

PRIMARY THERMOSTAT
RECTIFIER THERMOSTAT

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

TERMINAL BOARD
RECONNECT PANEL NOT USED ON SOME MACHINES. REFER TO WIRING DIAGRAM AND INPUT CONNECTION DIAGRAM.

TO SUPPLY LINES
TO PRIMARY COILS
FAN MOTOR

CONNECTIONS FOR SINGLE VOLTAGE MACHINES ABOVE 400V.

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

CONTROL CIRCUIT P.C. BOARD

FIRING CIRCUIT P.C. BOARD

THIS LEAD IS NOT USED WHEN POLARITY SWITCH IS INSTALLED

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

WORK TERMINAL ON MACHINES WITH POLARITY SWITCH

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	500 Ω 1/4 W.
		R32	3.9 K Ω
		R33	200 Ω 10W.
		R34	1.5 K Ω 2W.
		R36	1 K Ω 1/4 W.
		R37	330 Ω

D20 THRU D36 1 AMP

DZ20 20 V.
DZ21 6.2 V.
DZ22 100 V.
DZ23 150 V.

Q20 1A, 200V, P.N.P.
Q21 1A, 200V, P.N.P.
SCR1 4 A, 400 V.
SUS 2N4989
F1 9/10 AMP SLOW BLOW-FUSE

FOR CONTROL P.C. BOARDS L9208-1 OR HIGHER USE M17163-1 SCHEMATIC FOR COMPONENT VALUES AND CIRCUIT CONNECTIONS.

FIRING CIRCUIT P.C. BOARD

C40, C41, C42	.02 MFD	R40, R41, R42	430 Ω 5W.
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	100 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 5W.
		R79, R80, R81	5.1 Ω
		R82, R83, R84	100 Ω
		R85, R86, R87	68 Ω 5W.

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, 400 V.

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 25W.
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
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.

THE LINCOLN ELECTRIC CO.
CLEVELAND, OHIO U.S.A.

CHG. SHE. NO.
2-8500
REVISED
11-10-72
11-10-72
11-10-72
11-10-72

TYPE
IDEALARC R3R-500 (SINGLE & DUAL VOLTAGES)
SUBJECT
SCHEMATIC

SUPP'D 030 (6-1980) OF H.N. ENT. INC.
G-1525

ARNG. AUSTRALIA 8-80 CANADA 2-80 FRANCE 3-80

DATE 1-22-80 SCALE