



- (6) Set the CURRENT LIMIT ADJ potentiometer to the desired maximum output current, or set it fully clockwise.

4-3. TROUBLE SYMPTOMS AND SUGGESTED REMEDIES

a. Circuit faults can be isolated most rapidly by measuring the voltage and resistance. Use the data given on the schematic diagram in the Appendix as a first stop in servicing the supply.

CAUTION

WHEN UNSOLDERING SEMICONDUCTORS FOR TEST, USE A HEAT SINK TO PREVENT THERMAL DAMAGE. A LONG NOSE PLIERS BETWEEN THE SEMICONDUCTOR AND THE SOLDER JUNCTION IS ADEQUATE. NEVER OPERATE THE POWER SUPPLY WITH ANY LEADS DISCONNECTED OR SEMICONDUCTORS REMOVED. OPERATING POTENTIALS IN THE DC AMPLIFIER MAY CHANGE RADICALLY WHEN A COMPONENT IS REMOVED OR DISCONNECTED.

b. Power Supply Does Not Go On : If the OVEN and AC lamps do not light, check the AC fuse. If the fuse blows repeatedly, check the oven circuit and diodes CR1, CR2 and CR4 through CR7. Use an ohmmeter to take a resistance reading across each diode. Then, reverse the meter leads and take another reading. If one reading is not at least five times greater than the other, the diode is defective. If one diode in any pair is defective, replace both. A short circuit in one will produce high surge currents in the other, which can result in junction damage.

c. No DC Output Voltage: If both the AC and OVEN lamps light, but no output voltage is available, insure that the CURRENT LIMIT ADJ control is not turned fully counterclockwise. Set the meter switch to MA and increase the output voltage. If no current is indicated, check the DC fuse and input capacitor C1. If current is present when the output-voltage controls are adjusted, check safety diode CR12 and for incorrect programming or sensing connections. Diode CR12 is connected in the opposite polarity to the DC output voltage. If the reverse current flow is greater than 1 ampere, this diode may weld, placing a permanent short circuit across the supply output. Normal operation can be restored by replacing the diode (located on the amplifier board).

d. Regulator Failure : Check for correct potentials on amplifier transistors, voltage reference, etc. If any voltage appears incorrect, disconnect AC power and make a rapid check for defective transistors. This can be done without removing the transistors from the circuit. Use an ohmmeter set to its low resistance scale (R x1) and measure the forward and reverse resistances at the collector-base and base-emitter junctions. A resistance ratio of less than 5 to 1 indicates that the transistor is defective. Carefully remove it and check it on a transistor checker.