

Electrical System

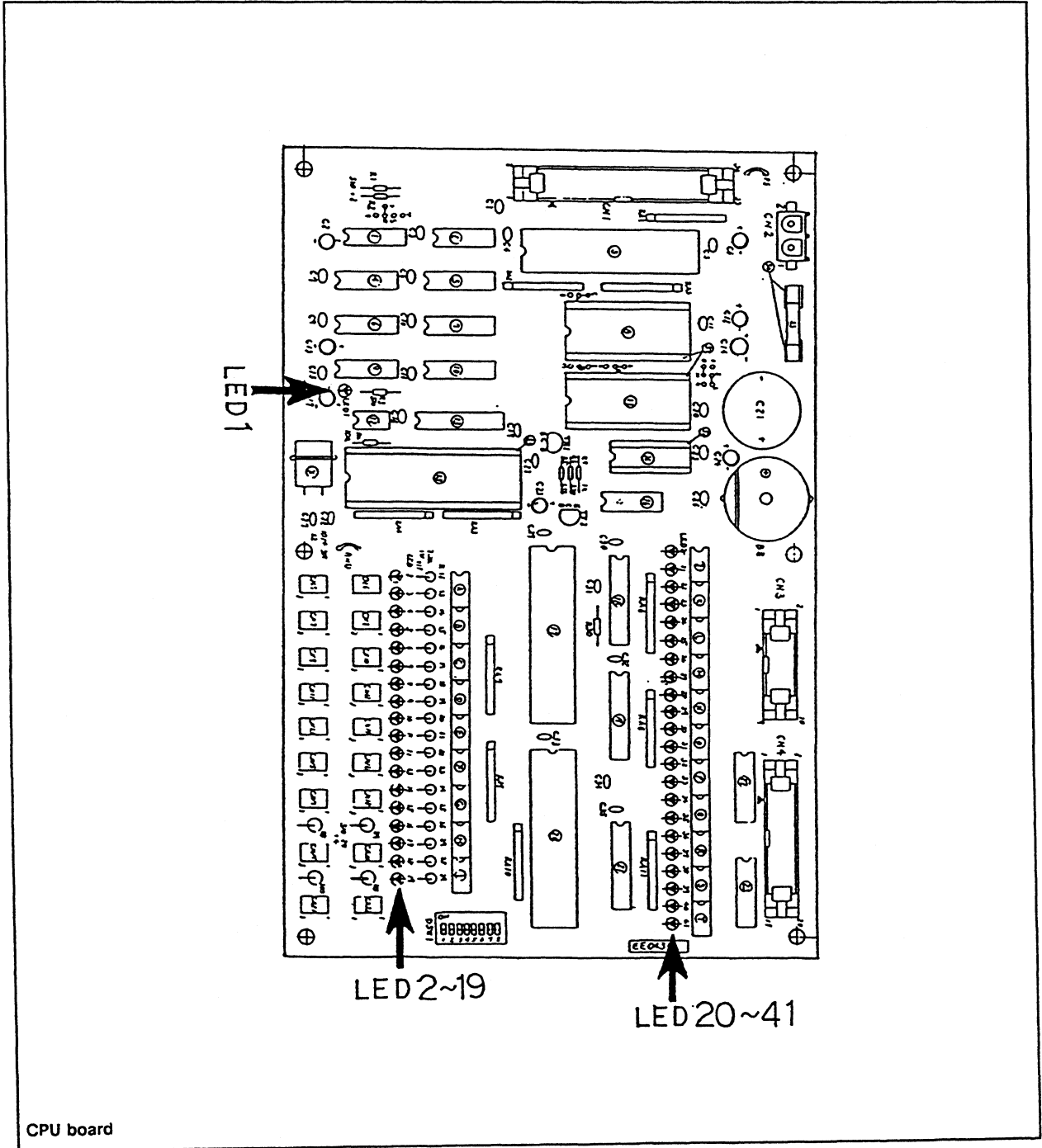
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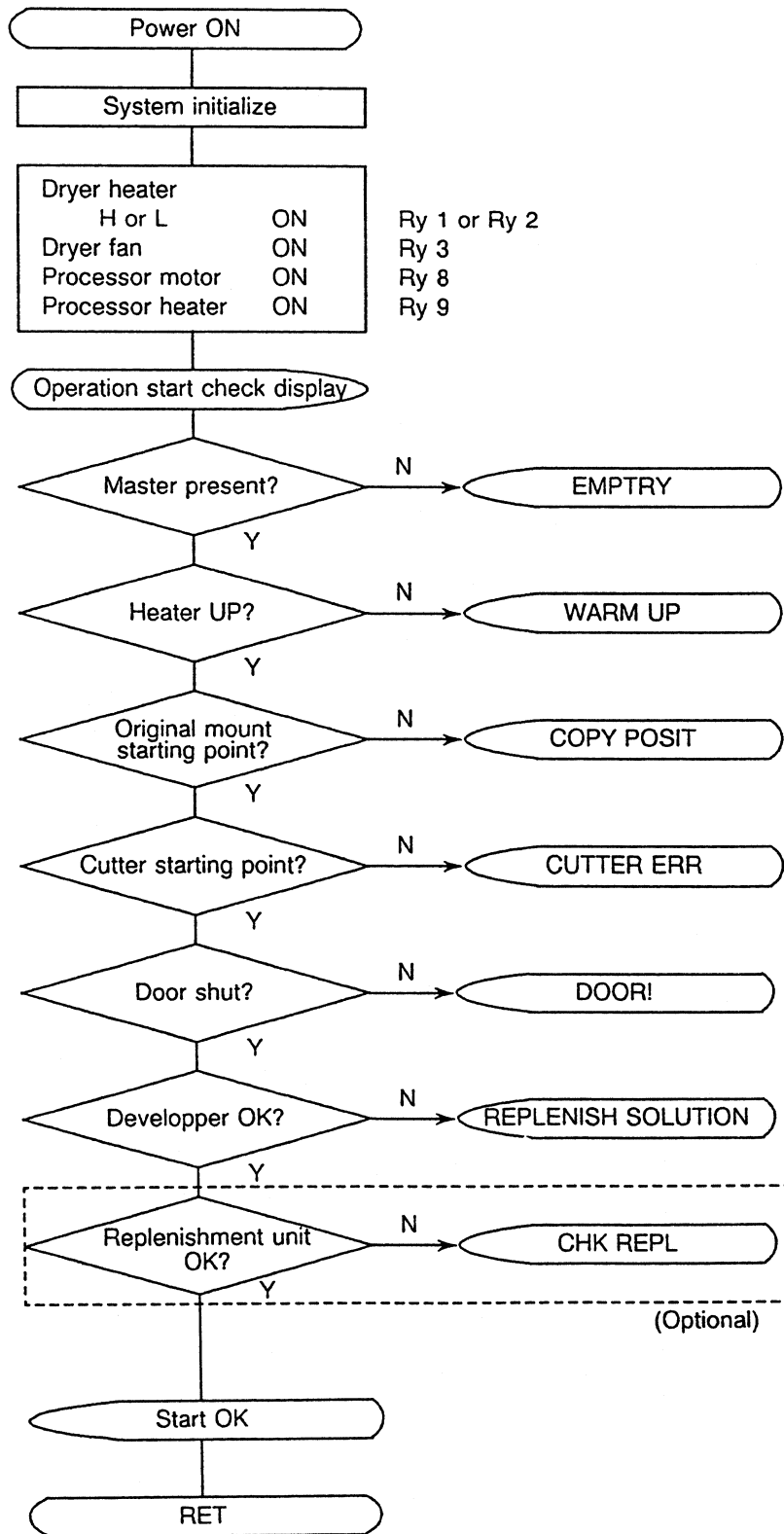
LEDs for verifying CPU board signals

The status of the board input/output signals can be verified with these LEDs.



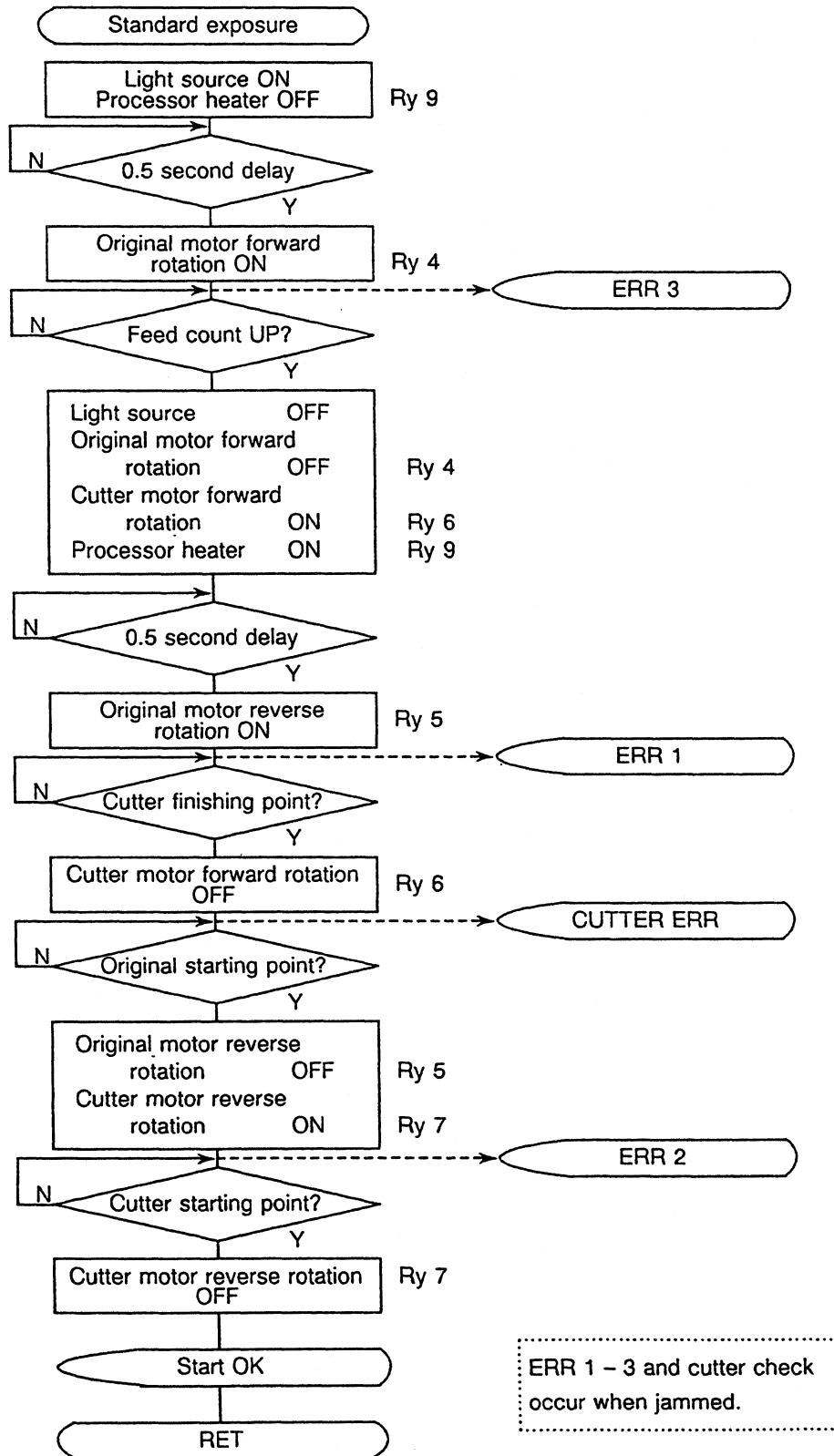
		LED name	Time of illumination
	1	CPU operating	When the CPU is operating.
LEDs for input	2	Original return sensor (for 2 divisions)	Flashes with sensor board rotation when the sensor board enters the cap of the photo interruptor (PS1) used for original return detection.
	3	Master feed sensor	Flashes with sensor board rotation when the sensor board enters the cap of the photo interruptor (PS2) used for master feed detection.
	4	Cover switch sensor	When the front (LS1) or left upper cover (LS2) are closed.
	5	Original mount starting point sensor	When there is no sensor board in the photo interruptor (PS3) used for original mount starting point detection.
	6	Original mount finishing point sensor	When there is no sensor board in the photo interruptor (PS4) used for original mount finishing point detection.
	7	Cutter starting point sensor	When there is no sensor board in the cutter starting point photo interruptor (PS5).
	8	Cutter finishing point sensor	When there is no sensor board in the cutter finishing point photo interruptor (PS6).
	9	Processor heater temperature sensor	When the heater is operating (ON).
	10	Developer level sensor	When the developer level detect reed switch (ReS1) is ON.
	14	Replenishing unit ON	When the replenishing unit power switch is ON.
	15	Replenishing OK	When the replenishment tank front SW is ON and the overflow tank is OFF.
LEDs for output	16	Master end sensor	When there is no master in the master end detect photo sensor (PS7).
	17	Master seam sensor	When there is no master in the seam detect photo sensor (PS8).
	28	Reflected light source	When reflected light source is ON.
	29	Dryer H	When the H dryer relay (RY1) is ON.
	30	Dryer L	When the L dryer relay (RY2) is ON.
	31	Dryer fan	When the dryer fan relay (RY3) is ON.
	32	Master and original mount advance	When the master and original mount advance relay (RY4) is ON.
	33	Original mount retreat	When the original mount retreat relay (RY5) is ON.
	34	Cutter advance	When the cutter advance relay (RY6) is ON.
	35	Cutter retreat	When the cutter retreat relay (RY7) is ON.
	36	Processor motor	When the processor motor relay (RY8) is ON.
37	Processor heater	When the processor heater relay (RY9) is ON.	
38	Dehumidifier dryer	When the dehumidifier dryer relay (RY10) is ON.	
41	Automatic replenishing	During automatic replenishing	

Operation Flowchart

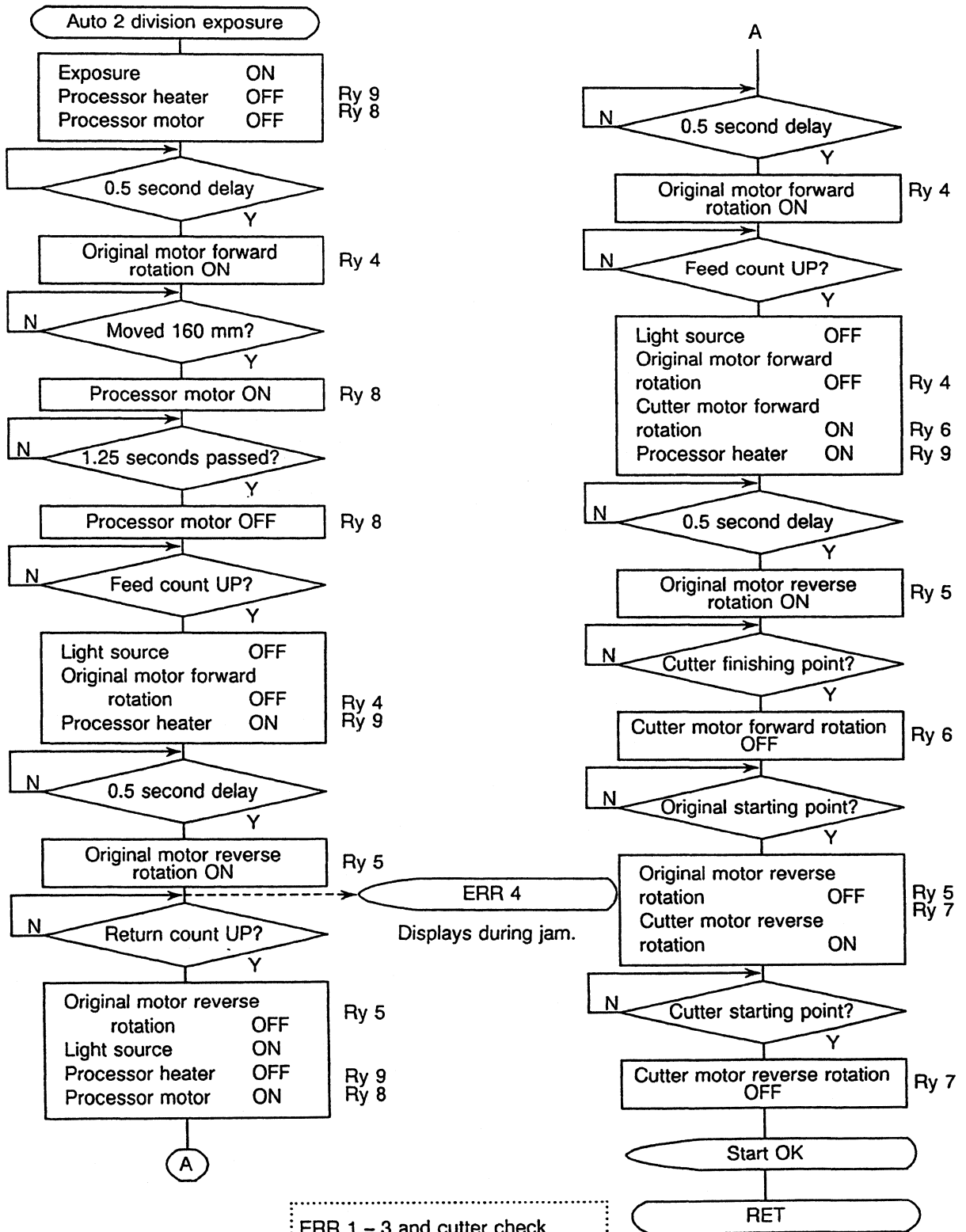


Operation Flowchart

<Standard exposure >

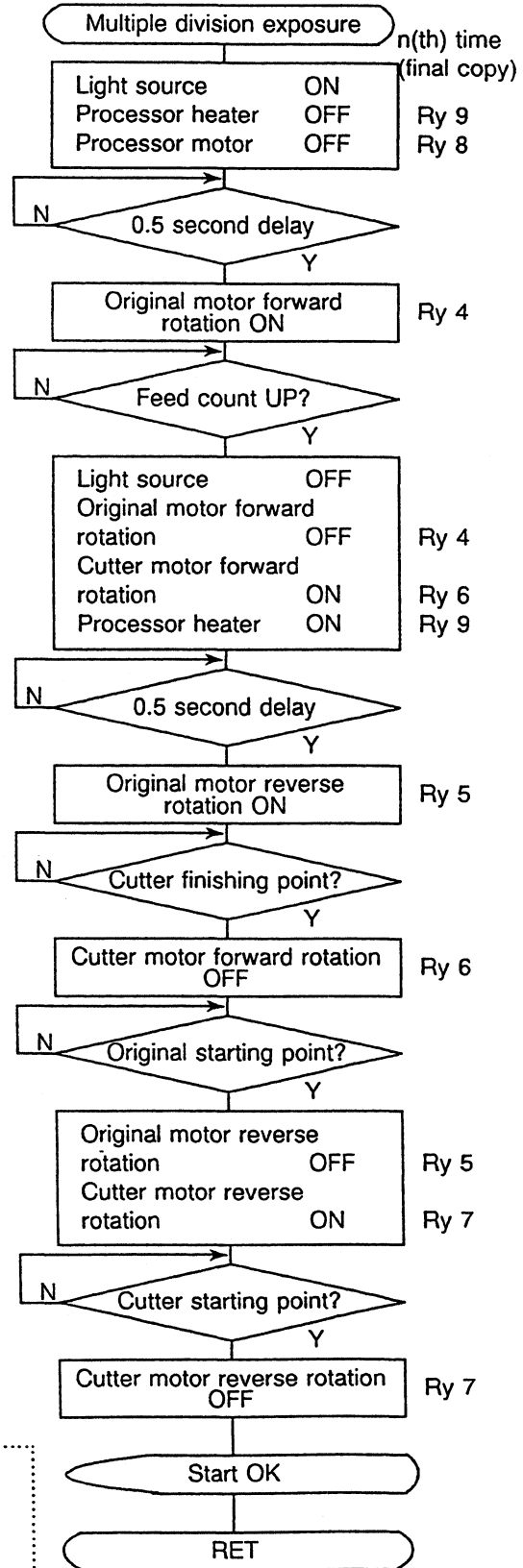
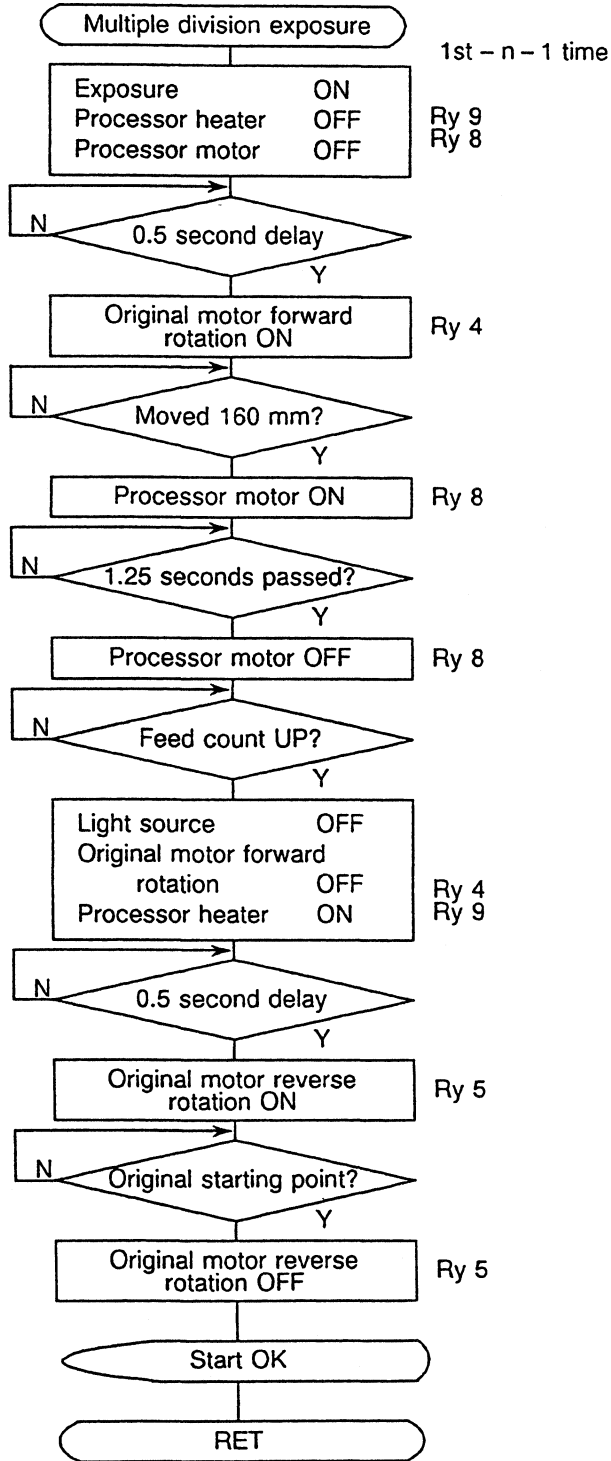


<Auto 2 division exposure >



ERR 1 - 3 and cutter check occur when jammed, the same as for standard exposure.

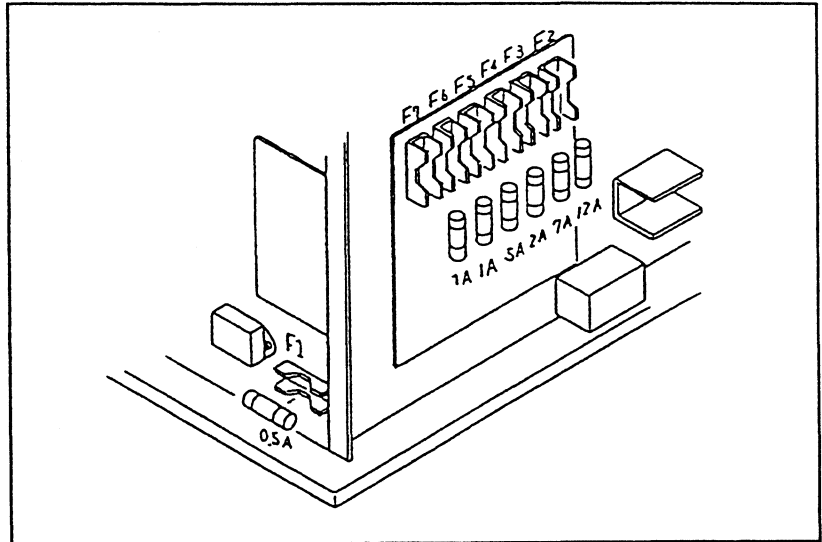
< Multiple division exposure >



ERR 1 - 3 and cutter check occur when jammed, the same as for standard exposure.

Function of Each Fuse

The electric supply unit is found below the master loading section on the right side of the machine and on the front left side of the machine. It is made up of various electrical parts. Turn the power switch and the original power source OFF before changing fuses or checking the circuit. Only use fuses of same rated capacity and type. (Use of anything different may cause damage to the unit.)



- 1. CPU board fuse (F1)**
A 0.5 A glass (Slow blow) protects the low voltage DC 5 V circuit.
- 2. Light source fuse (F2)**
A 12 A glass fuse protects the light source circuit.
- 3. Dryer fan and dryer heater fuse (F3)**
A 7 A glass fuse protects the dryer fan and dryer heater.
- 4. Drive motor fuse (F4)**
A 2 A glass fuse protects the original drive motor, the cutter drive motor and the processor drive motor circuits.
- 5. Developer heater fuse (F5)**
A 5 A glass fuse protects the developer heater circuit.
- 6. Dehumidifier fuse control circuit fuse (F6)**
A 1 A glass fuse protects the dehumidifier circuit and control circuit.
- 7. Weak voltage system protection fuse (F7)**
A 1 A glass fuse protects the low voltage DC 24 V circuit.

When Fuses Blow

1. When [F1] blows

The CPU does not operate.

2. When [F2] blows

The light source (halogen lamp) does not illuminate.

3. When [F3] blows

Dryer heater and dryer fan do not operate.

4. When [F4] blows

Master original motor, cutter motor and processor motor do not operate.

5. When [F5] blows

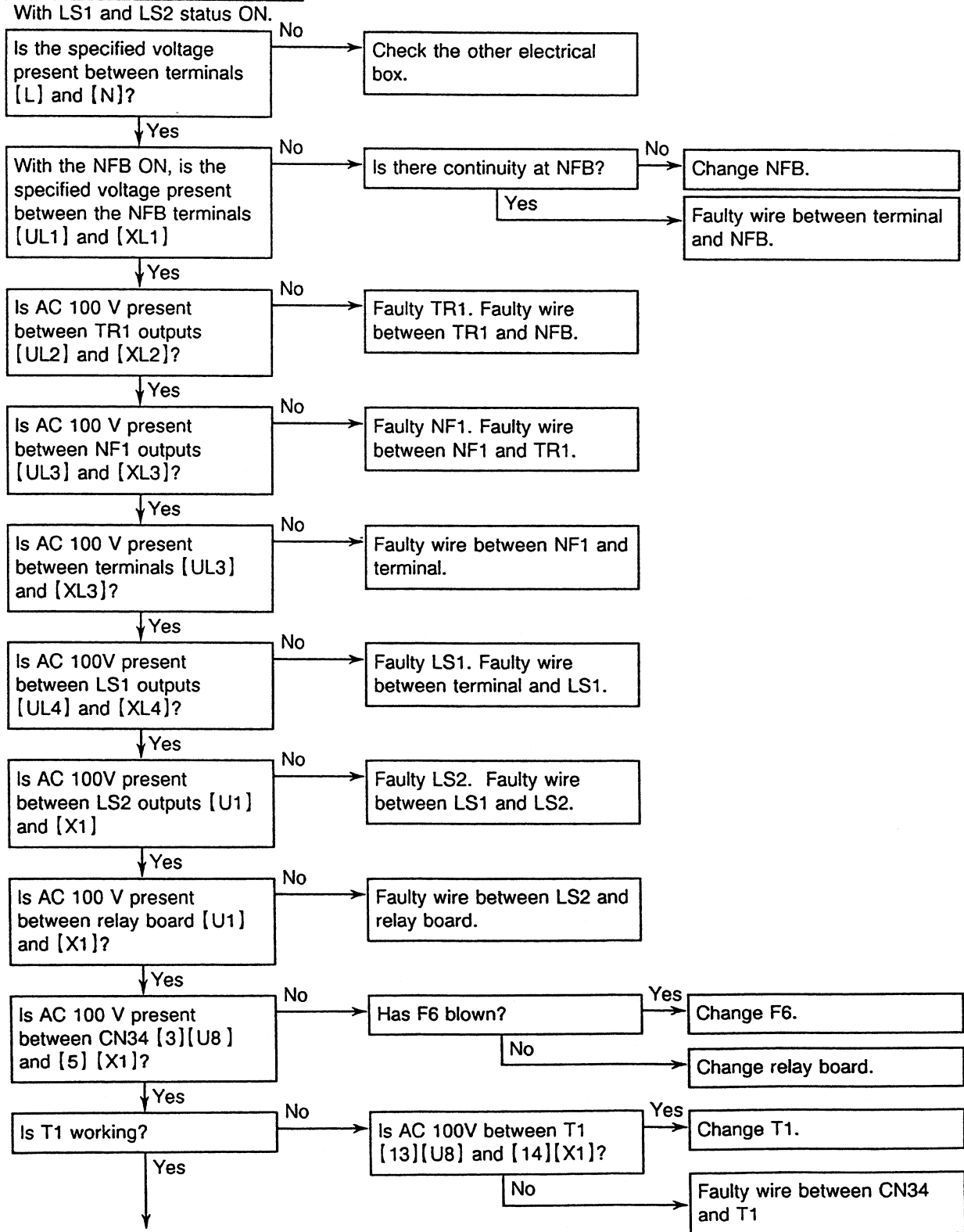
Processor heater does not operate.

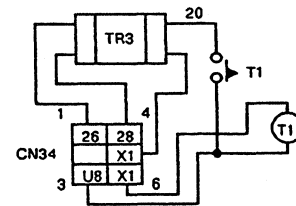
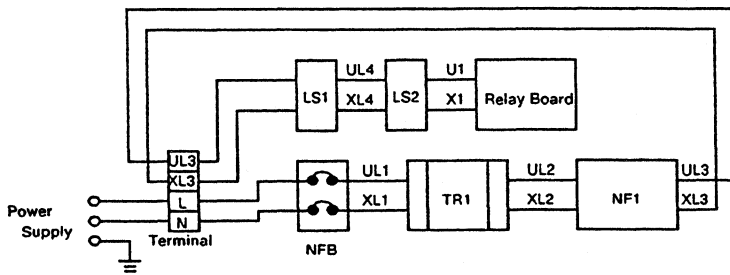
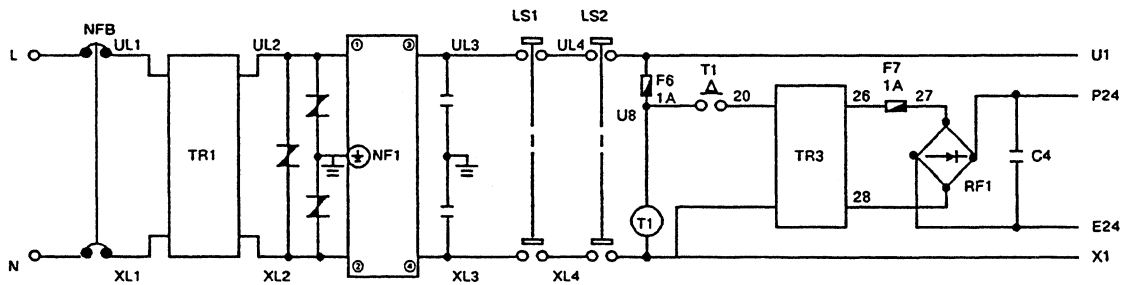
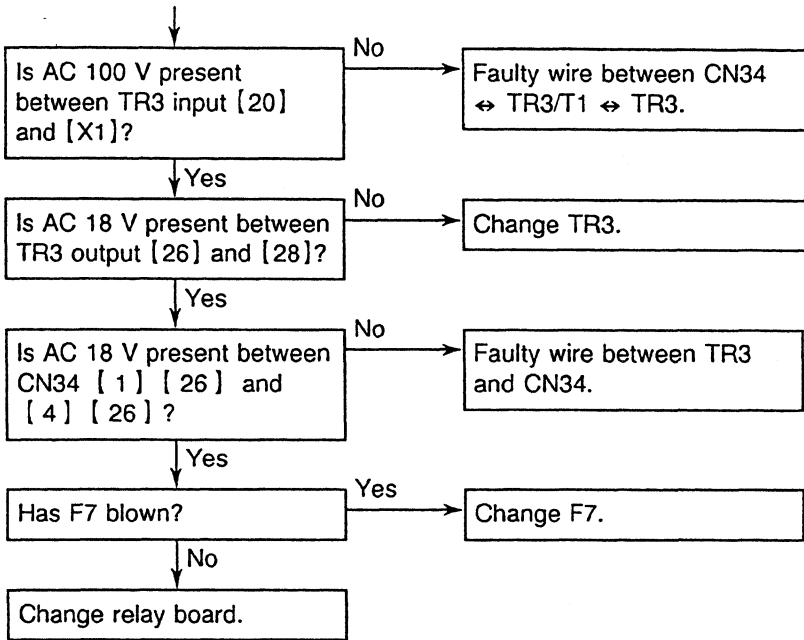
6. When [F6] and [F7] blow

All operations stop.

Troubleshooting

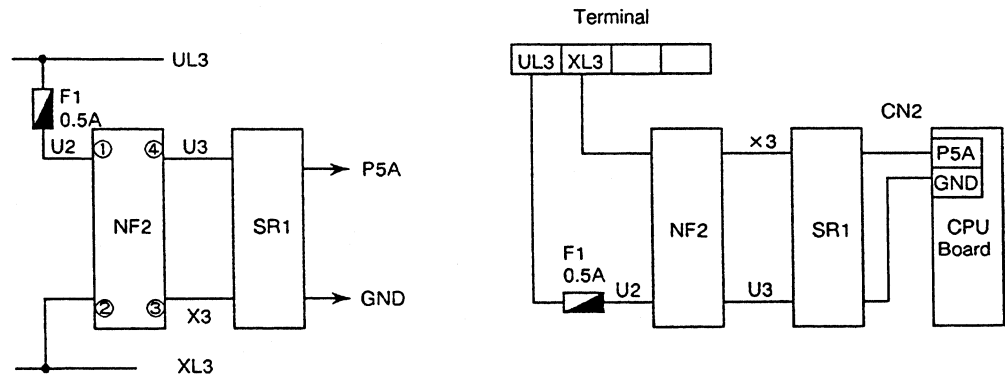
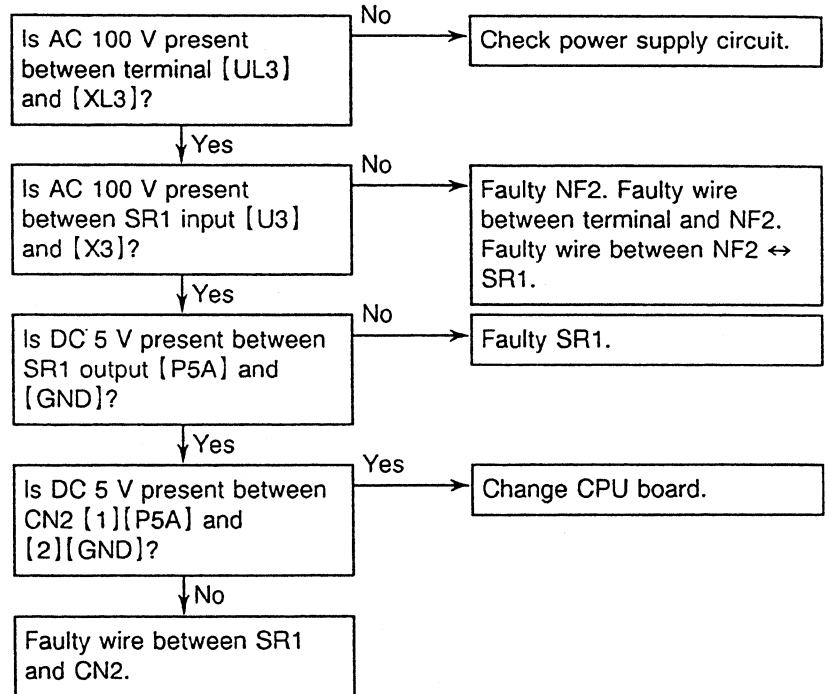
Power does not come on





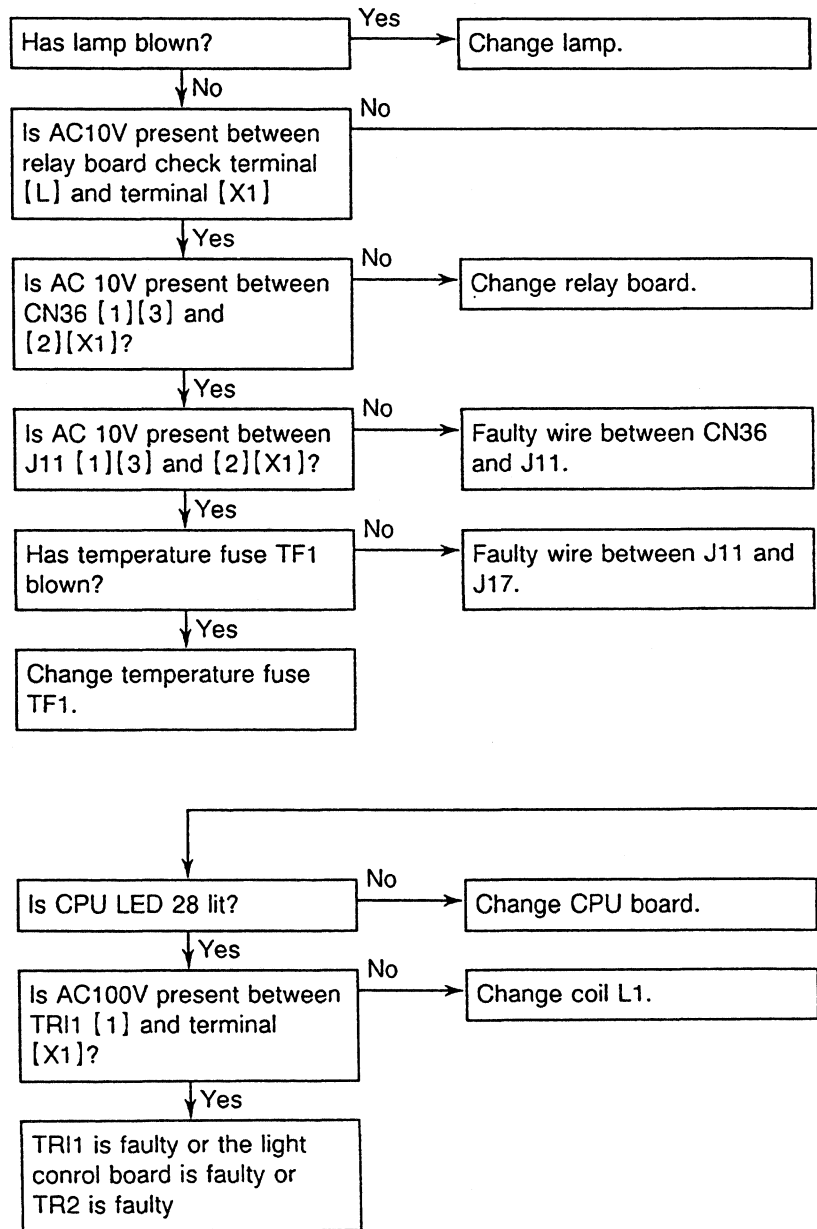
CPU does not operate

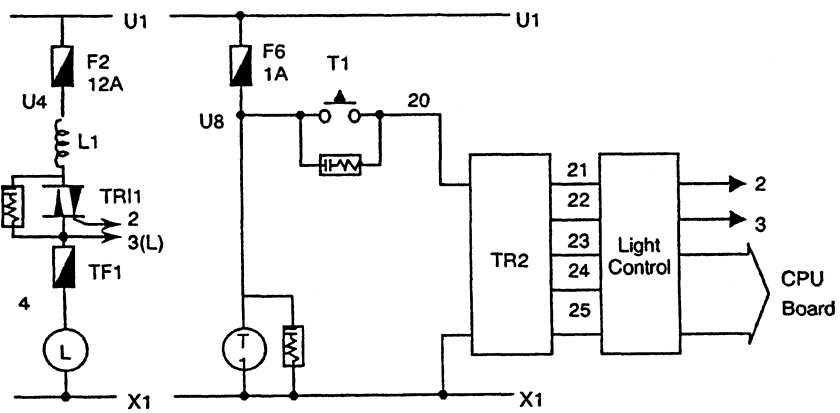
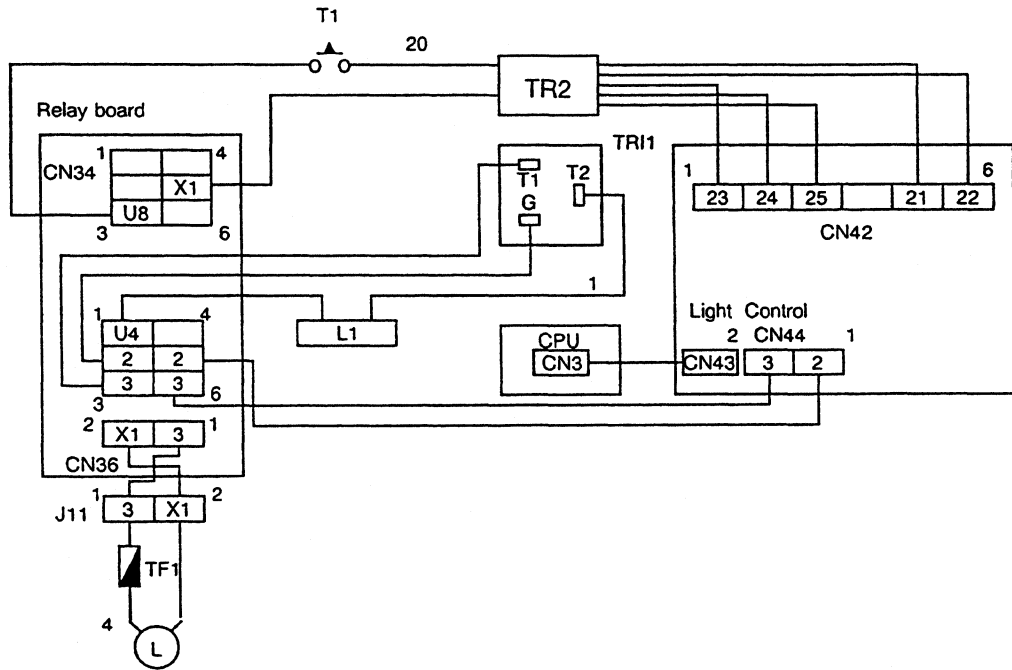
Check fuse F1



Light source does not illuminate

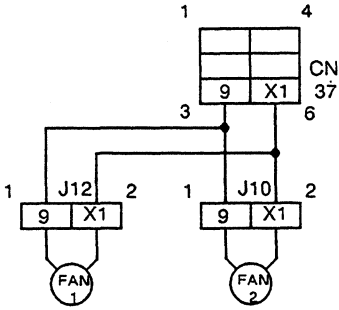
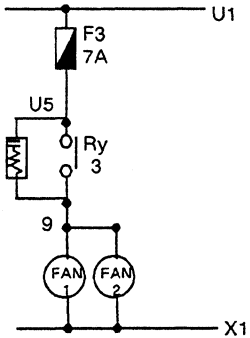
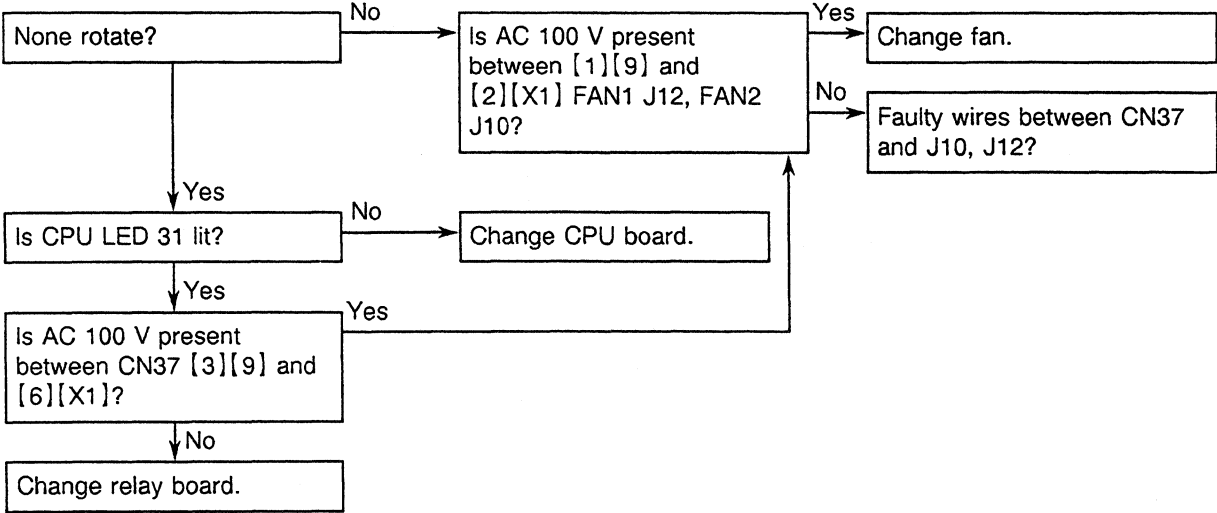
Check fuse F2





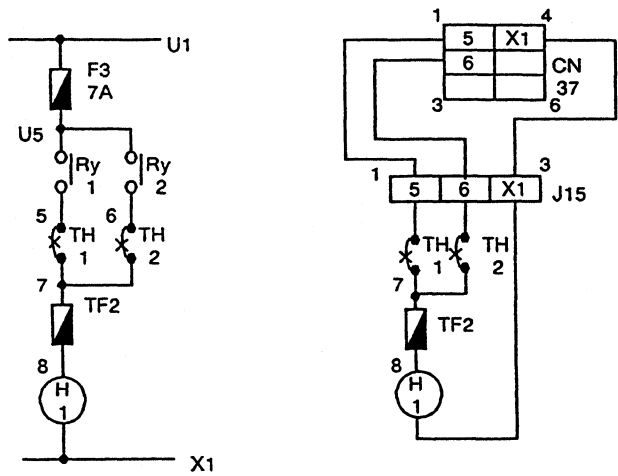
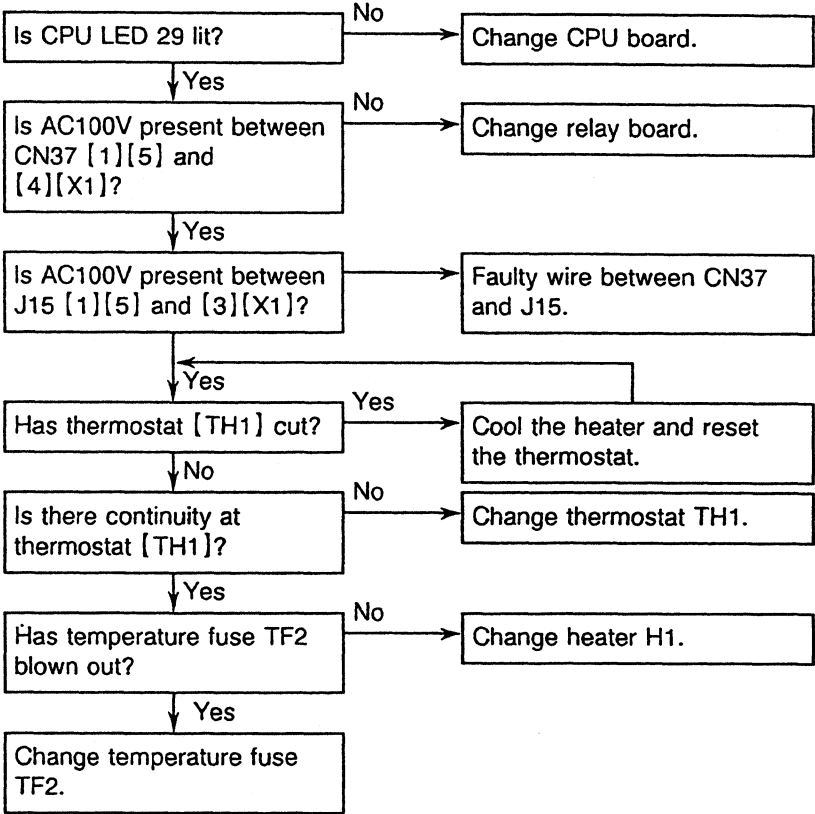
Dryer fans do not operate

Check fuse F3



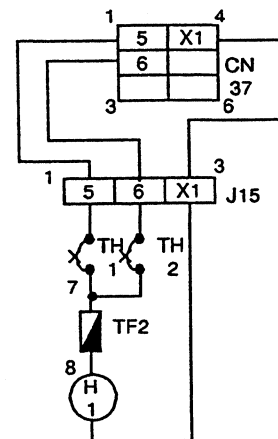
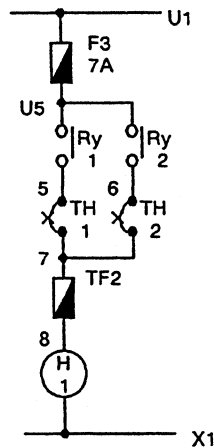
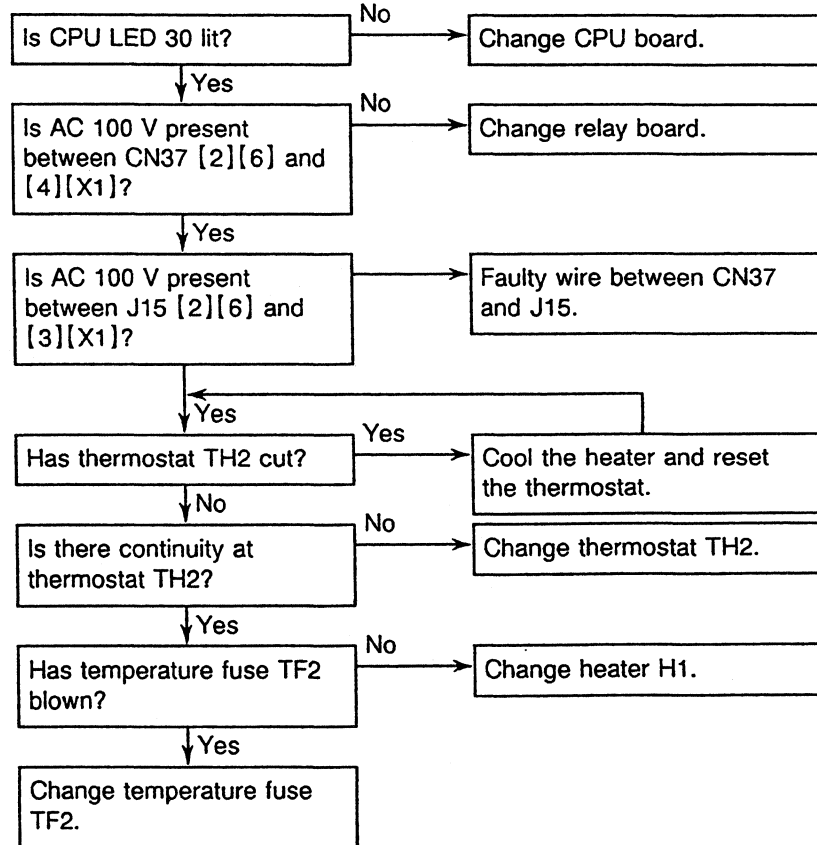
Dryer heater H does not operate

Check fuse F3



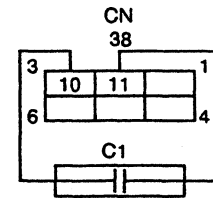
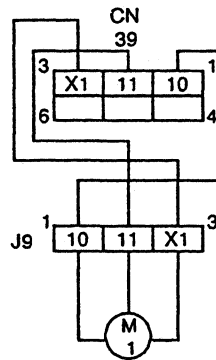
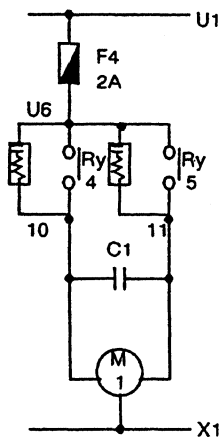
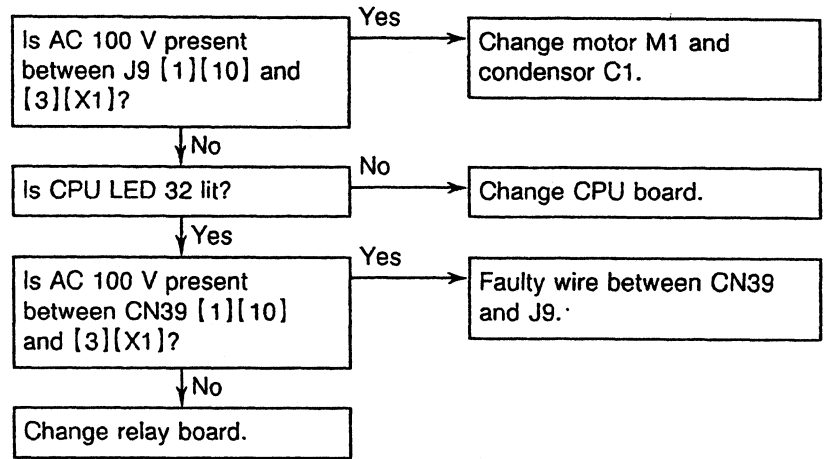
Dryer heater L does not operate

Check fuse F3



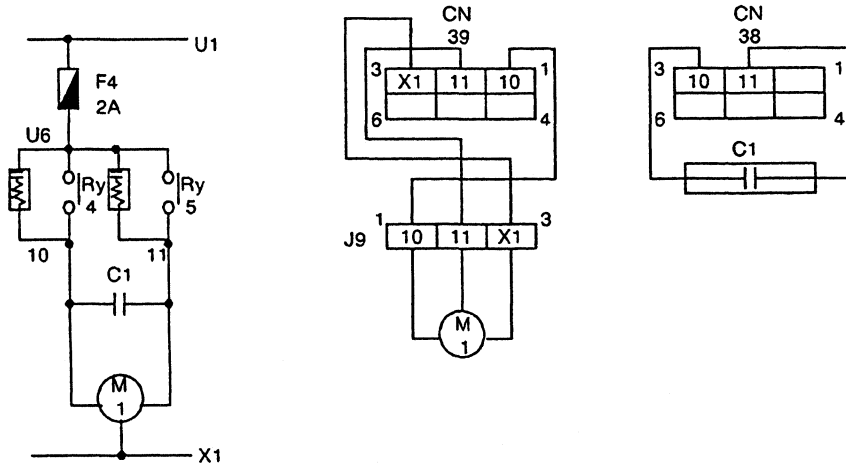
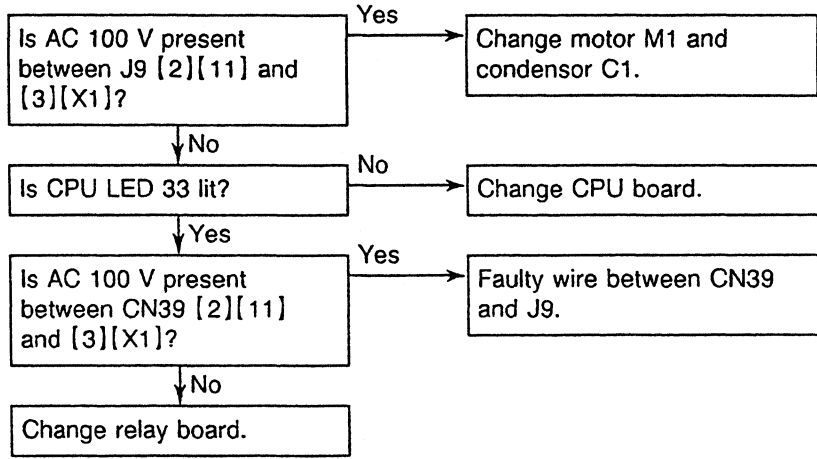
Master copy motor does not advance

Check fuse F4



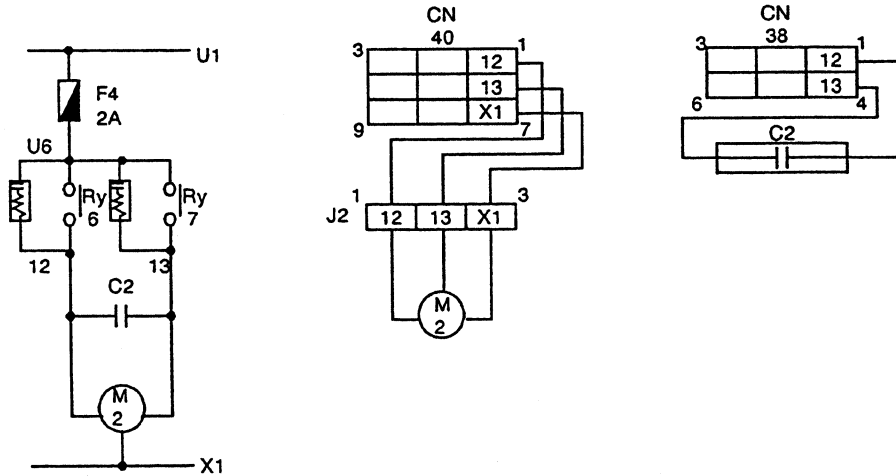
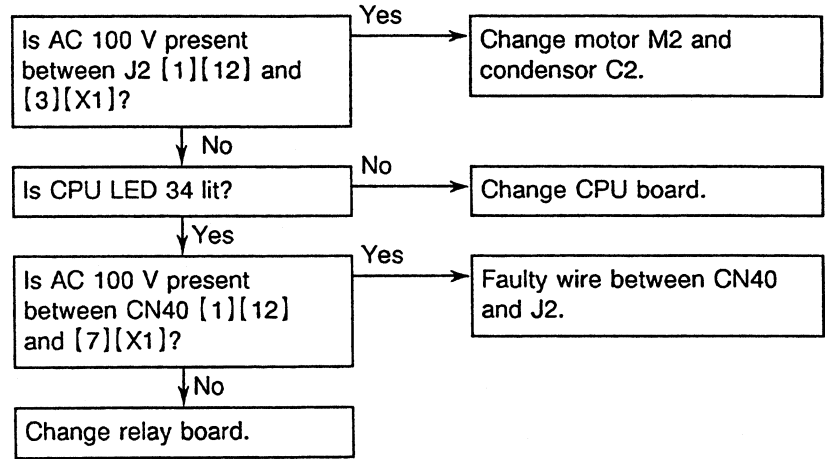
Master copy motor does not retreat

Check fuse F4



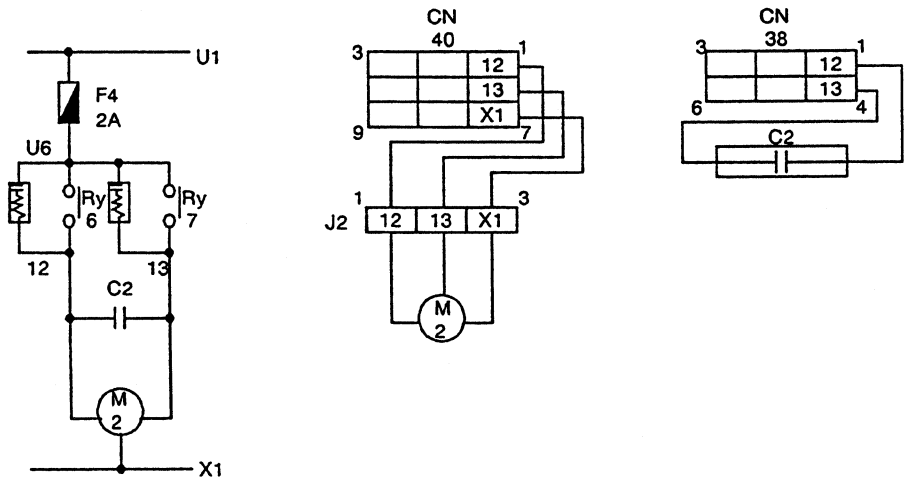
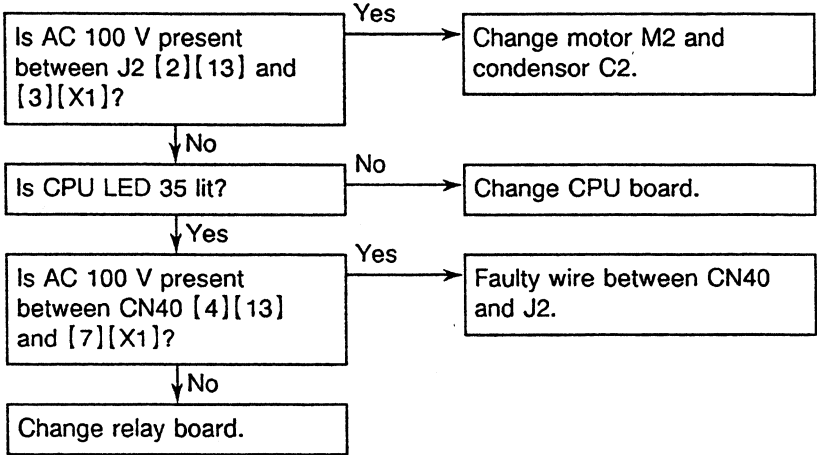
Cutter motor does not advance

Check fuse F4



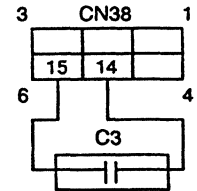
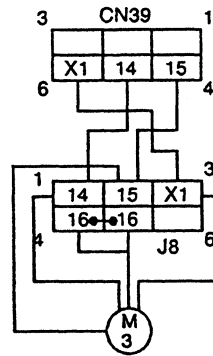
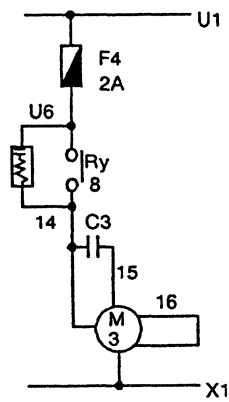
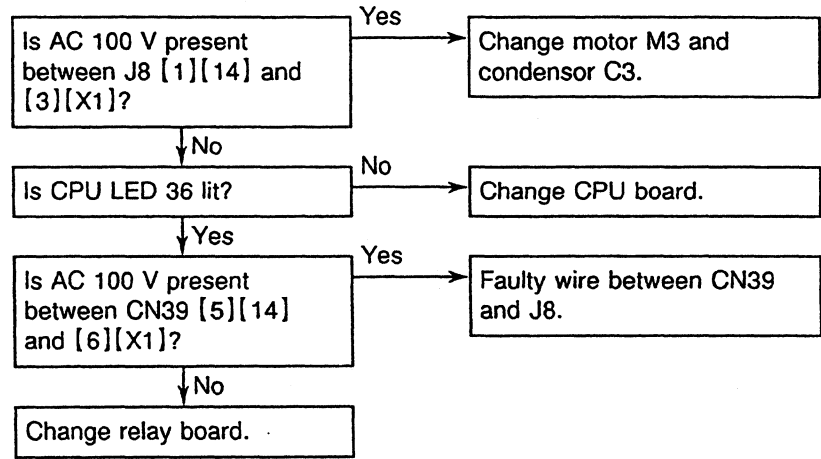
Cutter motor does not retreat

Check fuse F4



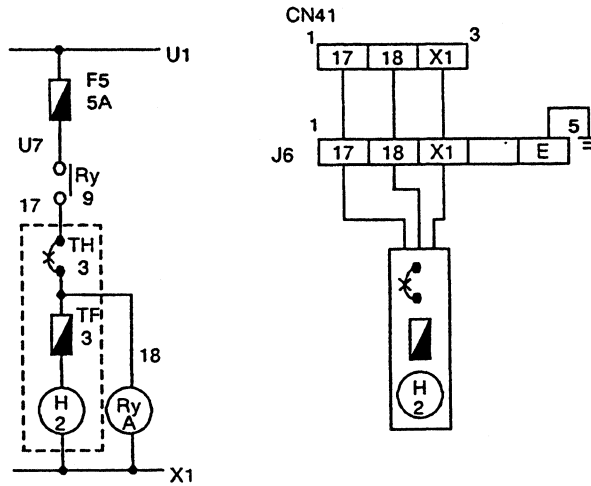
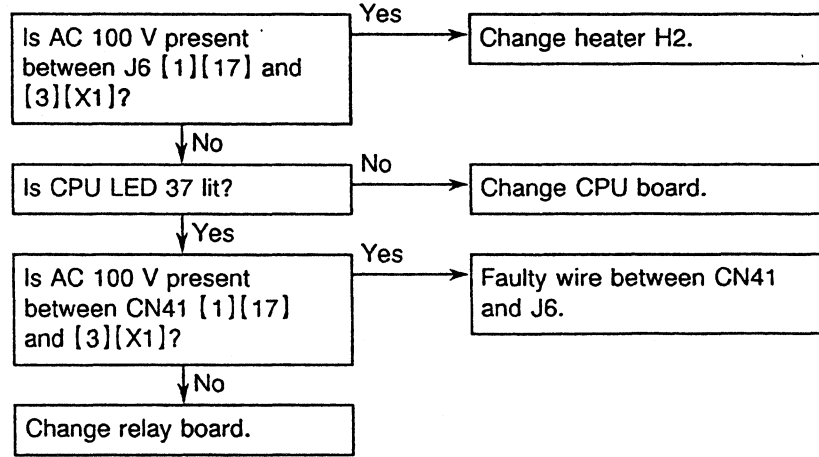
Processor motor does not move

Check fuse F4



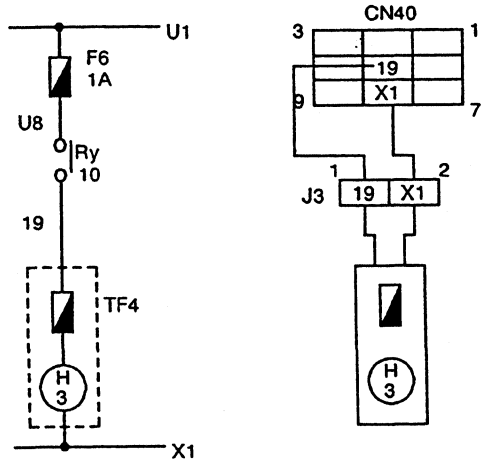
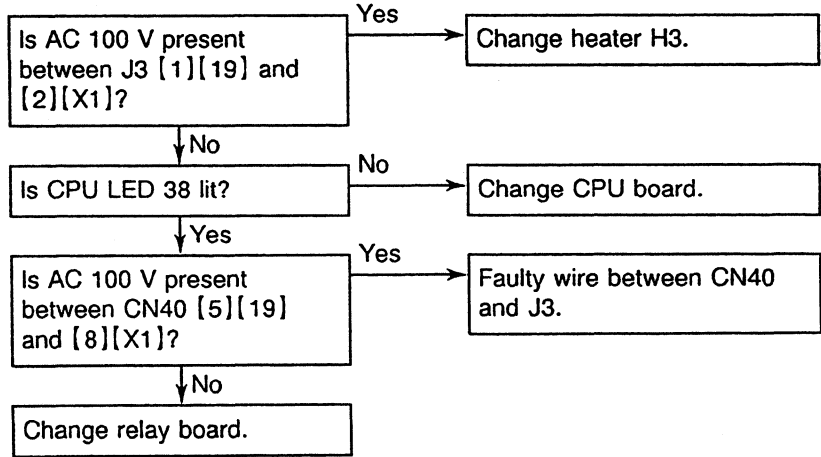
Processor heater does not operate

Check fuse F5



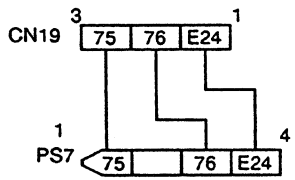
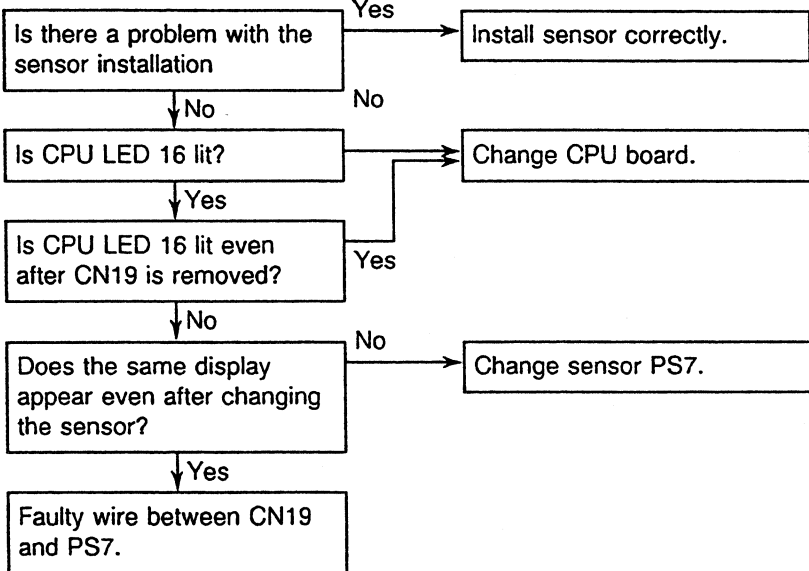
Dehumidifier dryer does not operate

Check fuse F6

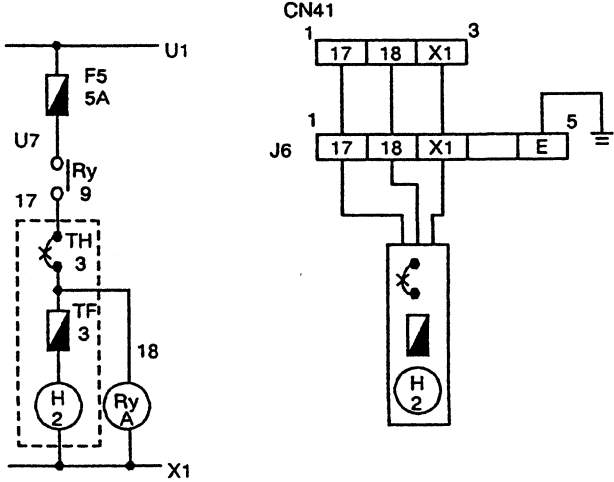
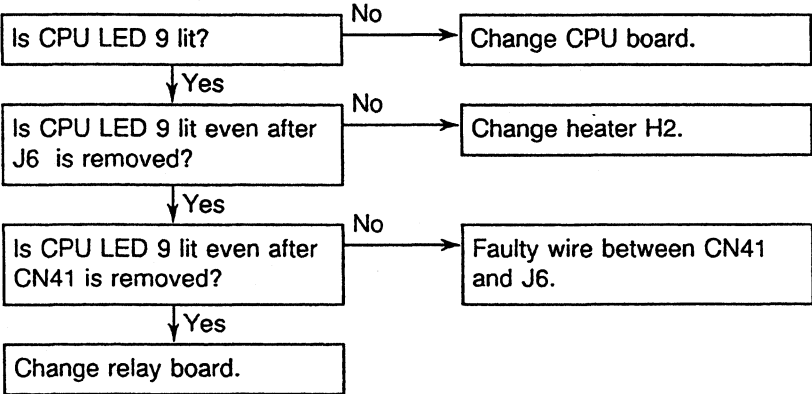


“EMPTY” displayed despite presence of master

Faulty master end sensor PS7

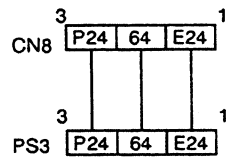
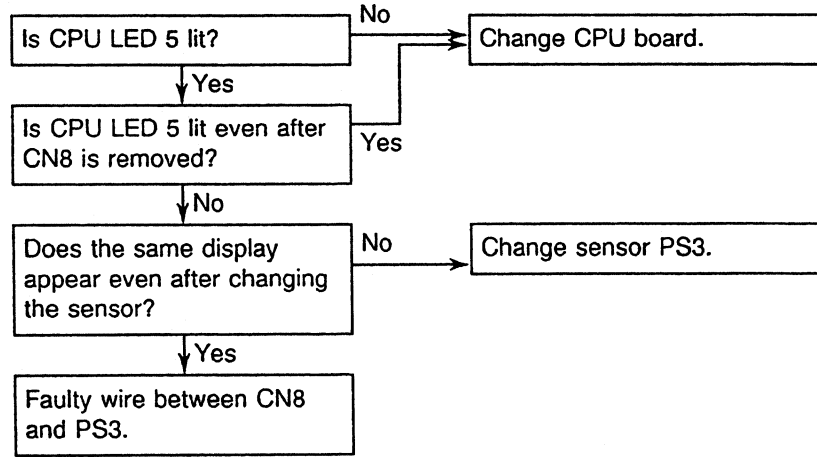


“WARM UP” does not disappear from display



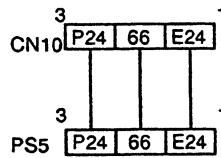
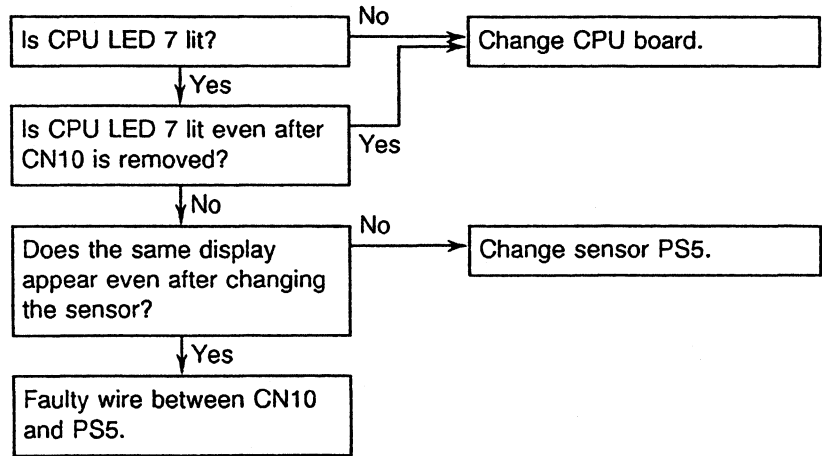
"COPY POSIT" is displayed despite original being in starting position

Faulty original starting point sensor PS3.



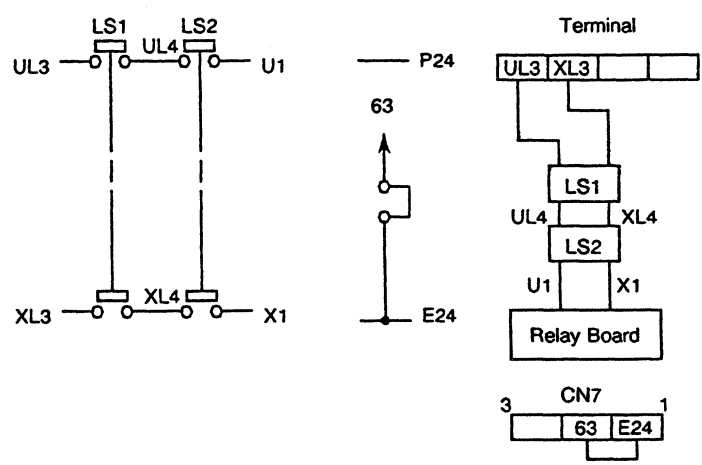
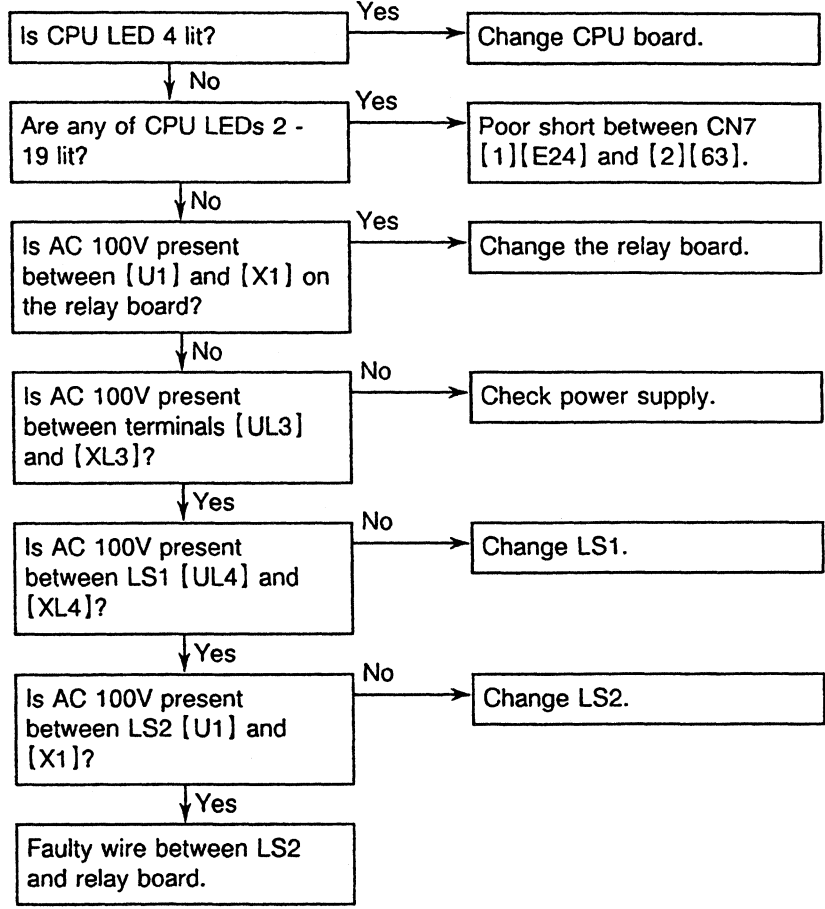
"CUTTER ERR" displayed despite cutter being in starting position.

Faulty cutter origin sensor PS5.



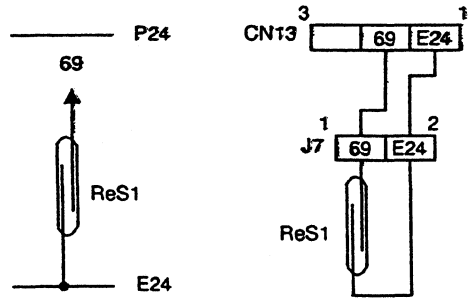
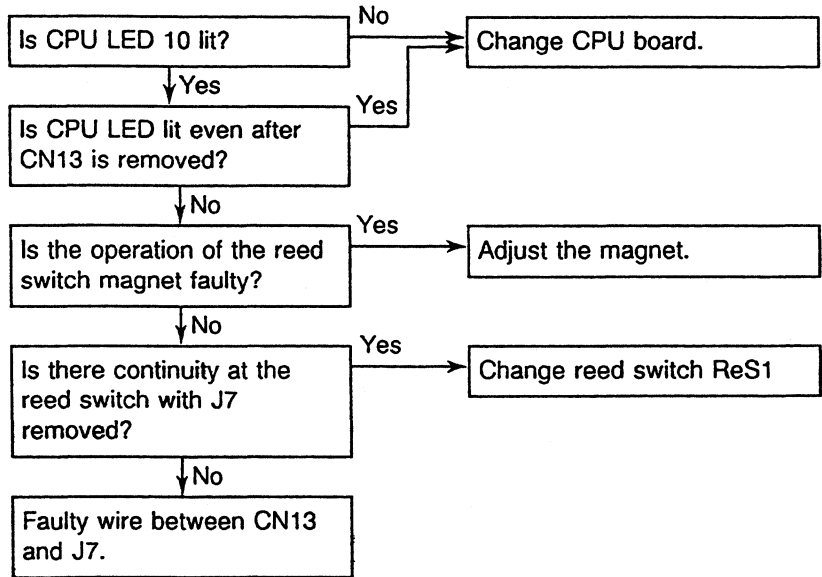
"DOOR" displayed despite cover being shut

Faulty cover SW.
With LS1, LS2 in ON status



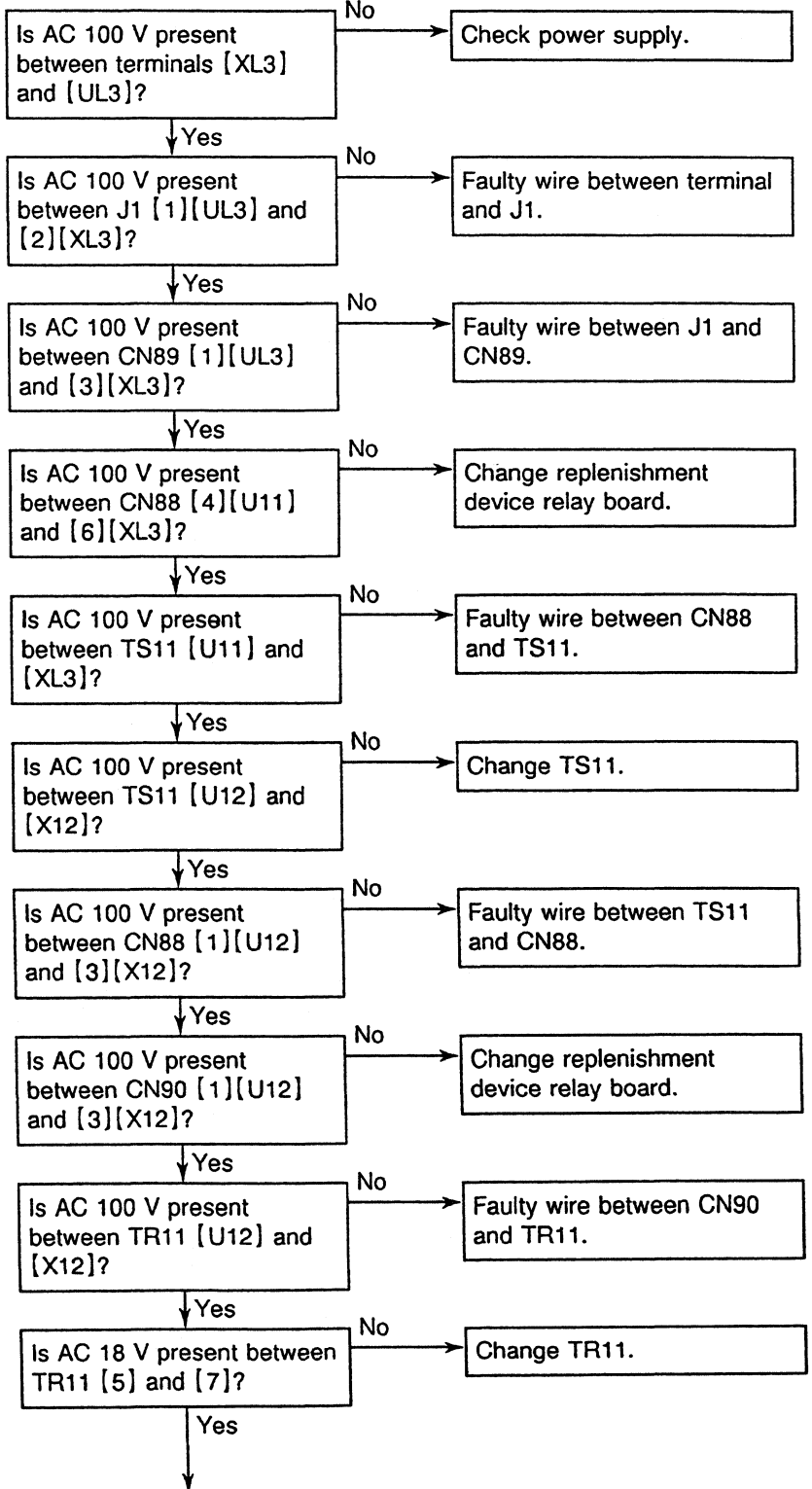
Reduction in developer fluid cannot be detected

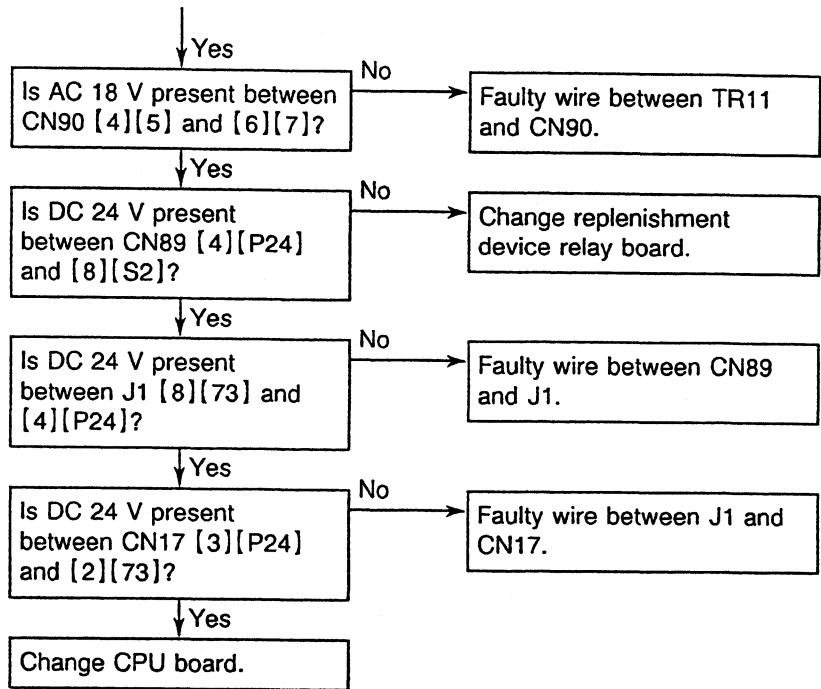
Developer fluid level reed switch ReS1 is faulty.

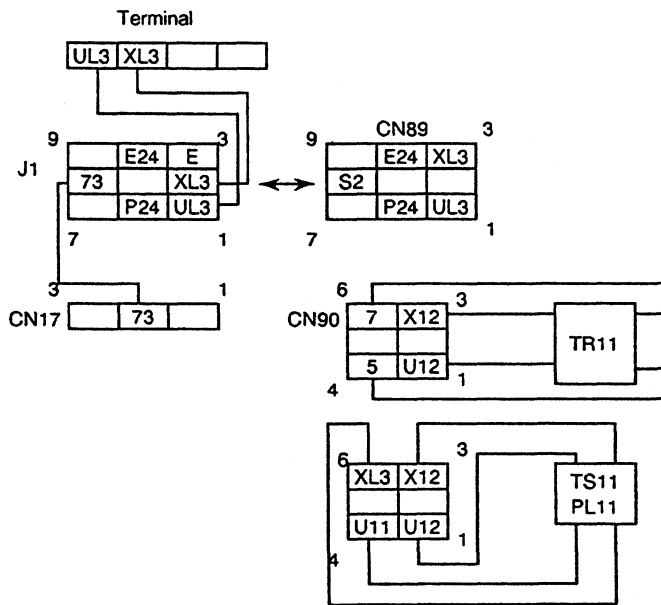
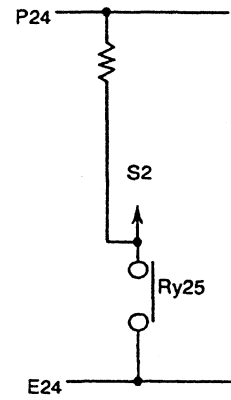
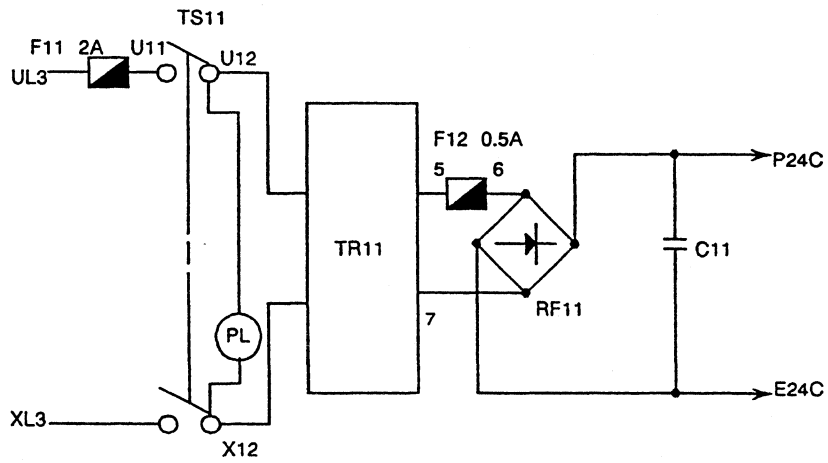


Power does not come ON even when the replenishment unit power is switched ON.

Check fuses F11 and F12.

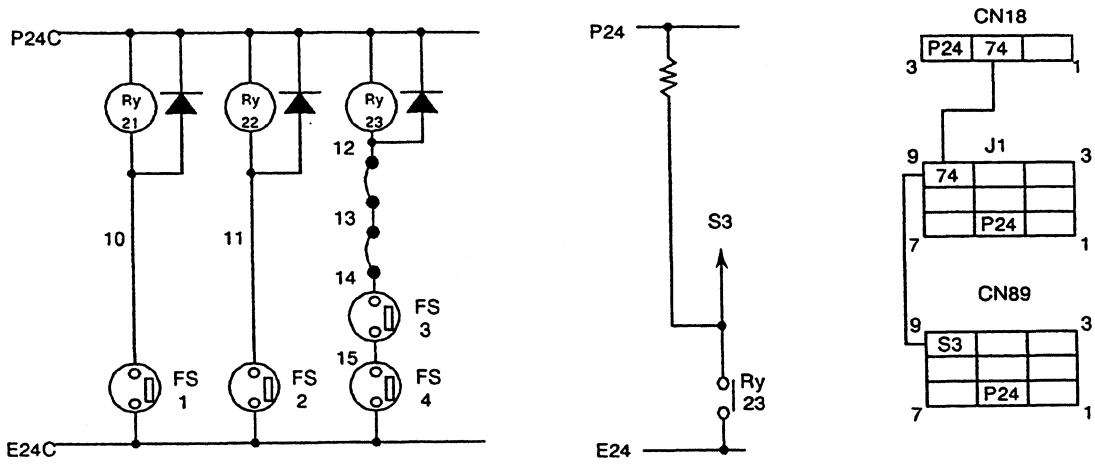
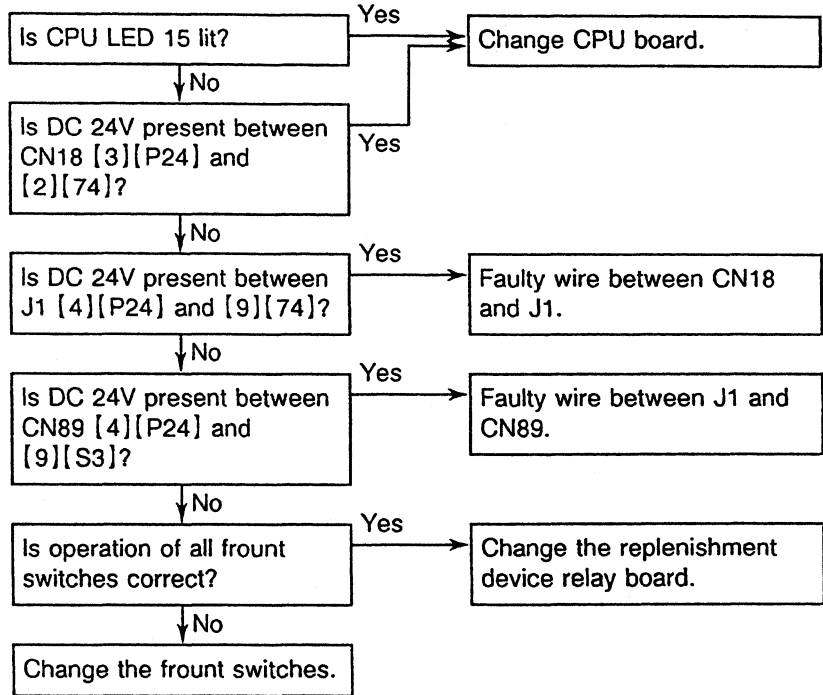






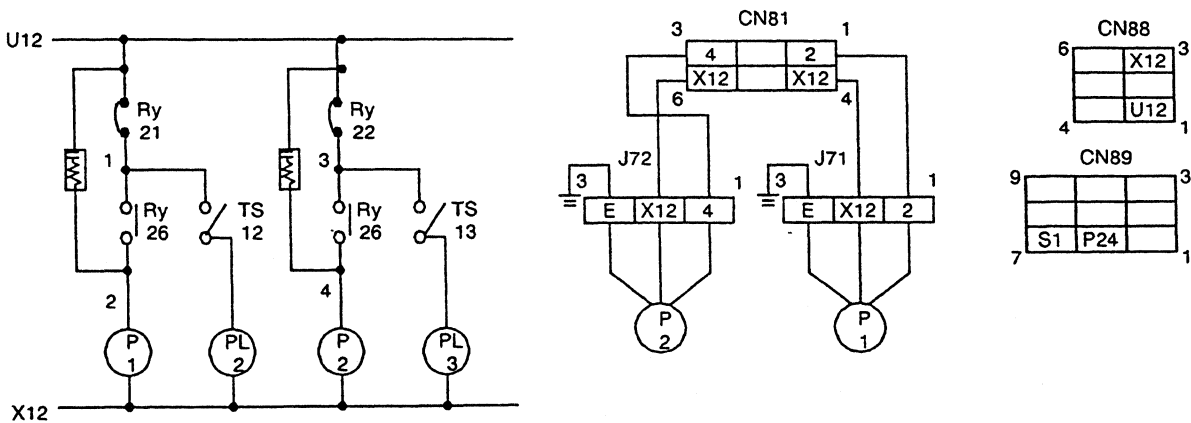
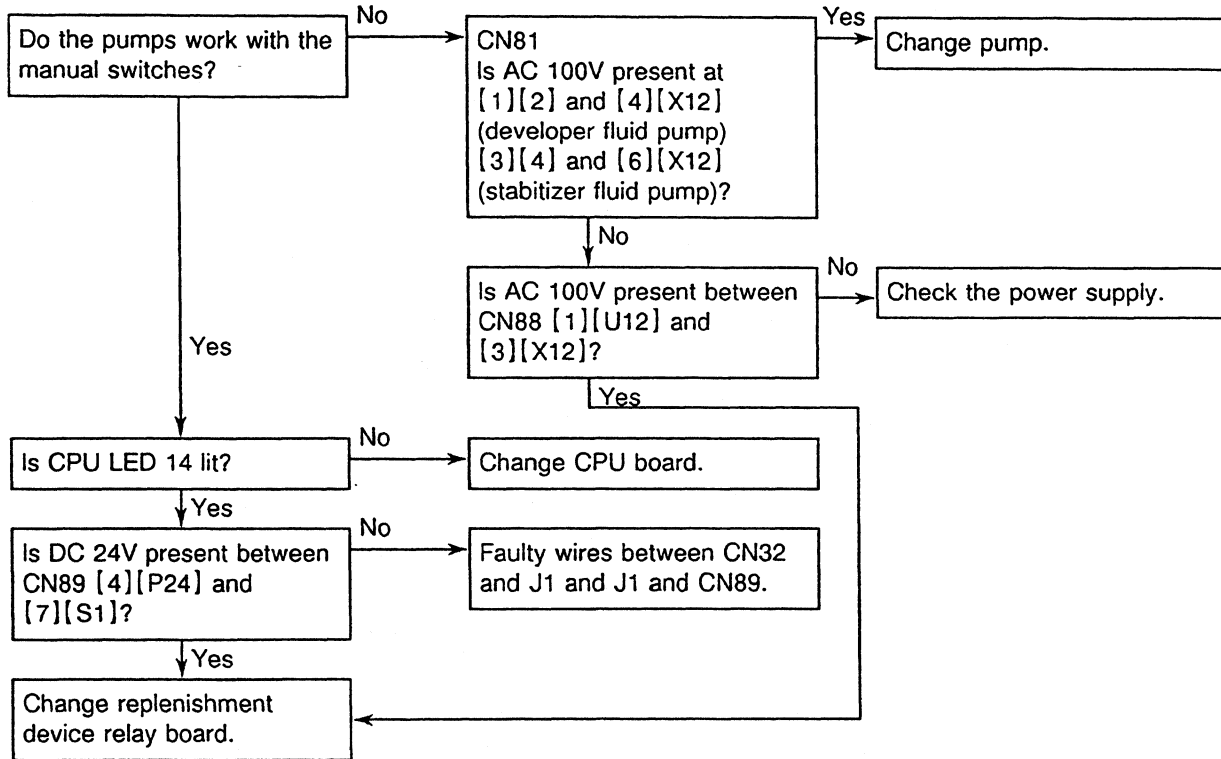
"CHECK REPL" is displayed despite normal amounts of replenishing and discharge fluids

Check fuses F11 and F12



Replenishment pump does not operate

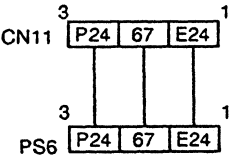
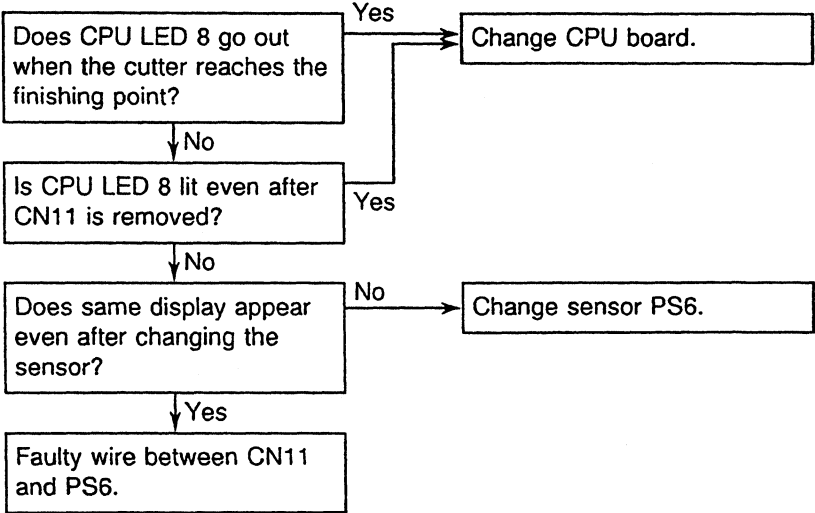
Check fuses F11 and F12.



"ERR 1" occurs

Faulty cutter finishing point sensor PS6.

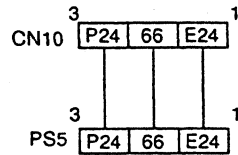
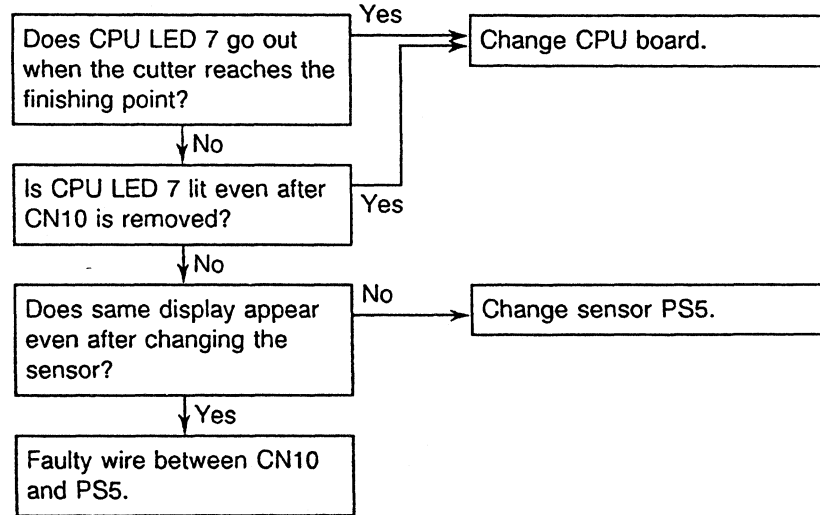
Cutter returned to front after prescribed time without stopping because of faulty cutter finishing point sensor.



"ERR 2" occurs

Faulty cutter starting point sensor PS5.

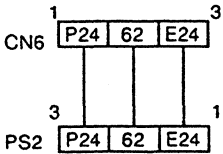
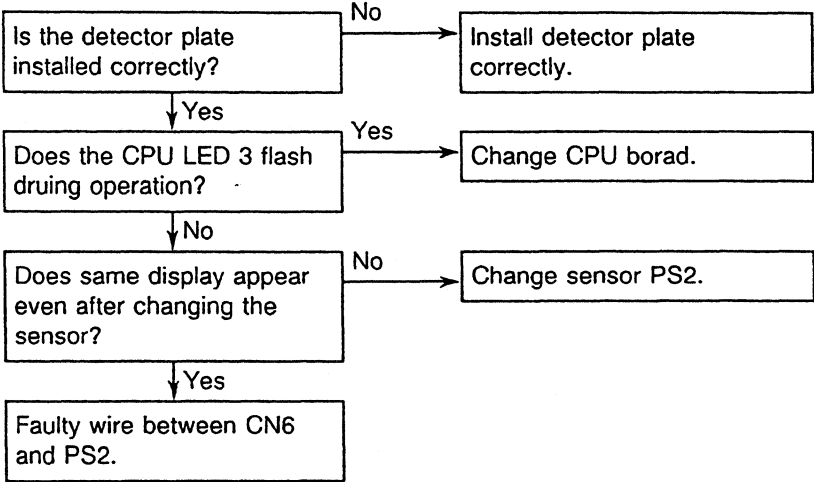
Although the finishing cutter reversed after cutting the master the cutter motor stopped after a prescribed time because of a faulty cutter starting point sensor.



"ERR 3" occurs

Faulty master feed pulse sensor PS2.

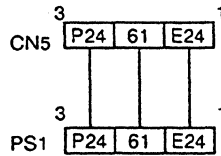
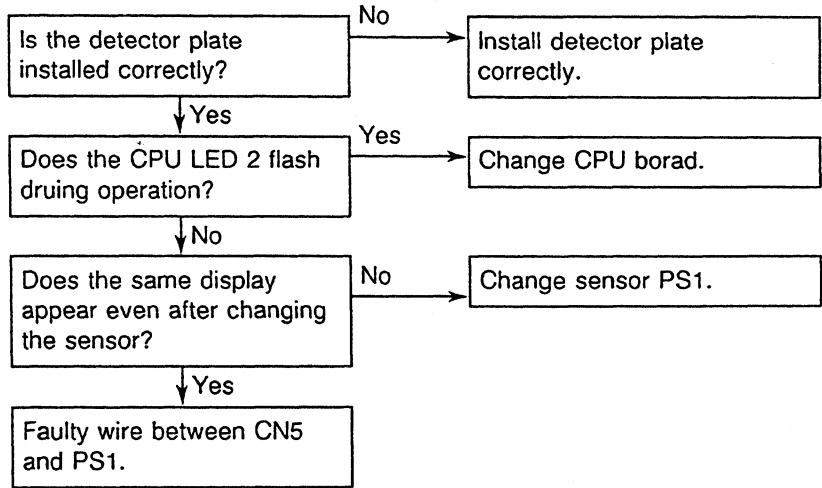
Pressing the start switch, the original mount fed, however, without stopping at first, it eventually stopped with the edge sensor or after a prescribed time.

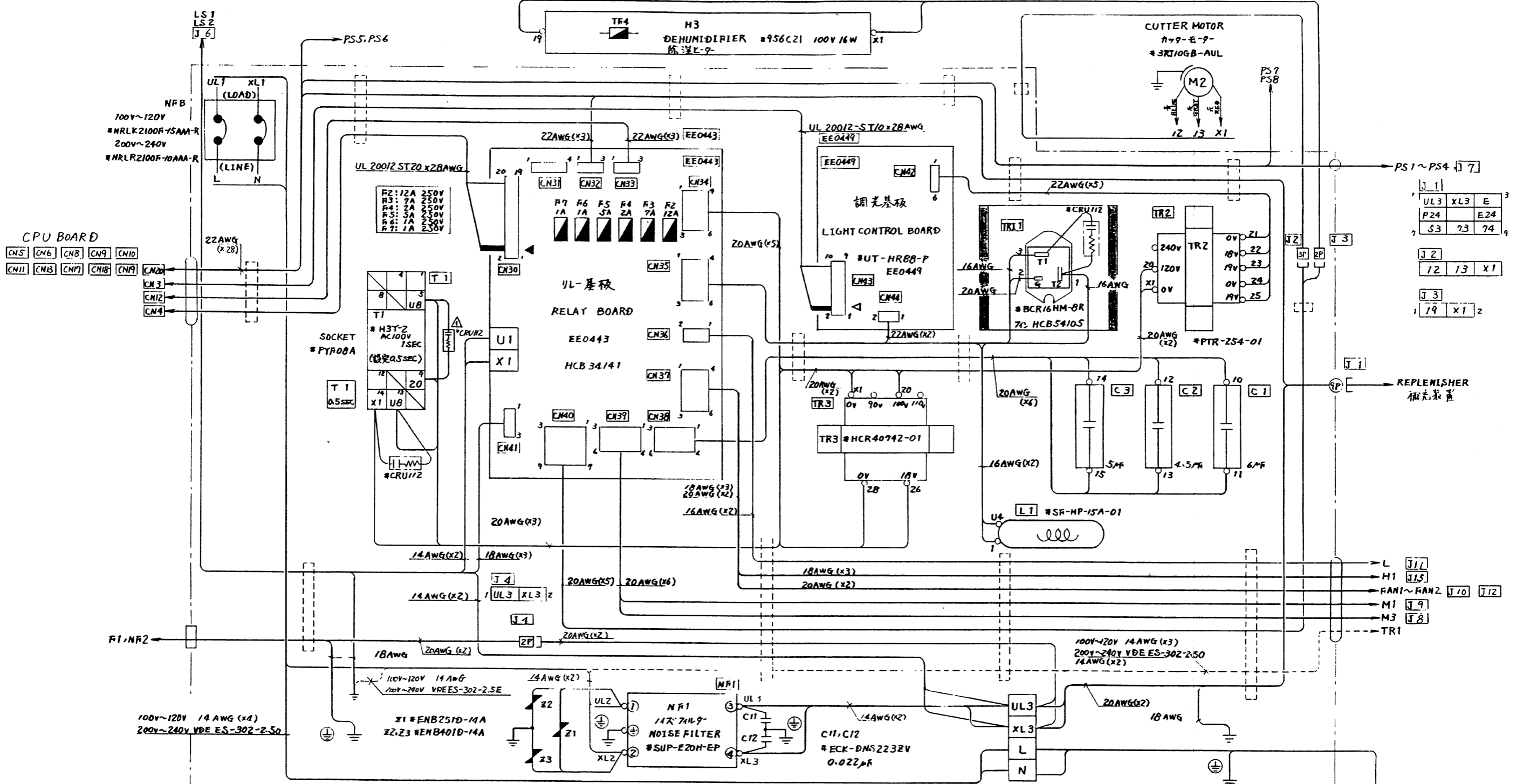


"ERR 4" occurs

Faulty master return pulse sensor PS1.

During 2 division mode, the original frame goes back after the first plate copy to prepare for the second plate copy, however, nothing happens after the prescribed time because of the faulty master return pulse sensor.





RELAY BOARD 1/1-基板

CN No.	PIN No.	WIRE No.	行先	CN No.	PIN No.	WIRE No.	行先	CN No.	PIN No.	WIRE No.	行先	CN No.	PIN No.	WIRE No.	行先
CN 30	1~3	P24	CPU CN 4	CN 31	1	E24	CPU CN12	CN 35	1	U4	L1	CN 38	1	12	C2
	4~6	E24			2	S1			2	2	11		2	19	M2
	7	41			3	S2			3	3	10		3	19	C1
	8	42			4	P24			4	4	13		4	13	M2
	9	43			5	E24			5	2	14		5	19	H3
	10	44			6	S3			6	3	15		6	15	C3
	11	45			7	P24			7	3	10		7	10	M2
	12	46			8	E24			8	X1	L		8	X1	H3
	13	47			9	68			9	5	11		9	X1	
	14	48			10	P24			10	6	9		10	X1	
	15	49			11	26			11	3	6		11	X1	
	16	50			12	U8			12	4	9		12	X1	
	17	51			13	U8			13	5	11		13	X1	
	18	52			14	28			14	6	11		14	X1	
	19	53			15	X1			15	3	6		15	X1	
	20				16	X1			16	4	9		16	X1	

LIGHT CONTROL BOARD 調光基板

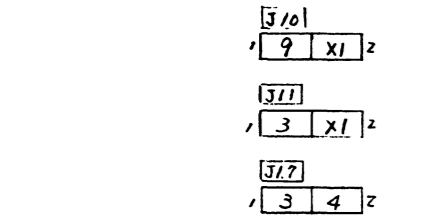
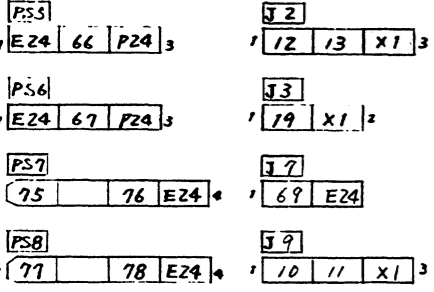
CN No.	PIN No.	WIRE No.	行先
CN 42	1	23	TR 2
	2	24	
CN 43	3	25	CPU CN3
	4		
	5	21	
	6	22	
CN 44	1	2	RELAY-BOARD CN 35
	2	3	

* 1/4 AWG ~ 1/8 AWG — UL 1015 105°C 600V
 * 20 AWG ~ 24 AWG — UL 1007 80°C 300V
 * HEAT PROOF WIRE — UL 1727 TETRAFLUOROETHYLENE WIRE (フロン芯線)

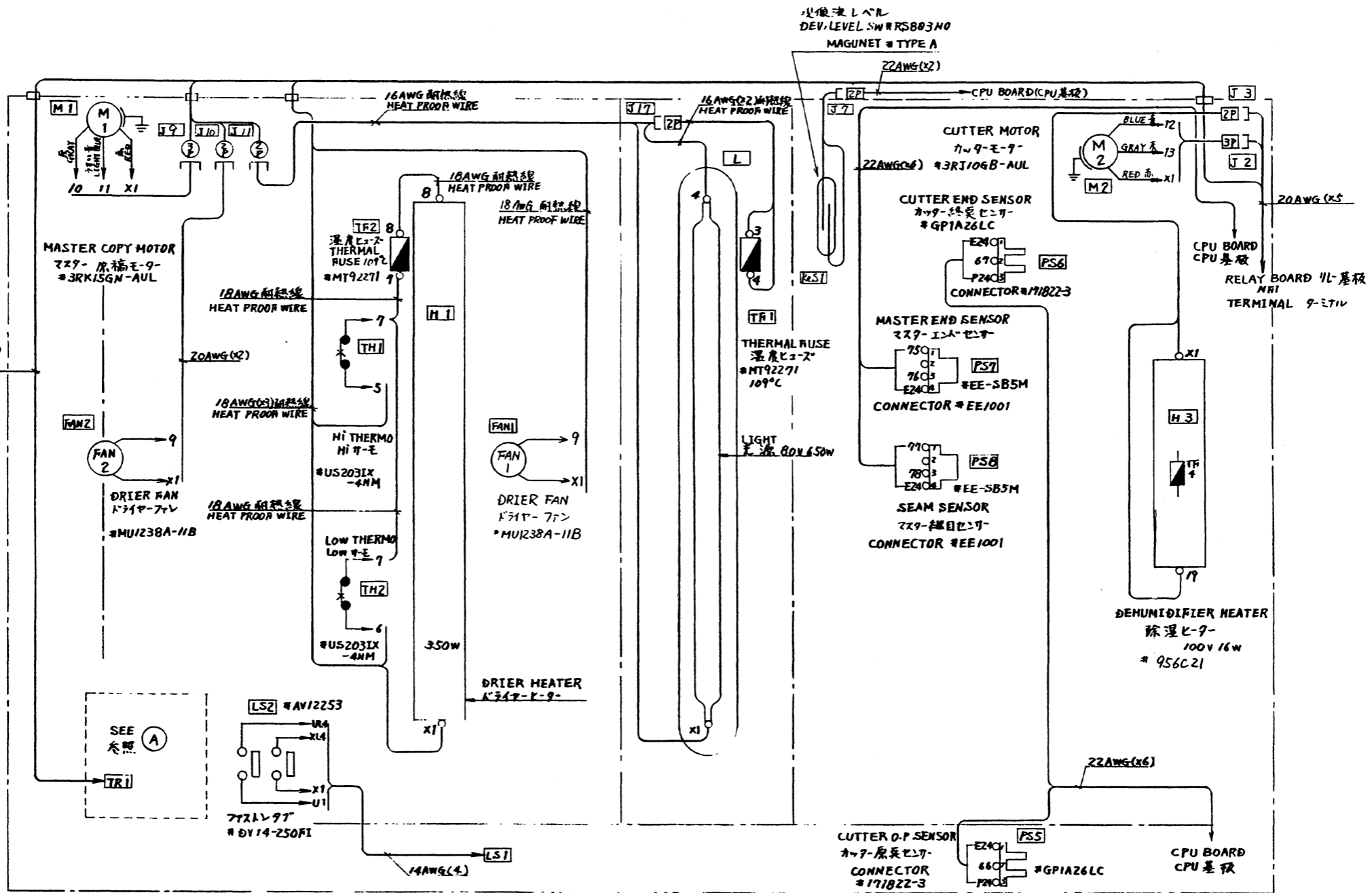
--- * TAISB
 ⊕ — 7-22-7

NOTE) 1) 7-22-7 付かない場合は、NFB → NF1 に配線 (UL1-UL2) 3-4
 2) 7-22-7 付かない場合は、NFB → TR1 → NF1 に配線
 3) 7-22-7 付かない (L, N, UL1, XL1) の配線は 2重絶縁すること

配電盤結線図
 DISTRIBUTING BOARD
 CONNECTION DIA.

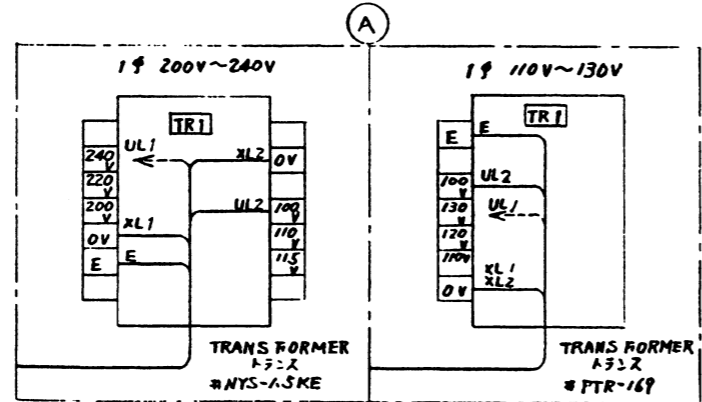


200V~240V VDE ES-302-2.50
100V~120V 14AWG (E3)
14AWG (X2)



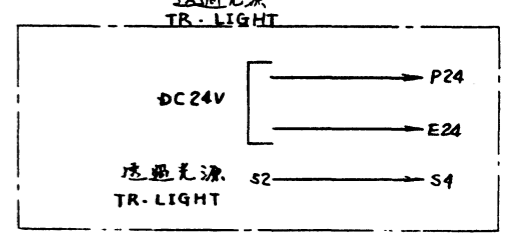
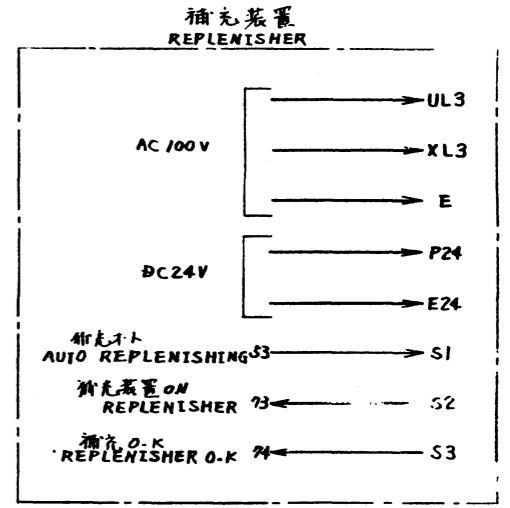
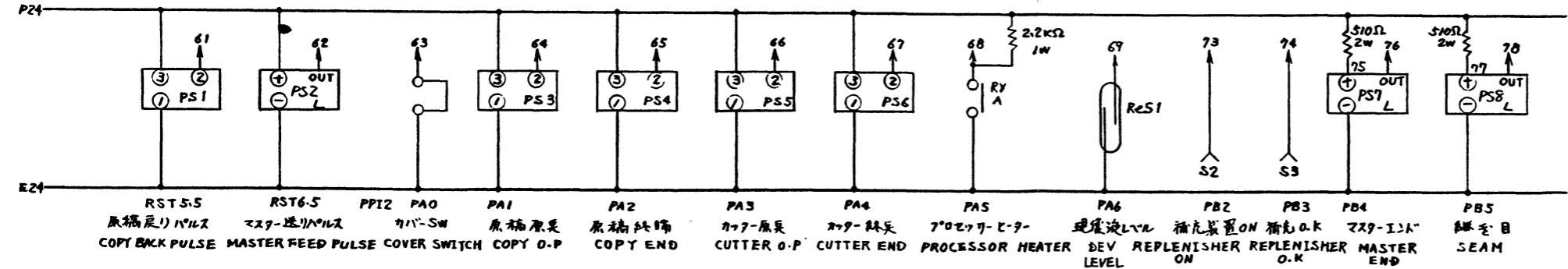
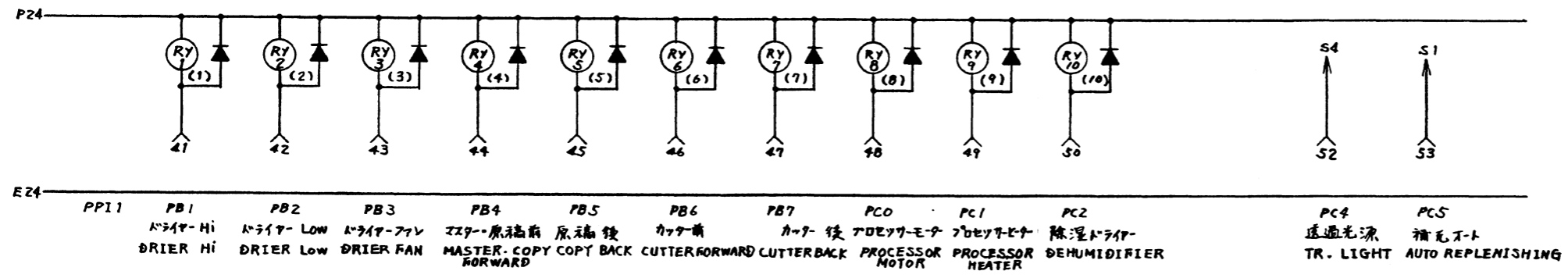
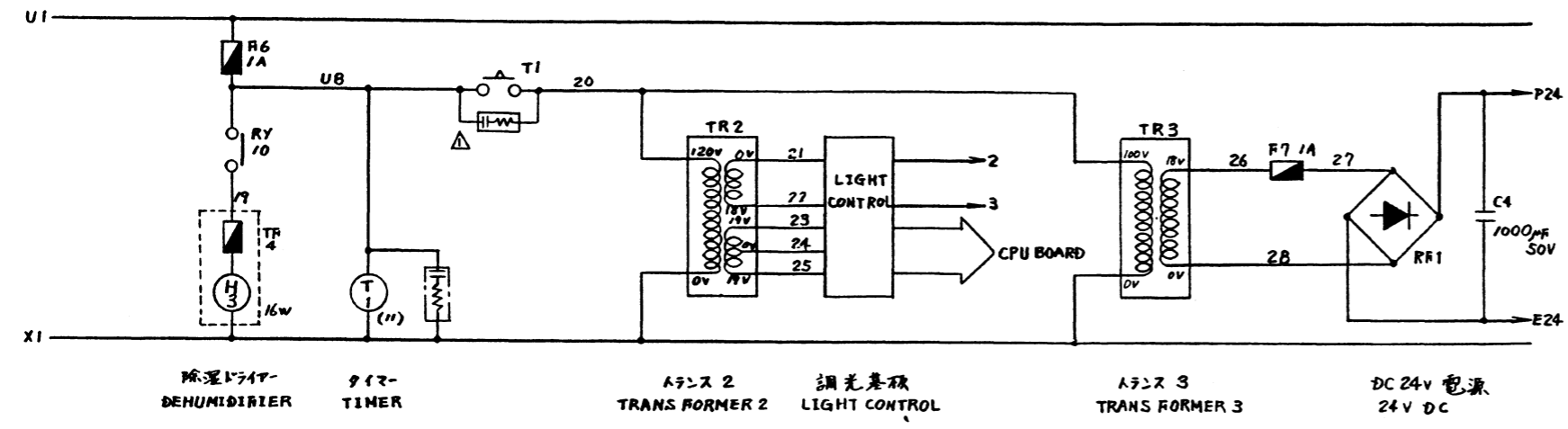
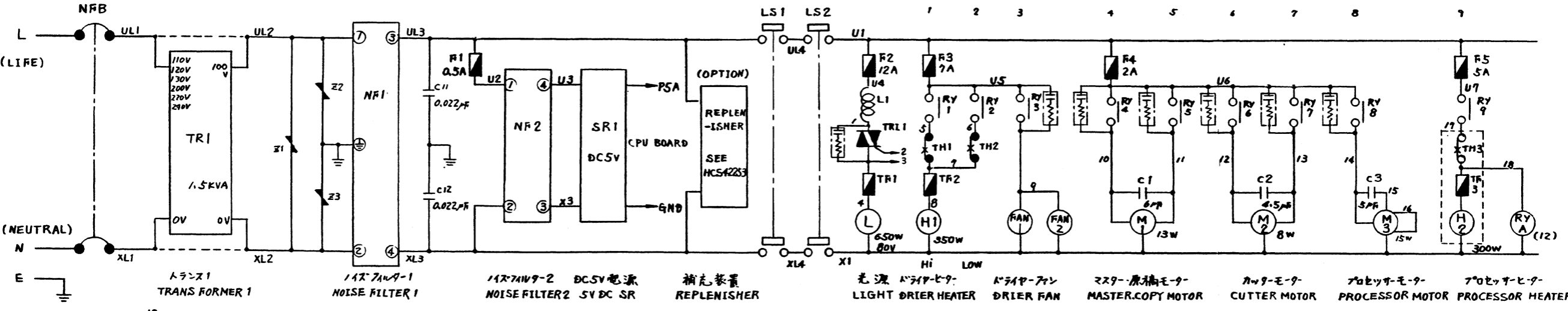
RELAY BOARD CN No.	RELAY BOARD CN No.
J2	CN 40
J3	CN 40
J7	CPU基板 CN 13
J9	CN 39
J10	CN 37
J11	CN 36
J12	CN 37
J15	CN 37

SENSOR No.	CPU BOARD CN No.
PS 5	CN 10
PS 6	CN 11
PS 7	CN 19
PS 8	CN 20



14~18 AWG — UL 1015 105°C 600V
20~24 AWG — UL 1007 80°C 300V
HEAT PROOF WIRE — UL1727 TETRAFLUOROETHYLENE WIRE (耐熱線)

上部結線図
TOP VIEW
CONNECTION DIA.

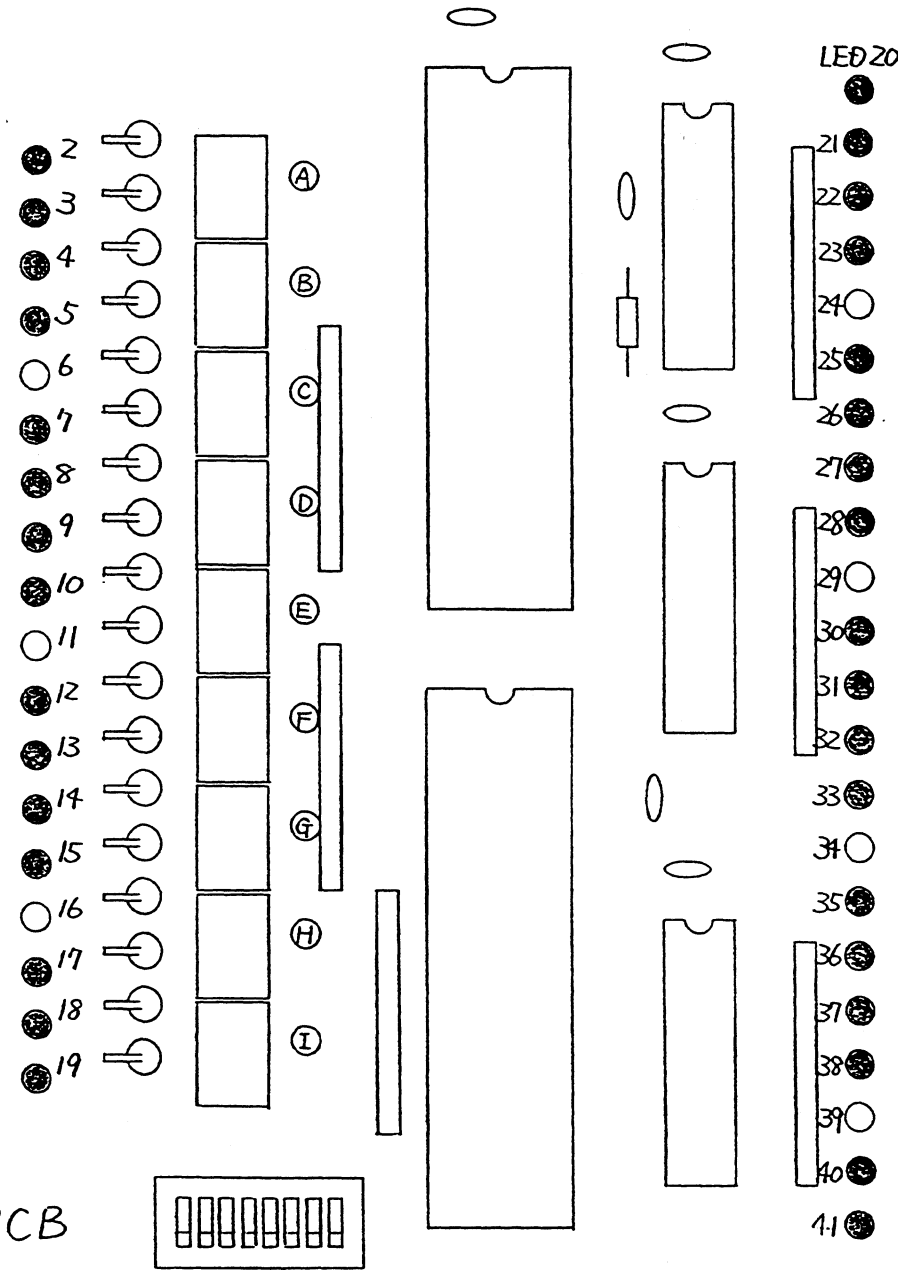


系統図

WIRING SYSTEM
D I A.

- 原稿戻りパルス COPY BACK PULSE (PS1)
- マスター送りパルス MASTER FEED PULSE (PS2)
- カバースイッチ COVER SWITCH (LS1)
- 原稿架原点 COPY ORIGINAL POINT (PS3)
- 原稿架終点 COPY END POINT (PS4)
- カッター原点 CUTTER ORIGINAL POINT (PS5)
- カッター終点 CUTTER END POINT (PS6)
- プロセッサヒータ PROCESSOR HEATER (RyA)
- △ 現像液レベル DEV. LEVEL (ReS1)

- 補充装置 ON REPLENISHER ON
- 補充 OK REPLENISH OK
- マスターエンド MASTER END (PS7)
- 継ぎ目 SEAM (PS8)



- J LSB
- K
- L 調光データ LIGHT CONTROL DATA
- M
- N MSB
- 反射光源 REFLECTION LIGHT
- ドライヤー H DRIER H (Ry1)
- ドライヤー L DRIER L (Ry2)
- ドライヤーファン DRIER FAN (Ry3)
- P マスター、原稿架前進 MASTER, COPY FORWARD (Ry4)
- 原稿架後退 COPY BACK (Ry5)
- Q カッター前進 CUTTER FORWARD (Ry6)
- カッター後退 CUTTER BACK (Ry7)
- R プロセッサモータ PROCESSOR MOTOR (Ry8)
- プロセッサヒータ PROCESSOR HEATER (Ry9)
- S 除湿ドライヤー DEHUMIDIFIER (Ry10)
- T 透過光源 TRANSPARENCY LIGHT
- 補充オート AUTO REPLENISH

CPU BOARD
LED CHECK DIA.

CN1, CN23	
PIN No.	WIRE No.
1	P5
2	P5
3	P5
4	P5
5	3C0
6	3C1
7	3C2
8	3C3
9	3C4
10	3C5
11	3C6
12	3C7
13	3A0
14	3A1
15	3A2
16	3A3
17	3A4
18	3A5
19	3A6
20	3A7
21	3B0
22	3B1
23	3B2
24	3B3
25	3B4
26	3B5
27	3B6
28	3B7
29	T M
30	
31	GND
32	GND
33	GND

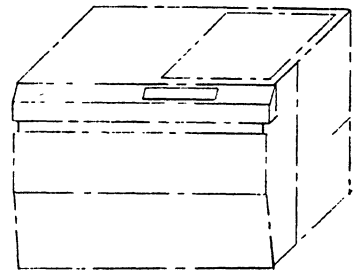
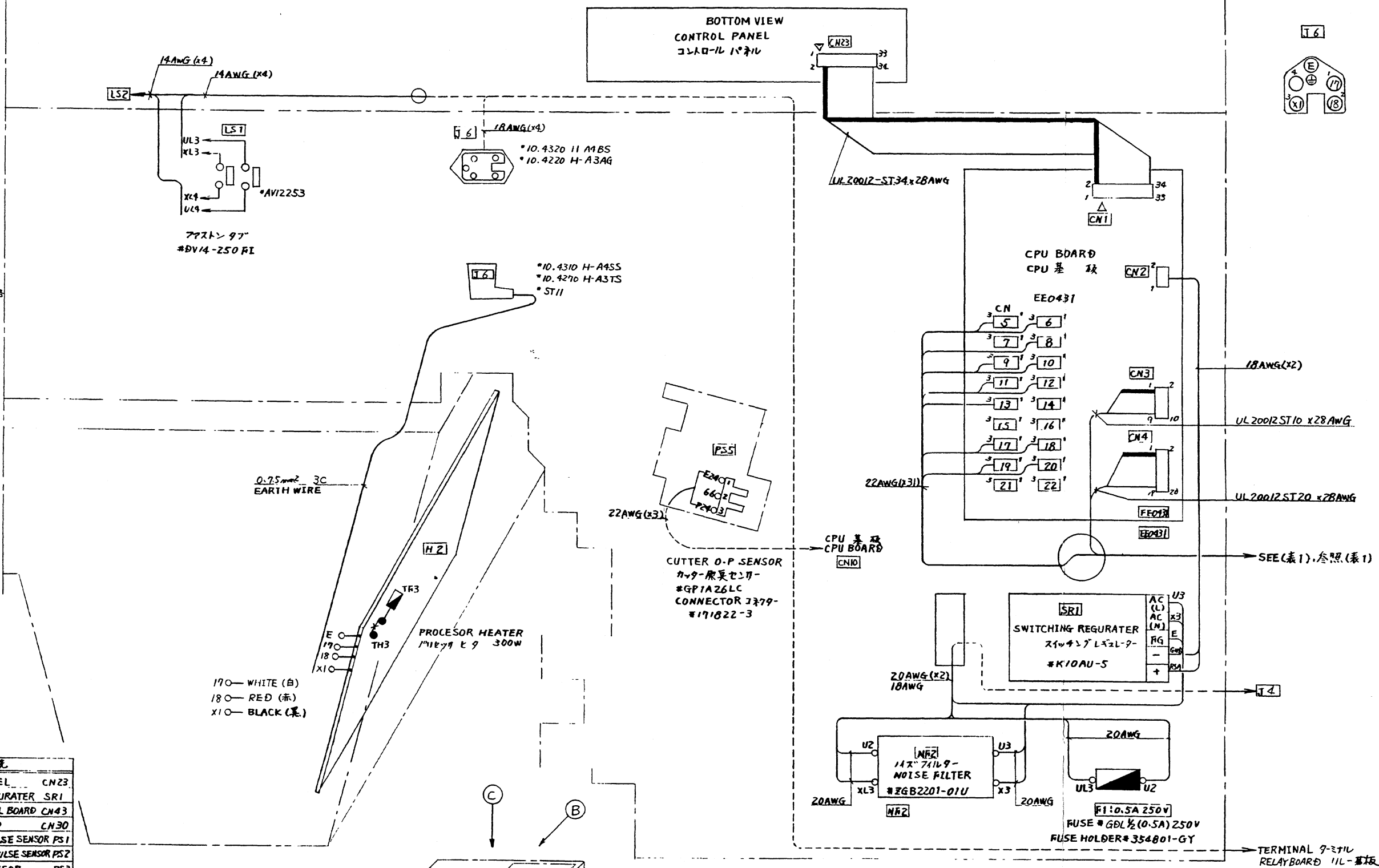
63-E24 SHORT TABS			
CN No.	WIRE No.	WIRE No.	WIRE No.
CN 2	P5A	GND	
CN 5	E24	61	P24
CN 6	E24	62	P24
CN 7	E24	63	P24
CN 8	E24	64	P24
CN 9	E24	65	P24
CN 10	E24	66	P24
CN 11	E24	67	P24
CN 12	E24	68	P24
CN 13	E24	69	
CN 17		73	
CN 18		74	
CN 19	E24	76	75
CN 20	E24	78	77

CN3			
PIN No.	WIRE No.	PIN No.	WIRE No.
1	P5B	2	1A0
3	1A1	4	1A2
5	1A3	6	1A4
7	1A5	8	1A6
9	1A7	10	1B0

CN4			
PIN No.	WIRE No.	PIN No.	WIRE No.
1	P24	2	P24
3	P24	4	E24
5	E24	6	E24
7	41	8	42
9	43	10	44
11	45	12	46
13	47	14	48
15	49	16	50
17	51	18	52
19	53	20	

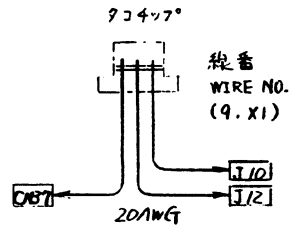
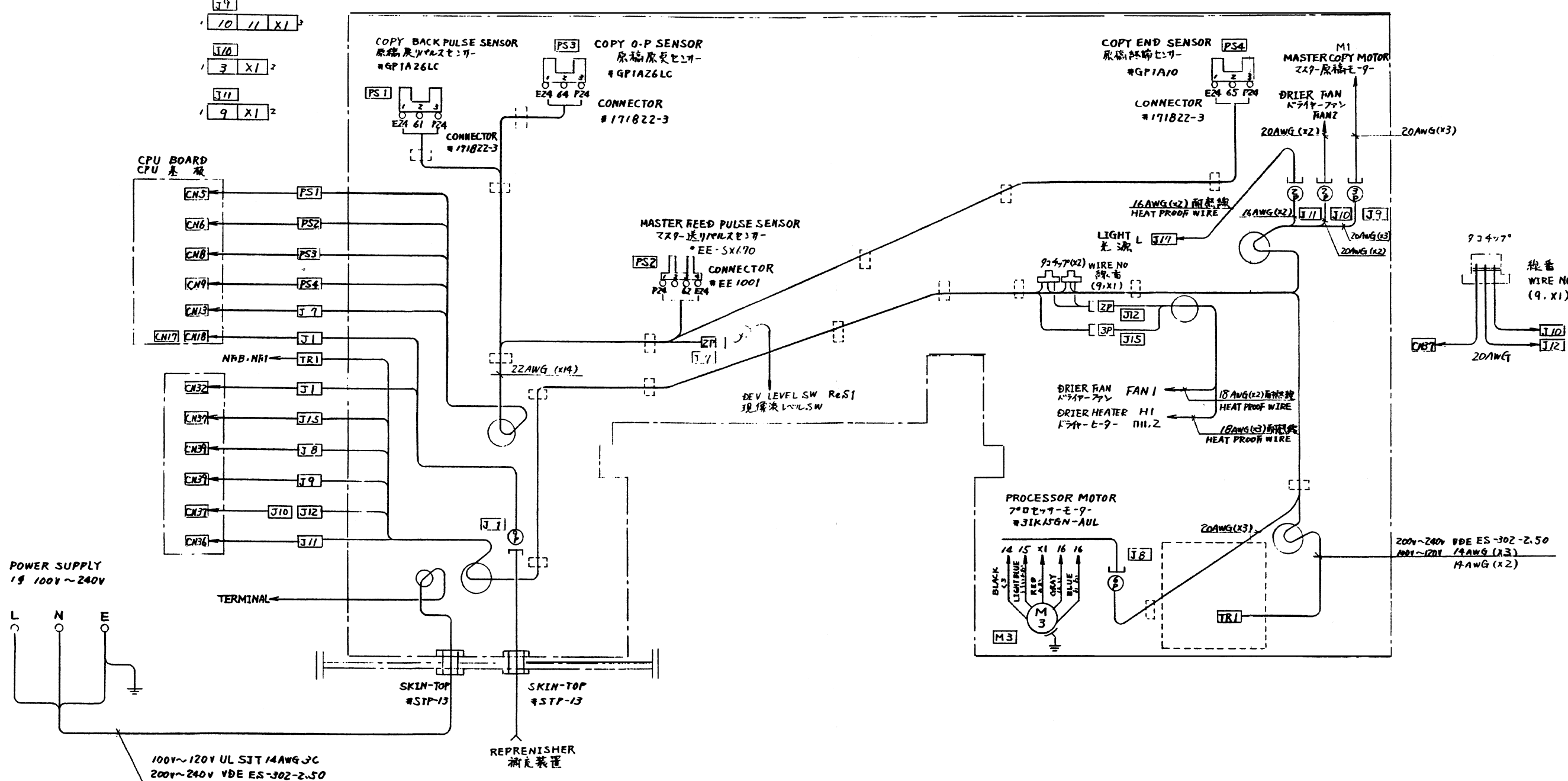
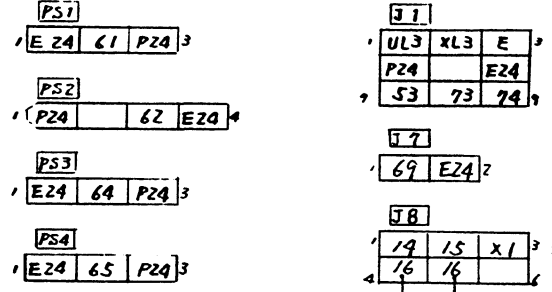
CPU CN No.	内容
CN 1	CONTROL PANEL CN23
CN 2	SWITCHING REGURATER SRI
CN 3	LIGHT CONTROL BOARD CN43
CN 4	RELAY BOARD CN30
CN 5	COPY BACK PULSE SENSOR PS1
CN 6	MASTER FEED PULSE SENSOR PS2
CN 8	COPY O-P SENSOR PS3
CN 9	COPY END SENSOR PS4
CN 11	CUTTER END SENSOR PS6
CN 12	RELAY BOARD CN33
CN 13	DEV LEVEL SW RES1 J7
CN 17	REPLENISHER J1
CN 18	REPLENISHER J1
CN 19	MASTER END SENSOR PS7
CN 20	MASTER SEAM SENSOR PS8

(A)	DISTRIBUTING BOARD CONNECTION 配電盤結線図	HCM 31259
(B)	BACK VIEW CONNECTION DIA. 後部結線図	HCE 31648
(C)	TOP VIEW CONNECTION DIA. 上部結線図	HCE 31647
	WIRING SYSTEM DIA. 系統図	HCS 32315



HEAT PROOF WIRE - UL1727 TETRAFLUOROETHYLENE WIRE (耐熱線) (フロン電線)
 * 14~18 AWG UL1015 105°C 600V
 20~24 AWG UL1007 80°C 300V

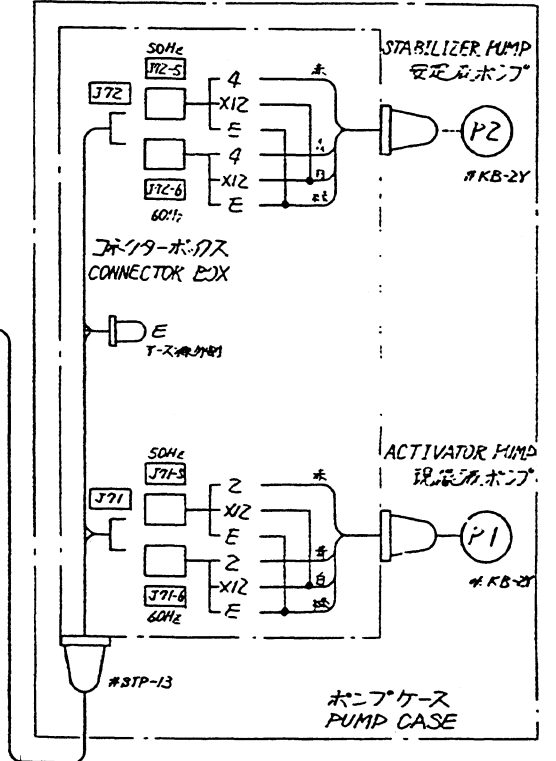
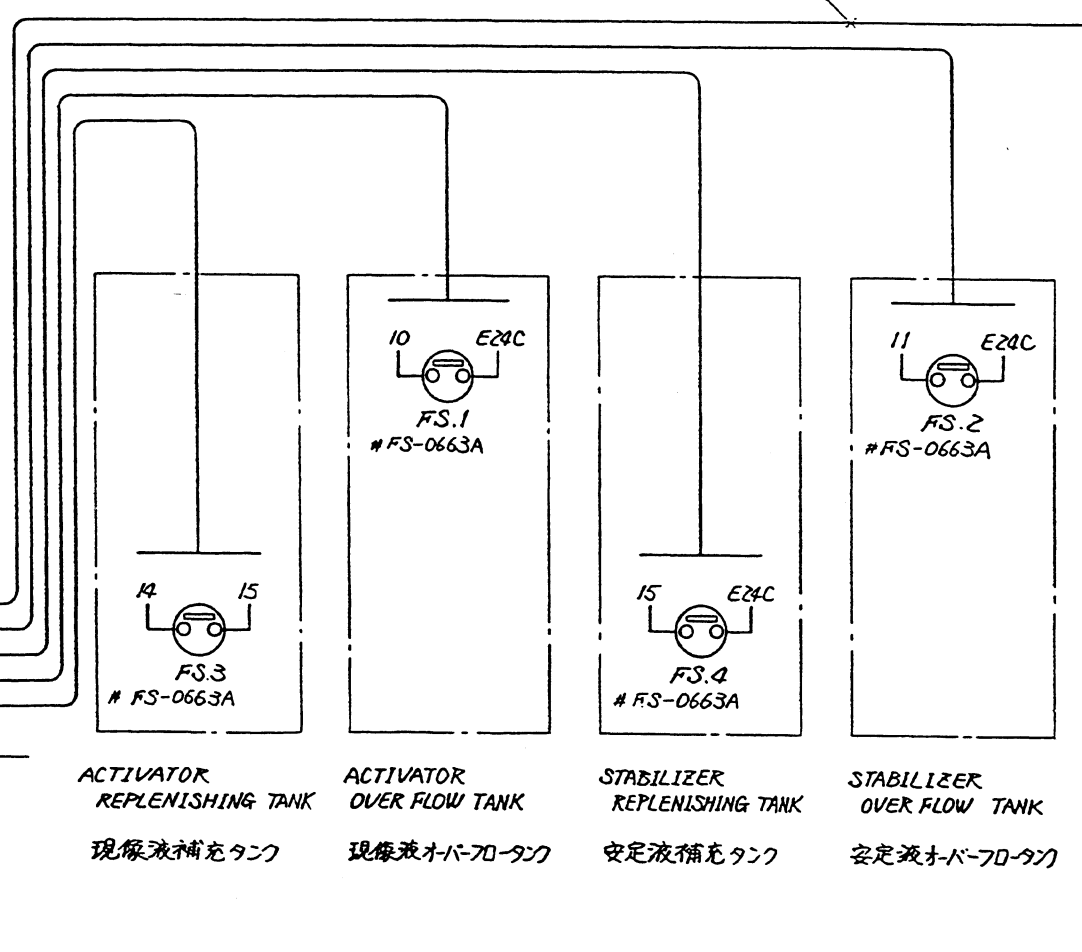
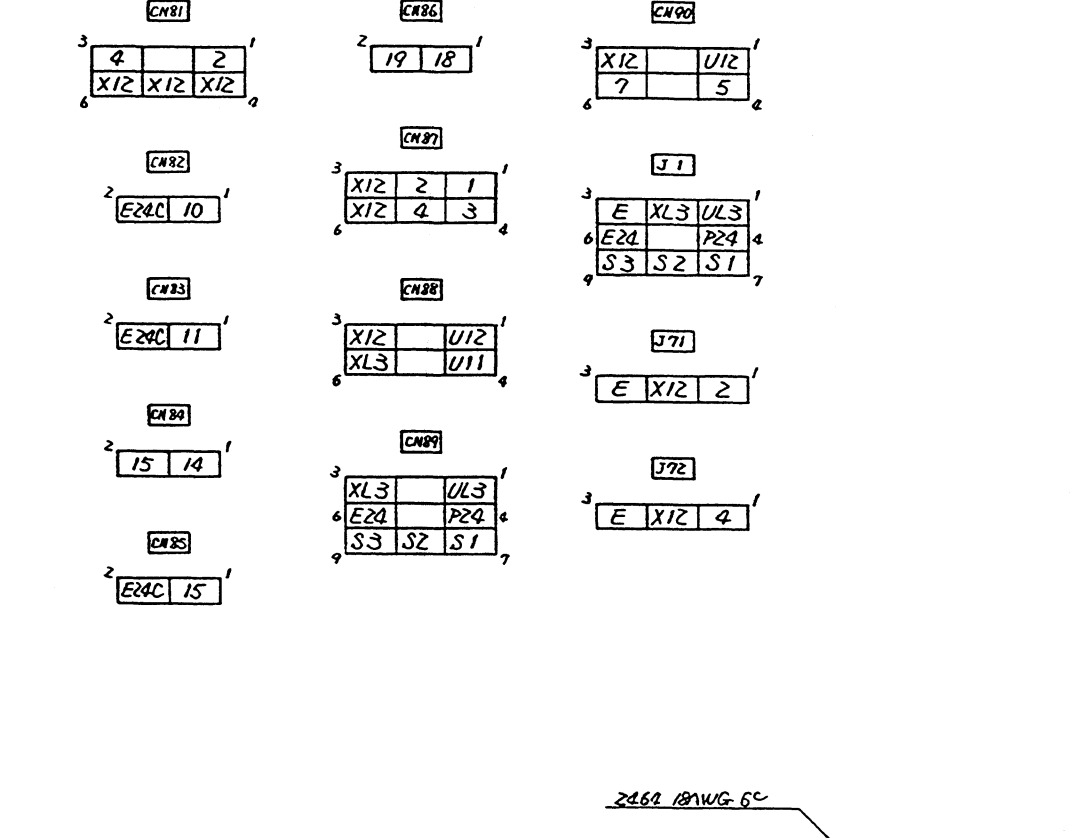
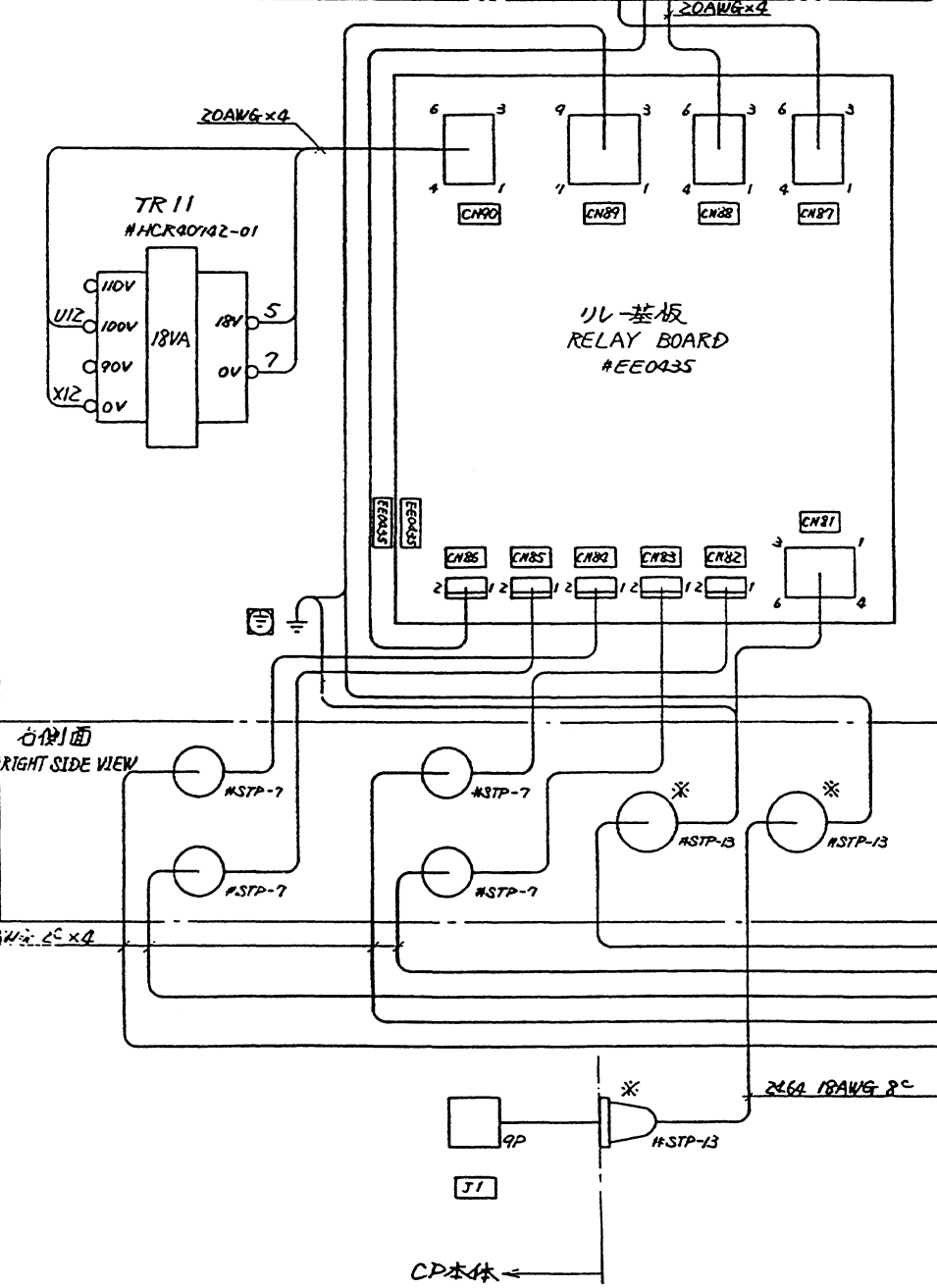
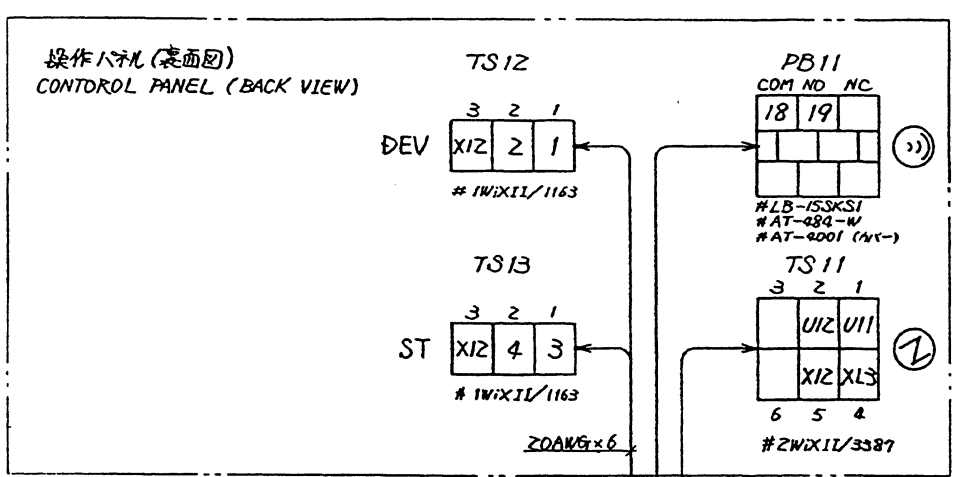
配線図
WIRING DIA.



--- #TA15B

* 14~18 AWG UL 1015 105°C 600V
 20~24 AWG UL 1007 80°C 300V
 HEAT PROOF WIRE — UL 1727 TETRAFLUOROETHYLENE WIRE (テフロン配線)

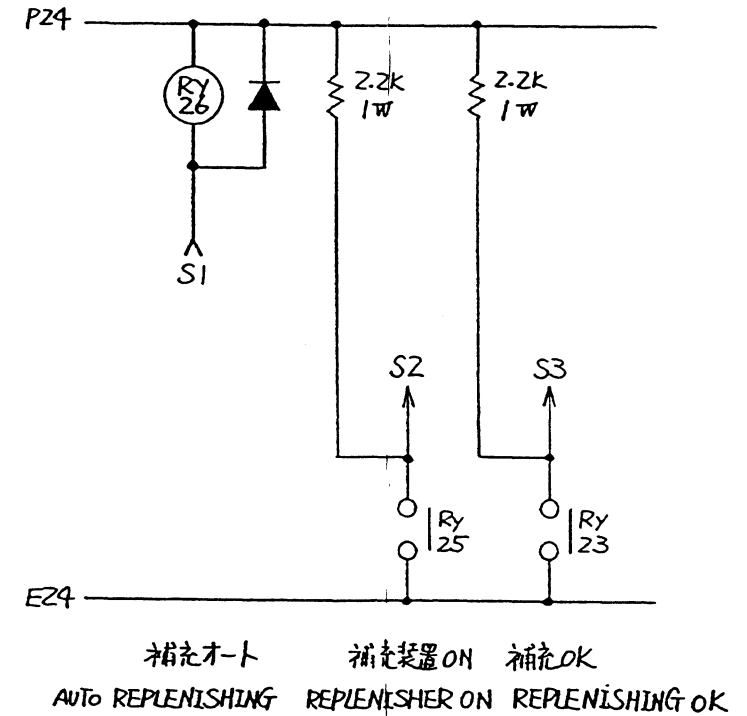
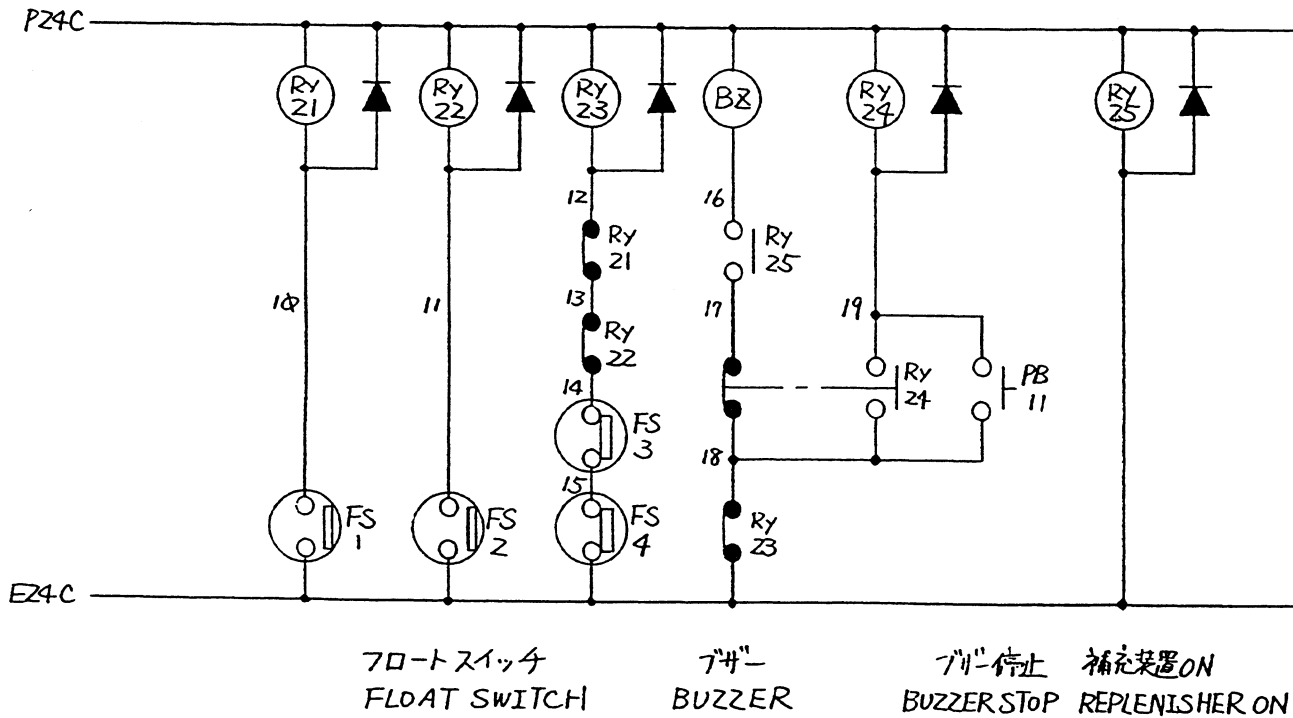
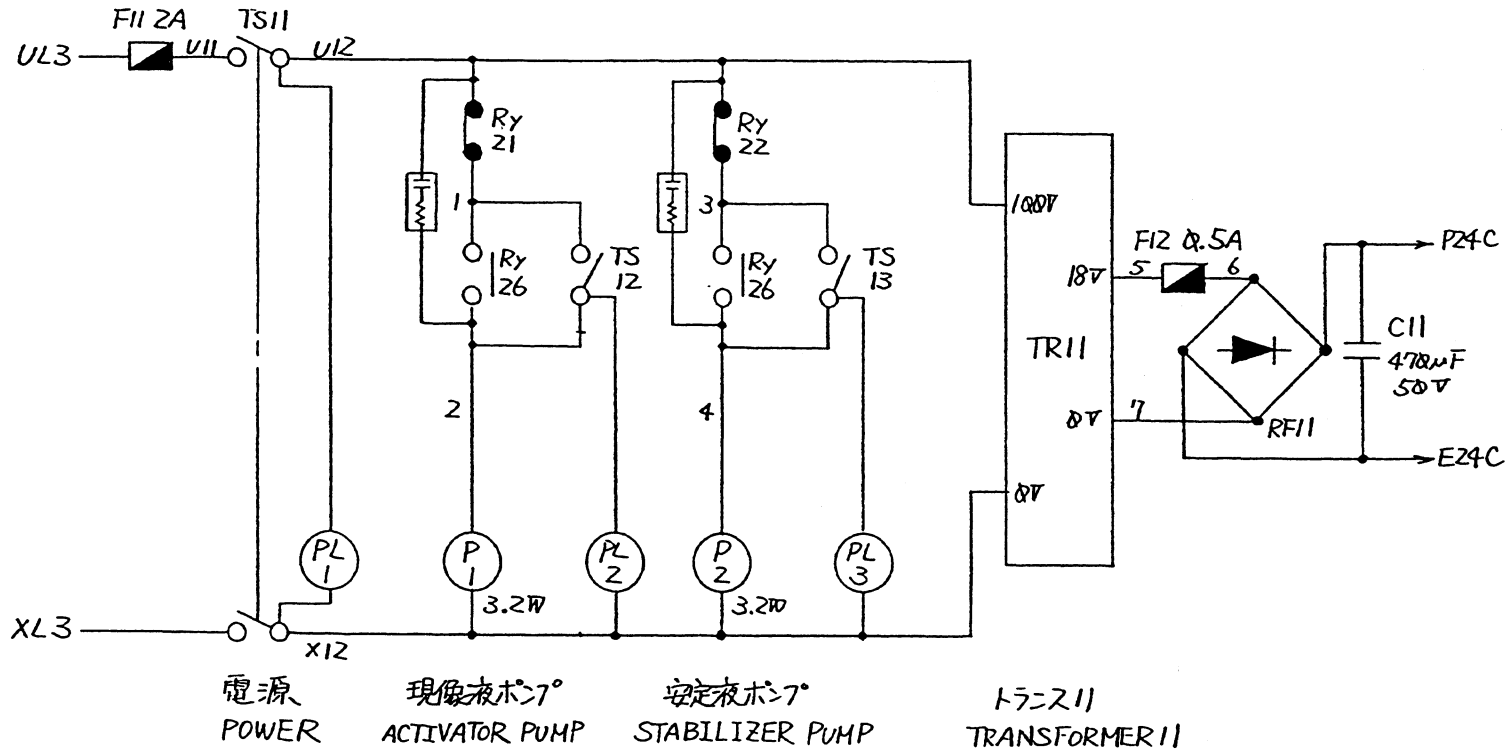
後部結線図
BACK VIEW
CONNECTION DIA.



注) 指定なき線は 22AWG を使用のこと
 18AWG — UL 1015 105°C 600V
 20. 22AWG — UL 1007 80°C 300V
 ・ J1, J71, J72 はユニバーサルメテックコネクタを使用のこと
 ・ CN82~86 は EI シリーズコネクタを使用のこと
 ・ *印は取り外し可能な箇所を示す

参照図面 HCS42253: 補充装置系統図
 REPLENISHER WIRING SYSTEM DIA.

配線図
 WIRING DIA.



- 70-トスイッチ FLOAT SWITCH
- FS 1 : 現像液オーバーフロータンク
ACTIVATOR OVERFLOW TANK
 - FS 2 : 安定液オーバーフロータンク
STABILIZER OVERFLOW TANK
 - FS 3 : 現像液補充タンク
ACTIVATOR REPLENISHING TANK
 - FS 4 : 安定液補充タンク
STABILIZER REPLENISHING TANK

補充装置 系統図
REPLENISHER
WIRING SYSTEM DIA