



**CONTROL CIRCUIT P.C. BOARD**

R101, R181	200 Ω
R102, R135, R148, R153	6.8 K Ω
R108, R109, R113, R146, R110, R182	330 Ω
R105, R167, R172	47 K Ω
R106	33 K Ω
R107	15 K Ω
R108, R119, R177	6.8 K Ω
R109, R137, R147	1 K Ω
R110, R125, R164	680 Ω
R111	1.5 MEG Ω
R112	390 K Ω
R114, R155, R156	82 K Ω
R115, R168	1 MEG Ω
R116, R117, R143, R182	22 K Ω
R118, R163	50 K Ω TRIMMER
R121, R161, R185	470 Ω
R122, R123, R127, R134, R135, R160, R164, R165	2.2 K Ω
R124, R141	270 Ω
R120, R140, R151	1.5 K Ω
R126, R138	1 K Ω
R128, R131, R132, R142, R145	4.7 K Ω
R162, R171, R173, R175	1 K Ω
R130	3 K Ω
R129, R154	27 K Ω
R136, R158	1.8 K Ω
R137	20 K Ω TRIMMER
R144	2.7 NEG Ω
R149	10 K Ω
R150	1.3 K Ω
R166, R169, R186	47 Ω
R174, R176	100 Ω
R180	560 Ω
R183	2.7 K Ω

R187	150 Ω
L101	33 mH
LED 101 THRU LED 105	RED LIGHT EMITTING DIODE
TP101, TP102, TP103	TRANS. SUPPRESSOR
X101	QUAD OP AMP
SCR 101	4 A
C102	47 MFD
C103, C109	10 MFD
C104, C114, C115	.022 MFD
C105, C106, C107, C113	.047 MFD
C108	39 MFD
C110	.47 MFD
C111, C112	18 MFD
C116	2 MFD
C117	2 MFD
C118	.02-.022 MFD
C119, C120, C121, C122, C123	.02 MFD
C124, C129	.01 MFD
C126	2.7 MFD
D101, D106 THRU D111	1A, 400 V
D113 THRU D127	1A, 1000 V
D102, D103, D104, D105	1A, 1000 V
D101	15V, 5W
D102	10V, 5W
D103	6.2V, 400 mW
D104	10V, 1W
D105	5.3V, 500 mW
D107	3V, .5W
D108	25V, .5W
D109	15V, 1W

**FIRING CIRCUIT P.C. BOARD**

R301-R306	250 Ω, 11W
R307-R312	10 Ω
R313-R318	470 Ω
R319-R324	5.1 Ω
R325-R330	100 Ω
R331-R336	150 Ω
R337-R339	4.7 K Ω
R340-R342	68 K Ω
R343-R345	1 K Ω
R346-R348	1 MEG Ω
R349-R351	50 K Ω TRIMMER
R352-R354	27 K Ω
R355-R357	680 Ω, 2W
D301 THRU D342	1A
DZ301, HRU DZ306	27V, 5W
L301	33 mH
LED301 THRU 309	RED LT. EMIT. DIODE
QU301 THRU QU303	2N6027
PT301-PT303	1:1:1 PULSE TRANS.
SCR301-SCR306	4A, 400V
TP301-TP303	TRANS. SUPPRESSOR
C301-C306	.22 MFD
C307-C312	.27 MFD
C313-C319	.047 MFD
C320-C328	.022 MFD
C329-C331	.22 MFD

**COMPONENTS NOT ON P.C. BOARD**

R1	10K Ω POT.
R2	30 Ω 300W
C7	.05+.05 MFD.
F1	5A. SLOW BLOW
1CR	INPUT STARTER
2CR	FAULT PROTECTION RELAY
3CR & 4CR	CURRENT ACTIVATED REED SW.
5CR	CV SUBARC STARTING RELAY
6CR	OUTPUT PILOT RELAY
SW1	INPUT POWER
SW2	ELECT. POLARITY
SW4	OUTPUT CONTROL
SW5	WELDING MODE
T1	MAIN POWER TRANS.
T2	INTERPHASE REACTOR
T3	CONTROL TRANS.

**TIME DELAY BOARD**

R401	1K Ω, 12W
C401	8 MFD, 250V
D401	1A, 1000V

**SNUBBER AS'BLY.**

R1-R16	47 Ω, 2W
C11-C16	.68 MFD
C17-C22	.15 MFD

**OUTPUT SNUBBER AS'BLY.**

R10	27 Ω, 2W
C10	1 MFD

**NOTES**

- ONE OR BOTH DIODES (D121 & D122) MAY BE SHORTED WITH A JUMPER.
- CIRCLED CONNECTION PIN NOS ON FIRING BOARD INDICATE THE SMALLER OF THE TWO MOLEX CONNECTORS.
- CIRCLED CONNECTION PIN NOS ON CONTROL BOARD INDICATE THE SMALLER OF THE TWO MOLEX CONNECTORS.
- REED SWITCHES CLOSE WHEN OUTPUT CURRENT FLOWS.