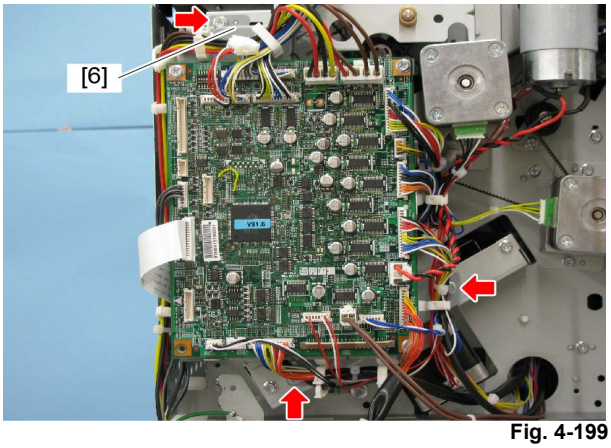


Fig. 4-199

(13) Remove 1 screw, and then disconnect the connector and take off the sensor bracket [5].

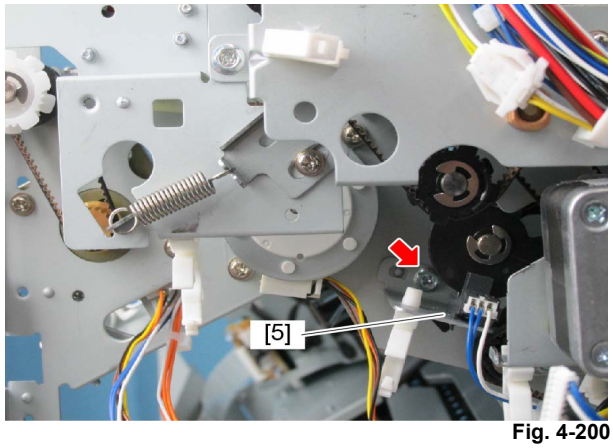


Fig. 4-200

(14) Release the latch, and then take off the paddle home position sensor.

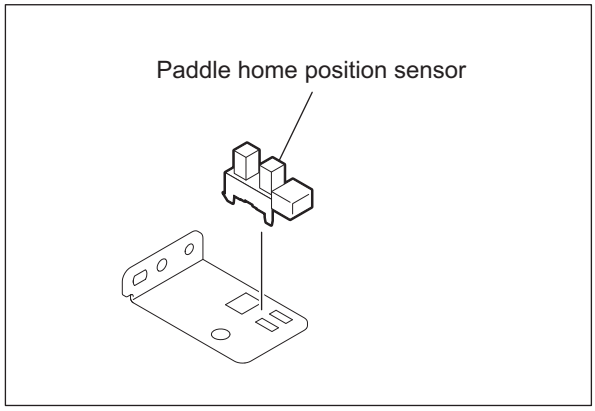


Fig. 4-201

[D] Buffer tray home position sensor (S5)

(1) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"
(2) Take off the control panel unit.
📖 P. 4-2 "[C] Control panel unit"
(3) Move each buffer guide [1].

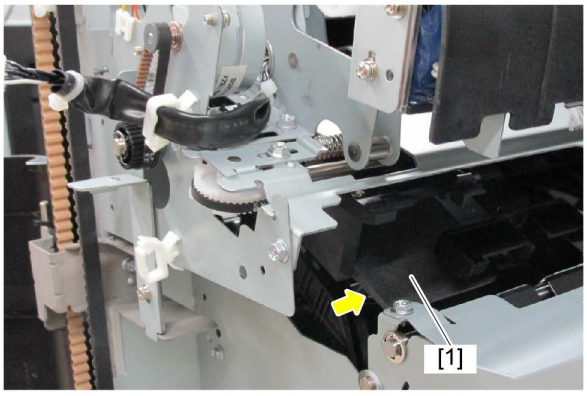


Fig. 4-202

(4) Disconnect the connector, and then release the latch to take off the buffer tray home position sensor [1].

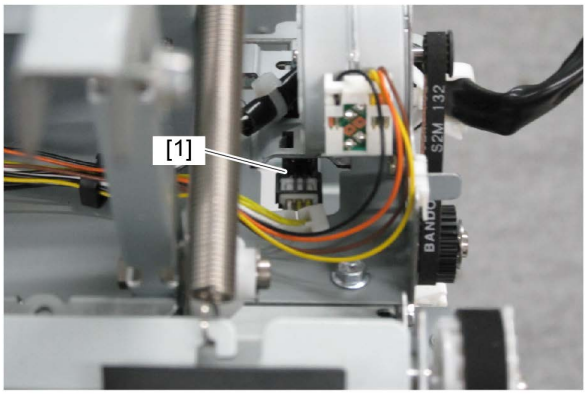


Fig. 4-203

[E] Paper pusher home position sensor (S6)

(1) Take off the stationary tray cover.
📖 P. 4-12 "[N] Stationary tray cover"

(2) Take off the roller lift solenoid assembly.
📖 P. 4-73 "[B] Buffer roller lift solenoid (SOL2) / Exit roller lift solenoid (SOL8)"

(3) Release the latch, and then disconnect the connector [1] to take off the paper pusher home position sensor[2].

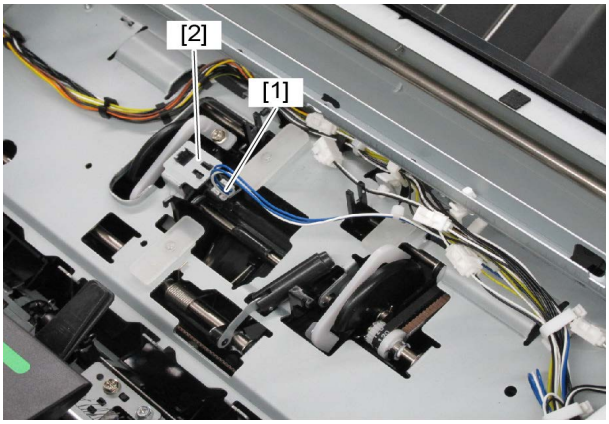


Fig. 4-204

[F] Front alignment plate home position sensor (S7)

(1) Take off the grate-shaped guide.
🕮 P. 4-9 "[L] Grate-shaped guide"

(2) Release the latch, and then disconnect the connector to take off the front alignment plate home position sensor.

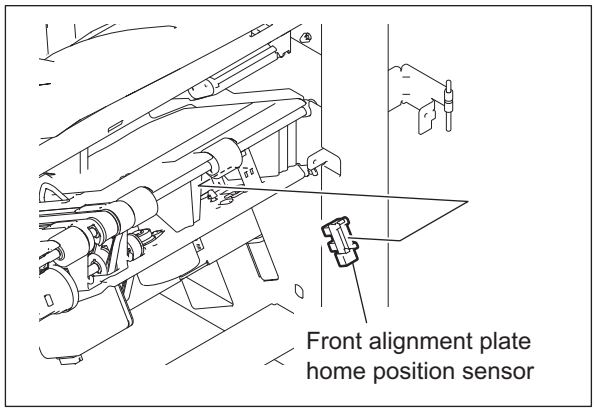


Fig. 4-205

[G] Rear alignment plate home position sensor (S8)

(1) Take off the grate-shaped guide.
🕮 P. 4-9 "[L] Grate-shaped guide"

(2) Release the latch, and then disconnect the connector to take off the rear alignment plate home position sensor.

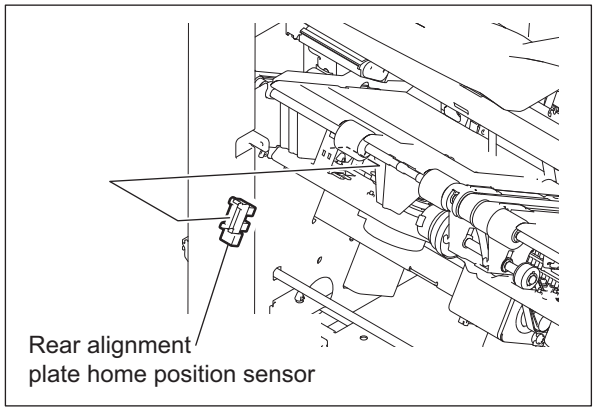


Fig. 4-206

[H] Stack exit belt home position sensor (S9)

(1) Take off the finishing tray unit.
📖 P. 4-21 "[C] Finishing tray unit"

(2) Remove 2 screws.

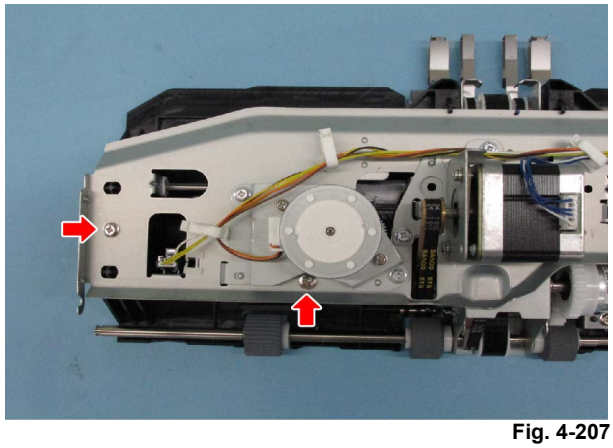


Fig. 4-207

(3) Turn over the finishing tray unit. Slide the rear finishing tray cover [1] to outside and lift it up. Release the link portion [2] inside the rear finishing tray cover.

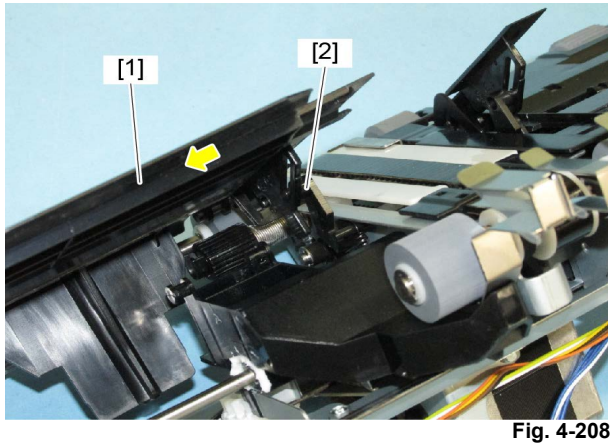


Fig. 4-208

(4) Move the front alignment plate guide [3] in the direction of the arrow.

(5) Remove the screw, disconnect the connector [4] and take off the sensor bracket [5].

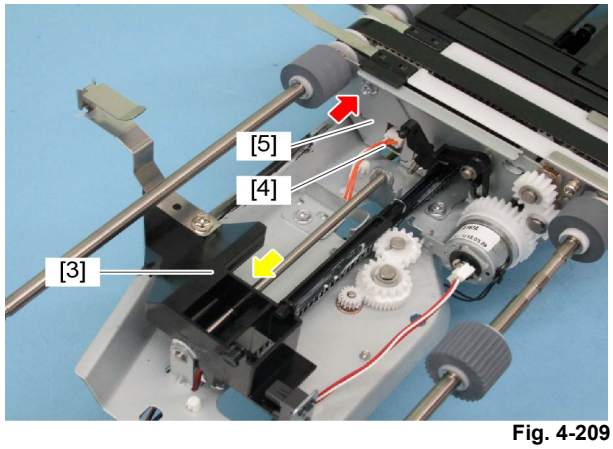


Fig. 4-209

(6) Release the latch, and then disconnect the connector to take off the stack exit belt home position sensor [6].

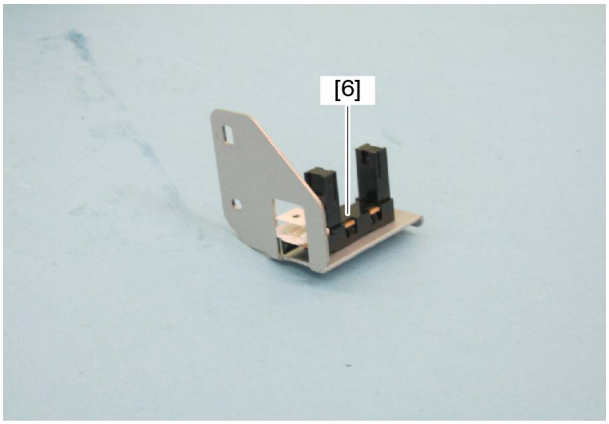


Fig. 4-210

[I] Stapler unit home position sensor (S10)

(1) Open the front upper cover.
(2) Move the stapler to the position where the stapler unit home position sensor is seen.
(3) Release the latch, and then disconnect the connector to take off the stapler unit home position sensor.

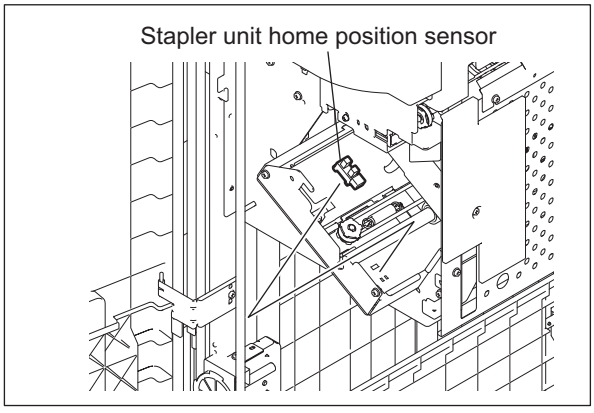


Fig. 4-211

[J] Stapler interference sensor (S11) / Actuator

(1) Take off the stapler.
📖 P. 4-29 "[E] Stapler"
(2) Release the latch, and then disconnect the connector to take off the stapler interference sensor.

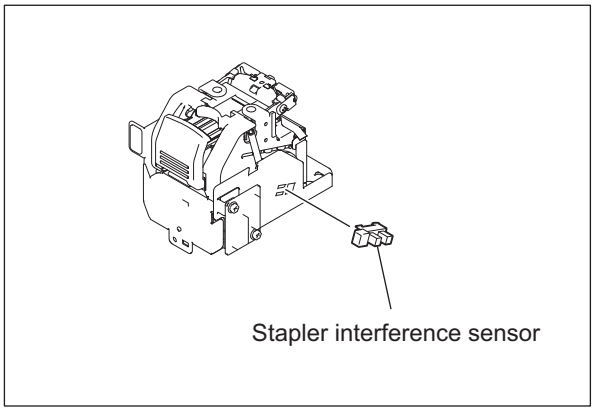


Fig. 4-212

(3) Remove the clip, and then take off the stapler base frame.

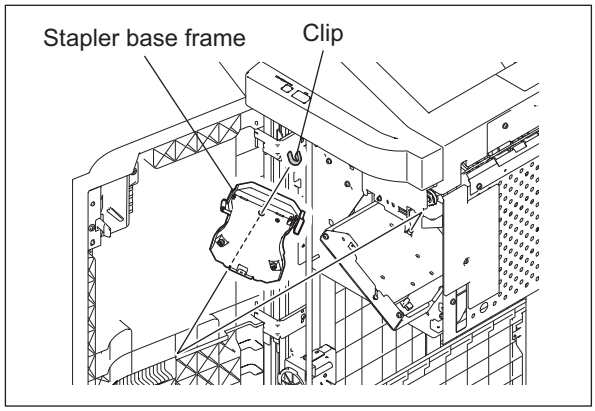


Fig. 4-213

(4) Remove the spring, and then remove the clip to take off the actuator.

Notes:

When installing the actuator, be sure to insert the clip from the side of the actuator.

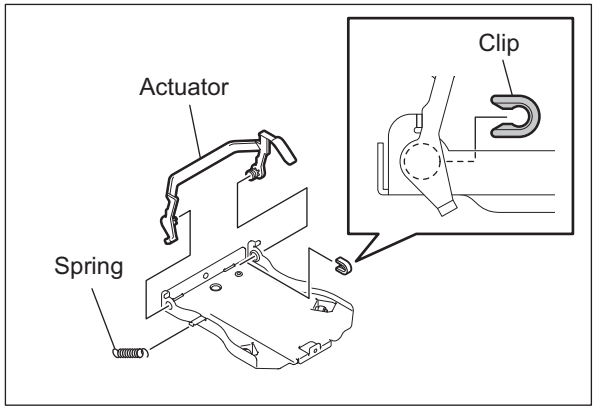


Fig. 4-214

[K] Finishing tray paper detection sensor (S12)

(1) Take off the finishing unit.
📖 P. 4-21 "[C] Finishing tray unit"

(2) Remove 2 screws.

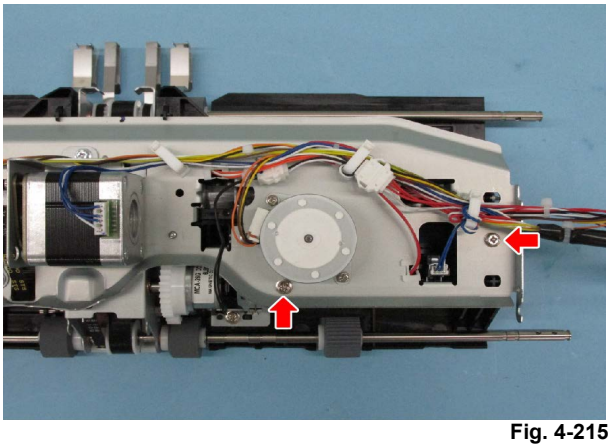


Fig. 4-215

(3) Turn over the finishing tray unit. Slide the front finishing tray cover [3] to outside and lift it up. Release the link portion [4] inside the front finishing tray cover to take it off.

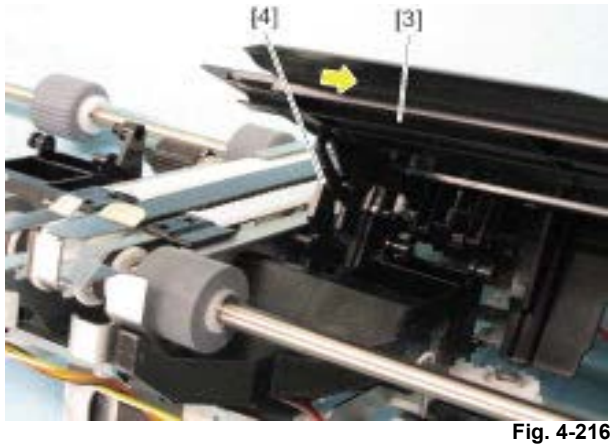


Fig. 4-216

(4) Disconnect the connector from the finishing tray paper detection sensor [5] and take off the rear finishing tray cover [3].

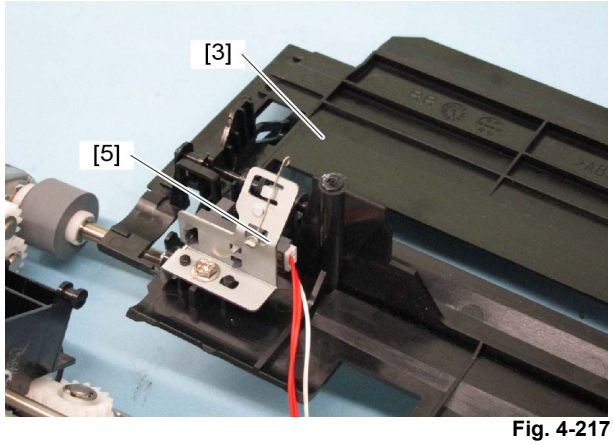


Fig. 4-217

(5) Remove the screw and take off the sensor bracket [6].

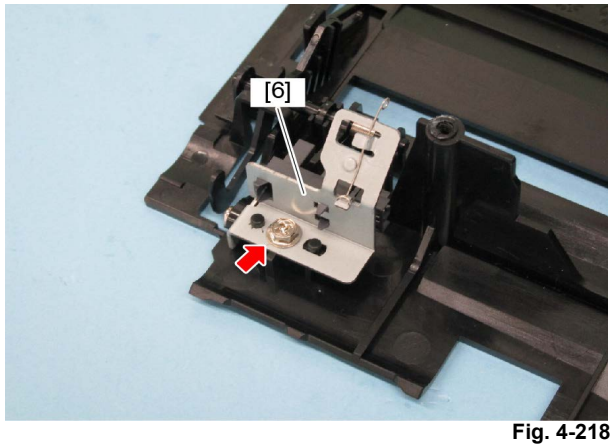


Fig. 4-218

(6) Release the latch, disconnect the connector and take off the finishing tray paper detection sensor [7].

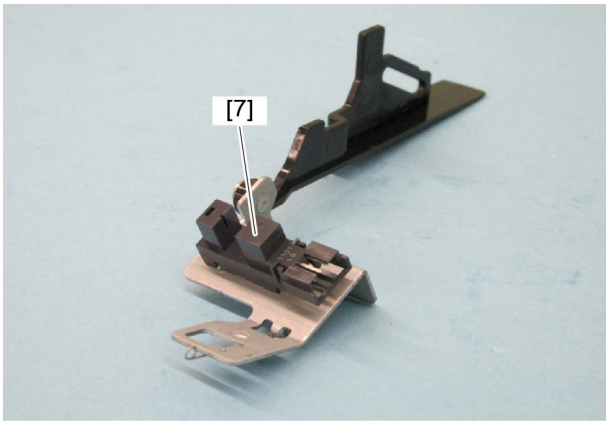


Fig. 4-219

[L] Movable tray position-A sensor (S13) / Movable tray position-B sensor (S14) / Movable tray position-C sensor (S15)

(1) Take off the rear upper cover.
P. 4-1 "[A] Rear upper cover / Rear lower cover"

(2) Remove 2 screws, and then take off the sensor rail by moving each movable tray to the highest position.

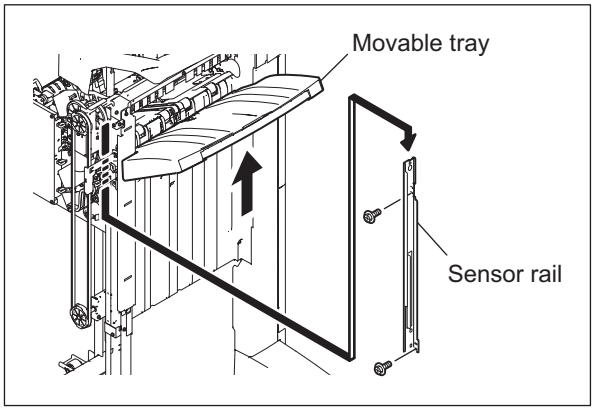


Fig. 4-220

Notes:

When installing the movable tray drive unit, fix it at the position where the gap between the center mark of the scale on the sensor rail and the edge of the movable tray position-A sensor is from 0 to 1 mm. Be sure to adjust the installation position by shifting the movable tray shift frame and measure the positions at the upper and lower measuring points on the sensor rail as shown in the figure

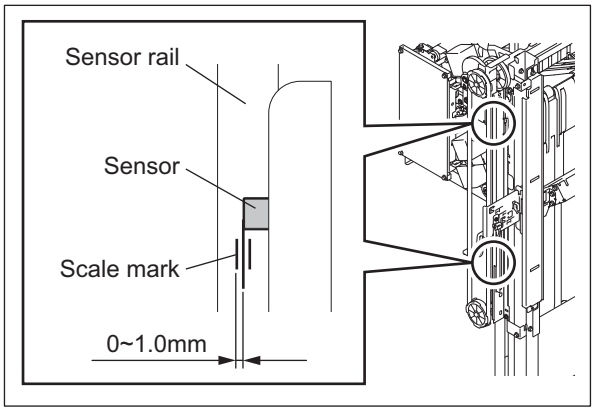


Fig. 4-221

(3) Move back each movable tray to the middle position. When lowering each tray, press the gear of the movable shift motor unit in the direction of the arrow, and then release the lock to lower each tray. (Be sure to hold the movable trays by hands because they fall when the gear is pressed.)

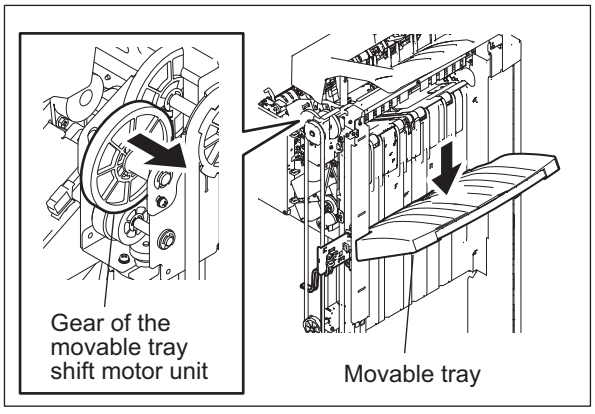


Fig. 4-222

(4) Release the latch, and then disconnect the connectors to take off the movable tray position-A sensor, movable tray position-B sensor and movable tray position-C sensor.

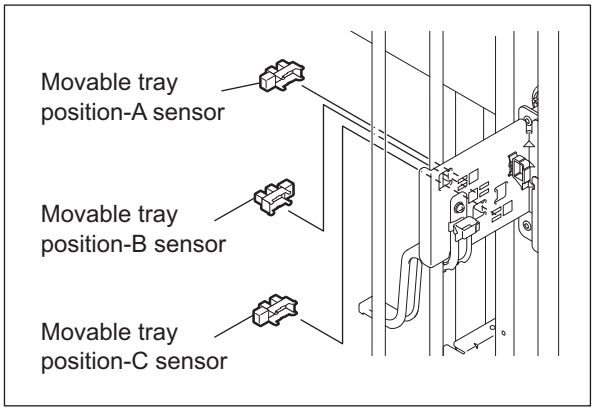


Fig. 4-223

[M] Movable tray paper-full sensor (S16)

(1) Take off the grate-shaped guide.
📖 P. 4-9 "[L] Grate-shaped guide"
(2) Move the shutter upward.
(3) Release the latch, and then disconnect the connector to take off the movable tray paper-full sensor [1].

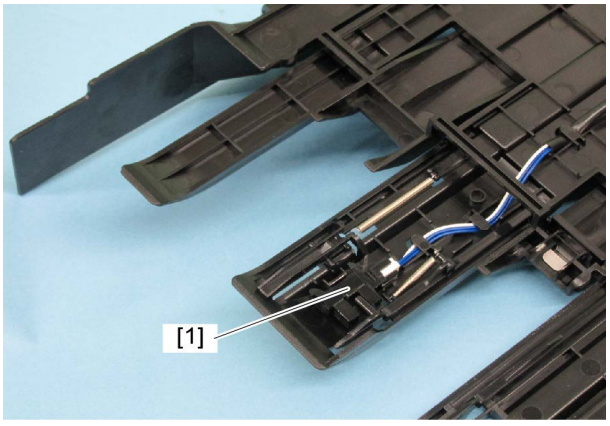


Fig. 4-224

[N] Movable tray paper exist sensor (S17)

(1) Take off the movable tray cover.
📖 P. 4-6 "[G] Movable tray cover"
(2) Disconnect the connector [1] of the movable tray paper exist sensor.
(3) Release the latch, and then take off the movable tray paper exist sensor [2].

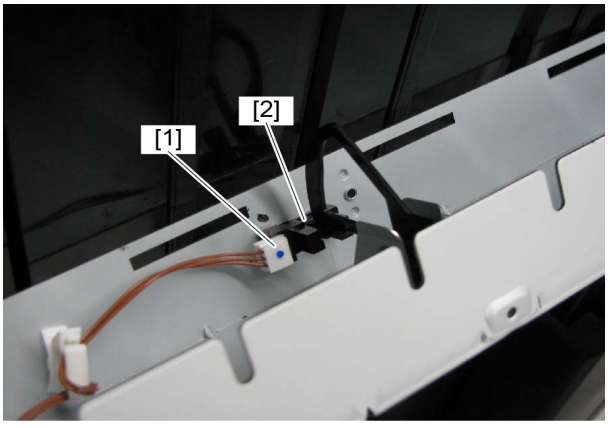


Fig. 4-225

[O] Stationary tray paper-full sensor (S18)

(1) Take off the stationary tray cover.
🕮 P. 4-12 "[N] Stationary tray cover"

(2) Hold up the jam access lever. Then remove 1 screw and disconnect the connector to take off the bracket.

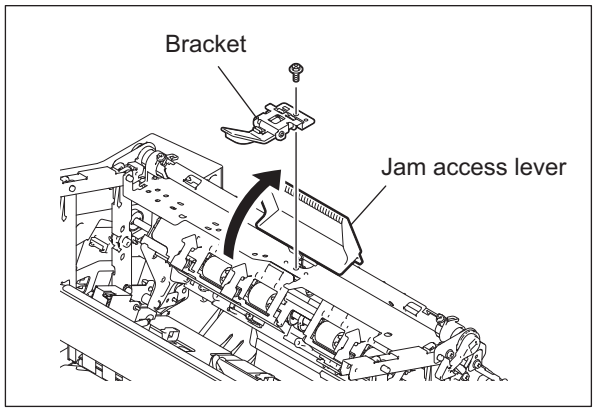


Fig. 4-226

(3) Remove 1 screw, and then take off the actuator and the spacer.

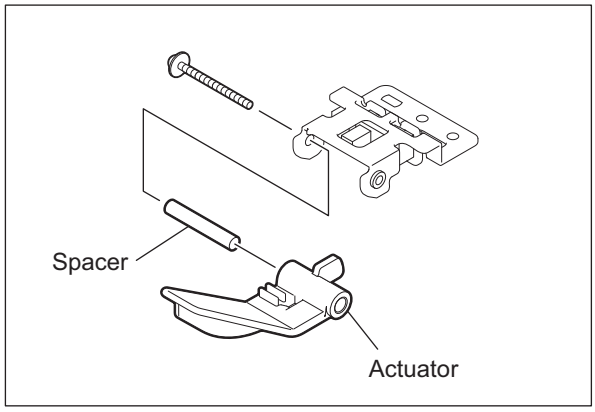


Fig. 4-227

(4) Release the latch, and then take off the stationary tray paper-full sensor.

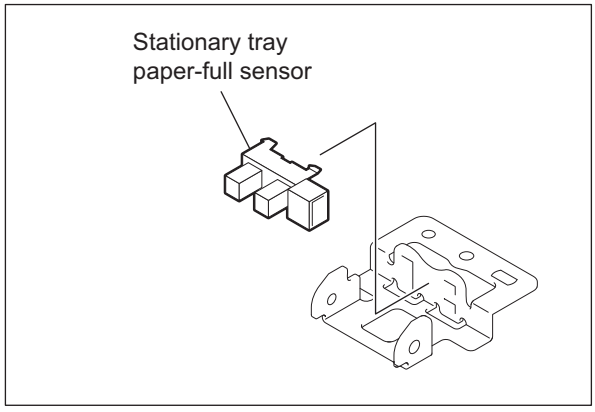


Fig. 4-228

[P] Front cover switch (SW1)

(1) Take off the rear upper cover and the rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Take off the left upper cover.
📖 P. 4-2 "[B] Left upper cover"
(3) Take off the control panel unit.
📖 P. 4-2 "[C] Control panel unit"
(4) Remove 2 screws, and then take off the switch bracket.

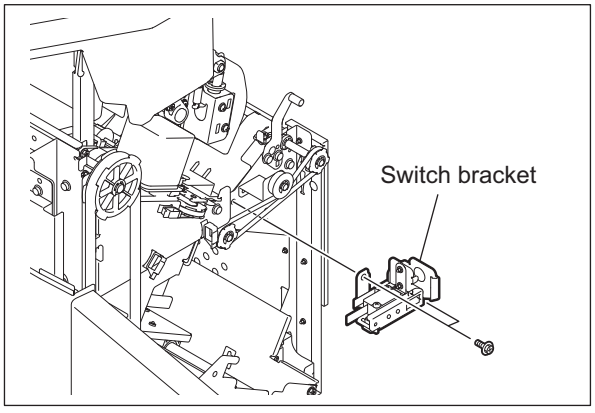


Fig. 4-229

(5) Remove 2 screws, and then take off the front cover switch.

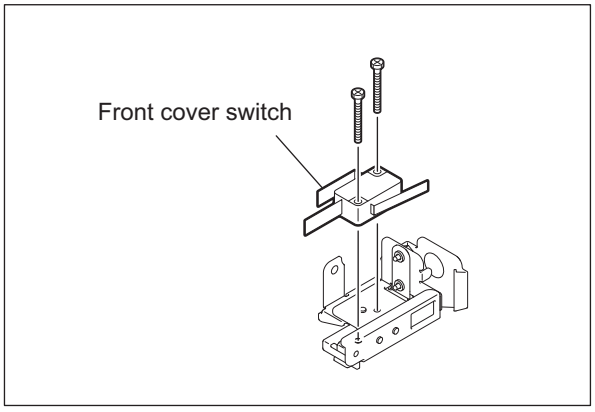


Fig. 4-230

[Q] Stationary tray opening/closing switch (SW2)

(1) Take off the rear upper cover / rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"
(2) Remove 1 screw and take off the grounding wire [3].
(3) Release the PC board cover [4] from 2 harness clamps [5].

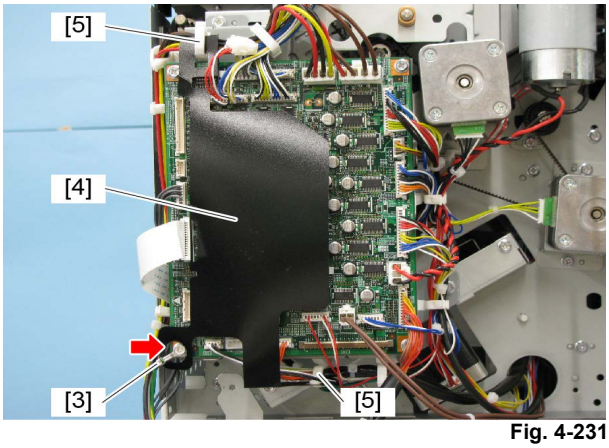


Fig. 4-231

(4) Disconnect all the connectors on the finisher control PC board and release the harness from the harness clamp.
(5) Remove 3 screws and take off the bracket [6] of the finisher control PC board.

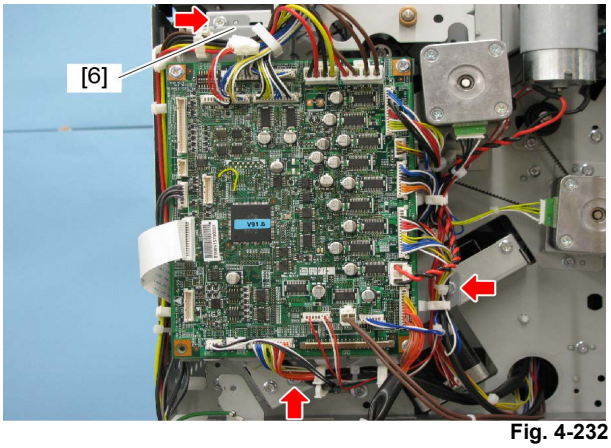


Fig. 4-232

(6) Remove 5 screws and take off the motor bracket [7].

Notes:
Pay full attention not to lose the bushing [8] while taking off the motor bracket [7].

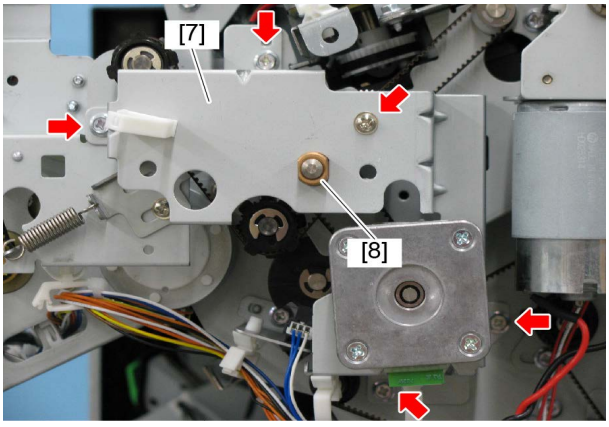


Fig. 4-233

(7) Loosen 1 screw. Push the pulley [9] in the direction indicated by the arrow to loosen the belt tension and tighten the screw.
(8) Remove the belts [10] and [11], the part assembled [12] and the bearing.

Notes:
Pay full attention not to lose the bearing while taking off the part assembled [12].

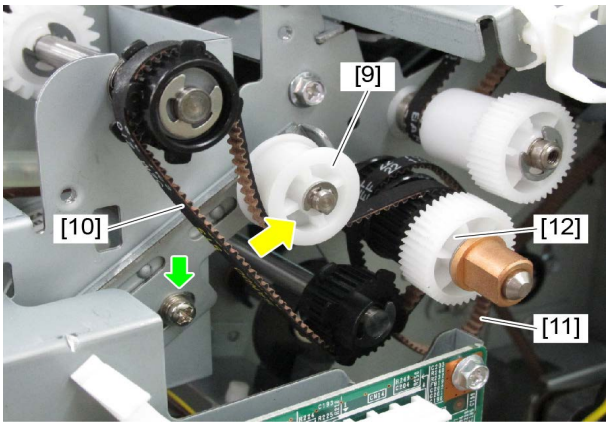


Fig. 4-234

(9) Remove 1 E-ring [13], bearing [14] and take off the shaft [15].

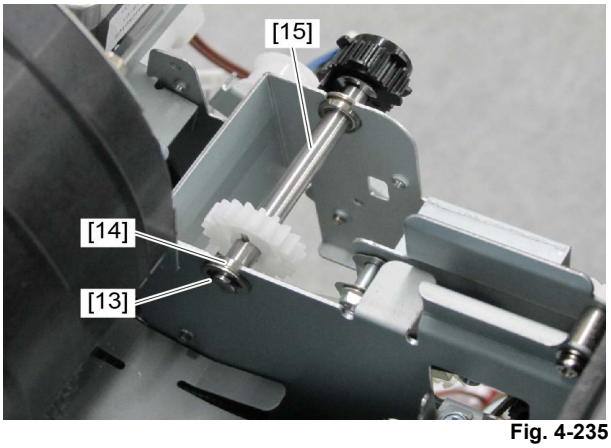


Fig. 4-235

(10) Remove 2 screws and take off the switch bracket [16].

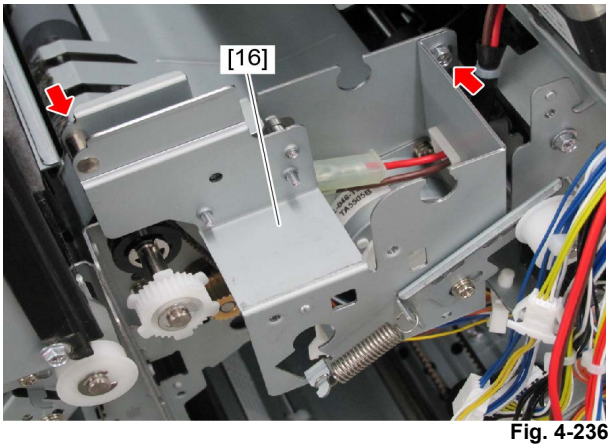


Fig. 4-236

(11) Disconnect the connector [17].
(12) Remove 2 screws and take off the stationary tray opening/closing switch [18].

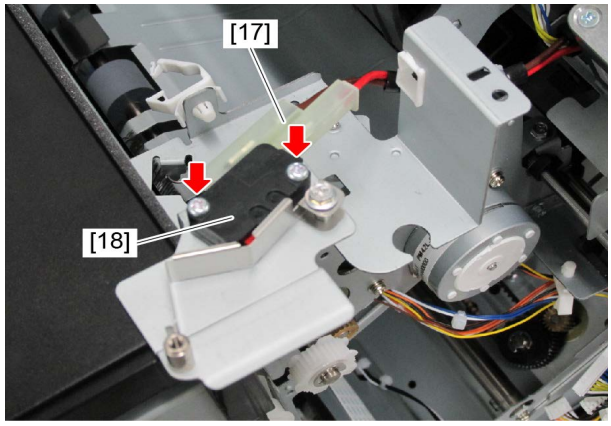


Fig. 4-237

[R] Stapler interference switch (SW3)

(1) Take off the stapler unit.
📖 P. 4-28 "[D] Stapler unit"
(2) Disconnect the connector [1].
(3) Remove 2 screws and take off the stapler interference switch [2].

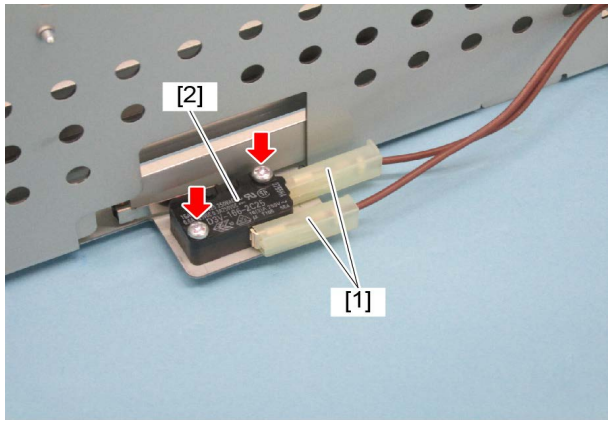


Fig. 4-238

4.7 PC Boards / Discharge Brush

[A] Finisher control PC board (FIN board)

Notes:

After the Finisher control PC board (FIN board) has been replaced, check that the firmware is the latest version. If not, upgrade it.

For updating firmware of the finisher, refer to “FIRMWARE UPDATING” in the Service Manual for MFP.

(1) Take off the rear upper cover/rear lower cover.
📖 P. 4-1 "[A] Rear upper cover / Rear lower cover"

(2) Remove 1 screw and take off the grounding wire [3].

(3) Release the PC board cover [4] from 2 harness clamps [5].

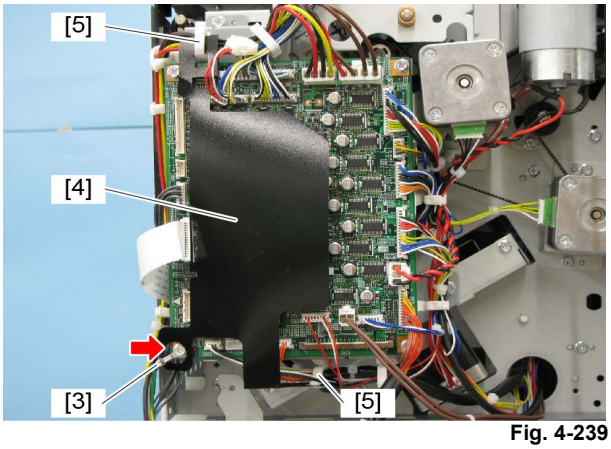


Fig. 4-239

(4) Disconnect all the connectors on the finisher control PC board and release the harness from the harness clamp.

(5) Remove 3 screws, and then take off the FIN board [6].

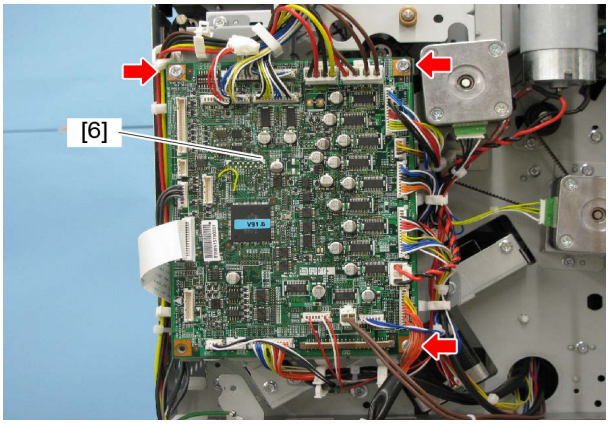


Fig. 4-240

[B] Front stationary tray discharge brush / Rear stationary tray discharge brush

(1) Take off the stationary tray cover.
P. 4-12 "[N] Stationary tray cover"

(2) Loosen 1 side screw. Remove 2 screws, and then take off the front stationary tray discharge brush.

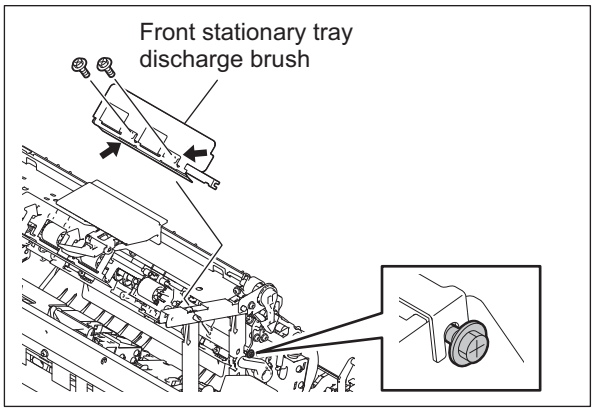


Fig. 4-241

(3) Loosen 1 side screw. Remove 2 screws, and then take off the rear stationary tray discharge brush.

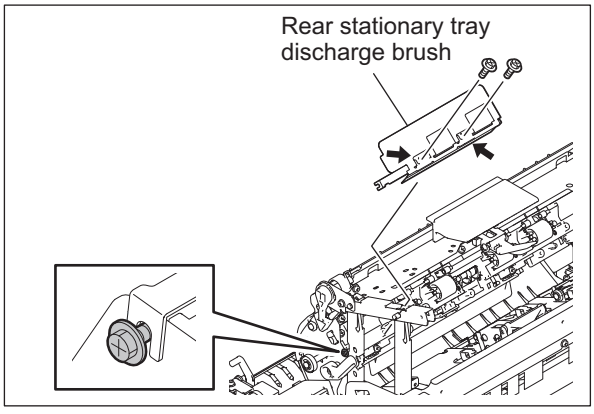


Fig. 4-242

[C] Paper exit discharge brush

(1) Open the stationary tray.
(2) Loosen 3 screws, and then take off the paper exit discharge brush.

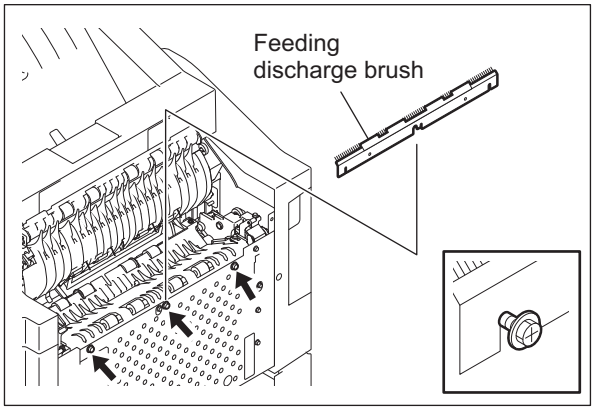


Fig. 4-243

4.8 Procedure for lowering the movable tray

The movable tray can be lowered by releasing its driving gear without disassembling the finisher.

(1) Pull out the jam access cover [1] and open the stationary tray [2].

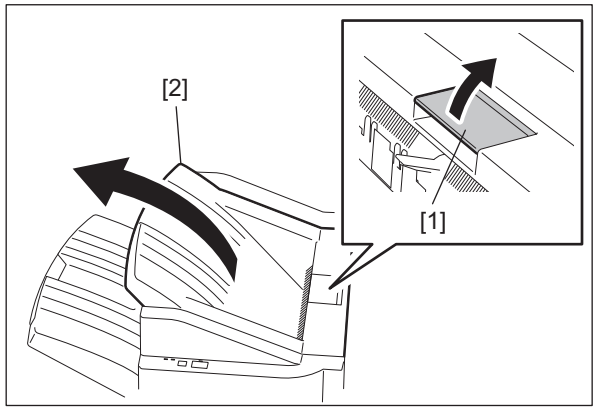


Fig. 4-244

(2) While the movable tray [1] is held with your hand, insert the screwdriver in the hole-B on the rear cover.

Notes:

- Be sure to hold the movable tray with your hands because it may fall when the screwdriver is pushed.
- Use a screwdriver with a diameter of 8 mm or less.

Remarks:

Since the insertion of the screwdriver has released the driving gear of the movable tray [1], it can now be lowered. If the screwdriver is taken out, the movable tray [1] will stop in that particular position.

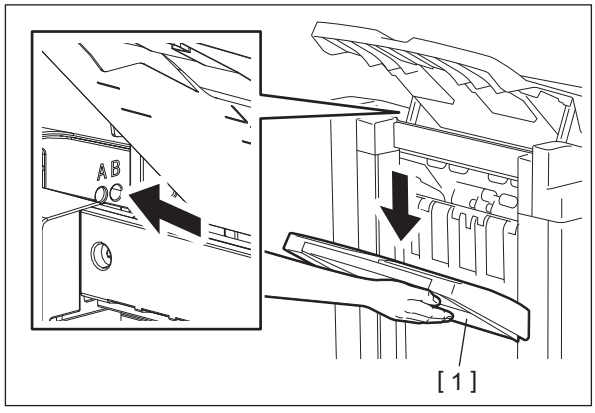


Fig. 4-245

(3) The movable tray can be moved upward without being released by the screwdriver.

Notes:

Be sure that the movable tray does not stay above its paper-full sensor. If printing is performed with the sensor turned ON, “Movable tray paper-full detection error” (CB31) will occur. The movable tray must be moved lower than the sensor.

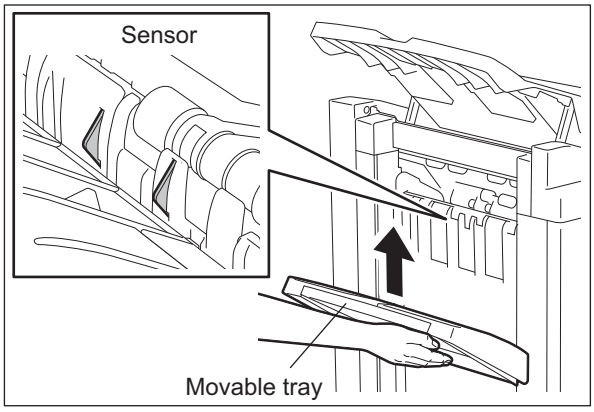


Fig. 4-246

5. ADJUSTMENTS

Notes:

Before performing each adjustment, make sure that all covers (incl. those of the finisher and host machine) are closed. Otherwise, the power is not supplied to the finisher and the adjustment may not be performed properly.

5.1 Adjusting the Aligning Position for the Finishing Tray

Perform this adjustment after replacing the Finisher control board or when the alignment position must be changed for some reasons.

[A] Reading/writing of the adjustment value with the self-diagnostic mode

Item to be adjusted		Code	Remarks
Horizontal position of the paper	A-series paper	FS-05-4838-1	0: Finisher not installed 1: -2.10mm 2: -1.68mm 3: -1.26mm 4: -0.84mm 5: -0.42mm 6: 0.00mm 7: +0.42mm 8: +0.84mm 9: +1.26mm 10: +1.68mm 11: +2.10mm
	LT-series paper	FS-05-4838-2	

If the adjustment values can be confirmed from the pre-change board during its replacement, read them from the connected equipment and then enter them into the post-change one.
A4-size adjustment value check: Perform FS-05-4838-1.
LT-size adjustment value check: Perform FS-05-4838-2.

If the adjustment values cannot be confirmed, perform “[B] Adjustment with DIP-SW”.

[B] Adjustment with DIP-SW

Adjustment must be performed with 2 types of adjustment sheets for the A4 and LT series.
The adjustment value of A4 will be applied to the operation with A3, A4, A4-R, B4, B5, FOLIO, 8K, 16K.
The adjustment value of LT will be applied to the operation with LD, LG, LT, LT-R, COMP, 13 LG, 8.5” SQ.

(1) Turn OFF the power of the equipment.

(2) Remove 1 screw and take off the board access cover [1].

(3) Set the SW1 [2] on the Finisher control board as shown in the figures below.

Adjusting for A4 size paper: Turn ON pins 2 and 4.

Adjusting for LT size paper: Turn ON pins 1, 2, and 4.

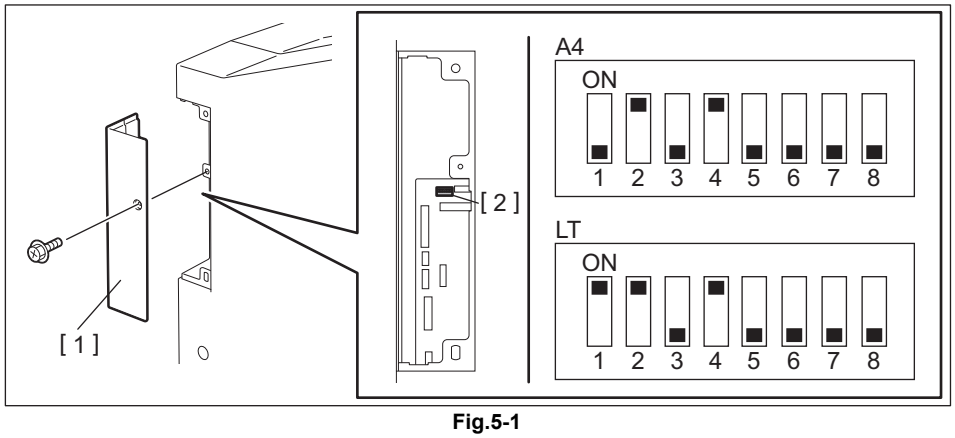


Fig.5-1

(4) Start the equipment in the HS mode.
The alignment plate moves to the SW1 set position and then stops.

(5) Press the [Button1] to adjust the alignment position.
Every time [Button1] is pressed, the alignment plate shifts by 0.42 mm.
(The gap between the alignment plates becomes narrower.)

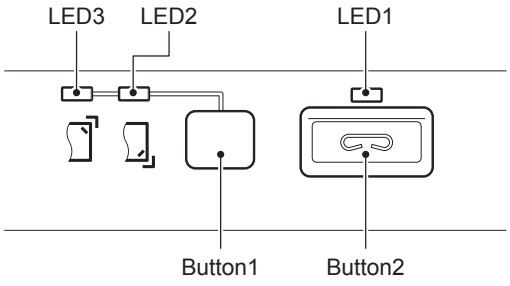


Fig.5-2

(6) Place the adjustment sheet [1] on the process tray and adjust the position to make the gap between paper and the alignment plate [2] “0”.
Then setting is performed at a value that is one smaller than the adjustment value.

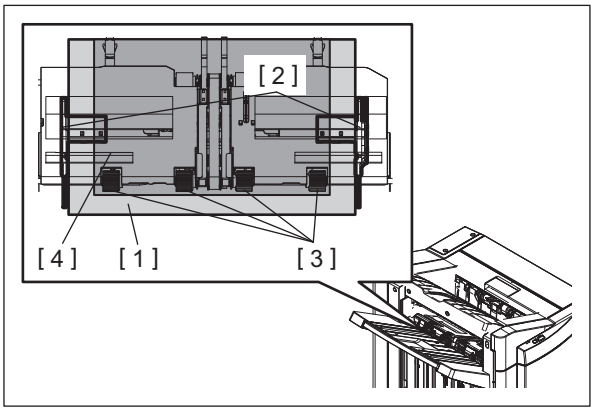


Fig.5-3

Remarks:

- Use an adjustment sheet [1] made of plastic resin which is light and accurate in measurement (e.g. OHP film).
- To reduce frictional resistance with the vertical alignment roller [3] on the process tray, place a sheet of B5 paper [4] beneath the adjustment sheet [1] on the vertical alignment roller [3].
- Confirm the gap between paper and the alignment plate [2] by moving the adjustment sheet [1] forward and backward.

(7) When the adjustment is completed, press [Button2] on the finisher control panel to store the adjustment value in memory.
When the value is stored normally, [LED1] on the control panel will blink for the number of times that corresponds to the adjustment value set for the equipment.
See the following table for the number of times the [LED1] blinks and its corresponding moved amount (mm).

Number of Blinking	Distance from the center value (mm)
1	-2.10
2	-1.68
3	-1.26
4	-0.84
5	-0.42
6	Center value (0.00)
7	+0.42
8	+0.84
9	+1.26
10	+1.68
11	+2.10

(8) Turn OFF the power of the equipment.

(9) Turn OFF all bits of the SW1 on the Finisher control board.

(10) Install the board access cover.

5.2 Adjusting the Stapling Position

Perform this adjustment after replacing the Finisher control board or when the stapling position must be changed for some reasons.

[A] Reading/writing of the adjustment value with the self-diagnostic mode

Item to be adjusted	Code	Remarks
Stapling position	FS-05-4838-3	0: Finisher not installed 1: -2.16mm 2: -1.89mm 3: -1.62mm 4: -1.35mm 5: -1.08mm 6: -0.81mm 7: -0.54mm 8: -0.27mm 9: 0.00mm 10: +0.27mm 11: +0.54mm 12: +0.81mm 13: +1.08mm 14: +1.35mm 15: +1.62mm 16: +1.89mm 17: +2.16mm

If the adjustment values can be confirmed from the pre-change board during its replacement, read them from the connected equipment and then enter them into the post-change one.
Adjustment value check (common for A4-size and LT-size): Perform FS-05-4838-3.

If the adjustment values cannot be confirmed, perform "[B] Adjustment with DIP-SW".

[B] Adjustment with DIP-SW

(1) Turn OFF the power of the equipment.

(2) Remove 1 screw and take off the board access cover [1].

(3) Set the SW1 [2] on the Finisher control board as shown in the figures below.

- **When adjusting the rear side for A4 size paper:**
  Turn ON pins 1, 3, and 4.
- **When adjusting the front side for A4 size paper:**
  Turn ON pins 3 and 4.
- **When adjusting the rear side for LT size paper:**
  Turn ON pins 1, 2, 3, and 4.
- **When adjusting the front side for LT size paper:**
  Turn ON pins 2, 3, and 4.

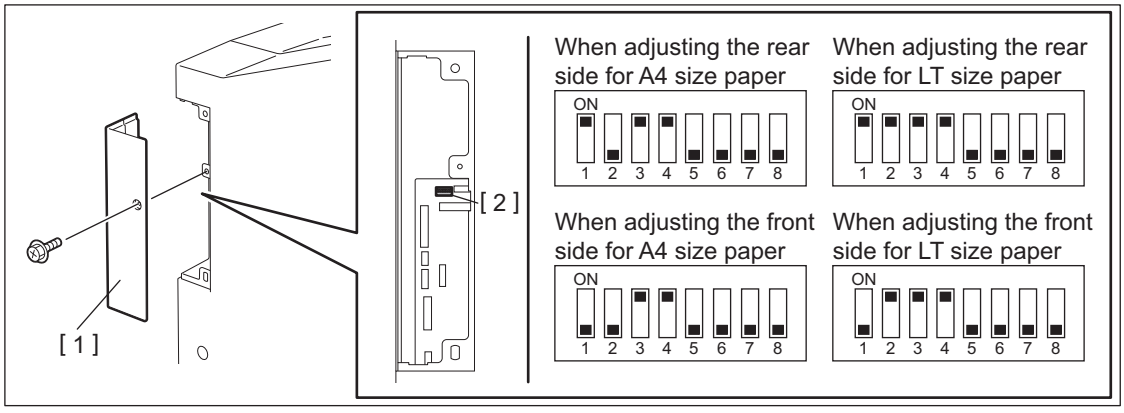


Fig.5-4

Remarks:
Although there are four setting types for the SW1 as shown above, perform only one of them since the adjustment values are used in common.

(4) Start the equipment in the HS mode.
The staple unit moves to the rear or front side stapling position and stops. (It stops at the position of -2.16 mm (at the front side) from the center value of the adjustment range.)

(5) Press [Button 1] to adjust the stapling position.
Every time [Button 1] is pressed, the staple unit shifts by +0.27 mm (toward the rear side).)
Adjustment range is from -2.16 to +2.16 mm. If [Button 1] is pressed when the alignment position is at +2.16 mm, the unit will return to -2.16 mm.

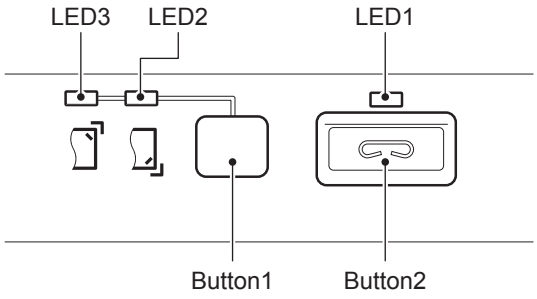


Fig.5-5

(6) When the adjustment is completed, press [Button 2] on the finisher control panel to store the adjustment value in memory without sheets on the finishing tray.
When the value is stored normally, [LED 1] on the control panel will blink for a number of times that corresponds to the adjustment value set for the equipment.
See the following table for the number of times [LED 1] blinks and its corresponding adjustment value.

Number of blinking	Distance from the center value (mm)
1	-2.16
2	-1.89
3	-1.62
4	-1.35
5	-1.08
6	-0.81
7	-0.54
8	-0.27
9	Center value (0.00)
10	+0.27
11	+0.54
12	+0.81
13	+1.08
14	+1.35
15	+1.62
16	+1.89
17	+2.16

(7) Turn OFF the power of the equipment.

(8) Turn OFF all bits of the SW1 on the Finisher control board.

(9) Install the board access cover.

6. TROUBLESHOOTING

Notes:

When an earth cable of the equipment is not connected securely, paper leading edge might be stapled or the position of Saddle Stitch Finisher folding might be misaligned.
If these problems occur, make sure that the earth cable of the equipment is connected securely.

You can check the operations of electric parts (motors, clutches, solenoids, sensors and switches) with self-diagnostic modes.(📖 P. 6-33 "6.4 Self-Diagnostic Modes")

Notes:

When an abnormal noise occurs in the grate-shaped guide or the trailing edge of the paper stacked on the tray is dirty, apply coating material (SANKOL CFD-409M) by using a cleaning brush to the portion on the guide with which the paper edge is in contact. (📖 P. 7-1 "7.1 Maintenance and Inspection Points")

6.1 Error Code List

The following error codes is displayed at the upper right of the screen when the “CLEAR PAPER” or “CALL SERVICE” symbol is blinking.

Remarks:

Elision character of the “Error code display media”
Panl: Operation panel
JLog: JobLog (TopAccess Print Log - Scan Log)
ML: Message Log (TopAccess Message Log)
Noti: Notification
CSV: CSV output (List print)
Y: Yes
2nd: An error status has been detected twice (= error code has been determined)

6.1.1 Jam

Error code	Classification	Message	Contents	Error code display media					Troubleshooting
				Panl	JL	ML	Noti	CSV	
E9F0	Finisher jam (Puncher unit)	Hole Punch Unit Jam in Finisher - Please Clear Hole Punch.	[MJ-6105] Paper jam at the hole punch unit	Y	-	Y	Y	-	P. 6-14
EA10	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper transport delay non-inserting jam	Y	-	Y	Y	-	P. 6-6
EA20	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam	Y	-	Y	Y	-	P. 6-7
EA21	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper size error jam:	Y	-	Y	Y	-	P. 6-7
EA22	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	[MJ-6105] Paper size error jam (paper position sensor)	-	-	Y	Y	-	P. 6-7
EA23	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam (transport sensor):	-	-	Y	Y	-	P. 6-8
EA24	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam (between the entrance and transport sensors):	-	-	Y	Y	-	P. 6-8

Error code	Classification	Message	Contents	Error code display media					Troubleshooting
				Panl	JL	ML	Noti	CSV	
EA25	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam (after the exiting of a stack of the paper is completed)	-	-	Y	Y	-	P. 6-9
EA26	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam (stop command request)	-	-	Y	Y	-	P. 6-9
EA27	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam (paper not inserted but detected)	-	-	Y	Y	-	P. 6-9
EA28	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam (paper holder plate operation delay)	-	-	Y	Y	-	P. 6-10
EA29	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper stopping jam (stack transport operation delay)	-	-	Y	Y	-	P. 6-10
EA31	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper remaining jam in the transport path	Y	-	Y	Y	-	P. 6-11
EA32	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Paper remaining jam at the paper exit	Y	-	Y	Y	-	P. 6-11
EA40	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Cover open error	Y	-	Y	Y	-	P. 6-12
EA50	Finisher jam (Finisher section)	Staple Jam in Finisher - Please Clear Staple.	Stapling jam	Y	-	Y	Y	-	P. 6-12
EA60	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Early arrival jam	Y	-	Y	Y	-	P. 6-12
EA70	Finisher jam (Finisher section)	Paper Jam in Finisher - Please Clear Paper Path.	Stack exit belt home position error	Y	-	Y	Y	-	P. 6-13
EAFA	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Catching motor home position detection error (paper jam)	-	-	-	-	-	
EAFB	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Stapler movement error (paper jam)	-	-	-	-	-	P. 6-22
EAFC	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Movable tray height error (paper jam)	-	-	-	-	-	P. 6-20
EAFD	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Movable tray movement error (paper jam)	-	-	-	-	-	P. 6-21
EAFE	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Paper holding cam position error (paper jam)	-	-	-	-	-	P. 6-19
ED10	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	[MJ-6105] Skew adjustment motor (M1) home position detection error	Y	-	Y	Y	-	P. 6-15
ED11	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	[MJ-6105] Sideways adjustment motor (M2) home position detection error	Y	-	Y	Y	-	P. 6-15

Error code	Classification	Message	Contents	Error code display media					Troubleshooting
				Panl	JL	ML	Noti	CSV	
ED13	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Front alignment plate home position error	Y	-	Y	Y	-	P. 6-15
ED14	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Rear alignment plate home position error	Y	-	Y	Y	-	P. 6-16
ED15	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Paddle home position error	Y	-	Y	Y	-	P. 6-16
ED16	Finisher jam	Paper Jam in Finisher - Please Clear Paper Path.	Buffer tray home position error	Y	-	Y	Y	-	P. 6-17

6.1.2 Service call

Error code	Classification	Message	Contents	Error code display media					Troubleshooting
				Panl	JL	ML	Noti	CSV	
CB00	Finisher related service call	Fatal Error - Please Contact Service Technician.	Finisher not connected	2nd	-	Y	Y	-	P. 6-18
CB01	Finisher related service call	Fatal Error - Please Contact Service Technician.	Finisher communication error	2nd	-	Y	Y	-	P. 6-18
CB10	Finisher related service call	Fatal Error - Please Contact Service Technician.	Entrance motor abnormality	2nd	-	Y	Y	-	P. 6-18
CB11	Finisher related service call	Fatal Error - Please Contact Service Technician.	Buffer tray guide motor abnormality	2nd	-	Y	Y	-	P. 6-18
CB13	Finisher related service call	Fatal Error - Please Contact Service Technician.	Finisher exit motor abnormality	2nd	-	Y	Y	-	P. 6-19
CB14	Finisher related service call	Fatal Error - Please Contact Service Technician.	Paper holding arm motor abnormality	2nd	-	Y	Y	-	P. 6-19
CB15	Finisher related service call	Fatal Error - Please Contact Service Technician.	Catching motor abnormality						
CB30	Finisher related service call	Printer Output Error.	Movable tray shift motor abnormality	2nd	-	Y	Y	-	P. 6-20
CB31	Finisher related service call	Fatal Error - Please Contact Service Technician.	Movable tray paper-full detection error.	2nd	-	Y	Y	-	P. 6-21
CB40	Finisher related service call	Printer Output Error.	Front alignment motor abnormality	2nd	-	Y	Y	-	P. 6-21
CB50	Finisher related service call	Printer Output Error.	Stapler home position error	2nd	-	Y	Y	-	P. 6-22
CB51	Finisher related service call	Fatal Error - Please Contact Service Technician.	Stapler shift home position error	2nd	-	Y	Y	-	P. 6-22
CB60	Finisher related service call	Printer Output Error.	Stapler shift motor abnormality	2nd	-	Y	Y	-	P. 6-22
CB80	Finisher related service call	Printer Output Error.	Backup RAM data abnormality	2nd	-	Y	Y	-	P. 6-23
CB81	Finisher related service call	Fatal Error - Please Contact Service Technician.	Flash ROM abnormality	2nd	-	Y	Y	-	P. 6-23
CB82	Finisher related service call	Fatal Error - Please Contact Service Technician.	Finisher - Main CPU program error	2nd	-	Y	Y	-	P. 6-23
CB84	Finisher related service call	Fatal Error - Please Contact Service Technician.	[MJ-6105] Hole punch unit - Main CPU program error	2nd	-	Y	Y	-	P. 6-23
CC30	Finisher related service call	Fatal Error - Please Contact Service Technician.	Stack transport motor abnormality	2nd	-	Y	Y	-	P. 6-24
CC31	Finisher related service call	Fatal Error - Please Contact Service Technician.	Transport motor abnormality	2nd	-	Y	Y	-	P. 6-24
CC41	Finisher related service call	Fatal Error - Please Contact Service Technician.	Paper holder cam home position abnormality	2nd	-	Y	Y	-	P. 6-24

Error code	Classification	Message	Contents	Error code display media					Troubleshooting
				Panl	JL	ML	Noti	CSV	
CC51	Finisher related service call	Fatal Error - Please Contact Service Technician.	[MJ-6105] Sideways adjustment motor (M2) abnormality	2nd	-	Y	Y	-	P. 6-25
CC52	Finisher related service call	Fatal Error - Please Contact Service Technician.	[MJ-6105] Skew adjustment motor (M1) abnormality	2nd	-	Y	Y	-	P. 6-25
CC61	Finisher related service call	Fatal Error - Please Contact Service Technician.	[MJ-6105] Punch motor (M3) home position detection error	2nd	-	Y	Y	-	P. 6-26
CC71	Finisher related service call	Fatal Error - Please Contact Service Technician.	[MJ-6105] Punch ROM checksum error	Y	-	Y	Y	-	P. 6-26
CC72	Finisher related service call	Fatal Error - Please Contact Service Technician.	[MJ-6105] Punch RAM read/write error	Y	-	Y	Y	-	P. 6-26
CC80	Finisher related service call	Fatal Error - Please Contact Service Technician.	Rear alignment motor abnormality	2nd	-	Y	Y	-	P. 6-27
CDE0	Finisher related service call	Printer Output Error.	Paddle motor abnormality	2nd	-	Y	Y	-	P. 6-27
CE00	Finisher related service call	Fatal Error - Please Contact Service Technician.	[MJ-6105] Communication error between the finisher and the punch unit	2nd	-	Y	Y	-	P. 6-27
CF10	Finisher related service call	Printer Output Error.	Communication module writing failure	2nd	-	Y	Y	-	P. 6-28

6.2 Diagnosis and Prescription for Each Error Code

6.2.1 Check item

Check item	Classification
Sensor check	• Check the sensor in the test mode. • Check that there is no dust on the sensor. • Check that the actuator is correctly operated.
Connector check	• Check that the connector is not disconnected. • Check that the pins are not deformed and do not come off. • Disconnect and reconnect the connector. Even if the connector is not apparently disconnected, it may be connected loosely. Therefore check carefully that it is secure.
Harness check	• Check if the harnesses are open circuited. • Check that the harness is not caught.
Motor check	• Check the motor in the test mode. • Check that there is no abnormality in the driving section. • Check that there is no abnormality in the roller.
Board check	• Check if the board is short circuited or open circuited. • Check that the boards are installed properly. • Check if the boards are deformed due to a forcible installation.

6.2.2 Paper jam in finisher section

[EA10] Transport delay jam (paper not inserted)

Classification	Error content
Paper jam in finisher section	Transport delay jam (paper not inserted)

Check item	Measures
Sensor Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Feeding sensor (S22)	Check if there is a disconnection of the connector, incorrect installation or breakage of the feeding sensor (S22). If there is, reinstall the sensor correctly or replace it.
Transport path switching solenoid (SOL5)	Check that the gap between the transfer guide surface and the upper surface of the flapper tip is in the acceptable range according to the status of the transport path switching solenoid (SOL5) (solenoid OFF: 1.5 to 2.1 mm, solenoid ON: 2.3 to 2.9 mm). If it is not, adjust it. Check the harness between the transport path switching solenoid (SOL5) and the finisher controller board (CN1). If there is any abnormality, correct it.
Entrance motor (M1)	Check the harness between the entrance motor (M1) and the finisher controller board (CN17). If there is any abnormality, correct it.
Finisher control PC board (FIN)	• Board check • Connector check (CN1, CN17) • Harness check

Parts to be replaced	Remark
Feeding sensor (S22)	
Transport path switching solenoid (SOL5)	
Entrance motor (M1)	
Finisher control PC board (FIN)	

[EA20] Paper transport stop jam (entrance sensor)

Classification	Error content
Paper jam in finisher section	Paper transport stop jam (entrance sensor)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Entrance sensor (S1)	• Sensor check • Connector check • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN8) • Harness check
Assist guide	Check that there is no abnormality in the adjustment for its height.

Parts to be replaced	Remark
Entrance sensor (S1)	
Finisher control PC board (FIN)	
Assist guide	

[EA21] Paper size error jam (transport sensor)

Classification	Error content
Paper jam in finisher section	Paper size error jam (transport sensor) Paper size error jam (punch paper edge sensor)

Check item	Measures
Paper	• Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is. • Use paper accepted in the specifications.
Entrance sensor (S1)	• Sensor check • Connector check • Harness check
Transport sensor (S2)	• Sensor check • Connector check • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN8) • Harness check

Parts to be replaced	Remark
Entrance sensor (S1)	
Transport sensor (S2)	
Finisher control PC board (FIN)	

[EA22] Paper size error jam (punch paper edge sensor)

Classification	Error content
Paper jam in finisher section	Paper size error jam (transport sensor) Paper size error jam (punch paper edge sensor)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Entrance sensor (S1)	• Sensor check • Connector check • Harness check
Transport sensor (S2)	• Sensor check • Connector check • Harness check
Paper position sensor (Hole punch unit)	• Sensor check (S6-1, S6-2) • Connector check (CN1, CN4, CN5) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN8) • Harness check

Parts to be replaced	Remark
Entrance sensor (S1)	
Transport sensor (S2)	
Paper position sensor (S6-1, S6-2)	Hole punch unit
Finisher control PC board (FIN)	

[EA23] Paper transport stop jam (transport sensor)

Classification	Error content
Paper jam in finisher section	Paper transport stop jam (transport sensor)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Transport sensor (S2)	• Sensor check • Connector check • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN8) • Harness check

Parts to be replaced	Remark
Transport sensor (S2)	
Finisher control PC board (FIN)	

[EA24] Paper transport stop jam (between entrance & transport sensor)

Classification	Error content
Paper jam in finisher section	Paper transport stop jam (between entrance and transport sensor)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Pinch roller arm	Check the position of pinch roller arm. If it is down, fix its mechanism.

Check item	Measures
Transport path switching solenoid (SOL5)	• Check that the gap between the transfer guide surface and the upper surface of the flapper tip is in the acceptable range according to the status of the transport path switching solenoid (SOL5) (solenoid OFF: 1.5 to 2.1 mm, solenoid ON: 2.3 to 2.9 mm). If it is not, adjust it. • Check the harness between the transport path switching solenoid (SOL5) and the finisher controller board (CN1). If there is any abnormality, correct it.
Entrance sensor (S1)	• Sensor check • Connector check (CN8) • Harness check
Transport sensor (S2)	• Sensor check • Connector check (CN8) • Harness check
Entrance motor (M1)	• Motor check • Connector check (CN17) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN8, CN17) • Harness check

Parts to be replaced	Remark
Transport path switching solenoid (SOL5)	
Entrance sensor (S1)	
Transport sensor (S2)	
Entrance motor (M1)	
Finisher control PC board (FIN)	

[EA25] Paper transport stop jam (after paper stack exit)

Classification	Error content
Paper jam in finisher section	Paper transport stop jam (after paper stack exit)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Finishing tray paper detection sensor (S12)	• Sensor check • Connector check (CN25) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN25) • Harness check

Parts to be replaced	Remark
Finishing tray paper detection sensor (S12)	
Finisher control PC board (FIN)	

[EA26] Paper transport stop jam (stop command request)
[EA27] Paper transport stop jam (paper not inserted)

Classification	Error content
Paper jam in finisher section	[EA26] Paper transport stop jam (stop command request) [EA27] Paper transport stop jam (paper not inserted)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Entrance sensor (S1)	• Sensor check • Connector check (CN8) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN8) • Harness check

Parts to be replaced	Remark
Entrance sensor (S1)	
Finisher control PC board (FIN)	

[EA28] Paper transport stop jam (paper holder plate operation delay)

Classification	Error content
Paper jam in finisher section	Paper transport stop jam (paper holder plate operation delay)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Assist guide	Is there any mechanical problem when the assist guide is rotated? If there is any mechanical problem, fix its mechanism.
Assist guide motor (M10)	• Sensor check • Connector check (CN10) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN10) • Harness check

Parts to be replaced	Remark
Assist guide motor (M10)	
Finisher control PC board (FIN)	

[EA29] Paper transport stop jam (stack transport delay)

Classification	Error content
Paper jam in finisher section	Paper transport stop jam (stack transport delay)

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Buffer tray guide	Is there any mechanical problem when the buffer tray guide is opened and closed while the buffer roller is kept raised? If there is any mechanical problem, fix its mechanism.
Buffer tray guide motor (M2)	• Motor check • Connector check (CN10) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN8) • Harness check

Parts to be replaced	Remark
Buffer tray guide motor (M2)	
Finisher control PC board (FIN)	

[EA31] Transport path paper remaining jam

Classification	Error content
Paper jam in finisher section	Transport path paper remaining jam

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Entrance sensor (S1)	• Sensor check • Connector check (CN8) • Harness check
Feeding sensor (S22)	• Sensor check • Connector check (CN1) • Harness check
Paper position sensor (Hole punch unit: S6-1, S6-2)	Remove any paper dust in and around the sensors (S6-1 and S6-2) and clean them.
	• Sensor check (S6-1, S6-2) • Connector check (CN1, CN4, CN5) • Harness check
Transport sensor (S2)	• Sensor check • Connector check (CN8) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN1, CN8) • Harness check

Parts to be replaced	Remark
Entrance sensor (S1)	
Feeding sensor (S22)	
Paper position sensor (S6-1, S6-2)	Hole punch unit
Transport sensor (S2)	
Finisher control PC board (FIN)	

[EA32] Exit paper remaining jam

Classification	Error content
Paper jam in finisher section	Exit paper remaining jam

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Processing tray sensor (S12)	• Sensor check • Connector check • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN25) • Harness check

Parts to be replaced	Remark
Processing tray sensor (S12)	

Parts to be replaced	Remark
Finisher control PC board (FIN)	

[EA40] Cover open error

Classification	Error content
Paper jam in finisher section	Cover open error

Check item	Measures
Cover	Close the front cover or the stationary tray if they are opened.
Front cover switch (SW1)	• Sensor check • Connector check • Harness check
Stationary tray opening/closing switch (SW2)	• Sensor check • Connector check • Harness check
Finisher controller board (FIN)	• Connector check (CN14) • Board check

Parts to be replaced	Remark
Cover locking bracket	If it is broken.
Front cover switch (SW1)	
Stationary tray opening/closing switch (SW2)	
Finisher control PC board (FIN)	

[EA50] Stapling jam

Classification	Error content
Paper jam in finisher section	Stapling jam

Check item	Measures
Stapler	• Check if there is any paper in the finisher or on the transport path of the equipment or on the finishing tray. Remove it if there is. • Is the jam cleared by taking off the staple cartridge from the finisher and removing the staple sheet slid from the staple case? • If the actuator of the stapler safety sensor (S11) does not move smoothly, remove its clip from the side and then reattach it. • Connector check • Harness check
Finisher controller board (FIN)	• Board check • Connector check (CN2) • Harness check

Parts to be replaced	Remark
Stapler	
Finisher control PC board (FIN)	

[EA60] Early arrival jam

Classification	Error content
Paper jam in finisher section	Early arrival jam

Check item	Measures
Paper	Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
Feeding sensor (S22)	• Sensor check • Connector check (CN1) • Harness check
Finisher control PC board (FIN)	• Board check • Connector check (CN1) • Harness check

Parts to be replaced	Remark
Feeding sensor (S22)	
Finisher control PC board (FIN)	

[EA70] Stack exit belt home position error

Classification	Error content
Paper jam in finisher section	Stack exit belt home position error

Check item	Measures
Stack belt exit home position sensor (S9)	• Check if there is a disconnection of the connector, incorrect installation or breakage of the stack belt exit home position sensor (S9). If there is, reinstall the sensor correctly or replace it. • Check if the connector (CN25) on the finisher controller PC board is disconnected from the stack belt exit home position sensor (S9) and the harnesses are open circuited. Correct if any.
Stack transport motor (M8)	Check if the connector (CN18) on the finisher controller PC board is disconnected from the stack transport motor (M8) and the harnesses are open circuited. Correct if any.

Parts to be replaced	Remark
Stack belt exit home position sensor (S9)	
Stack transport motor (M8)	
Finisher control PC board (FIN)	

6.2.3 Paper jam in puncher unit

[E9F0] Punching jam

Classification	Error content
Finisher jam (Punch section)	Punching jam

When MJ-6105 is installed

Check item	Measures
Paper	Check if there is any paper on the transport path of the equipment and remove it if there is.
Punch motor (M3)	• Motor check • Connector check • Harness check
Punch HP sensor (S4)	• Sensor check • Connector check • Harness check
Punch sensor (S5)	• Sensor check • Connector check (CN3) • Harness check
Hole punch control PC board (HP)	• Board check • Connector check • Harness check

Parts to be replaced	Remark
Punch motor (M3)	
Punch HP sensor (S4)	
Punch sensor (S5)	
Hole punch control PC board (HP)	

6.2.4 Other paper jam

[ED10] Skew adjustment motor (M1) home position detection abnormality

When MJ-6105 is installed

Classification	Error content
Other paper jam	Skew adjustment motor (M1) home position detection abnormality

Check item	Measures
Paper	• Check if there is any paper in the hole punch unit, finisher or the on the transport path of the equipment. Remove it if there is. • Use paper accepted in the specifications.
Skew adjustment motor (M1)	Rotate skew adjustment motor and fix its mechanism if it does not rotate smoothly.
Skew HP sensor (S2) Skew adjustment motor (M1) Hole punch control PC board (HP)	Check if the connectors on the hole punch controller PC board (HP board) are disconnected from the skew HP sensor (S2) and the skew adjustment motor, or the harnesses are open circuited. Correct if any.

Parts to be replaced	Remark
Skew adjustment motor (M1)	
Skew HP sensor (S2)	
Hole punch control PC board (HP)	

[ED11] Sideways adjustment motor (M2) home position detection error

When MJ-6105 is installed

Classification	Error content
Other paper jam	Sideways adjustment motor (M2) home position detection error

Check item	Measures
Paper	• Check if there is any paper in the hole punch unit, finisher or the on the transport path of the equipment. Remove it if there is. • Use paper accepted in the specifications.
Sideways adjustment motor (M2)	Rotate sideways adjustment motor and fix its mechanism if it does not rotate smoothly.
Sideways deviation HP sensor (S3) Sideways adjustment motor (M2) Hole punch control PC board (HP)	Check if the connectors on the hole punch controller PC board (HP board) are disconnected from the sideways deviation HP sensor (S3) and the sideways adjustment motor, or the harnesses are open circuited. Correct if any.

Parts to be replaced	Remark
Sideways adjustment motor (M2)	
Sideways deviation HP sensor (S3)	
Hole punch control PC board (HP)	

[ED13] Front alignment plate home position error

Classification	Error content
Other paper jam	Front alignment plate home position error

Check item	Measures
Front alignment plate	Move the front alignment plate. Fix any mechanical problem.
Front alignment plate home position sensor (S7)	• Check if there is a disconnection of the connector, incorrect installation or breakage of the front alignment plate home position sensor (S7). If there is, reinstall the sensor correctly or replace it. • Check if the connector (CN25) on the finisher controller PC board is disconnected from the front alignment plate home position sensor (S7) and the harnesses are open circuited. Correct if so.
Front alignment motor (M5)	Check if the connector (CN18) on the finisher controller PC board is disconnected from the front alignment motor (M5) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Front alignment plate home position sensor (S7)	
Front alignment motor (M5)	
Finisher controller PC board (FIN)	

[ED14] Rear alignment plate home position error

Classification	Error content
Other paper jam	Rear alignment plate home position error

Check item	Measures
Rear alignment plate	Move the rear alignment plate. Fix any mechanical problem.
Rear alignment plate home position sensor (S8)	• Check if there is a disconnection of the connector, incorrect installation or breakage of the rear alignment plate home position sensor (S8). If there is, reinstall the sensor correctly or replace it. • Check if the connector (CN25) on the finisher controller PC board is disconnected from the rear alignment plate home position sensor (S8) and the harnesses are open circuited. Correct if so.
Rear alignment motor (M6)	Check if the connector (CN18) on the finisher controller PC board is disconnected from the rear alignment motor (M6) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Rear alignment plate home position sensor (S8)	
Rear alignment motor (M6)	
Finisher controller PC board (FIN)	

[ED15] Paddle home position error

Classification	Error content
Other paper jam	Paddle home position error

Check item	Measures
Paddle	Rotate the paddle. If there is any mechanical problem, fix its mechanism.
Paddle home position sensor (S3) Paddle motor (M3) Finisher control PC board (FIN)	Check if the connectors (CN15, CN16) on the finisher control PC board are disconnected from the paddle home position sensor (S3) and the paddle motor (M3), or the harnesses are open circuited. Correct if any.

Parts to be replaced	Remark
Paddle motor (M3)	
Paddle home position sensor (S3)	
Finisher controller PC board (FIN)	

[ED16] Buffer tray home position error

Classification	Error content
Other paper jam	Buffer tray home position error

Check item	Measures
Buffer tray guide	Open and close the buffer tray guide. Fix any mechanical problem.
Buffer tray home position sensor (S5)	• Check if there is a disconnection of the connector, incorrect installation or breakage of the buffer tray home position sensor (S5). If there is, reinstall the sensor correctly or replace it. • Check if the connector (CN11) on the finisher controller PC board is disconnected from the buffer tray home position sensor (S5) and the harnesses are open circuited. Correct if so.
Assist guide motor (M10)	Check if the connector (CN10) on the finisher controller PC board is disconnected from the Assist guide motor (M10) and the harnesses are open circuited. Correct if so.
Buffer tray guide motor (M2)	Check if the connector (CN10) on the finisher controller PC board is disconnected from the buffer tray guide motor (M2) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Buffer tray home position sensor (S5)	
Assist guide motor (M10)	
Buffer tray guide motor (M2)	
Finisher controller PC board (FIN)	

6.2.5 Finisher related service call

[CB00] Finisher not connected
[CB01] Finisher communication error

Classification	Error content
Finisher related service call	Finisher not connected: Communication error has occurred between the equipment and finisher. Finisher communication error: Communication error has occurred between the equipment and finisher.

Check item	Measures
Finisher control PC board (FIN)	• Check if the harness connecting the equipment and the finisher control PC board is disconnected or open circuited. • Check if the conductor pattern on the finisher control PC board is open circuited or short circuited. • Update the finisher firmware. • Replace the finisher control PC board.
LGC board (LGC)	• Check if the harness connecting the finisher and the LGC board on the equipment is disconnected or open circuited. • Connector check (CN304) • Check if the conductor pattern on the LGC board is open circuited or short circuited. • Replace the LGC board.

Parts to be replaced	Remark
Finisher control PC board (FIN)	
LGC board (LGC)	

[CB10] Entrance motor abnormality

Classification	Error content
Finisher related service call	Entrance motor abnormality: The entrance motor is not rotating normally.

Check item	Measures
Feeding roller	Rotate the feeding roller. Fix any mechanical problem.
Entrance motor (M1)	Check if the connector (CN17) on the finisher controller PC board is disconnected from the entrance motor (M1) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Entrance motor (M1)	
Finisher control PC board (FIN)	

[CB11] Buffer tray guide motor abnormality

* A [CB11] error occurs if the [ED16] error occurs three times in succession or the [ED16] error occurs during the initialization.

Classification	Error content
Finisher related service call	Buffer tray guide motor abnormality: The buffer tray guide motor is not rotating or the buffer tray guide is not moving normally.

Check item	Measures
Buffer tray guide	Raise the buffer roller and open/close the buffer tray guide. Fix any mechanical problem.

Check item	Measures
Buffer tray guide motor (M2)	Check if the connector (CN10) on the finisher control PC board is disconnected from the buffer tray guide motor (M2) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Buffer tray guide motor (M2)	
Finisher control PC board (FIN)	

[CB13] Finisher exit motor (M11) abnormality

Classification	Error content
Finisher related service call	The exit motor is not rotating or the exit roller is not moving normally.

Check item	Measures
Exit roller	• Is there any mechanical problem when the exit roller is rotated? Correct if so.
Exit motor (M11)	• Motor check • Connector check (CN15) • Harness check
Finisher control PC board (FIN)	• Connector check (CN15) • Board check

Parts to be replaced	Remark
Exit motor (M11)	
Finisher control PC board (FIN)	

[CB14] Assist guide motor (M10) abnormality
[EAFE] Paper holding cam position error (paper jam)

Classification	Error content
Finisher related service call	The Assist guide motor is not rotating or the paper pusher cam is not moving normally.

Check item	Measures
Paper pusher cam	• Is there any mechanical problem when the paper pusher cam is rotated?
Assist guide motor (M10)	• Motor check • Connector check (CN10) • Harness check
Finisher control PC board (FIN)	• Connector check (CN10) • Board check

Parts to be replaced	Remark
Assist guide motor (M10)	
Finisher control PC board (FIN)	

[CB15] Catching motor abnormality

Classification	Error content
Finisher related service call	Catching motor abnormality

Check item	Measures
Catching motor (M21)	Is there any mechanical problem when the catching motor is rotated? If there is any mechanical problem, fix its mechanism.
Harness	Check if the connector (CN17) on the finisher controller PC board is disconnected from the Catching home position sensor (S52) and the harnesses are open circuited. Correct if any.
Finisher control PC board (FIN)	• Connector check (CN17) • Board check

Parts to be replaced	Remark
Catching motor (M21)	
Harness	
Finisher control PC board (FIN)	

[EAFA] Catching motor home position detection error

Classification	Error content
Finisher related service call	Catching motor home position detection error

Check item	Measures
Catching motor (M21)	Is there any mechanical problem when the catching motor is rotated? If there is any mechanical problem, fix its mechanism.
Catching home position sensor (S52)	• Sensor check • Connector check (CN17) • Harness check
Harness	Check if the connector (CN17) on the finisher controller PC board is disconnected from the Catching home position sensor (S52) and the harnesses are open circuited. Correct if any.
Finisher control PC board (FIN)	• Connector check (CN17) • Board check

Parts to be replaced	Remark
Catching home position sensor (S52)	
Harness	
Finisher control PC board (FIN)	

[CB30] Movable tray shift motor abnormality
[EAFC] Movable tray height error (paper jam)

Classification	Error content
Finisher related service call	Movable tray shift motor abnormality: The movable tray shift motor is not rotating or the movable tray is not moving normally.

Check item	Measures
Movable tray	If there is mechanical problem when the movable tray is moved, fix the mechanism.
Movable tray shift motor (M12)	Check the connectors and harnesses between the movable tray shift motor (M12) and the finisher control PC board (CN19).
Movable tray position A, B, and C sensors (S13, S14 and S15)	• Connector check (CN20) • Sensor check • Harness check

Parts to be replaced	Remark
Movable tray shift motor (M12)	
Movable tray position A, B, and C sensors (S13, S14 and S15)	
Finisher control PC board (FIN)	

[CB31] Movable tray paper-full detection error
[EAFD] Movable tray movement error (paper jam)

Classification	Error content
Finisher related service call	Movable tray paper-full detection error: The actuator of the movable tray paper-full detection sensor does not move smoothly.

Check item	Measures
Movable tray paper-full sensor (S16)	• Fix any mechanical problem occurring when the actuator is moved. • Check if there is a disconnection of the connector, incorrect installation or breakage of the movable tray paper-full sensor (S16). If there is, reinstall the sensor correctly or replace it. • Check if the connector (CN22) on the finisher controller PC board is disconnected from the movable tray paper-full sensor (S16) and the harnesses are open circuited. Correct if so.
Movable tray position A, B, and C sensors (S13, S14 and S15)	• Connector check (CN20) • Sensor check • Harness check

Parts to be replaced	Remark
Movable tray paper-full sensor (S16)	
Movable tray position A, B, and C sensors (S13, S14 and S15)	
Finisher control PC board (FIN)	

[CB40] Front alignment motor abnormality
* You receive a [CB40] error when the [ED13] error occurs three times in succession.

Classification	Error content
Finisher related service call	Front alignment motor abnormality: The front alignment motor is not rotating or the front alignment plate is not moving normally.

Check item	Measures
Front alignment plate	If there is mechanical problem when the front alignment plate is moved, fix the mechanism.
Front alignment motor (M5)	Check the connectors and harnesses between the front alignment motor (M5) and the finisher control PC board (CN18).

Parts to be replaced	Remark
Front alignment motor (M5)	
Finisher control PC board (FIN)	

[CB50] Stapler home position error

* You receive a [CB50] error when the [EA50] error occurs three times in succession.

Classification	Error content
Finisher related service call	Stapler home position error: The stapler home position sensor does not work.

Check item	Measures
Stapler	• Check the connectors and harnesses between the stapler and finisher controller PC board (CN2). • Check the harnesses in the stapler.

Parts to be replaced	Remark
Stapler	
Finisher control PC board (FIN)	

[CB51] Stapler shift home position error
[EAFB] Stapler movement error (paper jam)

Classification	Error content
Finisher related service call	Stapler shift home position error: The stapler is not at the home position.

Check item	Measures
Stapler	Move the stapler. Fix any mechanical problem.
Stapler unit home position sensor (S10)	• Check if there is a disconnection of the connector, incorrect installation or breakage of the stapler unit home position sensor (S10). If there is, reinstall the sensor correctly or replace it. • Check if the connector (CN27) on the finisher controller PC board is disconnected from the stapler unit home position sensor (S10) and the harnesses are open circuited. Correct if so.
Stapler unit shift motor (M9)	Check if the connector (CN15) on the finisher control PC board is disconnected from the stapler unit shift motor (M9) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Stapler unit home position sensor (S10)	
Stapler unit shift motor (M9)	
Finisher control PC board (FIN)	

[CB60] Stapler unit shift motor abnormality

Classification	Error content
Finisher related service call	Stapler shift motor abnormality: Stapler shift motor is not rotating or staple unit is not moving normally.

Check item	Measures
Stapler	If there is mechanical problem when the stapler is moved, fix the mechanism.
Stapler unit shift motor (M9)	Check the connectors and harnesses between the stapler unit shift motor (M9) and the finisher control PC board (CN15).

Parts to be replaced	Remark
Stapler unit shift motor (M9)	
Finisher control PC board (FIN)	

[CB80] Backup RAM data abnormality

Classification	Error content
Finisher related service call	Backup RAM data abnormality: Abnormality of checksum value on finisher controller PC board is detected when the power is turned ON.

Check item	Measures
Main power switch	Turn OFF the main power switch, then back ON.

Parts to be replaced	Remark
Finisher control PC board (FIN)	

[CB81] Flash ROM abnormality

Classification	Error content
Finisher related service call	Flash ROM abnormality: Abnormality of checksum value on finisher control PC board is detected when the power is turned ON.

Check item	Measures
Main power switch	Turn OFF the main power switch, then back ON.
Finisher control PC board (FIN)	Board check

Parts to be replaced	Remark
Finisher control PC board (FIN)	

[CB82] Finisher main program error

Classification	Error content
Finisher related service call	Finisher main program error

Check item	Measures
Finisher control PC board (FIN)	• Update the firmware version of the finisher control PC board (FIN). • Board check

Parts to be replaced	Remark
Finisher control PC board (FIN)	

[CB84] Punch unit main program error

When MJ-6105 is installed

Classification	Error content
Finisher related service call	Hole Punch Unit - Main CPU program error

Check item	Measures
Hole punch control PC board (HP)	• Update the firmware version of the hole punch control PC board (HP). • Board check

Parts to be replaced	Remark
Hole punch control PC board (HP)	

[CC30] Stack transport motor abnormality

* You receive a [CC30] error when the [EA70] error occurs three times in succession.

Classification	Error content
Finisher related service call	Stack transport motor abnormality: The stack transport motor is not rotating or the stack transport belt is not moving normally.

Check item	Measures
Stack transport belt	Move the stack transport belt. Fix any mechanical problem.
Stack transport motor (M8)	Check if the connector (CN18) on the finisher control PC board is disconnected from the stack transport motor (M8) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Stack transport motor (M8)	
Finisher control PC board (FIN)	

[CC31] Transport motor abnormality

* You receive a [CC31] error when the [ED12] error occurs three times in succession.

Classification	Error content
Finisher related service call	Transport motor abnormality: The transport motor is not rotating or the stack transport roller -1 and -2 is not rotating normally.

Check item	Measures
Stack transport roller -1 Stack transport roller -2	Rotate the stack transport roller -1 and -2. Fix any mechanical problem.
Transport motor (M7)	Check if the connector (CN15) on the finisher control PC board is disconnected from the transport motor (M7) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Transport motor (M7)	
Finisher control PC board (FIN)	

[CC41] Paper holder cam home position abnormality

Classification	Error content
Finisher related service call	Paper holder cam home position abnormality: The paper holder cam is not at the home position.

Check item	Measures
Paper pusher cam	Rotate the paper pusher cam. Fix any mechanical problem.
Paper holder home position sensor (S6)	Check if the connector (CN11) on the finisher control PC board is disconnected from the paper holder home position sensor (S6) and the harnesses are open circuited. Correct if so.

Parts to be replaced	Remark
Paper holder home position sensor (S6)	
Finisher control PC board (FIN)	

[CC51] Sideways adjustment motor (M2) abnormality

When MJ-6105 is installed

* You receive a [CC51] error when the [ED11] error occurs three times in succession or occurs during the initialization.

Classification	Error content
Finisher related service call	Sideways adjustment motor (M2) abnormality: Sideways adjustment motor is not rotating or puncher is not shifting normally.

Check item	Measures
Paper	If there is any paper remaining on the transport path, remove the paper.
Sideways adjustment motor (M2)	• If there is mechanical problem when the sideways adjustment motor (M2) is rotated, fix the mechanism. • Check the connector (CN10) and harnesses between the hole punch control PC board (HP) and sideways adjustment motor (M2).
Sideways deviation home position sensor (S3)	• Sensor check • Harness check • Connector check (CN8)

Parts to be replaced	Remark
Sideways adjustment motor (M2)	
Sideways deviation home position sensor (S3)	
Hole punch control PC board (HP)	

[CC52] Skew adjustment motor (M1) abnormality

When MJ-6105 is installed

* The [CC52] error occurs when the [ED10] error occurs three times in succession or during the initial operation.

Classification	Error content
Finisher related service call	Skew adjustment motor (M1) abnormality: Skew adjustment motor is not rotating or puncher is not shifting normally.

Check item	Measures
Paper	If there is any paper remaining on the transport path, remove the paper.
Skew adjustment motor (M1)	• If there is mechanical problem when the skew adjustment motor (M1) is rotated, fix the mechanism. • Check the connector (CN10) and harnesses between the hole punch control PC board (HP) and skew adjustment motor (M1).
Skew home position sensor (S2)	• Sensor check • Harness check • Connector check (CN10)

Parts to be replaced	Remark
Skew home position sensor (S2)	
Skew adjustment motor (M1)	
Hole punch control PC board (HP)	

[CC61] Punch motor (M3) home position detection error

When MJ-6105 is installed

* The [CC61] error occurs when the [E9F0] error occurs three times in succession or during the initial operation.

Classification	Error content
Finisher related service call	Punch motor (M3) home position detection error: Punch motor is not rotating or puncher is not shifting normally.

Check item	Measures
Paper	If there is any paper remaining on the transport path, remove the paper.
Punch motor (M3)	• If there is mechanical problem when the punch motor (M3) is rotated, fix the mechanism. • Check the connector (CN2) and harnesses between the hole punch control PC board (HP) and punch motor (M3).
Punch home position sensor (S4)	• Sensor check • Harness check • Connector check (CN3)

Parts to be replaced	Remark
Punch home position sensor (S4)	
Punch motor (M3)	
Hole punch control PC board (HP)	

[CC71] Punch ROM checksum error

When MJ-6105 is installed

Classification	Error content
Finisher related service call	Punch ROM checksum error: Abnormality of checksum value on Hole punch controller PC board is detected when the power is turned on.

Check item	Measures
Hole punch control PC board (HP)	Board check

Parts to be replaced	Remark
Hole punch control PC board (HP)	

[CC72] Punch RAM read/write error

When MJ-6105 is installed

Classification	Error content
Finisher related service call	Punch RAM read/write error: Abnormality of checksum value on Hole punch controller PC board is detected when the power is turned on.

Check item	Measures
Hole punch control PC board (HP)	Board check

Parts to be replaced	Remark
Hole punch control PC board (HP)	

[CC80] Rear alignment motor abnormality

* You receive a [CC80] error when the [ED14] error occurs three times in succession.

Classification	Error content
Finisher related service call	Rear alignment motor abnormality: The rear alignment motor is not rotating or the rear alignment plate is not moving normally.

Check item	Measures
Rear alignment plate	If there is mechanical problem when the rear alignment plate is moved, fix the mechanism.
Rear alignment motor (M6)	Check the connectors and harnesses between the rear alignment motor (M6) and the finisher control PC board (CN18).

Parts to be replaced	Remark
Rear alignment motor (M6)	
Finisher control PC board (FIN)	

[CDE0] Paddle motor abnormality

* You receive a [CDE0] error when the [ED15] error occurs three times in succession or during the Classification Contents

Classification	Error content
Finisher related service call	Paddle motor abnormality: The paddle motor is not rotating or the paddle is not rotating normally.

Check item	Measures
Paddle	Rotate the paddle. Fix any mechanical problem.
Paddle motor (M3)	Check the connectors and harnesses between the paddle motor (M3) and the finisher control PC board (CN16).

Parts to be replaced	Remark
Paddle motor (M3)	
Finisher control PC board (FIN)	

[CE00] Punch communication error

Classification	Error content
Finisher related service call	Communication error between finisher and punch unit: Communication error between finisher controller PC board and punch controller PC board

When MJ-6105 is installed

Check item	Measures
Hole punch control PC board (HP)	• Check the connectors and harnesses between the hole punch control PC board (HP) and the finisher control PC board. • Board check

Parts to be replaced	Remark
Hole punch control PC board (HP)	
Finisher control PC board (FIN)	

[CF10] Communication module writing failure

Classification	Error content
Finisher related service call	Communication module writing failure.

Check item	Measures
Finisher	• Check if the harness connecting the equipment and the finisher control PC board is disconnected or open circuited. • Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited. • Update the finisher firmware.
LGC board	• Check if the harness connecting the finisher and the LGC board on the equipment is disconnected or open circuited. • Connector check • Check if the conductor pattern on the LGC board is open circuited or short circuited.

Parts to be replaced	Remark
Finisher control PC board (FIN)	
LGC board	

6.3 Other errors

6.3.1 Paper trailing edge abnormality when it is exiting to the movable tray (dents, folding, tears)

When abnormalities such as dents, folding or tears have occurred at the trailing edge of paper outputted to the movable tray of the finisher, perform the following measure.

[A] Problems in outputted paper

The following problem will occur at the trailing edge of paper outputted to the movable tray.
If the returning of the ejectors is not sufficient, latches, which output the paper from the standby position to the movable tray, strongly contact the paper upper surface (trailing edge side), resulting in damage to it.

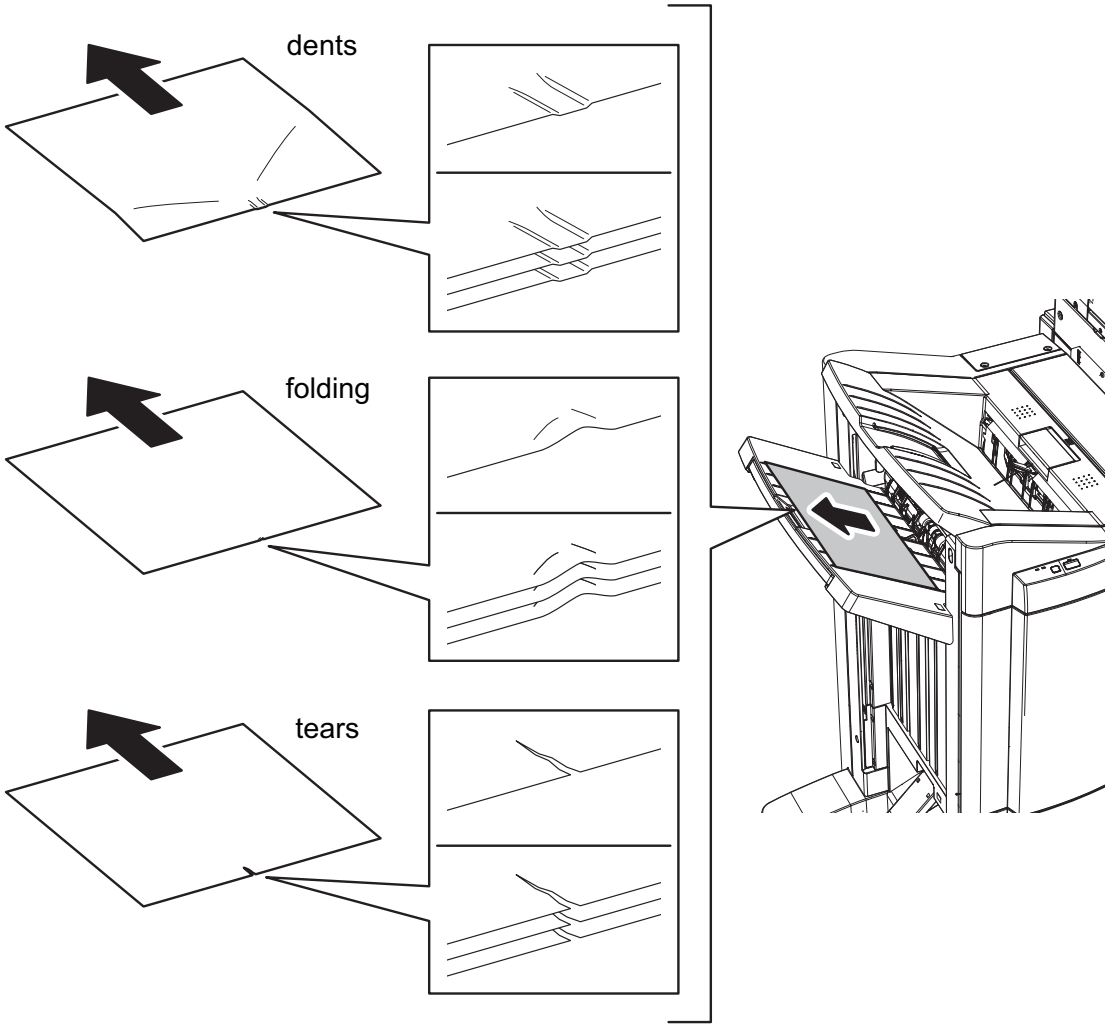


Fig.6-1

[B] Measures

(1) Clean the ejectors with alcohol while they are in the home position.

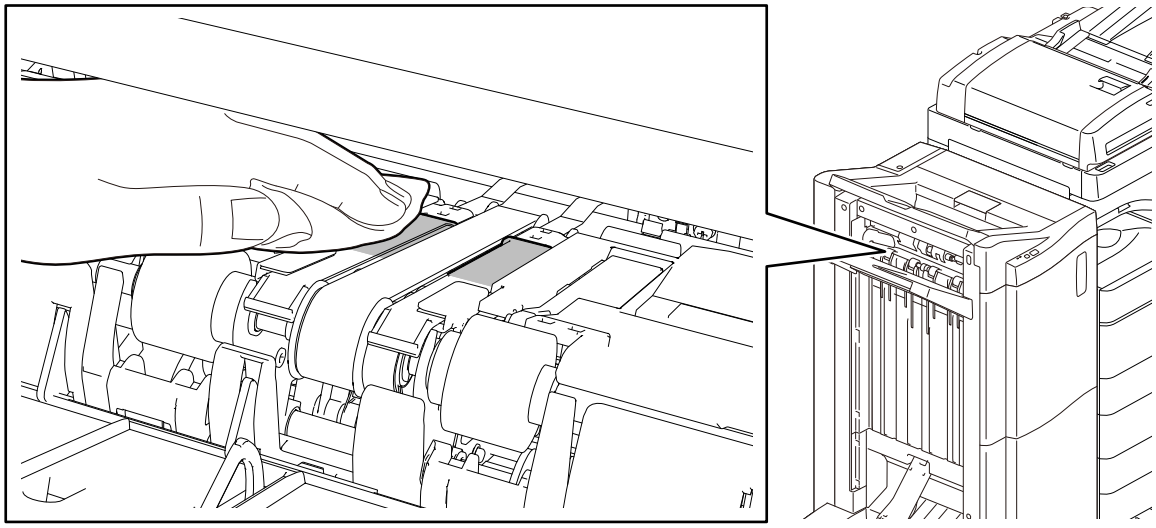


Fig.6-2

(2) Pull out the ejectors in the finishing tray unit.

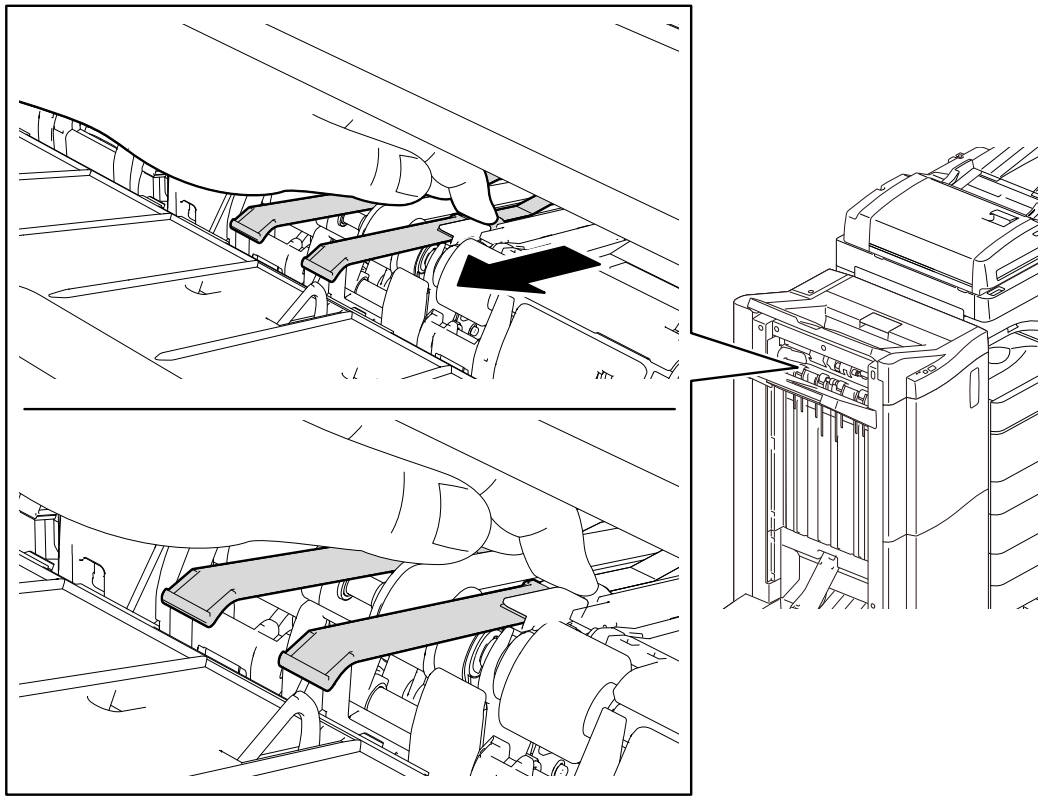


Fig.6-3

Clean both the back and front sides of the pulled out ejectors with alcohol.
If Molykote oil has adhered to the ejectors or the metal guide, wipe it all off.

(3) Perform the operation check of the finishing tray unit.

1. Put your hand on the holder at the end of the ejectors and then pull them out toward you until they stop.

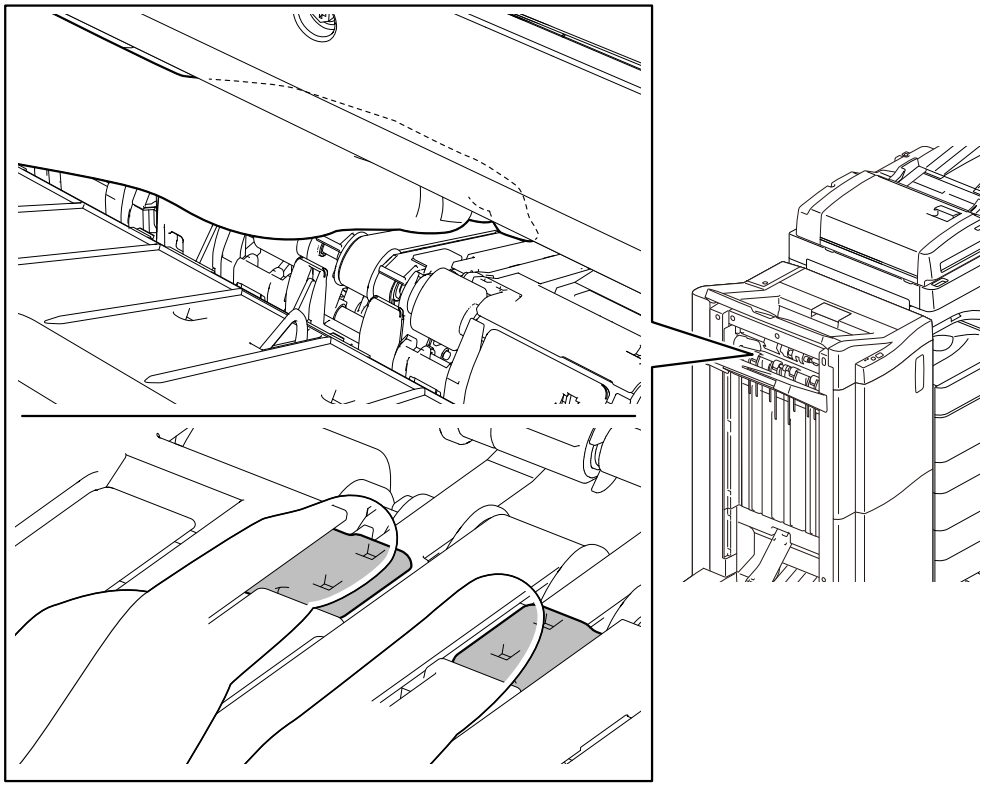


Fig.6-4

2. Release your hand from the holder and check that the ejectors are quickly returned to their home position.

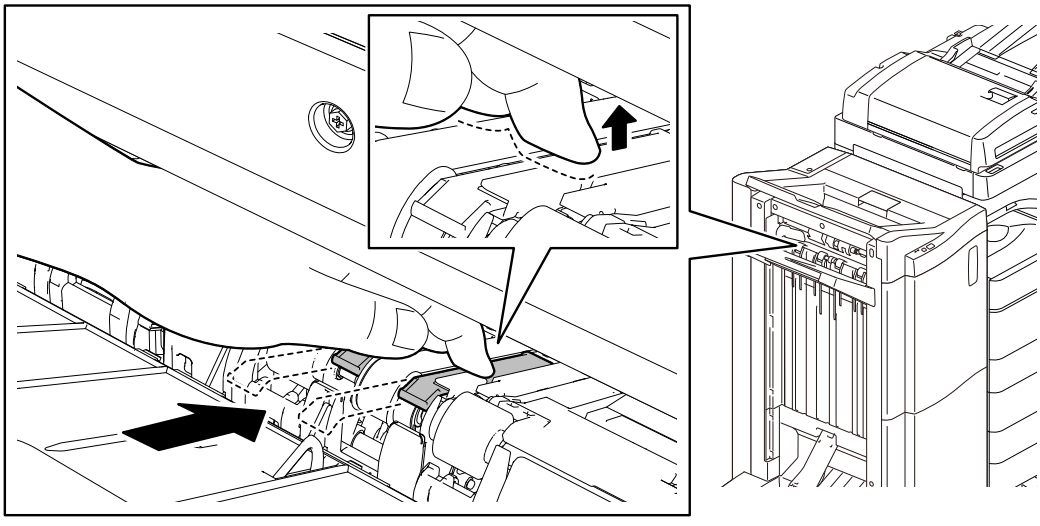


Fig.6-5

3. Check the returned position of the ejectors.

OK

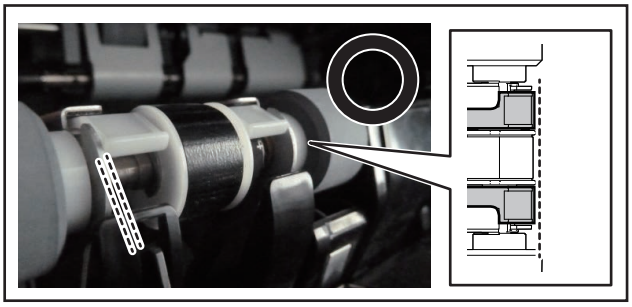


Fig.6-6

Not good

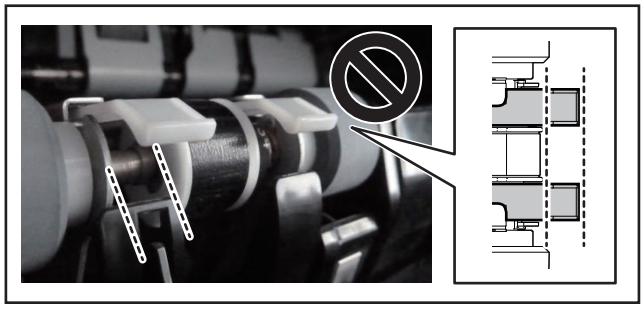


Fig.6-7

4. If the position is the Not good state, go to step (5).

(4) After the operation check of the finishing tray unit has been done, clean the ejectors in the home position with alcohol again.

Remarks:
Clean the ejectors in the same manner as that for step (1).

(5) Replace the finishing tray unit.
If the problem at the trailing edge of the paper still persists even after steps (1) to (3) have been performed, replace the finishing tray unit.

Finishing tray unit: ASYB-SHEAF-FEED-RBT3 (P-I: 10-48)

6.4 Self-Diagnostic Modes

6.4.1 General description

Check the operations of the motors, clutches, solenoids and sensors in the Finisher.

6.4.2 Operation procedure

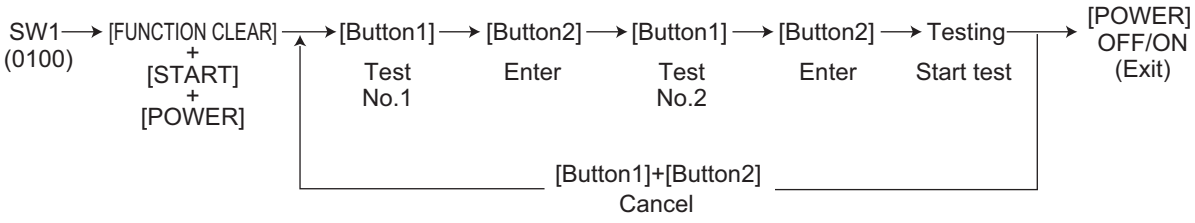


Fig.6-8

(1) Remove 1 screw and take off the board access cover.
(2) Set SW1 on the Finisher control board as shown in the figures below.

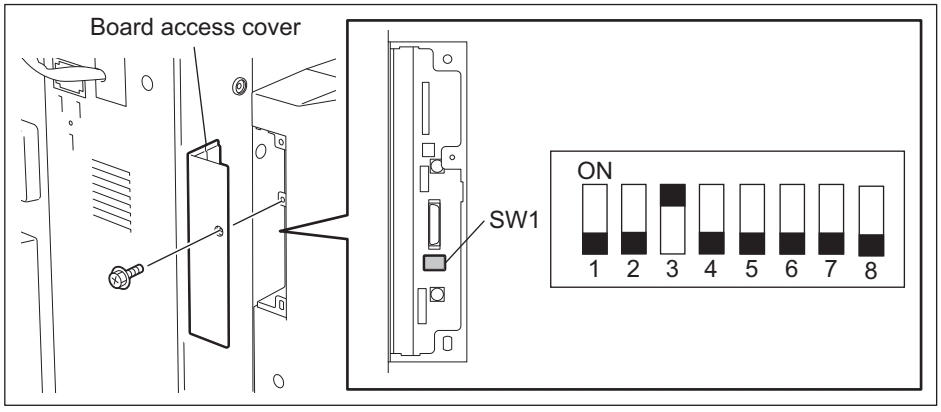


Fig.6-9

(3) Start FS Menu by pressing the [ON/OFF] button while pushing the [FUNCTION CLEAR] and [START] buttons simultaneously.
(4) Check the test list and press [Button1] as many times as noted for Test No. 1 whose operation you want to check.

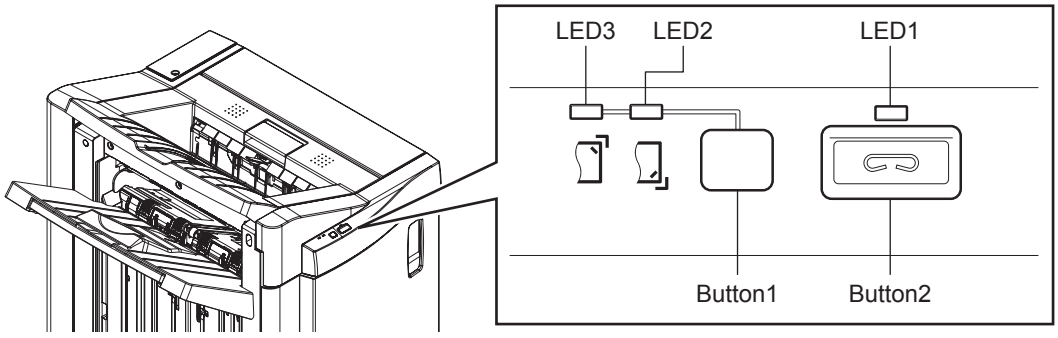


Fig.6-10

(5) Press [Button2] once. (To enter the number of Test No. 1)
(6) Check the test list and press [Button1] as many times as noted for Test No. 2 whose operation you want to check.
(7) Press [Button2] once. (To enter the number of Test No. 2)

(8) The test is started.
* To cancel the test, press [Button1] and [Button2] simultaneously.
(9) Turn OFF the power of the equipment.

* Example of operation
In case of an operation check for the paddle motor, the number of Test No. 1 is “2” and the one for Test No. 2 is “8”.
Therefore press [Button1] 2 times and then press [Button2] once. Then press [Button1] 8 times and then press [Button2] once. This starts the operation check for the paddle motor.

Notes:
In case of an error, open and close the front cover or the stationary tray of the Finisher to clear the error, and then start the next test.

6.4.3 Checking operational status

The operational status can be checked with LEDs on the control panel.

LED1(ON)	“1” is detected in a sensor check or the operation is finished normally
LED1(OFF)	“0” is detected in a sensor check or the operation is in progress
LED1(Blinks in a single pattern)	Turning power ON / during initialization / waiting for paper insertion
LED1(Blinks in a multiple pattern)	The operation is finished abnormally 🕮 P. 6-41 "6.4.5 Error indications"
LED2: ON, LED3: OFF	Waiting for Test No. 1 number to be entered
LED2: OFF, LED3: ON	Waiting for Test No. 2 number to be entered
LED2: ON, LED3: ON	Test in progress
LED2: OFF, LED3: OFF	Test finished

6.4.4 Test list

1. Aging

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
1	1	Aging 1	-	Performs dummy 2-position stapling on 3 pages of A4 paper. Continues the operation until it is canceled. (If a staple cartridge is installed, stapling is not performed. If it is removed, dummy stapling is performed.)
1	2	Aging 2	-	Performs dummy sorting on 3 pages of A4-R paper. Continues the operation until it is canceled.
1	3	Aging 3	-	Performs dummy exiting on A4 paper to the stationary tray in the non-sort mode. Continues the operation until it is canceled.
1	4	Aging 4	-	Performs dummy exiting on A5-R paper to the movable tray in the non-sort mode. Continues the operation until it is canceled.
1	5	Aging 5	-	Performs dummy sorting on 3 pages of A4 paper. Continues the operation until it is canceled.
1	6	Punch-aging	-	Drives the entrance motor of the Finisher. Outputs a mechanical initial command to the Hole Punch unit in every 4 seconds. Continues the operation until it is canceled.
1	7	(Unused)	-	-

2. Operation check for motors

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
2	1	Entrance motor	M1	Drives the motor for 10 seconds and then stops it.
2	2	Buffer tray guide motor	M2	Performs initialization (stopping at the standby position after detecting the home position).
2	3	Paddle motor	M3	Performs initialization (stopping at the standby position after detecting the home position).
2	4	(Unused)	-	-
2	5	Front alignment motor	M5	Performs initialization (stopping at the standby position after detecting the home position).
2	6	Rear alignment motor	M6	Performs initialization (stopping at the standby position after detecting the home position).
2	7	Transport motor	M7	Drives the motor for 10 seconds and then stops it.
2	8	Stack transport motor	M8	Moves the latch to the exiting position and then stops it for 10 seconds. Returns it to the home position.
2	9	Stapler unit shift motor	M9	Performs initialization (stopping at the standby position after detecting the home position).
2	10	Assist guide motor	M10	Performs initialization (stopping at the standby position after detecting the home position).
3	1	Exit motor	M11	Drives the motor for 10 seconds and then stops it.
3	2	Movable tray shift motor	M12	Lowers the movable tray to its lower limit. Closes and opens the shutter. Raises the movable tray to its upper limit with the shutter open.
3	3	Stapler motor	M13	Opens the shutter. Performs stapling. Closes the shutter. (If the staple cartridge is installed, stapling is not performed. If it is removed, dummy stapling is performed.)
3	4	(Unused)	-	-
3	5	(Unused)	-	-
3	6	(Unused)	-	-
3	7	(Unused)	-	-
3	8	(Unused)	-	-
3	9	(Unused)	-	-
3	10	(Unused)	-	-
4	1	Catching motor	M21	Performs initialization (stopping at the standby position after detecting the home position).

3. Operation check for solenoids

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
5	1	(Unused)	-	-
5	2	Buffer roller lift solenoid	SOL2	Turns the solenoid ON for 3 seconds and then turns it OFF.
5	3	(Unused)	-	-
5	4	Gate solenoid	SOL4	Turns the solenoid ON for 3 seconds and then turns it OFF.
5	5	(Unused)	-	-
5	6	(Unused)	-	-
5	7	(Unused)	-	-
5	8	Exit roller lift solenoid	SOL8	Turns the solenoid ON for 3 seconds and then turns it OFF. * Duty control is performed while the solenoid is ON.

4. Operation check for clutches

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
6	1	(Unused)	-	-
6	2	Paper exit guide clutch	CLT2	Turns the clutch ON for 3 seconds and then turns it OFF.
6	3	(Unused)	-	-
6	4	(Unused)	-	-

5. Real time operation check for switches

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
7	1	Front cover switch	SW1	The status of the switch is indicated with the LED1 in real time as follows: LED1 ON: Open LED1 OFF: Close Continues the operation until it is canceled.
7	2	Stationary tray opening/closing switch	SW2	The status of the switch is indicated with the LED1 in real time as follows: LED1 ON: Open LED1 OFF: Close Continues the operation until it is canceled.
7	3	(Unused)	-	-
7	4	(Unused)	-	-
7	5	(Unused)	-	-

6. Real time operation check for sensors (Finisher)

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
8	1	Entrance sensor	S1	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	2	Transport sensor	S2	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	3	Paddle home position sensor	S3	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	4	(Unused)	-	-
8	5	Buffer tray home position sensor	S5	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	6	Paper holder home position sensor	S6	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	7	Front alignment plate home position sensor	S7	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	8	Rear alignment plate home position sensor	S8	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	9	Stack exit belt home position sensor	S9	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
8	10	Stapler unit home position sensor	S10	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	1	Stapler interference sensor	S11	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	2	Finishing tray paper detection sensor	S12	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
9	3	Movable tray position-A sensor	S13	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	4	Movable tray position-B sensor	S14	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	5	Movable tray position-C sensor	S15	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	6	Movable tray paper-full sensor	S16	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	7	Movable tray paper exist sensor	S17	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	8	Stationary tray paper-full sensor	S18	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	9	Stapler home position sensor	S19	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
9	10	Staple top position sensor	S20	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
10	1	Staple empty sensor	S21	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
10	2	Feeding sensor	S22	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
10	3	Movable tray shift motor sensor	S23	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
10	4	(Unused)	-	-
10	5	(Unused)	-	-
10	6	Junction box paper detection sensor	S26	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
10	7	(Unused)	-	-
10	8	(Unused)	-	-
10	9	(Unused)	-	-
10	10	(Unused)	-	-
11	1	(Unused)	-	-
11	2	(Unused)	-	-
11	3	(Unused)	-	-
11	4	(Unused)	-	-
11	5	(Unused)	-	-
11	6	(Unused)	-	-
11	7	(Unused)	-	-
11	8	(Unused)	-	-
11	9	(Unused)	-	-
11	10	(Unused)	-	-
12	1	(Unused)	-	-
12	2	(Unused)	-	-
12	3	(Unused)	-	-
12	4	(Unused)	-	-
12	5	(Unused)	-	-
12	6	(Unused)	-	-
12	7	(Unused)	-	-
12	8	(Unused)	-	-
12	9	(Unused)	-	-
12	10	(Unused)	-	-
13	1	(Unused)	-	-
13	2	Catching home position sensor	S52	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.

7. Real time operation check for sensors (Punch)

Test No. 1 number	Test No. 2 number	Description	Symbol	Contents of operation
14	1	Front cover sensor	S1	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	2	Paper position sensor	S2	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	3	Paper position sensor-1	S3	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	4	Paper position sensor-2	S4	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	5	Paper position sensor-3	S5	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	6	Paper position sensor-4	S6	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	7	Skew sensor-1	S7	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	8	Skew sensor-2	S7	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.
14	9	Punched scrap full sensor	S8	The status of the sensor is indicated with the LED1 in real time as follows: LED1 ON: 1 LED1 OFF: 0 Continues the operation until it is canceled.

6.4.5 Error indications

When an error occurs during a test, LED2 and LED3 blink in a multiple pattern to indicate the cause of the error.
The blinking pattern of the error differs depending on the error category. If the multiple errors and alerts occurs at the same time, the error of the highest priority will be shown

Priority (High → Low)
Hardware error → Jam → Alert

If the event of a hardware error, jam or alert occurs, the test will not be performed unless the error condition clears.
The figure below shows the error code 32 “paddle home position error (ED15)”.

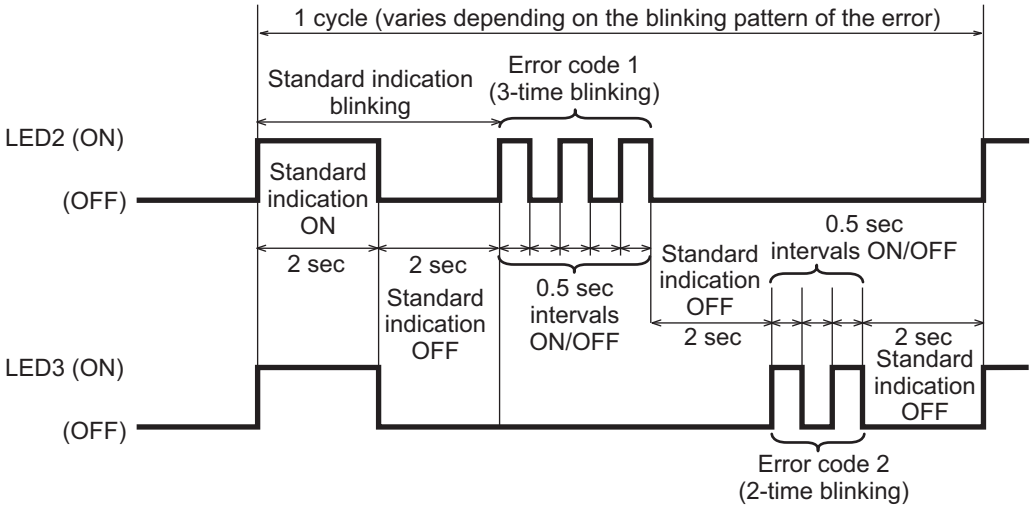


Fig.6-11

1. LED1 blinking pattern error code: Jams

Error code 1 (LED2)	Error code 2 (LED3)	Description	Error code (when connected to the equipment)
1	1	Transport path paper remaining jam in Finisher	EA31
1	2	Exit paper remaining jam	EA32
1	3	Transport delay jam (paper not inserted)	EA10
1	4	Short length paper jam in Finisher (transport sensor)	EA21
1	5	(Unused)	-
1	6	Paper transport jam in Finisher (entrance sensor)	EA20
1	7	Cover open error	EA40
1	8	Stapling jam	EA50
1	9	(Unused)	-
2	1	(Unused)	-
2	2	(Unused)	-
2	3	(Unused)	-
2	4	(Unused)	-
2	5	(Unused)	-
2	6	(Unused)	-
2	7	(Unused)	-
2	8	Stack exit belt home position error	EA70
2	9	Early arrival jam	EA60
3	1	Buffer tray home position error	ED16

Error code 1 (LED2)	Error code 2 (LED3)	Description	Error code (when connected to the equipment)
3	2	Paddle home position error	ED15
3	3	Rear alignment plate home position error	ED14
3	4	Front alignment plate home position error	ED13
3	5	(Unused)	-
3	6	Sideways adjustment motor (M2) home position detection error	ED11
3	7	Skew adjustment motor (M1) home position detection abnormality	ED10
3	8	Punching jam	E9F0
3	9	(Unused)	-
10	1	(Unused)	-
10	2	(Unused)	-
10	3	(Unused)	-
10	4	(Unused)	-
10	5	(Unused)	-
10	6	(Unused)	-
10	7	(Unused)	-
10	8	Paper leading edge skew detection abnormality	EF21
10	9	Paper leading edge detection abnormality	EF22
11	1	Paper alignment abnormality	EF23
11	2	Paper trailing edge skew detection abnormality	EF24
11	3	Paper trailing edge detection abnormality	EF25
11	4	(Unused)	-
11	5	Paper position detection error 1	EF27
11	6	Paper position detection error 2	EF28
11	7	Short length paper jam in Finisher (paper position sensors)	EA22
11	8	Paper transport jam in Finisher (transport sensor)	EA23
11	9	Paper transport jam in Finisher (entrance sensor - transport sensor)	EA24
12	1	Paper transport jam in Finisher (after paper stack was exited)	EA25
12	2	Paper transport jam in Finisher (Stop signal received from equipment)	EA26
12	3	Paper transport jam in Finisher (Paper not inserted but paper detected)	EA27
12	4	Paper transport jam in Finisher (paper holding delay)	EA28
12	5	Paper transport jam in Finisher (paper stack transport delay)	EA29
15	1	Movable tray position abnormality	EAFC
15	2	Movable tray ascending position detection error	EAFD
15	3	Assist guide motor home position detection error	EAFE
15	4	Catching motor home position detection error	EAFA
15	5	Stapler shift abnormality	EAFB

2. LED blinking pattern error code: Hardware errors

Error code 1 (LED2)	Error code 2 (LED3)	Description	Error code (when connected to the equipment)
4	1	Entrance motor (M1) abnormality	CB10
4	2	Buffer tray guide motor (M2) abnormality	CB11
4	3	Paddle motor (M3) abnormality	CDE0
4	4	Buffer roller drive motor (M4) abnormality	CB12
4	5	Rear alignment motor (M6) abnormality	CC80
4	6	Front alignment motor (M5) abnormality	CB40
4	7	Transport motor (M7) abnormality	CC31

Error code 1 (LED2)	Error code 2 (LED3)	Description	Error code (when connected to the equipment)
4	8	Stack transport motor (M8) abnormality	CC30
4	9	Stapler unit shift motor (M9) abnormality	CB60
5	1	Movable tray shift motor (M12) abnormality	CB30
5	2	Flash ROM abnormality	CB81
5	3	RAM abnormality	CB80
5	4	Finisher not connected	CB00
5	5	Finisher communication error	CB01
5	6	(Unused)	-
5	7	(Unused)	-
5	8	Stapler shift home position error	CB51
5	9	Stapler home position error	CB50
6	1	Movable tray paper-full detection error	CB31
6	2	Catching motor abnormality	CB15
6	3	Paper pusher cam home position abnormality	CC41
6	4	(Unused)	-
6	5	(Unused)	-
6	6	(Unused)	-
6	7	(Unused)	-
6	8	(Unused)	-
6	9	(Unused)	-
7	1	Punch motor (M3) home position detection error	CC61
7	2	(Unused)	-
7	3	(Unused)	-
7	4	Sideways adjustment motor (M2) abnormality	CC51
7	5	(Unused)	-
7	6	Skew adjustment motor (M1) abnormality	CC52
7	7	Punch ROM checksum error	CC71
7	8	Punch RAM read/write error	CC72
7	9	Punch communication error	CE00
8	1	(Unused)	-
8	2	(Unused)	-
8	3	(Unused)	-
8	4	(Unused)	-
8	5	(Unused)	-
8	6	(Unused)	-
8	7	(Unused)	-
8	8	(Unused)	-
8	9	Exit motor (M11) abnormality	CB13
9	1	Assist guide motor (M10) abnormality	CB14
9	2	Finisher main program error	CB82
9	3	(Unused)	-
9	4	Punch unit main program error	CB84
9	5	Punching device power supply abnormality	CC73
9	6	Transport pulse abnormality	CC74
9	7	Punch motor (M3) interrupt signal error	CC60
13	1	Loop-back test No response	-
13	2	Loop-back test Data abnormality	-

3. LED blinking pattern error code: Alerts

Error code 1	Error code 2	Description	Error code (when connected to the equipment)
13	3	The stationary tray is full.	-
13	4	The movable tray is full.	-
13	5	(Unused)	-
13	6	The punched scrap box is full.	-
13	7	(Unused)	-
13	8	The staple cartridge for the finisher section is empty.	-
13	9	(Unused)	-

7. PREVENTIVE MAINTENANCE (PM) / FIRMWARE UPDATE

7.1 Maintenance and Inspection Points

Perform preventive maintenance according to the check list.

* Perform preventive maintenance for the Finisher at the same interval as for the main equipment to which the Finisher is connected.

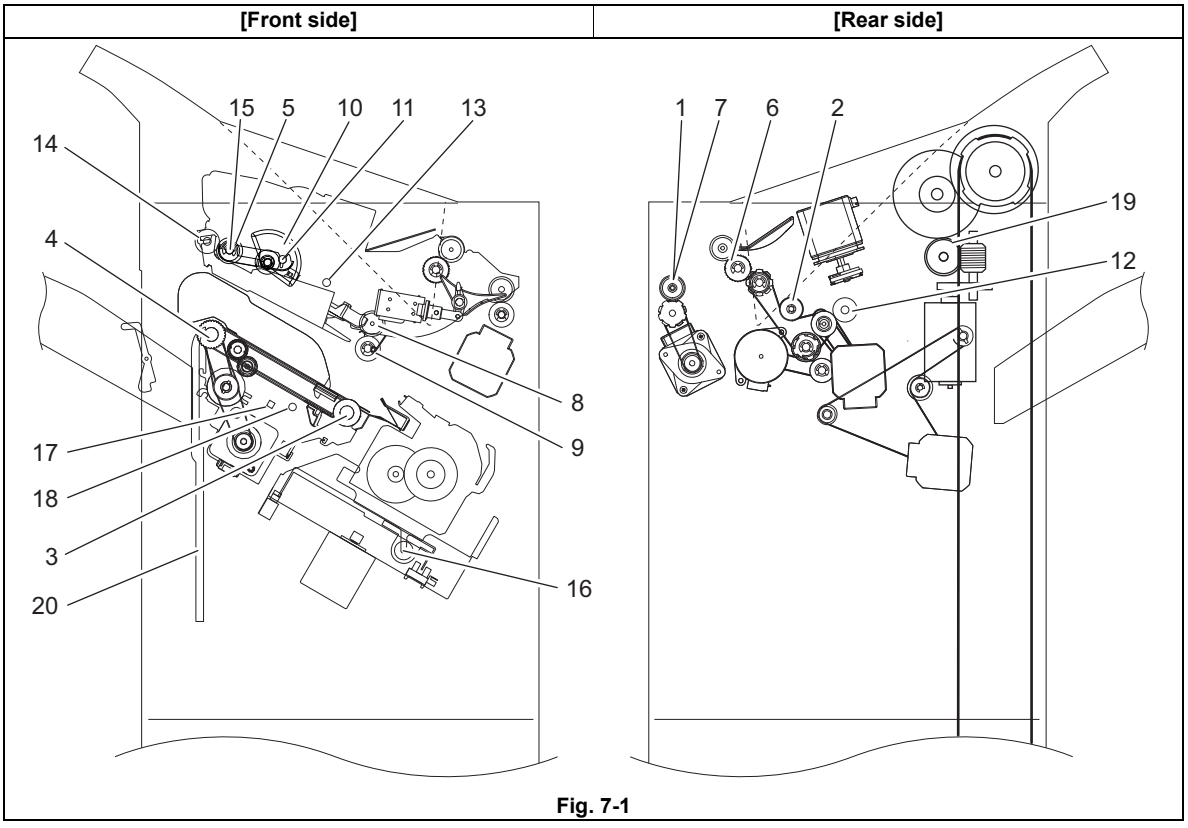


Fig. 7-1

Symbols used in the checklist

Cleaning	Lubrication/Coating	Replacement	Operation check
A: Clean with alcohol B: Clean with soft pad, cloth or vacuum cleaner	W2:White grease (Molykote HP-300) W3:White grease (Molykote EM-30L) C: Coating material (SANKOL CFD-409M)	Value: Replacement cycle (output pages or develop counts) R: Replace if deformed or damaged	O: After cleaning or replacement, confirm there is no problem.

Preventive Maintenance Checklist

Items to check		Cleaning	Lubrication	Replacement (x1,000)	Operation check	Parts list (P-I)	Remarks
1	Entrance sensor (S1)	A					
2	Transport sensor (S2)	A					
3	Stack transport roller-1	A					
4	Stack transport roller-2	A					
5	Buffer roller	A					
6	Exit roller	A					
7	Entrance roller	A					
8	Transport roller	A					
9	Paddle			1,000			
10	Front assist guide cam/ Rear assist guide cam		C				*a
11	Buffer roller link		W3				*b
12	Shaft		W3				*c
13	Buffer tray shaft		W3				*d
14	Pinch roller shaft		W3				*e
15	Buffer roller shaft		W3				*f
16	Stapler carrier shaft		W3				*g
17	Rack & pinion gear (Aligning plate)		W3				*h
18	Finishing tray shaft		W3				*i
19	Movable tray drive gear		W3				*j
20	Grate-shaped guide	A	C				*k

*a Front assist guide cam/Rear assist guide cam
Apply coating material (SANKOL CFD-409M) by using a cleaning brush to the portion on the guide with which the all around the assist guide cam [1].
* Use a cleaning brush (4407915710 BRUSH-33) because cloth contaminated with the coating material shall be treated as industrial waste.
* Do not apply coating material (Molykote PD-910) to the rubber section.
* When coating material adheres to the skin, rinse it well with water.
* The brush with which the coating agent (SANKOL CFD-409M) was applied must be exclusive for coating. Do not use it to clean other areas.

*b. Buffer roller link
Apply an adequate amount of white grease (Molykote EM-30L) to the entire buffer roller link [2].

*c. Shaft
Apply an adequate amount of white grease (Molykote EM-30L) to the entire shaft [3].

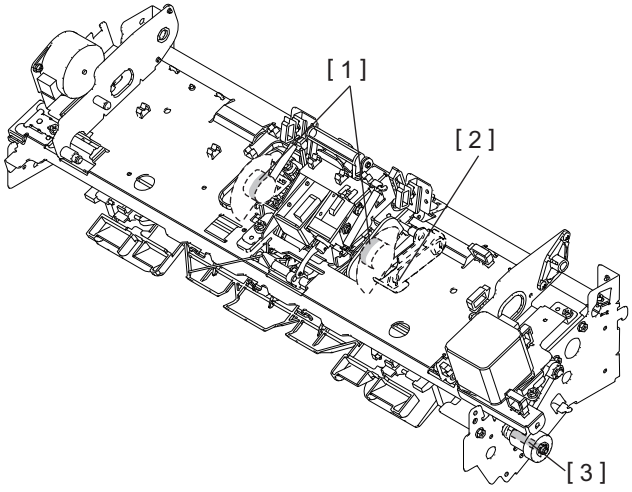


Fig. 7-2

*d. Buffer tray shaft
Apply an adequate amount of white grease (Molykote EM-30L) to the entire buffer tray shaft [1].

*e. Pinch roller shaft
Apply an adequate amount of white grease (Molykote EM-30L) to the entire pinch roller shaft [2].

*f. Buffer roller shaft
Apply an adequate amount of white grease (Molykote EM-30L) to the entire buffer roller shaft [3].

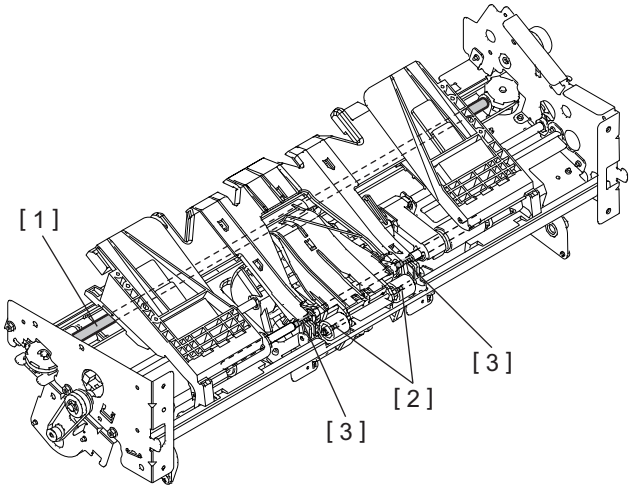


Fig. 7-3

*g. Stapler carrier shaft
Apply an adequate amount of white grease (Molykote EM-30L) to the entire stapler carrier shaft.

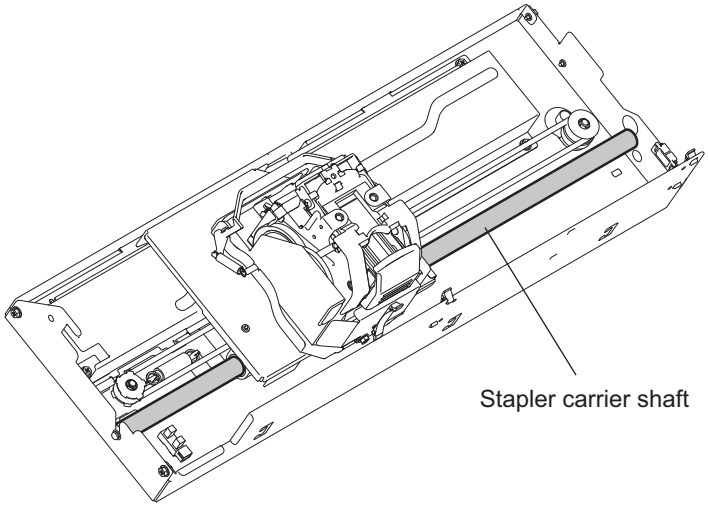


Fig. 7-4

*h. Rack gear, pinion gear (Aligning plate)

*i. Finishing tray shaft

1. Take off the metal shield plate.(📖 P. 4-8 "[K] Shield metal plate")
   * If the hole punch unit is installed, take it off beforehand.
2. Apply oil as follows through the opening which shows up when the metal shield plate has been removed.

Apply an adequate amount of white grease (Molykote EM-30L) to the gear teeth of the rack and pinion gears which drive the aligning plate, and the entire finishing tray shaft.

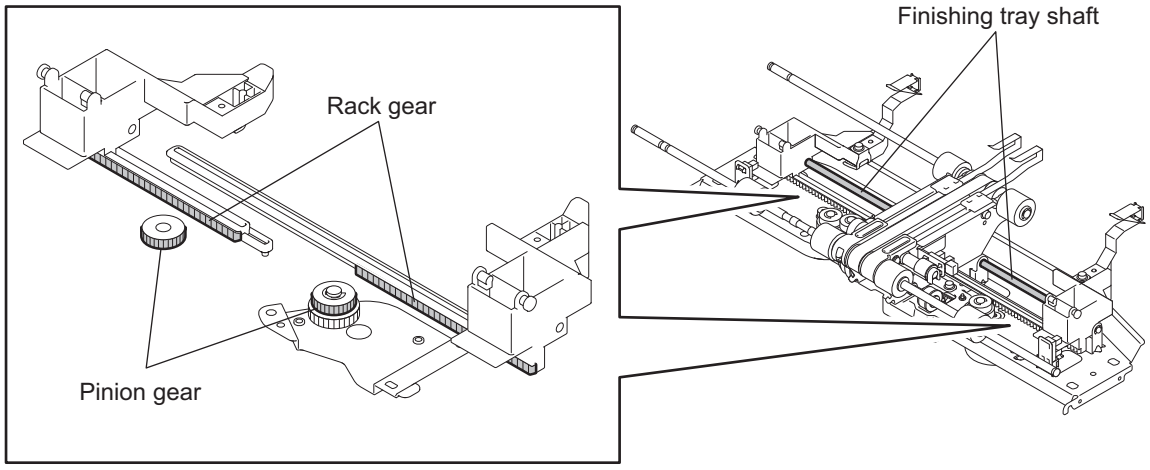


Fig. 7-5

*j. Movable tray drive gear

Apply an adequate amount of white grease (Molykote EM-30L) to the tooth face of gear [1].

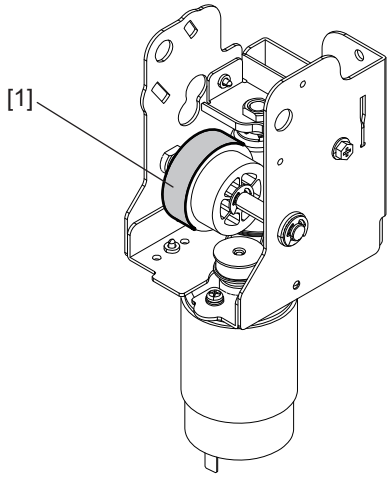


Fig. 7-6

*I. Grate-shaped guide

When an abnormal noise occurs in the grate-shaped guide or the trailing edge of the paper stacked on the tray is dirty, apply coating material (SANKOL CFD-409M) by using a cleaning brush to the portion on the guide with which the paper edge is in contact.

* Use a cleaning brush (4407915710 BRUSH-33) because cloth contaminated with the coating material shall be treated as industrial waste.
* Do not apply coating material (Molykote PD-910) to the rubber section of the grate-shaped tray.
* When coating material adheres to the skin, rinse it well with water.
* The brush with which the coating agent (SANKOL CFD-409M) was applied must be exclusive for coating. Do not use it to clean other areas.

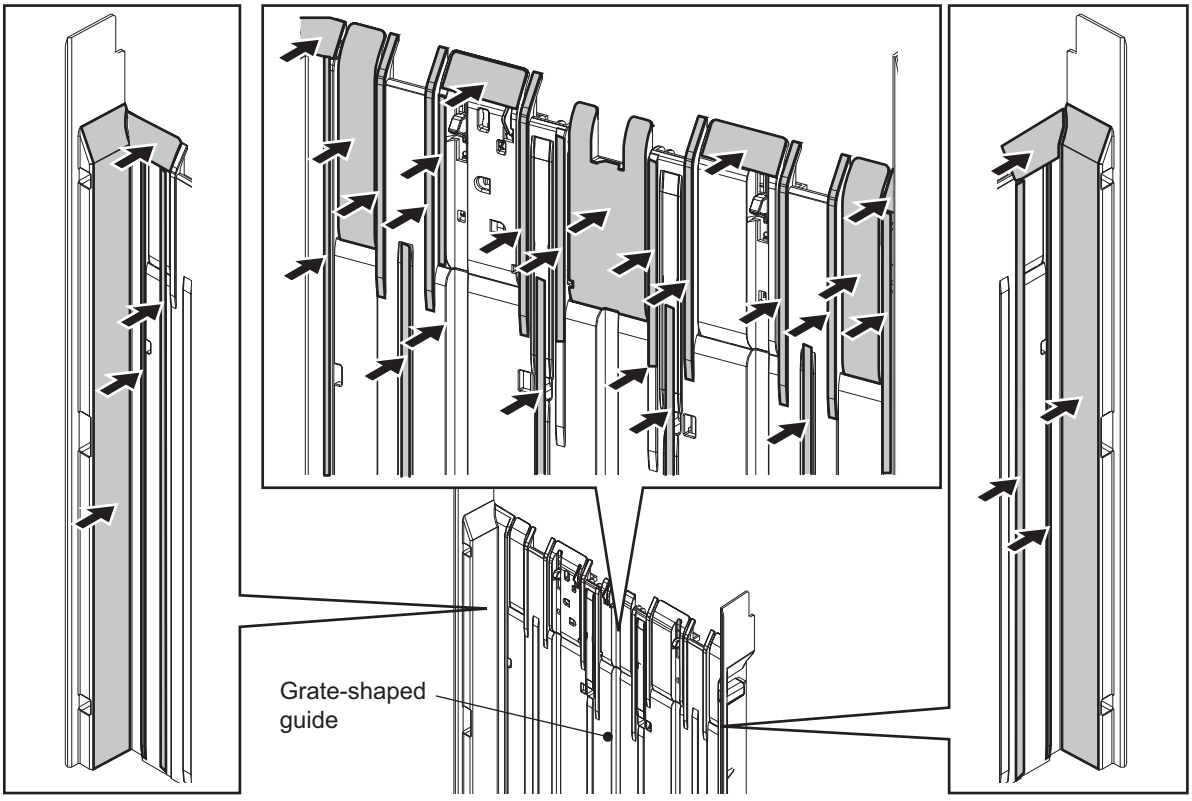


Fig. 7-7

7.2 Firmware Update

Notes:

For updating firmware of the finisher, refer to “FIRMWARE UPDATING” in the Service Manual for MFP.

8. ELECTRIC CIRCUIT

8.1 Harness Diagram

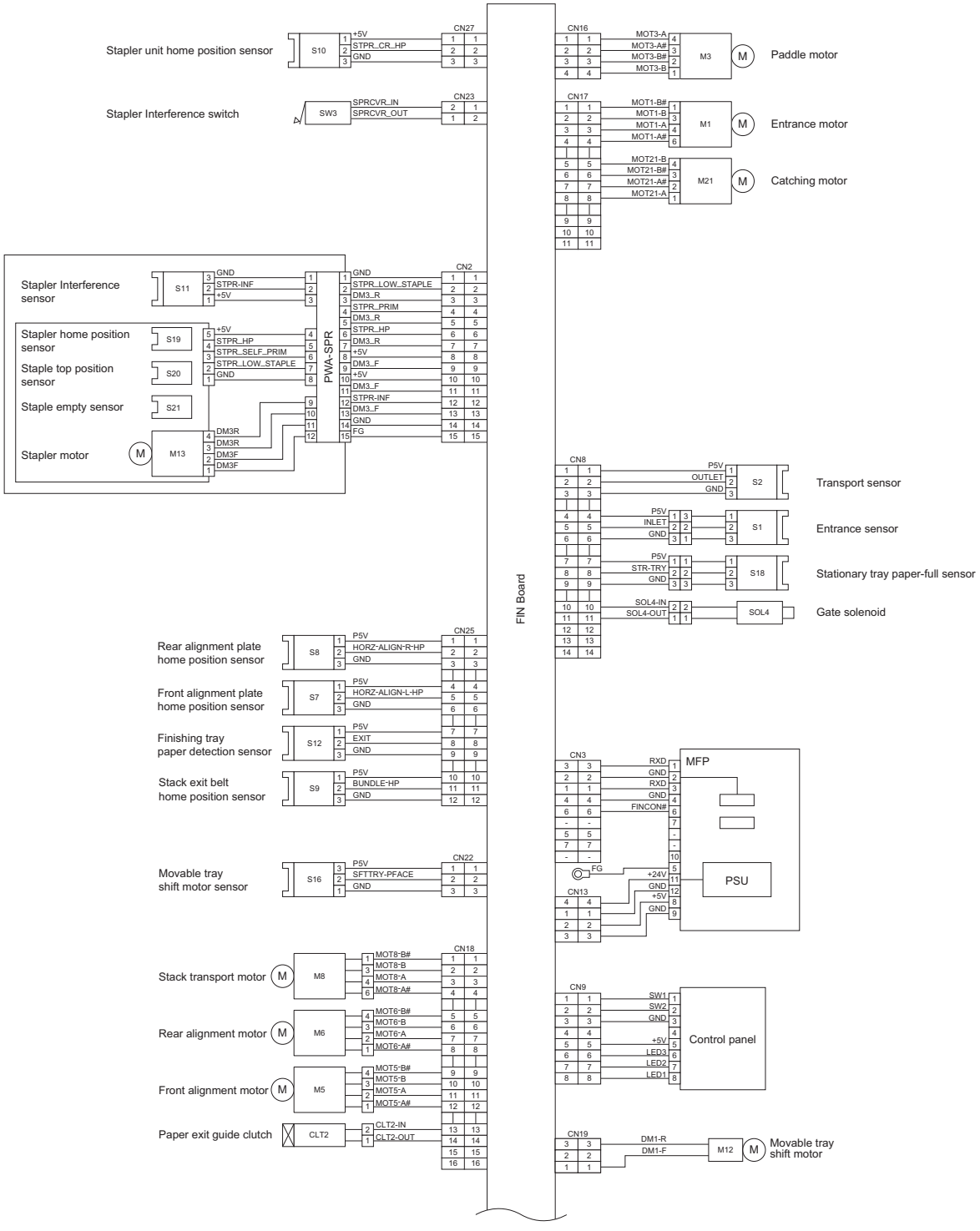


Fig.8-1

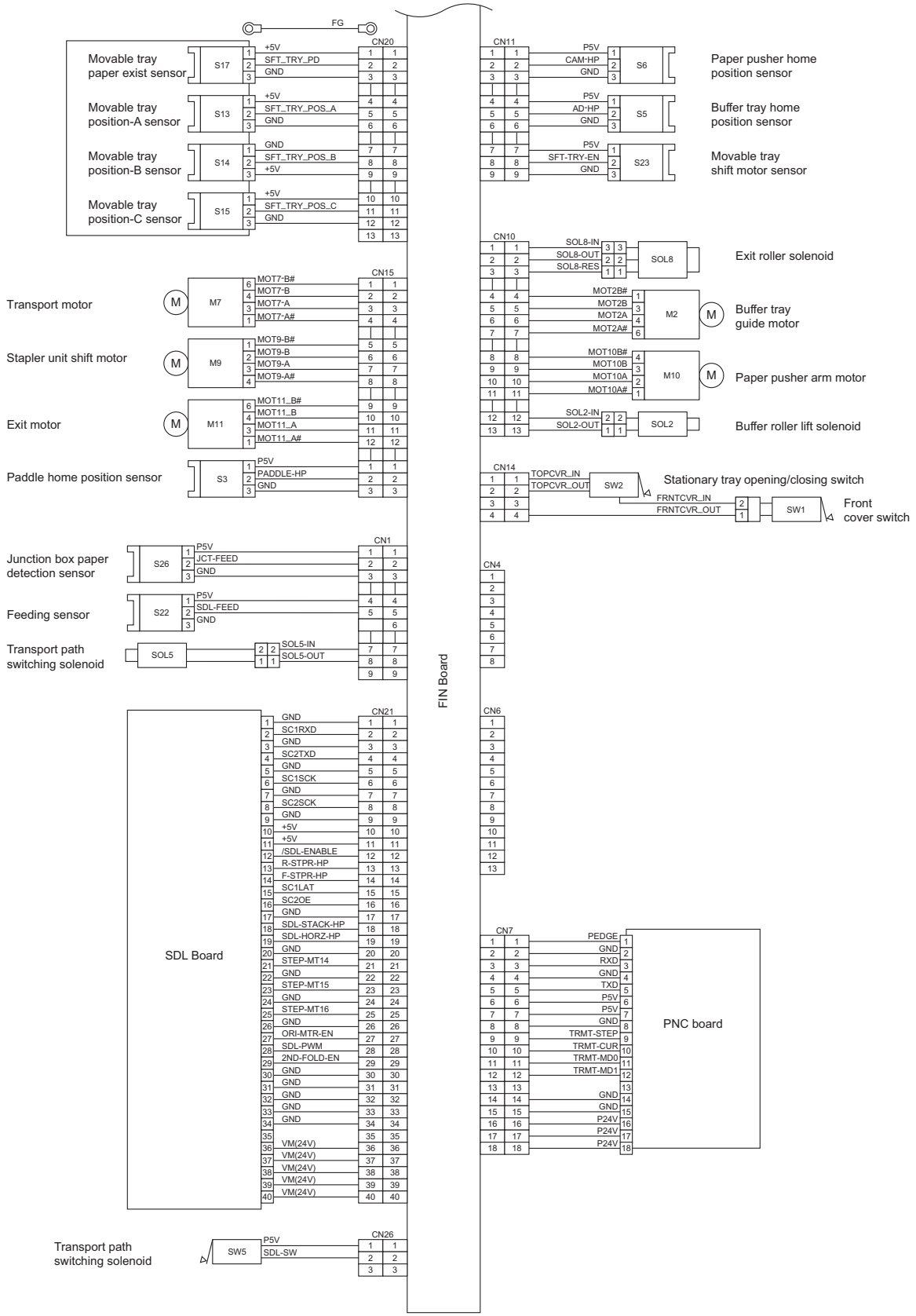


Fig.8-2

8.2 Circuit Diagram

1. Circuit Diagram (1)

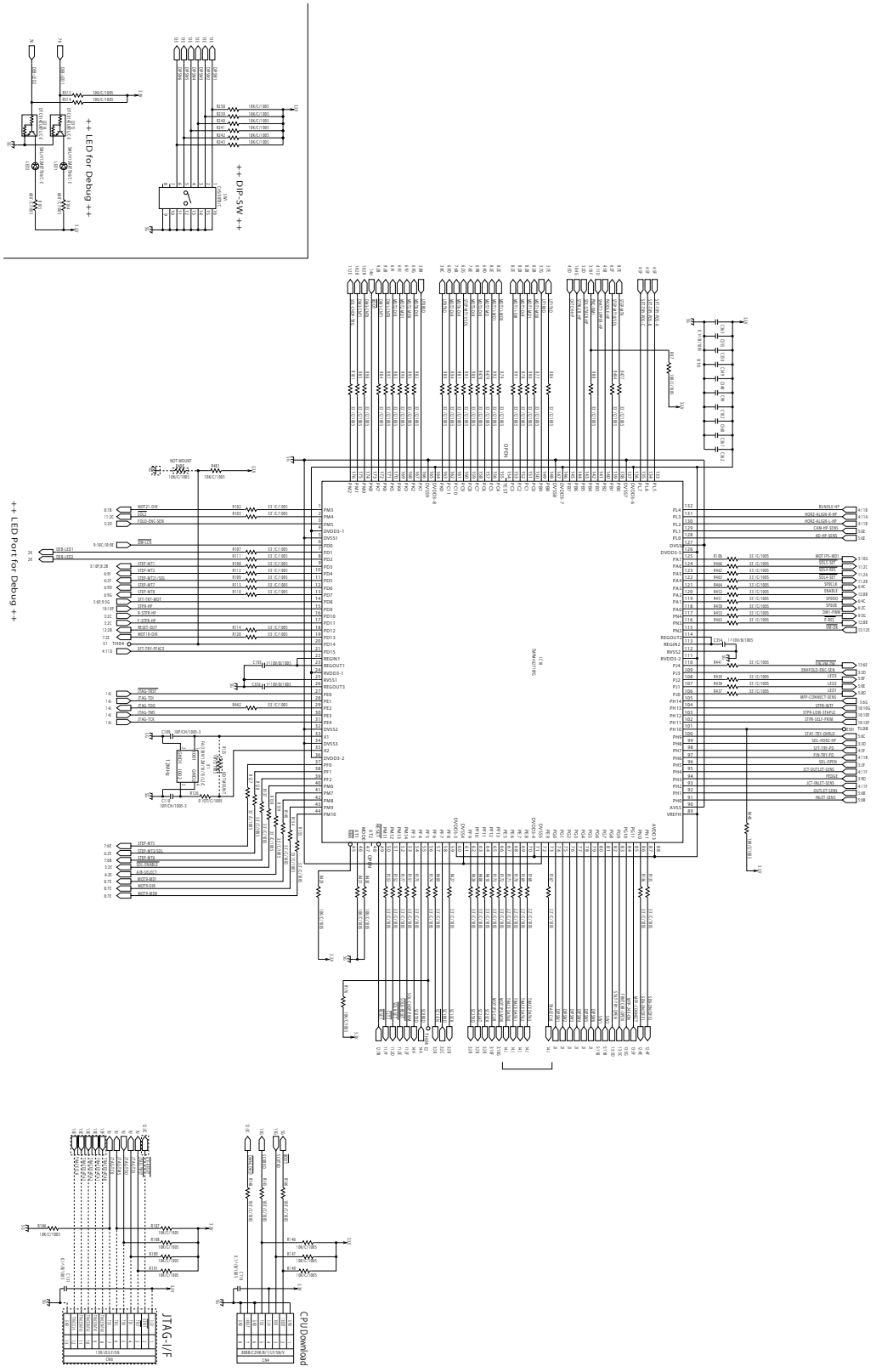


Fig.8-3

2. Circuit Diagram (2)

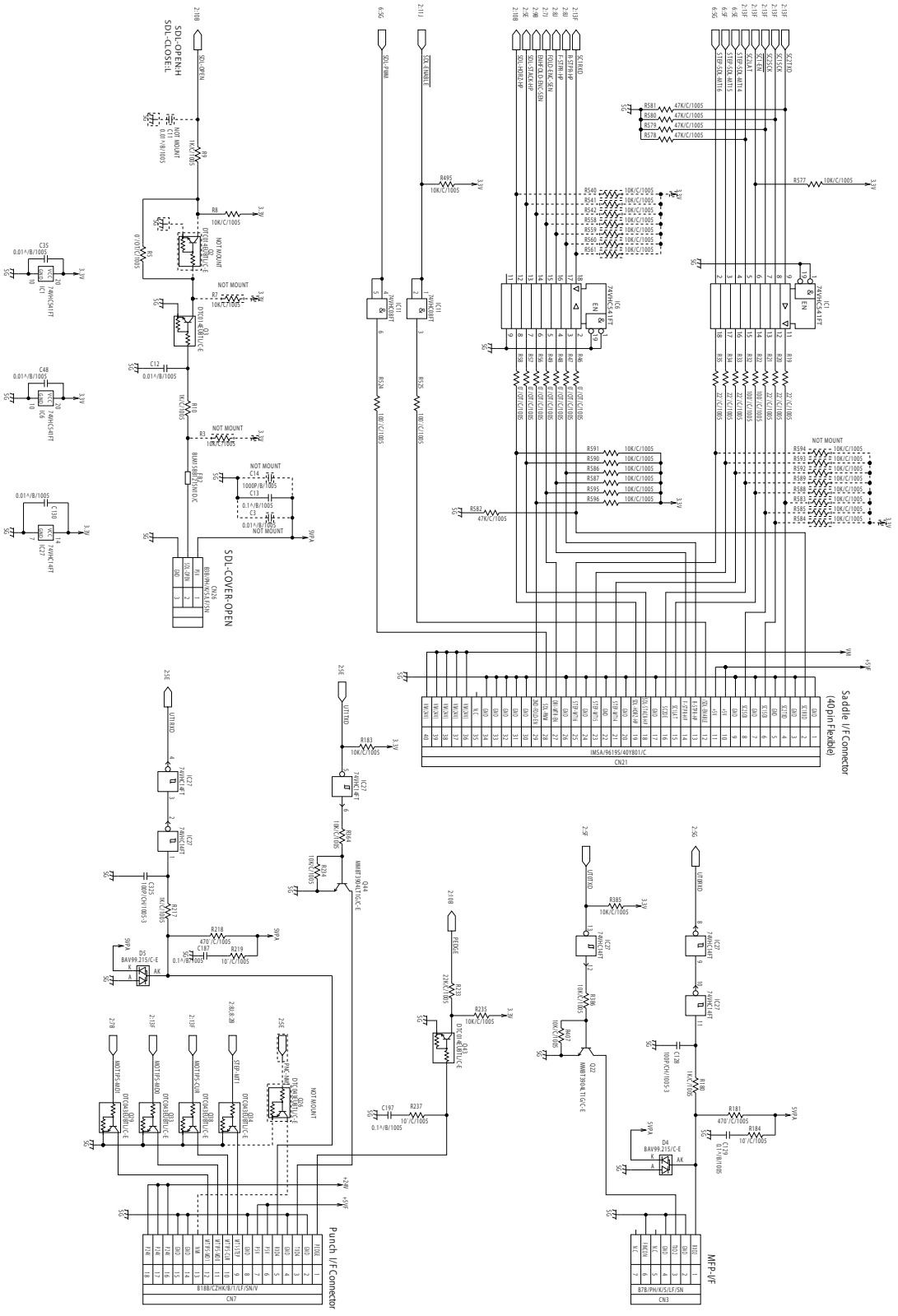


Fig.8-4

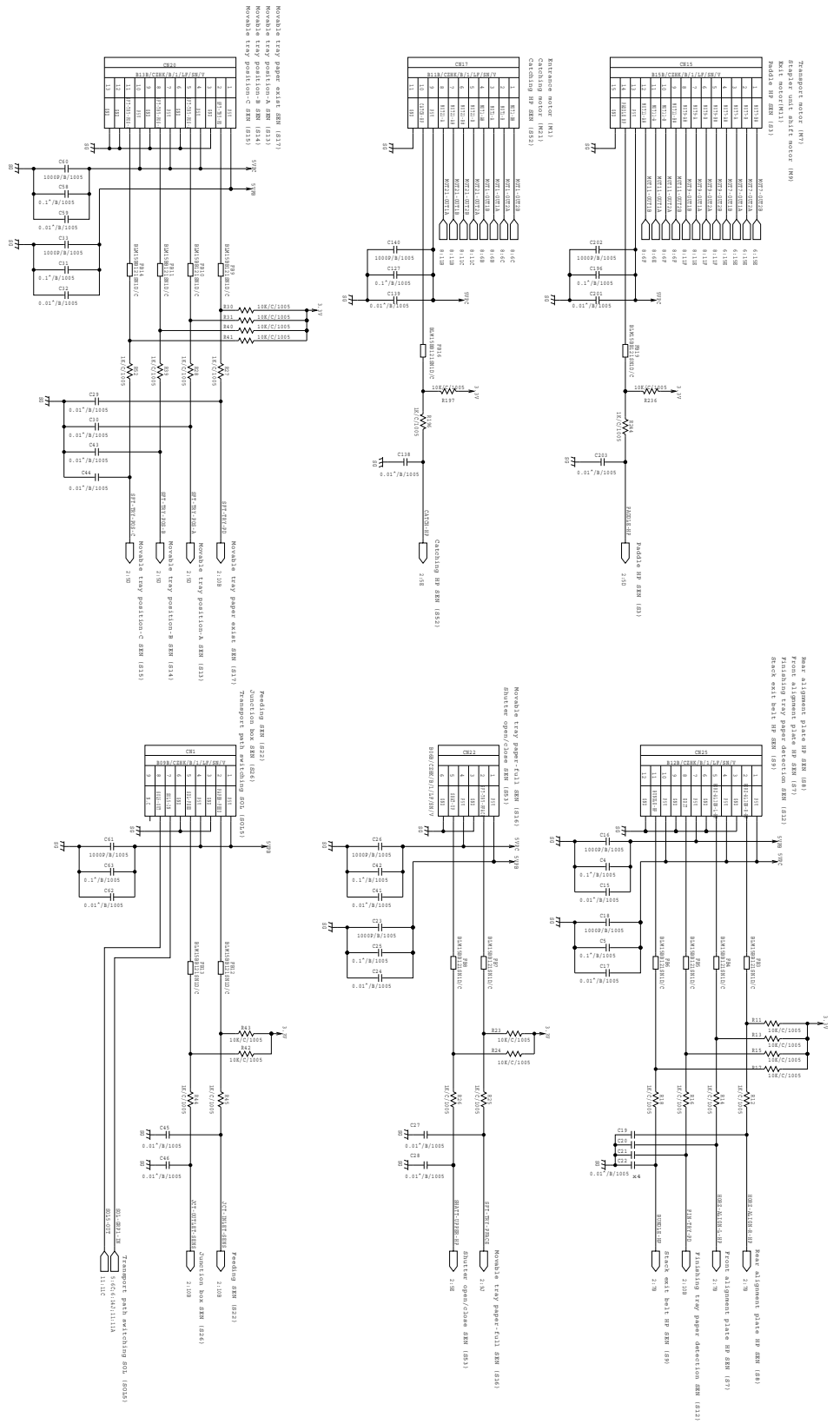


Fig.8-5

4. Circuit Diagram (4)

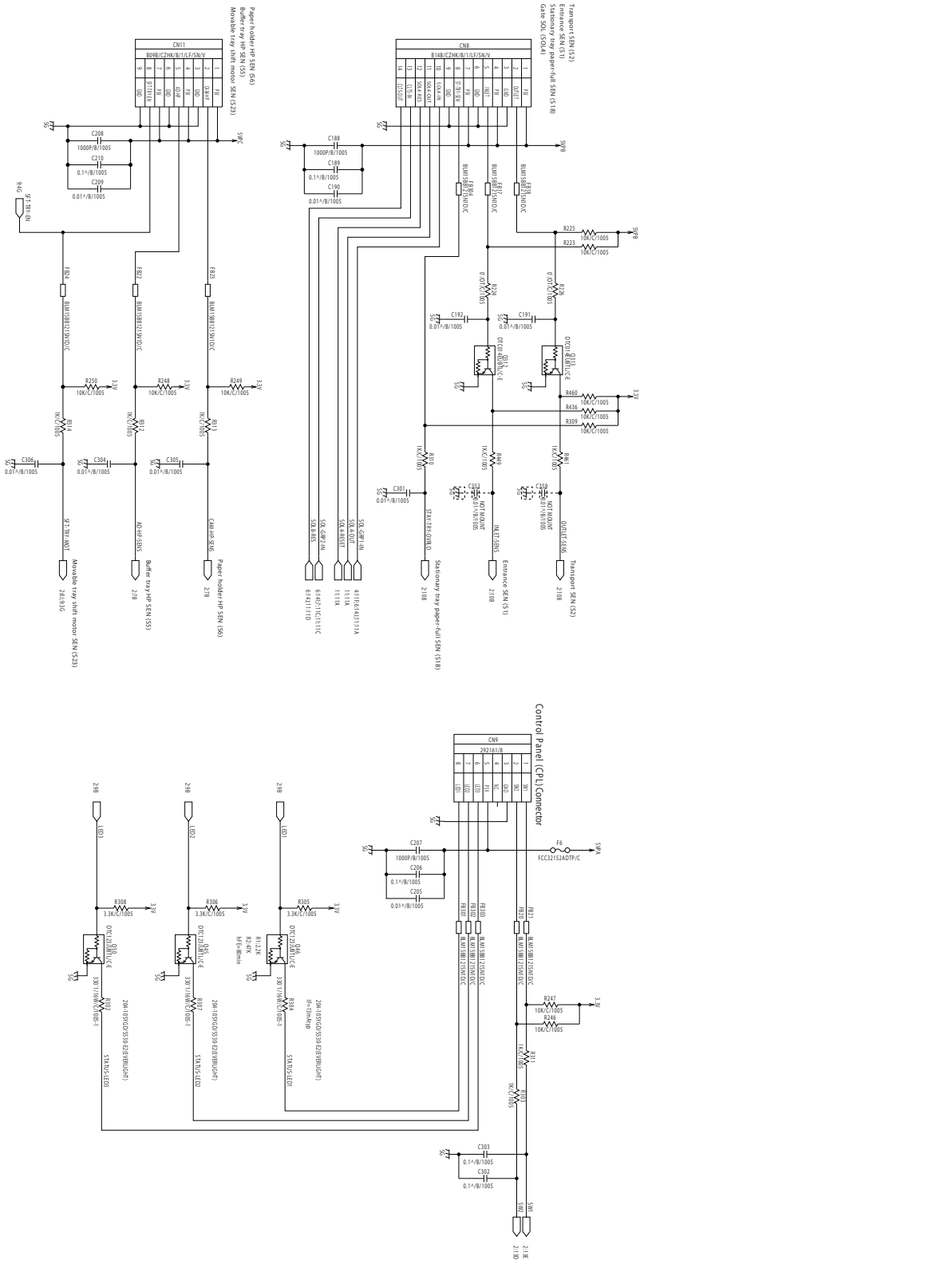


Fig.8-6

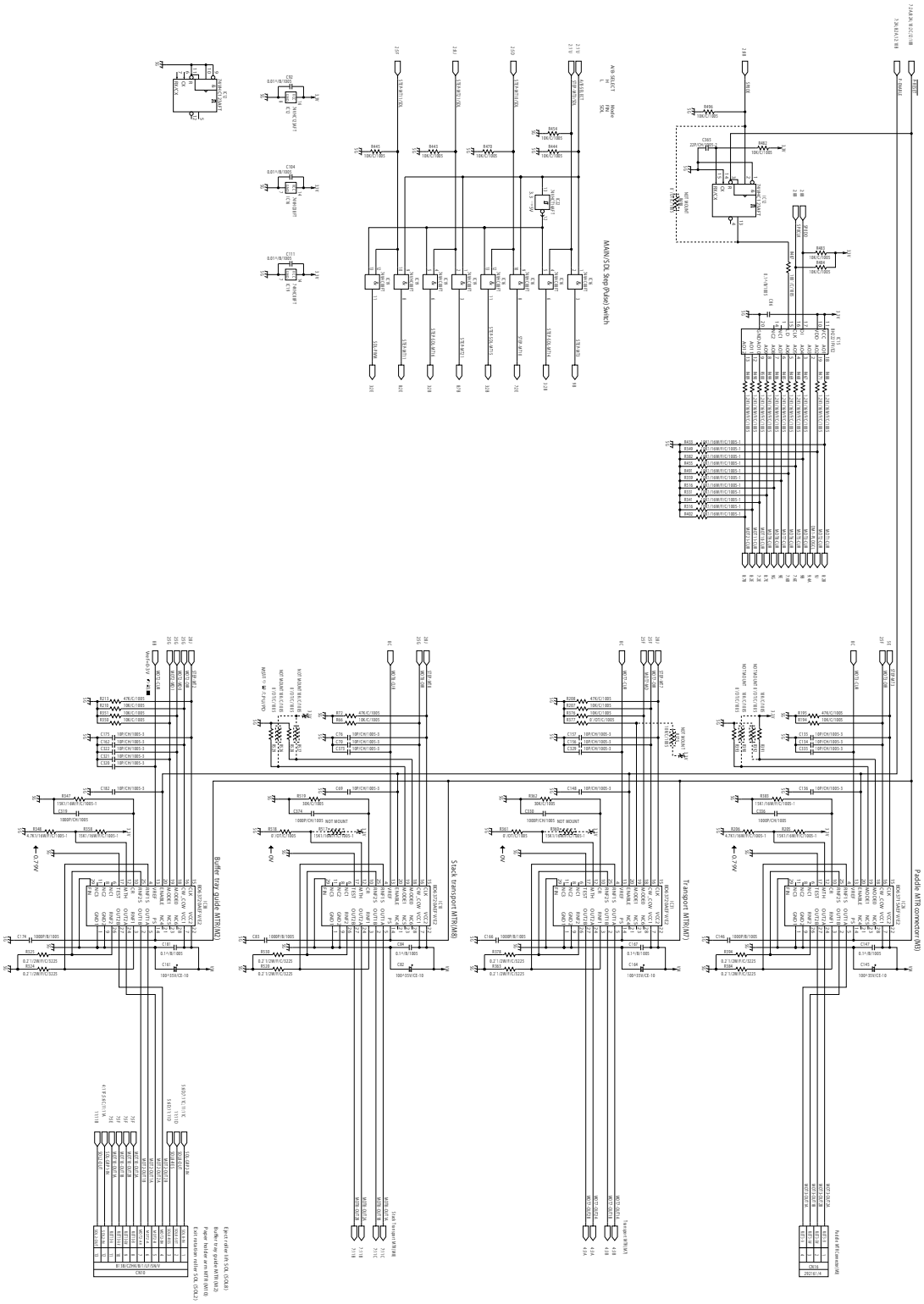


Fig.8-7

6. Circuit Diagram (6)

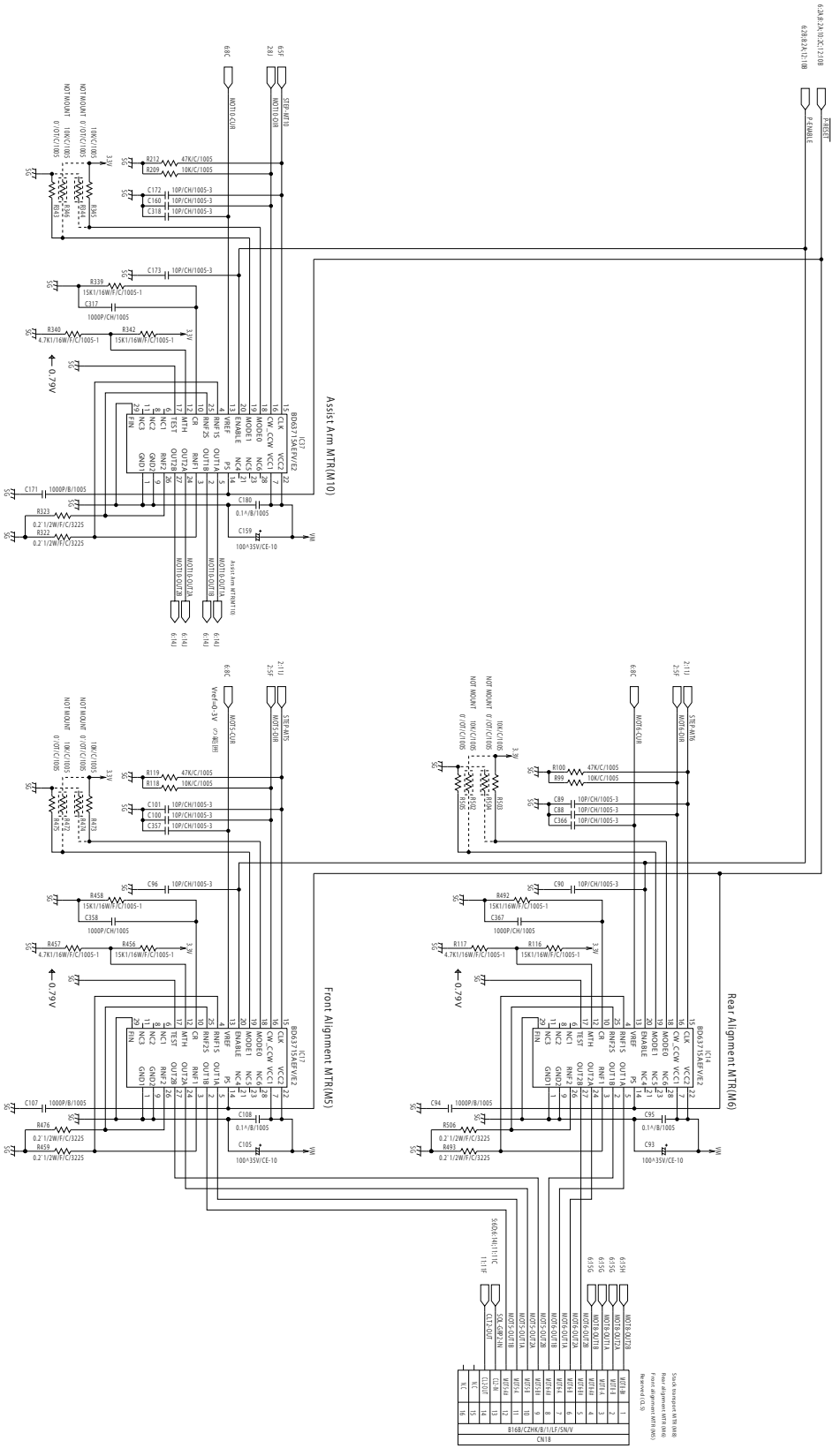


Fig.8-8

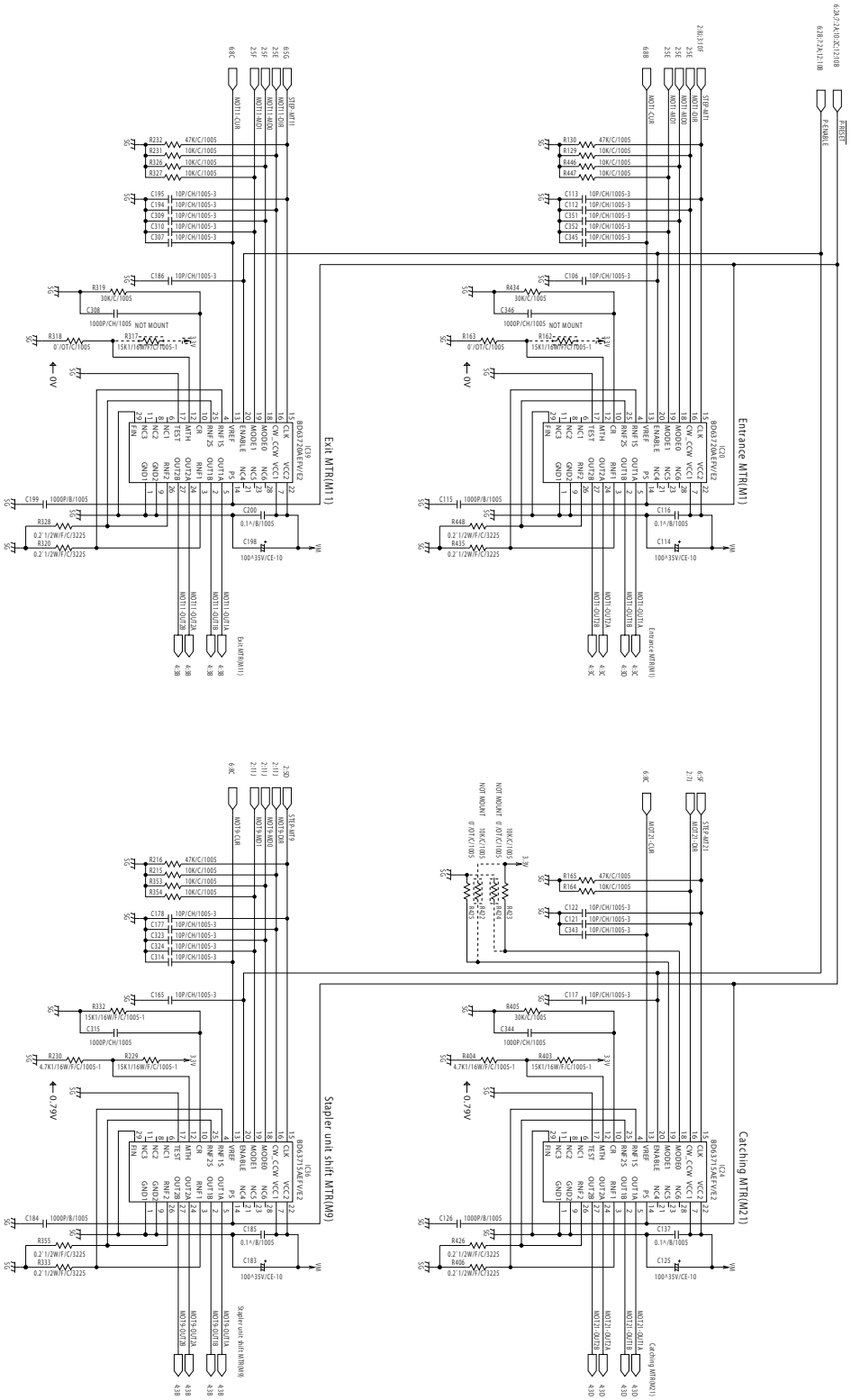


Fig.8-9

8. Circuit Diagram (8)

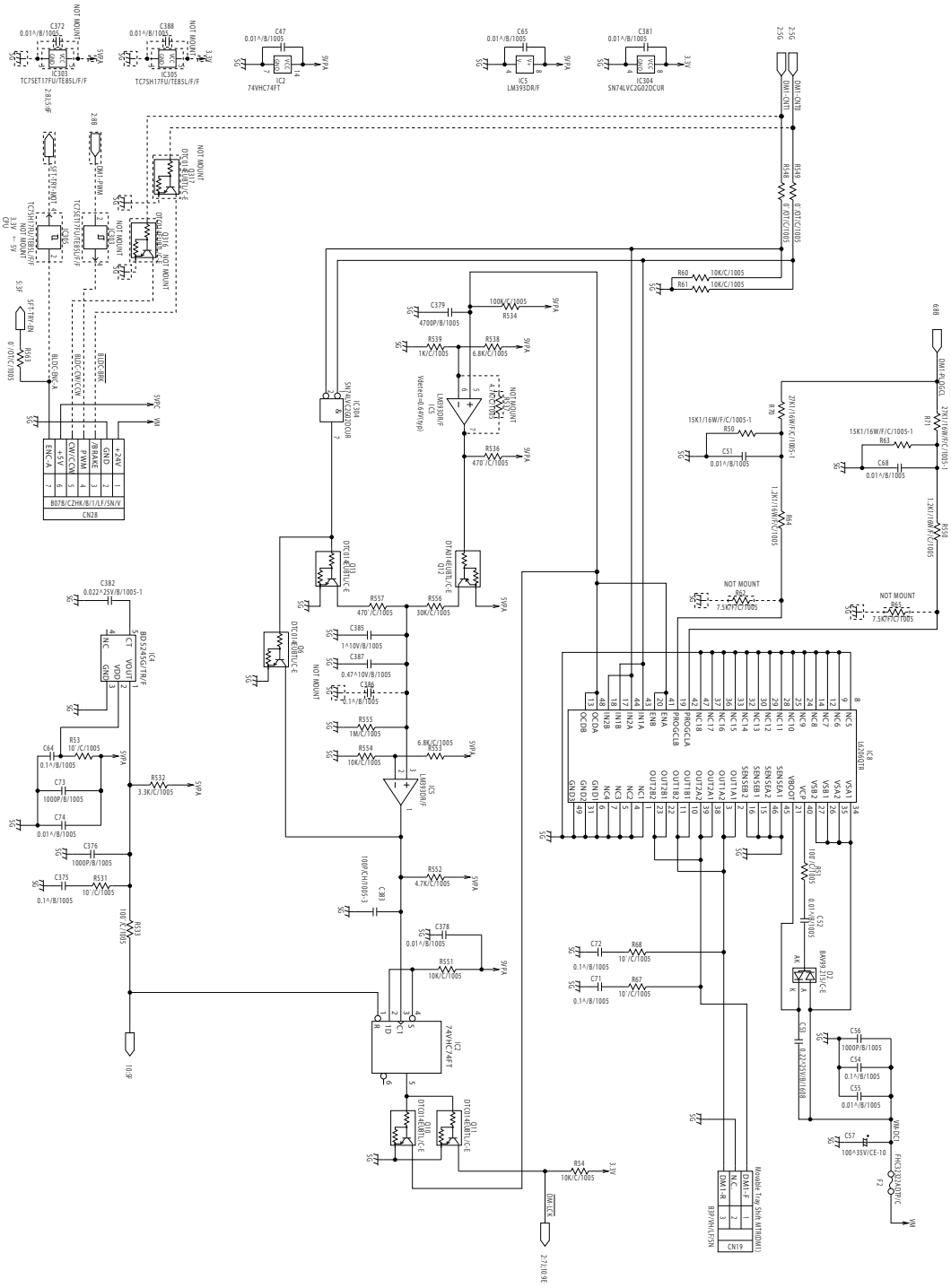


Fig.8-10

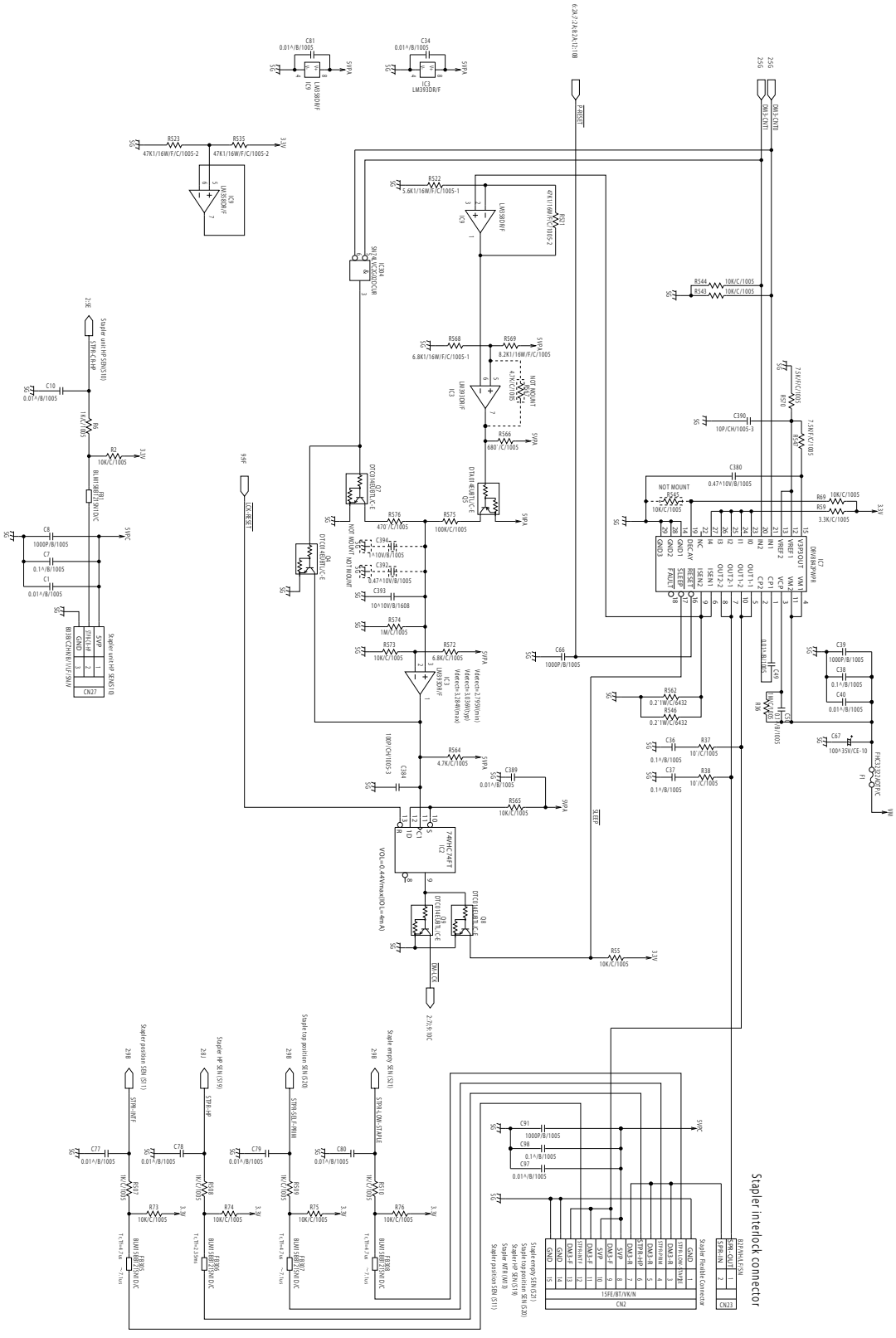


Fig.8-11

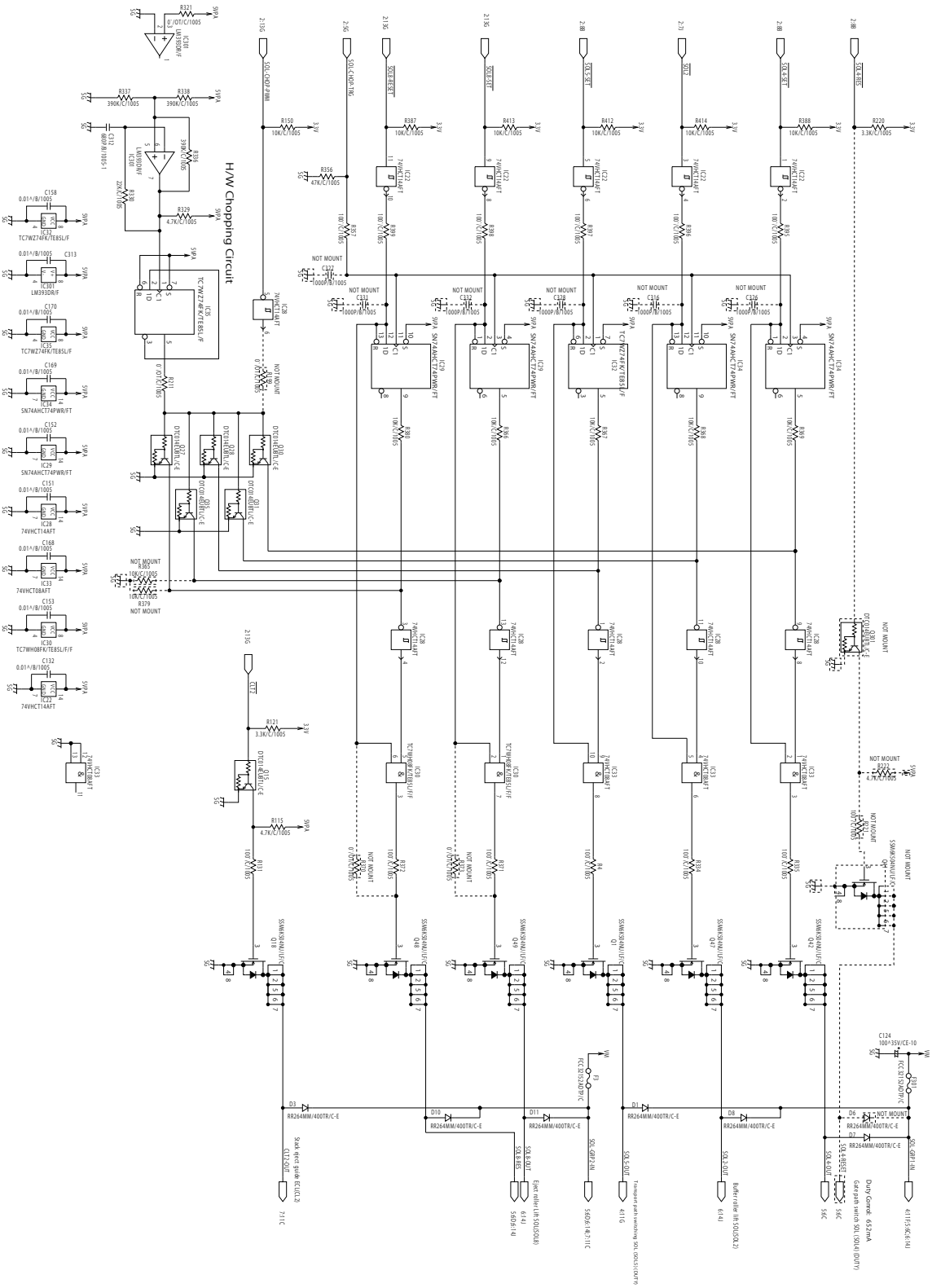


Fig.8-12

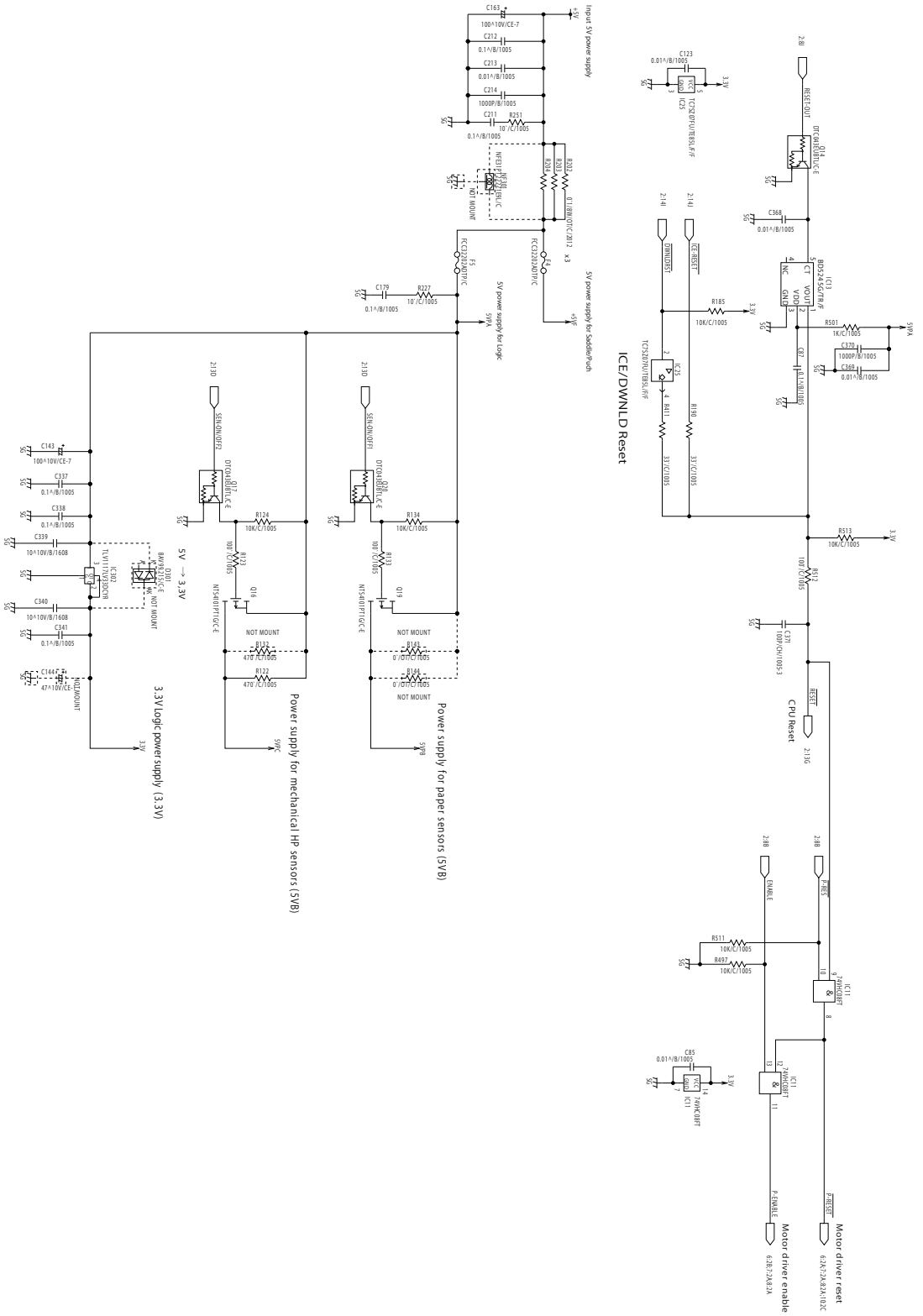


Fig.8-13

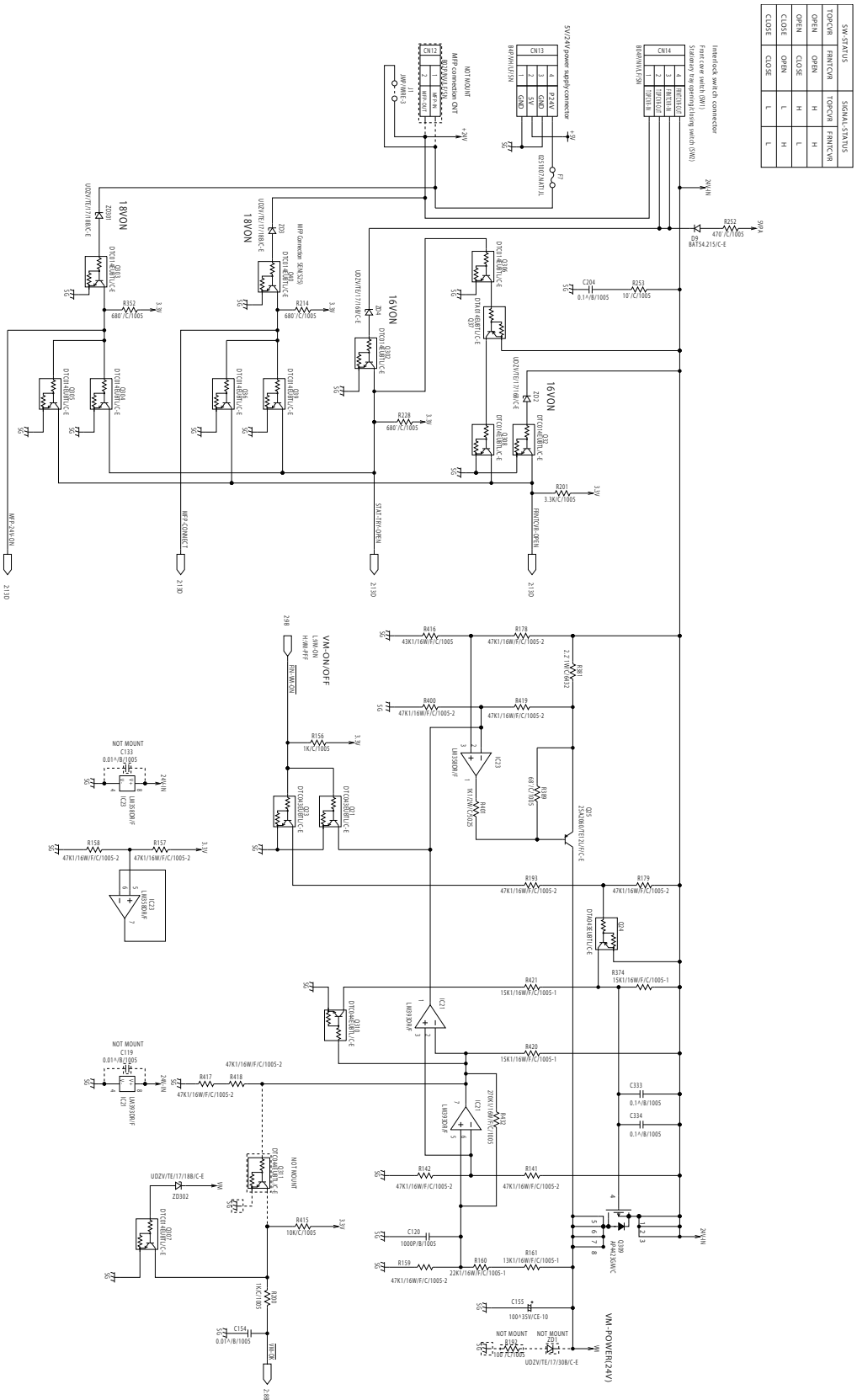


Fig.8-14

8.3 PC board

1. Finisher controller PC board

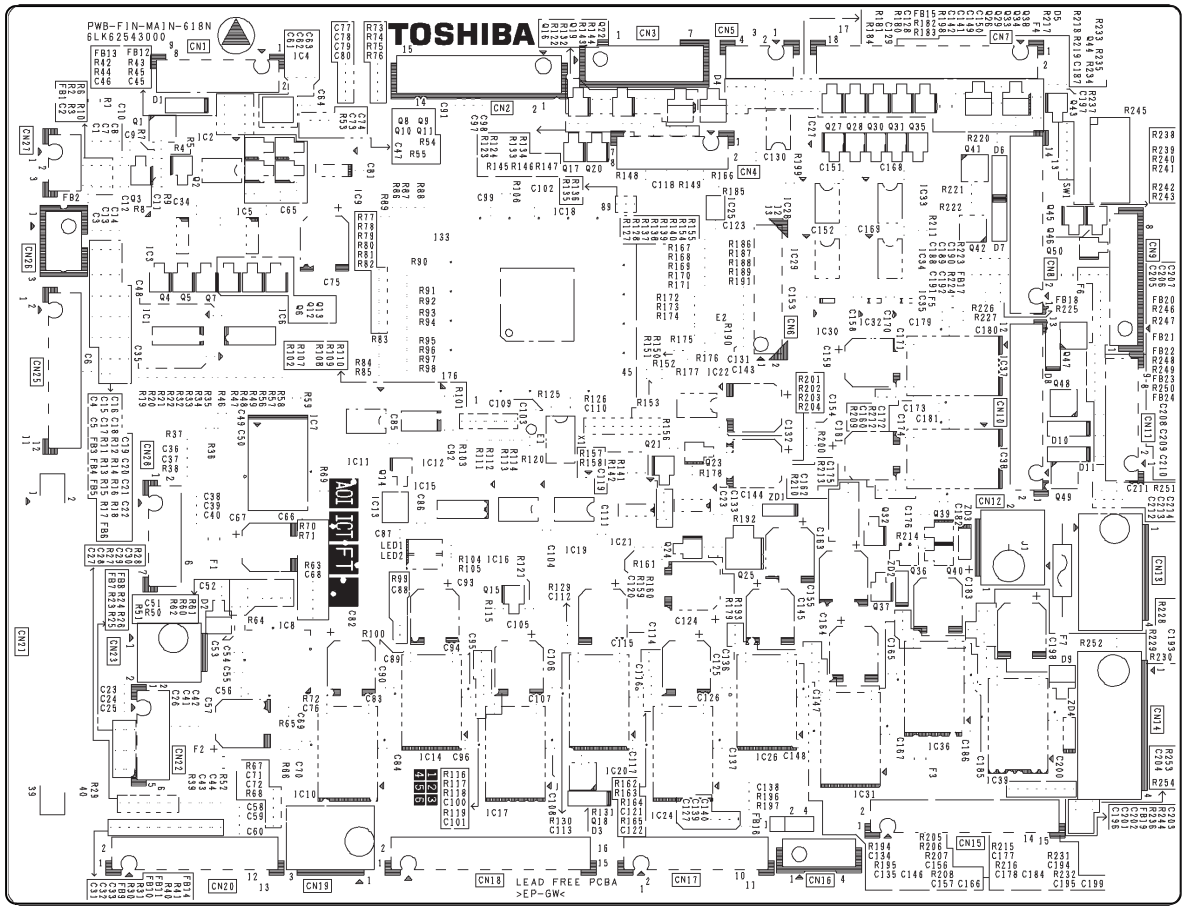


Fig.8-15

8

REVISION RECORD

Ver.03

Ver03<2018.06.20>	
Page	**Contents**
1-6	The description of rating label has been added.
4-24 to 4-27	“Remarks” has been added.
5-1 to 5-5	The mistake has been corrected.
6-29 to 6-32	"6.3 Other errors" has been added.
6-35	The mistake has been corrected.

Ver.02

Ver02<2017.09.22>	
Page	**Contents**
5-1 to 5-5	The adjustment procedure has been changed.
6-7	The troubleshooting of EA20 has been changed.

Ver.01

Ver01<2017.04.11>	
Page	**Contents**
1-1	Information for reused paper has been added.
1-2	Information for reused paper has been added.
1-4	Information for reused paper has been added.
6-11	The troubleshooting for the EA31 error has been changed.

Ver.00

Ver00<2015.03.11>	
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