

MORTISU

Service Manual

QSF - V30

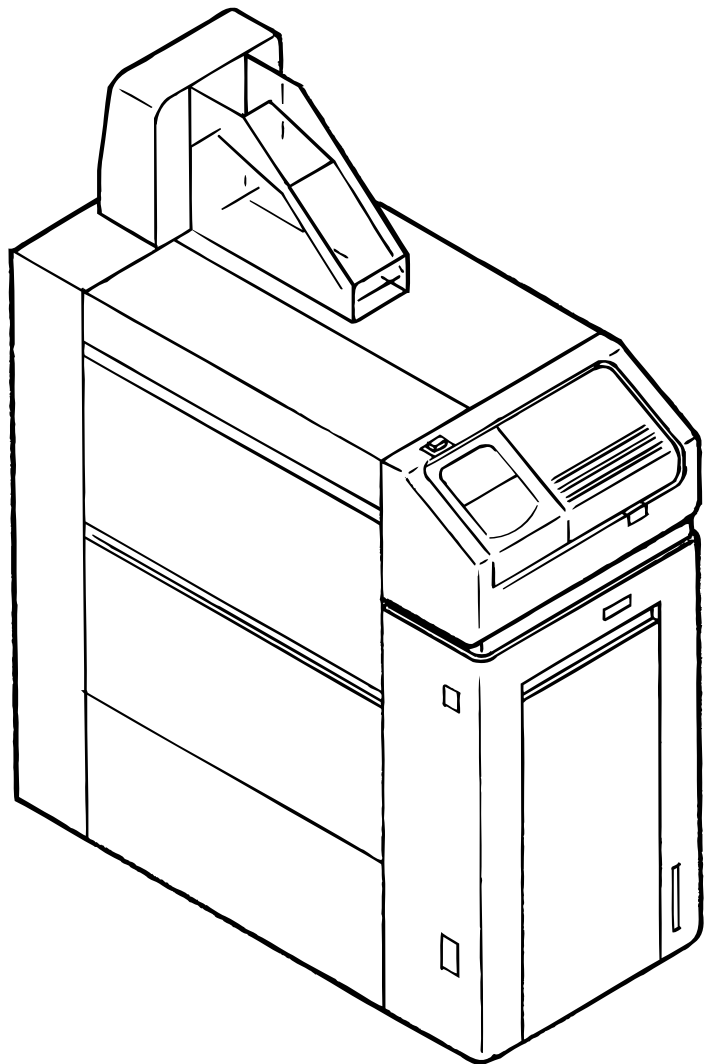
QSF - V50(A)

QSF - V100(A)

QSF - V50AB

QSF - V100(A)B

-This manual is for service personnel only-



FOR SAFETY WORK

1. REMOVING THE UNIT

2. REPLACEMENT AND ADJUSTMENT OF EACH PART

3. DESCRIPTION OF MODES

4. TROUBLESHOOTING




5. CHANGING THE SPECIFICATIONS

6. PRINTED CIRCUIT BOARDS

7. APPENDIX

NOTES TO SERVICE PERSONNELS

Please read this manual and understand thoroughly before servicing the machine.

The safety alert symbols such as  **DANGER**,  **WARNING**, and  **CAUTION** in this manual or the warning label are important areas for safety. Mishandling may cause an accident, resulting in death or serious injury, or a damage to machine. Be sure to observe the items described in this manual or warning labels.

Illustrations in this manual may vary depending on the model or manufacturing lot.

-
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EXPLANATION OF WARNING (SIGNAL WORD)

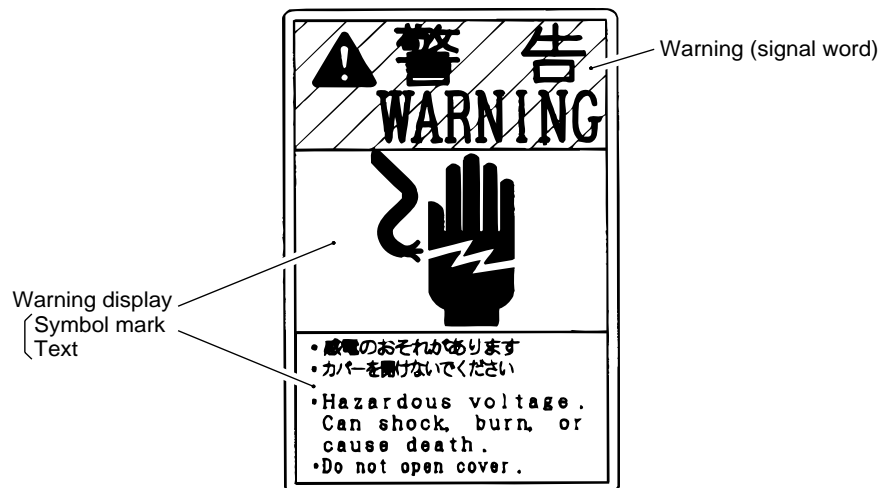
- Signal words are represented by warning displays classified by degree of injury that show messages for safety actions.
- Warning displays are classified by signal words of DANGER, WARNING and CAUTION.
- Warning displays show the signal word, type of danger, degree of danger and avoidance of danger.
- Read the warning displays in this manual and the warning label. Be familiar with the message before carrying out the work.

⚠ DANGER This symbol indicates that if a dangerous situation is not avoided, imminent death or serious injury may occur.

⚠ WARNING This symbol indicates that if a dangerous situation is not avoided, possible death or serious injury may occur.

⚠ CAUTION This symbol indicates that if a dangerous situation is not avoided, light or medium injury may occur.
This symbol is also used when property damage only may occur.

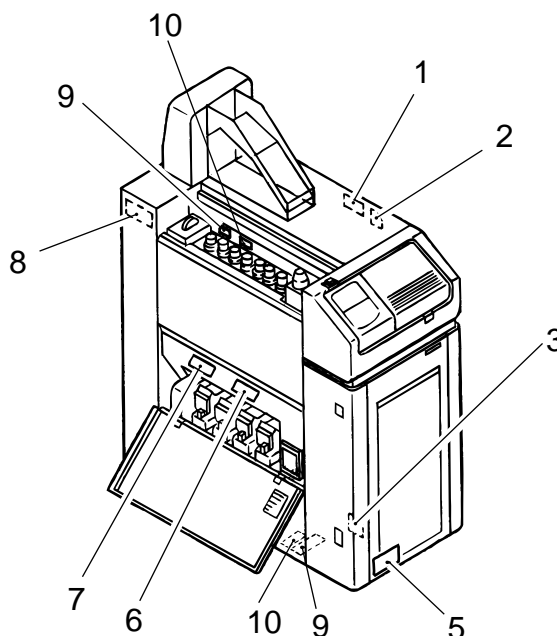
Example of warning label



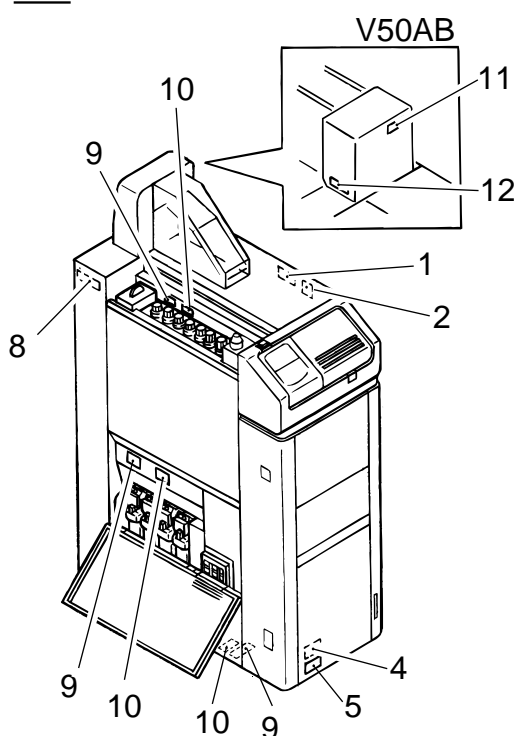
POSITION OF WARNING LABELS

Positions, types of warning labels and part numbers on this machine are as follows. Observe the warnings and work safely. If the warning labels are illegible or removed, contact us or agent for replacement with a new label.

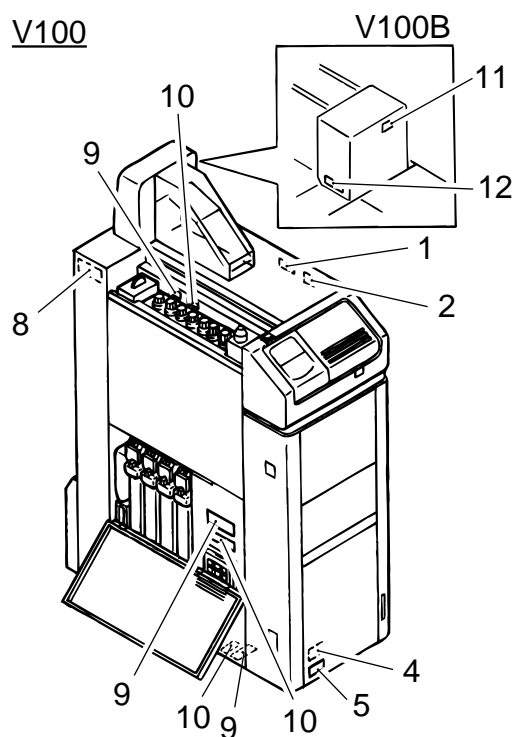
V30



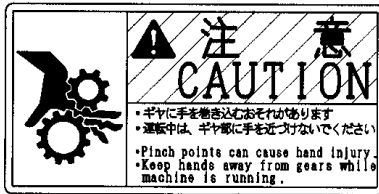
V50



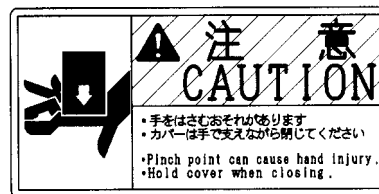
V100



1. A022519-01



2. A022516-01



3. A022769-01



4. A022779-01



5. A022780-01



6. A022531-01



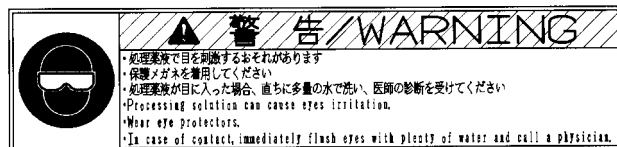
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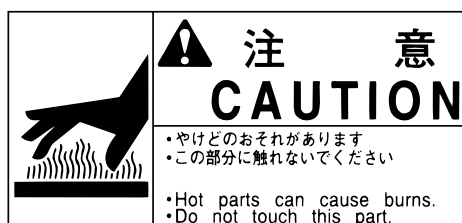
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10. A234392-01



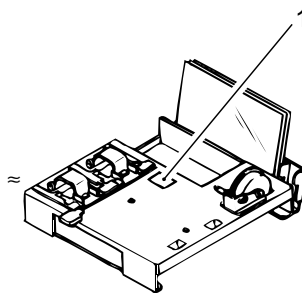
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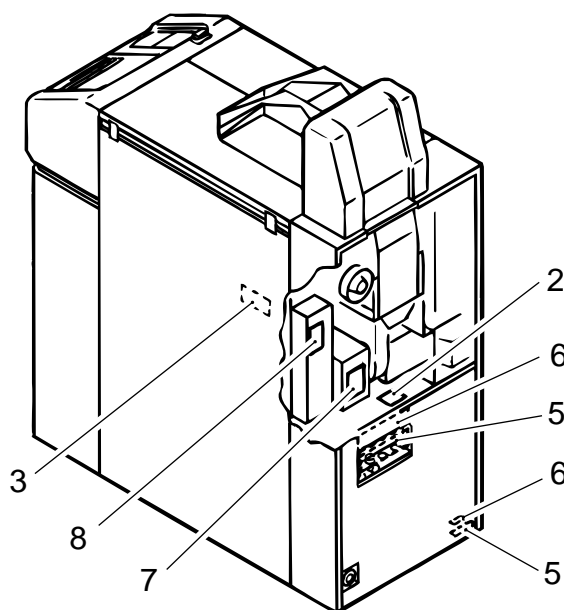
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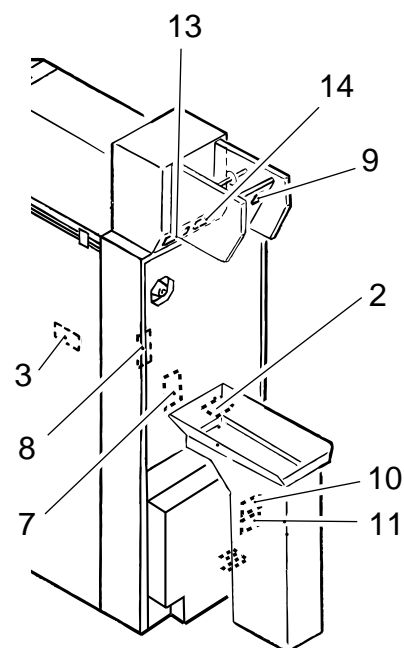
Splice gauge



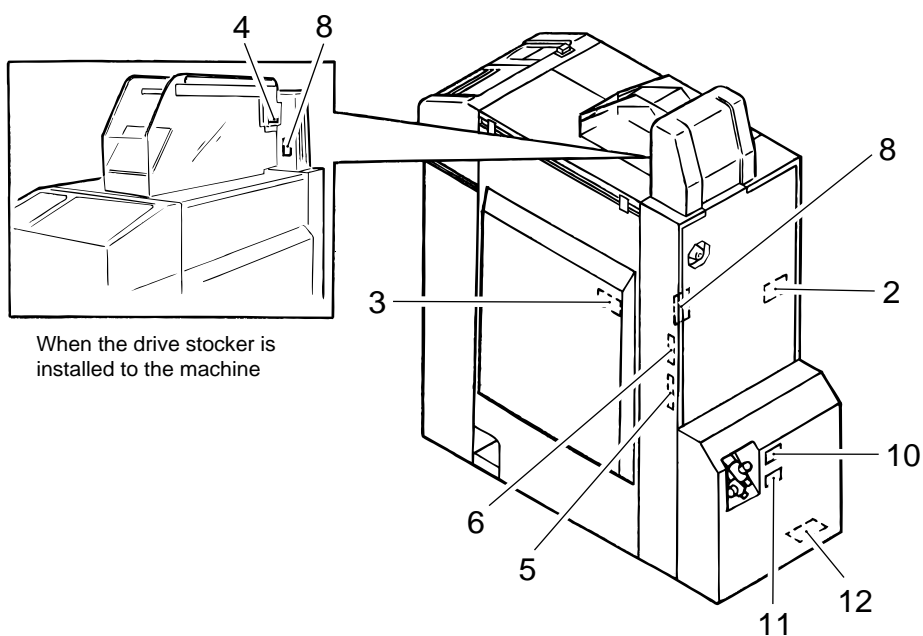
V30,50



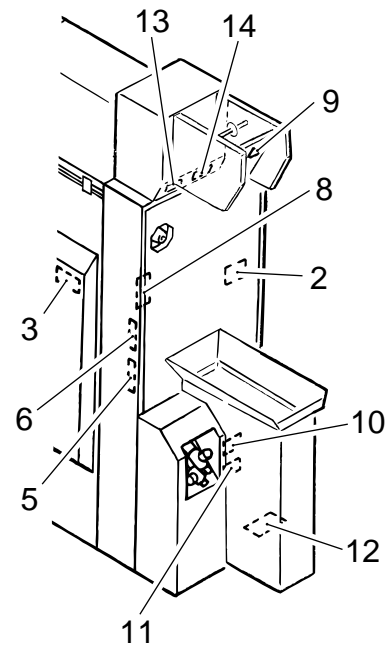
V50AB



V100



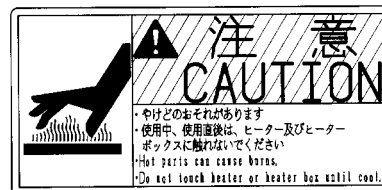
V100B



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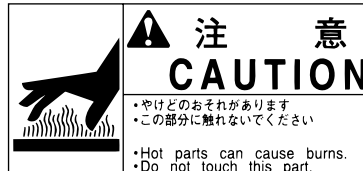
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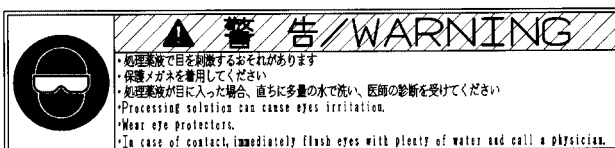
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4. A023202-01



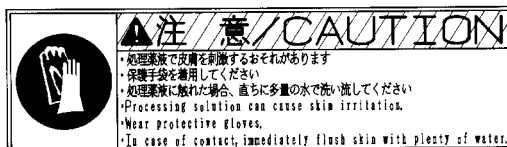
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6. A234392-01



8. A022501-01



9. A515330-01



10. A022523-01



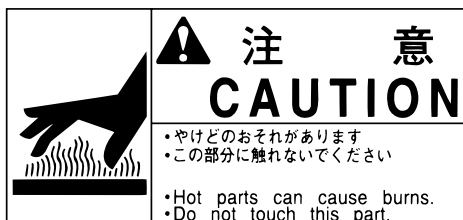
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12. A022781-01



13. A023202-01



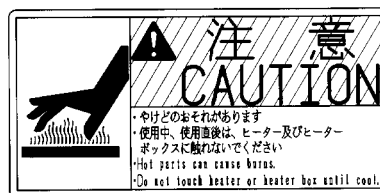
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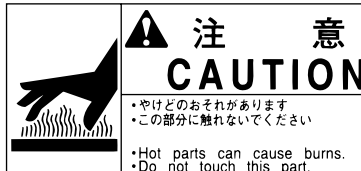
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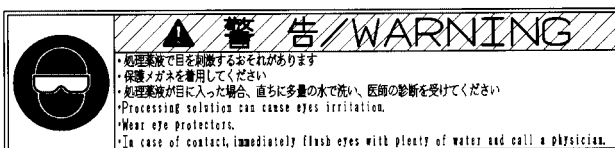
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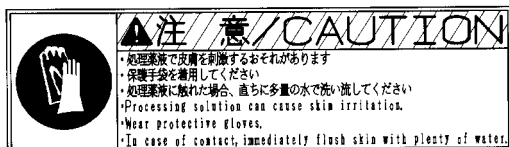
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6. A234392-01



8. A022501-01



9. A515330-01



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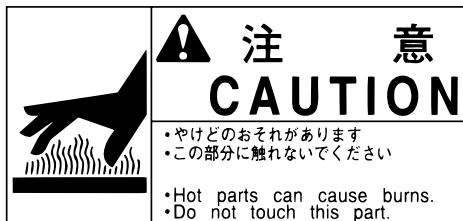
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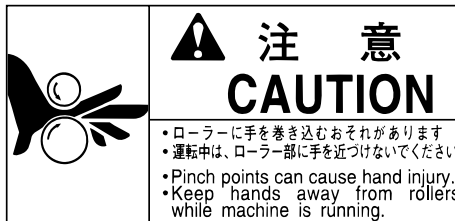
12. A022781-01



13. A023202-01



14. A022521-01



EXPLANATION OF MANUAL

About the chapters

For Safety Work

This chapter explains general safety precautions.

Be sure to read these precautions thoroughly before servicing the machine.

1. Removing the Unit

This chapter explains the removing method of each unit for servicing.

2. Replacement and Adjustment of Each Part

This chapter explains replacement and adjustment of each part.

3. Description of Modes

This chapter explains modes for service personnel.

4. Troubleshooting

This chapter explains troubleshooting of the products.

5. Changing the Specifications

This chapter explains the specification change.

6. Printed Circuit Boards

This chapter explains PCBs for each products.

7. Wiring Diagram

Symbols used in this manual



This is the safety alert symbol mark.

The sentence with this symbol is critical for safety. Make sure to observe this.

This symbol is used with DANGER, WARNING or CAUTION in reference to injury or property damage.

Caution

Cautious points for operations and procedures, items to be observed and additional explanations are described.

Memo

Useful points or functions to be noted are explained.



Manuals or sections for reference are indicated.

Abbreviations used in this manual

The following abbreviations are used in this manual. Some solutions are different from the following abbreviations.

CD Color developer

BL Bleach

FIX Fixing solution

STB Stabilizer

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Changing the Specifications

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7. Appendix

Wiring Diagram

Wiring Diagram 7001

For Safety Work

When replacing the parts or making mechanical adjustments, be sure to turn off the power.

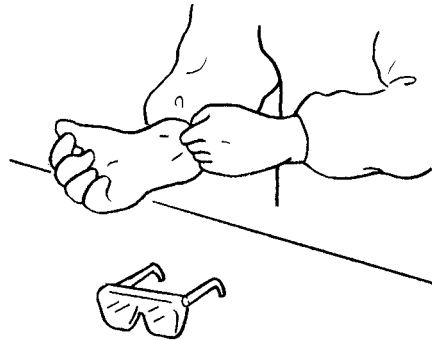
1. Be sure to turn off the circuit breaker of this machine.
2. Turn off the circuit breaker of the main power source (the power source connected to this machine).
3. Ground wires (green/yellow) are connected to the covers and units of this machine. For reassembly, be sure to connect the ground wires as they were.
4. When parts (units) are replaced or adjusted, be sure to carry out the motion check of the machine.

***When key operations are required, the circuit breaker cannot be turned off.
Be careful for the motion check of the machine.***

Cautions for Processing Solutions

WARNING

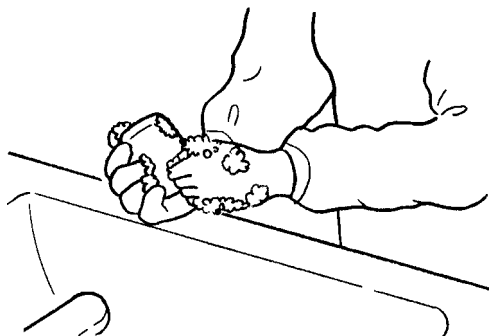
- *Processing solutions used in this machine may be hazardous if swallowed or it may be stimulating. Direct contact with solutions may damage skin or eyes, or repeated contact may result in allergic skin.*
- *When handling processing solutions, be sure to wear safety goggles, chemical resistant gloves and work wear to prevent direct contact of solutions.*



- *After direct contact with processing solution or work with such possibility, wash your hands with a lot of water and soap.*
- *If the processing solution comes in contact with clothes, discoloration or bleaching may occur.*
- *If it is swallowed, rinse your mouth with water and drink a few glasses of water. Put your fingers in the throat and vomit it. Contact a physician immediately.*
- *If solution gets into the eyes, wash with water for at least 15 minutes and consult a physician as soon as possible.*



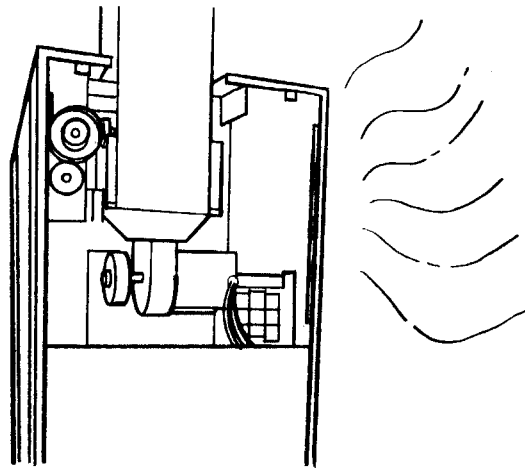
- *If solution come in contact with the skin, wash the area thoroughly with soap and water. If it is left undone, the allergy may occur on the skin.*



Cautions for Heating Unit

⚠ WARNING

- *The processing solution heater, dryer heater and motor generate high temperature heat. Direct contact during operation or just after operation may result in burning.*
- *Before replacing components or performing maintenance, make sure that the temperature is low. After the machine is cool, turn off the circuit breaker and main power source. Cooling time of heaters and motors vary depending on the working status. After turning off the circuit breaker and main power source, carry out the work when the machine is cool.*
- *If you get burnt, cool it with water and consult a physician as soon as possible.*



Cautions for Rotating Parts

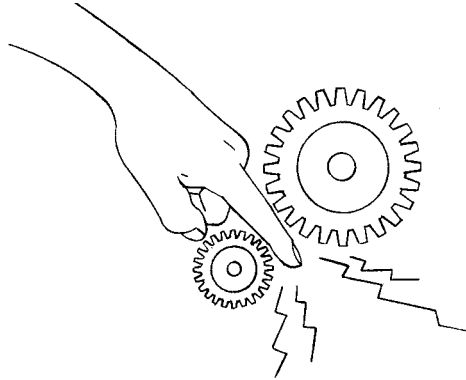
WARNING

- Hand, hair, or clothes may be trapped in gear, chain, belt, roller, or fan.
- Do not remove the unauthorized cover.

Before working, make sure that the circuit breaker of this machine and main power source are off.

Do not put your hand close to the rotating parts during operation.

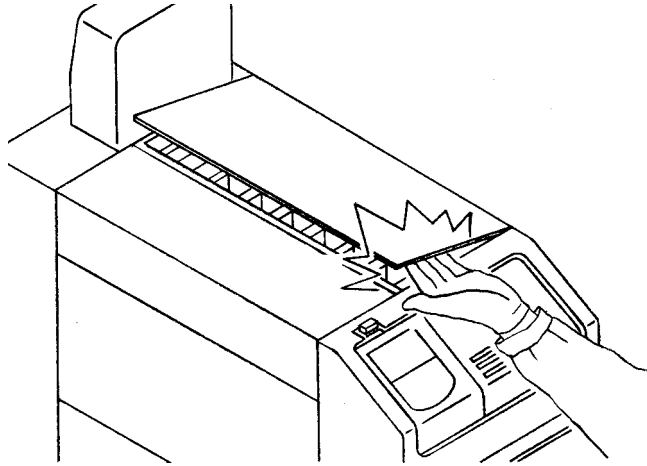
- If your hand or something is trapped, ask someone nearby to turn off the circuit breaker of this machine.



Cautions for Moving

WARNING

- *Your hand may be caught by an opening cover, door or moving unit.*

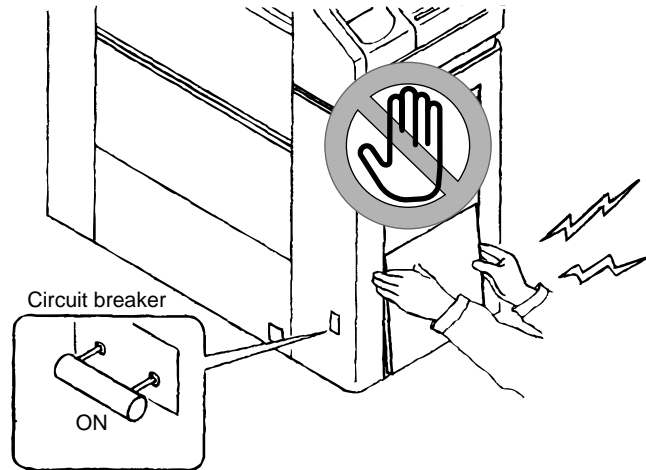


- *Hold the cover and door with your hand for opening and closing. Do not hold the unspecified part when moving the unit manually. If you are working on or near the automatic unit, turn off the circuit breaker and main power source.*
- *If your hand is caught, ask someone nearby to turn off the circuit breaker of this machine as soon as possible.*

Cautions for Electric Shock

WARNING

- When this machine is installed or moved, please ask the professional electrician to place the wiring of power source. Be sure to connect it with ground.
- If the troubleshooting, check of wiring, and measurement of voltage are carried out, be careful so as not to be subject to electric shock.



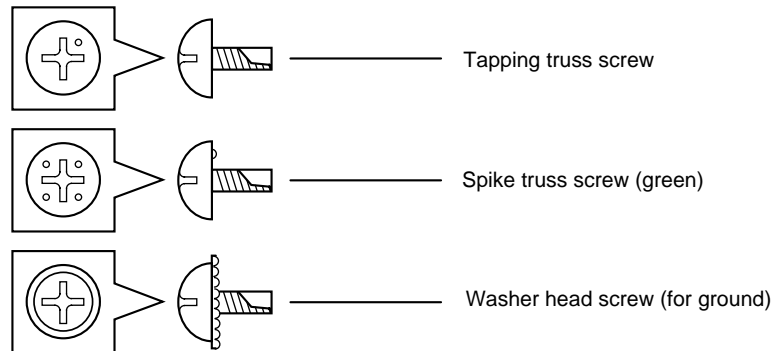
Cautions for Cutter

WARNING

- *Your hand may be cut with a cutter.*
- *Do not remove a cutter cover. Do not put your hand close to the cutter.*
If you are working near the cutter, turn off the circuit breaker and main power source of this machine.
- *If you cut your hand, consult a physician.*

Other Precautions

Tapping truss screws, spike truss screws and washer head screws (for ground) are used for this machine. When reassembling after the screws are removed, be sure to put them in the original position.




Memo


These screws are used for the place where ground is required.


When handling the processing solution such as replenishment solution or effluent, the filter cartridges containing the solution, and their packages, follow the chemical manufacture's instructions and comply with the regional ordinance and regulation.

Disposition and Removal of Screws Retaining Covers for V30

Memo

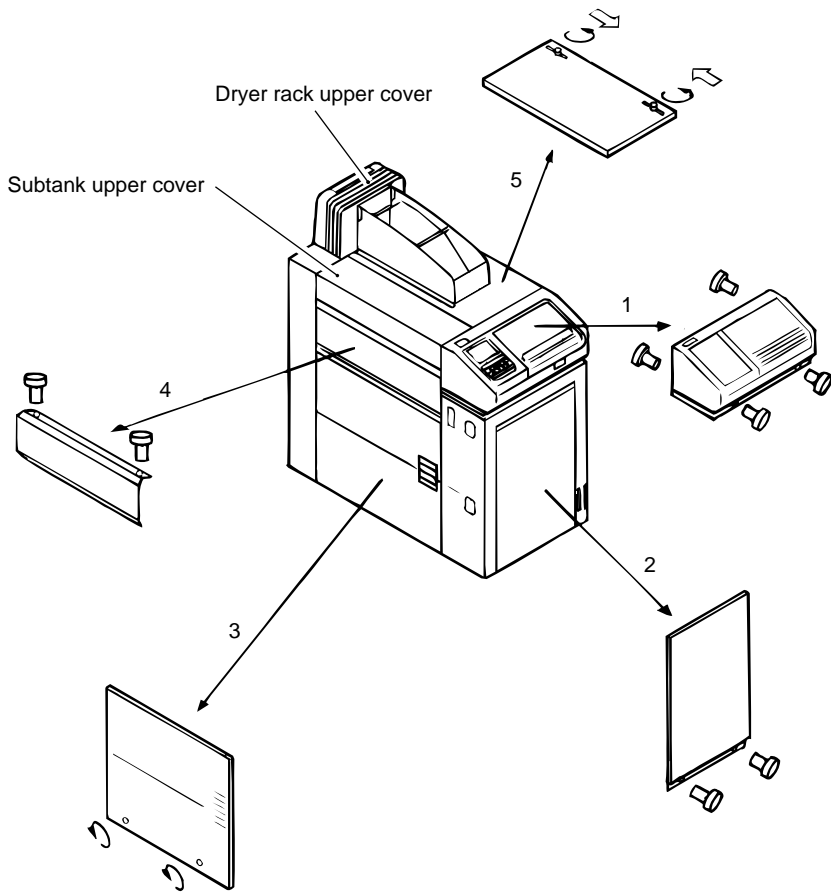
 Remove these screws.

 Loosen these screws.

 **WARNING**

You may get electric shock. Never open the cover when the circuit breaker is ON. If you get an electric shock, consult a physician as soon as possible.

V30, V50, V100 Removing the Unit



1. Loading box cover

2. Control box cover



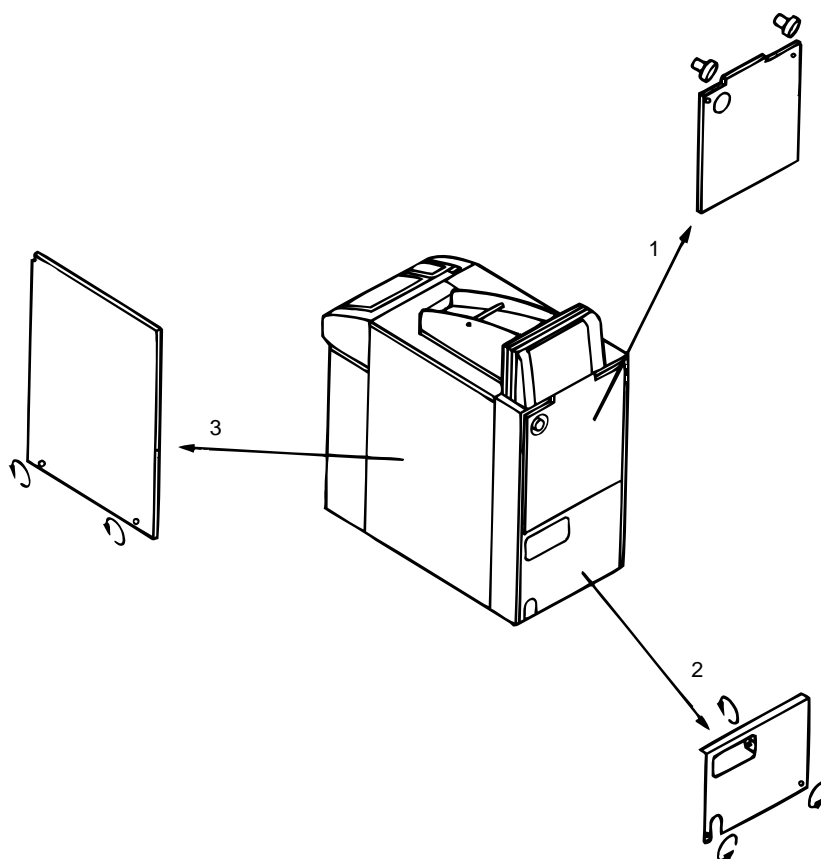
3. Replenisher tank cover
4. Subtank side cover

5. Upper cover

Memo

- When removing the loading box cover, disconnect connector J/P12 on the display control PCB for the READY lamp.
- When removing the upper cover, loosen the screws and slide them in the direction shown by the arrows (⇨).


Memo


 Remove these screws. Loosen these screws.

1. Dryer unit cover
2. Rear cover
3. Side cover

Disposition and Removal of Screws Retaining Covers for V50

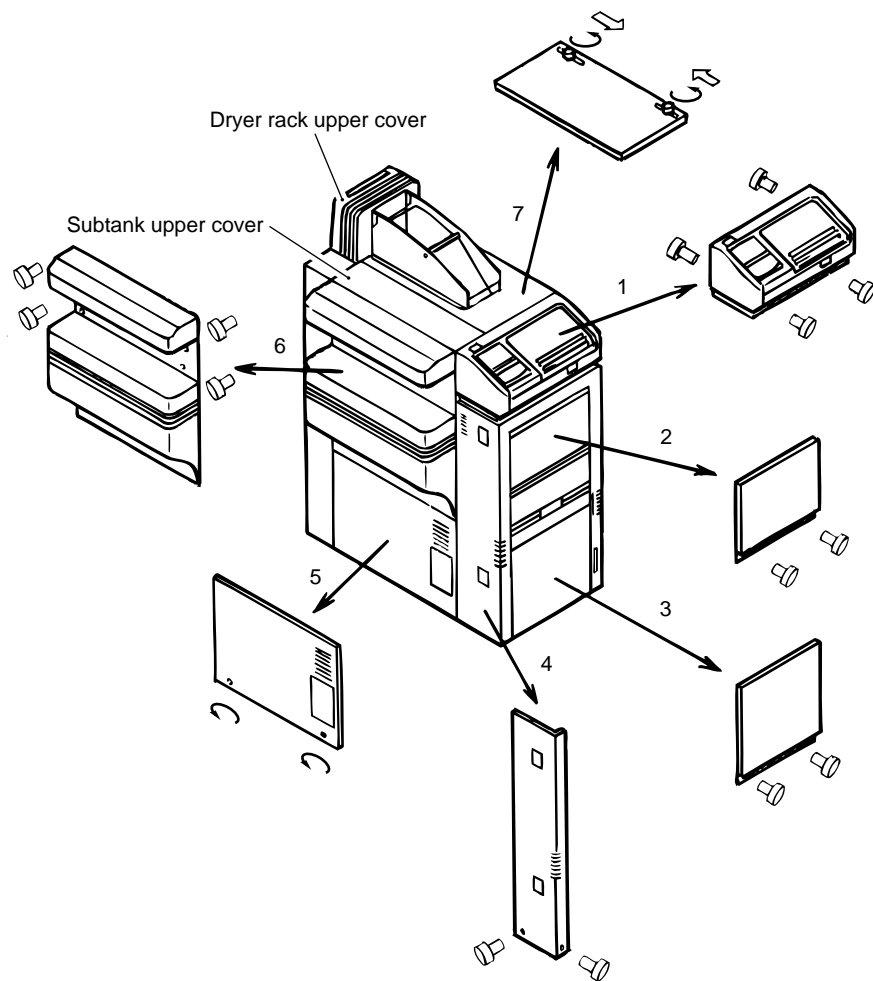
Memo

 Remove these screws.

 Loosen these screws.

⚠ WARNING

You may get electric shock. Never open the cover when the circuit breaker is ON. If you get an electric shock, consult a physician as soon as possible.





- | | |
|----------------------------------|-------------------------------|
| 1. Loading box cover | 5. Water supply tank cover |
| 2. Control box cover (upper) | 6. Tablet replenishment cover |
| 3. Control box cover (lower) | 7. Upper cover |
| 4. Control box side cover (left) | |

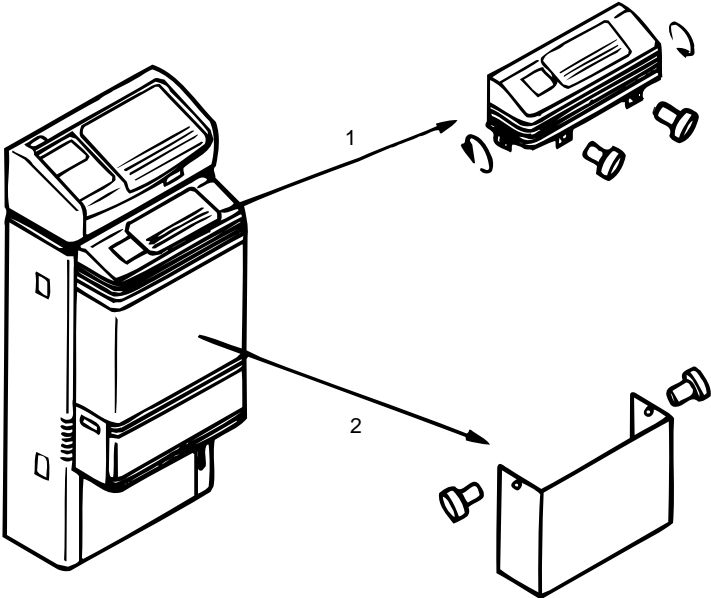
Memo

- When removing the loading box cover, disconnect connector J/P12 on the display control PCB for the READY lamp.
- When removing the upper cover, loosen the screws and slide them in the direction shown by the arrows (⇔).

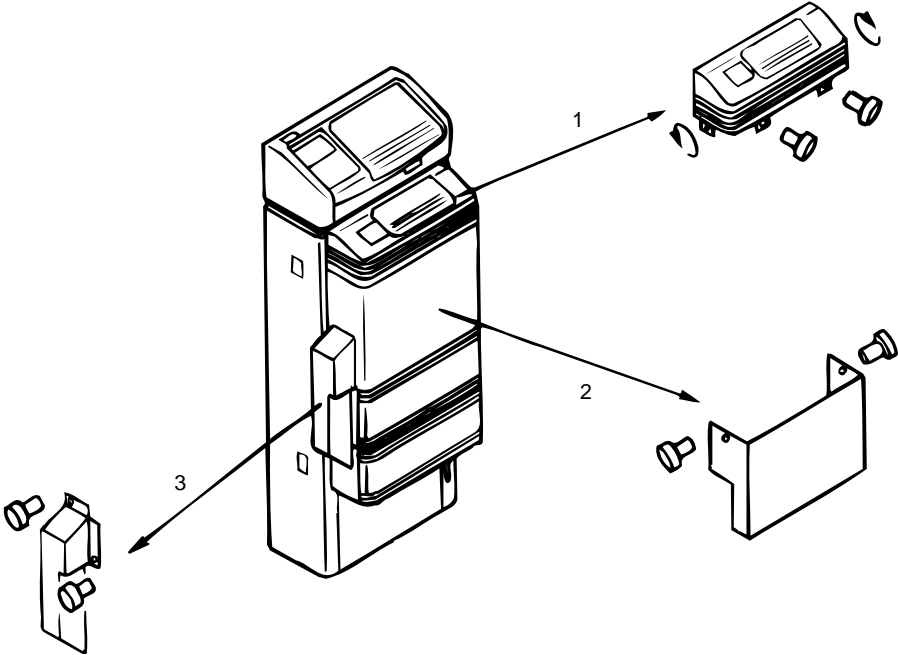
Memo

 Remove these screws.

 Loosen these screws.



Machine with the automatic film loader unit applicable for the Advanced Photo System



- 1. Automatic film loader unit upper cover
- 2. Automatic film loader unit cover
- 3. Chute cover

Memo

When removing the automatic film loader unit upper cover, remove the automatic film loader unit cover, then disconnect connectors J/P282, 284, 294, 640, and 641.

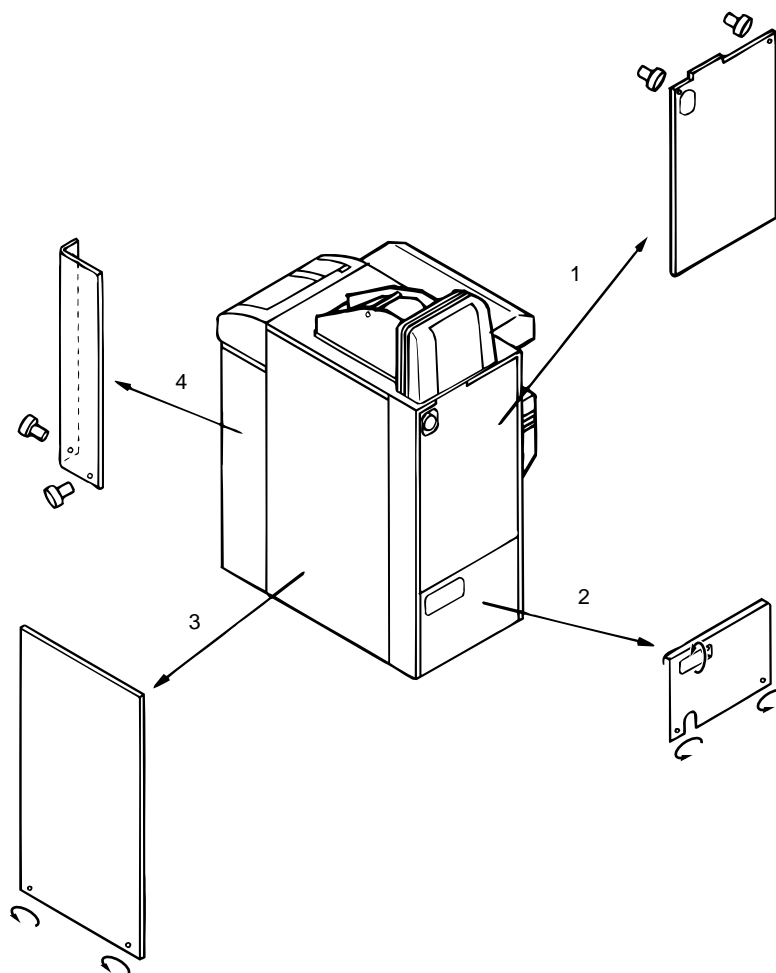
Memo



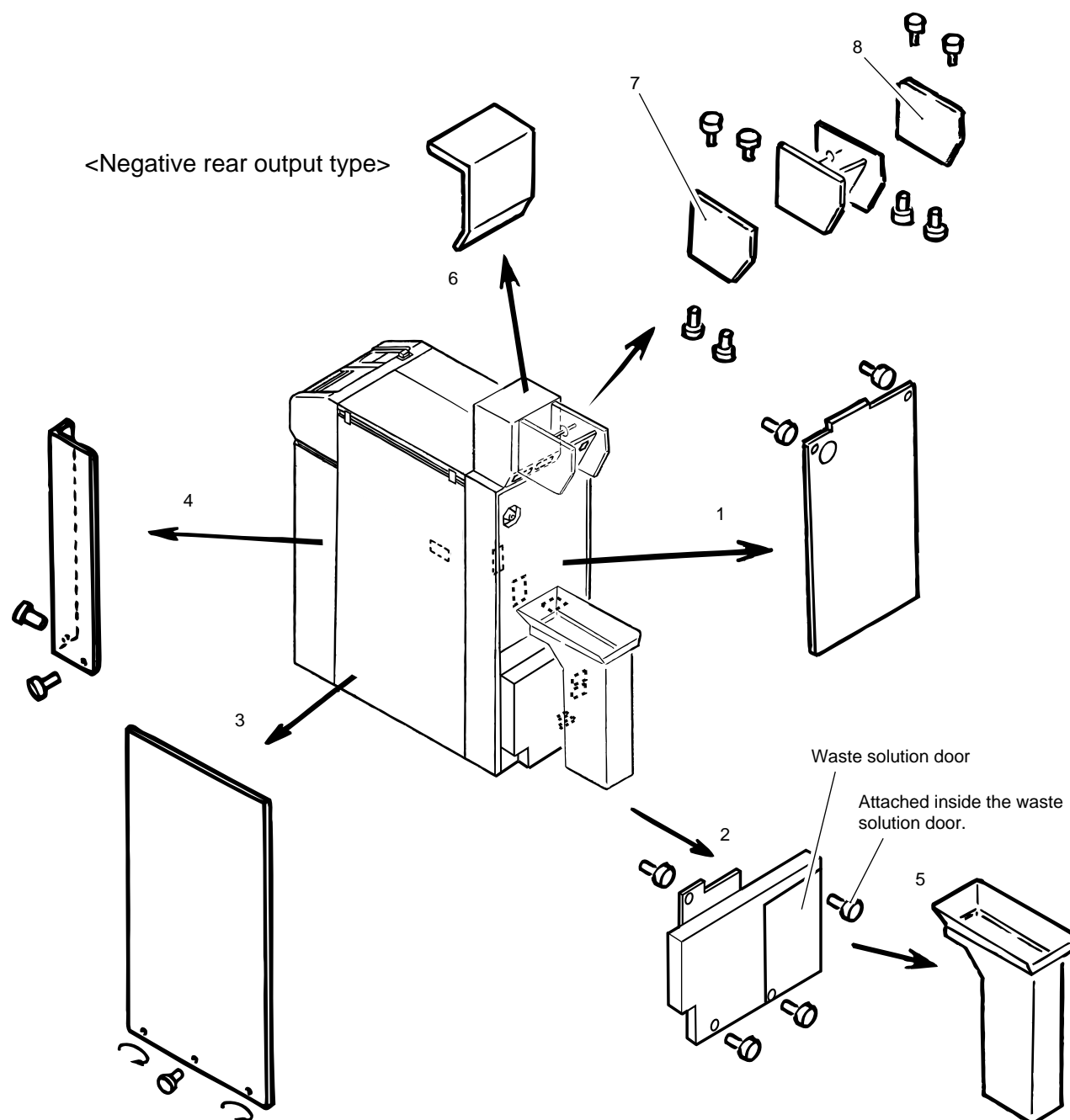
Remove these screws.



Loosen these screws.

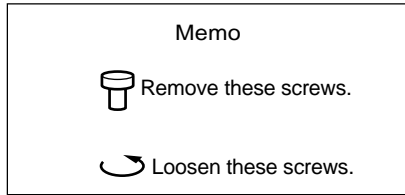


1. Dryer unit cover
2. Rear cover
3. Side cover
4. Control box side cover (right)



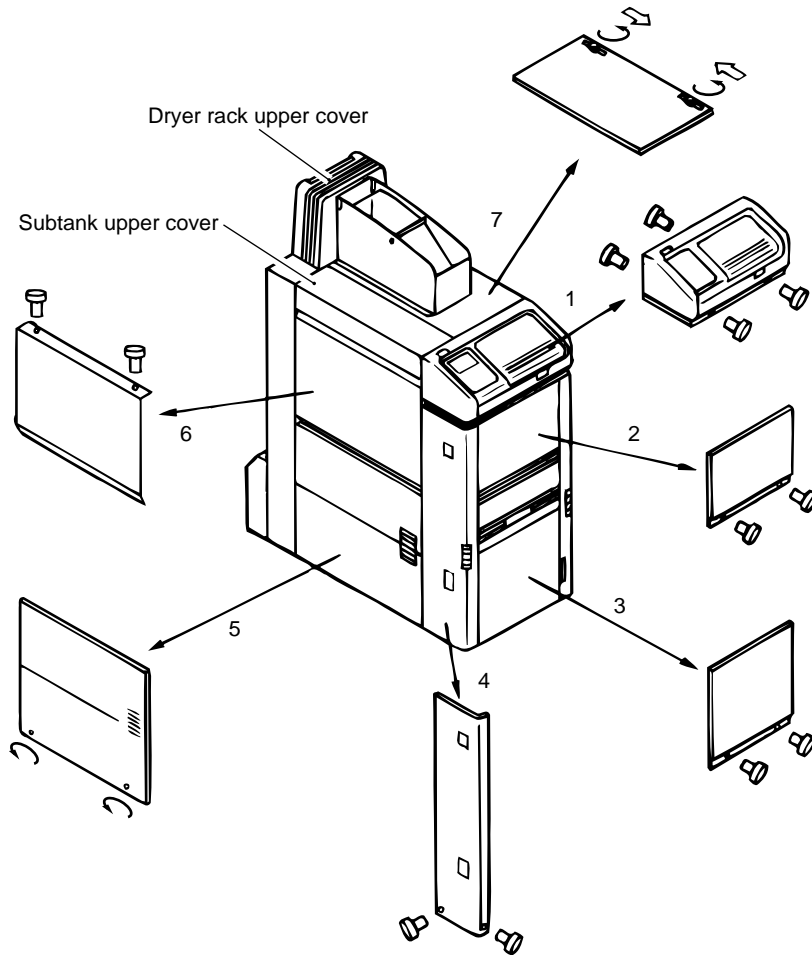
1. Dryer unit cover
2. Waste solution cover
3. Side cover
4. Control box side cover (right)
5. Negative stocker
6. Dryer rack upper cover
7. Leader output section side cover (right)
8. Leader output section side cover (left)

Disposition and Removal of Screws Retaining Covers for V100



⚠ WARNING

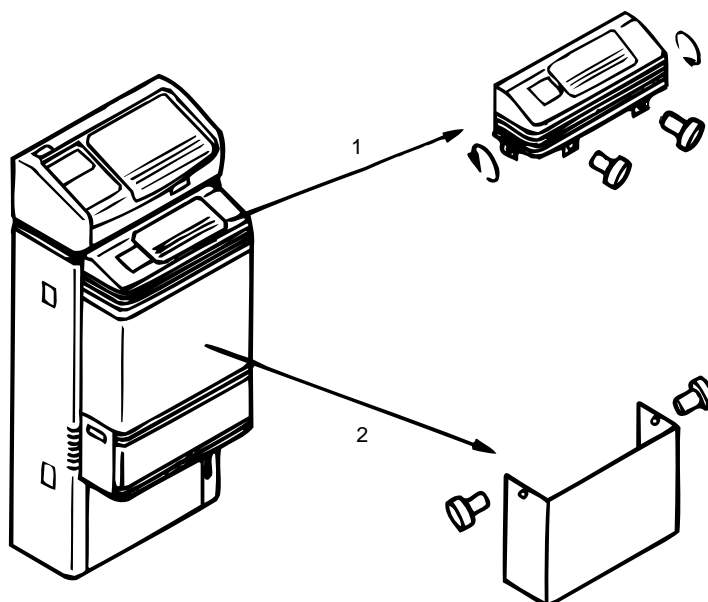
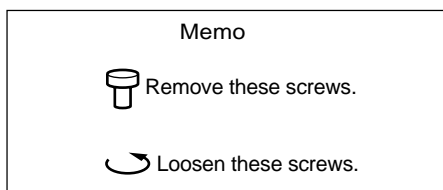
You may get electric shock. Never open the cover when the circuit breaker is ON. If you get an electric shock, consult a physician as soon as possible.



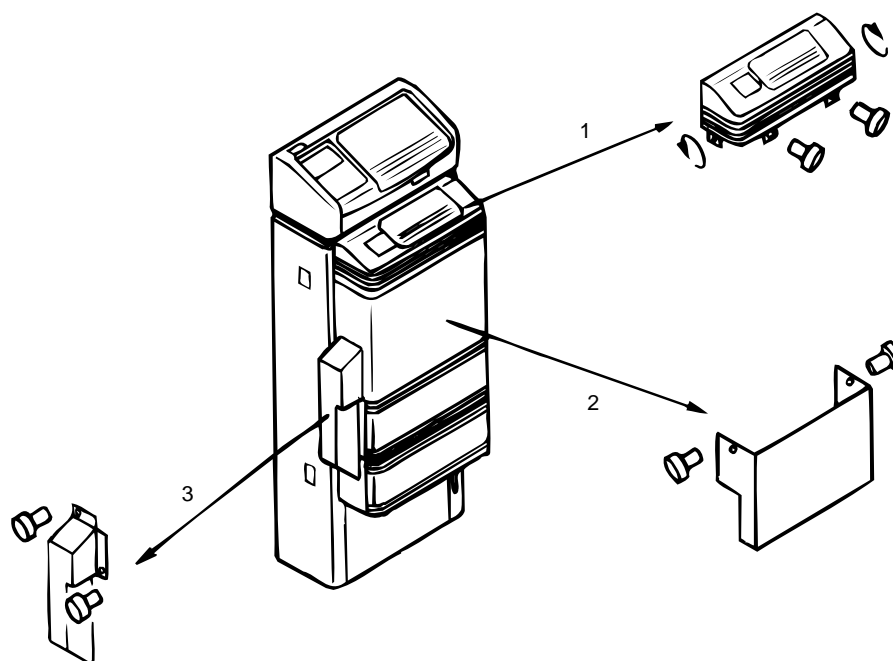
- | | |
|----------------------------------|---------------------------|
| 1. Loading box cover | 5. Replenisher tank cover |
| 2. Control box cover (upper) | 6. Subtank side cover |
| 3. Control box cover (lower) | 7. Upper cover |
| 4. Control box side cover (left) | |

Memo

- When removing the loading box cover, disconnect connector J/P12 on the display control PCB for the READY lamp.
- When removing the upper cover, loosen the screws and slide them in the direction shown by the arrows (⇔).



Machine with the automatic film loader unit applicable for the advanced photo system





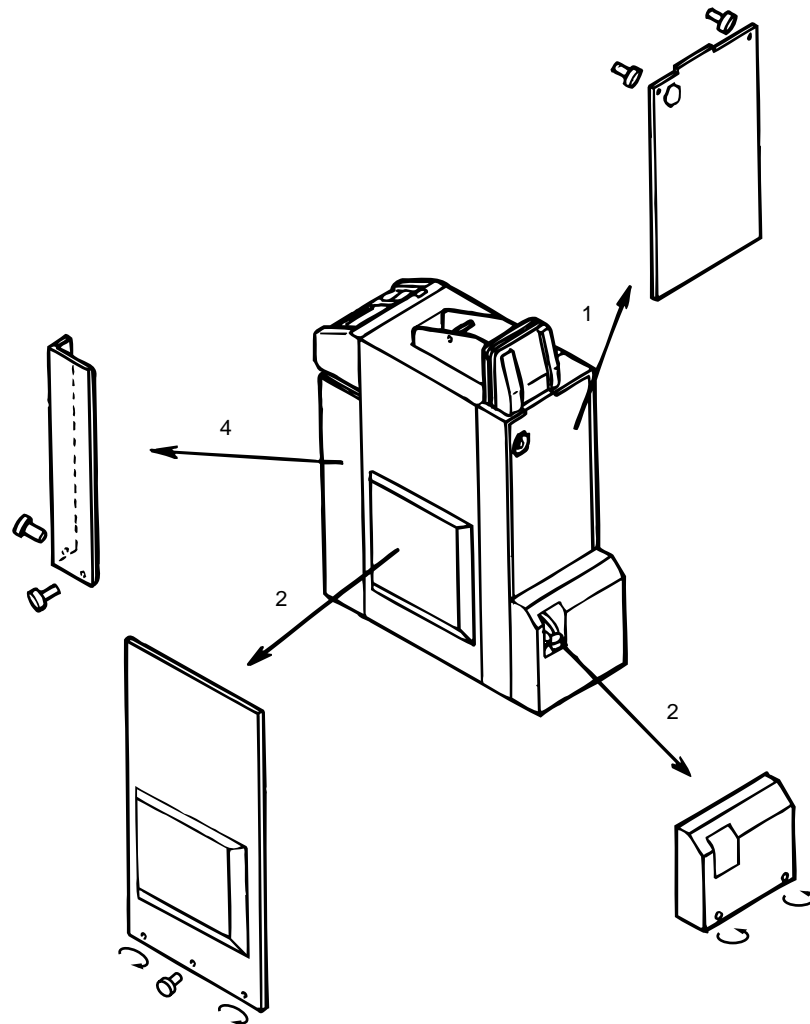
1. Automatic film loader unit upper cover
2. Automatic film loader unit cover
3. Chute cover

Memo

When removing the automatic film loader unit upper cover, remove the automatic film loader unit cover, then disconnect connectors J/P282, 284, 294, 640 and 641.


Memo


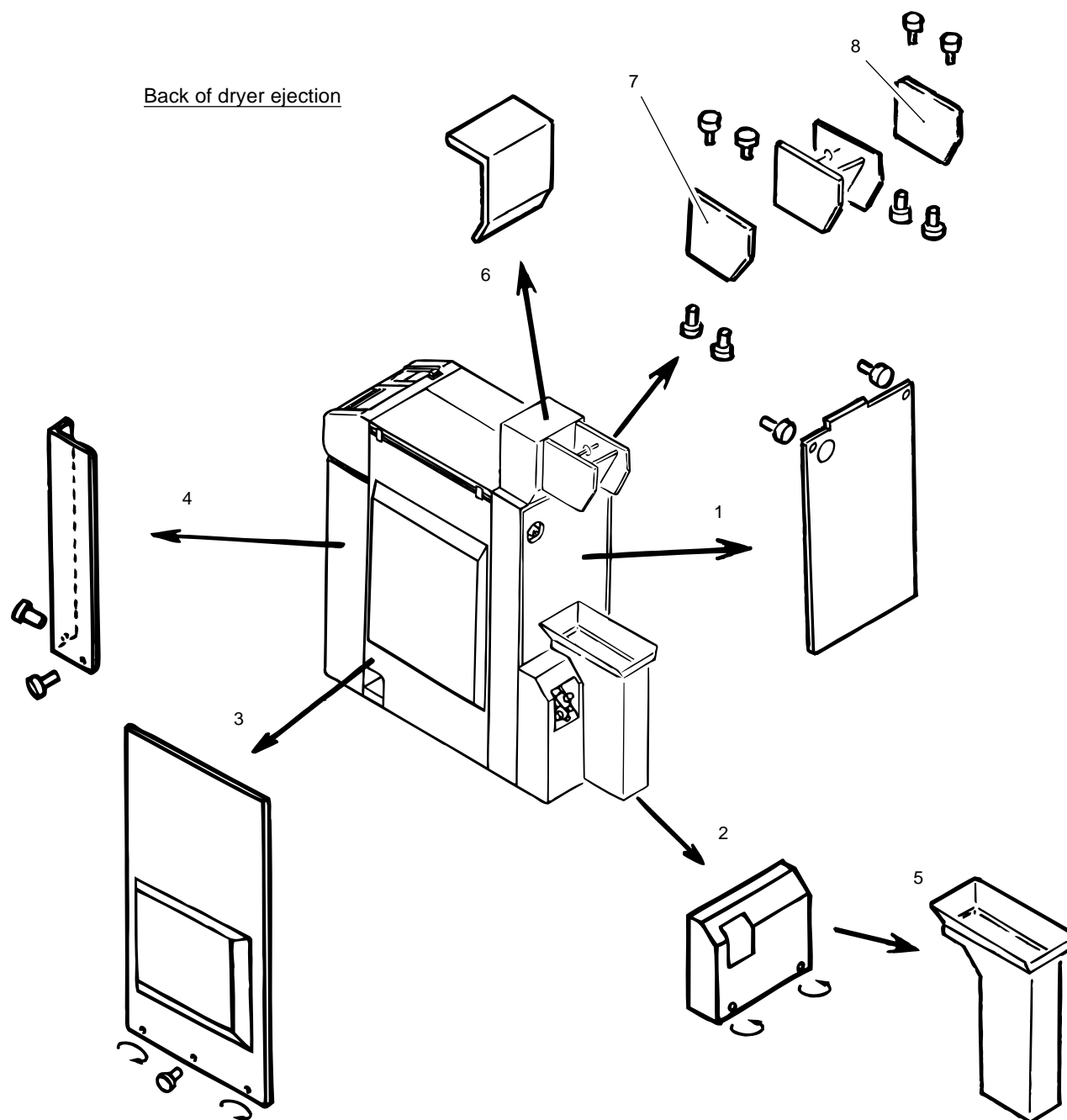
 Remove these screws.

 Loosen these screws.


1. Dryer unit cover
2. Rear cover
3. Side cover
4. Control box side cover (right)

Memo


 Remove these screws.

 Loosen these screws.
Back of dryer ejection


1. Dryer unit cover
2. Rear cover
3. Side cover
4. Control box side cover (right)
5. Negative stocker
6. Dryer rack upper cover
7. Leader ejection side cover (right)
8. Leader ejection side cover (left)

Removing the Film Loading Unit

1. Remove the automatic film loader unit upper cover. (Only for V50 and V100 with the automatic film loader unit)

 Refer to 1002 and 1003.

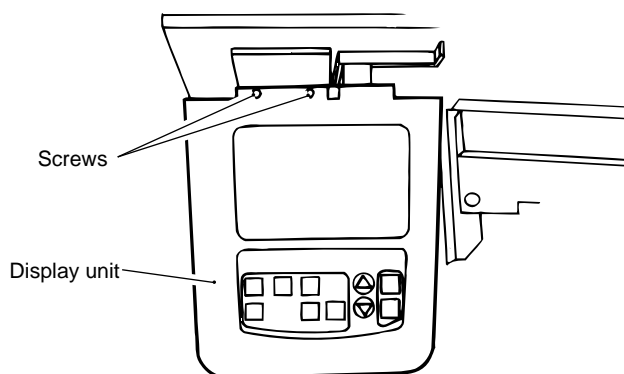
2. Remove the loading box cover.

 Refer to 1001, 1002 and 1003.

Memo

When removing the loading box cover, be careful not give a pull at the cable and connector J/P12.

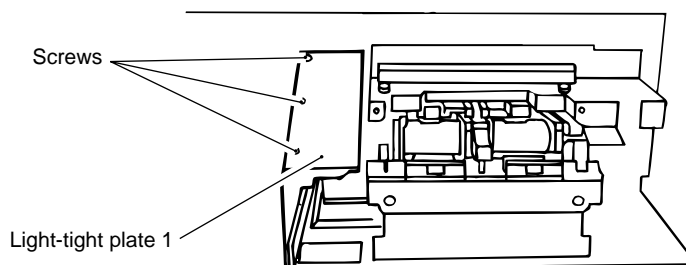
3. Remove the display unit. (2 screws)



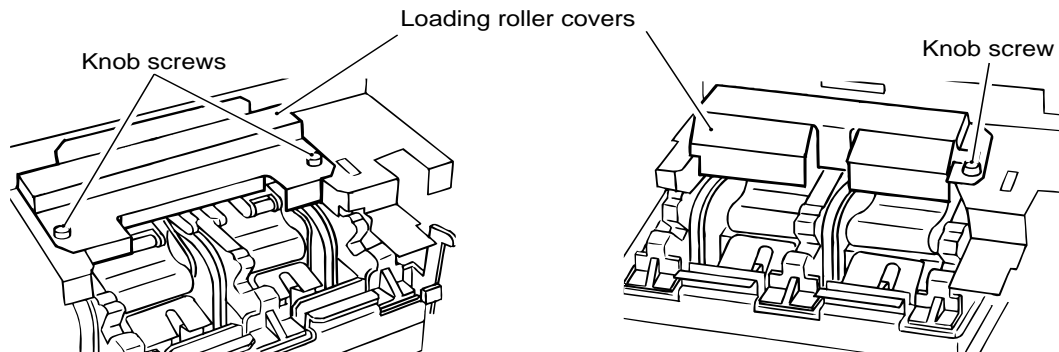
4. Disconnect the connectors.

J/P10, 11 ... Display control PCB

5. Remove light-tight plate 1. (3 screws)

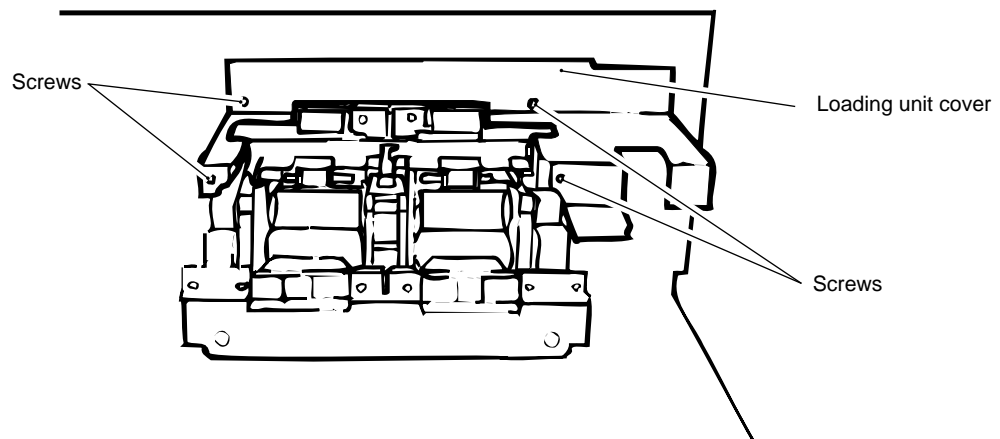


6. Remove the loading roller cover. (Loosen 2 knob screws. Loosen 1 knob screw for the machine with the automatic film loader unit applicable for the advanced photo system.)



(Machine with the automatic film loader unit applicable for the advanced photo system)

7. Remove the loading unit cover. (4 screws)



8. Disconnect the connectors.

J/P21 Loading connecting PCB

J/P32 Drive motion sensor

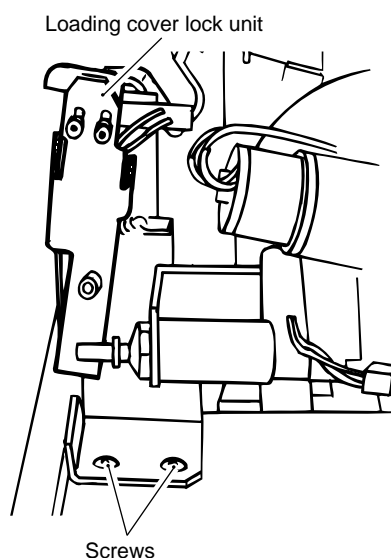
J/P217 .. Loading cover lock solenoid, pressure solenoids (left) and (right), cutter motors (left) and (right)

J/P293 ... Open motor home position sensors (left) and (right), open motors (left) and (right), *open motor set sensors (left) and (right)

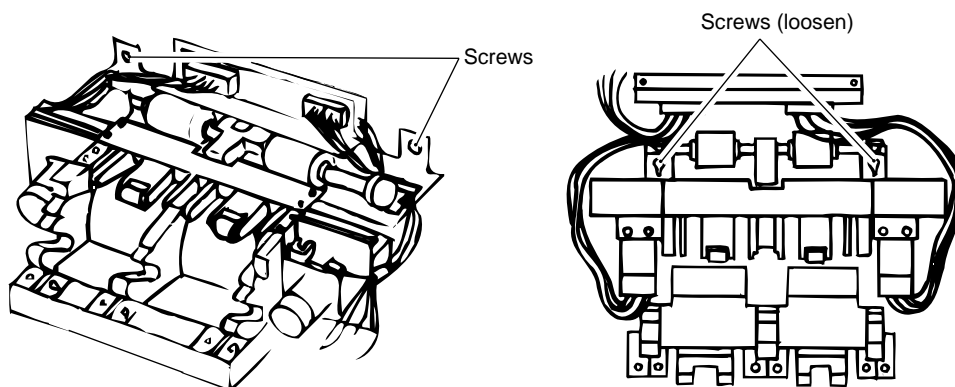
J/P339 .. Loading cover lock solenoid

* Only machine with the automatic film loader unit applicable for the advanced photo system

9. Remove the loading cover lock unit. (2 screws)

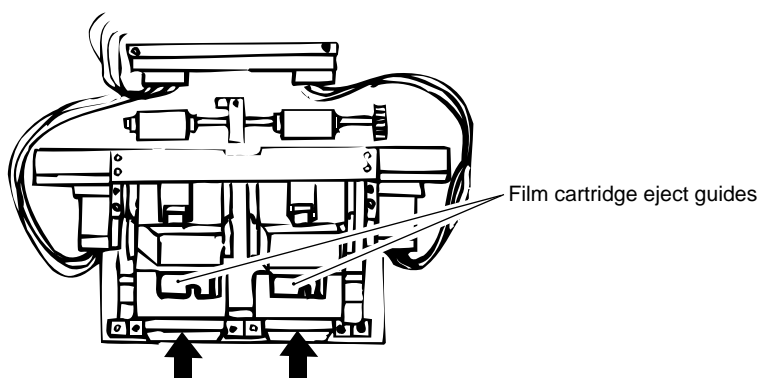


10. Remove the film loading unit. (Loosen 2 out of 4 screws.)



Memo

- When removing the film loading unit, be sure not to pull the cables.
- When the automatic film loader unit (option) has been equipped, remove the film loading unit while pressing the film cartridge eject guides shown by the arrows.




Removing the Dryer Unit

⚠ CAUTION

You may get burnt. Contact with the heater or heater box during operation or immediately after use may cause burning. If you get burnt, cool it with water and consult a physician as soon as possible.

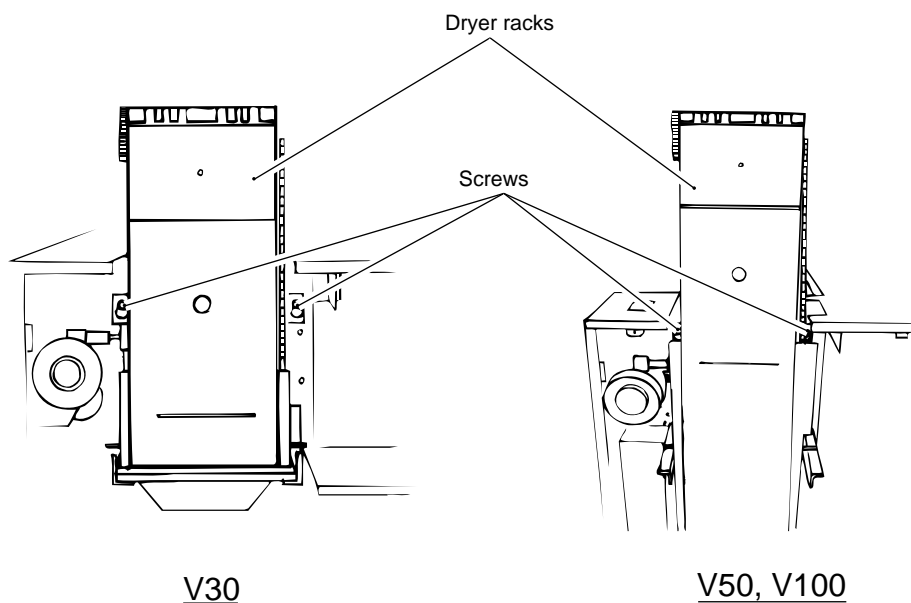
1. Remove the leader ejection unit. (Only for the back of dryer ejection)
2. Remove the dryer unit cover.

 Refer to 1001, 1002 and 1003.

3. Remove the dryer rack upper cover.
4. Lift and remove the dryer rack. (Loosen 2 screws.)

⚠ CAUTION

Before removing the dryer rack, ensure that temperature has cooled.




V30

V50, V100

Removing the Elevator Unit


1. Remove the film cartridge chute box.
2. Remove the automatic film loader unit cover. (Only for V50 and V100)

 Refer to 1002 and 1003.


3. Disconnect the connectors.

J/P282 ... Auto loading cover sensor
J/P284 ... Auto loading cover open solenoid
J/P294 ... Auto loading ready lamp
J/P640 ... LEADER INSERTION switch
J/P641 ... MANUAL LOADING switch/indicator lamp

4. Remove the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

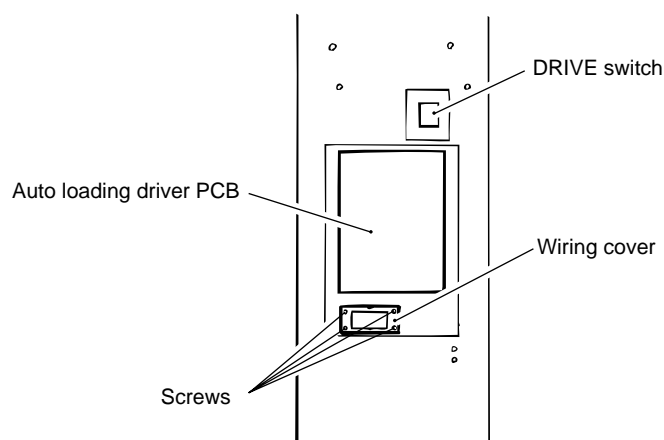
5. Remove the control box side cover (left).

 Refer to 1002 and 1003.

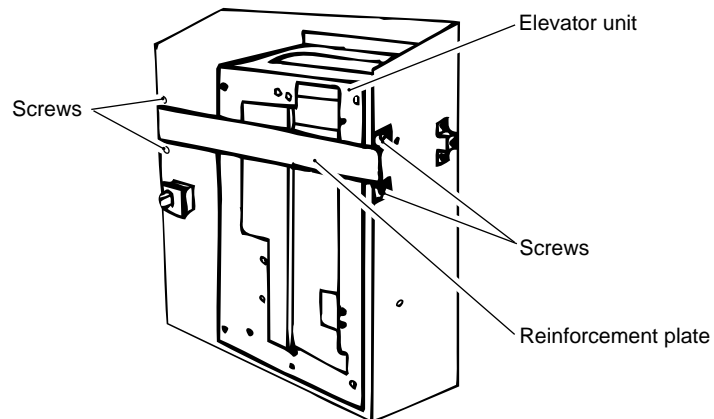
6. Disconnect the connectors.

J/P252, 253, 254 and 256 ... Auto loading driver PCB

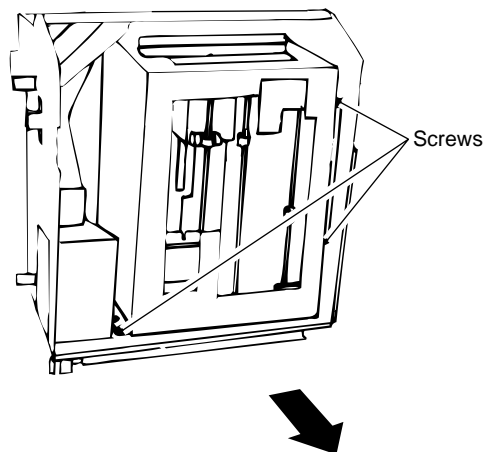
7. Remove the wiring cover. (4 screws)



8. Remove the reinforcement plate. (4 screws)



9. Slide and remove the elevator unit in the direction shown by the arrow. (3 screws)

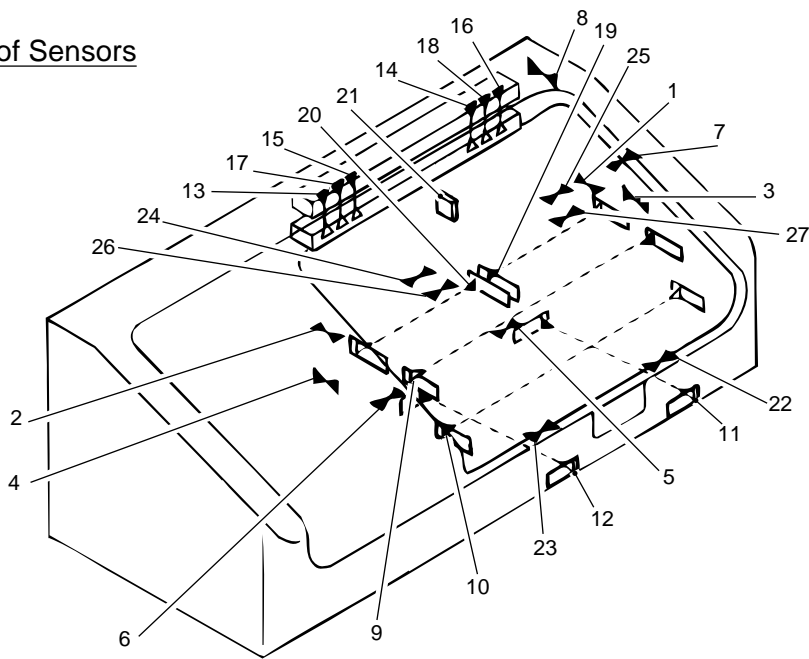


Memo

When sliding the elevator unit, be careful not to pull the cables.

Loading Box

Disposition of Sensors



Memo

.... Photo interrupter

.... LED side

.... Photo side

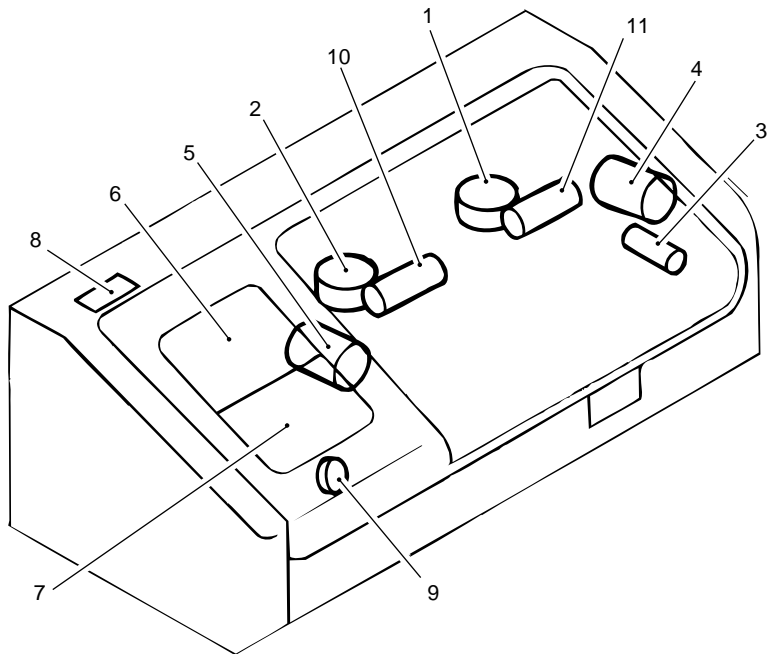
No.	Name	Symbol	Remarks
1	Cutter motor home sensor (right)	SE 2	
2	Cutter motor home sensor (left)	SE 6	
3	Cutter position sensor (right)	SE 3	
4	Cutter position sensor (left)	SE 7	
5	Pressure sensor (right)	SE 8	
6	Pressure sensor (left)	SE 4	
7	Loading cover sensor	SE 9	
8	Drive motion sensor	SE10	
9	Magazine adapter sensor	SE11	
10	Chute sensor 1	SE12	*1 *3
11	Film sensor (right) (shutter)	SE13	*1 *3
12	Film sensor (left) (shutter)	SE14	*1 *3
13	Perforation sensor 1 (left)	SE15	
14	Perforation sensor 1 (right)	SE18	
15	Perforation sensor 2 (left)	SE17	
16	Perforation sensor 2 (right)	SE20	
17	Film sensor (left)	SE16	
18	Film sensor (right)	SE19	
19	Film cartridge sensor (right)	SE38	*1 *3
20	Film cartridge sensor (left)	SE39	*1 *3
21	Leader card limit switch	LM 1	

Disposition of Electrical Parts

No.	Name	Symbol	Remarks
22	240 adapter sensor (right)	SE 1	*2 *3
23	240 adapter sensor (left)	SE 5	*2 *3
24	Open motor home position sensor (left)	SE36	*3
25	Open motor home position sensor (right)	SE37	*3
26	Open motor set sensor (left)	SE41	*3
27	Open motor set sensor (right)	SE42	*3

Memo	
*1 Only machine with the automatic film loader unit	
*2 Only standard machine applicable for the advanced photo system	
*3 Only machine with the automatic film loader unit applicable for the advanced photo system	

Disposition of Parts other than Sensors



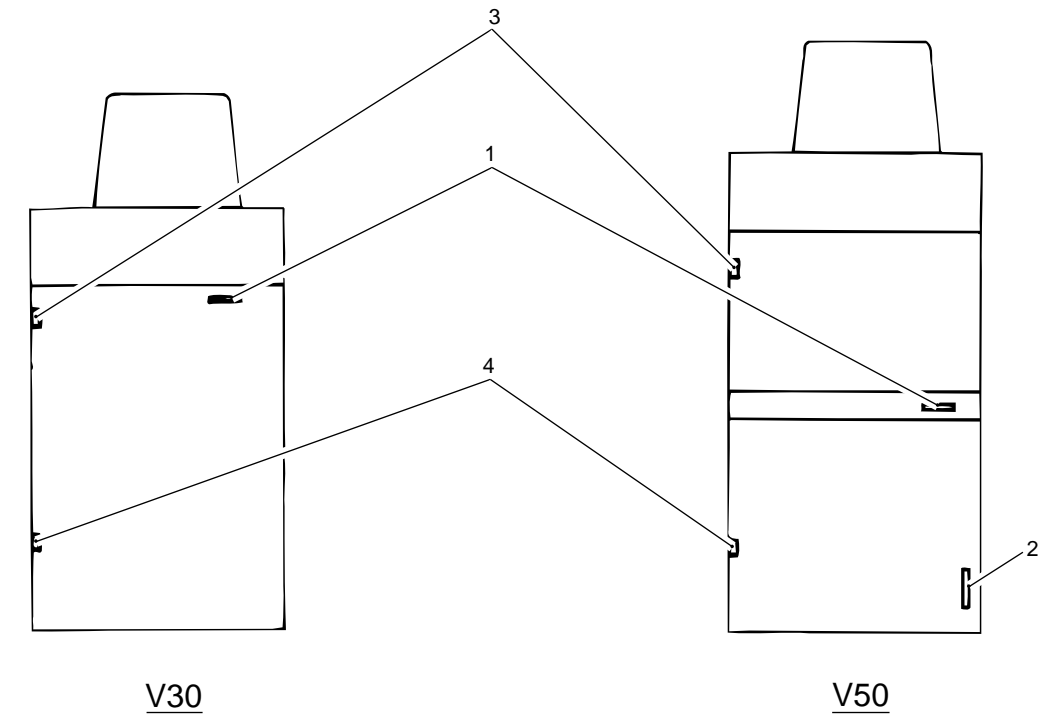
No.	Name	Symbol	Remarks
1	Pressure solenoid (right)	SOL1	
2	Pressure solenoid (left)	SOL2	
3	Loading cover lock solenoid	SOL3	
4	Cutter motor (right)	DM 1	
5	Cutter motor (left)	DM 2	
6	Display	—	
7	Keyboard	—	
8	READY lamp	—	
9	Buzzer	BZ	
10	Open motor (left)	DM 5	* 1
11	Open motor (right)	DM 6	* 1

Memo

*1 Only machine with the automatic film loader unit applicable for the advanced photo system

Control Box

Disposition of Parts other than Sensors



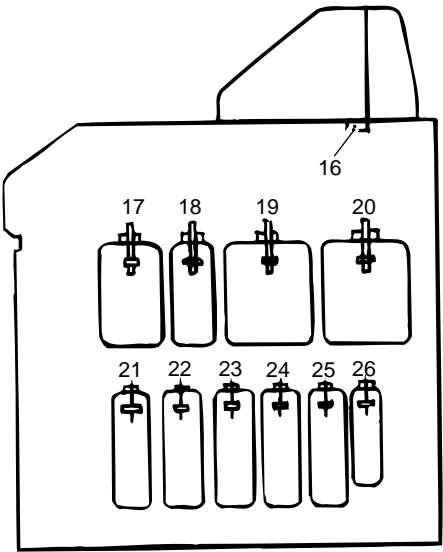
Front view

No.	Name	Symbol	Remarks
1	Floppy disk drive	—	
2	Control box cooling fan	FAN6	Not equipped with V30
3	DRIVE switch	SW 1	
4	Circuit breaker	NFB1	

Processor Unit

Disposition of Sensors

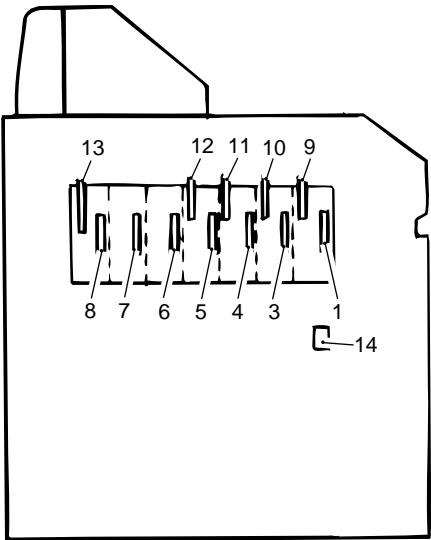
V30, V50, V100



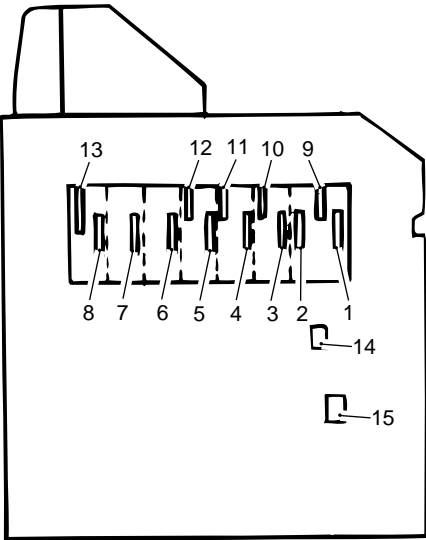
Right view

V30, V50

V100



Left view



Left view

V30,V50,V100 Replacement and Adjustment of Each Part

Processing solution tank unit

No.	Name	Symbol	Remarks
1	Processing solution level detection float switch (CD)	FS 1	*2
2	Processing solution level detection float switch (CD-2)	FS 23	V100 only *2
3	Processing solution level detection float switch (BL)	FS 2	*2
4	Processing solution level detection float switch (FIX 1)	FS 3	*2
5	Processing solution level detection float switch (FIX 2)	FS 4	*2
6	Processing solution level detection float switch (STB 1)	FS 5	*3
7	Processing solution level detection float switch (STB 2)	FS 6	*3
8	Processing solution level detection float switch (STB 3)	FS 7	*2
9	Thermosensor (CD)	TH 1	
10	Thermosensor (BL)	TH 2	
11	Thermosensor (FIX 1)	TH 3	
12	Thermosensor (FIX 2)	TH 4	
13	Thermosensor (STB 3)	TH 7	
14	Digital flowmeter 1	FLM 1	*1
15	Digital flowmeter 2	FLM 2	V100 only *1
16	Upper cover limit switch	LM 5	

Waste solution tank unit

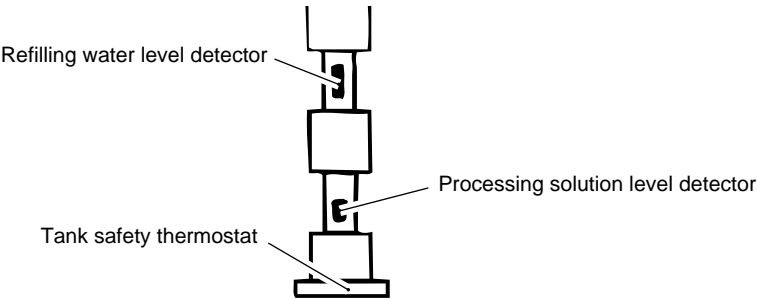
No.	Name	Symbol	Remarks
17	Waste solution level detection float switch (CD)	FS18	
18	Waste solution level detection float switch (BL)	FS19	
19	Waste solution level detection float switch (FIX)	FS20	
20	Waste solution level detection float switch (STB)	FS21	

Replenisher tank unit

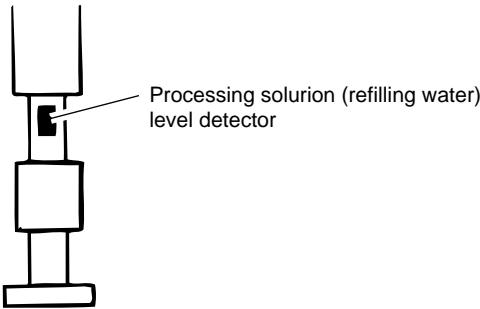
No.	Name	Symbol	Remarks
21	Replenisher level detection float switch (CD)	FS 8	
22	Replenisher level detection float switch (BL)	FS11	
23	Replenisher level detection float switch (FIX)	FS12	
24	Replenisher level detection float switch (WL)	FS15	*6
25	Replenisher level detection float switch (STB)	FS13	
26	Refilling water tank level detection float switch (upper limit/lower limit)	FS14	*5

Memo

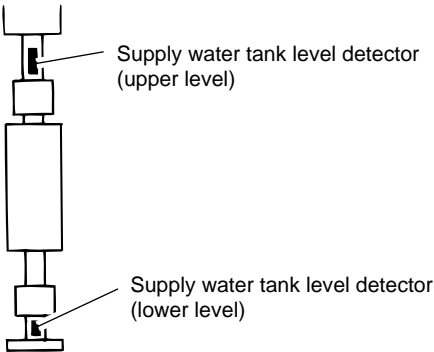
- The processing solution name may vary depending on the processor specification.
- *1 Option
- *2 The processing solution level detection float switch consists of the solution level detector, the refilling water level detector, and the tank safety thermostat.



- *3 The processing solution (refilling water) level detection float switches (STB 1 and 2) are for detection of the processing solution (refilling water) level only.

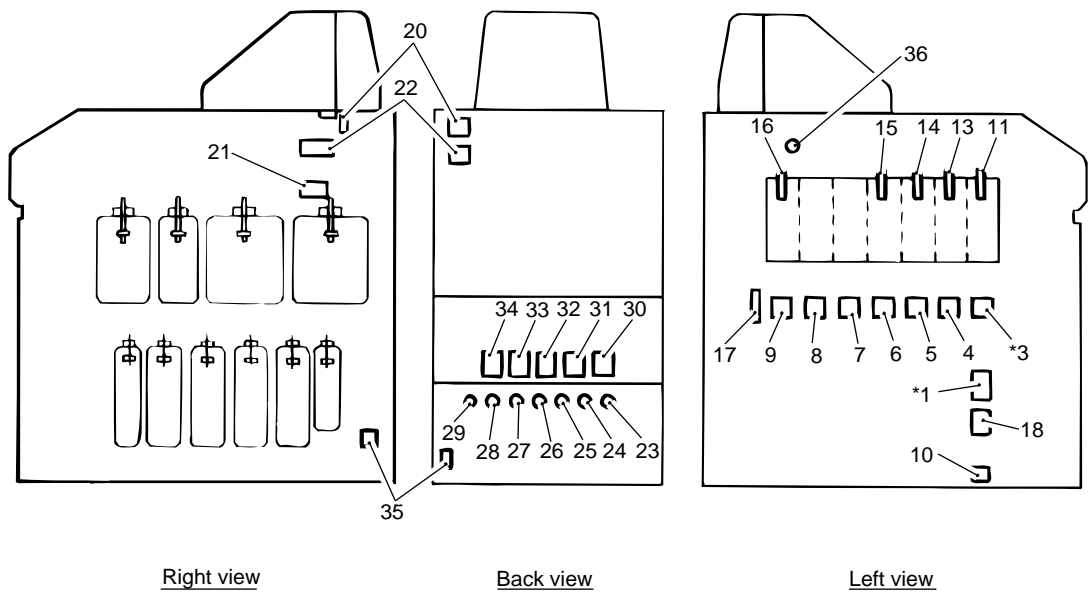


- *4 The position may vary depending on the processor specification.
- *5 The refilling water tank level detection float switch (upper limit/lower limit) consists of the refilling water tank level detector (upper limit) and refilling tank level detector (lower limit).



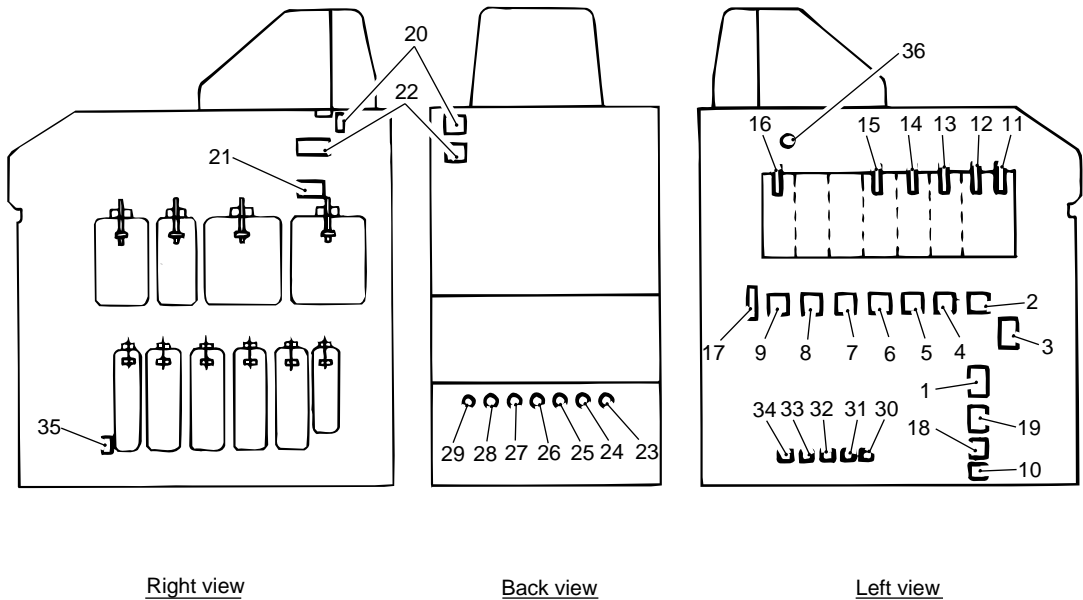
- *6 This may not be equipped depending on the processor specification.

V30, V50



* For the QSF-V30, 1 stands for the circulation pump (for CD shower: P1) and 3 stands for the circulation pump (CD: P2).
For the QSF-V50, 1 stands for the circulation pump (CD: P2) and 3 stands for the circulation pump (for CD shower: P1).

V100



Processing tank unit

No.	Name	Symbol	Remarks
1	Circulation pump	P 1	V30: for CD shower
		P 2	V50: CD
2	Circulation pump (CD-2)	P 9	
3	Circulation pump	P 1	V50: for CD shower
		P 2	V30: CD
4	Circulation pump (BL)	P 3	
5	Circulation pump (FIX 1)	P 4	
6	Circulation pump (FIX 2)	P 5	
7	Circulation pump (STB 1)	P 6	
8	Circulation pump (STB 2)	P 7	
9	Circulation pump (STB 3)	P 8	
10	Aeration pump	AP	
11	Processing solution heater (CD)	H 1	
12	Processing solution heater (CD-2)	H 6	V100 only
13	Processing solution heater (BL)	H 2	
14	Processing solution heater (FIX 1)	H 3	
15	Processing solution heater (FIX 2)	H 4	
16	Processing solution heater (STB 3)	H 5	
17	Cooling fan 1	FAN4	
18	Cooling fan 2	FAN5	
19	Cooling fan 3	FAN7	V100 only
20	Exhaust fan	FAN2	
21	Motor cooling fan	FAN3	
22	Drive motor Reducer	M 3	
23	Refilling water pump (CD)	WP 1	
24	Refilling water pump (BL)	WP 2	
25	Refilling water pump (FIX 1)	WP 3	
26	Refilling water pump (FIX 2)	WP 4	
27	Refilling water pump (STB 1)	WP 5	
28	Refilling water pump (STB 2)	WP 6	
29	Refilling water pump (STB 3)	WP 7	

Replenisher tank unit

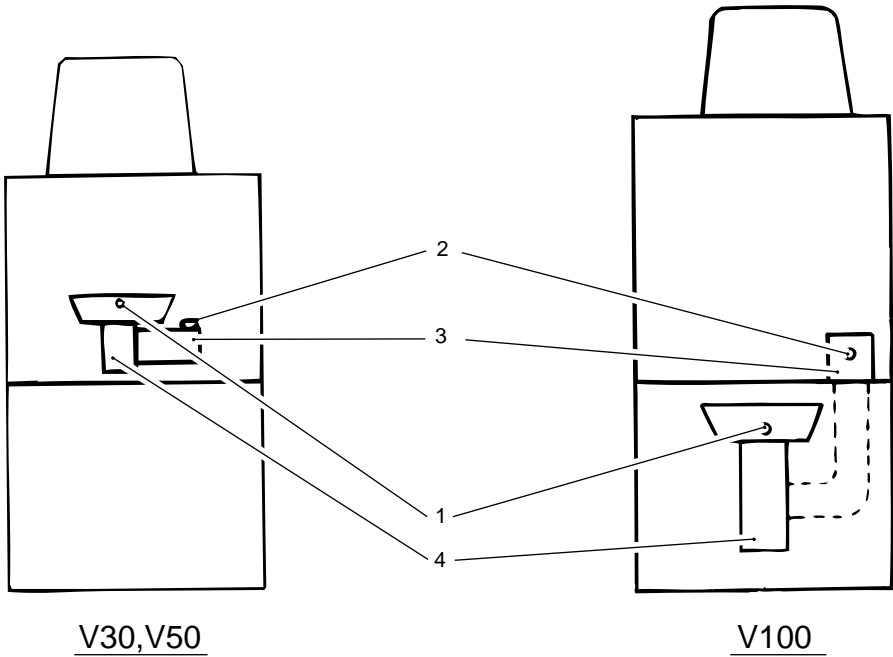
No.	Name	Symbol	Remarks
30	Replenisher pump (CD)	RP 1	
31	Replenisher pump (BL)	RP 2	
32	Replenisher pump (FIX)	RP 3	
33	Replenisher pump (WL)	RP 5	*2
34	Replenisher pump (STB)	RP 4	
35	Cooling water solenoid valve	MV	*1
36	Water tank full lamp	L 14	

Memo

- The processing solution name may vary depending on the processor specification.
- *1 Option
- *2 Some processor may not have this pump.

Dryer Unit

Disposition of electric parts



Sensor

No.	Name	Symbol	Remarks
1	Dryer thermosensor	TH 8	
2	Dryer safety thermostat	STH	

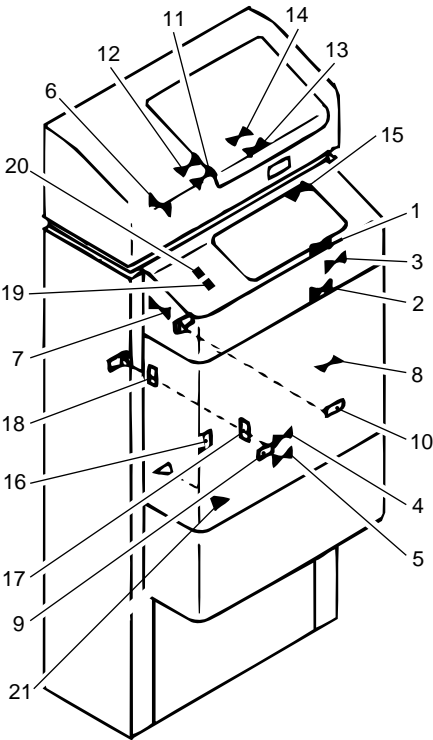
Other Parts

No.	Name	Symbol	Remarks
3	Dryer heater	H 9	
4	Dryer fan	FAN1	

V30,V50,V100 Replacement and Adjustment of Each Part

Automatic Film Loader Unit

Disposition of Sensors



Memo

◄◄

.... Photo interrupter

▶

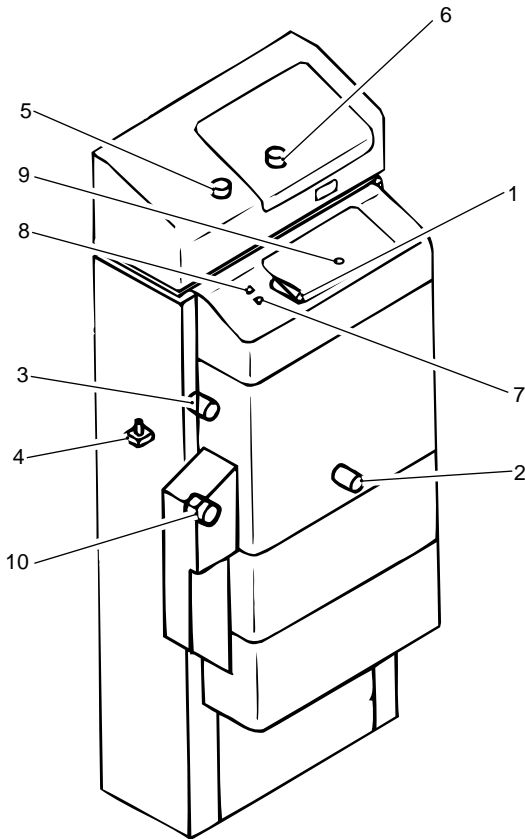
.... LED side

▷

.... Photo side

No.	Name	Symbol	Remarks
1	Leader card insertion set sensor 1	SE21	
2	Leader card insertion set sensor 2	SE22	
3	Entrance elevator upper sensor	SE23	
4	Entrance elevator middle sensor	SE24	
5	Entrance elevator lower sensor	SE25	
6	Exit elevator upper sensor	SE26	
7	Exit elevator lower sensor	SE27	
8	Horizontal feed position sensor	SE28	
9	Cartridge fall sensor (left)	SE29	
10	Cartridge fall sensor (right)	SE30	
11	Shutter sensor (left) (close)	SE31	
12	Shutter sensor (left) (open)	SE32	
13	Shutter sensor (right) (close)	SE33	
14	Shutter sensor (right) (open)	SE34	
15	Auto loading cover sensor	SE35	
16	Auto loading interlock	LM 2	
17	Entrance horizontal leader feed limit switch	LM 3	
18	Exit horizontal leader feed limit switch	LM 4	
19	Leader card insertion switch	SW 2	
20	Manual loading switch	SW 3	
21	Chute sensor 2	SE40	

Disposition of Parts other than Sensors



No.	Name	Symbol	Remarks
1	Auto loading cover open solenoid	SOL4	
2	Entrance elevator motor	DM 3	
3	Exit elevator motor	DM 4	
4	Horizontal feed motor	PM 1	
5	Shutter motor (left)	M 4	
6	Shutter motor (right)	M 5	
7	Leader card insertion indicator lamp	L 1	
8	Manual loading indicator lamp	L 2	
9	Auto loading ready lamp	L 3	
10	Selection solenoid	SOL5	* 1

Memo

*1 Only machine with the automatic film loader unit applicable for the advanced photo system

Replacing the Cutter

⚠ CAUTION

Your hand may be cut with a cutter. Do not put your hand close to the cutter. If you cut your hand, consult a physician as soon as possible.

1. Remove the automatic film loader unit upper cover. (Only for V50 and V100 with the automatic film loader unit)

☞ Refer to 1002 and 1003.

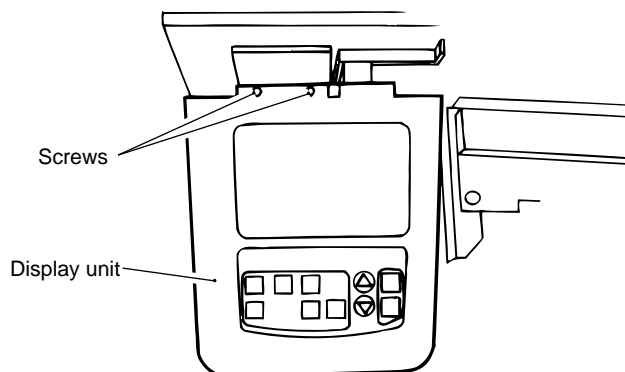
2. Remove the loading box cover.

☞ Refer to 1001, 1002 and 1003.

Memo

When removing the loading box cover, be careful not give a pull at the cable and connector J/P12.

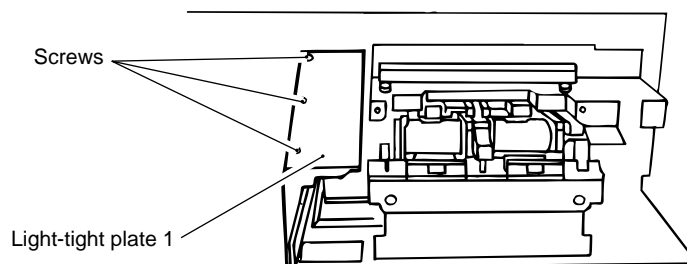
3. Remove the display unit. (2 screws) (Only machine with the automatic film loader unit applicable for the advanced photo system)



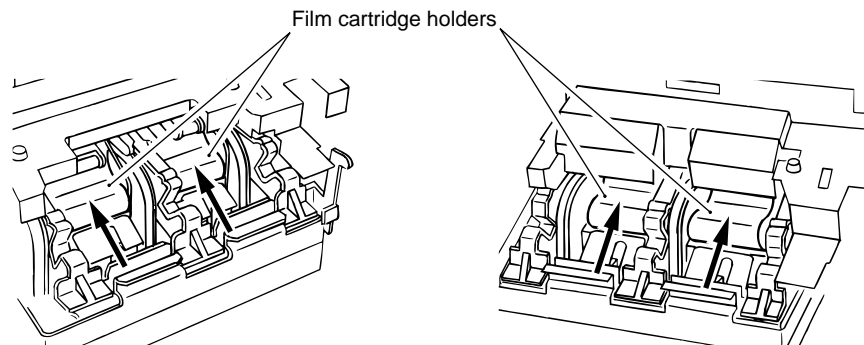
4. Disconnect the connectors. (Only machine with the automatic film loader unit applicable for the advanced photo system)

J/P10, 11 ... Display control PCB

5. Remove light-tight plate 1. (3 screws) (Only machine with the automatic film loader unit applicable for the advanced photo system)



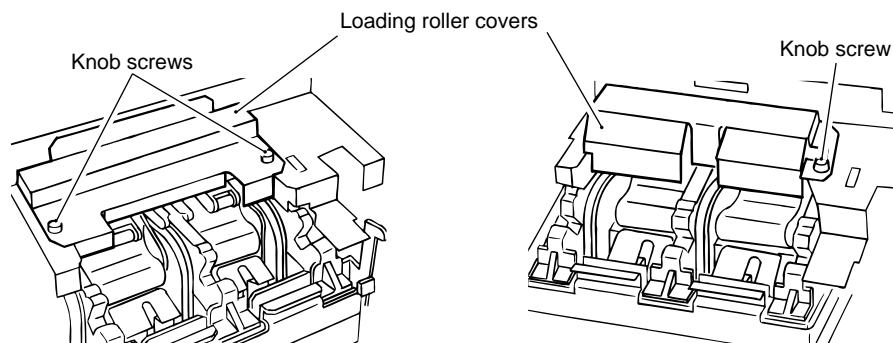
6. Push the both right and left film cartridge holders in the direction shown by the arrows and raise the cutters.



(Machine with the automatic film loader unit applicable for the advanced photo system)

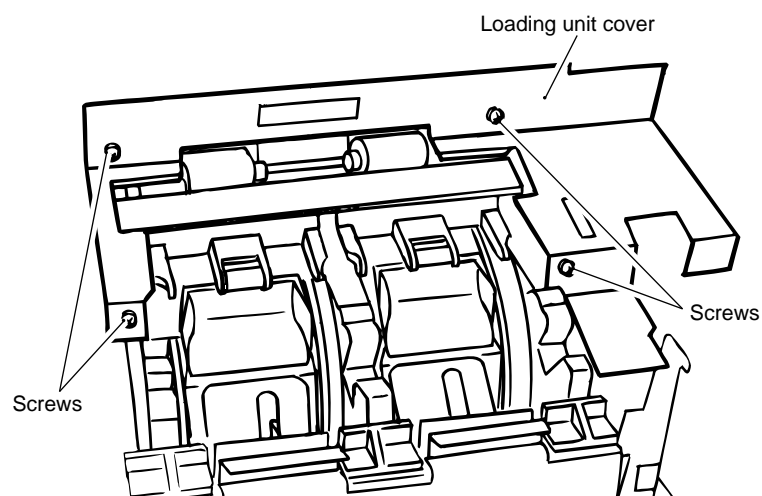
7. Remove the loading roller cover. (Loosen 2 knob screws.)

Loosen a knob screw for the machine with the automatic film loader unit applicable for the advanced photo system.

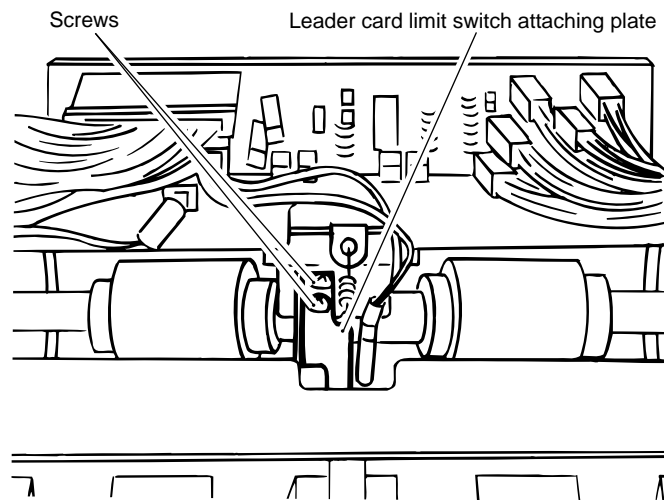


(Machine with the automatic film loader unit applicable for the advanced photo system)

8. Remove the loading unit cover. (4 screws)



9. Remove the leader card limit switch attaching plate. (2 screws)



10. Remove connectors.

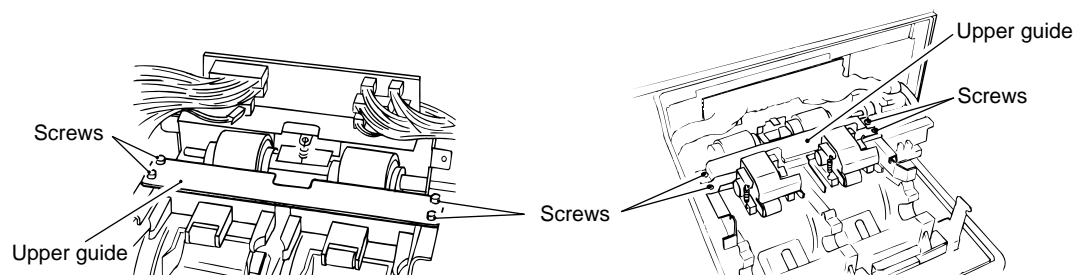
J/P293 Open motor home position sensors (left) and (right), Open motors (left) and (right), *open motor set sensors (left) and (right)

* Only machine with the automatic film loader unit applicable for the advanced photo system)

11. Remove the upper guide. (4 screws)

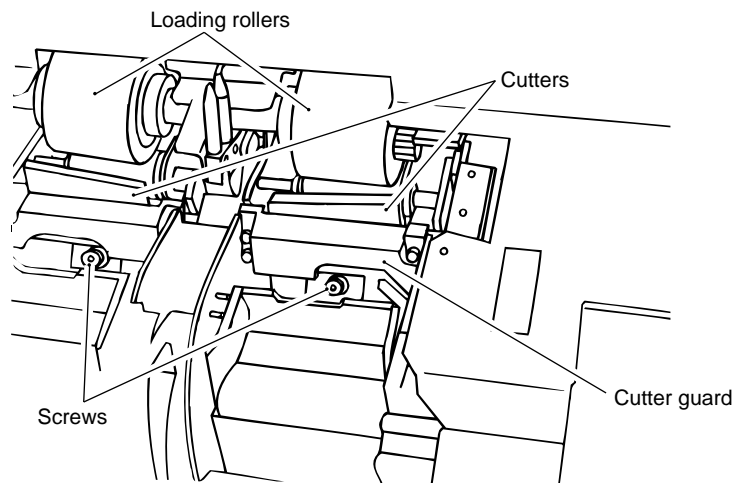
⚠ WARNING

When the upper guide is removed, be careful for the end of the cutter blade.



(Machine with the automatic film loader unit applicable for the advanced photo system)

12. Raise and remove the cutters. (Loosen 1 screw.)

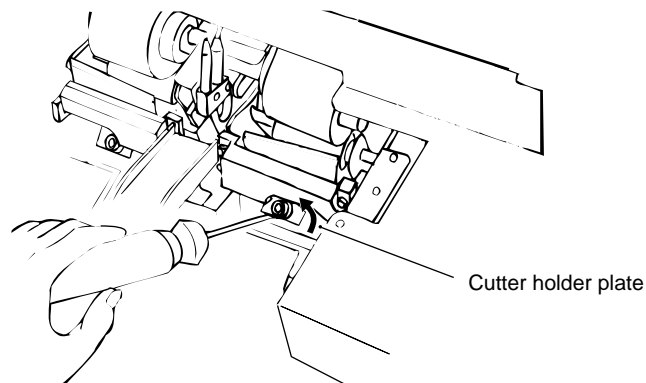


13. Replace the cutters with new ones.

14. Reassemble the parts as they were.

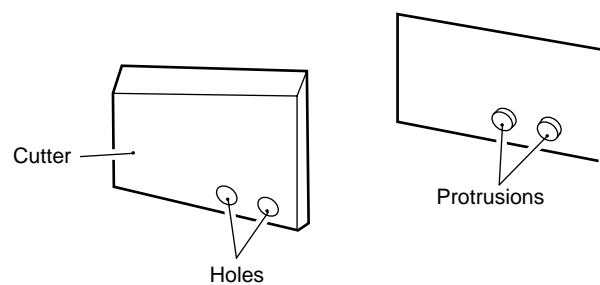
Memo

When the cutter holder plate as shown below is lifted in the arrow direction with a screwdriver, the cutter can be easily attached.



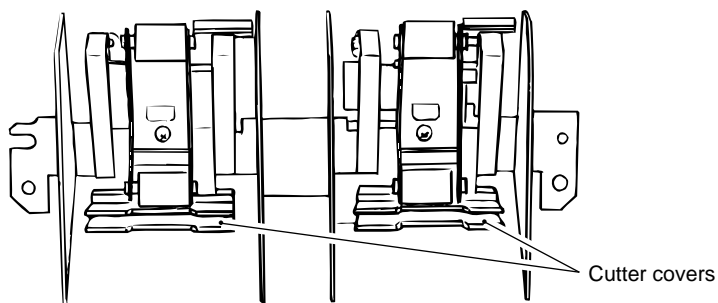
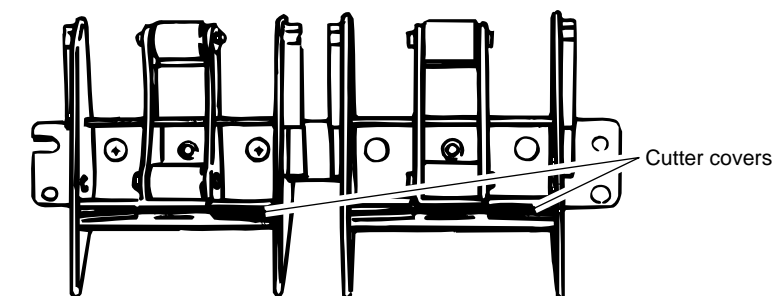
Caution

- Attach the cutter so that the protrusions may be engaged in the cutter holes.



Caution


- Attach the upper guide so that the cutters are placed between the cutter covers.



(Machine with the automatic film loader unit
applicable for the advanced photo system)

Replacing the Cutter Motor

1. Remove the film loading unit.

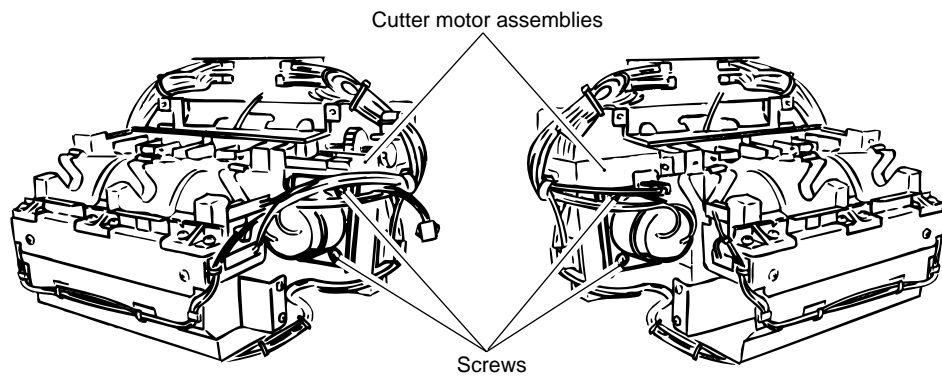
 Refer to 1011.

2. Disconnect the connectors.

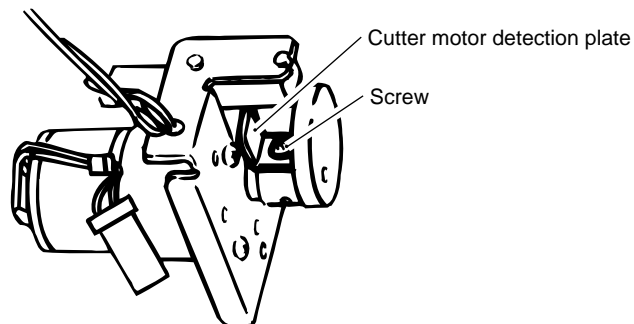
J/P45Cutter motor (right)

J/P46Cutter motor (left)

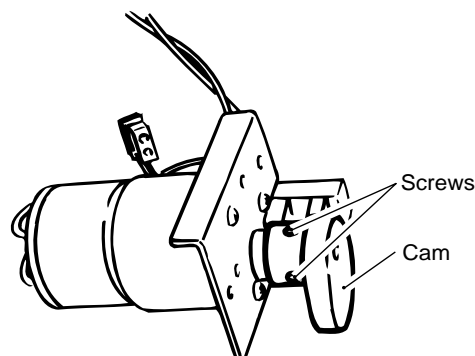
3. Remove the cutter motor assemblies. (2 screws each)



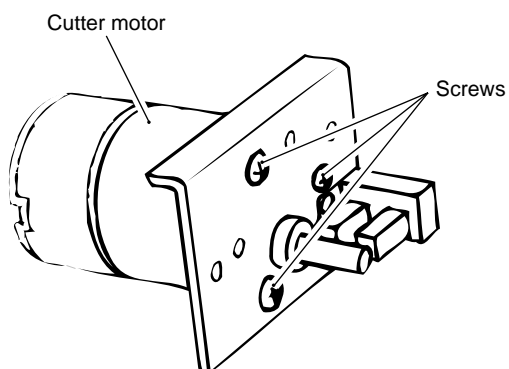
4. Remove the cutter motor detection plate. (1 screw)



5. Remove the cam. (2 screws)



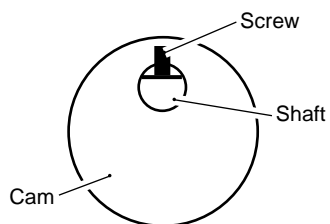
6. Replace the cutter motor. (3 screws)



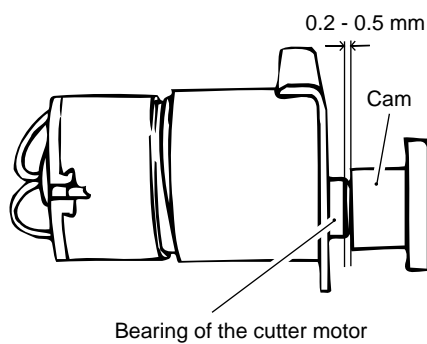
7. Reassemble the parts as they were.

Memo

- Attach the cam at the cutter motor so that one screw is positioned at the flattened portion of the shaft.



- Attach the cam so that the clearance between the cutter motor bearing and the cam is 0.2 - 0.5 mm.



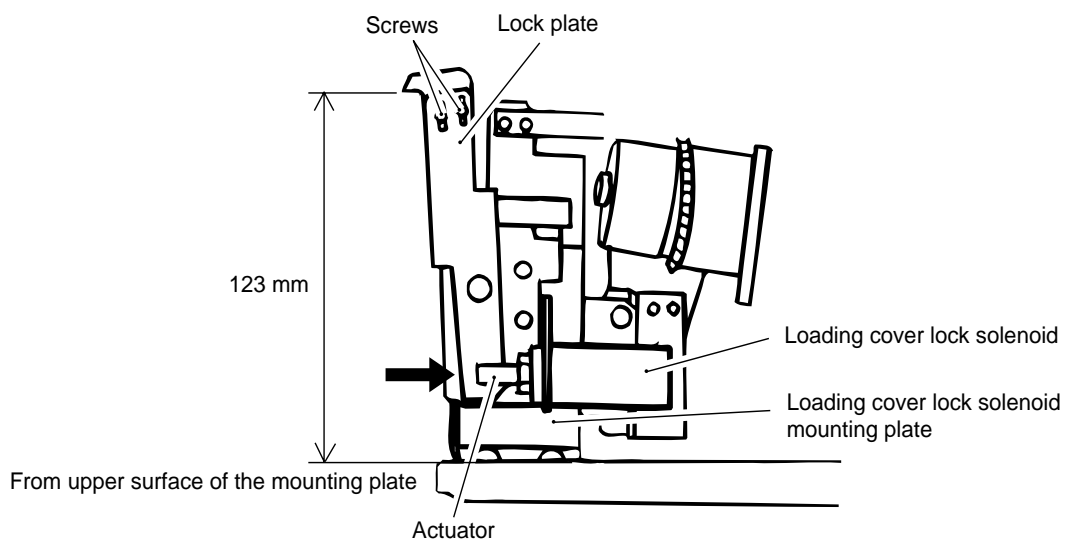
Adjusting the Loading Cover Lock Solenoid

1. Remove the loading box cover.



Refer to 1001, 1002 and 1003.

2. When the actuator is pressed in the arrow direction, loosen and adjust 2 screws so that the dimension of the lock plate and loading cover lock solenoid mounting plate are as shown in the figure below.



3. Reassemble the parts as they were.
4. When the loading cover lock solenoid is activated in the output check mode, check that the loading cover does not open by pressing the open button.

Adjusting the Film Cartridge Holder Spring

⚠ CAUTION

Your hand may be cut with a cutter. Do not put your hand close to the cutter. If you cut your hand, consult a physician as soon as possible.

1. Push the both right and left film cartridge holders and raise the cutters.

 Refer to 2011.

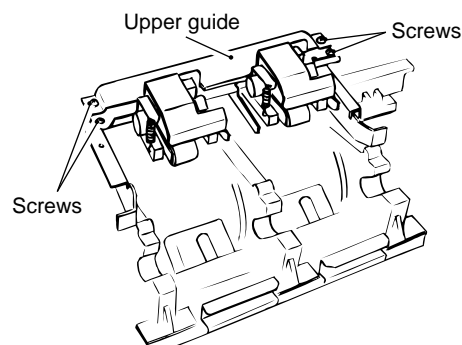
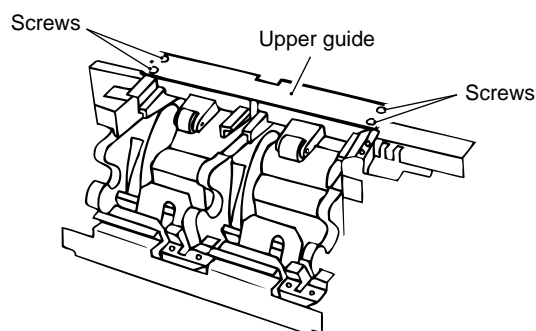
2. Remove the film loading unit.

 Refer to 1011.

3. Remove the upper guide. (4 screws)

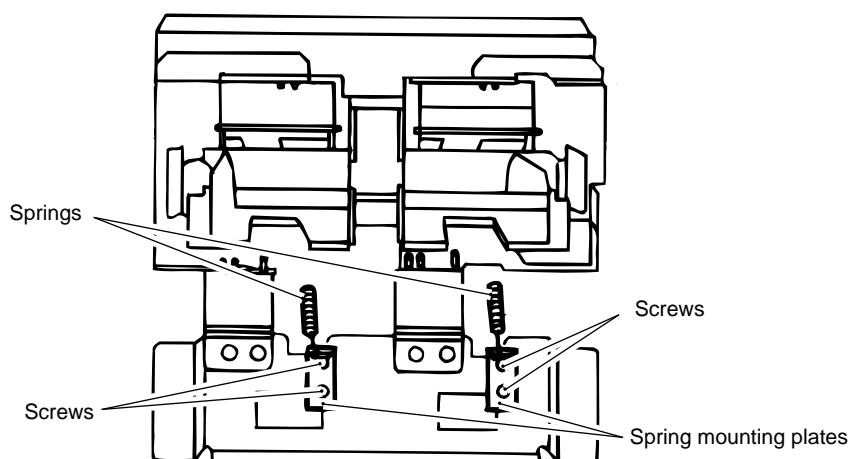
⚠ WARNING

When the upper guide is removed, be careful for the end of the cutter blade.



(Machine with the automatic film loader unit applicable for the advanced photo system)

4. Loosen the 2 screws fixing the spring mounting plate at the back of the film loading unit.

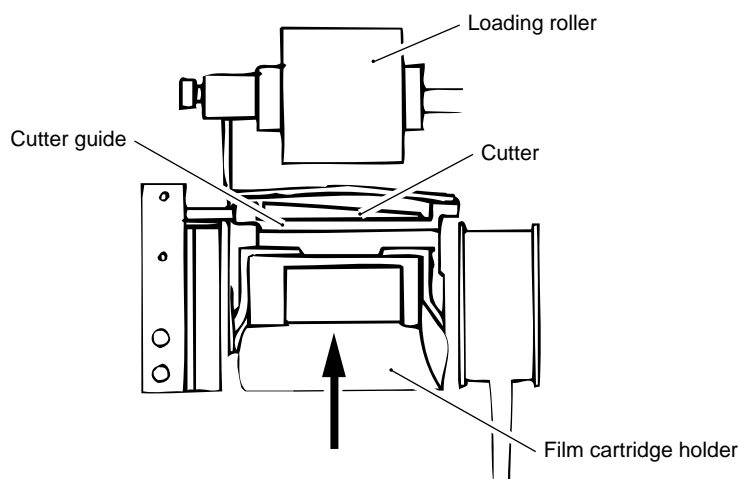


Back of the film loading unit

5. Adjust the position of the spring mounting plate so that the cutter may work when the cutter is returned and the film cartridge holder is pressed in the arrow direction by the force of 1550 ± 50 g.

⚠ WARNING


Work carefully. The end of the cutter blade ejects.



6. Reassemble the parts as they were.

Replacing the Film Detection Unit

1. Remove the film loading unit.

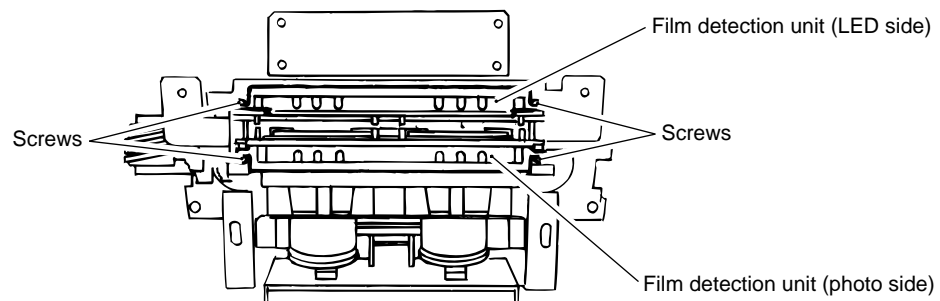
 Refer to 1011.

2. Disconnect the connectors.

J/P23 Loading connecting PCB (photo side)

J/P24 Loading connecting PCB (LED side)

3. Remove the film detection unit. (2 screws each)

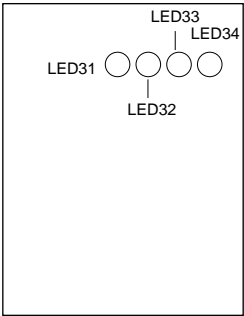


4. Replace the film detection unit with a new one.
5. Reassemble the parts as they were.

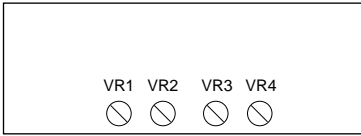
6. Develop the film and check the detection status of the film sensors and perforation sensors. Adjust the potentiometers, if required.

Sensor name	Power PCB 2	Loading connecting PCB
Perforation sensor (left)	LED31	VR 1
Film sensor (left)	LED32	VR 2
Perforation sensor (right)	LED33	VR 3
Film sensor (right)	LED34	VR 4

Power PCB 2 J340012 (*1), J391344



Loading connecting PCB J340036 (*1) J391348,




*1. Not comply with the RoHS Directive.

Memo

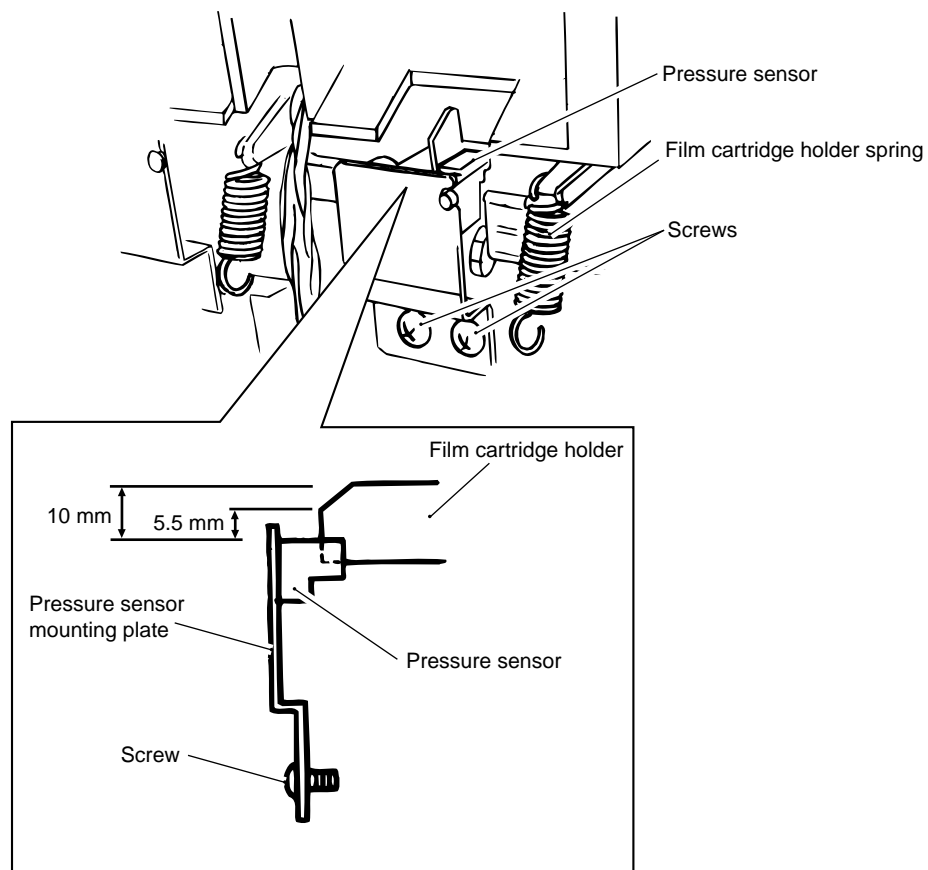
LED is on when the film is available and off when the film is not available.

Positioning the Pressure Sensor

1. Remove the film loading unit.

 Refer to 1011.

2. Adjust the position of the pressure sensor so that the pressure sensor may be closed when the film cartridge holder is returned. (2 screws each)




3. Reassemble the parts as they were.

4. Confirm that the pressure sensor is closed when the film cartridge holder is returned or that the pressure sensor is open when the film cartridge holder is pressed.

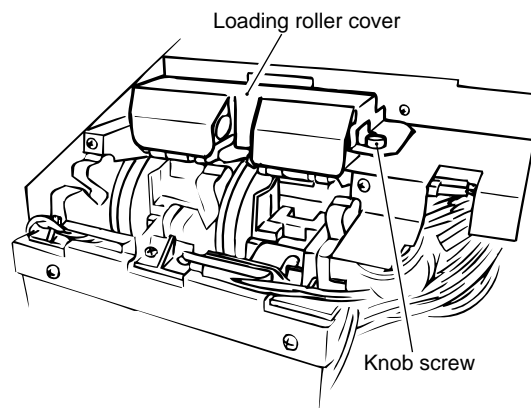
 Refer to 3031.

Positioning the Intermediate Cartridge Open Arm

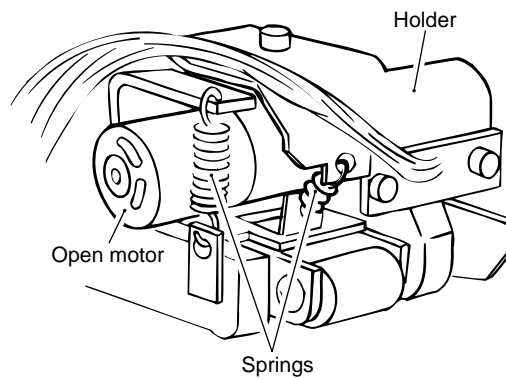
1. Remove the loading box cover.

 Refer to 1001, 1002 and 1003.

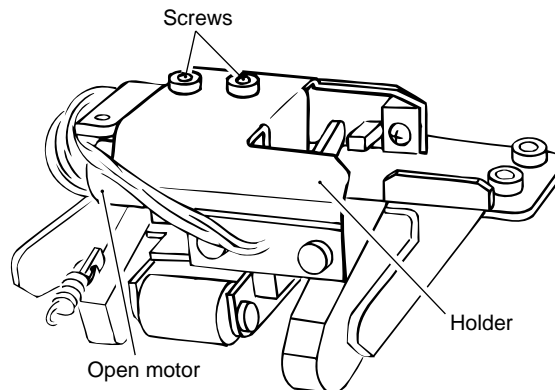
2. Remove the loading roller cover. (Loosen 1 knob screw.)



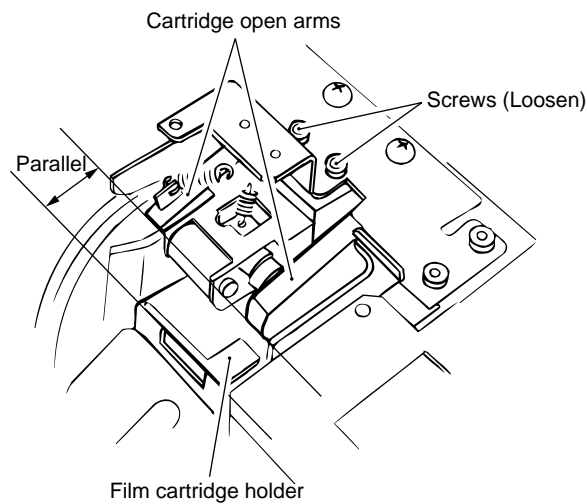
3. Remove springs from the open motor holder. (2 springs each)



4. Remove the open motor together with the holder. (2 screws each)




5. Adjust the position of the intermediate cartridge open arm so that it is parallel to the film cartridge holder. (Loosen 2 screws each.)



6. Reassemble the parts as they were.
7. When operating the open motor, check in the output check mode whether the intermediate cartridge opens.

Adjusting the Sensitivity of the Film Sensor

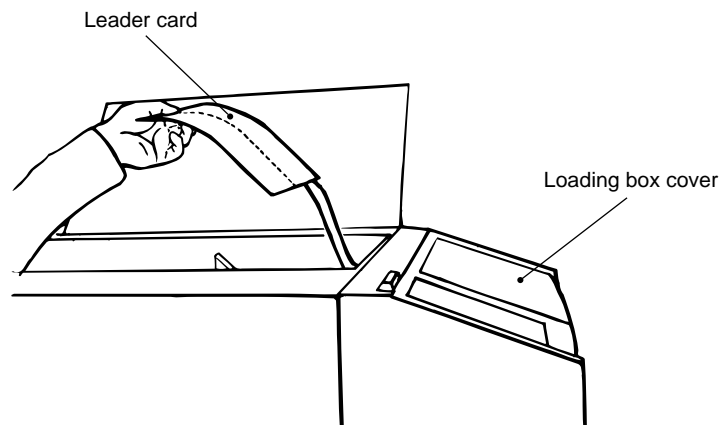
1. Remove the loading box cover.

 Refer to 1001, 1002 and 1003.


2. Insert the undeveloped film (KODAK VR200) into the insert port.

<How to insert>

1. Set the film into the control strip magazine.
2. Splice the 20 cm film and attach it to the leader card.
3. Remove CD turn ruck and insert the film into the insert port.
4. Take out the film before it gets soaked in chemical solutions.




3. Make sure the sensor condition at the input check.

 Refer to 3031.

Make sure the “FILM SENSOR (L,R)” and “PERFORATION SE. (L,R)” in the input check mode.

NOTE

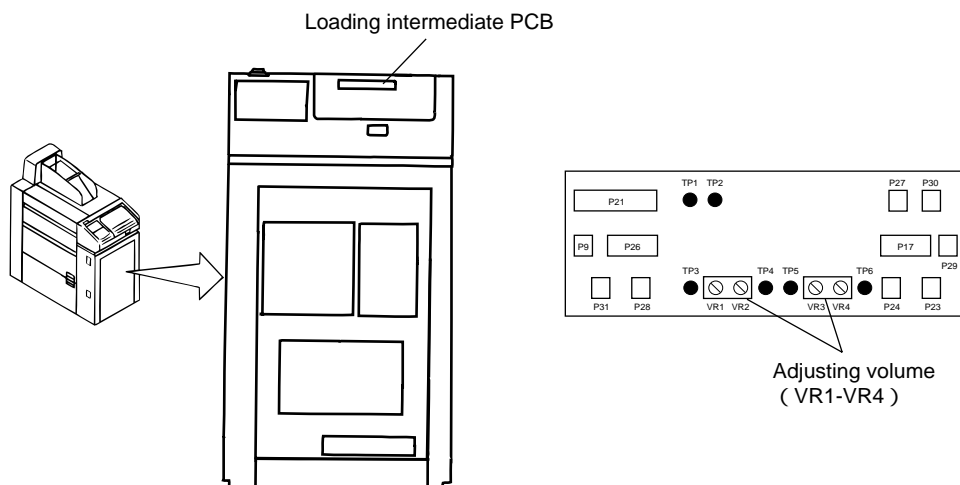
- You can also make sure the sensor condition at LED (LED31-LED34) on the POWER PCB 2 (J340012 (*1), J391344).

 Refer to 6015.

*1. Not comply with the RoHS Directive.

4. Insert the film and check the sensor is "CLOSE".

When the sensor is not "CLOSE", turn the adjusting volume (VR1-VR4) on the loading intermediate PCB to the left to be "CLOSE".



5. Turn the adjusting volume to the right and set the point that the sensor becomes "OPEN" as point A.

When the sensor does not become "OPEN" even if you turn the adjusting volume to the right fully, set that point as point A.

6. Take out the film and insert the leader card, then check the sensor is "OPEN".

When the sensor does not become "OPEN", turn the adjusting volume to the right to be "OPEN".

7. Turn the adjusting volume to the left and set the point that the sensor becomes "CLOSE" as point B.

When the sensor does not become "CLOSE" even if you turn the adjusting volume to the left fully, set that point as point B.


8. Set the adjusting volume to the middle between points A and B.

9. Attach the loading box cover.

Adjusting the Pitch of the Processing Rack

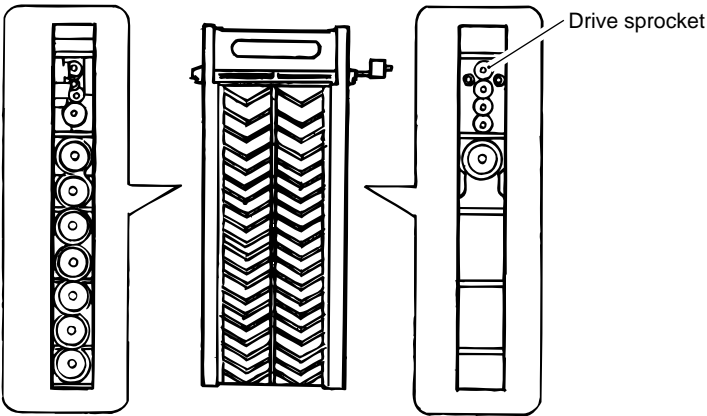


WARNING
Your eyes may be injured with the processing solution. Be sure to wear the safety goggles. If the solution comes in contact with your eyes, wash with water and consult a physician as soon as possible.

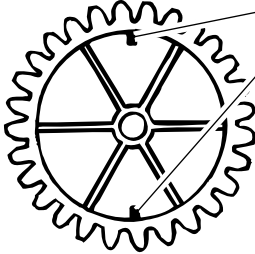


CAUTION
Your skin may be injured with the processing solution. Be sure to wear the chemical resistant gloves. If the solution comes in contact with your skin, wash it with water. If any abnormality is observed on your skin, consult a physician.

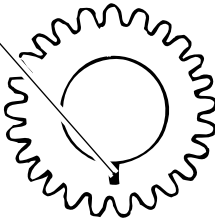
- 1. Set the drive sprocket or the feed idle gear so that the mark of the gear may be linear.



Memo



Feed idle gear



Drive sprocket

Marks

Caution


Since the number of gear teeth is different, the place where all marks are matched is only one. If the markings are matched, the grooves of all shafts are aligned in the same direction. In addition, be sure to carry out the leader card pass check before developing the film.

Adjusting the Pitch of the Processing Rack and Dryer Rack

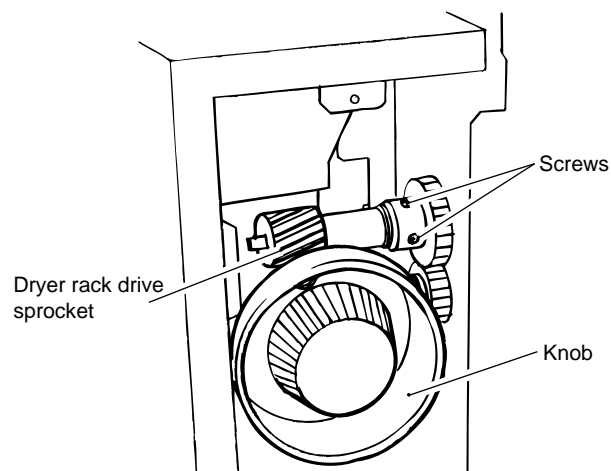
CAUTION

You may get electric shock. Never open the cover when the circuit breaker is ON. If you get an electric shock, consult a physician as soon as possible.


1. Remove the dryer unit cover.

 Refer to 1001, 1002 and 1003.

2. Loosen the 2 screws of the dryer rack drive sprocket.



3. Remove the dryer rack upper cover.

 Refer to 1001, 1002 and 1003.

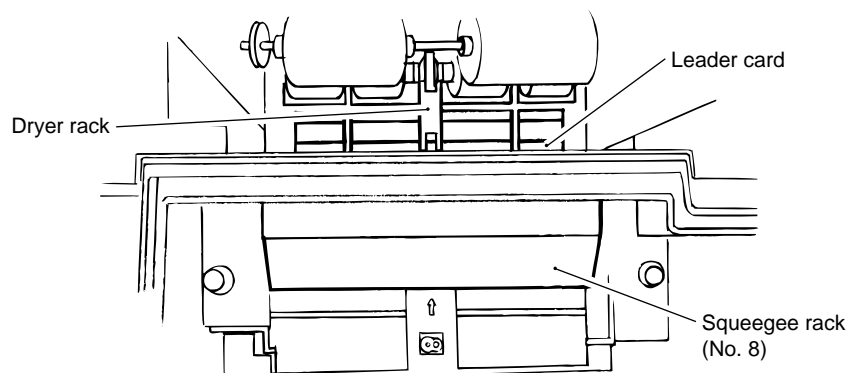
4. Remove No. 7 turn guide.

5. Insert the leader card into No. 7 processing rack, and turn the knob to feed the leader card.

Memo

Set the leader card in the No.8 processing rack for V100.

6. Stop the knob when the leading end of the leader card has entered the dryer rack entrance.




7. Tighten the 2 screws of the dryer rack drive sprocket.
8. Reassemble the parts as they were.
9. Feed the leader card actually and check passage.

Adjusting the Pitch of the Dryer Rack and the Leader Ejection Unit

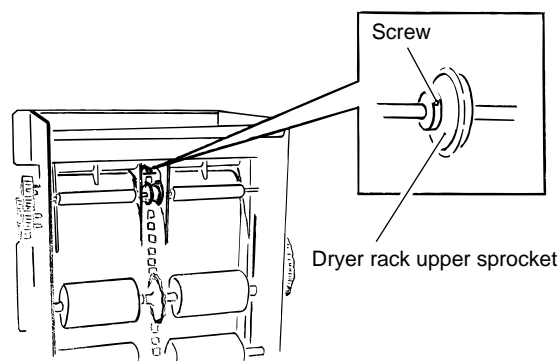
⚠ CAUTION

You may get burnt. Contact with the heater or heater box during operation or immediately after use may cause burning. If you get burnt, cool it with water and consult a physician as soon as possible.

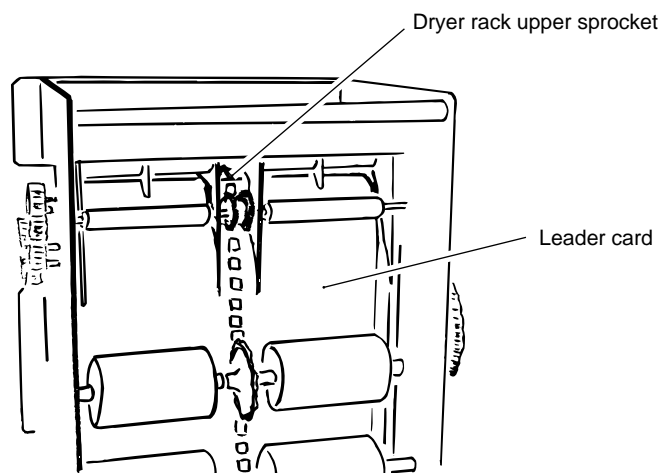
1. Remove the dryer rack.

 Refer to 1021

2. Loosen 2 screws of the dryer rack upper sprocket.



3. Set the leader card in the dryer rack and turn the dryer rack drive sprocket to feed the leader card.
4. When the head of the leader card engages with the dryer rack upper sprocket, stop the dryer rack drive sprocket.

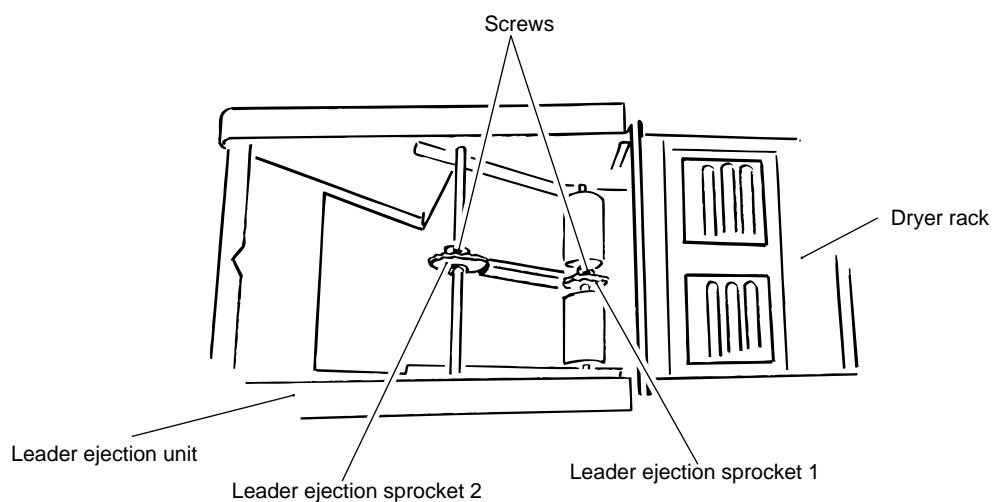


5. Tighten 2 screws of the dryer rack upper sprocket.
6. Mount the leader ejection unit to the dryer rack.

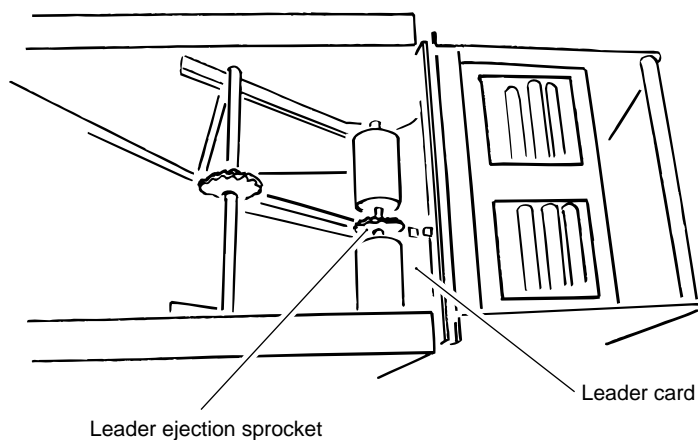
Caution

Take care not to push the dryer rack down.

7. Loosen 2 screws of the leader ejection sprockets 1 and 2.

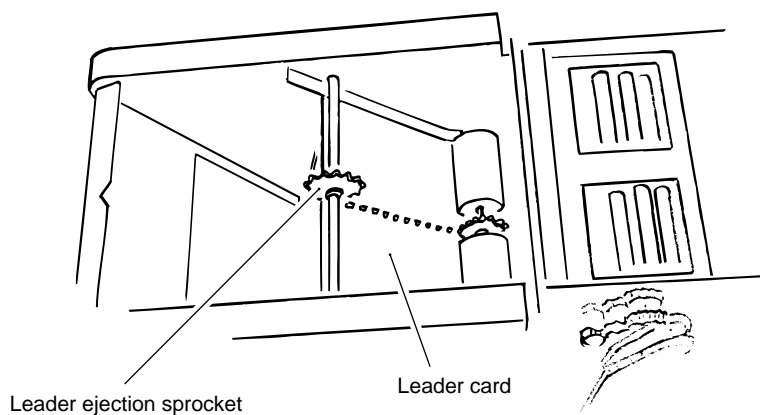


8. Set the leader card in the dryer rack and turn the dryer rack drive sprocket to feed the leader card.
9. When the head of the leader card engages with the leader ejection sprocket 1, stop the dryer rack drive sprocket.



10. Loosen 2 screws of the leader ejection sprocket 1.
11. Feed the leader card further by turning the dryer rack drive sprocket.

12. When the head of the leader card engages with the leader ejection sprocket 2, stop the dryer rack drive sprocket.



13. Tighten 2 screws of the leader ejection sprocket 2.
14. Assemble the parts as they were.
15. Feed the leader card and check passage.

Checking and cleaning the dryer rack, and lubricating the dryer rack chain

⚠ CAUTION

You may get burnt. Contact with the heater or heater box during operation or immediately after use may cause burning. If you get burnt, cool it with water and consult a physician as soon as possible.

1. Remove the dryer rack.

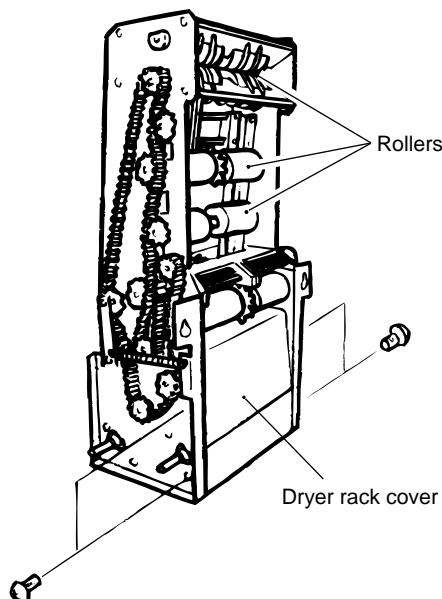
 Refer to 1021

2. Remove the dryer rack cover and check the dryer rack.

- If the rollers are not damaged
- If the screws are not loosened

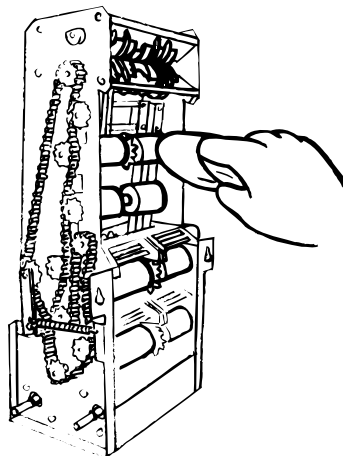
Note

.....
The number of screws fixing the dryer rack cover varies depending on the model.



3. Clean the rollers of the dryer rack.

Wipe the rollers with a damp, tightly squeezed cloth.



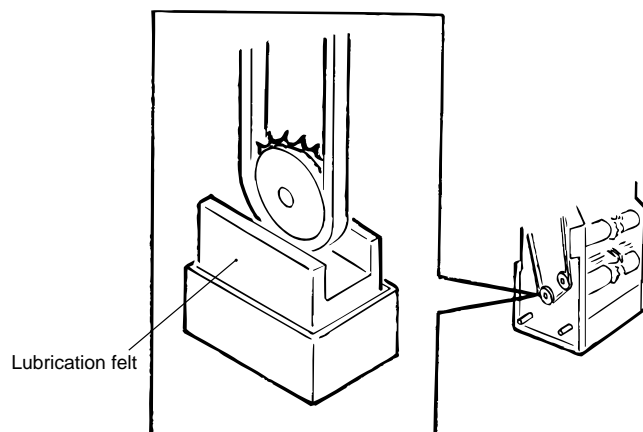
4. Lubricate the felt in the dryer rack.

Lubricate the felt until the whole of felt moistens with oil. Attaching positions of the lubrication felt may vary depending on the model.

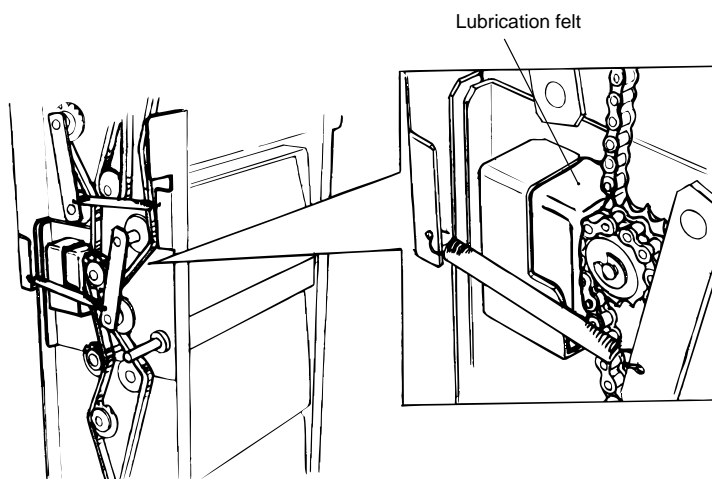
IMPORTANT

- When lubricating, use the oil specified by us. (Part No. L010010-00)
- Do not lubricate any other part than the specified part. The parts made of resin may be damaged.
- Wipe off the dripping oil thoroughly to prevent it splashing on film.

V30



V50 and V100



5. Ressemble the parts.

Replacing the Thermosensor


⚠ WARNING

Your eyes may be injured with the processing solution. Be sure to wear the safety goggles. If the solution comes in contact with your eyes, wash with water and consult a physician as soon as possible.

⚠ CAUTION

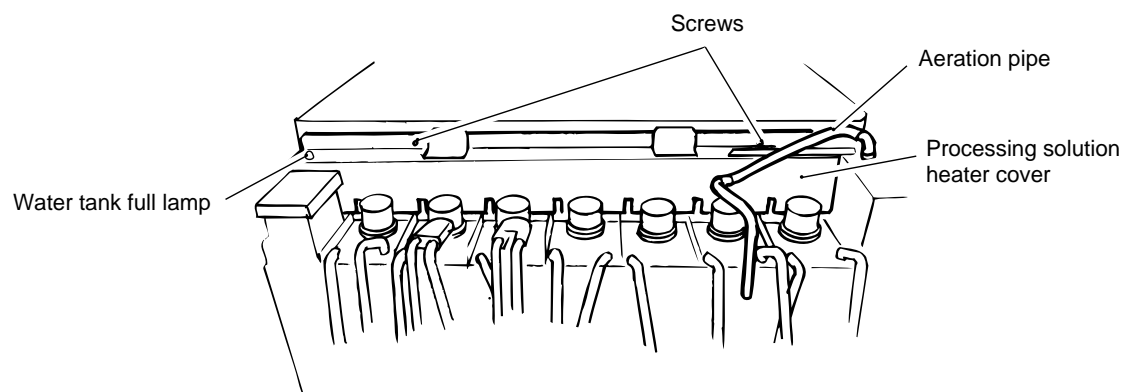
Your skin may be injured with the processing solution. Be sure to wear the chemical resistant gloves. If the solution comes in contact with your skin, wash it with water. If any abnormality is observed on your skin, consult a physician.

1. Remove the subtank upper cover.
2. Open the upper cover.
3. Open the replenisher tank cover.
4. Remove the subtank side cover.

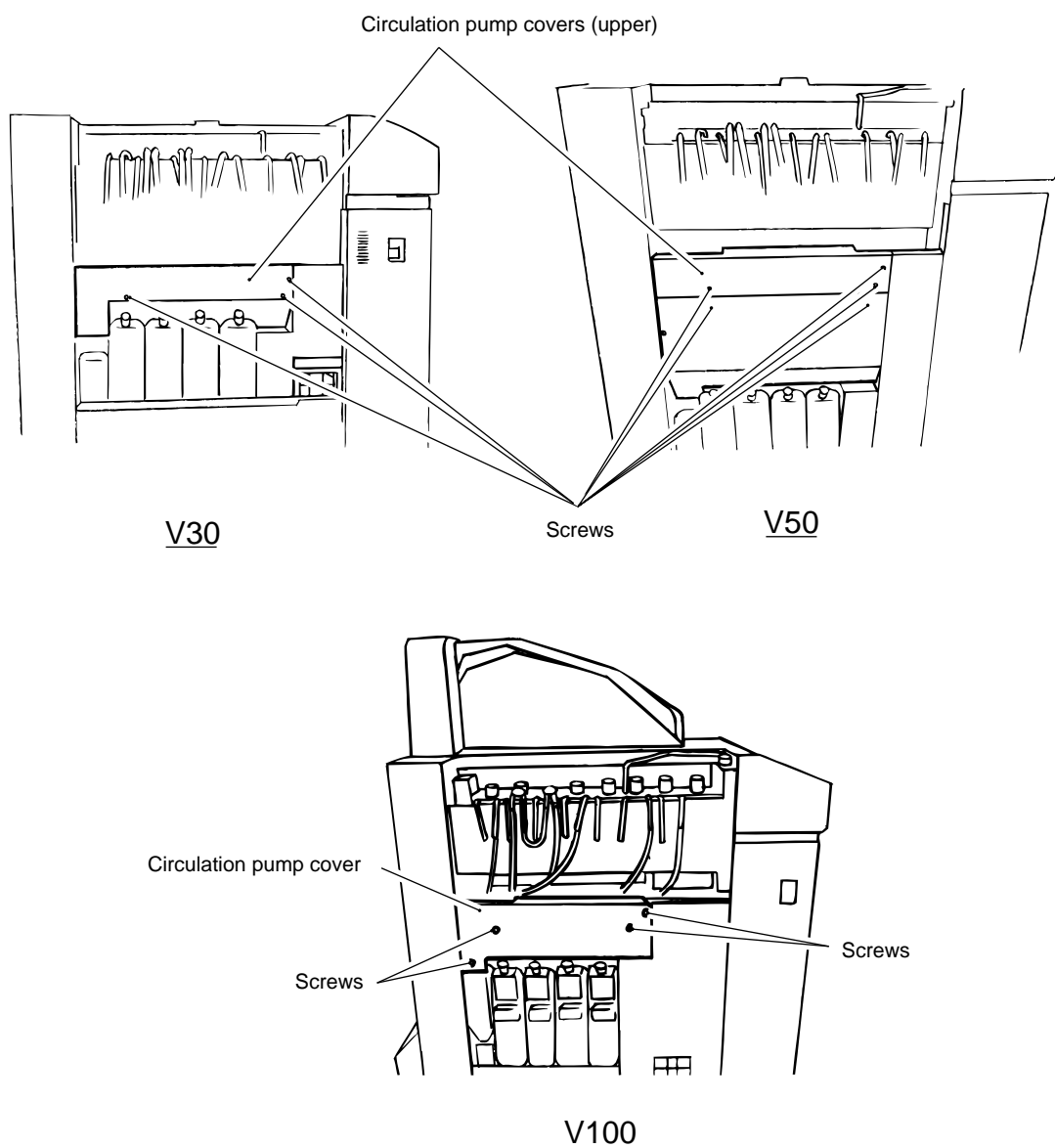
 Refer to 1001, 1002 and 1003.

5. Remove the aeration pipe. (1 screw)
6. Remove the processing solution heater cover. (2 screws)

The processing solution heater cover is equipped with the water tank full lamp. Disconnect the connector J/P222 of the water tank full lamp.



7. Remove the circulation pump cover (upper). (3 screws for V30, 5 screws for V50, 4 screws for V100)



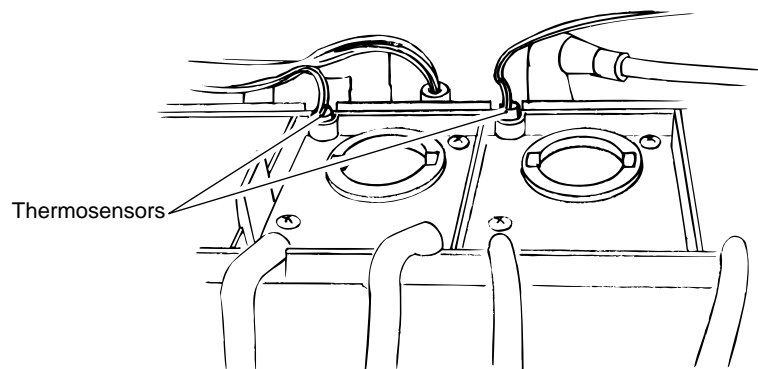
8. Disconnect the thermosensor connectors for replacement.

J/P154 CD
 J/P155 BL
 J/P156 FIX 1
 J/P157 FIX 2
 J/P160 STB 3


Memo

The processing solution name varies depending on the processor specification.

9. Replace the thermosensor.



10. Reassemble the parts as they were.
11. Carry out the thermosensor calibration.

 Refer to the OPERATOR'S MANUAL - Additional Operations -.

Replacing the Replenisher Pump (V30, V50)


⚠ WARNING

Your eyes may be injured with the processing solution. Be sure to wear the safety goggles. If the solution comes in contact with your eyes, wash with water and consult a physician as soon as possible.


⚠ CAUTION

Your skin may be injured with the processing solution. Be sure to wear the chemical resistant gloves. If the solution comes in contact with your skin, wash it with water. If any abnormality is observed on your skin, consult a physician.

1. Remove the dryer unit cover.

 Refer to 1001 and 1002.

2. Remove the rear cover.

 Refer to 1001 and 1002.

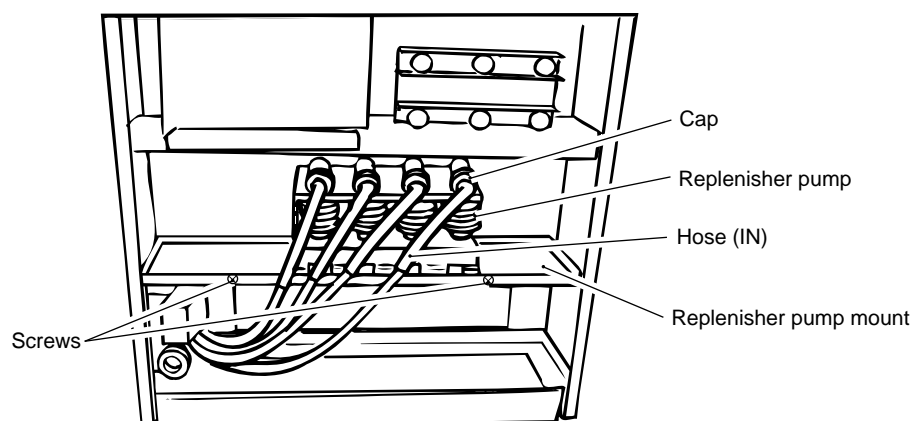
3. Remove the replenisher pump mount. (2 screws)

4. Close the strainer unit valve of the replenisher pump to replace.

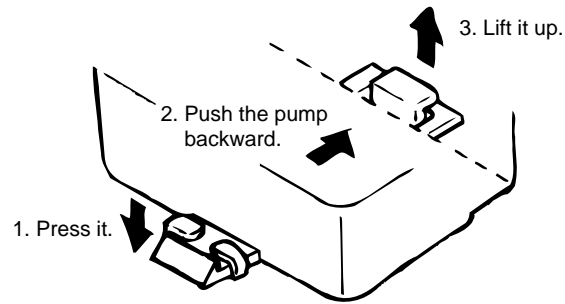
5. Remove the cap from the replenisher pump.

Caution

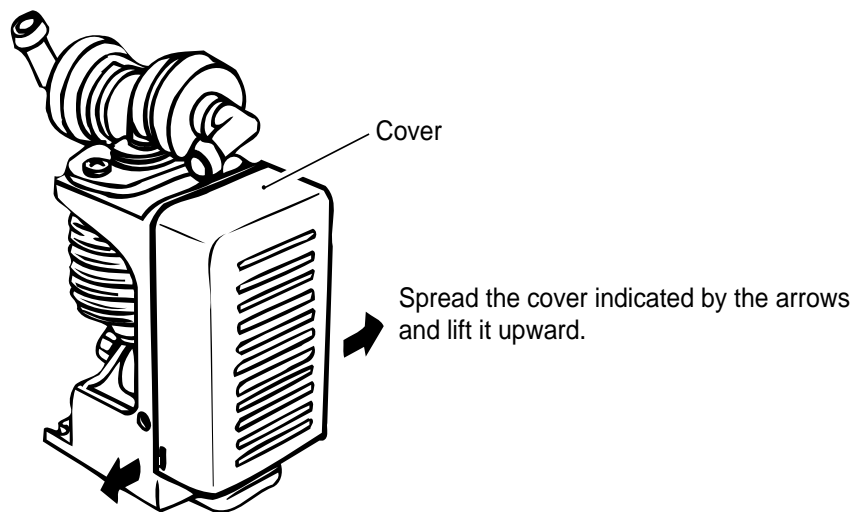
Be careful that the solution does not come in contact with the rotation part of the replenisher pump.



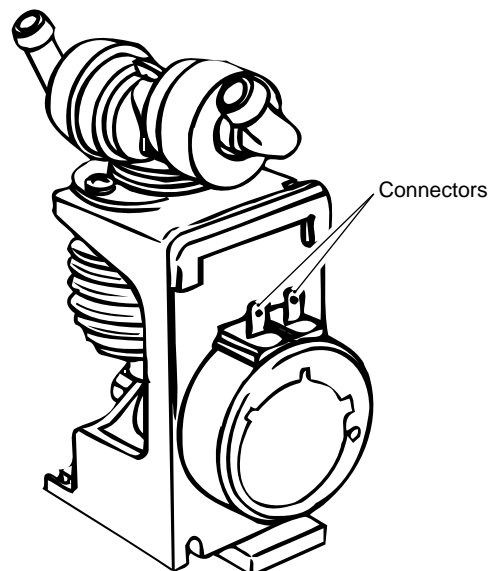
6. Remove the replenisher pump as shown in the figure below.



7. Remove the cover from the removed replenisher pump.



8. Disconnect the connector and replace the replenisher pump.



9. Reassemble the parts as they were.

10. Check the pump amount and change it.

 Refer to the Operator's Manual - Additional Operations -.


Replacing the Replenisher Pump (V100)

⚠ WARNING

Your eyes may be injured with the processing solution. Be sure to wear the safety goggles. If the solution comes in contact with your eyes, wash with water and consult a physician as soon as possible.

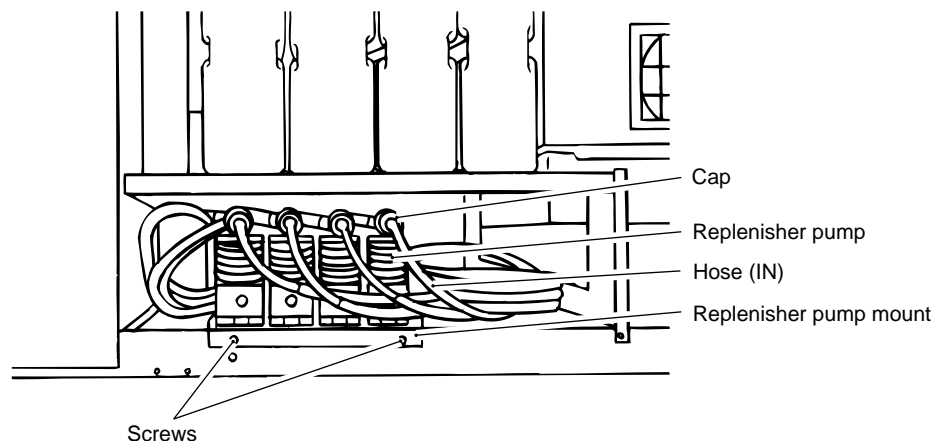
⚠ CAUTION

Your skin may be injured with the processing solution. Be sure to wear the chemical resistant gloves. If the solution comes in contact with your skin, wash it with water. If any abnormality is observed on your skin, consult a physician.

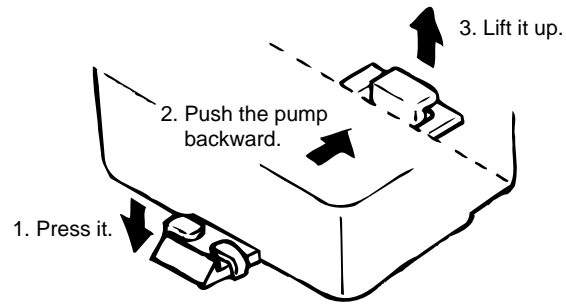
1. Remove the replenisher tank cover.
-  Refer to 1003.
2. Remove the replenisher pump mount. (2 screws)
3. Close the strainer unit valve of the replenisher pump to replace.
4. Remove the cap from the replenisher pump.

Caution

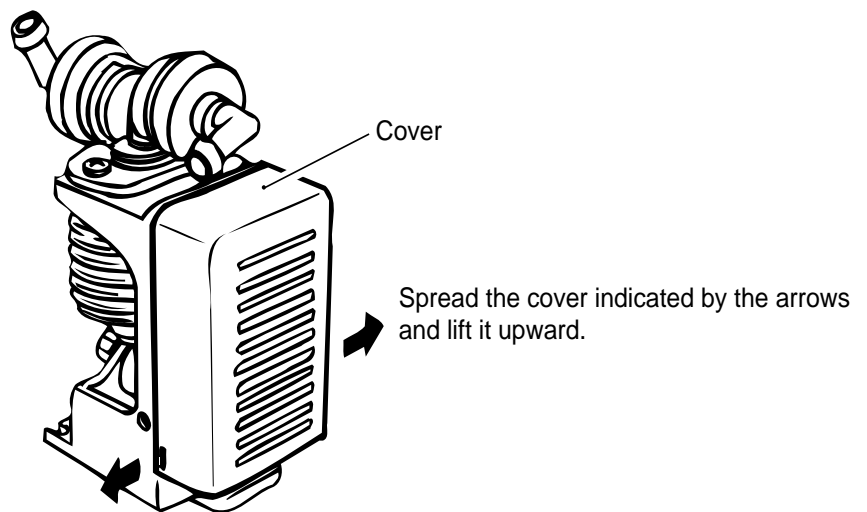
Be careful that the solution does not come in contact with the rotation part of the replenisher pump.



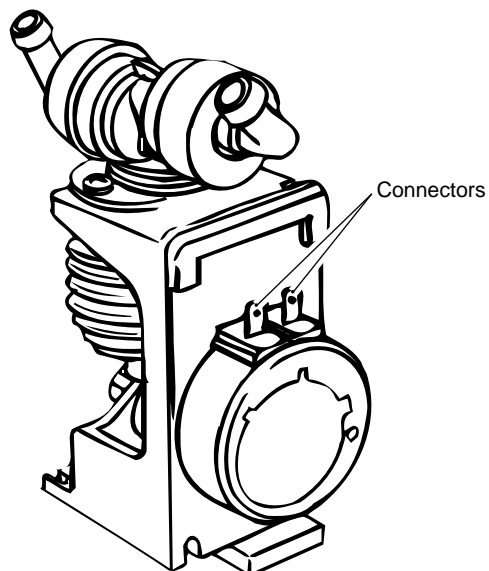
5. Remove the replenisher pump as shown in the figure below.



6. Remove the cover from the removed replenisher pump.



7. Disconnect the connector and replace the replenisher pump.




8. Reassemble the parts as they were.
9. Check the pump amount and change it.


Refer to the Operator's Manual - Additional Operators -.

Replacing and Adjusting the Drive Motor and the Reducer (V30)

1. Remove the dryer rack.

 Refer to 1021.

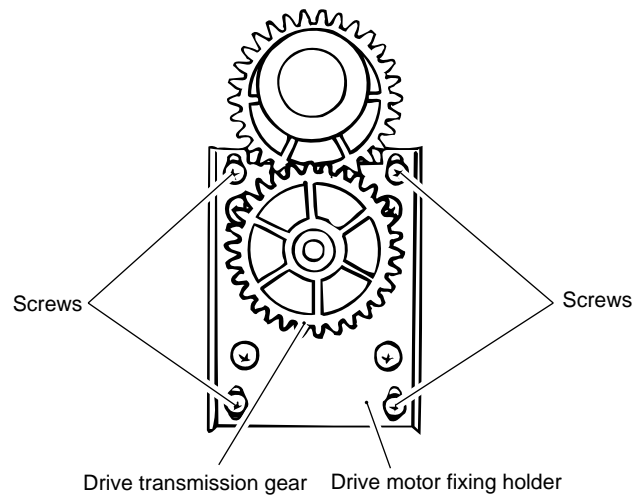
2. Remove the side cover.

 Refer to 1001.

Memo

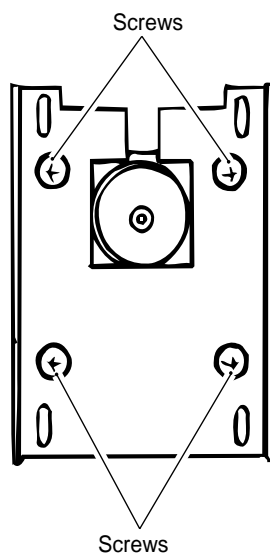
If the processor has been installed near the wall, move the machine to remove the side cover.

3. Remove the knob.
4. Disconnect the connector.
J/P129 Drive motor
5. Remove the drive motor fixing holder. (4 screws)



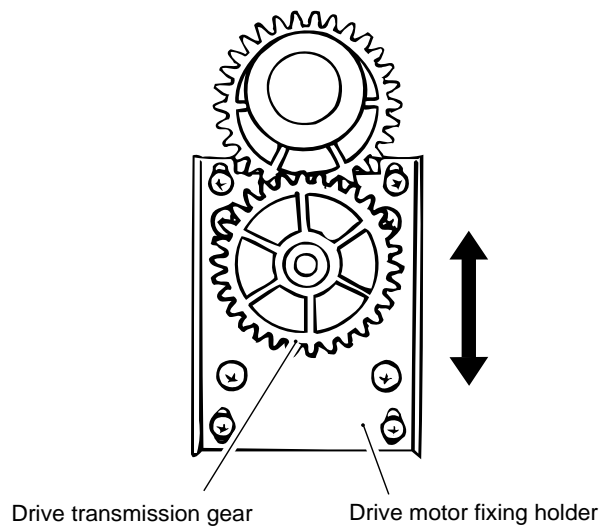
6. Remove the drive transmission gear. (2 screws)

7. Replace the drive motor and the reducer. (4 screws)




8. Reassemble the parts as they were.
9. Adjust the backlash of the drive transmission gear.

Adjust the position of the drive motor fixing holder so that the backlash is in the range of 0.2 - 0.3 mm.




Replacing and Adjusting the Drive Motor and the Reducer (V50,V100)

1. Remove the dryer rack.

 Refer to 1021.

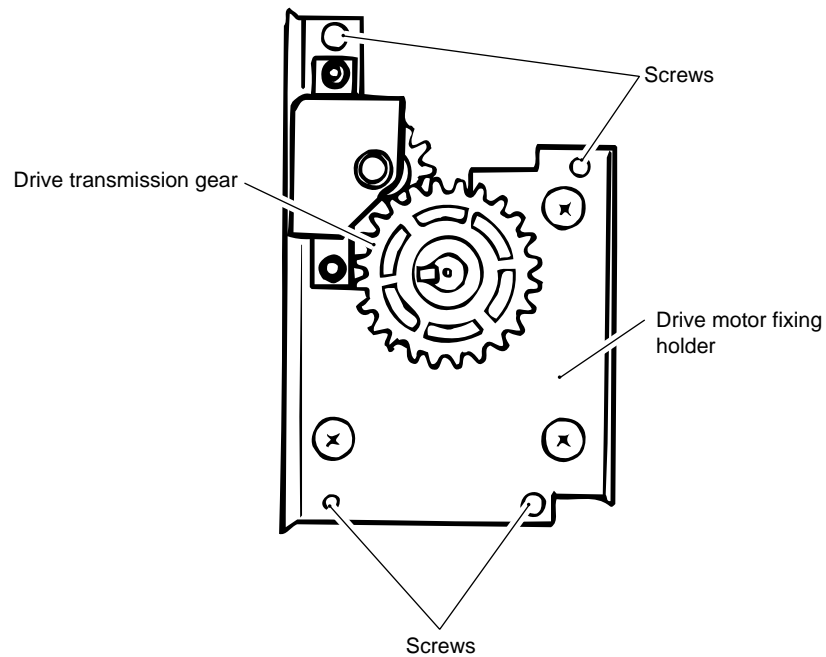
2. Remove the side cover.

 Refer to 1002 and 1003.

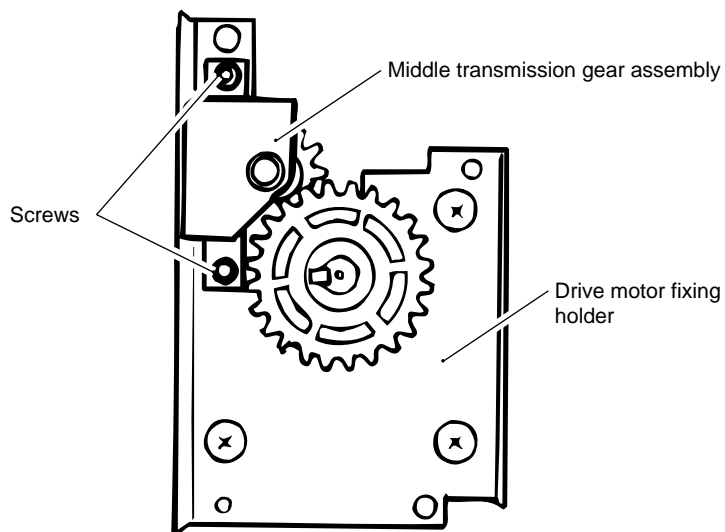
Memo

If the processor has been installed near the wall, move the machine to remove the side cover.

3. Remove the knob.
4. Disconnect the connector.
J/P129 Drive motor
5. Remove the drive motor fixing holder. (4 screws)

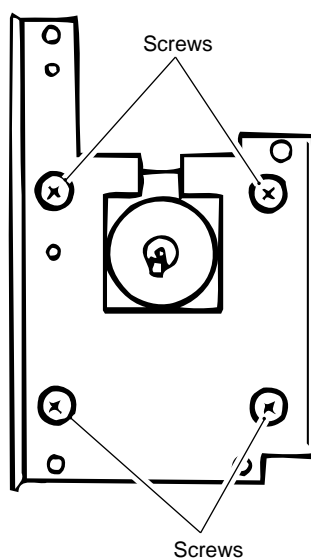


6. Remove the middle transmission gear assembly. (2 screws)



7. Remove the drive transmission gear. (2 screws)

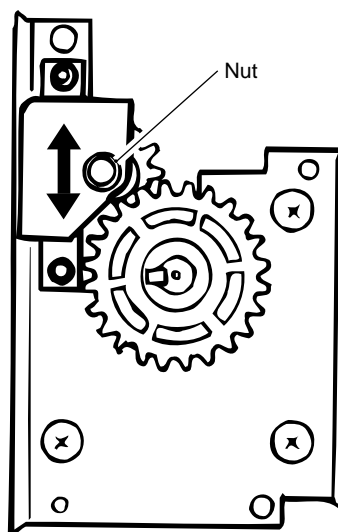
8. Replace the drive motor and the reducer. (4 screws)



9. Reassemble the parts as they were.


10. Adjust the backlash of the drive transmission gear.

Adjust the shaft position of the middle transmission gear so that the backlash is in the range of 0.2 - 0.3 mm.

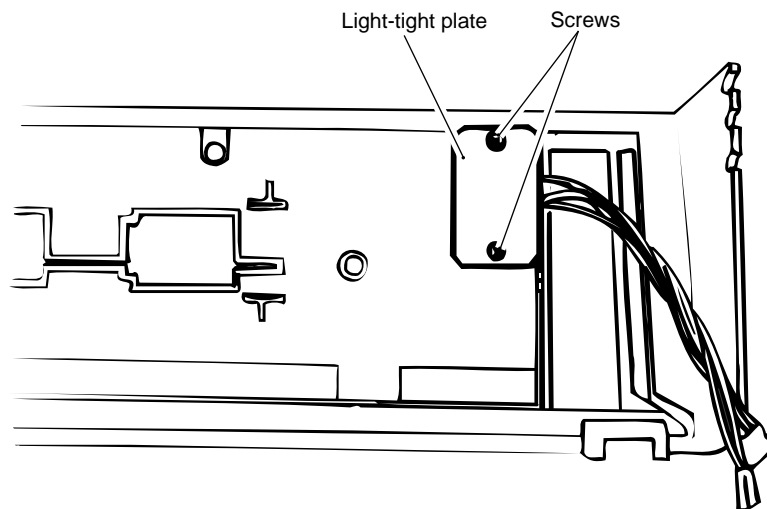


Replacing the Auto Loading Cover Open Solenoid

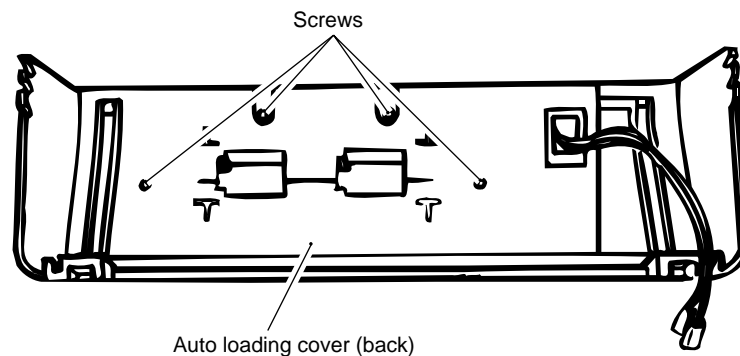
1. Remove the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

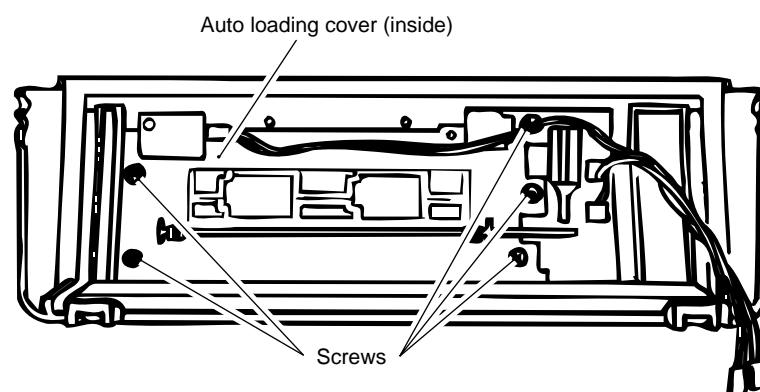
2. Remove the light-tight plate. (2 screws)



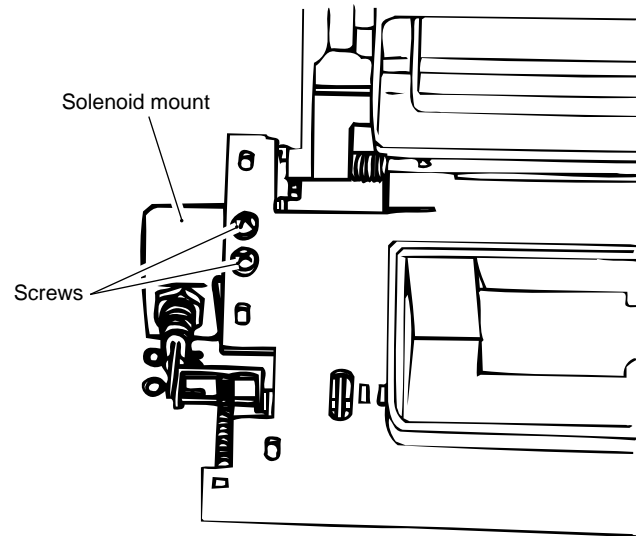
3. Remove the auto loading cover (back). (4 screws)



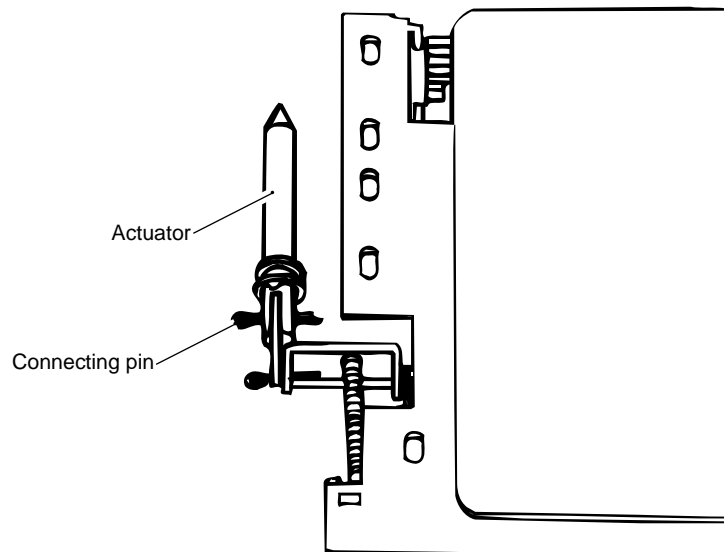
4. Remove the auto loading cover (inside). (5 screws)



5. Remove the solenoid mount. (2 screws)

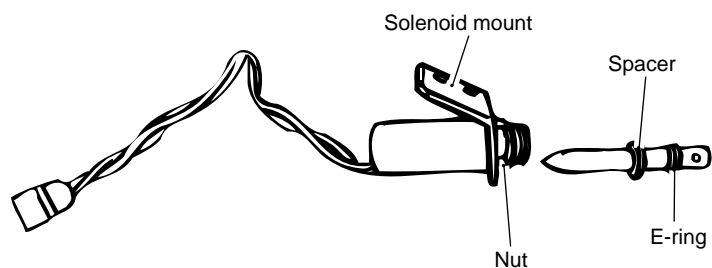


6. Remove the actuator. (1 connecting pin)

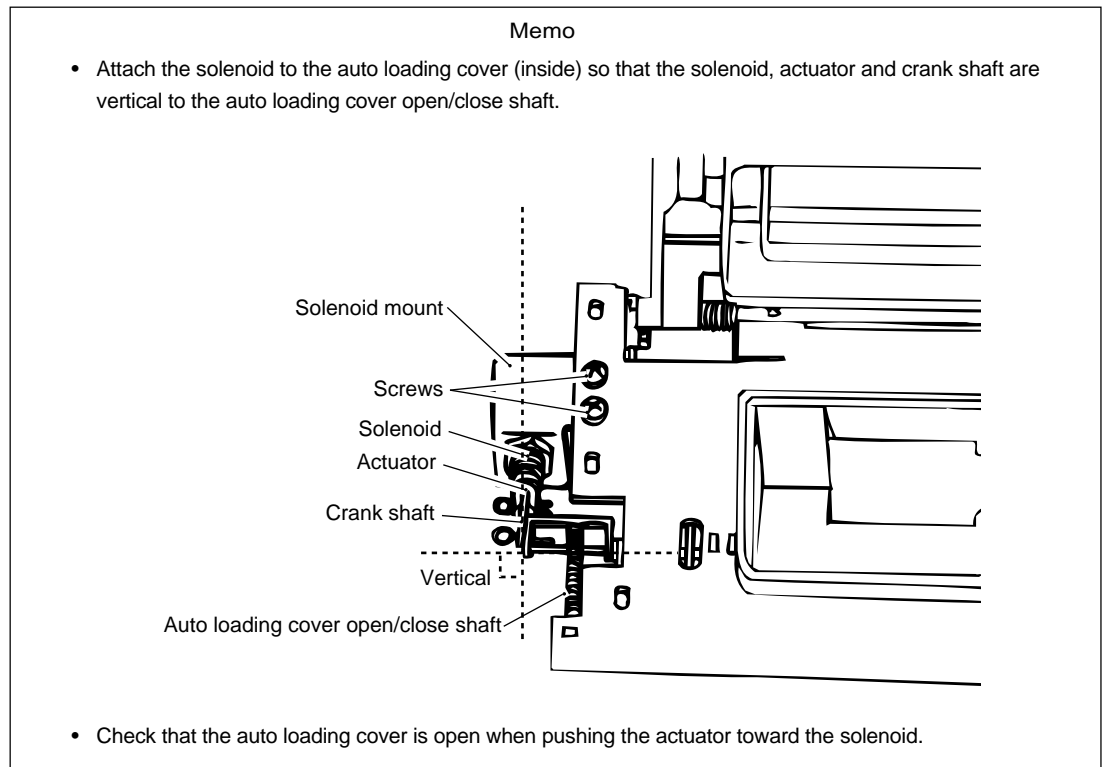


7. Replace the auto loading cover open solenoid. (1 nut)

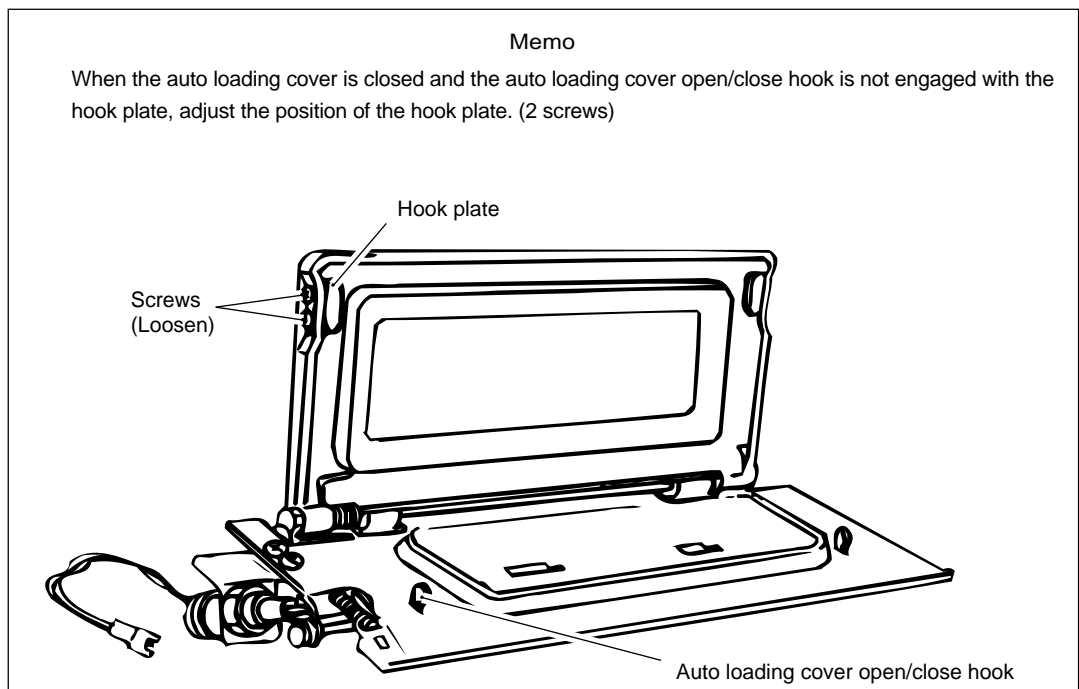
Remove the spacer and E-ring from the actuator.



8. Attach the solenoid and the actuator to the auto loading cover (inside) as they were.




9. Reassemble the parts as they were.

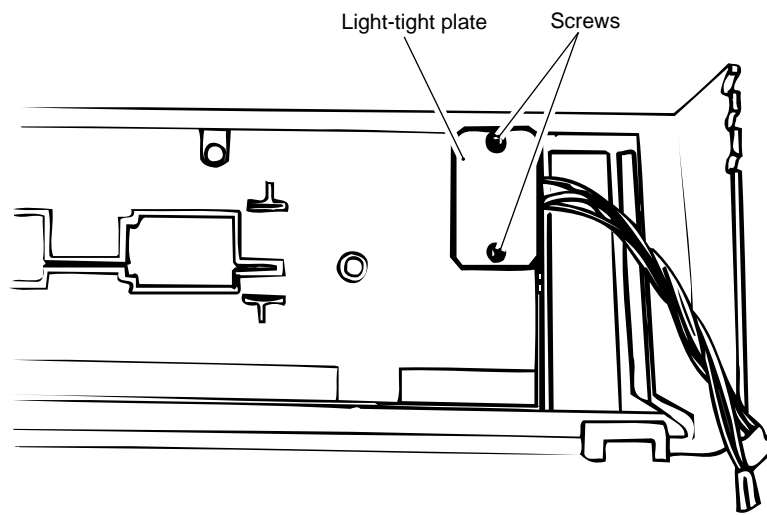


Positioning the Auto Loading Cover Sensor

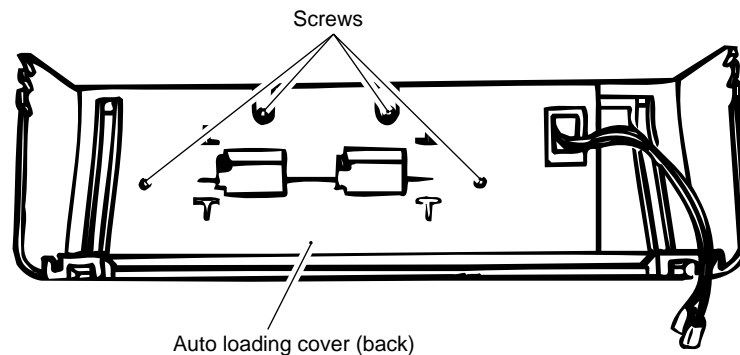
1. Remove the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

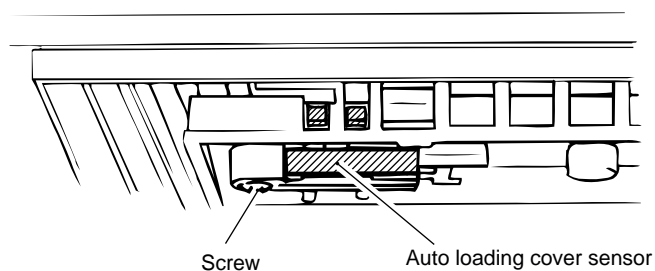
2. Remove the light-tight plate. (2 screws)



3. Remove the auto loading cover (back). (4 screws)




4. Adjust the position of the auto loading cover sensor so that the auto loading cover sensor is closed after closing the auto loading cover. (1 screw)



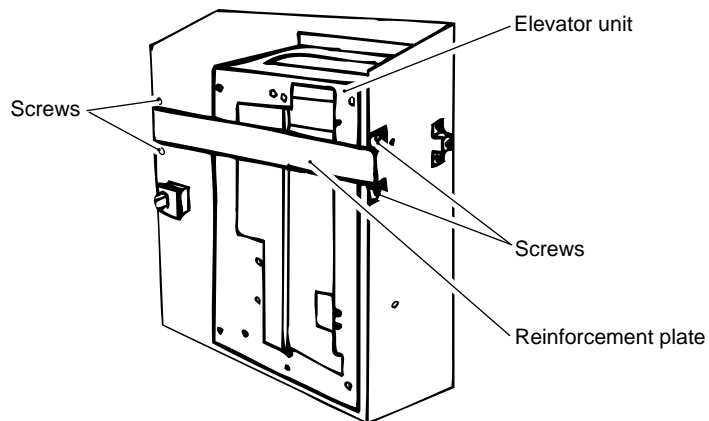
5. Reassemble the parts as they were.

Adjusting the Tension of the Entrance Elevator Belt

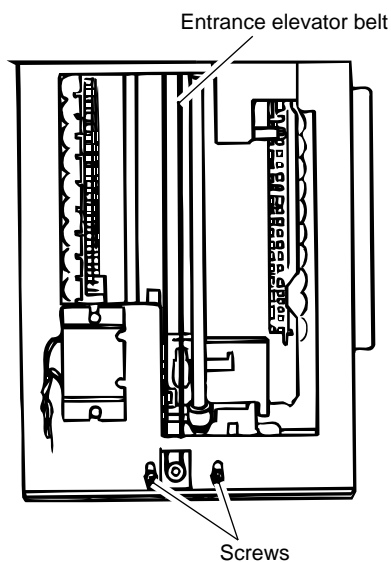
1. Remove the automatic film loader unit cover and the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

2. Remove the reinforcement plate. (4 screws)

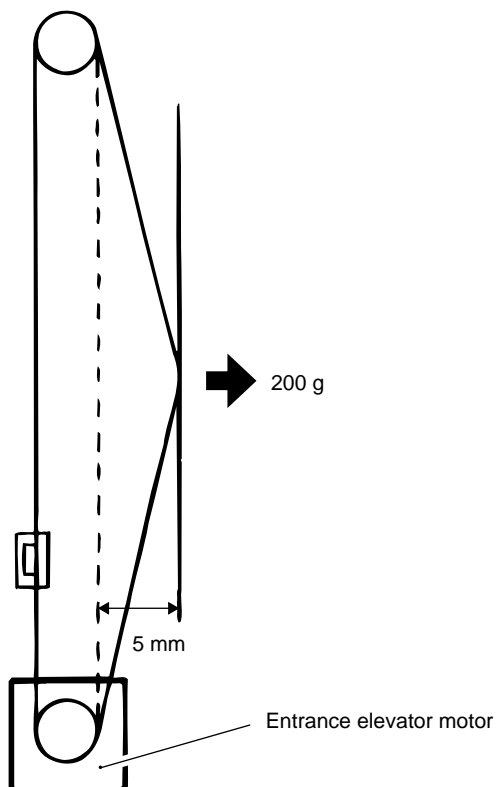


3. Loosen the 2 screws fixing the entrance elevator motor.



4. Adjust the tension of the entrance elevator belt.


When the belt is pulled at the arrow position by the force of 200 g, adjust the position of the entrance elevator motor so that the belt deflection is 5 mm.



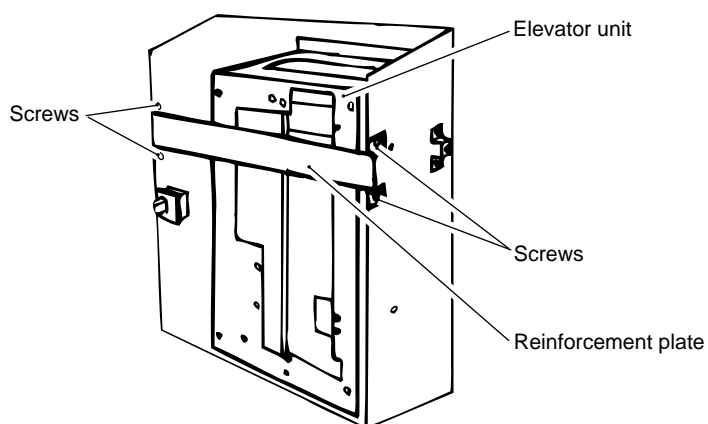
5. Reassemble the parts as they were.

Positioning the Entrance Elevator Upper Sensor and Leader Card Set Sensors 1 and 2

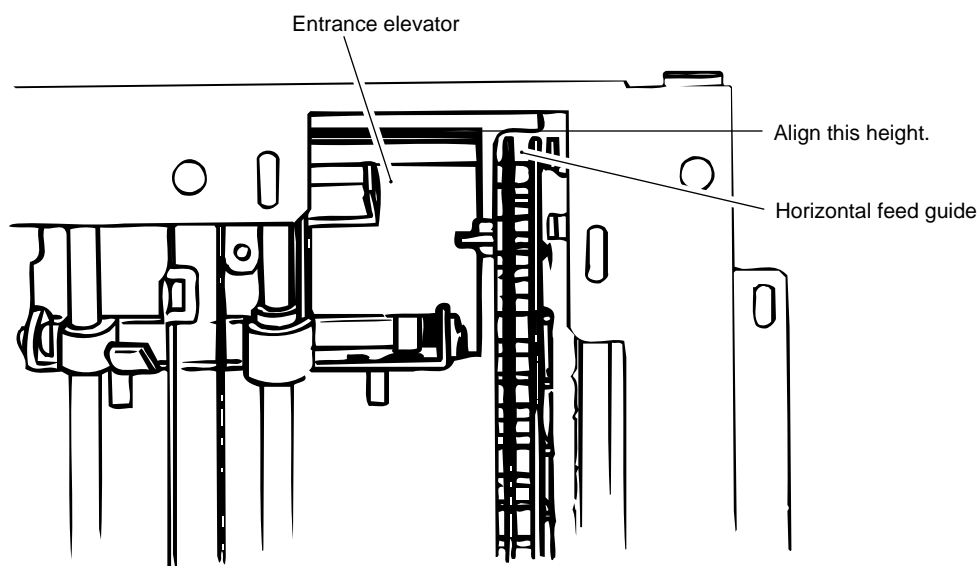
1. Remove the automatic film loader unit cover and the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

2. Remove the reinforcement plate. (4 screws)

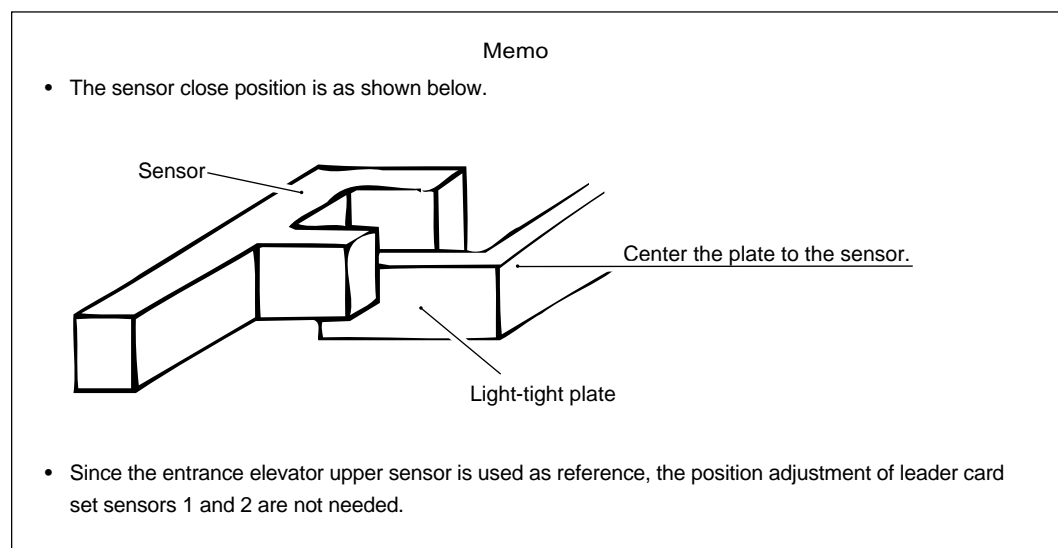
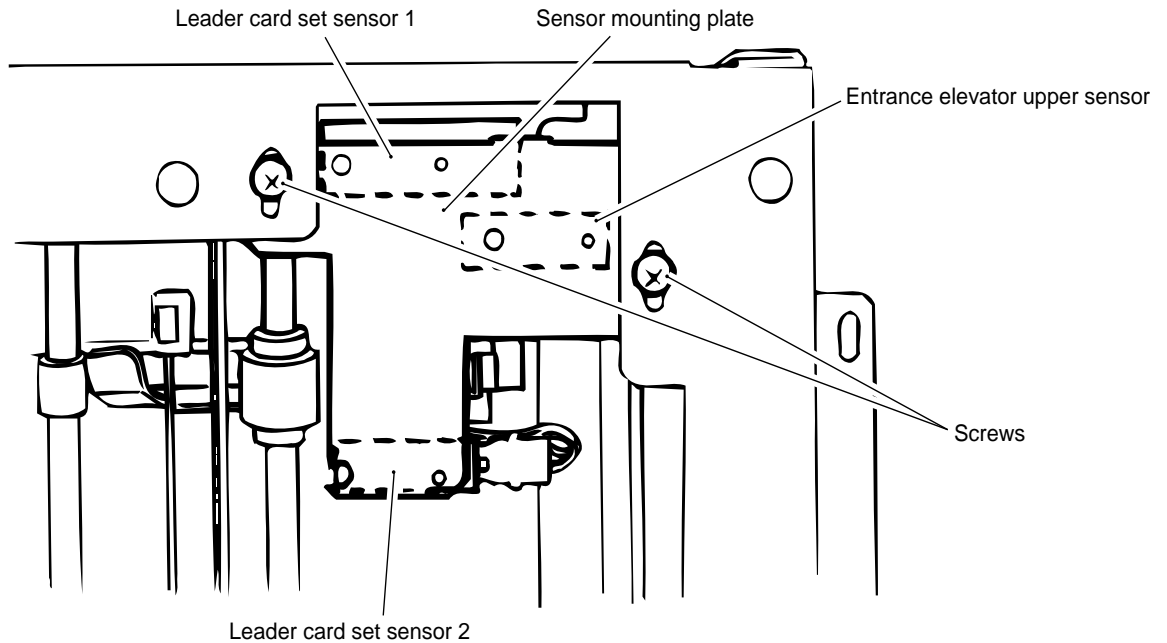


3. Move the entrance elevator and align the height of the entrance elevator to the horizontal feed guide.



4. Adjust the position of the entrance elevator upper sensor.

- 4.1 Adjust the position of the sensor and the mounting plate so that the entrance elevator upper sensor is closed with the input check. (Loosen 2 screws.)




- 4.2 Move the entrance elevator up or down and check that the light-tight plate does not come in contact with each sensor.

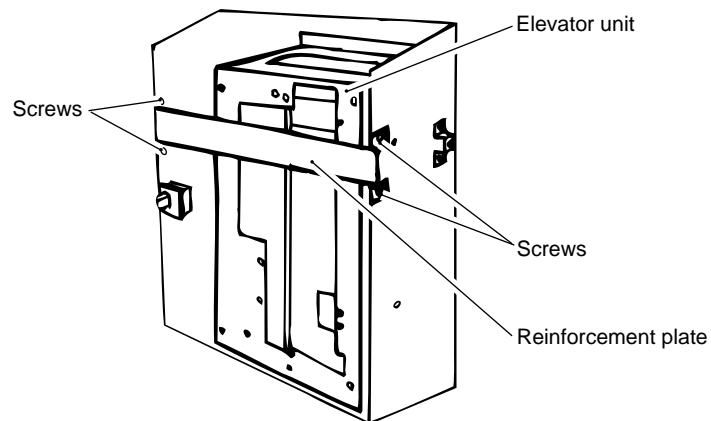
5. Reassemble the parts as they were.

Positioning the Entrance Elevator Middle Sensor and Entrance Elevator Lower Sensor

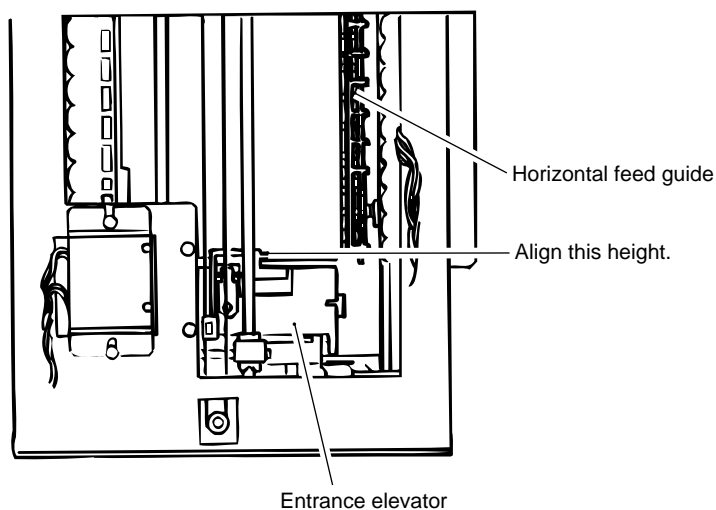
1. Remove the automatic film loader unit cover and the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

2. Remove the reinforcement plate. (4 screws)

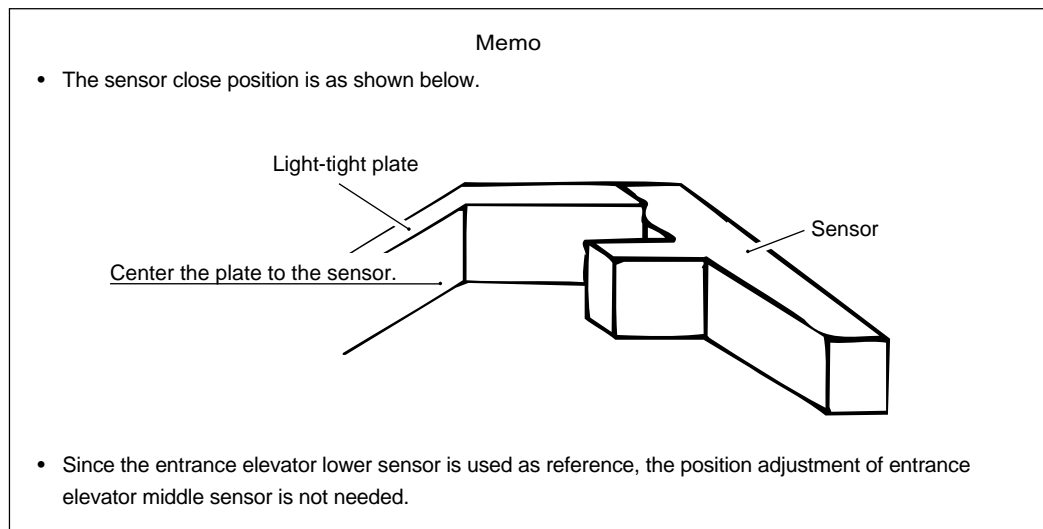
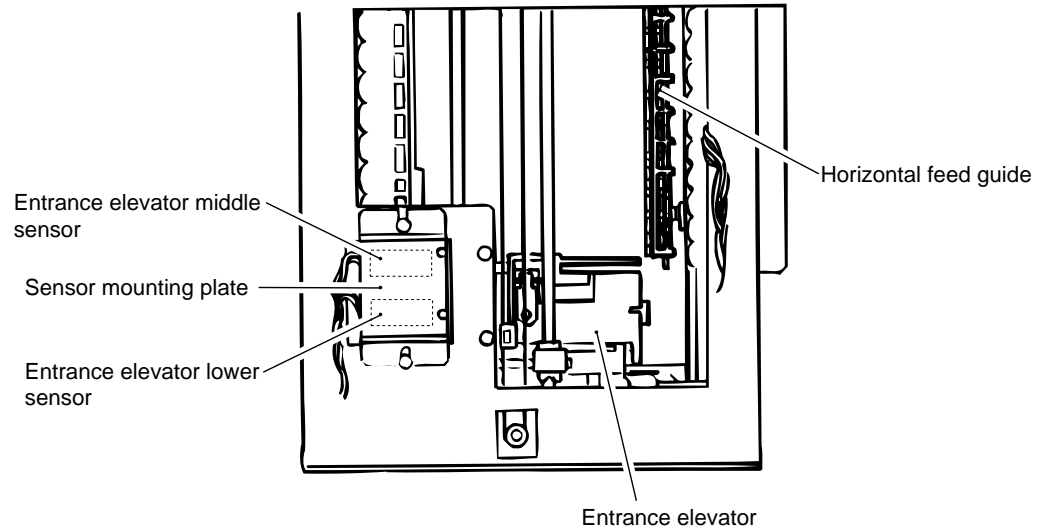


3. Move the entrance elevator and align the height of the entrance elevator to the horizontal feed guide.



4. Adjust the position of the entrance elevator lower sensor.

- 4.1 Adjust the position of the sensor mounting plate so that the entrance elevator lower sensor is closed with the input check. (Loosen 2 screws.)




- 4.2 Move the entrance elevator up or down and check that the light-tight plate does not come in contact with each sensor.

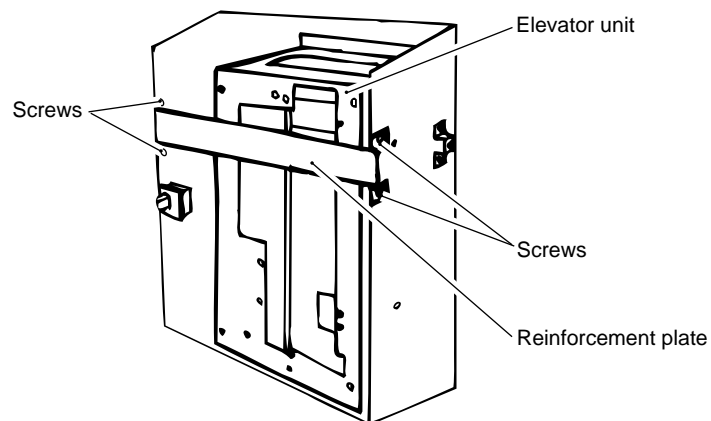
5. Reassemble the parts as they were.

Positioning the Entrance Horizontal Feed Limit Switch

1. Remove the automatic film loader unit cover and the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

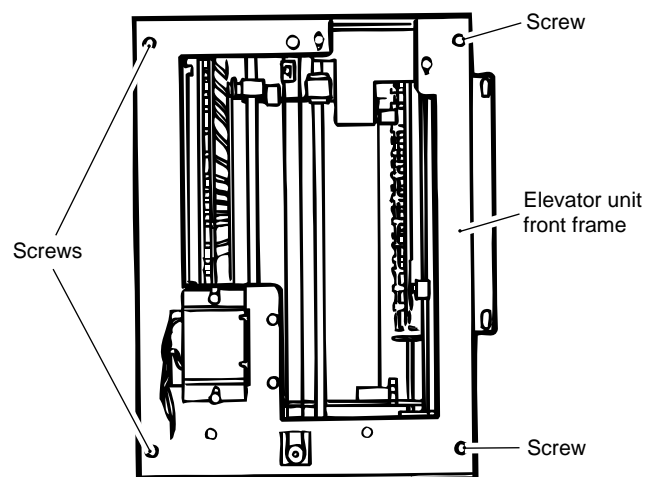
2. Remove the reinforcement plate. (4 screws)



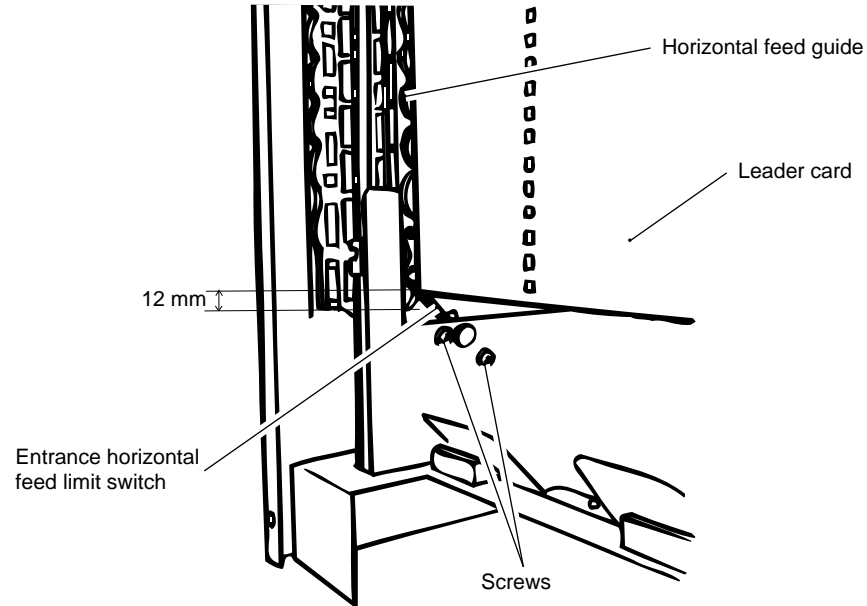
3. Disconnect the connectors.

J/P260 Relay connector (leader card set sensor 1)
 J/P261 Relay connector (leader card set sensor 2)
 J/P262 Relay connector (entrance elevator upper sensor)
 J/P263 Relay connector (entrance elevator middle sensor)
 J/P264 Relay connector (entrance elevator lower sensor)
 J/P272 Relay connector (entrance elevator motor)

4. Remove the elevator unit front frame. (4 screws)




5. Adjust the position of the entrance horizontal feed limit switch so that the entrance horizontal feed limit switch is turned on when the leader card reaches the position of 12 mm from the bottom of the horizontal feed guide. (Loosen 2 screws.)



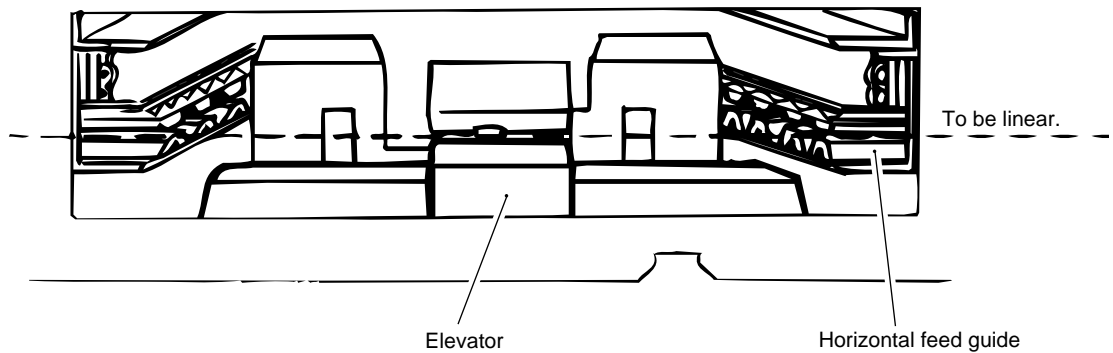
6. Reassemble the parts as they were.

Positioning the Horizontal Feed Position Sensor

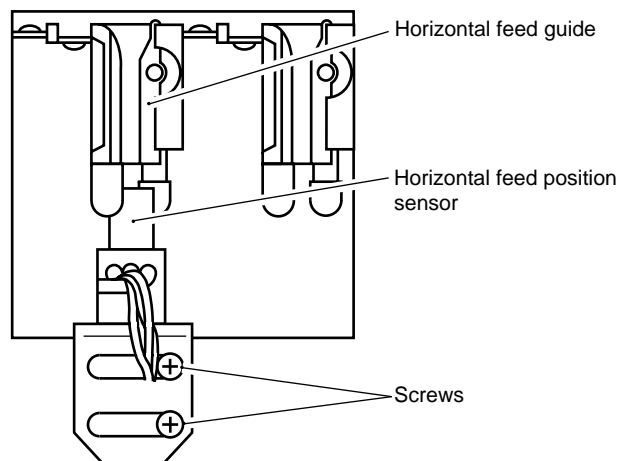
1. Remove the elevator unit.

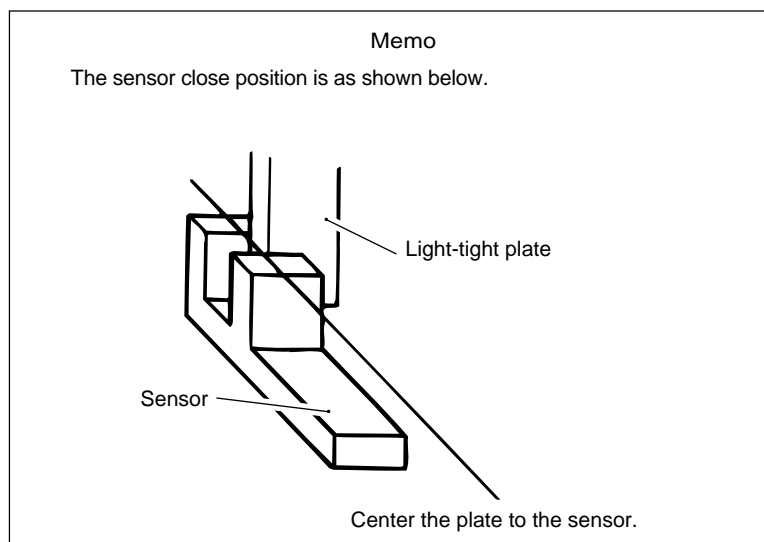
 Refer to 1031.

2. Raise the entrance elevator to the top.
3. Move the horizontal feed guide so that the groove of the elevator is linear to the groove of the horizontal feed guide.



4. Adjust the position of the horizontal feed position sensor so that the horizontal feed position sensor is closed. (Loosen 2 screws.)






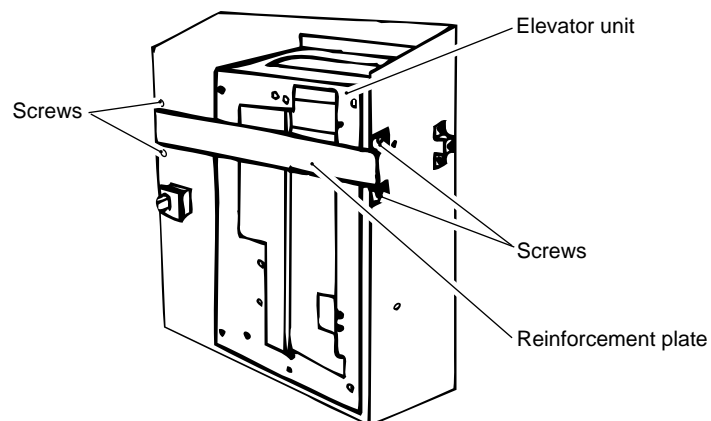
5. Reassemble the parts as they were.

Positioning the Exit Horizontal Feed Limit Switch

1. Remove the automatic film loader unit cover and the automatic film loader unit upper cover.

 Refer to 1002 and 1003.

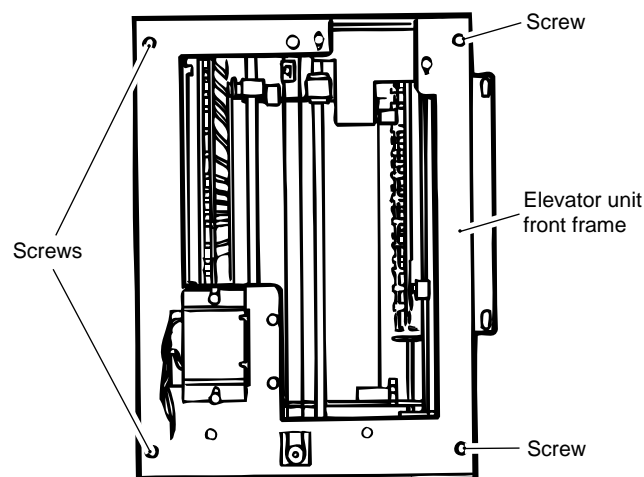
2. Remove the reinforcement plate. (4 screws)



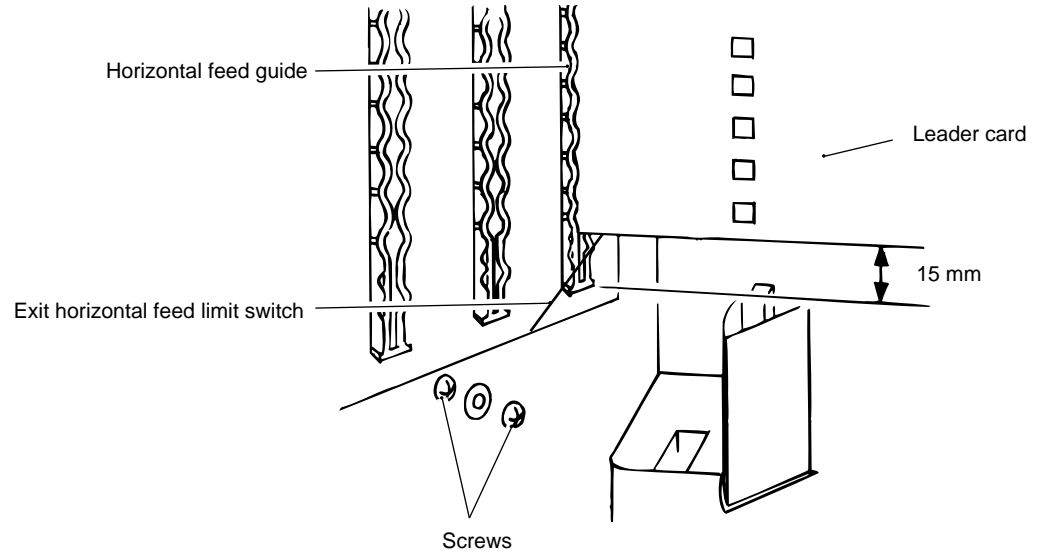
3. Disconnect the connectors.

J/P260 Relay connector (leader card set sensor 1)
 J/P261 Relay connector (leader card set sensor 2)
 J/P262 Relay connector (entrance elevator upper sensor)
 J/P263 Relay connector (entrance elevator middle sensor)
 J/P264 Relay connector (entrance elevator lower sensor)
 J/P272 Relay connector (entrance elevator motor)

4. Remove the elevator unit front frame. (4 screws)



5. Adjust the position of the exit horizontal feed limit switch so that the exit horizontal feed limit switch is turned off when the leader card reaches the position of 15 mm from the bottom of the horizontal feed guide. (Loosen 2 screws.)



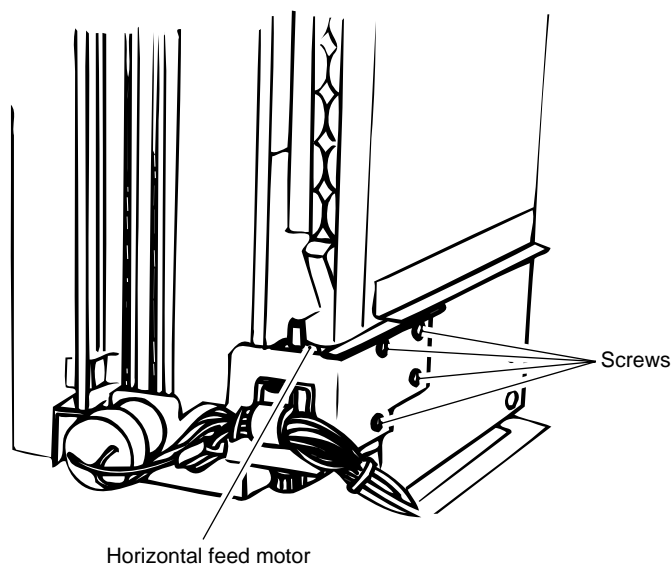
6. Reassemble the parts as they were.

Adjusting the Tension of the Horizontal Feed Belt

1. Remove the elevator unit.

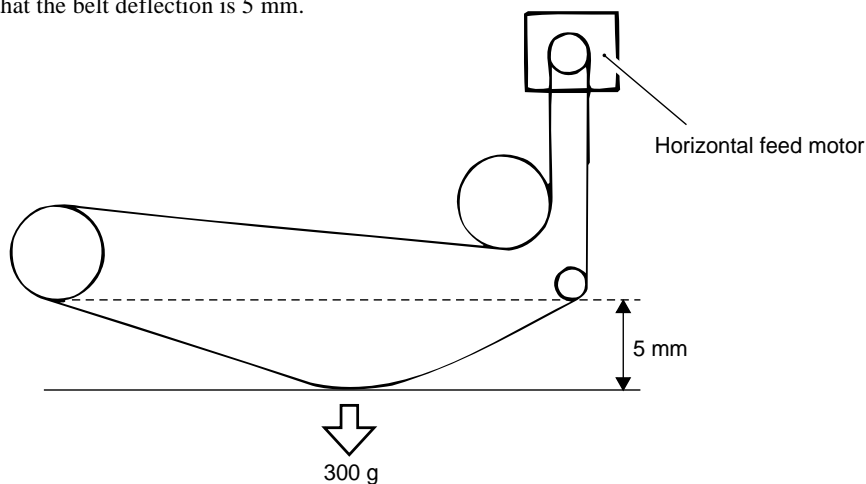
 Refer to 1031.

2. Loosen the 4 screws fixing the horizontal feed motor.



3. Adjust the tension of the entrance elevator belt.

When the belt is pulled at the arrow position by the force of 300 g, adjust the position of the entrance elevator motor so that the belt deflection is 5 mm.



4. Check that the right and left horizontal feed guides are symmetric.

Memo


If the right and left horizontal feed guides are not symmetric, adjust the position of the guides.

 Refer to 2410.

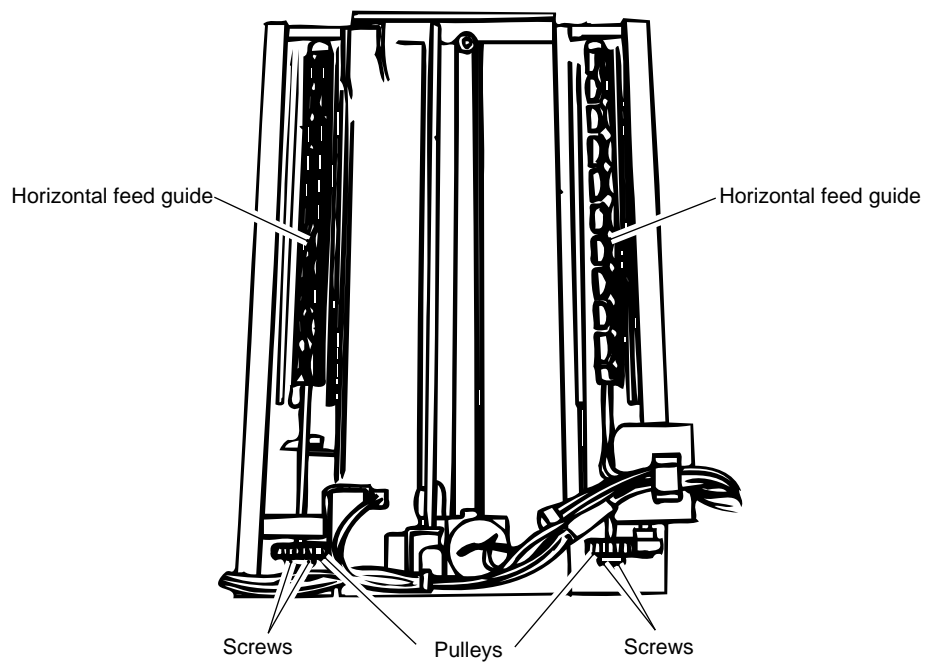
5. Reassemble the parts as they were.

Adjusting the Position of the Right and Left Horizontal Feed Guides

1. Remove the elevator unit.

 Refer to 1031.


2. Loosen the 2 screws of the pulley at one side so that the right and left horizontal feed guides are symmetric.



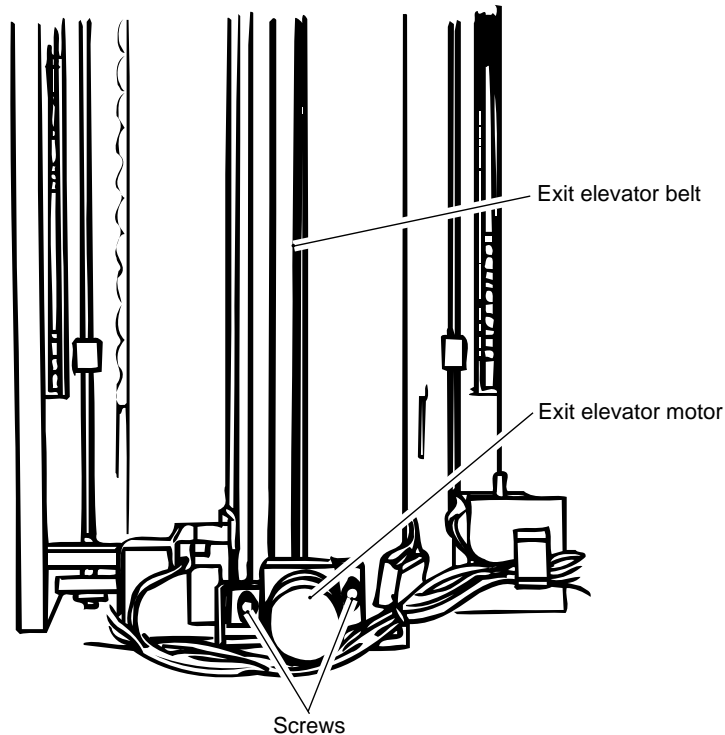
3. Reassemble the parts as they were.

Adjusting the Tension of the Exit Elevator Belt

1. Remove the elevator unit.

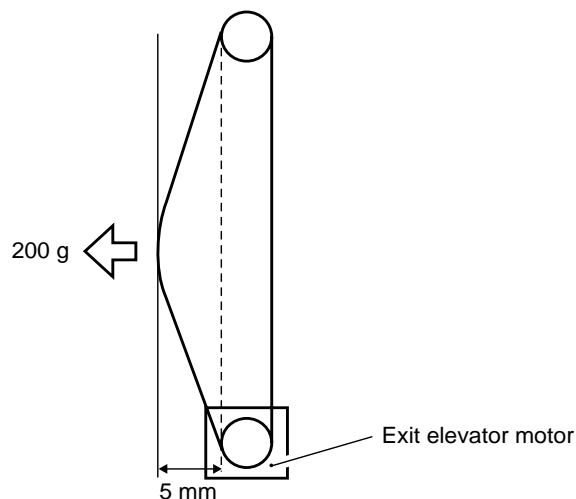
 Refer to 1031.

2. Loosen the 2 screws fixing the exit elevator motor.



3. Adjust the tension of the exit elevator belt.


When the belt is pulled at the arrow position by the force of 200 g, adjust the position of the exit elevator motor so that the belt deflection is 5 mm.



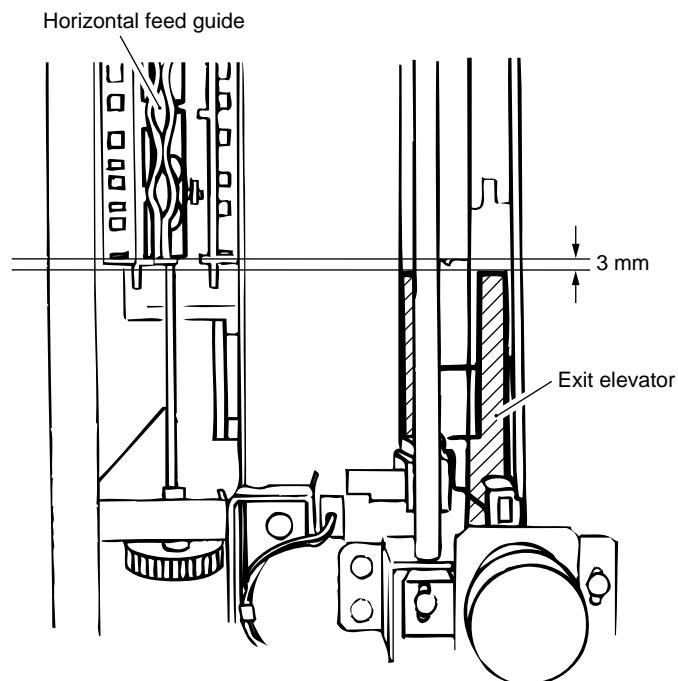
4. Reassemble the parts as they were.

Positioning the Exit Elevator Lower Sensor

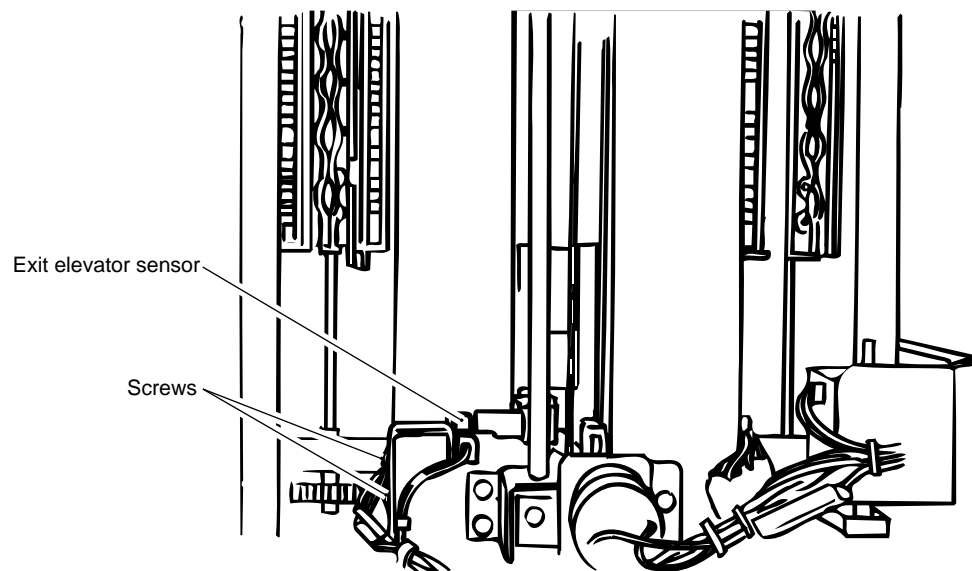
1. Remove the elevator unit.

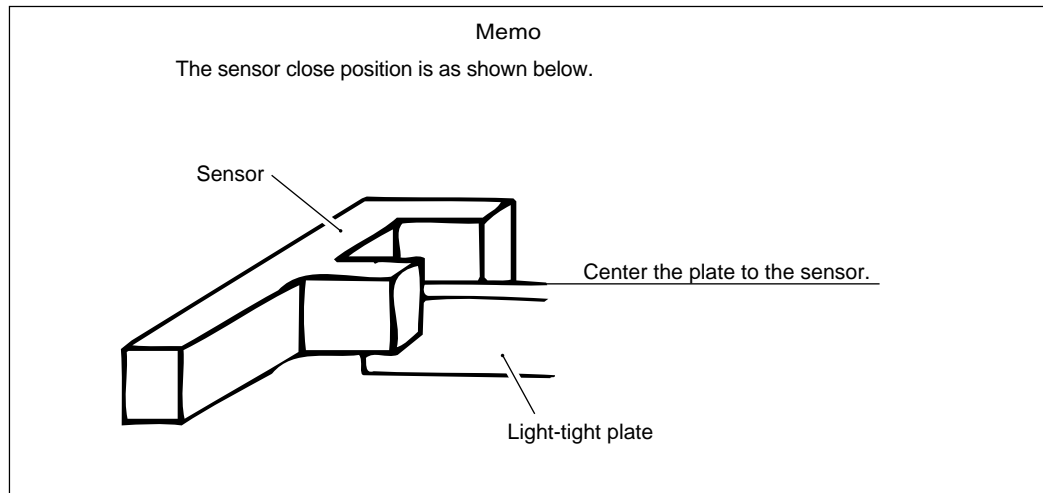
 Refer to 1031.

2. Move the exit elevator and maintain the gap of 3 mm between the exit elevator and the bottom of the horizontal feed guide.



3. Adjust the position of the sensor so that the exit elevator lower sensor is closed.
(2 screws)






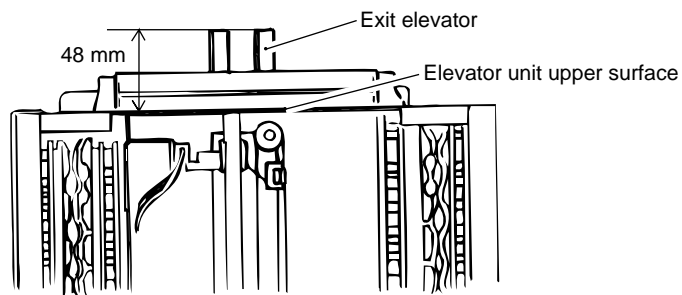
4. Move the exit elevator up or down and check that the light-tight plate does not come in contact with each sensor.
5. Reassemble the parts as they were.

Positioning the Exit Elevator Upper Sensor

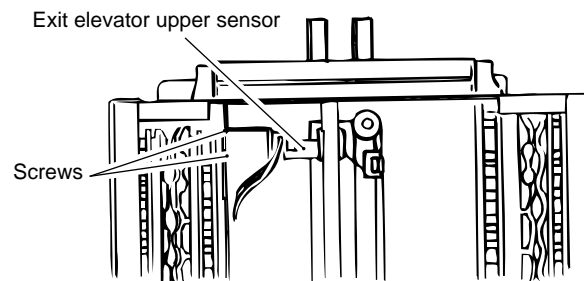
1. Remove the elevator unit.

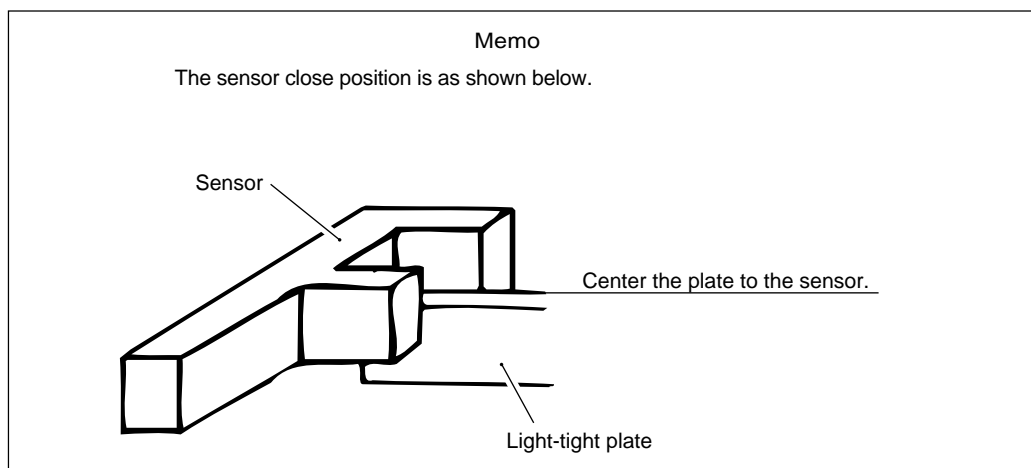
 Refer to 1031.

2. Move the exit elevator so that the height of the exit elevator is 48 mm from the elevator unit upper surface.



3. Adjust the position of the sensor so that the exit elevator lower sensor is closed.
(2 screws)






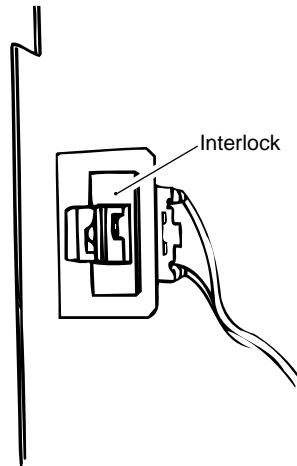
4. Move the exit elevator up or down and check that the light-tight plate does not come in contact with each sensor.
5. Reassemble the parts as they were.

Positioning the Shutter Sensor (Open and Close)

1. Remove the elevator unit.

 Refer to 1031.

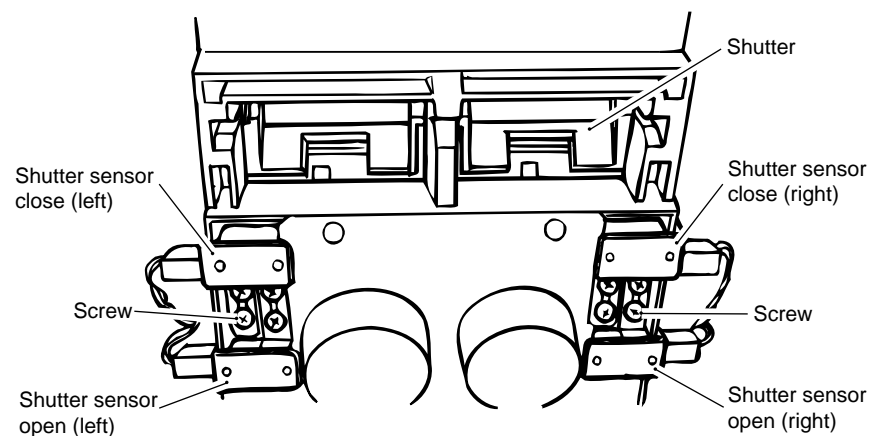
2. Turn on the interlock of the automatic film loader unit.



3. Press the **[NO]** key to stop the alarm. Then, press the **[MODE]** key to bring up the output check display.

 Refer to 3032.


4. Carry out the output check of the shutter and adjust the position of the shutter sensor (open) so that the shutter is fully open. After that, adjust the position of the shutter sensor (close) so that the shutter is fully closed. (Loosen 8 screws.)



5. Reassemble the parts as they were.

Positioning the Film Cartridge Eject Guide

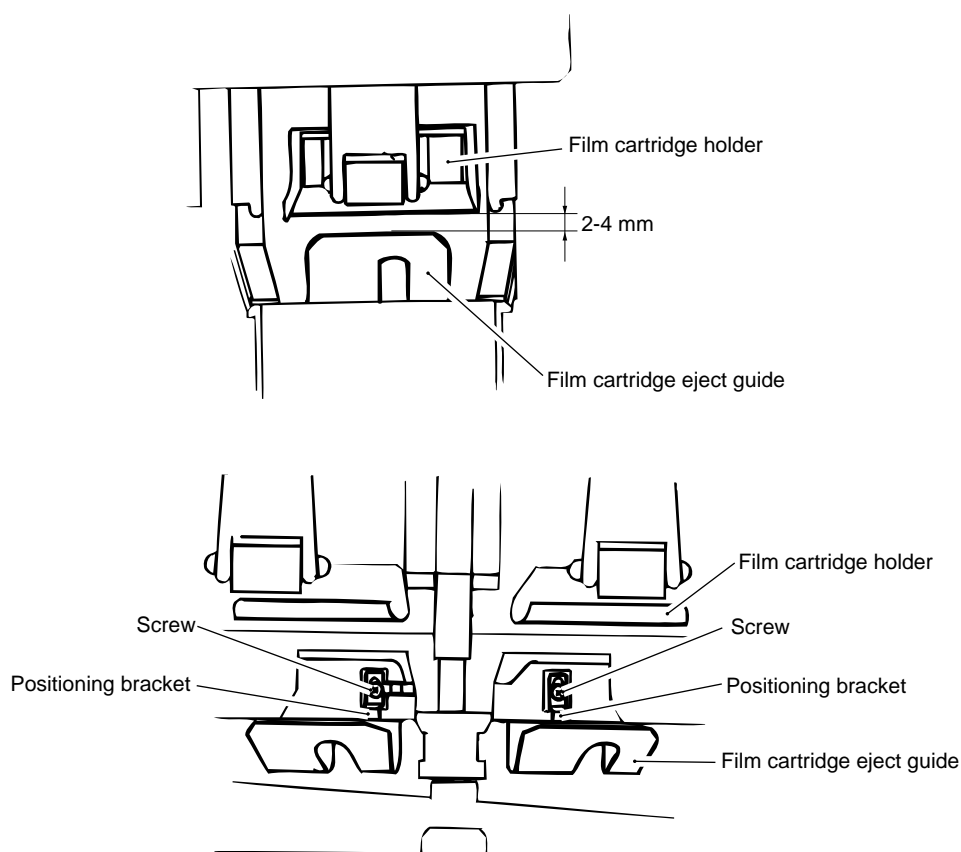
1. Remove the loading box cover.

 Refer to 1002 and 1003.

2. Operate the shutter motor with the output check.

 Refer to 3032.





3. When the shutter is fully closed (when the film cartridge eject guide comes nearest to the film cartridge holder) , repeat to adjust the position of the positioning bracket so that the clearance between the film cartridge eject guide and the film cartridge holder is 2-4 mm. (Each screw for left and right)








4. Reassemble the parts as they were.

List of Modes

MAIN MENU MODE	1	2	3	4	5	6	7	8
	SWITCHES	TEMPERATURE	TOTALING	FILM POSITION	CHECK	TIMER	REPLENISH/ REFIL. WATER	FLOPPY /STANDARD SETTING ^{*2}
1		TEMPERATURE DISPLAY	TODAY'S ROLLS		INPUT CHECK	DATE & TIME DISPLAY	REPLENISHMENT	PASSWORD FLOPPY DISK
2	DISPLAY CONTRAST	PASSWORD SOLUTION TEMP. SETTING	TOTAL ROLLS		PASSWORD VERSION CHECK	DATE & TIME SETTING	REFILLING WATER	SERVICE STANDARD SETTING 1
3	PASSWORD BUZZER VOLUME	PASSWORD THERMOSENSOR CALIBRATION			SERVICE ERROR RECORD	PROGRAM TIMER SETTING	SERVICE REFILLING WATER AMOUNT 1	SERVICE STANDARD SETTING 2
4	SERVICE DRYER SWITCH				SERVICE OUTPUT CHECK	MAINTENANCE DAY SETTING	SERVICE REFILLING WATER AMOUNT 2	SERVICE STANDARD SETTING 3
5					DIGITAL FLOWMETER ^{*1}			SERVICE DATA INITIALIZATION
6					SERVICE MOTION RECORD			

PASSWORD: Protection by password ( ,  ,  , )





SERVICE: Protection by service personnel's floppy disk ( ,  ,  ,  , )






*1 It is displayed only when the digital flowmeter in standard setting 3 is set to "ON".

*2 "STANDARD SETTING" is displayed only when the service personnel's password is input.

Mode Structure Chart

Mode	Structure	Manual No.
SWITCHES	<div>REPLENISHMENT SWITCH</div> <div>DISPLAY CONTRAST</div> <div>PASSWORD</div> <div>BUZZER VOLUME</div> <div>SERVICE</div> <div>DRYER SWITCH</div>	3021
TEMPERATURE	<div>TEMPERATURE DISPLAY</div> <div>PASSWORD</div> <div>SOLUTION TEMP. SETTING</div> <div>PASSWORD</div> <div>THERMOSENSOR CALIBRATION</div>	
TOTALING	<div>TODAY'S ROLLS</div> <div>TOTAL ROLLS</div>	3026
FILM POSITION		
CHECK	<div><div>INPUT CHECK</div><div>LOADING</div><div>PROCESSOR</div><div>AUTO LOADER</div></div> <div>PASSWORD</div> <div>VERSION CHECK</div> <div>SERVICE</div> <div>ERROR RECORD</div> <div>SERVICE</div> <div><div>OUTPUT CHECK</div><div>LOADING</div><div>PROCESSOR</div><div>AUTO LOADER</div></div> <div>DIGITAL FLOWMETER</div> <div>SERVICE</div> <div><div>MOTION RECORD</div><div>NORMAL MOTION RECORD</div><div>ERROR MOTION RECORD</div><div>SENSOR RECORD (GRAPHICS)</div></div>	3031 3033 3034 3032 3035

PASSWORD: Protection by password ( ,  ,  , )

SERVICE: Protection by service personnel's floppy disk ( ,  ,  ,  , )

Mode	Structure	Manual No.
TIMER	DATE & TIME DISPLAY	
	DATE & TIME SETTING	
	PROGRAM TIMER SETTING	
	MAINTENANCE DAY SETTING	
REPLENISH. / REFIL. WATER	REPLENISHMENT	TOTAL REPLENISH. AMOUNT
		PASSWORD
		MANUAL REPLENISHMENT
		PASSWORD
		BASIC AMOUNT SETTING
		PASSWORD
		PUMP AMOUNT SETTING
		PASSWORD
		SERVICE
		PUMP AMOUNT MEASUREMENT
		INITIAL REPLENISHMENT
		PASSWORD
		REPLENISHMENT LACK TIME
	REFILLING WATER	
	SERVICE	
	REFILLING WATER AMOUNT 1	3086
	SERVICE	
	REFILLING WATER AMOUNT 2	3087
	PASSWORD	
FLOPPY/ STANDARD SETTING *1	FLOPPY DISK	READING/Writing
		SOFTWARE UPGRADE
		FORMAT
		SERVICE
		FORMAT TYPE
	SERVICE	
	STANDARD SETTING 1	PROCESSING CAPACITY
		PROCESS SPECIFICATION
	SERVICE	
	STANDARD SETTING 2	AUTO FILM LOADER

To be continued

PASSWORD: Protection by password (, , ,)

SERVICE: Protection by service personnel's floppy disk (, , , ,)

*1 “STANDARD SETTING” is displayed only when the service personnel's password is input.

Mode	Structure	Manual No.
FLOPPY /STANDARD SETTING *1	<div><div>↓</div><div>SERVICE</div><div>STANDARD SETTING 3</div><div>LANGUAGE</div><div>SOLN. DISPLAY SETTING</div><div>WASTE TANK TYPE</div><div>CONCENTRATOR</div><div>DIGITAL FLOWMETER</div><div>DISPLAY UNIT SELECTION</div><div>FILM INTERVAL CORRECT.</div><div>REPLENISHMENT ERROR</div><div>WASTE SOLUTION ERROR</div><div>PUMP ERROR</div><div>DRYER FAN ERROR</div><div>DRIVE MOTION ERROR</div><div>CHUTE BOX ERROR</div><div>MANUAL LOADING (240)</div><div>AUTO FILM LOADER (240)</div><div>FILM CUT POS. ERROR</div></div>	3063
	<div><div>SERVICE</div><div>DATA INITIALIZATION</div><div>MAIN</div><div>EE-PROM</div><div>STATUS</div><div>ERROR RECORD</div><div>ALL</div></div>	3071

SERVICE: Protection by service personnel's floppy disk (, , , ,)

*1 “STANDARD SETTING” is displayed only when the service personnel's password is input.

*2 Only V30 and V50

Entering the Password Mode

To enter the password mode, input of the password is required.

< Operation >

- 1

Select the password mode. The message "PASSWORD?" appears.
- ↓
- 2

Input password (→ → →).
- ↓
- 3

Press the key.

Example: When SOLUTION TEMP. SETTING is selected.

*** TEMPERATURE ***

TEMPERATURE DISPLAY

SOLUTION TEMP. SETTING

THERMOSENSOR CALIBRATION

PASSWORD? _ _ _ _ Y/N

Memo

The input password is not displayed.

Entering the Service Personnel Mode

To enter the service personnel mode, the service personnel's floppy disk and the service personnel's password are required.

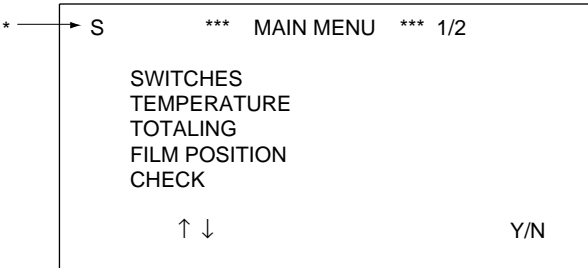
< Operation >

- 1

Insert the service personnel floppy disk into the floppy disk drive.
- 2

Press the **MODE** key and bring up the MAIN MENU display.
- 3

Input the service personnel's password (**SHIFT** → **+** → **-** → **+** → **YES**).



* It shows that the service personnel password is input.

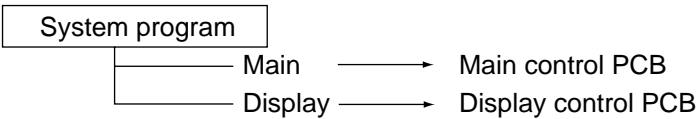
Memo

- Press the **YES** key within 5 seconds after the **SHIFT** key is pressed. If it is not input within 5 seconds, input the password again within 5 seconds.
- The service personnel's password is released when the power is turned off or the program timer is displayed.
- The service personnel's password again cannot be input during the film processing.

Reading the System Program

< Explanation >

After changing the display language or changing the PCB, you must read the system program into the following PCBs.



< Operation >

- 1 Turn off the circuit breaker of the film processor.
- ↓
- 2 Insert the system program floppy disk into the floppy disk drive.
- ↓
- 3 Turn on the circuit breaker of the film processor.

PROGRAM DOWNLOAD ? #

Y/N

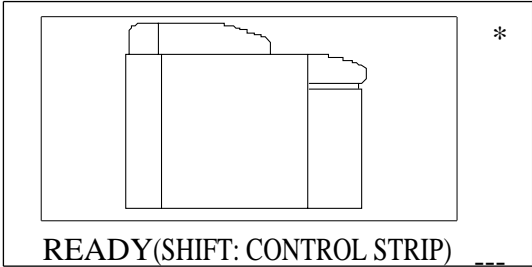
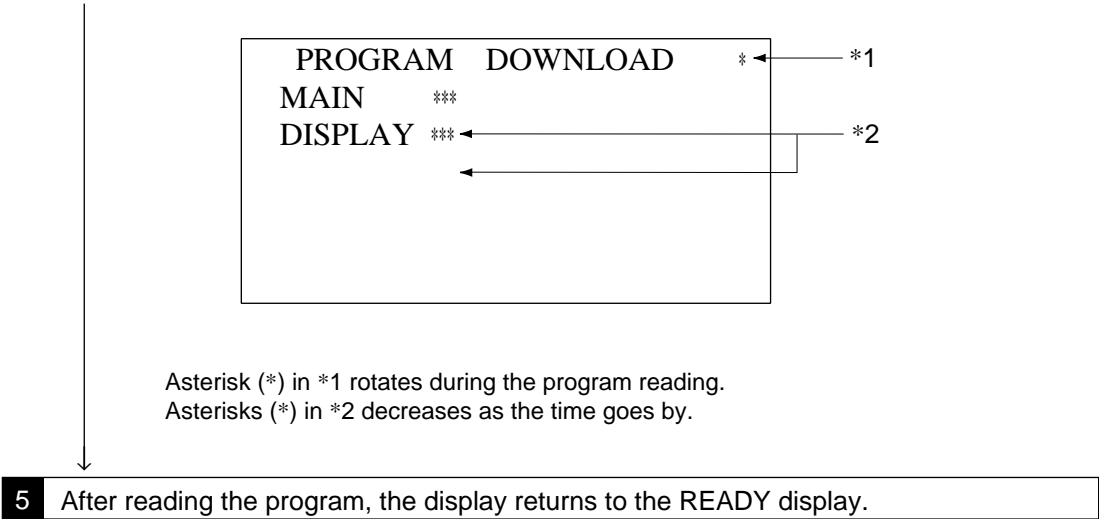
Displays the language No. read on the previous day.

- 4 Input the language No. and press the **YES** key. The system program is read from the floppy disk.

No.	Language
1	English + Japanese
2	English + French
3	English + German
4	English + Spanish
5	English + Italian
6	English + Portuguese
7-9	Not in use

Continues on next page.

V30,V50,V100 Description of Modes



Dryer Switch

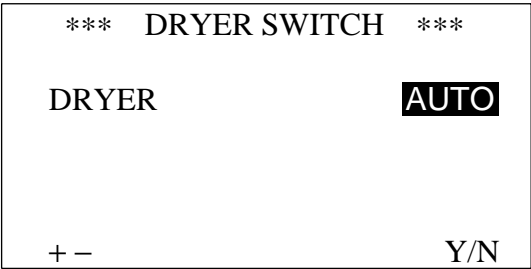
< Function >

Auto operation or continuous operation of the dryer can be selected.

< Entering the Mode >

MAIN MENU→SWITCHES→DRYER SWITCH

< Display of Mode >



< Explanation >

Select the “AUTO” or “ON” with the or key, and register it with the key.

Memo
When the power is turned off or the program timer is displayed, the setting is reset to “AUTO”.

Changing the Total Rolls

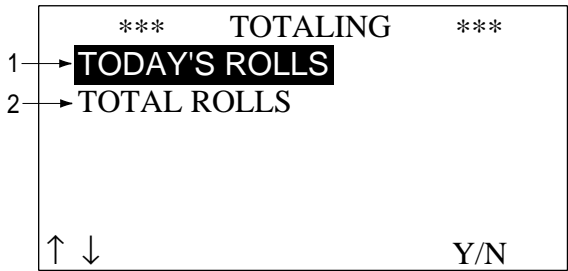
< Function >

When the service personnel's password is input, the number of rolls to be developed can be changed.

< Entering the Mode >

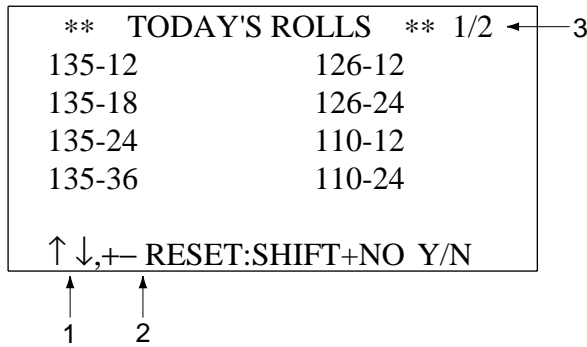
MAIN MENU→TOTALING

< Display of Mode >



< Explanation >

Example 1: When "TODAY'S ROLLS" is selected



- 1 Select the film type with the ▲ or ▼ key.
- 2 It is displayed only when the service personnel's password is input. Change the number of rolls with the + or - key. Register it with the YES key.
- 3 1/2 shows the page number, indicating first page of two pages.

Memo

The total rolls can be changed same as the method in today's rolls.

Input Check

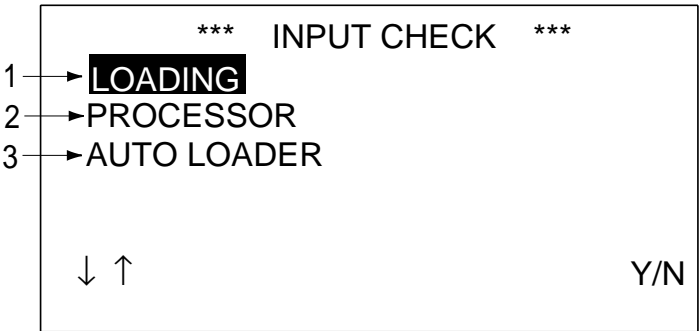
< Function >

This is a mode to check the status of sensors or limit switches.

< Entering the Mode >

MAIN MENU⇒CHECK ⇒INPUT CHECK

< Display of Mode >

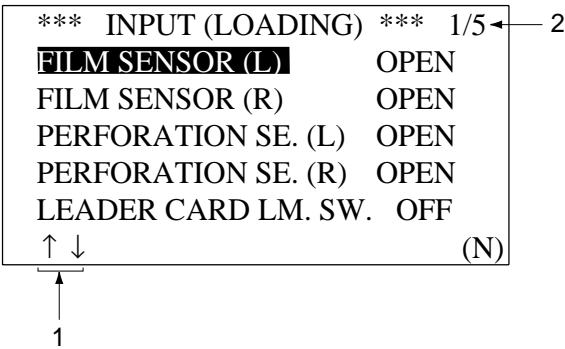




Memo


“AUTO LOADER” in standard setting 2 is displayed only when the auto film loader has been selected “ON”.

< Explanation >

Example: When “LOADING” is selected



- 1 Press the  or  key, and select the item to carry out the input check.

Press the  key and the cursor flashes. The alarm sounds when the sensor or switch is in “CLOSE” or “ON”.
- 2 1/5 shows the page. It means the first page of 5 pages.

LOADING

Page	Display			Status
1	FILM SENSOR (L)	OPEN	CLOSE	Close (film detected)
	FILM SENSOR (R)	OPEN	CLOSE	Close (film detected)
	PERFORATION SE. (L)	OPEN	CLOSE	Close (film detected)
	PERFORATION SE. (R)	OPEN	CLOSE	Close (film detected)
	LEADER CARD LM. SW.	OFF	ON	ON (leader card setting)
2	CUTTER MOTOR HOME (L)	OPEN	CLOSE	Close (home position)
	CUTTER MOTOR HOME (R)	OPEN	CLOSE	Close (home position)
	CUTTER POSITION (L)	OPEN	CLOSE	Close (cut is down)
	CUTTER POSITION (R)	OPEN	CLOSE	Close (cut is down)
	LOADING COVER SENSOR	OPEN	CLOSE	Close (cover closed)
3	MAGAZINE ADAPTER SE.	OPEN	CLOSE	Close (magazine adapter is setting)
	PRESSURE SENSOR (L)	OPEN	CLOSE	Open (film cartridge holder sliding)
	PRESSURE SENSOR (R)	OPEN	CLOSE	Open (film cartridge holder sliding)
	CARTRIDGE SENSOR (L)	OPEN	CLOSE	Close (cartridge detected)
	CARTRIDGE SENSOR (R)	OPEN	CLOSE	Close (cartridge detected)
4	CHUTE SENSOR 1	OPEN	CLOSE	Close (film cartridge detected)
	240 ADAPTER SENS. (L)	OPEN	CLOSE	Close (240 adapter detected)
	240 ADAPTER SENS. (R)	OPEN	CLOSE	Close (240 adapter detected)

5	OPEN MOTOR HOME (L)	OPEN	CLOSE	Close (home position)
	OPEN MOTOR SET (L)	OPEN	CLOSE	Close (cartridge setting)
	OPEN MOTOR HOME (R)	OPEN	CLOSE	Close (home position)
	OPEN MOTOR SET (R)	OPEN	CLOSE	Close (cartridge set)

*1 Indicated only when "AUTO LOADER" in standard setting 2 has been selected "ON".

*2 Indicated only when "MANUAL LOADING" (240) in standard setting 3 has been selected "ON".

*3 Indicated only when "AUTO FILM LOADER" (240) in standard setting 3 has been selected "ON".

Check

PROCESSOR

Page	Display			Status
1	CD CIRCULATION	OFF	ON	ON (during operation)
	CD SHOWER PUMP	OFF	ON	ON (during operation)
	CD2 CIRCULATION PUMP	OFF	ON	ON (during operation) *1
	BL CIRCULATION	OFF	ON	ON (during operation)
	FIX1 CIRCULATION	OFF	ON	ON (during operation)
2	FIX2 CIRCULATION	OFF	ON	ON (during operation)
	STB1 CIRCULATION	OFF	ON	ON (during operation)
	STB2 CIRCULATION	OFF	ON	ON (during operation)
	STB3 CIRCULATION	OFF	ON	ON (during operation)
	UPPER COVER SENSOR	OFF	ON	ON (cover closed)
3	CD REFIL. LEVEL	OFF	ON	OFF (when the solution level is below the refilling water level)
	BL REFIL. LEVEL	OFF	ON	OFF (when the solution level is below the refilling water level)
	FIX1 REFIL. LEVEL	OFF	ON	OFF (when the solution level is below the refilling water level)
	FIX2 REFIL. LEVEL	OFF	ON	OFF (when the solution level is below the refilling water level)
	STB1 REFIL. LEVEL	OFF	ON	OFF (when the solution level is below the refilling water level)
4	STB2 REFIL. LEVEL	OFF	ON	OFF (when the solution level is below the refilling water level)
	STB3 REFIL. LEVEL	OFF	ON	OFF (when the solution level is below the refilling water level)

5	CD SOLUTION LEVEL	OFF	ON	OFF (error No. 021 has occurred)
	BL SOLUTION LEVEL	OFF	ON	OFF (error No. 021 has occurred)
	FIX1 SOLUTION LEVEL	OFF	ON	OFF (error No. 021 has occurred)
	FIX2 SOLUTION LEVEL	OFF	ON	OFF (error No. 021 has occurred)

6	***			
	STB3 SOLUTION LEVEL	OFF	ON	OFF (error No. 021 has occurred)
	100V DETECTION	OFF	ON	ON (100V continuity)
	DRIVE SWITCH	OFF	ON	ON (switch ON)
	DRIVE MOTION SENSOR	OFF	ON	Repeats OFF/ON (during drive motion)
7	CD SAFETY THERMO.	OFF	ON	OFF (error No. 023 has occurred)
	BL SAFETY THERMO.	OFF	ON	OFF (error No. 023 has occurred)
	FIX1 SAFETY THERMO.	OFF	ON	OFF (error No. 023 has occurred)
	FIX2 SAFETY THERMO.	OFF	ON	OFF (error No. 023 has occurred)

8	***			
	STB3 SAFETY THERMO.	OFF	ON	OFF (error No. 023 has occurred)
	DRY SAFETY THERMO.	OFF	ON	OFF (error No. 026 has occurred)
	DRYER FAN	OFF	ON	ON (during operation)
	50/60Hz	50	60	Frequency display

*1 The display is available on V100 only.

Page	Display			Status
9	CONCENTRATOR LEVEL	OFF	ON	ON (waste solution is full) *2
	WASTE SOLN. LEVEL 1	OFF	ON	ON (error No. 030 has occurred)
	WASTE SOLN. LEVEL 2	OFF	ON	ON (error No. 030 has occurred)
	* * *			
	* * *			
9	CONCENTRATOR LEVEL	OFF	ON	ON (waste solution is full) *2
	CD WASTE SOLN. LEVEL	OFF	ON	ON (error No. 030 has occurred)
	BL WASTE SOLN. LEVEL	OFF	ON	ON (error No. 030 has occurred)
	FIX WASTE SOLN. LEVEL	OFF	ON	ON (error No. 030 has occurred)
	STB WASTE SOLN. LEVEL	OFF	ON	ON (error No. 030 has occurred)
10	CD REPLENISH. LEVEL	OFF	ON	OFF (replenisher solution is in short)
	BL REPLENISH. LEVEL	OFF	ON	OFF (replenisher solution is in short)
	FIX REPLENISH. LEVEL	OFF	ON	OFF (replenisher solution is in short)
	STB REPLENISH. LEVEL	OFF	ON	OFF (replenisher solution is in short)
	WL REPLENISH. LEVEL	OFF	ON	OFF (replenisher solution is in short) *5
11	WATER TANK LEVEL	OFF	ON	OFF (water is in short)

12	DS2-1	OFF	ON	OFF (initial setting)
	DS2-2	OFF	ON	OFF (initial setting)
	DS2-3	OFF	ON	OFF (initial setting)
	DS2-4	OFF	ON	OFF (initial setting)
	DS2-5	OFF	ON	OFF (initial setting)
13	DS2-6	OFF	ON	OFF (initial setting)
	DS2-7	OFF	ON	OFF (initial setting)
	DS2-8	OFF	ON	OFF (initial setting)

*2 It is displayed only when the concentrator in standard setting 3 is set to “ON”.

*3 It is displayed only when the waste solution tank type in standard setting 3 is set to “Standard” 2 solution collection.

*4 It is displayed only when the waste solution tank type in standard setting 3 is set to “A” individual collection.

*5 It may be displayed depending on the process specification in standard setting 1.

Check

AUTO LOADER

Page	Display			Status
1	LEADER INSERTION 1	OPEN	CLOSE	Open (leader card setting)
	LEADER INSERTION 2	OPEN	CLOSE	Open (normal)
	ENTRANCE ELEV. UPPER	OPEN	CLOSE	Close (when elevator is in upper position)
	ENTRANCE ELEV. MID.	OPEN	CLOSE	Close (when elevator is in middler position)
	ENTRANCE ELEV. LOWER	OPEN	CLOSE	Close (when elevator is in lower position)
2	ENTR. HORIZONTAL LM.	OFF	ON	ON (leader card detected)
	EXIT HORIZONTAL LM.	OFF	ON	ON (leader card detected)
	HORIZONTAL POS. SE.	OPEN	CLOSE	Close (horizontal feed guide is detected)
	CARTRIDGE FALL (L)	OPEN	CLOSE	Close (cartridge detected)
	CARTRIDGE FALL (R)	OPEN	CLOSE	Close (cartridge detected)
3	EXIT ELEVATOR UPPER	OPEN	CLOSE	Close (when elevator is in upper position)
	EXIT ELEVATOR LOWER	OPEN	CLOSE	Close (when elevator is in lower position)
	FILM SE. (L-SHUTTER)	OPEN	CLOSE	Close (film detected)
	FILM SE. (R-SHUTTER)	OPEN	CLOSE	Close (film detected)
	CHUTE SENSOR 2	OPEN	CLOSE	Close (cartridge detected)
4	SHUTTER SE. (L) (CLOSE)	OPEN	CLOSE	Close (when close) Open (when open)
	SHUTTER SE. (L) (OPEN)	OPEN	CLOSE	Open (when close) Close (when open)
	SHUTTER SE. (R) (CLOSE)	OPEN	CLOSE	Close (when close) Open (when open)
	SHUTTER SE. (R) (OPEN)	OPEN	CLOSE	Open (when close) Close (when open)

5	LEADER INSERT. SWITCH	OFF	ON	ON (switch is pressed)
	MANUAL LOADING SW.	OFF	ON	ON (switch is pressed)
	AUTOLOADING COVER SE.	OPEN	CLOSE	Close (cover closed)
	AUTOLOADING INTERLOCK	OFF	ON	ON (automatic film loader unit cover setting)

Output Check

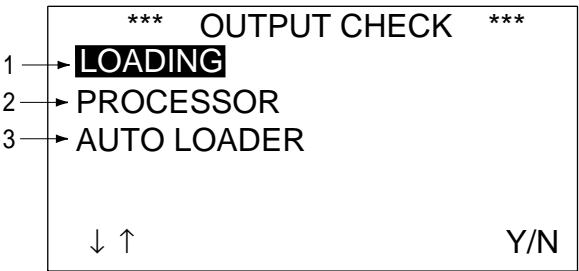
< Function >

This is a mode to check correct function of electric parts.

< Entering the Mode >

MAIN MENU⇒CHECK⇒OUTPUT CHECK

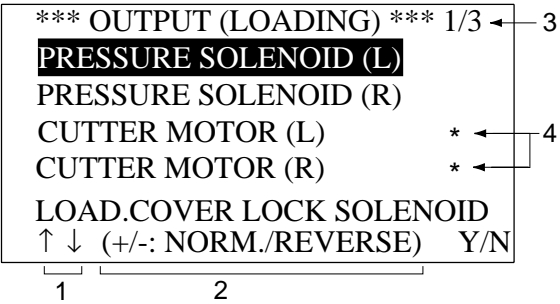
< Display of Mode >



Memo
"AUTO LOADER" in standard setting 2 is displayed only when the auto film loader has been selected "ON".

< Explanation >

Example: When "LOADING" is selected



- 1 Press the or key, and select the item to carry out the output check. Press the key and the electric parts operate.
- 2 Items with forward and reverse operation are only displayed. Forward or reverse operation can be made with the or key.
- 3 1/3 shows the page. It means the first page of 3 pages.

- 4 Asterisk (*) displayed at the right of the output check display shows the state of the sensor input.

When the sensor is open *

When the sensor is close *

Display	Sensor
CUTTER MOTOR (L) *	Cutter motor home sensor (L)
CUTTER MOTOR (R) *	Cutter motor home sensor (R)
HORIZONTAL FEED MOTOR *	Horizontal position sensor
ENTRANCE ELEVATOR MOTOR	Entrance elevator upper sensor
UPPER * * *	Entrance elevator middle sensor
MIDDLE * *	Entrance elevator lower sensor
LOWER *	
EXIT ELEVATOR MOTOR	Exit elevator upper sensor
UPPER * *	Exit elevator lower sensor
LOWER *	
SHUTTER MOTOR (L)	Shutter sensor (L) (close)
CLOSE * *	Shutter sensor (L) (open)
OPEN *	
SHUTTER MOTOR (R)	Shutter sensor (R) (close)
CLOSE * *	Shutter sensor (R) (open)
OPEN *	

LOADING

Page	Display	Motion
1	PRESSURE SOLENOID (L)	Motion while the <input type="button" value="YES"/> key is pressed.
	PRESSURE SOLENOID (R)	Motion while the <input type="button" value="YES"/> key is pressed.
	CUTTER MOTOR (L) *	Motion while the <input type="button" value="YES"/> key is pressed.
	CUTTER MOTOR (R) *	Motion while the <input type="button" value="YES"/> key is pressed.
	LOAD COVER LOCK SOLENOID	Motion while the <input type="button" value="YES"/> key is pressed.
2	PRESSURE ENABLE SIGNAL	Press the film cartridge holder to operate the pressure solenoid while the <input type="button" value="YES"/> key is pressed.
	READY LAMP (GREEN)	ON while the <input type="button" value="YES"/> key is pressed.
	READY LAMP (RED)	ON while the <input type="button" value="YES"/> key is pressed.
	OPEN MOTOR (L)	Motion while the <input type="button" value="YES"/> key is pressed.
	OPEN MOTOR (R)	Motion while the <input type="button" value="YES"/> key is pressed.
3	SELECTION SOLENOID	Motion while the <input type="button" value="YES"/> key is pressed.

*1

*1 Indicated only when AUTO FILM LOADER (240) in standard setting 3 has been selected "ON".

Check

PROCESSOR

Page	Display	Motion
1	CD PROCESS. SOLN. HEATER	Motion while the <input type="checkbox"/> YES key is pressed.
	BL PROCESS. SOLN. HEATER	Motion while the <input type="checkbox"/> YES key is pressed.
	FIX1 PROCESS. SOLN. HEATER	Motion while the <input type="checkbox"/> YES key is pressed.
	FIX2 PROCESS. SOLN. HEATER	Motion while the <input type="checkbox"/> YES key is pressed.

2	***	
	STB3 PROCESS. SOLN. HEATER	Motion while the <input type="checkbox"/> YES key is pressed.
	DRYER HEATER 1	Motion while the <input type="checkbox"/> YES key is pressed.
	DRYER HEATER 2	Motion while the <input type="checkbox"/> YES key is pressed.
	DRYER FAN	Motion while the <input type="checkbox"/> YES key is pressed.
3	CIRCULATION PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	COOLING FAN	Motion while the <input type="checkbox"/> YES key is pressed.
	AERATION PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	PROGRAM TIMER	Relay motion while the <input type="checkbox"/> YES key is pressed.
	COOL. WATER SOLENOID VALVE	Motion while the <input type="checkbox"/> YES key is pressed.
4	CD REFILLING WATER PUMP	Motion while the YES key is pressed.
	BL REFILLING WATER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	FIX1 REFILLING WATER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	FIX2 REFILLING WATER PUMP	Motion while the YES key is pressed.
	STB1 REFILLING WATER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
5	STB2 REFILLING WATER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	STB3 REFILLING WATER PUMP	Motion while the YES key is pressed.
	TOTAL FILM COUNTER	Counts are increased when the <input type="checkbox"/> YES key is pressed.

6	CD REPLENISHER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	BL REPLENISHER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	FIX REPLENISHER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.
	STB REPLENISHER PUMP	Motion while the <input type="checkbox"/> YES key is pressed.

AUTO LOADER

Page	Display	Motion
1	HORIZONTAL FEED MOTOR *	Motion while the <input type="checkbox"/> YES key is pressed.
	ENTRANCE ELEVATOR MOTOR ***	Motion while the <input type="checkbox"/> YES key is pressed.
	EXIT ELEVATOR MOTOR **	Motion while the <input type="checkbox"/> YES key is pressed.
	SHUTTER MOTOR (L) **	Motion while the <input type="checkbox"/> YES key is pressed.
	SHUTTER MOTOR (R) **	Motion while the <input type="checkbox"/> YES key is pressed.
2	LEADER INSERTION INDICATOR	ON while the <input type="checkbox"/> YES key is pressed.
	MANUAL LOADING INDICATOR	ON while the <input type="checkbox"/> YES key is pressed.
	AUTO LOAD. COVER OPEN SOL.	Motion while the <input type="checkbox"/> YES key is pressed.
	AUTO LOADING READY LAMP	ON while the <input type="checkbox"/> YES key is pressed.

*1

*1 Forward or reverse operation is made with the ☐ + or ☐ - key.

Version Check

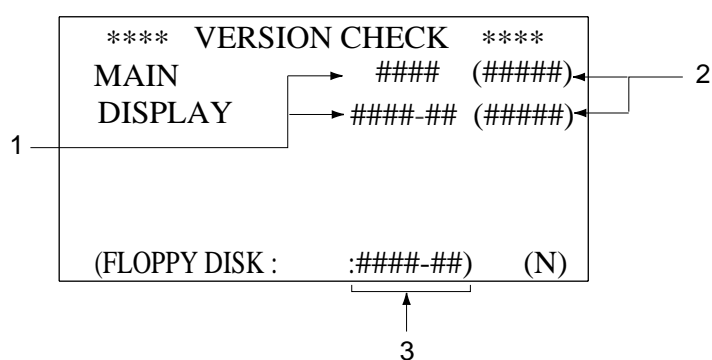
< Function >

The version of the program in the flash memory of the main PCB and display control PCB are displayed.

< Entering the Mode >

MAIN MENU→CHECK→VERSION CHECK

< Display of Mode >



< Explanation >

- 1 The version of the program read in each flash memory is displayed.
- 2 The version of the memory in each flash is displayed.
- 3 The version of the program floppy disk used for the software upgrade is displayed. The version is usually same as the version in 1.

Error Record

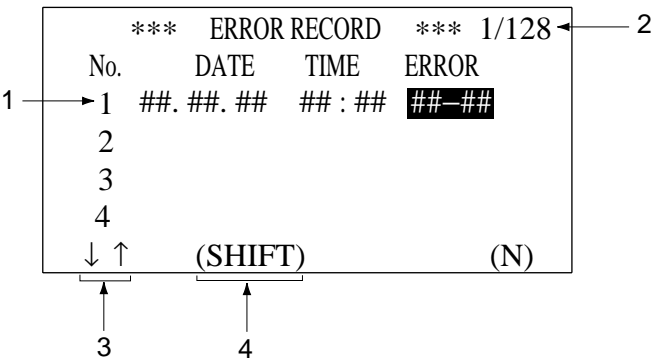
< Function >

Errors occurred in the past are displayed.

< Entering the Mode >

MAIN MENU→CHECK→ERROR RECORD

< Display of Mode >



< Explanation >

- 1 Errors occurred in the past are displayed from the top in the latest order.
- 2 1/128 shows the page and it means the first page of 128 pages.
- 3 The cursor moves with the or key and the page is changed. Errors are accumulated up to 500 maximum. Errors exceeding 500 are deleted in the oldest order.
- 4 Select the error with the or key. Press the key to bring up the error display. Press the key to bring up the above display.

Loading Motion Record

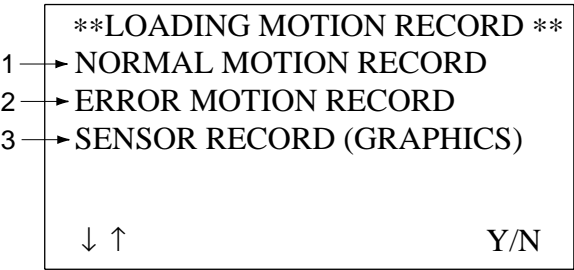
< Function >

This is a mode to record the loading status of the film processing.

< Entering the Mode >

MAIN MENU→CHECK→MOTION RECORD →LOADING MOTION RECORD

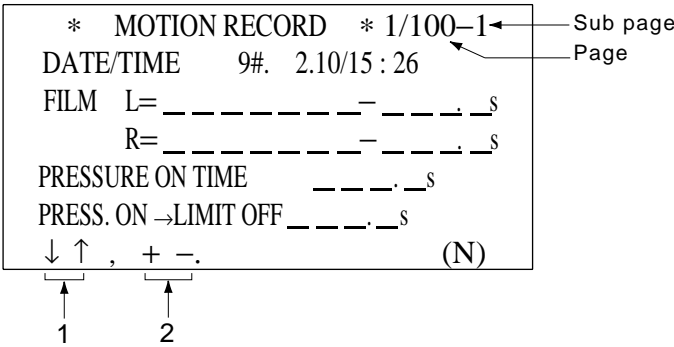
< Display of Mode >



< Explanation >

1. NORMAL MOTION RECORD

The latest data for 100 leader cards can be checked. The display is in the order of the latest data.



- 1 Press the ▲ or ▼ key to change the page.
- 2 Press the + or - key to change the sub page.

Memo
The sub page can extend to 4 pages for 1 leader card.

Contents for each item

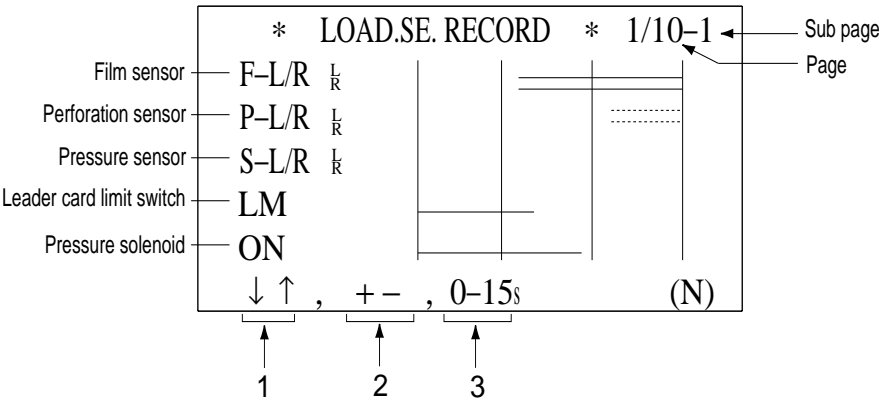
Sub page	Item	Contents
1	DATE/TIME	The date/time when the loading has started is displayed.
	FILM	Type of film and detection time are displayed.
	PRESSURE ON TIME	Time from turning on the pressure solenoid for the leader card feeding to turning off.
	PRESS. ON → LIMIT OFF	Time from turning on the pressure solenoid for the leader card feeding to turning off of the leader card detection limit switch.
2	PRESS. OFF → FILM DET.	Time from turning off the pressure solenoid for the leader card feeding to detection of the film leading end.
	PRESSURE SE. DETECTED TIME	Time from turning on the pressure solenoid for the leader card feeding to detection of the pressure sensor. (Detection of the pressure sensor is displayed up to three times in one loading. If the detection is more than three times, the first detection and the last two detections are displayed.)
3	LOADING STATUS	"AUTO" is displayed only when the film is processed in the automatic film loader unit.
	CUTTER MOTION DETECT. TIME	Time from turning on the pressure solenoid for the leader card feeding to detection of the cutter position sensor.
	LOADING COVER STATUS	The status of the loading cover is displayed when the film is inserted. <div style="text-align: center;"> ### • ### • ### 1 2 3 </div> 1 Film size is being checked. 2 Until the film detection ends after checking the film size. 3 Until the interval time is over after detecting the film. ### displays the loading cover status when the film is inserted. <ul style="list-style-type: none"> • *** The loading cover is close. • — The loading cover is open. • *—* The loading cover is close. → open → close • —* The loading cover is open. → close → open • *— The loading cover is close. → open • —* The loading cover is open. → close
4	DRIVE SWITCH STATUS	The status of the drive switch is displayed. <div style="text-align: center;"> ### • ### • ### 1 2 3 </div> 1 Film size is being checked. 2 Until the film detection ends after checking the film size. 3 Until the interval time is over after detecting the film. The status of the DRIVE switch at the film loading is displayed. <ul style="list-style-type: none"> • *** Operation is ON. • — Operation is OFF. • *—* Operation is ON. → OFF → ON. • —* Operation is OFF. → ON → OFF. • *— Operation is ON. → OFF. • —* Operation is OFF. → ON.
	ERROR No. — —	Errors related to the film loading are displayed.

2. ERROR MOTION RECORD

Errors related to loading for 100 leader cards can be checked. The data is displayed in the latest order. Contents of display are the same as in “1. NORMAL MOTION RECORD”.

3. SENSOR RECORD (GRAPHICS)

The latest sensor status of 10 leader cards can be checked on the graphics. All data are input after the pressure solenoid is “ON”. The status that sensor is “CLOSE” and limit switch and solenoid are “ON” is displayed in bar graphics.



- 1 Press the or key to change the page.
- 2 Press the or key to change the sub page.
- 3 One sub page displays the data for 15 seconds in total, 16 pages can be displayed for 240 seconds.

Reading and Writing Data

< Function >

This is a mode to carry out reading and writing of backup data.

< Entering the Mode >

MAIN MENU→FLOPPY/STANDARD SETTING→FLOPPY DISK→READING/Writing→READING or WRITING

< Display of Mode >

**** READING ****
(FROM FLOPPY DISK)

DATA No. (1-4) #
DATA #####

↑ ↓ , + - Y/N

**** WRITING ****
(TO FLOPPY DISK)

DATA No. (1-4) #

+ - Y/N

< Explanation >

READING: When you read the data from the floppy disk, select the required data using the or key.

Caution
If it is not in the service personnel mode, the applicable data is "Main" only.

WRITING: When the data is written in the floppy disk, the data is not displayed and "ALL" are positively written.

(1) DATA No.

The following 4 files can be created for the data floppy.

- DATA No. 1 Factory shipment is written.
- DATA No. 2 AUXILIARY
- DATA No. 3 AUXILIARY
- DATA No. 4 AUXILIARY

(2) DATA

MAIN

- DISPLAY CONTRAST
- BUZZER VOLUME
- DRYER SWITCH
- SOLUTION TEMP. SETTING
- TOTALING
- PROGRAM TIMER
- MAINTENANCE DAY
- TOTAL REPLENISH. AMOUNT
- BASIC AMOUNT SETTING
- REFILLING WATER AMOUNT 1
- REFILLING WATER AMOUNT 2

EE-PROM

- PROCESSING CAPACITY
- PROCESS SPECIFICATION
- AUTO FILM LOADER
- LANGUAGE
- SOLN. DISPLAY SETTING
- WASTE TANK TYPE
- CONCENTRATOR
- DIGITAL FLOWMETER
- DISPLAY UNIT SELECTION
- FILM INTERVAL CORRECT.
- REPLENISHMENT ERROR
- WASTE SOLUTION ERROR
- PUMP ERROR
- DRYER FAN ERROR
- DRIVE MOTION ERROR
- CHUTE BOX ERROR
- PUMP AMOUNT SETTING
- THERMOSENSOR CALIBRATION
- MANUAL LOADING (240)
- AUTO FILM LOADER (240)

ALL

- MAIN + EE-PROM

Software Upgrade

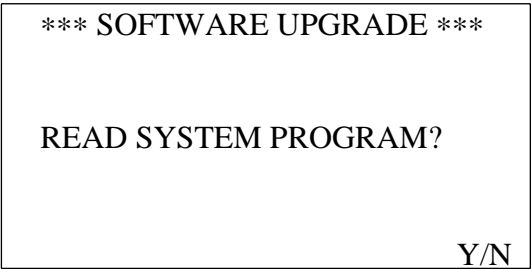
< Function >

This is a mode to carry out the software upgrade of the system program.

< Entering the Mode >

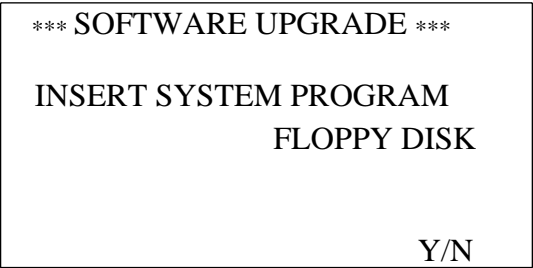
MAIN MENU→FLOPPY/STANDARD SETTING→FLOPPY DISK→SOFTWARE UPGRADE

< Display of Mode >

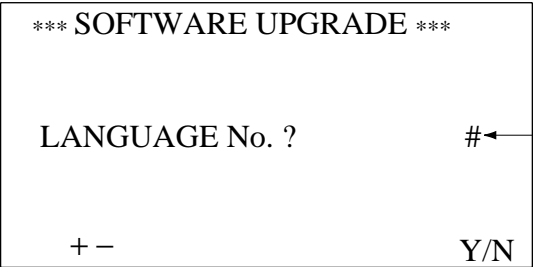


< Operation >

1 Press the **YES** key.



2 Insert the system program floppy disk and press the **YES** key.



Language No.
read last time is displayed.

Continues on next page.

Floppy Disk

↓

3

Input the language No. and press the YES key. Read the program from the floppy disk.

No.	Language
1	English + Japanese
2	English + French
3	English + German
4	English + Spanish
5	English + Italian
6	English + Portuguese
7-9	Not in use

PROGRAM DOWNLOAD

*

MAIN ***

DISPLAY ***

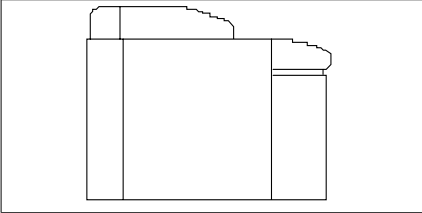
*1

*2

Asterisk (*) in * 1 rotates during the program reading.
Asterisks (*) in *2 decreases as the time goes by.

4

After reading the program, the display returns to the READY display.



*

READY (SHIFT: CONTROL STRIP) —

V30,V50,V100 Description of Modes

Format

< Function >

This mode carries out format (initialization) of the floppy disk.

< Entering the Mode >

MAIN MENU→FLOPPY/STANDARD SETTING→FLOPPY DISK→FORMAT

< Display of Mode >

```

***  FORMAT  ***

FORMAT?

#####

Y/N
  
```

1.2M or 1.44M set in the floppy disk format type mode is displayed in #####.

<Operation>

Floppy disk is formatted (initialized).

Memo

- Data cannot be written on the unformatted floppy disk.
- Applicable floppy disk is 3.5 inch 2HD.
- The format type of the floppy disk can be selected from 1.2M or 1.44M.
The format type is determined in FLOPPY/STANDARD SETTING→FLOPPY DISK→FORMAT TYPE.
- Be sure to take out the floppy disk from the floppy disk drive after writing or reading the data. This is to prevent entry of dust in the floppy disk drive.

Standard Setting 1

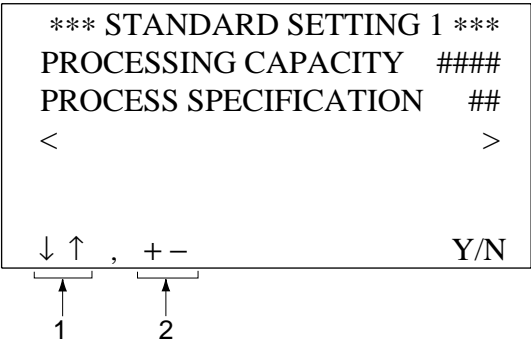
< Function >

This mode carries out the most basic setting for the process specification.

< Entering the Mode >

MAIN MENU→FLOPPY/STANDARD SETTING→STANDARD SETTING 1

< Display of Mode >



< Explanation >

- 1 Select the setting item with the or key.
- 2 Change the setting with the or key.

- 1. PROCESSING CAPACITY (V30/V50/V100)
Set the type of the processing capacity.
- 2. PROCESS SPECIFICATION (Nos. 1- 50)
Input the process specification number.

Refer to 5021.

The process specification name is displayed in < >.

Standard Setting 2

< Function >

Sets optional automatic film loader unit.

< Entering the Mode >

MAIN MENU→FLOPPY/STANDARD SETTING→STANDARD SETTING 2

< Display of Mode >

*** STANDARD SETTING 2 ***
AUTO LOADING #####
+ - Y/N

< Explanation >

- 1 Change the setting with the or key.
- 2 When the optional automatic film loader unit is used, make the setting to "ON".

Standard Setting 3

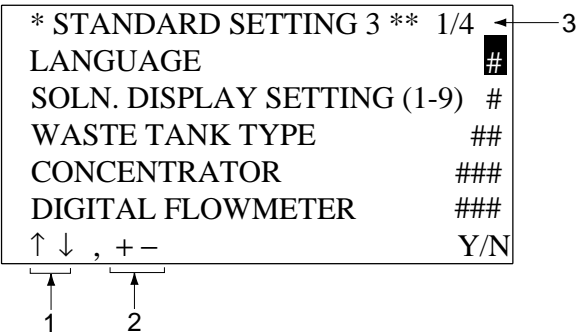
< Function >

This mode carries out the setting for the process specification.

< Entering the Mode >

MAIN MENU -> FLOPPY/STANDARD SETTING -> STANDARD SETTING 3

< Display of Mode >



< Explanation >

- 1 Select the setting item with the ▲ or ▼ key.
- 2 Change the setting with the + or - key.
- 3 1/4 shows the page and means the first page of four pages.

- 1. LANGUAGE
Set the language on the display.
The language varies depending on the set language number, when the software upgrade is carried out.

No.	Contents
1	English + Japanese
2	English + French
3	English + German
4	English + Spanish
5	English + Italian
6	English + Portuguese
7-9	Not in use

2. SOLN. DISPLAY SETTING (1- 9)

Name of solutions are displayed.

No.	Processing solution name							
1	CD	BL	FIX1	FIX2	STB1	STB2	STB3	*1
	CD	BL	FIX1	FIX2	NS	STB1	STB2	*2
2	N1	N2	N3-1	N3-2	NS	N4-1	N4-2	
3	N1	N2	N3-1	N3-2	N4-1	N4-2	N4-3	
4	CD	BL	FIX2	FIX2	TCS1	TCS2	TCS3	
5	J1	J2	J3-1	J3-2	J4-1	J4-2	J4-3	
6	F1	F2	F3-1	F3-2	F4-1	F4-2	F4-3	
7	Not in use							
8	Not in use							
9	Not in use							

*1 Processor specification No. in standard setting 1. Displayed when the number other than 2 is selected.

*2 Processor specification No. in standard setting 1. Displayed when 2 is selected.

3. WASTE TANK TYPE (A/STANDARD)

When the waste solution is individually collected (specification of 4 type solutions), set it to "A".
When 2 type solutions are collected, set it to "STANDARD".

4. CONCENTRATOR "ON/OFF"

When the option concentrator is used, set it to "ON".

5. DIGITAL FLOWMETER "ON/OFF"

When the option digital flowmeter is used, set it to "ON".

6. DISPLAY UNIT SELECTION "mL/m, mL/ft."

Set the display unit to either mL/m or mL/ft.

7. FILM INTERVAL CORRECT. (0 - 99s)

It is usually set to "0s".

8. REPLENISHMENT ERROR "ON/OFF"

When the replenisher solution has run out, whether the error message is displayed or not is set. It is usually set to "ON".

9. WASTE SOLUTION ERROR "ON/OFF"

When the waste solution tank is full, whether the error message is displayed or not is set. It is usually set to "ON".

10. PUMP ERROR "ON/OFF"

When the circulation pump has stopped, whether the error message is displayed or not is set. It is usually set to "ON".

11. DRYER FAN ERROR "ON/OFF" (only V30 and V50)

When the dryer fan has stopped, whether the error message is displayed or not is set. It is usually set to "ON".

12. DRIVE MOTION ERROR "ON/OFF"

When the drive motor has stopped, whether the error message is displayed or not is set. It is usually set to "ON".

13. CHUTE BOX ERROR "ON/OFF"

If the optional automatic film loader unit is attached, set whether an error for full film cartridge chute box is displayed or not. Normally, set it to "ON". If not attached, be sure to set it to "OFF".

14. MANUAL LOADING (240) "ON/OFF"
When the machine for advanced photo system is used, set it to "ON" for processing 240 film in manual loading.
15. AUTO FILM LOADER (240) "ON/OFF"
When the machine with the automatic film loader unit for advanced photo system is used, set it to "ON" for processing 240 film in automatic loading.
16. FILM CUT POS. ERROR "ON/OFF"
Set to "ON" as required. If the film length detected by the film sensor is 550 mm or less when the rear edge cut operation is activated, error No. 012 is displayed. It is usually set to "OFF".
17. COUNT DISPLAY "ON/OFF"
Set to "ON", the total number of films processed during the current day is displayed in the development mode.
18. AERATION
If you set the item to "STD.", the aeration is operated continually. If you set the item to "A", the aeration is interlocked with a dryer.

Memo

When the machine for advanced photo system is used, set the manual/automatic loading of basic setting 2/3 as shown below.

		Standard setting 2 Automatic loading	Standard setting 3 Manual loading (240)	Standard setting 3 Automatic loading (240)
Manual loading process	135 ○	OFF	OFF	OFF
	240 ×			
Automatic loading process	135 ×	OFF	ON	OFF
	240 ×			
Manual loading process	135 ○	OFF	ON	OFF
	240 ○			
Automatic loading process	135 ×	ON	OFF	OFF
	240 ×			
Manual loading process	135 ○	ON	ON	OFF
	240 ○			
Automatic loading process	135 ○	ON	ON	ON
	240 ×			
Manual loading process	135 ○	ON	ON	ON
	240 ○			
Automatic loading process	135 ○	ON	ON	ON
	240 ○			

○: Carries out the process.

×: Does not carry out the process.

Data Initialization

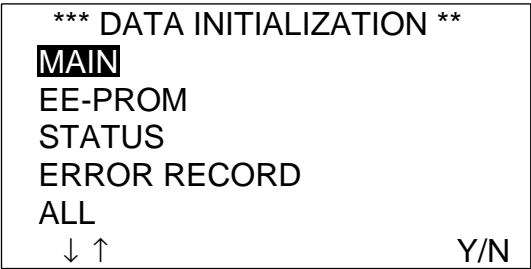
<Function >

The data maintained in the memory of the main control PCB is initialized.

< Entering the Mode >

MAIN MENU -> FLOPPY/STANDARD SETTING -> DATA INITIALIZATION

< Display of Mode >



< Explanation >

Data name		Data after initialization	
MAIN	SWITCHES	Tablet reservoir	OFF
		Display contrast	11
		Buzzer volume	2
		Dryer switch	Auto
	SOLUTION TEMP. SETTING	Solution temperature	Initial value of each process specification
		Dryer temperature 1	55℃
		Dryer temperature 2	60℃
	TOTALING	Today's rolls	0
		Total rolls	0
	TIMER	Program timer	Mode Day Time ---- -- --
		Maintenance day	Monday
EE-PROM	REPLENISHMENT/ REFILLING WATER	Basic amount setting	Initial value of each process specification
		Total replenish. amount	0
		Replenishment lack time	0
		Refilling water amount 1	Initial value of each process specification
		Refilling water amount 2	Initial value of each process specification
	STANDARD SETTING 1	Processing capacity	V30
		Process specification	1

Data Initialization

Data name		Data after initialization	
EE-PROM	STANDARD SETTING 2	Auto loading	OFF
	STANDARD SETTING 3	Language	ENGLISH
		Soln. display setting	1
		Waste tank type	A
		Concentrator	OFF
		Digital flowmeter	OFF
		Display unit selection	mL/m
		Film interval correct.	0
		Replenishment error	ON
		Waste solution error	ON
		Pump error	ON
		Dryer fan error	ON
		Drive motion error	ON
		Chute box error	OFF
STATUS	PUMP AMOUNT	Initial value	
	THERMOSENSOR CALIBRATION	0	
		Delete	*1
ERROR RECORD	ERROR RECORD	Delete	
	MOTION RECORD	Delete	

*1 Current status such as the memory of the leader card or film pass position is erased.

Memo

- When "ALL" is selected, memory of MAIN, EE-PROM, STATUS and ERROR RECORD is initialized.
- When EE-PROM or ALL is initialized, the language in standard setting 3 becomes ENGLISH. English is used on the display.

Refilling Water Amount 1

< Function >

When the service personnel's password is input, the setting of refilling water amount 1 can be changed.

Memo

When the processing solution tank level is lower than the refilling water level, water is refilled to the refilling water level. In addition, water is refilled for the set time of refilling water amount 1.








< Entering the Mode >

MAIN MENU →REPLENISHMENT/REFILLING WATER →REFILLING WATER AMOUNT 1

< Display of Mode >

*REFILLING WATER AMOUNT 1 *
CD = S STB2=___ S
BL = ___ S STB3=___ S
FIX1 = ___ S
FIX2 = ___ S
STB1= ___ S
↑↓,+ - RESET:SHIFT+NO Y/N

< Explanation >

- 1 Press the  or  key, and select the refilling water pump to change the refilling water amount.
Press the  or  key to change the refilling water time, and press the  key to register.
- 2 Keep the  key pressed and press the  key to reset the initial value.

Memo

The display may vary depending on the process specification.

Refilling Water Amount 2

< Function >

When the service personnel's password is input, the setting of refilling water amount 2 can be changed.

Memo

When the processing solution tank level is lower than the refilling water level, water is refilled for the set time of refilling water amount 2.








< Entering the Mode >

MAIN MENU→REPLENISHMENT/REFILLING WATER→REFILLING WATER AMOUNT 2

< Display of Mode >

*REFILLING WATER AMOUNT 2 *
CD = S STB2=___ S
BL = ___ S STB3=___ S
FIX1 = ___ S
FIX2 = ___ S
STB1= ___ S
↑↓,+ - RESET:SHIFT+NO Y/N

< Explanation >

- 1 Press the  or  key, and select the refilling water pump to change the refilling water amount.
Press the  or  key to change the refilling water time, and press the  key to register.
- 2 Keep the  key pressed and press the  key to reset the initial value.

Memo

The display may vary depending on the process specification.

Table of Errors

No.	Error message	Manual No.
001	FILM STOPPED (L) FILM STOPPED (R)	4011
002	FILM CUTTER NOT MOVED (L) FILM CUTTER NOT MOVED (R)	4012
003	LEADER CARD LIMIT SWITCH ERROR	4013
004	FILM SENSOR ERROR (L) FILM SENSOR ERROR (R)	4014
005	PERFORATION SE. ERROR (L) PERFORATION SE. ERROR (R)	4015
006	PRESSURE SENSOR ERROR (L) PRESSURE SENSOR ERROR (R)	4016
007	CUTTER MOTOR ERROR (L) CUTTER MOTOR ERROR (R)	4017
008	CUTTER RETURN ERROR (L) CUTTER RETURN ERROR (R)	4018
009	CLOSE LOADING COVER	4019
010	REMOVE LEADER CARD AND INSERT AGAIN	4020
011	OPEN MOTOR ERROR (L) OPEN MOTOR ERROR (R)	4021
012	CHECK FILM REMAINING IN FILM CARTRIDGE	4022
021	PROCESS. SOLN. LEVEL TOO LOW	4101
022	SOLUTION TEMP. ERROR	4102
023	SOLN. S-THERMO. ACTIVATED	4103
024	CIRCULATION PUMP STOPPED	4104
025	DRYER TEMPERATURE ERROR	4105
026	DRYER S-THERMO. ACTIVATED	4106
027	THERMOSENSOR ERROR	4107
028	DRYER FAN STOPPED	4108
029	REPLENISHER TANK EMPTY	4109
030	WASTE SOLUTION TANK FULL	4110
031	TURN ON REPLENISHMENT SWITCH	4111
032	TURN ON DRIVE SWITCH	4112
033	A/D CONVERTER ERROR	4113
034	CLOSE UPPER COVER	4114
035	REFILLING ERROR	4115
040	DRIVE MOTION ERROR	4120
041	CIRCULATION LOW (CD)	4121
051	SET DATE & TIME	4201
052	DATA INITIALIZED INPUT MAIN DATA	4202
053	100V POWER FAILURE	4203
054	DISPLAY SELF-CHECK ERROR	4204
055	MAIN SELF-CHECK ERROR	4205
056	COMMUNICATION ERROR BETWEEN MAIN AND DISPLAY	4206
057	EE-PROM DATA ERROR INITIALIZE DATA	4207

Table of Error

No.	Error message	Manual No.
081	FLOPPY DISK READING ERROR	4301
082	FLOPPY DISK WRITING ERROR	4302
083	FLOPPY DISK FORMAT. ERROR	4303
084	DATA FLOPPY DISK NOT INSERTED YET	4304
085	SYSTEM PROGRAM FLOPPY DISK NOT INSERTED YET	4305
101	CANNOT OPEN AUTO LOADING COVER	4401
102	CLOSE AUTO LOADING COVER	4402
103	LEADER CARD NOT INSERTED PROPERLY	4403
104	PULLED OUT FILM TOO LONG IN AUTO FILM LOADER	4404
105	ENTRANCE ELEVATOR ERROR (AUTO FILM LOADER)	4405
106	HORIZONTAL FEED ERROR (AUTO FILM LOADER)	4406
107	EXIT ELEVATOR ERROR (AUTO FILM LOADER)	4407
108	SHUTTER MOTION ERROR (L) SHUTTER MOTION ERROR (R)	4408
109	REMOVE MAGAZINE ADAPTER AND CLOSE LOADING COVER	4409
110	LEADER CARD JAM (AUTO FILM LOADER - LOADING)	4410
111	CARTRIDGE REMAINING IN AUTO LOADING SHUTTER UNIT	4411
112	CHECK FILM STOCKER IN AUTO FILM LOADER	4412
113	LEADER CARD REMAINING IN AUTO FILM LOADER	4413
114	PROBLEM WITH FILM COUNTING IN AUTO FILM LOADER	4414
115	AUTO FILM LOADER COVER OPEN	4415
116	CHUTE CLOGGED	4416
117	FILM CARTRIDGE CHUTE BOX FULL	4417
ERROR 0 - 8	PROGRAM DOWNLOAD ERROR	4701

No. 001

< Error >

No. 001

< Message >

Alarm sounds continuously.

< 001- >

FILM STOPPED (L)

FILM STOPPED (R)

SHIFT : RELEASE INTERLOCK
(N)

Memo

- When an error occurs, the READY lamp flashes in red.
- The lane for the error is displayed with the sub-number.

001 - 1 Left lane

001 - 2 Right lane

001 - 3 Both lanes

< Alarm Cancel >

Press the **NO** key.

< Error Message Cancel >

Press the **SHIFT** key and release interlock of the loading cover.

When the film sensor is open after correcting the error, the error is canceled.

< Condition >

The film sensor remains closed exceeding the specified time.

Memo

- The above specified time is for loading 2000 mm of the film.
V30: approx. 7 minutes, V50: approx. 4 minutes,
V100: approx. 2 minutes
- Disposition of Sensors (Refer to 2001.)

< Diagnostic >

When the leader card feed error occurs:

Leader card feed error

<Checkpoint>

1. The leader card is damaged.
2. The gear and sprocket are damaged.
3. Pitch of the gear is mismatched.
(☞ Refer to 2101.)
4. The drive shaft is damaged.

When the film sensor is closed.

Defective detection circuit of the film sensor

<Checkpoint>

1. Film sensor is dirty.
2. Imperfect sensitivity adjustment of the film sensor.
(☞ Refer to 2018.)
3. Check imperfect contact in the connectors and broken cables.
J/P24 (loading connecting PCB) - Film sensor (LED)
J/P23 (loading connecting PCB) - Film sensor (Photo)
J/P21 (loading connecting PCB) - J/P89 (Power PCB 2)
Power PCB 2 - Main control PCB
J/P4 (main control PCB) - J/P21 (loading connecting PCB)
4. Defective film sensor.
5. Defective loading connecting PCB.
(☞ Refer to 6016.)
6. Defective main control PCB.
(☞ Refer to 6011.)
7. Defective power PCB 2.
(☞ Refer to 6015.)

Memo

Electric circuit drawing 3 - 3

No. 002

< Error >

No. 002

< Message >

Alarm sounds.

< 002->
 FILM CUTTER NOT MOVED (L)
 FILM CUTTER NOT MOVED (R)

 CHECK FILM REMAINING
 IN FILM CARTRIDGE
 (N)

Memo

- When an error occurs, the interlock for the loading cover is released.
- The lane for the error is displayed with the sub-number.
 002 - 1 Left lane
 002 - 2 Right lane
 002 - 3 Both lanes

< Alarm Cancel >

Press the key.

< Error Message Cancel >

1. + - Error cancel
2. Film cutter operation (The cutter position sensor is open.) - Error cancel

< Condition >

When the film cutter does not work while loading 135 film (the cutter position sensor remains closed),
 the film sensor is open.

Memo

Disposition of Sensors (Refer to 2001.)


< Diagnostic >

Film cutter unit does not work.

Defective film cartridge holder and film cutter unit

<Checkpoint>

1. Defective sliding of the film cartridge holder.

( Refer to 2014.)

2. Defective film cutter unit.

The cutter position sensor is not open.

Defective detection circuit of the cutter position sensor

<Checkpoint>


1. Dust is on the cutter position sensor.
2. Check imperfect contact in the connectors and broken cables.

J/P17 (loading connecting PCB) - J/P35 (cutter sensor right)


J/P26 (loading connecting PCB) - J/P40 (cutter sensor left)

J/P21 (loading connecting PCB) - J/P4 (main control PCB)

3. Defective cutter position sensor.
4. Defective loading connecting PCB.

( Refer to 6016.)

5. Defective main control PCB.

( Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

No. 003

< Error >

No. 003

< Message >

Alarm sounds.

< 003 >

LEADER CARD LIMIT SWITCH
ERROR

(N)

Memo

When an error occurs, the interlock for the loading cover is released.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

YES

+

NO

Leader card limit switch ON

Leader card limit switch OFF

Error recurrence

Error cancel

< Condition >

1.

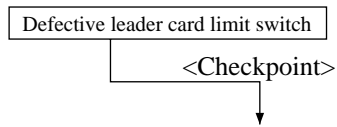
After film feeding was completed, the leader card limit switch remained ON.
2.

When rear end cut of the film in both lanes is completed, the leader card limit switch remains ON (the automatic film loader unit is used).

Memo

Disposition of Sensors (🔧 Refer to 2001.)

< Diagnostic >



1. Foreign matter is found at the leader card limit switch.
2. Check the position of the leader card limit switch.
3. Check imperfect contact in the connectors and broken cables.

J/P26 (loading connecting PCB) - Leader card limit switch

J/P21 (loading connecting PCB) - J/P4 (main control PCB)


4. Defective leader card limit switch.

If the limit switch is ON and no continuity is observed between pins 13-14 at the jack side of the limit switch connector J26, the limit switch is defective.

5. Defective loading connecting PCB.

 Refer to 6016.)

6. Defective main control PCB.

 Refer to 6011.)

Memo
Electric circuit drawing 3 - 2

No. 004

< Error >

No. 004

< Message >

Alarm sounds.

< 004- >

FILM SENSOR ERROR (L)
FILM SENSOR ERROR (R)

(N)

Memo

- When an error occurs, the interlock for the loading cover is released.
- The lane for the error is displayed with the sub-number.

004 - 1 Left lane

004 - 2 Right lane

004 - 3 Both lanes

< Alarm Cancel >

Press the key.

< Error Message Cancel >

 + - Error cancel - Error recurrence in case of the following conditions

< Condition >

1. When LED of the film sensor is turned off, the film sensor is not closed.
2. When LED of the film sensor is turned on, the film sensor is not opened.





Memo

- The film sensor LED is automatically turned on/off immediately after feeding of the film and leader card is completed and immediately after the power is turned on. Entry of the open/close signal at the photo side of the film sensor is checked.
- Disposition of Sensors (Refer to 2001.)

< Diagnostic >

Defective detection circuit of the film sensor

<Checkpoint>

1. Film sensor is dirty.
2. Imperfect sensitivity adjustment of the film sensor.
( Refer to 2018.)
3. Check imperfect contact in the connectors and broken cables.
J/P24 (loading connecting PCB) - Film sensor (LED)
J/P23 (loading connecting PCB) - Film sensor (photo)
J/P21 (loading connecting PCB) - J/P89 (power PCB 2)
Power PCB 2 - Main control PCB
J/P4 (main control PCB) - J/P21 (loading connecting PCB)
4. Defective film sensor.
5. Defective loading connecting PCB.
( Refer to 6016.)
6. Defective main control PCB.
( Refer to 6011.)
7. Defective power PCB 2.
( Refer to 6015.)

Memo

Electric circuit drawing 3 - 3

No. 005

< Error >

No. 005

< Message >

Alarm sounds.

< 005->

PERFORATION SE. ERROR (L)
PERFORATION SE. ERROR (R)

(N)

Memo

- When an error occurs, the interlock for the loading cover is released.
- The lane for the error is displayed with the sub-number.
005 - 1 Left lane
005 - 2 Right lane
005 - 3 Both lanes

< Alarm Cancel >

Press the key.

< Error Message Cancel >

 + - Error cancel - Error recurrence in case of the following conditions

< Condition >

1. When LED of the perforation sensor is turned off, the perforation sensor is not closed.
2. When LED of the perforation sensor is turned on, the perforation sensor is not opened.





Memo

- The perforation sensor LED is automatically turned on/off immediately after feeding of the film and leader card is completed and immediately after the power is turned on. Entry of the open/close signal at the photo side of the perforation sensor is checked.
- Disposition of Sensors (Refer to 2001.)

< Diagnostic >

Defective detection circuit of the perforation sensor

<Checkpoint>

1. Dust is on the perforation sensor.
2. Defective sensitivity adjustment of the perforation sensor.
( Refer to 2018.)
3. Check imperfect contact in the connectors and broken cables.
J/P24 (loading connecting PCB) - Perforation sensor (LED)
J/P23 (loading connecting PCB) - Perforation sensor (photo)
J/P21 (loading connecting PCB) - J/P89 (power PCB 2)
Power PCB 2 - Main control PCB
J/P4 (main control PCB) - J/P21 (loading connecting PCB)
4. Defective perforation sensor.
5. Defective loading connecting PCB.
( Refer to 6016.)
6. Defective main control PCB.
( Refer to 6011.)
7. Defective power PCB 2.
( Refer to 6015.)

Memo

Electric circuit drawing 3 - 3

No. 006

< Error >

No. 006

< Message >

Alarm sounds.

< 006- >
 PRESSURE SENSOR ERROR (L)
 PRESSURE SENSOR ERROR (R)

(N)

Memo

- When an error occurs, the interlock for the loading cover is released.
- The lane for the error is displayed with the sub-number.

006 - 1 Left lane
 006 - 2 Right lane
 006 - 3 Both lanes

< Alarm Cancel >

Press the key.


< Error Message Cancel >

 + - Error cancel - Error recurrence in case of the following conditions

< Condition >

When the leader card is set (leader card limit switch ON) and the loading cover is closed (loading cover sensor close), the pressure sensor is open.

Memo

Disposition of Sensors ( Refer to 2001.)

< Diagnostic >

Defective detection circuit of the pressure sensor

<Checkpoint>

1. Check sliding of the film cartridge holder.
(Refer to 2014.)
2. Check imperfect contact in the connectors and broken cables.
J/P17 (loading connecting PCB) - J/P36 (pressure sensor left)
J/P26 (loading connecting PCB) - J/P41 (pressure sensor right)
J/P21 (loading connecting PCB) - J/P89 (power PCB 2)
J/P21 (loading connecting PCB) - J/P4 (main CPU PCB)
Power PCB 2 - Main control PCB
3. Defective pressure sensor.
(Refer to 2016.)
4. Defective loading connecting PCB.
(Refer to 6016.)
5. Defective power PCB 2.
(Refer to 6015.)
6. Defective main control PCB.
(Refer to 6011.)

Memo

Electric circuit drawing 3 - 3

No. 007

< Error >

No. 007

< Message >

Alarm sounds.

< 007- >

CUTTER MOTOR ERROR (L)
CUTTER MOTOR ERROR (R)

(N)

Memo

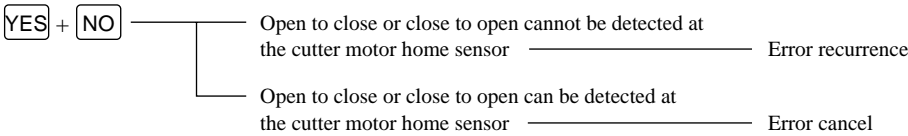
- When an error occurs, the interlock for the loading cover is released.
- The lane for the error is displayed with the sub-number.

007 - 1 Left lane
007 - 2 Right lane
007 - 3 Both lanes

< Alarm Cancel >

Press the NO key.

< Error Message Cancel >



< Condition >

1.

When the cutter motor is operated, the cutter motor home sensor is not open after 2 seconds.
2.

When the cutter motor is operated, the cutter motor home sensor is not closed 5 seconds after the cutter motor home sensor is open.

Memo

Disposition of Sensors (Refer to 2001.)

< Diagnostic >

Cutter motor motion error.

Defective cutter motor

<Checkpoint>

1. Check motion of the cutter motor and cam.
2. Blown fuse.
3. Check imperfect contact in the connectors and broken cables.

Power PCB 1 F19 (125V/6.3A)

(Refer to 6014 and 6014-1.)

J/P45 (cutter motor right) - J/P217 (relay connector)

J/P46 (cutter motor left) - J/P217 (relay connector)

J/P217 (relay connector) - J/P89 (power PCB 2)

Power PCB 2 - Main control PCB

4. Defective cutter motor.
If DC24V is output between pins 1-2 of each cutter motor connector (J/P45 and 46) and the cutter motor is not operating, the cutter motor is defective.

(Refer to 2012.)

5. Defective power PCB 2.

(Refer to 6015.)

6. Defective main control PCB.

(Refer to 6011.)

Memo

Electric circuit drawing 3 - 3

Defective cutter motor home sensor.

Defective detection circuit of the cutter motor home sensor

<Checkpoint>

↓

1. Dust is on the cutter motor home sensor.
2. Check imperfect contact in the connectors and broken cables.
J/P17 (loading connecting PCB) - J/P34 (cutter motor home sensor right)
J/P26 (loading connecting PCB) - J/P39 (cutter motor home sensor left)
J/P21 (loading connecting PCB) - J/P4 (main control PCB)
3. Defective cutter motor home sensor.
4. Defective loading connecting PCB.
(👉 Refer to 6016.)
5. Defective main control PCB.
(👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

No. 008

< Error >

No. 008

< Message >

Alarm sounds.

< 008- >

CUTTER RETURN ERROR (L)
CUTTER RETURN ERROR (R)

(N)

Memo

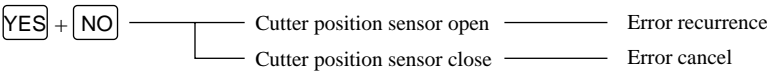
- When an error occurs, the interlock for the loading cover is released.
- The lane for the error is displayed with the sub-number.

008 - 1 Left lane
008 - 2 Right lane
008 - 3 Both lanes

< Alarm Cancel >

Press the NO key.

< Error Message Cancel >



< Condition >

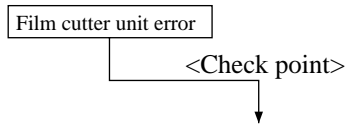
When the cutter is returned to its home position by activating the cutter drive motor, the cutter position sensor is not closed.

Memo

Disposition of Sensors (👉 Refer to 2001.)

< Diagnostic >

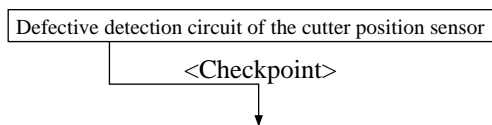
The film cutter unit does not operate.



1. Film cutter unit error.

(Refer to 2014.)

The cutter position sensor is not closed.



1. Check imperfect contact in the connectors and broken cables.

J/P17 (loading connecting PCB) - J/P35 (cutter position sensor right)

J/P26 (loading connecting PCB) - J/P40 (cutter position sensor left)

J/P21 (loading connecting PCB) - J/P4 (main control PCB)

2. Defective cutter position sensor.

3. Defective loading connecting PCB.

(Refer to 6016.)

4. Defective main control PCB.

(Refer to 6011.)

Memo
Electric circuit drawing 3 - 2

No. 009

< Error >

No. 009

< Message >

Alarm sounds.

< 009- >

CLOSE LOADING COVER

(N)

Memo

009 - 0 Loading film is being passed.

009 - 1 Automatic film loader unit is being used.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

When the loading cover sensor is closed, the error is canceled.

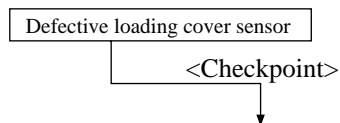
< Condition >

1. The loading cover sensor is open while the film is passing.
(The READY lamp flashes in red.)
2. When the leader card is fed from the automatic film loader unit, the loading cover sensor is opened.

Memo

Disposition of Sensors (Refer to 2001.)

< Diagnostic >




1. Incorrect position of the loading cover sensor.
2. Check imperfect contact in the connectors and broken cables.


J/P17 (loading connecting PCB) - J/P42 (loading cover sensor)

J/P21 (loading connecting PCB) - J/P4 (main control PCB)

3. Defective loading cover sensor.
4. Defective loading connecting PCB.

 Refer to 6016.)

5. Defective main control PCB.

 Refer to 6011.)

Memo
Electric circuit drawing 3 - 2

No. 010

< Error >

No. 010

< Message >

Alarm sounds.

< 010 >

**REMOVE LEADER CARD
AND INSERT AGAIN**

(N)

Memo

When an error occurs, the interlock is canceled.

< Alarm Cancel >

Press the NO key.

< Error Message Cancel >

When the leader card limit switch is turned off, the error is canceled.

< Condition >

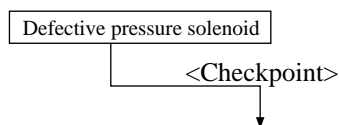
During the leader card feeding, the leader card limit switch was not turned off after the specified time. (The film sensor and perforation sensor remain open.)

Memo

- The above specified time is required for feeding the film in 383 mm.
V30: approx. 75 seconds. V50: approx. 40 seconds.
V100: approx. 20 seconds.
- Disposition of Sensors (Refer to 2001.)

< Diagnostic >

For defective leader card feeding:




1. Defective sliding of actuator.
2. Check imperfect contact in the connectors and broken cables.

J/P217 (relay connector) - J/P43 (pressure solenoid right)
 J/P217 (relay connector) - J/P44 (pressure solenoid left)
 J/P217 (relay connector) - J/P89 (power PCB 2)
 Power PCB 2- Main control PCB


3. Imperfect pressure solenoid.

If the pressure solenoid is not operating while DC24V is output at connector pins 1 - 2 of each pressure solenoid, the pressure solenoid is imperfect.

4. Defective power PCB 2.

 Refer to 6015.)

5. Defective main control PCB.

 Refer to 6011.)

Memo
Electric circuit drawing 3 - 3

The leader card limit switch is on.

Defective detection circuit of leader card limit switch

<Checkpoint>

1. Foreign matter at the leader card limit switch.
2. Check the position of leader card limit switch.
3. Check imperfect contact in the connectors and broken cables.


J/P26 (loading connecting PCB) - Leader card limit switch

J/P21 (loading connecting PCB) - J/P4 (main control PCB)

4. Defective leader card limit switch.

If the limit switch is ON and no continuity is observed between pins 13-14 at the jack side of the limit switch connector J26, the limit switch is defective.

5. Defective loading connecting PCB.

 Refer to 6016.)

6. Defective main control PCB.

 Refer to 6011.)

Memo
Electric circuit drawing 3 - 2

No. 011

< Error >

No. 011

< Message >

Alarm sounds.

< 011->

OPEN MOTOR ERROR (L)
OPEN MOTOR ERROR (R)

(N)

Memo

- If an error occurs, the loading cover lock is released.
- Errors are displayed by the sub-number.
- The 1st digit-left lane, the 2nd digit-right lane
- When the sub-number is 0, the lane is normal.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

+ - Error cancel - Error recurrence in case of the following conditions

< Condition >

Sub No.	Description
1	When the open motor is operated, the open motor home position sensor is closed 3.5 seconds later.
2	When the open motor is operated, the open motor home position sensor is open 3 seconds later.
3	When the open motor is operated, the open motor set sensor is closed 3.5 seconds later.
4	When the open motor is operated, the open motor set sensor is closed 3 seconds later.

Memo

- Disposition of Sensors (👉 Refer to 2001.)
- This error occurs only when AUTO FILM LOADER (240) in standard setting 3 is "ON".

< Diagnostic >

The open motor does not operate.

Open motor error

<Checkpoint>

1. Foreign matter between the film cartridge holder and upper guide.

2. Blown fuse.

Auto loading drive PCB F21 (125V/3.15A)

3. Check imperfect contact in the connectors and broken cables.

J/P293 (relay connector) - J/P290 (open motor left)

J/P293 (relay connector) - J/P291 (open motor right)

J/P285 (auto loading driver PCB) - J/P293 (relay connector)

J/P286 (auto loading driver PCB) - J/P248 (selection driver PCB)

J/P248 (selection driver PCB) - J/P18 (I/O PCB)

I/O PCB - Main control PCB

J/P251 (auto loading driver PCB) - J/P249 (selection driver PCB)

J/P251 (selection driver PCB) - J/P101 (power PCB 2)

4. Defective open motor.

If DC24V is output between pins 1-2 of each open motor connectors and the open motor is not operating, the open motor is defective.

5. Defective auto loading driver PCB.

(👉 Refer to 6017.)

6. Defective selection driver PCB.

(👉 Refer to 6018.)

7. Defective I/O PCB.

(👉 Refer to 6013.)

8. Defective main control PCB.

(👉 Refer to 6011.)

9. Defective power PCB 2.

(👉 Refer to 6015.)





Memo

Electric circuit drawings 2 - 5 and 4 - 3

Sensor error

Open motor home position sensor, open motor set sensor error

<Checkpoint>

1. The open motor home position sensor or open motor set sensor is dirty.
2. Check the position of the open motor home position sensor or open motor set sensor.
3. Check imperfect contact in the connectors and broken cables.
 J/P293 (relay connector) - J/P288 (open motor home position sensor, left)
 J/P293 (relay connector) - J/P289 (open motor home position sensor, right)
 J/P259 (auto loading driver PCB) - J/P293 (relay connector)
 J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
 J/P293 (relay connector) - J/P296 (open motor set sensor, left)
 J/P293 (relay connector) - J/P297 (open motor set sensor, right)
 J/P285 (auto loading driver PCB) - J/P293 (relay connector)
 J/P286 (auto loading driver PCB) - J/P248 (selection driver PCB)
 J/P248 (selection driver PCB) - J/P18 (I/O PCB)
4. Defective open motor home position sensor or open motor set sensor.
5. Defective auto loading driver PCB.
 Refer to 6017.)
6. Defective selection driver PCB.
 Refer to 6018.)
7. Defective I/O PCB.
 Refer to 6013.)
8. Defective main control PCB.
 Refer to 6011.)

Memo

Electric circuit drawings 2 - 5 and 4 - 3

No. 012

< ERROR >

No. 012

< Message >

Alarm sounds.

< 012- >

CHECK FILM REMAINING
IN FILM CARTRIDGE
(LEFT LANE/RIGHT LANE)

(N)

Memo

- If FILM CUT POS. ERROR in standard setting 3 is set to "OFF", this error does not occur.
- If an error occurs, the loading cover is unlocked.

< Alarm Cancel >

Press the key.


< Error Message Cancel >

 + —— Error cancel

< Condition >

When the rear edge cut operation was carried out, the film length detected by the film sensor was 550 mm or less.

Memo

Disposition of Sensors ( Refer to 2001.)

< Diagnostic >

Defective detection circuit of the pressure sensor

<Checkpoint>

1. Check sliding of the film cartridge holder.
(Refer to 2014.)
2. Check imperfect contact in the connectors and broken cables.
J/P17 (loading connecting PCB) - J/P36 (pressure sensor left)
J/P26 (loading connecting PCB) - J/P41 (pressure sensor right)
J/P21 (loading connecting PCB) - J/P89 (power PCB 2)
J/P21 (loading connecting PCB) - J/P4 (main control PCB)
Power PCB 2 - Main control PCB
3. Defective pressure sensor.
(Refer to 2016.)
4. Defective loading connecting PCB.
(Refer to 6016.)
5. Defective power PCB 2.
(Refer to 6015.)
6. Defective main control PCB.
(Refer to 6011.)

Memo

Electric circuit drawing 3 - 3

No. 021

< Error >

No. 021

< Message >

Alarm sounds.

The processing solution name for the error is displayed.

< 021- _ >

PROCESS. SOLN. LEVEL TOO LOW

(N)

Memo

- The processing solution tank for the error is displayed by the sub-number.

021 - 0 CD
021 - 1 BL
021 - 2 FIX1
021 - 3 FIX2
021 - 6 STB3
Displayed in the order from 0.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

+

Processing solution level detection float switch OFF

Processing solution level detection float switch ON

Error recurrence

Error cancel

< Condition >

The processing solution level detection float switch was turned off.

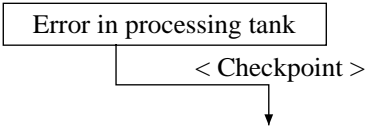
Memo

- When each processing solution level detection float switch is turned off, all inputs of the subsequent processing solution level detection float switch are turned off.

Example: When the BL processing solution level detection float switch is turned off, switches after FIX 1 are also turned off.
- Disposition of Sensors (Refer to 2003.)
- The processing solution name changes depending on the process specification.

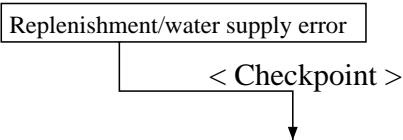
< Diagnostic >

Error in processing tank:



- 1. Check of leakage.

Replenishment error:



- 1. Cleaning of strainer.
- 2. Check of pump amount.
- 3. Replenisher hose is clogged.
- 4. Blown fuse.

Power PCB 1 F7 (125V/3.15A)

Refer to 6014 and 6014-1.)

- 5. Check imperfect contact in the connectors and broken cables.

J/P98 (power PCB 2) - J/P193 (replenisher pump)

Power PCB 2 - Main control PCB

J/P82 (power PCB 2) - J/P73 (power PCB 1)

- 6. Defective replenisher pump.

If AC24V is output at each replenisher pump connector and the pump is not operating, the replenisher pump is defective.

CD	PIN 1-2
BL	PIN 3-4
FIX	PIN 5-6
STB	PIN 7-8
WL	PIN 9-10

Refer to 2202 and 2203.)

- 7. Defective power PCB 2.

Refer to 6015.)

8. Defective main control PCB.

(👉 Refer to 6011.)

9. Defective power PCB 1.

(👉 Refer to 6014 and 6014-1.)

Memo

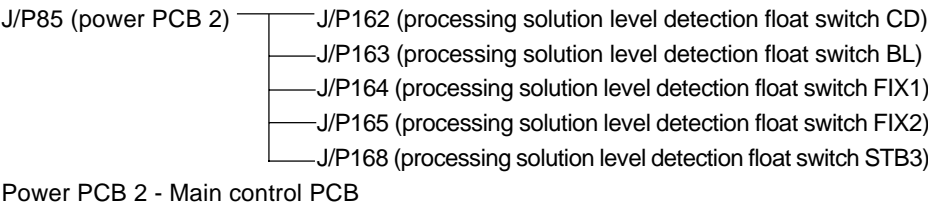
- Electric circuit drawing 3 - 7
- Some type may not have WL.

The processing solution level detection float switch is off.

Defective detection circuit of the processing solution level detection float switch

< Checkpoint >

1. The processing solution level detection float switch is dirty.
2. Check imperfect contact in the connectors and broken cables.



Memo

- Processing solution level detection float switches CD and CD-2 for V100 are wired in series.

J/P85 (power PCB 2)

J/P162

J/P162 (processing solution level detection float switch CD)

J/P117 (processing solution level detection float switch CD-2)

3. Defective processing solution level detection float switch.

(👉 Refer to 2003.)

If the float of processing solution level detection float switch is up and no continuity is observed between pins 3-4 at the plug side of each float switch connector, the float switch is defective.

4. Defective power PCB 2.

(👉 Refer to 6015.)

5. Defective main control PCB.

(👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 8

No. 022

< Error >

No. 022

< Message >

Alarm sounds.

< 022>

SOLUTION TEMP. ERROR

(SHIFT)

(N)

Memo

Press the SHIFT key and each solution name appears on the display.

< Alarm Cancel >

Press the NO key.

< Error Message Cancel >

YES

+

NO

Over the process range

Within the process range

Below the process range

Error recurrence

Error cancel

Error cancel (adjusting solution temperature)

< Condition >

After completion of temperature adjustment, the temperature of each processing solution has exceeded the process range.

Example:

Processing solution	Process range	
	Upper limit	Lower limit
C D	Set value +1.0°C	Set value -1.0°C
B L	Set value +3.0°C	Set value -5.0°C
F I X	Set value +3.0°C	Set value -5.0°C
S T B	Set value +4.0°C	Set value -5.0°C

Memo

- The process range may change depending on the process specification.
- Disposition of Sensors (Refer to 2003.)

< Diagnostic >

Cooling unit error (When the solution temperature is over the upper limit.)

Defective cooling fan, cooling water unit, and chilling unit

< Checkpoint >

1. Check the set temperature of the chilling unit. (chilling unit used.)

2. Blown fuse.

Power PCB 1 F16 (125V/6.3A) cooling fan

F20 (125V/3.15A) cooling water solenoid valve (chilling unit used)

3. Check imperfect contact in the connectors and broken cables.

J/P108 (power PCB 2) — J/P135 (cooling fan 1)

J/P136 (cooling fan 2)

J/P214 (cooling fan 3) V100 only

J/P93 (power PCB 2) — J/P132 (cooling water solenoid valve)

J/P77 (power PCB 1) — J/P192 (chilling unit) (chilling unit used)

J/P82 (power PCB 2) — J/P73 (power PCB 1)

Power PCB 2 - Main control PCB

4. Defective cooling fan.

If DC24V is output between pins 1-2 of each cooling fan connector and the cooling fan is not rotating, the cooling fan is defective.

(Refer to 6006.)

5. Defective cooling water solenoid valve.

6. Defective chilling unit. (chilling unit used)

7. Defective power PCB 1.

(Refer to 6014 and 6014-1.)

8. Defective power PCB 2.

(Refer to 6015.)

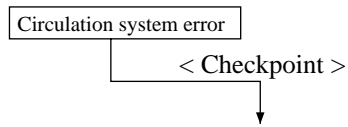
9. Defective main control PCB.

(Refer to 6011.)

Memo

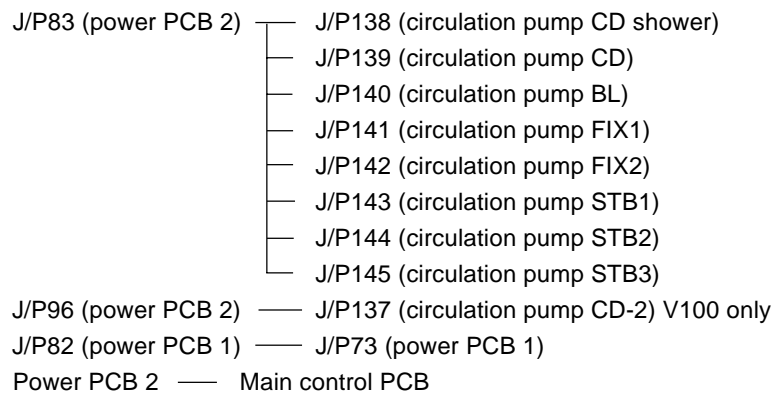
Electric circuit drawing 3 - 1 and 3 - 10

Circulation error (When the solution temperature is over the upper limit.)



1. Chemical filter cartridge is clogged.
2. Blown fuse.
Power PCB 1 F17 (125V/6.3A) circulation pump CD and CD shower
F18 (125V/6.3A) circulation pump CD-2, BL, FIX1 - 2 and STB1 - 3
(☞ Refer to 6014 and 6014-1.)

3. Check imperfect contact in the connectors and broken cables.



4. Defective circulation pump.

If DC24V is output between pins 1-2 of each circulation pump connector and the circulation pump is not rotating, the circulation pump is defective.
5. Defective power PCB 1.

(☞ Refer to 6014 and 6014-1.)
6. Defective power PCB 2.

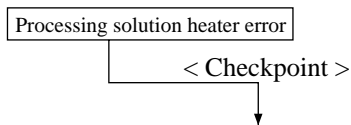
(☞ Refer to 6015.)
7. Defective main control PCB.

(☞ Refer to 6011.)

Memo

Electric circuit drawing 3 - 6

Processing solution heater error (when the solution temperature exceeding the upper or lower limit.



1. Blown fuse.

(V30,V50)

Power PCB 1 F1 (250V/3.15A) processing solution heater CD

F2 (250V/3.15A) processing solution heater BL and FIX1

F3 (250V/3.15A) processing solution heater FIX2

F4 (250V/3.15A) processing solution heater STB3

F10 (250V/6.3A) processing solution heater CD, BL, and FIX1

F11 (250V/6.3A) processing solution heater FIX2 and STB3

(Refer to 6014.)

(V100)

Power PCB 1 F1 (250V/10A) processing solution heater CD and CD-2

F2 (250V/3.15A) processing solution heater BL

F3 (250V/3.15A) processing solution heater FIX1

F4 (250V/6.3A) processing solution heater FIX2

F10 (250V/10A) processing solution heater CD, CD-2, and BL

F11 (250V/10A) processing solution heater FIX1, FIX2 and STB3

F36 (250V/6.3A) processing solution heater STB3

(Refer to 6014-1.)

2. Check imperfect contact in the connectors and broken cables.

J/P57 (power PCB 1) — J/P120 (processing solution heater CD)
 — J/P119 (processing solution heater CD-2) V100 only
 — J/P121 (processing solution heater BL)
 — J/P122 (processing solution heater FIX1) V30, V50 only
 — J/P123 (processing solution heater FIX2) V30, V50 only
 — J/P124 (processing solution heater STB3) V30, V50 only

J/P58 (power PCB 1) — J/P122 (processing solution heater FIX1) V100 only
 — J/P123 (processing solution heater FIX2) V100 only
 — J/P124 (processing solution heater STB3) V100 only

J/P69 (power PCB 1) — J/P100 (power PCB 2)

Power PCB 2 — Main control PCB

3. Defective processing solution heater.

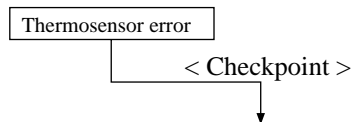
When resistance between pins 1-2 of each processing solution heater connector plug is measured, and the value is significantly different from the values in the table below, the heater is defective.

Heater name	Resistance (Ω)		
	V30	V50	V100
CD	192	144	96
BL	576	288	192
FIX1	576	576	192
FIX2	288	288	96
STB3	192	144	96
CD2	—	—	96

4. Defective power PCB 1.
(☞ Refer to 6014 and 6014-1.)
5. Defective power PCB 2.
(☞ Refer to 6015.)
6. Defective main control PCB.
(☞ Refer to 6011.)

Memo
Electric circuit drawing 3 - 4

The actual temperature and the displayed temperature are different (when the solution temperature exceeding the upper or lower limit.)



1. The thermosensor is dirty.
2. Check imperfect contact in the connectors and broken cables.

J/P8 (main control PCB)

- J/P154 (thermosensor) CD
- J/P155 (thermosensor) BL
- J/P156 (thermosensor) FIX1
- J/P157 (thermosensor) FIX2
- J/P160 (thermosensor) STB

3. Defective thermosensor.

When resistance between pins 1-2 at the plug side of each thermosensor connector is measured and the value is significantly different from the values in the table below, the thermosensor is defective.

Actual temperature(° C)	Resistance(kΩ)
10	20.66
20	12.64
30	7.97
35	6.39
38	5.62
40	5.16
45	4.20

(☞ Refer to 2201.)

4. Defective main control PCB.

(☞ Refer to 6011.)

Memo
Electric circuit drawing 3 - 11

No. 023

< Error >

No. 023

< Message >

Alarm sounds.

The processing solution name
for the error is displayed.

< 023-__>
SOLN. S-THERMO. ACTIVATED

(N)

Memo

- The processing tank for the error is displayed by the sub-number.

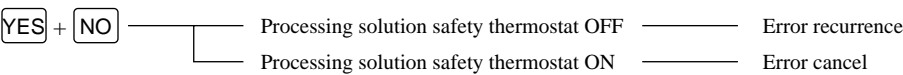
023 - 0 CD
023 - 1 BL
023 - 2 FIX 1
023 - 3 FIX 2
023 - 6 STB 3

Displayed in the order from 0.
- The processing solution name varies depending on the processing specification.

< Alarm Cancel >

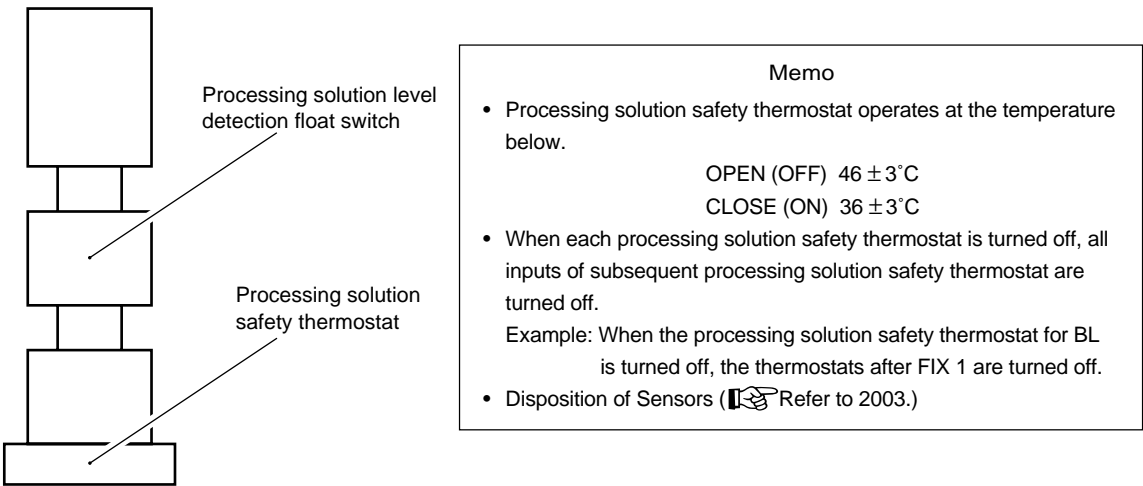
Press the NO key.

< Error Message Cancel >

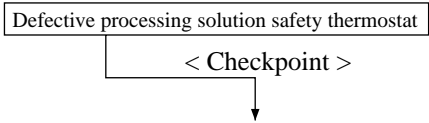


< Condition >

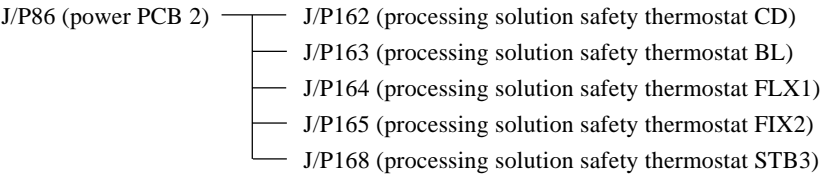
Processing solution safety thermostat was off.



< Diagnostic >



1. Check imperfect contact in the connectors and broken cables.



Memo

- Processing solution level detection float switches CD and CD-2 for V100 are wired in series.

J/P86 (power PCB 2) — J/P162 — J/P162 (processing solution level detection float switch CD)
J/P117 (processing solution level detection float switch CD-2)

Power PCB 2 — Main control PCB

2. Defective processing solution safety thermostat.

If no continuity is observed between pins 5-6 at the plug side of each safety thermostat, the safety thermostat is defective.

3. Defective power PCB 2.

(🔧 Refer to 6015.)

4. Defective main control PCB.

(🔧 Refer to 6011.)

Memo

Electric circuit drawing 3 - 8

No. 024

< Error >

No. 024

< Message >

Alarm sounds.

< 024 >
CIRCULATION PUMP STOPPED

(N)

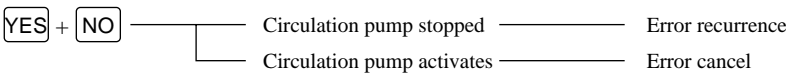
Memo

The pump number for the error is displayed.

< Alarm Cancel >

Press the key.

< Error Message Cancel >



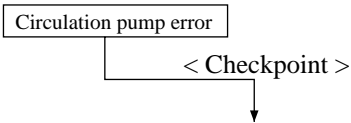
< Condition >

Circulation pump stopped.

Memo

The circulation pump has a built-in motion sensor. The sensor signal for the motion of the circulation pump is checked by CPU.

< Diagnostic >



- 1. **Chemical filter cartridge is clogged.**

- 2. **Blown fuse.**

Power PCB 1 F17 (125V/6.3A) circulation pump CD and CD shower
 F18 (125V/6.3A) circulation pump CD-2, BL, FIX1 - 2 and STB1 - 3
(Refer to 6014 and 6014-1.)

- 3. **Check imperfect contact in the connectors and broken cables.**

J/P83 (power PCB 2) — J/P138 (circulation pump CD shower)
 — J/P139 (circulation pump CD)
 — J/P140 (circulation pump BL)
 — J/P141 (circulation pump FIX1)
 — J/P142 (circulation pump FIX2)
 — J/P143 (circulation pump STB1)
 — J/P144 (circulation pump STB2)
 — J/P145 (circulation pump STB3)

J/P96 (power PCB 2) — J/P137 (circulation pump CD-2) V100 only
J/P82 (power PCB 1) — J/P73 (power PCB 1)
Power PCB 2 — Main control PCB

- 4. **Defective circulation pump.**

If DC24V is output between pins 1-2 of each circulation pump connector and the circulation pump is not rotating, the circulation pump is defective.

- 5. **Defective power PCB 1.**

(Refer to 6014 and 6014-1.)

- 6. **Defective power PCB 2.**

(Refer to 6015.)

- 7. **Defective main control PCB.**

(Refer to 6011.)

Memo

Electric circuit drawing 3 - 6

No. 025

< Error >

No. 025

< Message >

Alarm sounds continuously.

< 025 >
DRYER TEMPERATURE ERROR

(N)

Memo
If an error occurs, the READY lamp flashes in red.

< Alarm Cancel >

Press the

NO

 key.

< Error Message Cancel >

YES

 +

NO

 —————

Over the process range

 —————

Error recurrence

Within the process range

 —————

Error cancel

< Condition >

After the temperature adjustment, the dryer temperature has exceeded the process range while the film is in the dryer.

	Process range
DRY	Set temperature ± 10°C

Memo
Disposition of Sensors (👉 Refer to 2003.)

< Diagnostic >

The dryer fan does not rotate.

Defective rotation of the dryer fan

<Checkpoint>

1. Blown fuse.

Power PCB 1 F6 (125V/6.3A) V50, V100

F17 (125V/6.3A) V30 only

 Refer to 6014 and 6014-1.)

2. Check imperfect contact in the connectors and broken cables.

J/P68 (power PCB 1) - J/P130 (dryer fan)

J/P71 (power PCB 1) - Transformer 1

J/P60 (power PCB 1) - Transformer 1

J/P69 (power PCB 1) - J/P100 (power PCB 2)

Power PCB 2 - Main control PCB

J/P55 (power supply) - J/P72 (power PCB 1) V30 only

3. Imperfect contact of circuit breaker NFB 2. (V50 only)

4. Defective dryer fan.

V30: If DC24V is output between pins 1-3 and DC5V is output between pins 2-3 of J/P130 and the dryer fan is not rotating, the dryer fan is defective.


V50: If DC33V is output between pins 1-3 and DC5V is output between pins 2-3 of J/P130 and the dryer fan is not rotating, the dryer fan is defective.

V100: If AC100V is output between pins 1-3 of J/P130 and the dryer fan is not rotating, the dryer fan is defective.

5. Defective power PCB 1.

 Refer to 6014 and 6014-1.)

6. Defective power PCB 2.

 Refer to 6015.)

7. Defective main control PCB.

 Refer to 6011.)

8. Defective power supply. (V30 only)

If DC24V is not output between pins 2-3 of J/P55, the power supply is defective.

Memo

Electric circuit drawing 3 - 5

Dryer heater error

Dryer heater error

<Checkpoint>

1. Blown fuse.

Power PCB 1 F12 - 15 (250V/10A)

F33 - 34 (250V/10A) V100 only

(Refer to 6014 and 6014-1.)

2. Check imperfect contact in the connectors and broken cables.

J/P59 (power PCB 1) - J/P127 (dryer heater)

J/P69 (power PCB 1) - J/P100 (power PCB 2)

Main control PCB - Power PCB 2

3. Defective dryer heater.

When resistances between pins 1-2, 3-4, 4-5 and 5-6 at the plug side of each dryer heater connector are measured during normal operation and the value is significantly different from the values in the table below, the heater is defective. (For V100, resistances between pins 1-2, 2-3, 4-5, 5-6, 7-8, and 8-9 are measured.)

Pin No.	Resistance		
	V30	V50	V100
1-2	62.8	41.8	34.2
2-3	13.1	8.8	7.2
4-5	47	34.2	41.8
5-6	9.9	7.2	8.8
7-8	—	—	37.6
8-9	—	—	2.9

4. Defective power PCB 1.

(Refer to 6014 and 6014-1.)

5. Defective power PCB 2.

(Refer to 6015.)

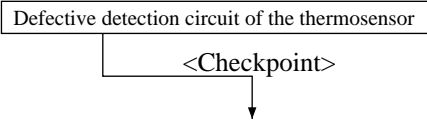
6. Defective main control PCB.

(Refer to 6011.)

Memo

Electric circuit drawing 3 - 4

Defective thermosensor.



1. The thermosensor is dirty.
2. Check imperfect contact in the connectors and broken cables.
J/P8 (main control PCB) - J/P161 (thermosensor)

3. Defective thermosensor.

When resistance between pins 1-2 at the plug side of the thermosensor connector P161 is measured and the value is significantly different from the values in the table below, the thermosensor is defective.

Actual temperature (°C)	Resistance (kΩ)
10	20.66
20	12.64
30	7.97
40	5.16
50	3.44
60	2.34
70	1.63
80	1.16

4. Defective main control PCB.

Refer to 6011.)

Memo

Electric circuit drawing 3 - 11

No. 026

< Error >

No. 026

< Message >

Alarm sounds countinuously.

< 026 >
DRYER S-THERMO. ACTIVATED

(N)

Memo
If an error occurs, the READY lamp flashes in red.

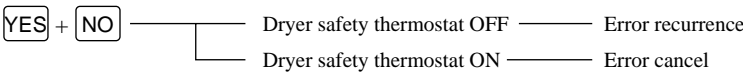
< Alarm Cancel >

Press the

NO

 key.

< Error Message Cancel >



< Condition >

Dryer safety thermostat was turned off.

Memo

- Dryer safety thermostat operates at the temperature shown below.

OPEN (OFF) 80 ± 2.8°C

CLOSE (ON) 60 ± 5.6°C
- Disposition of Sensors (Refer to 2004.)

< Diagnostic >

Defective dry safety thermostat

<Checkpoint>



1. Check imperfect contact in the connectors and broken cables.


J/P70 (power PCB 1) - J/P128 (dryer safety thermostat)

J/P100 (power PCB 2) - J/P69 (power PCB 1)


2. Defective safety thermostat.

If the temperature is 54.4°C or less and no continuity is observed between pins 1-2 of plug side of the safety thermostat connector P128, the safety thermostat is defective.

3. Defective power PCB 1.

 Refer to 6014 and 6014-1.)

4. Defective power PCB 2.

 Refer to 6015.)

Memo

Electric circuit drawing 3 - 4

No. 027

< Error >

No. 027

< Message >

Alarm sounds.

< 027 >

(SHIFT)

THERMOSENSOR ERROR

(N)

Memo

When the

SHIFT

 key is pressed, the name of each processing solution appears on the display.

< Alarm Cancel >

Press the

NO

 key.

< Error Message Cancel >

YES

 +

NO

Detection temperature less than 0°C or 100°C or more

Detection temperature 0°C or more or less than 100°C


Error recurrence

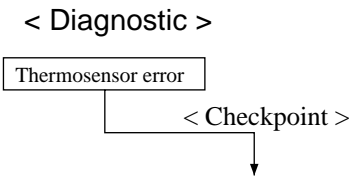
Error cancel

< Condition >

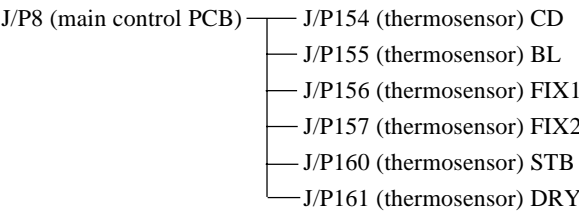
The detection temperature was either lower than 0°C or more than 100°C.

Memo

Disposition of Sensors ( Refer to 2003.)



- 1. The thermosensor is dirty.
- 2. Check imperfect contact in the connectors and broken cables.



- 3. Defective thermosensor.

When resistance between pins 1-2 at the plug side of each thermosensor connector is measured and the value is significantly different from the values in the table below, the thermosensor is defective.

Refer to 2201.)

CD,BL, FIX1, FIX2, STB

Actual temperature (°C)	Resistance (kΩ)
10	20.66
20	12.64
30	7.97
35	6.39
38	5.62
40	5.16
45	4.20

DRY

Actual temperature (°C)	Resistance (kΩ)
10	20.66
20	12.64
30	7.97
40	5.16
50	3.44
60	2.34
70	1.63
80	1.16

- 4. Defective main control PCB.

Refer to 6011.)

Memo

Electric circuit drawing 3 - 11

No. 028

< Error >

No. 028

< Message >

Alarm sounds continuously.

< 028 >
DRYER FAN STOPPED

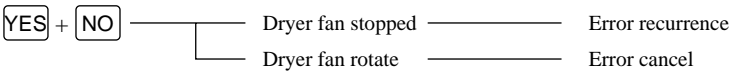
Memo

If an error occurs, the READY lamp flashes in red.

< Alarm Cancel >

Press the key.

< Error Message Cancel >



< Condition >

Dryer fan stopped.

Memo

- V30 and V50 dryer fan are equipped with a built-in rotation detector which sends rotation signal to CPU for monitoring.
- Since V100 dryer fan has no function to detect rotation, this alarm does not occur.

< Diagnostic >


Dryer fan does not rotate.

Defective rotation of the dryer fan

<Checkpoint>

1. Blown fuse.

Power PCB 1 F17(125V/6.3A) V30 only
F6(125V/6.3A) V50, V100

( Refer to 6014 and 6014-1.)

2. Check imperfect contact in the connectors and broken cables.

J/P68 (power PCB 1) — J/P130 (Dryer fan)
J/P71 (power PCB 1) — Transformer 1
J/P60 (power PCB 1) — Transformer 1
J/P69 (power PCB 1) — J/P100 (power PCB 2)
Power PCB 2 — Main control PCB
J/P55 (power supply) — J/P72 (power PCB 1) V30 only
Power PCB 1 — Main control PCB

3. Imperfect contact of circuit breaker NFB2.(Only V50)


4. Defective dryer fan.

V30: If DC24V is output between pins 1-3 and DC5V is output between pins 2-3 of J/P130 and the dryer fan is not rotating, the dryer fan is defective.

V50: If DC33V is output between pins 1-3 and DC5V is output between pins 2-3 of J/P130 and the dryer fan is not rotating, the dryer fan is defective.

V100: If AC100V is output between pins 1-3 of J/P130 and the dryer fan is not rotating, the dryer fan is defective.


5. Defective power PCB 1.

( Refer to 6014 and 6014-1.)

6. Defective power PCB 2.

( Refer to 6015.)

7. Defective main control PCB.

( Refer to 6011.)

8. Defective power supply. (V30 only)

If DC24V is not output between pins 2-3 of J/P55, the power supply is defective.

Memo

Electric circuit drawing 3 - 5

No. 029

< Error >

No. 029

< Message >

Alarm sounds.

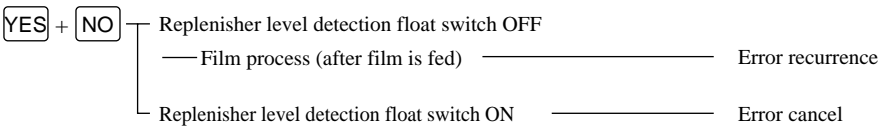
< 029 >
REPLENISHER TANK EMPTY

STB FIX BL CD (N)

< Alarm Cancel >

Press the **NO** key.

< Error Message Cancel >



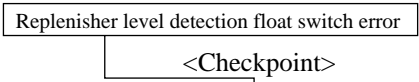
< Condition >

The replenisher level detection float switch was OFF.

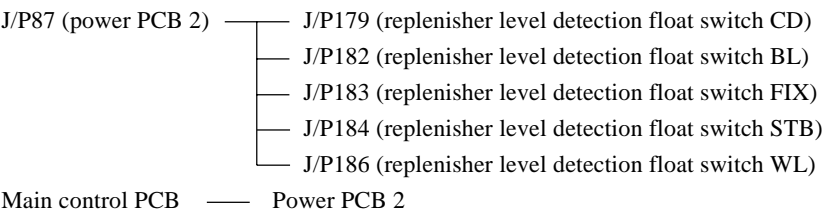
Memo

- The processing solution name differs depending on the process specification.
- Disposition of Sensors (Refer to 2003.)

< Diagnostic >



- 1. The float of the replenisher level detection float switch does not operate smoothly.
- 2. Check imperfect contact in the connectors and broken cables.



- 3. Defective replenisher level detection float switch.
If the float of processing solution level detection float switch is up and no continuity is observed between pins 1-2 at the plug side of each float switch connector, the float switch is defective.
- 4. Defective power PCB 2.
(Refer to 6015.)
- 5. Defective main control PCB.
(Refer to 6011.)

Memo
Electric circuit drawing 3 - 9

No. 030

< Error >

No. 030

< Message >

Alarm sounds.

< 030 >
WASTE SOLUTION TANK FULL

CD BL
FIX STB

(N)

Memo

- The tank full of the waste solution is displayed. (CD, BL, FIX and STB)
- When the waste solution collection type in the standard setting mode is set to "Standard", No.1 (with Ag) and No. 2 (without Ag) are displayed.

< Alarm Cancel >

Press the NO key.


< Error Message Cancel >

Waste solution level detection float switch OFF - Error cancel

< Condition >

The waste solution level detection float switch was turned on.

Memo

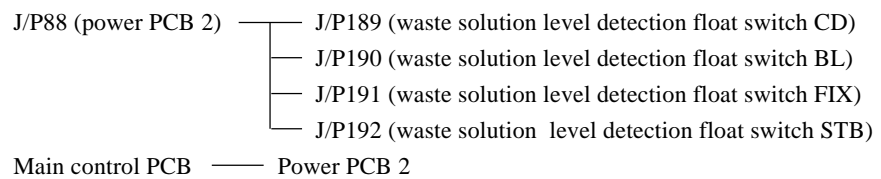
Disposition of Sensors ( Refer to 2003.)

< Diagnostic >

Defective detection circuit of waste solution level detection float switch

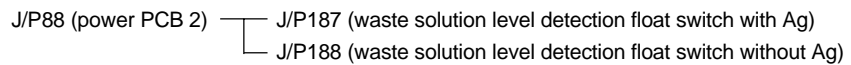
<Checkpoint>

1. The float of the waste solution level detection float switch does not operate smoothly.
2. Check imperfect contact in the connectors and broken cables.



Memo

In the case of optional specifications of 2 solution collection:



3. Defective waste solution level detection float switch.

If the float of processing solution level detection float switch is up and no continuity is observed between pins 1-2 at the plug side of each float switch connector, the float switch is defective.

4. Defective power PCB 2.

(👉 Refer to 6015.)

5. Defective main control PCB.

(👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 9

No. 031

< Error >

No. 031

< Message >

Alarm sounds.

< 031 >

TURN ON REPLENISHMENT SWITCH

(N)

< Alarm Cancel >

Press the key.

< Error Message Cancel >

1. Replenishment switch ON - Error cancel
2. When the replenishment lack time is cleared, the error is canceled.

< Condition >

1. 40 minutes or more have passed with the replenishment switch turned off.
2. The replenishment lack time is more than 600 seconds.

No. 032

< Error >

No. 032

< Message >

Alarm sounds continuously.

< 032- >

TURN ON
DRIVE SWITCH


(N)

Memo

032 - 0 Film is in process.

- When an error occurs, the READY lamp flashes in red.
- 032 - 1 Film is not in process.

< Alarm Cancel >

Press the  key.


< Error Message Cancel >

When the DRIVE switch is turned on, the error is canceled.

< Condition >

1. The DRIVE switch was turned off during the film processing. (alarm)
2. Standby status other than the DRIVE switch. (no alarm)

Memo

Disposition of Sensors ( Refer to 2002.)

< Diagnostic >

DRIVE switch error

<Checkpoint>

1. Blown fuse.

Power PCB 1 F5 (125V/3.15A)

2. Check imperfect contact in the connector and broken cables.

J/P62 (power PCB 1) - DRIVE switch

J/P100 (power PCB 2) - J/P69 (power PCB 1)

3. Defective DRIVE switch.

If the DRIVE switch is turned on and no continuity is observed between pins 1-2 of connector J62, the DRIVE switch is defective.

4. Defective power PCB 1.

 Refer to 6014 and 6014-1.)

5. Defective main control PCB.

 Refer to 6011.)

Memo

Electric circuit drawing 3 - 5

No. 033

< Error >

No. 033

< Message >

Alarm sounds.

< 033 >

A/D CONVERTER ERROR

(N)

< Alarm Cancel >

Press the key.

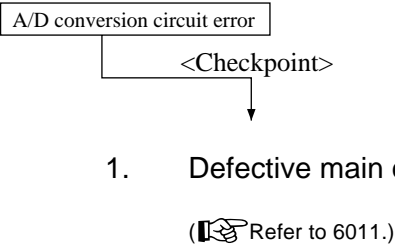
< Error Message Cancel >

+ - Error cancel - Error recurrence in case of the following condition

< Condition >

The A/D conversion was not correctly carried out.

< Diagnostic >



Memo

Electric circuit drawing 3 - 11

No. 034

< Error >

No. 034

< Message >

Alarm sounds continuously.

< 034 >

CLOSE UPPER COVER

(N)

Memo

When an error occurs, the READY lamp flashes in red.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

When the upper cover limit switch is on, the error is canceled.

< Condition >

1. The upper cover limit switch was turned off during film processing. (alarm)
2. The upper cover limit switch was turned off does not during film processing. (no alarm)

Memo

- When the upper cover limit switch is turned off, the circulation pump stops mechanically.
- When the processing solution level detection float switch is turned off, opening/closing of the processor cover cannot be detected.
- Disposition of Sensors (Refer to 2003.)

< Diagnostic >

Defective detection circuit of upper cover limit switch

<Checkpoint>



1. Check imperfect contact in the connectors and broken cables.


J/P109 (power PCB 2) - J/P209 (upper cover limit switch)

Main control PCB - Power PCB 2


2. Defective upper cover limit switch.

If the upper cover limit switch is turned on and no continuity is observed between pins 1-2 at the plug side of connector P209, the limit switch is defective.

3. Defective power PCB 2.

 Refer to 6015.)

4. Main control PCB.

 Refer to 6011.)

Memo

Electric circuit drawings 3 - 6

No. 035

< Error >

No. 035

< Message >

Alarm sounds instantaneously.

< 035 >

(SHIFT)

REFILLING ERROR

(N)

Memo

When the SHIFT key is pressed, the name of each processing solution is displayed.

< Error Message Cancel >

Press the NO key.

< Condition >

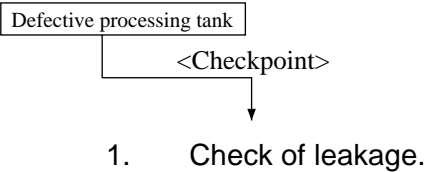
1. The refilling water level detector was not turned on 60 seconds after starting refilling water.
2. Refill water in the refilling water mode after the low level alarm for No. 021 processing tank was cancelled. The refilling water level detector was not turned on 60 seconds after starting refilling water.

Memo

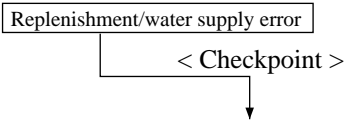
Disposition of Sensors (👉 Refer to 2003.)

< Diagnostic >

Defective processing tank.



Refilling water does not come out.



- 1. Clog in the refilling water pump or the refilling water hose.
- 2. Air bubble in the refilling water pump.
- 3. Blown fuse.
Power PCB 1 F16 (125V/6.3A)
(Refer to 6014 and 6014-1.)
- 4. Check imperfect contact in the connectors and broken cables.

J/P99 (power PCB 2) — J/P146 (refilling water pump CD)
 — J/P147 (refilling water pump BL)
 — J/P148 (refilling water pump FIX1)
 — J/P149 (refilling water pump FIX2)
 — J/P150 (refilling water pump STB1)
 — J/P151 (refilling water pump STB2)
 — J/P152 (refilling water pump STB3)

Main control PCB — Power PCB 2
J/P82 (power PCB 2) — J/P73 (power PCB 1)
- 5. Defective refilling water pump.
If DC24V is output between pins 1-2 of each refilling water pump connector J/P146-152 and the water pump does not operate, the refilling water pump is defective.
- 6. Defective power PCB 2.
(Refer to 6015.)
- 7. Defective main control PCB.
(Refer to 6011.)
- 8. Defective power PCB 1.
(Refer to 6014 and 6014-1.)

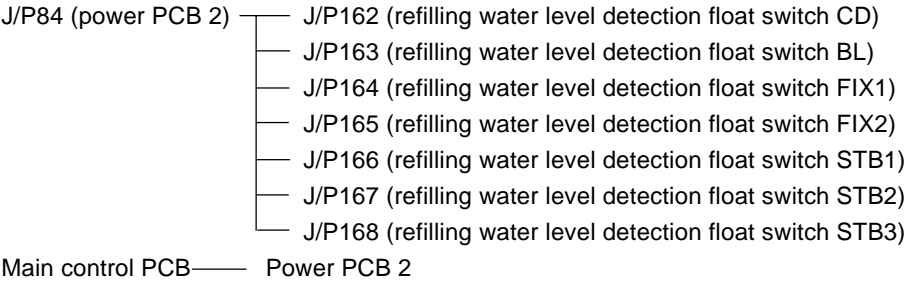
Memo
Electric circuit drawing 3 - 6

Defective refilling water level detection circuit.

Defective refilling water level detection float switch

< Checkpoint >

- 1. The float of the refilling water level detection float switch does not operate smoothly.
- 2. Check imperfect contact in the connectors and broken cables.



Memo

- Refilling water level detection float switches CD and CD-2 for V100 are wired in series.
J/P84 (power PCB 2) — J/P162 — J/P162 (refilling water level detection float switch CD)
J/P117 (refilling water level detection float switch CD-2)

- 3. Defective refilling water level detection float switch.

(Refer to 2003.)

If the float of the refilling water level detection float switch is raised and no continuity is observed between pins 1-2 of each float switch connector plug, the float switch is defective.

- 4. Defective power PCB 2.

(Refer to 6015.)

- 5. Defective main control PCB.

(Refer to 6011.)

Memo

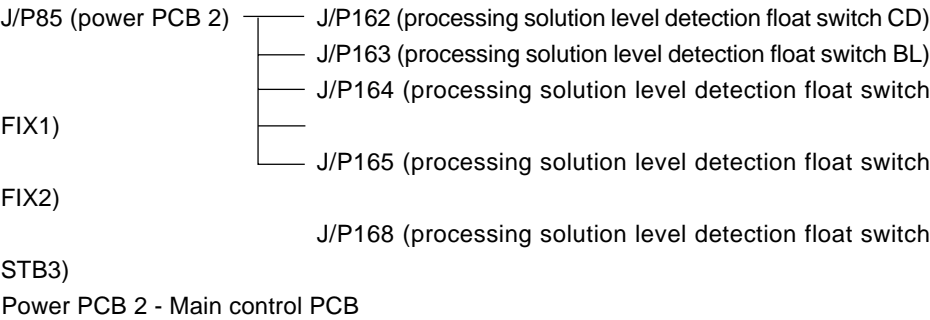
Electric circuit drawing 3 - 8

The processing solution level detection float switch is off.

Defective detection circuit of the processing solution level detection float switch

< Checkpoint >

- 1. The processing solution level detection float switch is dirty.
- 2. Check imperfect contact in the connectors and broken cables.



Memo

- Processing solution level detection float switches CD and CD-2 for V100 are wired in series.
J/P85 (power PCB 2) — J/P162 — J/P162 (processing solution level detection float switch CD)
J/P117 (processing solution level detection float switch CD-2)

- 3. Defective processing solution level detection float switch.

(Refer to 2003.)

If the float of the processing solution level detection float switch is raised and no continuity is observed between pins 3-4 of each float switch connector plug, the float switch is defective.

- 4. Defective power PCB 2.

(Refer to 6015.)

- 5. Defective main control PCB.

(Refer to 6011.)

Memo

Electric circuit drawing 3 - 8

No. 040

< Error >

No. 040

< Message >

Alarm sounds continuously.

< 040 >

DRIVE MOTION ERROR

(N)

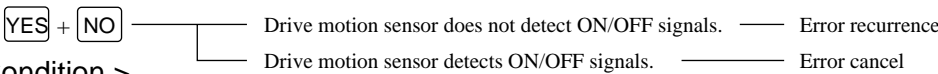
Memo

If an error occurs, the READY lamp flashes in red.

< Alarm Cancel >

Press the key.

< Error Message Cancel >



< Condition >

The drive motion could not be detected with the drive motion sensor.

Memo

Disposition of Sensors (👉 Refer to 2001.)

< Diagnostic >

The drive motor does not operate.

Defective drive motor


<Checkpoint>

1. Blown fuse.
- Power PCB 1 F5 (125V/3.15A)
- (👉 Refer to 6014 and 6014-1.)
2. Check imperfect contact in the connectors and broken cables.
- J/P62 (power PCB 1) - DRIVE switch
- J/P63 (power PCB 1) - J/P129 (drive motor)
- J/P100 (power PCB 2) - J/P69 (power PCB 1)

3. Defective drive motor.


If AC100V is output between pins 1-4 and 1-5 of J/P129 and the drive motor is not rotating, the drive motor is defective.

4. Defective power PCB 1.

 Refer to 6014 and 6014-1.)

5. Defective transformer TR1. (Other than 3 phase-3 wire/single phase-2 wire)

6. Defective power PCB 2.

 Refer to 6015.)

Memo
Electric circuit drawing 3 - 5

Defective detection circuit of drive motion sensor.


Defective drive motion sensor

<Checkpoint>

1. The drive motion sensor is dirty.
2. Check imperfect contact in the connectors and broken cables.

J/P26 (loading connecting PCB) - J/P32 (drive motion sensor)
J/P4 (main control PCB) - J/P21 (loading connecting PCB)

3. Defective drive motion sensor.
4. Defective loading connecting PCB.

 Refer to 6016.)

5. Defective main control PCB.

 Refer to 6011.)

Memo
Electric circuit drawing 3 - 2

No. 041

< Error >

No. 041

< Message >

Alarm sounds.

< 041->

CIRCULATION LOW

(CD)

12

(N)

Memo

- When the digital flowmeter in standard setting 3 is off, this error does not occur.
- The digital flowmeter with an error is displayed in sub-number.

041-1 Digital flowmeter 1

041-2 Digital flowmeter 2

041-3 Digital flowmeter 1 and 2
- Sub-number errors 2 and 3 does not occur on V30 and V50.
- If the circulation pump is stopped, error No. 024 occurs after this error occurs.

< Alarm Cancel >

Press the

NO

 key.

< Error Message Cancel >

YES

 +

NO

 —— Error cancel —— Error recurrence for the following conditions:

< Condition >

Flow of the digital flowmeter is lower than the value below.

	V30	V50	V100
Flowmeter 1	3 L/min	5 L/min	5 L/min
Flowmeter 2	—	—	5 L/min

Memo

Disposition of Sensors (🔧 Refer to 2003.)

< Diagnostic >

Flow is low.

The circulation pump is defective.

<Checkpoint>

1. The chemical filter cartridge is clogged.
2. Blown fuse.
Power PCB 1 F17(125V/ 6.3A) Circulation pump CD, CD shower (☞ Refer to 6014 and 6014-1.)
F18(125V/ 6.3A) Circulation pump CD-2 V100 only (☞ Refer to 6014-1.)
3. Check imperfect contact in the connectors and broken cables.
J/P83 (power PCB 2) — J/P 138 (circulation pump CD shower)
J/P 139 (circulation pump CD)
J/P96 (power PCB 2) — J/P 137 (circulation pump CD-2) V100 only
Main control PCB — Power PCB 2
4. Defective circulation pump.
If DC24V is output between pins 1-2 of each circulation pump connector and the flow of the circulation pump is reduced, the circulation pump is defective.
5. Defective power PCB 2.
(☞ Refer to 6015.)
6. Defective main control PCB.
(☞ Refer to 6011.)

Memo

Electric circuit drawing 3 - 6

Defective digital flowmeter.

Defective digital flowmeter

<Checkpoint>

1. Check imperfect contact in the connectors and broken cables.
J/P97 (power PCB 2) — J/P 178 (digital flowmeter 1)
J/P106 (power PCB 2) — J/P 214 (digital flowmeter 2)
Power PCB 2 — Main control PCB
2. Defective digital flowmeter.
3. Defective power PCB 2.
(☞ Refer to 6015.)
4. Defective main control PCB.
(☞ Refer to 6011.)

Memo

Electric circuit drawing 3 - 10

No. 051

< Error >

No. 051

< Message >

No alarm sounds.

< 051 >

SET DATE & TIME

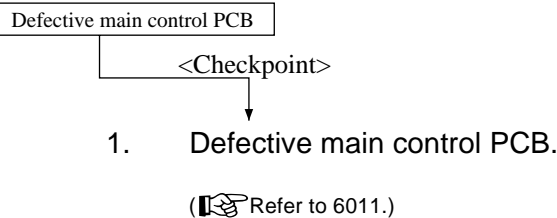
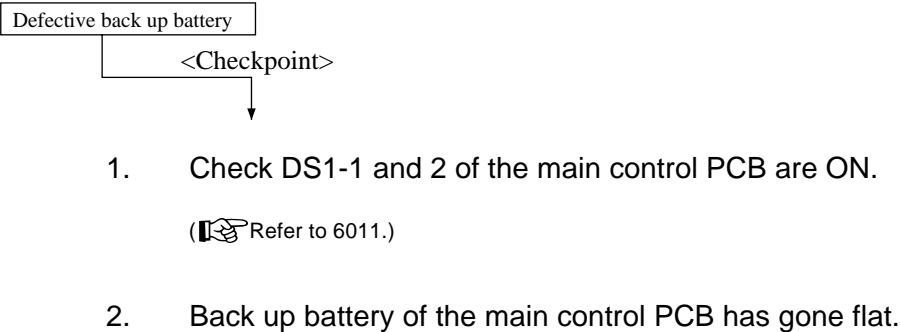
< Error Message Cancel >

Set the date and time correctly.

< Condition >

When the power is on, setting of date and time was incorrect.

< Diagnostic >



No. 052

< Error >

No. 052

< Message >

No alarm sounds.

< 052 >

DATA INITIALIZED
INPUT MAIN DATA

(N)

< Error Message Cancel >

Press the key.

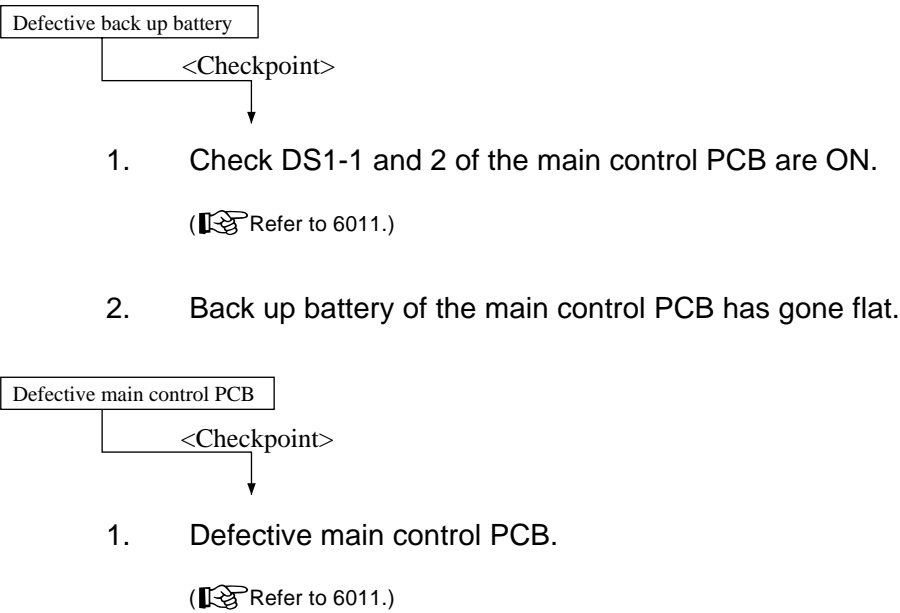
Memo

Input of initial data or main data reading from the floppy disk is required.

< Condition >

RAM data is destroyed.

< Diagnostic >



No. 053

< Error >

No. 053

< Message >

Alarm sounds continuously.

< 053 >

100V POWER FAILURE

(N)

Memo

If an error occurs, the READY lamp flashes in red.

< Alarm Cancel >

Press the **[NO]** key.

< Error Message Cancel >

When 100 V power is supplied, the error is canceled.

< Condition >

100 V power supply failed.

< Diagnostic >

Defective 100 V supply voltage

<Checkpoint>

1. Defective input voltage to the machine.
2. Check imperfect contact in the connectors and broken cables.
 J/P65 (power PCB 1)
 J/P60 (power PCB 1) - Transformer TR1
 J/P71 (power PCB 1) - Transformer TR1
 J/P69 (power PCB 1) - J/P100 (power PCB 2)
 Power PCB 2 - Main control PCB
3. Defective transformer TR1. (Other tahn 3 phase-3 wire/single phase-2 wire)
4. Defective power PCB 1.
 (Refer to 6014 and 6014-1.)
5. Defective main control PCB.
 (Refer to 6011.)

Memo

Electric circuit drawing 3 - 1 and 3 - 5

No. 054

< Error >

No. 054

< Message >


No alarm sounds.

< 054 >

DISPLAY SELF-CHECK ERROR

(N)

< Error Message Cancel >


 - Error cancel (Reset the display control PCB.) - Error recurrence in case of the following condition.

< Condition >

An error occurs during display self diagnosis.

< Diagnostic >

Defective display control PCB.

 Refer to 6012.)

No. 055

< Error >

No. 055

< Message >

No alarm sounds.

< 055 >

MAIN SELF-CHECK ERROR

(N)

< Error Message Cancel >

☐ NO - Error cancel (Reset the main control PCB.) - Error recurrence in case of the following condition.

< Condition >

An error occurs during main control PCB self diagnosis.

< Diagnostic >

Defective main control PCB.

 Refer to 6011.)

No. 056

< Error >

No. 056

< Message >

No alarm sounds.

< 056 >

COMMUNICATION ERROR
BETWEEN MAIN AND DISPLAY

(N)

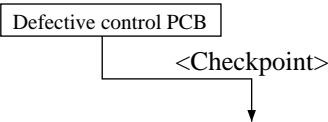
< Error Message Cancel >

Carry out power resetting.

< Condition >

Communication between the main control PCB and display control PCB could not be carried out.

< Diagnostic >



1. Check imperfect contact in the connectors and broken cables.
J/P3 (main control PCB) - J/P10 (display control PCB)
2. Defective main control PCB.
(👉 Refer to 6011.)
3. Defective display control PCB.
(👉 Refer to 6012.)

Memo

Electric circuit drawing 1 - 1

No. 057

< Error >

No. 057

< Message >

No alarm sounds.



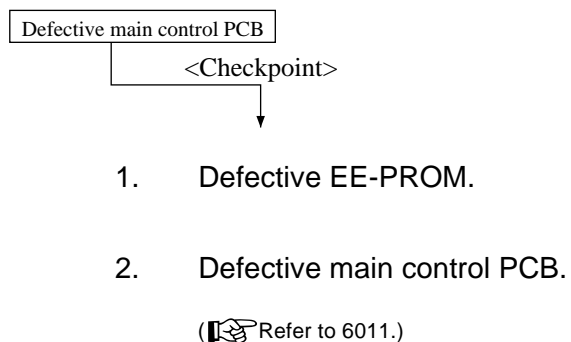
< Error Message Cancel >

1. Press the **NO** key.
2. Initialize all data.

< Condition >

Data written in EE-PROM is abnormal.

< Diagnostic >



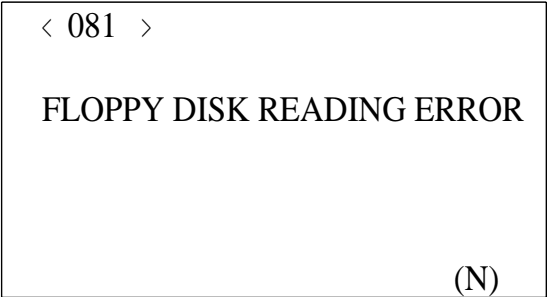
No. 081

< Error >

No. 081

< Message >

Alarm sounds instantaneously.



< Error Message Cancel >

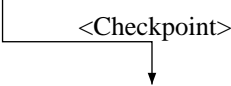
Press the NO key.

< Condition >

The floppy disk was read, but the data could not be read.

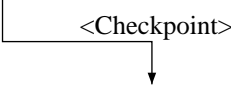
< Diagnostic >

Defective floppy disk



- 1. There is no data in the floppy disk.
- 2. Defective floppy disk.

Defective floppy disk drive



- 1. Check imperfect contact in the connectors and broken cables.
J/P14 (main control PCB) - J/P280 (floppy disk drive)
- 2. Defective main control PCB.
 Refer to 6011.)
- 3. Defective floppy disk drive.

Memo

Electric circuit drawing 1 - 2

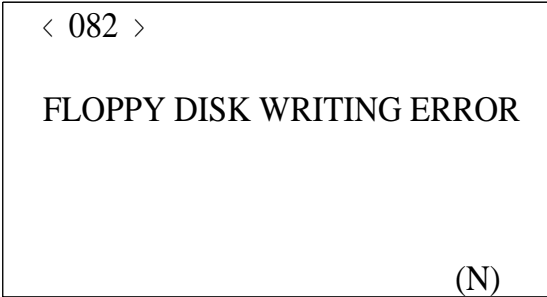
No. 082

< Error >

No. 082

< Message >

Alarm sounds instantaneously.



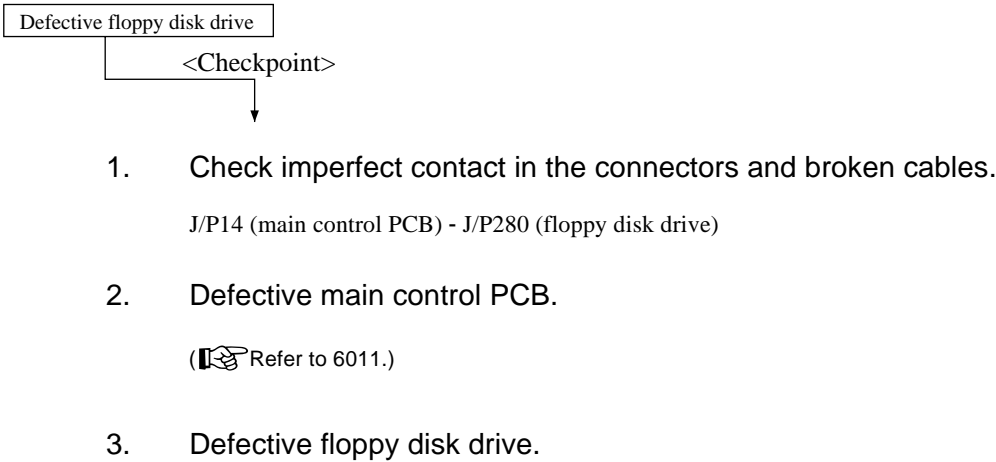
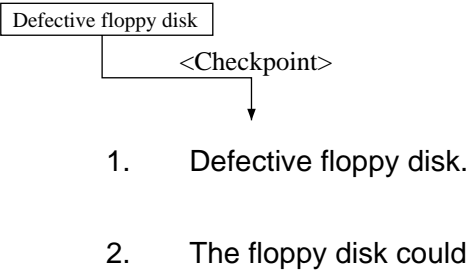
< Error Message Cancel >

Press the NO key.

< Condition >

Writing of data on the floppy disk has failed.

< Diagnostic >



Memo

Electric circuit drawing 1 - 2

No. 083

< Error >

No. 083

< Message >

Alarm sounds instantaneously.



< Error Message Cancel >

Press the key.

< Condition >

1. The floppy disk could not be formatted.
2. The system floppy disk was formatted.
3. The floppy disk was not formatted because the floppy disk was not inserted.

< Diagnostic >

Defective floppy disk

<Checkpoint>

1. Defective floppy disk.

Defective floppy disk drive

<Checkpoint>

1. Check imperfect contact in the connectors and broken cables.
J/P14 (main control PCB) - J/P280 (floppy disk drive)
2. Defective main control PCB.
(Refer to 6011.)
3. Defective floppy disk drive.

Memo

Electric circuit drawing 1 - 2

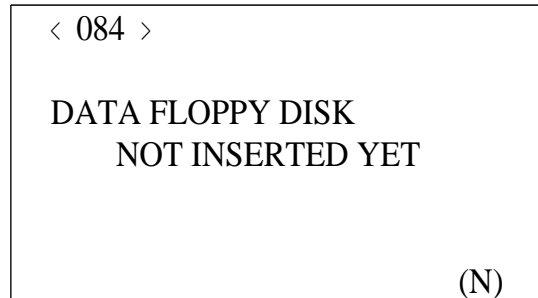
No. 084

< Error >

No. 084

< Message >

Alarm sounds instantaneously.



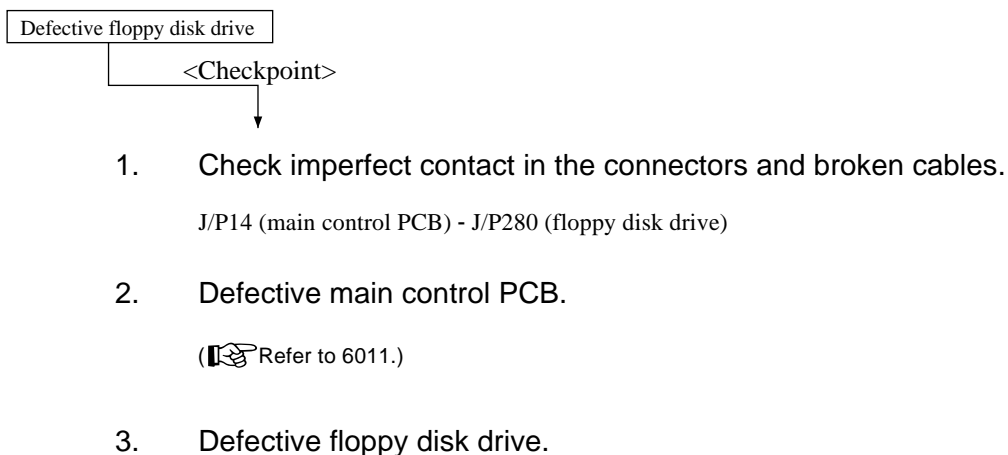
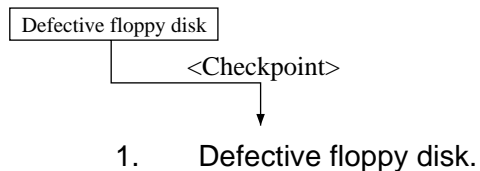
< Error Message Cancel >

Press the key.

< Condition >

Tried to read (write) the data floppy disk, but it was not in the disk drive.

< Diagnostic >



Memo
Electric circuit drawing 1 - 2

No. 085

< Error >

No. 085

< Message >

Alarm sounds instantaneously.

< 085 >
 SYSTEM PROGRAM FLOPPY
 DISK NOT INSERTED YET
 (N)

< Error Message Cancel >

Press the key.

< Condition >

Tried to read (write) the system program floppy disk, but it was not in the disk drive.

< Diagnostic >

Defective floppy disk

<Checkpoint>

1. There is no data in the floppy disk.
2. Defective floppy disk.

Defective floppy disk drive

<Checkpoint>

1. Check imperfect contact in the connectors and broken cables.
 J/P14 (main control PCB) - J/P280 (floppy disk drive)
2. Defective main control PCB.
 (Refer to 6011.)
3. Defective floppy disk drive.

Memo
 Electric circuit drawing 1 - 2

No. 101

< Error >

No. 101

< Message >

Alarm sounds.

< 101 >

CANNOT OPEN
AUTO LOADING COVER

(N)

< Alarm Cancel >

Press the key.


< Error Message Cancel >

1. + - Error cancel - Error recurrence in case of the following condition.
2. When the auto loading cover opens, the error is canceled.

< Condition >

The auto loading cover open solenoid turned on for 2 seconds to open the auto loading cover. The auto loading cover was not opened 1 second later.

Memo

Disposition of Sensors ( Refer to 2005.)

< Diagnostic >

The auto loading cover does not open.

Defective auto loading cover

<Checkpoint>

1. Foreign matter is found on the auto loading cover.
2. The auto loading cover spring is broken.
3. Blown fuse.

Auto loading driver PCB	F21 (125V/3.15A) (Refer to 6017.)
Power PCB 1	F19 (125V/6.3A) (Refer to 6014 and 6014-1.)
4. Check imperfect contact in the connectors and broken cables.

J/P257 (auto loading driver PCB) - J/P284 (auto loading cover open solenoid)
 J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
 I/O PCB - Main control PCB
 J/P251 (auto loading driver PCB) - J/P101 (power PCB 2)
5. Defective auto loading cover open solenoid.

If DC24V is output between pins 1-2 of connectors J/P284 and the solenoid is not operating, the solenoid is defective.
 (Refer to 2401.)
6. Defective auto loading driver PCB.

(Refer to 6017.)
7. Defective I/O PCB.

(Refer to 6013.)
8. Defective main control PCB.

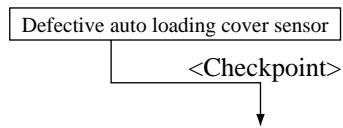
(Refer to 6011.)
9. Defective power PCB 2.

(Refer to 6015.)

Memo

Electric circuit drawing 4 - 3

The auto loading cover sensor is closed.



1. Foreign matter is found on the auto loading cover sensor unit.

2. Check imperfect contact in the connector and broken cables.

J/P282 (relay connector) - J/P283 (auto loading cover sensor)

J/P257 (auto loading driver PCB) - J/P282 (relay connector)

J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)

I/O PCB - Main control PCB

3. Defective auto loading cover sensor.

4. Defective auto loading driver PCB.

(Refer to 6017.)

5. Defective I/O PCB.

(Refer to 6013.)

6. Defective main control PCB.

(Refer to 6011.)

Memo
Electric circuit drawing 4 - 3

No. 102

< Error >

No. 102

< Message >

Alarm sounds.

< 102 >

CLOSE AUTO LOADING COVER

(N)

< Alarm Cancel >

Press the key.

< Error Message Cancel >

Cancel the error with the auto loading cover sensor closed.

< Condition >

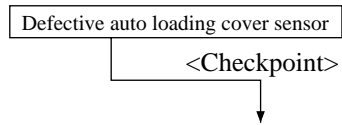
When 2 minutes or more have passed after the leader card was set in the automatic film loader unit (after the entrance elevator upper sensor was closed), the auto loading cover sensor was not closed, or when 2 minutes or more have passed after opening the auto loading cover, the leader card was not set (leader card insertion sensor 1 was not open).

Memo

Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

The auto loading cover sensor is open.



1. Check the position of the auto loading cover sensor.
(Refer to 2402.)
2. Check imperfect contact in the connectors and broken cables.
J/P282 (relay connector) - J/P283 (auto loading cover sensor)
J/P257 (auto loading driver PCB) - J/P282 (relay connector)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
3. Defective auto loading cover sensor.
4. Defective auto loading driver PCB.
(Refer to 6017.)
5. Defective I/O PCB.
(Refer to 6013.)
6. Defective main control PCB.
(Refer to 6011.)

Memo
Electric circuit drawing 4 - 3

No. 103

< Error >

No. 103

< Message >

Alarm sounds.

< 103->
LEADER CARD
NOT INSERTED PROPERLY

INSERT LEADER CARD
INTO AUTO FILM LOADER
(N)

< Alarm Cancel >

Press the NO key.

< Error Message Cancel >

1. When the leader card is set (the leader card set sensors 1 and 2 are open), the error is canceled.
2. When the auto loading cover is closed (the auto loading cover sensor is closed), the error is canceled.

< Condition >

Sub No.	Description
0	When the leader card was inserted in the automatic film loader unit, the leader card was not detected by the entrance horizontal feed limit switch (not ON).
1	When the leader card was inserted into the automatic film loader unit, the leader card was off the elevator base. (leader card set sensor 2 was closed.)





Memo
Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

The leader card set sensor 2 is close.

Defective detection circuit of leader card set sensor 2

<Checkpoint>

1. Check the position of leader card set sensor 2.
( Refer to 2404.)
2. Check imperfect contact in the connectors and broken cables.
J/P252 (auto loading driver PCB) - J/P261 (leader card set sensor 2)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
3. Defective leader card set sensor 2.
4. Defective auto loading driver PCB.
( Refer to 6017.)
5. Defective I/O PCB.
( Refer to 6013.)
6. Defective main control PCB.
( Refer to 6011.)

Memo


Electric circuit drawing 4 - 1

The entrance horizontal feed limit switch is OFF.

Defective detection circuit of the entrance horizontal feed limit switch

<Checkpoint>

1. Check the position of the entrance horizontal feed limit switch.

( Refer to 2406.)

2. Check imperfect contact in the connectors and broken cables.

J/P252 (auto loading driver PCB) - J/P265 (entrance horizontal feed limit switch)


J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)

I/O PCB - Main control PCB


3. Defective detection circuit of the entrance horizontal feed limit switch.

If the limit switch is turned on and continuity is not observed between pins 1-2 of connector jack J265, the limit switch is defective.


4. Defective auto loading driver PCB.

( Refer to 6017.)

5. Defective I/O PCB.

( Refer to 6013.)

6. Defective main control PCB.

( Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 104

< Error >

No. 104

< Message >

Alarm sounds.

< 104 >

PULLED OUT FILM TOO LONG
IN AUTO FILM LOADER
(LEFT LANE / RIGHT LANE)

CLOSE COVER

(N)

Memo

When the auto loading cover is closed (auto loading cover sensor is closed),
the message "CLOSE COVER" changes to "LEADER CARD BEING FED".

< Alarm Cancel >

When the auto loading cover sensor is closed, the alarm is canceled.

< Error Message Cancel >

When feeding of the film to the loading part is completed, the error is canceled.

< Condition >

1. When the leader card is inserted, the cartridge fall sensor is closed. (With the message "CLOSE COVER").
2. When the auto loading cover is closed, the cartridge fall sensor is closed. (Without the message "CLOSE COVER").

Memo

- When the auto loading cover is closed, the feed process starts. The leader card cannot be set until all leader cards in the film stock are ejected.
- Disposition of Sensors (Refer to 2005.)

< Diagnostic >

The cartridge fall sensor is closed.

Defective detection circuit of the cartridge fall sensor

<Checkpoint>

1. Check the position of the cartridge fall sensor.
2. The cartridge fall sensor is dirty.
3. Check imperfect contact in the connectors and broken cables.
 J/P253 (auto loading driver PCB) - J/P270 (film cartridge fall detection sensor left)
 J/P253 (auto loading driver PCB) - J/P271 (film cartridge fall detection sensor right)
 J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
 I/O PCB - Main control PCB
4. Defective film cartridge fall detection sensor.
5. Defective auto loading driver PCB.
 (Refer to 6017.)
6. Defective I/O PCB.
 (Refer to 6013.)
7. Defective main control PCB.
 (Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 105

< Error >

No. 105

< Message >

Alarm sounds.

< 105->

ENTRANCE ELEVATOR ERROR
(AUTO FILM LOADER)

(N)

Memo

Errors are displayed by the sub-number.

< Alarm Cancel >

Press the **NO** key.

< Error Message Cancel >

YES + NO →

Sub No.	Description
0	Entrance elevator upper sensor closed - Error recurrence Entrance elevator upper sensor open - Error cancel
1	Entrance elevator lower sensor open - Error recurrence Entrance elevator lower sensor closed - Error cancel
2	Entrance elevator middle sensor open - Error recurrence Entrance elevator middle sensor closed - Error cancel
3	Entrance elevator lower sensor closed - Error recurrence Entrance elevator lower sensor open - Error cancel
4	Entrance elevator upper sensor open - Error recurrence Entrance elevator upper sensor closed - Error cancel
5	Entrance elevator middle sensor open - Error recurrence Entrance elevator middle sensor closed - Error cancel

Memo

Press the **YES** and **NO** keys after the leader card is taken out.

< Condition >

The entrance elevator base of the automatic film loader unit is defective.

Sub No.	Description
0	When the elevator base is lowered, the entrance elevator upper sensor was closed after 1 second.
1	When the elevator base is lowered, the entrance elevator lower sensor was opened after 6 seconds.
2	When the elevator base is lowered, the entrance elevator middle sensor was opened after 5 seconds.
3	When the elevator base is lifted, the entrance elevator lower sensor was closed after 1 second.
4	When the elevator base is lifted, the entrance elevator upper sensor was opened after 6 seconds.
5	When the elevator base is lifted, the entrance elevator middle sensor was opened after 5 seconds.

Memo

Disposition of Sensors (☞ Refer to 2005.)

< Diagnostic >

The elevator base does not move up down.

Defective elevator base

<Checkpoint>

1. The entrance elevator base conveyor belt is elongated or cut.
(☞ Refer to 2403.)
2. Metal fittings fixing the elevator base to the entrance elevator base conveyor belt are loose.
3. Defective sliding of the entrance elevator base.

The entrance elevator motor does not rotate.

Defective entrance elevator motor

<Checkpoint>

1. Blown fuse.
Auto loading driver PCB F21 (125V/3.15A) (☞ Refer to 6017.)
Power PCB 1 F19 (125V/6.3A) (☞ Refer to 6014 and 6014-1.)
2. Check imperfect contact in the connectors and broken cables.

J/P254 (auto loading driver PCB) - J/P272 (entrance elevator motor)

J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)

I/O PCB - Main control PCB

J/P251 (selection driver PCB) - J/P101 (power PCB 2)

J/P251 (auto loading driver PCB) - J/P249 (selection driver PCB) *

J/P251 (selection driver PCB) - J/P101 (power PCB 2) *

3. Defective entrance elevator motor.

If DC24V is output between pins 1-2 of connectors J/P272 and the motor is not rotating, the motor is defective.

(☞ Refer to 2403.)

4. Defective auto loading driver PCB.

(Refer to 6017.)

5. Defective selection driver PCB. *

(Refer to 6018.)

6. Defective I/O PCB.

(Refer to 6013.)

7. Defective main control PCB.

(Refer to 6011.)

8. Defective power PCB 2.

(Refer to 6015.)

Memo

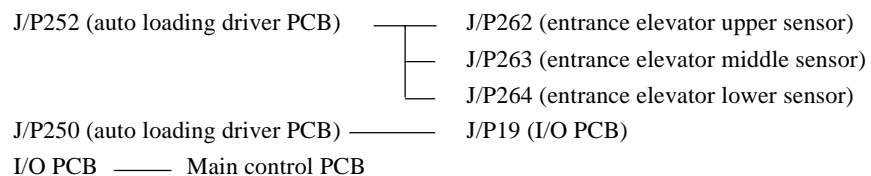
- Electric circuit drawings 4 - 2 and 4 - 4
- * Only machine with the automatic film loader unit applicable for the advanced photo system

The entrance elevator sensor does not detect correctly.

Defective detection circuit of the entrance elevator sensor

<Checkpoint>

1. The entrance elevator sensor is dirty.
2. Check the position of the entrance elevator sensor.
(Refer to 2404.)
3. Check imperfect contact in the connectors and broken cables.




4. Defective entrance elevator sensor.


5. Defective auto loading driver PCB.

(Refer to 6017.)

6. Defective I/O PCB.

 Refer to 6013.)

7. Defective main control PCB.

 Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 106

< Error >

No. 106

< Message >

Alarm sounds.

< 106->

HORIZONTAL FEED ERROR
(AUTO FILM LOADER)

(N)

Memo

Errors are displayed by the sub-number.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

YES

+

NO

The horizontal feed position sensor does not repeat open/close — Error recurrence

The horizontal feed position sensor repeats open/close ———— Error cancel

< Condition >

Motion error of the horizontal feed position sensor in the automatic film loader unit

Sub No.	Description
0	When the leader guide is fed inward, the horizontal feed position sensor could not detect the leader guide.
1	When the leader guide is fed outward, the horizontal feed position sensor could not detect the leader guide.

Memo


Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

The leader guide does not move horizontally.

Defective leader guide







<Checkpoint>

1. The horizontal conveyor belt is elongated or cut.
( Refer to 2409.)
2. Defective sliding of the leader guide.

The horizontal feed motor does not rotate.

Defective horizontal feed motor

<Checkpoint>

1. Blown fuse.
 Auto loading driver PCB F21 (125V/3.15A) ( Refer to 6017.)
 Power PCB 1 F19 (125V/6.3A) ( Refer to 6014 and 6014-1.)
2. Check imperfect contact in the connectors and broken cables.
 J/P256 (auto loading driver PCB) - Horizontal feed motor
 J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
 I/O PCB - Main control PCB
 J/P251 (auto loading driver PCB) - J/P101 (power PCB 2)
 J/P251 (auto loading driver PCB) - J/P249 (selection driver PCB) *
 J/P251 (selection driver PCB) - J/P101 (power PCB 2) *
3. Defective horizontal feed motor.
4. Defective auto loading driver PCB.
 ( Refer to 6017.)
5. Defective selection driver PCB. *
 ( Refer to 6018.)
6. Defective I/O PCB.
 ( Refer to 6013.)
7. Defective main control PCB.
 ( Refer to 6011.)

8. Defective power PCB 2.

(Refer to 6015.)

Memo

- Electric circuit drawings 4 - 2 and 4 - 4
- * Only machine with the automatic film loader unit applicable for the advanced photo system

The horizontal feed position sensor does not detect normally.

Defective detection circuit of the horizontal feed position sensor

<Checkpoint>

1. The horizontal feed position sensor is dirty.
2. Check the position of the horizontal feed position sensor.
(Refer to 2407.)
3. Check imperfect contact in the connectors and broken cables.
J/P253 (auto loading driver PCB) - J/P267 (horizontal feed position sensor)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
4. Defective horizontal feed position sensor.
5. Defective auto loading driver PCB.
(Refer to 6017.)
6. Defective I/O PCB.
(Refer to 6013.)
7. Defective main control PCB.
(Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 107

< Error >

No. 107

< Message >

Alarm sounds.

< 107- >

EXIT ELEVATOR ERROR
(AUTO FILM LOADER)

(N)

Memo

Errors are displayed by the sub-number.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

YES

 +

NO

 →

Sub No.	Description
0	Exit elevator upper sensor closed - Error recurrence Exit elevator upper sensor open - Error cancel
1	Exit elevator lower sensor closed - Error recurrence Exit elevator lower sensor open - Error cancel
2	Exit elevator lower sensor closed - Error recurrence Exit elevator lower sensor open - Error cancel
3	Exit elevator upper sensor closed - Error recurrence Exit elevator upper sensor open - Error cancel

Memo

Press the and keys after the leader card is taken out.

< Condition >

Defective exit elevator base of the auto film loader.

Sub No.	Description
0	When the elevator base is lowered, exit elevator upper sensor is closed after 1 second.
1	When the elevator base is lowered, exit elevator lower sensor is open after 6 seconds.
2	When the elevator base is lifted, exit elevator lower sensor is closed after 1 second.
3	When the elevator base is lifted, exit elevator lower sensor is open after 6 seconds.

Memo


Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

Defective elevator base does not move up and down.

Defective elevator base

<Checkpoint>






1. The exit elevator base conveyor belt is elongated or cut.
( Refer to 2411.)
2. Metal fittings fixing the elevator base to the exit elevator base conveyor belt is loose.
3. Defective sliding of the exit elevator base.

The exit elevator motor does not rotate.

Defective the exit elevator motor

<Checkpoint>

1. Blown fuse.

Auto loading driver PCB	F21 (125V/3.15A) ( Refer to 6017.)
Power PCB 1	F19 (125V/6.3A) ( Refer to 6014 and 6014-1.)
2. Check imperfect contact in the connectors and broken cables.
 J/P254 (auto loading driver PCB) - J/P273 (exit elevator motor)
 J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
 I/O PCB - Main control PCB
 J/P251 (auto loading driver PCB) - J/P101 (power PCB 2)
 J/P251 (auto loading driver PCB) - J/P249 (selection driver PCB) *
 J/P251 (selection driver PCB) - J/P101 (power PCB 2) *
3. Defective exit elevator motor.
 If DC24V is output between pins 1-2 of connectors J/P273 and the motor is not rotating, the motor is defective.
4. Defective auto loading driver PCB.
 ( Refer to 6017.)
5. Defective selection driver PCB. *
 ( Refer to 6018.)
6. Defective I/O PCB.
 ( Refer to 6013.)

7. Defective main control PCB.

(👉 Refer to 6011.)

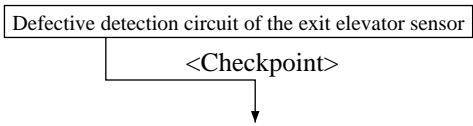
8. Defective power PCB 2.

(👉 Refer to 6015.)

Memo

- Electric circuit drawings 4 - 2 and 4 - 4
- * Only machine with the automatic film loader unit applicable for the advanced photo system

The exit elevator sensor does not detect normally.

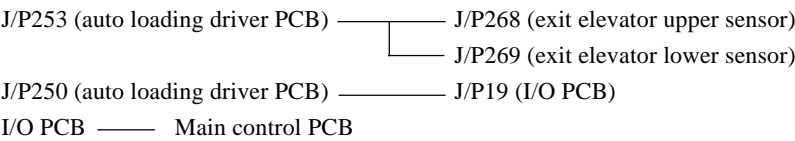


1. The exit elevator sensor is dirty.

2. Check the position of the exit elevator sensor.

(👉 Refer to 2412 and 2413.)

3. Check imperfect contact in the connectors and broken cables.



4. Defective exit elevator sensor.

5. Defective auto loading driver PCB.

(👉 Refer to 6017.)

6. Defective I/O PCB.

(👉 Refer to 6013.)

7. Defective main control PCB.

(👉 Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 108

< Error >

No. 108

< Message >

Alarm sounds.

< 108- >

SHUTTER MOTION ERROR (L)
SHUTTER MOTION ERROR (R)
(AUTO FILM LOADER)

SHIFT: RELEASE INTERLOCK (N)

Memo

- Errors are displayed by the sub-number.
- The 1st digit-left lane, the 2nd digit-right lane
- When the sub-number is 0, the lane is normal.
- Press the SHIFT key to release the interlock of the loading cover.

< Alarm Cancel >

Press the NO key.

< Error Message Cancel >

YES + NO →

Sub No.	Description
1	Shutter sensor (close) Close — Error recurrence Shutter sensor (close) Open — Error cancel
2	Shutter sensor (open) Open —Error recurrence Shutter sensor (open) Close — Error cancel
3	Shutter sensor (open) Close —Error recurrence Shutter sensor (open) Open —Error cancel
4	Shutter sensor (close) Open —Error recurrence Shutter sensor (close) Close— Error cancel

Memo


Press the YES and NO keys after the leader card is taken out.

< Condition >

Defective motion of the automatic film loader unit.

Sub No.	Description
1	When the shutter is opened, the shutter sensor (close) is closed 3 seconds later.
2	When the shutter is opened, the shutter sensor (open) is opened 6 seconds later.
3	When the shutter is closed, the shutter sensor (open) is closed 3 seconds later.
4	When the shutter is closed, the shutter sensor (close) is opened 6 seconds later.

Memo





Disposition of Sensors ( Refer to 2005.)

< Diagnostic >

The shutter does not open or close.

Defective opening and closing of the shutter

<Checkpoint>

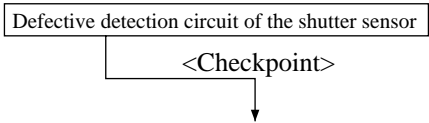
1. Blown fuse.
- Power PCB 1 F20 (125V/3.15A)
- ( Refer to 6014 and 6014-1.)
2. Check imperfect contact in the connectors and broken cables.
- J/P255 (auto loading driver PCB) — J/P274 (shutter motor left)
- J/P255 (auto loading driver PCB) — J/P277 (shutter motor right)
- J/P250 (auto loading driver PCB) — J/P19 (I/O PCB)
- I/O PCB — Main control PCB
- J/P251 (auto loading driver PCB) — J/P101 (power PCB 2)
- J/P251 (auto loading driver PCB) — J/P249 (selection driver PCB) *
- J/P251 (selection driver PCB) — J/P101 (power PCB 2) *
3. Defective shutter motor.
- If AC24V is output between pins 1-3 of each shutter motor connectors and the shutter motor is not rotating, the shutter motor is defective.
4. Defective auto loading driver PCB.
- ( Refer to 6017.)
5. Defective selection driver PCB. *
- ( Refer to 6018.)
6. Defective I/O PCB.
- ( Refer to 6013.)

7. Defective main control PCB.
(🔧 Refer to 6011.)
8. Defective power PCB 2.
(🔧 Refer to 6015.)

Memo

- Electric circuit drawing 4 - 2
- * Only machine with the automatic film loader unit applicable for the advanced photo system

The shutter sensor does not detect correctly.



1. The shutter sensor is dirty.
2. Check the position of the shutter sensor.
(🔧 Refer to 2414.)
3. Check imperfect contact in the connectors and broken cables.

J/P255 (auto loading driver PCB)

J/P275 (shutter sensor left CLOSE)
J/P276 (shutter sensor left OPEN)
J/P278 (shutter sensor right CLOSE)
J/P279 (shutter sensor right OPEN)

J/P250 (auto loading driver PCB)
I/O PCB

J/P19 (I/O PCB)

Main control PCB
4. Defective shutter sensor.
5. Defective auto loading driver PCB.
(🔧 Refer to 6017.)
6. Defective I/O PCB.
(🔧 Refer to 6013.)
7. Defective main control PCB.
(🔧 Refer to 6011.)

Memo

Electric circuit drawing 4 - 2

No. 109

< Error >

No. 109

< Message >

Alarm sounds.

< 109 >

REMOVE MAGAZINE ADAPTER
AND CLOSE LOADING COVER

(N)

Memo

When an error occurs, the interlock for the loading cover is released.

< Alarm Cancel >

Press the NO key.

< Error Message Cancel >

When the magazine adapter is taken out (the magazine adapter sensor is open), the error is canceled.

< Condition >

When carrying out the process in the automatic film loader unit, the magazine adapter sensor was closed.

Memo

- Disposition of Sensors (Refer to 2001.)
- If the following message does not disappear after removing the magazine adapter, carry out the same action as No. 109.

*** MANUAL INSERTION ***

REMOVE MAGAZINE ADAPTER

< Diagnostic >

Defective detection circuit of the magazine adapter sensor

<Checkpoint>

1. The magazine adapter sensor is dirty.
2. Check imperfect contact in the connectors and broken cables.
J/P28 (loading connecting PCB) - Magazine adapter sensor
J/P21 (loading connecting PCB) - J/P4 (main control PCB)
3. Defective magazine adapter sensor.
4. Defective loading connecting PCB.
(👉 Refer to 6016.)
5. Defective main control PCB.
(👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

Defective detection circuit of the 240 magazine adapter sensor

<Checkpoint>

1. 240 adapter sensor is dirty.
2. Check imperfect contact in the connectors and broken cables.
J/P17 (loading connecting PCB) — J/P33 (240 adapter sensor - right)
J/P17 (loading connecting PCB) — J/P37 (240 adapter sensor - left)
J/P21 (loading connecting PCB) — J/P4 (main control PCB)
3. Defective 240 adapter sensor.
4. Defective loading connecting PCB.
(👉 Refer to 6016.)
5. Defective main control PCB.
(👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

No. 110

< Error >

No. 110

< Message >

Alarm sounds.

< 110- >

LEADER CARD JAM
(AUTO FILM LOADER-LOADING)

SHIFT: RELEASE INTERLOCK (N)

Memo

- Errors are displayed by the sub-number.
- Press the **SHIFT** key to release the interlock of the loading cover.

< Alarm Cancel >

Press the **NO** key.

< Error Message Cancel >

YES + NO

Film sensor (shutter) close or either of exit horizontal feed limit switch, leader card limit switch or film sensor is ON. Error recurrence

Film sensor (shutter) open and all of the exit horizontal feed limit switch, leader card limit switch and film sensor are OFF. Error cancel

Memo

Press the **YES** and **NO** keys after the leader card is taken out.

< Condition >

The leader card was jammed in the automatic film loader unit.

Sub No.	Description
0	When the exit elevator base was lifted to feed the leader card from the automatic film loader unit, the leader card limit switch at the loading part was not turned ON.
1	When the exit elevator base was lowered to feed the leader card from the automatic film loader unit, the exit horizontal feed leader limit switch was not turned OFF.
2	When the film sensor (shutter) was closed, the film has stopped. (Refer to 4011.)
3	When the specified time has passed after feeding the leader card from the automatic film loader unit and pressing by loading, the leader card limit was not turned OFF. (Specified time is equivalent to the time to carry out 524 mm loading of the leader card. V50 - approximately 1 minute, and V100 - approximately 30 seconds) (Refer to 4013.)

Memo

Disposition of Sensors (Refer to 2001 and 2005.)

< Diagnostic >

For 110 - 0

Defective leader card limit switch

<Checkpoint>

1. Foreign matter is found at the leader card limit switch.
2. Check the position of the leader card limit switch.
3. Check imperfect contact in the connectors and broken cables.
J/P26 (loading connecting PCB) - Leader card limit switch
J/P21 (loading connecting PCB) - J/P4 (main control PCB)
4. Defective leader card limit switch.
If the limit switch is turned on and continuity is not observed between pins 3-14 of connector jack J26, the limit switch is defective.
5. Defective loading connecting PCB.
(☞ Refer to 6016.)
6. Defective main control PCB.
(☞ Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

For 110 - 1

Defective exit horizontal feed leader card limit switch

<Checkpoint>

1. Check the position of the exit horizontal feed leader card limit switch.
(☞ Refer to 2408.)
2. Check imperfect contact in the connectors and broken cable.
J/P253 (auto loading driver PCB) - J/P266 (exit horizontal feed leader card limit switch)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
3. Defective exit horizontal feed leader card limit switch.
If the limit switch is turned off and continuity is observed between pins 1-2 of connector jack J266, the limit switch is defective.
4. Defective auto loading driver PCB.
(☞ Refer to 6017.)
5. Defective I/O PCB.
(☞ Refer to 6013.)
6. Defective main control PCB.
(☞ Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

For 110 - 2

Defective film sensor (shutter)

<Checkpoint>

1. The film sensor (shutter) is dirty.
2. Check the position of the film sensor (shutter).
3. Check imperfect contact in the connectors and broken cables.
J/P30 (loading connecting PCB) - Film pressure sensor (shutter right)
J/P31 (loading connecting PCB) - Film pressure sensor (shutter left)
J/P21 (loading connecting PCB) - J/P4 (main control PCB)
4. Defective film sensor (shutter).
5. Defective loading connecting PCB.
(👉 Refer to 6016.)
6. Defective main control PCB.
(👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

For 110 - 3

Defective pressure solenoid

<Checkpoint>

1. Defective actuator sliding.
2. Check imperfect contact in the connectors and broken cables.
J/P217 (relay connector) - J/P43 (film pressure solenoid right)
J/P217 (relay connector) - J/P44 (film pressure solenoid left)
J/P217 (relay connector) - J/P89 (power PCB 2)
Main control PCB - Power PCB 2
3. Defective pressure solenoid.
If DC24V is output between pins 1-2 of each pressure solenoid and the pressure solenoid is not operating, the pressure solenoid is defective.
4. Defective power PCB 2.
(👉 Refer to 6015.)
5. Defective main control PCB.
(👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 3

No. 111

< Error >

No. 111

< Message >

Alarm sounds.

< 111 >

CARTRIDGE REMAINING IN
AUTO LOADING SHUTTER UNIT

(LEFT LANE / RIGHT LANE)

(N)

Memo

When an error occurs, the interlock for the loading cover is released.

< Alarm Cancel >

Press the key.

< Error Message Cancel >

<input type="button" value="YES"/> + <input type="button" value="NO"/>	_____	The film sensor (shutter) close	_____	Error recurrence
	_____	The film sensor (shutter) open	_____	Error cancel

< Condition >

When the film feed was completed (the film sensor was open), the film sensor (shutter) was closed.

Memo

Disposition of Sensors (Refer to 2005.)

< Diagnostic >

Defective film sensor (shutter)

<Checkpoint>

1. The film sensor (shutter) is dirty.
2. Check the position of the film sensor (shutter).
3. Check imperfect contact in the connectors and broken cables.

J/P30 (loading connecting PCB) - Film sensor (shutter right)

J/P31 (loading connecting PCB) - Film sensor (shutter left)

J/P21 (loading connecting PCB) - J/P4 (main control PCB)

4. Defective film sensor (shutter).
5. Defective loading connecting PCB.

(Refer to 6016.)

6. Defective main control PCB.

(Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

No. 112

< Error >

No. 112

< Message >

Alarm sounds.

< 112 >

CHECK FILM STOCKER
IN AUTO FILM LOADER

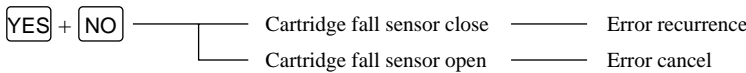
(LEFT LANE / RIGHT LANE)

(N)

< Alarm Cancel >

Press the **NO** key.

< Error Message Cancel >



< Condition >

When there is no film in the film stock on the memory, the cartridge fall sensor was closed.

Memo

Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

Defective detection circuit of the cartridge fall sensor

<Checkpoint>

1. Check the position of the cartridge fall sensor.
2. The cartridge fall sensor is dirty.
3. Check imperfect contact in the connectors and broken cables.

J/P253 (auto loading driver PCB) - J/P270 (cartridge fall sensor left)

J/P253 (auto loading driver PCB) - J/P271 (cartridge fall sensor right)

J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)

I/O PCB - Main control PCB

4. Defective cartridge fall sensor.
5. Defective auto loading driver PCB.

(Refer to 6017.)

6. Defective I/O PCB.

(Refer to 6013.)

7. Defective main control PCB.

(Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 113

< Error >

No. 113

< Message >

Alarm sounds.

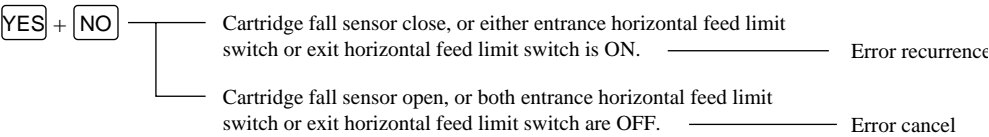
< 113 >
LEADER CARD REMAINING
IN AUTO FILM LOADER

REMOVE ALL LEADER CARD
FROM AUTO FILM LOADER
(N)

< Alarm Cancel >

Press the key.

< Error Message Cancel >



< Condition >

1.

When the power supply is on, the cartridge fall sensor was closed.
2.

In start check, the leader card was detected with the automatic film loader unit.
(The entrance horizontal feed limit switch is ON or the exit horizontal feed limit switch is ON.)

Memo
Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

The cartridge fall sensor is closed.

Defective detection circuit of the cartridge fall sensor

<Checkpoint>

1. Check the position of the cartridge fall sensor.
2. The cartridge fall sensor is dirty.
3. Check imperfect contact in the connectors and broken cables.
J/P253 (auto loading driver PCB) - J/P270 (cartridge fall sensor left)
J/P253 (auto loading driver PCB) - J/P271 (cartridge fall sensor right)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
4. Defective cartridge fall sensor.
5. Defective auto loading driver PCB.
(Refer to 6017.)
6. Defective I/O PCB.
(Refer to 6013.)
7. Defective main control PCB.
(Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

The entrance horizontal feed limit switch is ON.

Defective entrance horizontal feed limit switch

<Checkpoint>

1. Check the position of the entrance horizontal feed limit switch.
(Refer to 2406.)
2. Check imperfect contact in the connectors and broken cables.
J/P252 (auto loading driver PCB) - J/P265 (entrance horizontal feed limit switch)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
3. Defective entrance horizontal feed limit switch.
If the limit switch is turned off and continuity is observed between pins 1-2 of connector jack J265, the limit switch is defective.
4. Defective auto loading driver PCB.
(Refer to 6017.)
5. Defective I/O PCB.
(Refer to 6013.)
6. Defective main control PCB.
(Refer to 6011.)

Memo


Electric circuit drawing 4 - 1

The exit horizontal feed limit switch is ON.

Defective exit horizontal feed limit switch

<Checkpoint>

1. Check the position of the exit horizontal feed limit switch.

( Refer to 2408.)

2. Check imperfect contact in the connectors and broken cables.

J/P253 (auto loading driver PCB) - J/P266 (exit horizontal feed limit switch)


J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)

I/O PCB - Main control PCB


3. Defective exit horizontal feed limit switch.

If the limit switch is turned off and continuity is observed between pins 1-2 of connector jack J265, the limit switch is defective.


4. Defective auto loading driver PCB.

( Refer to 6017.)

5. Defective I/O PCB.

( Refer to 6013.)

6. Defective main control PCB.

( Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 114

< Error >

No. 114

< Message >

Alarm sounds.

<114->
PROBLEM WITH FILM
COUNTING IN AUTO FILM LOADER

REMOVE ALL LEADER CARD
FROM AUTO FILM LOADER
(N)

< Alarm Cancel >

Press the key.

< Error Message Cancel >

YES

+

NO

Entrance horizontal feed limit switch ON or
exit horizontal feed limit switch ON ————— Error recurrence

Entrance horizontal feed limit switch OFF or
exit horizontal feed limit switch OFF ————— Error cancel

< Condition >

Sub No.	Description
0	When the leader guide was moved to the stock 7, the leader card was not detected. (The exit horizontal feed limit switch remained OFF.)
1	When there was no leader card on the stock 7, the exit horizontal feed limit switch was ON.
2	When there was no leader card on the stock 1, the entrance horizontal feed limit switch was ON.

Memo

- When the leader card is taken out from the leader stock because of shutter operation error etc., this message appears.
- Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

The entrance horizontal feed limit switch is ON.

Defective entrance horizontal feed limit switch

<Checkpoint>

1. Check the position of the entrance horizontal feed limit switch.
(Refer to 2406.)
2. Check imperfect contact in the connectors and broken cables.
J/P252 (auto loading driver PCB) - J/P265 (entrance horizontal feed limit switch)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
3. Defective entrance horizontal feed limit switch.
If the limit switch is turned off and continuity is observed between pins 1-2 of connector jack J265, the limit switch is defective.
4. Defective auto loading driver PCB.
(Refer to 6017.)
5. Defective I/O PCB.
(Refer to 6013.)
6. Defective main control PCB.
(Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

The exit horizontal feed limit switch is ON.

Defective exit horizontal feed limit switch

<Checkpoint>

1. Check the position of the exit horizontal feed limit switch.
(Refer to 2408.)
2. Check imperfect contact in the connectors and broken cables.
J/P253 (auto loading driver PCB) - J/P266 (exit horizontal feed limit switch)
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
I/O PCB - Main control PCB
3. Defective exit horizontal feed limit switch.
If the limit switch is turned off and continuity is observed between pins 1-2 of connector jack J266, the limit switch is defective.
4. Defective auto loading driver PCB.
(Refer to 6017.)
5. Defective I/O PCB.
(Refer to 6013.)
6. Defective main control PCB.
(Refer to 6011.)

Memo

Electric circuit drawing 4 - 1

No. 115

< Error >

No. 115

< Message >

Alarm sounds.

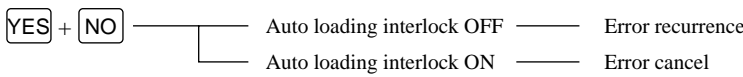
< 115 >
AUTO FILM LOADER COVER
OPEN

(N)

< Alarm Cancel >

Press the key.

< Error Message Cancel >



< Condition >

When the elevator base of the automatic film loader unit was operated, the auto loading interlock was OFF.

Memo
Disposition of Sensors (👉 Refer to 2005.)

< Diagnostic >

Defective auto loading interlock

<Checkpoint>



1. Check the position of the auto loading interlock.
2. Blown fuse.
Auto loading driver PCB F21 (125V/3.15A)
(Refer to 6017.)
3. Check imperfect contact in the connectors and broken cables.
J/P258 (auto loading driver PCB) - Auto loading interlock
J/P250 (auto loading driver PCB) - J/P19 (I/O PCB)
J/P251 (auto loading driver PCB) - J/P101 (power PCB 2)
J/P251 (auto loading driver PCB) - J/P249 (selection driver PCB) *
J/P251 (selection driver PCB) - J/P101 (power PCB 2) *
Main control PCB - I/O PCB
4. Defective interlock switch.
If the interlock switch is turned on and continuity is not observed between pins 1-3 of connector jack J258, the interlock switch is defective.
5. Defective auto loading driver PCB.
(Refer to 6017.)
6. Defective selecton driver PCB. *
(Refer to 6018.)
7. Defective I/O PCB.
(Refer to 6013.)
8. Defective main control PCB.
(Refer to 6011.)
9. Defective power PCB 2.
(Refer to 6015.)

Memo

- Electric circuit drawing 4 - 3
- * Only machine with the automatic film loader unit applicable for the advanced photo system

No. 116

< Error >

No. 116

< Message >

Alarm sounds.

< 116 >

CHUTE CLOGGED

REMOVE FILM CARTRIDGE
FROM LOADING BOX

SHIFT: RELEASE INTERLOCK (N)

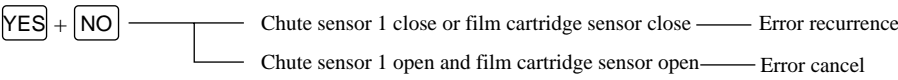
Memo

Press the SHIFT key to release the interlock for the loading cover.

< Alarm Cancel >

Press the NO key.

< Error Display Cancel >



< Condition >

1. When the film was fed from the automatic film loader unit to the loading entrance, the chute sensor 1 or the film cartridge sensor was closed for 2 seconds or more (before opening the shutter).
2. When the film was fed from the automatic film loader unit to the loading entrance, the chute sensor 1 or the film cartridge sensor was closed (after opening the shutter).

Memo

Disposition of Sensors (👉 Refer to 2001.)

< Diagnostic >

Defective detection circuit of the chute sensor 1 or the film cartridge sensor
--

<Checkpoint>



1. The chute sensor 1 or the film cartridge sensor is dirty.
2. Check imperfect contact in the connectors and broken cables.
 J/P29 (loading connecting PCB) - Chute sensor 1
 J/P27 (loading connecting PCB) - Film cartridge sensor (right)
 J/P9 (loading connecting PCB) - Film cartridge sensor (left)
 J/P21 (loading connecting PCB) - J/P4 (main control PCB)
3. Defective chute sensor 1 or film cartridge sensor.
4. Defective loading connecting PCB.
 (👉 Refer to 6016.)
5. Defective main control PCB.
 (👉 Refer to 6011.)

Memo

Electric circuit drawing 3 - 2

No. 117

< Error >

No. 117

< Message >

Alarm sounds.

< 117 >

FILM CARTRIDGE CHUTE BOX
FULL

(N)

Memo

When the chute box error in standard setting 3 is off, this error does not occur.

< Alarm Cancel >

Press the NO key.


< Error Display Cancel >

Chute sensor 2 is open for 1 second or more. ————— Error cancel

< Condition >

Chute sensor 2 is closed for 5 seconds or more.

Memo

Disposition of Sensors ( Refer to 2005.)

< Diagnostic >

Chute sensor 2 is abnormal.

<Checkpoint>

1. Chute sensor 2 is dirty.
2. Check the position of chute sensor 2.
3. Check imperfect contact in the connectors and broken cables.

J/P285 (auto loading driver PCB) ——— J/P292 (chute sensor 2)
 J/P286 (auto loading driver PCB) ——— J/P18 (I/O PCB)
 J/P286 (auto loading driver PCB) ——— J/P248 (selection driver PCB) *
 J/P248 (selection driver PCB) ——— J/P18 (I/O PCB) *
 I/OPCB ——— Main control PCB
 J/P250 (auto loading driver PCB) ——— J/P19 (I/O PCB)

4. Defective chute sensor 2.
5. Auto loading driver PCB.
(Refer to 6017.)
6. Defective selection driver PCB.
(Refer to 6018.)
7. Defective I/O PCB.
(Refer to 6013.)
8. Defective main control PCB.
(Refer to 6011.)

Memo

- Electric circuit drawings 4 - 3 and 4 - 4
- * Only machine with the automatic film loader unit applicable for the advanced photo system

ERROR 0 - 8

< Error >

ERROR 0 - 8

< Message >

No alarm sounds.

```

PROGRAM   DOWNLOAD      *
MAIN      *****
DISPLAY*****
ERROR     0-8

```

Memo

Error No. is displayed at the bottom of the display.

< Error Display Cancel >

Turn off the circuit breaker and upgrade the software again.

< Condition >

An error occurs during software upgrading.

Error No.	Description
0	The data in the flash memory is not erased.
1	The data in the flash memory is not written.
2	When reading the data in the program file, the program file is not opened or absent.
3	No data in the program file was present.
4	The data in the program file is not read.
5	No communication data was returned from the display control PCB 100 msec. after the data was sent from the main control PCB to the display control PCB.
6	When a command or data was sent from the main control PCB to the display control PCB, normal command or data was not returned but abnormal data was returned.
7	When the display control PCB was switched to the program reading operation by the main control PCB, the message which indicates switching to the program reading operation is not returned from the display control PCB to the main control PCB.
8	Comparing the check sum with check sum of the program file, they are not inconsistent.

< Diagnostic >

Abnormal when upgrading software

<Checkpoint>


↓


1. Defective system floppy disk.
2. Check imperfect contact in the connectors and broken cables.

J/P14 (main control PCB) — J/P280 (floppy disk drive)

J/P3 (main control PCB) — J/P10 (display control PCB)

3. Defective floppy disk drive.
4. Defective main control PCB.
5. Defective display control PCB.

 Refer to 6011.)

 Refer to 6012.)

Memo

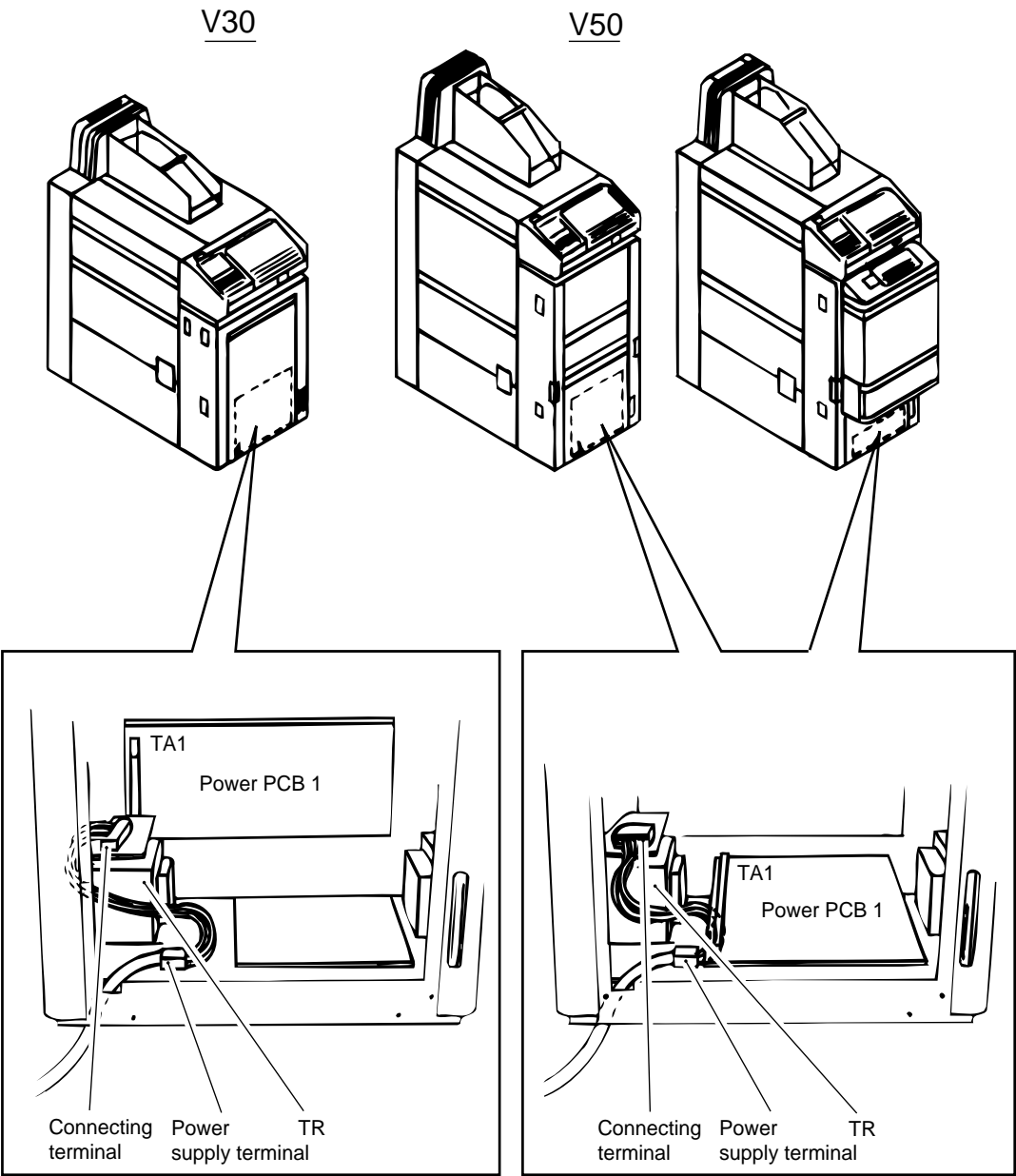
Electric circuit drawings 1 - 1 and 1 - 2

Changes to Power Supply Specifications

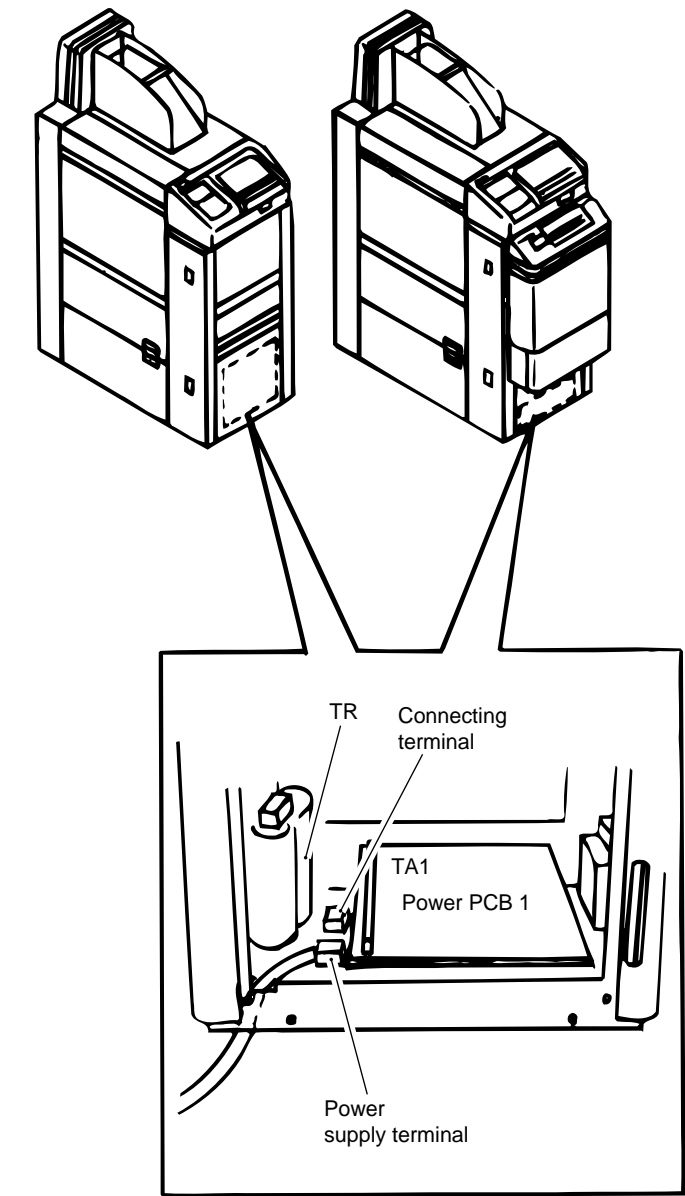
⚠ WARNING

Be sure to turn off the circuit breakers of the machine and the main power source before operation.

All power supply specifications can be changed by changing connections of the power supply terminal in the control box, connecting terminal, and terminal TA1 on power PCB 1 and changing connectors (J66 and J67).



V100

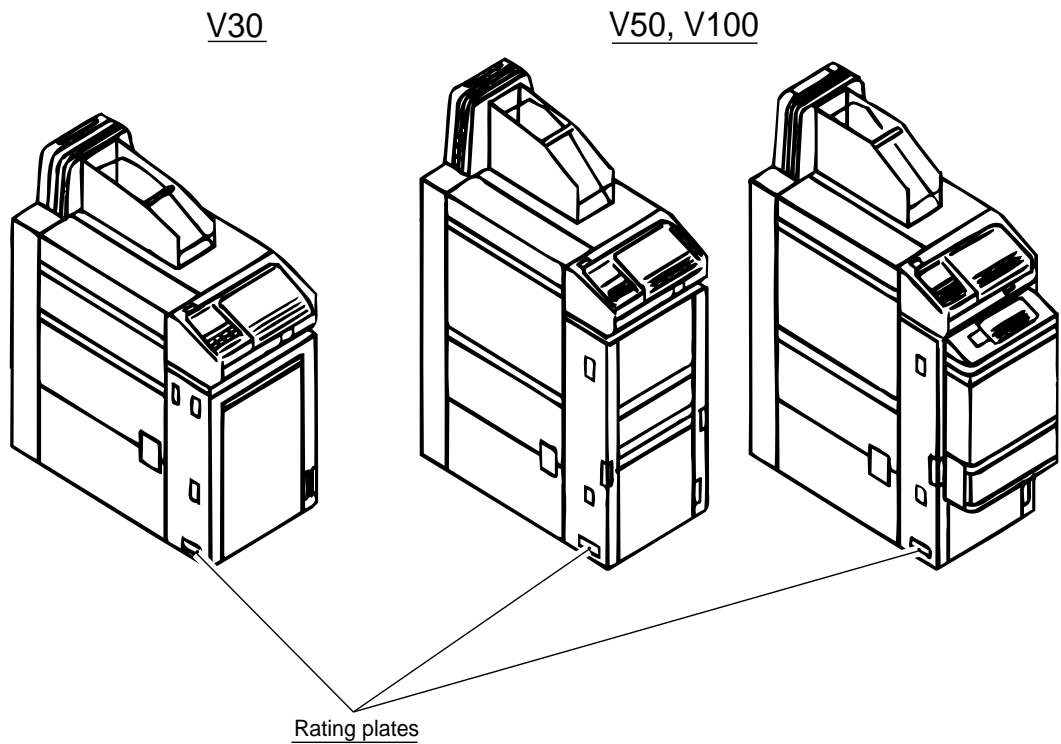


1. Wiring changes

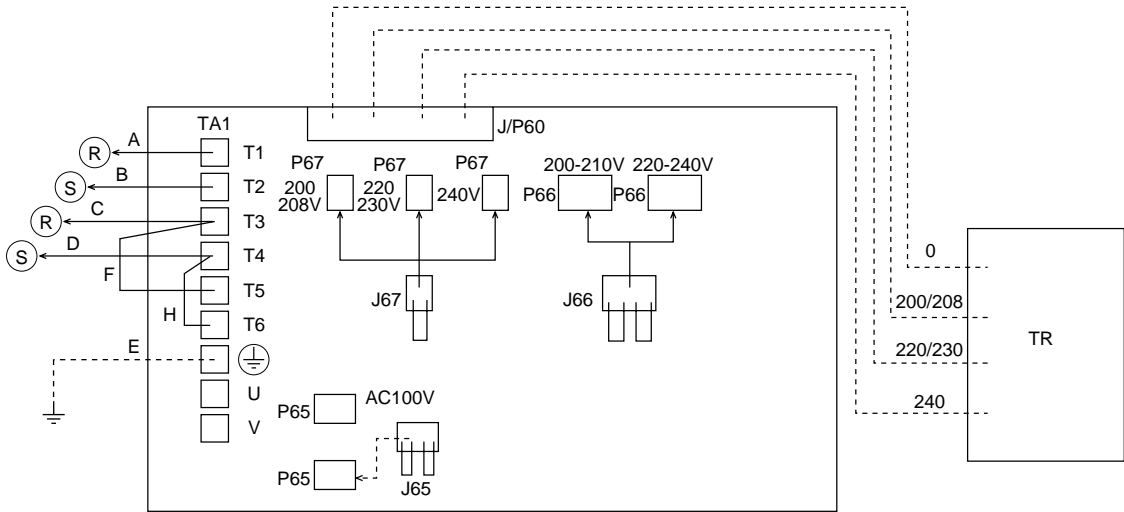
Wire No.	Single-phase, two-wires (AC 200V-AC 240V)	Three-phase, three-wires (AC 200V-AC 240V)	Three-phase, four-wires (AC 346V-AC 415V)
A	R-T1	R-T1	R-T1
B	S-T2	R-T3	S-T3
C	R-T3	S-T2	N-T2
D	S-T4	T-T4	N-T4
F	T3-T5	T2-T5	T-T5
H	T4-T6	T4-T6	T4-T6

2. Changing the connection of connectors (J66 and J67)

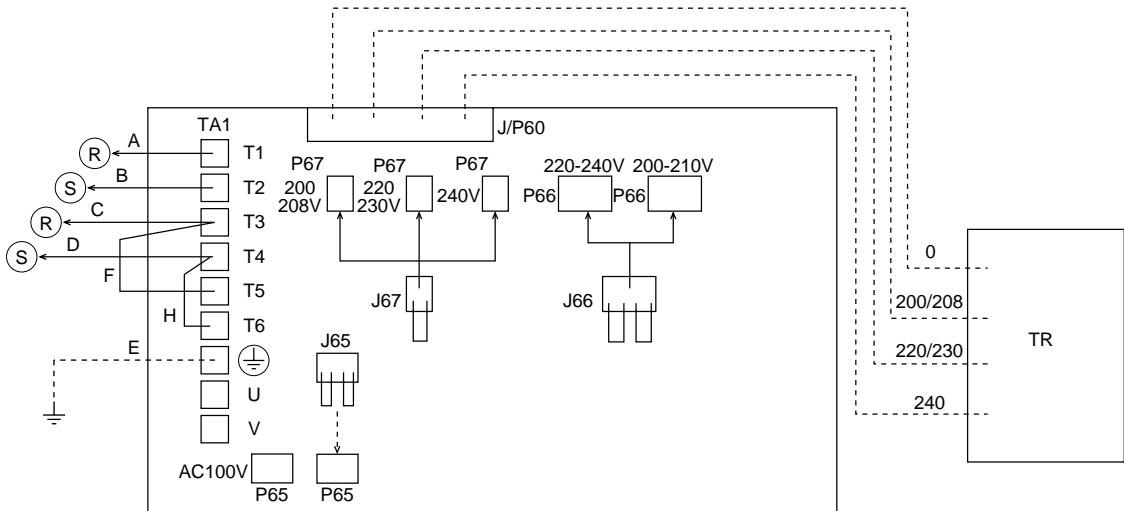
3. Changing the rating plate



Single-phase, two-wires (AC200V - AC240V)



V30,V50 Power PCB 1 (J340008 (*1), J391342)

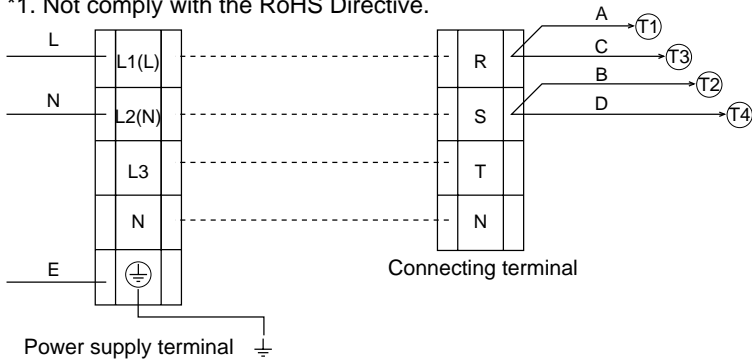


V100 Power PCB 1 (J340038 (*1), J391349)

Memo

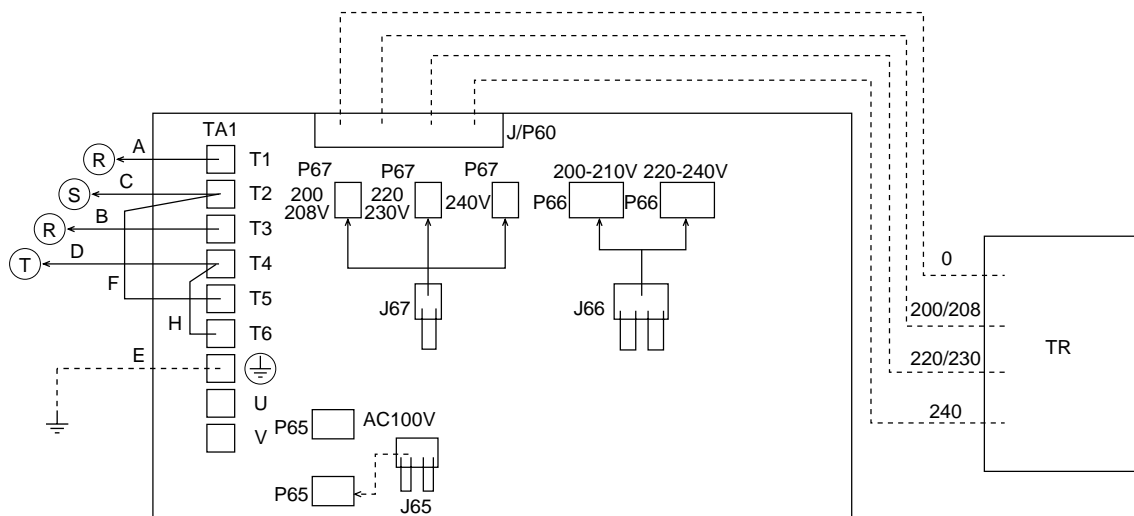
Be careful that the positions of P66 (200-210V) and P66 (220-240V) in V30/50 (J340008 (*1), J391349) are opposite to the positions in V100 (J340038 (*1), J391349).

*1. Not comply with the RoHS Directive.

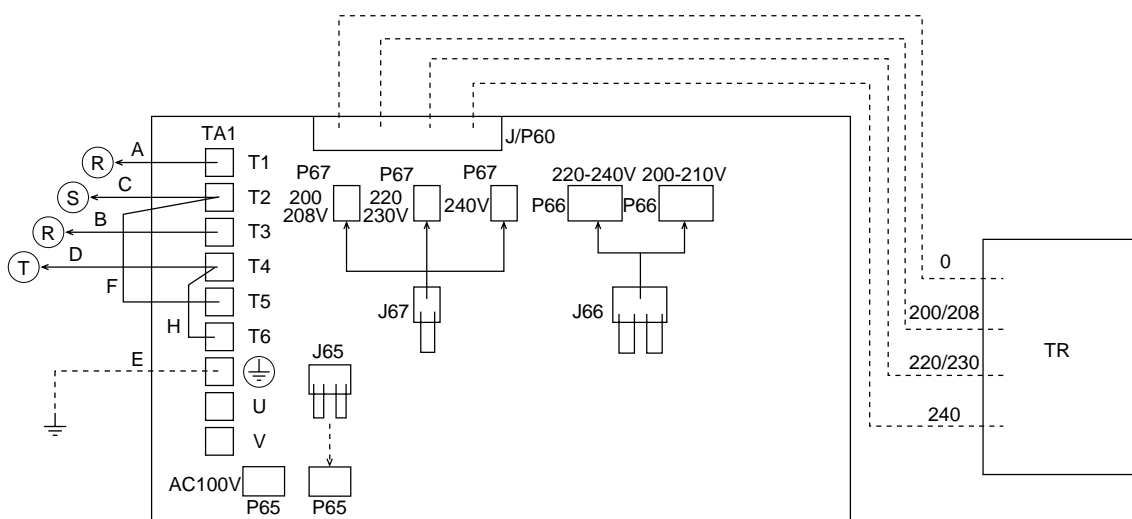


(..... Wiring changes not required.)

Three-phase, three-wires (AC200V - AC240V)



V30,V50 Power PCB 1 (J340008 (*1), J391342)

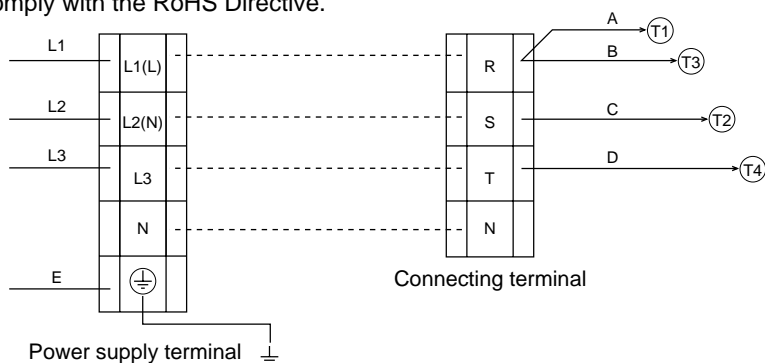


V100 Power PCB 1 (J340038 (*1), J391349)

Memo

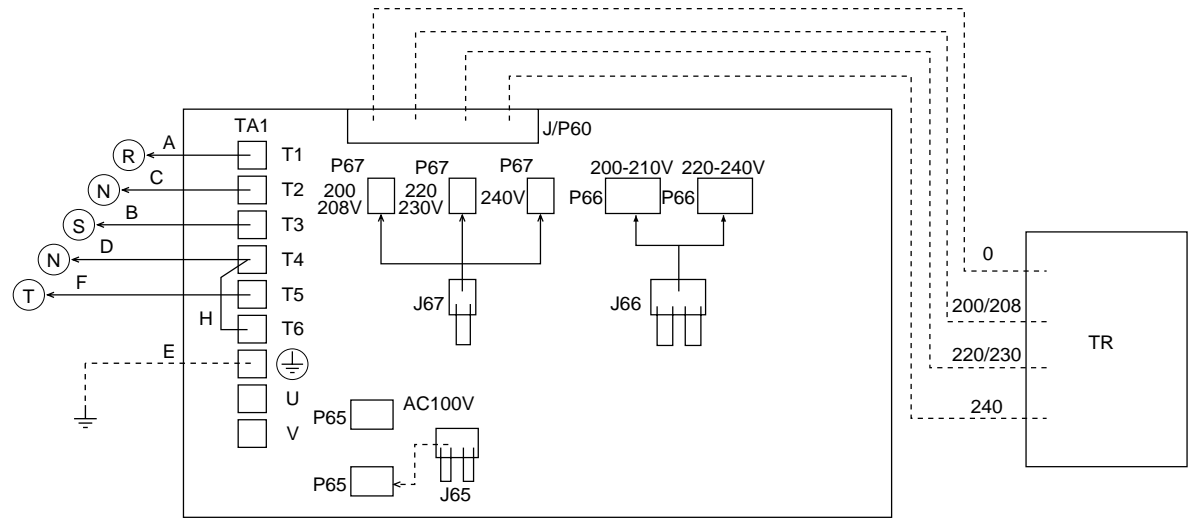
Be careful that the positions of P66 (200-210V) and P66 (220-240V) in V30/50 (J340008 (*1), J391342) are opposite to the positions in V100 (J340038 (*1), J391349).

*1. Not comply with the RoHS Directive.

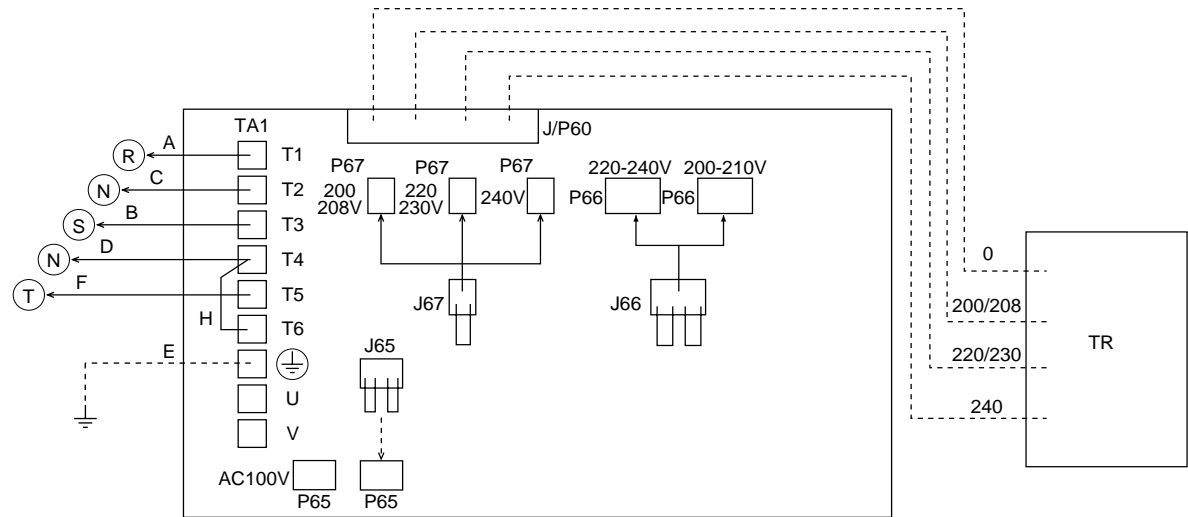


(----- Wiring changes not required.)

Three-phase, four-wires (AC346V - AC415V)



V30,V50 Power PCB 1 (J340008 (*1), J391342)

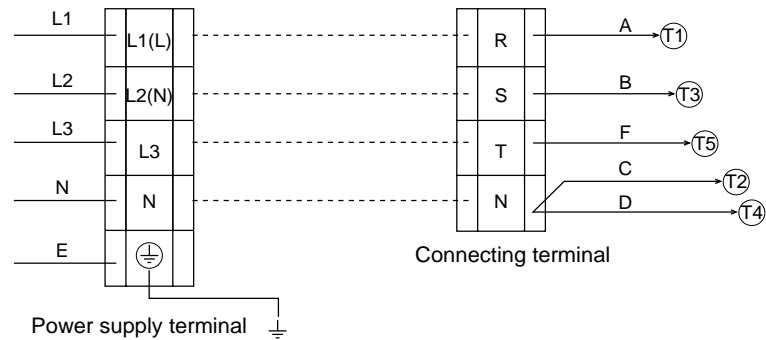


V100 Power PCB 1 (J340038 (*1), J391349)

Memo

Be careful that the positions of P66 (200-210V) and P66 (220-240V) in V30/50 (J340008 (*1), J391342) are opposite to the positions in V100 (J340038 (*1), J391349).

*1. Not comply with the RoHS Directive.



(..... Wiring changes not required.)

Changing the Frequency

⚠ CAUTION

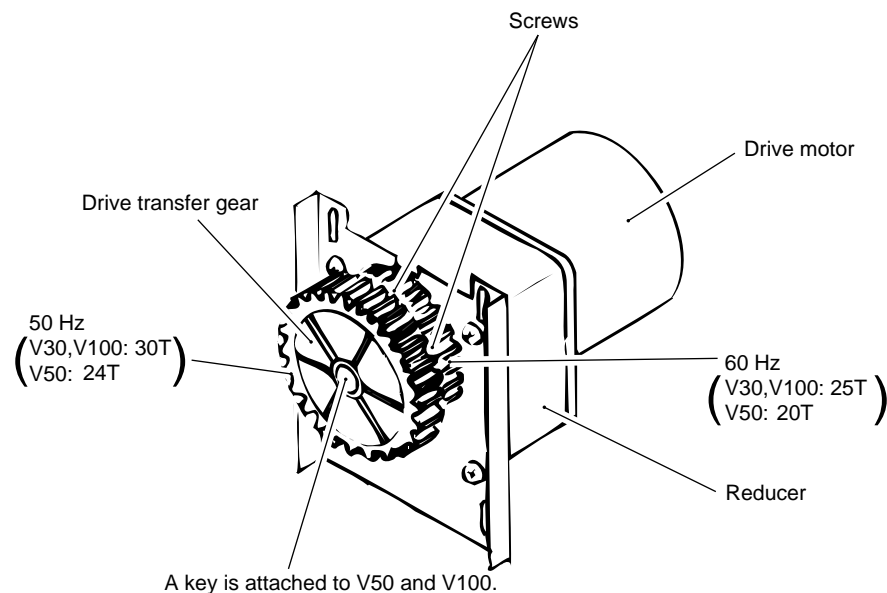
Do not put your hand close to the gear. Your hand may be trapped. If your hand or something is trapping, ask someone near by to turn off the circuit breaker of this machine as soon as possible.

- Change the direction of the drive transfer gear.
- Change the wiring of the dryer fan connector J/P130 only for V100.

1. Remove the drive motor.

🔧 Refer to 2301 and 2302.

2. Change the direction of the drive transfer gear. (Two screws)



Memo

The above figure shows the drive transfer gear direction for 60 Hz.

3. Reassemble the drive motor as it was.


4. Adjust the backlash of the drive transfer gear.

🔧 Refer to 2301 and 2302.

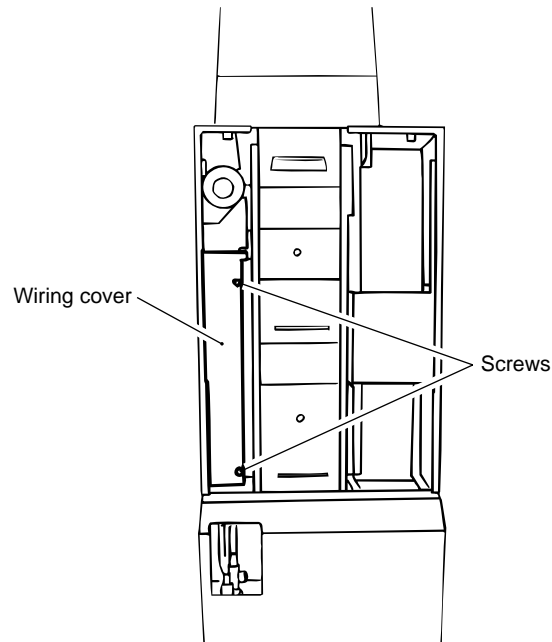
5. Write the new frequency on the rating plate.

6. The connector wiring of the dryer fan only for V100 must be changed.

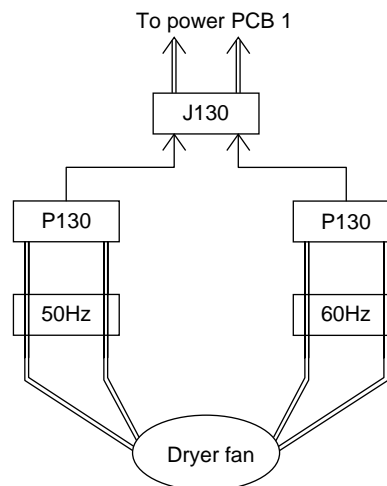
6.1 Open the dryer cover.

 Refer to 1003.

6.2 Open the wiring cover. (2 screws)



6.3 Change the wiring of connector J/P130 according to the frequency.



6.4 Reassemble the parts as they were.

Table of Processing Steps

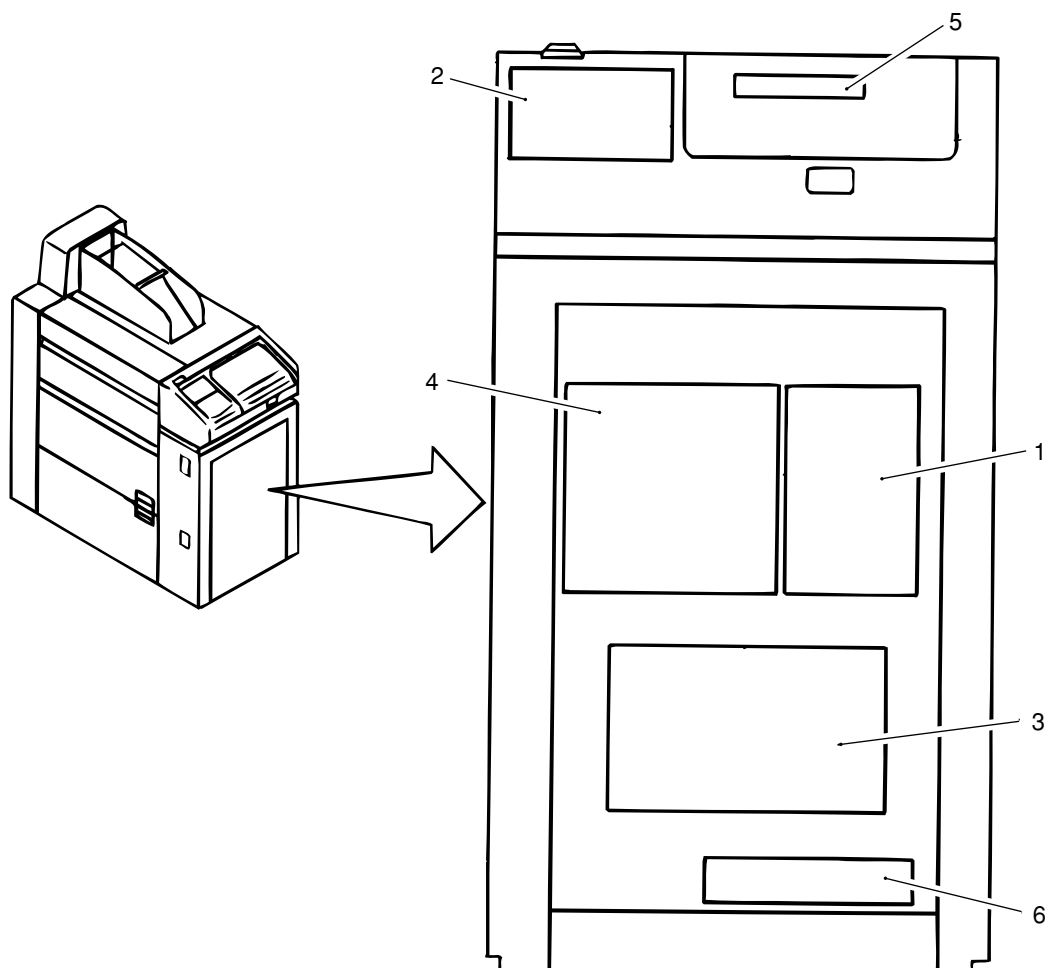
How to access the mode

MAIN MENU → FLOPPY/STANDARD SETTING → STANDARD SETTING 1

Depending on version of the machine, you may find additional specification name.

Processing Specification No.	Specification Name
1	C-41RANP
2	CN-16L
3	CNK-4-52
4	F510BA
5	FS
6	ACN-U
7	AP-72
8 - 50	—

Film Processor (V30)

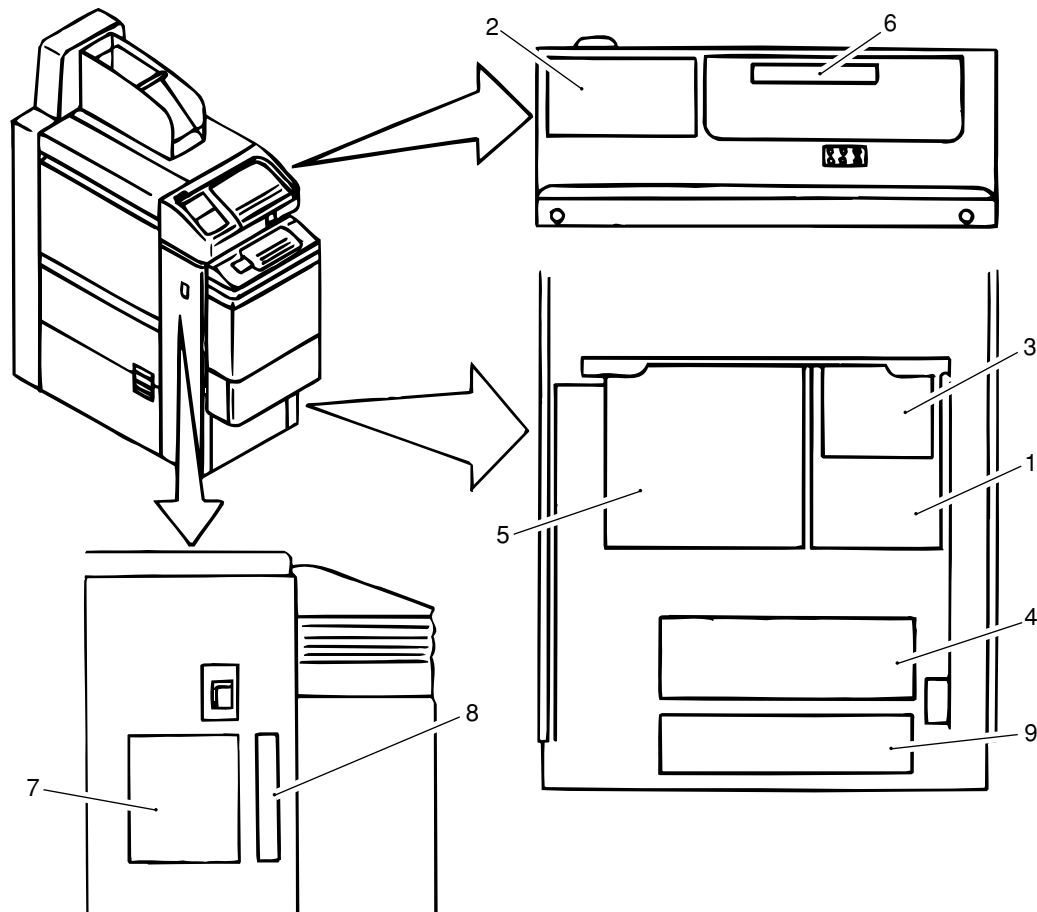


Control Box Unit

No.	Name	Symbol	Type	Manual No.
1	Main control PCB	—	J340033 ^{*1} J391377	6011
2	Display control PCB	—	J340034 ^{*1} J391346	6012
3	Power PCB 1	—	J340008 ^{*1} J391342	6014
4	Power PCB 2	—	J340012 ^{*1} J391344	6015
5	Loading connecting PCB	—	J340036 ^{*1} J391348	6016
6	Switching power source	PS	RPW-250 i038205	6051

*1. Not comply with the RoHS Directive

Film Processor (V50)



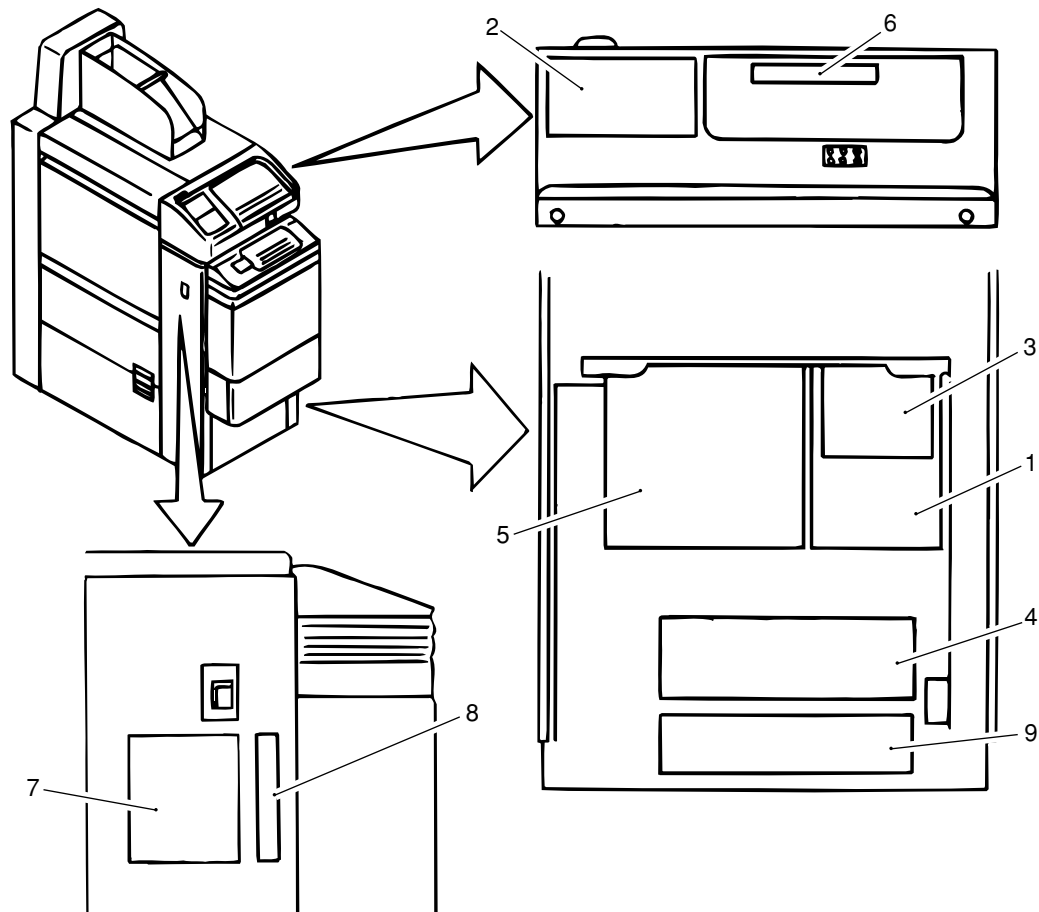
Control Box Unit

No.	Name	Symbol	Type	Manual No.
1	Main control PCB	-	J340033 *1 J391377	6011
2	Display control PCB	-	J340034 *1 J391346	6012
3	I/O PCB	-	J340035 *1 J391347	6013
4	Power PCB 1	-	J340008 *1 J391342	6014
5	Power PCB 2	-	J340012 *1 J391344	6015
6	Loading connecting PCB	-	J340036 *1 J391348	6016
7	Auto loading driver PCB	-	J340011 *1 J391343	6017
8	Selection driver PCB	-	J440033 *1 J490402	6018
9	Switching power source	PS	RPW-250 i038205	6051

*1. Not comply with the RoHS Directive

*Optional

Film Processor (V100)



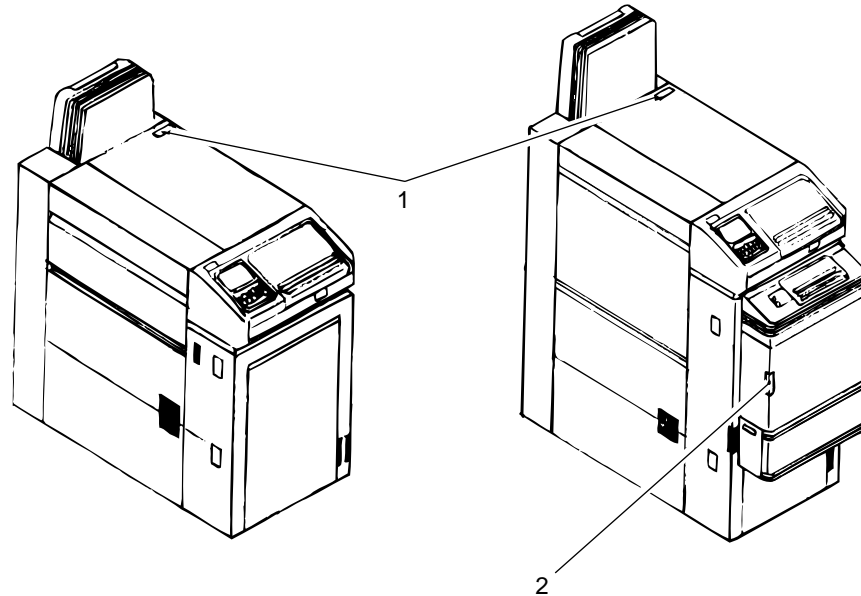
Control Box Unit

No.	Name	Symbol	Type	Manual No.
1	Main control PCB	-	J340033 ^{*1} J391377	6011
2	Display control PCB	-	J340034 ^{*1} J391346	6012
3	I/O PCB	-	J340035 ^{*1} J391347	6013 *
4	Power PCB 1	-	J340038 ^{*1} J391349	6014-1
5	Power PCB 2	-	J340012 ^{*1} J391344	6015
6	Loading connecting PCB	-	J340036 ^{*1} J391348	6016
7	Auto loading driver PCB	-	J340011 ^{*1} J391343	6017 *
8	Selection driver PCB	-	J440033 ^{*1} J490402	6018 *
9	Switching power source	PS	RPW-250 i08205	6051

*1. Not comply with the RoHS Directive

*Optional

Disposition and Function of Interlock Switch



1. Upper cover limit switch

Function: (1) Detecting the upper cover

(2) When the upper cover is opened, detecting the processing solution level, turning OFF the relays ($\times 10$, $\times 1$, $\times 2$, and $\times 11$) of the processing solution heater and circulation pump, and turning OFF the circulation pump and processing solution heater. (When the upper cover is opened, turning OFF the relay.)

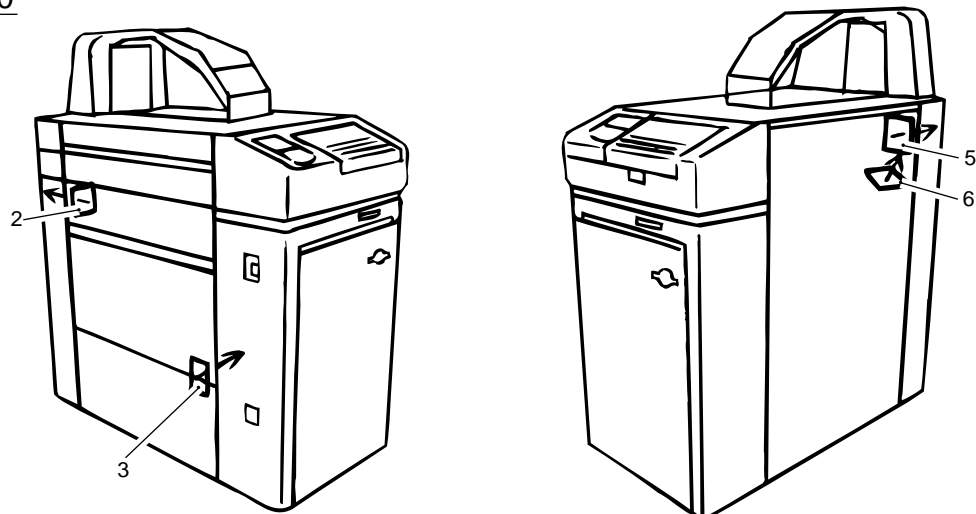
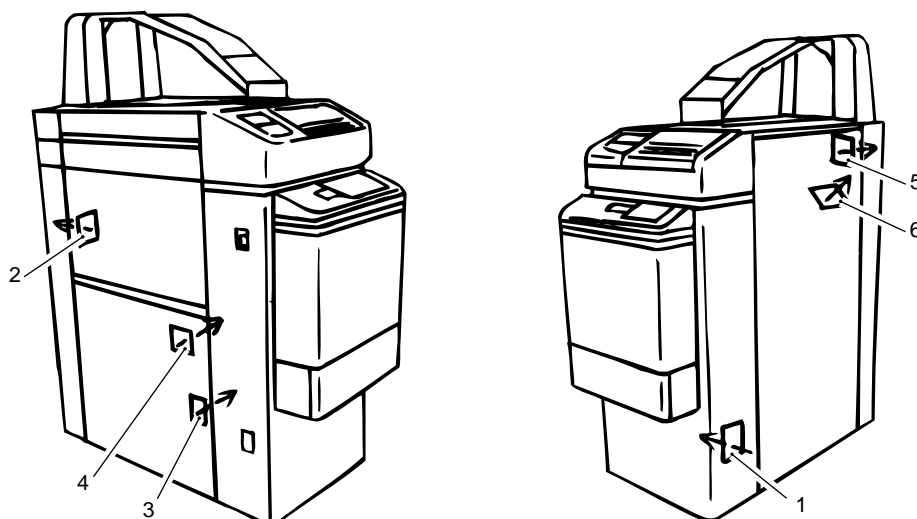
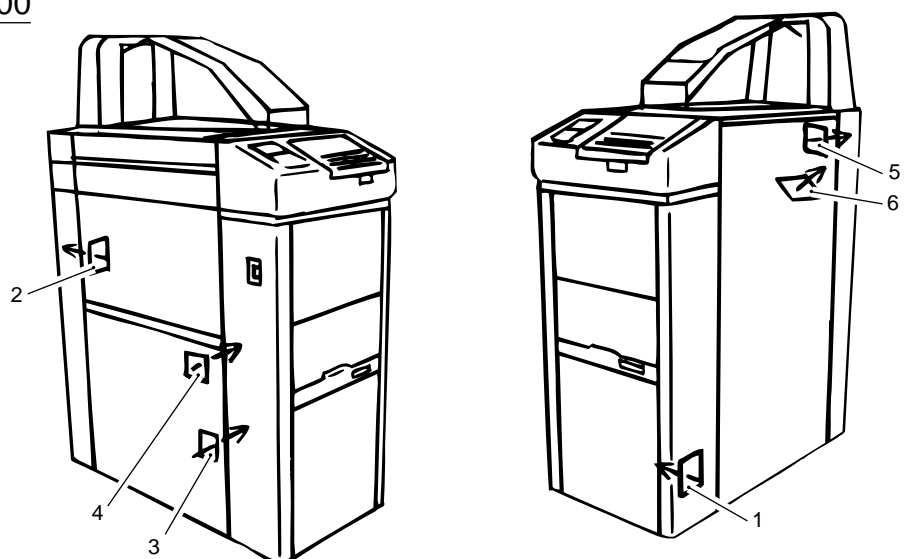
2. Auto loading interlock

Function: (1) Detecting the auto loading unit cover

(2) Turning ON/OFF the power of the entrance elevator motor and exit elevator motor

(When the auto loading unit cover is opened, turning OFF the entrance elevator motor and exit elevator motor.)

Position and Explanation of Fan

V30V50,V100V50,V100

1. Control box cooling fan (FAN 6)

Explanation: The fan always works. (for V50 and V100)

2. Cooling fan 1 (FAN 4)

Explanation: When the temperature of the CD processing solution has reached -1°C below the set temperature, the fan works.

When the temperature of the CD processing solution has reached -1°C below the set temperature with program timer, the fan works; when the temperature is -1.5°C below the set temperature, the fan stops.

When the program timer mode is used, the fan stops.

When the drive switch is ON, the fan works.

3. Cooling fan 2 (FAN 5)

Explanation: When the temperature of the CD processing solution has reached -1°C below the set temperature, the fan works.

When the temperature of the CD processing solution has reached -1°C below the set temperature with program timer, the fan works; when the temperature is -1.5°C below the set temperature, the fan stops.

When the program timer mode is used, the fan stops.

When the drive switch is ON, the fan works.

4. Cooling fan 3 (FAN 7) only for V100

Explanation: When the temperature of the CD processing solution has reached -1°C below the set temperature, the fan works.

When the temperature of the CD processing solution has reached -1°C below the set temperature with program timer, the fan works; when the temperature is -1.5°C below the set temperature, the fan stops.

When the program timer mode is used, the fan stops.

When the drive switch is ON, the fan works.

5. Exhaust fan (FAN 2)

Explanation: The fan always works.

6. Motor cooling fan (FAN 3)

Explanation: When the temperature of the CD processing solution has reached -1°C below the set temperature, the fan works.

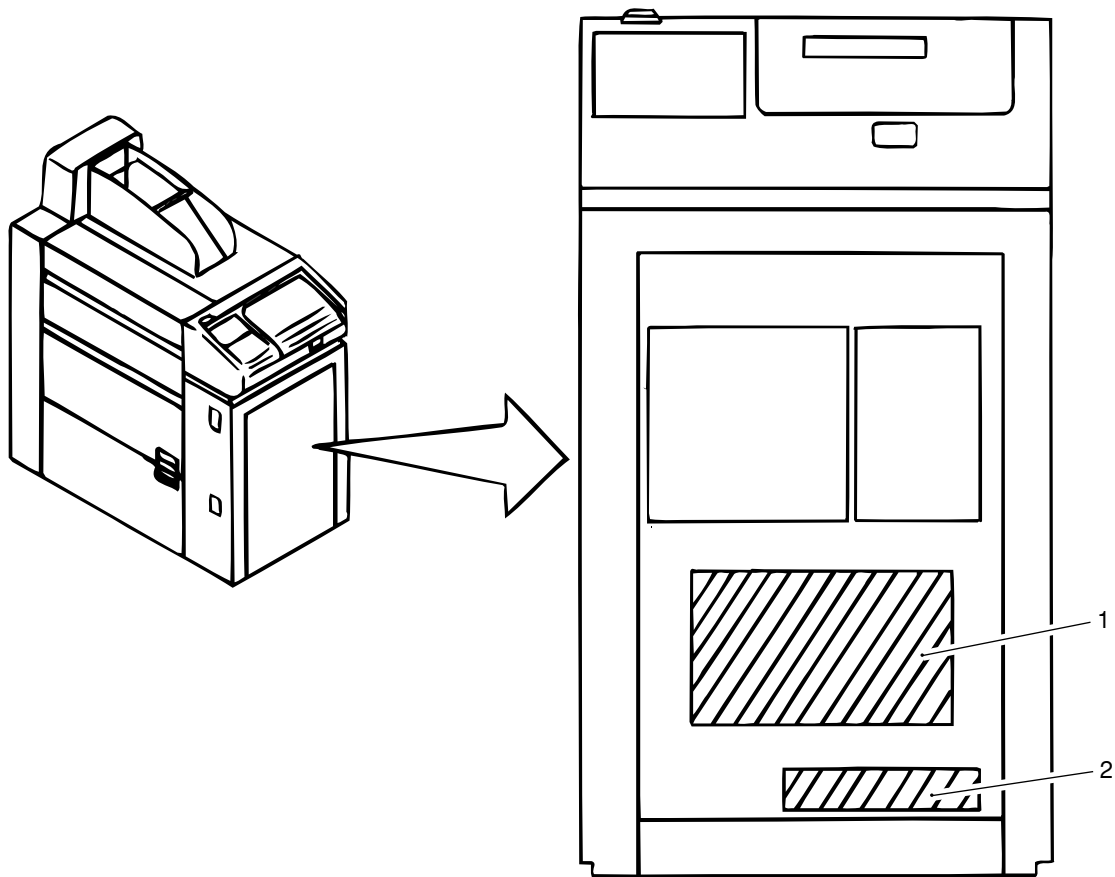
When the temperature of the CD processing solution has reached -1°C below the set temperature with program timer, the fan works; when the temperature is -1.5°C below the set temperature, the fan stops.

When the program timer mode is used, the fan stops.

When the drive switch is ON, the fan works.

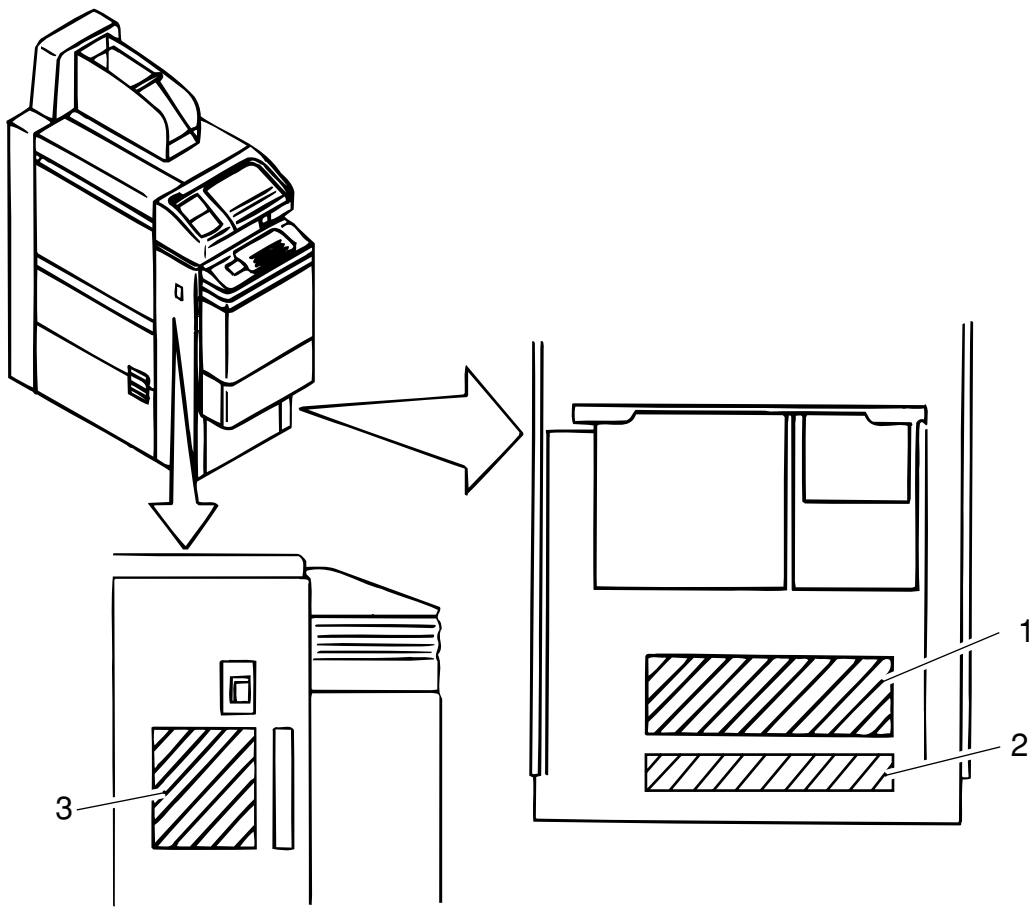
Disposition and Description of Fuses

V30



No.	Name	Manual No.
1	Power PCB 1	6014
2	Switching power source	6051

V50,V100



V50

No.	Name	Manual No.
1	Power PCB 1	6014
2	Switching power source	6051
3	Auto loading driver PCB	6017

*Option

*

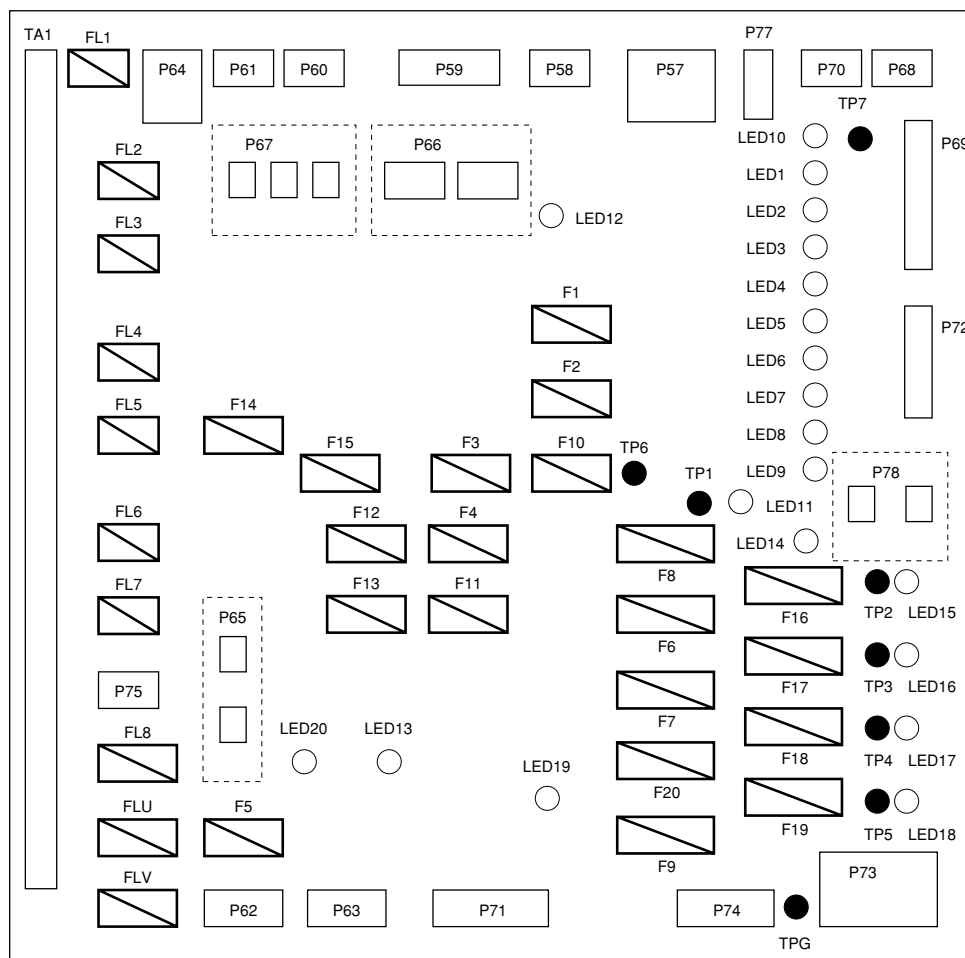
V100

No.	Name	Manual No.
1	Power PCB 1	6014-1
2	Switching power source	6051
3	Auto loading driver PCB	6017

*Option

*

1. Power PCB 1 (J340008 (*1), J391342)



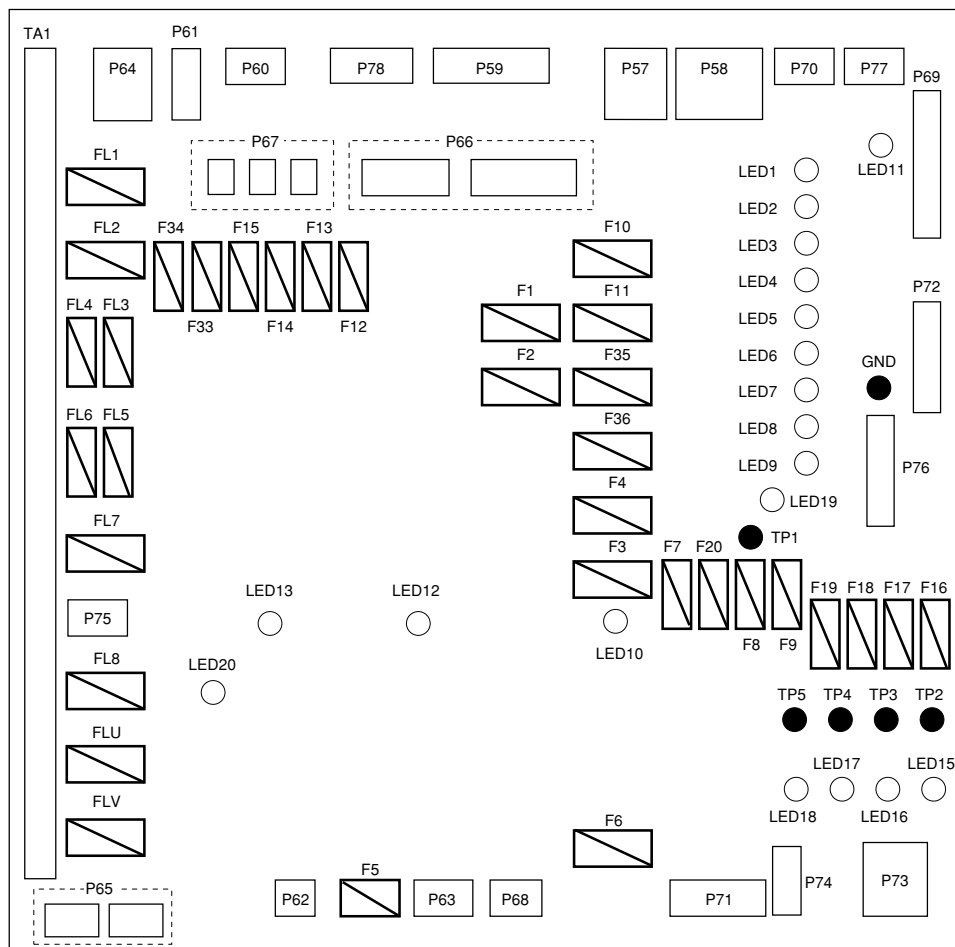
*1. Not comply with the RoHS Directive.

Fuse No.	Rating	Protection line	Load
F1	250V3.15A	AC200-240V	Processing solution heater (CD)
F2	250V3.15A	AC200-240V	Processing solution heater (BL, FIX1)
F3	250V3.15A	AC200-240V	Processing solution heater (FIX2)
F4	250V3.15A	AC200-240V	Processing solution heater (STB)
F5	125V3.15A	AC100V	Drive motor
F6	125V6.3A	AC+33V	Dryer fan (V50 only)
F7	125V3.15A	AC24V	Replenisher pump
F8	125V3.15A	DC+20V	Main control PCB
F9	125V3.15A	DC-24V	Main control PCB, display control PCB
F10	250V6.3A	AC200-240V	Processing solution heater (CD, BL, FIX1)
F11	250V6.3A	AC200-240V	Processing solution heater (FIX2, STB)
F12	250V10A	AC200-240V	Dryer heater
F13	250V10A	AC200-240V	Dryer heater
F14	250V10A	AC200-240V	Dryer heater
F15	250V10A	AC200-240V	Dryer heater
F16	125V6.3A	DC+24V	Exhaust fan, motor cooling fan, cooling fan 1-2, refilling water pump, relay × 1-12
F17	125V6.3A	DC+24V	Circulation pump (CD, CD shower)
F18	125V6.3A	DC+24V	Circulation pump (BL, FIX1-2, STB1-3)

Description of Electric Parts

Fuse No.	Rating	Protection line	Load
F19	125V6.3A	DC+24V	Display control PCB Pressure solenoid (right, left) Cutter motor (right, left) Entrance elevator motor, Exit elevator motor Horizontal feed motor Auto loading cover open solenoid Open motor (right, left) Selection solenoid
F20	125V3.15A	AC24V	Aeration pump Cooling water solenoid valve, Shutter motor (right, left)
FL1	250V5A	AC200-240V	Power source surge circuit
FL2	250V5A	AC200-240V	
FL3	250V5A	AC200-240V	
FL4	250V5A	AC200-240V	
FL5	250V5A	AC200-240V	
FL6	250V5A	AC200-240V	
FL7	250V5A	AC200-240V	
FL8	250V5A	AC200-240V	
FLU	250V5A	AC100V	
FLV	250V5A	AC100V	

2. Power PCB 1 (J340038 (*1), J391342)

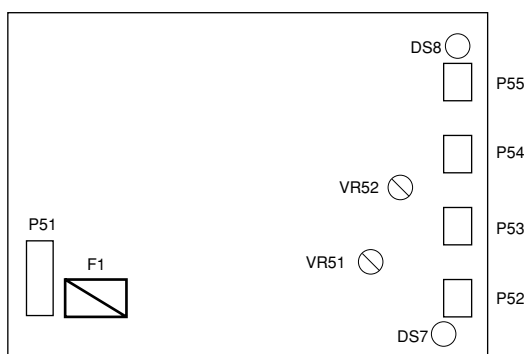


*1. Not comply with the RoHS Directive.

Fuse No.	Rating	Protection line	Load
F1	250V10A	AC200-240V	Processing solution heater (CD, CD-2)
F2	250V3.15A	AC200-240V	Processing solution heater (BL)
F3	250V3.15A	AC200-240V	Processing solution heater (FIX1)
F4	250V6.3A	AC200-240V	Processing solution heater (FIX2)
F5	125V3.15A	AC100V	Drive motor
F6	125V6.3A	AC100V	Dryer fan
F7	125V3.15A	AC24V	Replenisher pump
F8	125V3.15A	DC+20V	Main control PCB
F9	125V3.15A	DC-24V	Main control PCB, display control PCB
F10	250V10A	AC200-240V	Processing solution heater (CD, CD-2, BL)
F11	250V10A	AC200-240V	Processing solution heater (FIX1, FIX2, STB3)
F12	250V10A	AC200-240V	Dryer heater
F13	250V10A	AC200-240V	Dryer heater
F14	250V10A	AC200-240V	Dryer heater
F15	250V10A	AC200-240V	Dryer heater
F16	125V6.3A	DC+24V	Exhaust fan, motor cooling fan, cooling fan 1-3, refilling water pump, relay ¥ 1-13
F17	125V6.3A	DC+24V	Circulation pump (CD, CD shower)

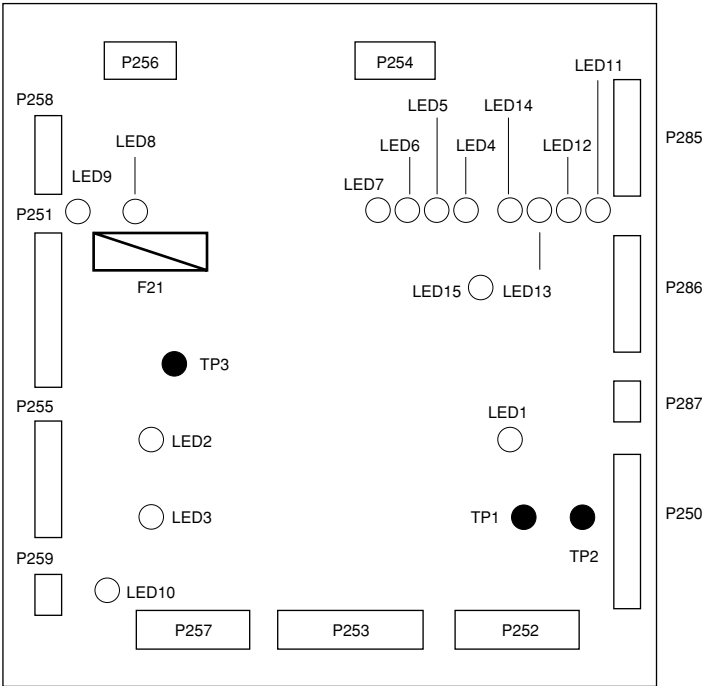
Fuse No.	Rating	Protection line	Load
F18	125V6.3A	DC+24V	Circulation pump (CD-2, BL, FIX1-2, STB1-3)
F19	125V6.3A	DC+24V	Display control PCB Pressure solenoid (right, left) Cutter motor (right, left) Entrance elevator motor, exit elevator motor Horizontal feed motor Auto loading cover open solenoid Open motor (right, left) Selection solenoid
F20	125V3.15A	AC24V	Aeration pump Cooling water solenoid valve, shutter motor
F33	240V10A	AC200-240V	Dryer heater
F34	250V10A	AC200-240V	Dryer heater
F35	250V3.15A	AC200-240V	Not in use
F36	250V6.3A	AC200-240V	Processing solution heater (STB3)
FL1	250V5A	AC200-240V	Power source surge circuit
FL2	250V5A	AC200-240V	
FL3	250V5A	AC200-240V	
FL4	250V5A	AC200-240V	
FL5	250V5A	AC200-240V	
FL6	250V5A	AC200-240V	
FL7	250V5A	AC200-240V	
FL8	250V5A	AC200-240V	
FLU	250V5A	AC100V	
FLV	250V5A	AC100V	

3. Switching power source PS1 (RPW-250, i038205)



Fuse No.	Rating	Protection line	Load
F1	250V5A	AC200-240V	For protection of switching power source

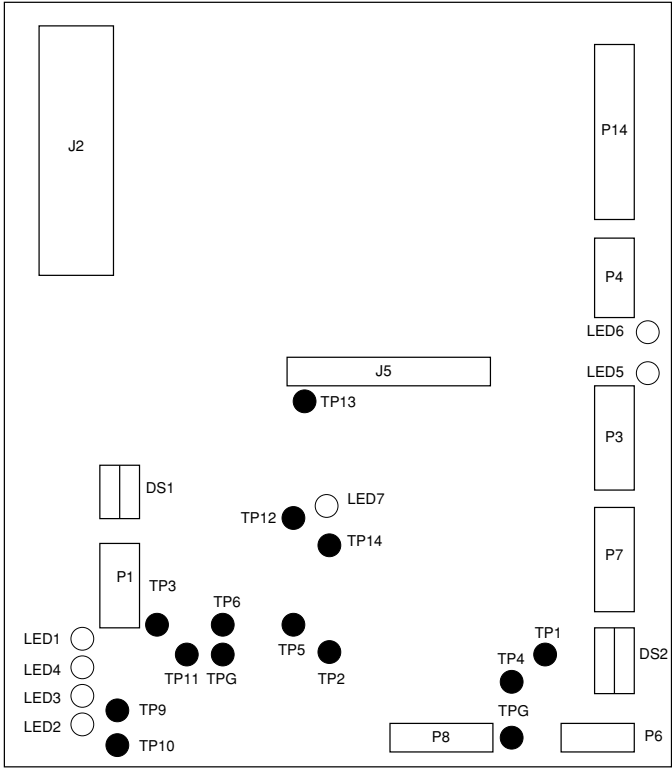
4. Auto loading driver PCB (J340011(*1), J391343)



*1. Not comply with the RoHS Directive.

Fuse No.	Rating	Protection line	Load
F21	125V T3.15A	+24V	Entrance elevator motor Exit elevator motor Auto loading cover open solenoid Horizontal feed motor Open motor (right, left)

Main Control PCB (J391377)



NOTE
 • The main control PCB (J340033) dose not comply with the RoHS Directive.

- 1. Function
 - 1.1 Main control
- 2. Adjustment and cautions after replacement
 - 2.1 Set the DIP switches.
 - DS1 ... Set both switches 1 and 2 to on.
 - DS2 ... Set all switches to off.
 - 2.2 Read in the system program.
 - Refer to 3016.
 - 2.3 Initialize the data (ALL).
 - Refer to 3071.
 - 2.4 Read in the data of the data backup floppies (ALL).
 - Refer to 3051.
 - 2.5 Set date and time.

3. Connector not in use

Connector No.	Purpose	Remark
P6	RS-232C	
P7	Not in use	

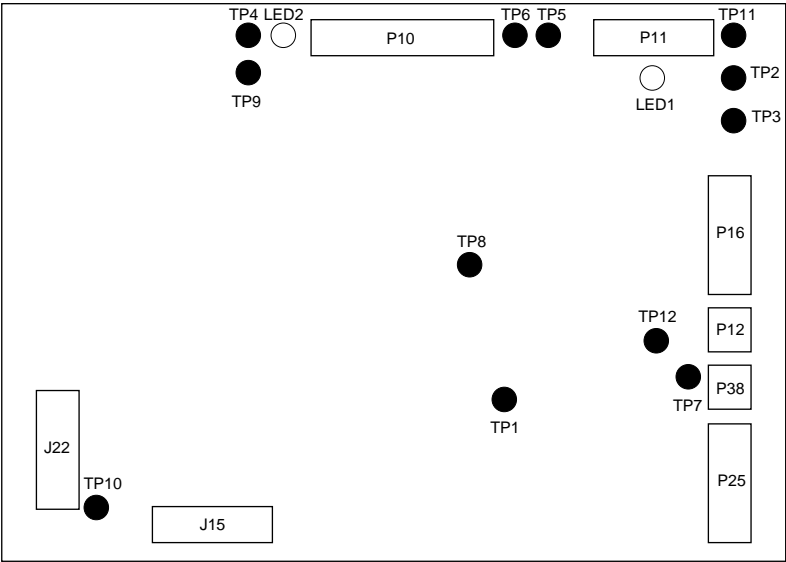
4. Tables of main parts

LED No.	Purpose	Remark
1	DC+5V input	ON with power input.
2	DC+12V input	ON with power input.
3	DC-12V input	ON with power input.
4	DC+5V-2 output	ON with power input.
5	For check of display control PCB operation	Flashes during normal operation.
6	For check of main control PCB operation	Flashes during normal operation.
7	Power supply for DC+12V(F) flash memory writing	ON when the program is read.

TP No.	Purpose	Measurement with voltmeter	Remark
1	For check of DC+5V voltage	Possible	
2	For check of DC+20V voltage	Possible	
3	For check of DC-24V voltage	Possible	
4	For check of thermistor reference level	Possible	Approx. 1.0V
5	For check of DC+12V voltage	Possible	
6	For check of DC-12V voltage	Possible	
7	GND	Possible	
8	GND	Possible	
9	For check of A/D converter reference voltage	Possible	
10	For check of A/D analogue input	Possible	
11	For check of DC+5V-2 voltage	Possible	
12	Not in use	Impossible	
13	Not in use	Impossible	
14	For check of DC+12V (F) voltage	Possible	

DS No.	Bit No.	Purpose	Remark
1	1	ON/OFF of memory backup battery	Set to ON without fail.
	2		
2	1	Not in use	Set to OFF without fail.
	2	Not in use	
	3	Not in use	
	4	Not in use	
	5	Not in use	
	6	Not in use	
	7	Not in use	
	8	Not in use	

Display Control PCB (J391346)




NOTE

- The display control PCB (J340034) dose not comply with the RoHS Directive.

- 1. Functions
 - 1.1 Controls the display.
 - 1.2 Controls the keyboard.
 - 1.3 Controls the buzzer.
- 2. Adjustment and caution after replacement

Read in the system program to the PCB.

 Refer to 3016.

3. Connector not in use

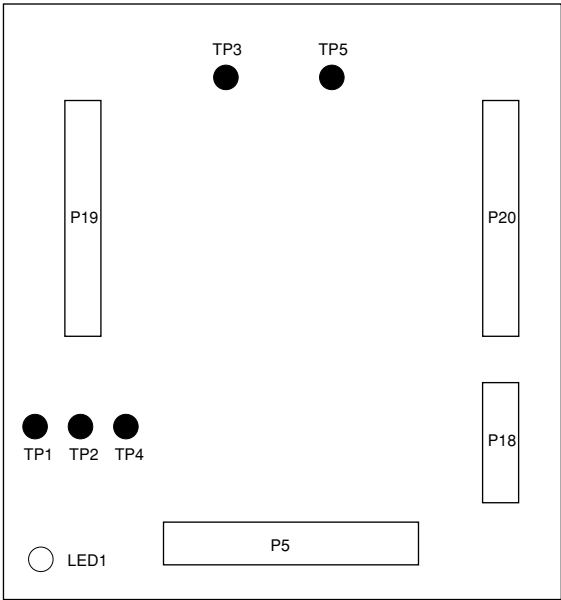
Connector No.	Purpose	Remark
P16	RS-232C	

4. Tables of main parts

LED No.	Purpose	Remark
1	DC+5V input	ON with power input.
2	DC+12V (F) input	ON when the program is read.

TP No.	Purpose	Measurement with voltmeter	Remark
1	For check of display contrast control voltage	Possible	
2	GND	Possible	
3	For check of DC+5V voltage	Possible	
4	For check of DC+12V(F) voltage	Possible	For flash
5	For check of DC+12V voltage	Possible	
6	For check of DC-12V voltage	Possible	
7	For check of buzzer volume	Possible	
8	Not in use	Impossible	
9	Not in use	Impossible	
10	Not in use	Impossible	
11	For check of DC+24V voltage	Possible	
12	For check of DC-24V voltage	Possible	

I/O PCB (J391347)



NOTE

- The I/O PCB (J340035) dose not comply with the RoHS Directive.

- 1. Function
 - 1.1 Controls the auto loading unit.
- 2. Adjustment and caution after replacement
 - Nothing particular
- 3. Connector not in use

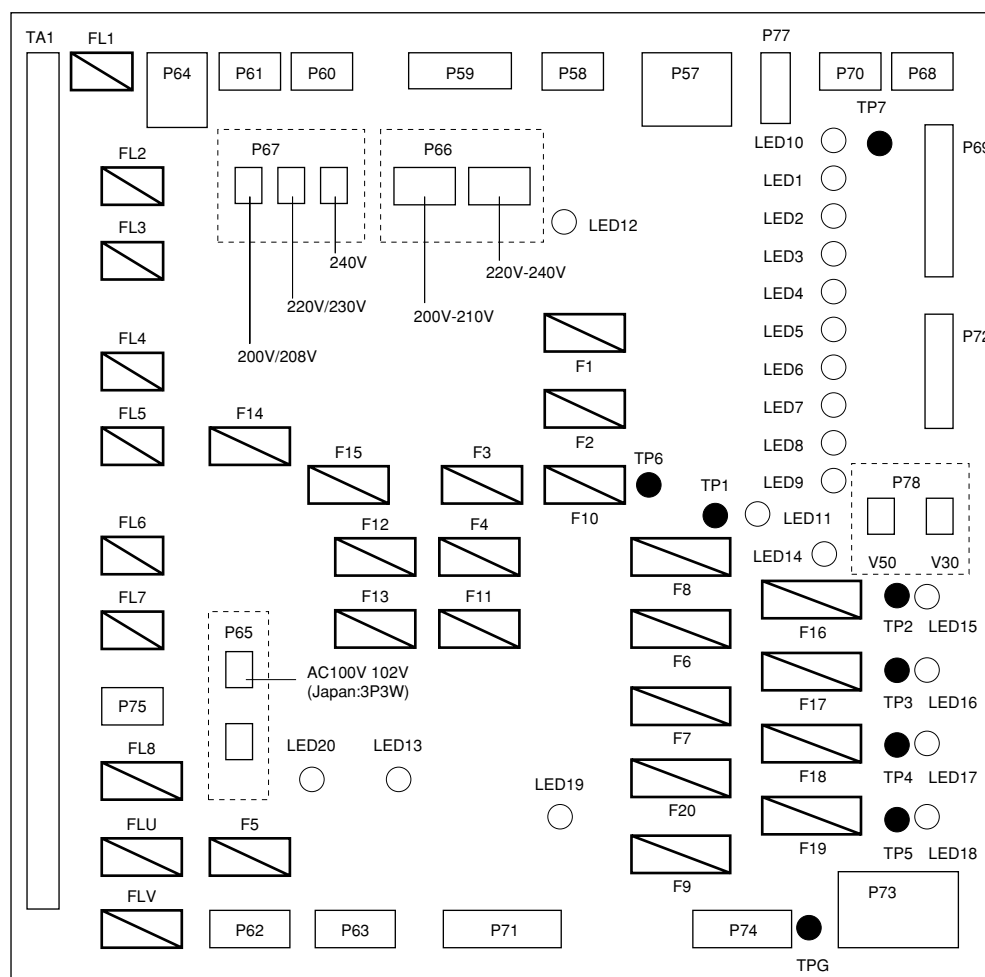
Connector No.	Purpose	Remark
P20	For spare	

4. Tables of main parts

LED No.	Purpose	Remark
1	Not in use	

TP No.	Purpose	Measurement with voltmeter	Remark
1	For check of DC+5V voltage	Possible	
2	GND	Possible	
3	Not in use	Impossible	
4	Not in use	Impossible	
5	Not in use	Impossible	

Power PCB 1 (J391342)



Caution

Be sure to replace power PCB 1 when five years have elapsed after starting the use of power PCB 1.
If it is used continuously, it may cause serious troubles such as burning out the PCB itself.

NOTE

- Power PCB1 (J340008) dose not comply with the RoHS Directive.

1. Functions

- 1.1 Power supply to each unit
(Processing solution heater, dryer heater, drive motor, transformer, switching power source, dryer fan)
- 1.2 For power supply surge
- 1.3 Switching the dryer heater voltage
Switching the transformer voltage
Switching the dryer fan voltage
Switching the AC 100V power supply source

2. Adjustment and cautions after replacement

WARNING

- You may get electric shock. Never open the cover when the circuit breaker is ON. If you get an electric shock, consult a physician as soon as possible.
- Where the circuit breaker is turned OFF, voltage is still applied to terminal TA1 of power PCB 1. Be sure to turn OFF the circuit breaker of the main power source, when replacement is required.

2.1 Connect each connector (P65-67, and 78) to the same position as before replacement.

Connector No.	Remark
P65	Depending on power supply specification
P66	Depending on service voltage
P67	
P78	Depending on models

2.2 Connect terminal TA1 according to the main body power supply specification.

3. Connector not in use

Connector No.	Purpose	Remark
P58	Not in use	
P77	Cooling water unit	

4. Tables of main parts

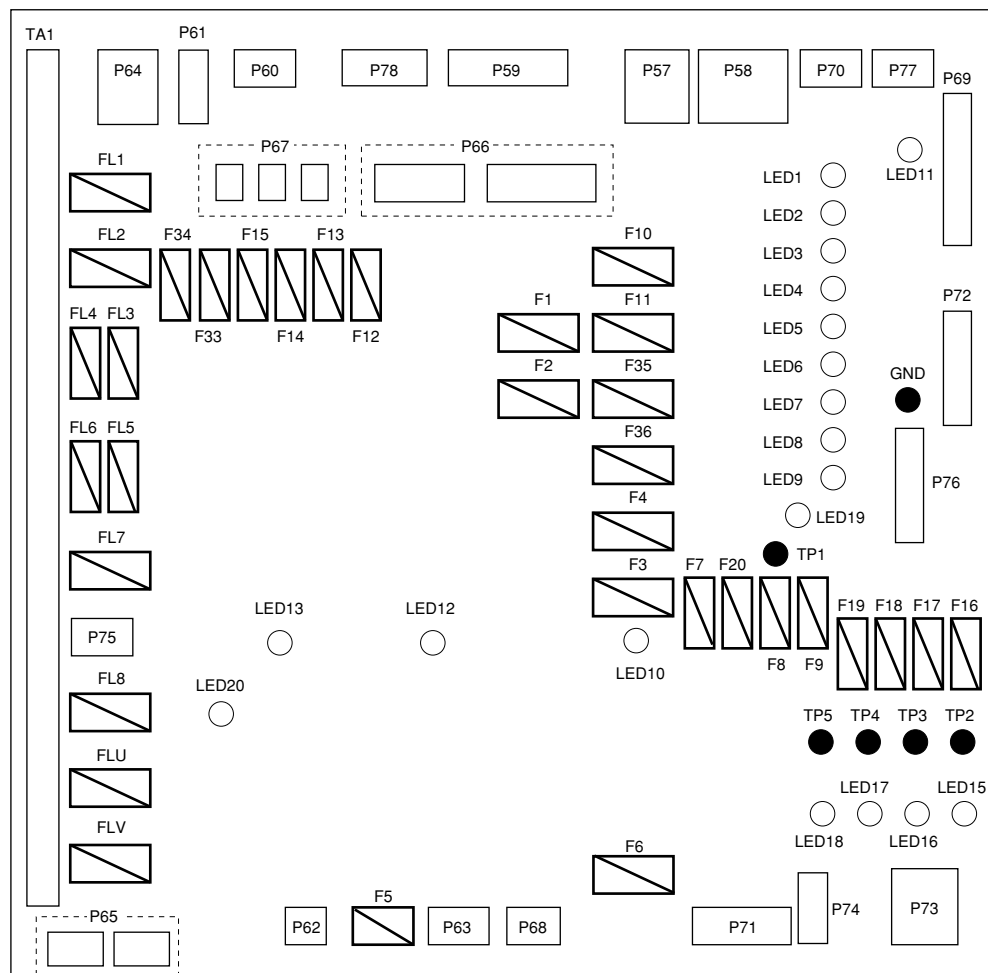
LED No.	Purpose	Remark
1	For check of SSR1 (processing solution heater CD) operation	ON during operation.
2	For check of SSR2 (processing solution heater BL) operation	
3	For check of SSR3 (processing solution heater FIX1) operation	
4	For check of SSR4 (processing solution heater FIX2) operation	
5	Not in use	ON during operation.
6	Not in use	
7	For check of SSR5 (processing solution heater STB3) operation	
8	For check of SSR8 (dryer heater V30-600W, V50-900W) operation	
9	For check of SSR9 (dryer heater V30-800W, V50-1100W) operation	ON with power supply input.
10	For check of relay ×4 (dryer fan) operation	
11	For check of relay ×3 (program timer relay) operation	
12	For check of relay ×1, ×2 (processing solution heater main relay) operation	
13	For check of relay ×5, ×6 (chemical solution heater main relay) operation	ON during operation.
14	DC+33V input	
15	DC+24V-1 input	
16	DC+24V-2 input	
17	DC+24V-3 input	ON during operation.
18	DC+24V-4 input	
19	DC+5V input	
20	For check of relay ×7 (drive motor relay) operation	

TP No.	Purpose	Measurement with voltmeter	Remark
G	GND	Possible	
1	DC+33V voltage	Possible	
2	DC+24V-1 voltage	Possible	
3	DC+24V-2 voltage	Possible	
4	DC+24V-3 voltage	Possible	
5	DC+24V-4 voltage	Possible	
6	For check of DC+5V voltage	Possible	
7	Not in use	Impossible	

Fuse No.	Rating	Protection line	Load
F1	250V3.15A	AC200-240V	Processing solution heater (CD)
F2	250V3.15A	AC200-240V	Processing solution heater (BL, FIX1)
F3	250V3.15A	AC200-240V	Processing solution heater (FIX2)
F4	250V3.15A	AC200-240V	Processing solution heater (STB)
F5	125V3.15A	AC100V	Drive motor
F6	125V6.3A	DC+33V	Dryer fan (only for V50)
F7	125V3.15A	AC24V	Replenisher pump
F8	125V3.15A	DC+20V	Main control PCB
F9	125V3.15A	DC-24V	Main control PCB, display control PCB
F10	250V6.3A	AC200-240V	Processing solution heater (CD, BL, FIX1)
F11	250V6.3A	AC200-240V	Processing solution heater (FIX2, STB)
F12	250V10A	AC200-240V	Dryer heater
F13	250V10A	AC200-240V	Dryer heater
F14	250V10A	AC200-240V	Dryer heater
F15	250V10A	AC200-240V	Dryer heater
F16	125V6.3A	DC+24V	Exhaust fan, motor cooling fan, radiator cooling fan, cooling fan 1-4, relay ×1-12
F17	125V6.3A	DC+24V	Circulation pump (CD, CD shower)
F18	125V6.3A	DC+24V	Circulation pump (BL, FIX1-2, STB1-3)
F19	125V6.3A	DC+24V	Display control PCB Pressure solenoid (right, left) Cutter motor (right, left) Entrance elevator motor, exit elevator motor Horizontal feed motor Auto loading cover open solenoid Open motor (right, left) Selection solenoid
F20	125V3.15A	AC24V	Aeration pump Cooling water solenoid valve, shutter motor (left, right)
FL1	250V5A	AC200-240V	Power supply surge circuit
FL2	250V5A	AC200-240V	
FL3	250V5A	AC200-240V	
FL4	250V5A	AC200-240V	
FL5	250V5A	AC200-240V	
FL6	250V5A	AC200-240V	
FL7	250V5A	AC200-240V	
FL8	250V5A	AC200-240V	
FLU	250V5A	AC100V	
FLV	250V5A	AC100V	

* Cooling fan 4 is for V30 only.

Power PCB 1 (J391349)



Caution

Be sure to replace power PCB 1 when five years have elapsed after starting the use of power PCB 1.
If it is used continuously, it may cause serious troubles such as burning out the PCB itself.

NOTE

- Power PCB1 (J340008) dose not comply with the RoHS Directive.

1. Functions

- 1.1 Power supply to each unit
(Processing solution heater, dryer heater, drive motor, transformer, switching power source, dryer fan)
- 1.2 For power supply surge
- 1.3 Switching the dryer heater voltage
Switching the transformer voltage
Switching the AC 100V power supply source

2. Adjustment and cautions after replacement

WARNING

- You may get electric shock. Never open the cover when the circuit breaker is ON. If you get an electric shock, consult a physician as soon as possible.
- Where the circuit breaker is turned OFF, voltage is still applied to terminal TA1 of power PCB 1. Be sure to turn OFF the circuit breaker of the main power source, when replacement is required.

2.1 Connect each connector (P65-67) to the same position as before replacement.

Connector No.	Remark
P65	Depending on power supply specification
P66	Depending on service voltage
P67	

2.2 Connect terminal TA1 according to the main body power supply specification.

3. Connector not in use

Connector No.	Purpose	Remark
P76	Not in use	
P77	Cooling water unit	

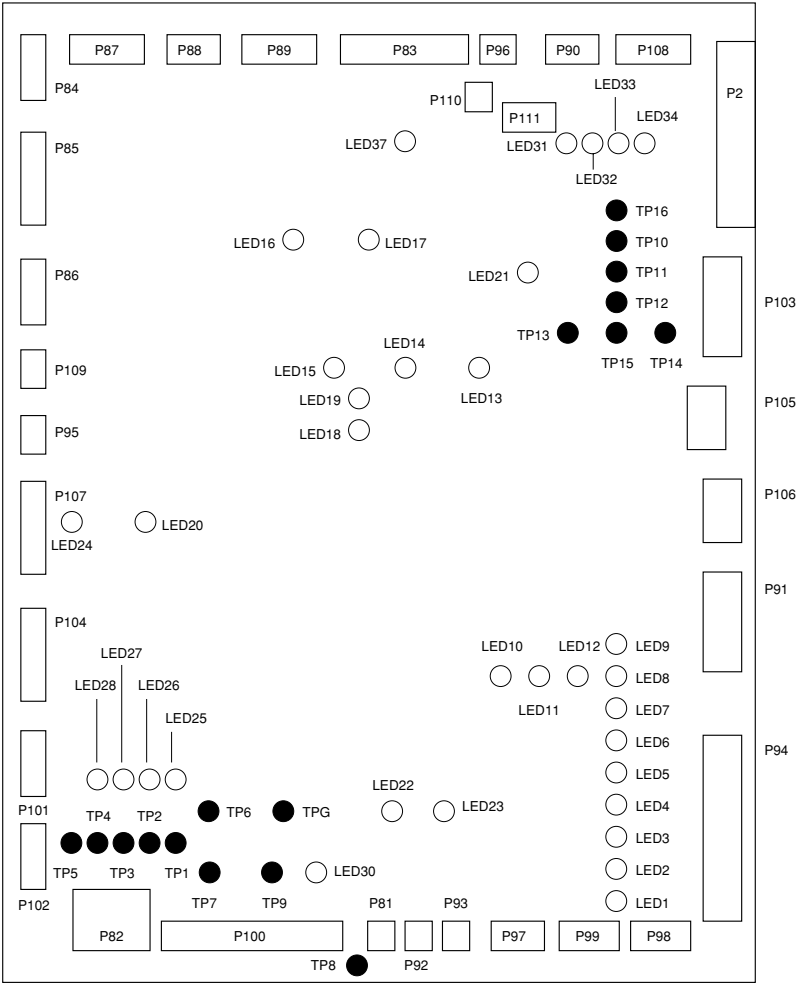
4. Tables of main parts

LED No.	Purpose	Remark
1	For check of SSR1 (processing solution heater CD, CD2) operation	ON during operation.
2	For check of SSR2 (processing solution heater BL) operation	
3	For check of SSR3 (processing solution heater FIX1) operation	
4	For check of SSR4 (processing solution heater FIX2) operation	
5	For check of SSR6 (processing solution heater STB1) operation	
6	For check of SSR7 (processing solution heater STB2) operation	
7	For check of SSR5 (processing solution heater STB3) operation	
8	For check of SSR8 (dryer heater 1100W) operation	
9	For check of SSR9,10 (dryer heater 900W, 1000W) operation	
10	For check of relay ×4 (dryer fan) operation	
11	For check of relay ×3 (program timer relay) operation	
12	For check of relay ×1, ×2 (processing solution heater main relay) operation	
13	For check of relay ×5, ×6, ×13 (dryer heater main relay) operation	
15	DC+24V-1 input	ON with power supply input.
16	DC+24V-2 input	
17	DC+24V-3 input	
18	DC+24V-4 input	
19	DC+5V input	
20	For check of relay ×7 (drive motor relay) operation	ON during operation.

TP No.	Purpose	Measurement with voltmeter	Remark
G	GND	Possible	
1	DC+5V voltage	Possible	
2	DC+24V-1 voltage	Possible	
3	DC+24V-2 voltage	Possible	
4	DC+24V-3 voltage	Possible	
5	DC+24V-4 voltage	Possible	

Fuse No.	Rating	Protection line	Load
F1	250V10A	AC200-240V	Processing solution heater (CD, CD2)
F2	250V3.15A	AC200-240V	Processing solution heater (BL)
F3	250V3.15A	AC200-240V	Processing solution heater (FIX1)
F4	250V6.3A	AC200-240V	Processing solution heater (FIX2)
F5	125V3.15A	AC100V	Drive motor
F6	125V6.3A	AC100V	Dryer fan
F7	125V3.15A	AC24V	Replenisher pump, Supply water pump, Water pump
F8	125V3.15A	DC+20V	Main control PCB
F9	125V3.15A	DC-24V	Main control PCB, Display control PCB
F10	250V10A	AC200-240V	Processing solution heater (CD, CD2, BL)
F11	250V10A	AC200-240V	Processing solution heater (FIX1, FIX2, STB3)
F12	250V10A	AC200-240V	Dryer heater
F13	250V10A	AC200-240V	Dryer heater
F14	250V10A	AC200-240V	Dryer heater
F15	250V10A	AC200-240V	Dryer heater
F16	125V6.3A	DC+24V	Exhaust fan, Motor cooling fan, Radiator cooling fan Cooling fan 1-4, Relay ×1-13
F17	125V6.3A	DC+24V	Circulation pump (CD1, CD3)
F18	125V6.3A	DC+24V	Circulation pump (CD2, BL, FIX1-2, STB1-3)
F19	125V6.3A	DC+24V	Display control PCB Pressure solenoid (right, left) Cutter motor (right, left) Entrance elevator motor, Exit elevator motor Horizontal feed motor Auto loading cover open solenoid Open motor (right, left) Selection solenoid
F20	125V3.15A	AC24V	Aeration pump Cooling water solenoid valve, Shutter motor (left, right)
F33	250V10A	AC200-240V	Dryer heater
F34	250V10A	AC200-240V	Dryer heater
F35	250V3.15A	AC200-240V	Processing solution heater (STB1-2)
F36	250V6.3A	AC200-240V	Processing solution heater (STB3)
FL1	250V5A	AC200-240V	Power supply surge circuit
FL2	250V5A	AC200-240V	
FL3	250V5A	AC200-240V	
FL4	250V5A	AC200-240V	
FL5	250V5A	AC200-240V	
FL6	250V5A	AC200-240V	
FL7	250V5A	AC200-240V	
FL8	250V5A	AC200-240V	
FLU	250V5A	AC100V	
FLV	250V5A	AC100V	

Power PCB 2 (J391344)



NOTE

- Power PCB2 (J340012) dose not comply with the RoHS Directive.

- 1. Function
 - 1.1 Controls each unit and power supply.
(Each pump, loading unit, cooling fan, cooling water solenoid valve and auto loading unit)
- 2. Adjustment and caution after replacement
 - Nothing particular
- 3. Connector not in use

Connector No.	Purpose	Remark
P91	Not in use	
P93	Cooling water unit	
P94	Not in use	
P95	Waste solution connecting kit	
P96	CD-2 circulation pump	V100 only
P97	Digital flowmeter	
P101	Auto loading unit	

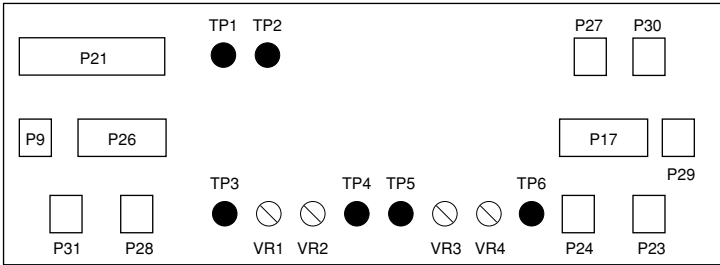
Connector No.	Purpose	Remark
P102	Not in use	
P103	Not in use	
P104	Film counter/hour meter	option
P106	Digital flowmeter	V100 only
P110	Not in use	
P111	Not in use	

4. Tables of main parts

LED No.	Purpose	Remark							
1	For check of SSR10 (replenisher pump CD) operation	ON during operation.							
2	For check of SSR11 (replenisher pump BL) operation								
3	For check of SSR12 (replenisher pump FIX) operation								
4	For check of SSR13 (replenisher pump STB) operation								
5	For check of SSR14 (replenisher pump WL) operation								
6	Not in use								
7	Not in use								
8	Not in use								
9	Not in use								
10	For check of refilling water pump operation	WP No.							
11	Each combination of LED 10-12 shows the refilling water pump in operation.		1	2	3	4	5	6	7
12		LED10	ON	OFF	ON	OFF	ON	OFF	ON
		LED11	OFF	ON	ON	OFF	OFF	ON	ON
		LED12	OFF	OFF	OFF	ON	ON	ON	ON
13	For check of loading cover lock solenoid operation	ON during operation.							
14	For check of pressure solenoid (right) operation								
15	For check of pressure solenoid (left) operation								
16	For check of cutter motor (right) operation								
17	For check of cutter motor (left) operation								
18	For check of pressure sensor (left) operation	ON when the sensor is closed.							
19	For check of pressure sensor (right) operation								
20	For check of relay ×11 (circulation pump) operation	ON during operation.							
21	For check of relay ×8 (cooling fan) operation								
22	For check of relay ×9 (aeration pump) operation								
23	For check of SSR23 (cooling water solenoid valve) operation								
24	For check of relay ×10 (processing solution level detection, upper cover detection) operation								
25	DC+24V-1 input	ON during power supply input.							
26	DC+24V-2 input								
27	DC+24V-3 input								
28	DC+24V-4 input								
30	DC+5V input								
31	For check of perforation sensor (left) detection	ON when the sensor is closed.							
32	For check of film sensor (left) detection								
33	For check of perforation sensor (right) detection								
34	For check of film sensor (right) detection								
37	Not in use								

TP No.	Purpose	Measurement with voltmeter	Remark
G	GND	Possible	
1	For check of DC+24V-1 voltage	Possible	
2	For check of DC+24V-2 voltage	Possible	
3	For check of DC+24V-3 voltage	Possible	
4	For check of DC+24V-4 voltage	Possible	
5	For check of DC+33V voltage	Possible	
6	For check of AC24V-1 voltage	Possible	Measure between TP6 and 7, between TP7 and 8.
7	For check of AC24V voltage	Possible	
8	For check of AC24V-2 voltage	Possible	
9	For check of DC+5V voltage	Possible	
10	Not in use	Impossible	
11	Not in use	Impossible	
12	Not in use	Impossible	
13	Not in use	Impossible	
14	Not in use	Impossible	
15	Not in use	Impossible	
16	Not in use	Impossible	

Loading Connecting PCB (J391348)



NOTE

- The Loading Connecting PCB (J340036) dose not comply with the RoHS Directive.

1. Function

1.1 Connection of input signal in the loading unit

2. Adjustment and cautions after replacement

- 2.1 Check detecting condition of the perforation sensor.
- 2.2 Check detecting condition of the film sensor.

3. Connector not in use

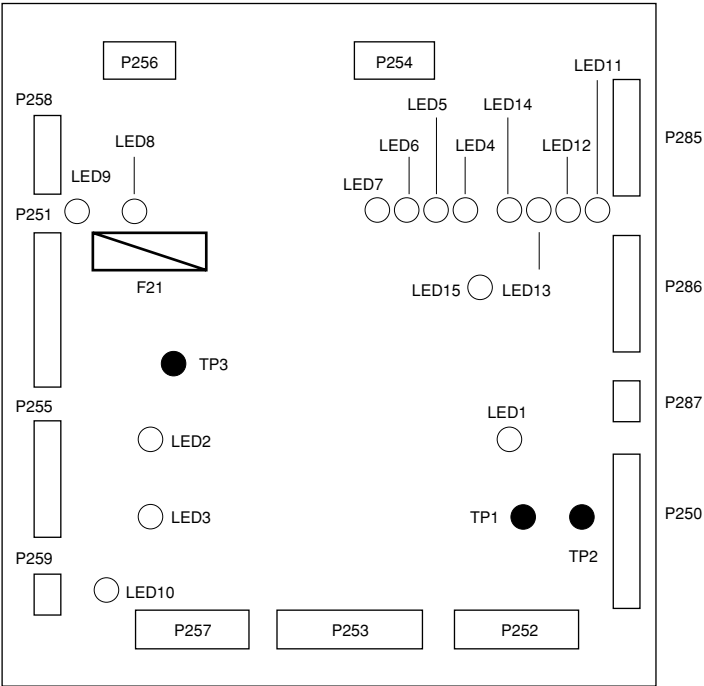
None

4. Tables of main parts

VR No.	Purpose	Remark
1	For adjustment of perforation sensor (left)	
2	For adjustment of film sensor (left)	
3	For adjustment of perforation sensor (right)	
4	For adjustment of film sensor (right)	

TP No.	Purpose	Measurement with voltmeter	Remark
1	For check of DC+5V voltage	Possible	
2	GND	Possible	
3	For check of perforation sensor (left) input signal	Possible	11-12V when the sensor is closed and 0V opened.
4	For check of film sensor (left) input signal	Possible	
5	For check of perforation sensor (right) input signal	Possible	
6	For check of film sensor (right) input signal	Possible	

Auto Loading Driver PCB (J391343)



NOTE

- The Auto Loading Driver PCB (J340011) dose not comply with the RoHS Directive.

- 1. Function
Controls and power supply of auto loading unit.
- 2. Adjustment and caution after replacement
Nothing particular
- 3. Connector not in use
None
- 4. Tables of main parts

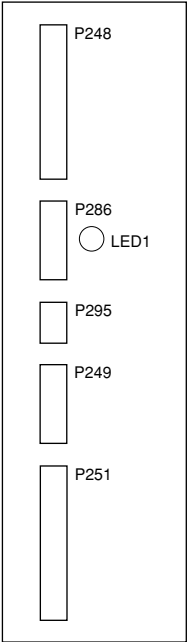
LED No.	Purpose	Remark
1	DC+5V input	ON during power supply input.
2	For check of shutter motor (left) operation	ON during operation.
3	For check of shutter motor (right) operation	
4	For check of entrance elevator motor forward operation	
5	For check of entrance elevator motor reverse operation	
6	For check of exit elevator motor forward operation	
7	For check of exit elevator motor reverse operation	
8	DC+24V input	ON during power supply input.
9	DC+24V input	ON during power supply input.
10	For check of auto loading cover open solenoid operation	ON during operation.
11	For check of open motor (left) forward operation	
12	For check of open motor (left) reverse operation	
13	For check of open motor (right) forward operation	
14	For check of open motor (right) reverse operation	

Printed Circuit Boards

TP No.	Purpose	Measurement with voltmeter	Remark
1	For check of DC+5V voltage	Possible	
2	GND	Possible	
3	For check of DC+24V voltage	Possible	

Fuse No.	Rating	Protection line	Load
F21	125V T3.15A	+24V	Entrance elevator motor Exit elevator motor Auto loading cover open solenoid Horizontal feed motor Open motor (right, left)

Selection driver PCB (J490402)

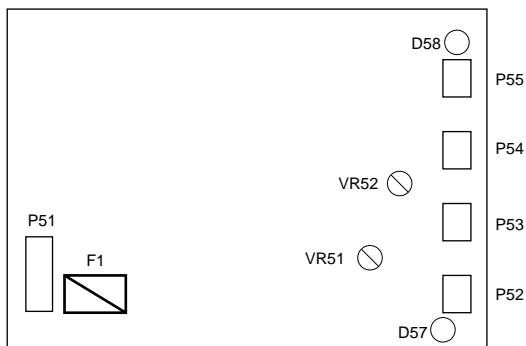


NOTE
• The Selection driver PCB (J440033) dose not comply with the RoHS Directive.

- 1. Function
Control the selection solenoid and power supply.
- 2. Adjustment and caution after replacement
Nothing particular
- 3. Connector not in use
None
- 4. Table of main part

LED No.	Purpose	Remark
1	For check of selection solenoid operation	ON during operation

Switching Power Source RPW-250 (i038205)



1. Function

Power supply to each unit

5V3A (CPU and power source for various controls)

24V10A (motor, pump, solenoid, control relay)

2. Adjustment and caution after replacement

Do not touch VR51 and VR52 since the manufacturer has adjusted them before shipment.

3. Connector not in use

None

4. Tables of main parts

LED No.	Purpose	Remark
D57	DC+5V input	ON during power supply input.
D58	DC+24V input	ON during power supply input.

Fuse No.	Rating	Protection line	Load
1	250V5A	AC200-240V	For protection of switching power source

Wiring Diagram

General

Name	No.	V30	V50	V100
Power supply circuit diagram	1-1	J340041	J340041	J340228
Diagram	1-2	J340040	J340040	J340040

Block

Name	No.	V30	V50	V100
Power PCB 1, 2 and peripheries (1)	2-1	J340072	J340075	J340114
Power PCB 1, 2 and peripheries (2)	2-2	J340073	J340073	J340073
Loading connecting PCB and peripheries	2-3	J340037	J340037	J340037
Auto loading section (option)	2-5		J340010	J340010
Auto loading section option (IX240)	2-6		J340229	J340229

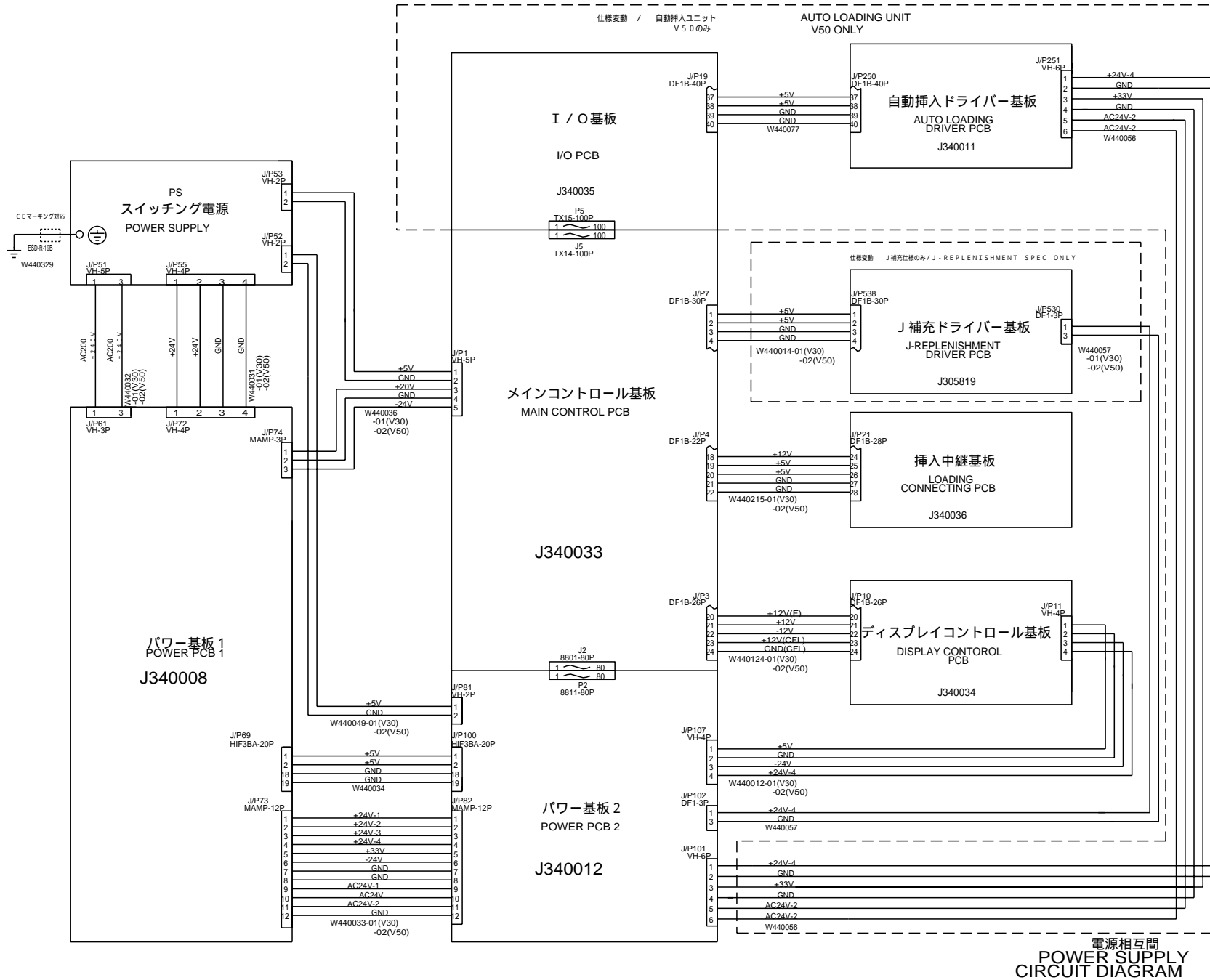
Component

Name	No.	V30	V50	V100
Power supply circuit	3-1	J340071	J340074	J340116
Loading connecting PCB and peripheries 1	3-2	J340026	J340026	J340026
Loading connecting PCB and peripheries 2	3-3	J340027	J340027	J340027
Heater section	3-4	J340062	J340095	J340118
Drive/Dryer fan section	3-5	J340063	J340096	J340117
Pump section	3-6	J340064	J340064	J340119
Replenisher pump section	3-7	J300065	J300065	J300065
Float switch section	3-8	J340066	J340066	J340066
Replenisher/Waste solution float switch section	3-9	J340093	J340093	J340093
Fan/Option section	3-10	J340094	J340094	J340094
Thermosensor	3-11	J340090	J340090	J340090
Keyboard/Display unit	3-12	J340028	J340028	J340028

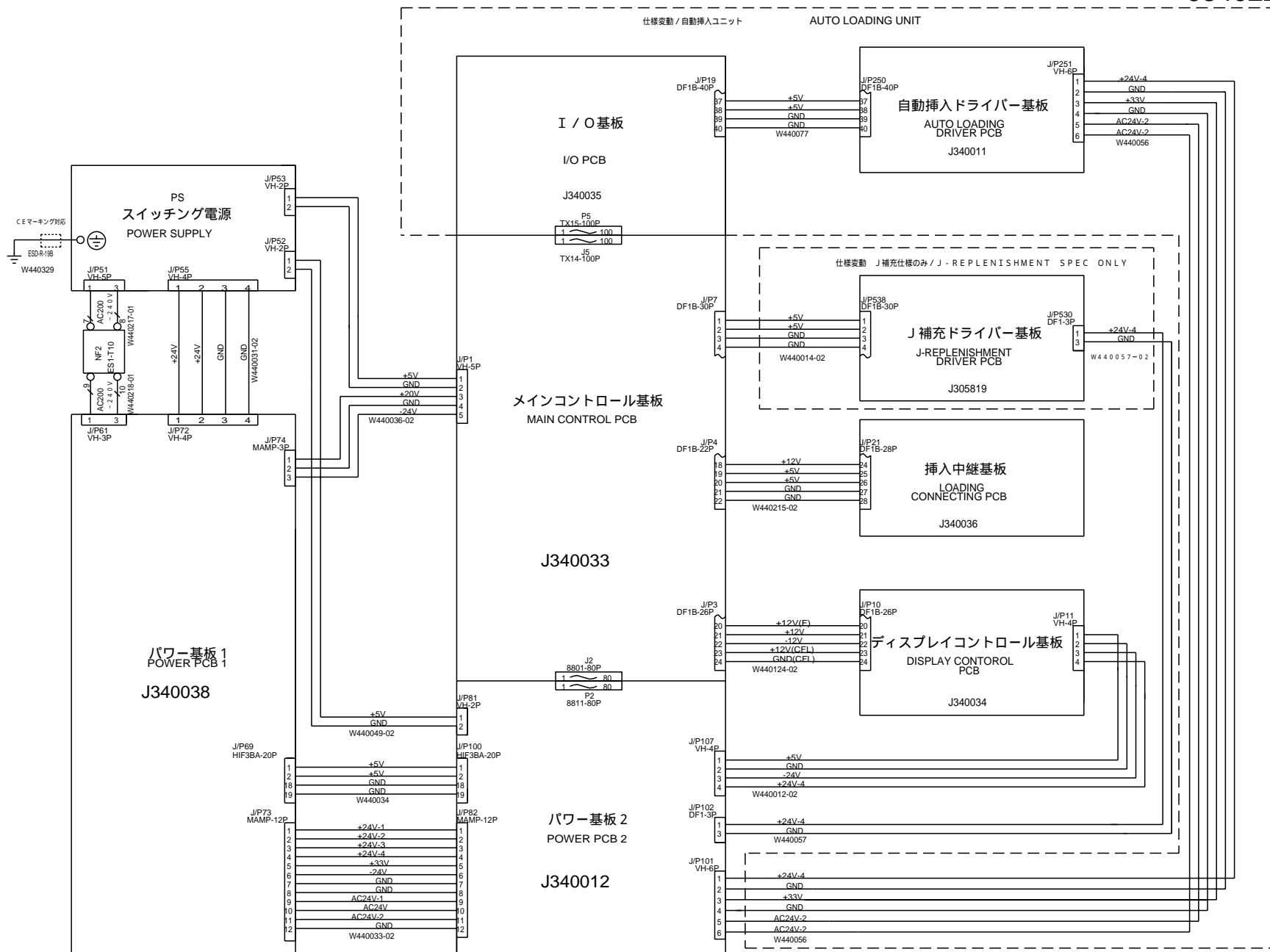
Automatic Film Loader Unit (Option)

Name	No.	V30	V50	V100
Auto loading section 1	4-1		J340029	J340029
Auto loading section 2	4-2		J340030	J340030
Auto loading section 3	4-3		J340031	J340031
Auto loading section option (IX240)	4-4		J340349	J340349

J340041-02



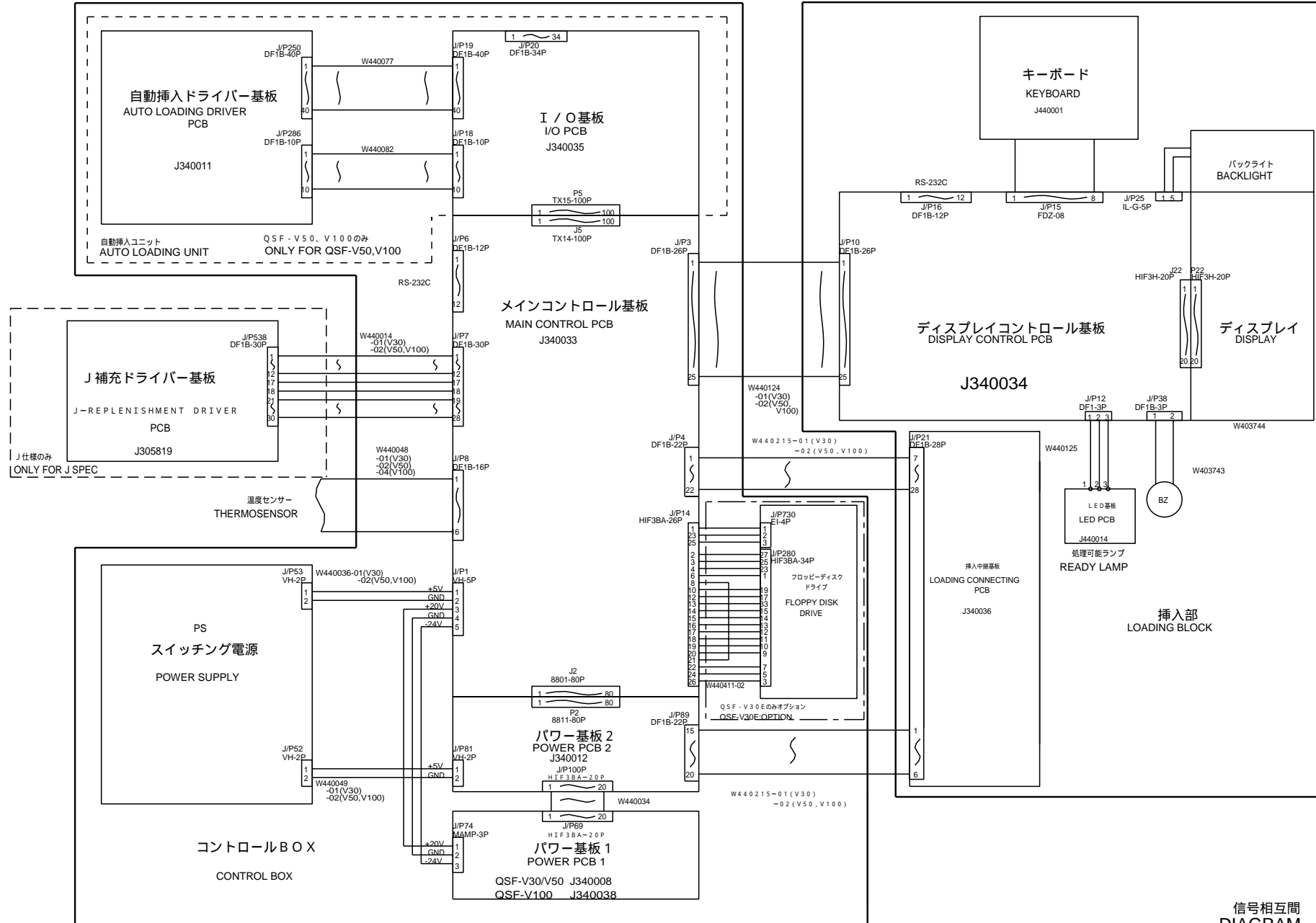
J340228-01



電源相互間
POWER SUPPLY
CIRCUIT DIAGRAM

QSF-V100
電気回路図 1-1
WIRING DIAGRAM 1-1

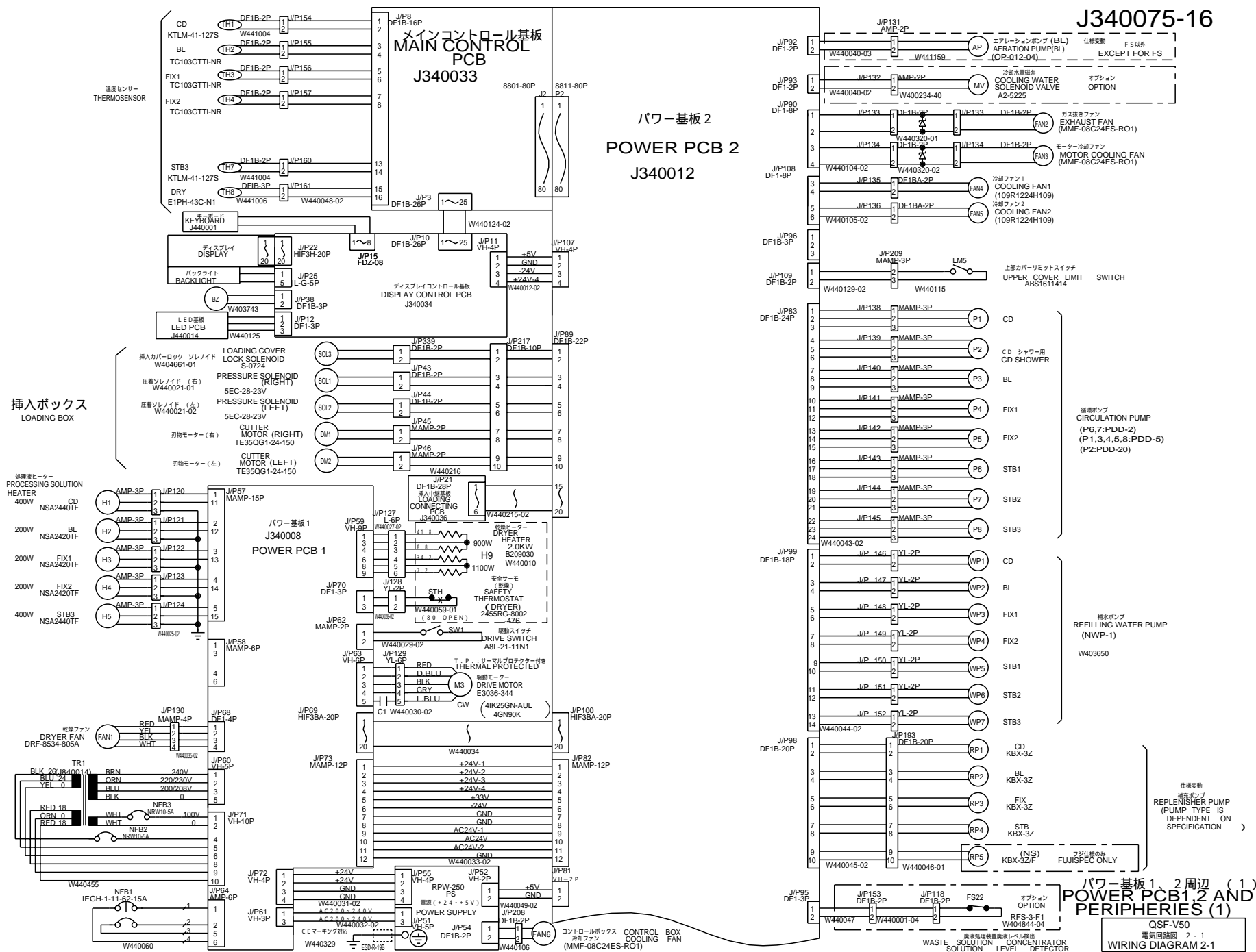
J340040-03

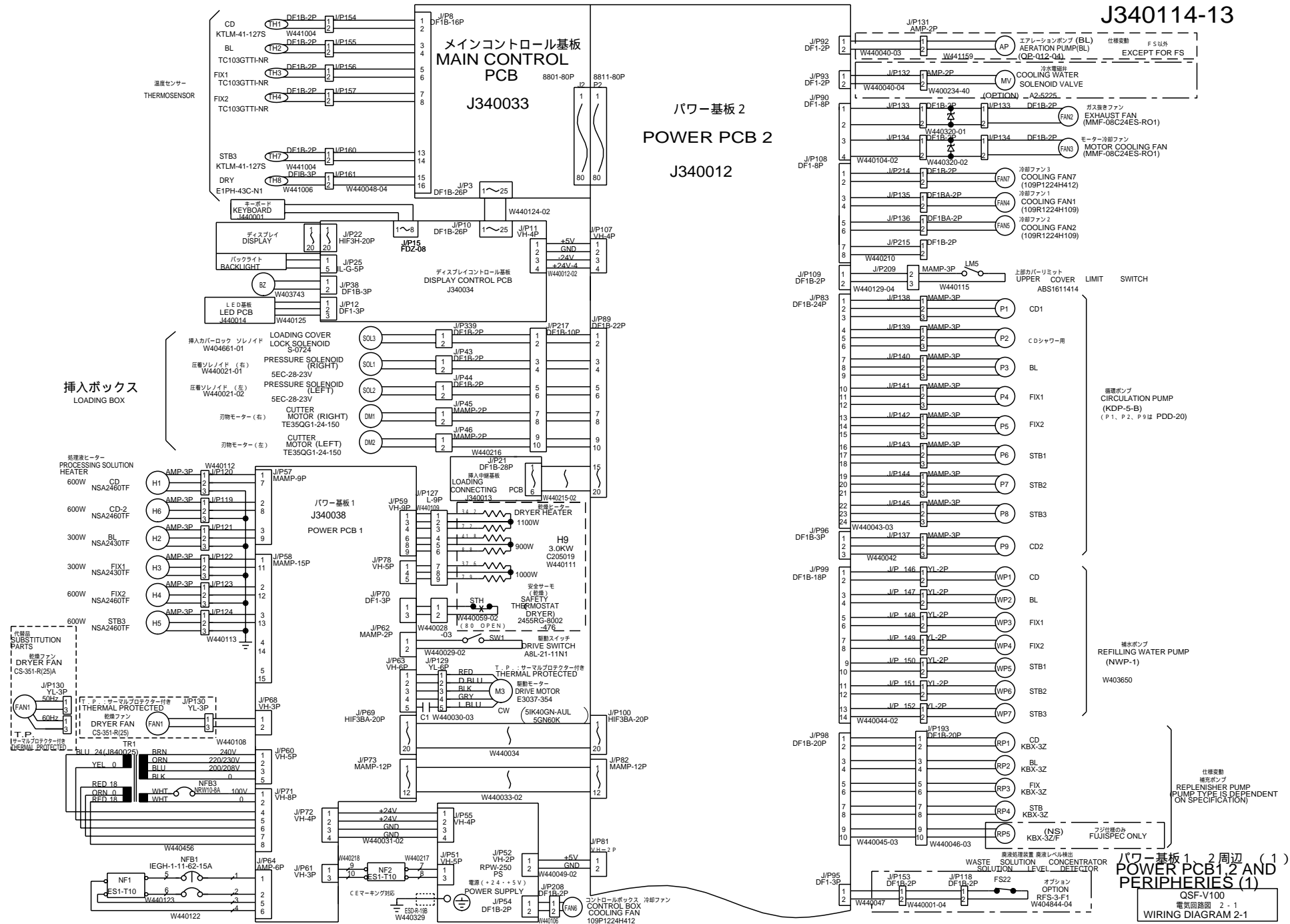


メイン/ディスプレイ周辺
MAIN & DISPLAY PCB
AND PERIPHERIES

信号相互間
DIAGRAM

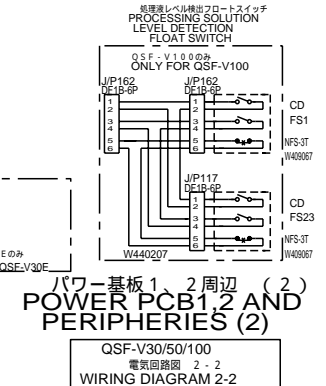
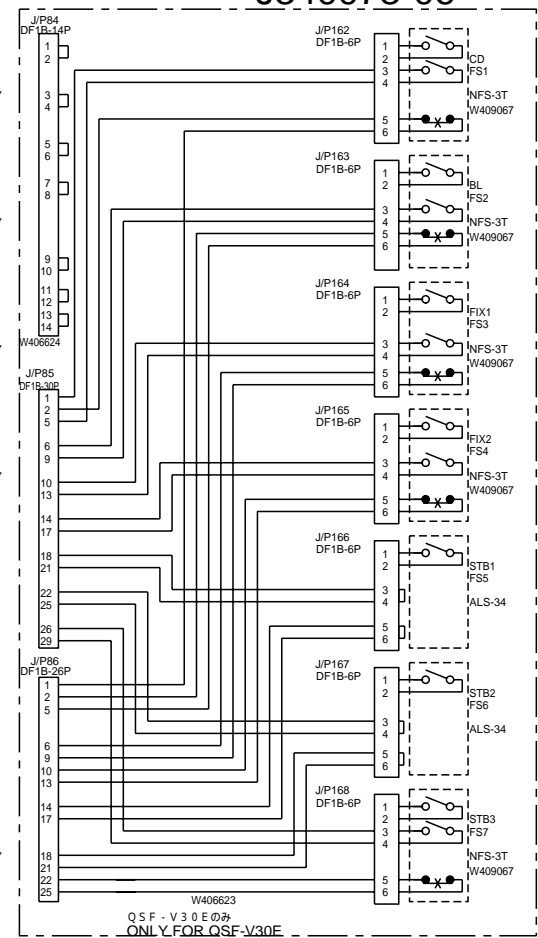
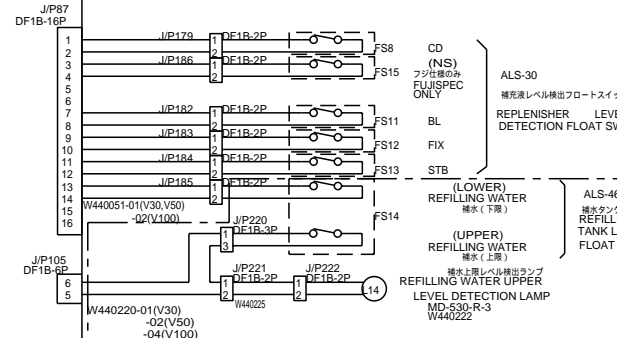
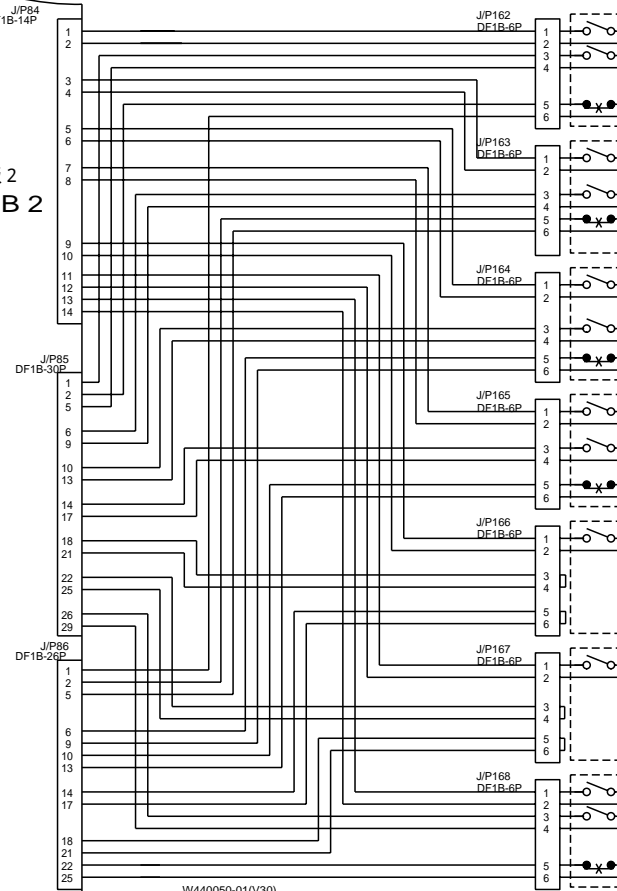
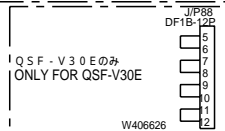
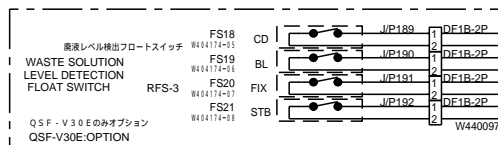
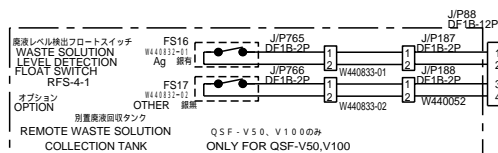
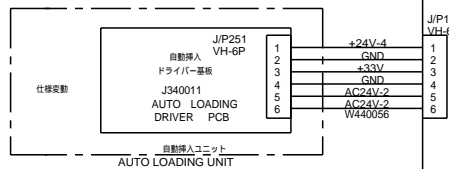
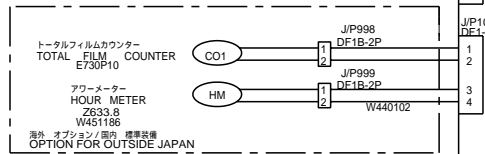
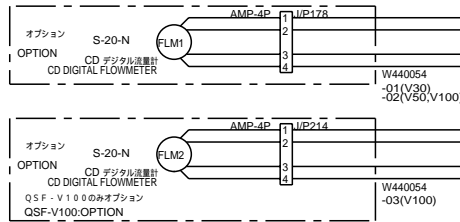
QSJ-V30/50/100
電気回路図 1-2
WIRING DIAGRAM 1-2

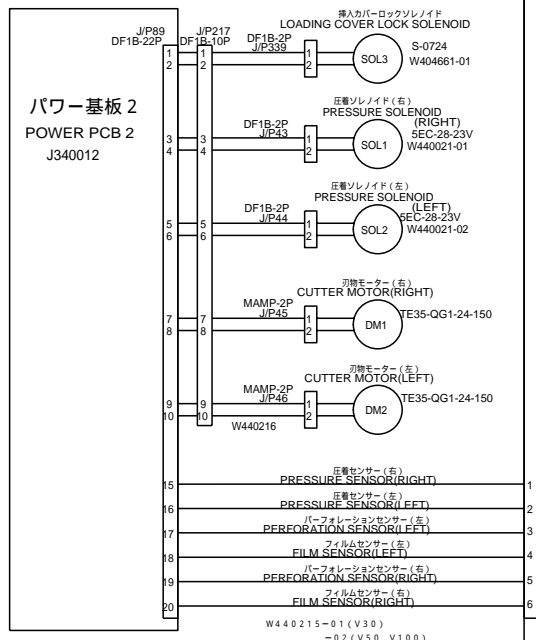




J340073-06

パワー基板 2 POWER PCB 2 J340012





插入中継基板周辺 LOADING CONNECTING PCB AND PERIPHERIES

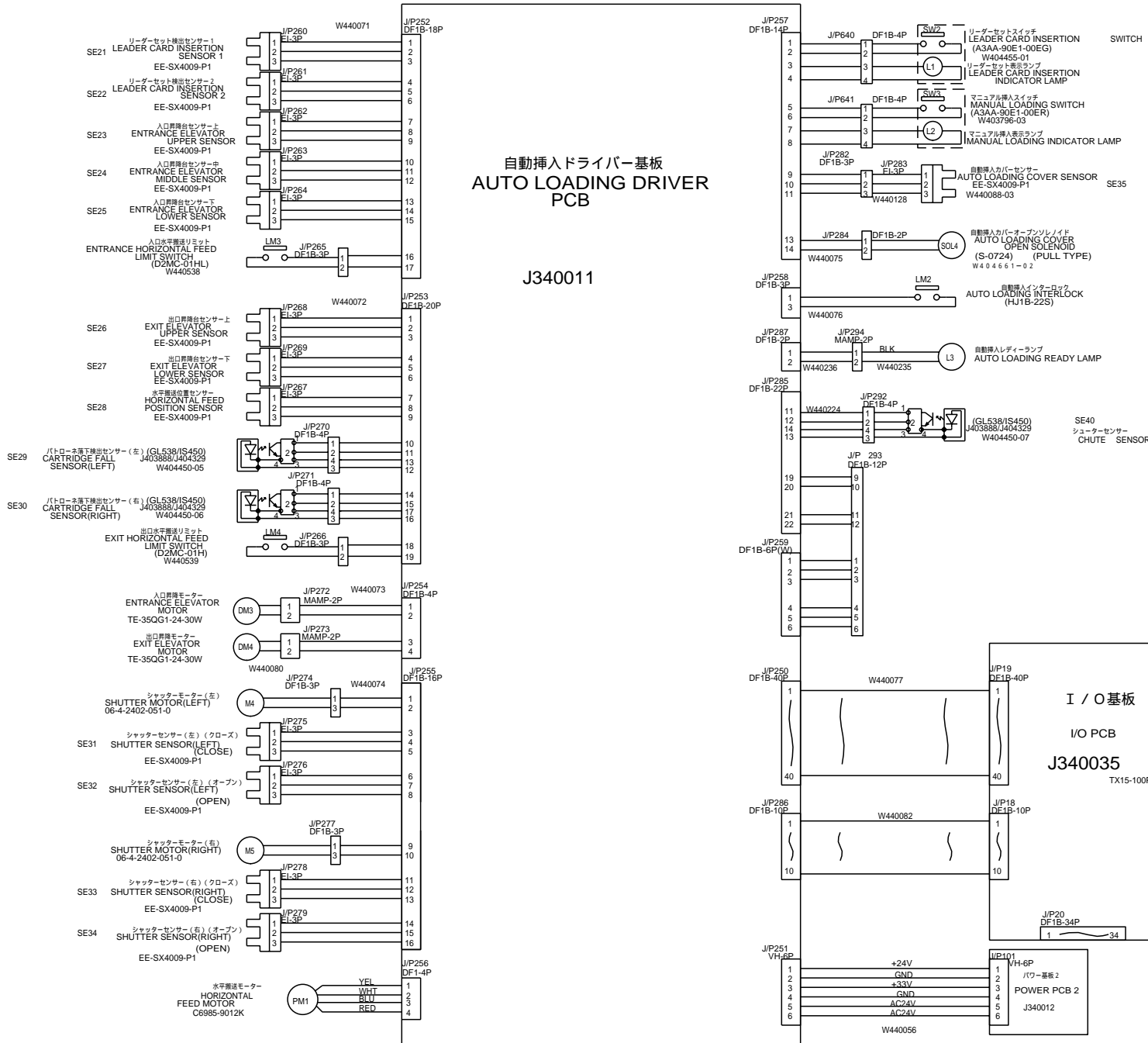
QSF-V30/50/100
電氣回路圖 2-3
WIRING DIAGRAM 2-3

J340037-02

J340010-03

自動挿入ドライバー基板
AUTO LOADING DRIVER
PCB

J340011



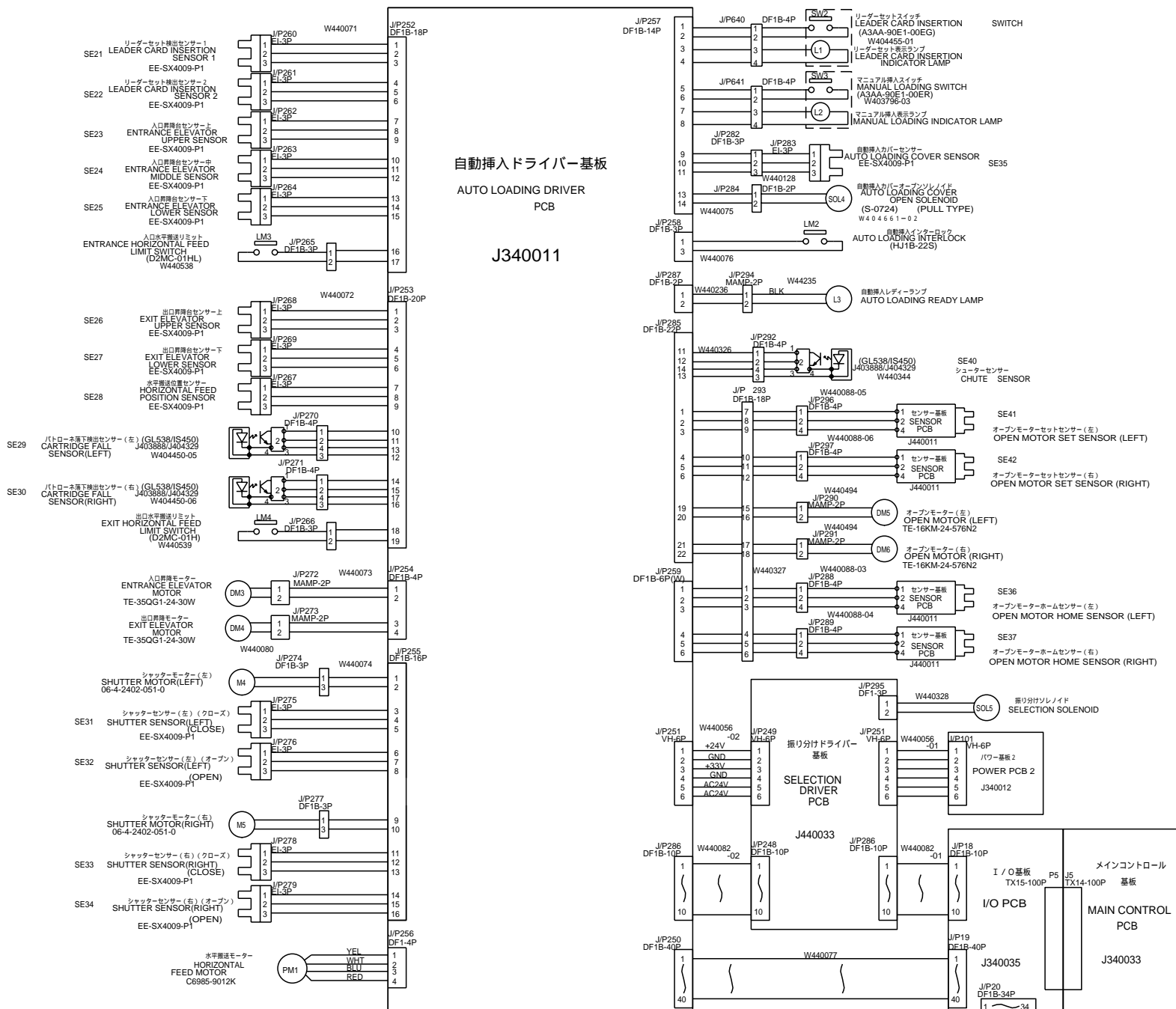
I / O 基板
I/O PCB
J340035

メインコントロール
基板
MAIN CONTROL PCB
J340033

自動挿入部
AUTO LOADING
SECTION(OPTION)

QSF-V50/100
電気回路図 2-5
WIRING DIAGRAM 2-5

J340229-04



メインコントロール基板
MAIN CONTROL PCB
J340033

10F
SN74LS244
1A1
1A2
1A3
1A4
2A1
2A2
2A3
2A4

11F
SN74LS244
1A1
1A2
1A3
1A4
2A1
2A2
2A3
2A4

8F
SN74LS244
2A3

挿入中継基板
LOADING CONNECTING PCB
J340036

J340026-02

W440088-01
SE1
240 ADAPTER SENSOR (RIGHT)
SE2
CUTTER MOTOR HOME SENSOR (RIGHT)
EE-SX4009-P1
SE3
CUTTER POSITION SENSOR (RIGHT)
EE-SX4009-P1
SE9
挿入カバーセンサー
LOADING COVER SENSOR
EE-SX4009-P1

W440088-02
SE5
240 ADAPTER SENSOR (LEFT)
SE6
CUTTER MOTOR HOME SENSOR (LEFT)
EE-SX4009-P1
SE7
CUTTER POSITION SENSOR (LEFT)
EE-SX4009-P1

SE11
マガジンアダプターセンサー
MAGAZINE ADAPTER SENSOR

SE12
シューターつまみセンサー
CHUTE JAM SENSOR

SE13
フィルムセンサー (右) (シャッター)
FILM SENSOR (R) (SHUTTER)

SE14
フィルムセンサー (左) (シャッター)
FILM SENSOR (L) (SHUTTER)

SE38
フィルムカートリッジセンサー (右)
FILM CARTRIDGE SENSOR (R)

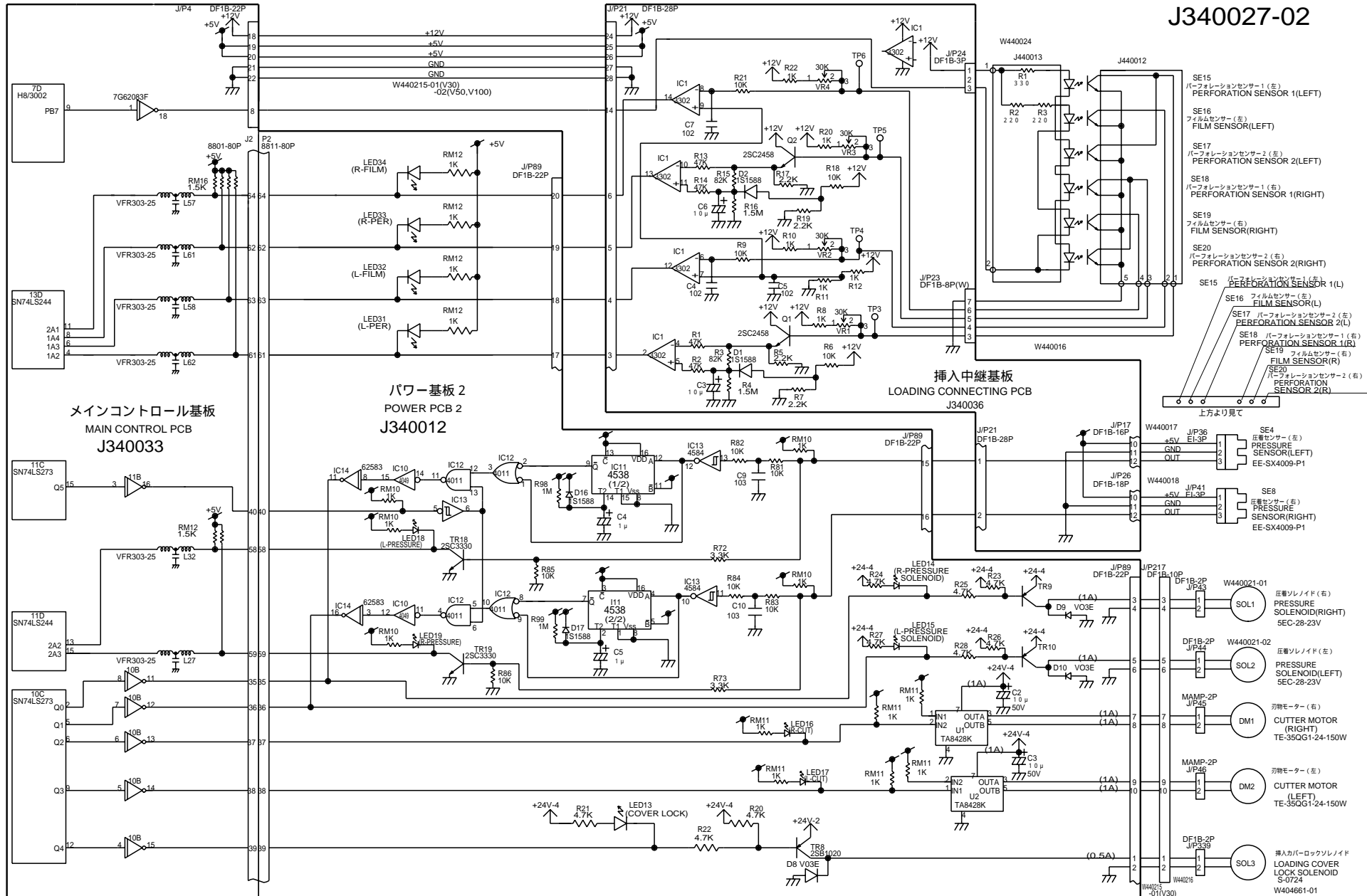
SE39
フィルムカートリッジセンサー (左)
FILM CARTRIDGE SENSOR (L)

挿入中継基板周辺 1
LOADING CONNECTING PCB
AND PERIPHERIES 1

QSF-V30/50/100
電気回路図 3-2
WIRING DIAGRAM 3-2

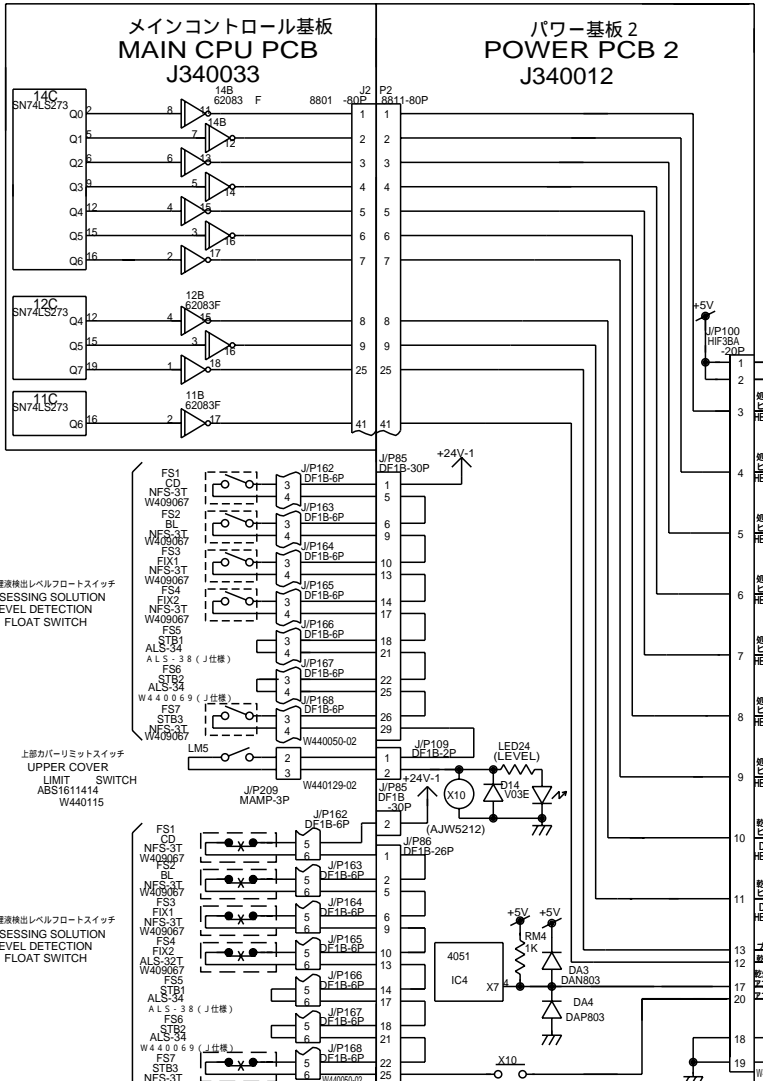
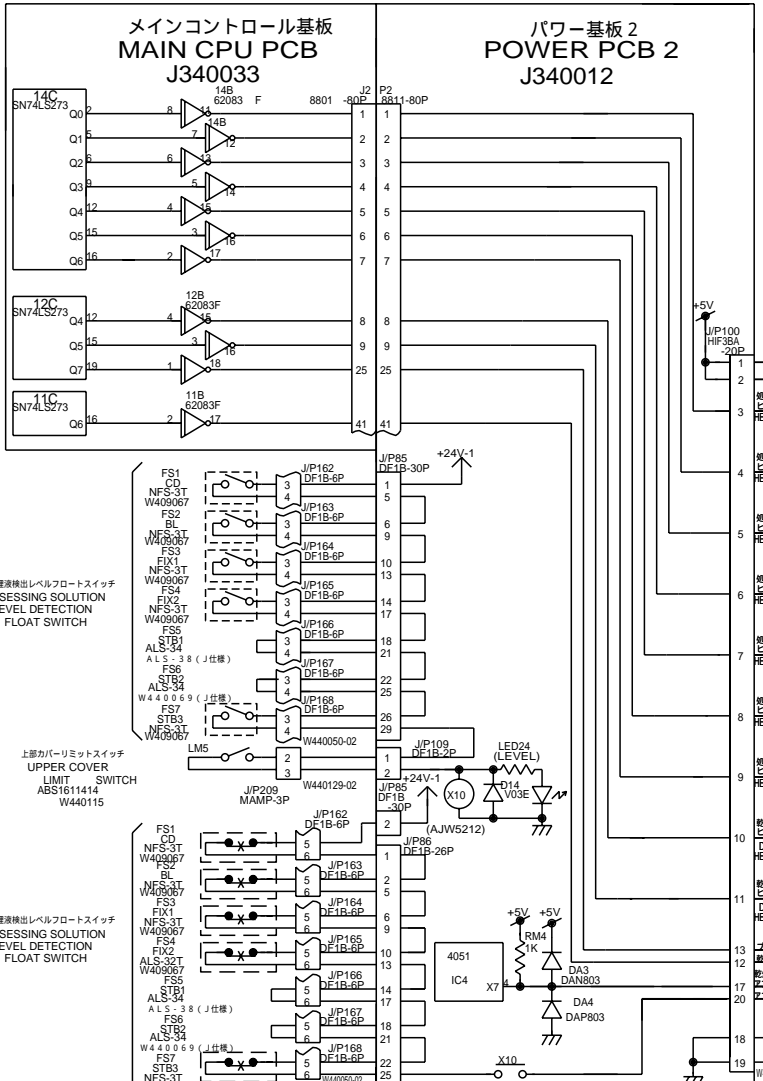
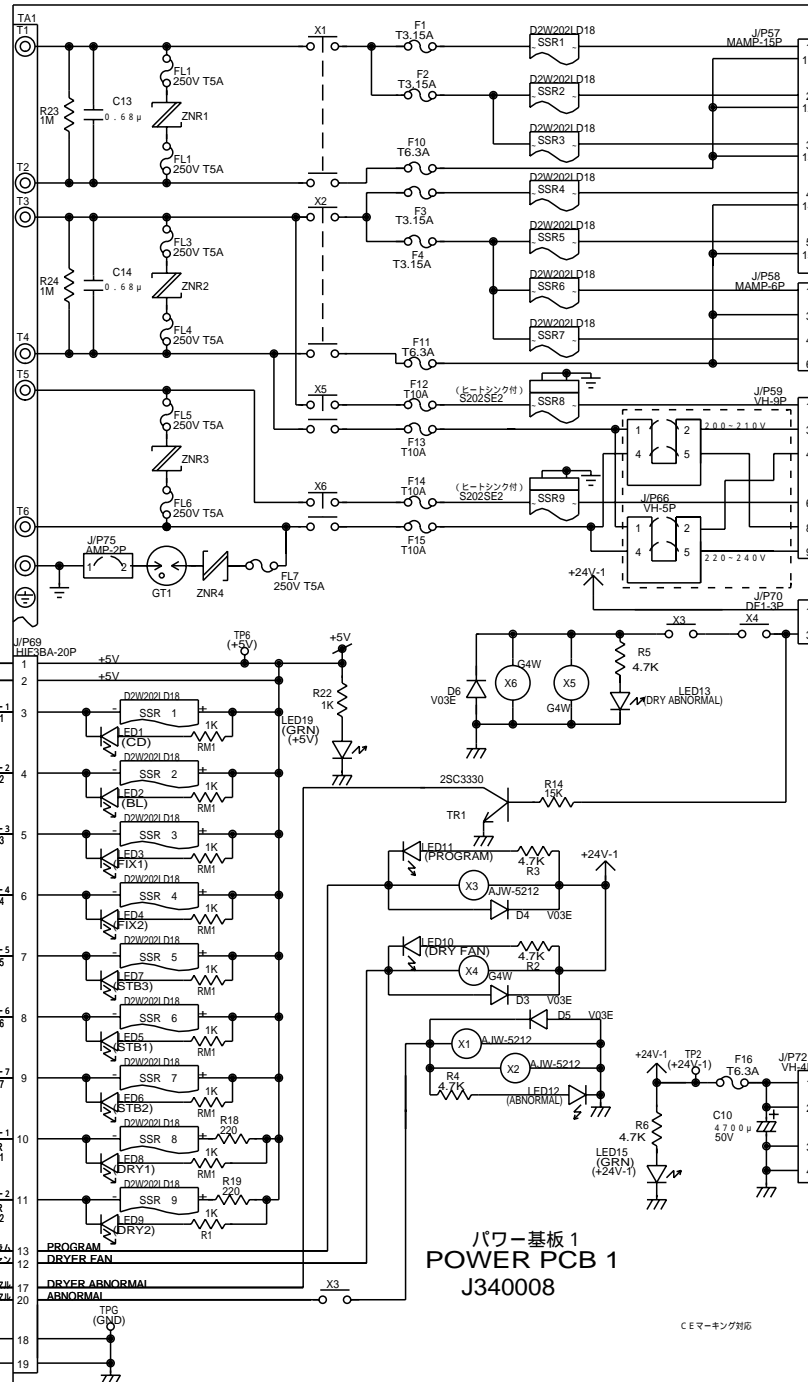
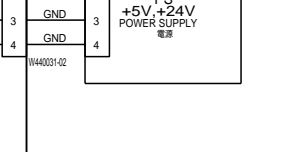
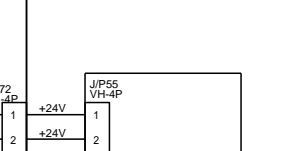
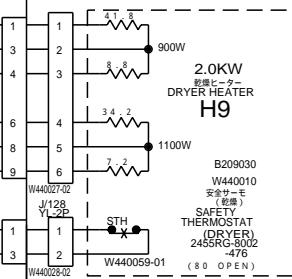
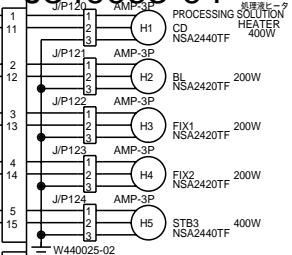
オプション
OPTION

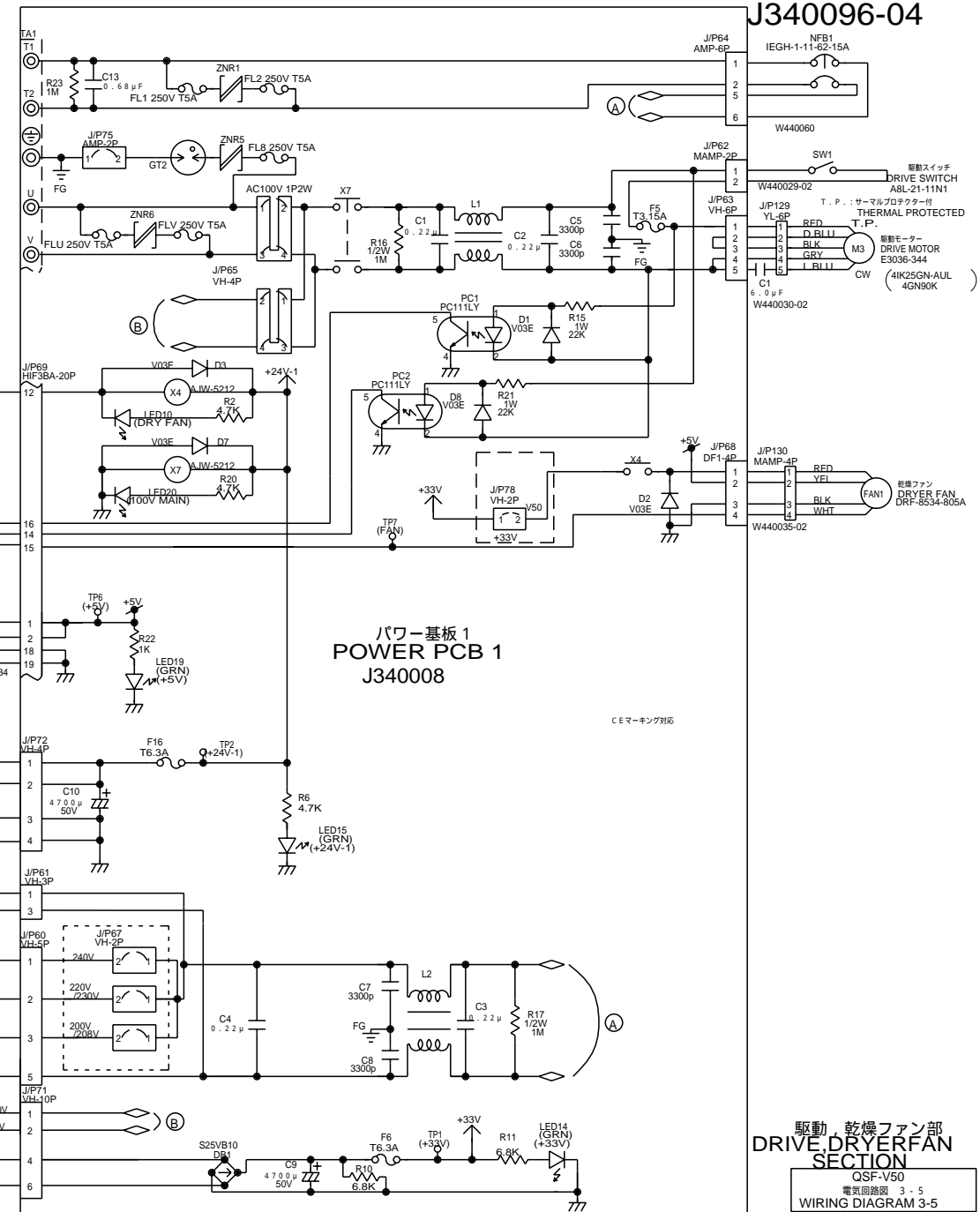
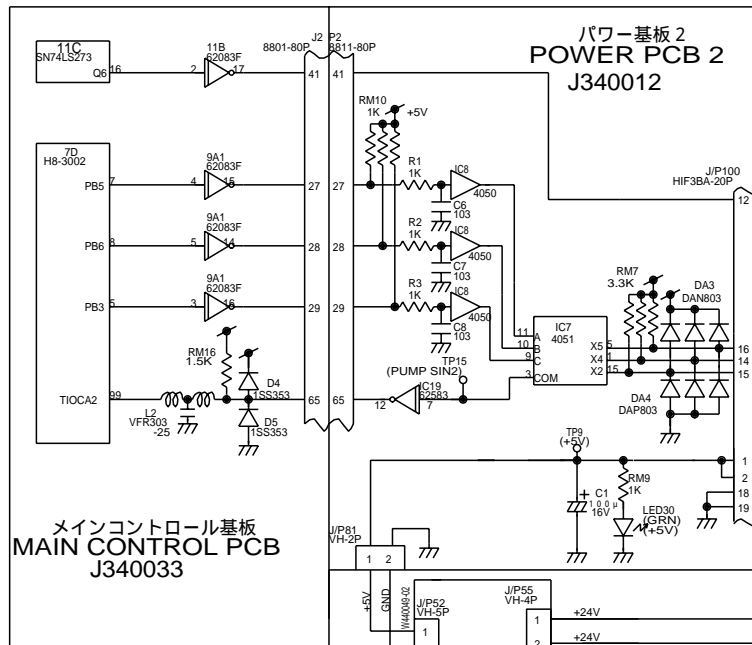
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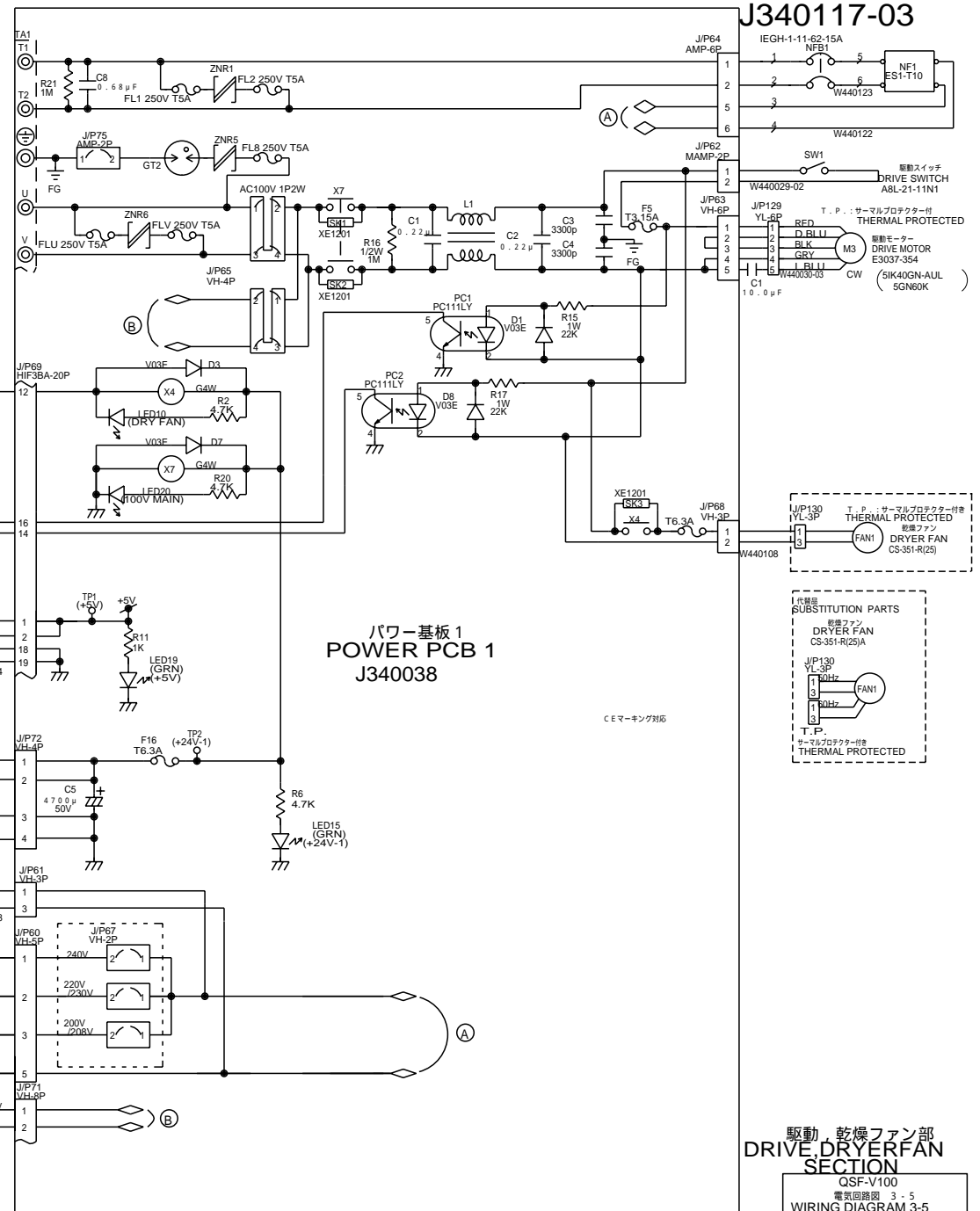
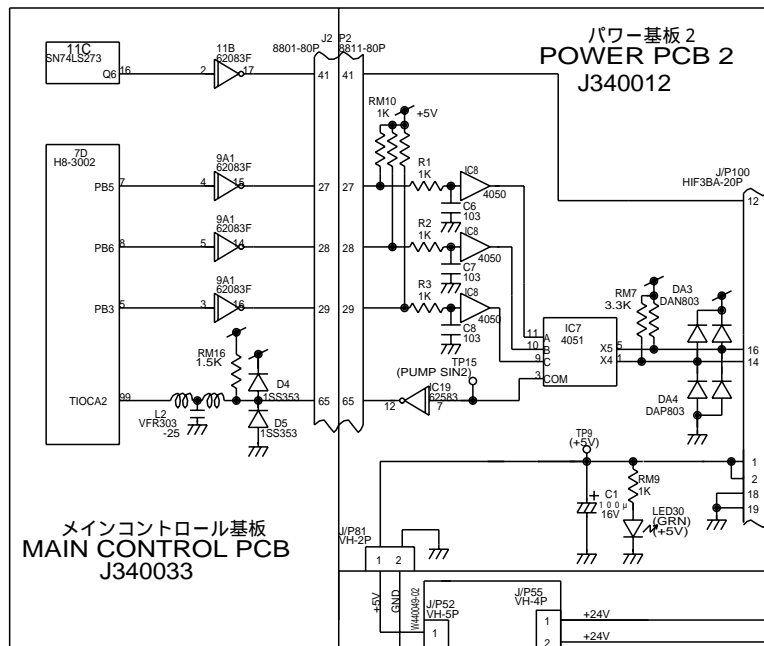


LOADING CONNECTING PCB AND PERIPHERIES 2

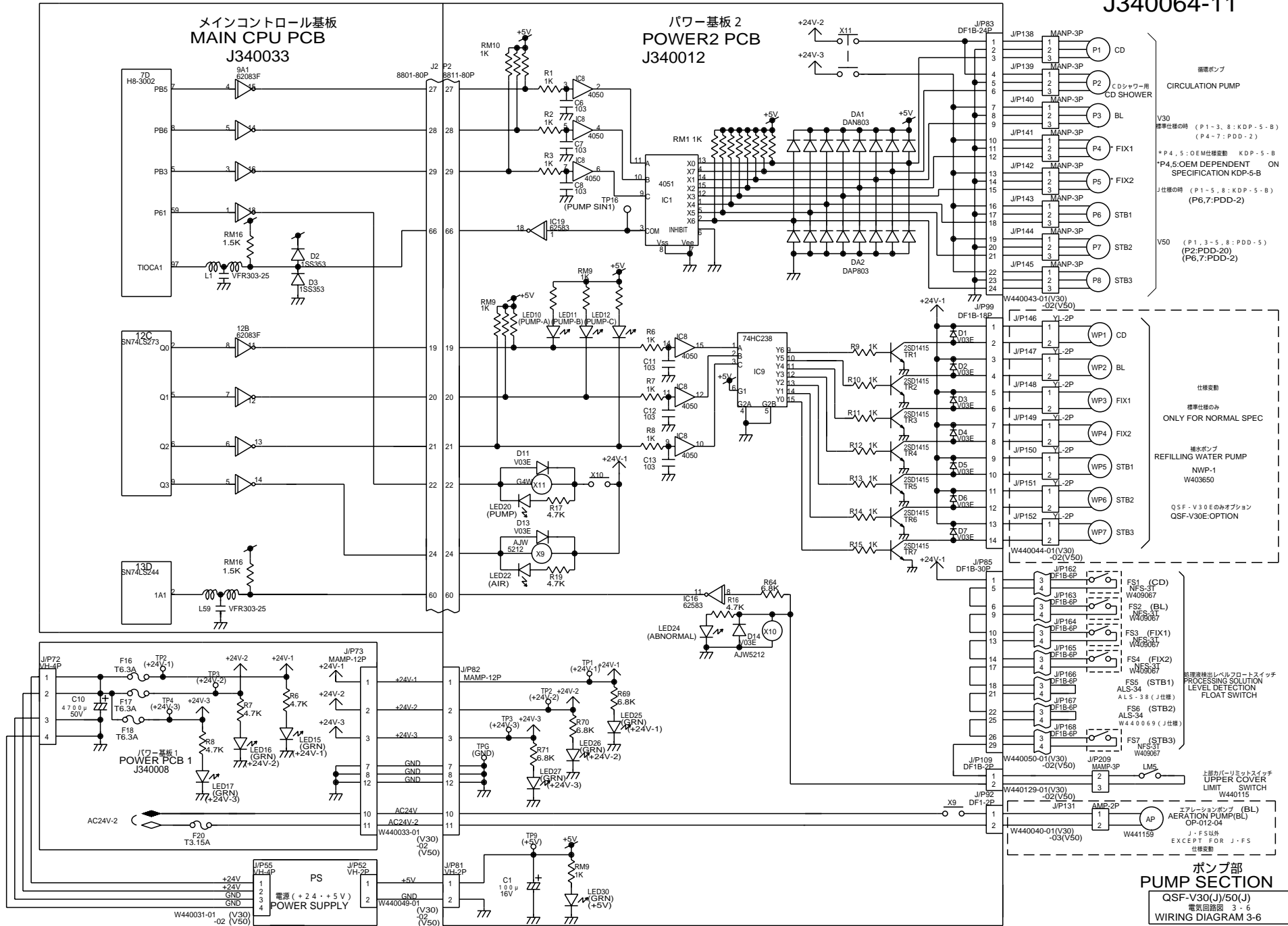
J340095-04





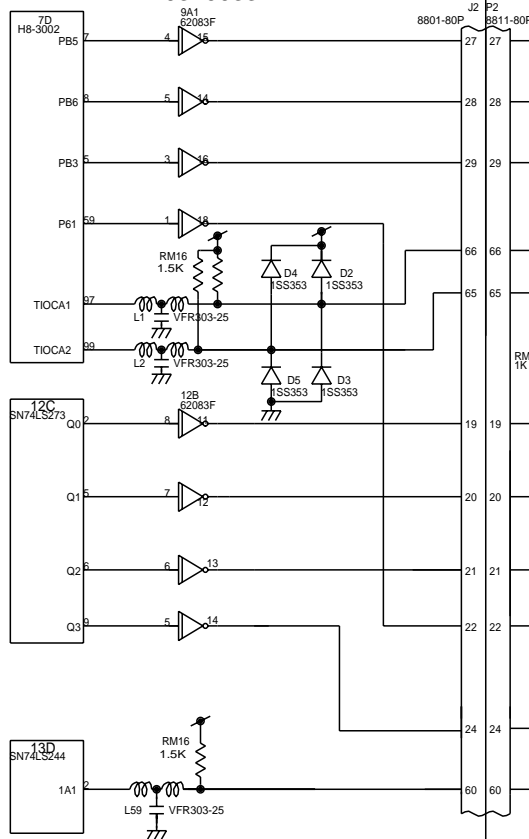


J340064-11

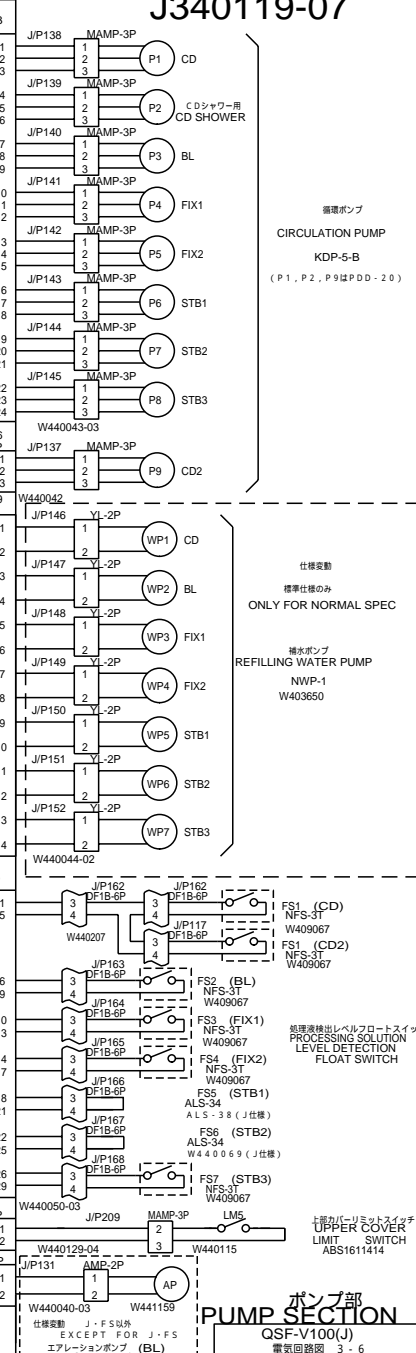
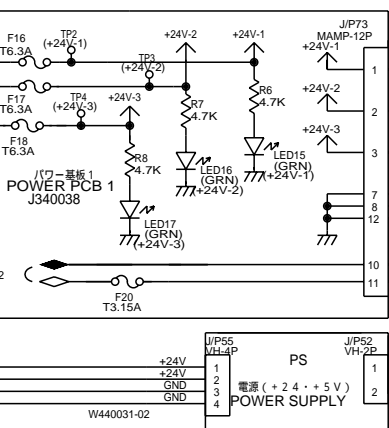
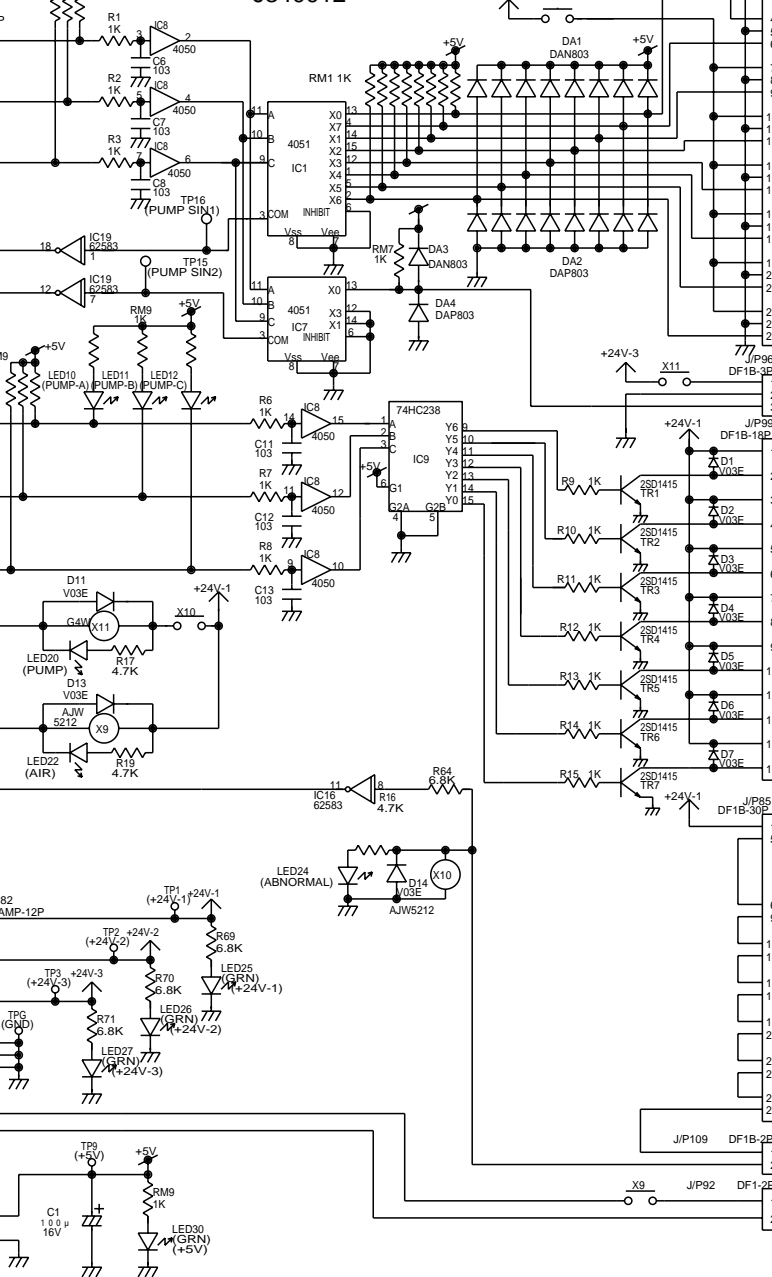


J340119-07

メインコントロール基板 MAIN CPU PCB J340033

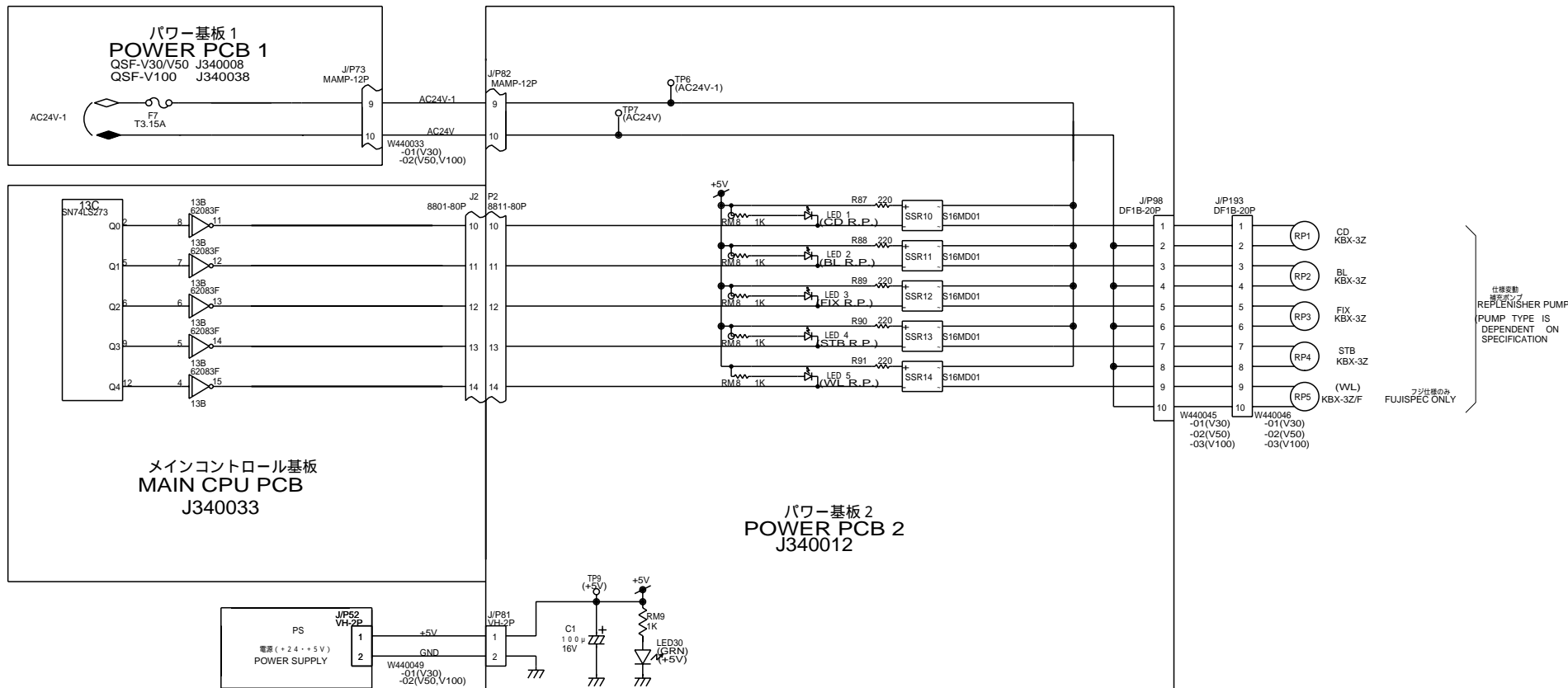


パワー基板 2 POWER2 PCB J340012



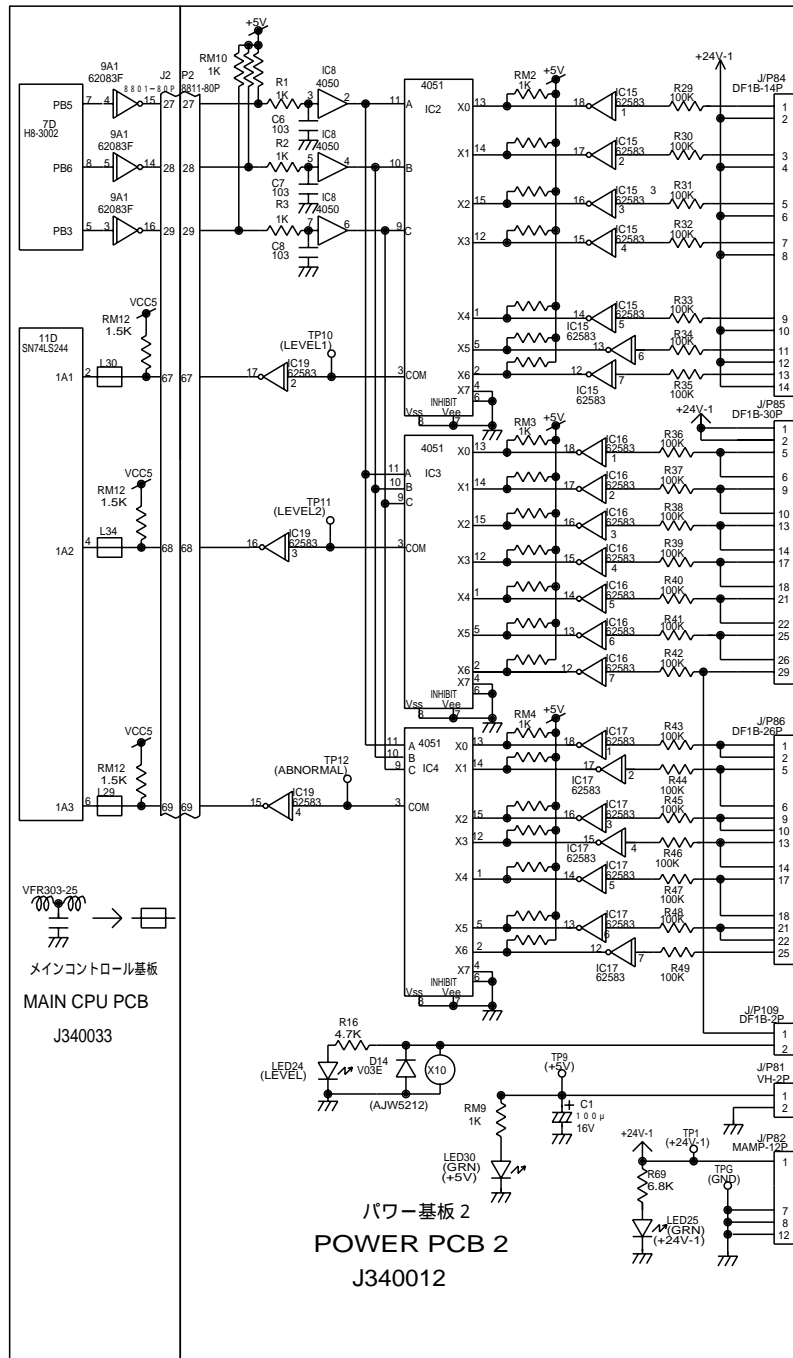
ポンプ部
PUMP SECTION
QSF-V100(J)
電気回路図 3-6
WIRING DIAGRAM 3-6

J340065

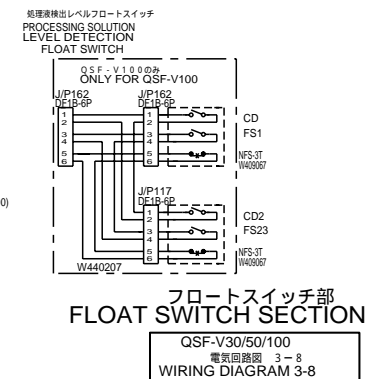
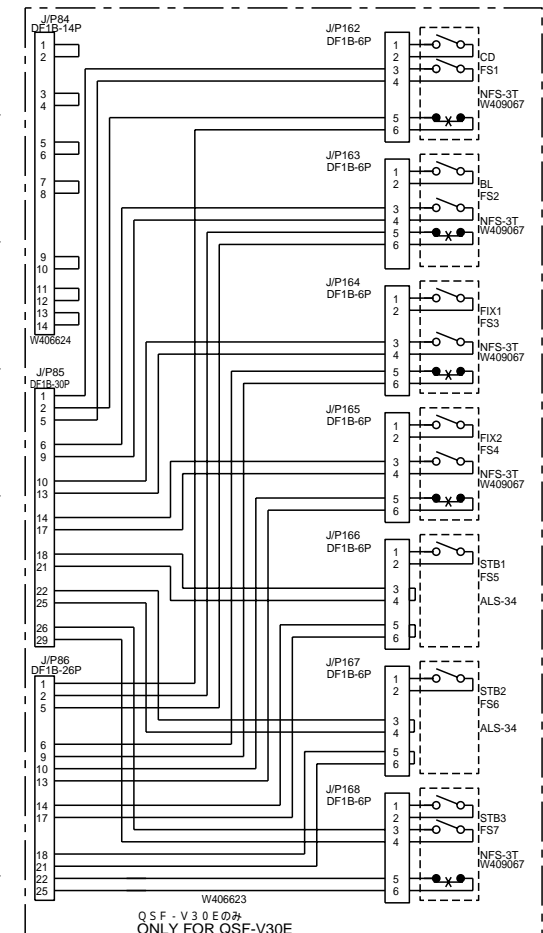


補充ポンプ部
REPLENISH PUMP SECTION

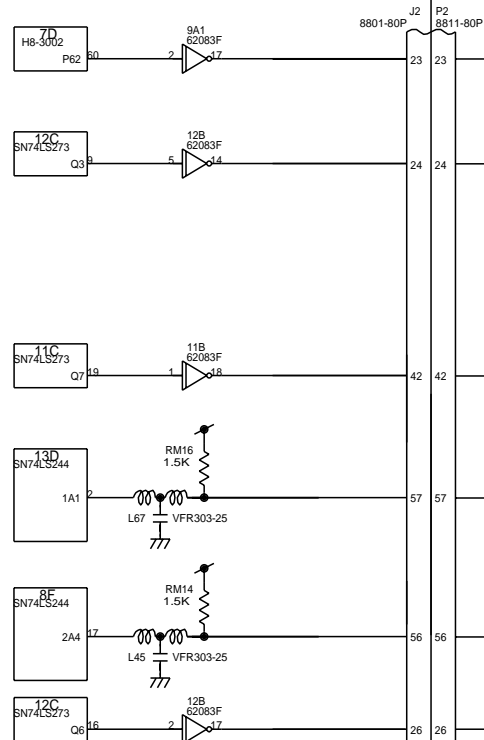
QSF-V30/50/100
電気回路図 3 - 7
WIRING DIAGRAM 3-7



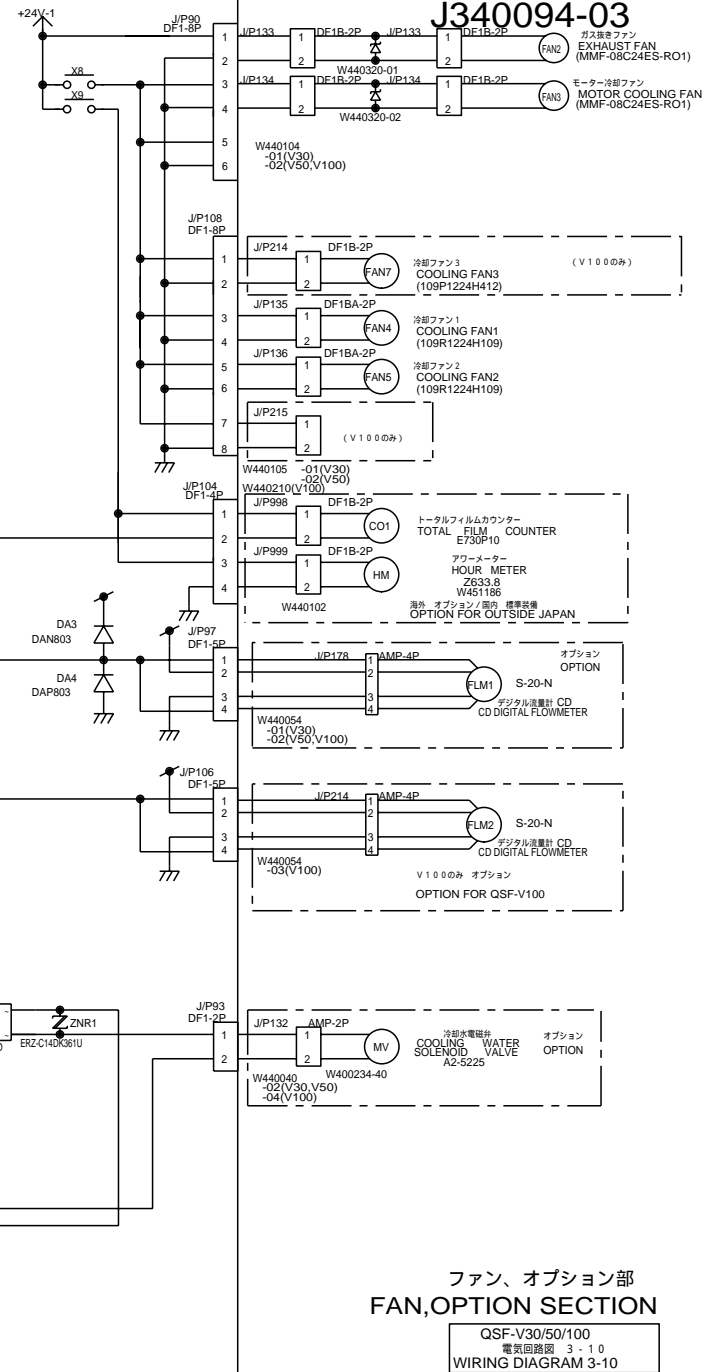
J340066-05



メインコントロール基板
MAIN CONTROL PCB
J340033

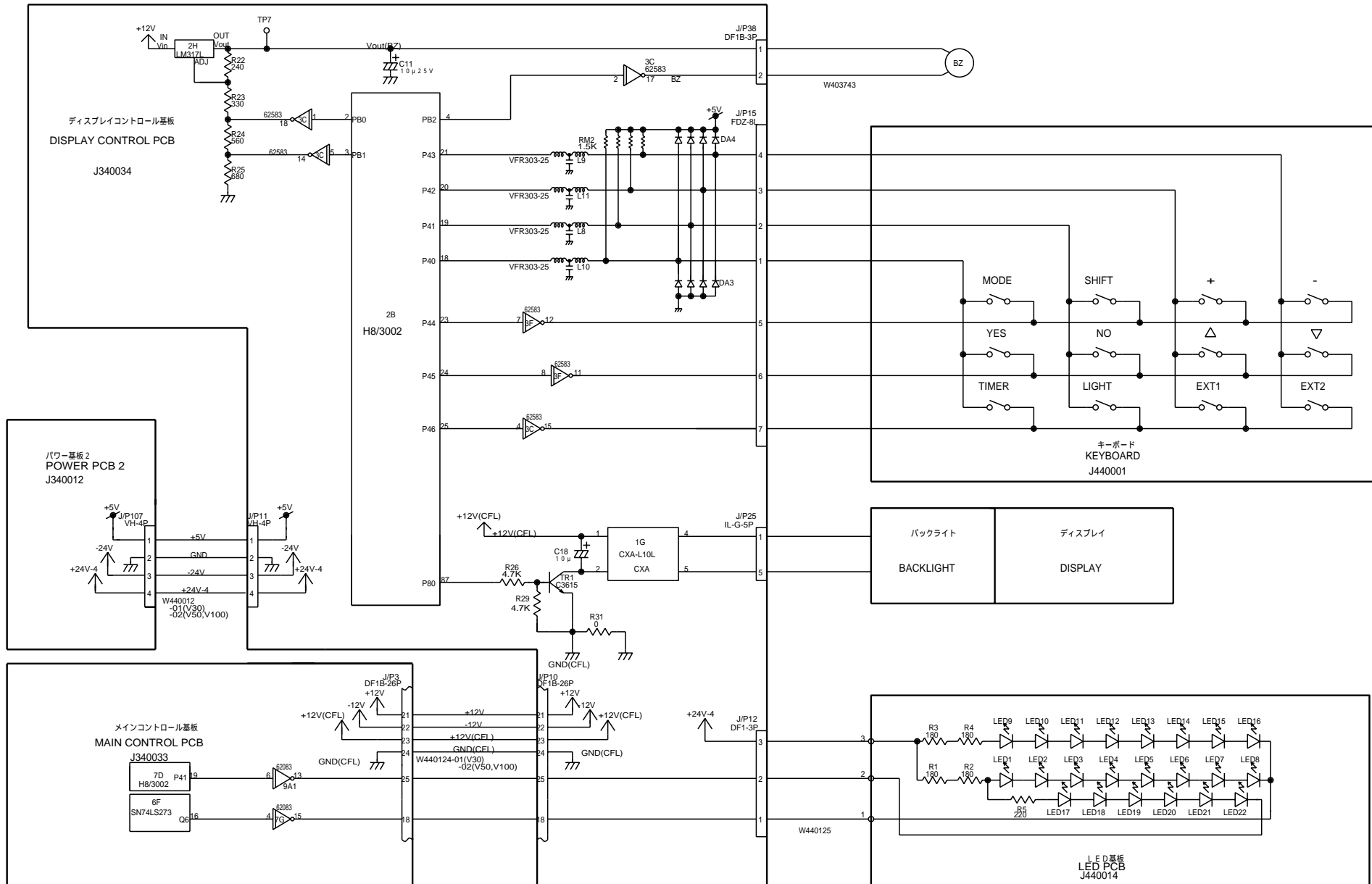


パワー基板 2
POWER PCB 2
J340012



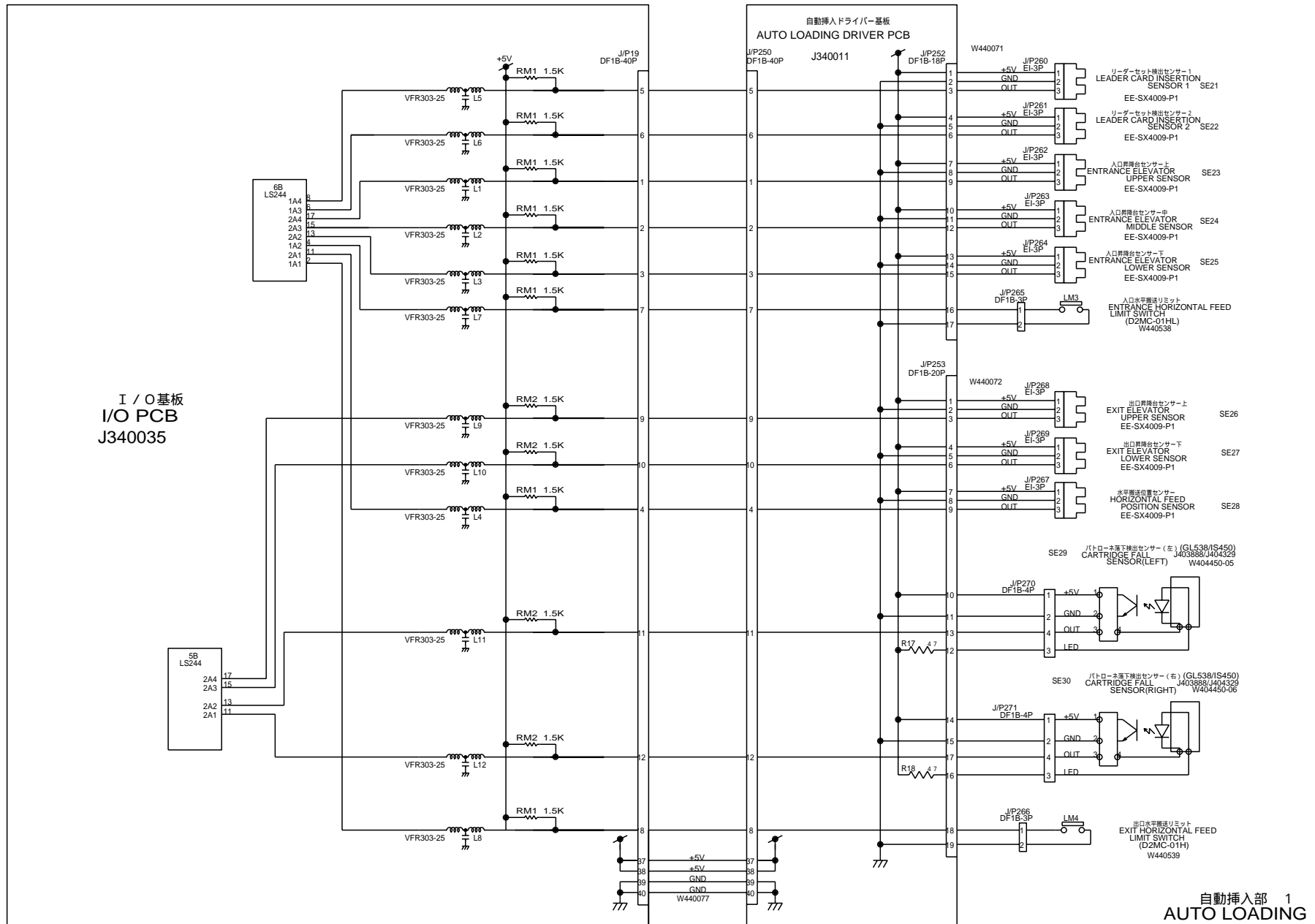
ファン、オプション部
FAN, OPTION SECTION

QSF-V30/50/100
電気回路図 3-10
WIRING DIAGRAM 3-10



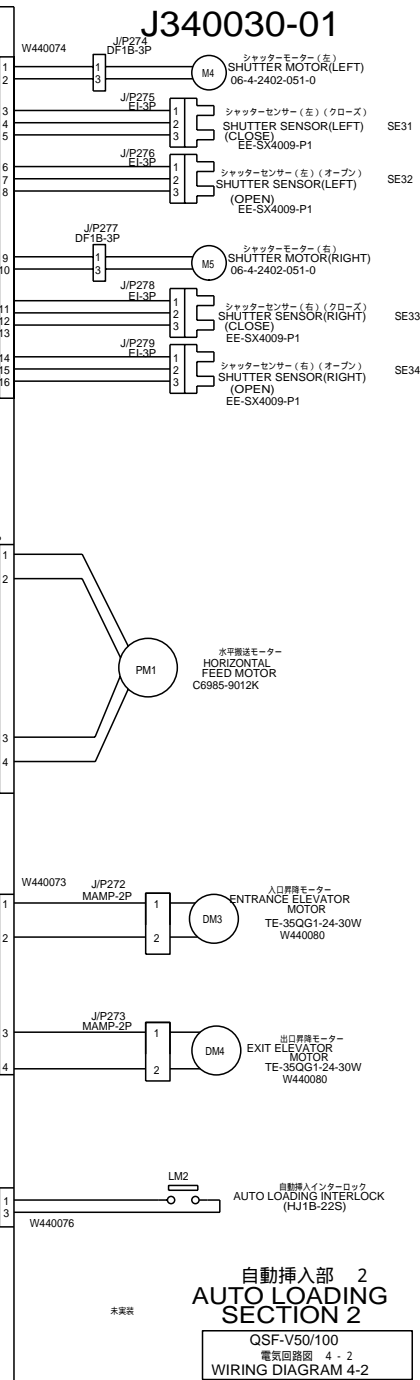
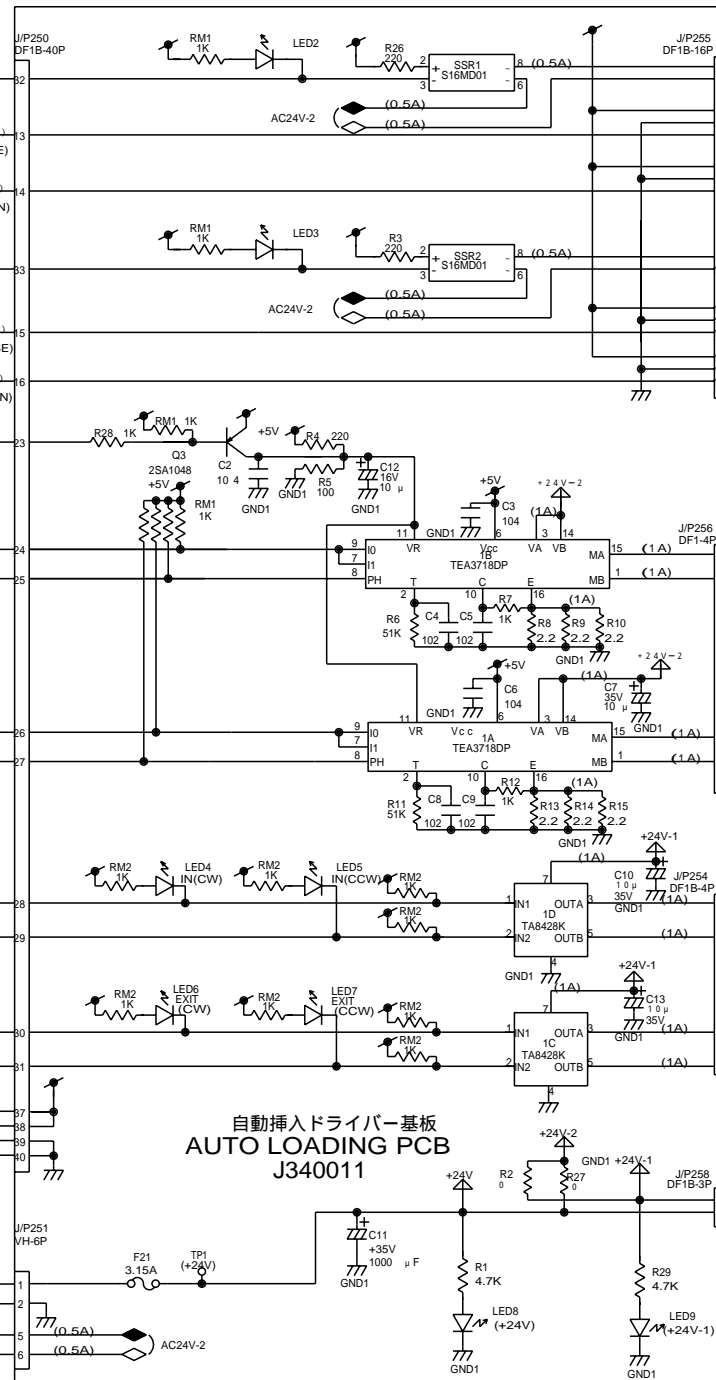
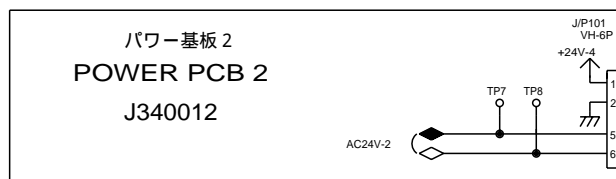
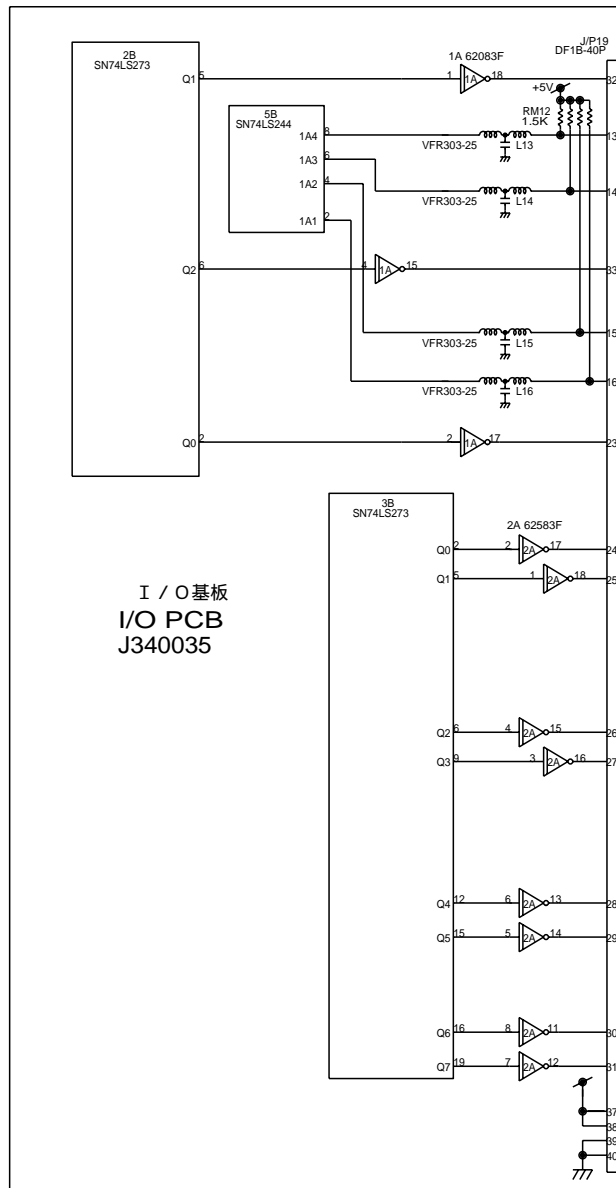
キーボード&ディスプレイユニット部 **KEYBOARD&DISPLAY UNIT** QSF-V30/50/100 電気回路図 3-12 **WIRING DIAGRAM 3-12**

J340029-02



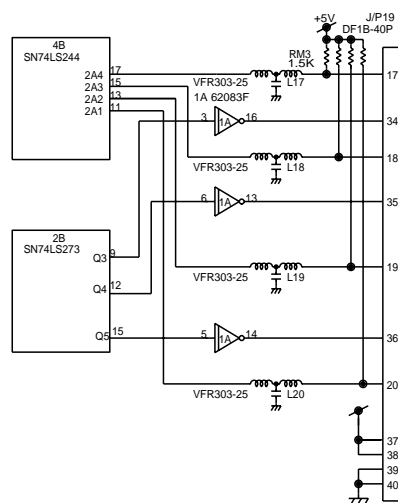
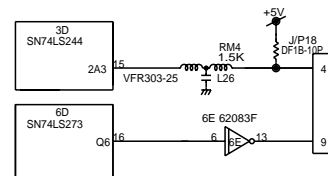
自動挿入部 1
AUTO LOADING
SECTION 1

QSF-V50/100
電気回路図 4 - 1
WIRING DIAGRAM 4-1



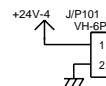
J340031-03

自動挿入ドライバー基板
AUTO LOADING DRIVER PCB
J340011

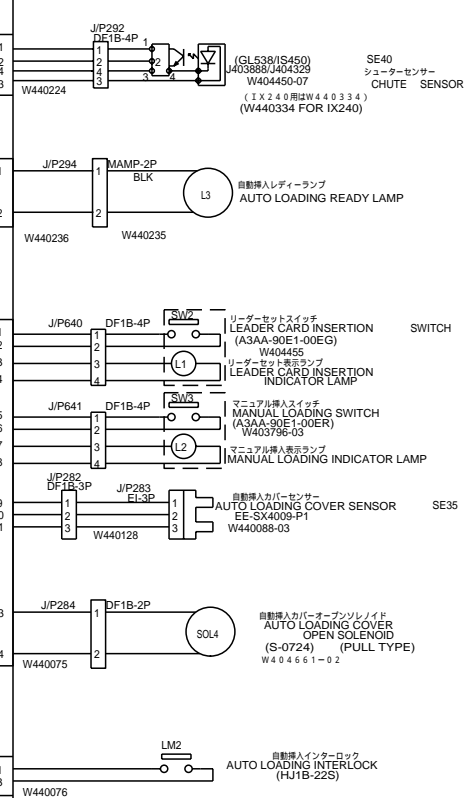
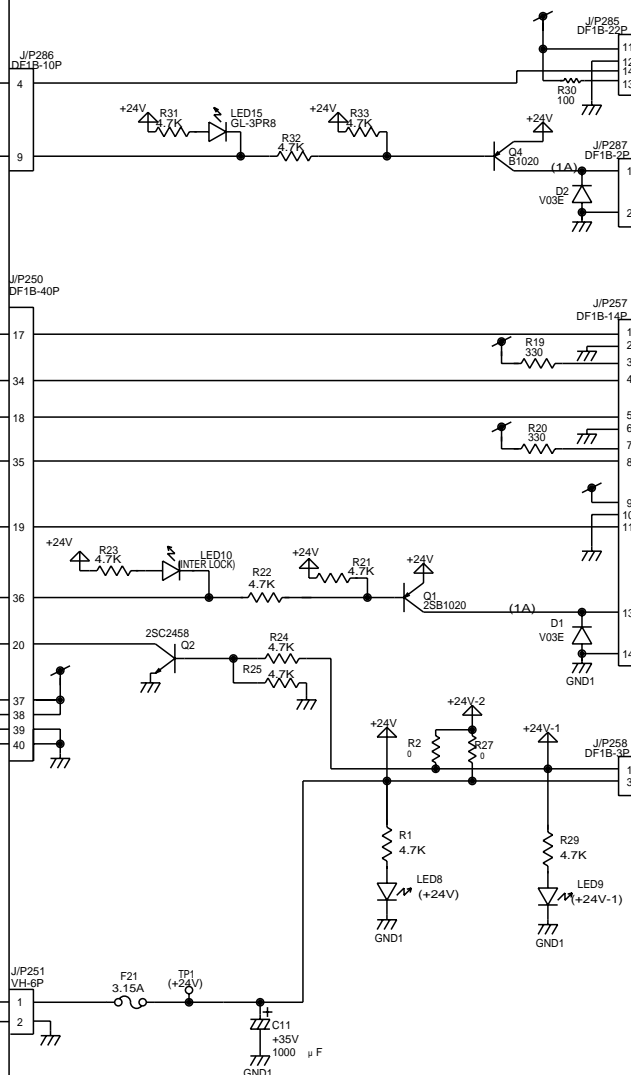


I/O基板
I/O PCB
J340035

パワー基板 2
POWER PCB 2
J340012



- シューターセンサー
CHUTE SENSOR
- 自動挿入レディランプ
AUTO LOADING READY LAMP
W440082
- リーダーセットスイッチ
LEADER CARD INSERTION SWITCH
- リーダーセット表示ランプ
LEADER CARD INSERTION INDICATOR LAMP
- マニュアル挿入スイッチ
MANUAL LOADING SWITCH
- マニュアル挿入表示ランプ
MANUAL LOADING INDICATOR LAMP
- 自動挿入カバーセンサー
AUTO LOADING COVER SENSOR
- 自動挿入カバーオープンソレノイド
AUTO LOADING COVER OPEN SOLENOID
- 自動挿入インターロック
AUTO LOADING INTERLOCK
- +5V
- +5V
- GND
- GND
- W440077

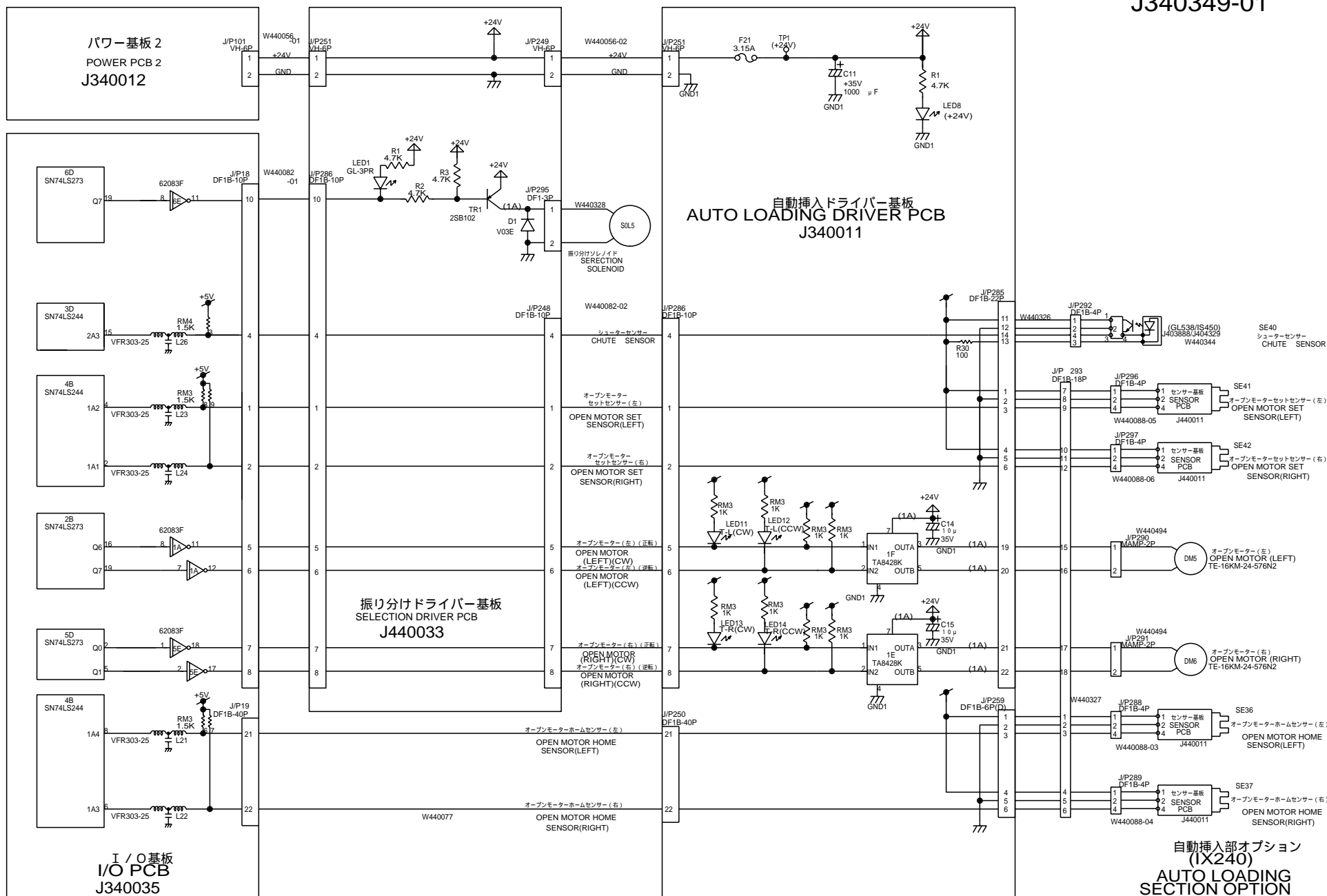


自動挿入部 3
AUTO LOADING
SECTION 3

QSF-V50/100
電気回路図 4-3
WIRING DIAGRAM 4-3

未実装

J340349-01



自動挿入部オプション
(IX240)
AUTO LOADING
SECTION OPTION
(IX240)

QSF-V50/100
電気回路図 4 - 4
WIRING DIAGRAM 4-4