



**LEGEND**

SPECIFIED VALUES OF NUMBERED COMPONENTS

**CONTROL CIRCUIT P.C. BOARD**

C20	.022 MFD.	R20	500 Ω 1/4 W.
C21	.22 MFD.	R21	100 Ω
C22	150 MFD.	R22	2.2 K Ω
C23	.047 MFD.	R23	270 Ω 1W
C24	100 MFD.	R24	15 K Ω
C25	33 MFD.	R25	10 Ω
C26	50 MFD.	R26	100 Ω
		R27	39 K Ω
		R28	1.8 K Ω
		R29	6.8 K Ω
		R30	1 K Ω
		R31	1 K Ω 1/4 W.
		R32	3.9 K Ω
		R33	200 Ω 10 W.
		R34	4.7 K Ω 2W
		R36	1 K Ω 1/4 W.
		R37	55 Ω

D20 THRU D36 1AMP  
 DZ20 20 V.  
 DZ21 6.2 V.  
 TP1 50 V.  
 Q20 1A, 200V. P.N.P.  
 Q21 1A, 200V. P.N.P.  
 SCR1 4 A, 400 V.  
 SUS 2N4989  
 F1 10 AMP SLOW BLOW FUSE

FOR CONTROL P.C. BOARDS L5C07-1 OR HIGHER USE M17162-1 SCHEMATIC FOR COMPONENT VALUES AND CIRCUIT CONNECTIONS.

**FIRING CIRCUIT P.C. BOARD**

C40, C41, C42	.022 MFD	R40, R41, R42	430 Ω 4W.
C43, C44, C45	4.7 MFD	R43, R44, R45	27 Ω
C46, C47, C48	.047 MFD	R46, R47, R48	150 Ω
C49, C50, C51	.047 MFD	R49, R50, R51	3.3 K Ω
C52, C53, C54	.1 MFD	R52, R53, R54	6.8 K Ω
C55, C56, C57	.022 MFD	R55, R56, R57	47 K Ω
C58, C59, C60	.22 MFD	R58, R59, R60	47 Ω
C61	.022 MFD	R61, R62, R63	1 K Ω
C62, C63, C64	2 MFD	R64, R65, R66	10 Ω
C65, C66, C67	50 MFD	R67, R68, R69	47 Ω
		R70, R71, R72	500 Ω 1/4 W.
		R73, R74, R75	100 K Ω 1/4 W.
		R76, R77, R78	270 Ω 4 W.
		R79, R80, R81	5.1 Ω
		R82, R83, R84	100 Ω
		R85, R86, R87	68 Ω 4W.

D40 THRU D54 1 AMP  
 DZ40, DZ41, DZ42 20 V. 1W.  
 Q40, Q41, Q42 2N3393 N.P.N.  
 Q43, Q44, Q45 UJT  
 SCR1, SCR2, SCR3 4 A. 400V.

**NOT ON P.C. BOARDS**

C1	.05 + .05 MFD	R1	50 Ω 50W.
C2	.68 MFD.	R2	40 Ω 100W.
C3	.68 MFD.	R3	10 K Ω 2W
C4	.68 MFD.	R4	50 Ω
C5	1 MFD.	R5	270 Ω
		R6	47 Ω
		R7	47 Ω
		R8	47 Ω
		R9	27 Ω

CT1, CT2, CT3 CURRENT TRANS.  
 L1 D.C. OUTPUT FILTER  
 L2 FEEDBACK FILTER  
 ICR INPUT STARTER  
 SCR1 - D4 }  
 SCR2 - D5 } HYBRID BRIDGE  
 SCR3 - D6 }  
 - D7 }  
 SW1 POWER SWITCH  
 SW2 MACH. REMOTE SWITCH  
 SW3 DIAL SELECTOR SWITCH  
 T1 MAIN TRANSFORMER  
 T2 CONT. TRANSFORMER

A.N.S.I. ELECTRICAL SYMBOLS PER E-1537

NOTE: SINCE COMPONENTS OR CIRCUITRY ON A PRINTED CIRCUIT BOARD MAY CHANGE WITHOUT AFFECTING THE INTERCHANGEABILITY OF A COMPLETE BOARD THIS DIAGRAM MAY NOT SHOW THE EXACT COMPONENTS OR CIRCUITRY OF CONTROLS HAVING A COMMON CODE NUMBER.

THIS LEAD IS NOT USED WHEN POLARITY SWITCH IS INSTALLED

L2 IS LOCATED NEAR POSITIVE OUTPUT TERMINAL ON OLDER MACHINES

TO GROUND PER NATIONAL ELECTRICAL CODE

TO SUPPLY LINES

NOT PRESENT ON SINGLE VOLTAGE MACHINES ABOVE 400V.

CONNECTIONS FOR SINGLE VOLTAGE MACHINES ABOVE 400V.

N.A. A DASH N<sup>o</sup> IS STAMPED ON THE LAMINATION OF L2 NEAR THE COIL. THE SIDE OF L2 WITH THE DASH N<sup>o</sup> MUST FACE THE HEAVY LEAD THAT CONNECTS TO THE POSITIVE STUD (OR POLARITY SWITCH, IF SO EQUIPPED).

THIS LEAD IS NOT USED WHEN POLARITY SWITCH IS INSTALLED

WORK TERMINAL ON MACHINES WITH POLARITY SWITCH

OPTIONAL POLARITY SWITCH (SHOWN IN D.C. + POSITION)

THE LINCOLN ELECTRIC CO. CLEVELAND, OHIO U.S.A.	Change Sheet No. 1214-770 R-378 1214-78 1214-79 1214-80 1214-81 1214-82	TYPE IDEALARC R3R-400 (SINGLE & DUAL VOLTAGE) SUBJECT SCHEMATIC DATE 7-19-78 SCALE	G-1482
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