



620 EXPANSION POWER SUPPLY

Model 620L-195-5; P/N 01P1879-xxx

Operation and Service Manual

UP-8665

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APRIL 1978

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FOREWORD

This manual describes the 620 expansion power supply. The manual contains five sections. Features, applications, and specifications are included in section 1. Section 2 contains physical descriptions and interconnection information. Section 3 contains operating instructions. Detailed circuit descriptions are provided in section 4. Section 5 contains maintenance information.

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SECTION 1 INTRODUCTION

SECTION 1 INTRODUCTION

The SPERRY UNIVAC 620 expansion power supply (part number 83P0044) is a general-purpose, single voltage source capable of supplying a fixed dc output of +5 volts at 20 amperes. The supply can be used in Varian compute systems that require additional power for peripheral controllers, or any other application requiring +5 volts. The input ac line voltage can be either 115 or 230 volts at 60 to 50 Hz.

One of two operating modes are available: remote on-off mode or continuous mode. In the remote on-off mode, the dc circuits turn on when an external +5-volt signal is sensed. In the continuous mode, the dc circuits are on as long as the supply is connected to the ac line voltage.

Overcurrent and overvoltage protection circuits are included in the supply. The overcurrent protection circuit prevents component damage in the event the +5-volt output is connected across a short circuit. When the short circuit is removed, the +5-volt output automatically returns to normal. The overvoltage protection circuit produces a low impedance across the dc output terminals if the +5-volt output rises above 6.2 volts. An ac circuit breaker provides protection against overloads or shorts within the supply.

The specifications for the 620 expansion power supply are listed in table 1-1.

**SECTION 1
INTRODUCTION**

Table 1-1. 620 Expansion Power Supply Specifications

Parameter	Description
Ambient temperature range (free air, no forced air cooling required)	0 to 55 degrees C
Adjustable voltage range	- 5 percent, + 5 percent
Dc isolation	100 megohms minimum from primary to all other windings and chassis
Ripple	1.5 percent maximum peak to peak
Transient response	50 microsecond maximum for 50 percent change in load (see Note 1)
Input line frequency	47 to 63 Hz single phase
Input line voltage	105 to 125V ac or 210 to 250V ac
Input line current	2.5 amperes ac, full load
Line regulation of +5V dc output	10 mv maximum for 105 to 125V ac line change at one-half of full load
Load regulation of +5V dc output	135 mv maximum for 50 percent load change at 115V ac input
Relay turn on/off transient at output terminals	100V peak
Energy storage	With a full load and low line voltage, the regulated outputs will maintain regulation for a minimum of 2 milliseconds after loss of input power

**SECTION 1
INTRODUCTION**

Table 1-1. 620 Expansion Power Supply Specifications (continued)

Parameter	Description
Remote on-off	The remote on-off feature is a two-wire control system that turns on the regulator in the expansion supply by sensing an external +5 volts (30 milliamperes minimum).
Total regulation	The +5 volts output has a maximum deviation of ± 5 percent. Regulation includes the combined effects of ripple, transient loads, dc loading from 0 to 100 percent, line voltage and frequency change, temperature, long term stability over eight hours and all other sources.
Supply dissipation	200 watts maximum
Input power	300 watts, nominal line voltage and full load
Overload protection	Electronic current limit with automatic recovery
Over-voltage limit	5.7V dc minimum, 7.5V dc maximum (including overshoot)
Short circuit current	Less than 10 amperes dc
Outline dimension	5.25 inches (13.3 cm) high, 7.5 inches (19.1 cm) deep, 19 inches (48.3 cm) wide
Weight	28 pounds (12.2 kg)

**SECTION 1
INTRODUCTION**

Note 1:

Transient response is defined as the time required for the output voltage to return within the dc load regulation specification.

The maximum deviation allowed by a transient of 30 percent change in load/microsecond is 0.150V dc.

SECTION 2 INSTALLATION

SECTION 2 INSTALLATION

2.1 PHYSICAL DESCRIPTION

The 620 expansion power supply is contained in a chassis that is suitable for rack-mounted or table-top installation. The chassis is 5.25 inches (13.3 cm) high, 7.5 inches (19.1 cm) deep, and 19 inches (48.3 cm) wide.

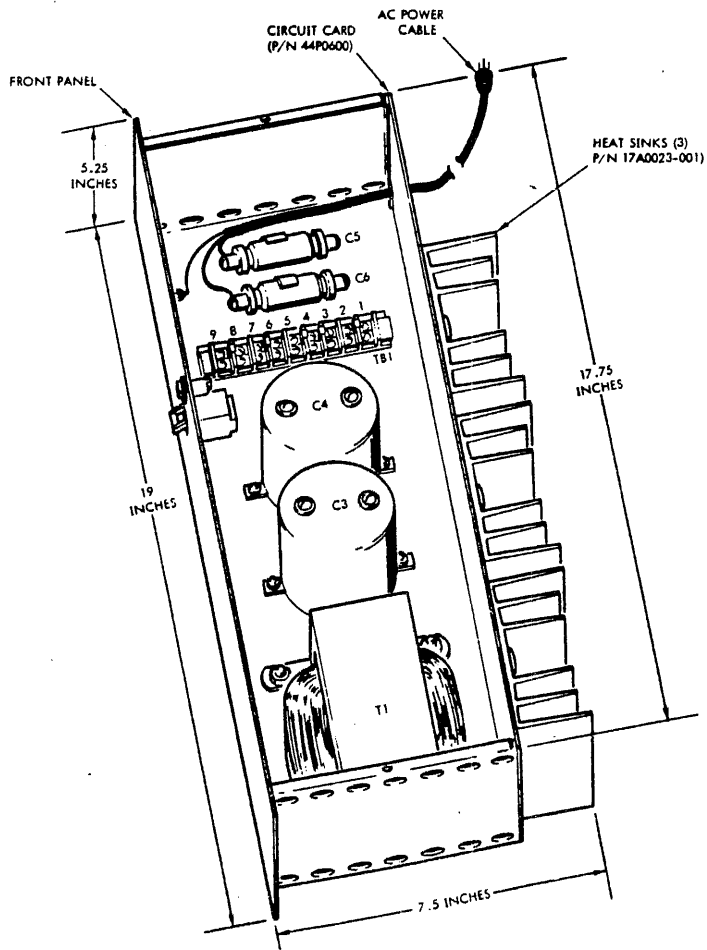
An ac indicator (DS1) and an ac circuit breaker (CB1) are located on the front panel of the supply. The indicator lights when ac line voltage is applied to the supply. When the supply draws more than 2.5 amperes of ac current, the circuit breaker is actuated resulting in the removal of ac line voltage from the input circuits. In addition to being an overload protection device, the circuit breaker can be used as an on-off switch; the up position is on and the down position is off.

The electronic components within the supply are accessible after removal of the top cover which is fastened to the chassis with four screws. The rear panel of the supply consists of a printed circuit card (part number 44P0600) that has electronic components mounted on both sides of it. Locations of major components of the supply are illustrated in figures 2-1 and 2-2.

2.2 620/L EXPANSION POWER INTERCONNECTION

To provide additional +5-volt power for peripheral controller cards in a 620/L computer system, the 620/L-95-5B option is available. This option (part number 01A1280-000) consists of a 620 expansion power supply (part number 83P0044) and a 620/L expansion power cable (part number 53P0637). Figure 2-3 illustrates expansion power interconnection for a typical 620/L computer system. The power for the 620/L mainframe and memory expansion chassis is provided by the 620/L power supply (part number 83P0035). A 620/L power cable (part number 53P0569) routes power to the mainframe, and the 620/L expansion power cable routes power to the memory expansion chassis. The expansion power cable contains terminal lugs at both ends which connect to the 620 expansion and 620/L power supplies; also it contains two 17-pin connectors that connect to the memory and I/O expansion chassis. The I/O expansion chassis, in addition to receiving +5 volts from the 620 expansion supply, also receives ± 12 and -5 volts from the 620/L supply. All power to the I/O chassis is routed through the expansion power cable.

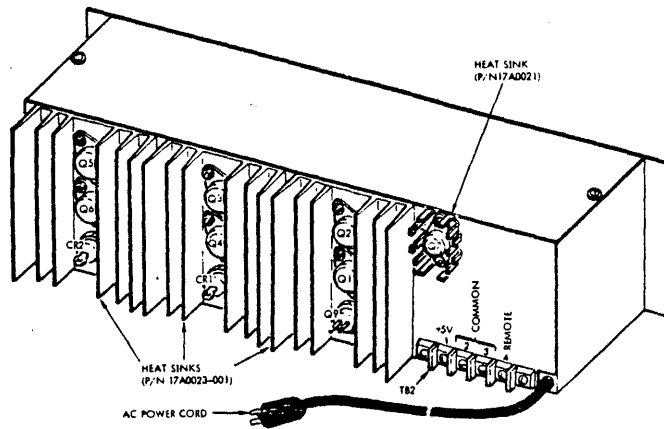
**SECTION 2
INSTALLATION**



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Figure 2-1. 620 Expansion Power Supply

SECTION 2 INSTALLATION



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Figure 2-2. Rear View of 620 Expansion Power Supply

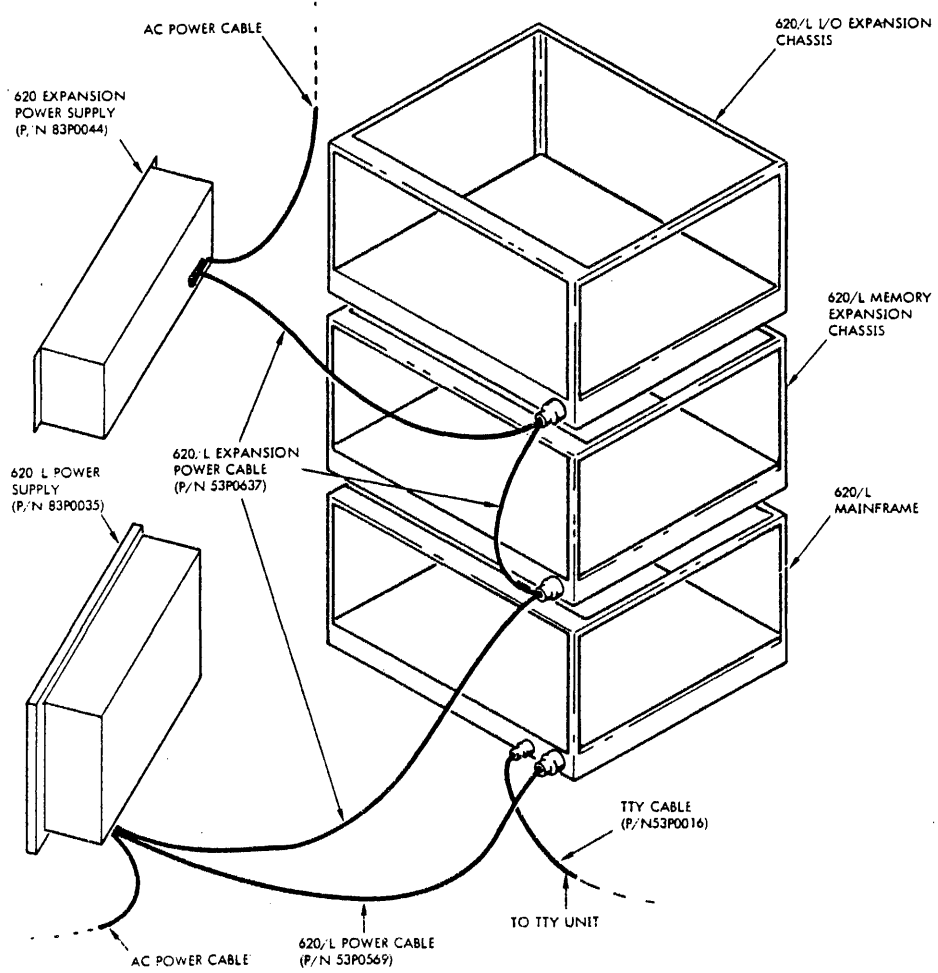
The expansion supply is turned on with +5 volts which is routed through the expansion power cable from the 620/L supply. A wiring diagram of the expansion power cable is illustrated in figure 2-4.

2.3 620/f-100 EXPANSION POWER INTERCONNECTION

To provide additional +5V power for peripheral controller cards in a 620/f-100 series computer system, the 620/f-195-5 option is available. This option (part number 01A1280-001) consists of a 620 expansion power supply (part number 83P0044) and a 620/f-100 expansion power cable (part number 53P0631). Figure 2-5 illustrates expansion power interconnection for a typical 620/f-100 series computer system. Pin assignments for the expansion power cable are listed in table 2-1.

Connector J31 of the I/O expansion chassis receives +5V from the expansion power supply via the expansion power cable. The +5V from the mainframe power supply is routed to the I/O expansion chassis connector J30 via the I/O power cable (part number 53P0629). The +5V at J30 is wired to connector J31 where it is routed through the expansion power supply cable to turn on the expansion power supply.

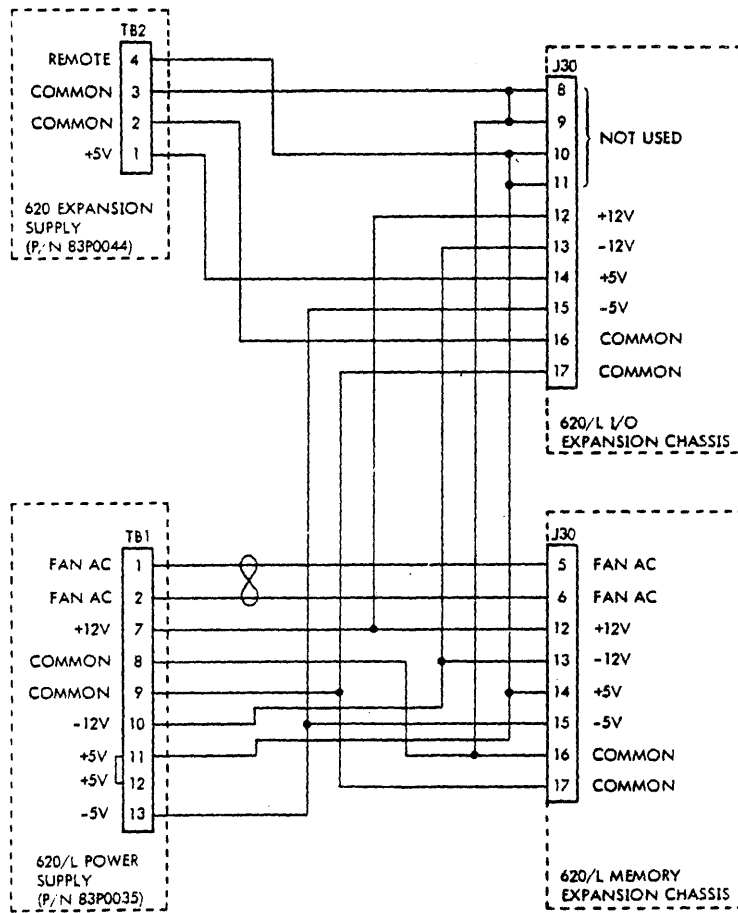
**SECTION 2
INSTALLATION**



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Figure 2-3. Typical 620/L Power Interconnection

SECTION 2
INSTALLATION

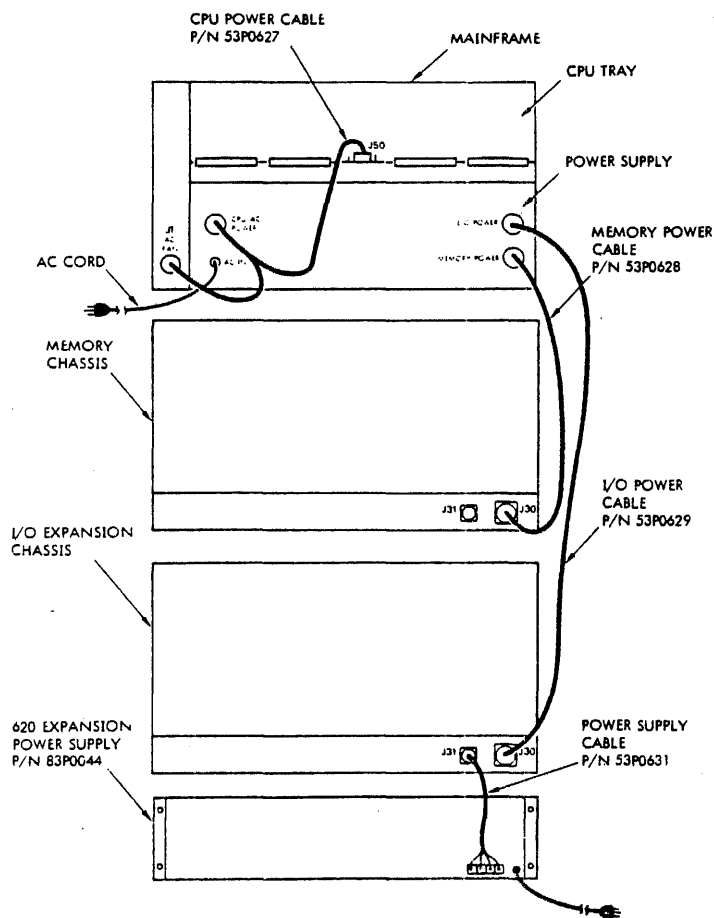


NOTE: ONLY THE PINS THAT CONNECT TO THE EXPANSION POWER CABLE ARE SHOWN.

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Figure 2-4. Expansion Power Cable Wiring Diagram

**SECTION 2
INSTALLATION**



VT11-1335

Figure 2-5. Typical 620/1-100 Power Interconnection

**SECTION 2
INSTALLATION**

Table 2-1. 620/f-100 Expansion Power Cable

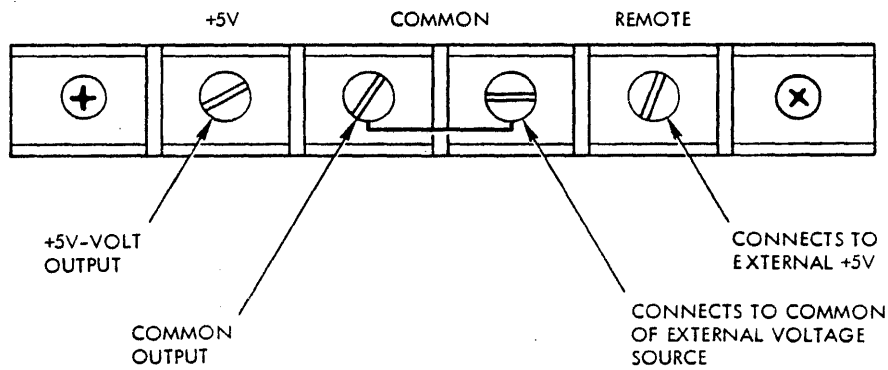
I/O Expansion Chassis Connector (J31)	Expansion Power Supply TB2	Signal
1	4	+ 5V Remote
2	1	+ 5V
3	3	Common
4	2	Common

**SECTION 3
OPERATION**

**SECTION 3
OPERATION**

3.1 GENERAL

Operation of the 620 expansion power supply consists of applying ac line voltage to the input circuits and turning on the dc circuits. Ac line voltage is applied to the input circuits by connecting the power cable to the appropriate ac line voltage and placing the circuit breaker on (up position). The dc circuits can be turned on by one of two methods depending on which operating mode is used. In the remote on-off mode, the dc circuits are turned on when an external +5-volt signal (30 milliamperes minimum) is sensed at the REMOTE terminal of terminal board TB2 (figure 3-1) at the rear of the supply. In the continuous mode, an internal jumper wire is connected between terminals E6 and E7 on the power supply circuit card (part number 44P0600). In this mode, the dc circuits are on as long as the power cable is connected to the ac line voltage and the circuit breaker is on.



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Figure 3-1. Terminal Board TB2 Connections

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3.2 REMOTE ON-OFF OPERATION

To operate the supply in the remote on-off mode, perform the following steps.

- a. Connect the ac power cable to the appropriate ac line voltage.
- b. Ensure that the ac circuit breaker on the front panel is on (up position). The ac indicator should now light.
- c. Connect an external +5-volt line to the REMOTE terminal of terminal board TB2 at the rear of the supply.
- d. Connect a common line from the external +5-volt source to the COMMON terminal of TB2.
- e. Turn on the external +5 volts. The supply should now be operating with the +5-volt output available between the +5V and COMMON terminals of TB2.

3.3 CONTINUOUS OPERATION

To operate in the continuous mode, the supply must have an internal jumper installed between terminals E6 and E7 on the power supply circuit card (part number 44P0600). The following steps are required to operate the supply in the continuous mode:

- a. Connect the ac power cable to the appropriate ac line voltage.
- b. Ensure that the ac circuit breaker on the front panel is on (up position). The ac indicator should now light, and the supply should be operating with the +5-volt output available between the +5V and COMMON terminals of TB2.

**SECTION 4
THEORY OF OPERATION**

**SECTION 4
THEORY OF OPERATION**

4.1 GENERAL

This section provides detailed circuit descriptions of the 620 expansion power supply. Refer to schematic 95D0894 in.

4.2 INPUT CIRCUIT

The input circuit consists of the following components.

- a. Terminal board TB1
- b. Circuit breaker CB1
- c. Line filter capacitors C5 and C6
- d. RFI filter capacitors C1 and C2
- e. Power transformer T1

The ac power cable contains a black wire which is hot, a white wire which is neutral, and a green wire which is chassis ground. Circuit breaker CB1 is connected to the black wire to provide protection against overloads or shorts within the supply.

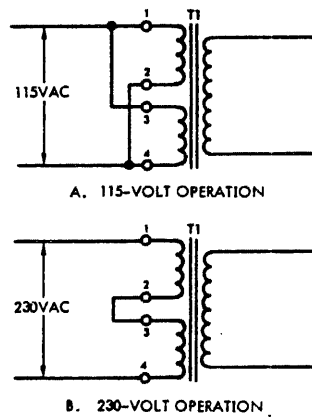
The supply can be wired for either 115-volt operation or 230-volt operation by connecting various jumper wires on TB1. In schematic 95D0894, the jumper wires are shown as solid lines for 115-volt operation and dotted lines for 230-volt operation. As illustrated in figure 4-1, the primary coils of T1 are connected in parallel for 115-volt operation and in series for 230-volt operation; thus 115 volts are always applied across each primary coil.

Capacitors C5 and C6 are connected to the neutral and hot ac lines to reduce input noise; resistors R1 and R2 provide a discharge path for the charged capacitor when the power cable is removed from ac line voltage. Capacitors C1 and C2 are connected across the primary coils of T1 to reduce the amount of radio frequency interference emanating from the supply.

4.3 RECTIFIER AND FILTER CIRCUITS

The rectifier and filter circuits consist of the following components:

SECTION 4
THEORY OF OPERATION



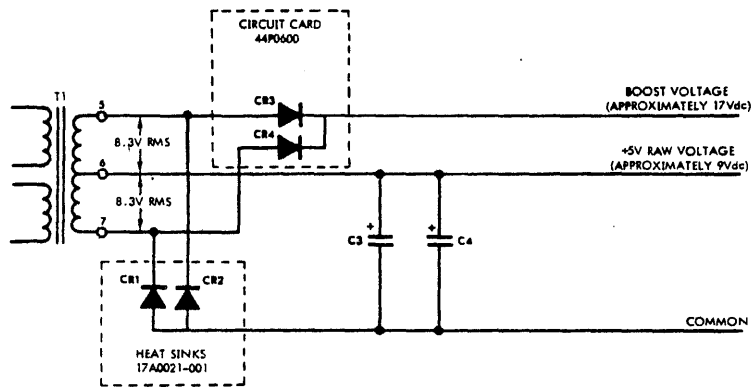
VT11-1359

Figure 4-1. Simplified Schematic of Transformer Connections

- a. Power rectifiers CR1 and CR2.
- b. Boost-voltage rectifiers CR3 and CR4.
- c. Raw-voltage filter capacitors C3 and C4.

Power transformer T1, along with the rectifier and filter circuits, provide unregulated dc voltages to drive the regulator circuits. A simplified schematic of the rectifier and filter circuits is illustrated in figure 4-2. A +5V raw voltage (unregulated) from the center tap of the transformer secondary is approximately 9 volts dc. This voltage is applied to the collectors of pass transistors Q2 through Q6, and is also used as a bias voltage for transistors Q10 and Q11 in the regulator inhibit circuit. A boost voltage from the cathode of rectifiers CR3 and CR4 is approximately 17 volts dc. This voltage provides operating power for the integrated-circuit voltage regulator (IC1) and base-drive transistors Q1 and Q7.

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Figure 4-2. Simplified Schematic of Rectifier and Filter Circuits

4.4 VOLTAGE REGULATOR

The voltage regulator circuit contains an IC regulator (IC1) which compares the +5-volt output with a reference voltage and provides the appropriate drive for transistors Q1 through Q7 to maintain a constant +5-volt supply output across the load. If the inverting input (pin 2) of IC1 becomes less positive than the noninverting input (pin 3), the output current at pin 6 increases. If the inverting input of IC1 becomes more positive than the noninverting input, the output current at pin 6 decreases. Transistor Q7 is mounted on the small heat sink at the rear of the supply, and transistors Q1 through Q6 are mounted on the large heat sinks at the rear of the supply. Capacitors C9 and C10 are the regulator output filter capacitors.

A detailed block diagram of the IC voltage regulator is illustrated in figure 4-3. The temperature-compensated reference voltage from pin 4 of the IC is coupled through an external resistor to the noninverting input at pin 3. The voltage at pin 3 is compared with the regulator output that is fed back to the inverting input at pin 2. The reference voltage is a stable dc voltage in the 6.8 to 7.35 range (depending on the individual IC).

The voltage at pin 3 of IC1 is adjusted to 5 volts with potentiometer R22. This causes the output current at pin 6 to produce a feedback voltage at pin 2 equal to the voltage at pin 3 (5 volts). At this time the regulator reduces its gain until the output current through the load is sufficient to develop 5 volts.

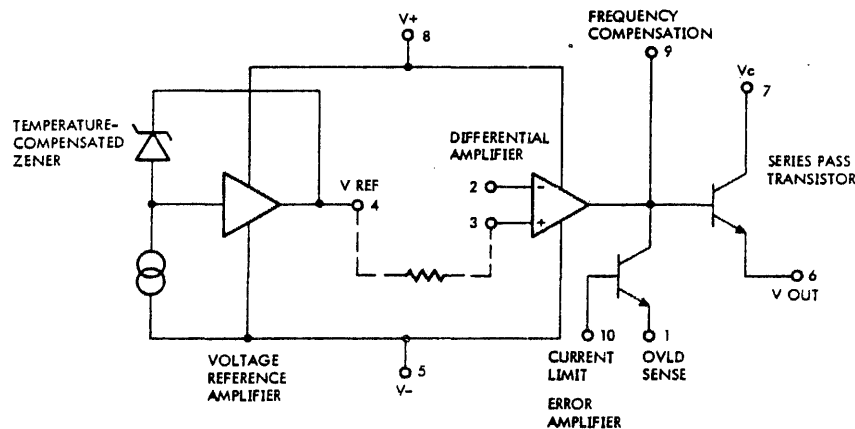
**SECTION 4
THEORY OF OPERATION**

4.5 REGULATOR INHIBIT

The regulator inhibit circuit consists of Q10 and Q11, CR5 and CR7, and R23 and R24. If no +5 volts are applied to the REMOTE terminal of TB2, the regulator inhibit circuit applies a ground to pin 9 of IC1 which inhibits the voltage regulator circuit. When +5 volts are applied to the REMOTE terminal (from an external source or from the internal jumper connection), Q11 turns on and Q10 turns off. With Q10 off, ground is removed from pin 9 of IC1 thus enabling the voltage regulator circuit to provide the +5 volt output at TB2.

4.6 OVERCURRENT PROTECTION

The overcurrent protection is a feature of the voltage regulator circuit that turns off the +5-volt output when a 20 percent overload occurs (24 amperes load current). An overcurrent condition causes IC1-10 to become 0.6 volt more positive than IC1-1. This causes a reduction in drive current at IC1-6 which turns off the +5-volt supply output. Overcurrent potentiometer R19 controls the amount of load current required to turn off the +5-volt output. R19 is adjusted at room temperature (20 degrees C) so that +5 volts drops when the load is increased to 24 amperes. This ensures that the +5-volt output is maintained with a 20 ampere load at 55 degrees C.



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Figure 4-3. IC Voltage Regulator Block Diagram

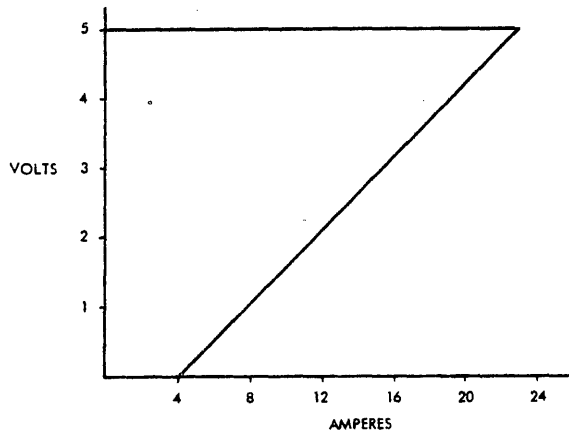
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During an overcurrent condition, the voltage regulator circuit enters a foldback-current limiting mode that enables the supply to produce less current (approximately 4 amperes) with the output shorted than with a normal load. The foldback-current characteristics are illustrated in figure 4-4.

4.7 OVERVOLTAGE PROTECTION

The supply is protected against an overvoltage condition by an overvoltage protection circuit. The circuit senses the output voltage and, if it is greater than 6.2 volts, places a low impedance across the output load. The overvoltage circuit (figure 4-5) consists of a Zener diode and transistor circuit that drives an SCR mounted on one of the large heat sinks.

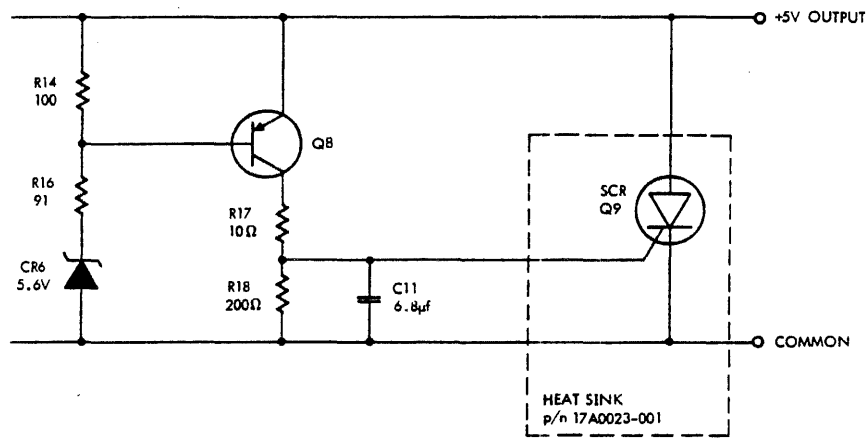
Under normal conditions (+5-volt output), Zener diode CR6 operates as reverse-biased diode to provide a high impedance which keeps Q8 off. If the output voltage rises to 6.2 volts, CR6 goes into its avalanche mode allowing enough current (6 milliamperes) to flow through R14 and R16 to turn on Q8. With Q8 conducting, the voltage developed at the junction of R17 and R18 turns on the SCR (Q9) which provides a low impedance between the output terminals, reducing the output voltage to approximately 0.3 volt.



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Figure 4-4. Foldback-Current Characteristics

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Figure 4-5. Overvoltage Protection Circuits

SECTION 5 MAINTENANCE

SECTION 5 MAINTENANCE

5.1 TEST EQUIPMENT

Test equipment required to maintain the 620 expansion power supply should consist of a multimeter and a general-purpose oscilloscope. In addition, assorted hand tools that include screwdrivers, long-nose pliers, spin-tight wrenches, and a pencil-type soldering iron should be available.

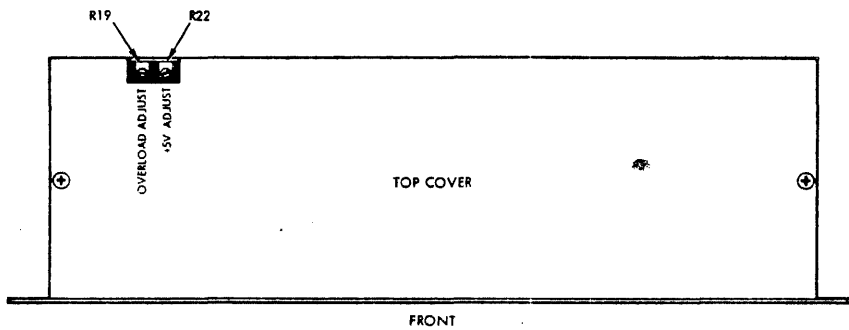
5.2 PREVENTIVE MAINTENANCE

Preventive maintenance for the power supply consists of inspection and checking the dc output voltage. The supply contains no components such as relays or fans that wear out due to mechanical action. Visual inspection within the supply can be performed by removing the top cover which is fastened to the chassis with four screws. An inspection should be performed occasionally to locate any possible defects such as loose wiring connections and heat-damaged components. The corrective procedures for most visible defects are obvious. However, particular care must be taken if heat-damaged components are found. Overheating usually indicates other trouble in the supply. For this reason, the cause of the overheating should be located and corrected before continuing operation. The power cables should be inspected periodically to ensure that they are not under abnormal tension in any direction.

The supply contains two adjustments (potentiometers R19 and R22) which are accessible through a slot in the top cover (figure 5-1). Potentiometer R22 provides an adjustable voltage range of ± 5 percent for the +5-volt output. Overcurrent potentiometer R19 is adjusted at room temperature (20 degrees C) so that the +5-volt output starts to drop when the load current increases to 24 amperes. This ensures that the +5-volt output is maintained with a load of 20 amperes at 55 degrees C.

The ripple on the +5-volt output should not exceed 75 millivolts peak-to-peak with a full load of 20 amperes.

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Figure 5-1. Potentiometer Locations

5.3 CORRECTIVE MAINTENANCE

Incorrect dc voltage readings do not always indicate a malfunctioning power supply. This condition could be caused by a short circuit in the load (such as a peripheral controller card). It can be determined whether or not the load is the cause of trouble by disconnecting it from the supply. If the malfunction still persists, the cause of trouble is in the supply or the external +5-volt source if the remote on-off mode is used. When troubleshooting the supply, refer to voltage points referenced throughout the theory section of this manual.

The following is a list of power supply failures with possible causes.

- a. If there is no +5-volt output, possible causes are:
 1. No ac input voltage. Check for voltage at the ac power plug. If no ac voltage is present, check the power and main circuit breaker in the building. If ac voltage is present, ensure that the power supply circuit breaker is on.
 2. No external +5-volts. If the supply is used in the

SECTION 5 MAINTENANCE

remote on-off mode, check for the presence of +5 volts at the REMOTE terminal of TB2.

3. No internal jumper. If the supply is used in the continuous operating mode, ensure that the jumper wire is installed between terminals E6 and E7 on the power supply card.
 4. Faulty inhibit circuit (CR5, CR7, Q10, or Q11).
- b. If the +5-volt output is too low, possible causes are:
1. Faulty IC regulator (IC1).
 2. CR1, CR2, CR3, or CR4 open.
 3. Q8 shorted.
 4. The supply may be in an overcurrent or overvoltage condition.
- c. If there is too much ripple on the +5-volt output, possible causes are:
1. Faulty CR1, CR2, CR3, and CR4.
 2. Faulty C3 and C4.
 3. Faulty transformer winding.
 4. Faulty IC regulator
- d. If the circuit breaker switches to the off position each time power is applied, possible causes are:
1. Shorted transformer winding.
 2. Shorted C3 or C4.
 3. Shorted Q1, Q2, Q3, Q4, Q5, or Q6.
 4. Shorted CR1, CR2, CR3, or CR4.

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MFG CODE W	ISSUE DATE 81/05/28	CONTROL W 777	DOC NO. W0101838	AC 2	SHEET 1				
PCC	ADC	PCD	COMM CODE	CA	U/M EA	ST A	TYPE M	SIZE D	CLASS A

TITLE
POWER SUPPLY ASSEMBLY - 5V EXP

FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO.		EIR AND PART DESCRIPTION INFORMATION	ECC	ST	CHG
				DOCUMENT NO.	DASH				
2009				W 94604	-01	PL REV J, PIC REV J, RANGE 00 - 01 EIR RELEASED 81/05/27			*
2008				W 94520	-01	PL REV H, PIC REV G, RANGE 00 - 01 EIR RELEASED 80/11/24			
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1	1	EA		W4400777	-00	PC ASSY - PWR SUPPLY +5 EXP			A
2	1	EA		W0400688	-00	PLATE, FRONT			A
3	1	EA		W0400689	-01	ENCLOSURE			A
4	1	EA		W0400690	-00	COVER, TOP			A
5	2	EA		W2300001	-00	SHIM .017THK STL SLD .47LG .50 W			A
6	1	EA		W2400022	-01	BUSHING, STRAIN RELIEF, CABLE CABLE DIA .325-.360 PNL .125			A
7	2	EA		W2600007	-03	RETAINER, CAPACITOR WRAP AROUND RD 2.500ID			A
8	1	EA		W5300015	-01	CORD - POWER, 3 COND 16 AWG 8 FT			A
9	5	EA		W5800003	-01	LINK, TERMINAL CONNECTING 2TERMS BRIDGED .375 APART CC			A
10	1	EA		W5900000	-09	TERMINAL BOARD, BARRIER 15A 9 TERM 4.031LG .875W			A
11	1	EA		W6000000	-09	PLATE, DESIGNATION 1 2 3 4 5 6 7 8 9 WHT ON BLK			A
12	1	EA		W6300028	-00	LIGHT, INDICATOR			A
13	2	EA		W6502500	225	RES, FXD, COMPOSITION, 1/4W, 5% 2.2MEG			A
				REF DES (1)	R1 R2				
14	2	EA		W7000601	472	CAPACITOR FIXED PLASTIC DIELECTRIC 250V 10% 47K PF			A
				REF DES (1)	C1 C2				
15	2	EA		W7200018	-03	CAPACITOR, FIXED, ELECTROLYTIC 15V +75 - 10% 86K UF			A
				REF DES (1)	C3 C4				
16	1	EA		W7300033	-00	FILTER, RADIO INTERFERENCE 20A250VAC 60HZ 1CKT			A
				REF DES (1)	FL1				
17	1	EA		W7800097	-00	CIRCUIT BREAKER 2 POLE 250VAC 4A			A
				REF DES (1)	CB1				

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FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO.		EIR AND PART DESCRIPTION INFORMATION	ECC	ST	CHG
				DOCUMENT NO.	DASH				
18	1	EA		W8000040	-00	TRANSFORMER, POWER, STEP-DOWN 2WDGS230VMAXOUT 2WDGS 16VMAX			A
				REF DES (1)	T1				
20	2	EA		W5800116	-05	TERMINAL, TAB, RECEPTACLE 18 22W.135INS DIA F/.230W TAB			A
21	1	EA		W5800184	-02	TERMINAL, TAB FEMALE, 16-14 AWG .205 X .020			A
22	11	EA		W5800041	-02	TERMINAL, LUG CRPG1622W6 SCR RING			A
23	5	EA		W5800041	-03	TERMINAL, LUG CRPG1622W8 SCR RING			A *
24	5	EA		W5800031	-04	TERMINAL, LUG CRPG1416W10 SCR RING			A
25	9	EA		W5800031	-02	TERMINAL, LUG CRPG1416W6 SCR RING			A
26	2	EA		W5800217	-04	TERMINAL, TAB, RECEPTACLE FEMALE 22-18 AWG .250 X .032			A *
27	2	EA		W5800217	-09	TERMINAL, TAB, RECEPTACLE FEMALE 16-14 AWG .250 X .032			A *
29	1	EA		W7900073	-00	INSULATOR			A
30	AR	IN		W5300454	-92	WIRE, ELECTRICAL 14 AWG WHITE			A
31	AR	IN		W5300454	-04	WIRE, ELECTRICAL 18 AWG BLACK			A
32	AR	IN		W5300454	-94	WIRE, ELECTRICAL 18 AWG WHITE			A
33	AR	IN		W5300454	-53	WIRE, ELECTRICAL 16 AWG GREEN			A
34	AR	IN		W5400003	-XX	INSL SLVG ELEC HEAT SHRINKABLE SELECTION TO BE MADE			A
35	AR	IN		W5400001	124	INSULATION SLEEVING, ELEC SIZE 24 BLACK .022 ID			A
43	AR	IN		W5300454	-91	WIRE, ELECTRICAL 12 AWG WHITE			A
44	3	EA		W5800095	-02	TERMINAL, LUG CRPG1012W10 SCR RING			A
45	1	EA		W5800095	-00	TERMINAL, LUG CRPG1012W6 SCR RING			A
46	1	EA		W8600062	-00	LABEL, MAIN POWER			A
47	1	EA		W8600043	-00	LABEL, IDENTIFICATION THIS SUPPLY RED LTR WHT BKGD			A
FD01		X		W9501222	-00	SCHEMATIC POWER SUPPLY			A
FD02		X		W9501223	-00	WIRE LIST POWER SUPPLY +5V EXP *			I
SD01		X		SW01163	-00	MARKING, MECHANICAL SPECS DSGN-F/GENERAL IDENTIFICATION			A

SPERRY UNIVAC PARTS LIST

SPERRY UNIVAC IS A DIVISION OF SPERRY CORPORATION

MFG CODE

W

ISSUE DATE

81/05/28

CONTROL

W 777

DOC NO.

PL

W0101838

AC

2

SHEET

3

TITLE POWER SUPPLY ASSEMBLY - 5V EXP			PCC	ADC	PCD	COMM CODE	CA	U/M EA	ST A	TYPE M	SIZE D	CLASS A
---	--	--	-----	-----	-----	-----------	----	-----------	---------	-----------	-----------	------------

FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO.		EIR AND PART DESCRIPTION INFORMATION	ECC	ST	CHG
				DOCUMENT NO.	DASH				
0002			X	SW00536	-00	THREADED FASTENERS SPECS DSGN-SELECTION-INSTALLATION			A
*****	*****	***	*	*****	****	WITHOUT FANS VAR DATA PART - 00 *****			A
*****	*****	***	*	*****	****	WITH FANS VAR DATA PART - 01 *****			A
36	1	EA		W0400766	-00	BRACKET, FAN			A
37	2	EA		W8400002	-03	FAN, AXIAL 115CFM 115V50/60HZ			A
				REF DES (1)	B1 P2				
38	1	EA		W7900008	-33	GROMMET, RUBBER .188 ID .438 OD .250 THK			A
39	1	EA		W5300345	-00	CABLE ASSY, SPEC PURPOSE, ELEC 12.00 IN.			A
40	1	EA		W5300345	-03	CABLE ASSY, SPEC PURPOSE, ELEC 72.00 IN.			A
41	4	EA		W0900009	-00	GRILLE, METAL 4.2 DIA F/4.5 DIA HOLE			A
42	AR	EA		W7900004	-00	GROMMET, CATERPILLAR .015 - .052 MATL THKNSS			A
48	9	EA		W2600046	-00	FASTNER, SPRING TENSION, TRIM .41 DIA F/.155 HOLE STL CAD			A
49	4	EA		W2200001	-00	SPACER, SLEEVE .250 LG .250 OD .140ID			A

POWER SUPPLY OPTION 5 V EXP

FIND NO.	QUANTITY REQUIRED	U/M	SIZE	PART OR IDENT. NO.		NOMENCLATURE OR DESCRIPTION	S	C
				DOCUMENT NO.	DASH			
Z03				W-87830	-14	PL REV C, PIC REV IC, RANGE 00 - 09 EIR RELEASED 10/12/79		
***** COMMON DATA *****								
3	4	EA		W 2100062	-59	SCREW, MACHINE, PAN HEAD 10-32 X .38 INCHES LONG	A	*
4	4	EA		W 2200089	-19	WASHER, FLAT - LARGE PATTERN #10 .438 OD, .203 ID, .049 THK	A	*
5	4	EA		W 2200057	-73	WASHER, SPLIT LOCK SZ NO,10 .202ID .334OD	A	*
8	1	EA		W 0101838	-01	POWER SUPPLY ASSEMBLY - 5V EXP WITH FANS	A	*
18	1	EA		W 8600065	-00	NAMEPLATE	A	*
S01		X		SW01163	-00	PART IDENTIFICATION MARKING SPEC	A	*
***** 115 VAC, 4 AMPS, 50/60 HZ * VARIABLE DATA = 00*****								
1	1	EA		W 0101838	-00	POWER SUPPLY ASSEMBLY - 5V EXP WITHOUT FANS	A	*
7	1	EA		W 5300637	-00	CABLE ASSY - P/S EXP (620/L)	A	*
***** 230 VAC, 2 AMPS, 50/60 HZ * VARIABLE DATA = 01*****								
1	1	EA		W 0101838	-00	POWER SUPPLY ASSEMBLY - 5V EXP WITHOUT FANS	A	*
6	1	EA		W 5300706	-96	POWER CORD ASSEMBLY (230 VAC) 96 INCH	A	*
7	1	EA		W 5300637	-00	CABLE ASSY - P/S EXP (620/L)	A	*
9	1	EA		W 8600043	-01	LABEL, OPERATING VOLTAGE 230 VAC	A	*
***** 115 VAC, 4 AMPS, 50/60 HZ * VARIABLE DATA = 02*****								
1	1	EA		W 0101838	-00	POWER SUPPLY ASSEMBLY - 5V EXP WITHOUT FANS	A	*
2	1	EA		W 5300631	-30	CABLE ASSY - P/S EXP	A	*
***** 230 VAC, 2 AMPS, 50/60 HZ * VARIABLE DATA = 03*****								
1	1	EA		W 0101838	-00	POWER SUPPLY ASSEMBLY - 5V EXP WITHOUT FANS	A	*
2	1	EA		W 5300631	-30	CABLE ASSY - P/S EXP	A	*
6	1	EA		W 5300706	-96	POWER CORD ASSEMBLY (230 VAC) 96 INCH	A	*
9	1	EA		W 8600043	-01	LABEL, OPERATING VOLTAGE 230 VAC	A	*
***** 115 VAC, 4 AMPS, 50/60 HZ * VARIABLE DATA = 04*****								
10	1	EA		W 5300872	-72	CABLE ASSEMBLY - DC PWR WCS/ MAP/FLT PT	A	*



VAC

PARTS LIST

SPERRY UNIVAC IS A DIVISION OF SPERRY RAND CORP.

MFG. CODE

W

ISSUE DA

11/30/77

CONTROL

W777

CA

TYPE

M

COMM. CODE

ST.

M

PL

DOC. NO

W 0101839

S.

2

PL. REV.

C

POWER SUPPLY OPTION 5 V EXP

CL

U/M

EA

AC

8

DOC. SIZE

A

RANGE

THRU

ISSUE

PIC. REV.

C

FIND NO.	QUANTITY REQUIRED	U/M	SIZE	PART OR IDENT. NO.		NOMENCLATURE OR DESCRIPTION	S	C
				DOCUMENT NO.	DASH			

						230 VAC, 2 AMPS, 50/60 HZ		
						↓ VARIABLE DATA = 05*****		
6	1	EA		W 5300706	-96	POWER CORD ASSEMBLY (230 VAC) 96 INCH	A	*
9	1	EA		W 8600043	-01	LABEL, OPERATING VOLTAGE 230 VAC	A	*
10	1	EA		W 5300872	-72	CABLE ASSEMBLY - DC PWR WCS/ MAP/FLT PT	A	*

						115 VAC, 4 AMPS, 50/60 HZ		
						* VARIABLE DATA = 06*****		
						ABOVE PT NO INACTIVE FOR NEW DESIGN 10/12/79 W=87830-14		
10	1	EA		W 5300872	-72	CABLE ASSEMBLY - DC PWR WCS/ MAP/FLT PT	A	*
11	1	EA		W 0101228	-00	FRONT PANEL ASSY BLANK 5.19 HEIGHT, OFF WHITE	I	*
12	2	EA		W 0400713	-00	BRACKET, LATCH	A	*
13	2	EA		W 2100050	-04	FASTENER, PUSHBUTTON RECEPICAL	A	*
14	4	EA		W 2100050	-06	FASTENER, PUSHBUTTON NUT	A	*
15	4	EA		W 2100062	-42	SCREW, MACHINE, PAN HEAD 8-32 X .25 INCHES LONG	A	*
16	4	EA		W 2208320	-01	WASHER, FLAT #8	A	*
17	4	EA		W 2208321	-02	WASHER, LOCK, INT TOOTH NO. 8	A	*

						230 VAC, 2 AMPS, 50/60 HZ		
						* VARIABLE DATA = 07*****		
						ABOVE PT NO INACTIVE FOR NEW DESIGN 10/12/79 W=87830-14		
6	1	EA		W 5300706	-96	POWER CORD ASSEMBLY (230 VAC) 96 INCH	A	*
9	1	EA		W 8600043	-01	LABEL, OPERATING VOLTAGE 230 VAC	A	*
10	1	EA		W 5300872	-72	CABLE ASSEMBLY - DC PWR WCS/ MAP/FLT PT	A	*
11	1	EA		W 0101228	-00	FRONT PANEL ASSY BLANK 5.19 HEIGHT, OFF WHITE	I	*
12	2	EA		W 0400713	-00	BRACKET, LATCH	A	*
13	2	EA		W 2100050	-04	FASTENER, PUSHBUTTON RECEPICAL	A	*
14	4	EA		W 2100050	-06	FASTENER, PUSHBUTTON NUT	A	*
15	4	EA		W 2100062	-42	SCREW, MACHINE, PAN HEAD 8-32 X .25 INCHES LONG	A	*
16	4	EA		W 2208320	-01	WASHER, FLAT #8	A	*
17	4	EA		W 2208321	-02	WASHER, LOCK, INT TOOTH NO. 8	A	*

PARTS LIST

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MFG. CODE

W

ISSUE DATE

11/30/79

CONTROL

W777

CA

TYPE

M

COMM. CODE

ST

M

PL

DOC NO

0101839

SHEET

3

PL. REV.

C

POWER SUPPLY OPTION 5 V EXP

CL

U/M

EA

AC

8

DOC. SIZE

A

RANGE

THRU

ISSUE

PIC. REV.

C

FIND NO.	QUANTITY REQUIRED	U/M	PART OR IDENT. NO.		NOMENCLATURE OR DESCRIPTION	S	C
			DOCUMENT NO.	DASH			

					115 VAC, 4 AMPS, 50/60 HZ		
					↓ VARIABLE DATA = 08*****		
10	1	EA	W 5300872	-72	CABLE ASSEMBLY - DC PWR WCS/ MAP/FLT PT	A	*
12	2	EA	W 0400713	-00	BRACKET, LATCH	A	*
13	2	EA	W 2100050	-04	FASTENER, PUSHBUTTON RECEPTICAL	A	*
14	4	EA	W 2100050	-06	FASTENER, PUSHBUTTON NUT	A	*
15	4	EA	W 2100062	-42	SCREW, MACHINE, PAN HEAD 8-32 X .25 INCHES LONG	A	*
16	4	EA	W 2208320	-01	WASHER, FLAT #8	A	*
17	4	EA	W 2208321	-02	WASHER, LOCK, INT TOOTH NO. 8	A	*
19	1	EA	W 0101228	-05	FRONT PANEL ASSY BLANK 5.19 PEARL GRAY	A	*

					230 VAC, 2 AMPS, 50/60 HZ		
					* VARIABLE DATA = 09*****		
6	1	EA	W 5300706	-96	POWER CORD ASSEMBLY (230 VAC) 96 INCH	A	*
9	1	EA	W 8600043	-01	LABEL, OPERATING VOLTAGE 230 VAC	A	*
10	1	EA	W 5300872	-72	CABLE ASSEMBLY - DC PWR WCS/ MAP/FLT PT	A	*
12	2	EA	W 0400713	-00	BRACKET, LATCH	A	*
13	2	EA	W 2100050	-04	FASTENER, PUSHBUTTON RECEPTICAL	A	*
14	4	EA	W 2100050	-06	FASTENER, PUSHBUTTON NUT	A	*
15	4	EA	W 2100062	-42	SCREW, MACHINE, PAN HEAD 8-32 X .25 INCHES LONG	A	*
16	4	EA	W 2208320	-01	WASHER, FLAT #8	A	*
17	4	EA	W 2208321	-02	WASHER, LOCK, INT TOOTH NO. 8	A	*
19	1	EA	W 0101228	-05	FRONT PANEL ASSY BLANK 5.19 PEARL GRAY	A	*

REVISIONS

REV	EN	CHG CODE	DESCRIPTIONS	DR	APPD
C	87039		ADDED NEW SHEET 2, RENUMBERED EACH SUCCESSIVE SHEET, REV TABULATION, ADDED NOTE Δ , SHEET 8: REV LABELS, REV DRAWING TO CONFORM TO 01P1839.	RM	<i>KRL</i> 9/21/8

DWG NO. 01A1839

NOTICE
This document is the property of Sperry Rand Corporation. All references to Varian, Varian Data Machines, and VDM should be replaced with Sperry Univac.

NEXT ASSEMBLY END ITEM	MODEL NO. SEE TABULATION
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DR	G. R. LUTHER	10/4/75	CODE IDENT NO. 21101 THIS DOCUMENT MAY CONTAIN PROPRIETARY INFORMATION AND SUCH INFORMATION MAY NOT BE DISCLOSED TO OTHERS FOR ANY PURPOSE OR USED TO PRODUCE THE ARTICLE OR SUBJECT, WITHOUT PERMISSION FROM SPERRY UNIVAC.
CHK	R. DUSTON	10/19/75	
DSGN	G. R. LUTHER	10/4/75	
ENGR			
APPD			
APPD			

TITLE POWER SUPPLY OPTION +5V EXP		
SIZE A	DWG NO. 01A1839	REV C
SHEET 1 OF 8		

TABULATION

PART NO.	MODEL	VOLTS	AMPS	HERTZ	DESCRIPTION
01P1839-000		115VAC	4 AMPS	50/60 HZ	WITHOUT FANS AND PANEL ASSY (SEE SHEET 4)
01P1839-001		230VAC	2 AMPS	50/60 HZ	
01P1839-002		115VAC	4 AMPS	50/60 HZ	WITHOUT FANS AND PANEL ASSY (SEE SHEET 5)
01P1839-003		230VAC	2 AMPS	50/60 HZ	
01P1839-004	70-4090	115VAC	4 AMPS	50/60 HZ	WITHOUT FANS AND WITHOU PANEL ASSY (SEE SHEET 6)
01P1839-005	70-4090X	230VAC	2 AMPS	50/60 HZ	
01P1839-006		115VAC	4 AMPS	50/60 HZ	WITH FANS AND PANEL ASSY (SEE SHEETS 6 & 7)
01P1839-007		230VAC	2 AMPS	50/60 HZ	
01P1839-008		115VAC	4 AMPS	50/60 HZ	
01P1839-009		230VAC	2 AMPS	50/60 HZ	

6

6

SPEERRY  UNIVAC

CODE IDENT NO.
21101

01A1839

SH 2 OF 8


REV

NOTES: UNLESS OTHERWISE SPECIFIED

1. This option is for adding additional +5V to the I/O Expansion. It also provides the optional power for the writable control store option. When connected to the I/O Expansion or WCS as shown, switching the main P/S off turns the Expansion P/S +5 voltage off.



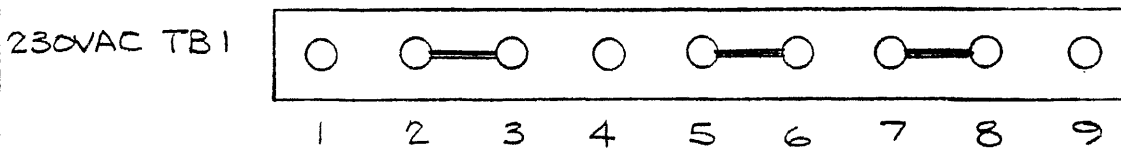
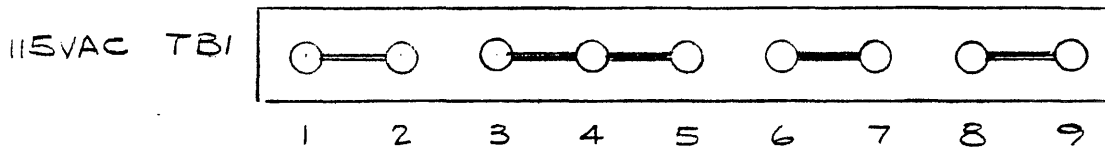
Identify per Specification 98A1163.

3. For converting to 230VAC (01P1839-001, -003, -005 and -007, -008) remove power cord (53P 0015-001) and replace with power cord 53P0706-096 (F/N 6).

Power Cord Connections

Color	To
Blk	FL1-1
Wht	FL1-3
Grn	E1

4. For converting to 230VAC (01P1839-001, -003, -005 and -007, -008) change jumpers on TB1 as shown below:



5. For converting to 230VAC (01P1839-001, -003, -005 and -007, -008) Remove voltage label from Transformer T1 and replace with voltage label 86A0043-001 (F/N 9).



Inactive for new designs.



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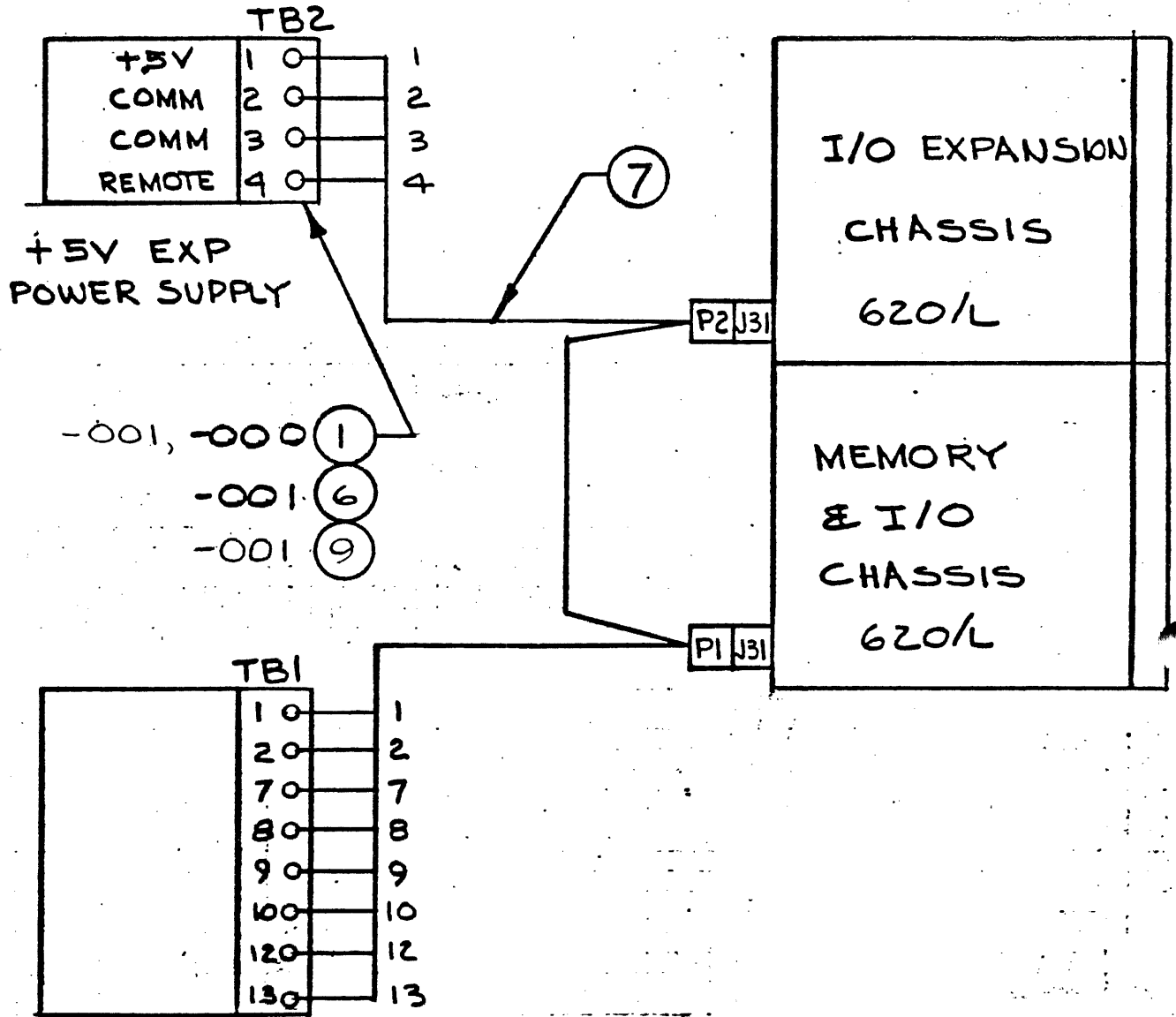
CODE
IDENT NO.
21101

01A1839

SH 3 OF 8

REV

01P1839-000,-001



NOTE: THE POWER SUPPLY CABLE 53P0569-XXX MUST BE REMOVED FROM THE MEMORY & I/O CHASSIS AND THE 620/L POWER SUPPLY BEFORE INSTALLATION OF THE OPTION.



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CODE IDENT NO.
21101

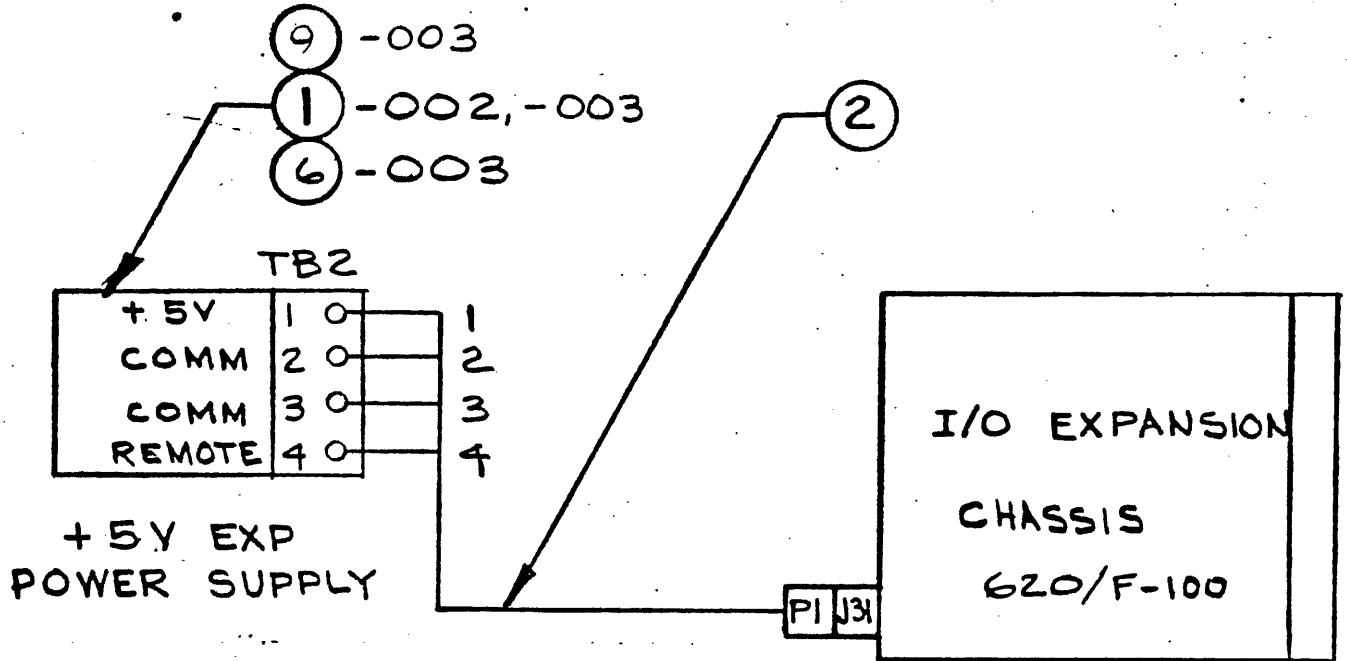
01A1839

SH 4 OF 8

C

REV

01P1839-002,-003



NOTE: REMOVE JUMPER, CONNECTOR ASSY P 31
(P/N 53P0634-000) FROM J 31 BEFORE
INSTALLATION OF THE OPTION.



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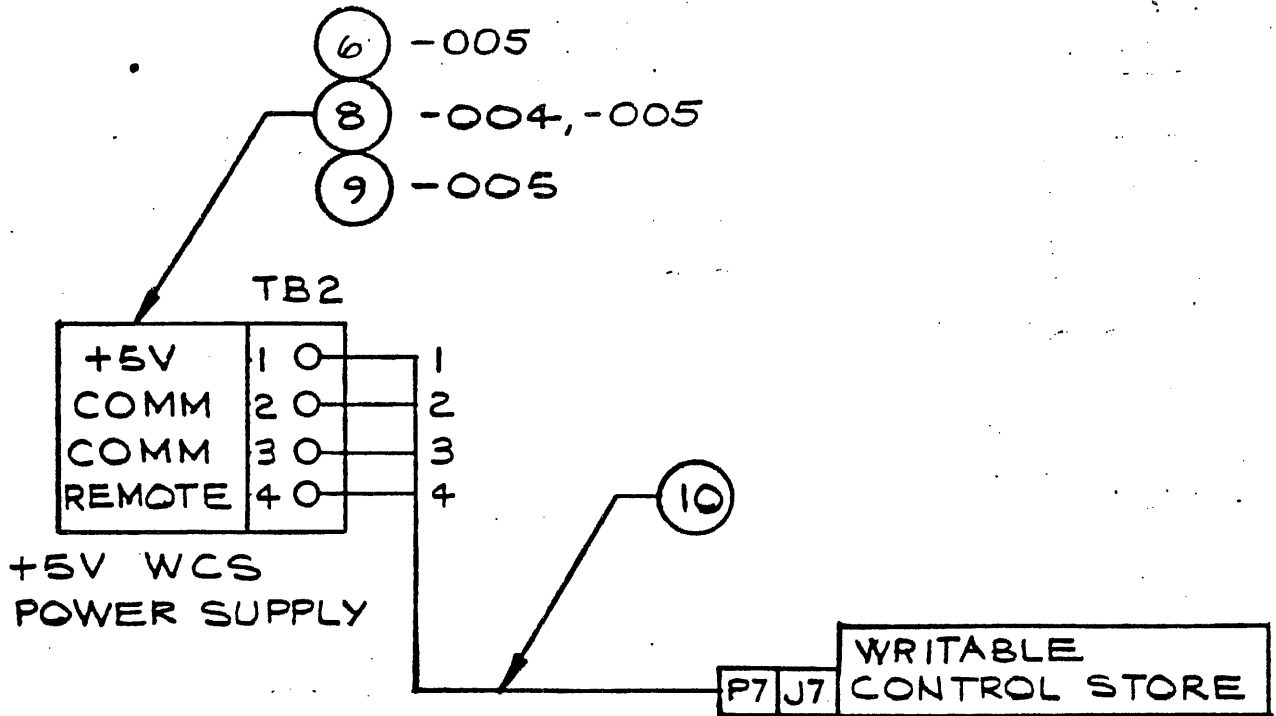
CODE
IDENT NO.
21101

01A1839

SH 5 OF 8

C
REV

OIA1839 - 004, -005 (V73/WCS)



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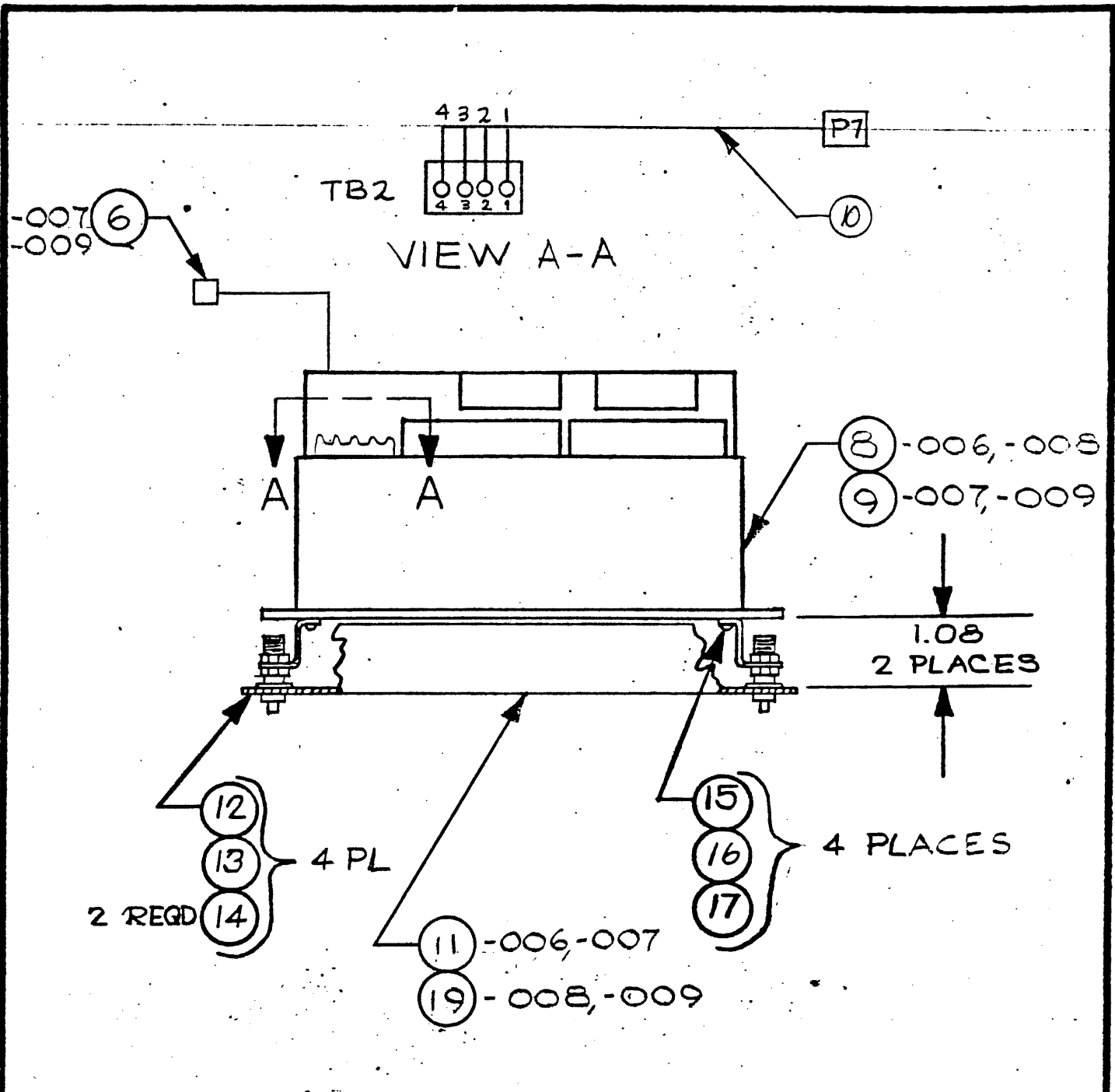
CODE IDENT NO.
21101

OIA1839

SH 6 OF 8

C

REV



O1A1839 -006 THRU -009



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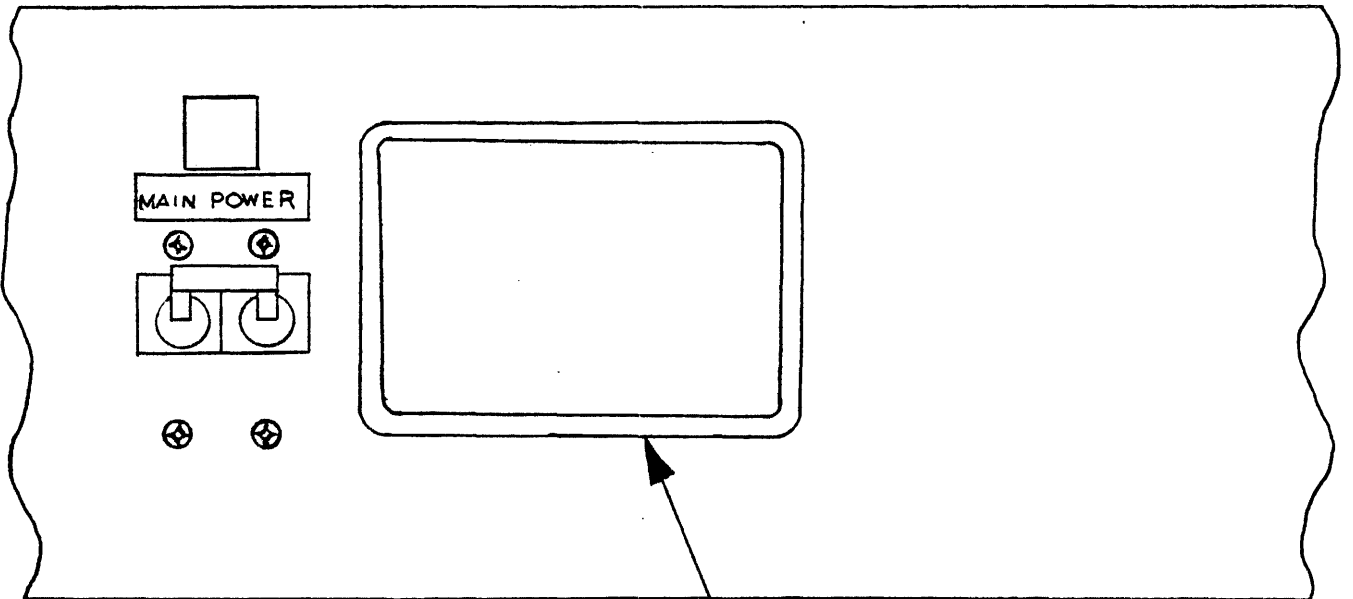
CODE
IDENT NO.
21101

O1A1839

C

SH 7 OF 8

REV



POWER SUPPLY
 01A1839-000 THRU -009

18/2



varian data machines
 a varian subsidiary

CODE
 IDENT NO.
21101

01A1839

SH 8 OF 8

C
 REV

SPERRY UNIVAC PARTS LIST

SPERRY UNIVAC IS A DIVISION OF SPERRY CORPORATION

MFG CODE
W

ISSUE DATE
81/11/19

CONTROL
W 777

DOC NO.
PL W4400777

AC SHEET
1 1

TITLE PC ASSY - PWR SUPPLY +5 EXP		PCC	ADC	PCD	COMM CODE	CA	U/M EA	ST A	TYPE M	SIZE C	CLASS A
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FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO.		EIR AND PART DESCRIPTION INFORMATION	ECC	ST	CHG
				DOCUMENT NO.	DASH				
2004				W 95086	-01	PL REV D, PIC REV B, RANGE 00 - 00 EIR RELEASED 81/11/19			*
2003				W 87863	-01	PL REV C, PIC REV B, RANGE 00 - 00 EIR RELEASED 79/10/29			
*****	*****	***	**	*	*****	***** COMMON DATA *****			
1	1	EA		W4000642	-00	PC BOARD - POWER SUPPLY DM461			A
2	3	EA		W1700023	-01	HEAT SINK ELEC-ELECTRONIC COMP 5.00 X 3.92 X 1.68AL			A
3	1	EA		W1700021	-00	HEAT SINK ELEC-ELECTRONIC COMP 1.40 X 1.12 X .50AL T066			A
4	12	EA		W2200040	-03	WASHER SHOULDERED NONMETALLIC .3100 SHLD OD .18TOT THK .09			A
5	1	EA		W2600036	-00	CLIP, ELECTRICAL 1.000ID 1.210LG COP NATURAL			A
6	1	EA	I	3008340	-01	INTEGRATED CIRCUIT - IC128 TTL 723 * VOLT REG			A
				REF DES (1)		IC1			
7	2	EA		W5800184	-00	TERMINAL, TAB MALE .205 X .020			A
8	1	EA		W5900005	-19	TERM BLK-9/16 CENTERS, SGL ROW 30A 4 TERM 3.220LG .750W			A
				REF DES (1)		TB2			
9	2	EA		W6400023	-00	RESISTOR, ADJBL, CERAMIC-PLSTC 2K			A
				REF DES (1)		R19 R22			
10	1	EA		W6502500	391	RES,FXD,COMPOSITION,1/4W,5% 390 OHMS			A
				REF DES (1)		R4			
11	1	EA		W6502500	682	RES,FXD,COMPOSITION,1/4W,5% 6800 OHMS			A
				REF DES (1)		R11			
12	3	EA		W6502500	102	RES,FXD,COMPOSITION,1/4W,5% 1000 OHMS			A
				REF DES (1)		R12 R13 R15			
13	2	EA		W6502500	101	RES,FXD,COMPOSITION,1/4W,5% 100 OHMS			A *
				REF DES (1)		R14,R23			
15	1	EA		W6502500	910	RES,FXD,COMPOSITION,1/4W,5% 91 OHMS			A
				REF DES (1)		R16			

SPERRY UNIVAC PARTS LIST

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MFG CODE W	ISSUE DATE 81/11/19	CONTROL W 777	DOC NO. PL W4400777	SHEET 1 2						
TITLE PC ASSY - PWR SUPPLY +5 EXP	PCC	ADC	PCD	COMM CODE	CA	U/M EA	ST A	TYPE M	SIZE C	CLASS A

FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO.		EIR AND PART DESCRIPTION INFORMATION						ECC	ST	CHG
				DOCUMENT NO.	DASH									
16	1	EA		W6502500	100	RES,FXD,COMPOSITION,1/4W,5%	10	OHMS					A	
				REF DES	(1)	R17								
17	1	EA		W6502500	201	RES,FXD,COMPOSITION,1/4W,5%	200	OHMS					A	
				REF DES	(1)	R18								
18	2	EA		W6502500	301	RES,FXD,COMPOSITION,1/4W,5%	300	OHMS					A	*
				REF DES	(1)	R24,R25								
19	1	EA		W6600000	188	RESISTOR FIXED METAL FILM	909	OHMS					A	*
				REF DES	(1)	R20								
20	1	EA		W6600000	209	RESISTOR FIXED METAL FILM	1.50K						A	
				REF DES	(1)	R21								
21	1	EA		W6501010	240	RESISTOR, FIXED, COMPOSITION	24	OHMS	5%	1W			A	
				REF DES	(1)	R10								
22	5	EA		W6600034	-00	RESISTOR, FIXED, WIRE WOUND	5W	10%		.1			A	
				REF DES	(1)	R5 THRU R9								
23	1	EA		W6600034	-01	RESISTOR, FIXED, WIRE WOUND	5W	10%		.15			A	
				REF DES	(1)	R3								
24	1	EA		W7100004	222	CAPACITOR, FIXED, CERAMIC DIEI	50V	+80 - 20%		2.2K	PF		I	
				REF DES	(1)	C8								
25	1	EA		W7100350	685	CAPACITOR, FXD, TANTALUM DIEI	6.80	UF					A	
				REF DES	(1)	C11								
26	2	EA		W7200016	-02	CAPACITOR, FIXED, ELECTROLYTIC	10V	+150- 10%		2.5K	UF		A	
				REF DES	(1)	C9 C10								
27	1	EA		W7200020	-02	CAPACITOR, FIXED, ELECTROLYTIC	4500	UF	-10%	+150%			A	
				REF DES	(1)	C7								
28	1	EA		W7600007	-00	TRANSISTOR	NPN	VCBO	90V	29W	BETA25		A	

SPERRY UNIVAC PARTS LIST

SPERRY UNIVAC IS A DIVISION OF SPERRY CORPORATION

MFG CODE

W

ISSUE DATE

81/11/19

CONTROL

W 777

DOC NO.

PL

W4400777

AC

1

SHEET

3

TITLE PC ASSY - PWR SUPPLY +5 EXP				PCC	ADC	PCD	COMM CODE	CA	U/M EA	ST A	TYPE M	SIZE C	CLASS A
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FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO.		EIR AND PART DESCRIPTION INFORMATION	ECC	ST	CHG
				DOCUMENT NO.	DASH				
				REF DES (1)	Q7				
29	21	EA	D	9800127	-01	SEMICOND DEVICE DIODE SILICON RECT 100PRV 6AMP	9	A	
				REF DES (1)	CR3 CR4				
30	21	EA		2510264	-00	TSTR,NPN,SILICON NPN VCBO 75V 1.8W BETA50		I	
				REF DES (1)	Q10 Q11				
31	1	EA		W7602504	-00	TRANSISTOR PNP VCBO 45V 360MW BETA35		A	
				REF DES (1)	Q8				
32	6	EA	Q	3005829	-03	TSTR NPN VCBO 100V 4W BETA70		A	
				REF DES (1)	Q1 THRU Q6				
33	1	EA		3007331	-00	RECTIFIER, CONTROLLED-SILICON IT (RMS) 35A VRRM-VDRM 50V		A	
				REF DES (1)	Q9				
34	21	EA	D	4915718	-01	SEMICONDUCTOR DEVICE DIODE PWR IF 40 A BV+ 100V A38A3X220		A	
				REF DES (1)	CR1 CR2				
35	1	EA	D	4915496	-08	SEMICONDUCTOR DEV,DIODE, ZENER 5.10V NOM 5% 400MW PWR DIS		A	
				REF DES (1)	CR6				
36	2	EA		W7701C17	-00	SEMICONDUCTOR DEVICE, DIODE 200MA		A	
				REF DES (1)	CR5 CR7				
37	6	EA		W7900C17	-00	INSULATOR PLATE .002 THK FOR TO-3		A	
38	3	EA		W7900C50	-00	TERMINAL LUG JEDEC DO 5 CASE		A	
39	AR	EA		W0400C11	-00	SPACER, TRANSISTOR TO-5 .075H		A	
				REF DES (1)	Q9				
40	1	EA		W0400620	-00	SPACER, TRANSISTOR 10 .022HOLES ON A.400DIA .150H		A	
				REF DES (1)	IC1				
41	2	EA		W0400109	-00	SPACER, TRANSISTOR 3 LEAD .28 OD .150H		A	
				REF DES (1)	Q10 Q11				

SPERRY UNIVAC PARTS LIST

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DOC NO.

PL

W4400777

SHEET

1

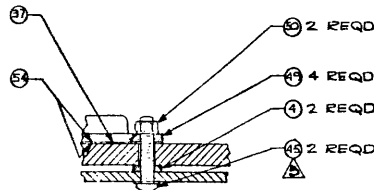
4

TITLE PC ASSY - PWR SUPPLY +5 EXP				PCC	ADC	PCD	COMM CODE	CA	U/M EA	ST A	TYPE M	SIZE C	CLASS A
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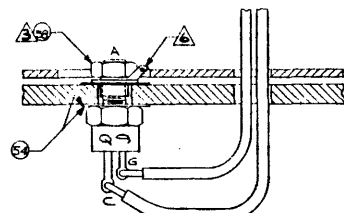
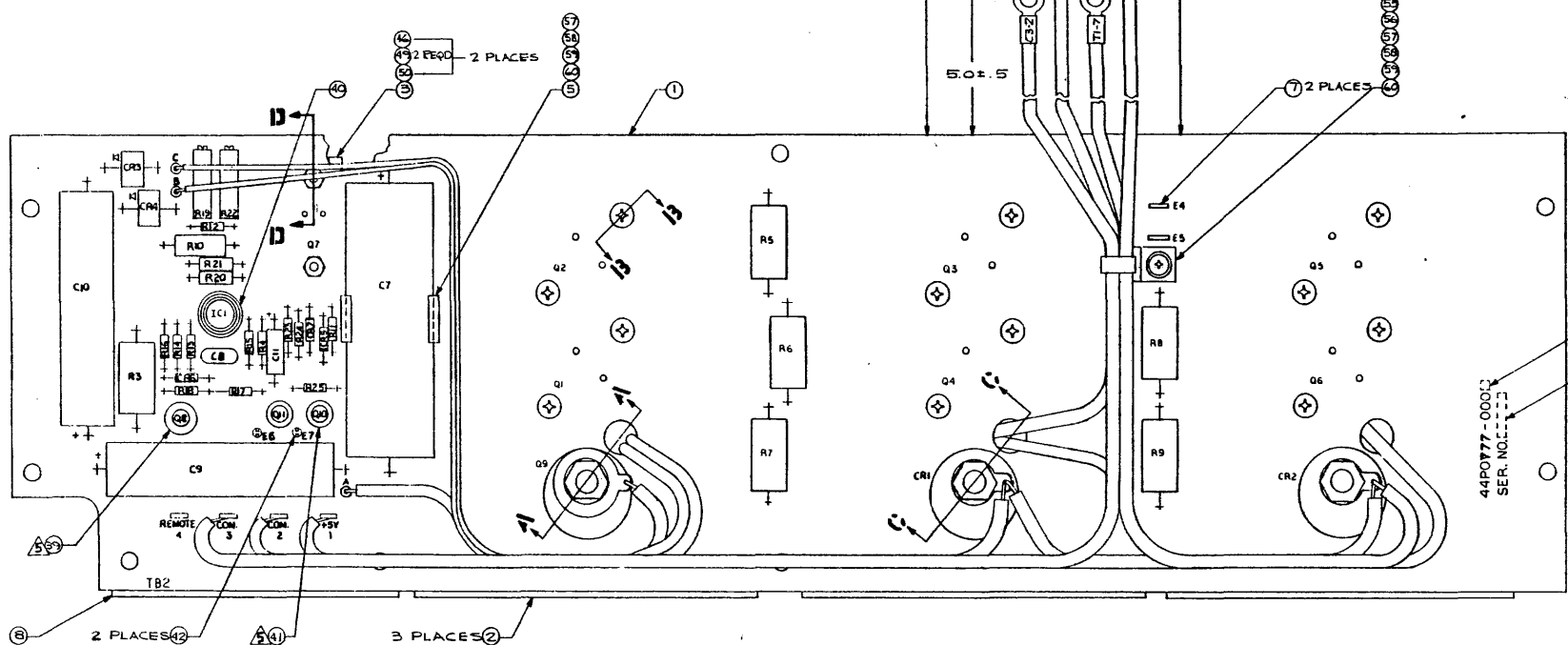
FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO.		EIR AND PART DESCRIPTION INFORMATION							ECC	ST	CHG		
				DOCUMENT NO.	DASH												
42	2	EA		W5800068	-03	TERMINAL, STUD	PRESS IN.115MTG LG FORK									A	
45	12	EA		W2100062	-31	SCREW, MACH, PAN HEAD	SST PASS XREC	6-32	.750							A	
46	2	EA		W2100062	-29	SCREW, MACH, PAN HEAD	SST PASS XREC	6-32	.500							A	
49	28	EA		W2206321	-02	WASHER, LOCK, FLAT, INT TEETH	SST PASS.018T	.142 ID	.288 OD							A	
50	14	EA		W2300025	-02	NUT, PLAIN, HEXAGON	SST PASS	.250AFLT	6-32.087							A	
52	AR	IN		W5300454	-93	WIRE, ELECTRICAL	16 AWG WHITE									A	
53	AR	IN		W5300454	193	WIRE, ELECTRICAL	20 AWG WHITE									A	
54	AR	OZ		W9000023	-00	THERMAL JOINT COMPOUND	OPAQUE WHITE									A	
55	1	EA		W2600013	-01	HANGER STRAP TIE	N	PLN	F/MED SIZE TIES							A	
56	1	EA	H	3156579	-03	STRAP, TIE, ELEC COMPONENTS	.060-	.620BUNDLE DIA	NON MTG							A	
57	2	EA		W2100062	-14	SCREW, MACH, PAN HEAD	SST PASS XREC	4-40	.375							A	
58	2	EA		W2204400	-01	WASHER-FLAT, NO.4	.250 OD,	.125 ID,	.028 THK							A	
59	2	EA		W2204401	-08	WASHER, LOCK, FLAT, INT TEETH	SST PASS.016T	.116 ID	.275 OD							A	
60	2	EA		W2300025	-01	NUT, PLAIN, HEXAGON	SST PASS	.188AFLT	4-40.057							A	
61	4	EA	J	3156271	-08	TERMINAL LUG	CRPG1012W10	SCR RING								A	
62	AR	IN		W5300454	-91	WIRE, ELECTRICAL	12 AWG WHITE									A	
63	1	EA		W7900017	-01	INSULATOR PLATE	.002 THK	FOR T0-66								A	
FOG1		X		W9501222	-00	SCHEMATIC POWER SUPPLY										A	
*****	*****	***	*	*****	****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	A

FROM	TERM	F/N	TERM	F/N	AWG	F/N
CR1-A	SOLDER	CR2	SOLDER	12	62	
CR1-A		CB-2	61	12	62	
CR1-C		B	SOLDER	20	53	
CR2-C		C	SOLDER	20	53	
Q9-G		A	SOLDER	20	53	
Q9-C		TB2-2	SOLDER	16	52	
Q9-A		TB2-1	SOLDER	16	52	
CR1-C		T1-7	61	12	62	
CR2-C		T1-5	61	12	62	
TB2-3	SOLDER	C4-2	61	12	62	

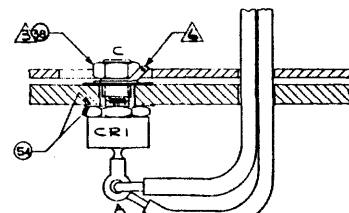
REV	DATE	BY	DESCRIPTION
A	1/11/63		PRODUCTION RELEASE
B	1/13/63		ADDED - TYPING LINE
C	1/13/63		D-D
D	1/13/63		REVISED



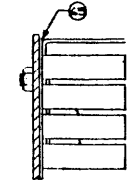
SECTION B-B
ROTATED 45° CW
TYP FOR Q1 THRU Q6



SECTION A-A
ROTATED 45° CW



SECTION C-C
ROTATED 45° CW
TYP CR1 & CR2



SECTION D-D
SCALE: NONE

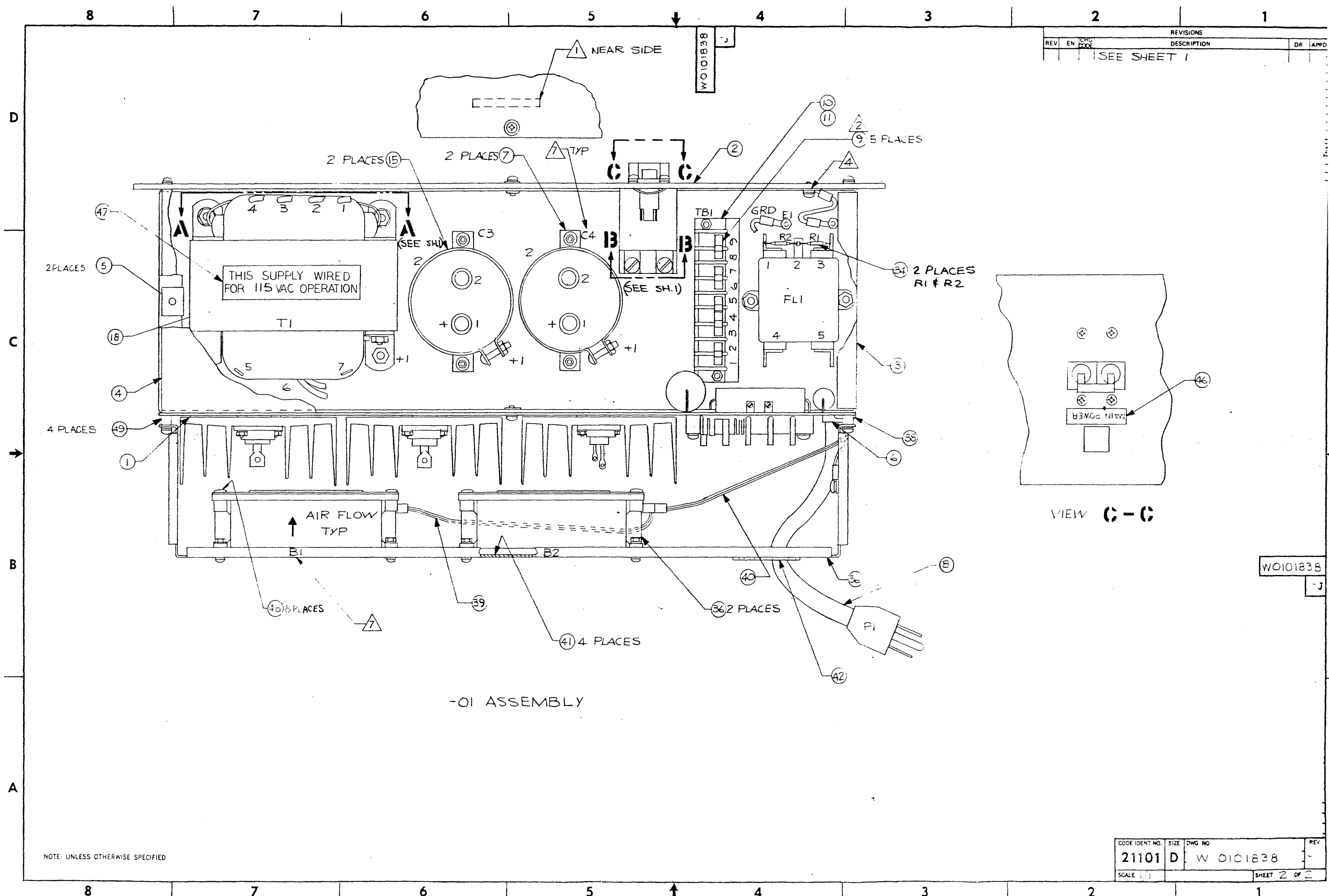
REFERENCE DRAWINGS
SCHEMATIC --- 95D1222
ARTWORK --- 97E1010
SOLDERMASK --- 97E1011
SILKSCREEN --- 97E1012

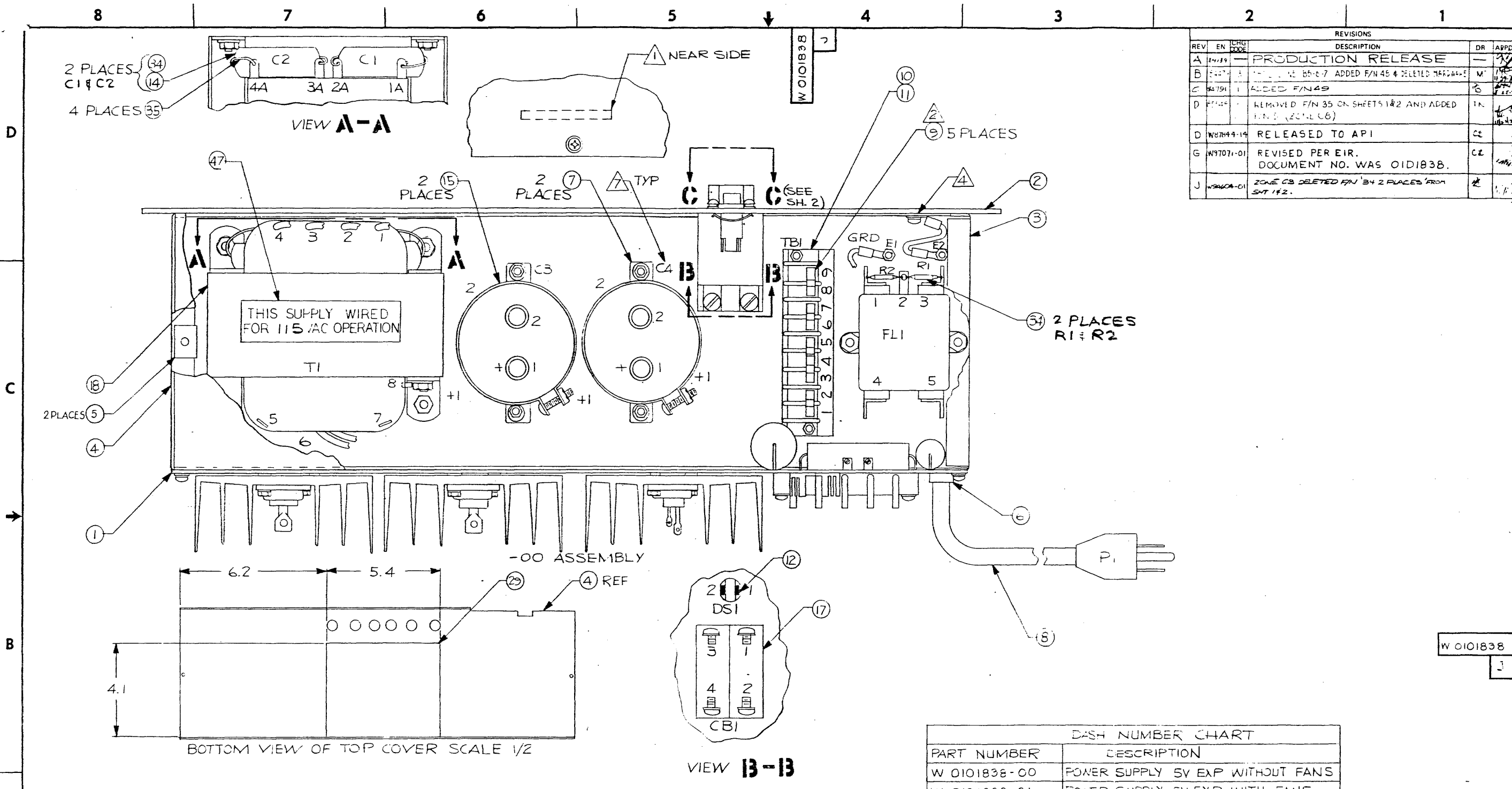
- ▲ BEND SOLDER LUG UP APPROX. (45°) AS SHOWN.
- ▲ USE OF TRANSISTOR MOUNTING PADS OPTIONAL.
- ▲ IDENTIFY TERMINALS AS SHOWN.
- ▲ TORQUE STUDS OF CR1, CR2, Q1 THRU Q6 & Q9 TO 12 IN - LBS MAX.
- ▲ MARK SERIAL NO. WHERE SHOWN USING .12 HIGH PERMANENT CHARACTERS.
- ▲ IDENTIFY PER SPECIFICATION 98A1163.

NOTE: UNLESS OTHERWISE SPECIFIED

PART NO. 44PO77-000
FOR PARTS LIST SEE 44PO777

MODEL NO.	MULTI-USAGE	DATE	1/11/63	BY	SPERRY UNIVAC
REV	A	DATE	1/11/63	BY	
APPD	QIP/SS	DATE	1/11/63	BY	
CHKD		DATE		BY	
APPR		DATE		BY	
DATE		DATE		BY	
TITLE	PWR SUPPLY BD				
TOLERANCES	UNLESS OTHERWISE SPECIFIED				
ANGLES	UNLESS OTHERWISE SPECIFIED				
FINISH	UNLESS OTHERWISE SPECIFIED				
SCALE	UNLESS OTHERWISE SPECIFIED				
DRG NO.	21101	REV	C	DATE	44C0777





REVISIONS					
REV	EN	CHG CODE	DESCRIPTION	DR	APPD
A	En/19		PRODUCTION RELEASE		
B	En/19		ZONE CB DELETED F/N 35 & DELETED HARDWARE		
C	En/19		ADDED F/N 49		
D	En/19		REMOVED F/N 35 ON SHEETS 1&2 AND ADDED F/N 35 (ZONE CB)		
D	W87844-14		RELEASED TO API	CE	
G	W97071-01		REVISED PER EIR. DOCUMENT NO. WAS 01D1038.	CE	
J	W9800A-01		ZONE CB DELETED F/N 34 2 PLACES FROM SHT 1&2.		

DASH NUMBER CHART	
PART NUMBER	DESCRIPTION
W 0101838-00	POWER SUPPLY 5V EXP WITHOUT FANS
W 0101838-01	POWER SUPPLY 5V EXP WITH FANS

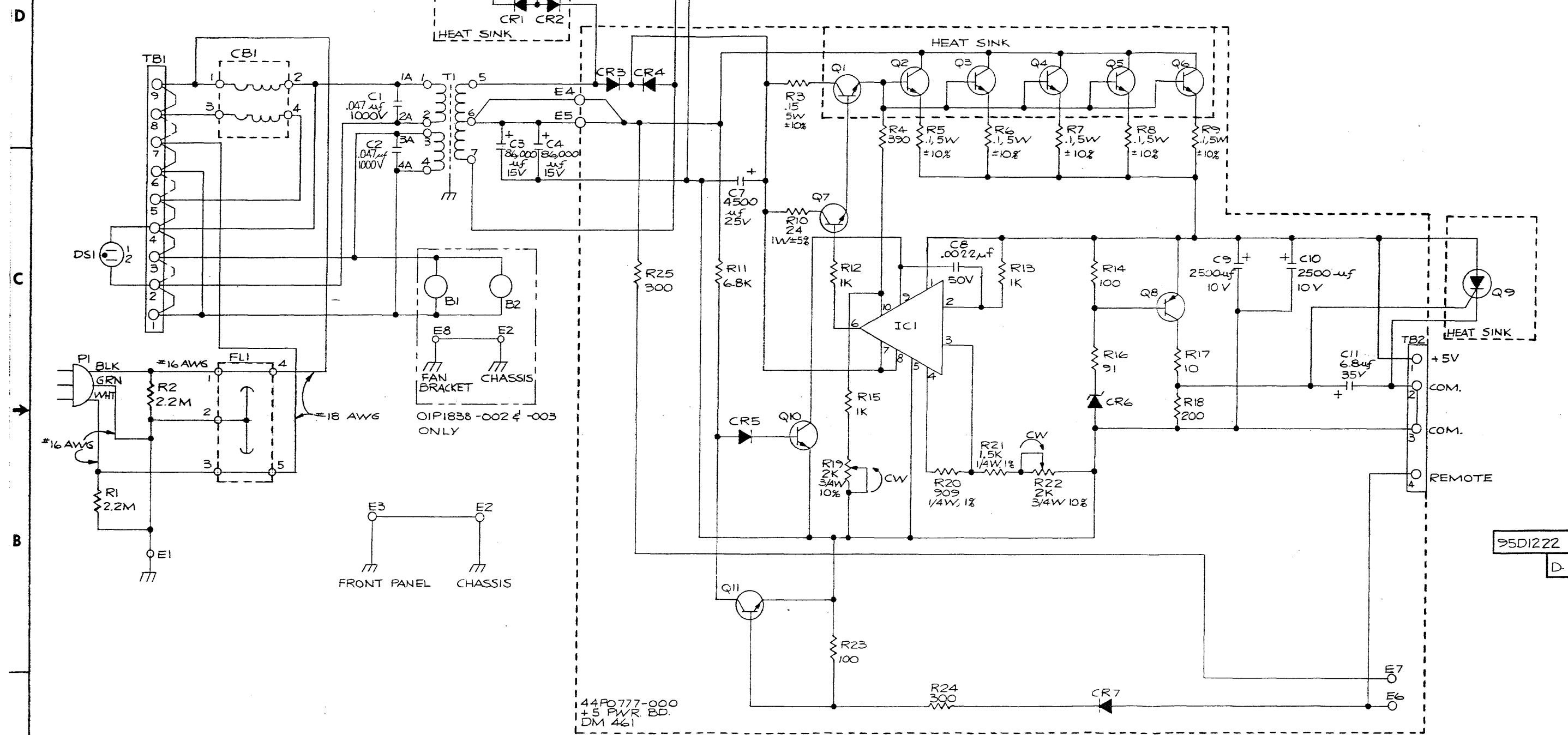
- △ MARK REF. DES. APPROX. WHERE SHOWN.
 - 6. WIRE PER (F02).
 - 5. USE HARDWARE IN ACCORDANCE WITH (502).
 - △ A LOCK WASHER MUST BE BETWEEN CHASSIS & TERMINALS ON ALL GROUNDS.
 - 3. REF. DES. SHOWN ARE FOR WIRING REFERENCE AND DO NOT APPEAR ON PARTS.
 - △ INSTALL F/N 9 JUMPERS FROM TBI-1 TO TBI-2; TBI-3 TO TBI-4; TBI-4 TO TBI-5; TBI-6 TO TBI-7 & TBI-8 TO TBI-9 AS SHOWN.
 - △ IDENTIFY PER (501).
- NOTE: UNLESS OTHERWISE SPECIFIED

REFERENCE DRAWING
SCHEMATIC-W 95 01222.

MODEL NO. MULTI-USAGE	DIMENSIONS ARE IN INCHES AND AFTER FINISHING TOLERANCES UNLESS OTHERWISE SPECIFIED X ± .1 XX ± .03 XXX ± .010 ANGLES = 0.5°	DR CHK ENGR APPD	
NEXT ASSY W 0101839	BREAK ALL SHARP EDGES TO R APPROX	THIS DOCUMENT MAY CONTAIN PROPRIETARY INFORMATION AND SUCH INFORMATION MAY NOT BE DISCLOSED TO OTHERS FOR ANY PURPOSE OR USED TO PRODUCE THE ARTICLE OR SUBJECT WITHOUT WRITTEN PERMISSION	TITLE POWER SUPPLY ASSEMBLY 5V EXP
MATERIAL	DO NOT SCALE DRAWING	CODE IDENT NO. 21101	SIZE D
FINISH		DWG NO. W 0101838	REV
		SCALE 1/1	SHEET 1 OF 2

W 0101838
3

REVISIONS				
REV	EN	CRG	DESCRIPTION	DR
A	2-11-77	-	PRODUCTION RELEASE	-
B	85075	2	ZONE D7, C1 & C2 WAS: .1μf	B
C	85514	1	ZONE C4, C8 WAS: .0022μf	B
D	8575	1	C8 WAS: .1μf, 50V	MX



2. JUMPER TBI-1 TO TBI-2, TBI-3 TO TBI-4, TBI-4 TO TBI-5, TBI-6 TO TBI-7, AND TBI-8 TO TBI-9 FOR 115V INPUT (SHOWN SOLID) JUMPER TBI-2 TO TBI-3, TBI-5 TO TBI-6, AND TBI-7 TO TBI-8 FOR 230V INPUT (SHOWN DOTTED).
1. ALL RESISTORS VALUES ARE IN OHMS, 1/4W ±5%
NOTE: UNLESS OTHERWISE SPECIFIED

REF. DESIGNATIONS LAST USED NOT USED	
FL1	
CBI	
PI	
DS1	
T1	
TB2	
IC1	
CR7	
Q11	
R25	
C11	C5, C6
E7	

- REFERENCE DRAWINGS
- 01D1838 --- ASSEMBLY
 - 44C0777 --- BD. ASSEMBLY
 - 40E042 --- BD. DETAIL
 - 97E1010 --- ARTWORK
 - 97E1011 --- SOLDER MASK
 - 97E1012 --- SILKSCREEN
 - 95W1223 --- WIRE LIST

MODEL NO. MULTI-USAGE	DR
NEXT ASSY 44P0777	CHK'd
OIP1838	ENGR
MATERIAL	APPD
FINISH	APPD

DIMENSIONS ARE IN INCHES AND AFTER FINISHING

TOLERANCES (UNLESS OTHERWISE SPECIFIED)

X ±.1
XX ±.05
XXX ±.010
ANGLES ±0.5°

BREAK ALL SHARP EDGES 0.10R APPROX

DO NOT SCALE DRAWING

DR	10/19/75
CHK'd	10/15/77
DSGN	
ENGR	
APPD	
APPD	

SPERRY UNIVAC

TITLE
SCHEMATIC POWER SUPPLY

CODE IDENT NO.	SIZE	DMG NO	REV
21101	D	95D1222	D
SCALE			SHEET 1 OF 1