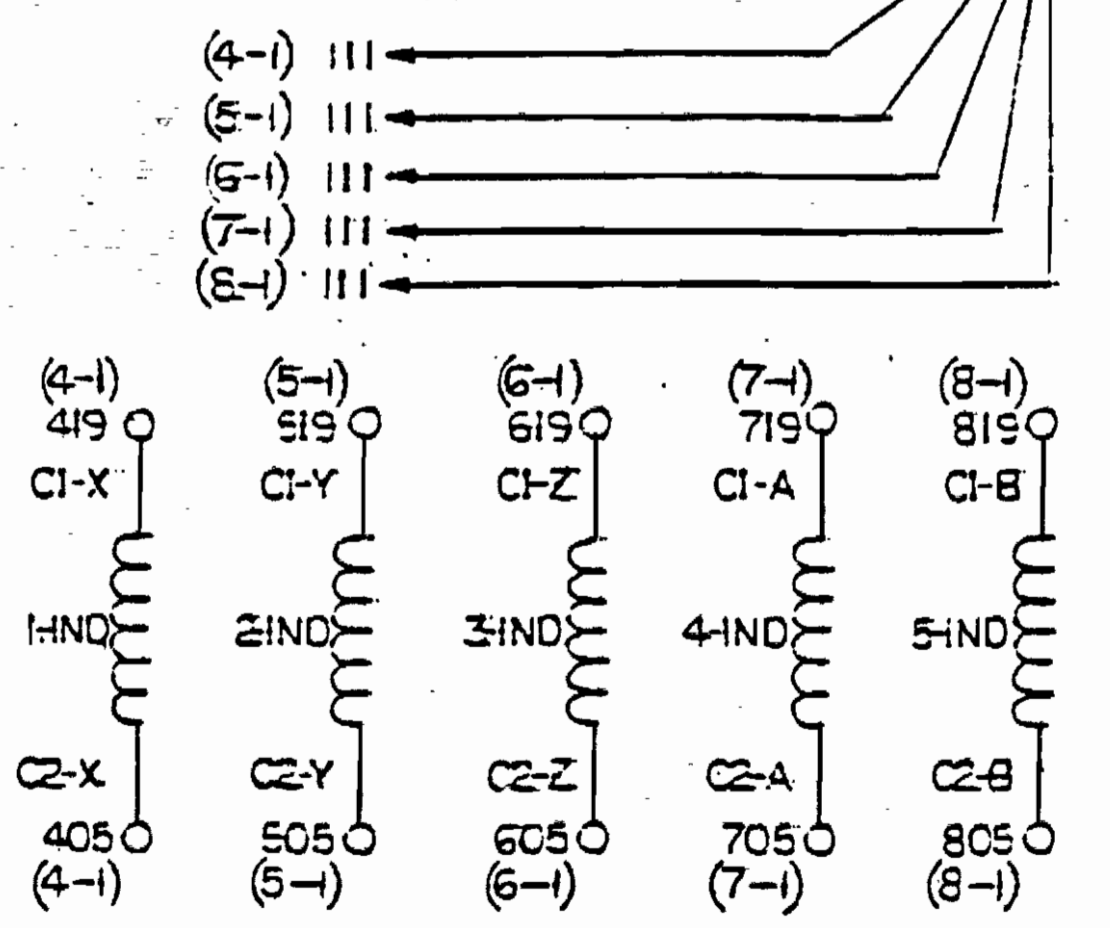


NOTE: FLOOR MOUNT
COMPONENTS LOCATED IN
TRANSFORMER ENCLOSURE:
1T, 2T, 5 IND.'S,
1T-TH, 2T-TH & 3 RC'S.



2.5A @ 460
5.0A @ 230

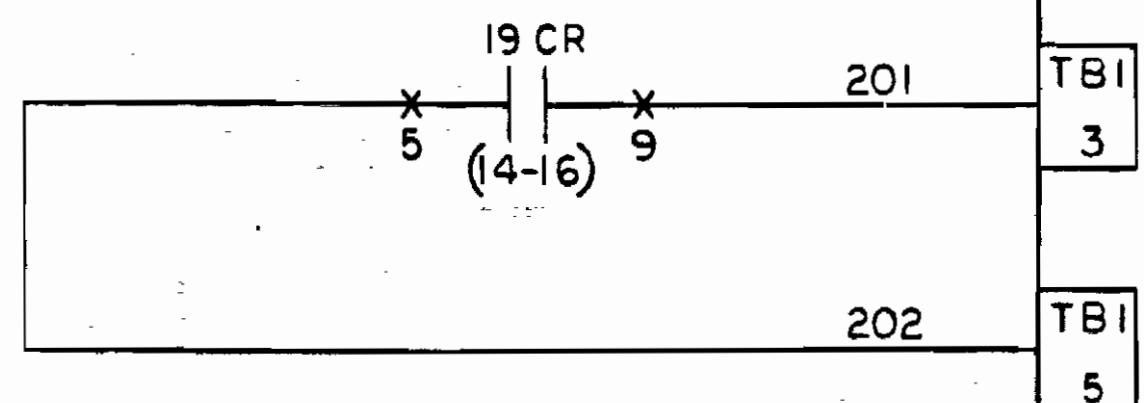
REFERENCE:
PANEL LAYOUT MMB-87M-417859
INTERCONNECTION MMC-87M-417859

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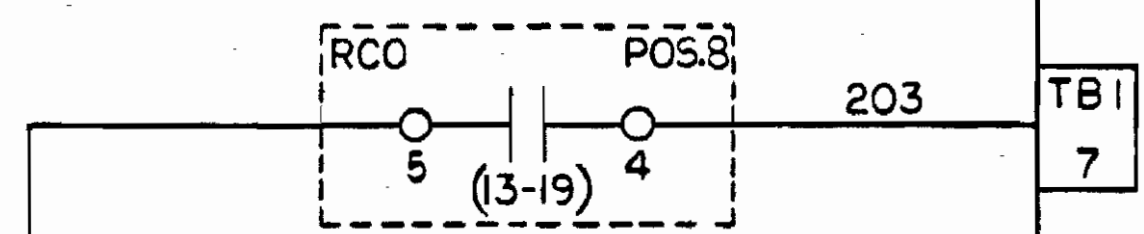
D CONTROL DIAGRAM	
ELEMENTARY <input checked="" type="checkbox"/>	INTERCONNECTION <input type="checkbox"/>
PANEL LAYOUT <input type="checkbox"/>	OTHER <input type="checkbox"/>
PRODUCT	A-950
PROJECT	ZOV 5-AXIS
DATE	8-21-61
DRAWING NUMBER	MMA-87M-417859
SUPERSEDED BY	
LAST NUMBER ON THIS SHEET	125
1 OF 15	

2L1 2L2 2L3 (I-I)
460/3/60
L1 L2 L3

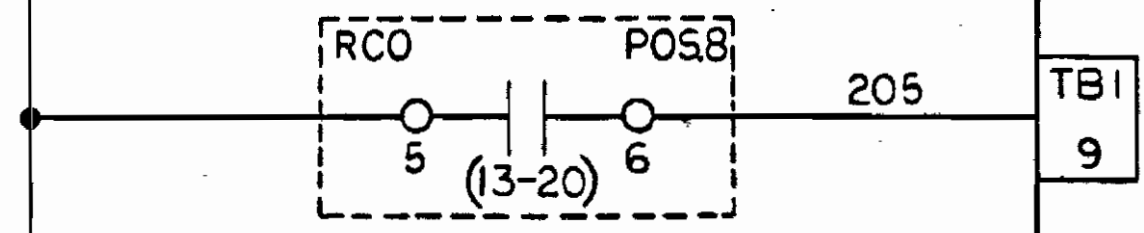
SPINDLE STOP/RUN



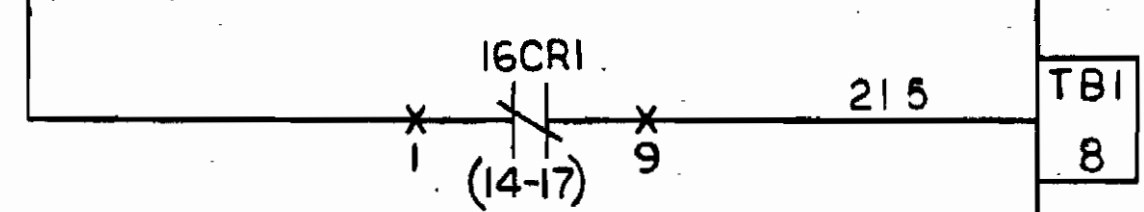
SPEED SELECT
OPEN : MANUAL
CLOSED : AUTO



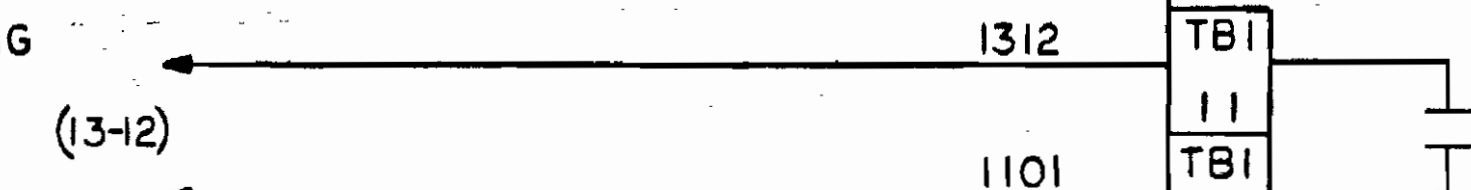
SPINDLE DIRECTION
OPEN : CW
CLOSED : CCW



E-STOP



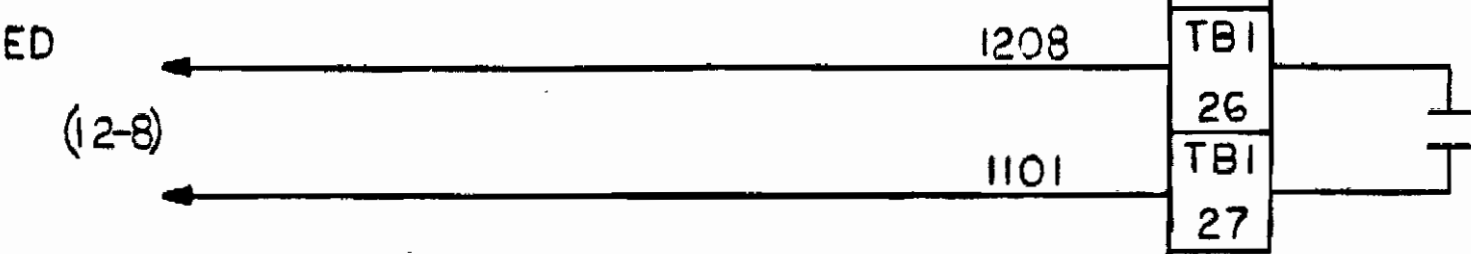
SPINDLE RUNNING
WHEN CLOSED



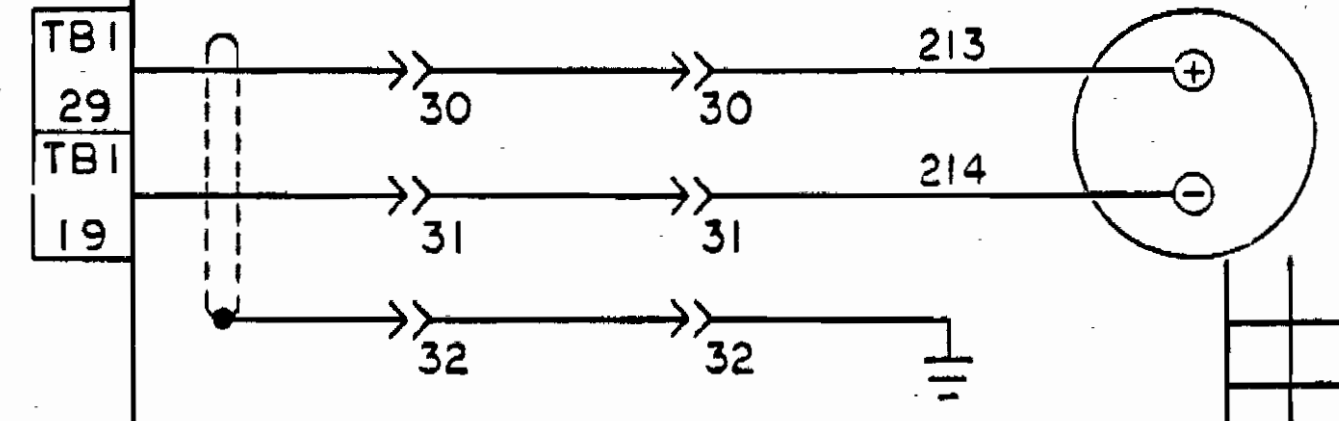
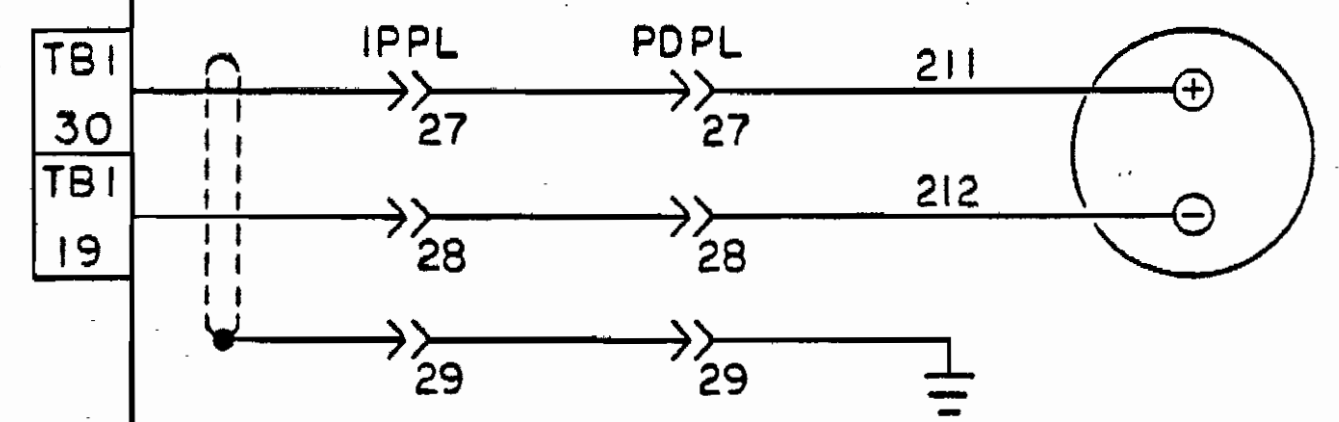
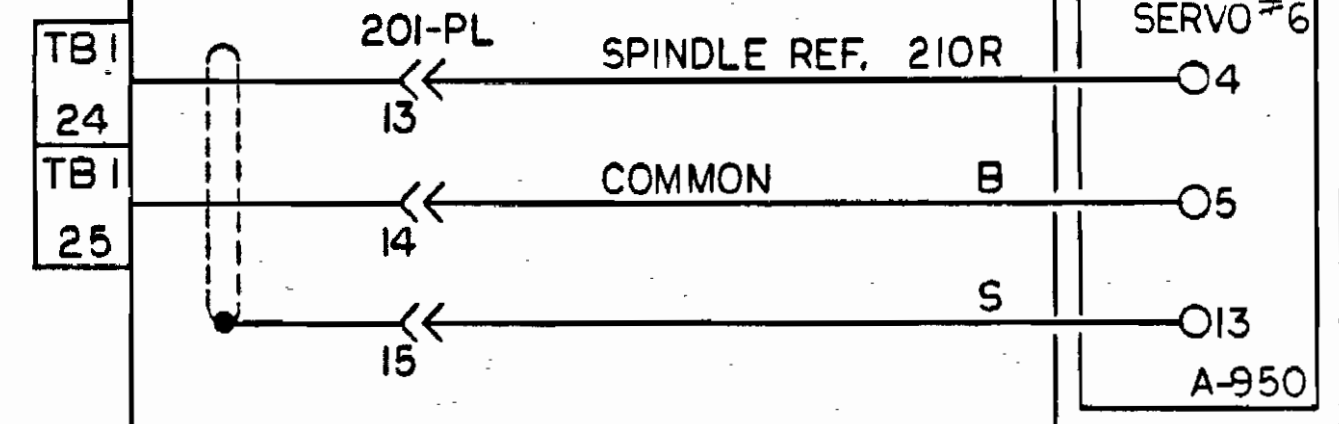
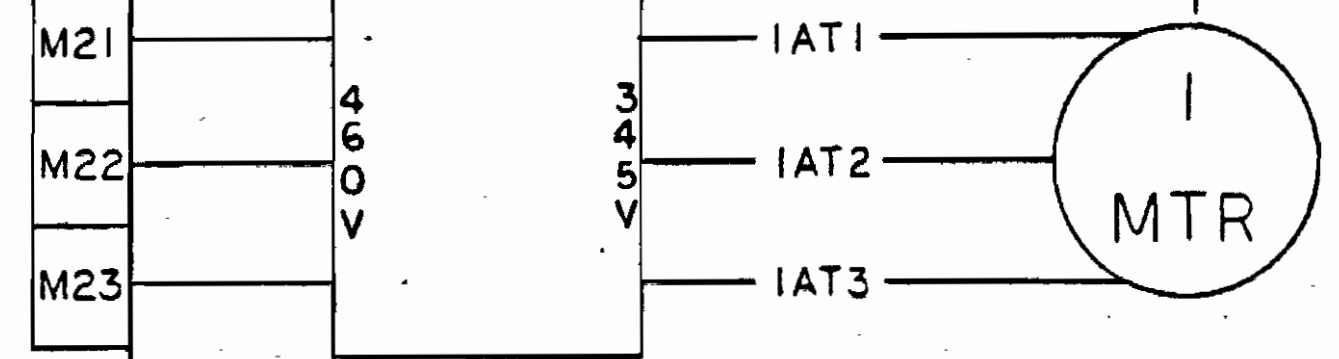
SPINDLE FAULT
WHEN OPEN



SPINDLE AT SPEED
WHEN CLOSED



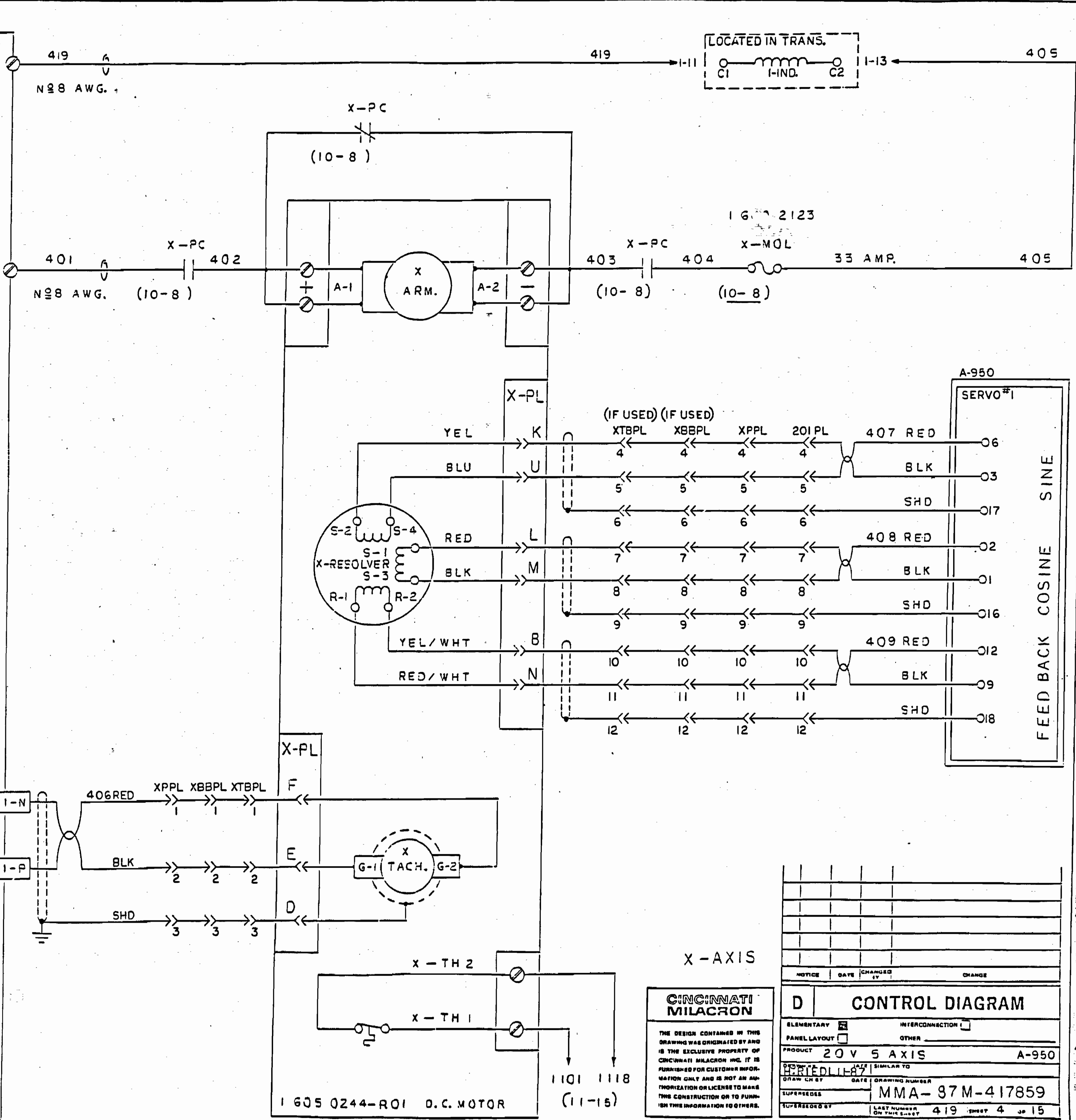
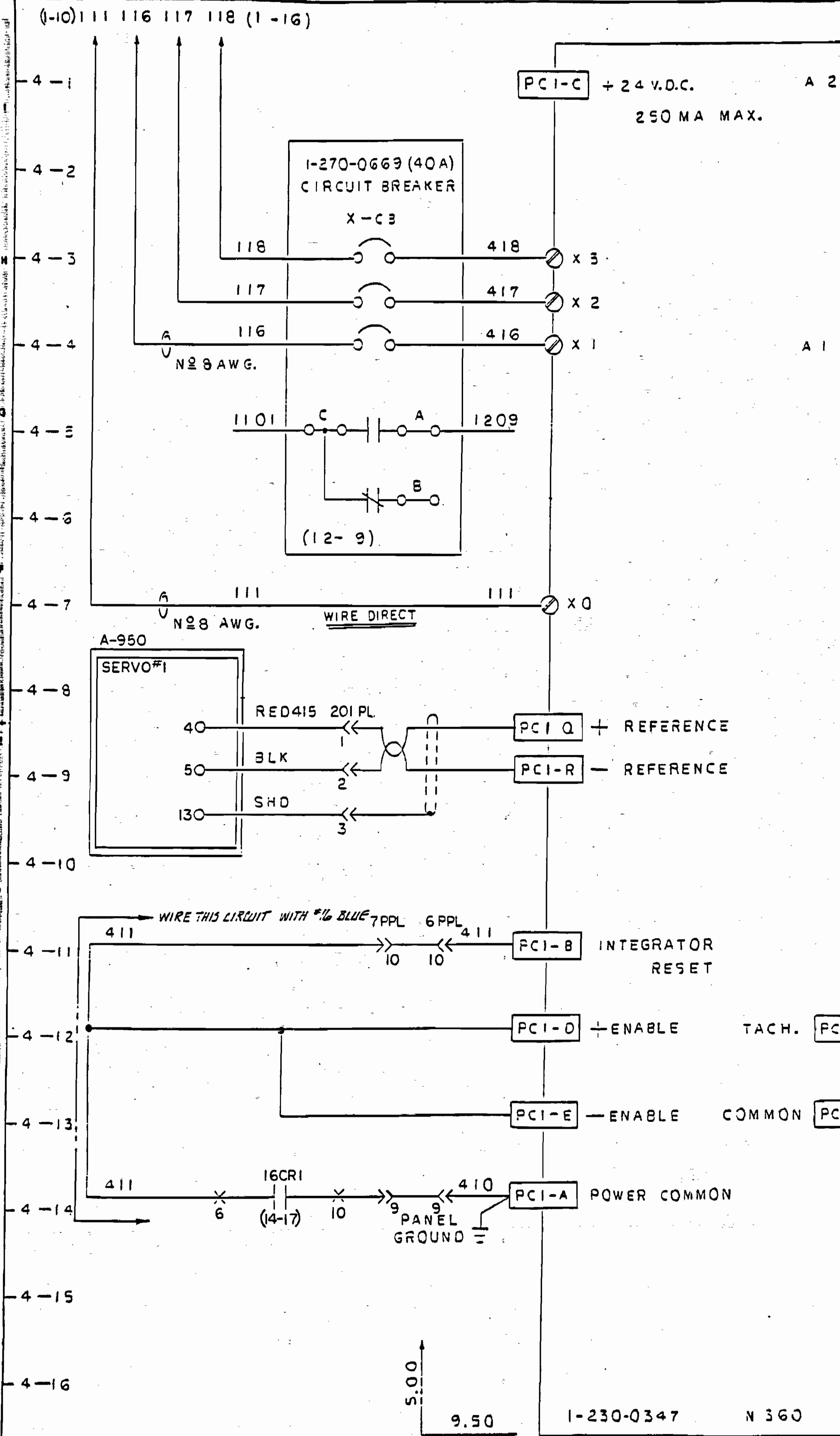
TRANSFORMER

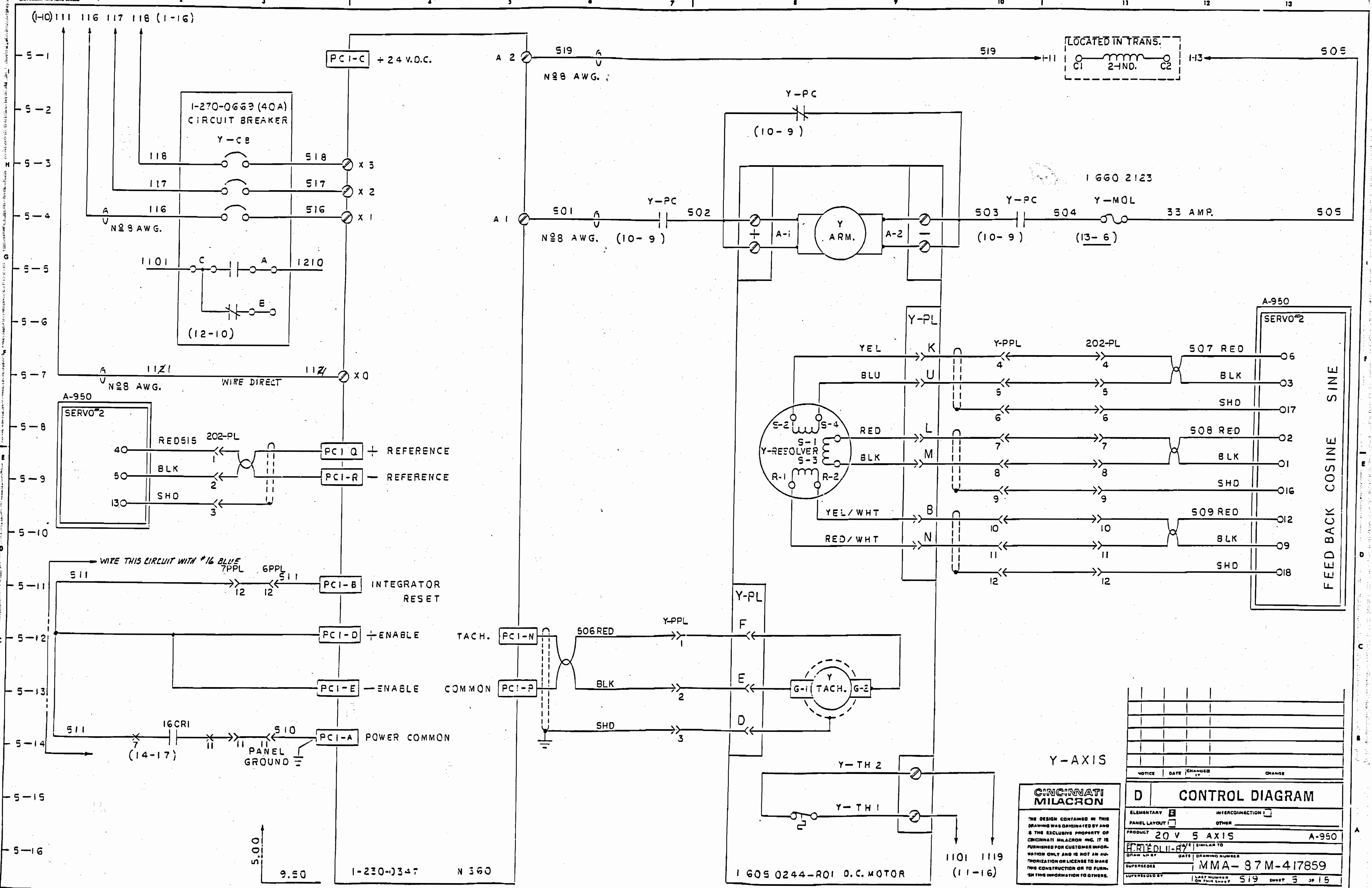


VOLKMANN ADJUSTABLE A.C. DRIVE
MODEL : 8400
RATING : 20KVA, 3/60/460V INPUT

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NOTICE	DATE	CHANGED BY	CHANGE
D CONTROL DIAGRAM			
ELEMENTARY	INTERCONNECTION		
PANEL LAYOUT	OTHER		
PRODUCT	20V 5-AXIS		A-950
DRAWN BY	DATE	DRAWING NUMBER	
MMA-87M-417859		SIMILAR TO	
SUPERSEDED BY		LAST NUMBER ON THIS SHEET	
		SHEET 2 OF 15	





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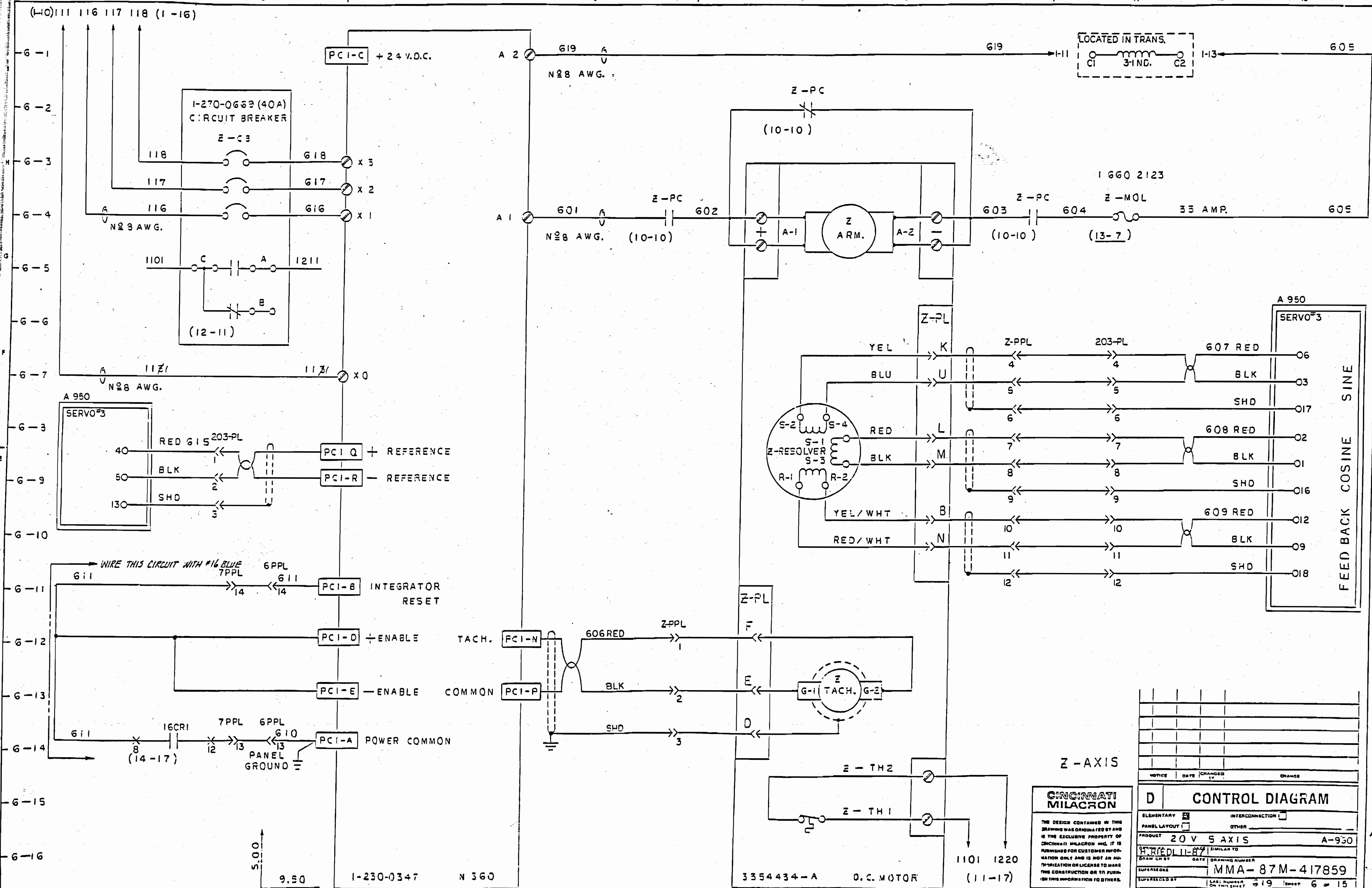
NOTICE	DATE	CHANGED BY	CHANGE
D CONTROL DIAGRAM			
ELEMENTARY <input type="checkbox"/>	INTERCONNECTION <input type="checkbox"/>		
PANEL LAYOUT <input type="checkbox"/>	OTHER <input type="checkbox"/>		
PRODUCT	20 V 5 AXIS	A-950	
DRAWN BY	DATE	DRAWING NUMBER	
PREPARED BY		MMA-87M-417859	
SUPERSEDES		LAST NUMBER OF THIS DRAWING	
SUPERSEDED BY		519	SHEET 5 OF 15

5.00
9.50

1-230-0347 N 360

1605 0244-001 D.C. MOTOR

1101 1119 (11-16)



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NOTICE	DATE	CHANGED BY	ORANGE
D CONTROL DIAGRAM			
ELEMENTARY	INTERCONNECTION		
PANEL LAYOUT	OTHER		
PRODUCT	20V S AXIS		A-950
DRAWN BY	DATE	DRAWING NUMBER	
SUPERSEDES	MMA-87M-417859		
SUPERSEDED BY	LAST NUMBER ON THIS SHEET	19	SHEET 6 OF 15

FEED BACK COSINE SINE

5.00

1-230-0347 N 360

3354434-A D.C. MOTOR (11-17)

Z-AXIS

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NOTICE DATE CHANGED BY ORANGE

D CONTROL DIAGRAM

ELEMENTARY INTERCONNECTION

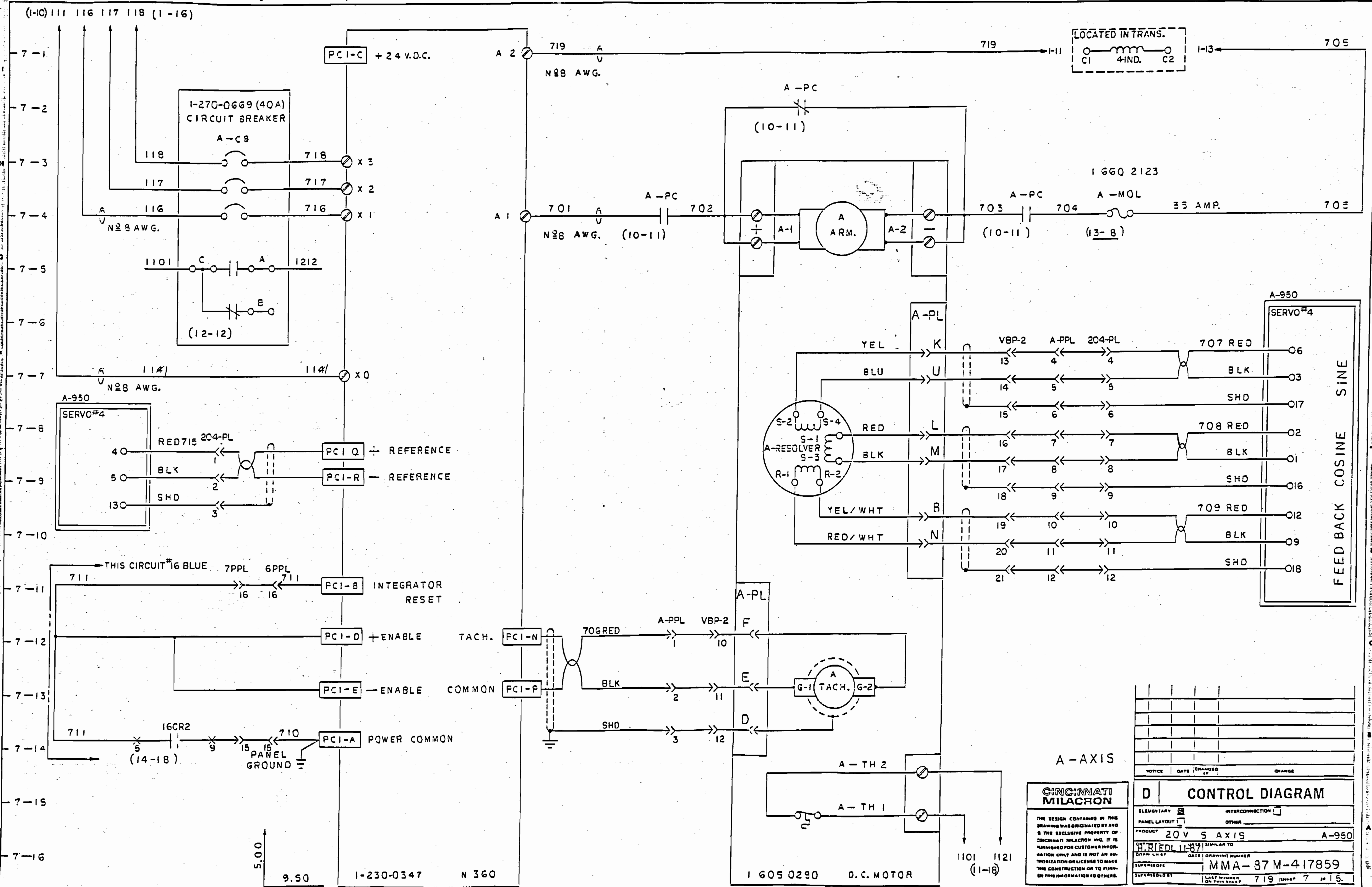
PANEL LAYOUT OTHER

PRODUCT 20V S AXIS A-950

DRAWN BY DATE DRAWING NUMBER

SUPERSEDES MMA-87M-417859

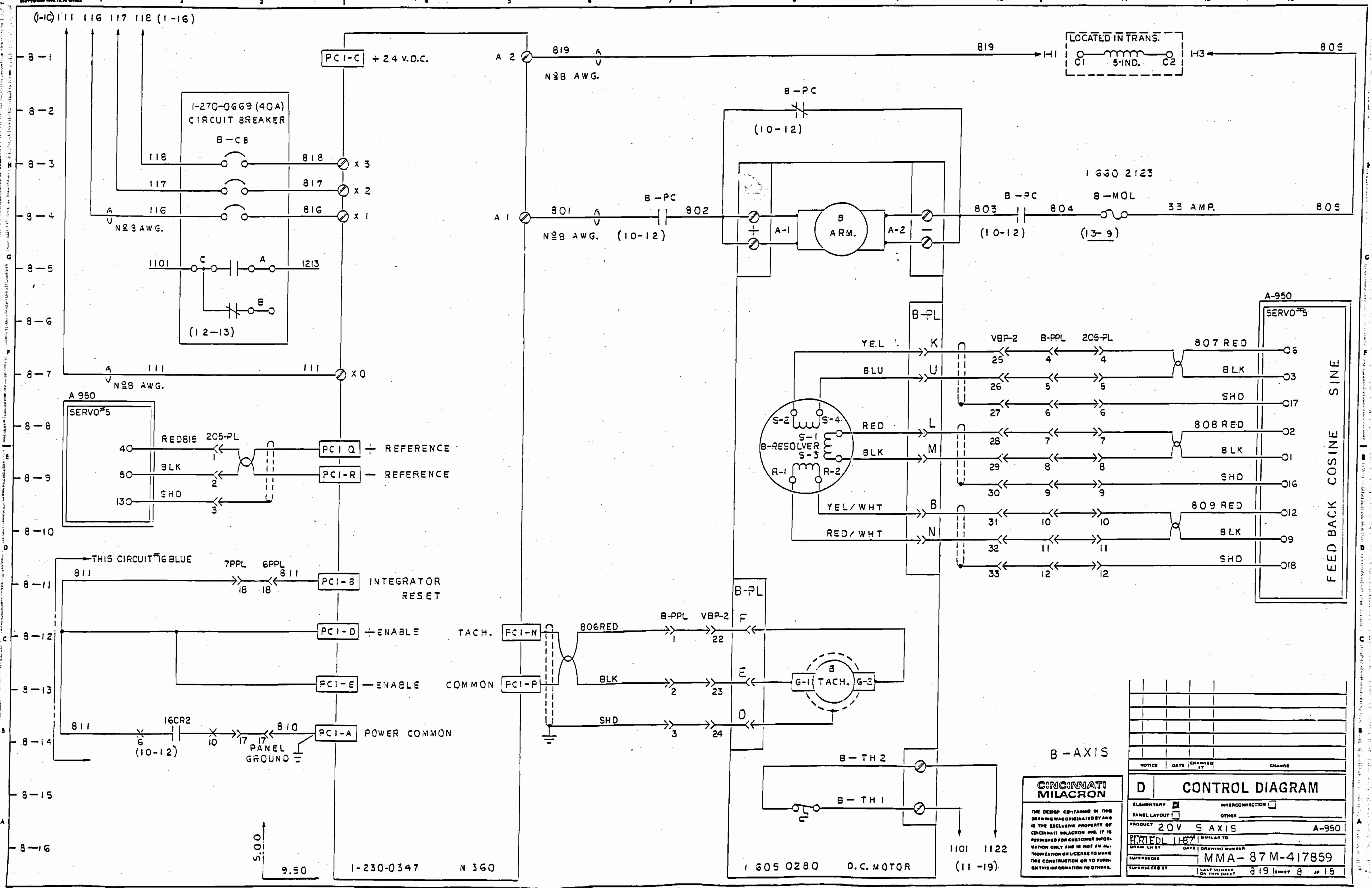
SUPERSEDED BY LAST NUMBER ON THIS SHEET 19 SHEET 6 OF 15



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NOTICE	DATE	CHANGED	BY	CHANGE
D CONTROL DIAGRAM				
ELEMENTARY	INTERCONNECTION			
PANEL LAYOUT	OTHER			
PRODUCT	20V 5 AXIS		A-950	
DRAWN BY	DATE			
SUPERSEDES	MMA-87M-417859			
SUPERSEDED BY	LAST NUMBER ON THIS SHEET 719 13NOV 7 20 15.			



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NOTICE	DATE	CHANGED BY	CHANGE
D CONTROL DIAGRAM			
ELEMENTARY <input checked="" type="checkbox"/>	INTERCONNECTION <input type="checkbox"/>		
PANEL LAYOUT <input type="checkbox"/>	OTHER <input type="checkbox"/>		
PRODUCT 20V S AXIS			A-950
DATE 11-87	DRAWING NUMBER		
SUPERSEDES MMA-87M-417859			
LAST NUMBER ON THIS SHEET 819			SHEET 8 OF 15

FEED BACK COSINE SINE

B-AXIS

5.00

1-230-0347 N 360

1 605 0280 D.C. MOTOR (11-19)

1 660 2123

B-MOL 33 AMP.

A-950 SERVO #5

LOCATED IN TRANS. C1 5-IND. C2

PCI-C +24 V.D.C.

1-270-0669 (40A) CIRCUIT BREAKER

(12-13)

A 950 SERVO #5
40 RED 815 205-PL
50 BLK
130 SHD

PCI-Q REFERENCE
PCI-R REFERENCE

PCI-B INTEGRATOR RESET

PCI-D ENABLE

PCI-E ENABLE

PCI-A POWER COMMON

TACH. PCI-N

COMMON PCI-P

B ARM.

B-RESOLVER
S-1 S-2 S-3 S-4
R-1 R-2

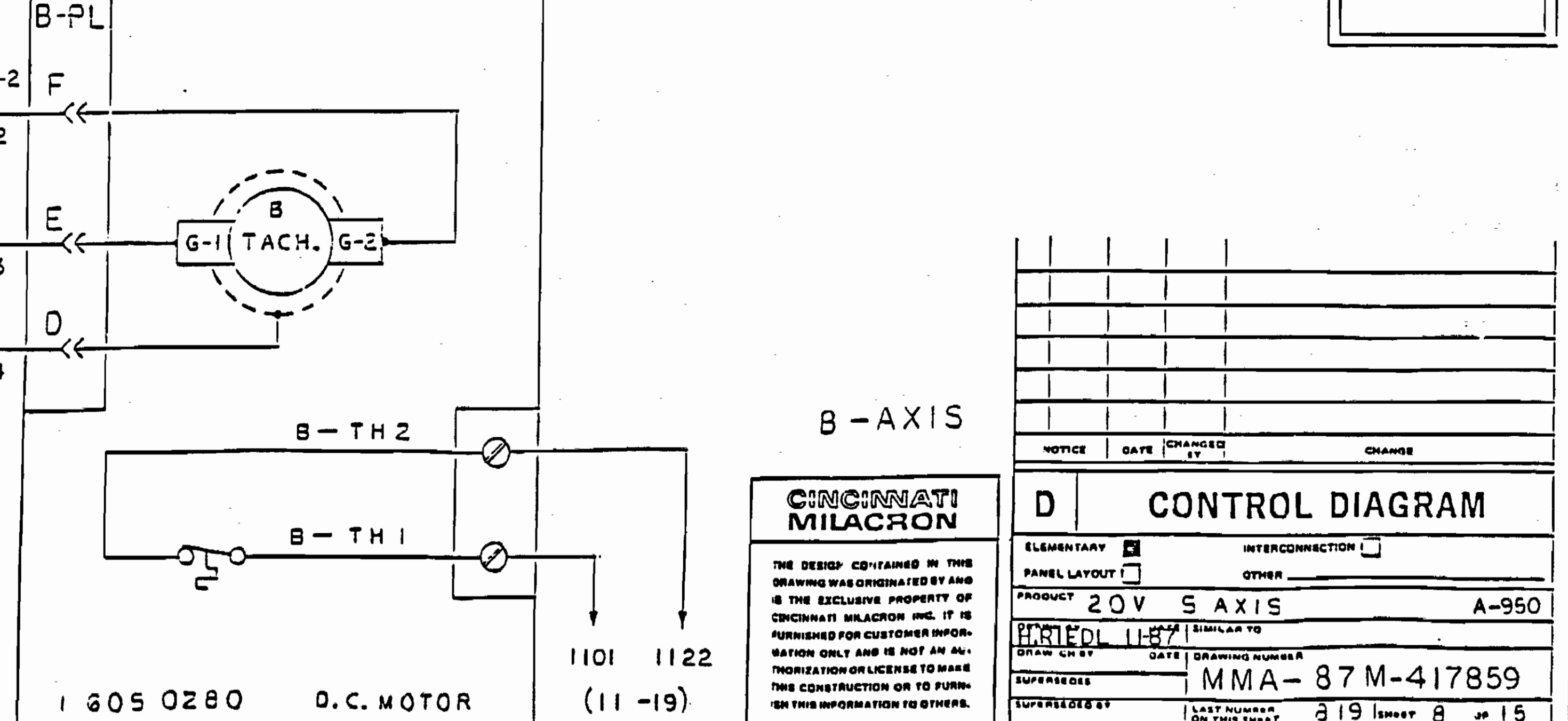
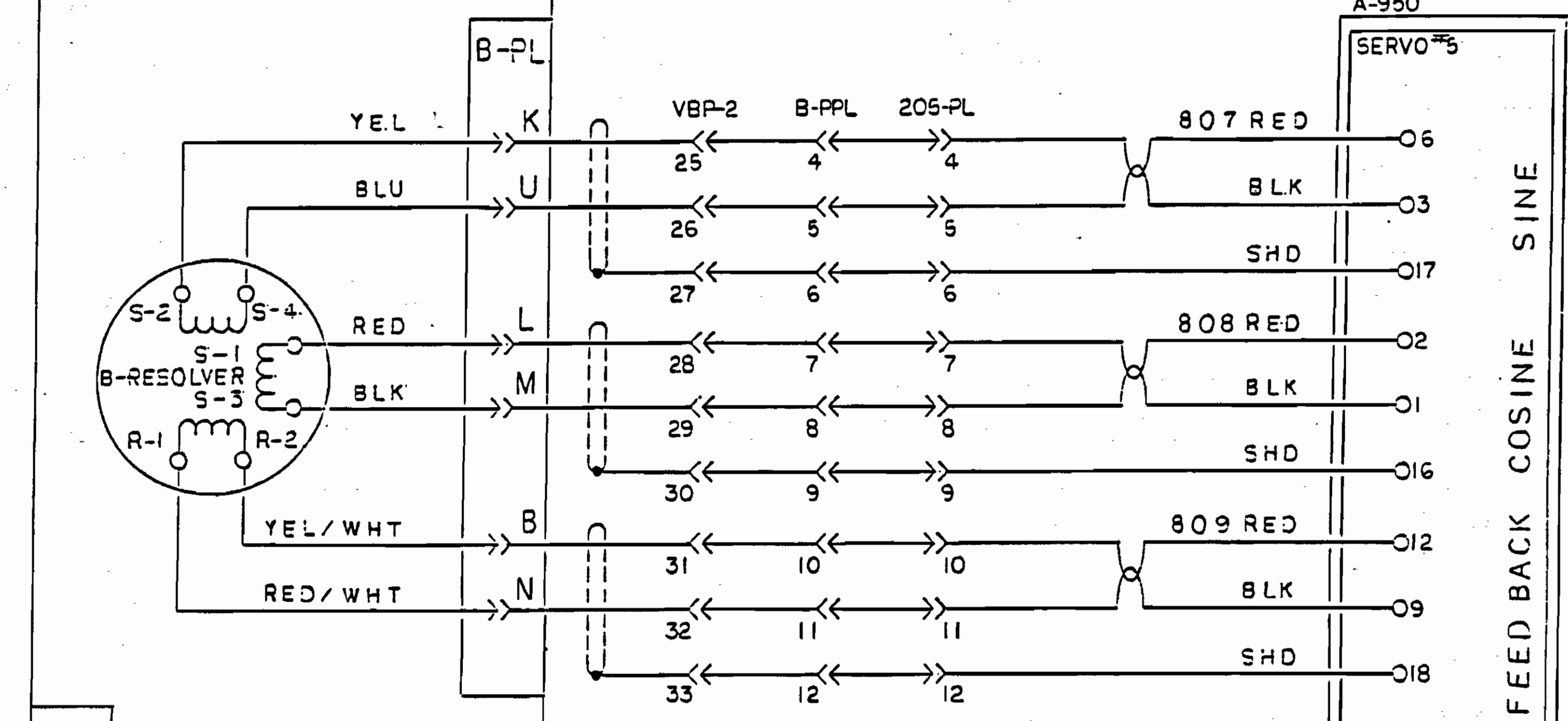
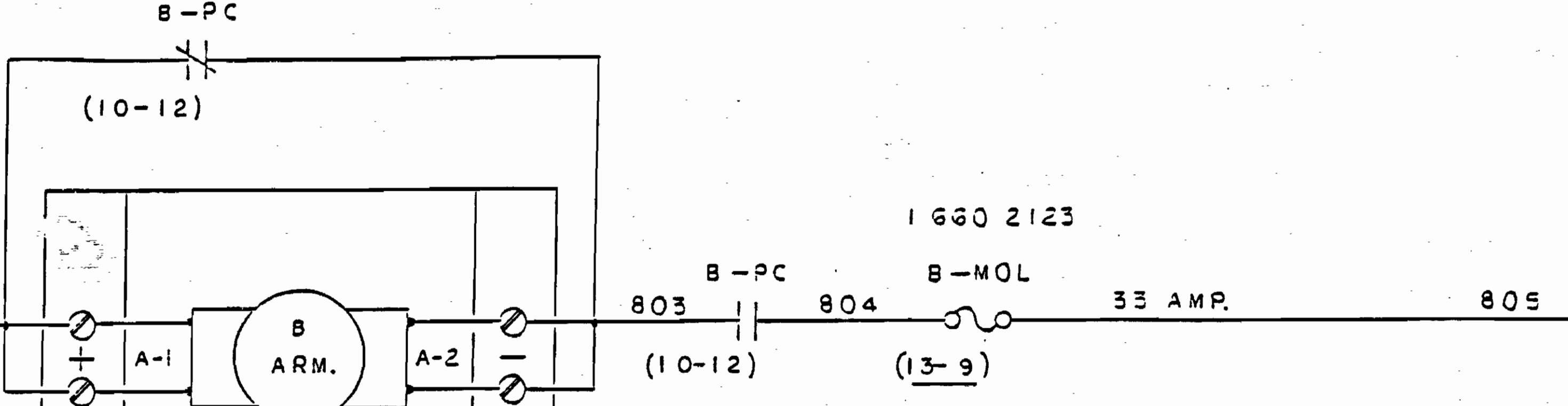
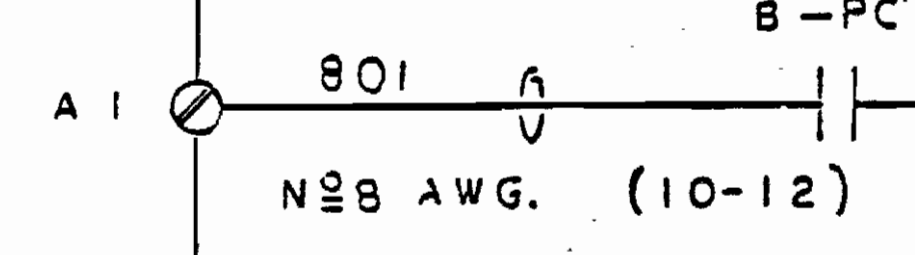
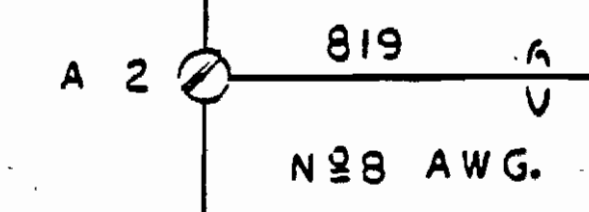
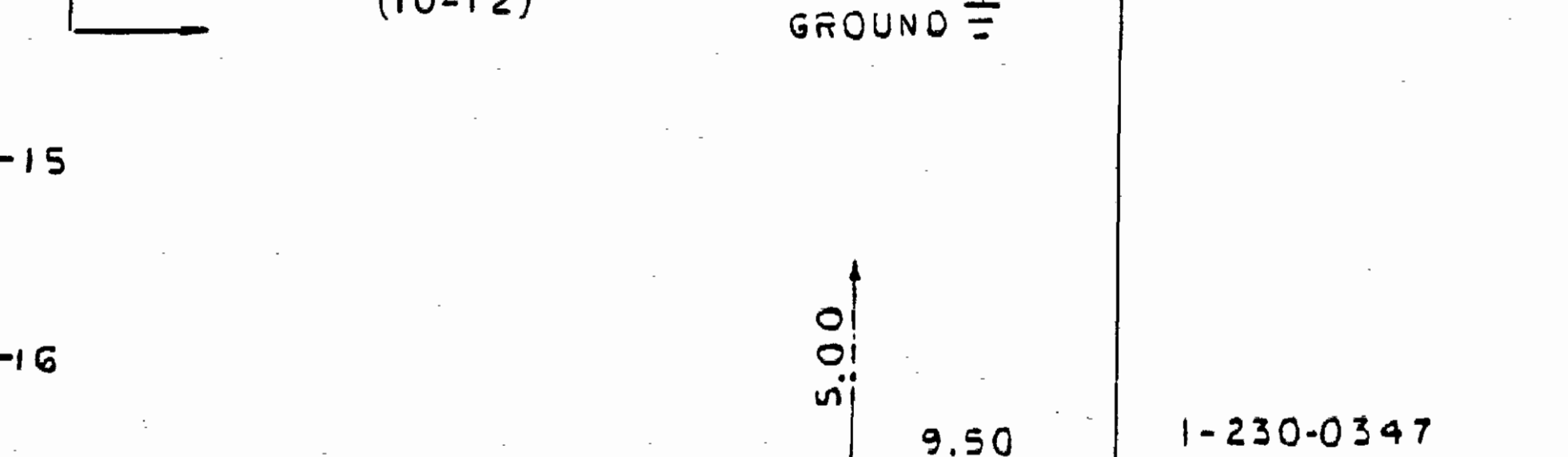
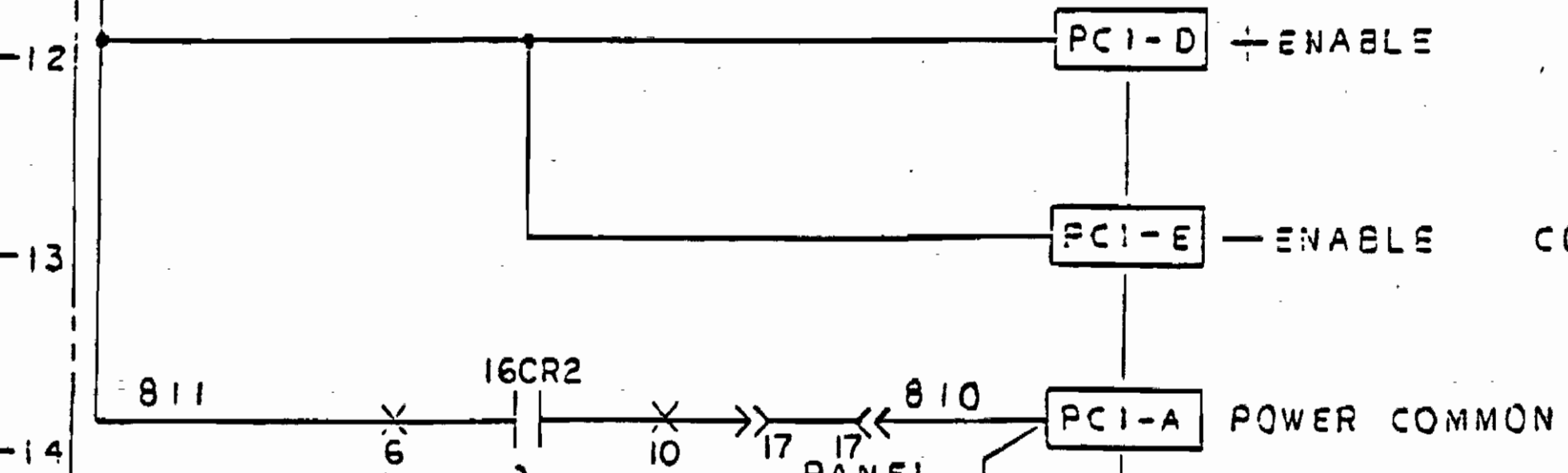
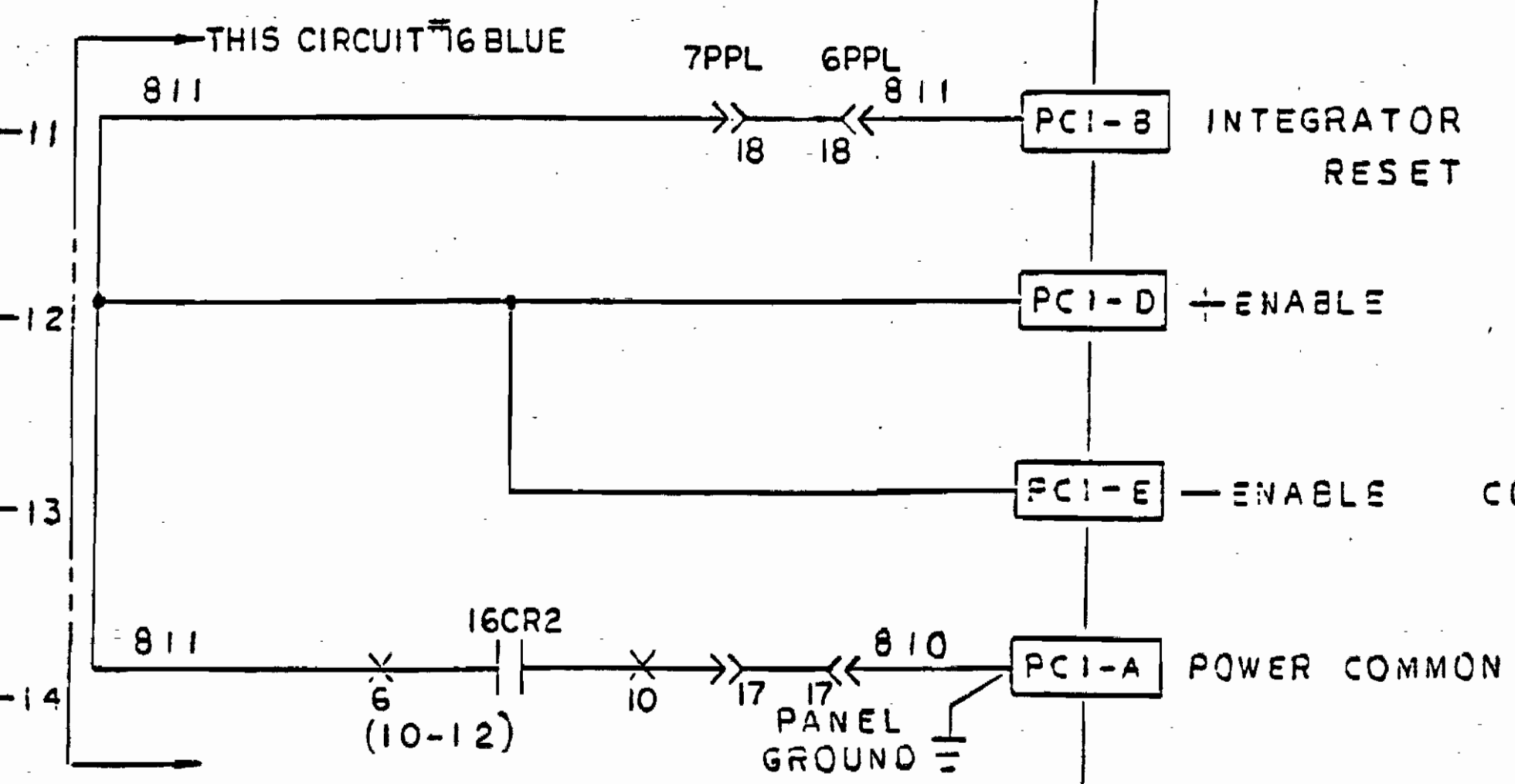
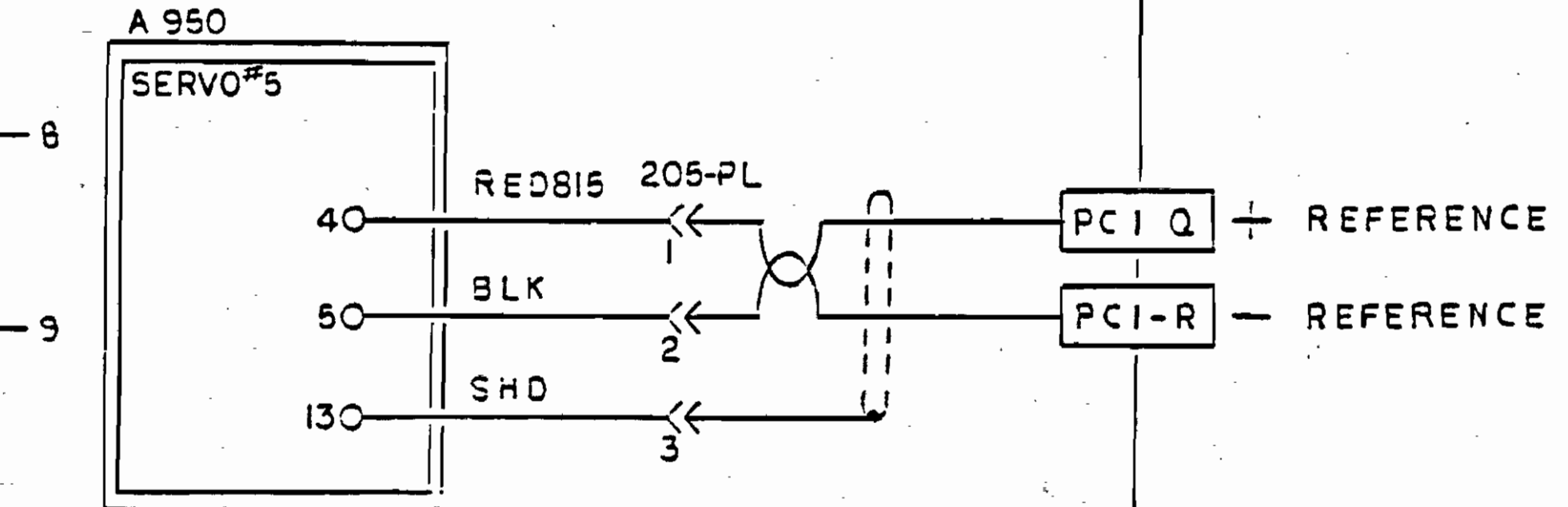
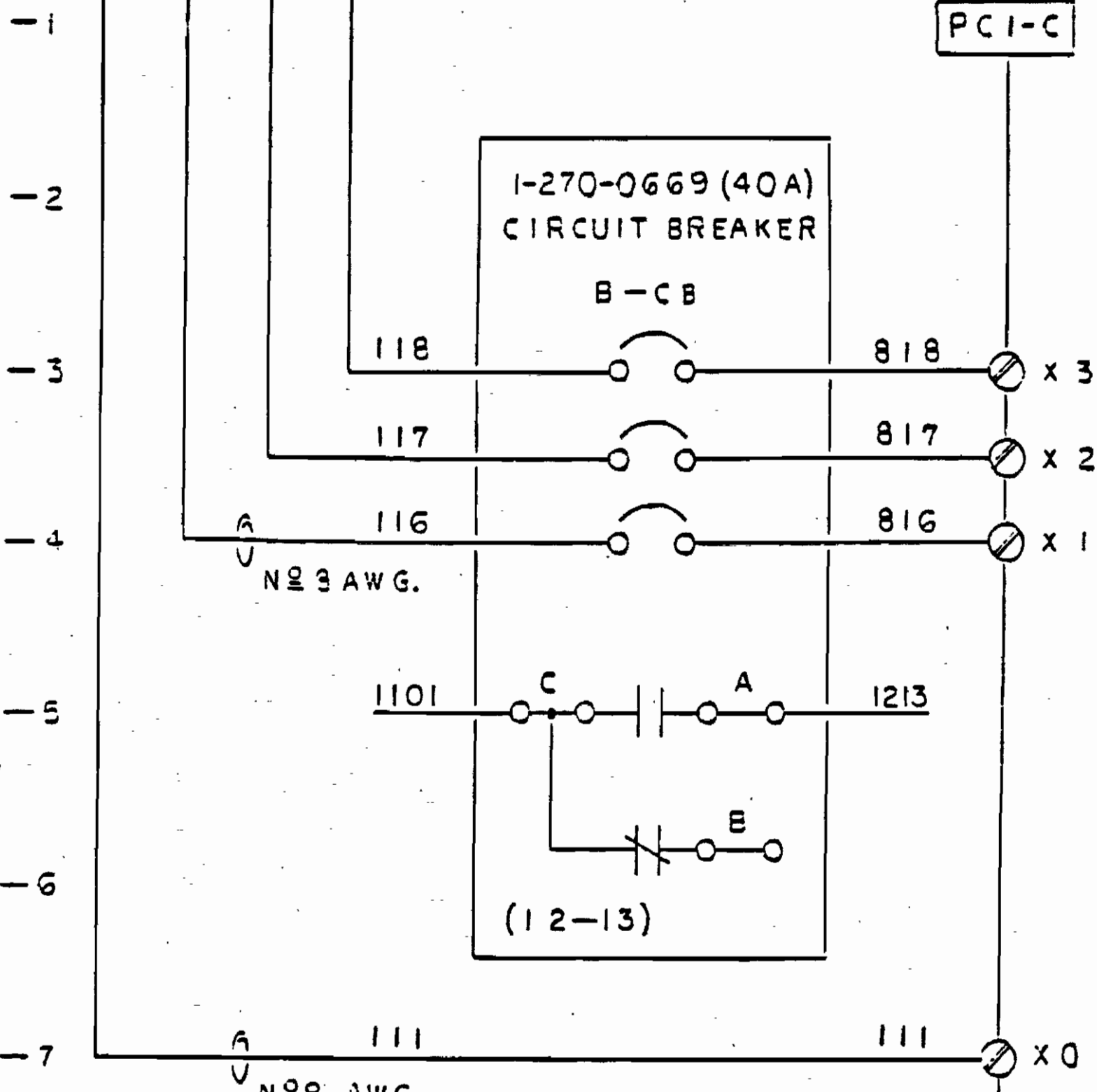
G-1 TACH. G-2

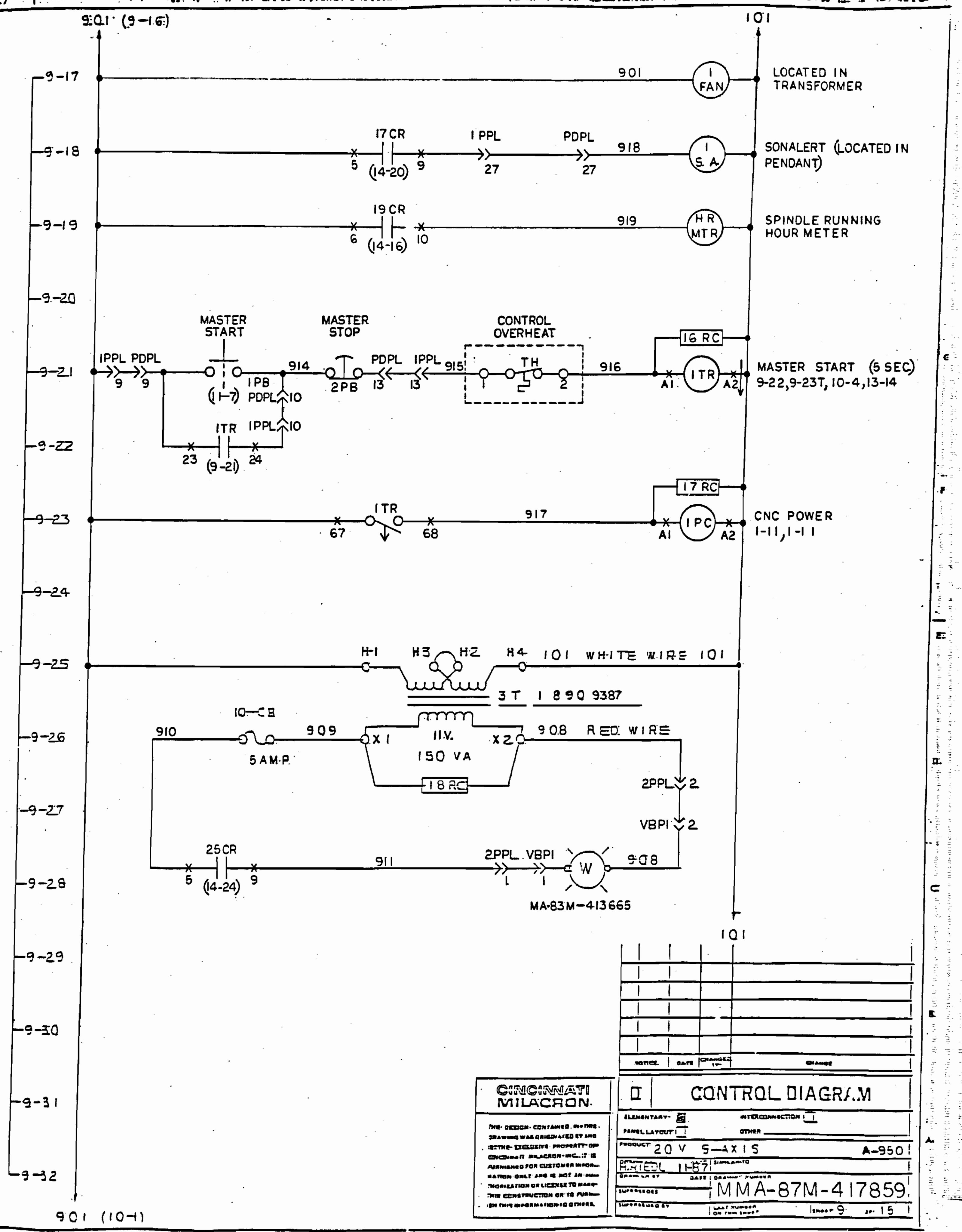
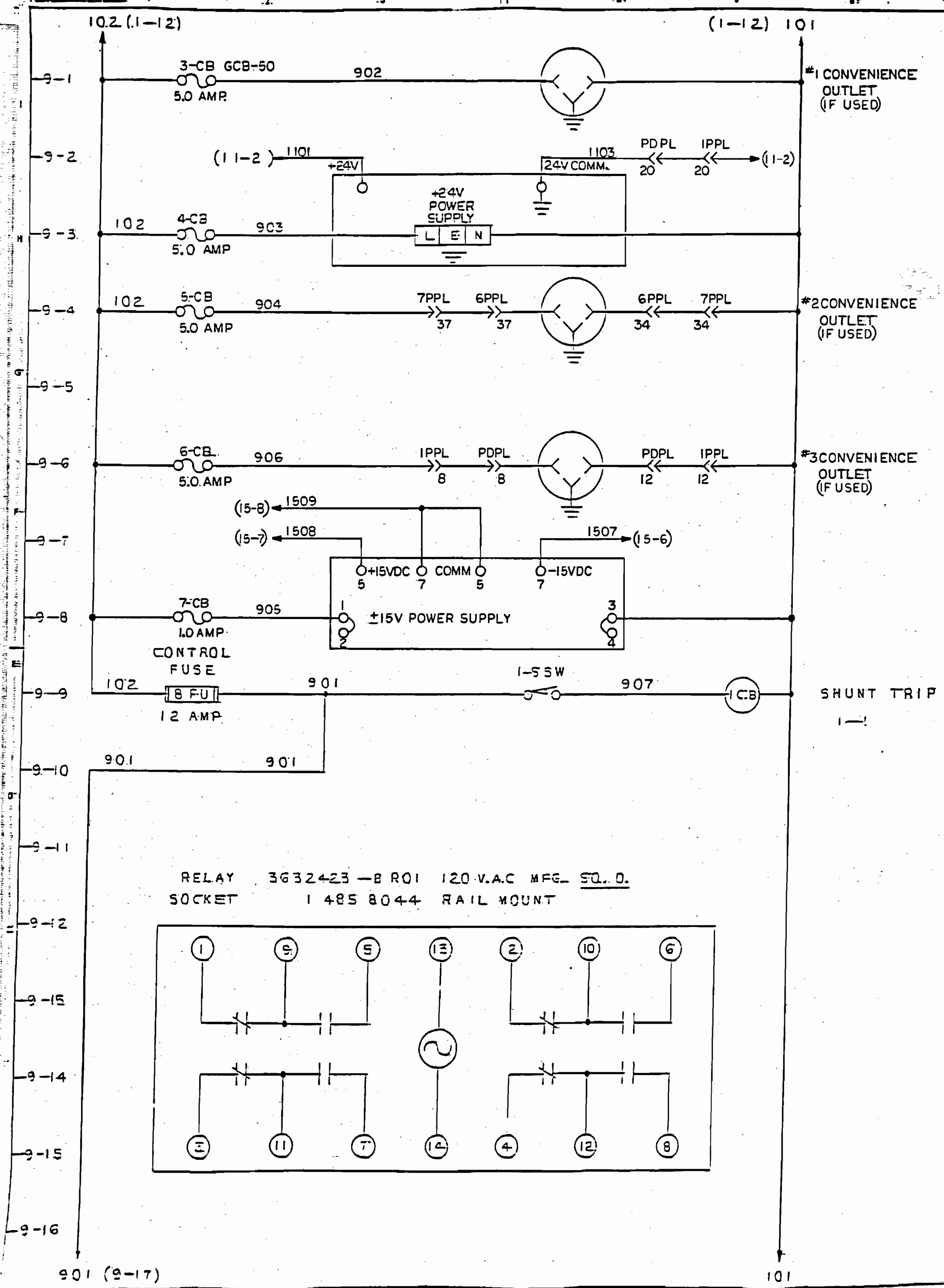
B-TH2

B-TH1

YEL	K	VBP-2 25	B-PPL 4	205-PL 4	807 RED	06
BLU	U	26	5	5	BLK	03
		27	6	6	SHD	017
RED	L	28	7	7	808 RED	02
BLK	M	29	8	8	BLK	01
		30	9	9	SHD	016
YEL/WHT	B	31	10	10	809 RED	012
RED/WHT	N	32	11	11	BLK	09
		33	12	12	SHD	018

(-10) 111 116 117 118 (1-16)

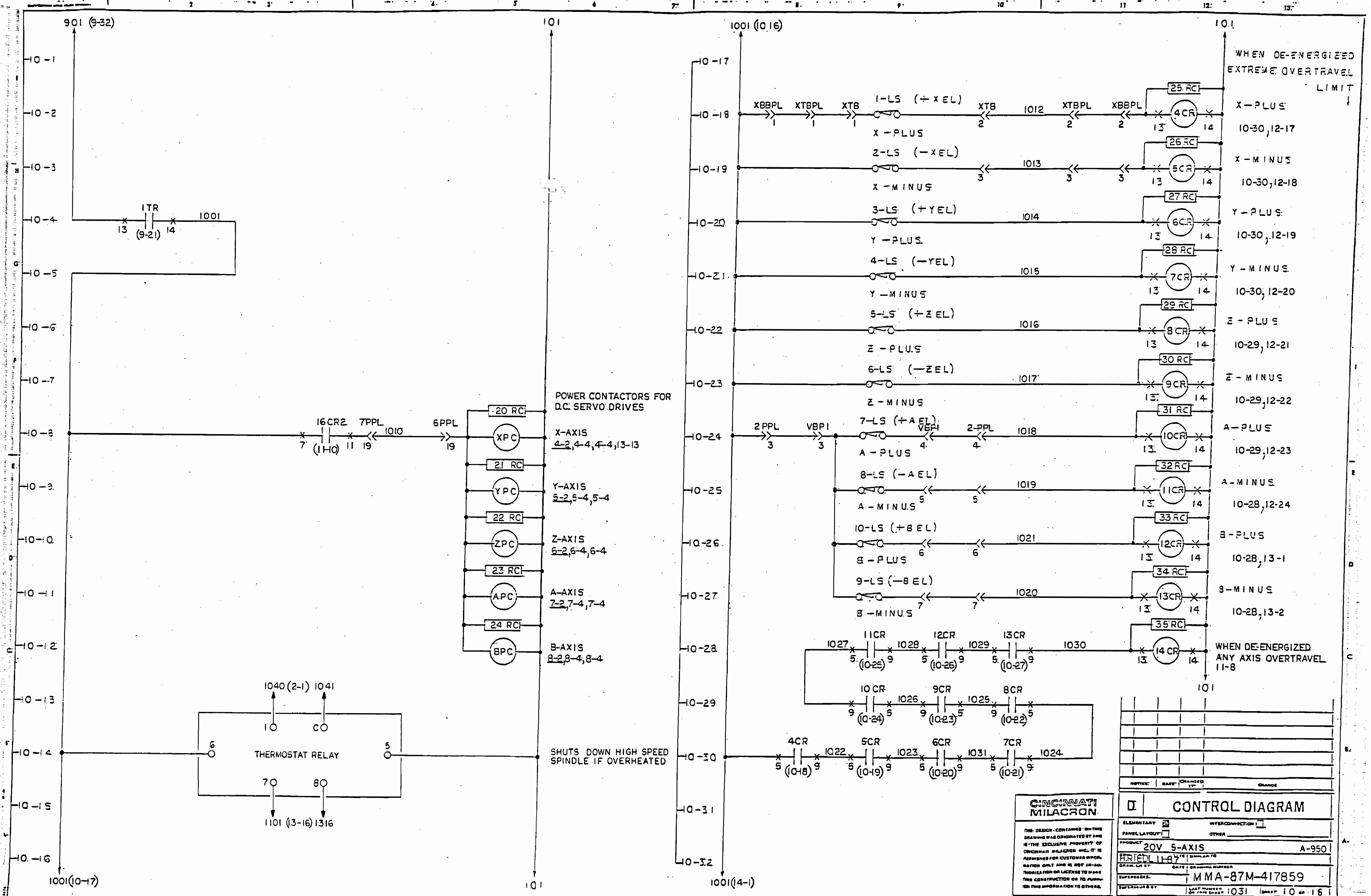




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NOTICE	DATE	CHANGED	BY
CONTROL DIAGRAM			
ELEMENTARY		INTERCONNECTION	
PANEL LAYOUT		OTHER	
PRODUCT 20 V 5-AXIS		A-950	
DRAWN BY		DATE	
SUPERSEDES		MMA-87M-417859	
APPROVED BY		DATE	



WHEN DE-ENERGIZED
EXTREME OVERTRAVEL
LIMIT

X-PLUS
10-30, 12-17

X-MINUS
10-30, 12-18

Y-PLUS
10-30, 12-19

Y-MINUS
10-30, 12-20

Z-PLUS
10-29, 12-21

Z-MINUS
10-29, 12-22

A-PLUS
10-29, 12-23

A-MINUS
10-28, 12-24

B-PLUS
10-28, 13-1

B-MINUS
10-28, 13-2

WHEN DE-ENERGIZED
ANY AXIS OVERTRAVEL
11-8

POWER CONTACTORS FOR
D.C. SERVO DRIVES

20 RC XPC X-AXIS
4-2, 4-4, 4-4, 13-13

21 RC YPC Y-AXIS
5-2, 5-4, 5-4

22 RC ZPC Z-AXIS
6-2, 6-4, 6-4

23 RC APC A-AXIS
7-2, 7-4, 7-4

24 RC BPC B-AXIS
8-2, 8-4, 8-4

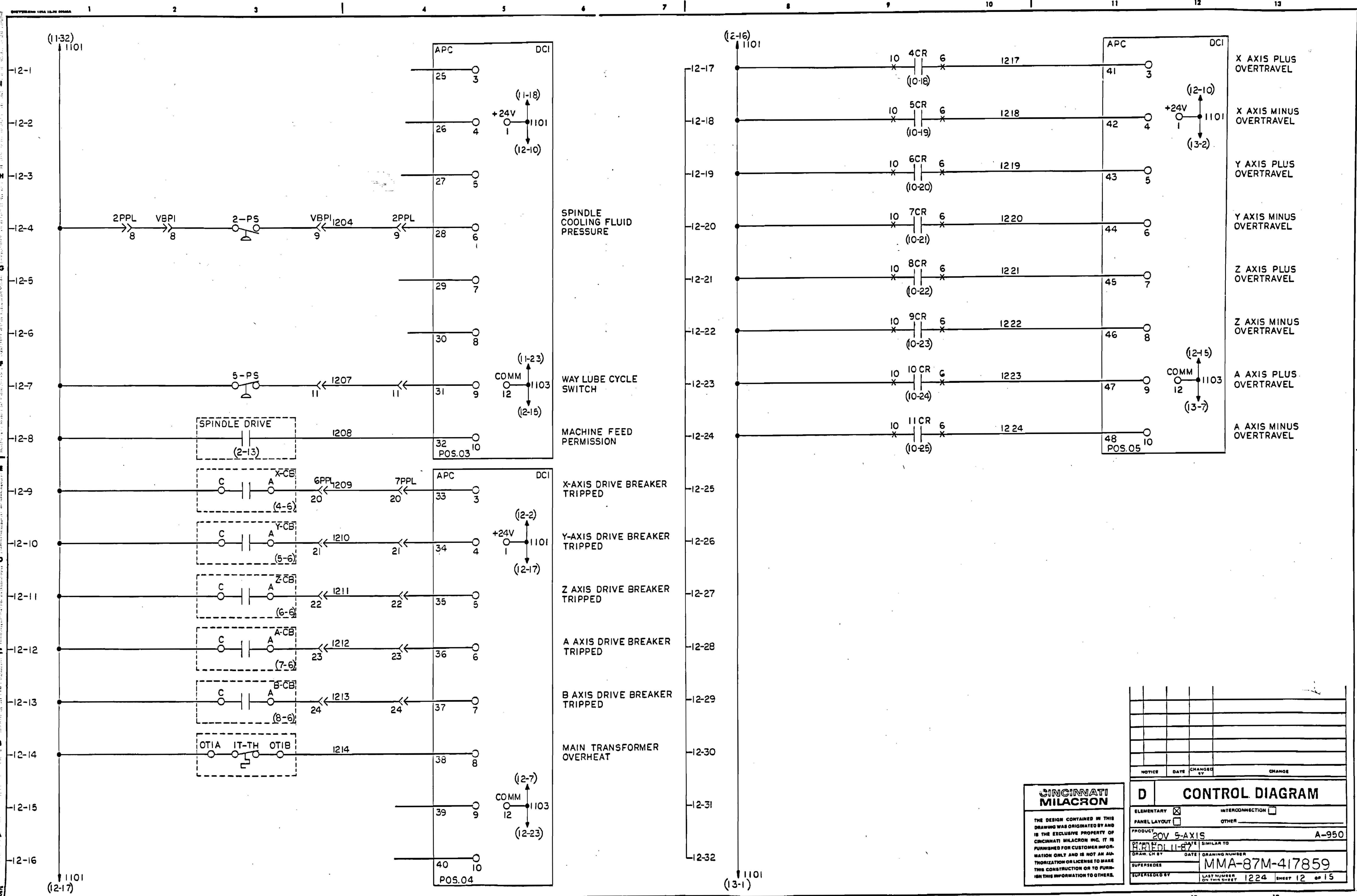
SHUTS DOWN HIGH SPEED
SPINDLE IF OVERHEATED

THERMOSTAT RELAY

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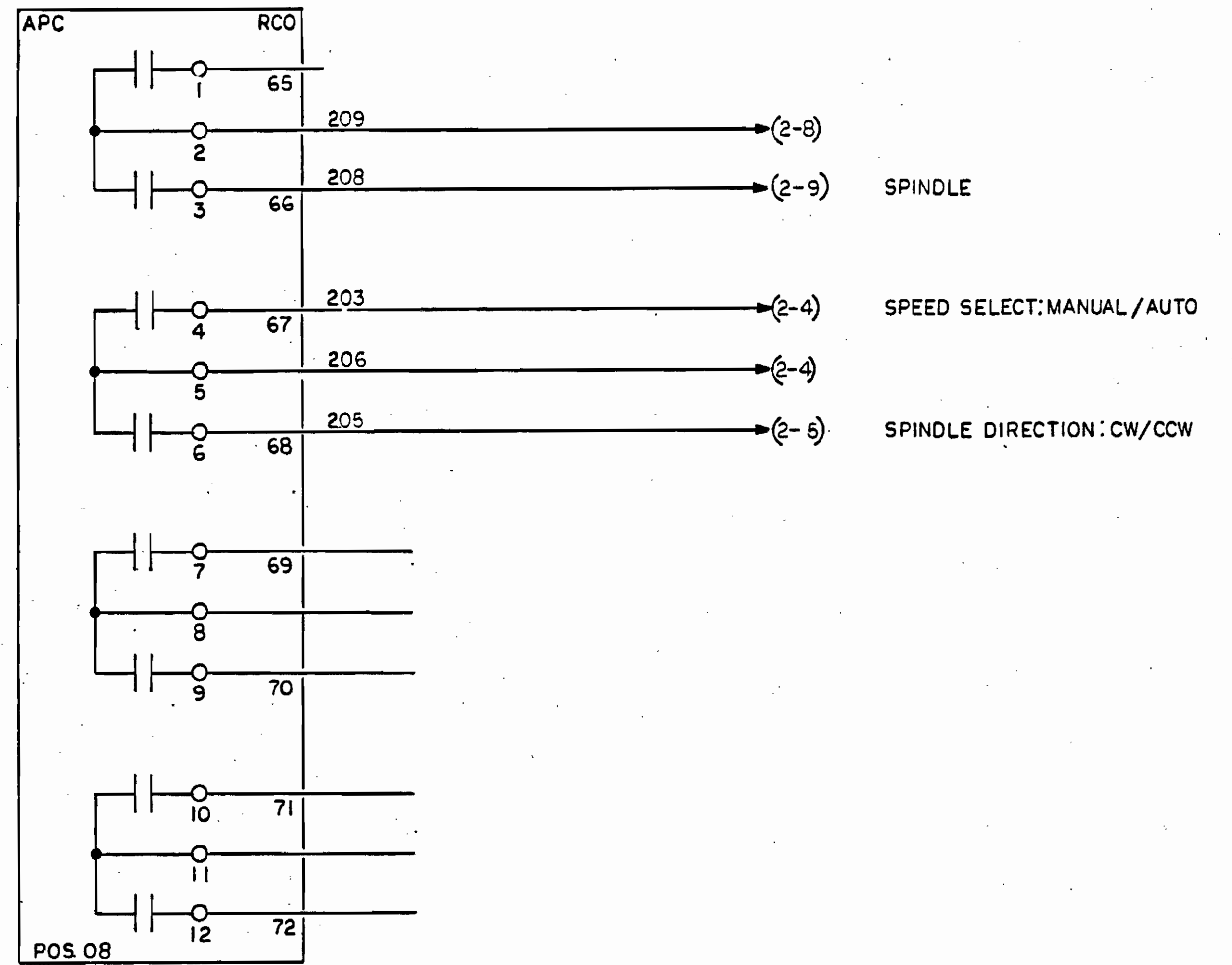
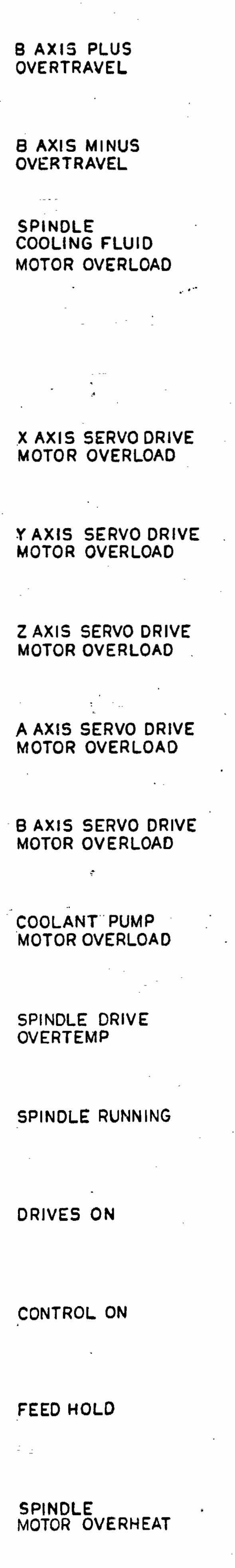
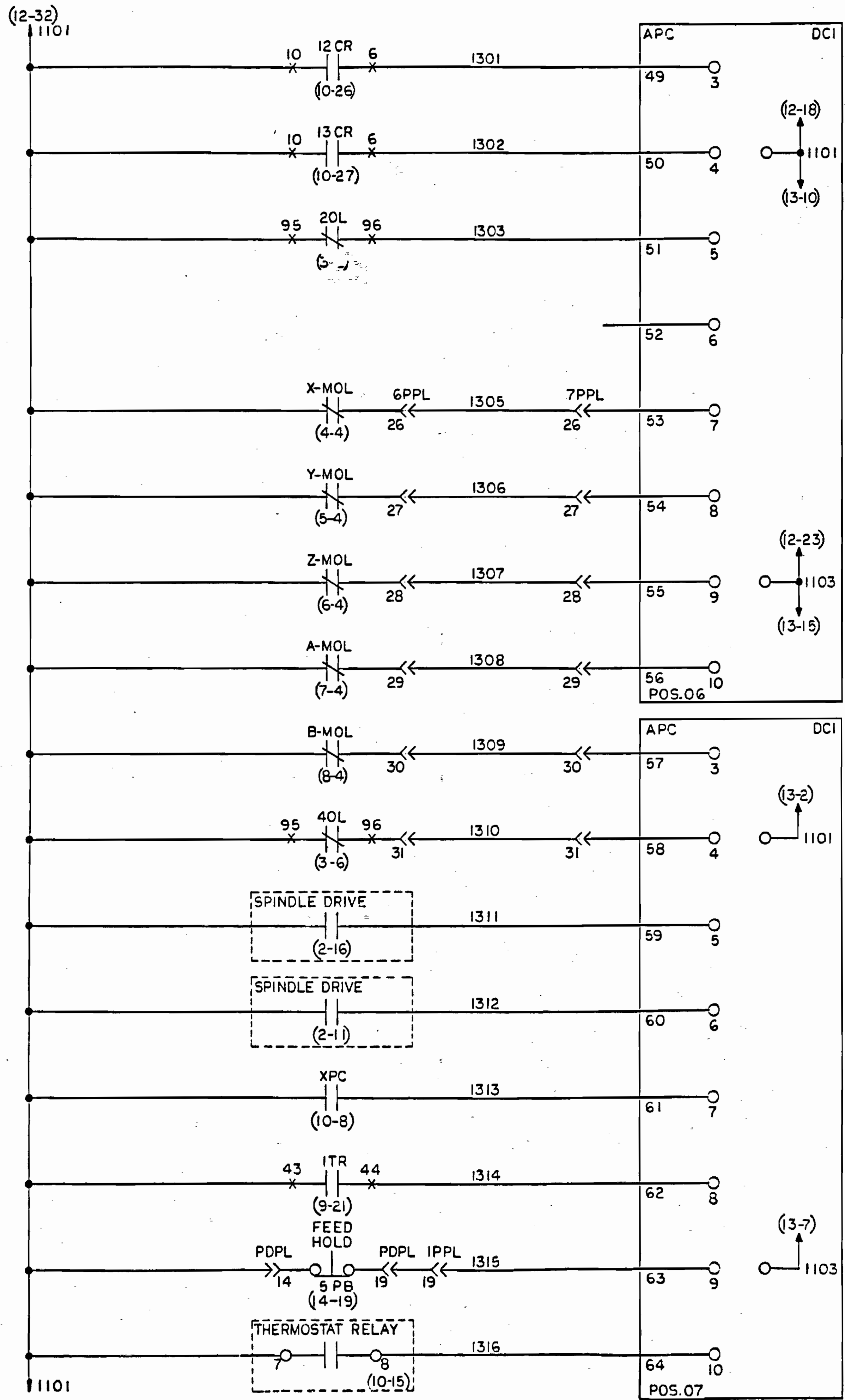
NOTICE	DATE	CHANGED	BY	REASON
CONTROL DIAGRAM				
ELEMENTARY	INTERCONNECTION			
PANEL LAYOUT	OTHER			
PRODUCT	20V 5-AXIS		A-950	
DATE	11-87		DRAWN BY	
SUPERSEDES	MMA-87M-417859		LAST NUMBER OF THIS SERIES	
	1031		SHEET 10 OF 16	



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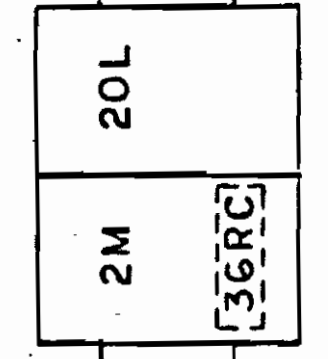
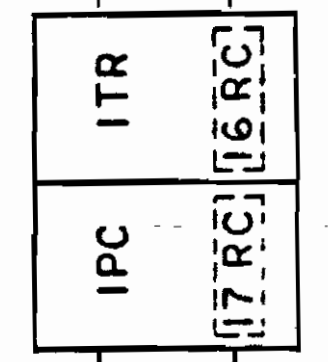
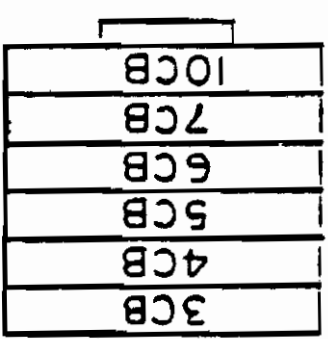
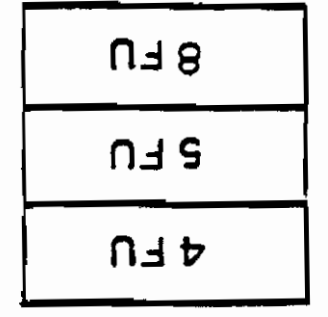
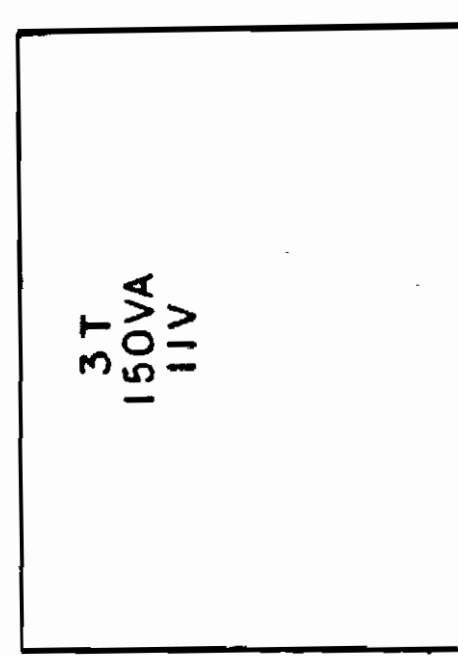
NOTICE	DATE	CHANGED BY	CHANGE
D CONTROL DIAGRAM			
ELEMENTARY <input checked="" type="checkbox"/>	INTERCONNECTION <input type="checkbox"/>		
PANEL LAYOUT <input type="checkbox"/>	OTHER <input type="checkbox"/>		
PRODUCT	20V 5-AXIS		A-950
DATE	DATE	DATE	DATE
DRAWN BY	DATE	DRAWING NUMBER	
SUPERSEDED BY		MMA-87M-417859	
SUPERSEDED BY		LAST NUMBER ON THIS SHEET	1224 SHEET 12 OF 15



NOTICE	DATE	CHANGED BY	CHANGE
D CONTROL DIAGRAM			
ELEMENTARY <input checked="" type="checkbox"/>	INTERCONNECTION <input type="checkbox"/>		
PANEL LAYOUT <input type="checkbox"/>	OTHER <input type="checkbox"/>		
PRODUCT	20V 5-AXIS		A-950
DATE	11-87	SIMILAR TO	
DRAWN BY		DATE	
SUPERSEDES	MMA-87M-417859		
SUPERSEDED BY	LAST NUMBER ON THIS SHEET	1314	SHEET 13 OF 15

CINCINNATI MILACRON

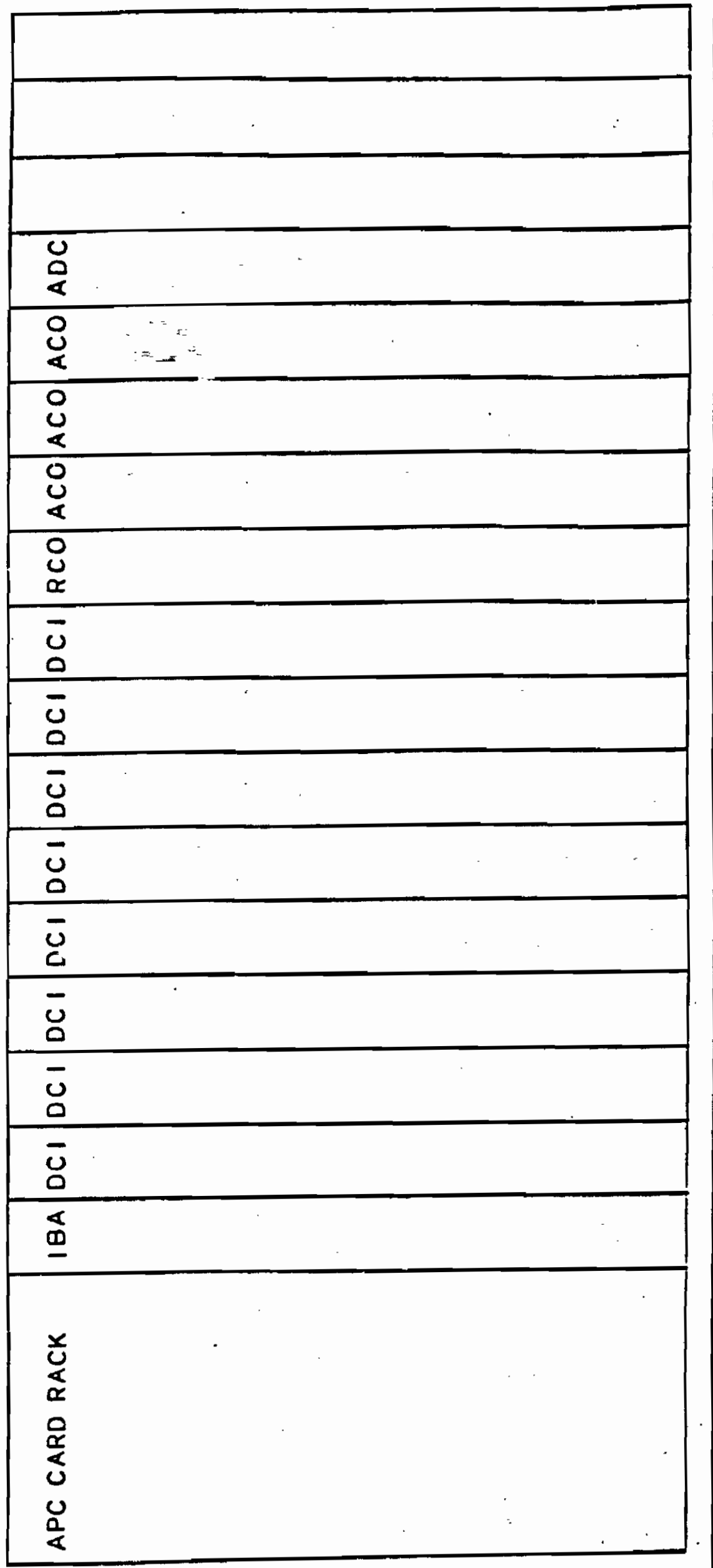
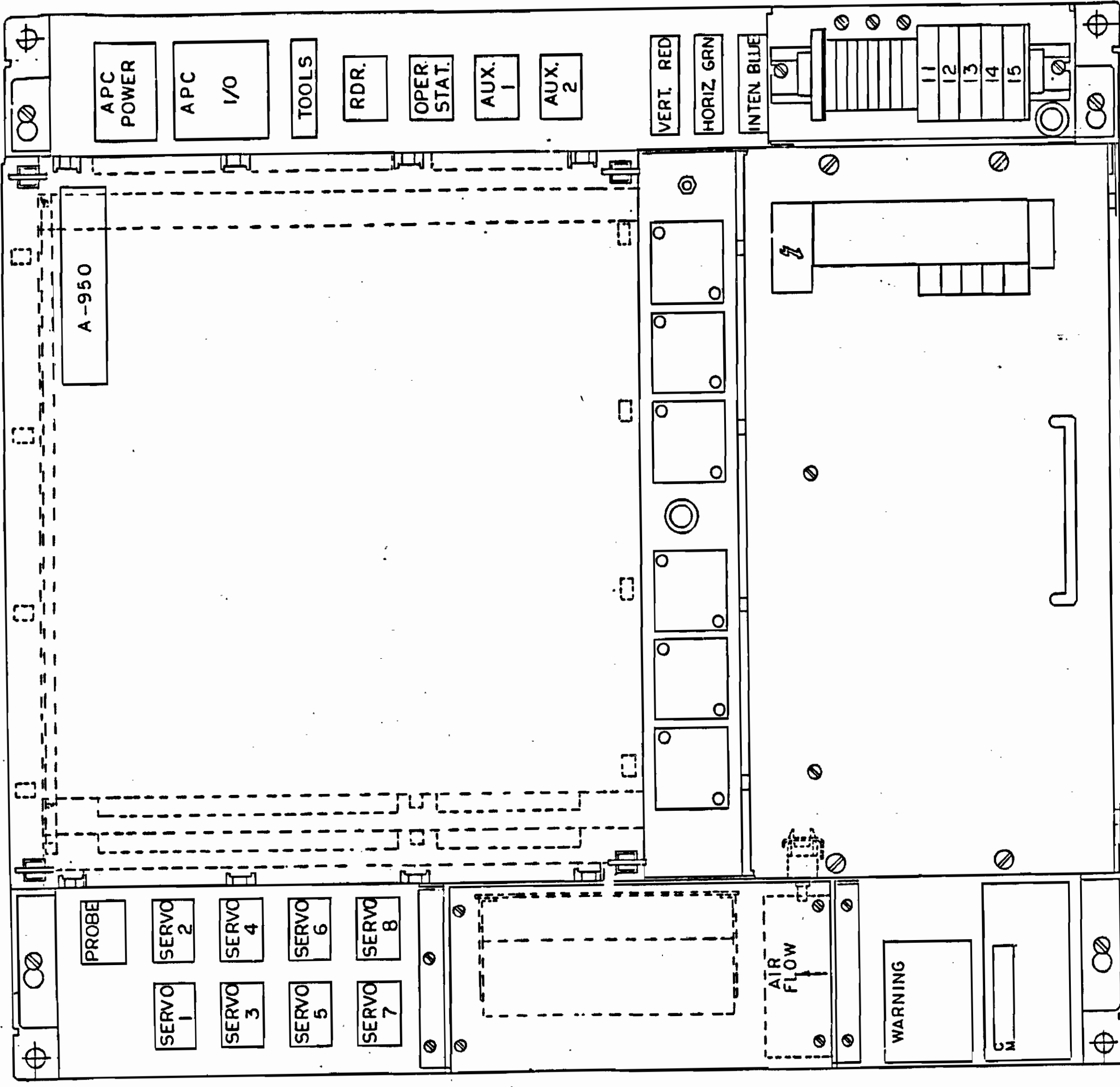
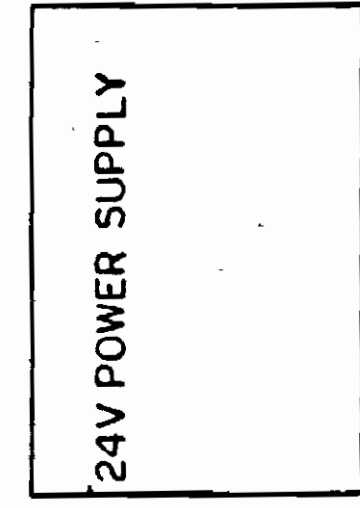
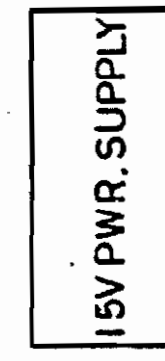
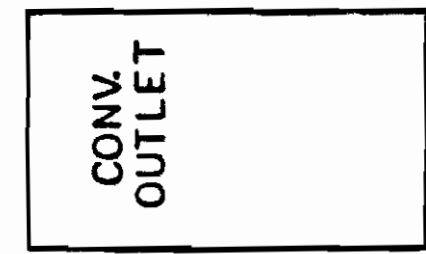
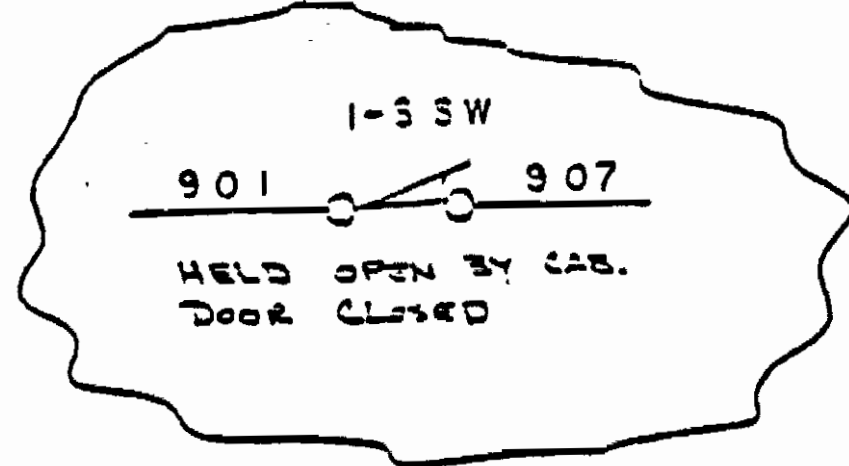
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1 T B	201	1101	1102
50 P I	202	1101	1101
101	203	1101	1101
101	204	1101	1101
101	205	1101	1101
101	206	1101	1101
201	208	1101	1101
202	209	1101	1101
203		1101	1101
204		1101	1101
205		1101	1101
206		1101	1101
901		1101	1101
901		1101	1101
907		1101	1101
1001		1101	1101
1001		1101	1101
1001		1101	1101
1001		1101	1101
1012		1101	1101
1013		1101	1101
1014		1101	1101
1015		1101	1101
1016		1101	1101
1017		1101	1101

PANEL
31.25 X 64.25

ENCLOSURE
1-090-0721



2 T B	1214	1404	211
57 P T	1215	1408	212
1104	1216	125	213
1107	1217	126	311
1112	1218		312
1113			313
1114			101
1116			102
1117			103
1118			104
1119			107
1120			108
1128			110

0000
0000
GND.
T.B.

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25 AMP. 600 V.

NOTICE	DATE	CHANGED	BY	CHANGE
D CONTROL DIAGRAM		ELEMENTARY <input type="checkbox"/> INTERCONNECTION <input type="checkbox"/>		
PANEL LAYOUT <input checked="" type="checkbox"/>		OTHER <input type="checkbox"/>		
PRODUCT	20 V 5 AXIS	A-950		
DATE	11-28-71	SIMILAR TO		
DESIGNED BY	MM B-87M-417859	DRAWN BY		
SUPERSEDED BY		CHECKED BY		
2 of 2		2 of 2		

