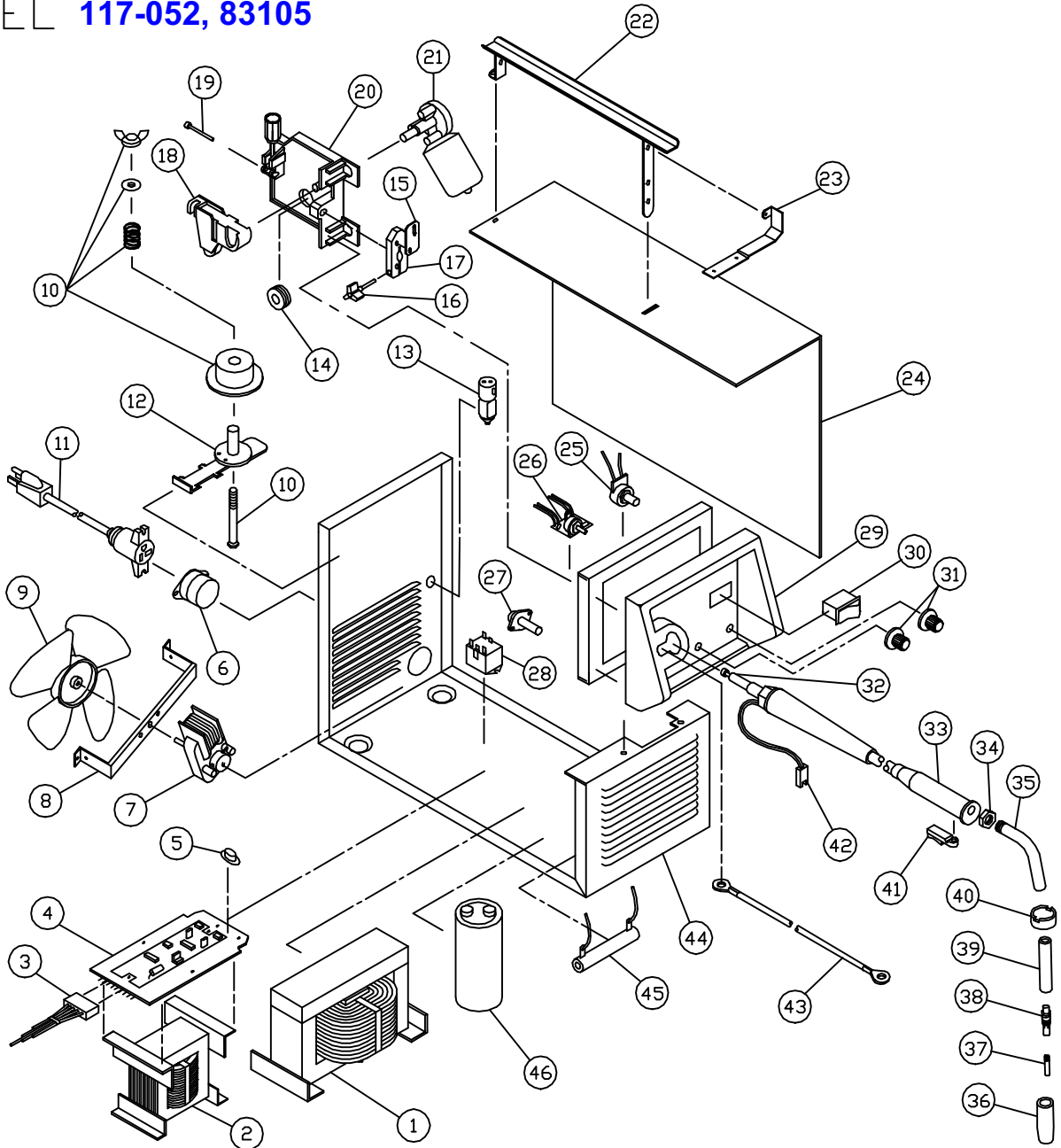


# REPLACEMENT PARTS LIST CENTURY 130 WIRE FEED WELDER MODEL 117-052, 83105



# 117-052 (83105), 105 Amp Mig

Item	Lincoln Stock #	Customer #	Description
1	Repair	<b>880-188-888</b>	Main weld transformer
2	NLA	880-215-888	Reactor Coil w/ thermostat
3	NLA	880-225-666	Wire harness
4	880-217-666	880-217-666	Circuit board
5	216-053-666	216-053-666	Thermostat
6	S18414-1	239-159-666	Power receptacle
7	216-087-666	216-087-666	Fan motor
8	NLA	412-375-000	Fan motor bracket
9		<b>316-009-000</b>	Fan blade
10	131-419-000	131-213-000, 131-350-001	Tension hardware
11	S18475	248-226-000, <b>248-227-100 (4040)</b>	Power cord
12	312-076-666	312-076-666	Spindle
13	246-086-666	246-212-666	Gas solenoid
14	310-122-500	4323	Drive roller, 0.024 / 0.030 / 0.035
	860-616-002	4324	Drive roller for aluminum
15		<b>412-464-666</b>	Copper jumper
16		<b>246-326-000</b>	Bolt w/knob
17	412-465-666	412-465-666	Mig Gun connector
18	Included with #20	880-111-666, <b>312-107-000</b>	Tension arm only
19	Included with #20	239-123-666, <b>239-208-000</b>	Inlet guide tube
20	880-130-666	880-130-666	Drive base with arm
21	S27985-4 with 880-130 base hole enlarged & terminals changed	216-089-666	Drive motor
22	NLA	880-012-010	Handle assembly
23	NLA	412-278-010	Hood hinge
24	NLA	410-568-020	Right side panel
25		<b>245-108-666</b>	Heat potentiometer
26	880-219-666	880-219-666	Wire speed pcb
27a		<b>246-116-666</b>	Fuse holder cap
27b		<b>245-060-666</b>	Fuse only, BAN30 or BLN30

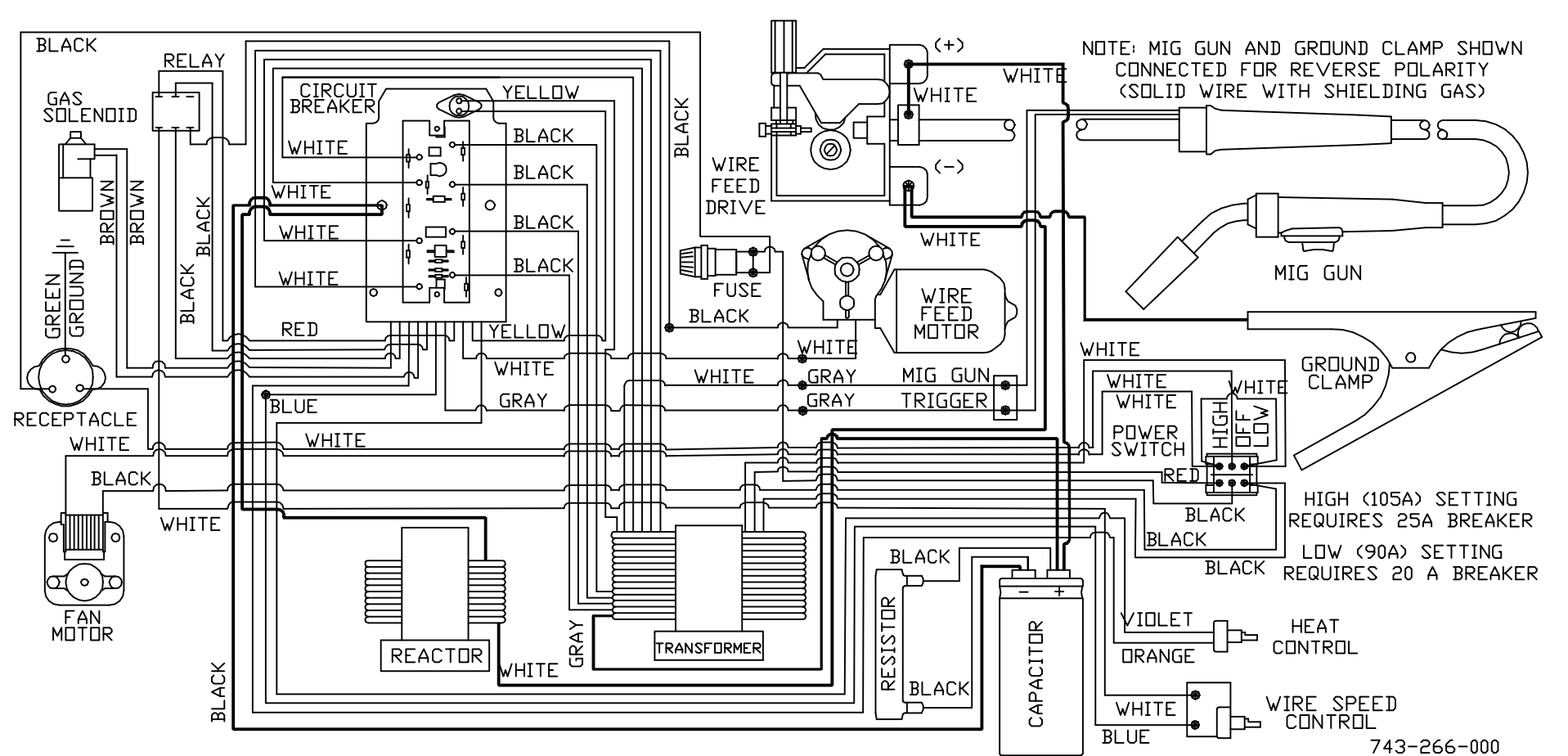
Item	Lincoln Stock #	Customer #	Description
28	246-258-666	246-258-666	Relay, 24Vdc coil
29	NLA	743-267-666	Mig nose w/label
30	246-259-666	246-259-666	90 / 110 Amp Rocker Switch
31	246-041-666	<b>246-107-000</b>	Knob
32	<b>KP45-40-15</b>	<b>KP1937-1, 4331</b>	<b>Steel liner, 15'</b>
	<b>KP1959-1</b>	<b>4325</b>	<b>Teflon liner</b>
33	<b>238-155-000</b>	<b>4320</b>	<b>10' Mig Gun</b>
34	S19580	334-220-000	Nut
35	334-227-000	334-227-000	Conductor tube
36	KP21T-50	43480, 334-203-300, KP1942-1, M15578	Steel welding nozzle
	KP21T-62	43300, 334-210-300, KP1942-3	Aluminum welding nozzle
	KP21-62-FAS	43290, 334-211-300, KP1956-1, M15577	Spot welding nozzle
37	KP11-25, KH710	43090, 334-159-300, KP2039-1B1, M15522	0.025 Contact Tips
	KP11-30, KH711	43100, 334-160-300, KP2039-2B1, M15523	0.030 Contact Tips
	KP11-35, KH712	43110, 334-161-300, KP2039-3B1, M15524	0.035 Contact Tips
38	334-228-000	334-228-000	Gas diffuser
39	Included with #35	<b>334-217-000</b>	Conductor tube insulation
40		<b>334-219-000</b>	Handle cap
41	334-221-000	334-221-000	Trigger
42		<b>860-744-000</b>	Trigger harness
43	S11609-18	<b>238-216-666</b>	Ground cable only, 9' w / lugs
	M12033	239-010-102	Ground clamp only
44	NLA	410-639-010	Mig base
45		<b>860-523-666</b>	Bleeder resistor
46	S13490-109	213-035-666	Capacitor

## Not Shown

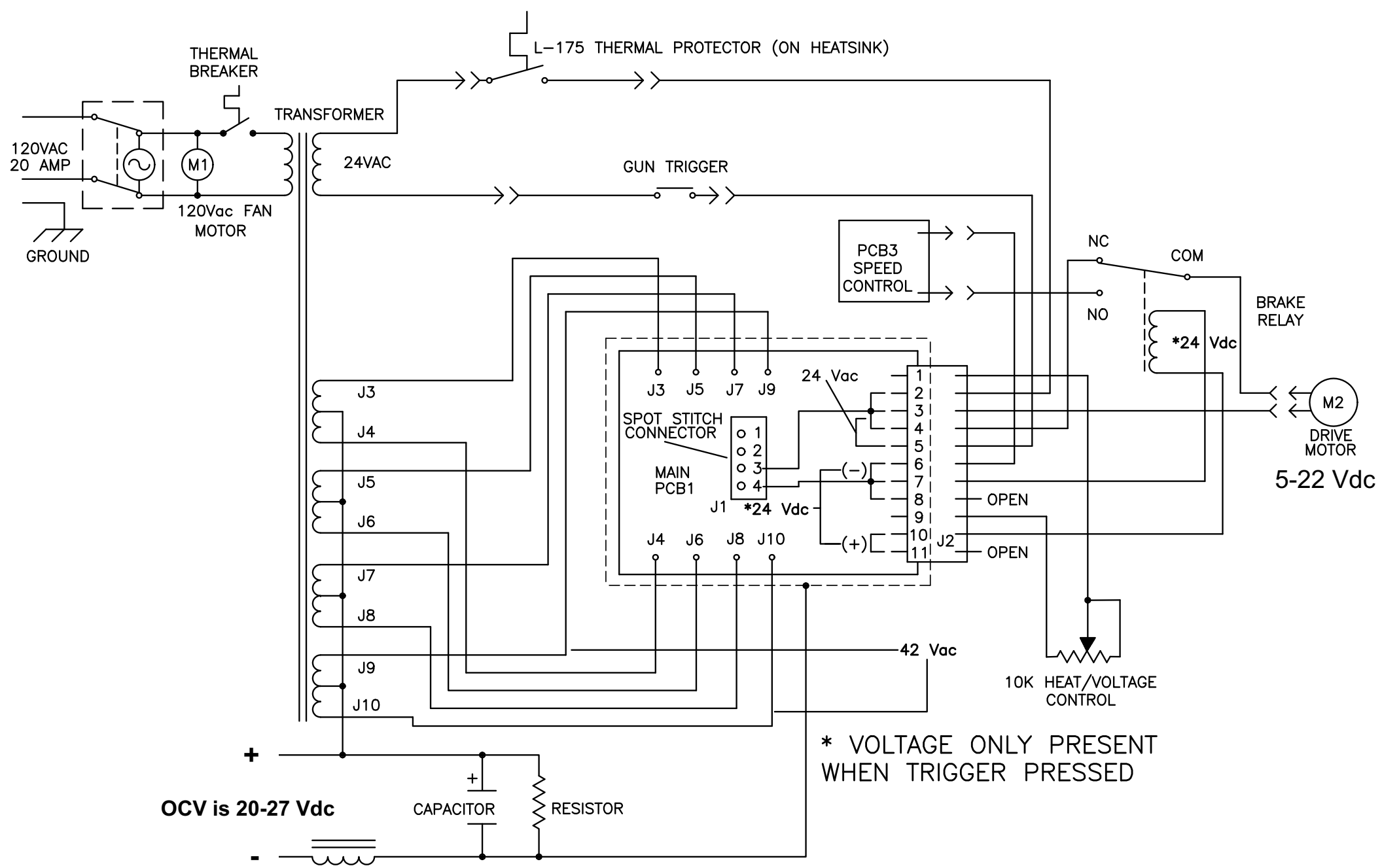
47	334-303-001	334-286-666	Gas regulator
48	059-245-666		Gas hose

Model	Primary Input	Input Plug	Duty Cycle at Rated Output
117-052	120V, 20 amp	15A	20%

Rated Output	Voltage Settings	Agency Listing	Max Output
105 amps	Infinite	CSA	130 amps



Models 117-052, 117-053, 117-058, 117-061, 117-064



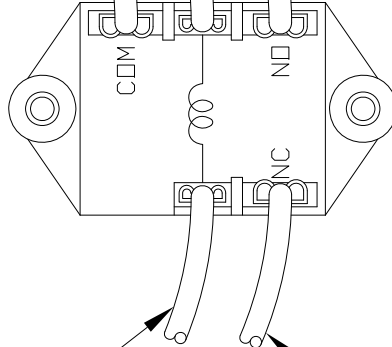
**Black Lead to drive motor**

**Black lead from PCB**

**White lead from speed control**

**To bypass the wire feed relay, remove the NO and COM wires and connect them to each other away from the relay.**

**When the trigger is pulled, there should be 24Vdc between the two center wires (smaller terminals).**



**Black lead from PCB**

**Red lead from PCB**

## CONTROL SET-UP REFERENCE GUIDE

The settings given in this guide are approximate only. Different conditions may cause you to adjust higher or lower.

Steel C-25 or CO <sup>2</sup>	Wire Diameter Solid Wire	Heat Setting	Wire Speed
22 ga and thinner (.031 in. and less) (.794mm and less)	.024in.(.6mm.)	5	5-6
22-18 ga (.031-.050in.) (.794-1.270mm.)	.024in.(.6mm.) .030in.(.8mm.)	6 5	6 5
18-14 ga (.050-.078in.) (1.270-1.981mm.)	.024in.(.6mm.) .030in.(.8mm.) .035in.(.9mm.)	7 7 5	6-7 6-7 5
14 ga- $\frac{1}{8}$ in. (.078-.125in.) (1.981-3.175mm.)	.024in.(.6mm.) .030in.(.8mm.) .035in.(.9mm.)	8-9 8 6-7	7 6 5-6
$\frac{1}{8}$ - $\frac{3}{4}$ in. (.125-.187in.) (3.175-4.75mm.)	.030in.(.8mm.) .035in.(.9mm.)	9 8	6-7 6
$\frac{3}{8}$ in. and thicker (.187in. and more) (4.75mm. and more)	.035in.(.9mm.)	9	6

Steel No Gas Needed	Wire Diameter Flux Cored Wire	Heat Setting	Wire Speed
22-16 ga (.037-.062in.) (.940-1.59mm.)	.030in.(.8mm.) .035in.(.9mm.)	5 5	5 5
16ga- $\frac{3}{4}$ in. (.062-.093in.) (1.59-2.36mm.)	.030in.(.8mm.) .035in.(.9mm.) .045in.(1.2mm.)	7 7 7	5 5 5
$\frac{3}{4}$ in. and thicker (.093in. and more) (2.36mm. and more)	.035in.(.9mm.) .045in.(1.2mm.)	9 9	6 6

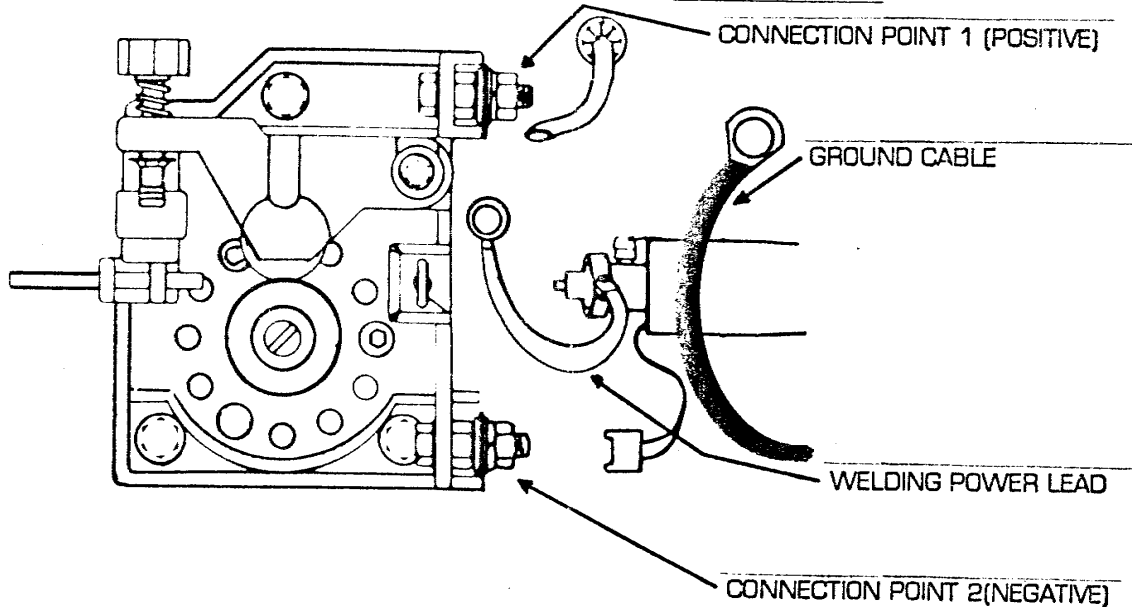
Aluminum Argon Gas	Wire Diameter	Heat Setting	Wire Speed
$\frac{1}{8}$ - $\frac{3}{4}$ in. (.0625-.093in.) (1.58-2.36mm.)	.024in.(.6mm.) .030in.(.8mm.) .035in.(.9mm.)	6 6 6	6 6-7 7
$\frac{3}{4}$ in. and thicker (.093in. and more) (2.36mm. and more)	.030in.(.8mm.) .035in.(.9mm.)	9 9	8 8

FOR DC STRAIGHT POLARITY  
(FLUX CORED WIRE)

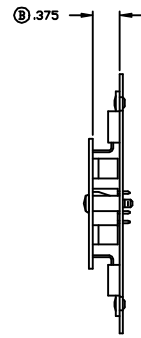
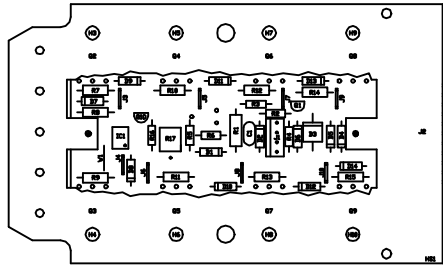
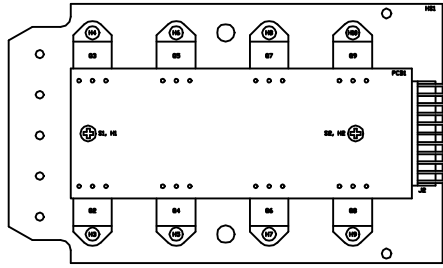
CONNECT GROUND CABLE TO POINT 1 (POSITIVE)  
CONNECT WELDING POWER LEAD TO POINT 2 (NEGATIVE)

FOR DC REVERSE POLARITY  
(MOST SOLID WIRES)

CONNECT GROUND CABLE TO POINT 2 (NEGATIVE)  
CONNECT WELDING POWER LEAD TO POINT 1 (POSITIVE)

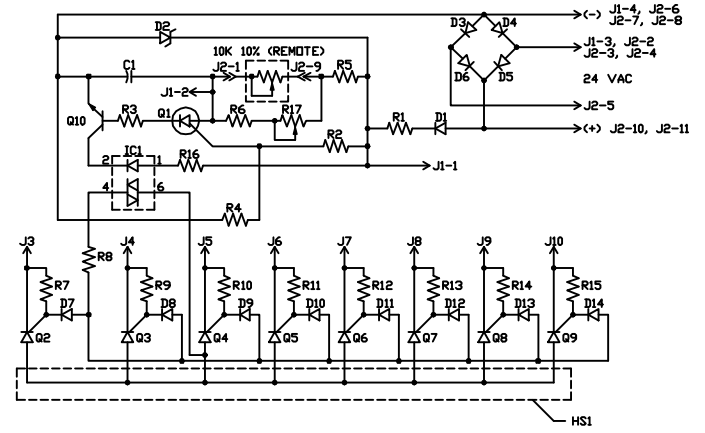


**117-052, 117-053**



NOTES:

1. SOLDERING AND GENERAL WORKMANSHIP TO COMPLY WITH IPC-CN-770B.
2. TRIM EXCESS COMPONENT LEAD LENGTH TO .125" MAX.
3. CONFORMAL COAT PER QC PROCEDURE #QCP 98050. DO NOT CONFORMAL COAT POTENTIOMETER (R17).  
MATERIAL: DOW CORNING 1-2577 .002 - .006 THICK  
HUMISEAL 1A27 .002 - .004 THICK
4. KNOB OF POTENTIOMETER (R17) TO BE SEALED TO PREVENT ROTATION AFTER CALIBRATION OF CIRCUIT BOARD.
5. ENTIRE CONTACT SURFACE OF SCR'S (Q2 THRU Q9) TO HAVE THERMAL GREASE, GE #G64L OR EQUAL, APPLIED PRIOR TO RIVETING TO HEATSINK.
- 6.
7. BOARD TO BE SHIPPED IN BULK PACKING TO PROTECT FROM DAMAGE.



SCHMATIC DIAGRAM

J10	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J9	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J8	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J7	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J6	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J5	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J4	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J3	TERMINAL, .250 x .031 TAB, AMP #62650-1, AUTOSPLICE #7-13330-8	(B)
J2	CONNECTOR, 11-PIN, AMP #1-640389-1	(B)
J1	CONNECTOR, 4-PIN, AMP #640388-4	(B)
IC1	INTEGRATED CIRCUIT MDC 3021	(A)
HS1	HEATSINK (CENTURY #412-374-001)	(A)
H10	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H9	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H8	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H7	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H6	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H5	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H4	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H3	RIVET, SEMITUBULAR, .120 DIA x .218 L (CENTURY #077-056-000)	(B)
H2	SPACER I.D. 1/4", LENGTH .375 CLEARANCE #6 SCREW	(B)
H1	SPACER I.D. 1/4", LENGTH .375 CLEARANCE #6 SCREW	(B)
D14	DIODE, 1N4002 THRU 1N4006	(B)
D13	DIODE, 1N4002 THRU 1N4006	(B)
D12	DIODE, 1N4002 THRU 1N4006	(B)
D11	DIODE, 1N4002 THRU 1N4006	(B)
D10	DIODE, 1N4002 THRU 1N4006	(B)
D9	DIODE, 1N4002 THRU 1N4006	(B)
D8	DIODE, 1N4002 THRU 1N4006	(B)
D7	DIODE, 1N4002 THRU 1N4006	(B)
D6	DIODE, 1N4002 THRU 1N4006	(B)
D5	DIODE, 1N4002 THRU 1N4006	(B)
D4	DIODE, 1N4002 THRU 1N4006	(B)
D3	DIODE, 6A MR754 DR 6A4	(B)
D2	DIODE, ZENER 5.1V 1N4733A	(B)
D1	DIODE, 1N4002 THRU 1N4006	(B)
C1	CAPACITOR, .47UF 50V 5X PANASONIC V-SERIES	(B)
SYM	DESCRIPTION	

V1	WIRE, 22GA TINNED COPPER CONDUCTOR	(B)
S2	SCREW #6-32 x 11/16" P.P.H. EXTENDED STAR WASHER	(B)
S1	SCREW #6-32 x 11/16" P.P.H. EXTENDED STAR WASHER	(B)
R17	POTENTIOMETER, CERMET 50K, SEALED	(B)
R16	RESISTOR, 100Ω 1/4W 5%	(B)
R15	RESISTOR, 100Ω 1/2W 5%	(B)
R14	RESISTOR, 100Ω 1/2W 5%	(B)
R13	RESISTOR, 100Ω 1/2W 5%	(B)
R12	RESISTOR, 100Ω 1/2W 5%	(B)
R11	RESISTOR, 100Ω 1/2W 5%	(B)
R10	RESISTOR, 100Ω 1/2W 5%	(B)
R9	RESISTOR, 100Ω 1/2W 5%	(B)
R8	RESISTOR, 10Ω 1/2W 5%	(B)
R7	RESISTOR, 100Ω 1/2W 5%	(B)
R6	RESISTOR, 13K 1/4W 5%	(B)
R5	RESISTOR, 4.3K 1/4W 5%	(B)
R4	RESISTOR, 15K 1/4W 1%	(B)
R3	RESISTOR, 33Ω 1/4W 5%	(B)
R2	RESISTOR, 10K 1/4W 1%	(B)
R1	RESISTOR, 330Ω 1W 5%	(B)
Q10	TRANSISTOR, 2N3904, MPS3904 DR PN3904	(B)
Q9	SCR (CENTURY #244-073-000)	(B)
Q8	SCR (CENTURY #244-073-000)	(B)
Q7	SCR (CENTURY #244-073-000)	(B)
Q6	SCR (CENTURY #244-073-000)	(B)
Q5	SCR (CENTURY #244-073-000)	(B)
Q4	SCR (CENTURY #244-073-000)	(B)
Q3	SCR (CENTURY #244-073-000)	(B)
Q2	SCR (CENTURY #244-073-000)	(B)
Q1	TRANSISTOR, 2N6027	(B)
PCB1	PRINTED CIRCUIT BOARD (CENTURY #510-095-000)	(B)
SYM	DESCRIPTION	

DO NOT SCALE UNLESS SPECIFIED DIMENSIONS ARE IN INCHES		CENTURY MFG CO		EN 11877 5-21-91 LRB	
TOLERANCES UNLESS SPECIFIED		DRAWN BY KIM DATE 11-14-90		EN 11694 3-22-91 CEA	
REVISIONS: 8-818		ENG CHK		STR REVISION 1 DATE	
FRONTING: 8-1/4		ENG APPV JCW		DATE	
ANGLES: 90°		3-13-91			
PREVIOUSLY RELEASED AS		SCALE 1:1		MATERIAL NO	
REV. 1		RELEASED 11438		P.74	
CIRCUIT BOARD ASSEMBLY		DWG NO		880-550-000-01	