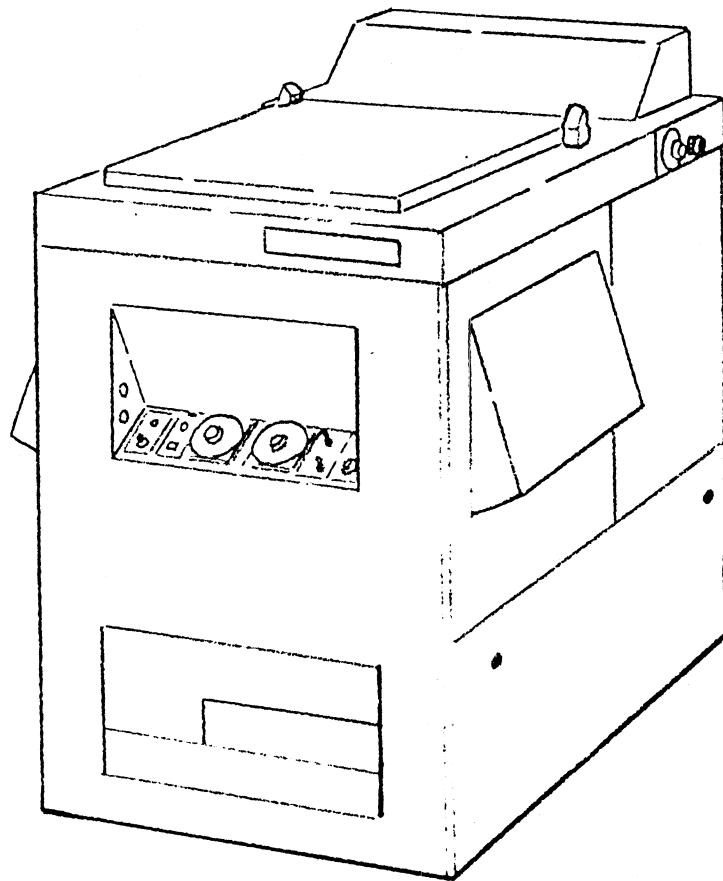




# SILVER MASTER PLATEMAKER

CP-200S(CP-100S)

## SERVICE MANUAL



**SCREEN** DAINIPPON SCREEN MFG. CO., LTD.

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## 1. Introduction

This Service Manual for CP-200s has been compiled as an aid to after-sale mechanical services of the plate-maker.

As for the procedures of operation of the machine and handling of the master processing fluids, see the Instruction Manual of CP-200s, Technical Guide, and other related literature.

For more accurate and deeper understanding, refer to the CP-200s Parts List when reading this Service Manual. (Please note that the contents in this book and specifications of the machine are subject to change without notice.)

When ordering parts or making any inquiries, please specify the following items:

- Model (CP-200s)
- Machine No.
- Part No., part name
- Quantity
- Date of delivery

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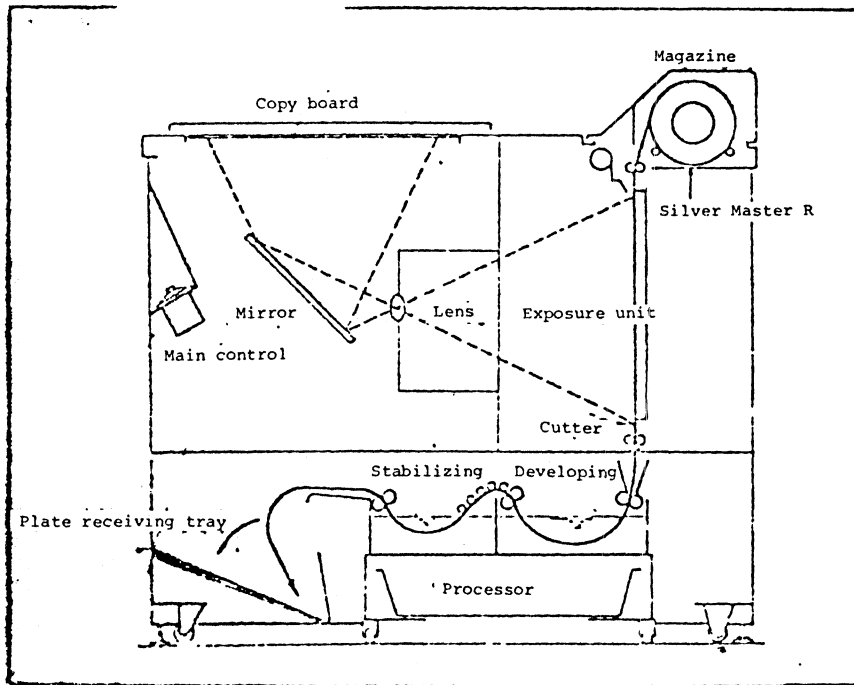
2. Specifications, process part

Specifications

	Item	Specification
1	Master width	254 mm (10 in.), 279 mm (11 in.), 305 mm (12 in.), 404 mm (15 7/8 in)
2	Master feed length	370 to 510 mm, continuously variable
3	Effective exposure size	404 x 485 mm (while light exposure, 404 x 510 mm)
4	Setting of original	Sponge pressure setting, with original positioning seat
5	Processor	Developing tank, with 400W surface heater and thermostat
	Processing fluid capacity	Developing tank: 10 liters Stabilizing tank: 8 liters
	Refill fluid capacity	Developing, stabilizing: 2 liters each
6	Lens	Focal length: 260 mm, fixed aperture
7	Magnification	100% (original scale)
8	Exposure adjust- ment	0 to 30 seconds, by timer
9	Light source	Halogen lamp; 100V, 300W, 4 lamps; 100V, 200W, 2 lamps
10	Light source for original positioning	100V, 100W tungsten lamp
11	Independent switch	Switches for absorption fan, master setting
12	Master rewinder	Manual rewinding
13	Master seam detector	Alarm buzzer, automatic over-cut
14	Exposure plane retention	VB absorption system

	Item	Specification
15	Platemaking speed	1st plate A3: 104 sec/60 Hz, 122 sec/50 Hz Cycle A3: 41 sec/60 Hz, 46 sec/50 Hz
16	Machine dimensions	900(W) x 1320(D) x 1225(H) mm
17	Weight	250 kg
18	Electric capacity	1 $\phi$ , 100V, 2.5kW, 50/60Hz

Process chart

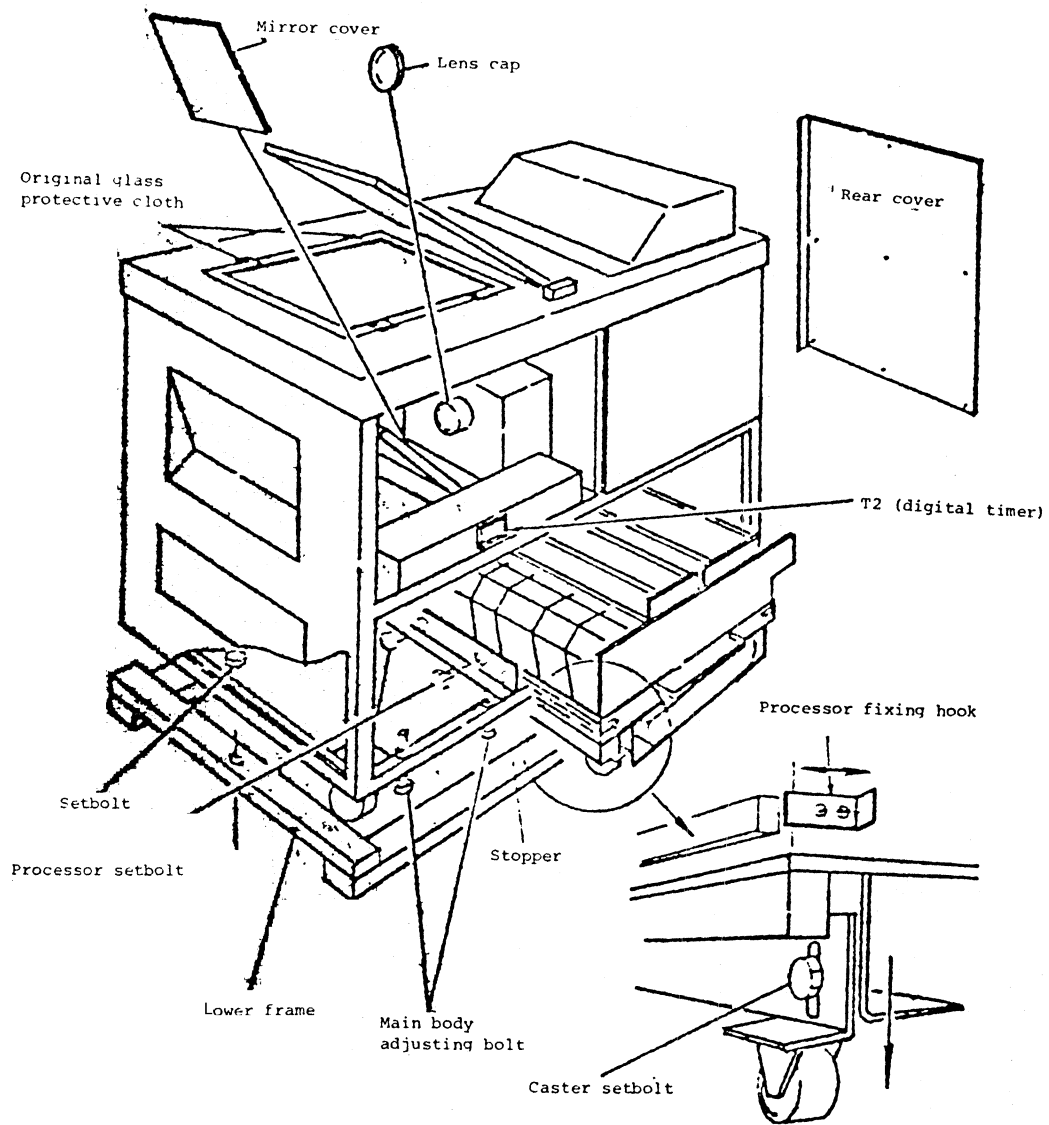


3. Installation, packing list

\* When installing the machine, avoid a place exposed to direct sunlight.

[Packing list]

No.	Name	Quantity
1	Main body	1
2	Refill bottle	2
3	Spool	2
4	Plate receiving tray	
5	Master guide	
6	Base seat	6
7	Vat	1
8	Funnel	1
9	Measuring cup	1
10	Instruction Manual, Technical Guide, Waste Liquid Disposal Manual	1 each
11	Wall-mount instruction sheet	1
12	Test chart, exposure sample	1 each
13	Tools	1 set
14	Glass fuse, 3A	6
	" 10A	4
15	Spring belt	2
16	Cutter blade	10
17	Air brush	1
18	Metal polisher	1
19	Retouch paint	1 set
20	VB mask	1 set



Carry in and install the CP-200s in the following procedure.

[Unpacking]

1. Remove wooden frame package.
2. The package lower frame and the main body are fastened together with two setbolts--remove processor cover and rear cover, and take out setbolts from the front and rear parts.

(Drawing out the processor unit)

3. Remove two left-side bolts and one right-side bolt of the processor draw-out rail part, as seen from the drawing-out direction of the processor unit.
4. Slide the processor fixing hook, and draw out the processor unit. Lift the processor rear part when the locking stopper is set in place, then the stopper is disconnected and the processor unit is separated from the main body.
5. Dismount the main body from the lower frame. Castors are provided in the lower part of the main body, so that it can be carried lightly.

[Installation, adjustment]

1. Carry the main body up to the specified position, and place base seat beneath the main body adjusting bolts (six).
2. Open the original cover, and remove protective cloth placed beneath the original glass.
3. Put a spirit level on the original glass, and turn the adjusting bolts until the main body is set in horizontal position.



At this time, tighten the adjusting bolts until the four castors are set loose:

4. Assemble the processor unit into the main body, and attach the connectors J22 and J23 for fastening the processor unit and the main body.
5. Push down the castors for processor provided on both sides of the processor until reaching the floor, and tighten the castor setbolts.
6. Remove the processor fixing hook, and draw out the processor unit.

Dismount the developing and stabilizing units from the tank, and clean the tank and these units.

At first the rollers of unit may rotate heavily due to mutual contact; in such a case turn the rollers by hand.

7. Take out the exposure unit cover from the right side, and put the cutter blades.
8. Mount the plate receiving tray, liquid discharge vat, and master guide.
9. Remove mirror cover and lens cap. At this time, be careful not to leave fingerprints on the mirror and lens.

[Preparation of processing fluids]

1. Prepare the developer and stabilizer according to the Instruction Manual, and charge them into the tank and refill bottles.
2. Set the refill bottles filled with processing fluids on each unit.

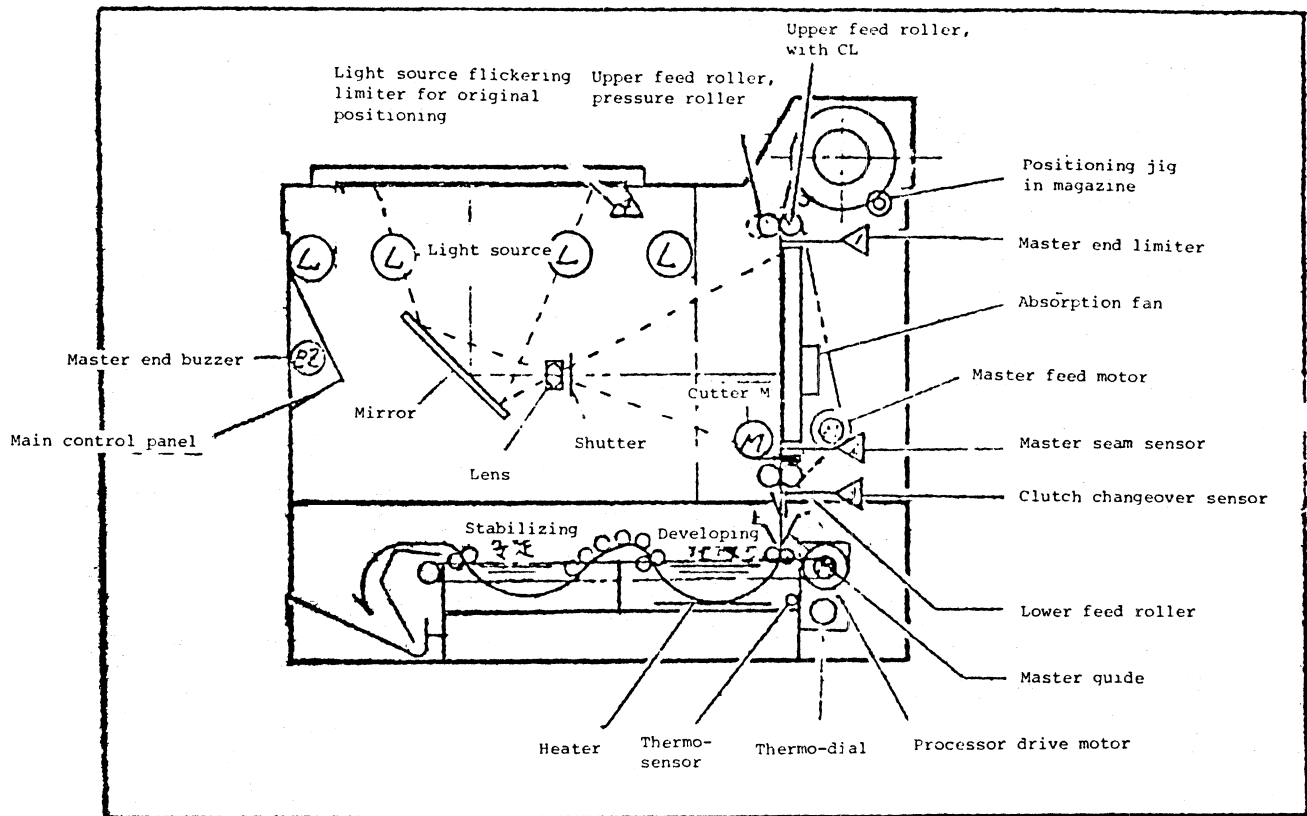
[Connection of power source]

1. Turn off the power switch on the main control panel.
2. Make sure the power source is 1 $\phi$  and 100V, then connect the input line.  
(Power source capacity: 1 $\phi$ , 100V, 2.5kW, 50/60Hz)
3. Ground the input line (class 3 grounding work).

[Checking and adjusting]

1. Turn on the power switch, and check the performances according to the Instruction Manual.
2. Adjustment of master feed length  
Set the master feed length setting dial on the main control panel to the master length most commonly used by the customer, and measure the feed length for about five plates.  
In this machine, the feed length may fluctuate about 5 mm; if the minimum value differs from the set value, open the right side cover and adjust by means of digital timer T2 (0.1 second will change about 2 mm).
3. Adjustment of developer temperature  
A proper developer temperature should be about 28 to 31°C when the heater lamp goes out. If different, adjust by means of the thermo-dial provided in the processor unit.
4. Checking of exposure time frequency changeover  
When the machine is installed in a 50Hz district, set the exposure timer frequency to 50Hz.

#### 4. Structure and performance



Item	Operation	Performance and conditions
MASTER SET	<ol style="list-style-type: none"> <li>1. Set the master.</li> <li>2. Close upper feed roller, pressure roller.</li> <li>3. Turn on VB fan switch.</li> <li>4. Turn on feed switch.</li> </ol>	<ol style="list-style-type: none"> <li>1. Selection of master width desired.</li> <li>2. When feed switch ④ is turned on, master feed motor ⑤ is driven to feed the master.</li> <li>3. When the end of master comes to the position of master seam sensor △, master feed stops, and START OK lamp lights up.</li> <li>4. *If clutch changeover sensor △ detects the master, the clutch ⑥ of upper feed roller is disengaged, so that the master is not fed if the master feed motor runs.</li> </ol>
ORIGINAL SET	<ol style="list-style-type: none"> <li>1. Open original cover.</li> </ol>	<ol style="list-style-type: none"> <li>1. When the original cover is opened, the light source flickering limiter △ for original positioning functions to light up tungsten lamp (100V, 100W).</li> </ol>
START	<ol style="list-style-type: none"> <li>1. Turn on start switch.</li> </ol>	<ol style="list-style-type: none"> <li>1. Start-ready conditions: <ol style="list-style-type: none"> <li>(1) Cutter placed in original position.</li> <li>(2) Master end limiter △ being on.</li> <li>(3) Master seam sensor △ detecting the master.</li> <li>(4) VB fan being on.</li> </ol> </li> </ol>
EXPUSURE		<ol style="list-style-type: none"> <li>1. Exposure time ⑦ starts, six lamps ⑧ light up, and shutter opens.</li> <li>2. Exposure ends the moment timer ⑦ expires.</li> </ol>
MASTER FEED		<ol style="list-style-type: none"> <li>1. When timer ⑦ expires, master feed timer ⑨ (digital timer) starts.</li> <li>2. Upon start of ⑨, master feed motor ⑤ runs to feed the master.</li> <li>3. The master is sent out by the upper feed roller, and gets into the lower feed roller.</li> </ol>

Item	Operation	Performance and conditions
MASTER CUT		<p>4. When the master comes to the position of clutch changeover sensor <math>\Delta</math>, the upper feed roller's clutch is disengaged, so that the upper feed roller is set free. As a result, the drive source is only lower feed roller.</p> <p>5. When <math>T2</math> expires, the master feed timer <math>T3</math> on main control panel starts. *At this point, if the clutch changeover sensor <math>\Delta</math> is not detecting the master (which is master feed trouble), the master end buzzer sounds to notify abnormality.</p> <p>6. When <math>T3</math> expires, the master feed ceases.</p> <p>7. If <math>T3</math> expires, when master seam is detected and <math>T4</math> is operating, master feed continues. (If there is master seam, a longer master than specified may come out.)</p> <p>1. When <math>T3</math> expires, cutter motor <math>M</math> drives the cutter.</p> <p>2. As the cutter end limiter LS2 operates, the cutter stops at the terminal end.</p> <p>3. When <math>LS2</math> is turned on, master feed timer <math>T5</math> is actuated to drive the master feed, so that the master being stopped at the lower roller part is discharged and sent out into the processor unit (<math>T5</math> runs for about 3 seconds).</p> <p>4. When <math>T5</math> expires, the cutter motor is driven reversely, and the cutter returns to the original position <math>LS1</math> and stops.</p> <p>5. As <math>LS1</math> is turned on, it is ready to start again.</p>

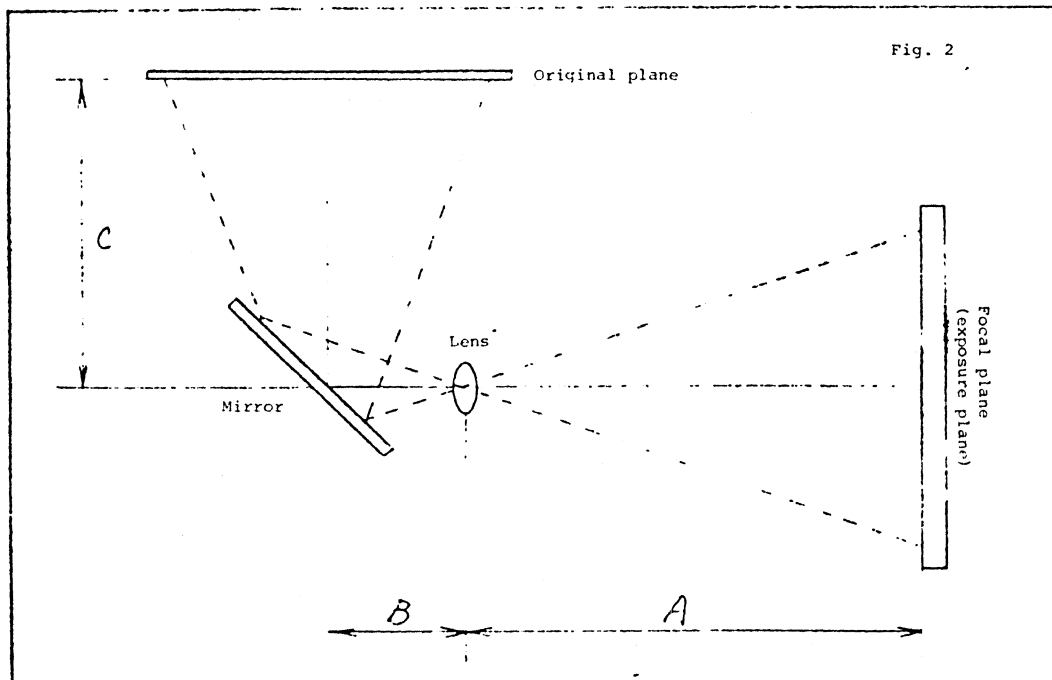
Item	Operation	Performance and conditions
DEVELOP- ING	1. Turn on heater switch.	1. The plate is developed and processed in the processor developing unit. 2. The developer temperature is kept constant (28 to 30°C) by means of heater and thermo-switch.
STABILIZ- ING		1. The plate is stabilized in the stabilizing tank.

## 5. Checking and adjustment of focus

[Focus checking procedure]

If the focus seems improper, check in the procedure below.

1. Take a Mitsubishi standard chart at a 70% over-exposure.
2. Comparing with the sample, if an equal or higher resolution is obtained, the focus is correct.
3. If the resolution is inferior, focal adjustment is necessary.



Correct focus The configuration of the original, lens and exposure plane should be ideally related as follows.

$$A = B+C$$
$$f(1+m) = f(1+\frac{1}{m})$$

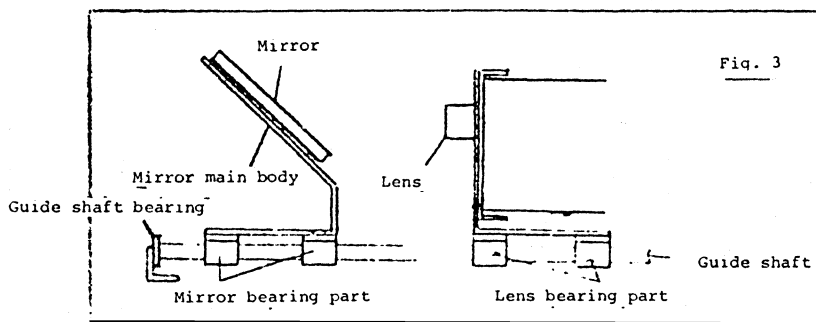
f: focal length of lens  
m: magnification

(Example) Suppose  $f=260$  mm, and  $m=100\%$ , then

$$A = B+C = 260(1+1) = 520 \text{ mm}$$

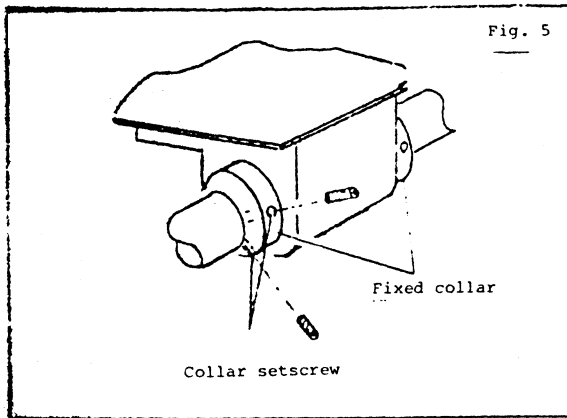
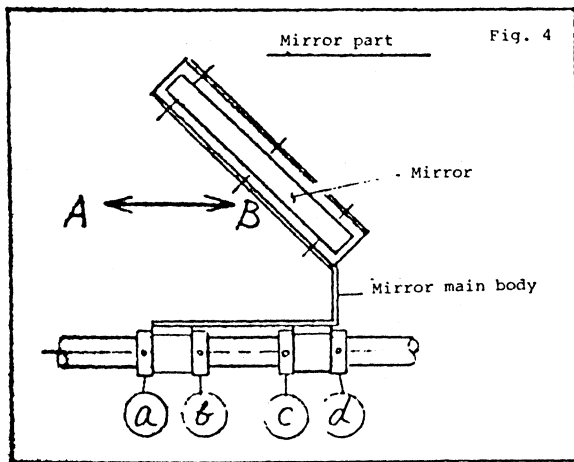
(Actually, the focal length is not always 260 mm, so that the distance between lens and exposure plane is not always 520 mm.)

[General description]





[Focal adjustment procedure]



\* When adjusting the focus, first check the guide shaft and guide shaft bearing for excessive play (Fig. 2), then start adjustment.

See Figs. 3 and 4.

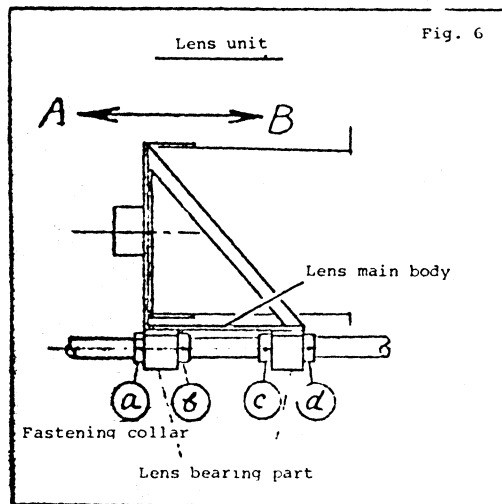
1. Loosen setscrews (M4 hollow screws) of collars (a) and (c). (Two screws are used for each collar.)

\*At this time, do not loosen the fastening collars (b) and (d).

2. Move the mirror main body gradually in the direction A, and photograph a test chart. Compare this picture with a previous sample; if the focus seems to go out gradually, return the mirror main body once to the original position [to the positions of collars (b) and (d)].
3. Temporarily fix the collars (a) and (c). Loosen the collars (b) and (d), and move the mirror main body slightly in the direction B. Similarly, photograph a test chart, and determining the focusing position.

4. When the focusing position is found in steps 2 and 3, fix the collars (a) to (d) with care not to apply immoderate force on the mirror main body.
5. Measure the image dimensions on the obtained picture; if different from the original dimensions, correct in accordance with the procedure in Chapter 6 "Adjustment of magnification".

## 6. Adjustment of magnification



### [Checking of magnification]

1. Set a proper piece of original, such as a scale, suited to checking of magnification.
2. photograph this original, measure the image dimensions, and compare with the original dimensions.
3. If the magnification differs, adjust in the procedure below.

### [Magnification adjusting procedure]

#### a. Larger image dimensions

1. Loosen fastening collars (b) and (d).  
\*At this time, do not loosen collars (a) and (c).
2. Move the lens main body gradually in the direction B, and take photographs at each movement, and measure the image dimensions.
3. Find a position where the image dimensions coincide with the original dimensions, and fix the bearing

part with collars (a) to (d), with care not to apply immoderate force on the lens part.

\*Check the focus again at the correct magnification position; if the focus is out, repeat the adjustment of focus and adjustment of magnification.

b. Smaller image dimensions

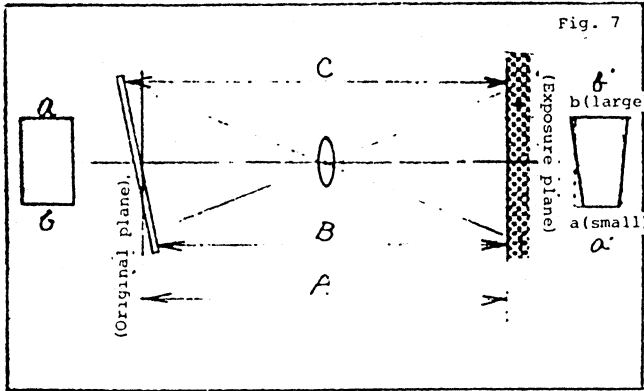
1. Loosen collars (a) and (c).

\*Do not loosen collars (b) and (d).

2. Move the lens main body gradually in the direction A, and take photographs at each movement, and measure the image dimensions.
3. Find a position where the image dimensions coincide with the original dimensions, and tighten the fastening collars (a) to (d) with care not to apply immoderate force on the lens part.

## 7. Adjustment of image deviation

[Basic knowledge of image deviation]

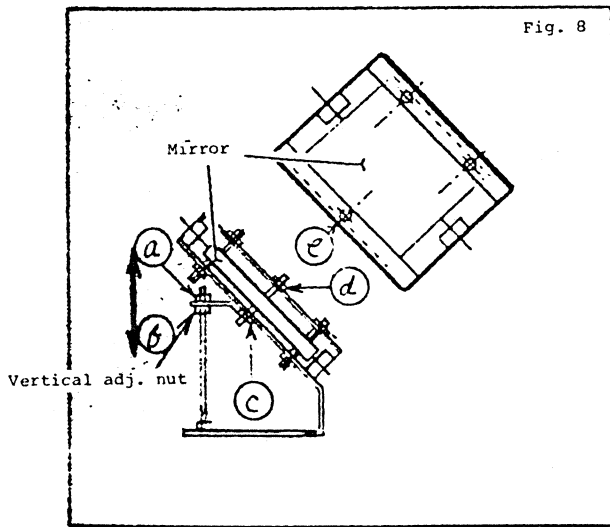


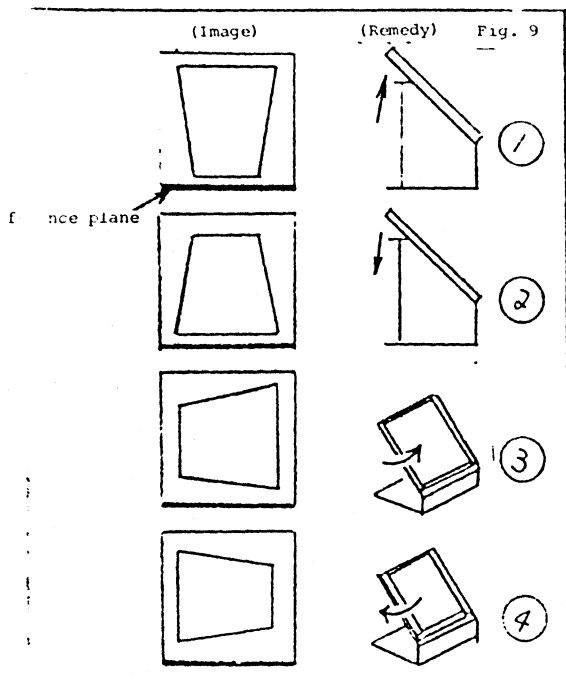
° In order to take a correct square image from a square original, the original plane, lens plane and exposure plane must be on the same plane and parallel to one another.

As in Fig. 7, if the parallelism of the original plane is broken ( $B < C$ ), the obtained image has a smaller "a" size and a larger "b" size, showing a trapezoidal form. Such phenomenon is called image deviation.

° Main cause of image deviation in CP-200s and method of adjustment

In the structure of CP-200s, a reversing mirror is provided between the original plane and lens plane, and this portion seems to be the main cause of image deviation. In other words, image deviation can be corrected in this position.





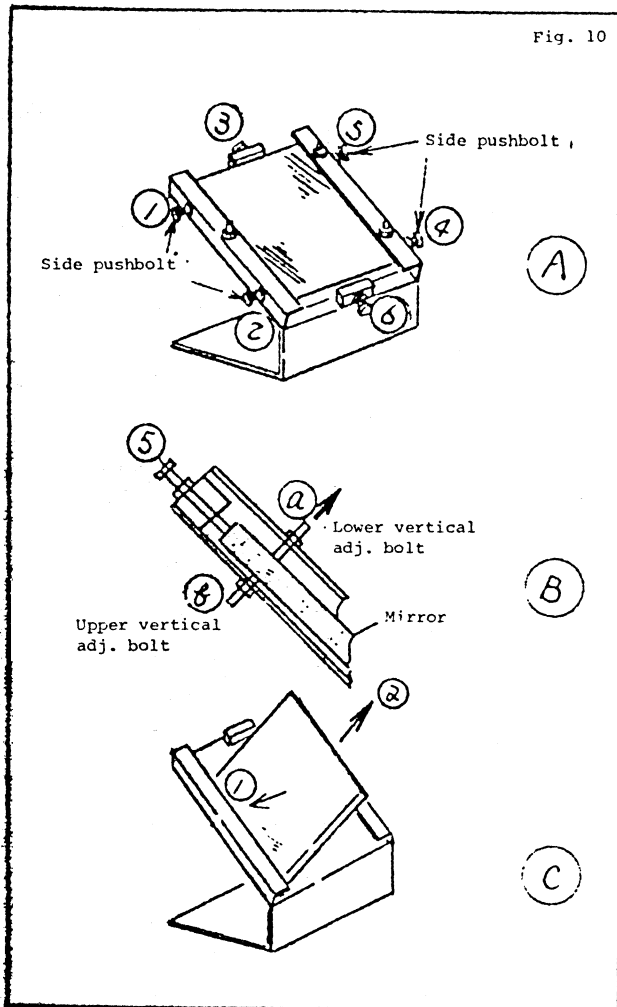
[Checking for image deviation]

1. Use a proper original suited to measurement of image deviation (square or rectangular), and take pictures.
2. Measure the four sides of the image; the difference in diagonal dimensions should be less than 0.5 mm normally (reference: 360 mm). If the dimensional error is more than 0.5 mm, adjust according to the procedure below.

[Adjustment of image deviation]

1. If the image's deeper side is larger and operation side is smaller:  
Loosen vertical adjusting nuts (a) and (b) shown in Fig. 8, and move upward the upper end of the mirror.
2. If the deeper side is smaller and operation side is larger:  
Loosen screw (b) and tighten (a), and move downward the upper end of the mirror.
3. If the right side seen from the image side is larger and the left side is smaller:  
Loosen bolt (d) in part (e), and push up bolt (c).
4. If the left side is larger and the right side is smaller:  
Loosen bolt (c), and push down the mirror by means of bolt (d).

## 8. Replacement of mirror



The mirror is secured by means of six side pushbolts, two upper vertical adjusting bolts, and another three lower vertical adjusting bolts.

### [Removal of mirror]

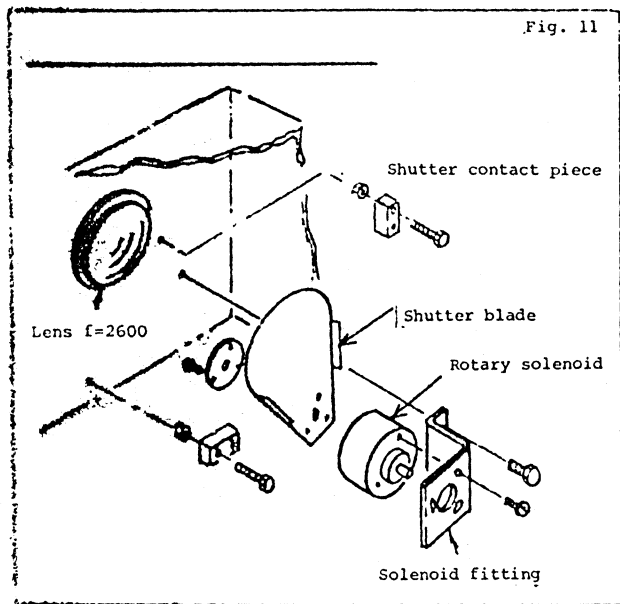
1. Remove the right side cover as seen from the operation side.
2. Put a lens cap to protect.
3. Loosen three upper vertical adjusting bolts (a).  
\*Since the mounting of mirror is based on the three lower vertical adjusting bolts (b), do not loosen them.
4. Loosen bolts 1, 2, 3 of the six side pushbolts.
5. Draw the mirror once to the near side as shown in drawing C, and pull out to the far side.

### [Mounting of mirror]

\*When mounting a new mirror, be careful not to damage or stain it.

1. Mount the mirror in the reverse order of removal.
2. With the mirror set in place, fit to side bolts 4, 5, 6, and tighten three upper vertical adjusting bolts (a) evenly to lock.
3. Tighten side pushbolts 1, 2, 3, and make sure the mirror is not loose.
4. Check for image deviation according to the method in Chapter 7.

## 9. Lens unit



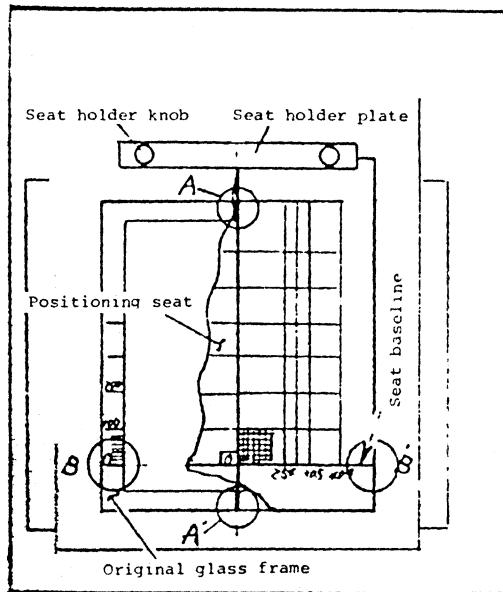
### [Replacement of shutter solenoid]

1. Remove two solenoid fitting bolts (M4) of the lens unit from the exposure unit side, then the shutter block can be dismantled.
2. Separate into the solenoid and shutter blades. Replace with new parts, and assemble in block again and set in the original position.
- \*3. If the shutter is heavy and may operate when aided by hand upon starting (that is, torque is insufficient), move the coil spring of the rotary solenoid in the loosening direction.  
At this time, do not loosen too much; otherwise the shutter may fail to close.



10. Original unit

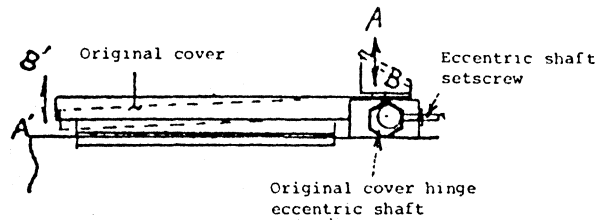
Fig. 12 Original positioning seat



[Replacement of original positioning seat]

1. Loosen seat holder knob, and remove seat.
2. Insert a new seat beneath seat holder plate, and determine position in the procedure below.
3. Adjust the right and left optical axes to markers A and A' on the graduation seat adhered to the original glass frame.
4. For longitudinal adjustment, adjust B and B' so that the seat baseline coincide with "0" position on the graduation seat of the original glass frame, and turn the seat holder knob to secure firmly.
5. When the lens and mirror positions are not changed after shipping from the factory, the optical axis of the seat will coincide with that of the master in this state.

Fig. 13 Original pressure mechanism

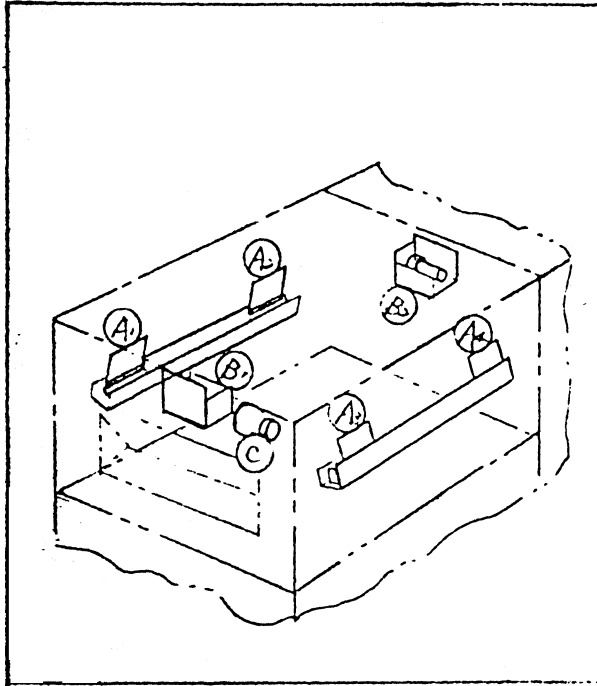


[Adjustment of original pressure]

1. If pressure of the original cover becomes improper, correct as follows.
2. Loosen the eccentric shaft setscrew of the original cover hinge part, and rotate the right and left eccentric shafts, so that the hinge side of the cover will move up and down.
3. When the hinge side is moved in the upward A direction by this operation, the end side will go down in the downward A' direction; when moved in the downward B direction, the end will move in the upward B' direction.
4. Determine a proper position by adjustment of the right and left eccentric shafts, and tighten the eccentric shaft setscrew to fasten firmly.

11. Light source unit

Fig. 14 Composition of light source unit



[Composition of light source unit]

1. The light source consists of:  
four 100V, 300W halogen lamps (A);  
two 100V, 200W halogen lamps (B); and  
one 100V, 100W tungsten lamp (C).

As the light source for exposure, the six lamps (A), (B) light up.

2. For positioning of the original, the lamp (C) is used, which is lit only when the original cover is opened.

Fig. 15 Composition of light source

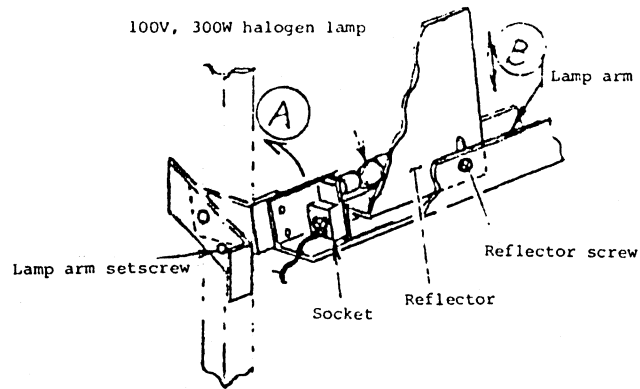
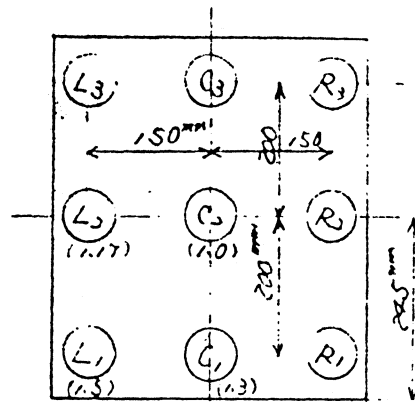


Fig. 16 Adjustment of illumination distribution



(Operation side)

[Adjustment of light source unit]

1. The light source units provided on the right and left sides can be stored within the main body frame when carrying or transporting.
  - 1-1 Remove right and left lamp covers.
  - 1-2 Loosen lamp arm fixing screws, and lift the lamp arm and push it inside the frame.
  - 1-3 When setting in the original position, draw out the lamp arm and pull down until hitting against the fixing screws, and secure by holding with the collar of screw.
2. When adjusting the illumination distribution or the like, aforesaid arm position adjustment and positioning of reflectors of each light source may be also done.
3. The theoretical ideal illumination distribution on the original plane is as shown in the drawing; assuming the illumination at center C2 to be 1, the illumination at four corners (L1, L3, R1, R3) should be 1.5 times; at L2 and R2, 1.17 times; and at C1 and C3, 1.3 times.
4. If the balance of illumination distribution is broken, adjust in the procedure below.
  - 4-1 When adjusting the L line (L, L2, L3) or R line only:  
Adjust the positions of arms of the corresponding side.
  - 4-2 To raise the illumination at center C2:  
Raise the reflectors on the whole.
  - 4-3 For each part:  
Move up or down the corresponding lamp and reflector.

12. Exposure unit

Fig. 17 Master feed unit mechanism

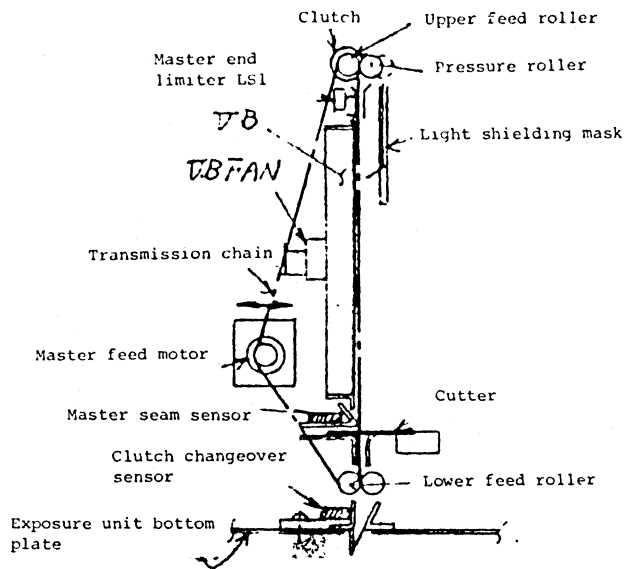


Fig. 18 Clutch

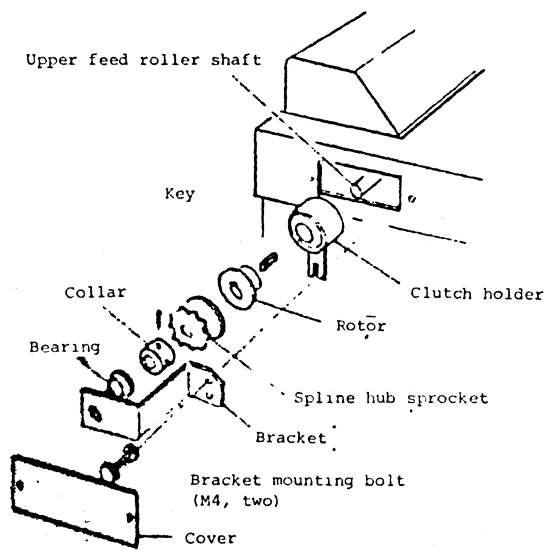
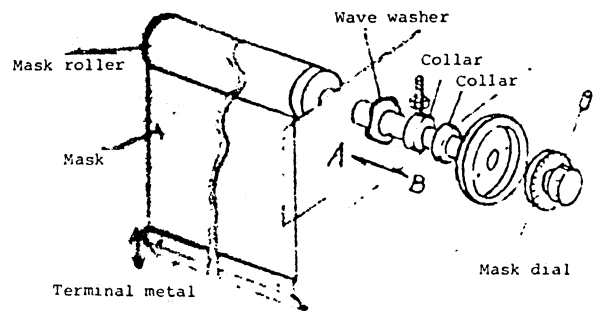


Fig. 19 Light shielding mask



## 1[Master feed mechanism]

1. Master feed mechanism consists of:

Master feed motor

Upper feed roller (with clutch)

Lower feed roller

Transmission chain

To set the rollers free when servicing:

1. Loosen master feed motor mounting bolts, and remove the transmission chain.
2. The master feed motor also works to stretch the transmission chain to proper tension.

(Example)

When the master plate get entangled on the master feed roller:

1. Detach the transmission chain from the drive source to set free the rollers.
2. Draw out the processor, and remove the exposure unit bottom plate, and draw out the master from the bottom part.

## 2[Replacement of upper feed roller clutch]

[Removal of clutch]

1. Remove the clutch unit cover from the left side of the main body.
2. Remove two bracket mounting bolts (M4), and dismount the bracket.
3. Loosen the collar fixing screws, and draw out the collars.
4. Pull out the spline hub with sprocket, and take out the key.
5. Dismount the clutch holder.

[Mounting and adjustment]

1. Assemble in the procedure above.
2. When mounting the bracket, secure in a light state as far as possible while rotating the upper feed roller by hand.

3 [Adjustment of light shielding mask]

1. Adjust the mask inclination at the terminal metal.
2.
  - 2-1 To adjust the mask position, take a photograph at an arbitrary position, and read the mask position.
  - 2-2 Loosen the mask dial fixing screw, and while securing the mask roller by hand, adjust until the mask position graduation comes to the marker line, and secure with the fixing screw.
3. For adjustment of heaviness of sliding of mask handle, loosen the collar fixing screws, and move the collars in direction A to set heavier or in direction B to set lighter.



13. Processor unit

Fig. 20 Composition of processor unit

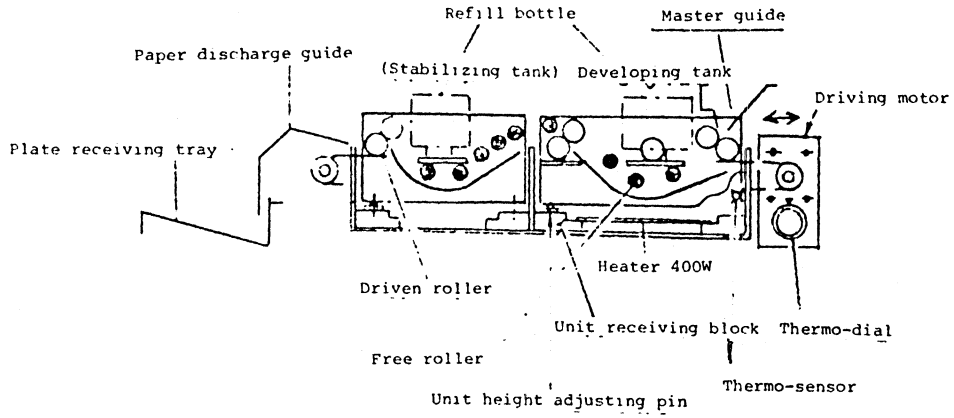
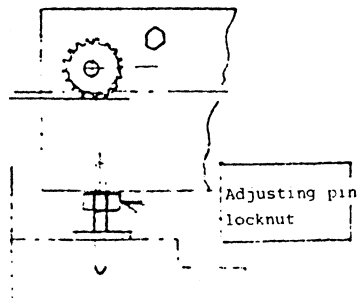


Fig. 21 Unit vertical adjusting pin



\*The processor unit can be drawn out and separated from the main body.

[Adjustment of processor unit]

1. Adjust the tension of driving chain at the driving motor mountingpart.

2. If the chain line does not agree with the driving roller sprocket, adjust in the procedure below.

2-1 Check if there is excessive play between the unit height adjusting pin and unit receiving block; if found, loosen the bolts securing the side plate of the unit, and correct the distortion of the unit so as to coincide with the receiving block at four points.

2-2 If the sprocket height does not agree with the check line though there is no excessive gap in the unit height adjusting bolt:

Draw out the unit, and loosen the unit height adjusting pin locknut, and adjust the pin vertically.

\*Adjust the pins equally at all four points.

3. If the master is damaged in the processor unit: Check and adjust the following points (generally).

3-1 Make sure the nine free rollers shown in the drawing are smoothly rotating.

3-2 If the surface of free rollers is dirty, polish with compound to clean the surface.

3-3 Clean the inside of the master guide, especially the both film sides of the master.

\*If the master is damaged, check for the location of the cause in the entire process.

#### 14. Troubles and check points

Check point	Phenomenon																			
	Master cannot be set.	Lamp for original positioning not lit.	Start OK lamp not lit.	Not started.	No exposure light.	Exposure light not ending.	Master feed disabled.	Cutter not working.	Master not discharged from lower roller.	Exhaust heat fan not rotating.	Processor not driven.	Developer temperature not rising.	Master seam auto over-cut failure.	Buzzer sounds while feeding master.	Master end ineffective.	VB fan not rotating.	Master feed not ending.	Light source not lit even by manual.	Multicopy operation disabled.	
Relay RY1 (light source)					o	o												o		
Relay RY2 (master set interlock)	o																			
Relay RY3 (exposure)					o	o														
RY4 (master feed)							o													
RY5 (cutter)	o							o	o											
PCB RY6 (master seam)			o																	
RY7 (clutch changeover)							o							o						
RY8 (master feed)								o												
RY9 ( " )									o											
RY10 (master set)	o	o																		
RY11 ( " )	o	o																		
RTY1			o	o																
Timer T1 (60") (exposure)				o	o	o														
T2 (999") (master feed)							o										o			
T3 (10") ( " )							o										o			
(13" set) T4 (30") (auto over-cut)												o								
(3" set) T5 (5") (master feed)								o												

Check point	Phenomenon
Switch TS1 (heater)	Master cannot be set.
TS2 (exposure changeover)	Lamp for original positioning not lit.
TS3 (light source)	Start OK lamp not lit.
TS4 (VB fan)	Not started.
PB1 (start)	No exposure light.
PB2 (master set)	Exposure light not ending.
Limit switch LS1 (master end)	Master feed disabled.
LS2 (cutter)	Cutter not working.
LS3 ( " )	Master not discharged from lower roller.
LS4 (light source for original)	Exhaust heat fan not rotating.
Sensor PI1 (master seam)	Processor not driven.
PI2 (clutch changeover)	Developer temperature not rising.
Motor RM1 (master feed)	Master seam auto over-cut failure.
RM2 (cutter)	Buzzer feeding master.
IM1 (processor)	Master end ineffective.
FM1 (VB adsorption fan)	VB fan not rotating.
	Master feed not ending.
	Light source not lit even by manual
	Multicopy operation disabled.



Check point	Phenomenon																			
	Master cannot be set.	Lamp for original positioning not lit.	Start OK lamp not lit.	Not started.	No exposure light.	Exposure light not ending.	Master feed disabled.	Cutter not working.	Master not discharged from lower roller.	Exhaust heat fan not rotating.	Processor not driven.	Developer temperature not rising.	Master seam auto over-cut failure.	Buzzer feeding master.	Master end ineffective.	VB fan not rotating.	Master feed not ending.	Light source not lit even by manual.	Multicopy operation disable.	
Connector J14			o					o												
J15			o	o																
J16								o												
J17	o																			
J18	o						o													
J19																	o			
J20																o				
J21	o		o				o													
J22, J34											o									
J23												o								
J24	o	o								o	o									
J33																		o		
Fuse F1, F2(3A) operation																				
F3, F4 (3A) processor											o									
F5, F6 (10A) heater												o								

<div style="text-align: center;">Phenomenon</div> <div style="text-align: left; padding-top: 10px;">Checking and adjusting position (cause of fault)</div>	One of focus	Partially out of focus	Image distortion	Vignetting of image	Defective magnification	Inclination of image (defective optical axis)	Other image reproduced	Uneven density in image	Damage in master	Defective passing of master (zigzag)	Silver appearing in squeeze part	Excessive multiexposure part	Early fatigue of processing fluid	Master contamination (defective development)	Plate skipping (fog)	Master not cut sharp
Defective focal adjustment (Chapter 5)	o	o			o										o	
Image deviation (Chapter 7)		o	o		o											
Defective magnification adjustment (Chapter 6)	o	o			o										o	
Defective original pressure		o	o					o							o	
Defective mounting of original positioning seat						o										
Contamination or damage of original pressure glass		o					o	o							o	
Defective illumination distribution		o						o								
Defective block copy								o							o	
Cloudy or dirty lens	o	o						o							o	
Cloudy mirror, evaporation separation, contamination				o			o	o								
Defective adjustment of mirror angle	o	o	o			o										
Improper position of light shielding plate within bellows				o			o									
Defective master setting position (exposure part)						o			o							



Checking and adjusting position (cause of fault)	Phenomenon															
	One of focus	Partially out of focus	Image distortion	Vignetting of image	Defective magnification	Inclination of image (defective optical axis)	Other image reproduced	Uneven density in image	Damage in master	Defective passing of master (zigzag)	Silver appearing in squeeze part	Excessive multiexposure part	Early fatigue of processing fluid	Master contamination (defective development)	Plate skipping (fog)	Master not cut sharp
Poor precision of master feed length (defective setting)										o	o					
Improper master absorption	o	o	o													
Improper position of light shielding mask (defective sliding)										o	o					
Defective cutter blade, poor adjustment															o	
Defective exposure unit light shielding														o		
Contamination or damage inside master guide								o					o			
Improper setting of processor unit								o	o							
Contamination of processor unit guide roller, defective rotation								o	o							
Improper fitting position of exposure unit bottom plate, guide plate									o							
Contamination of processor, developing unit roller							o			o						
Vibration	o	o														

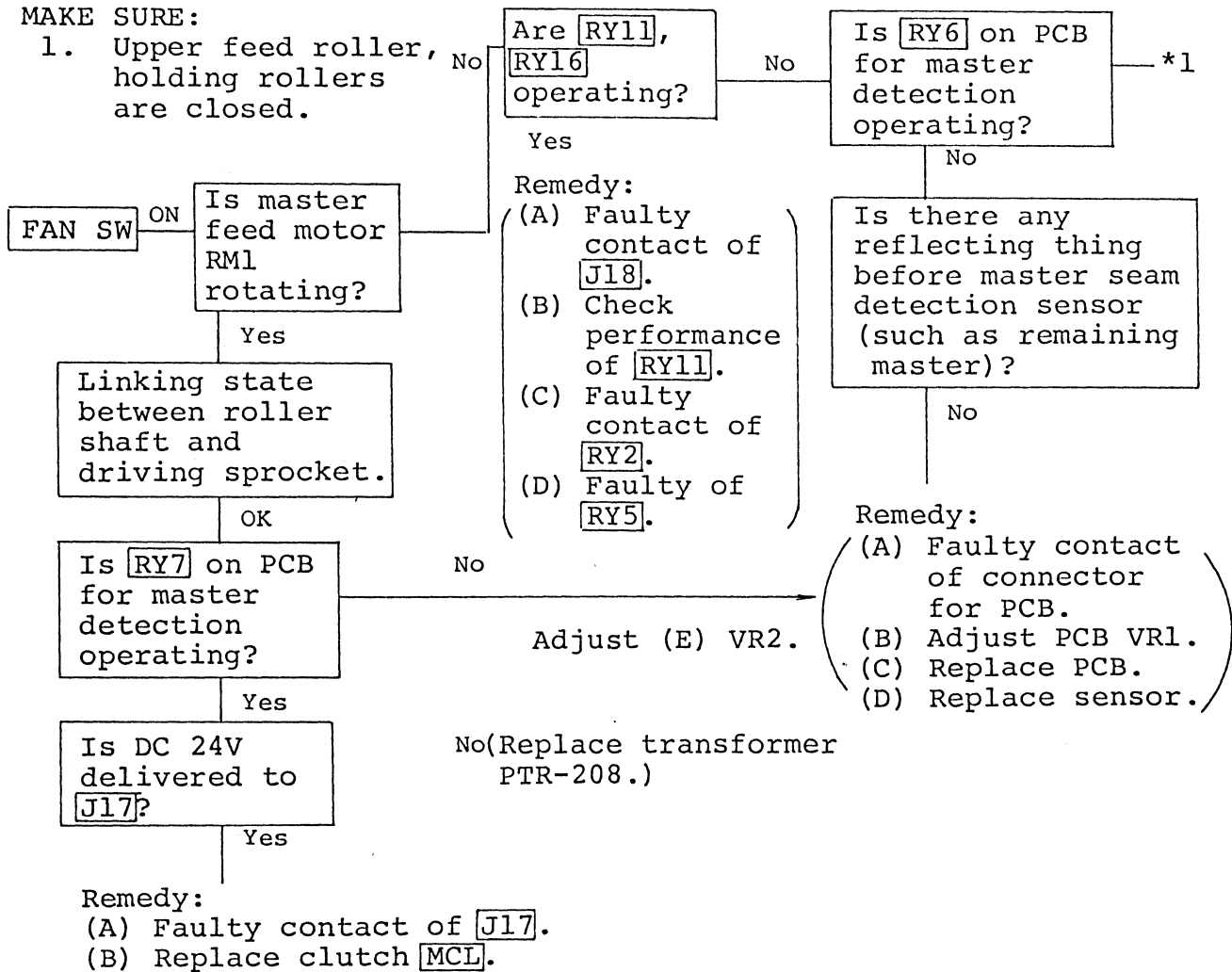
Checking and adjusting position (cause of fault)	Phenomenon															
	One of focus	Partially out of focus	Image distortion	Vignetting of image	Defective magnification	Inclination of image (defective optical axis)	Other image reproduced	Uneven density in image	Damage in master	Defective passing of master (zigzag)	Silver appearing in squeeze part	Excessive multiexposure part	Early fatigue of processing fluid	Master contamination (defective development)	Plate skipping (fog)	Master not cut sharp
Improper liquid level in processor tank (refill)												o				
Defective adjustment of processor drive chain tension									o							
Defective shutter opening and closing				o			o									
Flare of light source															o	
Defective setting of exposure														o		

15. Electric system fault diagnosis guide

E1. Master cannot be set if feed switch (PB2) is pushed.

MAKE SURE:

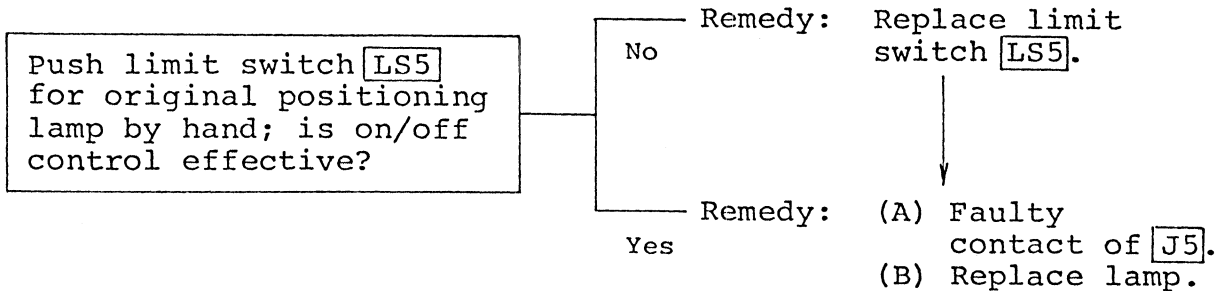
- Upper feed roller, holding rollers are closed.



E2. Lamp for original positioning is not lit.

MAKE SURE:

1. Main switch is OFF.

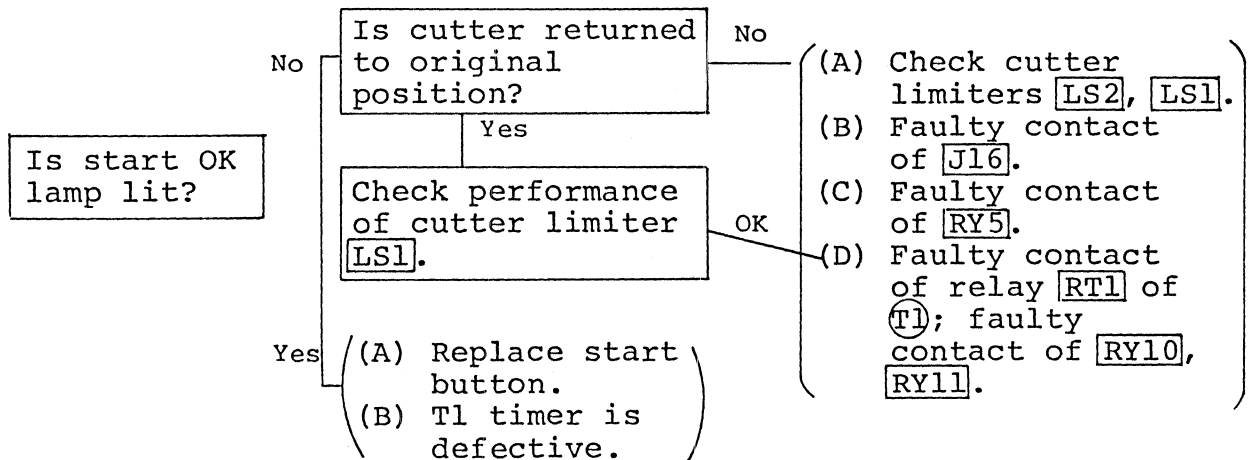


E3. Start lamp does not light up.

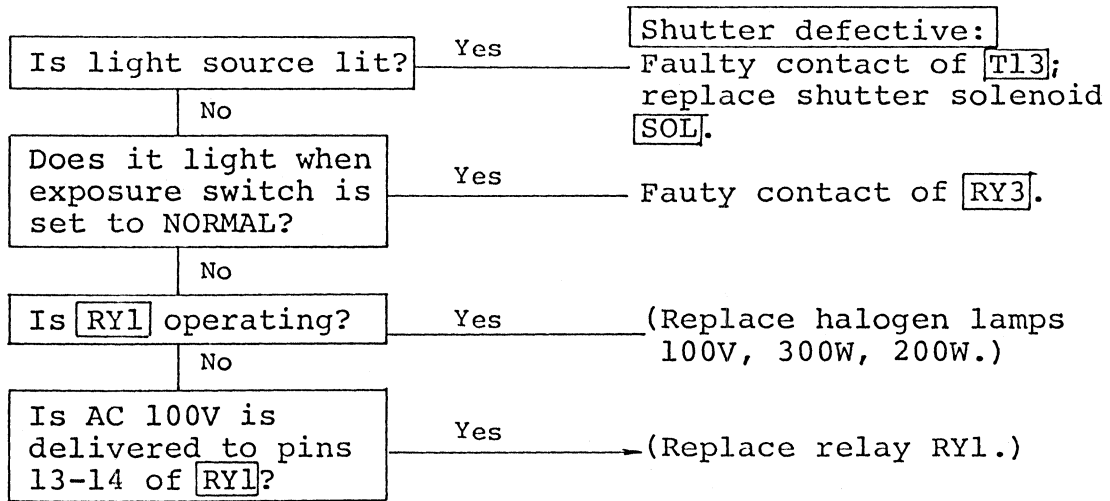
E4. Start is disabled.

MAKE SURE:

1. VB fan switch is ON.
2. Not at the master end.



E5. No exposure.



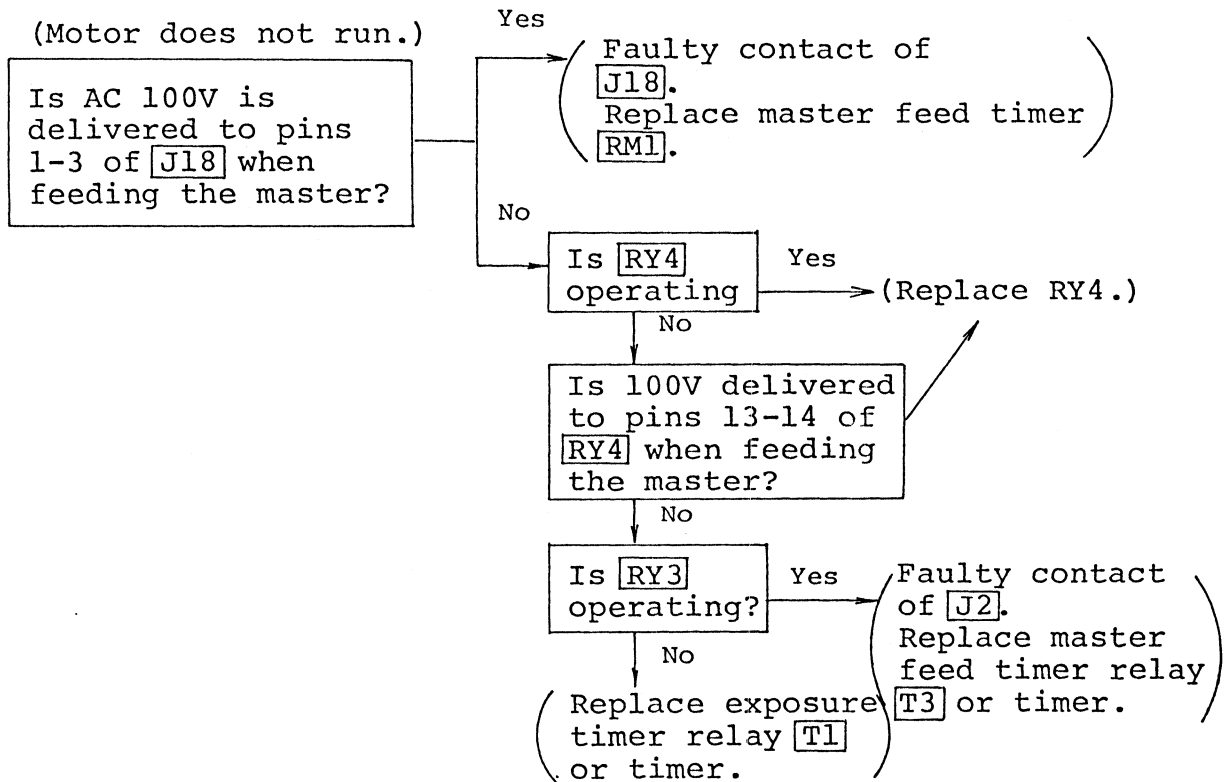
E6. Exposure not ending.

(Faulty contact of RY3.)

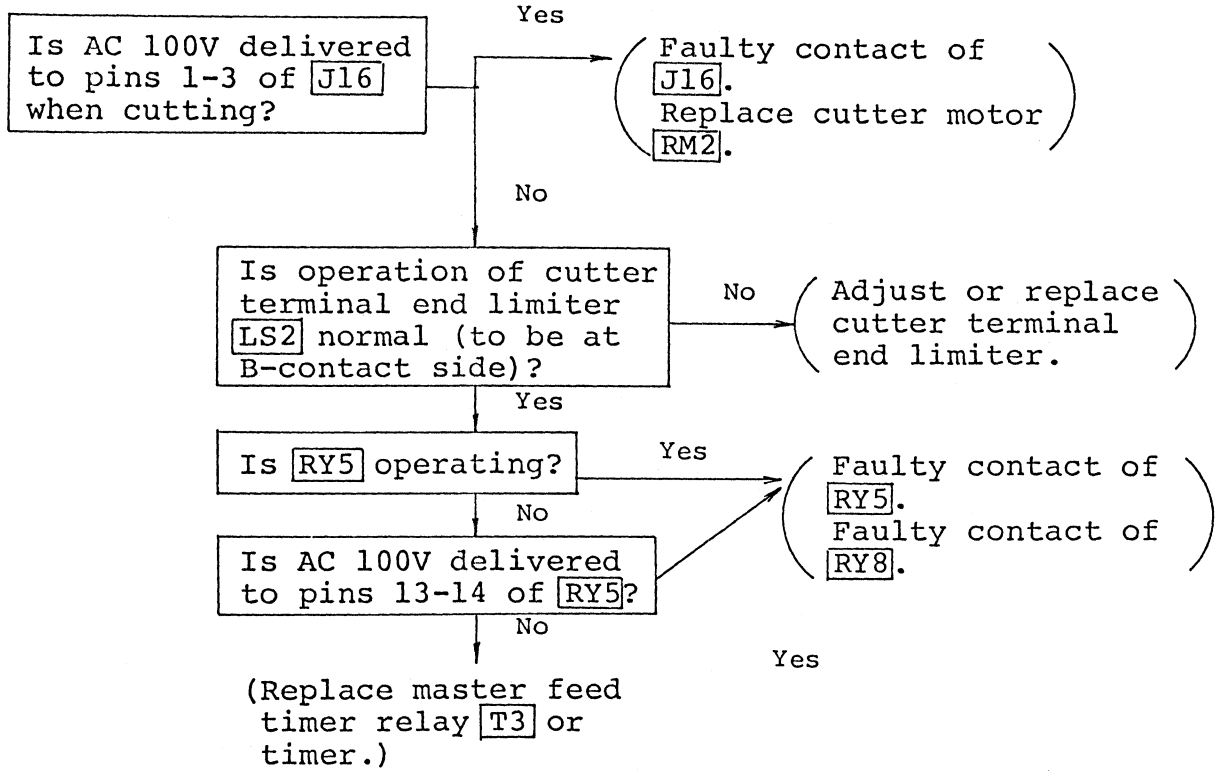
E7. Master feed is disabled.

MAKE SURE:

1. Exposure changeover switch is at NORMAL position.

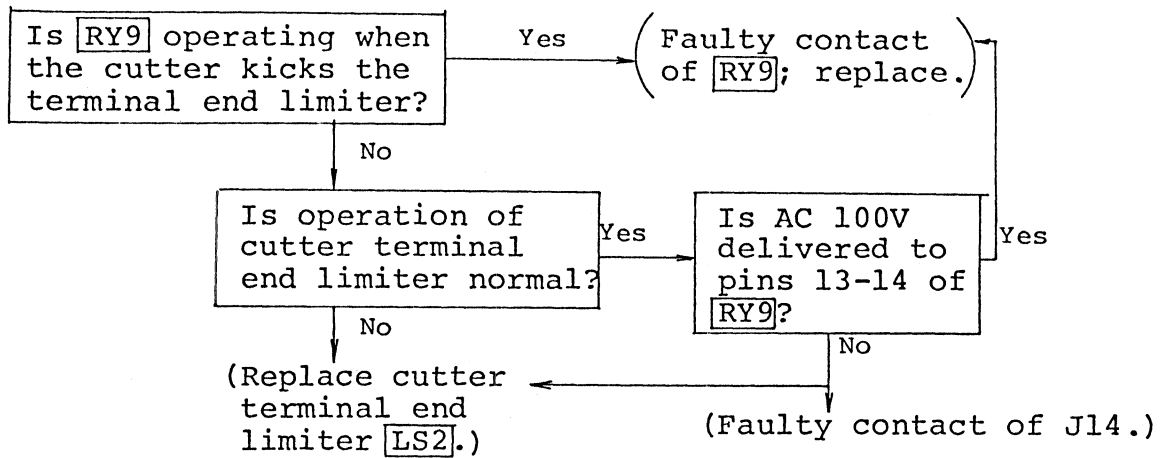


E8. Cutter does not operate.





E9. Master is not discharged from lower feed roller after cutting.

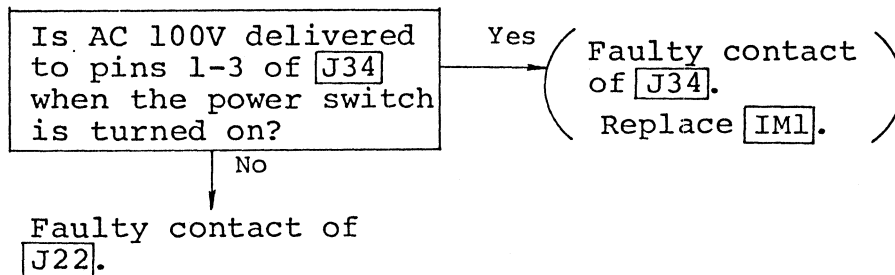


E10. Exhaust heat fan does not rotate. (See Chapter 14.)

E11. Processor is not driven.

\*MAKE SURE:

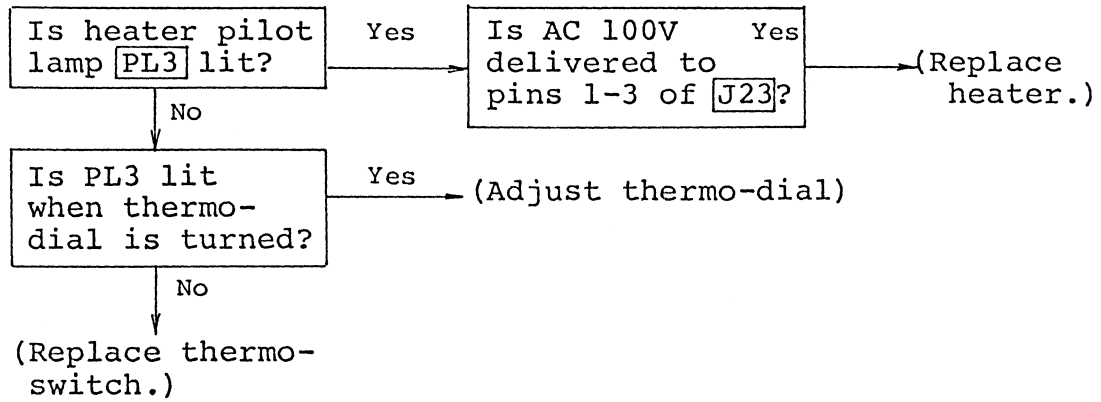
1. Fuses F3, F4 (3A) are normal.



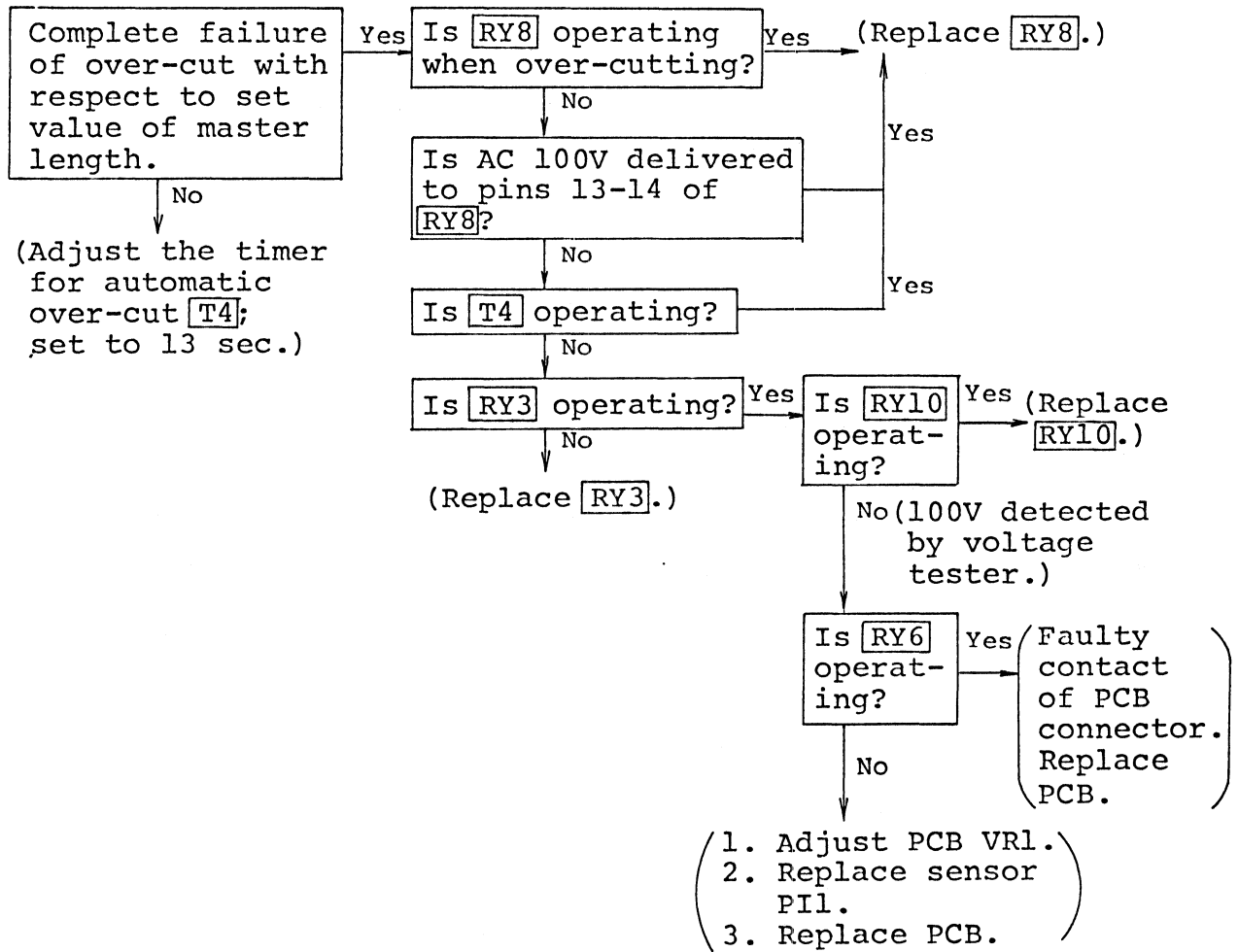
E12. Developer temperature does not rise.

\*MAKE SURE:

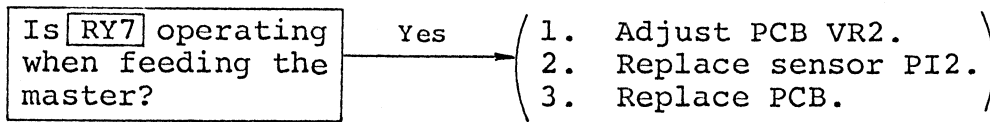
1. Heater cord is plugged into heater power outlet.
2. Fuses F5, F6 (10A) are normal.
3. TS1 heater switch is ON.



E13. Defective over-cut of master seam.



E14. Buzzer sounds when feeding the master.



E15. Master end is not effective. (See Chapter 14.)

E16. VB fan does not rotate. (See Chapter 14.)

E17. Master feed does not stop. (See Chapter 14.)

E18. Light source is not lit by manual operation.  
(See Chapters 5, 14.)

E19. Multicopy operation is disabled. (See Chapter 14.)

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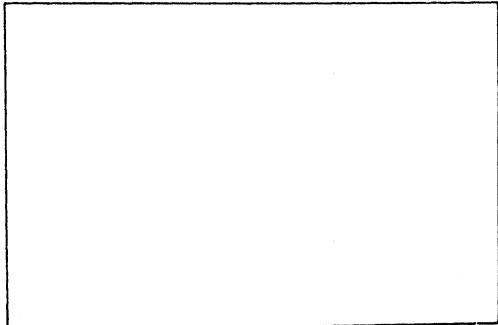
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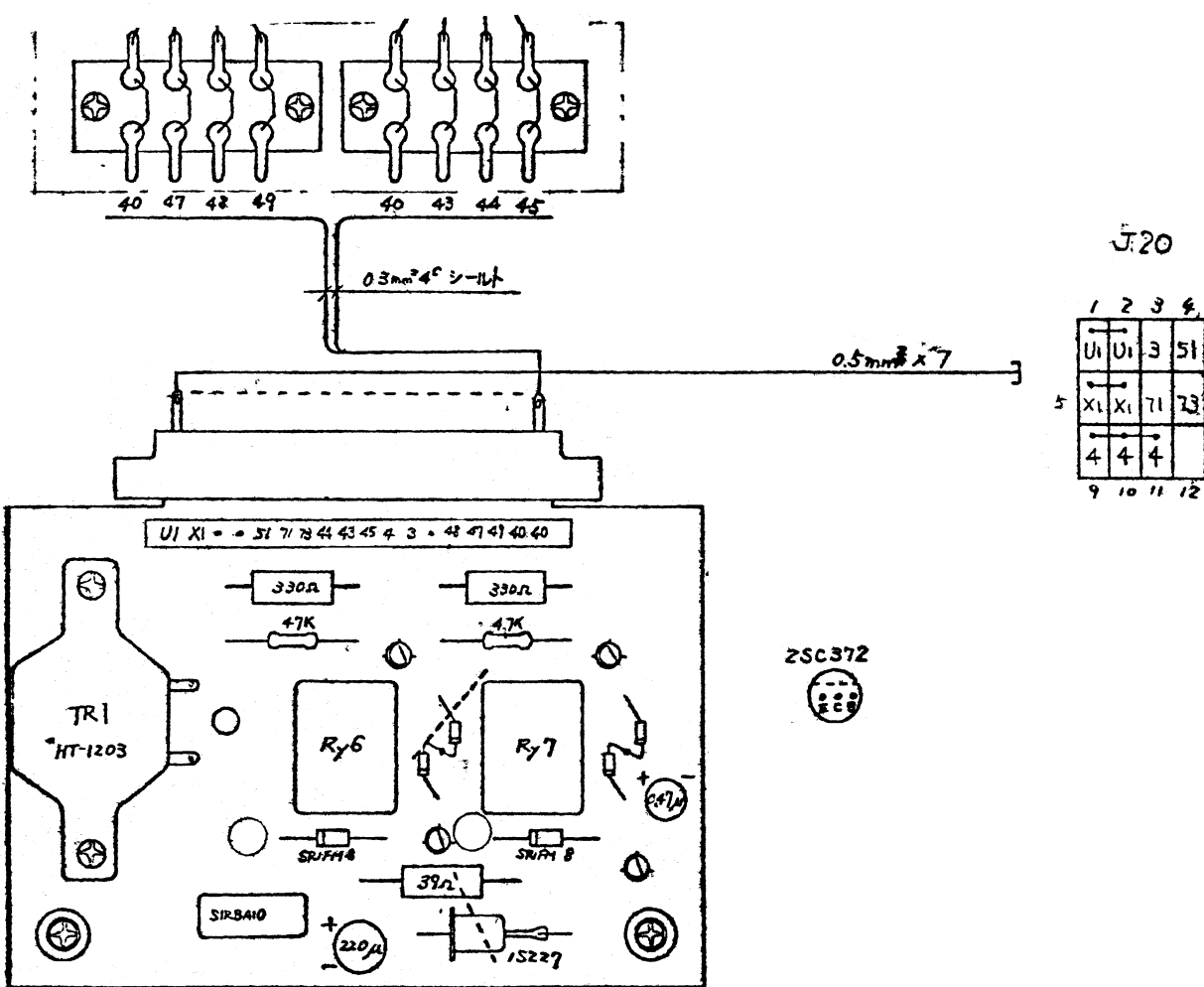
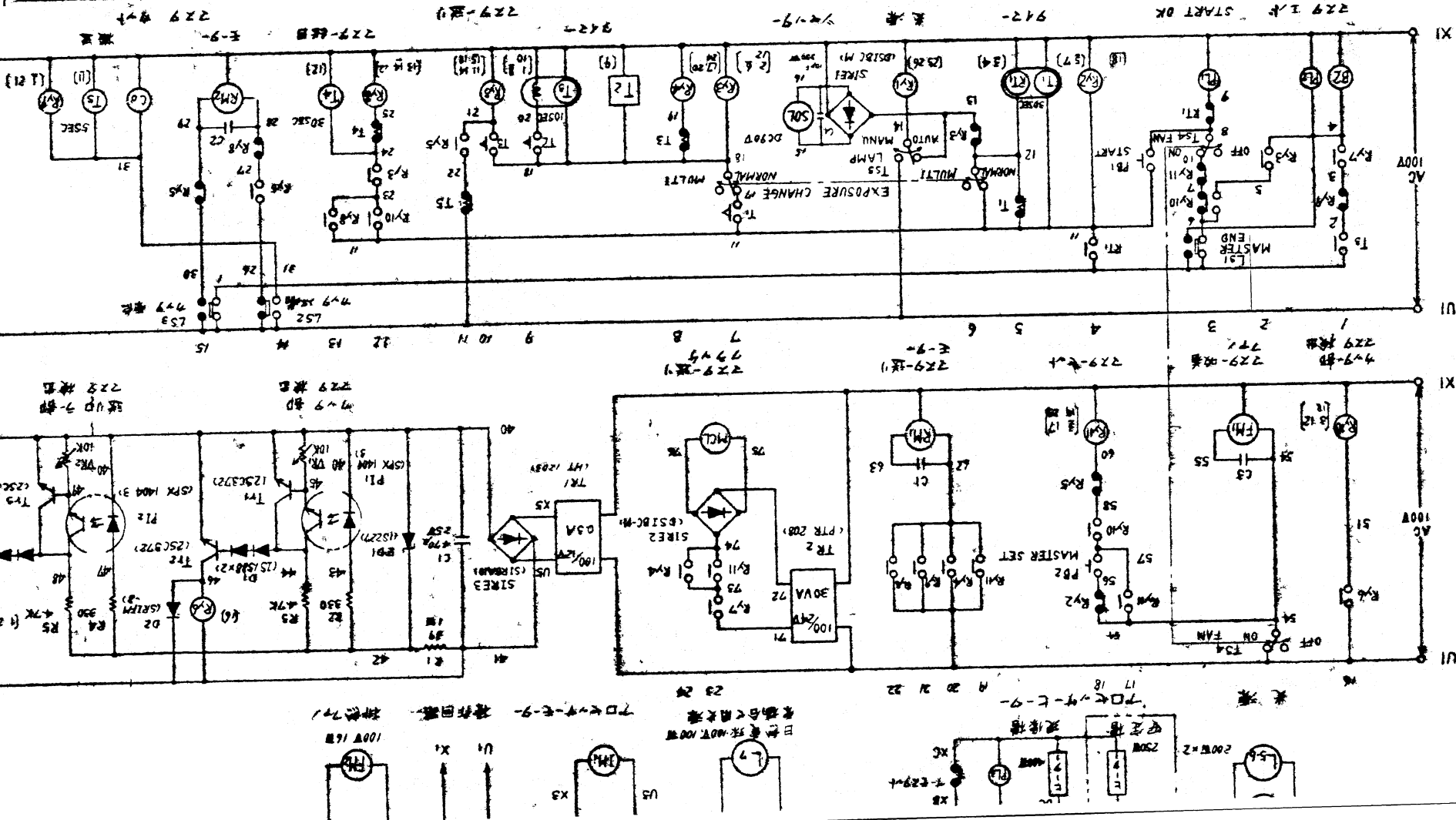
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J:20

1	2	3	4
U1	U1	3	51
X1	X1	17	73
4	4	4	4
9	11	10	12

40679

DESIGN	<i>M. Hattori</i>	TITLE	マスタ-抽出ユニット
DRAWING			結線図
CHECKED			
APPROVED			
DATE	JUL 20 '78	DWG NO	HCZ 40679
MODEL			

SYM	REVISION	DATE	APPROVED