

BAND SAWING MACHINE
HFA SERIES ^{EX}
HFA 250/250W/400/400W

CIRCUIT DIAGRAMS



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Circuit Diagrams:

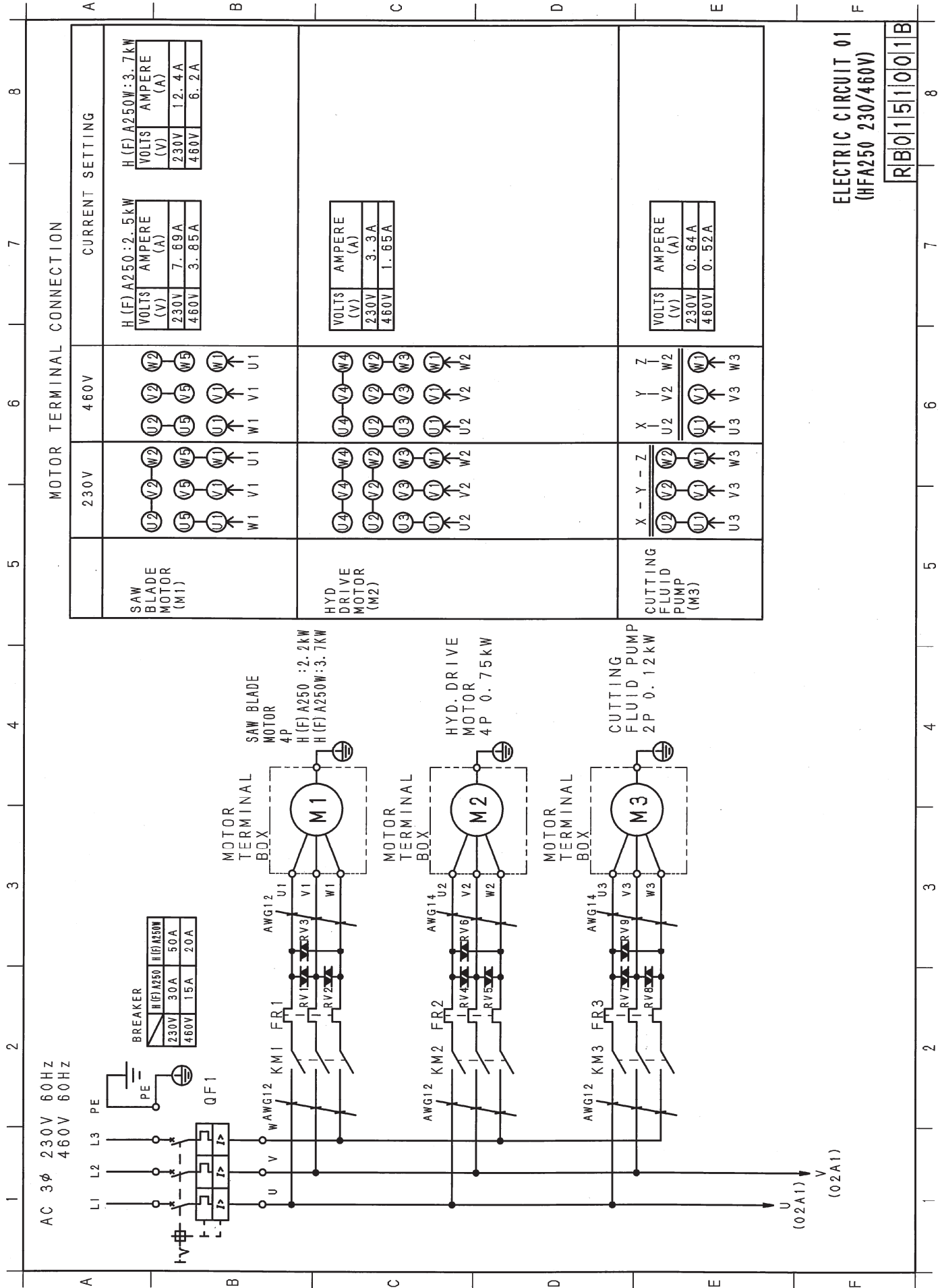
HFA Series Band Sawing Machine

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Dec. 2011

ELECTRIC CIRCUIT

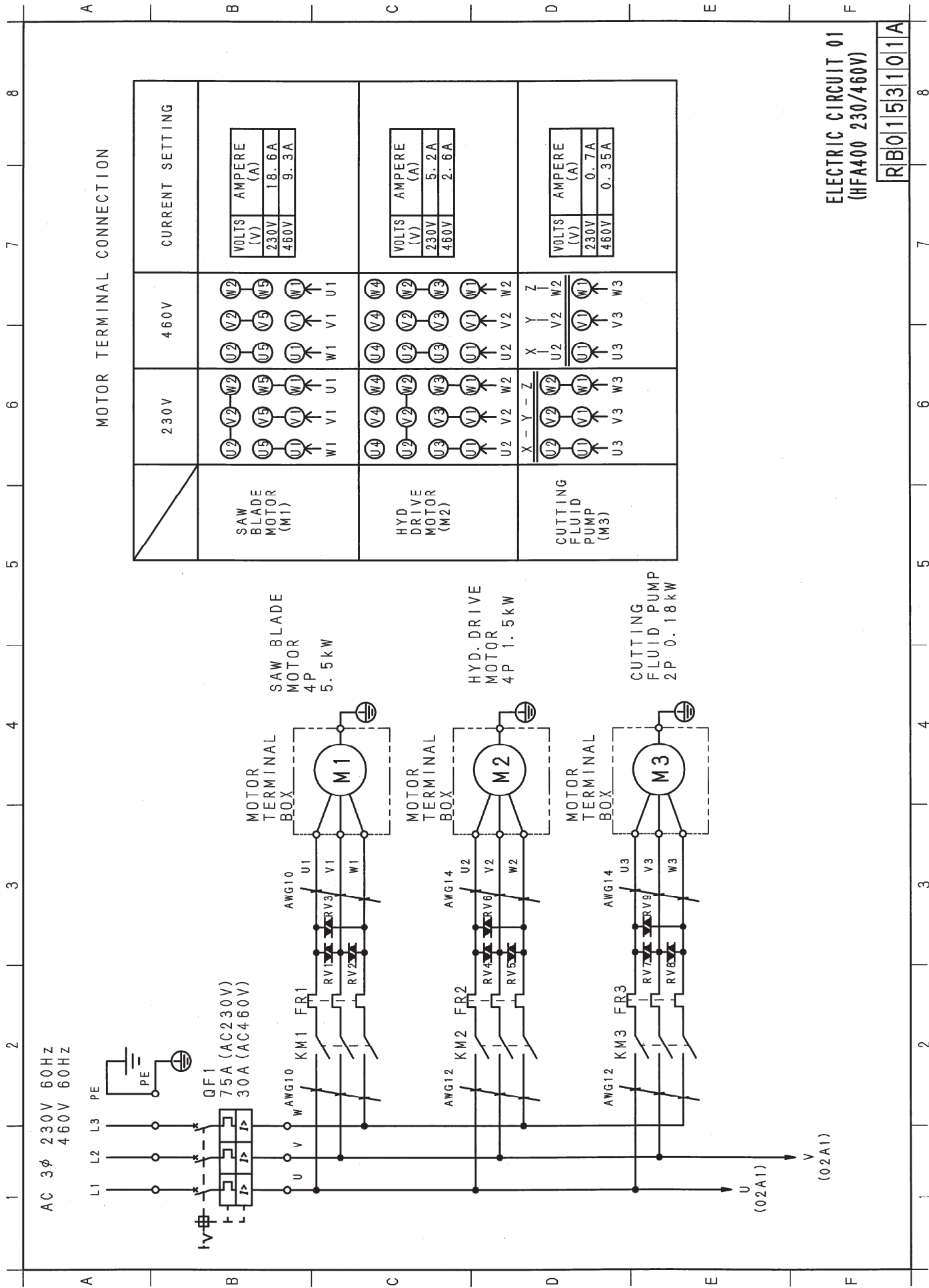


MOTOR TERMINAL CONNECTION

	230V	460V	CURRENT SETTING								
SAW BLADE MOTOR (M1)			<table border="1"> <tr> <td colspan="2">H (F) A250 : 2.5kW</td> </tr> <tr> <td>VOLTS (V)</td> <td>AMPERE (A)</td> </tr> <tr> <td>230V</td> <td>7.69A</td> </tr> <tr> <td>460V</td> <td>3.85A</td> </tr> </table>	H (F) A250 : 2.5kW		VOLTS (V)	AMPERE (A)	230V	7.69A	460V	3.85A
H (F) A250 : 2.5kW											
VOLTS (V)	AMPERE (A)										
230V	7.69A										
460V	3.85A										
HYD DRIVE MOTOR (M2)			<table border="1"> <tr> <td>VOLTS (V)</td> <td>AMPERE (A)</td> </tr> <tr> <td>230V</td> <td>3.3A</td> </tr> <tr> <td>460V</td> <td>1.65A</td> </tr> </table>	VOLTS (V)	AMPERE (A)	230V	3.3A	460V	1.65A		
VOLTS (V)	AMPERE (A)										
230V	3.3A										
460V	1.65A										
CUTTING FLUID PUMP MOTOR (M3)			<table border="1"> <tr> <td>VOLTS (V)</td> <td>AMPERE (A)</td> </tr> <tr> <td>230V</td> <td>0.64A</td> </tr> <tr> <td>460V</td> <td>0.52A</td> </tr> </table>	VOLTS (V)	AMPERE (A)	230V	0.64A	460V	0.52A		
VOLTS (V)	AMPERE (A)										
230V	0.64A										
460V	0.52A										

**ELECTRIC CIRCUIT 01
(HFA250 230/460V)**

RB0151001B



MOTOR TERMINAL CONNECTION

	230V	460V	CURRENT SETTING						
SAW BLADE MOTOR (M1)			<table border="1"> <tr><th>VOLTS (V)</th><th>AMPERE (A)</th></tr> <tr><td>230V</td><td>18.6A</td></tr> <tr><td>460V</td><td>9.3A</td></tr> </table>	VOLTS (V)	AMPERE (A)	230V	18.6A	460V	9.3A
VOLTS (V)	AMPERE (A)								
230V	18.6A								
460V	9.3A								
HYD. DRIVE MOTOR (M2)			<table border="1"> <tr><th>VOLTS (V)</th><th>AMPERE (A)</th></tr> <tr><td>230V</td><td>5.2A</td></tr> <tr><td>460V</td><td>2.6A</td></tr> </table>	VOLTS (V)	AMPERE (A)	230V	5.2A	460V	2.6A
VOLTS (V)	AMPERE (A)								
230V	5.2A								
460V	2.6A								
CUTTING FLUID PUMP MOTOR (M3)			<table border="1"> <tr><th>VOLTS (V)</th><th>AMPERE (A)</th></tr> <tr><td>230V</td><td>0.7A</td></tr> <tr><td>460V</td><td>0.35A</td></tr> </table>	VOLTS (V)	AMPERE (A)	230V	0.7A	460V	0.35A
VOLTS (V)	AMPERE (A)								
230V	0.7A								
460V	0.35A								

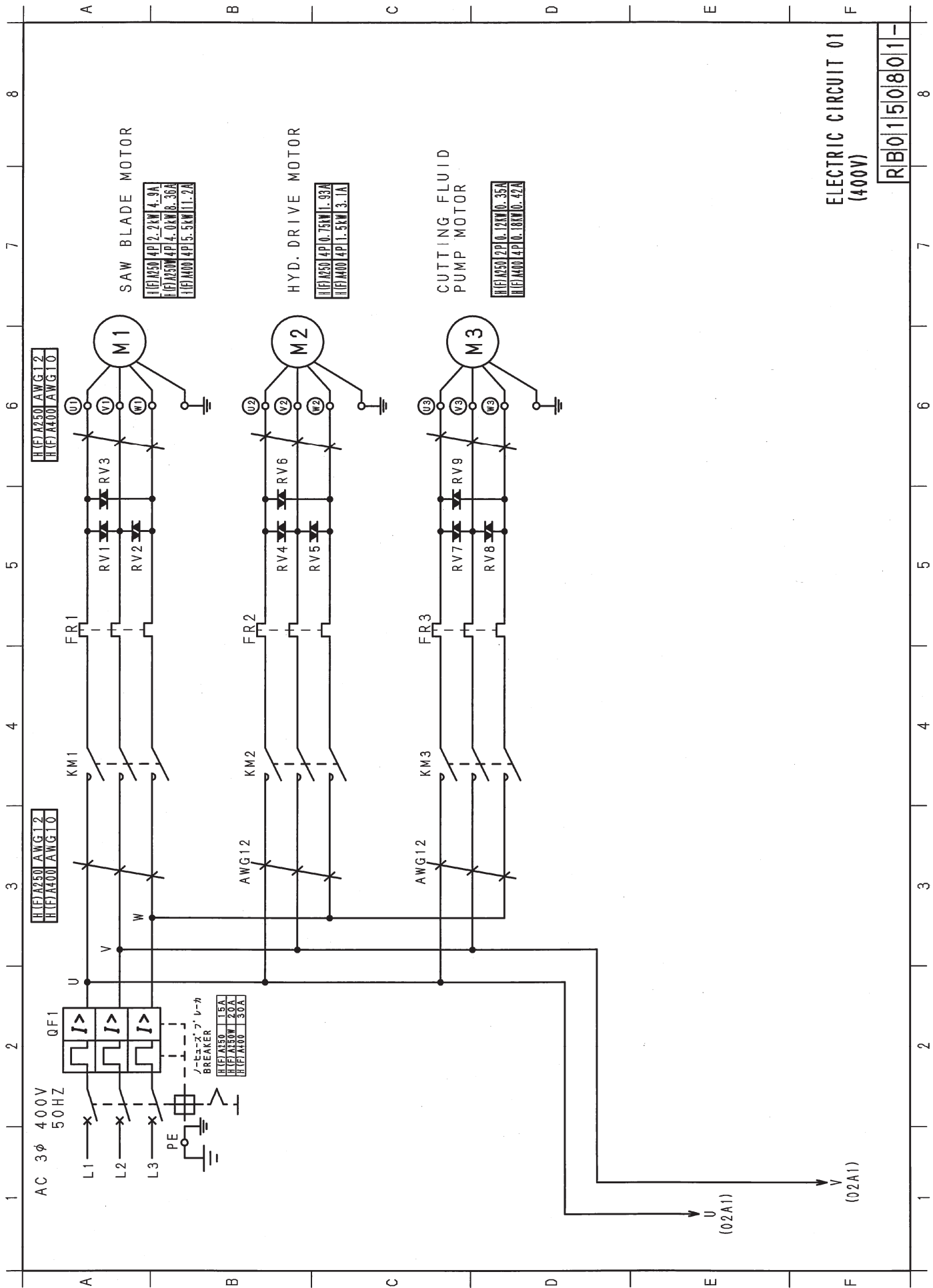
SAW BLADE MOTOR
MOTOR
4P
5.5kW

HYD. DRIVE MOTOR
MOTOR
4P 1.5kW

CUTTING FLUID PUMP
MOTOR
2P 0.18kW

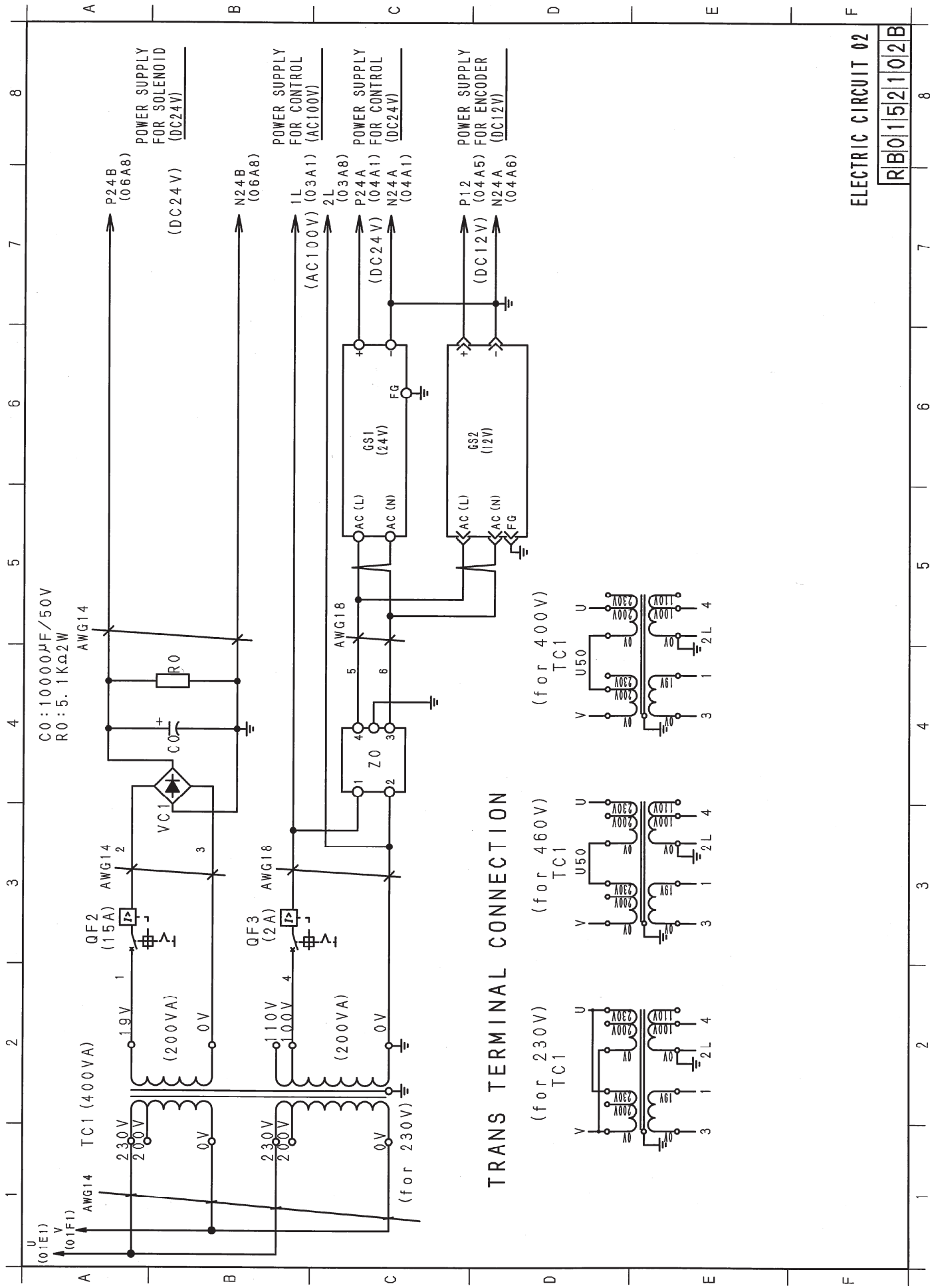
ELECTRIC CIRCUIT 01
(HFA400 230/460V)

RIB0153101A



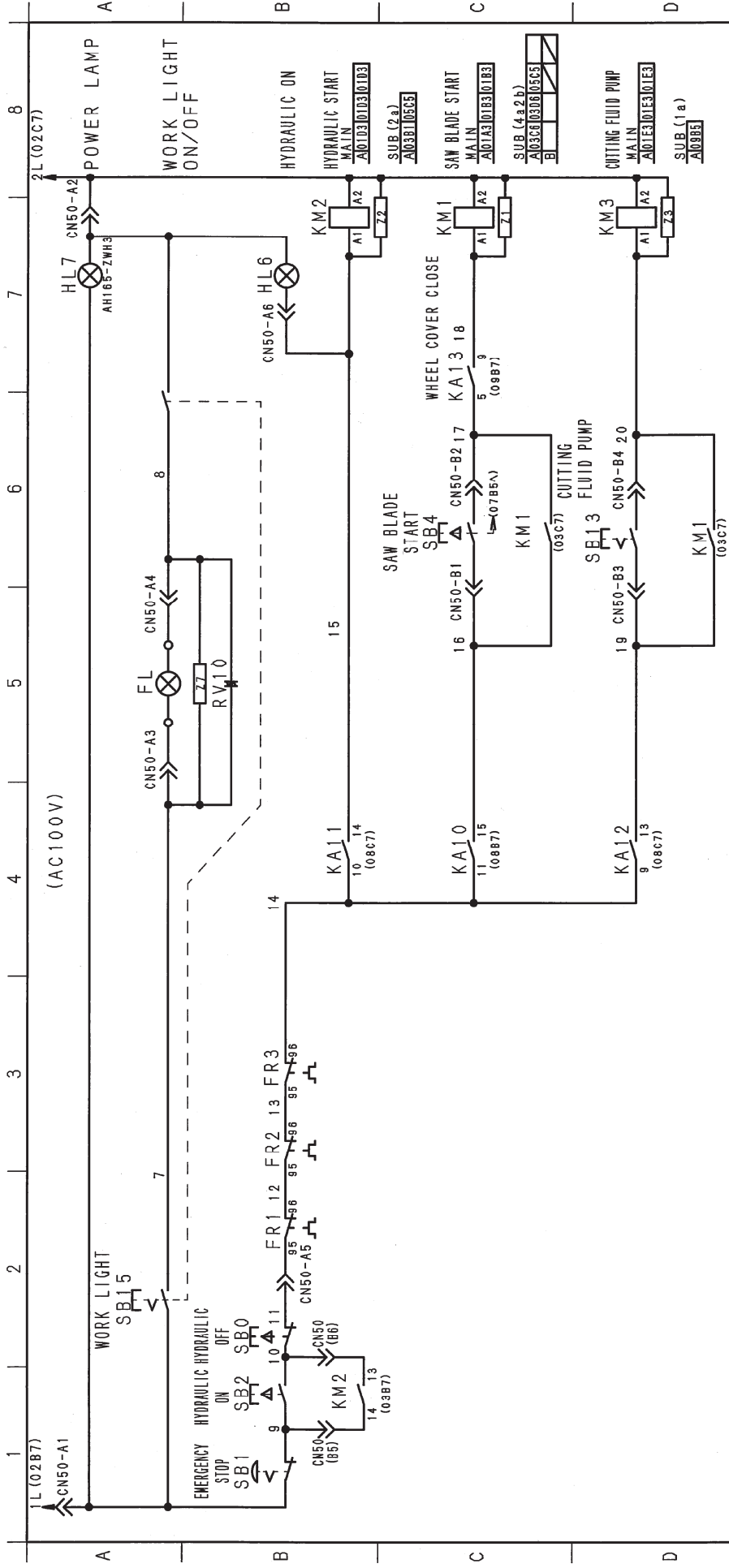
ELECTRIC CIRCUIT 01
(400V)

RB0150801-



ELECTRIC CIRCUIT 02

R|B|0|1|5|2|1|0|2|B



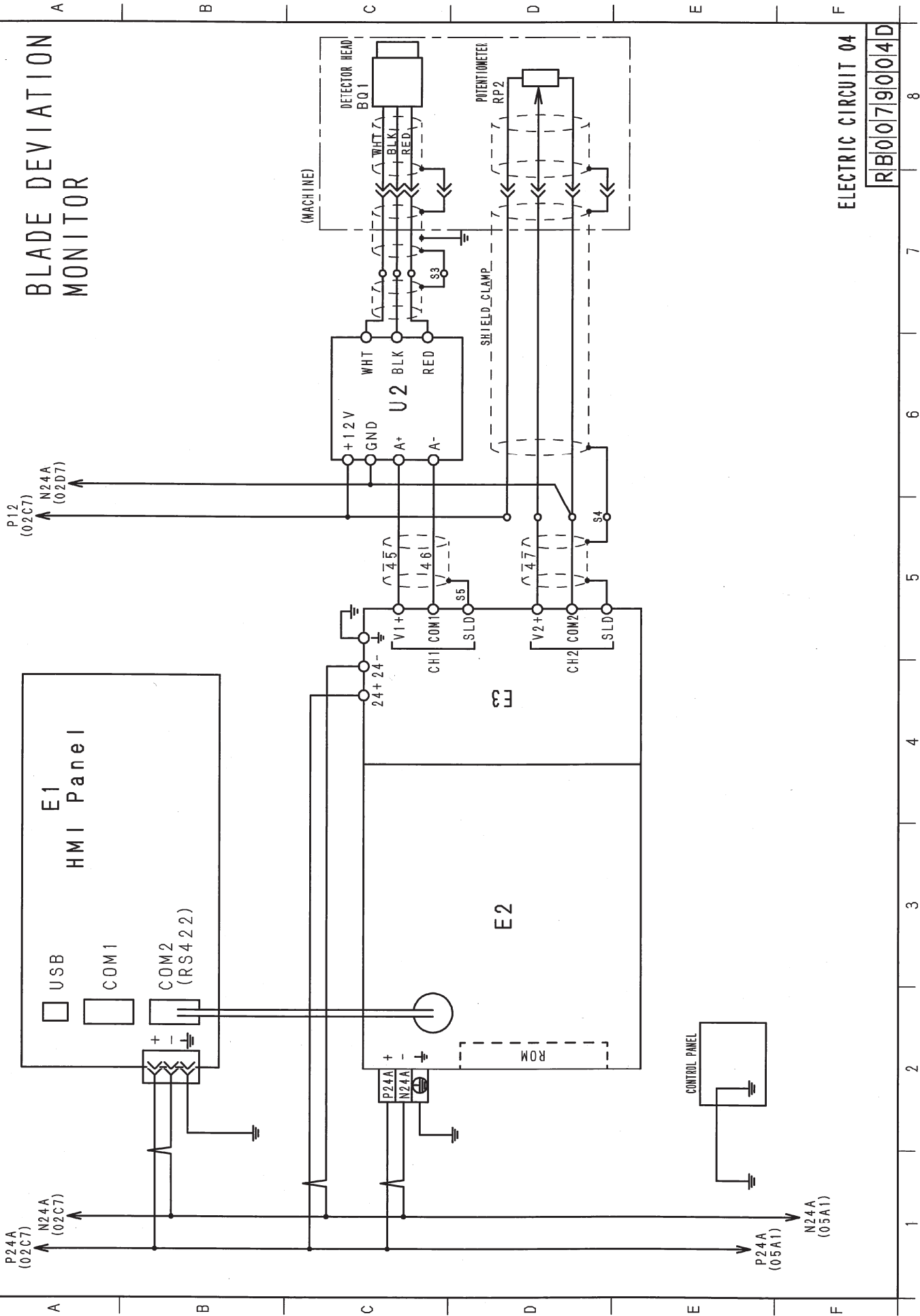
FRONT MOUNTING AUXILIARY CONTACT BLOCK AND UNIT OF KM1.

(MODEL)	(KM1 TYPE)	(CONTACT NUMBER)	(UNIT TYPE)	(CONTACT NUMBER)
HFA252	SW-5-1	1a1b	SZ-A31	3a1b
HFA407	SW-N1	2a2b	SZ-A20	2a

ELECTRIC CIRCUIT 03

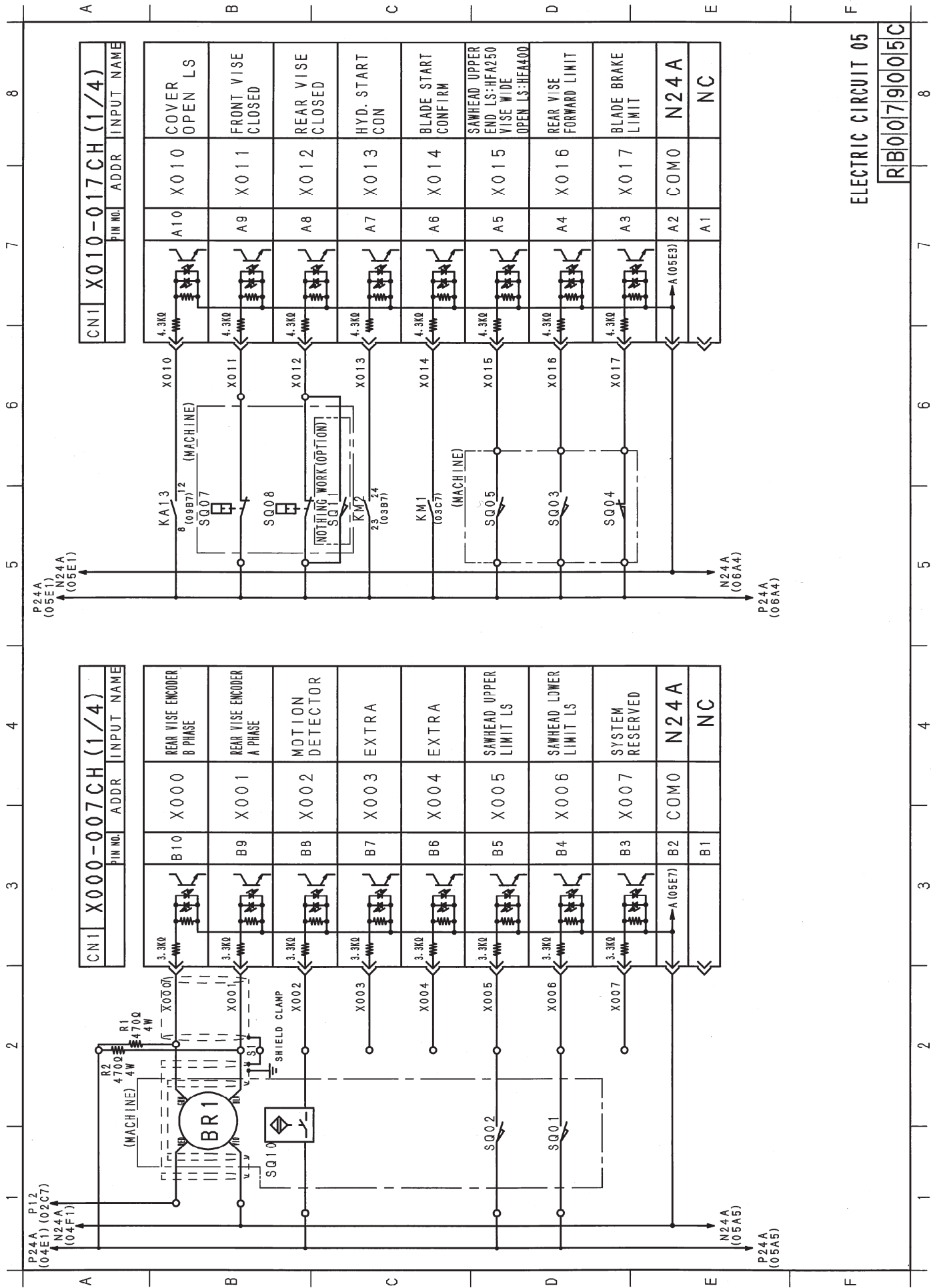
RB0079003B

BLADE DEVIATION MONITOR



ELECTRIC CIRCUIT 04

RB0079004D

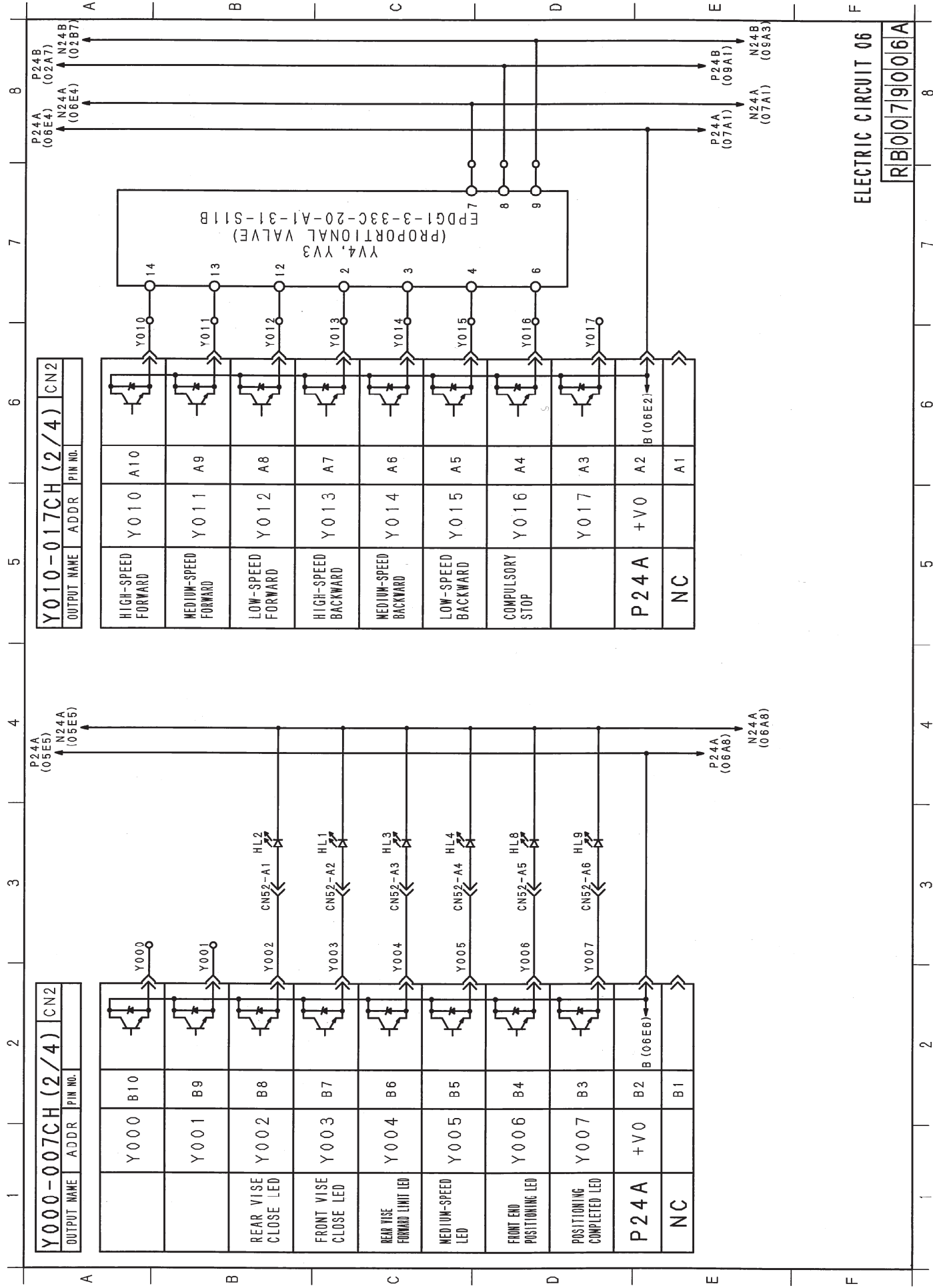


CN1	X010-017CH (1/4)	PIN NO.	ADDR	INPUT NAME
		A10	X010	COVER OPEN LS
		A9	X011	FRONT VISE CLOSED
		A8	X012	REAR VISE CLOSED
		A7	X013	HYD. START CON
		A6	X014	BLADE START CONFIRM
		A5	X015	SAWHEAD UPPER END LS:HFA250 VISE WIDE OPEN LS:HEA400
		A4	X016	REAR VISE FORWARD LIMIT
		A3	X017	BLADE BRAKE LIMIT
		A2	COM0	N24A
		A1		NC

CN1	X000-007CH (1/4)	PIN NO.	ADDR	INPUT NAME
		B10	X000	REAR VISE ENCODER B PHASE
		B9	X001	REAR VISE ENCODER A PHASE
		B8	X002	MOTION DETECTOR
		B7	X003	EXTRA
		B6	X004	EXTRA
		B5	X005	SAWHEAD UPPER LIMIT LS
		B4	X006	SAWHEAD LOWER LIMIT LS
		B3	X007	SYSTEM RESERVED
		B2	COM0	N24A
		B1		NC

ELECTRIC CIRCUIT 05

RB0079005C



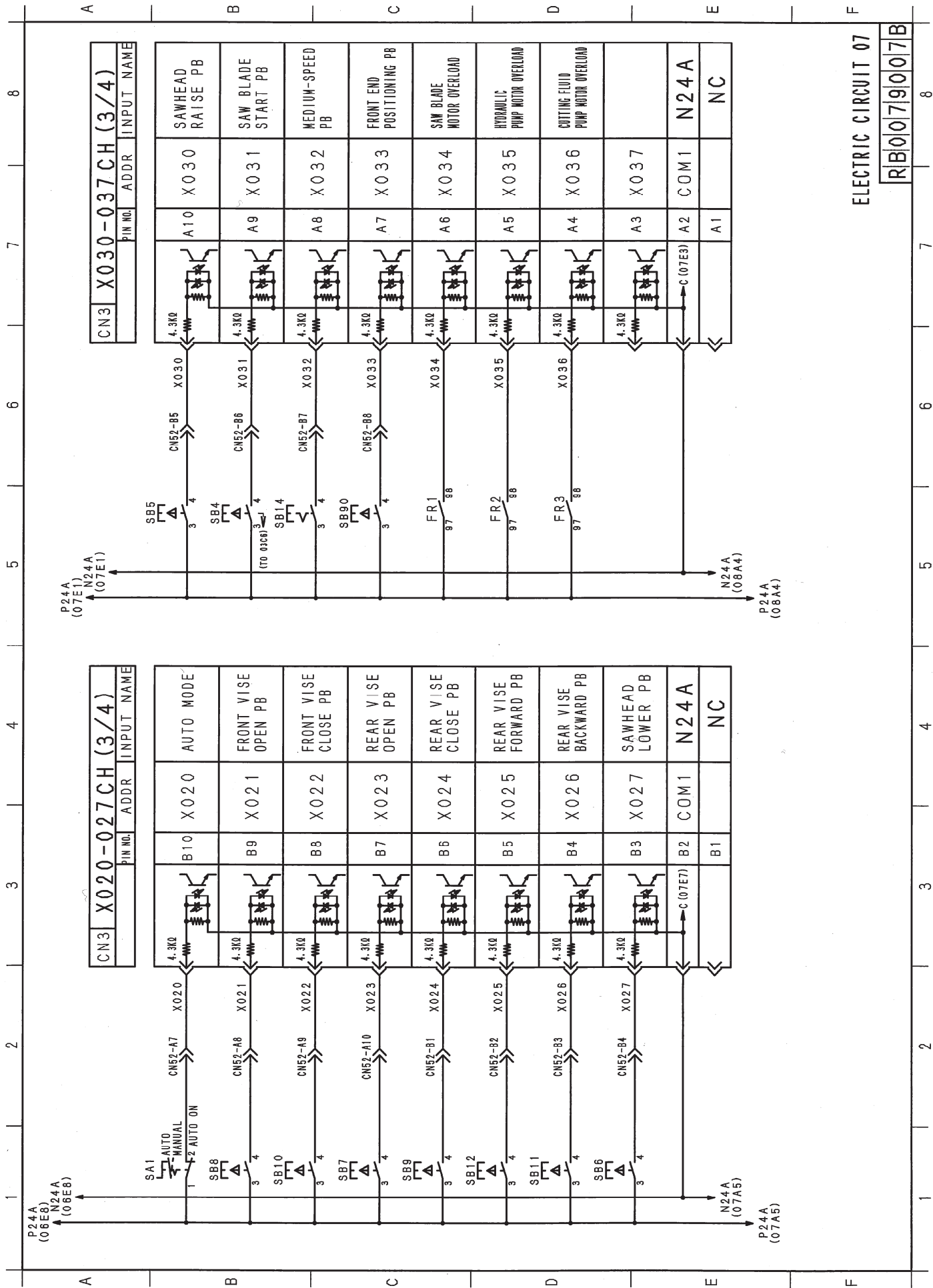
Y000-007CH (2/4) CN2		
OUTPUT NAME	ADDR	PIN NO.
Y000	B10	
Y001	B9	
Y002	B8	
REAR VISE CLOSE LED	B7	
FRONT VISE CLOSE LED	B6	
REAR VISE FORWARD LIMIT LED	B5	
MEDIUM-SPEED LED	B4	
FRONT END POSITIONING LED	B3	
POSITIONING COMPLETED LED	B2	
P24A	+V0	B (06E6)
NC	B1	

Y010-017CH (2/4) CN2		
OUTPUT NAME	ADDR	PIN NO.
HIGH-SPEED FORWARD	Y010	A10
MEDIUM-SPEED FORWARD	Y011	A9
LOW-SPEED FORWARD	Y012	A8
HIGH-SPEED BACKWARD	Y013	A7
MEDIUM-SPEED BACKWARD	Y014	A6
LOW-SPEED BACKWARD	Y015	A5
COMPULSORY STOP	Y016	A4
	Y017	A3
P24A	+V0	A2
NC		A1

YV4, YV3
 (PROPORTIONAL VALVE)
 PDG1-3-33C-20-A1-31-S11B

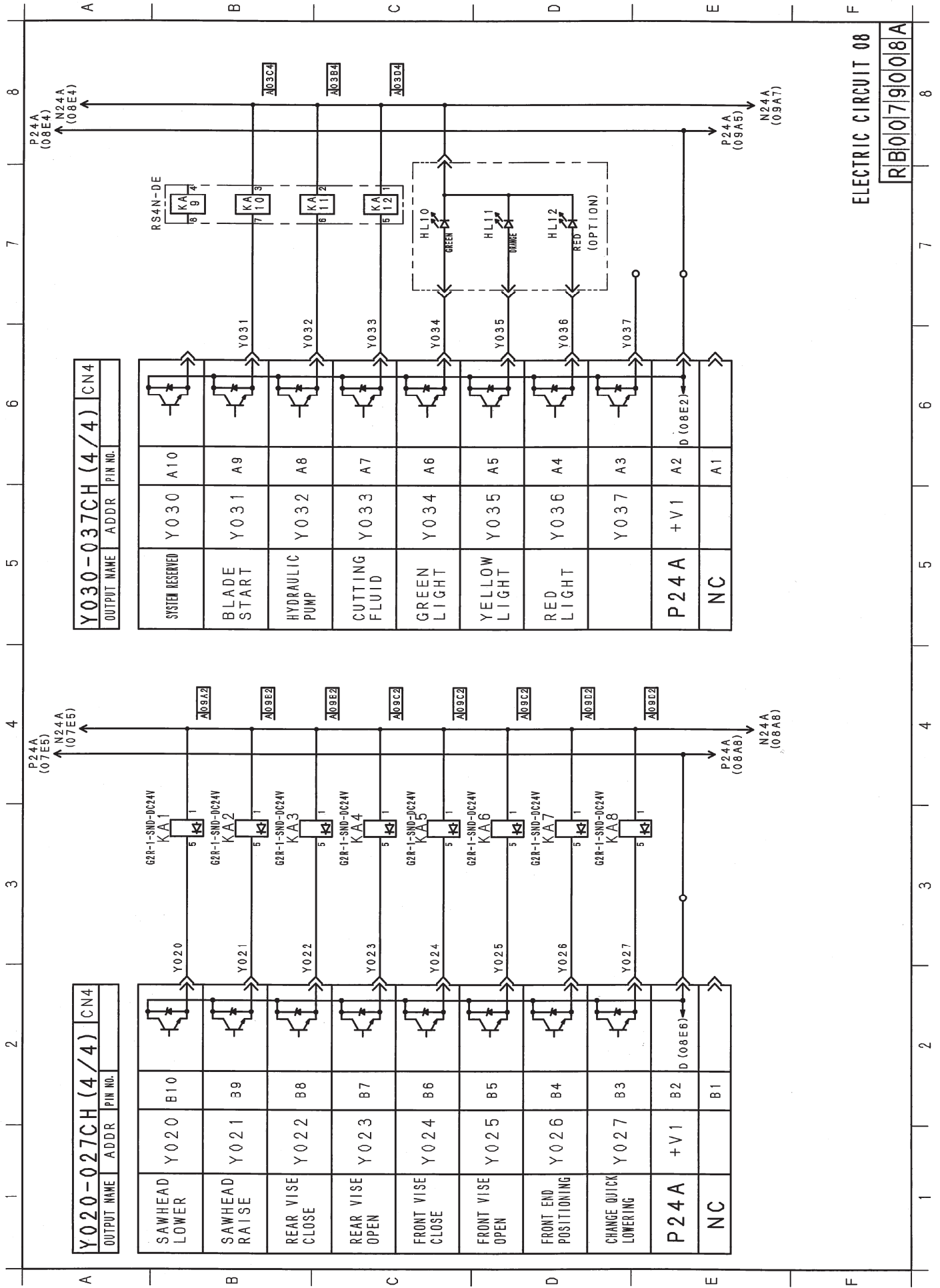
ELECTRIC CIRCUIT 06

RIB0079006A



ELECTRIC CIRCUIT 07

R101079107B

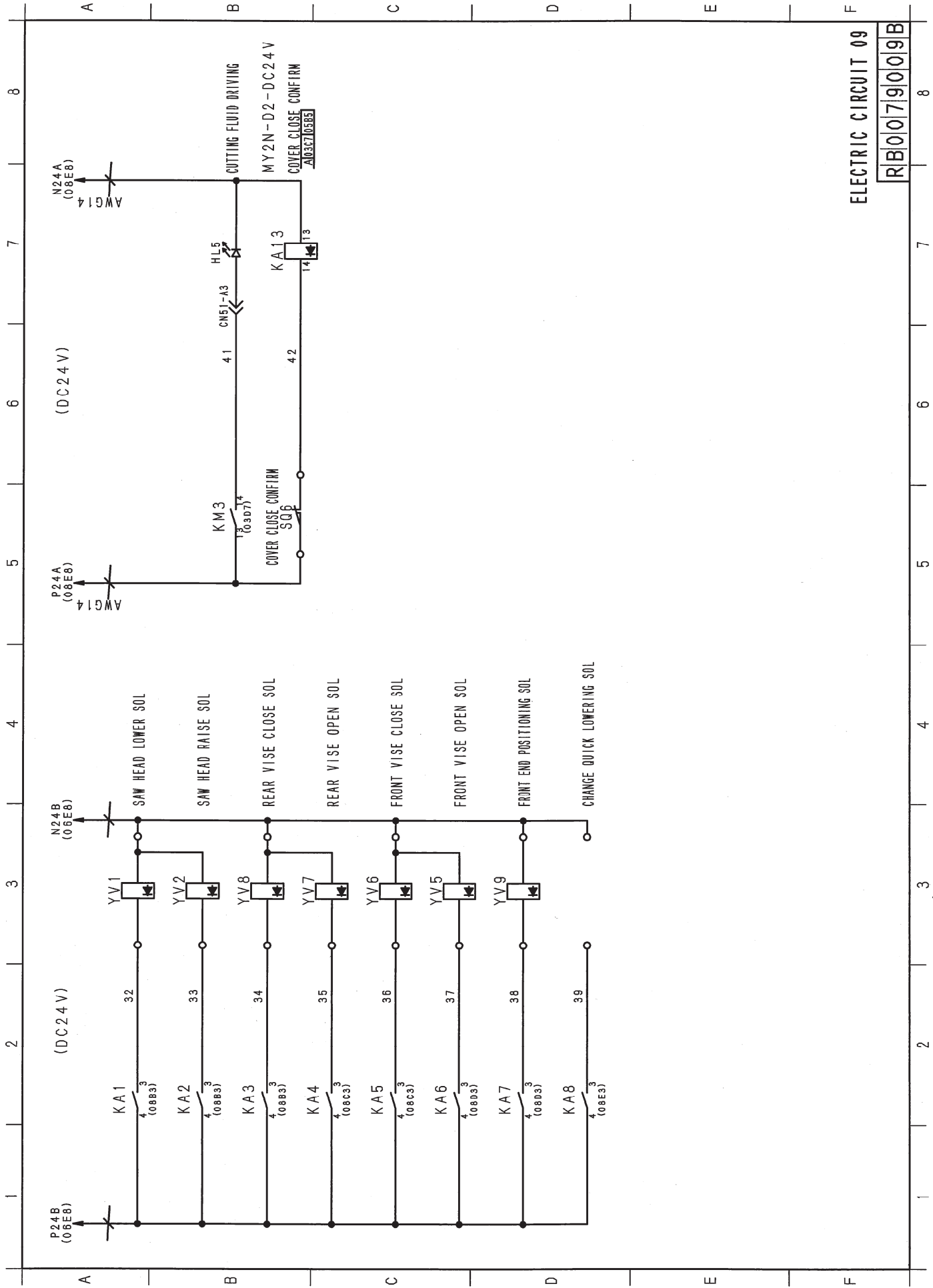


Y020-027CH (4/4)			CN4
OUTPUT NAME	ADDR	PIN NO.	
SAWHEAD LOWER	Y020	B10	
SAWHEAD RAISE	Y021	B9	
REAR VISE CLOSE	Y022	B8	
REAR VISE OPEN	Y023	B7	
FRONT VISE CLOSE	Y024	B6	
FRONT VISE OPEN	Y025	B5	
FRONT END POSITIONING	Y026	B4	
CHANGE QUICK LOWERING	Y027	B3	
P24A	+V1	B2	D (08E6)
NC		B1	

Y030-037CH (4/4)			CN4
OUTPUT NAME	ADDR	PIN NO.	
SYSTEM RESERVED	Y030	A10	
BLADE START	Y031	A9	
HYDRAULIC PUMP	Y032	A8	
CUTTING FLUID	Y033	A7	
GREEN LIGHT	Y034	A6	
YELLOW LIGHT	Y035	A5	
RED LIGHT	Y036	A4	
	Y037	A3	
P24A	+V1	A2	D (08E2)
NC		A1	

ELECTRIC CIRCUIT 08

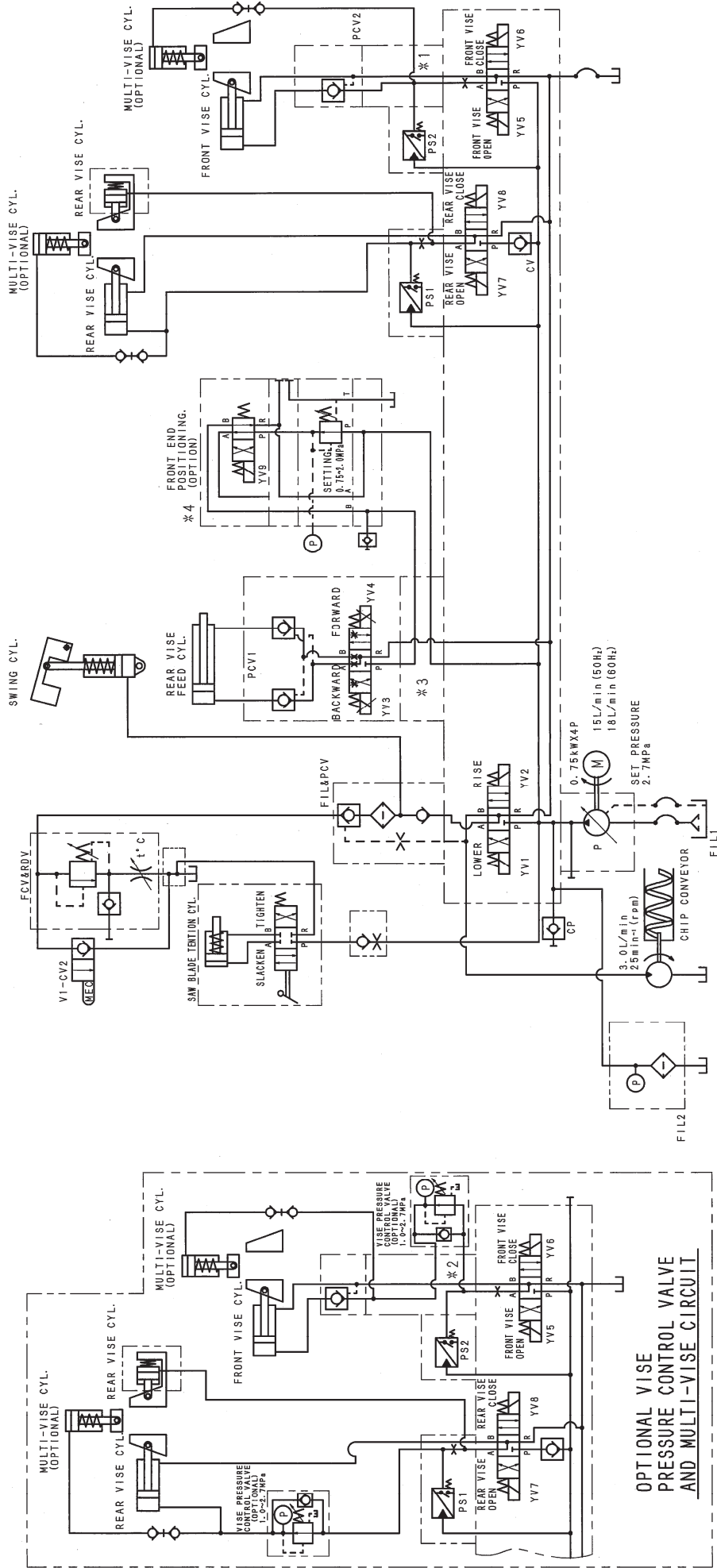
R|B|0|0|7|9|0|0|8|A



ELECTRIC CIRCUIT 09

RB0079009B

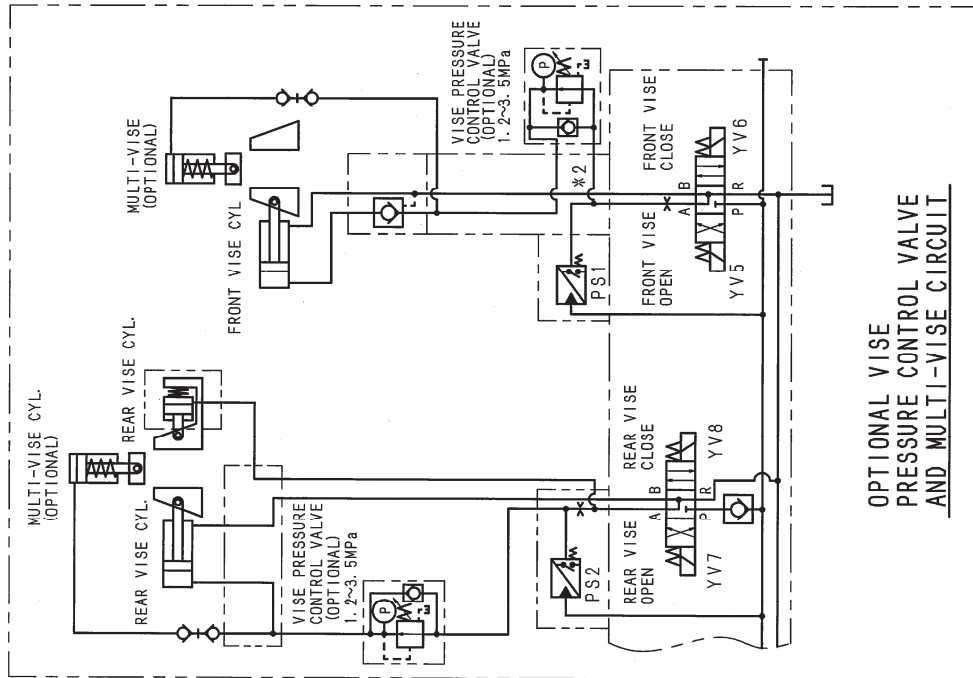
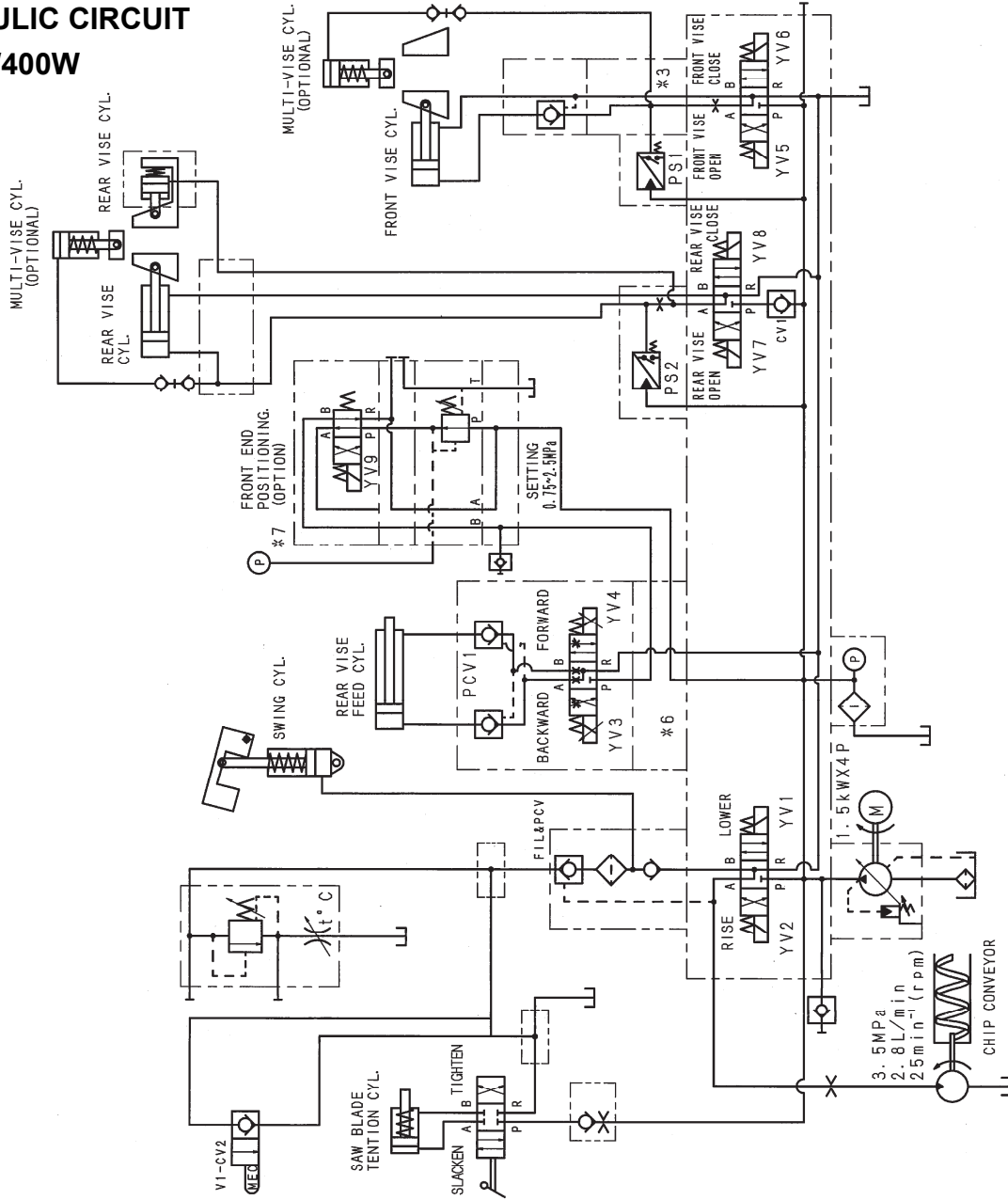
HYDRAULIC CIRCUIT HFA250/250W



**OPTIONAL VISE
PRESSURE CONTROL VALVE
AND MULTI-VISE CIRCUIT**

When optional vise pressure control Valve is equipped.
Manifold *1 is changed to manifold *2.
When front end positioning is equipped.
Manifold *3 is added.
Assembly *4 is added.

HYDRAULIC CIRCUIT HFA400/400W



**OPTIONAL VISE
PRESSURE CONTROL VALVE
AND MULTI-VISE CIRCUIT**

- When optional vise pressure control Valve is equipped.
- Manifold *3 is changed to manifold *2.
- When front end positioning is equipped.
- Manifold *6 is added.
- Assembly *7 is added.

AMADA CO., LTD.

200, Ishida, Isehara-shi, Kanagawa 259-1196, JAPAN