

**ELECTRIC, PNEUMATIC  
& HYDRAULIC CIRCUIT**

**PEGA-204040**

(AMADAN-04P-C)

TCU24(A)

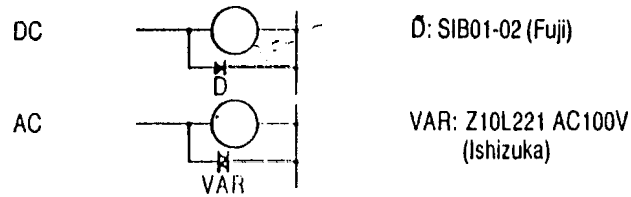
**AMADA**

## CONTENTS

Cautions	1
Power supply circuit	2
1 00VAC circuit	3
NC input signal	4
NC output signal	9
Proximity switch signal NC input	12
Control panel	14
NC power supply circuit	18
TCU24 connection diagram	19
Connector pin arrangement	20
2A.I. (auto-index)	24
Work chute	26
X-gauge block	27
Safety mat	28
Beacon	29
Auto power shut off	30
MP retrofitting	31
Power receptacle	34
(Option limited to use in U.S.A.)	
Short-bar setting table	35
Protectors list	36
Electric parts list	38
Pneumatic and hydraulic circuit	43
• Pneumatic and hydraulic parts list	44

To check the electrical parts in the printed circuit board TCU24(A), see the parts list on page 42.

NOTE 1: Noise suppressors with relays shall be the following ones unless otherwise specified.



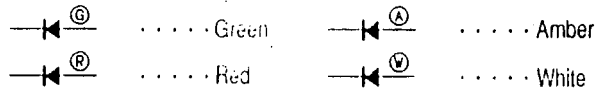
NOTE 2: Resistors and capacitors described in drawings are as follows.

r3, 4	100Ω 20W	C1	6800μF 63WV
r7	1 kΩ 50W	C2	8μF 250WV (Inside the fan)
r8	70Ω 150W	C4	2200μF 50WV
r9, 10	160Ω 5W	C5	4700μF 160WV
		C6	47μF 160WV

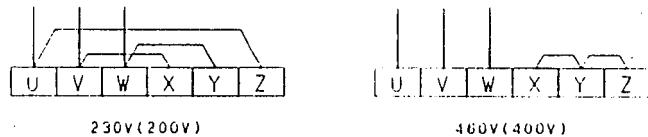
NOTE 3: Noise suppressors with motors shall be the following ones unless otherwise specified.

SK1 . . . DCR2-50A22 0.5μF 200Ω±10% 1W (Marukon)  
 SK2 . . . RFM2H664KPD 0.22μF x 3 47Ω±20% 6W (Marukon)

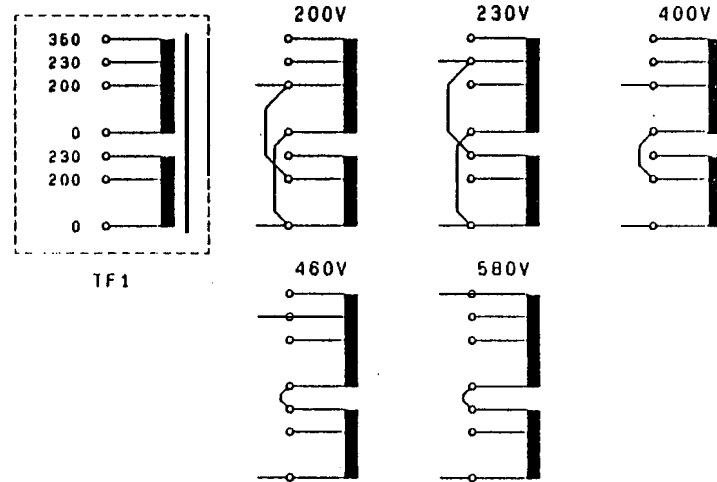
NOTE 4: Colors of LEDs described in drawings are as follows.

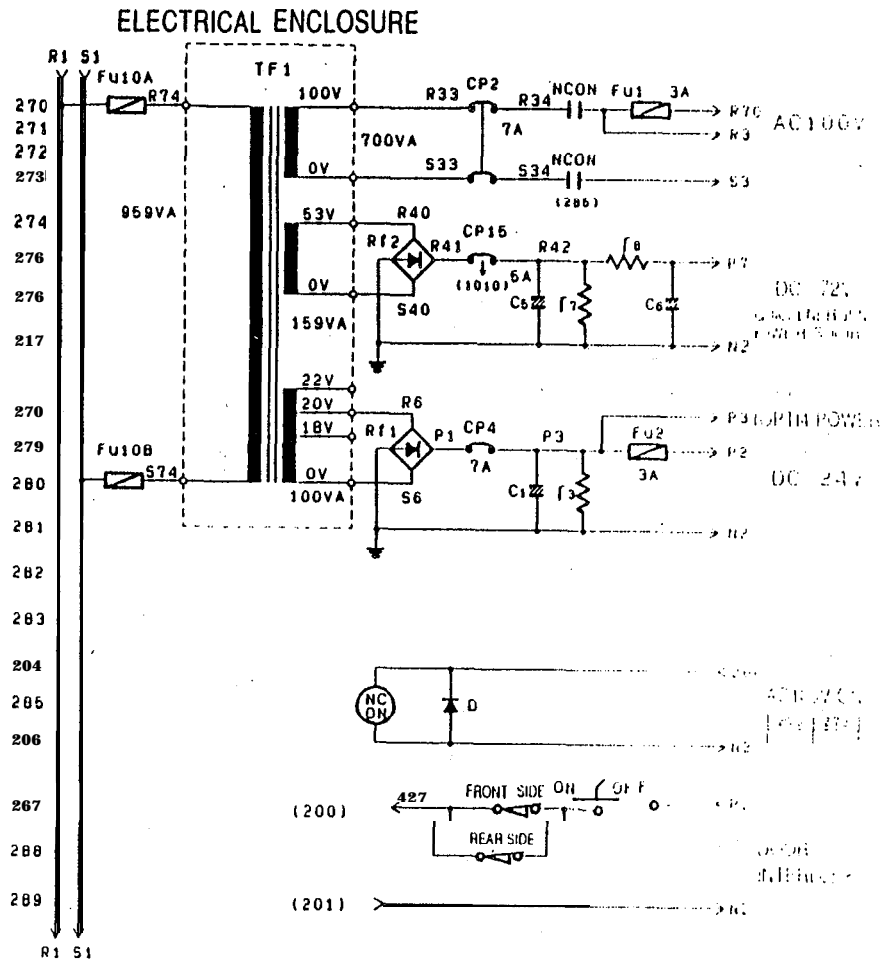
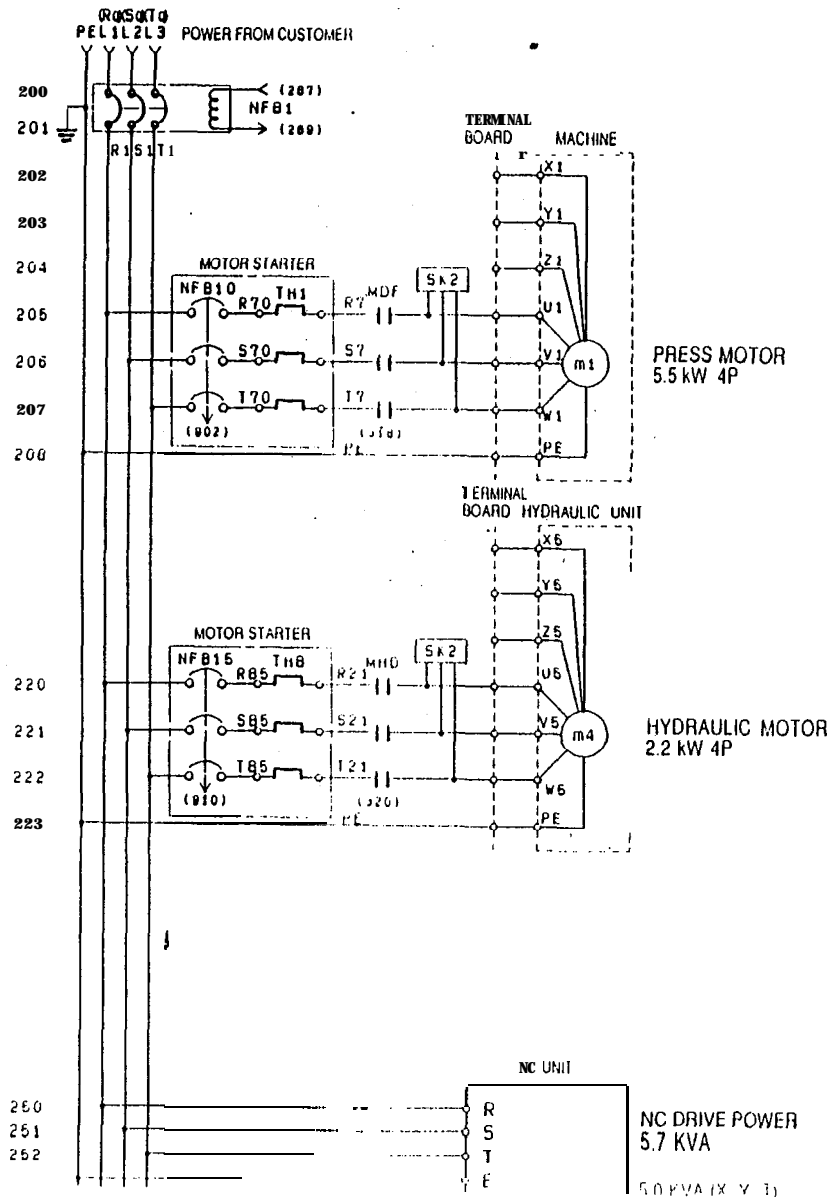


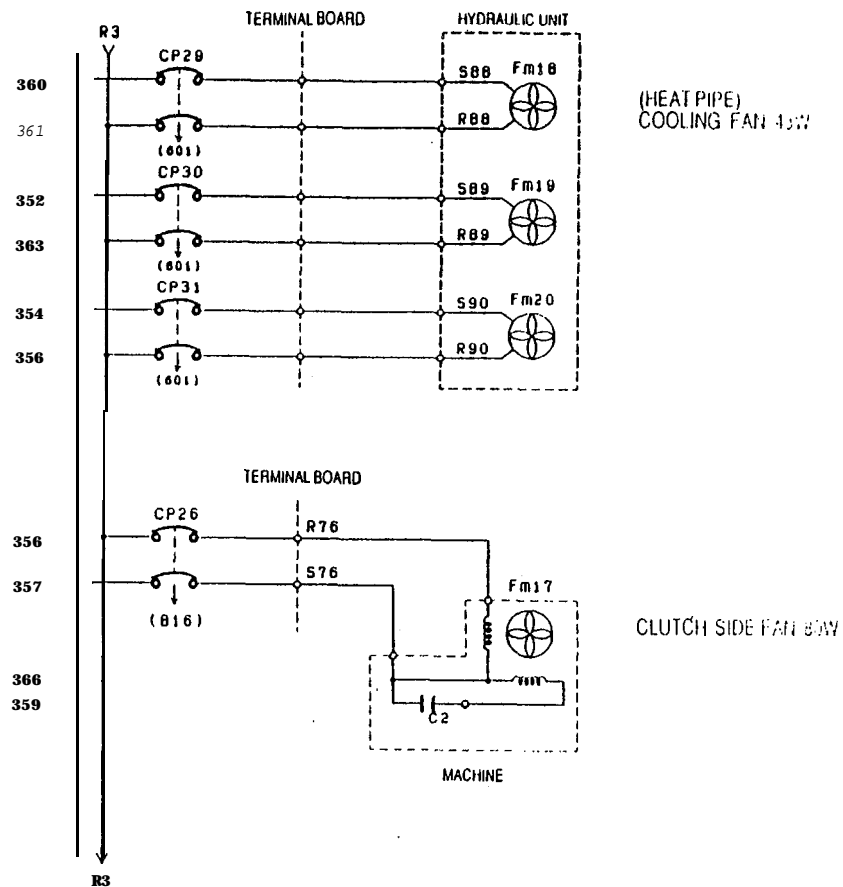
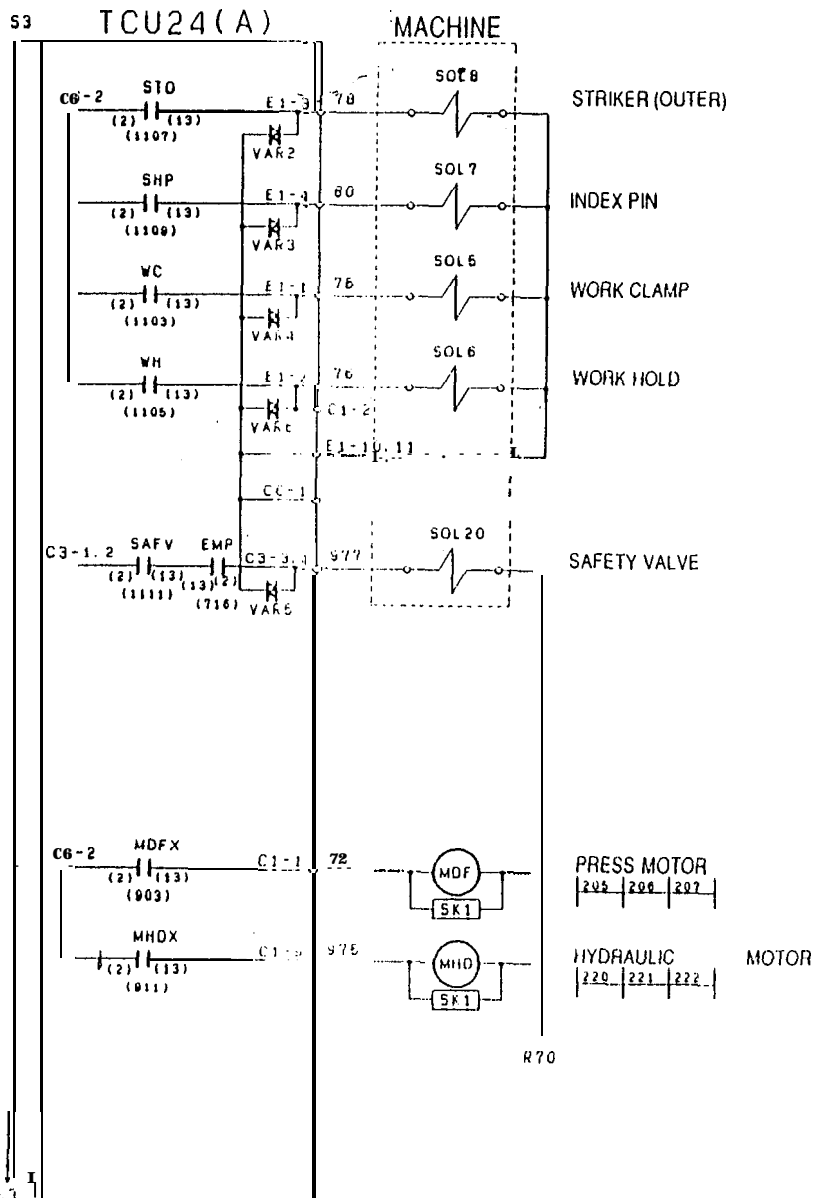
NOTE 5: Wiring connection of the press motor and the hydraulic motor in the electric enclosure shall be as shown below.

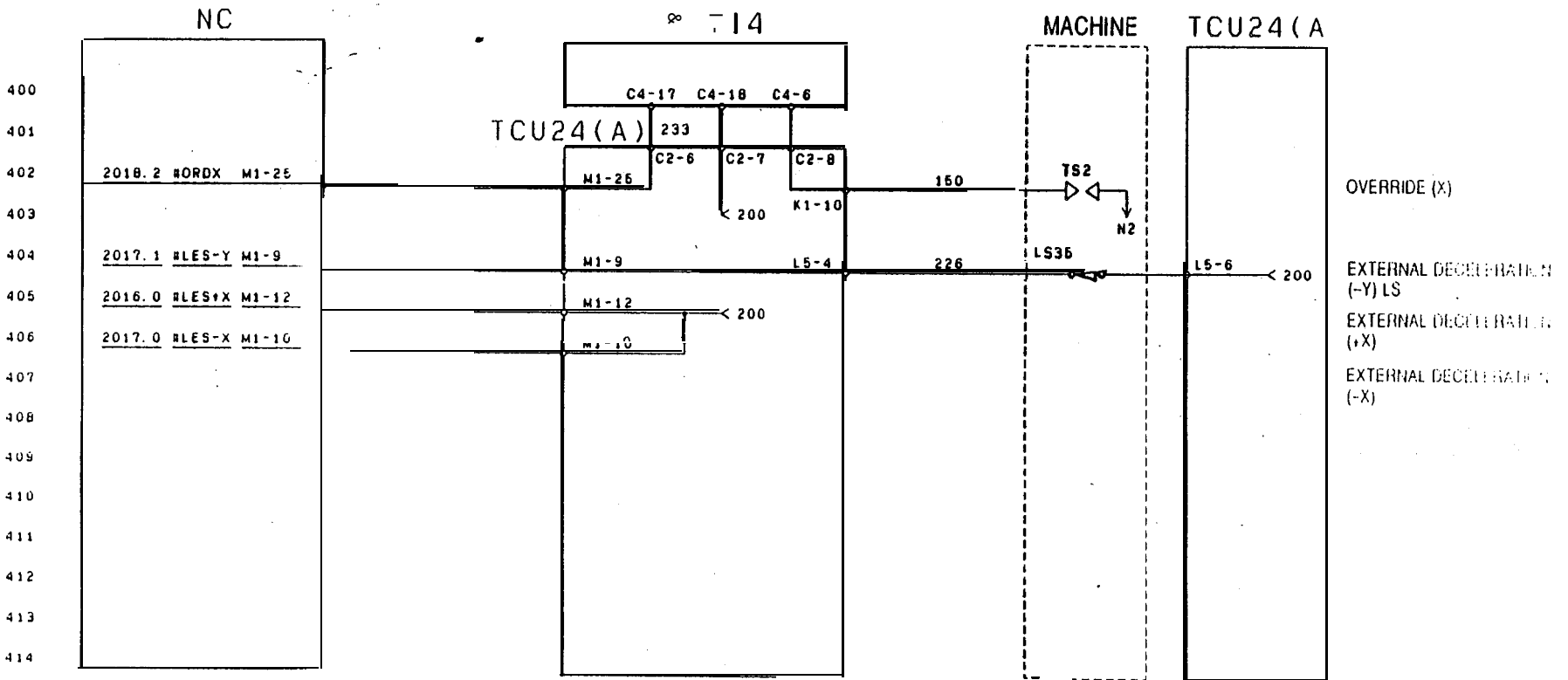


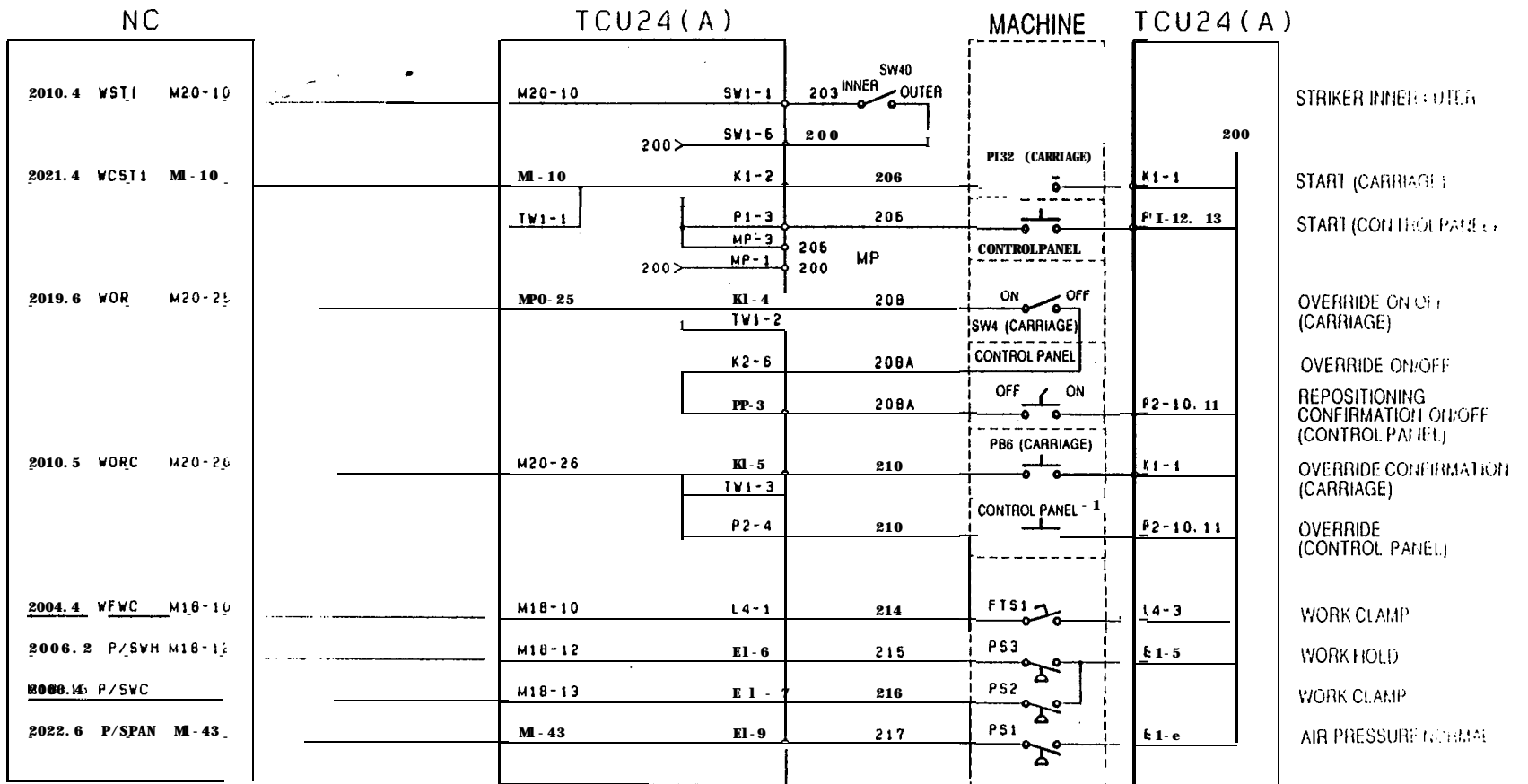
NOTE 6: Wiring connection of the transformer TF1 shall be as shown below.

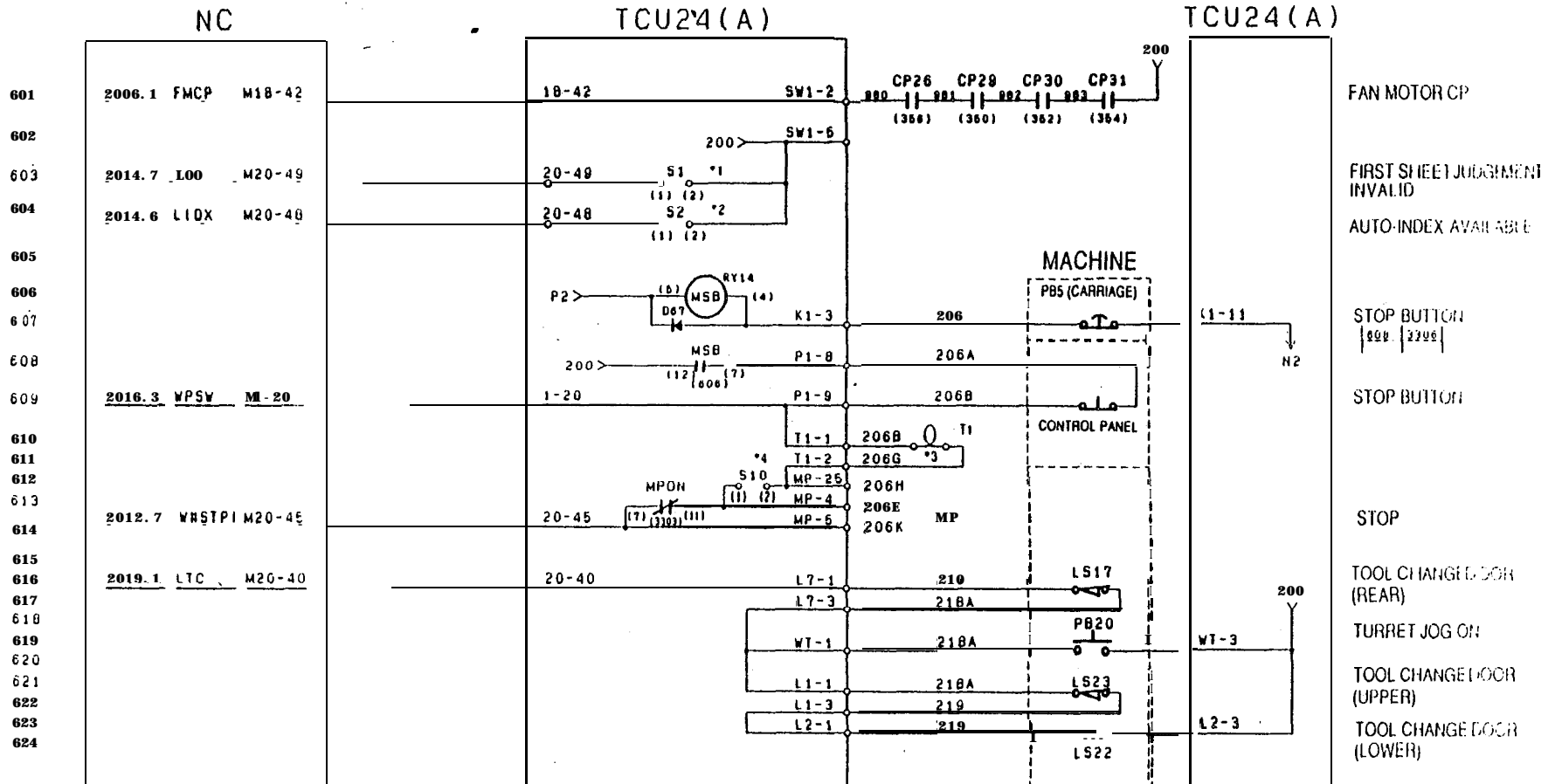


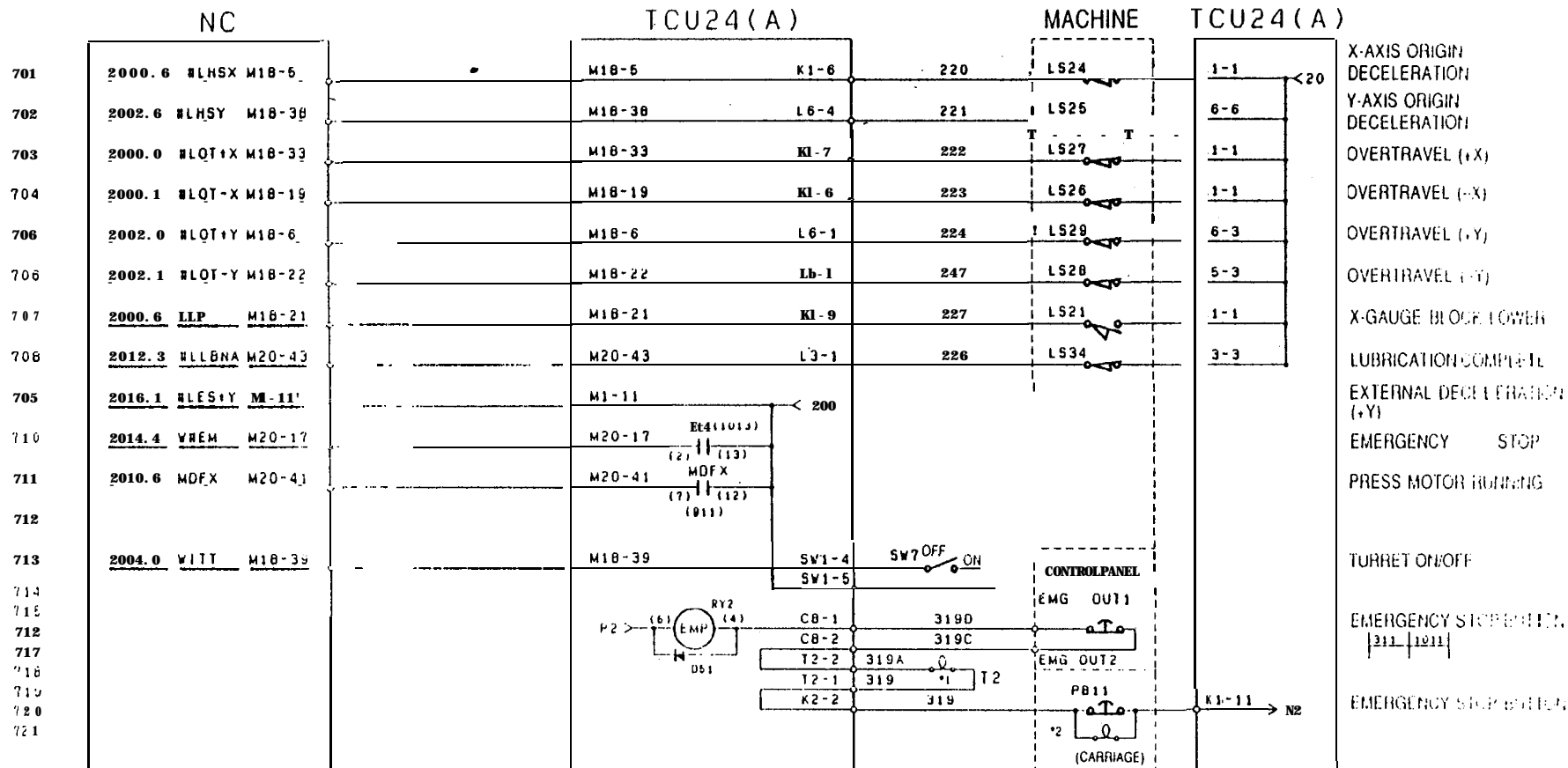








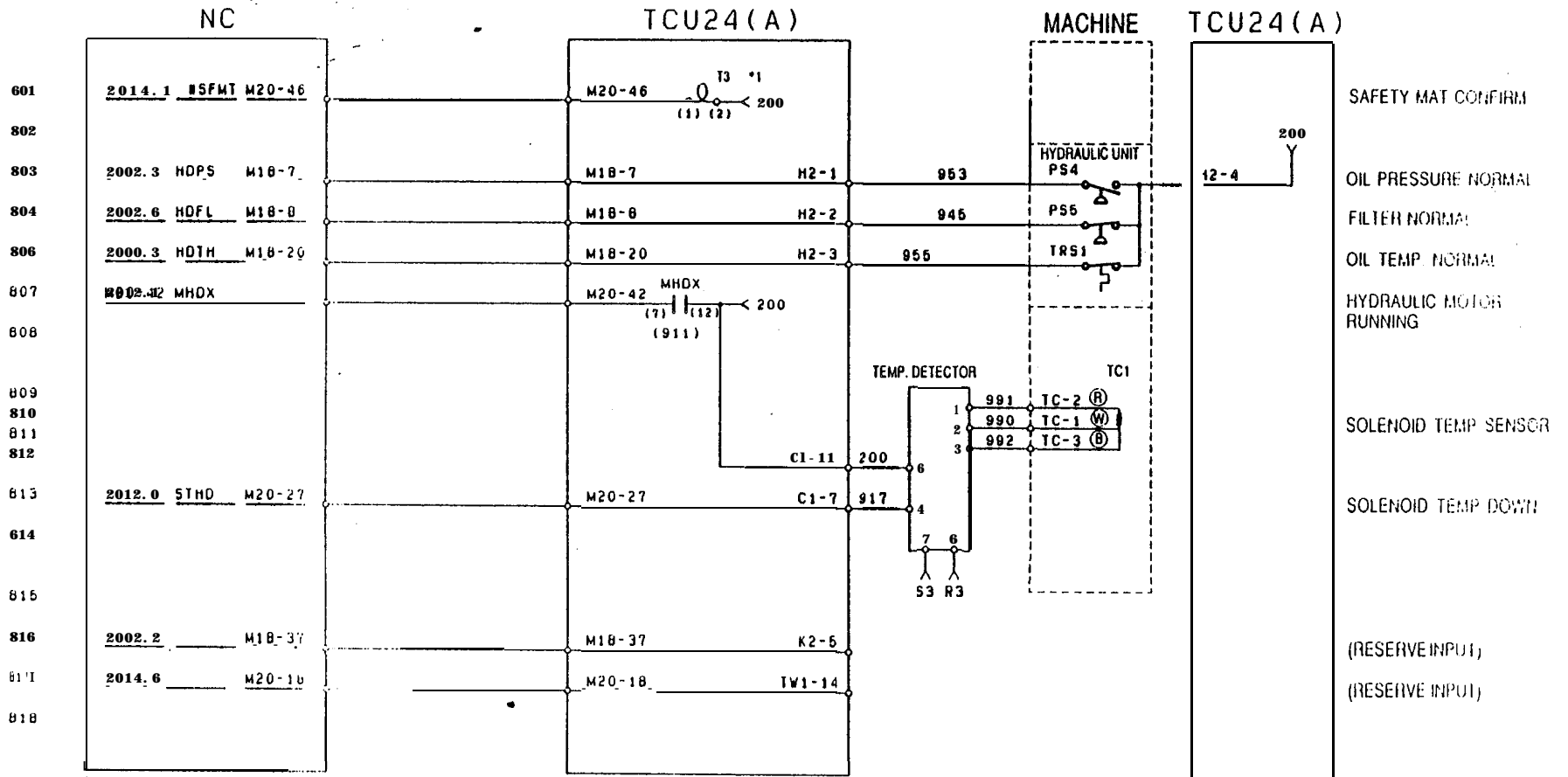




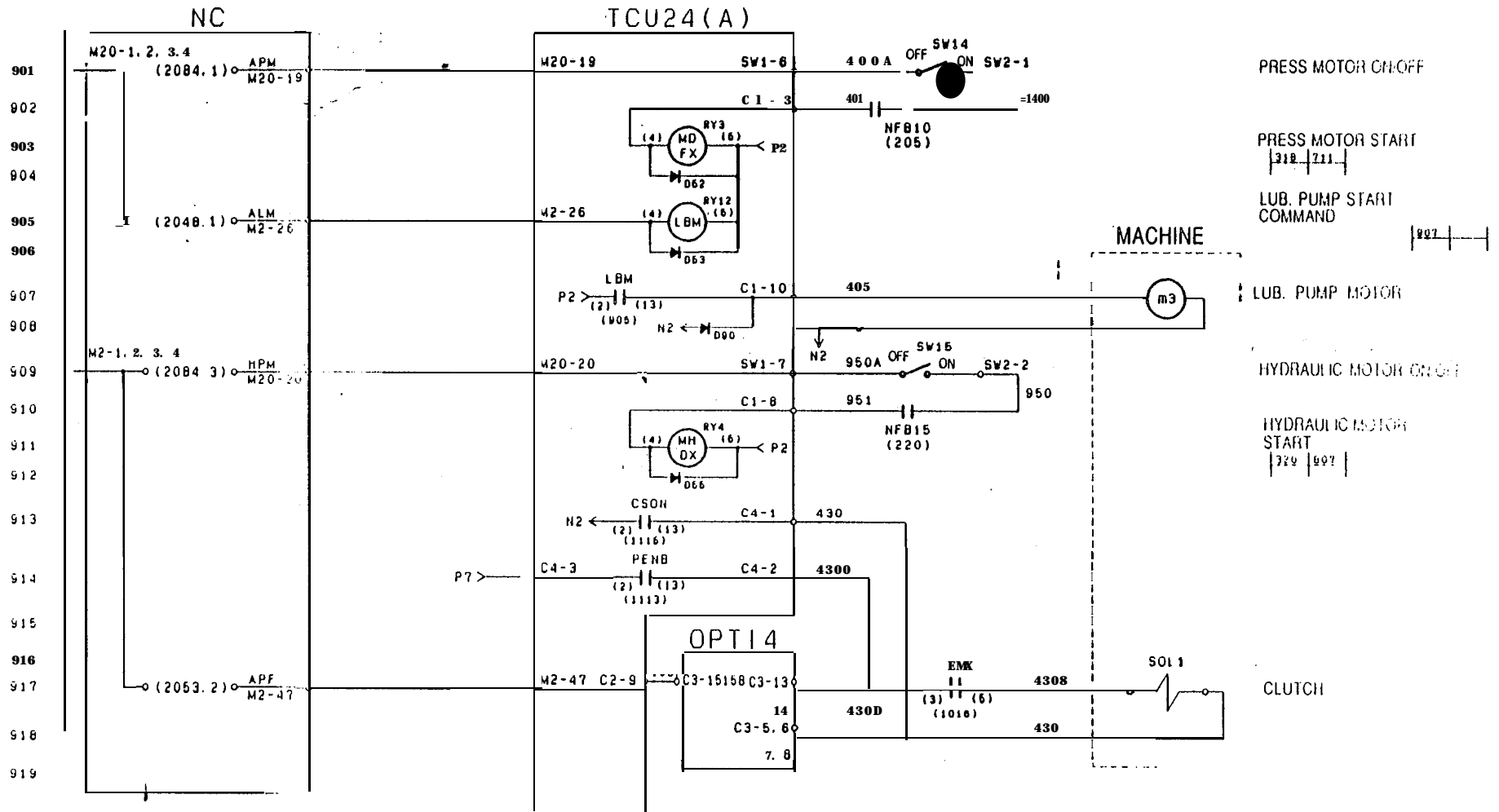
\*1. This shall be short circuited via connector 12.

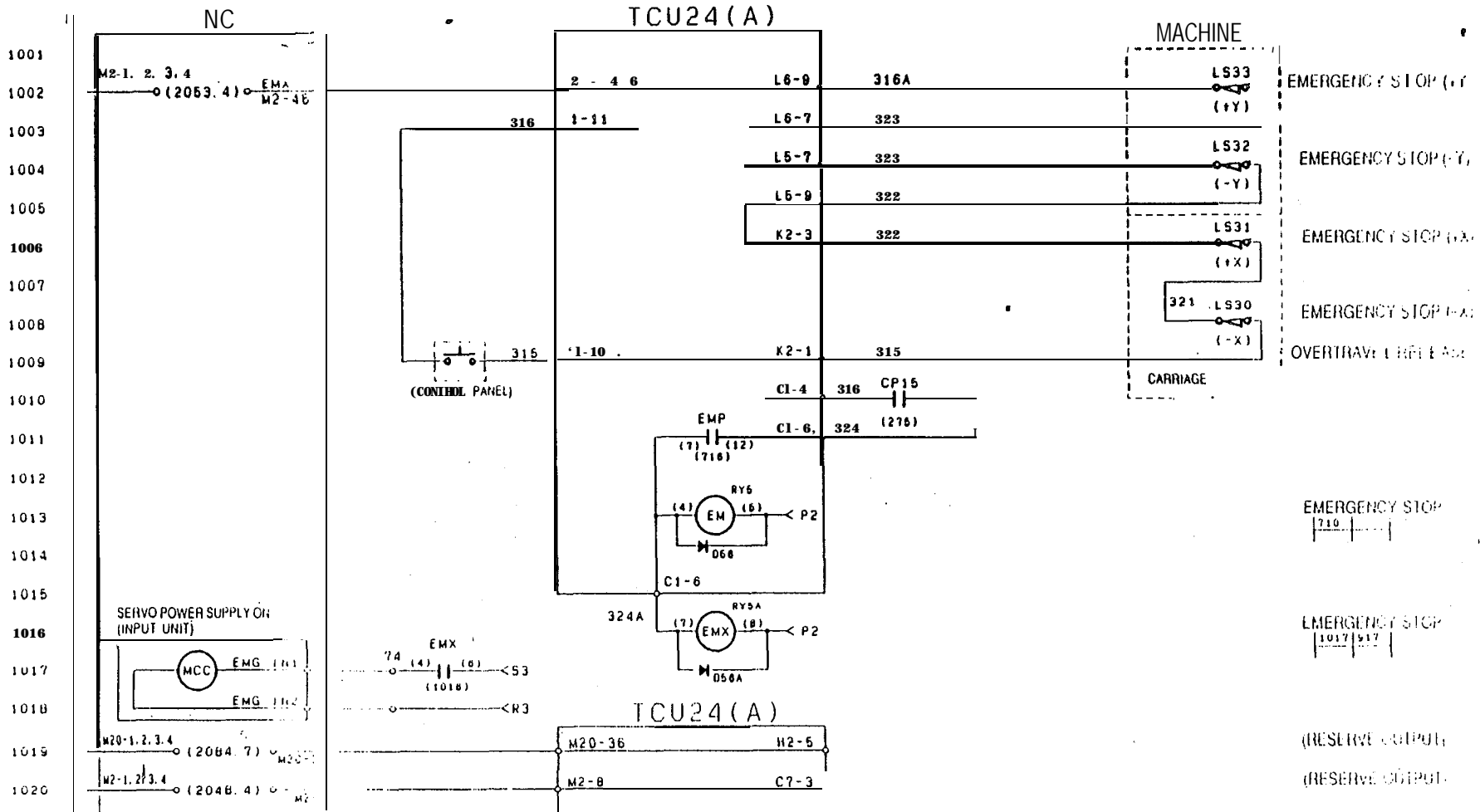
\*2. If emergency stop pushbutton is not provided, this shall be short circuited via carriage control panel.

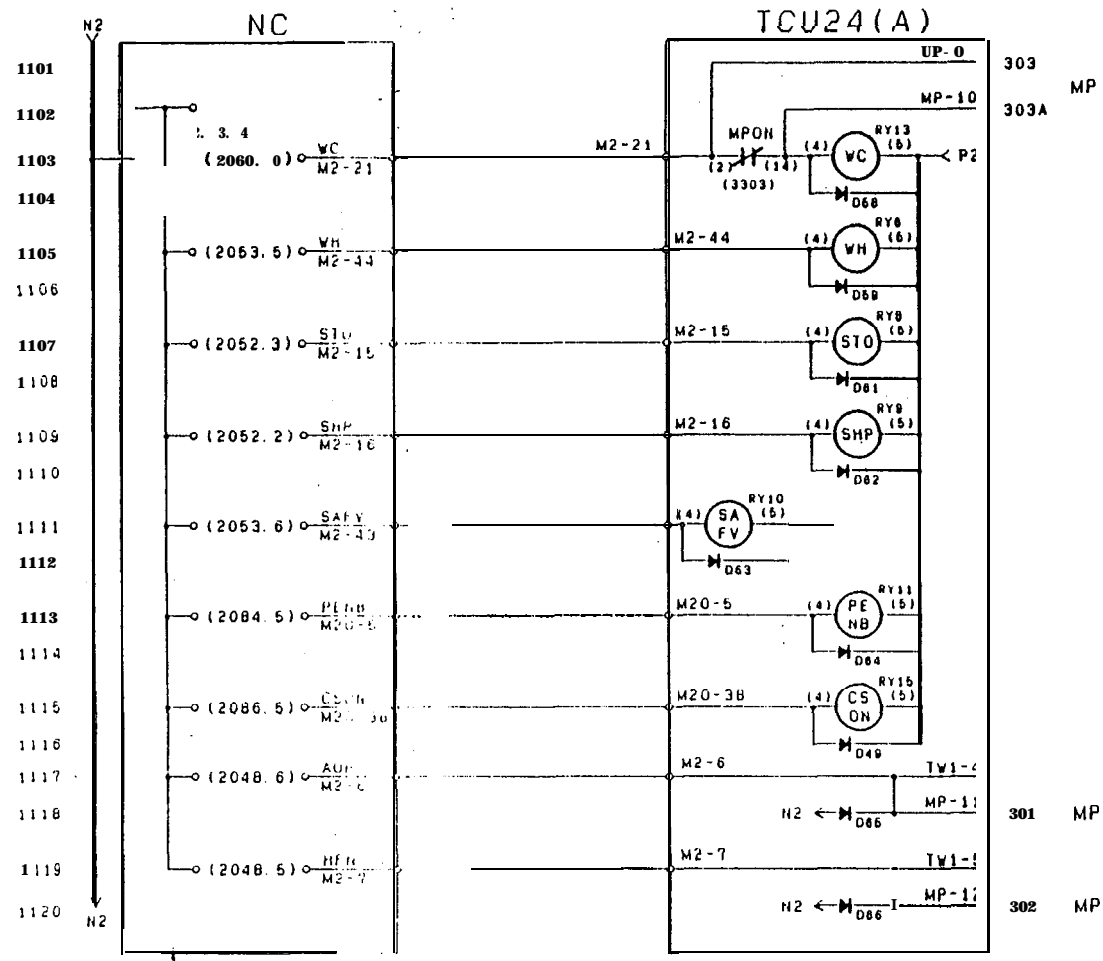
8



\*1 This shall be short circuited unless safety mat is used.







WORK CLAIM  
| 306 |

WORK HOLD  
| 307 |

STRIKER (CUTTER)  
| 308 |

INDEX PIN  
| 309 |

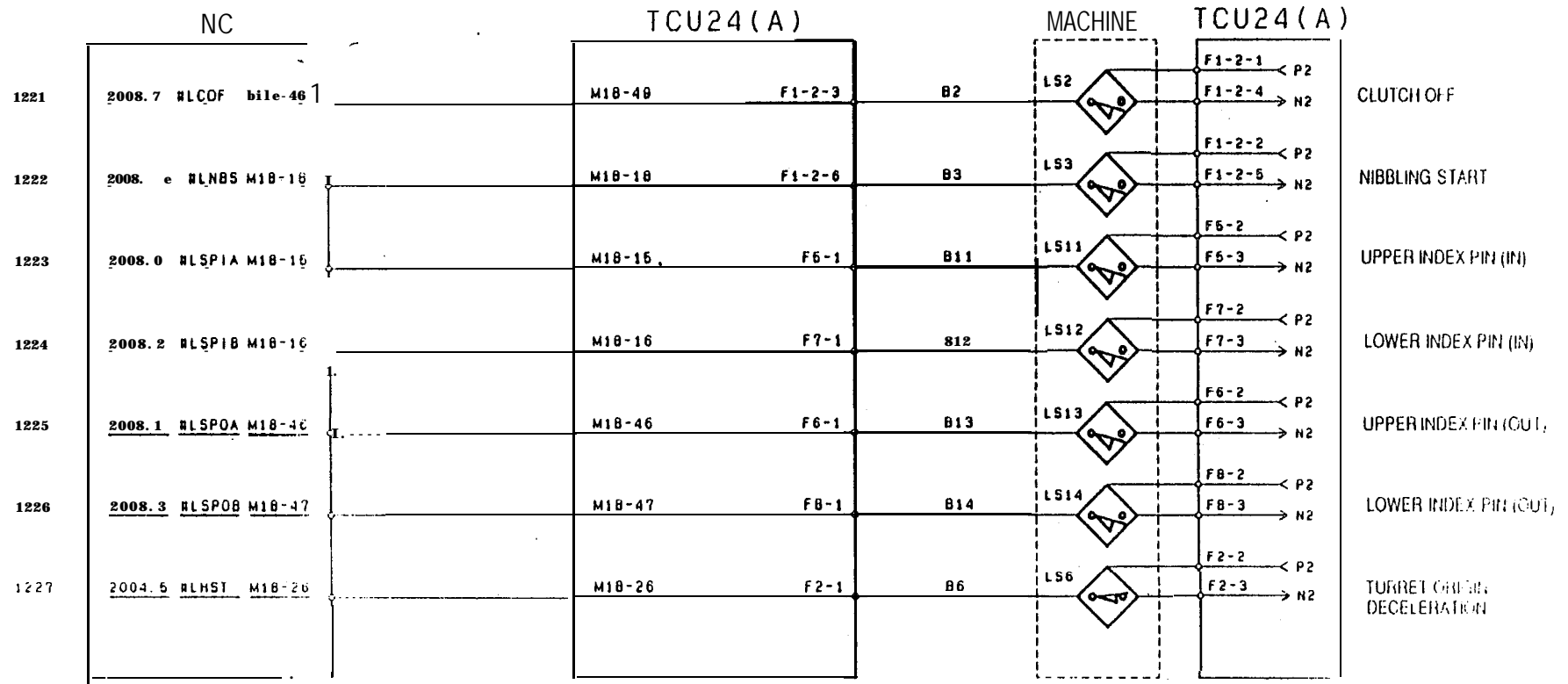
SAFETY VALVE  
| 310 |

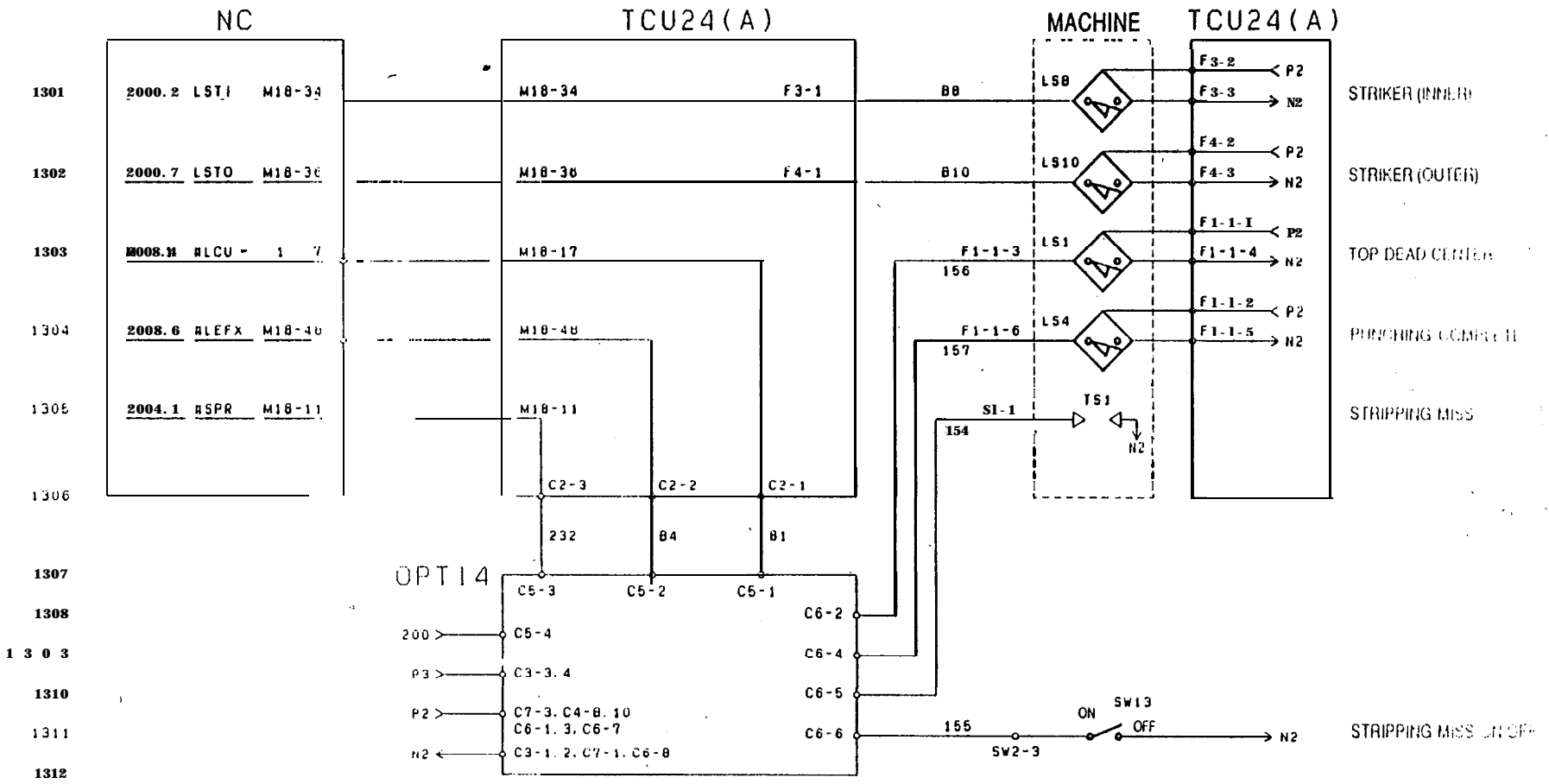
PRESS ENABLE  
| 311 |

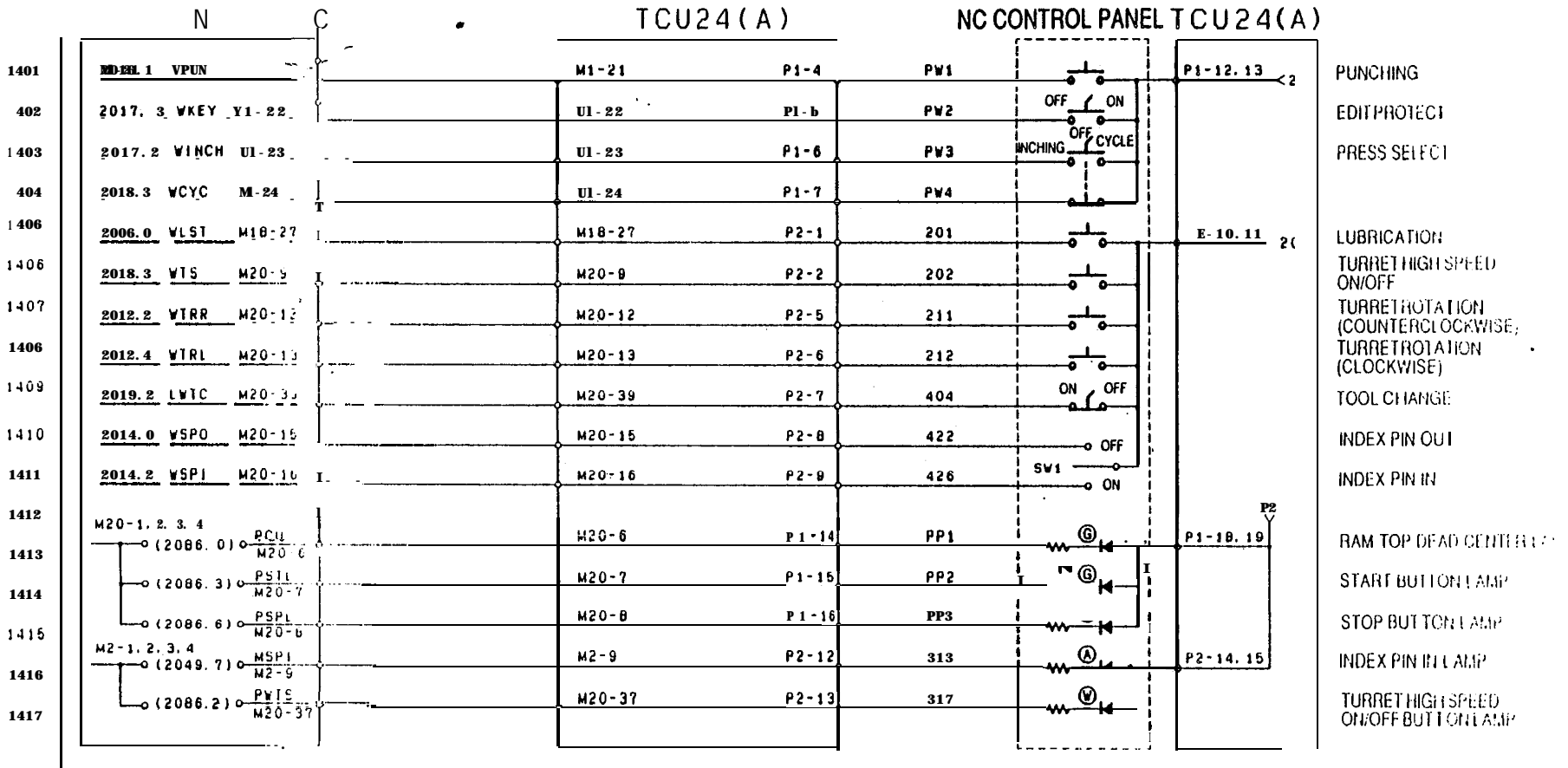
CLUTCH SAFETY  
| 312 |

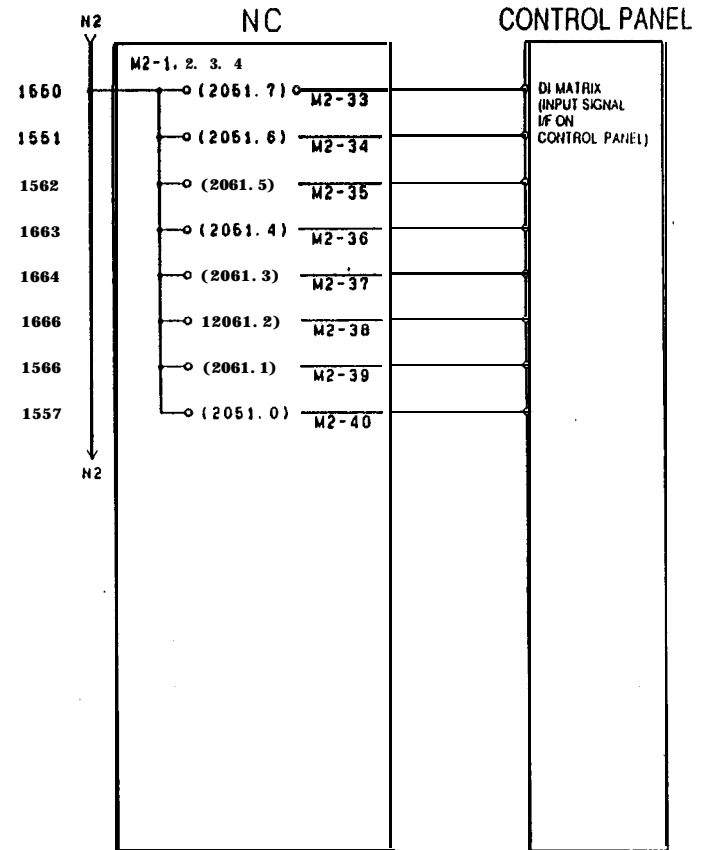
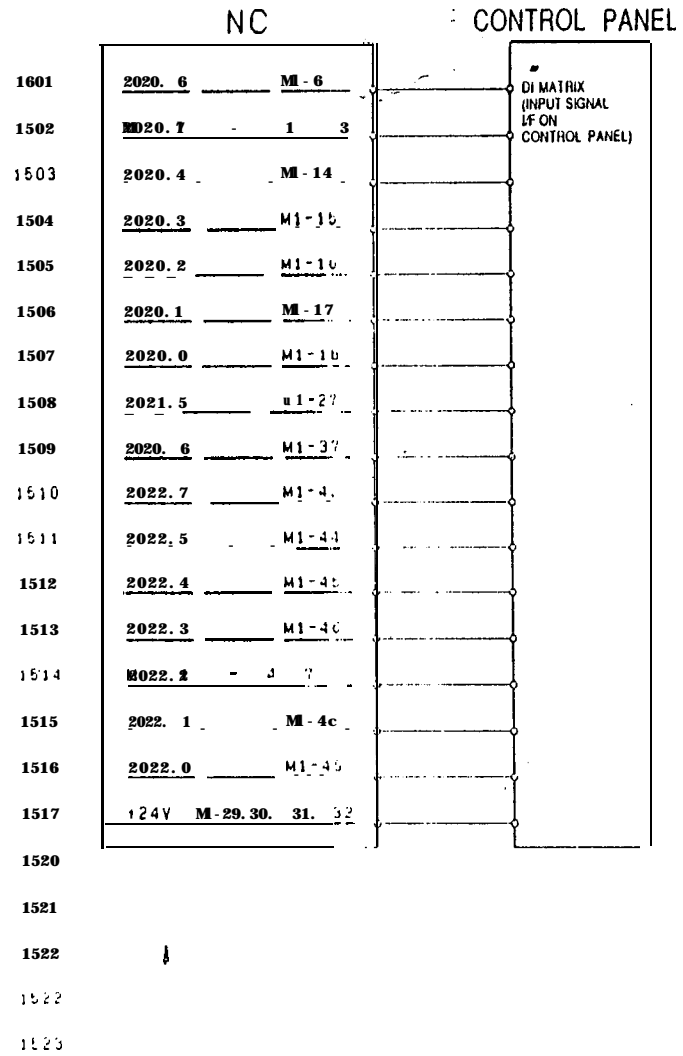
AUTOMATIC OPERATION  
RUNNING

X, Y-ORIGIN or TRACT  
COMPLETION

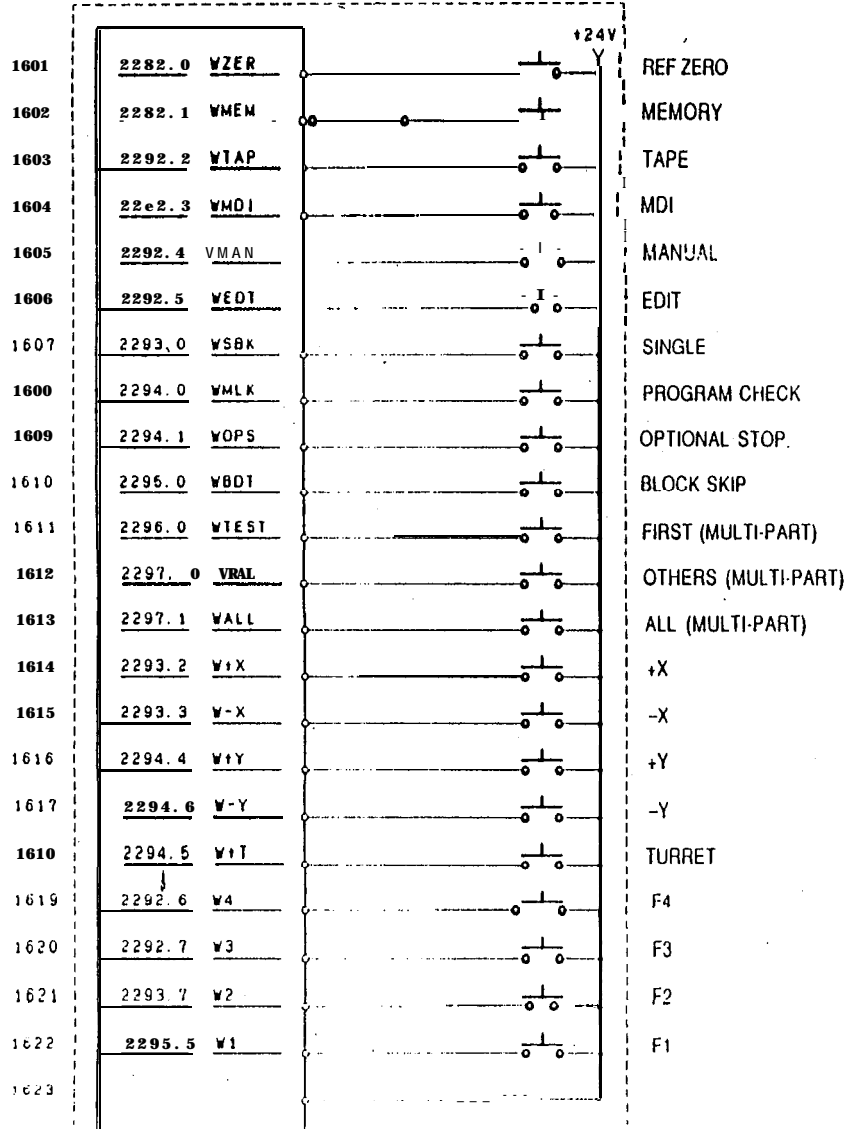




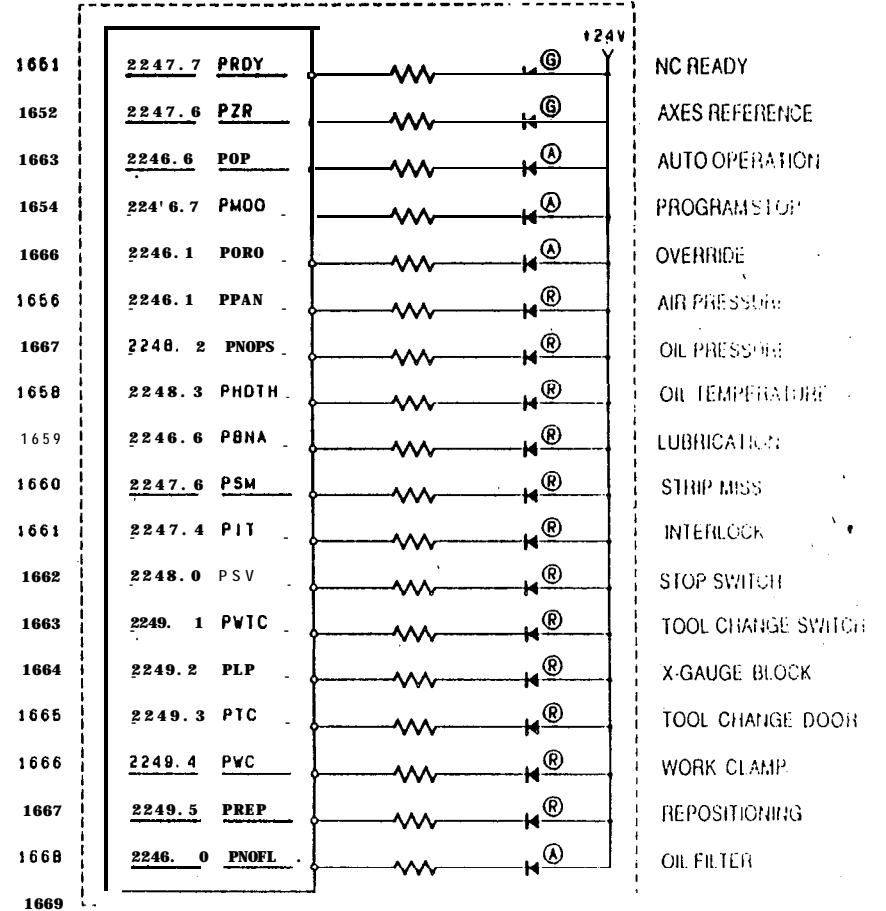




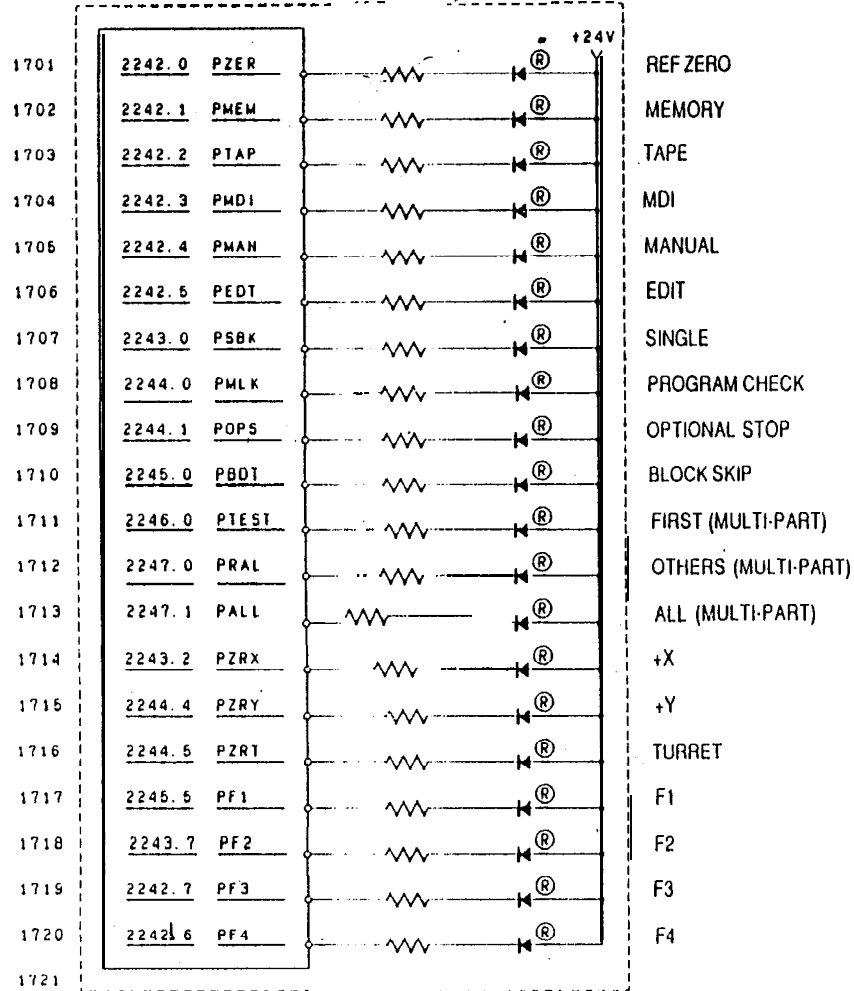
NC CONTROL PANEL



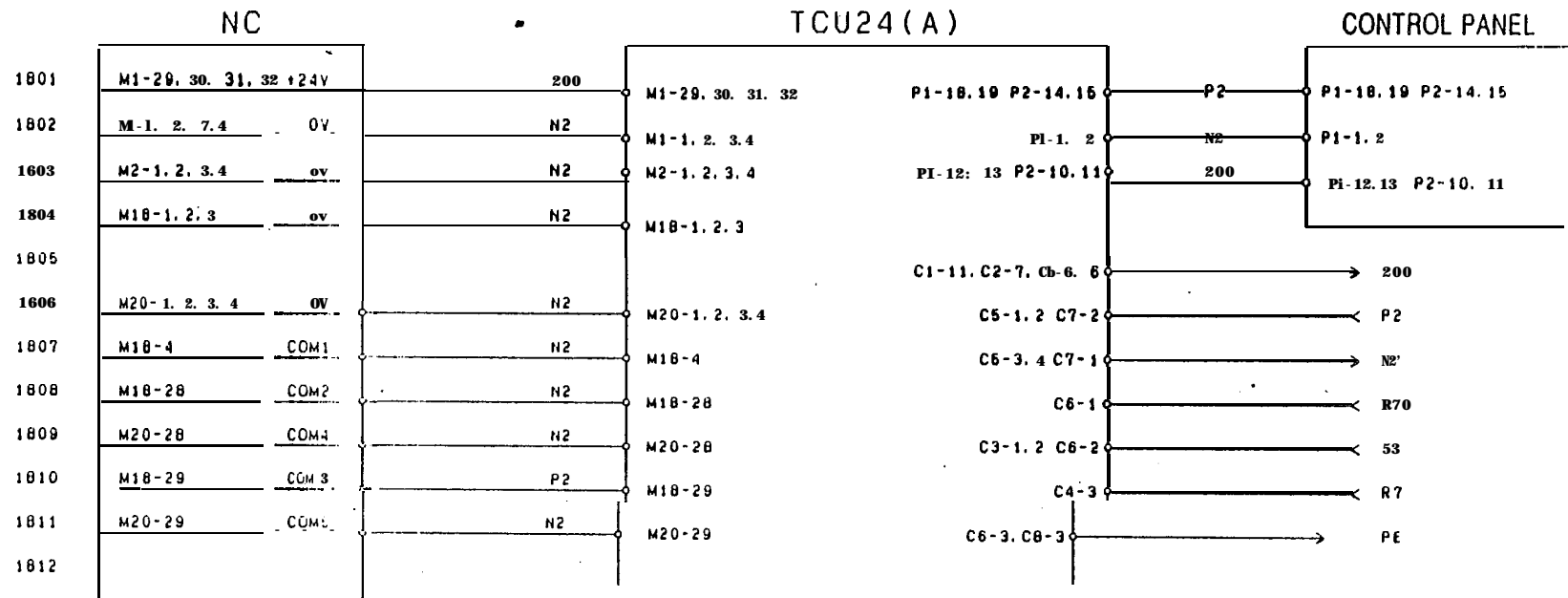
NC CONTROL PANEL

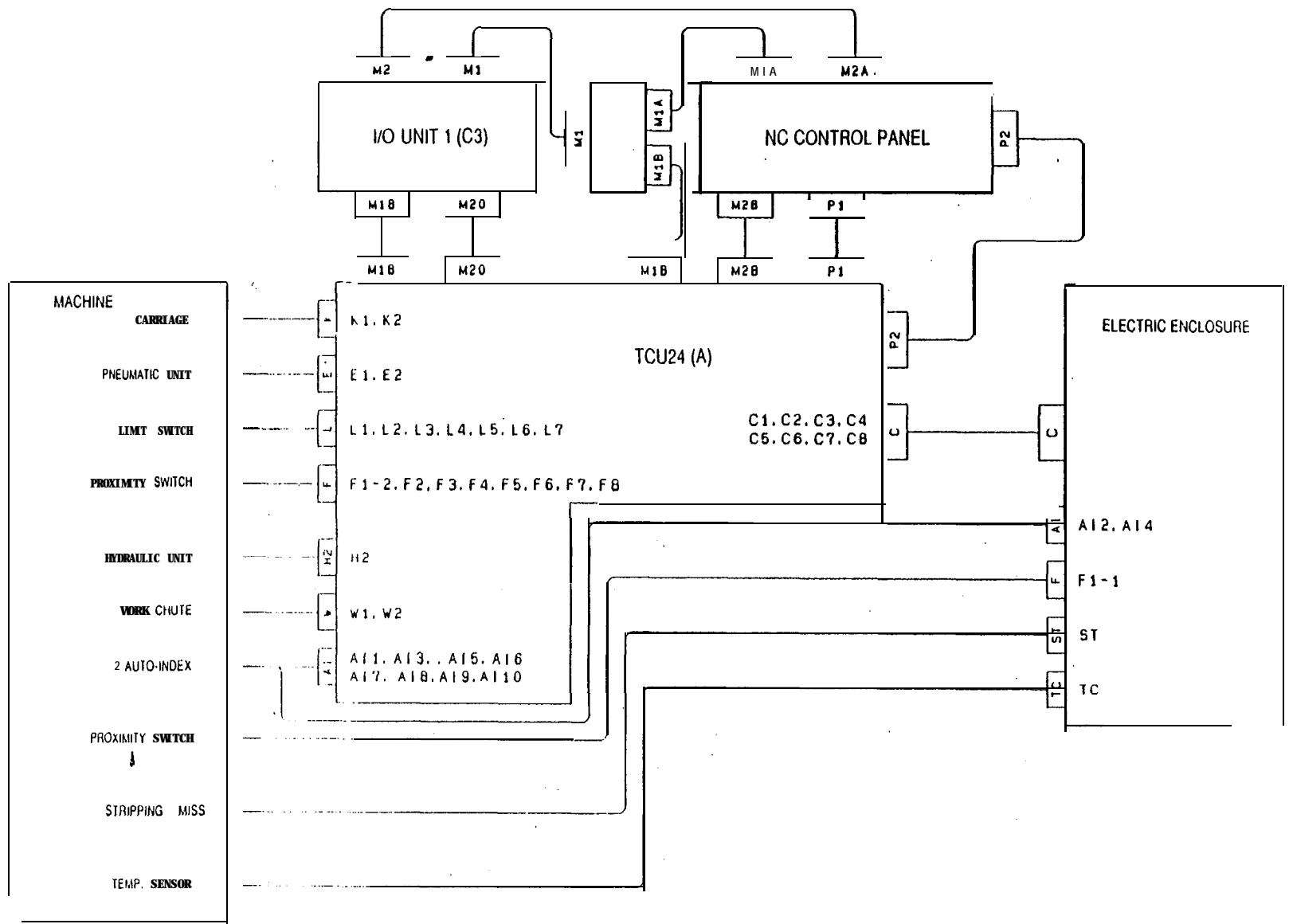


### NC CONTROL PANEL



Caution: Corresponding image bits may be different from actual wiring.





M1

1	2	3	4	5	6	7	8	9	10
OV	OV	OV	OV		LBKUA	LBKUB		#LES-Y	#LES-X
N2	N2	N2	N2		B20X	B21X		226	
11	12	13	14	16	16	17	18	19	20
#LES+Y	#LES+X							WCST1	WPSW
								205	206B
21	22	23	24	25	26	27	28	29	30
WPUN	WKEY	WINCH	WCYC	WORDX	LIPC			+24V	+24V
					233	B24X		200	200
31	32	33	34	35	36	37	38	39	40
+24V	+24V	LCPUA	LCPUB	LCPDA	LCPDB		LBKDA	LBKOB	LWSN
200	200	B25X	B26X	B27X	B28X		B22X	B23X	234
41	42	43	44	45	46	47	48	49	50
LWSD		P/SPAN							
235		217							

M18

1	2	3	4	5	6	7	8	9	10
OV	OV	OV	COM1	#LHSX	#LOT+Y	HDPS	HDFL		WFWC
N2	N2	N2	N2						
11	12	13	14	15	16	17	18	19	20
#SPR	P/SWH	P/SWC	ITBL	#LSPIA	#LSPIB	#LCU	#LNBS	#LOT-X	HDTH
21	22	23	24	25	26	27	28	29	30
LLP	#LOT-Y				#LHST	WLST	COM2	COM3	
							N2	P2	
31	32	33	34	35	36	37	38	39	40
		#LOT+X	LSTI		LSTO	FNCP	#LHSY	WITI	
41	42	43	44	45	46	47	48	49	50
	O		#LHSC		#LSPOA	#LSPOB	#LEFX	#LCOF	

M2

1	2	3	4	5	6	7	8	9	10
OV	OV	OV	OV	LLPA	AOP	HFN		MSP1	
N2	N2	N2	N2		301	302			
11	12	13	14	15	16	17	18	19	20
				STO	SHP	18K	ICLP	SWS	
21	22	23	24	25	26	27	28	29	30
SVC	BSTL			ASPL	ALM				
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
		SAFV	SWH	EMX		APF		ALPY	

M20

1	2	3	4	5	6	7	8	9	10
OV	OV	OV	OV	PENB	PCU	PSTL	PSPL	WTS	WSTI
N2	N2	N2	N2						
11	12	13	14	15	16	17	18	19	20
	WTRR	WTRL	SFEM	WSPO	WSPI	WREM	O	APM	HPM
21	22	23	24	25	26	27	28	29	30
		T4X		WOR	WORC	STHD	COM4	COM5	
							N2	N2	
31	32	33	34	35	36	37	38	39	40
				T3X	O	PWTS	CSON	LWTC	LTC
41	42	43	44	45	46	47	48	49	50
MOFX	MHDX	#LLBNA	K Y O N	#WSTP	#SFMT		LIDX	LOD	

P1

1	2	3	4	5	6	7	8	9	10
N2	N2	205	PW1	PW2	PW3	PW4	206A	206B	315
11	12	13	14	15	16	17	18	19	20
316	200	200	PP1	PP2	PP3	O	P2	P2	O

P2

1	2	3	4	5	6	7	8	9	10
201	202	208A	210	211	212	404	422	426	200
11	12	13	14	15	16	17	18	19	20
200	313	317	P2	P2	O	O	O	O	PE

K1

1	2	3	4	5	6	7	8	9	10
200	205	206	208	210	220	222	223	227	150
11	12								
N2	PE								

K2

1	2	3	4	5	6	7	8	9
315	319	322	423	980	208A	440	441	442

E1

1	2	3	4	5	6	7	8	9	10
75	76	78	80	200	215	216	200	217	R70
11	12								
R70	PE								

E2

1	2	3	4	5	6
B2	B3	100	102	R70	PE

F1-2

1	2	3	4	5	6
P2	P2	B2	N2	N2	B3

F2

1	2	3
B6	P2	N2

F3

1	2	3
B8	P2	N2

F4

1	2	3
B10	P2	N2

F5

1	2	3
B11	P2	N2

F6

1	2	3
B13	P2	N2

F7

1	2	3
B12	P2	N2

F8

1	2	3
B14	P2	N2

L1

1	2	3
218A	PE	219

L2

1	2	3
219	PE	200

L3

1	2	3
228	PE	200

L4

1	2	3
214	PE	200

L7

1	2	3
218	PE	218A

S1 (SHORT BAR)

1	2
LOD	200

S10 (SHORT BAR)

1	2
MP-4	MP-25

L5

1	2	3	4	5	6	7	8	9
247	PE	200	226	PE	200	323	PE	322

L6

1	2	3	4	5	6	7	8	9
224	PE	200	221	PE	200	323	PE	316A

WT

1	2	3
218A	PE	200

H2

1	2	3	4	5	6
953	954	955	200	M20-36 O	PE

C6

1	2	3
R70	S3	PE

C7

1	2	3
P2	N2	M2-8 O

C8

1	2	3
319D	319C	PE

SW1

1	2	3	4	5	6	7
203	980	261	WITT	200	400A	950A

SW2

1	2	3	4	5	6
400	950	158	N2	S3	42

C1

1	2	3	4	5	6	7	8	9	10
72	76	401	315	324	324A	917	951	975	405
11									
200									

F1-1

1	2	3	4	5	6
P2	P2	156	N2	N2	157

C2

1	2	3	4	5	6	7	8	9
B1	B4	232	B22X	B20X	233	200	150	158

-TC

1	2	3
990	991	992

ST1

1	2
154	

C3

1	2	3	4
S3	S3	977	977

C4

1	2	3
430	430U	P7

C5

1	2	3	4	5	6
P2	P2	N2	N2	200	200

2 AUTO-INDEX

A11

1	2	3
25B	PE	200

A16

1	2	3
B24X	P2	N2

A19

1	2	3
B27X	P2	N2

A12

1	2	3
B20		N2

A13

1	2	3
B21X	P2	N2

A17

1	2	3
B25A	P2	N2

A110

1	2	3
B26X	P2	N2

A14

1	2	3
B22		N2

A15

1	2	3
B23X	P2	N2

A18

1	2	3
B26X	P2	N2

S2 (SHORT BAR)

1	2
L1DX	200

AUTO POWER OFF

T4

1	2
42B	200

TW1

7	8
T3X	T4X

RESERVED

T1 (STOP)

1	2
206B	206G

T2 (EMERGENCY STOP)

7	8
319	319A

TW1

1	2	3	4	5	6	7	8	9	10
205	208	210	301	302	423A	T3X	T4XA	440	441
11	12	13	14						
			M20-18						
442	200	200	0						

WORK CHUTE

W1

1	2	3
234	PE	200

W2

1	2	3
235	PE	200

SCRAP CONVEYOR

T5

1	2	3
37	38	42

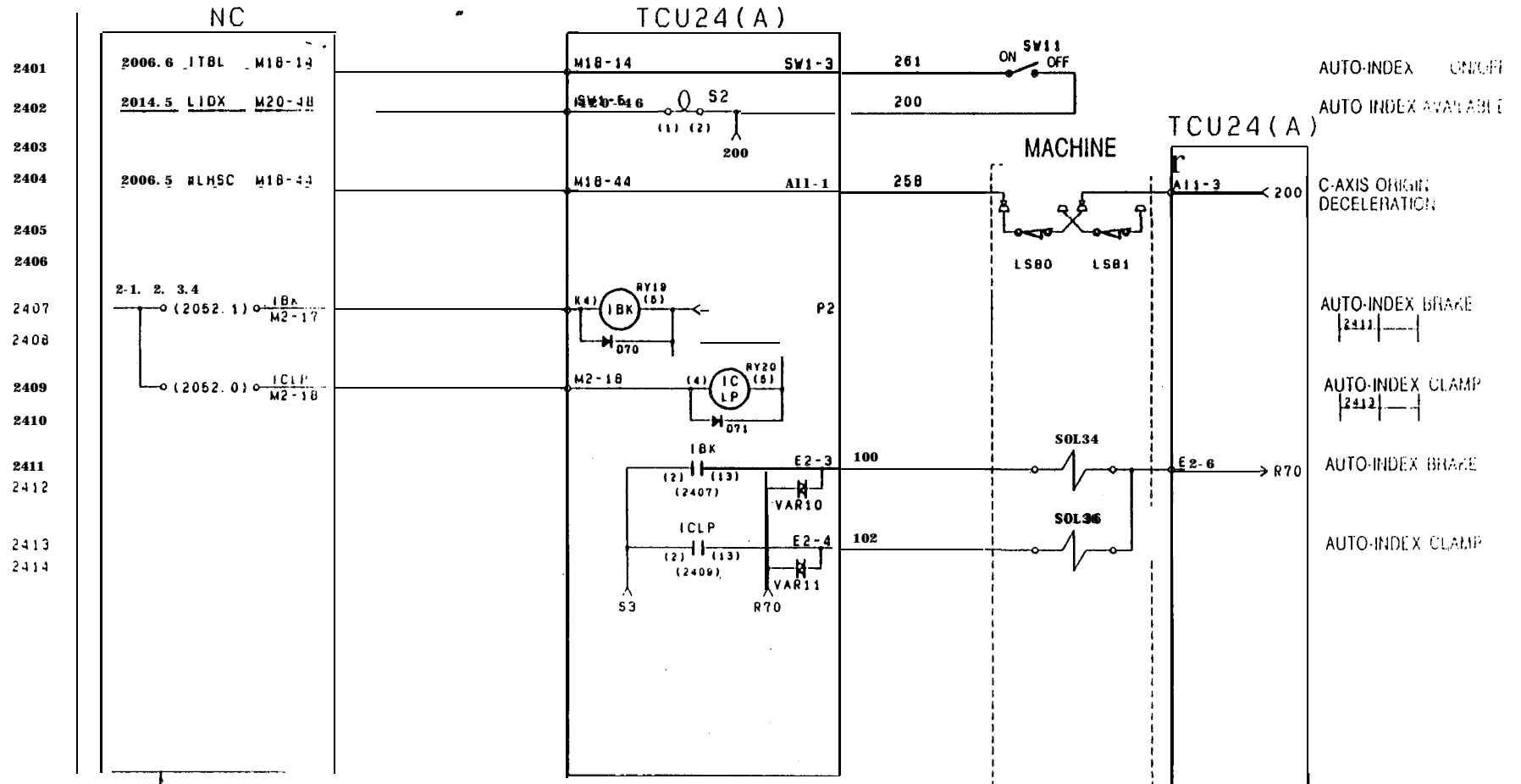
SAFETY MAT

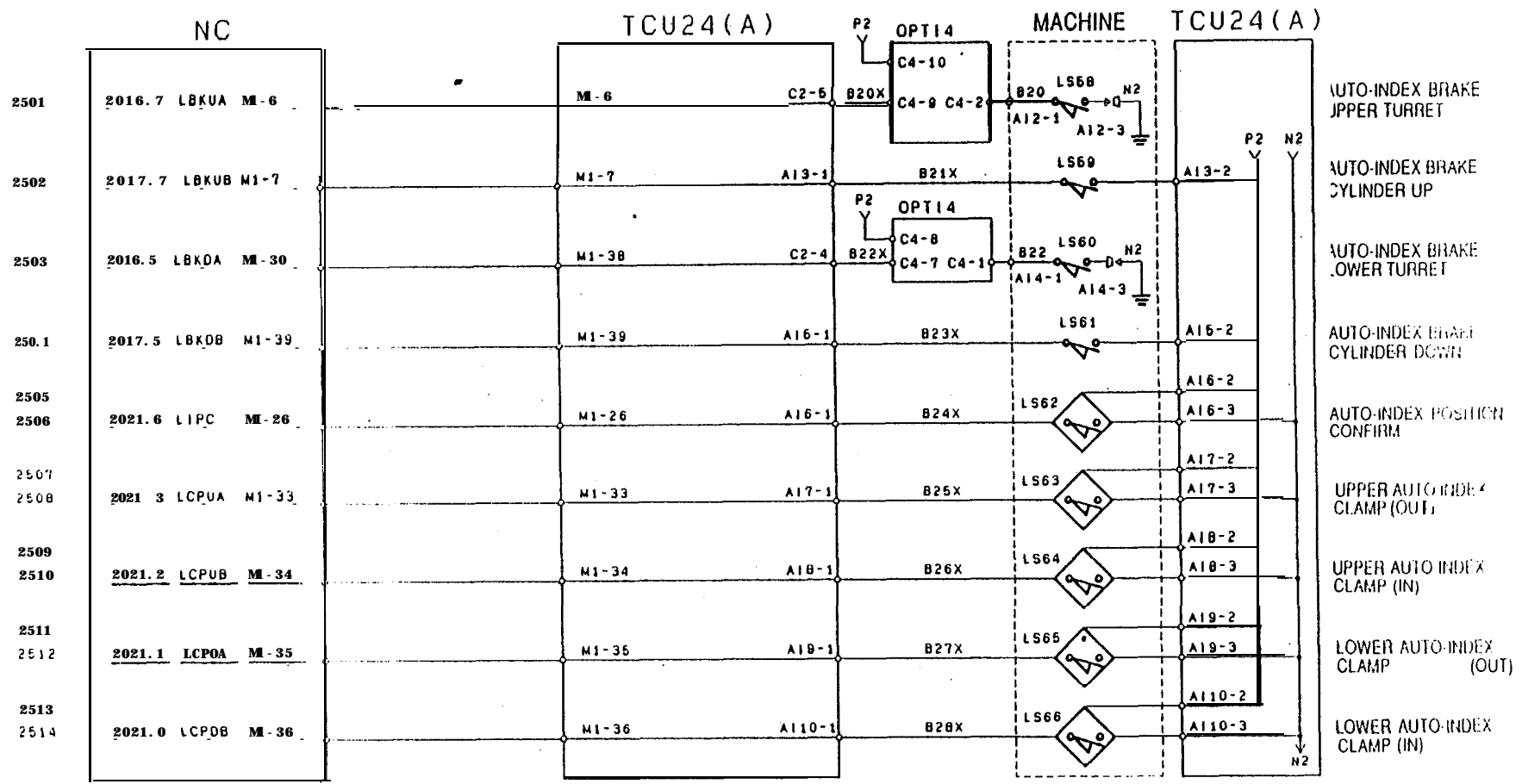
I3

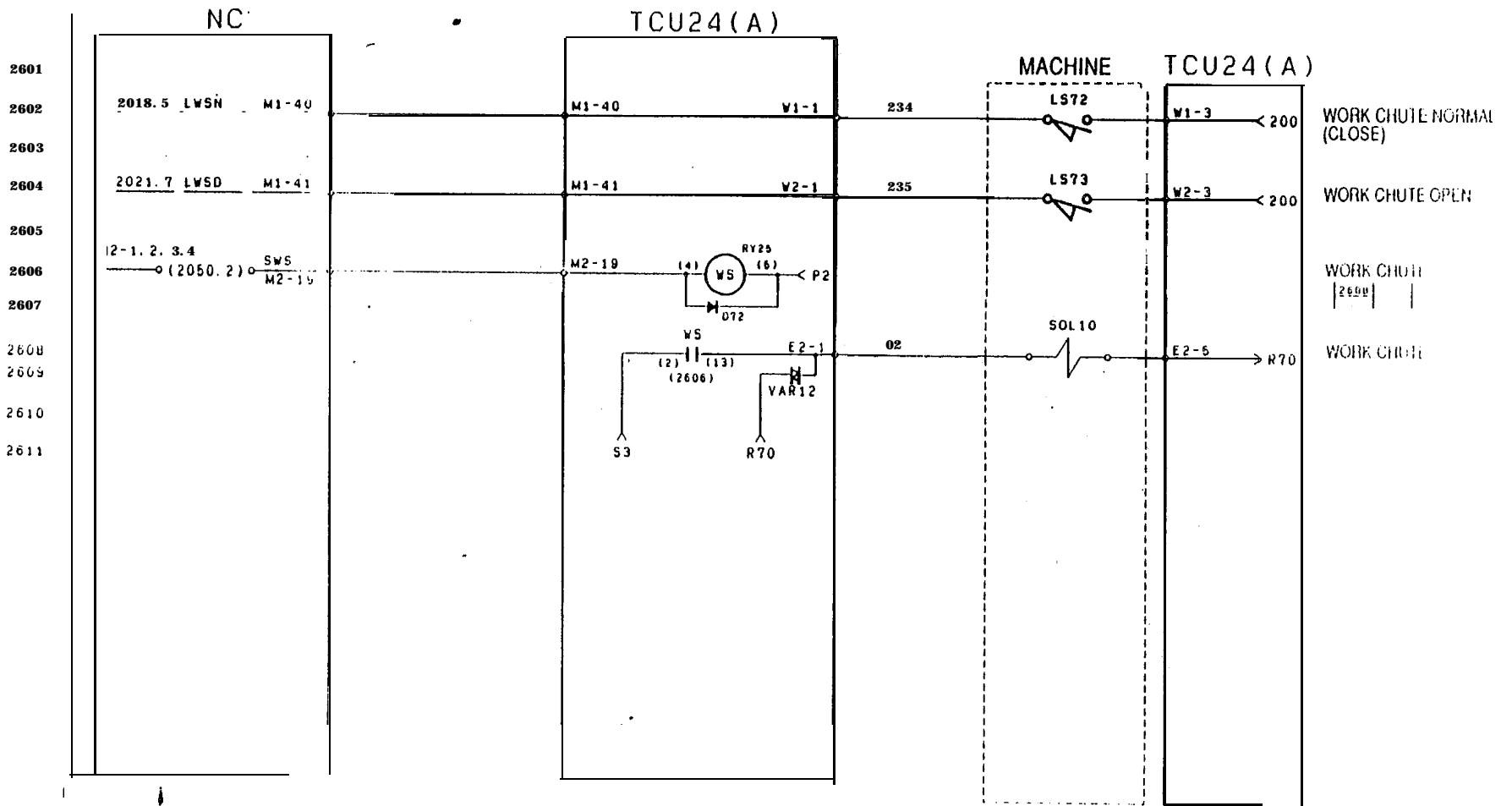
1	2
#SFM1	200

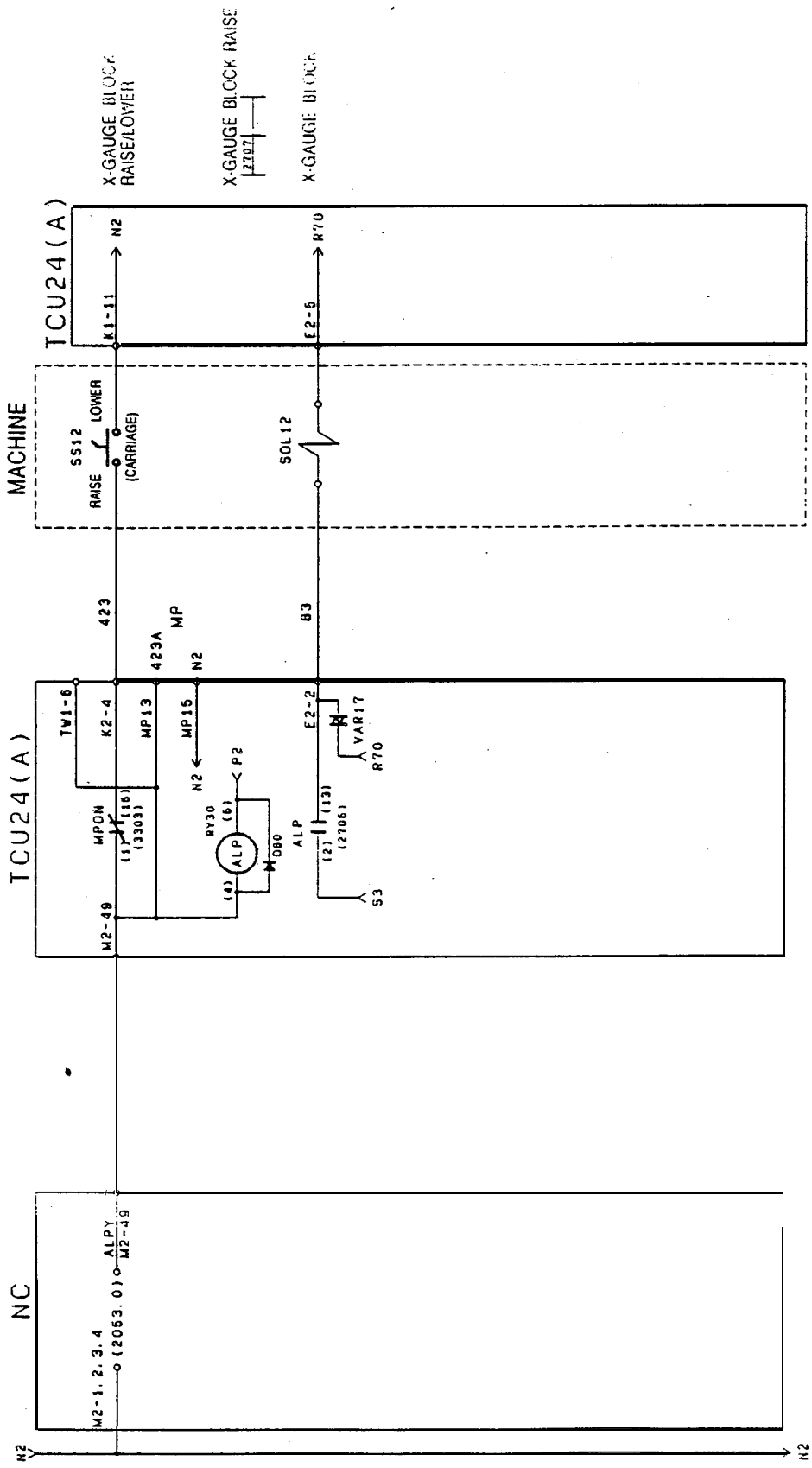
S18 (SHORT BAR)

1	2
SFEM	200

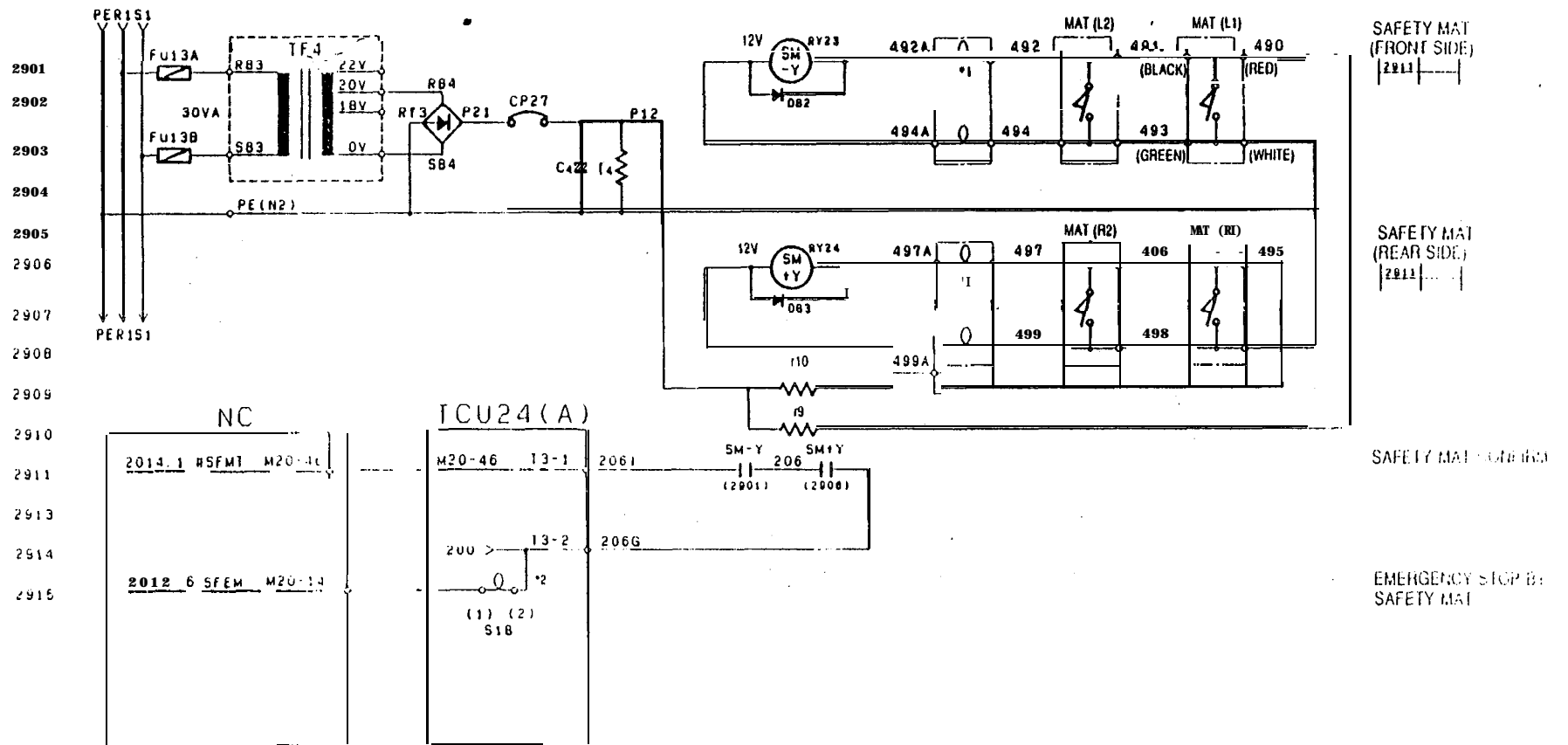








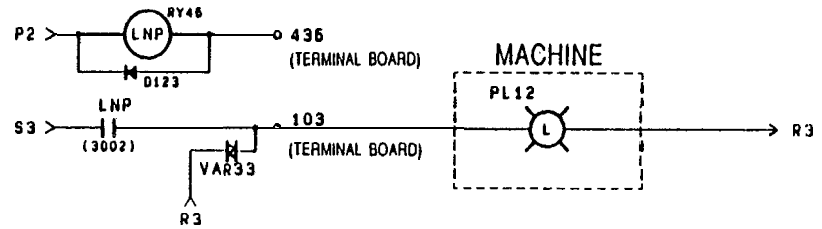
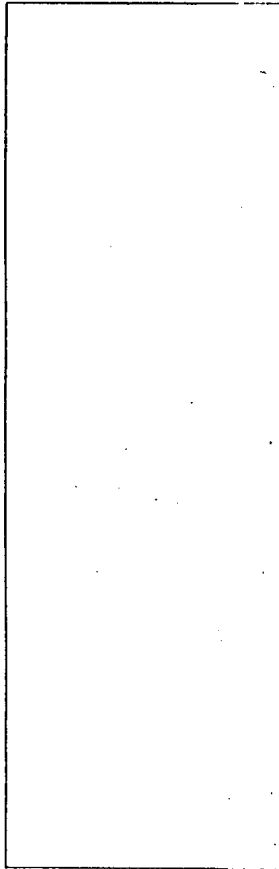
- 2701
- 2702
- 2703
- 2704
- 2705
- 2706
- 2707
- 2708
- 2709
- 2710

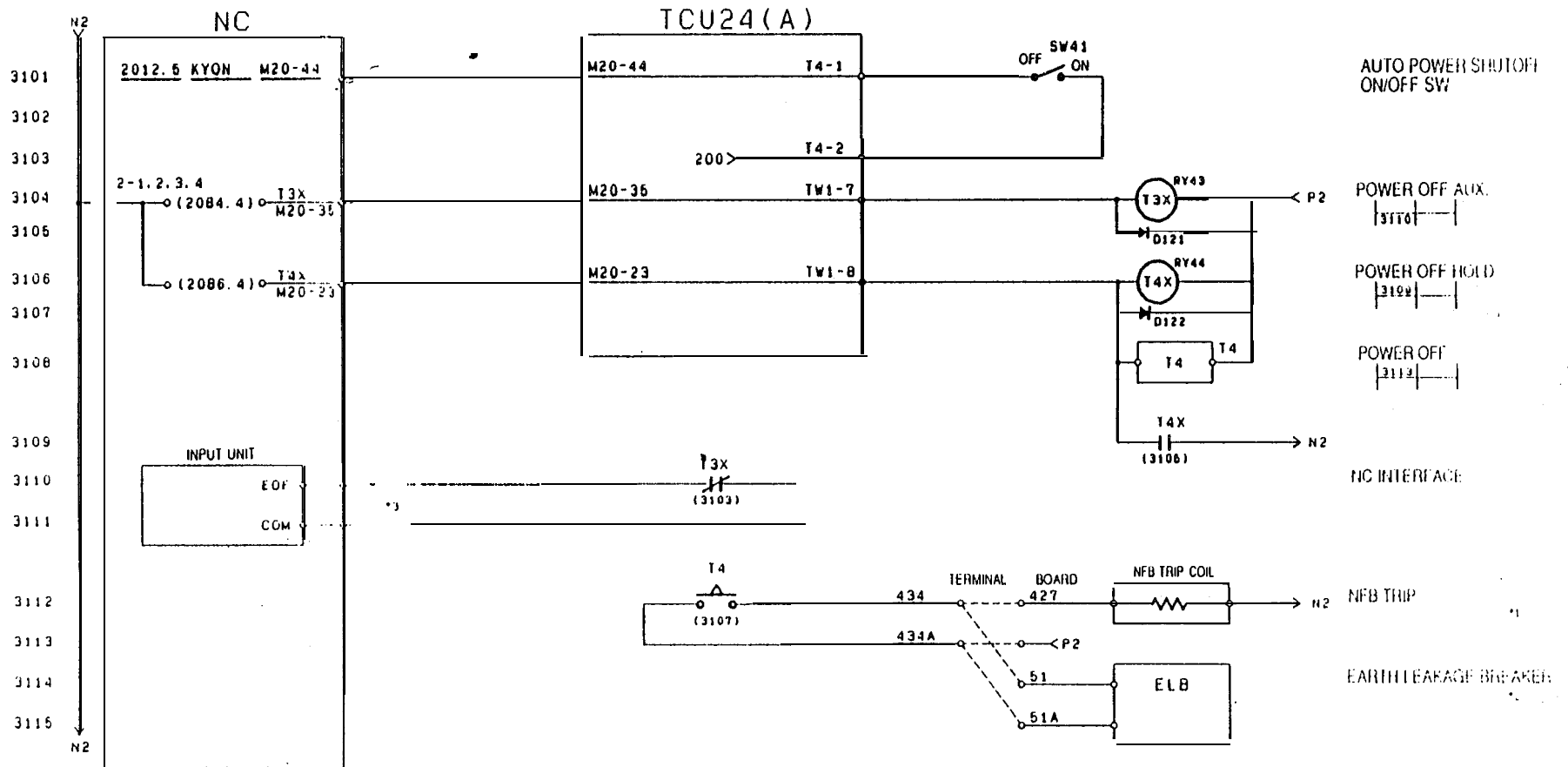


\*1 This shall be short-circuited via circuit breaker (Additional safety mat is not in service)  
 \*2 S18 shall be opened if safety mat turns up at emergency stop

3001  
3002  
3003  
3004  
3006

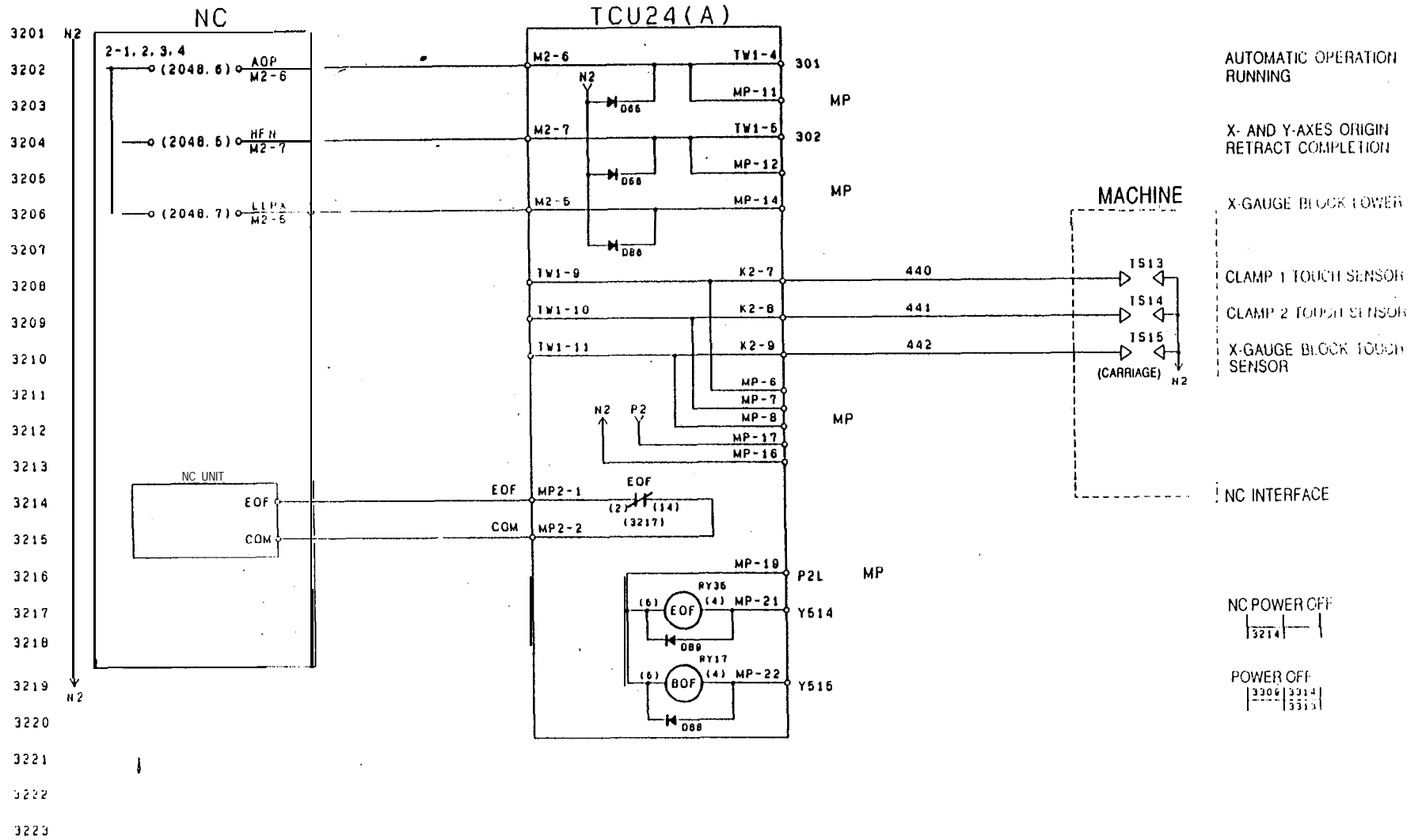
NC





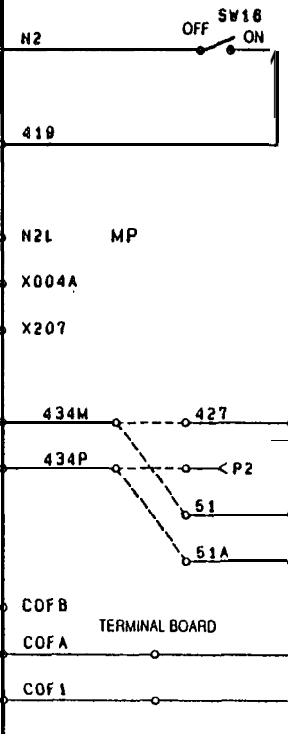
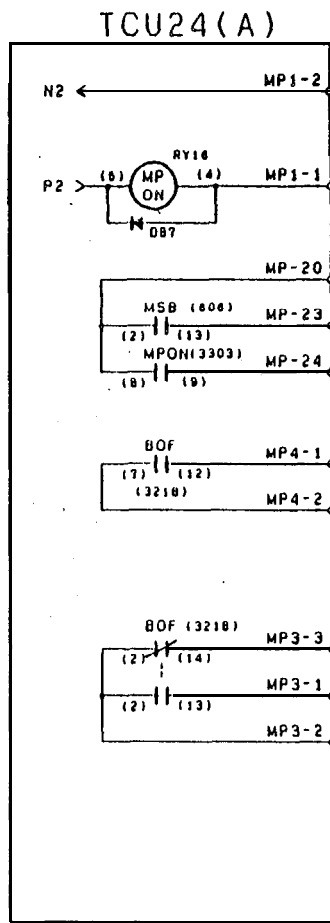
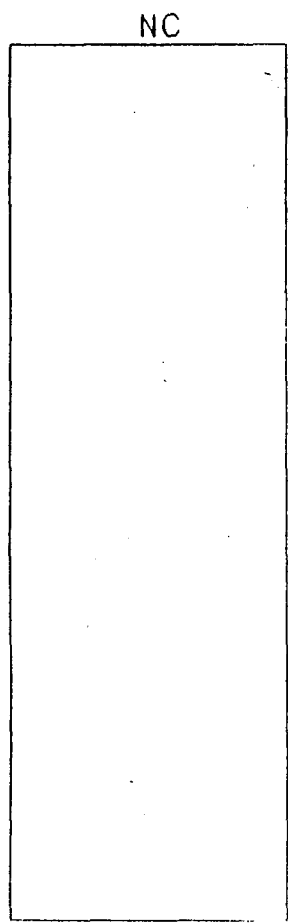
- \*1: Add NFB trip coil when its use is specified. (Connect line No. 434 with 427 and No. 434A with P2.)
- \*2: Earth leakage breaker shall be added when its use is required. (Connect line No. 434 with 51 and No. 434A with 51A.)
- \*3: EOF and COM shall be short-circuited when not in service.

Caution: MP retrofitting is unavailable when Auto Power Shutoff is in service.



Caution: As to other connections for MP retracting, refer to START (506) (505), STOP (612) (613), WORK CLAMP (1011) (1012) and X-GAUGE BLOCK (2703) (2704)

3301  
3302  
3303  
3304  
3306  
3306  
3307  
3308  
3309  
3310  
3311  
3312  
3313  
3314  
3315  
3316  
3316  
3317  
3318  
3319

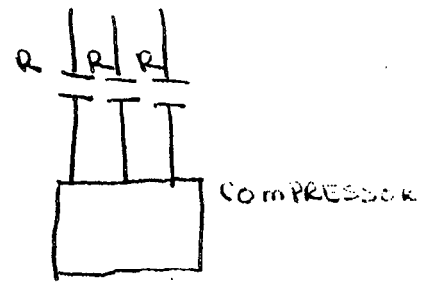


MP OPERATION ON OFF  
MP OPERATION  
STOP BUTTON  
MP OPERATION  
NFB TRIP  
EARTH LEAKAGE BREAKER  
COMPRESSOR OFF

GET P2 & N2 FROM MACHINE SIDE. MOUNT RELAY R IN SEPARATE BOX ABOVE AIR COMPRESSOR



COMPRESSOR POWER



\*1 Added when use of NFB Trip is specified (connected line No. 434M with 427 and 434P with P2)  
\*2 Added when use of earth leakage breaker is specified (connected line No. 434M with No. 51 and 434P with 51A)

R RELAY COIL NO. 12V DC

MP

1	2	3	4	5	6	7	8	9	10
		WCST1	WRSTF1					WC	
200		205	206E	206K	440	441	442	303	303A
11	12	13	14	15	16	17	18	19	20
OP	HFN		LLPX						
301	302	432A		N2	N2	P2		P2L	N2L
21	22	23	24	25					
Y514	Y515	X004A	X207	206H					

MP1

1	2
419	N2

MP2

1	2
EOF	COM

MP3

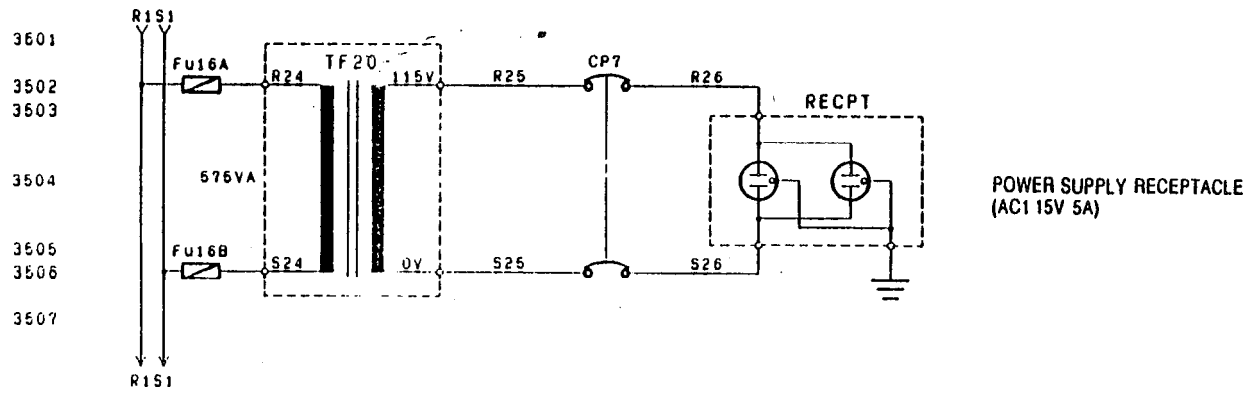
1	2	3
COF A	COF 1	COF B

MP4

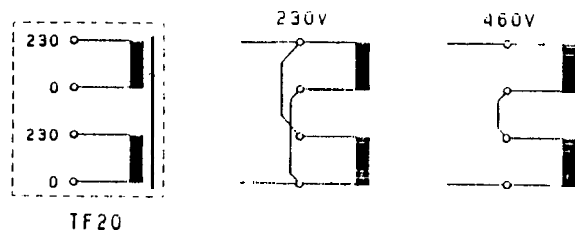
1	2
434M	434P

S10 (SHORT BAR)

1	2
MP-4	MP-26



TF20 CONNECTION DIAGRAM



SHORT-BAR SETTING (TCU24)

S: Short-circuit  
 O: Open  
 NO MARK: No relationship

	S1	S2	S10	S18		T1	T2	T3
STANDARD SETTING	O	O	S	S		S	S	S
FIRST SHEET JUDGEMENT ON OVERRIDE DETECTING FUNCTION INVALID	S							
2A.I. (A.I. AVAILABLE)		S						
MANIPULATOR (MP)			O					
EMERGENCY STOP BY SAFETY MAT				O				
SAFETY MAT								O
ADDITION OF STOP BUTTON						O		
ADDITION OF EMERGENCY STOP BUTTON							O	

PROTECTOR LIST

EQUIPMENT/DEVICE	SYMBOL	RATED VOLTAGE (AMPER RATING)	TYPE (MAKER)
PRESS MOTOR 5.5 kW 4P	NFB10	200V - 30A (Thermal 21.0A)	PKZM3-25/U+HI11+C-NA (Klockner-moeller)
		230V - 30A (Thermal 18.3A)	
		400V - 15A (Thermal 10.5A)	PKZM3-16/U+HI11+C-NA (Klockner-moeller)
		460V - 10A (Thermal 9.1A)	PKZM3-10/U+HI11+C-NA (Klockner-moeller)
HYDRAULIC MOTOR 2.2 kW 4P	NFB15	200V - 15A (Thermal 9.3A)	PKZM3-10/U+HI11+C-NA (Klockner-moeller)
		230V - 15A (Thermal 8.1A)	
		400V - 15A (Thermal 4.7A)	PKZM3-6.3/U+HI11+C-NA (Klockner-moeller)
		460V - 15A (Thermal 4.0A)	
POWER CIRCUIT TF1 959VA	FU10A FU10B (Primary side)	200V - 15A 230V - 15A 400V - 8A 460V - 8A 580V - 8A	KTK (Bussman) KLK (Littelfuse)
	CP2 (AC100V)	7.5A	CP32E/7.5 (Fuji)
	CP4 (DC24V)	7.5A	CP32E/7.5 (Fuji)
	CP15 (Quick energizing power source)	5A	CP31E/5WDDC (Fuji)
	FU1 (AC100V)	3A	KTK (Bussman) KLK (Littelfuse)
	FU2 (DC24V)	3A	KTK (Bussman) KLK (Littelfuse)
COOLING FAN FOR HYDRAULIC UNIT 43W x 3	CP29	1A	CP32E/1W (Fuji)
	CP30	1A	CP32E/1W (Fuji)
	CP31	1A	CP32E/1W (Fuji)
COOLING FAN FOR MACHINE 80W	CP26	2.5A	CP32E/2.5W (Fuji)

EQUIPMENT/DEVICE	SYMBOL	RATED VOLTAGE (AMPER RATING)	TYPE (MAKER)
SAFETY MAT TF4 36.7VA	CP27	1A	CP31E/1D (Fuji)
	FU13A FU13B	200V - 1-1/2A 230V - 1-1/2A 400V - 3/4A 460V - 3/4A 580V - 1/2A	KTK (Bussman) KLK (Littlefuse)
POWER SUPPLY RECEPTACLE TF20 575VA	CP7 FU16	5A 230V - 10A 460V - 5A	CP32E/5 (Fuji) KTK (Bussman) KLK (Littlefuse)


## ELECTRIC PARTS LIST

SYMBOL	PARTS NAME	TYPE	MAKER
Page 2 NFB1	Non-fuse breaker	NZM6b-63/ZM6a-60+H6 -A	Klockner-moeller
NFB10	Non-fuse breaker	PKZM3-25/U+HI11+C-NA	Klockner-moeller
TH1	Thermal relay	(230V-30A) PKZM3-16/U+HI11 +C-NA (400V-15A) PKZM3-10/U+HI11 +C-NA (460V-10A)	
m1	Press motor	YEFOUP-KK 5.5 kW 4P	Hitachi
m4	Hydraulic motor	2.2 kW 4P	Toshiba
MDF	Magnet contactor	SC-1 N/UL AC1 OOV	Fuji
MHD	Magnet contactor	SRC3631-05/UL AC1 OOV	Fuji
SK2	Spark killer condenser	RFM2H664KPD	Marukon
NFB15	Non-fuse breaker	PKZM3-10/U+HI11 +C-NA	Klockner-moeller
TH8	Thermal relay	(230V-15A) PKZM3-6.3/U+HI11+C-NA (400V-15A) (460V-15A)	
Fu10A	Fuse	K T K	Bussman
Fu10B		KLK (230V-15A) (400V-8A) (460V-8A) (580V-8A)	Littlefuse
TF1	Transformer	1 $\phi$ 959VA WT-959 0-200-230-350V, 0-200-230V/ 0-100V 700VA, 0-53V 159VA. O-I 8-20-22V 1 00VA	Sankyo
CP2	Circuit protector	CP32E/7.5	Fuji
Fu1	Fuse	KTK KLK	Bussman Littlefuse
RI2	Rectifier	DSIOBNL	Mitsubishi
CP15	Circuit protector	CP31E/5WDDC	Fuji
c5	Capacitor	4700 $\mu$ F 160WV	Nihon chemical condenser
r7	Resistor	1 k $\Omega$ 50W	Nihon teikouki
r8	Resistor	70 $\Omega$ 150w	Nihon teikouki
C6	Capacitor	47 $\mu$ F 160WV	Nihon chemical condenser
RI1	Rectifier	S5VB20	Shindengen
CP4	Circuit protector	CP32E/7.5	Fuji
C1	Capacitor	6800 $\mu$ F 63WV	Nihon chemical condenser
r3	Resistor	100 $\Omega$ 20W	Nihon teikouki
Fu2	Fuse	KTK KLK	Bussman Littlefuse

	SYMBOL	PARTS NAME	TYPE	MAKER
	D	Diode	SIB01-02	Fuji
Page 3	VAR2~6 10~12, 17.33	Varistor	Z10L221	Ishizuka
	SK1	Spark killer condenser	DCR2-50A22	Marukon
	CP29	Circuit protector	CP32E/1W	Fuji
	CP30	Circuit protector	CP32E/1W	Fuji
	CP31	Circuit protector	CP32E/1W	Fuji
	CP26	Circuit protector	CP32E/2.5W	Fuji
	Fm18. 19.20	Cooling fan motor	T750DX	Toyo
	Fm17	Cooling fan motor	MH-8B	Kamakura
	C2	Capacitor	8 $\mu$ F 250WV	
Page 4	LS35	Limit switch	LDZ-5312	Yamatake
Page 5	SW40	Snap switch	S-1A	Nihon kaiheiki
	PB2	Push button switch	AH30-FG10	Fuji
	SW4	Snap switch	S-6A	Nihon kaiheiki
	PB6	Push button switch	AH30-FY10	Fuji
	FTS1	Foot switch	OFL-BS-SM2K	Ojiden
	PS3	Pressure switch	IS1 000-01	Shouketsu
	PS2	Pressure switch	IS1000-01	Shouketsu
	PS1	Pressure switch	IS1000-01	Shouketsu
Page 6	PB5	Push button switch	AH30VR-VR01	Fuji
	LS17	Limit switch	14CE3-3J	Yamatake
	PB20	Push button switch	AH30-FG10	Fuji
	LS23	Limit switch	14CE3-3J	Yamatake
	LS22	Limit switch	14CE2-1J	Yamatake
Page 7	LS24	Limit switch	SL1-A	Yamatake
	LS25	Limit switch	L D Z - 5 3 1 2	Yamatake
	LS27	Limit switch	SL1-A	Yamatake
	LS26	Limit Switch	SL1-A	Yamatake
	LS29	Limit switch	LDZ-5312	Yamatake
	LS28	Limit switch	LDZ-5312	Yamatake
	LS21	Limit switch	14CE2-1J	Yamatake
	LS34	Limit switch	U-84MA2	IHI
	PB11	Push button switch	AH30-VR01	Fuji
	SW7	Snap switch	S-1A	Nihon kaiheiki
Page 8	PS4	Pressure switch	TDZ-3F	Taihei

	SYMBOL	PARTS NAME	TYPE	MAKER
	PS5	Pressure switch	UCF-E-03-10μ	Masuda seisakusho
	TRS1	Thermo switch	ALS-C 1090C	Saginomiya
Page 9	SW14	Snap switch	S-1A	Nihon kaiheiki
	SW15	Snap switch	S-1A	Nihon kaiheiki
	m3	Lubrication motor	SK505	IHI
Page 10	LS33	Limit switch	LDZ-5312	Yamatake
	LS32	limit switch	LDZ-5312	Yamatake
	LS31	Limit switch	SL1-A	Yamatake
	LS30	Limit switch	SL1-A	Yamatake
Page 12	LS2	Proximity switch	TL-T5E1-7	Omron
	LS3	Proximity switch	TL-T5E1-7	Omron
	LS11	Auto switch	D-F79	Shouketsu
	LS12	Auto switch	D-F79	Shouketsu
	LS13	Auto switch	D-F79	Shouketsu
	LS14	Auto switch	D-F79	Shouketsu
	LS6	Proximity switch	FL1 -5E6-L4A	Yamatake
Page 13	LS8	Proximity switch	FL1 -5D6-L4A	Yamatake
	LS10	Proximity switch	FL1-5D6-L4A	Yamatake
	LS1	Proximity switch	TL1-T5E1-7	Omron
	LS4	Proximity switch	TL1-T5E1-7	Omron
	SW13	Snap Switch	S-1A	Nihon kaiheiki
Page 24	SW1 1	Snap switch	S-1A	Nihon kaiheiki
	*LS80	Limit switch	14CE8-1J	Yamatake
	*LS84	Limit switch	14CE8-1J	Yamatake
Page 25	● LS58	Limit switch	14CE3-1	Yamatake
	*LS59	Auto switch	D-A77	Shouketsu
	*LS60	Limit switch	14CE2-1	Yamatake
	*LS61	Auto switch	D-A77	Shouketsu
	*LS62	Proximity switch	F L 1 -2D6-L4A	Yamatake
	*LS63	Proximity switch	FL1-2D6-L3A	Yamatake
	*LS64	Proximity switch	FL1-2D6-L3A	Yamatake
	● LS65	Proximity switch	FL1-2D6-L3A	Yamatake
	● LS66	Proximity switch	FL1-2D6-L3A	Yamatake
Page 26	*LS72	Auto switch	D-A77	Shouketsu
	*LS73	Auto switch	D-A77	Shouketsu
Page 27	*SS12	Select switch	AH30-P2B10	Fuji

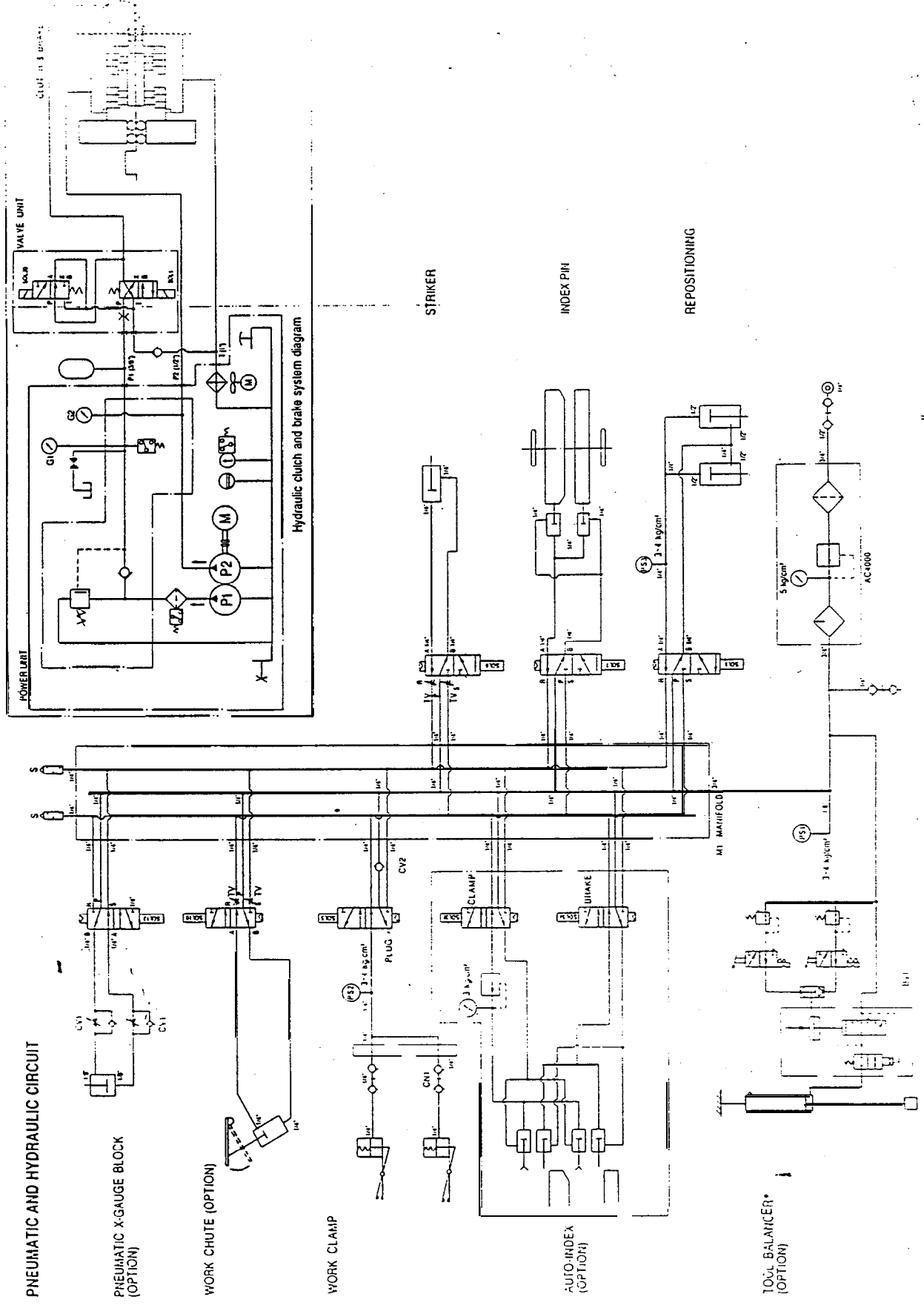
● : OPTIONAL

	SYMBOL	P A R T S NAME	TYPE	MAKER
Page 28	*Fu13A Fu13B	Fuse	KTK KLK (230%1 1/2A) (400V-3/4A) (460V-3/4A) (580V-1/2A)	Bussman Littlfuse
	*TF4	Transformer	1 $\phi$ 30VA TW-30 0-200-230-350V, 0-200-230V/ 0-1 8-20-22V	Sankyo
	*Ri3	Rectifier	S5VB20	Shindengen
	*CP27	Circuit protector	CP31E/1D	Fuji
	*C4	Capacitor	100 $\Omega$ 2 o w	Nihon chemical condenser
	*r4	Resistor	2200 $\mu$ F 50WV	Nihon teikouki
		Resistor	160 $\Omega$ 5W	Nihon teikouki
Page 30	*SW41	Snap switch	S-1A	Nihon kaiheiki
Page 32	*SW16	Snap switch	S-1A	Nihon kaiheiki
Page 34	*Fu16A Fu16B	Fuse	KTK KLK (230V-10A) (460V-5A)	Bussman Littlefuse
	*CP7	Circuit protector	CP32E/5	Fuji
	*TF20	Transformer	1 $\phi$ 575VA TW-575 0-200-230V, 0-200-230V/ 0-1 15V	S a n k y o

\*: OPTIONAL

PCB:TCU24 (A)

SYMBOL	PARTS NAME	TYPE	MAKER
	P.C.B.	A51026A	Toyo
<b>RY2-6, 8-15, 17,</b> 19. 20. 22. 25. 30. 34.35	Relay Relay socket	NC-20 DC24V NC.20 AW4924	National National
<b>RY16</b>	Relay Relay socket	NC4D DC24V NC4A AW4944	National National
s3	Check pin connector	60874-2	AMP
R70	Check pin connector	60874-2	AMP
200	Check pin connector	60874-2	AMP
N2	Check pin connector	60874-2	AMP
P2	Check pin connector	60874-2	AMP
<b>D49, 51-53.</b> 55.56. 58. 59. <b>61-67, 70-72,</b> 80, 84-90	Diode	S1B01-02	Fuji
<b>VAR2-6,</b> 10-12, 17	Varistor	Z10L221	shizuka



PNEUMATIC AND HYDRAULIC CIRCUIT

PNEUMATIC X-GAUGE BLOCK (OPTION)

WORK CHUTE (OPTION)

WORK CLAMP

AUTO-INDEX (OPTION)

TOOL BALANCER\* (OPTION)

STRIKER

INDEX PIN

REPOSITIONING

Hydraulic clutch and brake system diagram

PNEUMATIC AND HYDRAULIC PARTS LIST

SYMBOL	PARTS NAME	TYPE	MAKER
SOL1	Solenoid valve	4WE 10	REXROTH
SOL5	Solenoid valve	VF2100-1G	Shouketsu
SOL6	Solenoid valve	VF2100-1G	Shouketsu
SOL7	Solenoid valve	VF2100-1G	Shouketsu
SOL8	Solenoid valve	VF2100-1G	Shouketsu
SOL90	Solenoid valve	VF2100-1G	Shouketsu
SOL92	Solenoid valve	VF2100-1G	Shouketsu
SOL20	Solenoid valve	<b>3WE10</b>	<b>REXROTH</b>
SOL34	Solenoid valve	VF29 00-1G	Shouketsu
SOL36	Solenoid valve	<b>VF2100-1G</b>	Shouketsu
BV9	Balance valve	7931038	Taiyo
<b>M1</b>	Manifold	<b>VV5F2-01-071 -02</b>	Shouketsu
<b>PS1</b>	Pressure switch	XT1 5-39	Shouketsu
<b>PS2</b>	Pressure switch	<b>XT15-31</b>	Shouketsu
<b>PS3</b>	Pressure switch	XT9 5-39	Shouketsu
<b>CV1</b>	Check valve	<b>PSC6-PT 1/8-0</b>	<b>Nitta</b>
cv2	Check valve	XT9 9-57	Shouketsu
CN9	Connector	<b>20PF-SM</b>	Nina
<b>TV</b>	Throttle valve	<b>VVF2000-20A-1</b>	Shouketsu
S	Silencer	AN200-02	Shouketsu