DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S, AVIATION UNIT, AND INTERMEDIATE MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

FOR

VERTICAL INSTRUMENT DISPLAY SYSTEM
BENCH TEST SET
PART NUMBER 476-854
NSN 4920-01-112-5905

This copy Is a reprint which includes current pages from Changes 1 through 4.

This manual is a revision of TM 55-4920-412-13&P including all changes, dated 3 August 1979.

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1 NOVEMBER 1986

WARNING

Personnel performing operations, procedures, and practices which are included or implied in this technical manual shall observe the following warnings. Disregard of these warnings and precautionary information can cause serious injury, or death.

Warnings, cautions, and notes are used to emphasize important and critical instructions and shall be used for the following conditions:

WARNING

An operating procedure, practice, etc., which, if not correctly followed, could result in personal injury or loss of life.

CAUTION

An operating procedure, practice, etc., which if not strictly observed, could result in damage to or destruction of equipment.

NOTE

An operating procedure, condition, etc., which it is essential to highlight.

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NO. 4

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Operator's, Aviation Unit, and Intermediate Maintenance Manual
Including Repair Parts and Special Tools List

For

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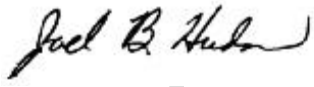

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C-5 through C-8	C-5 through C-8
C-13 and C-14	C-13 and C-14
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C-51 through C-60	C-51 through C-60
C-63 through C-78	C-63 through C-78

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VERTICAL INSTRUMENT DISPLAY SYSTEM BENCH TEST SET
PART NUMBER 476-854
NSN 4920-01-112-5905

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C-43 through C-48	C-43 through C-48
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FP-13/FP-14	FP-13/FP-14
FP-15/FP-16	FP-15/FP-16
FP-17/FP-18	FP-17/FP-18
FP-53/FP-54	FP-53/FP-54
FP-55/FP-56	FP-55/FP-56
FP-63/FP-64	FP-63/FP-64
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TECHNICAL MANUAL

NO. 55-4920-412-13&P

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You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army AviationTroop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <mpmt%avma28 @st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope.

This manual describes the Vertical Instrument Display System Bench Test Set (Figure 1-1) hereinafter referred to as the test set, and provides instructions for operation, aviation unit, and intermediate maintenance. It includes instructions for replacement of parts available to the operators and aviation unit, and intermediate repairmen and a repair parts and special tools list (RPSTL).

1-2. Maintenance Forms, Records, and Reports.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-751.

1-3. Destruction of Army Materiel to Prevent Enemy Use.

Refer to TM 750-244-2, Procedures for Destruction of Electronic Materiel to Prevent Enemy Use.

1-4. Preparation for Storage or Shipment.

For administrative storage, refer to TM 750-90-1 and Chapter 4.

1-5. Quality Assurance/Quality Control (QA/QC).

Refer to FM 55-411 for information about quality assurance and quality control.

1-6. Equipment Improvement Recommendations (EIR).

EIR can and must be submitted by anyone Who is aware of an unsatisfactory condition with the equipment design or use. It is not necessary to show a new design or list a better way to do a procedure; just simply tell why the design is unfavorable or why a procedure is difficult. EIR may be submitted on SF 368 (Quality Deficiency Report). Mail directly to Commander, US Army Aviation and Troop Command, ATTNAMSAT-I-MDO, 4300 Goodfellow Blvd., S Louis, MO 63120-1798. A reply will be furnished to you.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-7. Purpose and Use.

The test set provides the interconnecting and power control which allows maintenance personnel to service individually the SDC (Signal Data Converter), CDU (Central Display Unit), and PDU (Pilot Display Unit). In addition to controlling power, the test set simulates specific inputs required for calibration and testing of the VIDS units.

1-8. Description.

The test set consists of two parts: Simulator P/N 244476862-002 and Unit Tester P/N 245-601115-000. The two parts of the test set are housed in a fiber glass, lightweight case. The case consists of two hinged sections that may be separated Each half of the case has storage space for test and power cables.

1-9. Equipment Data.

Refer to Table 1-1 for equipment data.

Table 1-1. Equipment Data

AC voltage input	115 vac, single-phase 400 ± 20 Hz
DC voltage input	20 ± 0.5 vdc
Outputs	All necessary ac and dc power and control voltages and simulated signals for the parameter to be tested.
Dimensions	
Length	39 cm (15.38 inches)
Width	37.8 cm (14.88 inches)
Height	34 3 cm (13.5 inches)
Weight	33.75 kg (75 Ibs)

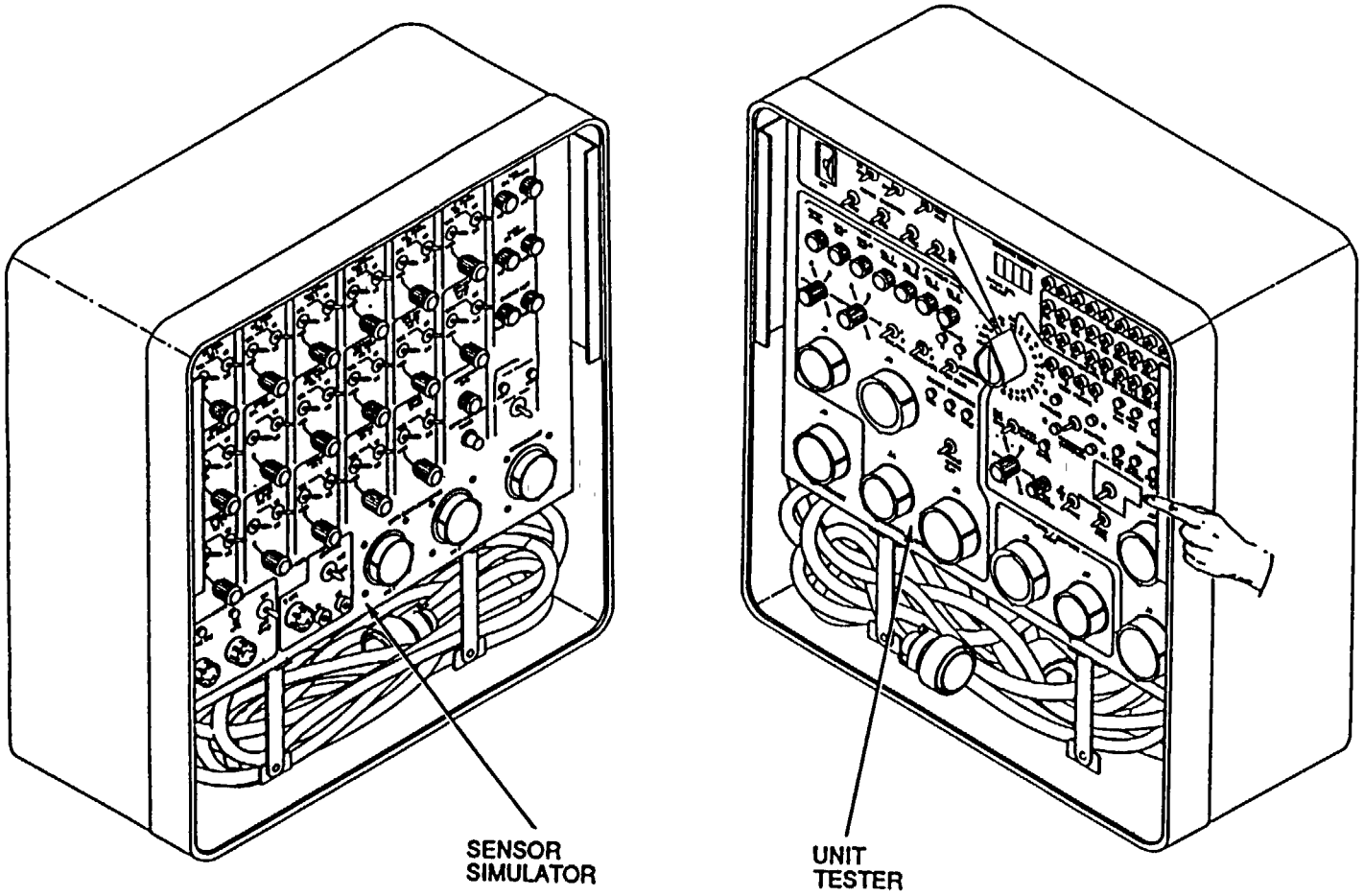

Figure 1-1. Vertical Instrument Display System Bench Test Set

CHAPTER 2

SERVICE UPON RECEIPT

Section I. SITE AND SHELTER REQUIREMENTS

2-1. Siting.

The test set operates in the bench environment and requires the availability of 28 vdc and 115 vac, single-phase, 400 Hz power.

Section II. SERVICE UPON RECEIPT OF MATERIEL

2-2. Unpacking.

a. Packing Data. When received, the Vertical Instrument Display System Bench Test Set is packaged in a fiberboard carton. A typical shipping carton and contents are shown in Figure 2-1. The carton is 59.69cm (23 1/2 inches) long x 57.15cm (22 1/2 inches) wide x 52.07cm (20 1/2 inches) deep. The volume of the carton is 0.2 cubic meter (62 cubic feet) and the total weight when packed for shipment is 35.1kg (78 pounds).

b. Remove Contents.

(1) Cut or remove the gummed tape from top of carton and open top of carton.

(2) Remove polyethylene cushioning material from top of and from around test set.

(3) Lift test set from carton and remove remaining polyethylene cushioning material.

2-3. Checking Unpacked Equipment.

CAUTION
To open the test set, release air pressure by opening the air release valve.

a. Inspect equipment for damage caused during shipment. If equipment has been damaged, report damage on DD Form 6 in accordance with instructions in AR 700-58.

b. Check equipment against component listing in operators' manual and packing slip to see if shipment is complete. Report all discrepancies in accordance with the instructions of DA PAM 738-751. Equipment should be placed in service even though a minor assembly or part that does not affect proper functioning is missing.

c. Check to see whether equipment has been modified. (Equipment which has been modified will have MWO number on front panel, near nomenclature plate). Check also to see whether all currently applicable MWOs have been applied. (Current MWO applicable to equipment are listed in DA PAM 25-30.

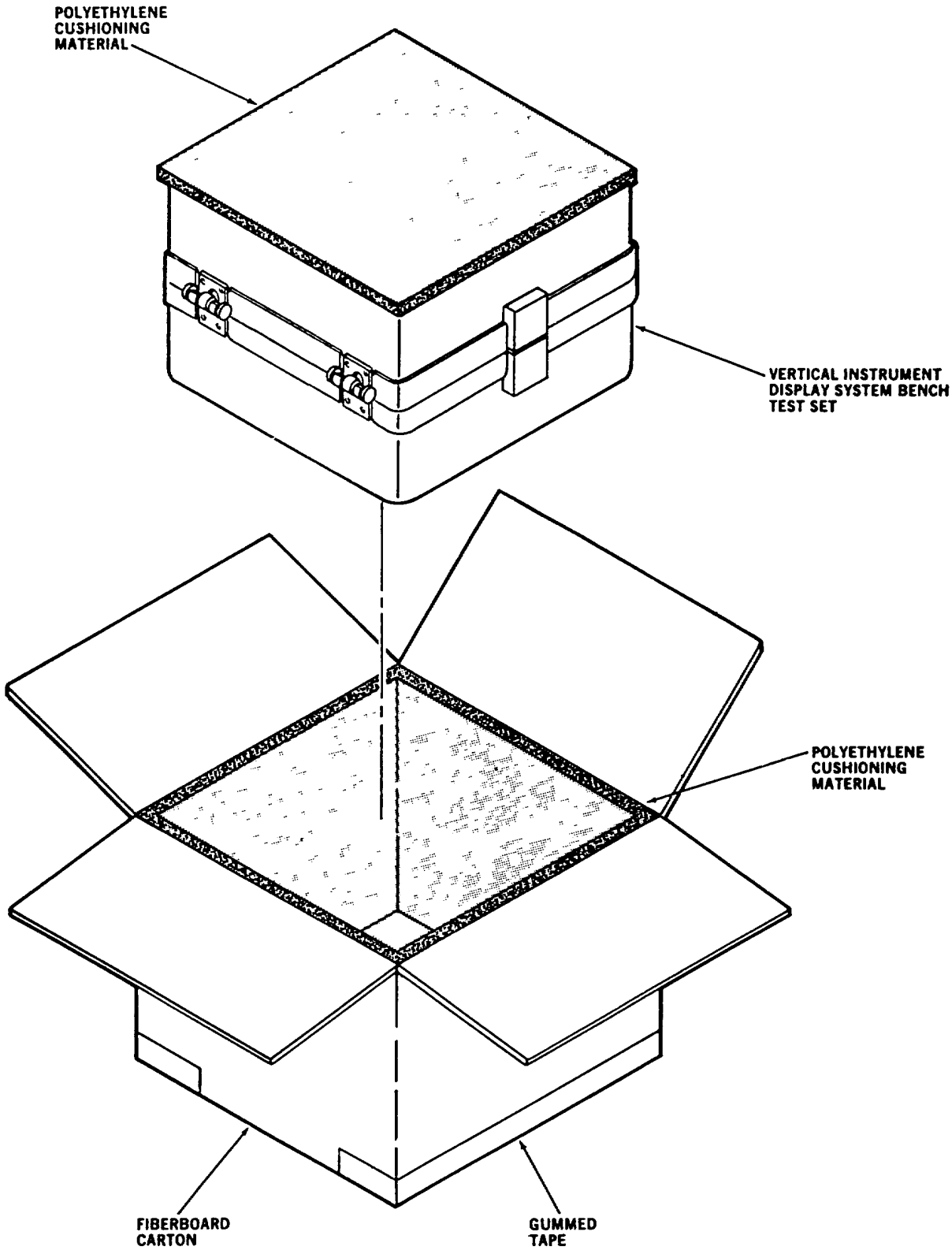

Figure 2-1. Typical Packaging

Section III. INSTALLATION INSTRUCTIONS

2-4. Installation of Equipment.

Connect has assemblies to test set as shown in Figure 2-2.

2-5. Seating of Fuses and Lamps.

Line Test Set/Vertical Instrument Display System is shipped with fuses and lamps in place. Check that these fuses and lamps are installed and not damaged.

a. 115 VAC2A
b. 28 VDC 8A
c. 5 VAC 8A
d. 115 VAC Power-on Lamp
e. 28 VDC Power-on-Lamp
f. Warning Lamps-

(1) LOW OIL PRESS NO. 1
(2) LOW OIL PRESS NO. 2
(3) HIGH OIL TEMP NO. I
(4) HIGH OIL TEMP NO. 2
(5) ENGINE OUT NO. I
(6) ENGINE OUT NO. 2
(7) LOW ROTOR SPD
(8) LAMP SUPPLY OVERLOAD NO. 1
(9) LAMP SUPPLY OVERLOAD NO. 2

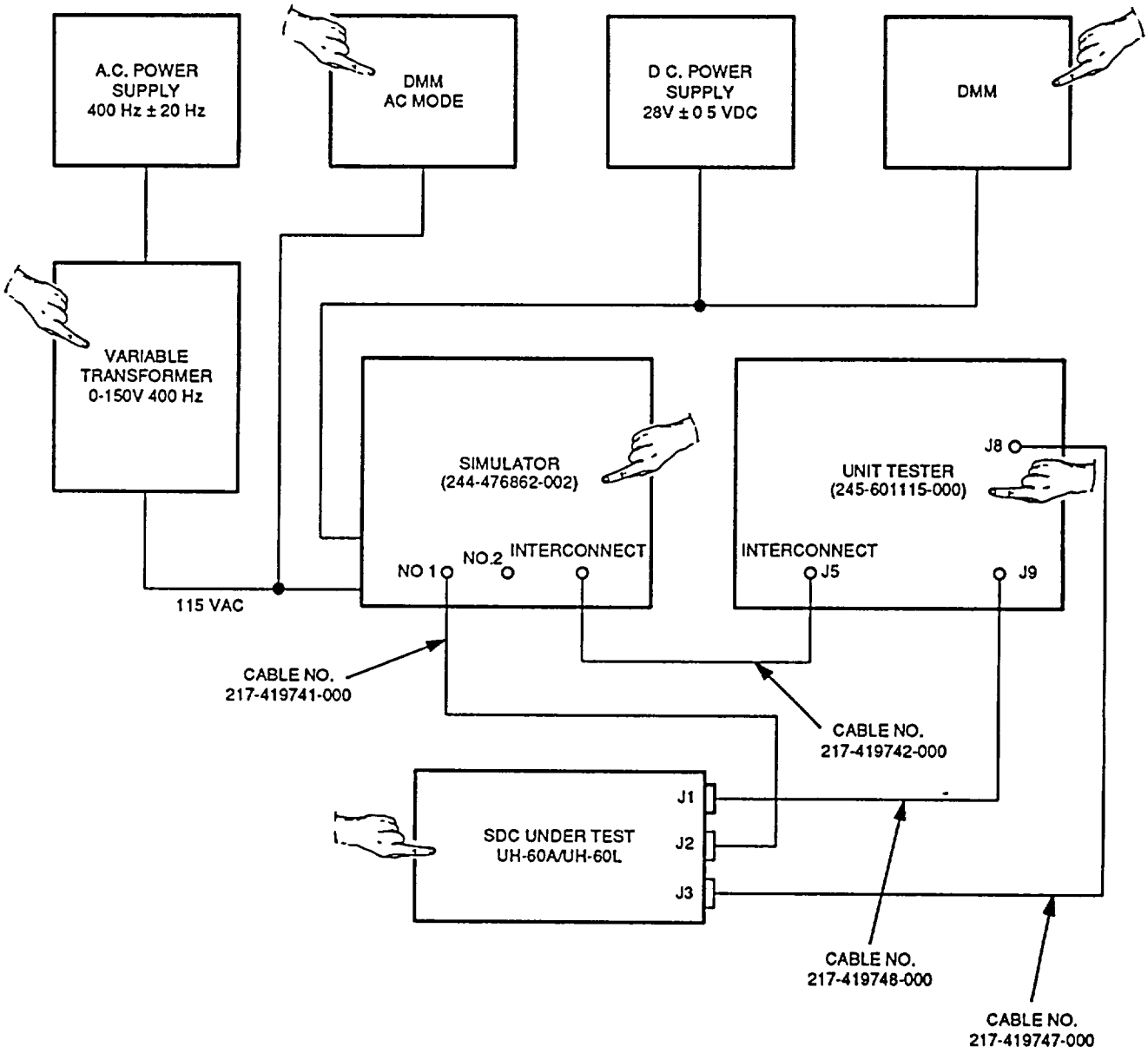

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Figure 2-2. Signal Data Converter Test Setup

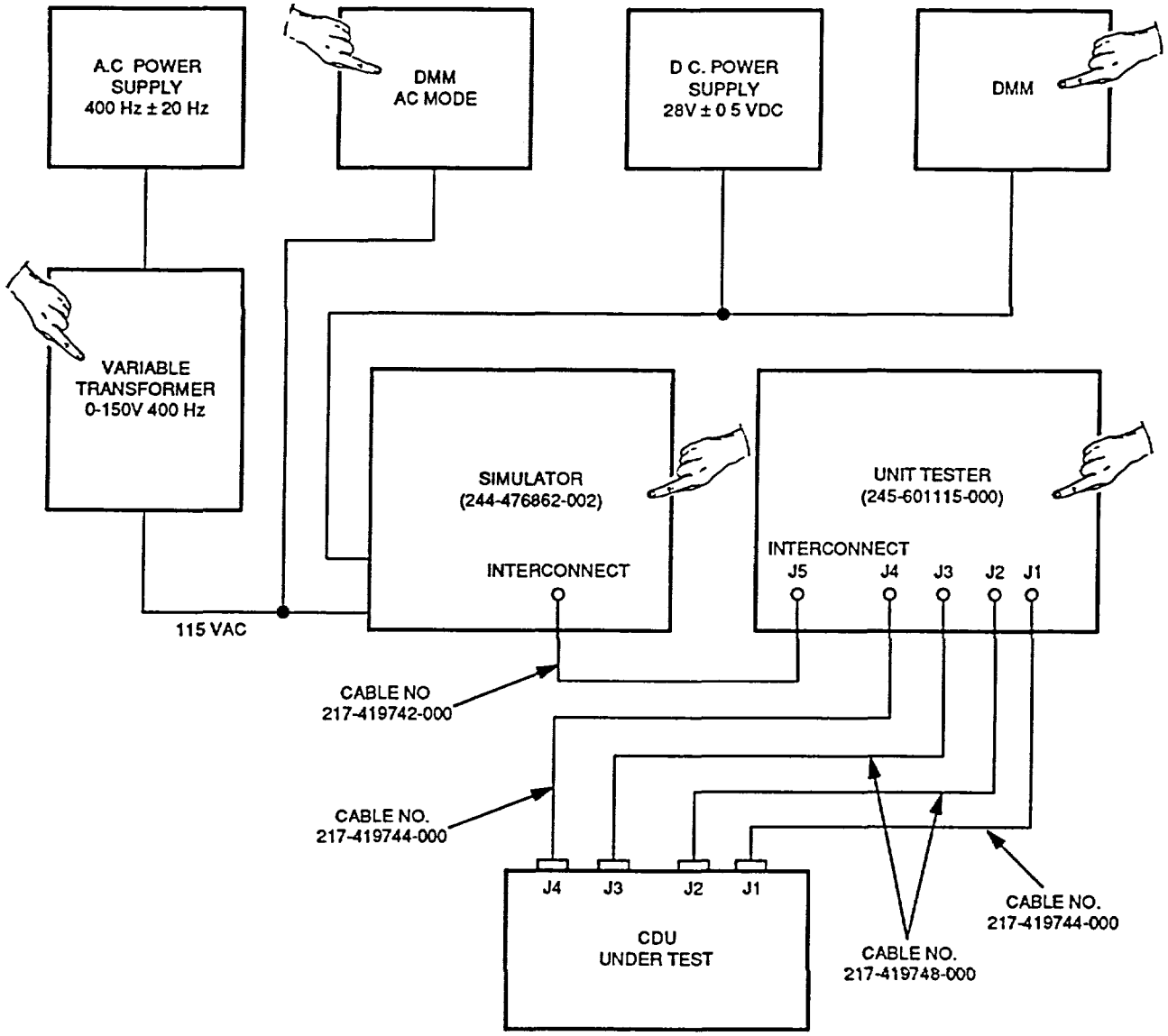

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Figure 2-3. Central Display Unit Test Setup

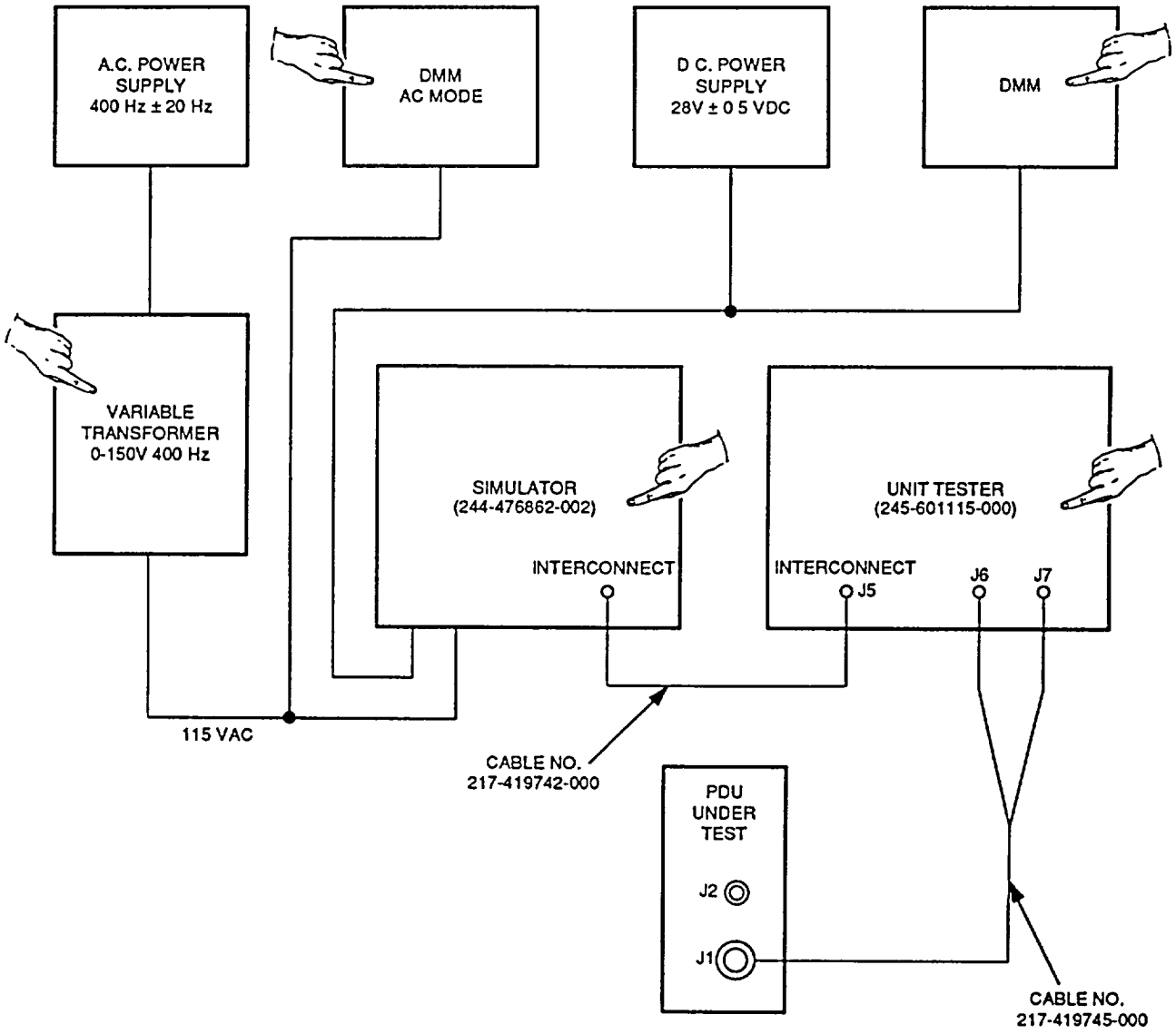

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Figure 2-4. Pilot Display Unit Test Setup

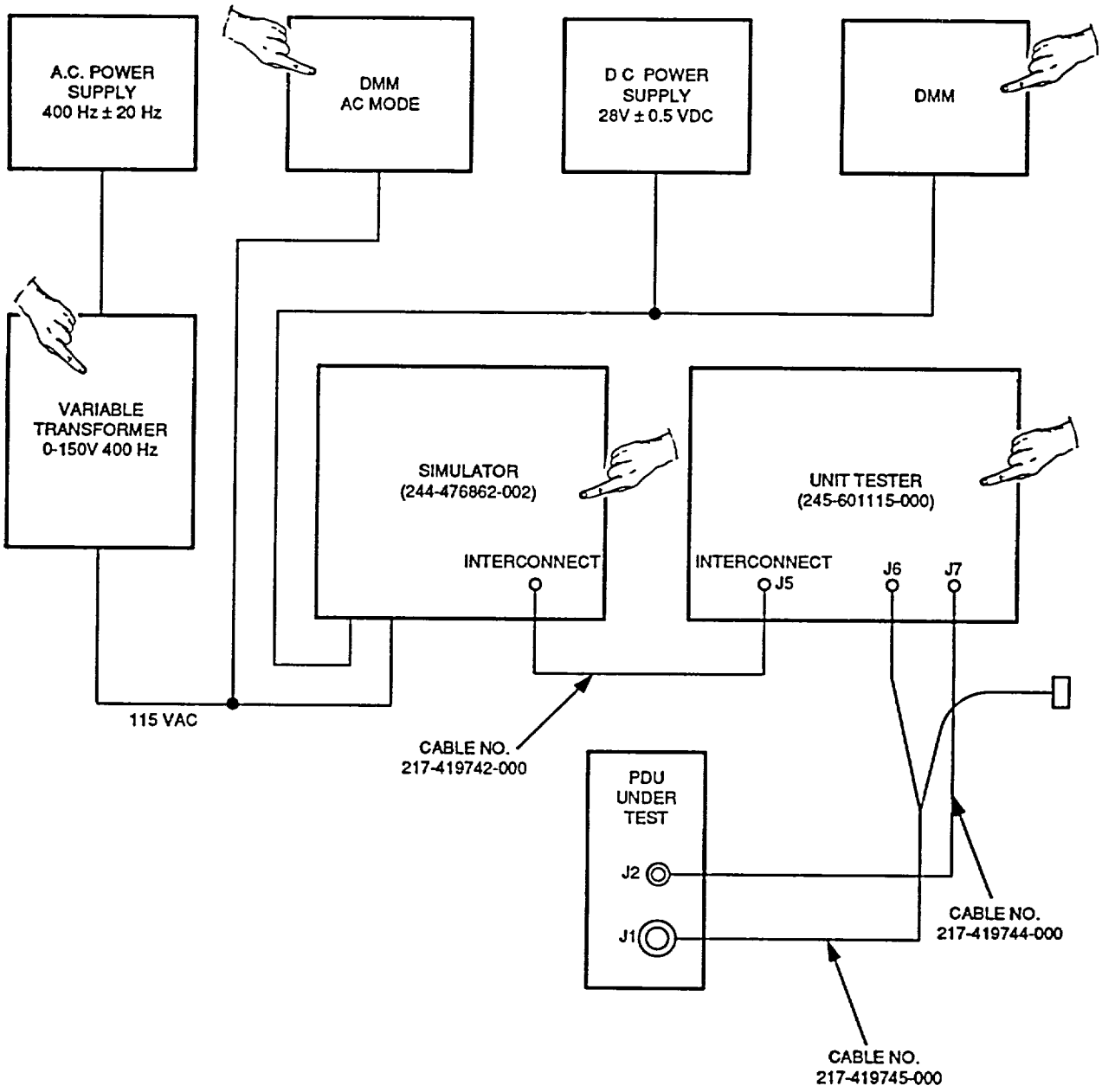

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Figure 2-5. Pilot Display Unit Alternate Test Setup

CHAPTER 3

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

3-1. Operator's Controls.

All operator's controls, indicators and connectors are shown in Figures 3-1 and 3-2 and listed and described in Table 3-1.

Section II. OPERATION UNDER USUAL CONDITIONS

3-2. Preliminary Starting Procedure.

a. Place simulator INPUT POWER switch OFF.

NOTE

Only one of the three units to be tested can be connected to the test set at one time. Test setup diagrams and typical testing procedures are given for each situation.

b. Connect unit to be tested to test set (Figures 2-2 through 2-5).

3-3. Operating Procedure.

Do an operational check of Vertical Instrument Display System (TM 55-1520-237-23-3).

3-4. Procedures for Shutdown.

a. Place simulator INPUT POWER switch OFF.

b. Disconnect test set and other test equipment.

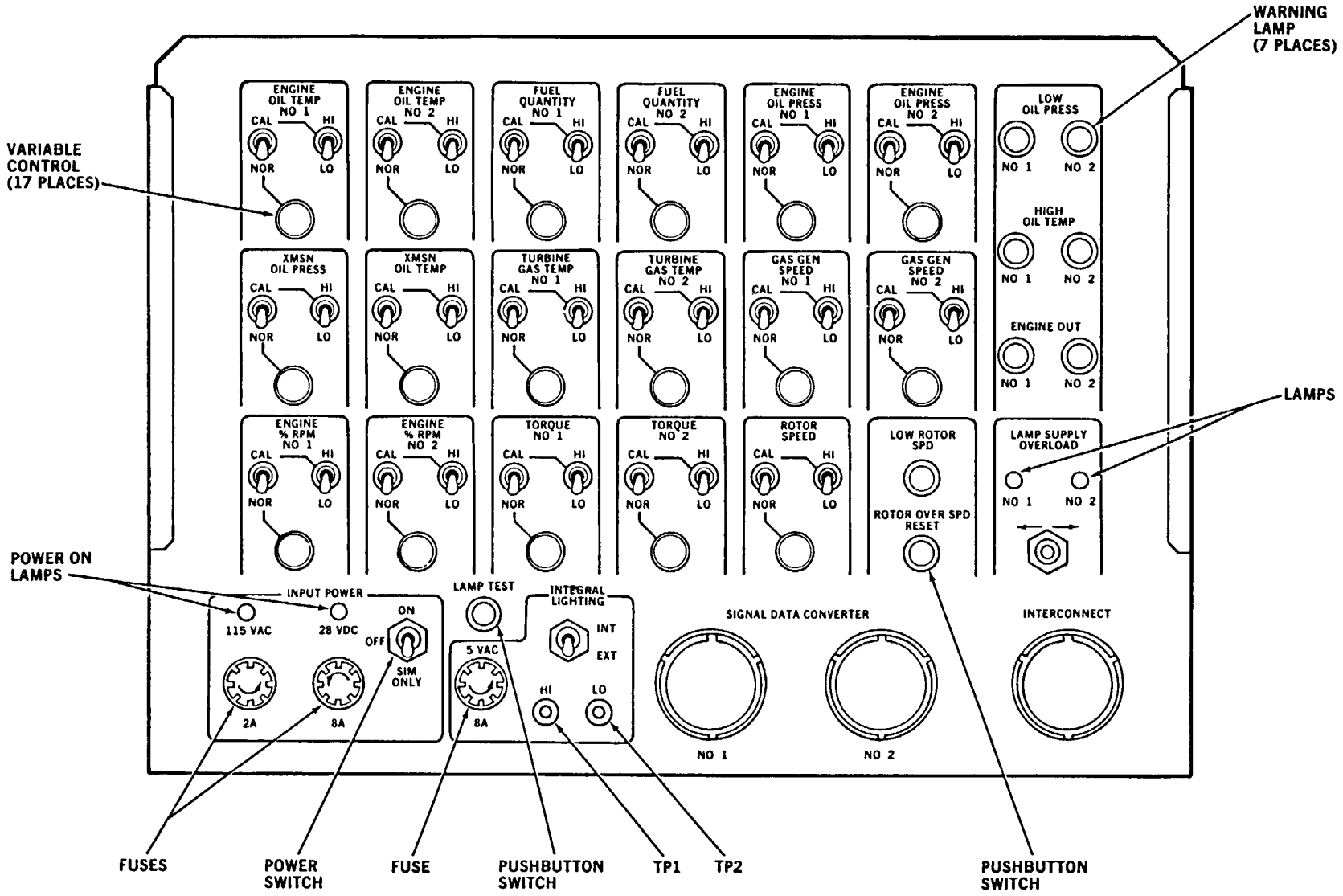

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Figure 3-1. Sensor Simulator Operator's Controls and Indicators

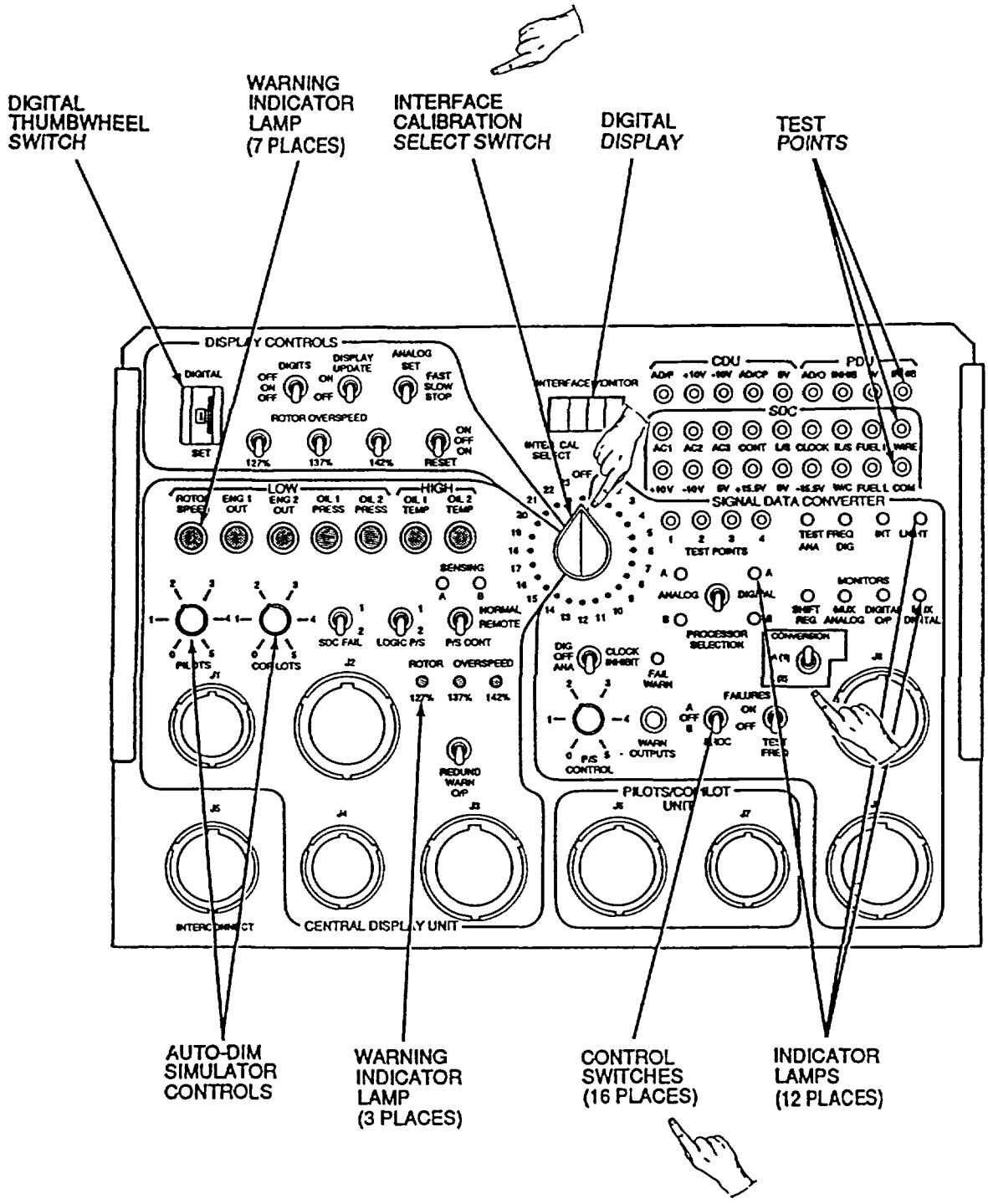

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Figure 3-2. Unit Tester Operator's Controls and Indicators

Table 3-1. Operator's Controls (Cont)

Control, indicator or connector	Function
Variable control	Used to check complete range of operation of #2 engine oil pressure when NOR CAL switch Is placed to NOR.
LOW OIL PRESS NO. 1 LOW OIL PRESS NO. 2 XMSN OIL PRESS	Used to indicate simulated conditions exist on appropriate parameter tests.
NOR CAL switch	Used to select testing mode: either fixed calibration operation or variable (controllable) operation.
HI LO switch	Used to select high and low fixed calibration points for transmission pressure indicator when NOR CAL switch is placed to CAL
Variable control	Used to check complete range of operation of transmission pressure indicator when NOR CAL switch is placed to NOR.
XMSN OIL TEMP NOR CAL switch	Used to select testing mode of transmission oil temperature indicator in either normal or calibrating functions.
HI LO switch	Used to select high and low calibration points for transmission oil temperature indicator, when NOR CAL switch is placed to CAL
Variable control	Used to check full range of transmission oil temperature indicator when NOR CAL switch is placed to NOR.
TURBINE GAS TEMP NO. 1 NOR CAL switch	Permits selection of mode of operation testing - normal or calibration of TGT #1 indicator.
HI LO switch	Used to select high and low calibration points of TGT #1 system indicator when NOR CAL switch is placed to CAL.
Variable control	Used to check full range of operation of TGT #1 system indicator when NOR CAL switch is placed to NOR.
TURBINE GAS TEMP NO. 2 NOR CAL switch	Used to select mode of operation for testing - normal or Calibration of TGT #2 indicator.
HI LO switch	Permits selection of high and low Calibration points of TGT #2 system indicator when NOR CAL switch is placed to CAL.
Variable control	Permits checking full range of operation of TGT #2 system indicator when NOR CAL is placed to NOR.
GAS GEN SPEED NO. 1 NOR CAL switch	Selects mode of operation for Ng #1 indicator in normal or Calibration.
HI LO switch	Used to select high and low Calibration points for Ng #1 indicator when NOR CAL switch is placed to CAL.
Variable control	Permits checking of Ng #1 indicator over its range of operation when NOR CAL switch is placed to CAL.

Table 3-1. Operator's Controls (Cont)

Control, indicator or connector	Function
	SENSOR SIMULATOR (Cont)
Variable control	Used to check complete range of operation of #2 engine oil pressure when NOR CAL switch is placed to NOR.
LOW OIL PRESS NO. 1 LOW OIL PRESS NO. 2	Used to indicate simulated conditions exist on appropriate parameter tests.
XMSN OIL PRESS	
NOR CAL switch	Used to select testing mode: either fixed Calibration operation or variable (controllable) operation.
HI LO switch	Used to select high and low fixed Calibration points for transmission pressure indicator when NOR CAL switch is placed to CAL.
Variable control	Used to check complete range of operation of transmission pressure indicator when NOR CAL switch is placed to NOR.
XMSN OIL TEMP	
NOR CAL switch	Used to select testing mode of transmission oil temperature indicator in either normal or Calibrating functions.
HI LO switch	Used to select high and low Calibration points for transmission oil temperature indicator, when NOR CAL switch is placed to CAL.
Variable control	Used to check full range of transmission oil temperature indicator when NOR CAL switch is placed to NOR.
TURBINE GAS TEMP NO. 1	
NOR CAL switch	Permits selection of mode of operation testing - normal or Calibration of TGT #1 indicator.
HI LO switch	Used to select high and low Calibration points of TGT #1 system indicator when NOR CAL switch is placed to CAL.
Variable control	Used to check full range of operation of TGT r#1 system indicator when NOR CAL switch is placed to NOR.
TURBINE GAS TEMP NO. 2	
NOR CAL switch	Used to select mode of operation for testing - normal or Calibration of TGT #2 indicator.
HI LO switch	Permits selection of high and low Calibration points of TGT #2 system indicator when NOR CAL switch is placed to CAL.
Variable control	Permits checking full range of operation of TGT #2 system indicator when NOR CAL is placed to NOR.
GAS GEN SPEED NO. 1	
NOR CAL switch	Selects mode of operation for Ng #1 indicator in normal or Calibration.
HI LO switch -	Used to select high and low Calibration points for Ng #1 indicator when NOR CAL switch is placed to CAL.
Variable control	Permits checking of Ng #1 indicator over its range of operation when NOR CAL switch is placed to CAL.

Table 3-1. Operator's Controls (Cont)

Control, indicator or connector	Function
	SENSOR SIMULATOR (Cont)
GAS GEN SPEED NO. 2	
NOR CAL switch	Permits selection of mode of operation for equipment testing of Ng #2 indicator.
HI LO switch	Permits selection of high and low Calibration tests for Ng #2 indicator when NOR CAL switch is placed to CAL.
Variable control	Used to check range of operation of Ng #2 indicator when NOR CAL switch is placed to NOR.
HIGH OIL TEMP NO. 1 HIGH OIL TEMP NO. 2	Used to indicate simulated conditions exist on appropriate parameter tests.
ENGINE OUT NO. 1 ENGINE OUT NO. 2 ENGINE % RPM NO. 1	
NOR CAL switch	Used to select mode of operation: normal or Calibration of % RPM #1 indicator.
HI LO switch	Used to select high and low speed Calibration points of % RPM #1 indicator when NOR CAL switch is placed to CAL.
Variable control	Used when NOR CAL switch is placed to NOR, to check operation of % RPM Engine #1 indicator over its range.
ENGINE % RPM NO. 2	
NOR CAL switch	Selects mode of operation for % RPM #2 indicator - normal or Calibration.
HI LO switch	Used to select high and low Calibration points for % RPM #2 indicator when NOR CAL switch is placed to CAL.
Variable control	Used when NOR CAL switch is placed to NOR, to check operation of % RPM #2 indicator over its range.
TORQUE NO. 1	
NOR CAL switch	Used to select mode of testing - normal or Calibration of % TRQ #1 indicator.
HI LO switch	Permits selection of high and low Calibration of % TRQ #1 indicator checks when NOR CAL switch is placed to CAL.
Variable control	**Permits testing of range of operation of % TRQ #1 indicator system when NOR CAL switch is at NOR**.
TORQUE % NO. 2	
NOR CAL switch	Used to select mode of testing - normal or calibration of % TRQ #2 indicator.
HI LO switch	Permits selection of high and low calibration checks of % TRQ #2 indicator when NOR CAL switch is placed to CAL.
Variable control	Permits testing of range of operation of % TRQ #2 indicator system when NOR CAL switch is at NOR.

Table 3-1. Operator's Controls (Cont)

Control, indicator or connector	Function
SENSOR SIMULATOR (Cont)	
ROTOR SPEED	
NOR CAL	Selects mode of operation - normal or Calibration for checking % RPM R indicator.
HI LO	When ROTOR NOR CAL switch is set to CAL, HI LO switch allows high and low Calibration points of % RPM R indicator to be checked.
Variable control	Used when NOR CAL switch is at NOR, to check operation of Rotor Speed indicator as simulated % RPM rotor speed signals cover range from minimum to maximum.
LOW ROTOR SPD	Indicates operation of ROTOR SPEED LO switch.
ROTOR OVER SPD RESET switch	Used to reset rotor overspeed warning indicator.
LAMP SUPPLY OVERLOAD NO. 1	Indicates operation of LAMP SUPPLY OVERLOAD switch
LAMP SUPPLY OVERLOAD NO. 2	
LAMP SUPPLY OVERLOAD switch	**Used to select NO. 1 and NO. 2 lamp supply overload** conditions.
INPUT POWER Lamps:	When lighted they indicate this
115 VAC	AC input power Is applied
28 VDC	DC input power is applied.
INPUT POWER switch	Three-position switch that controls application of 115 vac and 28 vdc power. At ON, input power is connected. At OFF, Input power is disconnected. At SIM ONLY, input power to interconnect connector (J5) Is removed. This removes power from Unit Tester, de-energizing it without removing power from SIMULATOR.
LAMP TEST switch	**NO. 2 Low Oil Pressures, NO. 1 and NO. 2 High Oil Temperature, Low Rotor Speed, NO. 1 and NO. 2 Engine Out, and both Lamp Supply Overload lamps on LTS.**
INTEGRAL LIGHTING switch	To select internal or external integral lighting power.
115 VAC 2A fuse	AC power line fuse. Fuse blows if primary circuits of transformers T1, T2, T3, T4 become overloaded due to circuit malfunction.
28 VDC 8A fuse	DC input power fuse, protects 28 vdc circuits.
5 VAC 8A fuse	Protects 5 vac lighting circuits.
UNIT TESTER *(Figure 3-2)*	
DISPLAY CONTROLS	
DIGITAL SET	Thumbhole selector switch.
DIGITS OFF ON OFF switch	Controls digit display.
DISPLAY UPDATE ON OFF switch	Controls display update pulses.
ANALOG SET FAST SLOW STOP switch	Controls fast, slow, and stop gates of internal shift register

Table 3-1. Operator's Controls (Cont)

Control, indicator or connector	Function
	UNIT TESTER (Cont)
ROTOR OVERSPEED switches	
127%	Selects overspeed signal for 127%.
137%	Selects overspeed signal for 137%.
142%	Selects overspeed signal for 142%.
RESET ON OFF ON switch	Resets latching relays (warning indicators) in SDC.
CDU test points	
AD/P	Auto dim pilot display
+10V	+10V Regulated output
-10V	-10V Regulated output
AD/CP	Auto dim copilot display
5V	5V regulated output
PDU test points	
AD/O	Auto dim output
INHIBIT (Left)	Analog clock inhibit - positive pulses 5V amplitude
5V	5V regulator output
INHIBIT (Right)	Digital clock inhibit - positive pulses 5V amplitude
INTERFACE MONITOR Digital display	Provides Digital readouts for both analog and Digital channels.
SIGNAL DATA CONVERTER test points	
AC1	Engine oil pressure excitation: 7.5 VRMS to 11 V.
AC2	Transmission oil pressure excitation.
AC3	CDU reference excitation source.
CONT	Lamp power supply control voltage.
L/S	Lamp power supply output voltage.
CLOCK	Squarewave 4V to 6V amplitude, period 6.8 to 8.8 sec. (128 kHz prime clock).
IL/S	Internal lamp supply voltage.
FUEL H	Wiring continuity with FUEL L, monitor range of dc voltage for fuel quantity simulation.
WIRE	Wiring continuity of transmission oil temperature.
+10V	Regulated +10 volts from the SDC.
-10V	Regulated -10 volts from the SDC.
5V	Regulated +5 volts from the SDC.
+15.5V	+ 15.5 volts unregulated
8V	+8 volts unregulated
-15.5V	-15.5 volts unregulated
W/C	SDC wiring check
FUEL L	See FUEL H
COM	AC and dc common return

Table 3-1. Operator's Controls (Cont)

Control, indicator or connector	Function
	UNIT TESTER (Cont)
CENTRAL DISPLAY UNIT section	Seven 28 vdc lamps are used to indicate operation of warning output signals
LOW warning indicator lamps	
ROTOR SPEED	
ENG 1 OUT	
ENG 2 OUT	
OIL 1 PRESS	
OIL 2 PRESS	
HIGH warning indicator lamps	
OIL 1 TEMP	
OIL 2 TEMP	
PILOTS	Auto dim simulator control
COPILOTS	Auto dim simulator control
SDC FAIL I	Simulates SDC failure
SDC FAIL 2 switch, spring-loaded to OFF	
LOGIC P/S 1 switch	Connects logic P/S to either J1 (1) or J4 (2)
LOGIC P/S 2 switch	
P/S CONT NORMAL REMOTE switch	Selects normal or remote modes
ROTOR OVERSPEED lamps	Monitors rotor overspeed latching indicators in CDU
127%	
137%	
142%	
REDUNDANT WARN O/P switch	Wiring continuity check
SENSING indicator lamps	5 volt lamps used to verify lamp supply control loops
A	
B	
SIGNAL DATA CONVERTER section	
TEST POINTS	
1	Analog data outputs for CDU (+5V good)
2	Analog data outputs for PDU (+5V good)
3	Digital data outputs for CDU (+5Vgood)
4	Digital data outputs for PDU (+5V good)
TEST FREQ indicator lamps	
ANA	Monitors analog processors
DIG	Monitors Digital processors

Table 3-1. Operator's Guide (Cont)

Control, indicator or connector	Function
	UNIT TESTER (Cont)
SIGNAL DATA CONVERTER section (cont)	
NT indicator lamp LIGHT indicator lamp	Verify presence of integral lighting voltages which are routed to display units through SDC
PROCESSOR SELECTION Switch A B	Manual selection of A or B processors
PROCESSOR SELECTION indicator lamps	
ANALOG A	When lit, indicates analog processor A is energized
ANALOG B	When lit, indicates analog processor B is energized
DIGITAL A	When lit, indicates Digital processor A is energized
DIGITAL B	When lit, indicates Digital processor B is energized
CONVERSION switch	A(1) switch position to test UH-60A SDC L(2) switch position to test UH-60L SDC
MONITORS indicator lamps SHIFT REG	CDU and PDU shift register operation. Also indicates UH-60A SDC and UH-60L SDC test selection
MUX ANALOG	Normal operation
DIGITAL O/P	Normal operation
MUX DIGITAL	Normal operation
CLOCK INHIBIT DIG OFF ANA switch	Disables/enables Digital and analog clocks
FAIL WARN indicator lamp	Indicates SDC failure
P/S CONTROL	Provides variable de voltage (0-5 volts) for lamp supply output
WARN OUTPUTS pushbutton switch	Warning output signal wiring continuity
FAILURES switches PROC A OFF B	Capability of stopping either A or B analog processor
TEST FREQ ON OFF	Test frequency signal wiring continuity
INTER CAL SELECT switch	Interface Calibration selector switch
1	% RPM engine No. I1
2	% RPM engine No. 2
3	Rotor RPM
4	% TRQ No. 1 engine (analog)
5	% TRQ No. 2 engine (analog)
6	Engine oil temperature
7	Engine oil pressure
8	Turbine gas temperature (analog)
9	Gas generator speed (analog)
10	% TRQ No. 1 engine (Digital)
11	% TRQ No. 2 engine (Digital)
12	Turbine gas temperature (Digital)

Table 3-1. Operator's Controls (Cont)

Control, indicator or connector	Function
UNIT TESTER (Cont)	
INTER CAL SELECT switch (cont)	
13	Gas generator speed (Digital)
14	Rotor RPM (analog relay)
15	Fuel quantity No. 1
16	Fuel quantity No. 2
17	Main transmission oil temperature (analog)
18	Main transmission oil pressure (analog)
19	Total fuel quantity (Digital)
20	(Not used)
21	Shift register number (monitored on INTERFACE MONITOR display)
22	(Not used)
23	(Not used)
OFF	Off

CHAPTER 4

MAINTENANCE INSTRUCTIONS

Section I. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-1. General.

Preventive maintenance checks and services consist of a visual inspection to be done at each operation of the test set, operational check, any troubleshooting required, and the repair required to correct any malfunctions. If your equipment does not operate, troubleshoot with proper equipment. Report any deficiencies using the proper forms, see DA PAM 738-751.

4-2. Inspections.

Do inspections as shown in Table 4-1.

Table 4-1. Operator/Aviation Unit Maintenance Preventive Maintenance Checks and Services.

NOTE: Within designated interval, these checks are to be done in the order listed.

B - Before
D - During
A - After

Item No.	Internal					C	Item to be Inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready/ available if:
	B	D	A	W	M				
1	•		•				Cables	Check for broken wires, burned insulation, damage or dirt in connectors	
2	•						Controls and Switches	Positive action and freedom of movement.	
3							Indicator Lights	Check operation of lights.	

Section II. TROUBLESHOOTING

4-3. Scope.

a. This section contains troubleshooting or malfunction information and tests for locating and correcting most of the troubles which may develop in the Bench Test Set. Each malfunction or trouble symptom for an individual component, unit, or system is followed by a list of tests or inspections necessary for you to determine probable causes and corrective actions for you to remedy the malfunction.

b. This manual cannot list all possible malfunctions that may occur or all tests or inspections and corrective actions. If a malfunction is not listed (except when malfunction and cause are obvious), or is not corrected by listed corrective actions, you should notify higher level maintenance.

c. Table 4-2 lists the common malfunctions that you may find during the operation or maintenance of the Bench Test Set or its components. You should do the tests/inspections and corrective actions in the order listed.

Table 4-2. Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
1. INPUT POWER INDICATORS DO NOT GO ON WITH INPUT POWER SWITCH PLACED ON.
Step 1. Place INPUT POWER switch ON. INPUT POWER 115 VAC and 28 VDC indicators should go on. a. both indicators do not go on, forward BTS to higher maintenance. b. only one indicator does not go on, check/replace corresponding fuse, paragraph 4-7. c. fuse is good, replace lamp, paragraph 4-9.
2. INDICATORS DO NOT GO ON WHEN LAMP TEST SWITCH IS PRESSED.
Step 1. Press LAMP TEST SWITCH. On sensor simulator:LOW OIL PRESS NO. 1 and NO. 2, HIGH OIL TEMP NO. 1 and NO. 2, ENGINE OUT NO. 1 and NO. 2, LAMP SUPPLY OVERLOAD NO. 1 and NO. 2, and LOW ROTOR SPD indicators should go on. On unit tester ROTOR SPEED, ENG 1 OUT, ENG 2 OUT, OIL 1 PRESS, OIL 2 PRESS, OIL 1 TEMP, TEST FREQ ANA, TEST FREQ DIG, INT, LIGHT SENSING A, SENSING B, ANALOG A, ANALOG B, DIGITAL A, DIGITAL B, SHIFT REG, MUX ANALOG, DIGITAL O/P, MUX DIGITAL, ROTOR OVERSPEED 127%, 137%, 142%, and FAIL WARN indicators should go on. a. If no indicators go on, forward BTS to higher maintenance. b. If only unit tester indicators do not go on, forward interconnect cable to higher maintenance. c. If only one indicator does not go on, replace lamp, paragraph 4-9.

Section III. REPAINTING AND REFINISHING INSTRUCTIONS

WARNING

Observe all cautions and warnings on containers when using consumables. When applicable, wear necessary protective gear during handling and use. If a consumable is flammable or explosive, MAKE CERTAIN consumable and its vapors are kept away from heat, spark, and flame. MAKE CERTAIN helicopter is properly grounded and firefighting equipment is readily available prior to use.

4-4. Cleaning Instructions.

a. Remove dust and loose dirt with a clean, soft cloth, item 4, App D.

b. Remove grease, fungus, and ground-in dirt with cloth dampened with dry-cleaning solvent, item 3, App D.

c. Remove moisture with a dry cloth.

4-5. Repainting and Refinishing Instructions.

NOTE

Refer to TB 746-10, Field Instructions for Painting and Preserving Electronics Equipment.

a. Repaint test set using these colors:

(1) Case (exterior). Finish with two coats of baked enamel colored grey, item 1, app D.

(2) Front panel. Retouch using enamel colored instrument black, item 2, App D.

Section IV. MAINTENANCE

4-6. Scope.
The scope of corrective maintenance is the replacement of knobs, fuses, and indicator lamps and lenses, and the cable assemblies.

4-7. Fuse Replacement.

a. Make certain INPUT POWER switch is OFF.

b. Disconnect LTS/VIDS from power source.

c. Unscrew fuse holder cap and remove fuse.

d. Insert new fuse and replace fuse holder cap.

4-8. Knob Replacement.

a. Loosen setscrew holding knob to shaft.

b. Slide knob off shaft.

c. Place new knob on shaft, making certain knob is fully on shaft and indexed correctly.

d. Tighten setscrew.

4-9. Indicator Lamp Replacement.

NOTE
This applies to the seven warning lamps only.

a. Make certain INPUT POWER switch is OFF.

b. Remove lens cover.

c. Remove lamp.

d. Install new lamp.

e. Replace lens cover.

4-10. Cable Assemblies.

Remove cable assembly from LTS case and ship to higher maintenance.

4-11. Lubrication.

None is required.

Section V. MAINTENANCE: AUTHORIZED REPAIR AND REPLACEMENT OF PARTS (ATST)

NOTE
Authorized repair of the VIDSB Test Set by Aviation Intermediate Maintenance (ATST) personnel is indicated in Appendix B, Maintenance Allocation Chart.

NOTE
Aviation Intermediate Maintenance (ATST) will perform only the authorized maintenance which includes replacement and repair of components and · end items which can be accomplished efficiently

with available skills, tools, and test equipment. Evacuate, circuit boards, components and end items beyond capability of ATST to the Depot.

NOTE
Perform Paras 4-12 through 4-14 as directed by Troubleshooting Tables 4-5 through 4-38. Do not replace circuit board if repair can be accomplished by authorized replacement of components on board.

Interconnecting diagrams are shown in Table 4-18.

NOTE

Remove Keying Plug from circuit boards before inserting extender board in assembly connector (Plugs in each circuit board). Be sure to reinstall Keying Plugs AFTER maintenance has been completed.

CAUTION

Place simulator INPUT POWER switch OFF before removing or installing printed circuit boards and connections.

4-12. Troubleshooting and Repair (ATST).

a. General. This paragraph contains general repair information, maintenance instructions, troubleshooting procedures and component replacement procedures. Test equipment and accessories required are listed in Tables 4-3 and 4-4. VIDSB Test Set circuit schematics are shown in FO-1 through FO-16. Refer to Figure 4-1 for power supply-equipment set up.

Table 4-3. Test Equipment

Common Name	Manufacturer and Model (Part Number) or (Equivalent)
AUTOTRANSFORMER	General Radio, Model W10MT3AS3 (7910809)
DC POWER SUPPLY	NJE, Model CS36CR30D2 (7907346-2)
DIGITAL MULTIMETER[1] (DMM)	Hewlett-Packard, Model 3478A
FREQUENCY COUNTER	Hewlett-Packard, Model 5345A (MIS-28754/l, Type 1)
OSCILLOSCOPE	Tektronix, Type R5440 (MIS-28706/1 Type 1) w/5A48 (MIS-28706/3) and 5B42 (MIS-28706/4)
PRECISION OSCILLATOR	Krohn-Hite,. Model 4100AR-8 (7915951) w/7500 (7500)
POWER SUPPLY	Tektronic, PS 503A

Table 4-4. Accessories Required

Common Name	Manufacturer and Model (Part Number) or (Equivalent)
ADAPTER[1]	BNC plug to double banana jacks (7907401)
ADAPTER	Single banana jack to pin plug (black) (7907528)
ADAPTER BOX	BAN jack terminations (7916113) (SKD4850-3)
EXTENDER BOARDS[2]	Canadian Marconi, P/N 220-419916-000 Canadian Marconi, P/N 220-421707-000 Canadian Marconi, P/N 220-412705-000
LEAD	24-in., No. 18; single banana plug terminations (red) (7907497)
LEAD[1]	24-in., No. 18; single banana plug terminations (black) (7907498)
LEAD[3]	Pin jack to single banana plug (7921032)
LEAD[1]	32-in., single banana plug to test hook (red) (7915941-1)
LEAD	2 single banana plug to ac power plug (7907551)

[1]Two required.
[2]One each required.
[3]Five required.

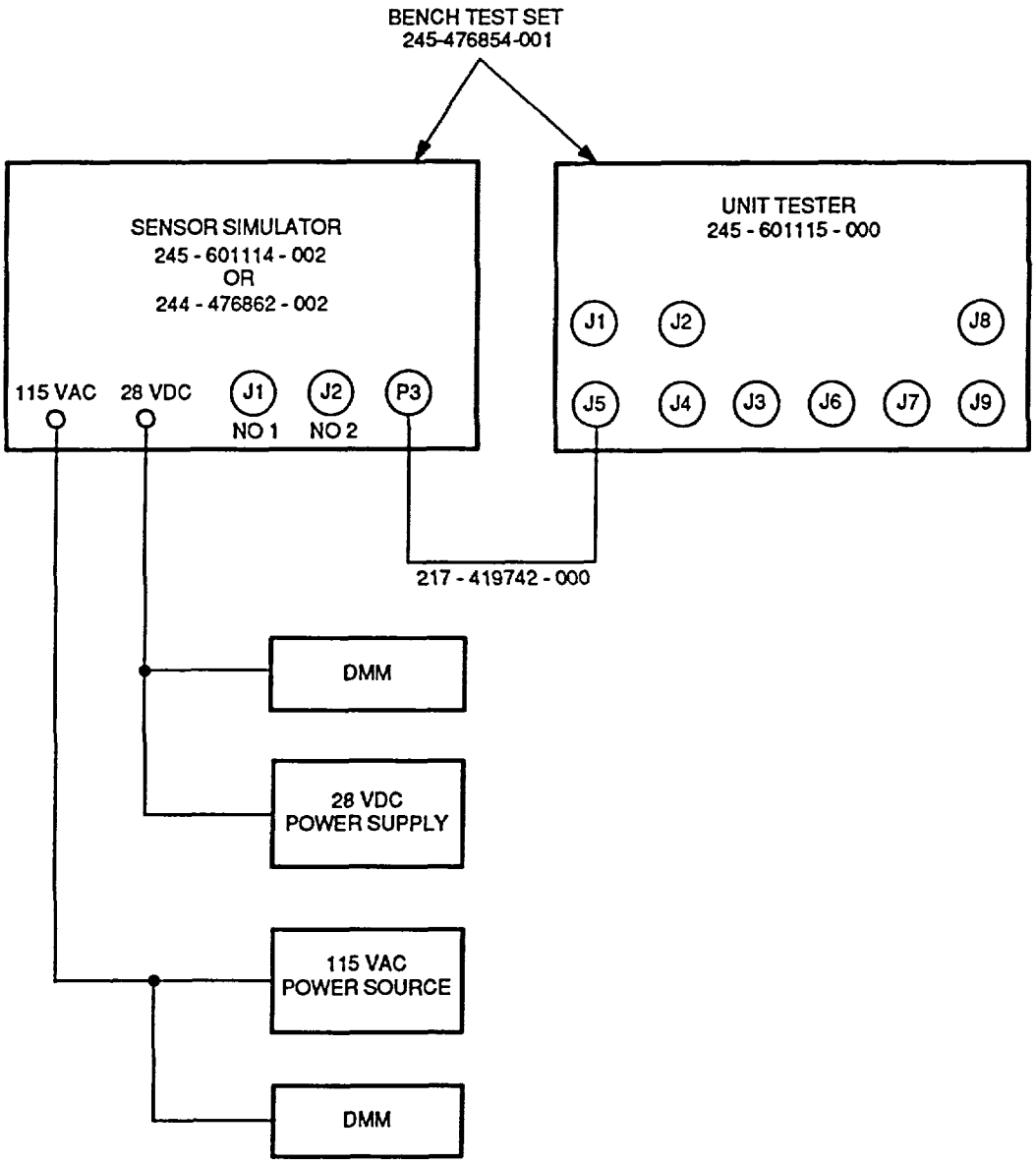

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Figure 4-1. Power Supply - Equipment Setup

4-13. Simulator Circuits.

a. Lamp Circuit.

(1) Set INPUT POWER switch to SIM ONLY and test equipment power to ON.

(2) Observe that the 115vac indicator lamp lights. If not, perform Troubleshooting Table 4-5.

(3) Observe that the 28vdc indicator lamp lights. If not, perform Troubleshooting Table 4-5.

(4) Press LAMP TEST Switch. All warning lamps will light. If not, perform Troubleshooting Table 4-5.

(5) Connect 5vdc power supply (current limited to 25ma) between No. 1 connector pins. U, V (+) and EE (-).

(6) LAMP SUPPLY OVERLOAD No. 1 warning lamp will go ON. Set LAMP SUPPLY OVERLOAD switch to left, lamp will go OFF. If not, see Troubleshooting Table 4-5.

(7) Disconnect dc power supply from No. 1 connector pins and connector to No. 2 connector pins U, V (+) and EE (-).

(8) LAMP SUPPLY OVERLOAD No. 2 warning lamp will go on. Set LAMP SUPPLY OVERLOAD switch to right, lamp will go OFF. If not, see Troubleshooting Table 4-5.

(9) Disconnect dc power supply from No. 2 connector.

(10) LIGHTING INT/EXT circuit. Connector Digital multimeter between No. 1 pin HH(LOW) and FF(HI). Refer to Figure 4-2 for pin locations.

(11) Observe that ON-OFF-SIM ONLY switch is set to SIM ONLY and INTEGRAL LIGHTING is set to INT Digital multimeter will indicate between 4.0 and 6.0vac. If not, perform Troubleshooting Table 4-5.

b. Power Supply Circuit (Input Voltage to A1 Board)

(1) Set all Power to OFF.

(2) Remove power supply board (A1), Figure 4-3 and reconnect, using extender board.

(3) Connect Digital multimeter positive to loop 2 and negative to loop 8 on extender board, using two leads.

(4) Observe that ON-OFF-SIM only switch is set to SIM ONLY and set equipment POWER is ON. Digital multimeter

Table 4-5. Troubleshooting Lamp Test Circuit (AVIM)

NOTE

Before performing troubleshooting, remove oil pressure (A2) board and reconnect using extender board.

Trouble	Probable Cause	Remedy
115 vac Indicator lamp does not light	F1 Fuse (2 amp) S1,T4,DS1	Replace defective component FO-5
28vdc Indicator Lamp does not light	F2 Fuse (8 amp) S1, 330 ohm resistor 2W, DS2	Replace defective components FO-5
Low Oil Press NO 1 and NO 2 Lamps do not light	DS5/DS6 CR8/CR7	Replace defective components, Figures 4-12, FO-4, FO-5
High Oil Temp NO 1 and NO 2 lamps do not light	DS7/DS8 CR6/CR5	Replace defective components, Figures 4-12, FO-4 and FO-5
Engine out NO 1 and NO 2 do not light	DS9/DS10 CR4/CR3	Replace defective components, Figure 4-12, FO-4 and FO-5.
Lamp Supply Overload NO 1 and NO 2 do not light	DS3/DS4 S19, CR12/CR11	Replace defective components, Figures 4-12, FO-4 and FO-5.
Low Rotor SPD does not light	DS 11 CR2	Replace defective components, Figures 4-12, FO-4 and FO-5.
All Indicator Lamps do not light	Lamp Test Switch S8	Replace defective components, Figures 4-12, FO-4 and FO-5
INTEGRAL LIGHTING INT Postion indicates no vac.	8 amp Fuse (F3) S39, T4	Replace defective components, Figure FO-5.

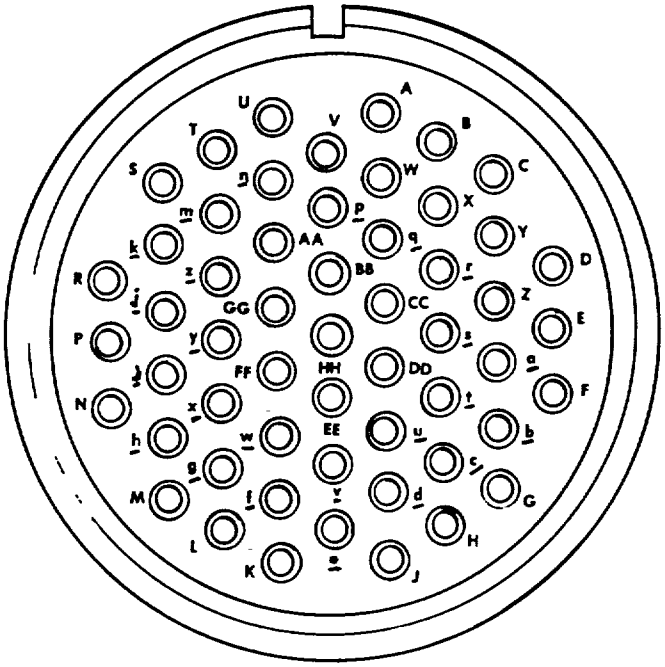

Figure 4-2. Signal Data Converter Connectors NO 1 and NO 2.

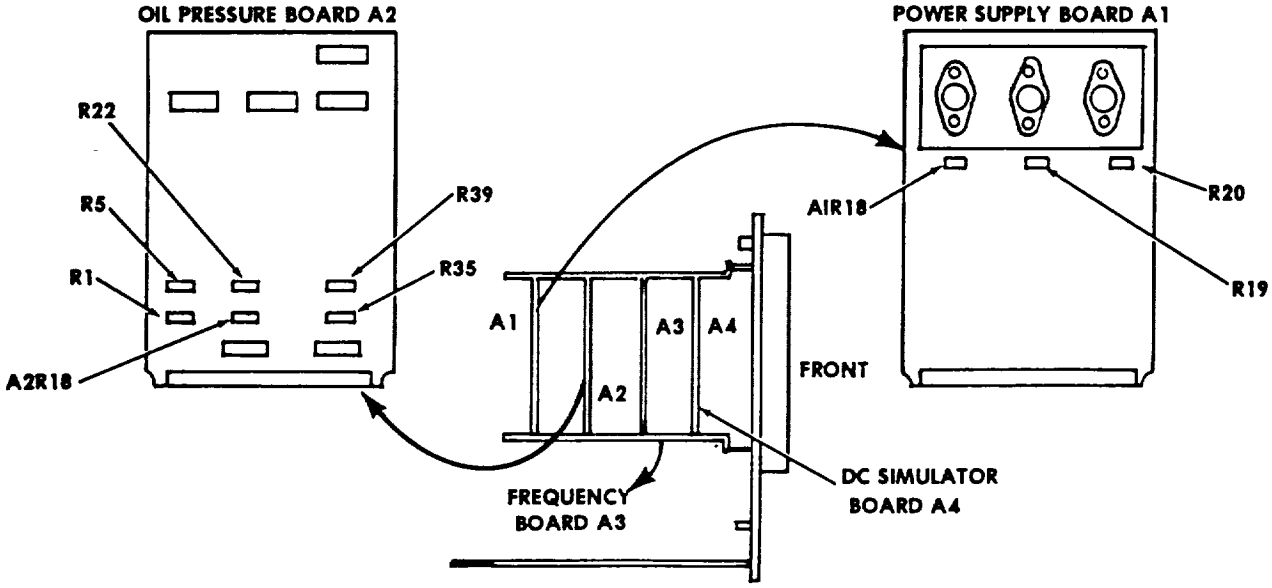

Figure 4-3. Simulator Unit - internal Left View.

will indicate between 21 and 27 vac. If not, perform Troubleshooting Table 4-6.

(5) Disconnect lead from loop 2 and connect to loop 4. Digital multimeter will indicate between 21 and 27 vac. If not, perform Troubleshooting Table 4-6.

(6) Disconnect lead from loop 4 and connect to loop 29 and disconnect negative lead from loop 8 and connect to loop 43. Digital multimeter will indicate between 7 and 9 vac. If not, perform Troubleshooting Table 4-6.

(7) Disconnect lead from loop 29 and connect to loop 53 and disconnect negative lead from 43 and connect to loop 49. Digital multimeter will indicate between 7 and 9 vac. If not, perform Troubleshooting Table 4-6.

(8) Disconnect lead from loop 53 and connect to loop 7 and disconnect negative lead from loop 49 and connect to loop 11. Digital multimeter0 will indicate between 23 and 29 vac. If not, perform Troubleshooting Table 4-6.

c. Power Supply Circuit (Voltage Output A1 Board).

(1) Connect Digital multimeter positive lead to loop 47 and negative lead to loop 63. Digital multimeter will indicate between 4.9 and 5.1 vdc. If not, perform Troubleshooting Table 4-6.

(2) Disconnect leads from loops 47 and 63. Connect Digital multimeter positive lead to loop 23 and negative lead to loop 27. Digital multimeter will indicate between 4.9 and 5.1 vdc. If not, perform Troubleshooting Table 4-6.

(3) Disconnect leads from loops 23 and 27. Connect Digital multimeter positive lead to loop 5 and negative lead to loop 14. Digital multimeter will indicate between 14 and 16 vdc. If not, perform Troubleshooting Table 4-6.

(4) Disconnect positive lead from loop 5 and connect to loop 3. Digital multimeter will indicate between -14 and -15 vdc. If not, perform Troubleshooting Table 4-6.

(5) Disconnect positive lead from loop 3 and connect to loop 1, Digital multimeter will indicate between 33 and 41 vdc. If not, perform Troubleshooting Table 4-6.

(6) Disconnect positive lead from loop 1 and connect to loop 19. Digital multimeter will indicate between -33 and -41 vdc. If not, perform Troubleshooting Table 4-6.

(7) Disconnect positive lead from loop 19 and connect to loop 18. Digital multimeter will indicate between 1 1.5 and 12.5 vdc. If not, perform Troubleshooting Table 4-6.

(8) Disconnect positive lead from loop 18 and connect to loop 46. Digital multimeter will indicate between 11.5 and 12.5 vdc. If not, perform Troubleshooting Table 4-6.

(9) positive lead from loop 46 and connect to loop 13. Digital multimeter will indicate between -11.5 and -125 vdc. If not, perform Troubleshooting Table 4-6.

Table 4-6. Troubleshooting Power Supply Circuit (AVIM)

NOTE

Before performing troubleshooting, remove power supply A1 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
No AC inputs to A1 board	Fuse F1,S1,T1 Transformer	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
5VFL NO 1 and NO 2 vdc reading out of tolerance	NO 1-(R3) NO 2-(R6)	(R3) or (R6) are Fixed Resistors, use decade Resistor Box and check or replace, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
5 VFL NO 1 and NO 2 no vdc or shows excessive reading after trim resistors (R3) or (R6) checked or replaced	NO 1 - CR1, C7, U NO 2 - CR2,C8,U2	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
15 vdc reading out of tolerance	CR4,R8,CR6,C6,C13	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.

Table 4-6. Troubleshooting Power Supply Circuit (AVIM) - Cont.

Trouble	Probable Cause	Remedy
-15 vdc vdc reading out of tolerance	CR3, R7, CR5 C9, C10	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
37 vdc vdc reading out of tolerance	CR4, CR6, C3, R8 C6, C13	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
-37 vdc vdc reading out of tolerance	CR3, R7, CR5 C9, C10	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A-1 board.
12 vdc NO 1 and NO 2 vdc reading out of tolerance	R19 R18	Adjust (R18) or (R19) if defective use decade resistor box check or replace, Figures 4-4, 4-5, FO-1, FO-5
12 vdc NO 1 and NO 2 vdc reading out of tolerance after trim resistors (R19) or (R18) (R19) or (R18) checked or replaced.	NO 1 - Q2, U3, CR7, CR10 NO 2 - Q1, U4, CR7, CR10	Replace defective components, figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
12 vdc NO 1 and NO 2 no vdc or shows excessive reading after trim resistors checked or replaced	NO 1 - C14, C29, U3, C21, C19, C25, R10 NO 2 - U4, C28, C20, C18, C24, C20, R9 -	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
-12 vdc vdc reading out of tolerance	R20	Adjust (R20) if defective use decade resistor box and check or replace, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
-12 vdc vdc reading out of tolerance after trim resistor (R20) checks or replaced	U5, CR8, CR9	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.
-12 vdc no vdc reading out or shows excessive reading after trim resistor checked	C26, R23, C27, C25, C22, C23, U5, R11	Replace defective components, Figures 4-4, 4-5, FO-1, FO-5 or replace A1 board.

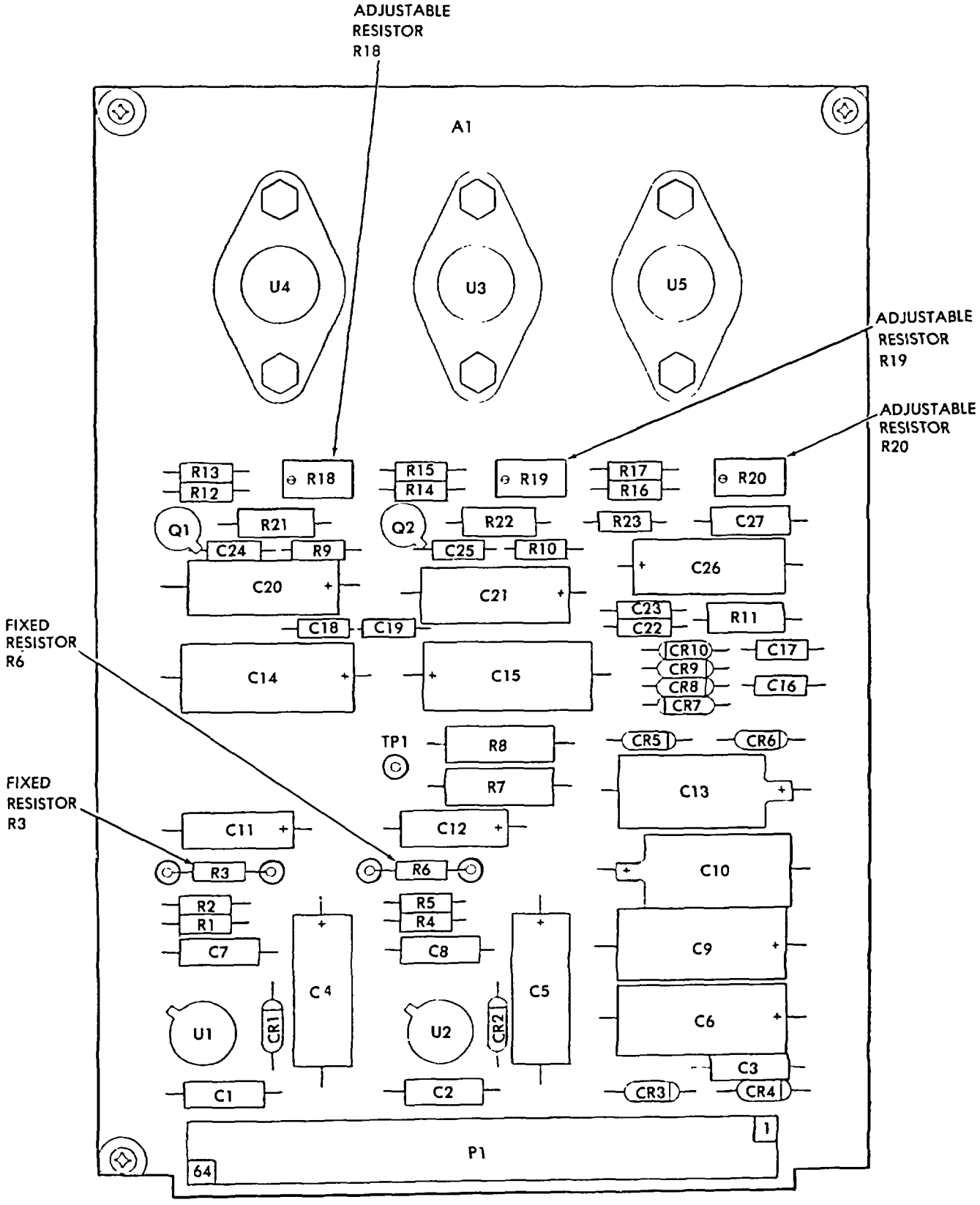

Figure 4-4. A1 Power Supply Board.

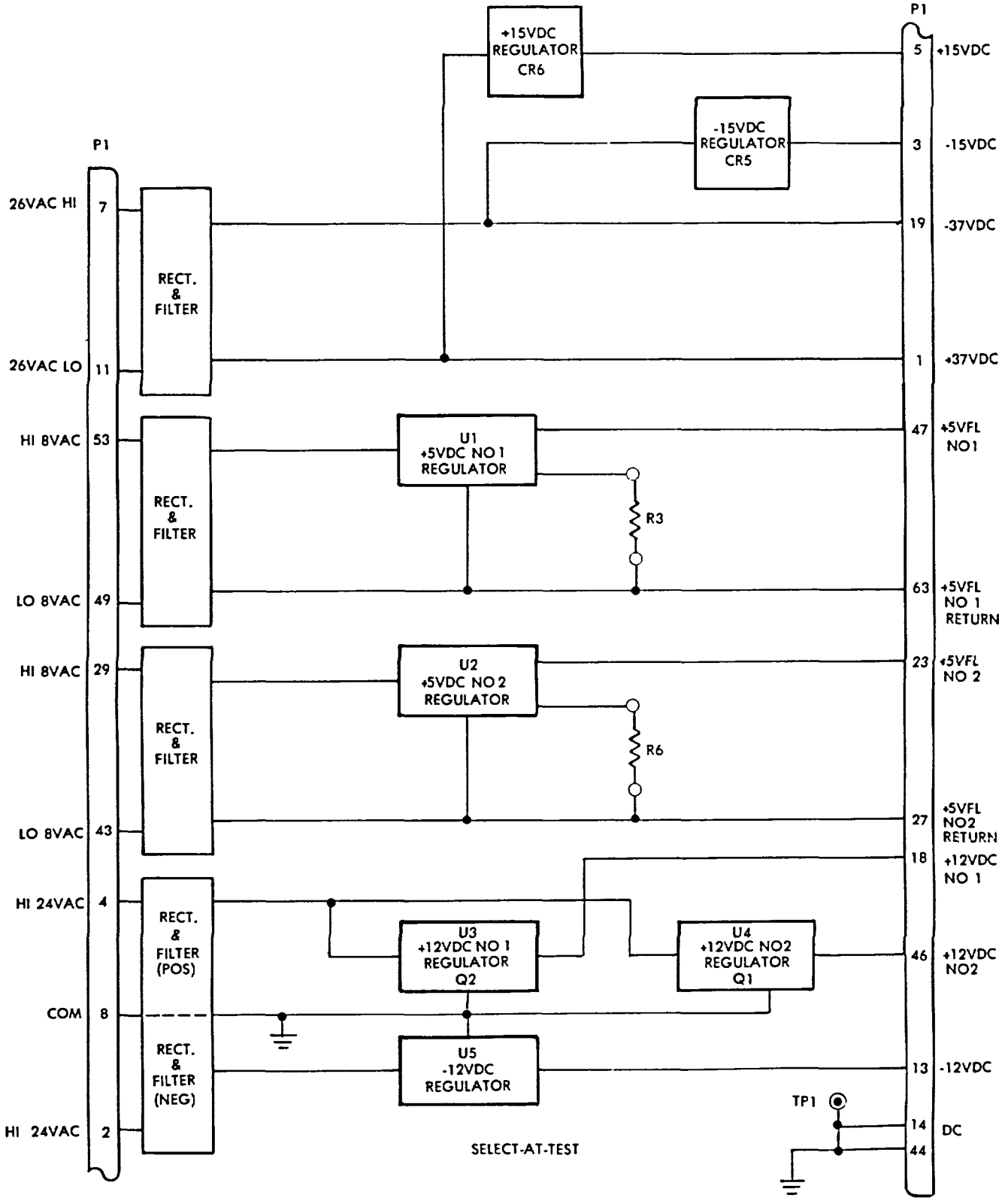

Figure 4-5. Simulator Power Supply Assembly A1, Block Diagram.

d. Torque NO 1 and NO 2.

(1) Set ON-OFF-SIM ONLY switch to OFF.

(2) Connect Digital multimeter to J1 connector NO 1 pins E(HI) and F(LOW), using two leads (B7). Refer to Figure 4-2 for pin locations.

(3) Set TORQUE NO 1 CAL/NOR switch to CAL, HI/LO switch to HI and variable control fully clockwise (CW).

(4) Set ON-OFF-SIM ONLY switch to SIM ONLY. Digital multimeter will indicate between +3.6963 and +3.7037 vdc. If not, perform Troubleshooting Table 4-7.

(5) Set TORQUE NO 1 HI/LO switch to LO. Digital multimeter will indicate between -0.1 and +0.1 mvdc. If not, perform Troubleshooting Table 4-7.

(6) Set TORQUE NO 1 CAL/NOR switch to NOR and turn variable control fully counterclockwise (CCW). Digital multimeter will indicate between -3.0 and +3.0 mvdc. If not, perform Troubleshooting Table 4-7.

(7) Adjust variable control fully CW. Digital multimeter will indicate between +5.415 and +5.815 Vdc. If not, perform Troubleshooting Table 4-7.

(8) Set ON-OFF-SIM ONLY switch to OFF.

(9) Disconnect leads from connector NO 1 pins E (HI) and F(LOW) and connect to connector NO 2 pins a (HI) and b (LOW).

(10) Repeat (3) thru (8) above, except use TORQUE NO 2 controls.

Table 4-7. Troubleshooting Power Supply Circuit (AVIM)

NOTE

Before performing troubleshooting, remove power supply A1 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
Torque No HI-CAL VOLTAGE	C11,C12,R52,CR5 (6.2 vdc), Also NO 1 (R45) NO 2 (R48)	First check loops 18(+) and 14 (-) for input 12 vdc t5 vdc, Replace defective components, Figure 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI-CAL VOLTAGE Indication out of tolerance NO 2 - (R49,R50)	Trim Resistors NO 1 - (R46,R51)	Use decade resistor box, and check or replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI-CAL VOLTAGE Indication out of tolerance after trim resistors checked or replaced	NO 1 - CR5,R44,R45,S34 or S35 NO 2 - CRS,R48,R47,S36 or S37	If trim resistors do not bring reading in tolerance, replace mal-functioning components. Figure 4-5, 4-7, FO-2, FO-6 or replace A4 board.
LO-CAL Indication out of tolerance	NO 1 - (S34) NO 2 - (S35)	Replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
Indication out of tolerance in NOR-FULLY GCW	NO 1 (R16) NO 2 (R17)	Replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
In NOR-FULLY CW NO 2 (R17) (R47)	NO 1 (R16) (R44)	Replace malfunctioning component, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.

NOTE

Voltage checks are also listed on figure 4-7.

e. Fuel Quantity NO 1 and NO 2.

(1) Connect Digital multimeter to connector NO 1 pin G (HI) and H (LOW), using two leads.

(2) Set FUEL QUANTITY NO 1 CAL/NOR switch to CAL, HI/LO switch to HI and variable control full CW.

(3) Set ON-OFF-SIM ONLY switch to SIM ONLY. Digital multimeter will indicate between +6.120 and +6.130 vdc. If not, perform Troubleshooting Table 4-8.

(4) Set FUEL QUANTITY NO 1 HI/LO switch to LO. Digital multimeter will indicate between -1.0 and +1.0 mvdc. If not, perform Troubleshooting Table 4-8.

(5) Set FUEL QUANTITY NO 1 CAL/NOR switch to NOR and adjust variable control fully CCW. Digital multimeter will indicate between -10.0 and +10.0 mvdc. If not, perform Troubleshooting Table 4-8.

(6) Adjust variable control fully CW. Digital multimeter will indicate between +7.630 and +8.030 vdc. If not, perform Troubleshooting Table 4-8.

(7) Set ON-OFF-SIM ONLY switch to OFF.

(8) Disconnect leads from J1 connector NO 1 pins G (HI) and H (LOW) and connect to connector NO 2 pins G (HI) and H (LOW).

(9) Repeat (2) through (7) above, except use FUEL QUANTITY NO 2 controls.

Table 4-8. Troubleshooting Fuel Quantity NO 1 or NO 2 (AVIM)

NOTE

Before performing troubleshooting, remove DC simulator A4 board and reconnect using extender board.

NOTE

Voltage checks are also listed on Figure 4-7.

Trouble	Probable Cause	Remedy
Fuel Quantity No HI-CAL VOLTAGE	CR,C3,U1,R8,T2,R9,C1, NO 1 - (R2) or NO 2 - (R5)	Fist check loops 7(+) and 8(-) for input 15 vac t.5 vac. Check 7T2 if no voltage. Replace defective components Figure 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI-CAL VOLTAGE Indication out of tolerance	Trim Resistors NO 1 - (R3) NO 2 - (R6)	Remedy, use decade resistor box, and replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI CAL VOLTAGE Indication out of tolerance after trim resistors checked or replaced (R3) or (R6)	NO 1 - (R56) or (R9) NO 2 - (R55)	Output of U1 should read between 11.9 and 12.1 vdc at TP1, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
LO-CAL VOLTAGE Indication out of tolerance	NO 1 - (S26) NO 2 - (S28)	Replace malfunctioning components, A4 Board, Figures 4-6, 4-7, FO-2, FO-5.
LO-CAL VOLTAGE Indication out of tolerance in NOR-FULLY CCW	NO 1 - (R12) NO 2 - (R13)	Replace malfunctioning component A4 Board. Figures 4-6, 4-7, FO-2, FO-5.
IN NOR-FULLY CW	NO 1 (R1) (R12) NO 2 (R13) (R55)	Replace malfunctioning components A4 Board, Figures 4-6, 4-7, FO-2, FO-5.

f: Turbine Gas Temp NO 1 and NO 2.

(1) Connect Digital multimeter to connector NO 1 pin L (Hl) and M (LOW), using two leads.

(2) Set TURBINE GAS TEMP NO 1 CAL/NOR switch to CAL, HI/LO switch to HI and variable control fully CW.

(3) Set ON-OFF-SIM ONLY switch to SIM ONLY. Digital multimeter will indicate between +33.69 and +33.89 mvdc. If not, perform Troubleshooting Table 4-9.

(4) Set TURBINE GAS TEMP NO 1 HILO switch to LO. Digital multimeter will indicate between -0.1 and +0.1 mvdc. If not, perform Troubleshooting Table 4-9.

(5) TURBINE GAS TEMP NO 1 CAL/NOR switch to 1 NOR and adjust variable control fully CCW. Digital multimeter will indicate between -0.5 and +0.5 mvdc. If not, perform Troubleshooting Table 4-9.

(6) Adjust variable control fully CW. Digital multimeter will indicate between +41.30 and +51.30 mvdc. If not, perform Troubleshooting Table 4-9.

(7) Set ON-OFF-SIM ONLY switch to OFF.

(8) Disconnect leads from connector NO 1 pins L (HI) and M (LOW) and connect to connector NO 2 pins L (HI) and M (LOW).

(9) Repeat (2) through (7) above, except use TURBINE GAS TEMP NO 2 controls.

Table 4-9. Troubleshooting Turbine Gas Temp NO 1 or NO 2 (AVIM)

NOTE
Before performing troubleshooting, remove DC simulator A4 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
No HI-CAL voltage	NO 1 - (CR2),T3,(U2) NO 2 - (CR3),T3,(U3) associated resistors and capacitors NO 1 - TGT-U1 NO 2 - TGT-U2	First check loops 56(+) and 58(-) NO 1 for input 15 vac ±.5 vac and loops 27(+) and 30(-) NO 2 for 15 vac .5 vac. Check T3 if no voltage. Replace defective components, Figure 4-6, 4-7, FO-2, FO-5, or replace A4 board.
HI-CAL VOLTAGE Indication out of tolerance	NO 1 - (R13) NO 2 - (R20)	Use decade resistor box, and check or replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI-CAL VOLTAGE Indication out of tolerance after trim resistors checked or replaced (R13) or (R20)	NO 1 - (R54) or (R10)(U1) NO 2 - (R53)(R17) or (U3)	If trim resistors do not bring reading in tolerance replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
LO-CAL VOLTAGE Indication out of tolerance	NO 1 - (S30) NO 2 - (S32)	Replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
Indication out of tolerance In NOR-FULLY CCW	NO 1 - (R20) NO 2 - (R21)	Replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
IN-NOR-FULLY CW	NO 1 (R14)(R20) NO 2 (R1114)(R21)	Replace malfunctioning components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.

g. Engine Oil Temp NO 1 and NO 2.

(1) Connect Digital multimeter to connector NO 1 pin g (HI)and h (LOW), using two leads.

(2) Set ENGINE OIL TEMP NO 1 CAL/NOR switch to CAL, HI/LO switch to HI and variable control fully CW.

NOTE

Measure resistance of test leads and subtract from resistance indications

(3) Measure resistance. Digital multimeter will indicate between 150.2 and 151.0 ohms. If not, perform Troubleshooting Table 4-10.

(4) Set ENGINE OIL TEMP NO 1 HI/LO switch to LO. Digital multimeter will indicate between 75.3 and 75.9 ohms. If not, perform Troubleshooting Table 4-10.

(5) Set ENGINE OIL TEMP NO 1 CAL/NOR switch to NOR. Digital multimeter shall indicate between 170 and 190 ohms plus calibrated resistance.

(6) Adjust variable control from fully CW to fully CCW. Digital multimeter will indicate between 73.6 and 77.6 ohms. If not, perform Troubleshooting Table 4-10.

(7) Disconnect leads from connector NO 1 pins g (HI) and h (LOW) and connect to connector NO 2 pins g (HI) and h (LOW).

(8) Repeat (2) through (6) above, except use ENGINE OIL TEMP NO 2 controls.

Table 4-10. Troubleshooting Engine Oil Temp NO 1 or NO 2 (AVIM)

NOTE
Before performing troubleshooting, remove DC simulator A4 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
No HI-CAL resistance	Eng Oil Temp NO 1 (S20) (S21) (R41) Eng Oil Temp NO 2 (S22) (S23) (R38)	Replace defective components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI-CAL Resistance Indication out of tolerance	Trim resistors NO 1 - (R42) NO 2 - (R39)	Use decade resistor box, and check or replace defective components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI-CAL resistance Indication out of tolerance resistors checked or replaced (R42) or (R39)	NO 1 - (R41) (R43) (S20) or (S21) NO 2 - (R38) (R40) (S22) (S23)	Replace defective components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
LO-CAL resistance Indication out of tolerance	NO 1 - (S20) NO 2 - (S22)	Replace defective components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
NOR-FULLY CCW Resistance out of tolerance	NO 1 - (R9) NO 2 - (R10)	Replace defective components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
NOR-FULLY CW Resistance out of tolerance	NO 1 - (R9) NO 2 - (R10)	Replace defective components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.

NOTE
Not all components listed for circuits above are indicated in Table. Refer to applicable circuits and Troubleshoot using information provided in Table.

NOTE
Resistance checks are also listed on figure 4-7.

h. Xmsn Oil Temp.

(1) Connect Digital multimeter to connector NO 2 pin J (111) and K (LOW), using two leads.

(2) Set XMSN OIL TEMP CAL/NOR switch to CAL, HI/LO switch to HI and variable control fully CW.

NOTE
Measure resistance of test leads and subtract from resistance indications.

(3) Measure resistance. Digital multimeter will indicate between 234.04 and 234.96 ohms. If not, perform Troubleshooting Table 4-11.

(4) Set XMSN OIL TEMP HI/LO switch to LO. Digital multimeter will indicate between 86.7 and 87.3 ohms. If not, I perform Troubleshooting Table 4-11.

(5) Set XMSN OIL TEMP CAL/NOR switch to NOR. Digital multimeter will indicate between 250 and 290 ohms. If not, perform Troubleshooting Table 4-11.

(6) Adjust variable control fully CCW. Digital multimeter will indicate between 84 and 90 ohms.

Table 4-11. Troubleshooting Xmsn Oil Temp (AVIM)

NOTE
Before performing troubleshooting, remove DC simulator A4 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
No HI-CAL resistance	S23 or S24	Replace defective components, Figures 4-6, 4-7, FO-2, FO-5 or replace A4 board.
HI-CAL resistance Indication out of tolerance	Trim resistors R37	Use decade resistor box, and check or replace defective components, Figures 4-6, 4-7, FO-1, FO-5 or replace A4 board.
HI-CAL Resistance Indication out of tolerance after trim resistors replaced	S22 or R36	Replace defective components, Figures 4-6, 4-7, FO-1, FO-5 or, replace A4 board.
LO-CAL Resistance Indication out of tolerance after trim resistor checked or replaced	S23,S24 or R34	Replace defective components, Figures 4-6, 4-7, FO-1, FO-5 or replace A4 board.
NOR-FULLY CCW Resistance out of tolerance	NOR Control R11	Replace defective components, Figures 4-6, 4-7, FO-1, FO-5 or replace A4 board.
NOR-FULLY CW Resistance out of tolerance	R11 or R19	Replace defective components, Figures 4-6, 4-7, FO-1, FO-5 or replace A4 board.

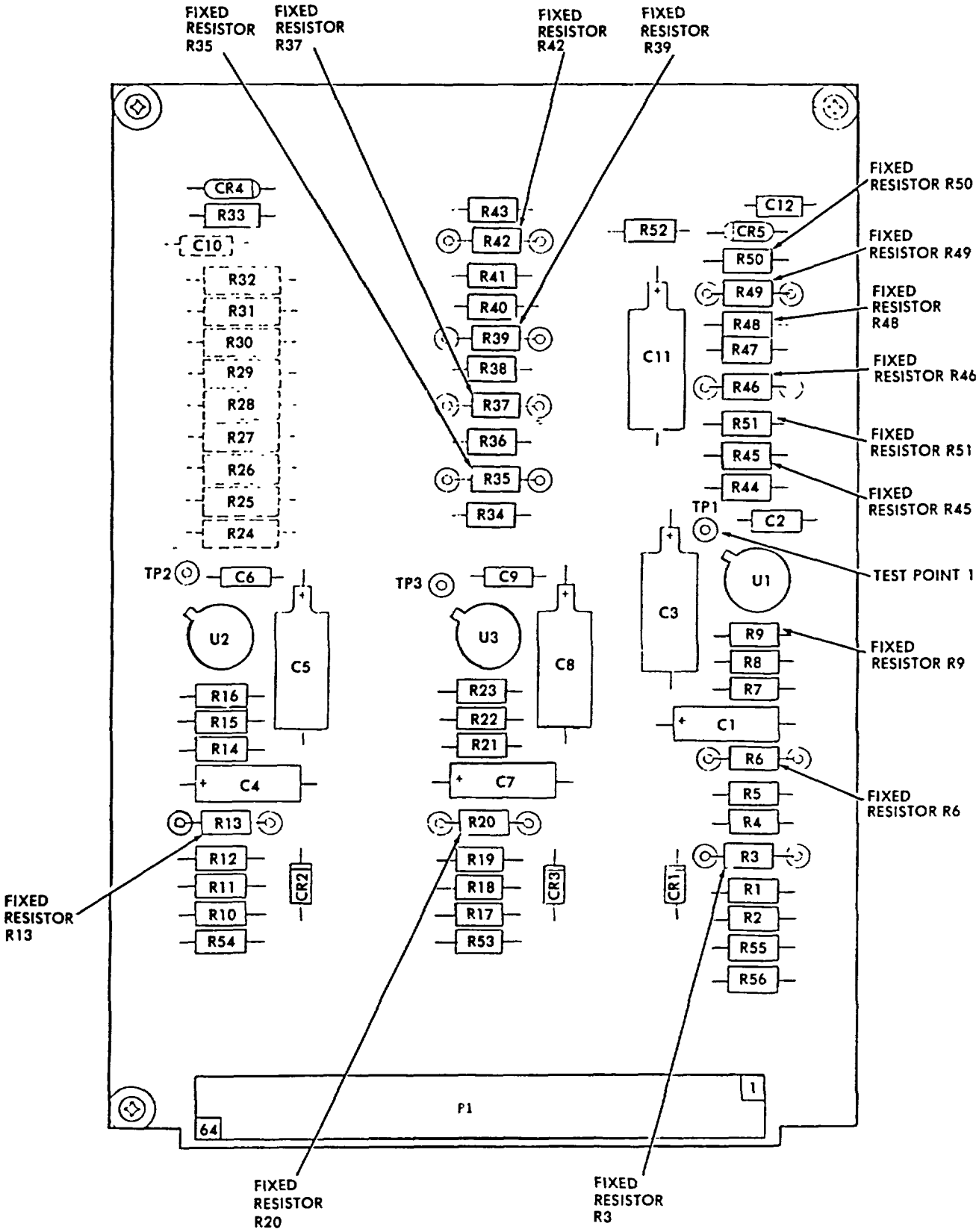

Figure 4-6. DC Simulator A4 Board.

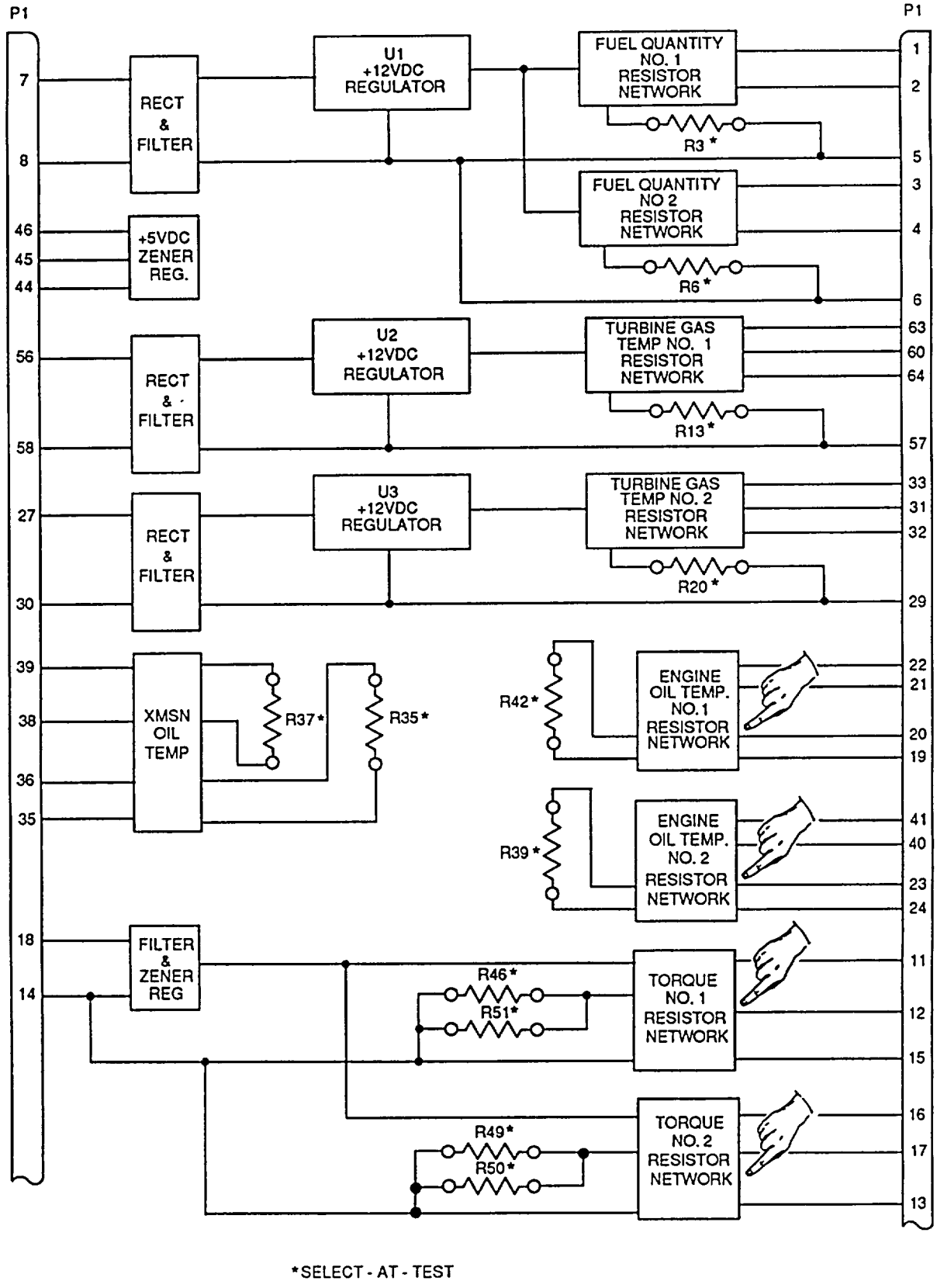

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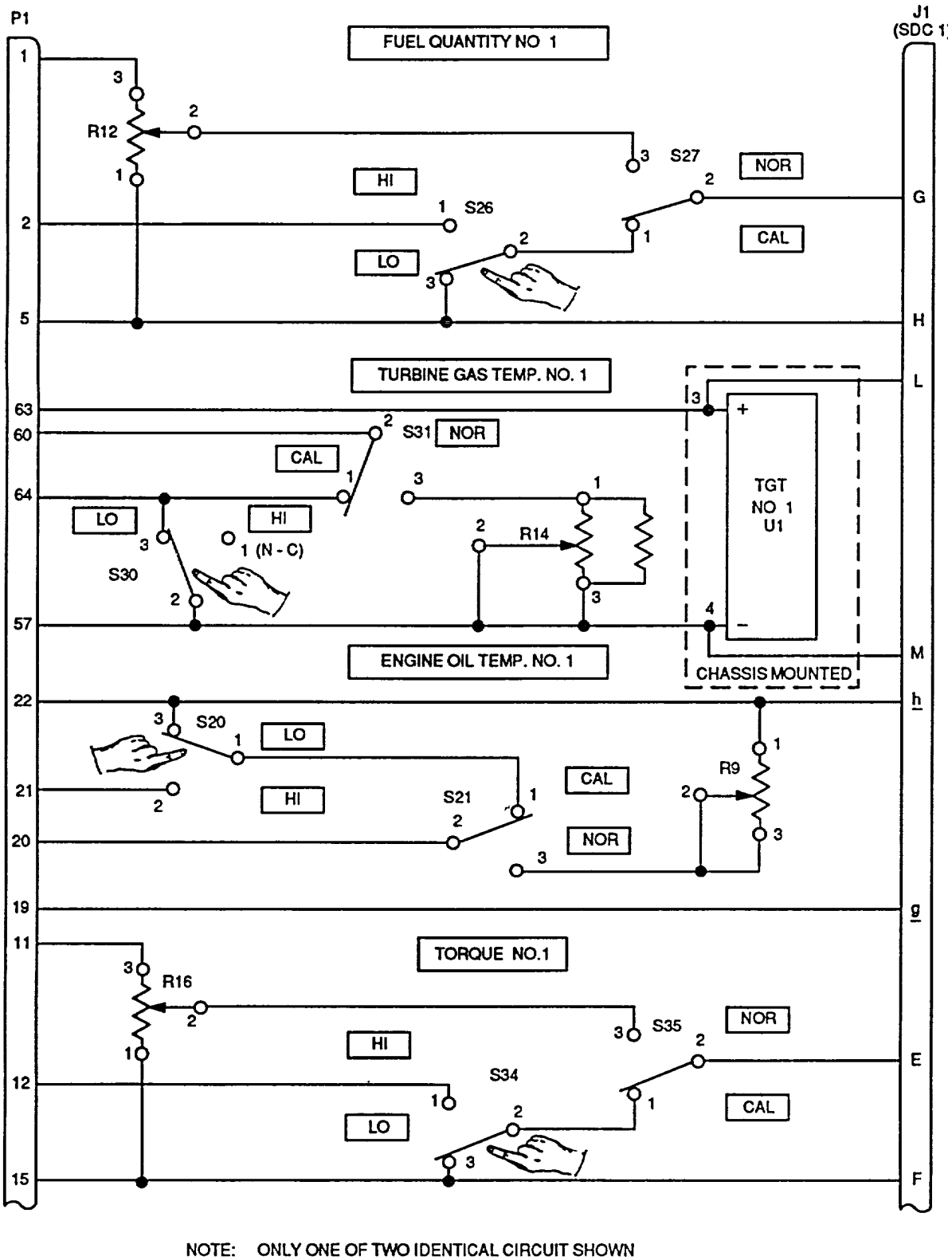
Figure 4-7. DC Input Simulator Assembly A4, Block Diagram (Sheet 1 of 2)



NOTE: ONLY ONE OF TWO IDENTICAL CIRCUIT SHOWN

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Figure 4-7. DC Input Simulator Assembly A4, Block Diagram (Sheet 2 of 2)

i. Rotor Speed

NOTE

Observe amplitude limitations of frequency counter, unattenuated inputs can cause damage.

(1) Connect frequency counter to connector NO 1 pins A (HI) and B (LOW), using two leads and adapter.

(2) Set ROTOR SPEED CAL/NOR switch to CAL, HI/LO switch to HI and variable control fully CW.

(3) Set ON-OFF-SIM ONLY switch to SIM ONLY.

(4) Measure frequency. Frequency counter will indicate between 11,245.1 and 11,247.1 Hz. If not, perform Troubleshooting Table 4-12.

(5) Set ROTOR SPEED HI/LO switch to LO. Frequency counter will indicate 0. (Disregard residual noise count). If not, perform Troubleshooting Table 4-12.

(6) Set ROTOR SPEED CAL/NOR to NOR Frequency counter will indicate between 17,200 and 18,000 Hz.

(7) Adjust ROTOR SPEED variable control from fully CW to full CCW. Frequency counter indication will vary from 0 to 17,200 Hz minimum. If not, perform Troubleshooting Table 4-12.

(8) Set ON-OFF-SIM ONLY switch to OFF.

Table 4-12. Troubleshooting Rotor Speed (Hz) (AVIM)

NOTE

Before performing troubleshooting, remove frequency simulator A3 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
HI-CAL - No Frequency Output	U4 pin 13 (337 Hz t 5 Hz) U8 pin 4, -5 (675 Hz +5)	First check loops 44(-) and 3(+) for 11,246.1 Hz ± 1.0 Hz and check U12 pin 7 (HI), U8 pins 4 HI, 5 HL U12 pin 7 HI. Replace defective components, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
LO-CAL indicates Frequency (Hz) greater than 0 Hz	HI/LO Switch (S9)	Replace defective components, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-FULLY CCW Frequency indication greater than 0 Hz	NOR Control (R4)(R5)(R8) or Q1)	Replace defective components, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-FULLY CW NO Frequency Output	NOR Control (R4)Q1, Q6, Q11 or U1A (U1A, C6 or R6 amplitude)	Replace defective components, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-Frequency indication out of tolerance	Trim Resistor R1	Use decade resistor box and check or replace defective components, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.

j. Engine % RPM NO 1 and NO 2.

(1) Connect frequency counter to connector NO 1 pins C (HI) and D (LOW), using two leads and adapter.

(2) Set ENGINE % RPM NO 1 CAL/NOR switch to CAL. H/LO switch to HI and variable control fully CW.

(3) Set ON-OFF-SIM ONLY switch to SIM ONLY. Frequency counter will indicate between 1,332.5 and 1,334.5 Hz. If not perform Troubleshooting Table 4-13.

(4) Set ENGINE % RPM NO 1 HI/LO switch to LO. Frequency counter will indicate 0. If not, perform Troubleshooting Table 4-13.

(5) Set ENGINE % RPM NO 1 CAL/NOR to NOR. Frequency counter will indicate between 1,830 and 2,030 Hz.

(6) Adjust ENGINE % RPM NO 1 variable control from fully CW to fully CCW. Frequency counter will indicate 0 Hz. If not, perform Troubleshooting Table 4-13.

(7) Set ON-OFF-SIM ONLY switch to OFF.

(8) Disconnect leads from connector NO 1 pins C (HI) and D (LOW) and connect to connector NO 2 pins Y (HI) and Z (LOW).

(9) Repeat (2) through (7) above, except use ENGINE % RPM NO 2 controls.

Table 4-13. Troubleshooting Engine % RPM NO 1 or NO 2 (AVIM)

NOTE

Before performing troubleshooting, remove frequency simulator A3 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
HI-CAL % RPM indicates No Frequency Output	NO 1 - U5 pin 7 (61,342 Hz ± 27 Hz) U13 pin 7 (61,134 Hz ± 27 Hz)	First check loops 44 (-) and 3 (+) NO 1 for 1333.5 Hz ± 1.0 Hz and check U15 pin 7 (HI), U14 pin 7 (HI), U13 pin 7 (HI), U5 pin 7 (HI). Figures 4-9, FO-3, FO-5, or replace A3 board.
LO-CAL Frequency greater than 0 Hz	NO 1 - (S11) NO 2- (S13)	Replace defective components A3 board, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-FULLY CCW Frequency greater than 0 Hz	NO 1 - (R5)(R14)(R17) NO 2 - (R6)(R30)(R27)	Replace defective components A3 board, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-FULLY CW NO Frequency Output	NO 1 - (R5)(Q2),(Q7)(Q12)(U18) NO 2 - (R5)(Q3)(Q8)(Q13)(U2A)	Replace defective components A3 board, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-Frequency out of tolerance Frequency greater than 0 Hz	Trim Resistor NO 1 - (R4) NO 2 - (R23)	Replace defective components A3 board, Figures 4-8, 4-9, FO- 3, FO-5, or replace A3 board.
Frequency out of tolerance after trim resistors checked or replaced	NO 1 - (R3)(C4)(Q7)(R18) NO 2 - (R24)(C13)(Q8)(R31)	Replace defective components A3 board, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
Low Amplitude effecting Frequency	NO 1 - (U18)(C7)(R15) NO 2 - (U2A)(C18)(R28)	Replace defective components A3 board, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.

k. Gas Gen Speed NO 1 and NO 2.

(1) Connect frequency counter to connector NO 1 pins c (HI) and d (LOW), using two leads and adapter.

(2) Set GAS GEN SPEED NO 1 CAL/NOR switch to CAL, HI/LO switch to HI and variable control fully CW.

(3) Set ON-OFF-SIM ONLY switch to SIM ONLY. Frequency counter will indicate between 2134.3 and 2136.3 Hz. If not, perform Troubleshooting Table 4-14.

(4) Set GAS GEN SPEED NO 1 HI/LO switch to LO. Frequency counter will indicate 0. If not, perform Troubleshooting Table 4-14.

(5) Set GAS GEN SPEED NO 1 CAL/NOR switch to NOR. Frequency counter will indicate between 2,375 and 2,480 Hz.

(6) Adjust GAS GEN SPEED NO 1 variable control fully CCW. Frequency counter will indicate 0 Hz. If not, perform Troubleshooting Table 4-14.

(7) Set ON-OFF-SIM ONLY switch to OFF.

(8) Disconnect leads from connector NO 1 pins c (HI) and d (LOW) and connect to connector NO 2 pins e (HI) and d (LOW).

(9) Repeat (2) through (7) above, except use GAS GEN SPEED NO 2 controls.

Table 4-14. Troubleshooting GAS GEN SPEED NO 1 or NO 2 (AVIM)

NOTE
Before performing troubleshooting, remove frequency simulator A3 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
HI-CAL No Frequency Output of out of tolerance	NO 1 - U4 U10 Pin 7 (34,165 Hz ± 10 Hz) U11 pin 7 (4,271 Hz ± 10 Hz) U8C pin 3 (34,165 Hz ± 10 Hz)	First check loops 44 (-) and 17 (+)) for 2135.3 ± 1.0 Hz NO 1 and NO 2 check, U8C pin 3 (HI) U10 pin 7(HI), U11 pin 7 (HI). NO 1 check U4 pin 13 (HI). Replace defective components, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
HI-CAL amplitude affecting Frequency	NO 1 - (U4B)(C32)(R57)(R56) NO 2 - (U4B)(C31)(R57)(R56)	Replace defective components A3 board, Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
LO/CAL indicates Frequency greater than 0 Hz	NO 1 - (S15) NO 2 - (S17)	Replace defective components Figures 4-8, 4-9, FO-3, FO- 5, or replace A3 board.
NOR-FULLY CCW indicates Frequency greater than 0 Hz	NO 1 - (R7)(R36)(R30) NO 2 - (S17)	Replace defective components Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-FULLY CW greater than 0 Hz	NO 1-(R7)(Q4)(Q9)(Q14)(U2B) NO 2-(R8)(Q5)(Q10)(Q15)(U3A)	Replace defective components Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
NOR-Frequency out of tolerance	Trim Resistor NO 1 - (R26) NO 2 - (R46)	Replace defective components Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
Low Amplitude affective Frequency	NO 1-(U2B)(C19)(R37) NO 2-(U3A)(C28)(R48)	Replace defective components Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.
Frequency out of tolerance after trim resistor replaced	NO 1-(R25)(C16)(Q9)(R40) NO 2-(R45)(C25)(Q10)(R51)	Replace defective components Figures 4-8, 4-9, FO-3, FO-5, or replace A3 board.

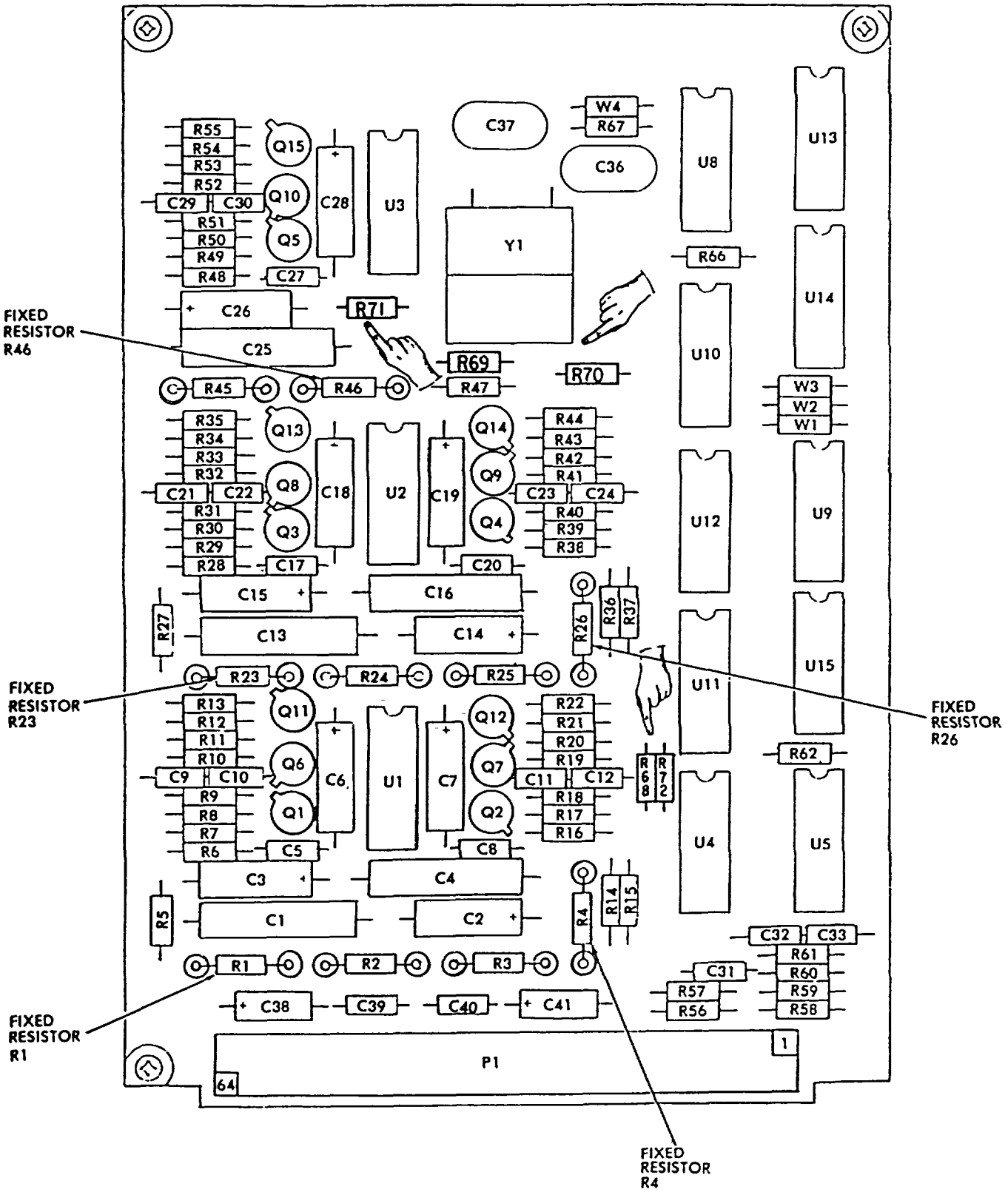

Figure 4-8. Frequency Simulator A3 Board.

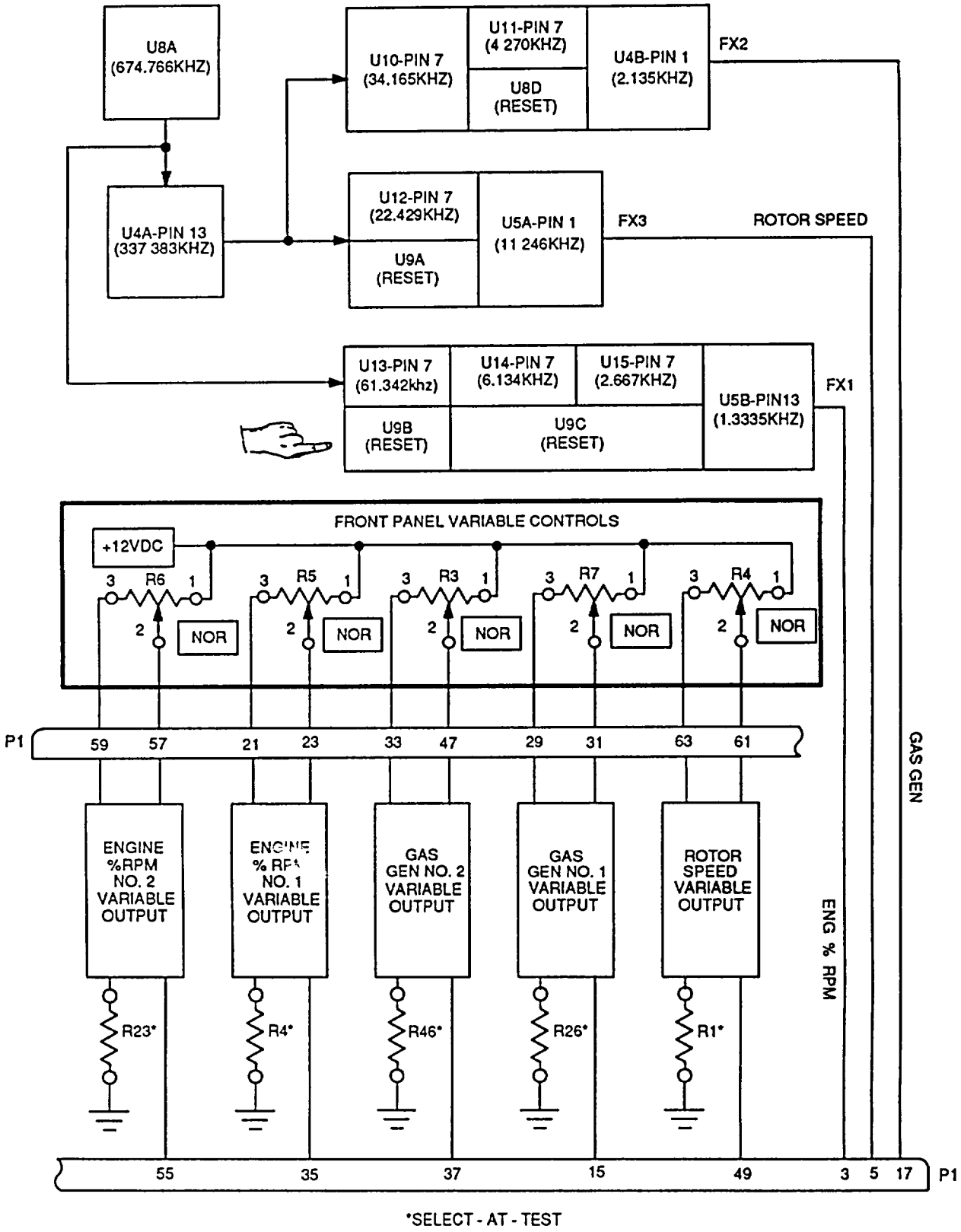

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Figure 4-9. Frequency Input Simulator Assembly A3, Block Diagram (Sheet 1 of 2).

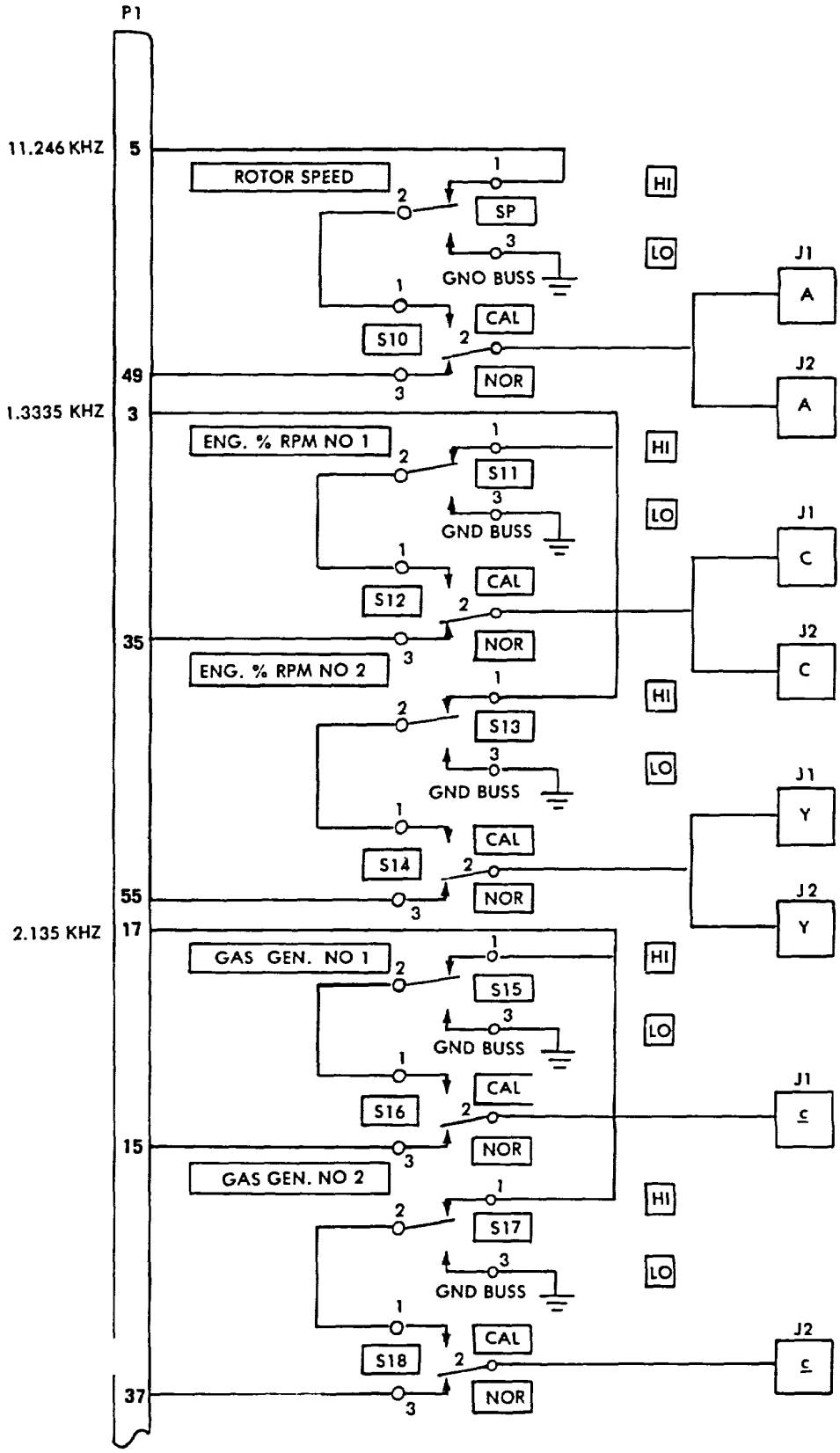

Figure 4-9. Frequency Input Simulator Assembly A3, Block Diagram (Sheet 2 of 2).

l Engine Oil Press NO 1 and NO 2.

(1) Connect equipment as shown in Figure 4-10, connection A for connector NO 1. Do not disconnect equipment connected in Figure 4-1.

(2) Set ENGINE OIL PRESS NO 1 CAL/NOR switch to CAL and HI/LO switch to LO.

(3) Set precision oscillator (A6) for a 6-V, 400 Hz output

(4) Set ON-OFF-SIM ONLY switch to SIM ONLY. If digital voltmeter does not indicate between 3.447 and 3.735 vac, perform (a) through (d) below. If still defective perform Troubleshooting Table 4-15.

(a) Set auto transformer, dc power supply (A2), and precision oscillator power to OFF.

(b) Remove oil pressure board A2 (Figure 4-11) and reinstall, using extender board.

(c) Set auto transformer, dc power supply, and precision oscillator power to ON.

(d) Adjust R5 (Figure 4-11) for a 3.591 vac indication on digital voltmeter (oil No. 1).'

(5) ENGINE OIL PRESS NO 1 HI/LO switch to HI. Digital multimeter will indicate between 2.770 and 3.058 vac. If not, perform Troubleshooting Table 4-15.

(6) Set ENGINE OIL PRESS NO 1 CAL/NOR switch to NOR and adjust ENGINE OIL PRESS NO 1 variable control from fully CCW to fully CW. If digital multimeter does not indicate from more than 3.447 to less than 2.770 vac, perform adjustments (4)(a) through (c) above and 6(a) and (b) below.

(a) Turn ENGINE OIL PRESS NO 1 variable control fully CCW.

(b) Adjust R1 (Figure 4-11) for a 3.591 vac indication on digital voltmeter.

(7) Set ON-OFF-SIM ONLY switch to OFF and precision oscillator switch to OFF>

(8) Connect equipment as shown in Figure 4-10, connection A, for connector NO 2.

(9) Repeat (2) through (4) above except use ENGINE OIL PRESS NO 2 controls. If not within tolerances in (4) above, perform 4(a) through (c) and (a) below. If not in tolerance in (6) above, perform (4)(a) through (c) above and 9(b) and (c) below.

(a) Adjust R22 (figure 4-11) for a 3.591 vac indication on digital multimeter.

(b) Turn Engine Oil Pressure NO 2 variable control fully CCW.

(c) Adjust R18 (fig. 4-11) for a 3.591 vac indication on digital multimeter.

Table 4-15. Troubleshooting Engine Oil Press NO 1 or NO 2 (AVIM)

NOTE
Before performing troubleshooting, remove oil pressure simulator A2 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
LO/NOR Fully CW indication out of tolerance	NO 1 - (R5) NO 2 - (R22)	First check loops 61 (+) and 14 (-) for 15 vdc and then No 2 loop 40 (+) for 15 vdc. Check loop 3 for -15 Vdc. Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/NOR Fully CW	NO 1 - R3, R4, R5, U1, L3, S6, S7 (Front Panel) NO 2 - (R2)(R21)(R22)(U2)(L2)S4/S5 (Front Panel)	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/CAL Fully CCW indication out of tolerance	NO 1 - (R1) NO 2 - (R18)	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/NOR Fully CCW indication out of tolerance after adjustment (R1) or (R18)	NO 1 - (R3)(U1) NO 2 - (R2)(U2)	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/CAL indication out of tolerance	NO 1 - (R9) NO 2 - (R26)	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/CAL indication out of tolerance after adjustment (R9) or (R26)	ENG OIL PRESS NO 1 HI/LOW switch R8, R2, C5, C6, C7, U4 ENG OIL PRESS NO 2 HI/LOW switch R25, R19, C1, C12, U4	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
HI/CAL indication out of tolerance	NO 1 - (R7) NO 2 - (R27)	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
HI/CAL indication out of tolerance after adjustment (R7) or (R24)	NO 1 - R6, R3, U1 NO 2 - R23, R20, U2	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5 or replace A2 board

NOTE
Check input voltage to (A2) board from (A1) board before Troubleshooting (A2) board. Voltage checks also listed in table 4-17, using figure 4-10 connections.

m Xmsn Oil Press.

(1) Connect equipment as shown in Figure 4-10 connection B, for connector NO 2. Do not disconnect equipment connected in Figure 4-2.

(2) Set XMSN OIL PRESS CAL/NOR switch to CAL and HI/LOW switch to LO.

(3) Set precision oscillator (A6) for a 6-V, 400 Hz output.

(4) Set ON-OFF-SIM ONLY switch to SIM ONLY. If digital multimeter (A3) does not indicate between 3.447 and 3.735 vac, perform (a) through (d) below. If still defective perform Troubleshooting Table 4-16.

(a) Set auto transformer (A1), dc power supply (A2), and precision oscillator (A6) power to OFF.

(b) Remove oil pressure board A2 (Figure 4-11) and reinstall, using extender board (B4).

(c) Set auto transformer, dc power supply, and precision oscillator power to ON.

(d) Adjust R39 (Figure 4-11) for 3.591 vac indication on digital multimeter (R).

(5) Set XMSN OIL PRESS HI/LO switch to HI. Digital multimeter will indicate between 2.696 and 2.984 vac. If not, perform Troubleshooting Table 4-16.

(6) Set XMSN CAL/NOR switch to NOR and adjust XMSN variable control from fully CCW to fully CW. If digital multimeter does not indicate from more than 3.447 to less than 2.770 vac, perform 4(a) through (c) above and 6(a) and (b) below.

(a) Turn XMSN OIL PRESS variable control fully clockwise.

(b) Adjust R35 (figure 4-11) for 3.591 vac indicator on digital multimeter.

Table 4-16. Troubleshooting XMSN OIL PRESSURE (AVIM)

NOTE

Before performing troubleshooting, remove oil pressure simulator A2 board and reconnect using extender board.

Trouble	Probable Cause	Remedy
LO/NOR Fully CW indication out of tolerance	R39	First check loops 5 (+) and 14 (-) for 15 vdc ± 5. Then loop 3 for -15 vdc. If voltages are present, proceed below. Replace defective components, Figure 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/NOR Fully CW indication out of tolerance after adjustment (R39)	R13, R39, R38, U3, L1, or S2/S3 (Front Panel)	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/NOR Fully CCW indication out of tolerance	R35	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/NOR Fully CCW indication out of tolerance after adjustment (R35)	R35, R1	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
LO/CAL indication out of tolerance	R43 NO 2 - (R26)	Replace defective components, Figures 4-11, 4-12, F0-4, F0-5, or replace A2 board.
LO/CAL indication out of tolerance after adjustment (R43)	HI/LOW switch R42 R36, C15, C16, C17, U4, U3	Replace defective components, or Figures 4-11, 4-12, FO-4, FO-5, replace A2 board.
LO/CAL indication out of tolerance after adjustment (R43)	HI/LOW switch R42, R36 C15, C16, C17, U4, U3	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
HI/CAL indication out of tolerance	R41	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.
HI/CAL indication out of tolerance after adjustment (R41)	R40 or R37 U3	Replace defective components, Figures 4-11, 4-12, FO-4, FO-5, or replace A2 board.

NOTE

Check input voltage to (A2) board from (A1) board before troubleshooting (A2) board. Voltage checks also listed in table 4-17 connections.

Table 4-17. Troubleshooting Oil and XMSN Pressure Voltage Checks (A2) Board (AVIM).

Extender Board and Oil Pressure (A2) board Pin/Connections	Switch Positions	Voltmeter indications (vac) Approx. readings expected
Oil Press NO 1 - 59 NO 2 - 43 XMSN -17	CAL/LO CW and CCW	1.178 vac
	CAL/HI CW and CCW	0.5 vac
	NOR/HI CCW	1.19 vac
	NOR/LO CCW	1.19 vac
Oil Press NO 1 - 53 NO 2 - 37 XMSN -11	CAL/LO CW and CCW	1.288 vac
	CAL/HI CW and CCW	1.288 vac
	NOR/HI CW and CCW	1.288 vac
	NOR/LOW CW and CCW	1.288 vac
Oil Press NO 1 - 54, 60 NO 2 - 46,34 XMSN -20, 8		Ground Loop
Oil Press NO 1 - 55 NO 2 - 39 XMSN -13	All Positions	6 vac
Oil Press NO 1 - 51 NO 2 - 35 XMSN -9	All Positions	55 vac
Oil Press NO 1 - 49 NO 2 - 33 XMSN -7	CAL/LO CW and CCW	1.17 vac
	CAL/HI CW and CCW	1.46 vac
	NOR/HI CW and CCW	1.46 vac
	NOR/LO CW and CCW	1.46 vac
Oil Press NO 1 - 61 NO 2 - 40 XMSN -19		15vdc
Oil Press NO 1 - 57 NO 2 - 41 XMSN -15	CAL/LO CW and CCW	14.3 vdc
	CAL/LO CW and CCW	0 vdc
	NOR/HI CW and CCW	14.3 vdc
	NOR/LO CW and CCW	14.3 vdc
Oil Press NO 1 - 63 NO 2 - 45 XMSN -21	CAL/LO CAL/HI	3.44 to 3.73 vac 2.77 to 3.05 vac

NOTE - See figure 4-12 and FO-4. Voltage check using figure 4-10 connections

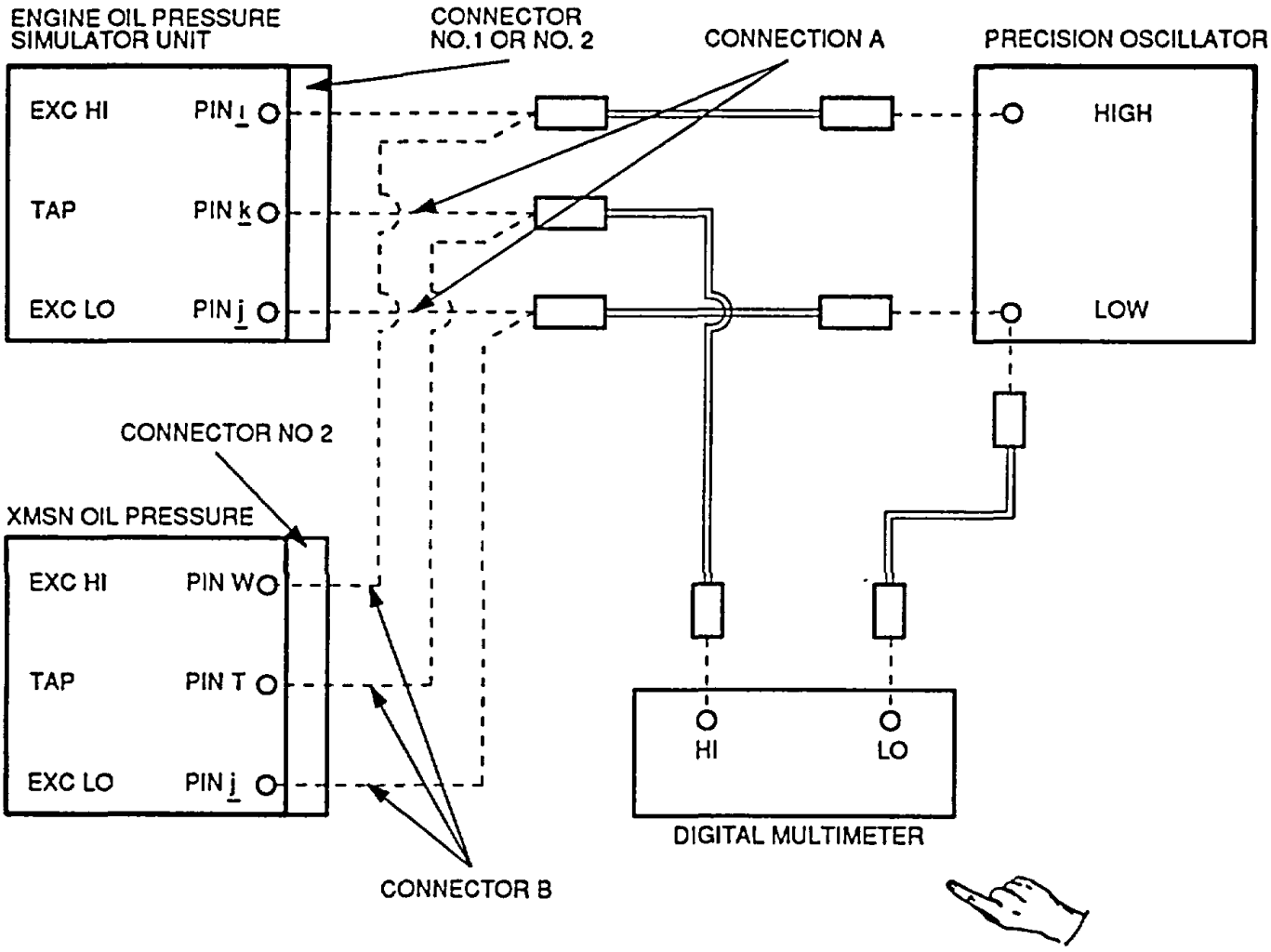

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Figure 4-10. Engine and XMSN Oil Pressure - Equipment Setup

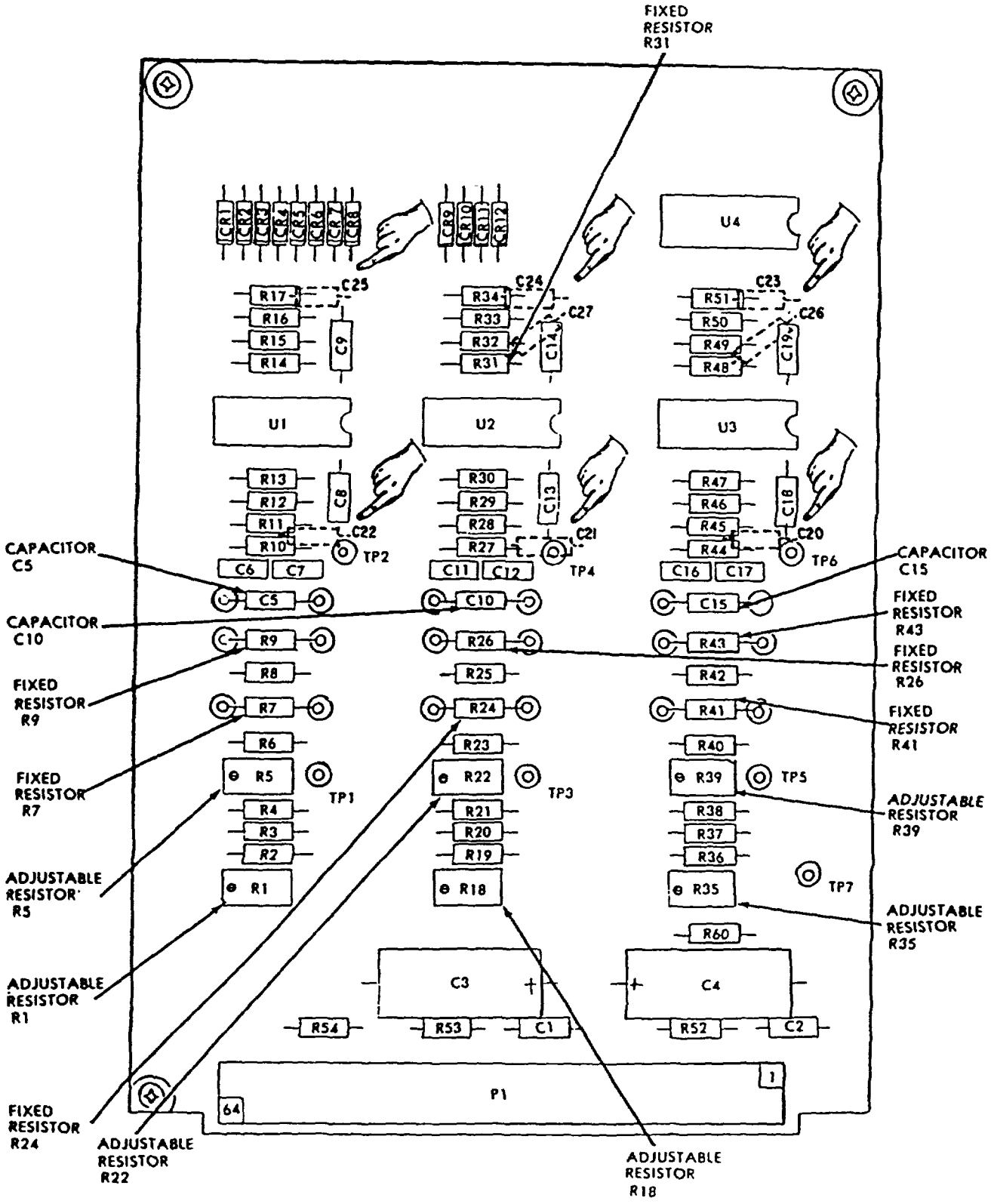

Figure 4-11. Oil Pressure Simulator A2 Board.

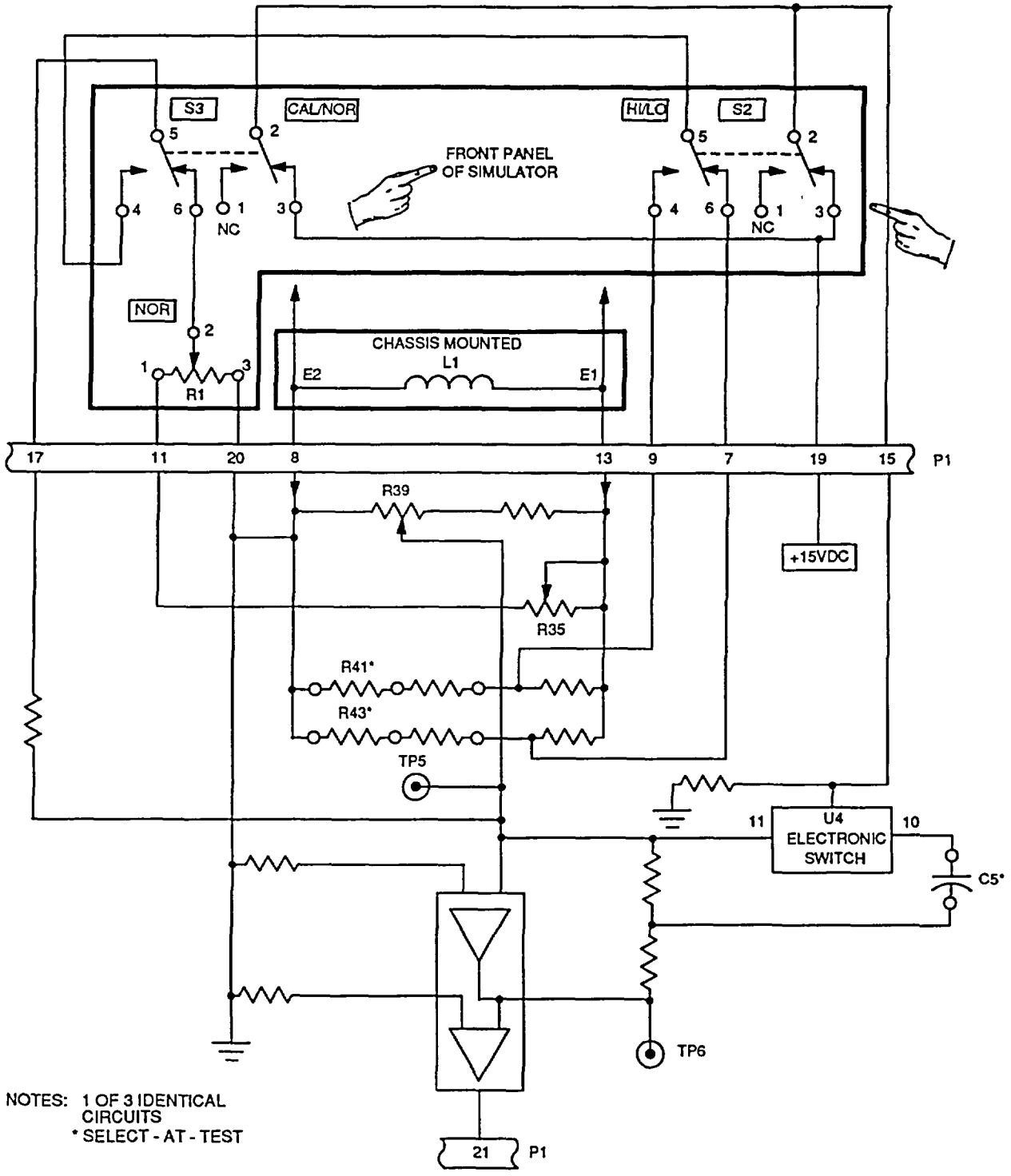

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Figure 4-12. Oil Pressure Simulator Assembly A2, Block Diagram

Table 4-18. Simulator Wiring List

FROM	TO	RELATED FUNCTION
S21-3	R9-3	ENG, OIL TEMP NO. 1
S1-3	S1-1	28 VDC
S1-8	S1-11	115 VAC
S2-5	S3-4	MAIN XMSN PRESS
S20-2	S21-1	ENG, OIL TEMP NO. 1
S22-2	S23-1	ENG, OIL TEMP NO. 2
S24-2	S25-1	MAIN ENG, OIL TEMP
S31-3	R14-1	TGT, NO. 1
S33-3	R15-1	TGT NO. 2
S35-3	R16-2	TORQUE NO. 1
S35-1	S34-2	TORQUE NO. 1
S37-3	R17-2	TORQUE NO. 2
S37-1	S36-2	TORQUE NO. 2
R9-2	R9-3	ENG, OIL TEMP NO. 1
R10-2	R10-3	ENG. OIL TEMP NO. 2
R11-2	R11-3	MAIN XMSN TEMP
S19-2	DS3-2	P/S OVERLOAD NO. 1
S19-2	DS4-2	P/S OVERLOAD NO. 2
S19-2	BUSS GRD.	P/S OVERLOAD
S39-6	TP2	INT. LIGHT LO
S39-3	TP1	INT. LIGHT HI
S394	T44	INT. LIGHT
S39-1	T4-5	INT. LIGHT
S3-6	R1-2	MAIN XMSN PRESS
S7-6	R3-2	ENG. OIL PRESS NO. 1
S5-6	R2-2	ENG. OIL PRESS NO. 2
S1-11	F1-1	115 VAC HI
S13	F2-1	28 VDC HI
S27-3	R12-2	FUEL QUANTITY NO. 1
S29-3	R13-2	FUEL QUANTITY NO. 2
S39-2	F3-1	INT. LIGHT
S9-2	S10-1	ROTOR SPD
S11-2	S12-1	% RPM NO. 1
S13-2	S14-1	% RPM NO. 2
S15-2	S16-1	GAS GEN. NO. 1
S17-2	S18-1	GAS GEN. NO. 2
R11-3	S25-3	MAIN XMSN OIL TEMP
S4-5	S5-4	ENG. OIL PRESS NO. 2
S6-5	S74	ENG. OIL PRESS NO. 1
S28-2	S29-1	FUEL QUANTITY NO. 2
S26-2	S27-1	FUEL QUANTITY NO. 1
S23-3	R10-3	ENG. OIL TEMP NO. 2
S19-1	DS3-1	LAMP SUPPLY OVERLOAD TEST
S19-3	DS4-4	LAMP SUPPLY OVERLOAD TEST
 (2 DIODES JAN1N4148)		

Table 4-18. Simulator Wiring List (continued)

		26 VAC T1-5	26 VAC LO T1-6	8 VAC HI T1-10	8 VAC LO T1-11	8 VAC HI T1-12	8 VAC LO T1-13	24 VAC HI T1-7	COMMON (24 VAC LO) T1-8	24 VC LO T1-9	GND	GND	GND	KEYING PINS	-12 VDC	+12 VDC NO. 2	+12 VDC NO. 1 (R4-1, R5-1, R6-1 R7-1, R8-1	3VDC FL. NO. 1 RETURN U2-6 YELLOW	+5 VDC FL. NO. 2 7-2-5 BROWN	5 VDC FL. NO. 1 RETURN U1-6 YELLOW	+5 VDC FL. NO. 1 U1-5 BROWN	+37 VDC SPARE	-37 VDC SPARE	-15 VDC	+15 VDC	+28 VDC
POWER SUPPLY CARD	XA1	7	11	53	49	29	43	4	8	2	11	14	44	10	13	46	18	27	23	63	47	1	19	3	5	
OIL PRESSURE SIMULATOR CARD	XA2											14	44	26										3	5	12
FREQ. SIMULATOR CARD	XA3											14	44	42	46		18									
D.C. SIMULATOR CARD	XA4										61	14	44	62		18 46										59
SPARE CARD	XA5											14	44		7	8	9	19	11	12	13	15	16	17	18	
M.B. INTERCONNECT	XA6	1	2	3	4	5	6	7	8	9	10	11	12													13
M.B. INTERCONNECT	XA7																	60								

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Table 4-18. Simulator Wiring List (continued)

		TRANSMISSION OIL PRESSURE S2-2 AND S3-2	S2-3 AND S3-3	S2-6	S2-4	TRANSMISSION OIL PRESSURE EXC. INPUT IN L1-E1	EMISSION O.P. GND EXC. I.O. L1-F2 (GRD)	S3-5	R1-3	R1-1	ENG. OIL PRESSURE NO. 2 S4-2 AND S5-2	S4-3 AND S5-3	S4-6	S4-4	ENG. O.P. EXC. IN NO. 2 HI 1.2-E3	ENG. O.P. NO. 2 EXC. LO 1.2-E-4 (GND)	S5-3	R2-3	R2-1	S6-2 AND S7-2	S6-3 AND S7-3	SG-6	SG-1	ENG. OIL PRESSURE EXC. IN NO. 1 HI 1.3-E5	ENG. OIL PRESSURE NO. 1 EXC. LO 1.3-E6 (GND)	S7-5
POWER SUPPLY CARD	XA1						11									14									44	
OIL PRESSURE SIMULATOR CARD	XA2	15	19	7	13	8	17	20	11	41	40	33	35	39	34	34	43	46	37	57	61	49	51	55	60	59
FREQ. SIMULATOR CARD	XA3																									
D.C. SIMULATOR CARD	XA4																									
SPARE CARD	XA5																									
M.B. INTERCONNECT	XA6	14	15	16	17	18	19	20	21	22																
M.B. INTERCONNECT	XA7										1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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Table 4-18. Simulator Wiring List (continued)

		R3-3	R3-1	SPARE	+28 VDC ON F2-2	SPARE	SPARE	DS4-1	DS3-1	LAMP TEST XA7-20	S3-6 LAMP TEST SWITCH	DS5-2	DS6-2	DS7-2	DS8-2	DS9-2	DS10-2	DS11-2	SPARE	TRANSMISSION OIL PRESSURE SIGNAL OUTPUT	ENGINE OIL PRESSURE NO. 2 SIGNAL OUTPUT	ENGINE OIL PRESSURE NO. 1 SIGNAL OUTPUT	ROTOR SPEED VARIATION ADJUST R4-2	R4-3	ENGINE R.P.M. NO. 1 VARIATION ADJUST R5-2	R5-3
POWER SUPPLY CARD	XA1																									
OIL PRESSURE SIMULATOR CARD	XA2	54	53		16		28	30	32	31	47	64	58	56	52	50	48	38	36	21	45	63				
FREQ. SIMULATOR CARD	XA3																						61	63	23	21
D.C. SIMULATOR CARD	XA4																									
SPARE CARD	XA5																									
M.B. INTERCONNECT	XA6																						23	24	25	26
M.B. INTERCONNECT	XA7	17	18	19	20	21	22	23	24	25	26	27	29	30	31	32	33	34	35	36	37					

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Table 4-18. Simulator Wiring List (continued)

		ENGINE R.P.M. NO. 2 VARIATION ADJUST R6-2	R6-3	GAS GENERATOR SPEED NO. 1 VAR. ADJUST 47-2	R7-3	GAS GENERATOR SPEED NO. 2 VAR. ADJUST R8-2	R8-3	ROTOR SPEED OUTPUT S16-3	ENGINE R.P.M. NO. 1 OUTPUT S12-3	ENGINE R.P.M. NO. 2 OUTPUT S14-3	GAS GENERATOR SPEED NO. 1 OUTPUT S16-3	GAS GENERATOR SPEED NO. 2 OUTPUT S18-3	FIXED FREQUENCY F X2 2135	FIXED FREQUENCY OUTPUT F X3 11246 HZ S9-1	FIXED FREQUENCY OUTPUT F X1 - 1333, 5 HZ S11-1 AND S13-1	15 VAC HI 2-3	15 VAC LO T2-4	15 VAC HI T3-3	15 VAC LO T3-4	15 VAC HI T3-5	15 VAC LO T3-6	15 VDC OUTPUT (TEST)	SPARE	SPARE	ENGINE OIL TEMPERATURE NO. 1 R9-1 AND S20-3	ENGINE OIL TEMPERATURE NO. 1 S29-1
POWER SUPPLY CARD	XA1																									
OIL PRESSURE SIMULATOR CARD	XA2																									
FREQ. SIMULATOR CARD	XA3	57	59	31	29	47	33	49	35	55	15	37	17	5	3											
D.C. SIMULATOR CARD	XA4															7	8	56	58	27	30	45	48	47	22	21
SPARE CARD	XA5																									
M.B. INTERCONNECT	XA6	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46					
M.B. INTERCONNECT	XA7																					38	39	40	41	42

Table 4-18. Simulator Wiring List (continued)

		ENGINE OIL TEMPERA S21-2	ENGINE OIL TEMPERATURE NO. 1 HI	ENGINE OIL TEMPERATURE NO. 2 LO R10-1 AND S22-3	ENGINE OIL TEMPERATURE NO. 2 S22-1	ENGINE OIL TEMPERATURE NO. 2 S23-2	ENGINE OIL TEMPERATURE NO. 2 HI	MAIN MISSION TEMPERATURE LO R11-1 AND S24-3	MAIN MISSION TEMPERATURE S24-1	MAIN MISSION TEMPERATURE S25-2	MAIN MISSION TEMPERATURE HI	LO O/P WARNING NO. 1 LAMP 5-1	LO O/P WARNING NO. 2 LAMP 6-1	HI O/P WARNING NO. 1 LAMP 7-1	HI O/P WARNING NO. 2 LAMP 8-1	GAS GENERATOR WARNING NO. 1 LAMP 9-1	GAS GENERATOR WARNING NO. 2 LAMP 10-1	LO MOTOR SPEED WARNING LAMP 11-1	FUEL QUANTITY NO. 1 R12-3	FUEL QUANTITY NO. 1 R26-1	F QUANTITY NO. 1 R12-1, S26-3 AND OUTPUT	F. QUANTITY NO. 2 R13-3	F. QUANTITY NO. 2 S28-1	F. QUANTITY NO. 2 R13-1, S28-3	T.G.T. NO. 1 U1-3 RED	T.G.T. NO. 1 U1-4 (BLUE) S30-2, R14-3, R14-2
POWER SUPPLY CARD	XA1																									
OIL PRESSURE SIMULATOR CARD	XA2																									
FREQ. SIMULATOR CARD	XA3																									
D.C. SIMULATOR CARD	XA4	20	19	41	40	23	24	39	38	36	35	49	50	51	52	53	54	55	1	2	5	3	4	6	63	57
SPARE CARD	XA5																									
M.B. INTERCONNECT	XA6																		47	48	49	59	51	52	53	54
M.B. INTERCONNECT	XA7	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59								

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Table 4-18. Simulator Wiring List (continued)

		T.G.T. NO. 1 S31-2	T.G.T. NO. 1 S30-3 AND S31-1	T.G.T. NO. 2 U2-3 (RED)	T.G.T. NO. 2 U24 (RED R15-3, S32-2 AND R15-2	T.G.T. NO. 2 S33-3	T.G.T. NO. 2 S32-3 AND S33-1	TORQUE NO. 1 R16-3	TORQUE NO. 1 S34-1	TORQUE NO. 1 R16-1 AND S34-3	TORQUE NO. 2 R17-3	TORQUE NO. 2 R36-1	TORQUE NO. 2 R17-1 AND S36-3													
POWER SUPPLY CARD	XA1																									
OIL PRESSURE SIMULATOR CARD	XA2																									
FREQ. SIMULATOR CARD	XA3																									
D.C. SIMULATOR CARD	XA4	60	64	33	29	31	32	11	12	15	16	17	13													
SPARE CARD	XA5							1	2	3	4	5	6													
M.B. INTERCONNECT	XA6	55	56	57	58	59	60																			
M.B. INTERCONNECT	XA7																									

4-14. Unit Tester Circuits.

a. Lamp Test Circuit.

Set ON-OFF-SIM ONLY to OFF.

(1) Connect test equipment as shown in Figure 4-1, with unit tester connected to simulator, using cable P/N 217- 419742-000.

(2) Set ON-OFF-SIM ONLY to ON.

(3) Press simulator LAMP TEST Switch.

(4) Lamps on unit tester will light as follows. If not, replace lights as applicable or see Troubleshooting Table 4-19.

(a) LOW ROTOR SPEED.
(b) LOW ENG 1 OUT, LOW ENG 2 OUT.
(c) LOW OIL 1 PRESS, LOW 2 PRESS.
(d) HIGH OIL 1 TEMP. HIGH OIL 2 TEMP.
(e) SENSING A, B.
(f) ROTOR OVER SPEED 127%, 137%, 142%.
(g) INT. LIGHTS
(h) TEST FREQ. ANA-DIG
(i) MONITORS-SHIFT REG. MUX ANALOG, DIGITAL O/P, MUX DIGITAL.
(j) PROCESSOR SELECTION A-B ANALOG, A-B DIGITAL.
(k) FAIL WARNING.

(5) Release simulator lamp test switch, lamps will go off.

(6) Set ON-OFF-SIM ONLY to OFF.

NOTE

Perform paragraph 4-14a before Troubleshooting (A2) Board.

b. Lamp Power Supply Board(A2).

(1) Set ON-OFF-SIM ONLY to OFF.

(2) Connect test equipment as shown in Figure 4-1 with unit tester connected.

(3) Connect digital multimeter leads between J6 pin 16(+) and SDC common (panel front).

(4) Set ON-OFF-SIM ONLY to ON and P/S CONT to NORMAL and P/S CONTROL to fully CCW position.

(5) Digital multimeter will indicate between +4.5 and +5.5 vdc. If not, see Troubleshooting Table 4-20.

(6) Set ON-OFF-SIM ONLY to OFF.

(7) Disconnect digital multimeter lead from J6 pin 16 and 1 reconnect to J3 pin 34.

(8) Set ON-OFF-SIM ONLY to ON.

Table 4-19. Troubleshooting Lamp Test Circuit (AVIM)

Trouble	Probable Cause	Remedy
Indicator Lamps, para 4-14a(4)(a) thru (g) do not light	28 vdc missing from Interconnecting Cable; 5 vdc missing from Lamp Test Board.	Replace defective components on Lamp Test board, see fig. FO-6.
Indicator Lamps, para 4-14a4 (h thru k) do not light	115 vac missing from Interconnecting Cable, Voltage Regulator Board (A4) 5 vdc missing. Lamp Test Board, Logic Power Supply Board (A3).	Replace defective components on Lamp Test Board, FO-6 (sheet 11 of 16); Logic Power Supply A3 (figs 4-13 and FO-7); and Regulator Board Assembly (A4) (figs. 4-14 and FO-8).

(9) Digital multimeter will indicate between +275 and +28.5 vdc. If not, see Troubleshooting Table 4-20.

(10) Set ON-OFF-SIM ONLY to OFF.

(11) Disconnect digital multimeter lead from J3 pin 34 and connect to J3 pin 1.

(12) Set LOGIC P/S switch to position 2.

(13) Set ON-OFF-SIM ONLY to ON.

(14) Digital multimeter will indicate between 13.0 to 17.0 vdc. If not, see Troubleshooting Table 4-20.

(15) Repeat Technique (10) thru (13) above using connection J3 pin 3. Digital multimeter will indicate between -13.0 to -17.0 vdc. If not, see Troubleshooting Table 4-20.

NOTE

Remove power when connecting and disconnecting test leads. Use Figure 4-1 with unit tester connected

Table 4-20. Troubleshooting Lamp Power Supply Board (A2) (AVIM)

Trouble	Probable Cause	Remedy
5 vdc output low or missing	Interconnect cable voltage missing. Logic power Supply (A2). Lamp Power Supply (A3). Oscillator Board (A6).	Replace defect components. Replace boards, if required. See figs 4-13, 4-15, 4-16, FO-6, FO-7, FO-9 and FO-10.
28 vdc output low or missing	Interconnect cable. Lamp test Board. Lamp Power Supply (A2).	Replace defective components or A2 board as required. See figs. 4-15, FO-6 and FO-9.
+15.5 V input low or missing	Logic Power Supply (A3).	Replace defective components or (A3) board. See figs. 4-13 and FO-7.
-15.5 V input low or missing	Logic Power Supply (A3).	Replace defective components or (A3) board. See figs. 4-13 and FO-7.
Lamp Supply Control Voltage (Input) low or missing pin Z or E3 Term (on Lamp Power Supply)	OSC Board (A6).	Replace defective components or replace (A6) board. See figs. 4-16 and FO-10.
28 vdc (Input) low or missing	Interconnect cable voltage missing.	Check simulator section - Interconnect circuit.

c. Logic P/S, SDC FAIL, P/S CONT PILOTS, and COPILOTS switch circuits.

(1) Connect digital multimeter leads to J2 pin I (+) and SDC COMM on unit tester.

(2) Set ON-OFF-SIM ONLY to ON.

(3) Set Logic P/S switch to 1. Digital multimeter will indicate between +13 and +17 vdc. If not, see Troubleshooting Table 4-21.

(4) Set ON-OFF-SIM ONLY to OFF.

(5) Disconnect test leads from J2 pin 1 and reconnect to 19 pin 19.

(6) Set ON-OFF-SIM ONLY to ON.

(7)Set P/S CONTROL to FULLY CW position. Digital multimeter will indicate between +4.5 and +5.5 vdc. If not, see Troubleshooting Table 4-21.

(8) Set ON-OFF-SIM ONLY to OFF.

(9) Repeat techniques of (2) thru (4) above at unit tester switch setting and pin connections listed in Table 4-22. Digital multimeter will indicate within limits specified. If not, see Troubleshooting Table 4-21.

NOTE

In Table 4-22, INTER CAL SELECT switch must be set to 15 for pin connection J2 pin 41 and to 19 for pin connection J2 pin 43.

(10) Disconnect digital multimeter from equipment setup.

(11) Connect jumper between J3 pin 26 and J3 pin 27.

(12) Connect digital multimeter positive lead to J3 pin 93 and negative lead to J3 pin 26.

(13) Set ON-OFF-SIM ONLY to ON. Digital multimeter will indicate between 7.5 and 11.5 vac. If not, see Troubleshooting Table 4-21.

(14) Set ON-OFF-SIM ONLY switch to OFF.

NOTE

Perform Logic P/S checks in Paragraph c before Troubleshooting Logic Power Supply Board (A3).

Table 4-21. Troubleshooting Logic P/S. SDC Fail, P/S Cont., Pilots, and Copilots Switch Circuits

NOTE
Install extender board before troubleshooting

Trouble	Probable Cause	Remedy
Placing Logic P/S switch in 1 or 2 Positions does not change voltage readings	Logic Power Supply (A3), Logic Power Supply Switch (S9).	Replace defective components or circuit board (A3), see Figures 4-13, FO-6, FO-7.
SDC Fail switch indicates open circuit	Wiring or SDC Fail Switch (S10).	Replace defective components or wiring, see Fig. FO-6.
Placing P/S Cont. in Remote or normal positions does not change voltage readings	OSC Control Board (A6), Internal Power Supply Switch (S8).	Replace defective components or circuit board (A6). See Figures 4-16, FO-6, FO-10.
Rotating Pilots Control to FULLY CW position does not vary voltage voltage	Pot (R3), Logic Power Supply (A3), Regulator Board (A4).	Replace defective components or boards. Figures 4-13, 4-14, FO-6, FO-7, FO-8.

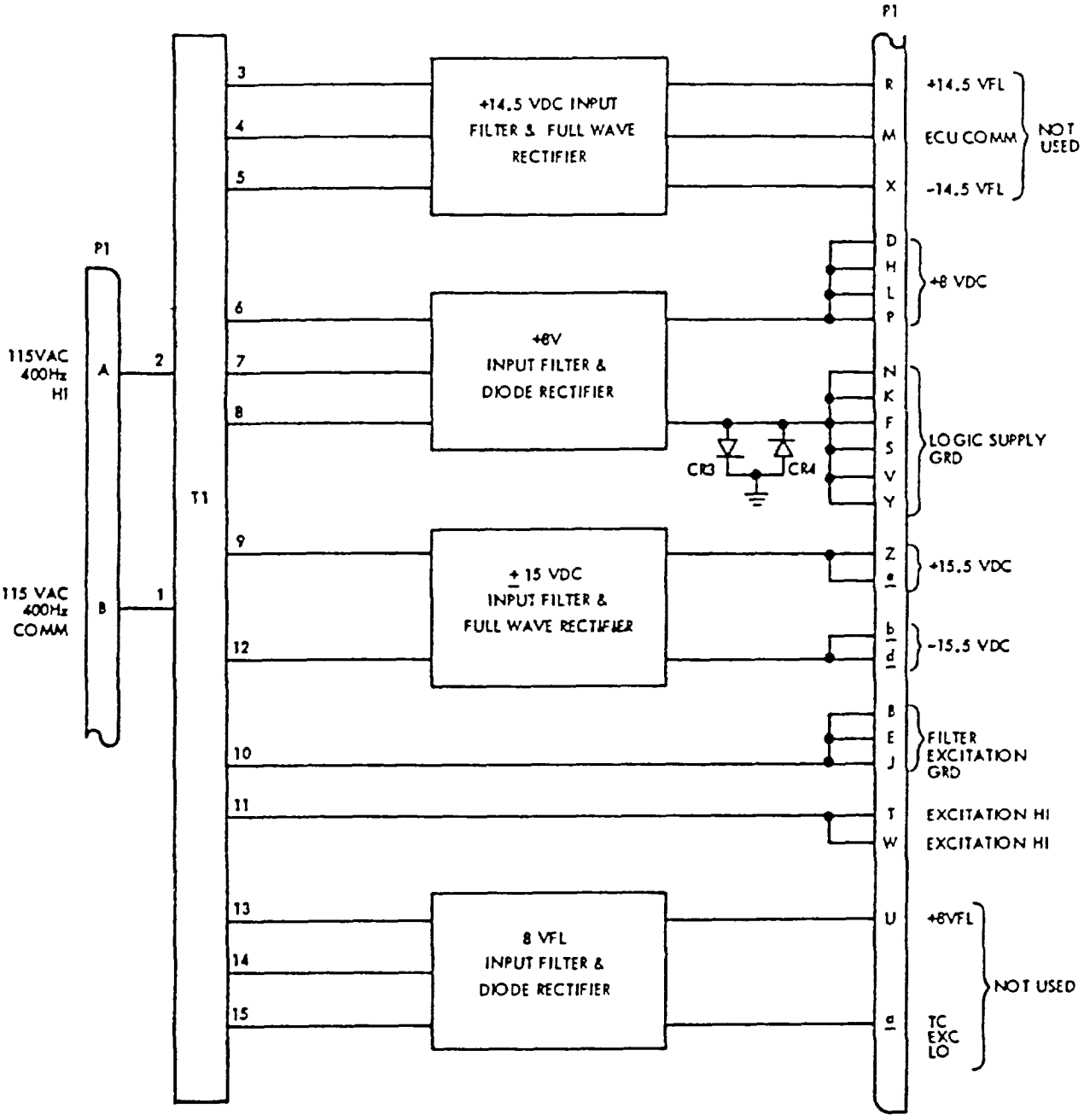

Figure 4-13. Logic Power Supply Assembly A3.

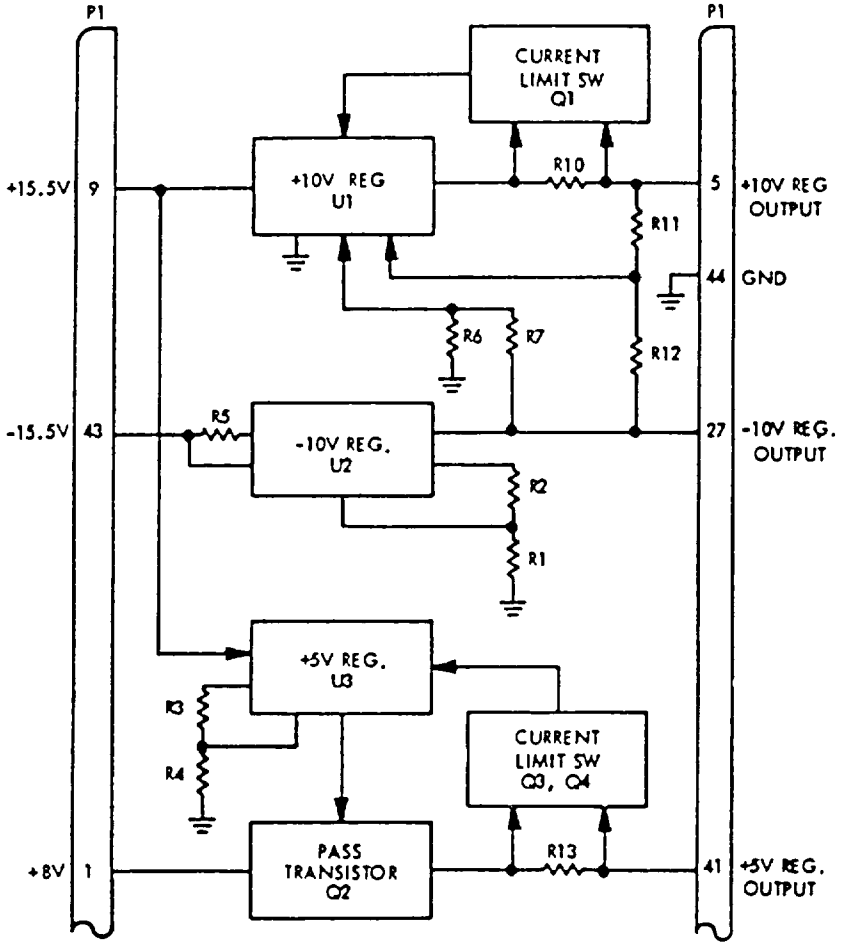

Figure 4-14. Regulator Board Assembly A4, Block Diagram.

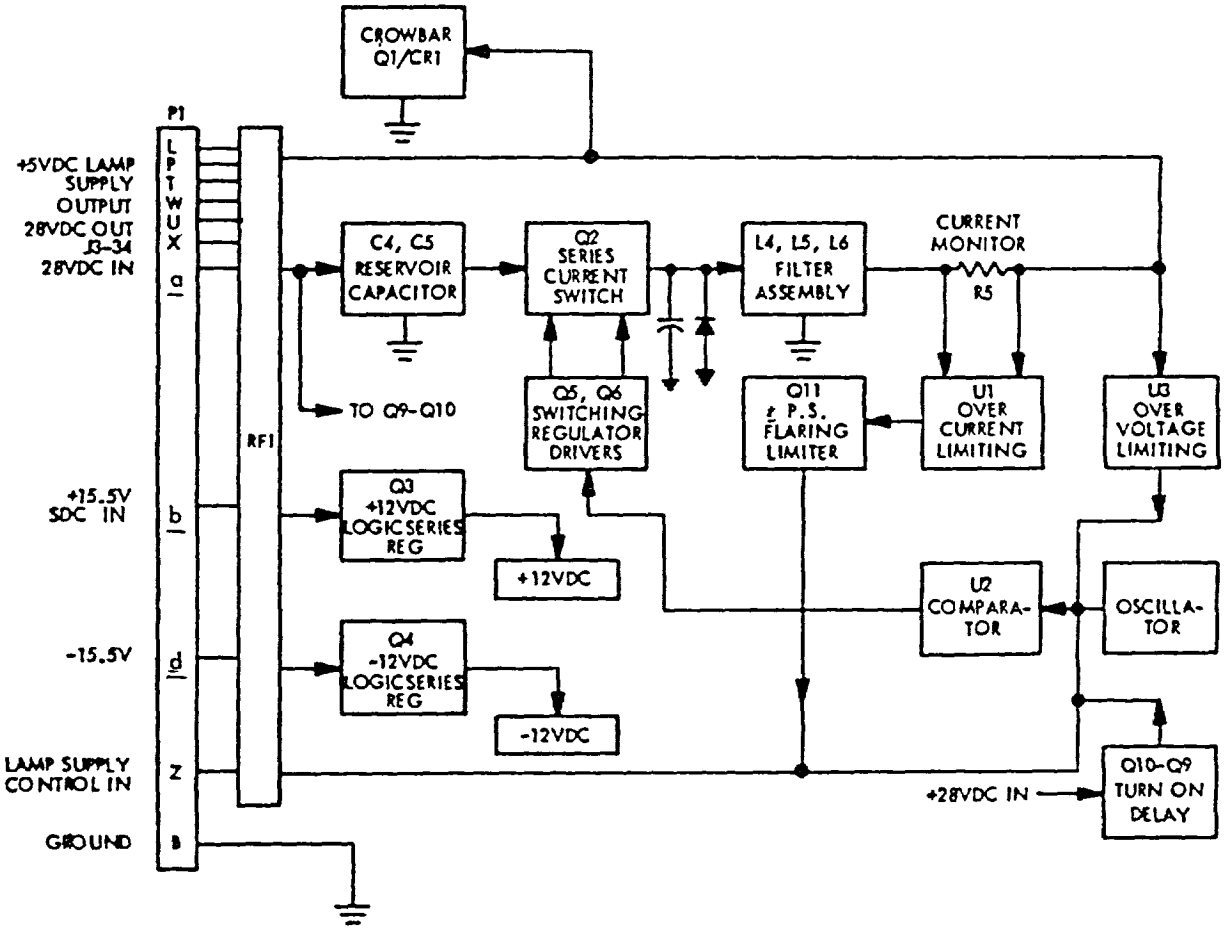

Figure 4-15. Lamp Power Supply Assembly A2.

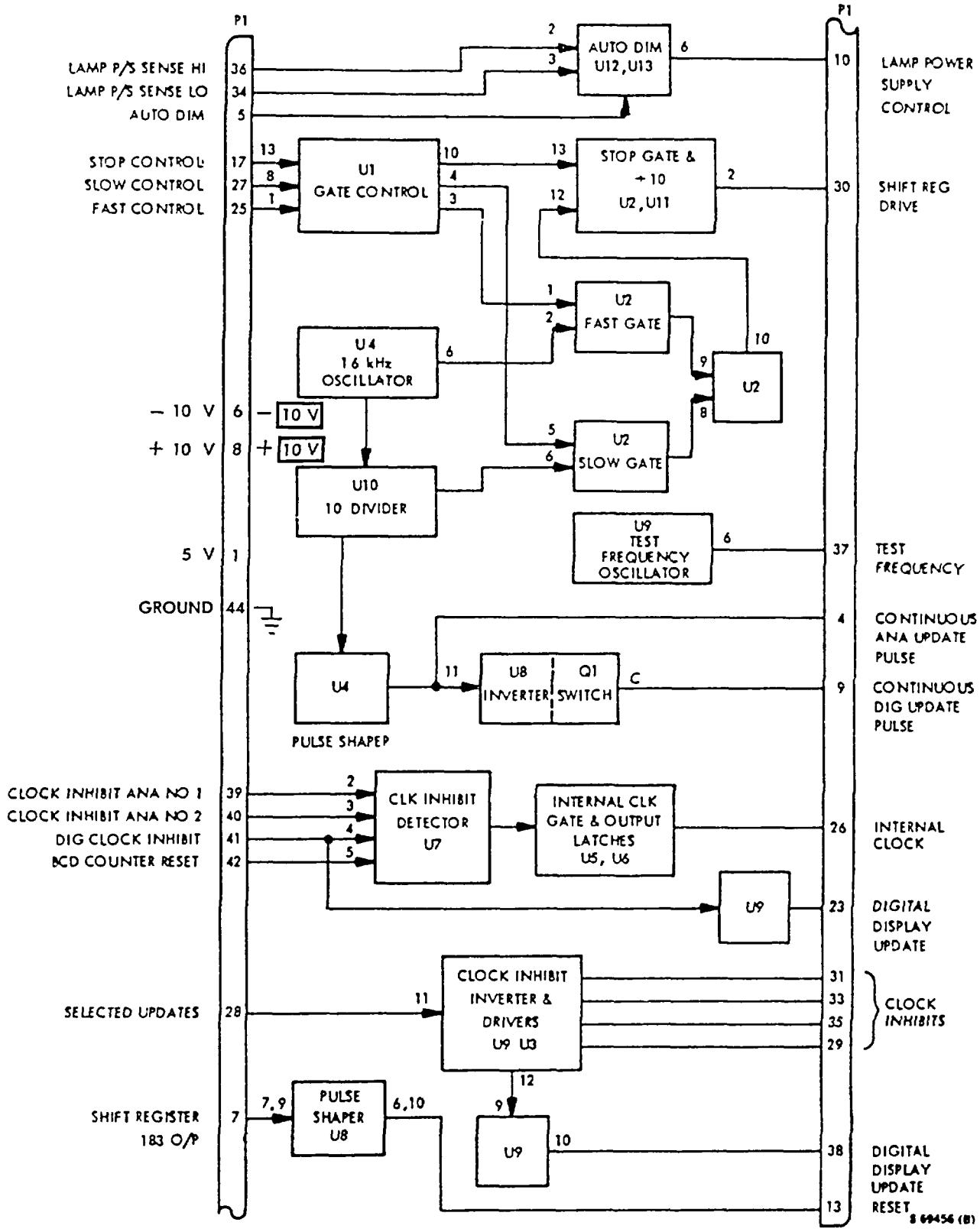

Figure 4-16. Oscillator Control Board Assembly A6.

Table 4-22. Central Display and Signal Data

Unit Tester		Digital Voltmeter Indications (V dc)	
Logic P/S Switch Settings	Pin Connections	Min	Max
1	J2 Pin 3	-13.0	-17.0
1	J2 Pin 5	6.5	9.5
1	J2 Pin 6	6.5	9.5
1	J2 Pin 35 -	4.5	5.5
1	J2 Pin 41	4.5	5.5
1	J2 Pin 43	4.5	5.5
2	J3 Pin 1	13.0	17.0
2	J3 Pin 3	-13.0	-17.0
2	J3 Pin 5	6.5	9.5
2	J3 Pin 6	6.5	9.5
2	J3 Pin 35	3.5	6.5
1	J6 Pin 26	10.0	11.0
.....	J6 Pin 27 -	-10.0	-11.0
.....	J6 Pin 16	4.0	6.0
.....	J6 Pin 29 -	4.0	6.0
.....	J8 Pin 13-	4.0	6.0
.....	J8 Pin 16	6 0	4.0
1	J9 Pin 2	13 0	17.5
1	J9 Pin 4	-13.5	-17.5
1	J9 Pin 7	6.5	9.5
PILOTS control fully cw	J1 Pin 4	4.5	5.5
COPILOTS control Fully cw	J4 Pin 4	4.5	5.5
COPILOTS control fully cw	AD/CP Test Point	4.5	5.5
P/S Cont. To Remote and variable P/S Control fully CW (connect jumper between J3-26 and J3-27)	IL/S Test Point	4.5	5.5

d. Logic Power Supply Board (A).

(1) Set ON-OFF-SIM ONLY to OFF.

(2) Connect test equipment as shown in Figure 4-1 with unit tester connected.

(3) Connect digital multimeter leads between J3 pin 1 (+) and COM. Observe that LOGIC POWER SUPPLY switch is in DOWN position.

(4) Set ON-OFF-SIM ONLY to ON.

(5) Digital multimeter will indicate between +13 and +17 1 vdc and set LOGIC POWER SUPPLY switch to UP position. Digital multimeter will indicate between -0.5 and 405 vdc. If not, see Troubleshooting Table 4-23.

(6) Set ON-OFF-SIM ONLY to OFF and LOGIC POWER SUPPLY switch to DOWN position.

(7) Disconnect digital multimeter lead from J3 pin 1 and reconnect to J3 pin 3.

(8) Digital multimeter will indicate between -13 and -17 vdc. If not, see Troubleshooting Table 4-23.

(9) Set ON-OFF-SIM ONLY to OFF.

(10) Disconnect digital multimeter lead from J3 pin 3 and reconnect to J3 pin 5.

(11) Set ON-OFF-SIM ONLY to ON.

(12) Digital multimeter will indicate between +6.5 and +9.5 vdc and set LOGIC POWER SUPPLY switch to UP position. Digital multimeter will indicate between -0.5 and +0.5 vdc. If not, see Troubleshooting Table 4-23.

(13) Set ON-OFF-SIM ONLY to OFF.

(14) Disconnect digital multimeter from unit tester.

(15) Set LOGIC POWER SUPPLY switch to DOWN position.

(16) Set ON-OFF-SIM ONLY to ON.

(17) Connect digital multimeter leads between J3 pin 93 (-) 3 and J3 pin 26 (+). Digital multimeter will indicate approximately 2.4 vac. If not see Troubleshooting Table 4-23.

(18) Set ON-OFF-SIM ONLY to OFF.

Table 4-23. Troubleshooting Logic Power supply (A3) (AVIM).

NOTE

Before performing troubleshooting, remove Logic Power Supply (A3) and reconnect using extender board.

Trouble	Probable Cause	Remedy
15.5 vdc output low or missing	Interconnect cable. Logic power supply (A3). Faulty simulator output.	Replace defective components, or re-replace board (A3). See figs. 4-13, FO-6, FO-7.
-15.5 vdc output low or missing	Interconnect cable. Faulty simulator output Logic power supply (A3).	Replace defective components, or replace board (A3). See figs. 4-13, FO-6, FO-7.
8 vdc output low or missing	Interconnect cable. Logic power supply (A3). Faulty simulator Output	Replace defective components, or replace board (A3). See figs. 4-13, FO-6, FO-7.
Excitation voltage output (2.4 vac)	Interconnect cable. Logic power supply (A3). Faulty simulator output.	Replace defective components, or replace board (A3). See figs. 4-13, FO-6, FO-7.

NOTE

Perform logic P/S checks in Paragraph c before Troubleshooting Regulator Board (A4).

e. Regulator Board A4.

(1) Connect test equipment as shown in Figure 4-1 with unit tester connected and Set ON-OFF-SIM ONLY to OFF.

(2) Connect digital multimeter leads between J6 pin 26 and COM.

(3) Set ON-OFF-SIM ONLY to ON.

(4) Digital multimeter will indicate between +9.5 and +10.5 vdc. If not, see Troubleshooting Table 4-24.

(5) Set ON-OFF-SIM ONLY to OFF.

(6) Disconnect digital multimeter lead from J6 pin 26 and reconnect J6 pin 27.

(7) Set ON-OFF-SIM ONLY to ON.

(8) Digital multimeter will indicate between -9.5 and -10.5 vdc. If not, see Troubleshooting Table 4-24.

(9) Set ON-OFF-SIM ONLY to OFF.

(10) Disconnect digital multimeter lead from J6 pin 27 and reconnect to J9 pin 37. Observe that CLOCK INHIBIT is set to ANA position.

(11) Set ON-OFF-SIM ONLY to ON. Digital multimeter will indicate between +4.5 and +5.5 vdc. If not, see Troubleshooting Table 4-24.

(12) Set CLOCK INHIBIT to DIG position. Digital multimeter will indicate between -0.5 and +0.5 vdc.

(13) Set ON-OFF-SIM ONLY to OFF.

NOTE

CDU and SDC when tested provide voltage inputs to unit tester for light circuits listed below. Troubleshoot as applicable.

Table 4-24. Troubleshooting Regulator Board (A4)

NOTE

Before performing troubleshooting, remove regulator board (A4) and reconnect using extender board.

Trouble	Probable Cause	Remedy
+10 vdc output low or missing	Logic Power Supply Board (A3). Regulator board (A4).	Replace defective components or boards. See figs. 4-13, 4-14, FO-7, FO-8.
-10 vdc output low or missing	Logic Power Supply Board (A3). Regulator board (A4).	Replace defective components or boards. See figs. 4-13, 4-14, FO-7, FO-8.
5 vdc output low or missing	Logic Power Supply Board (A3). Regulator board (A4).	Replace defective components or boards. See figs. 4-13, 4-14, FO-7, FO-8.
+15.5 vdc output low or missing	Logic Power Supply Board (A3).	Replace defective components or boards. See figs. 4-13, FO-7.
± 15.5 vdc output low or missing	Logic Power Supply Board (A3).	Replace defective components or boards. See figs. 4-13, FO-7.
8 vdc output low or missing	Logic Power Supply Board (A3).	Replace defective components or boards. See figs. 4-13, FO-7.

f. Rotor Overspeed 127%, 137%, 142%, sensing A or B, Rotor SPEED, ENG 1 OUT, ENG 2 OUT, OIL 1 PRESS, OIL 2 PRESS, OIL 1 TEMP and OIL 2 TEMP, INT LIGHT, Lamp circuits.

(1) Press LAMP TEST switch on simulator to light Lamps before troubleshooting circuits.

(2) Refer to schematic FO-6 to troubleshoot applicable circuits.

(3) Troubleshooting Table 4-25 identifies probable causes of trouble.

Table 4-25. Troubleshooting Rotor Overspeed, 127%o 137%, 142%, Sensing, Rotor Speed, ENG 1 OUT, ENG 2 OUT, OIL 1 PRESS, OIL 2 PRESS, OIL 1 TEMP, OIL 2 TEMP, INT LIGHT, LAMP CIRCUITS.

NOTE

Voltage input is from CDU or SDC when testing.

Trouble	Probable Cause	Remedy
Rotor 127% overspeed lamp will not light	Redundant Warn O/P switch (S7), Lamp Test Board	Replace defective components, FO-6
Rotor 137% overspeed lamp will not light	Redundant Warn O/P switch (S7), Lamp Test Board	Replace defective components, FO-6
Rotor 142% overspeed lamp will not light	Redundant Warn O/P switch (S7) Lamp Test Board	Replace defective components, FO-6
Sensing A or B lamps will not light	Lamp Test Board, J3 or J2 con- nector	Replace defective components, FO-6
Rotor speed lamp will not light	S7, Interconnecting cable, J3 or J2 connectors, Lamp Test Board	Replace defective components, FO-6
ENG 1 OUT or ENG 2 OUT lamps will not light	Lamp Test Board, J3 or J2 con- nector	Replace defective components, FO-6
OIL 1 PRESS or OIL 2 PRESS lamps will not light	Lamp Test Board, J2 or J3 con- nector	Replace defective components. FO-6
High OIL Temp 1 or 2 lamps will not light	Lamp Test Board, J2 or J3 con- nector	Replace defective components, FO-6
INT light lamps will not light	Lamp Test Board, J8 or J9 con- nector	Replace defective components, FO-6

g. Digital Set, BCD (thumb wheel switch) circuit.

(1) Set ON-OFF-SIM ONLY to OFF.

(2) Connect test equipment as shown in Figure 4-1, unit tester connected.

(3) Connect digital multimeter leads to J2 pin 60 (+) and COM.

(4) Set ON-OFF-SIM ONLY to ON.

(5) Rotate DIGITAL SET B C D thumbwheel switch through each position as listed in Table 4-26. Digital multimeter will indicate voltage within the limit specified, at settings listed in Table 4-26. If not, see Troubleshooting Table 4-27.

(6) Repeat techniques (1) thru (5) above using connector J2 pins 60, 62, 63 and 64 for each check as indicated below. Indications will be as specified at pins and settings as shown in Table 4-26.

h. Rotor Overspeed.

Performance Check.

(1) Disconnect lead from J2 pin 64 and connect to J6 pin 31 on unit tester.

(2) Set ROTOR OVERSPEED 127% switch to ON.

(3) Set ON-OFF-SIM ONLY to ON. Digital multimeter will indicate between +4.5 and +55 vdc. If not, see Troubleshooting Table 4-27.

(4) Set ROTOR OVERSPEED 127% and ON-OFF-SIM ONLY switch to OFF.

(5) Disconnect lead from J6 pin 31 and connect to J6 pin 32.

(6) Repeat (2) thru (4) above, except use ROTOR OVERSPEED 137% switch.

(7) Disconnect lead from J6 pin 32 and connect to J6 pin 33.

(8) Repeat (2) thru (4) above, except use ROTOR OVERSPEED 142% switch.

(9) Disconnect lead from J6 pin 33.

(10) Set ON-OFF-SIM ONLY to OFF.

i. Display Update.

(1) Connect test equipment as shown in Figure 4-17. Do not disconnect equipment connected in Figure 4-1, unit tester connected.

(2) Set DISPLAY UPDATE switch to ON.

(3) Set ON-OFF-SIM ONLY switch to ON. Oscilloscope will indicate negative pulses between 4.0 and 6.0v and frequency counter will indicate between 1300 and 1900 Hz. If not, see troubleshooting Table 4-27.

(4) Set DISPLAY and ON-OFF ONLY switches to OFF.

Table 4-26. Digital Set B C D

Digital Set Thumbwheel Settings	J2 Connector Pins				Digital Voltmeter Indication (vdc)	
	60	62	63	64	Min	Max
0					0	0
1	x				4.5	5.5
2				x	4.5	5.5
3	x			x	4.5	5.5
4		x			4.5	5.5
5	x	x			4.5	5.5
6		x		x	4.5	5.5
7	x	x		x	4.5	5.5
8			x		4.5	5.5
9	x		x		4.5	5.5

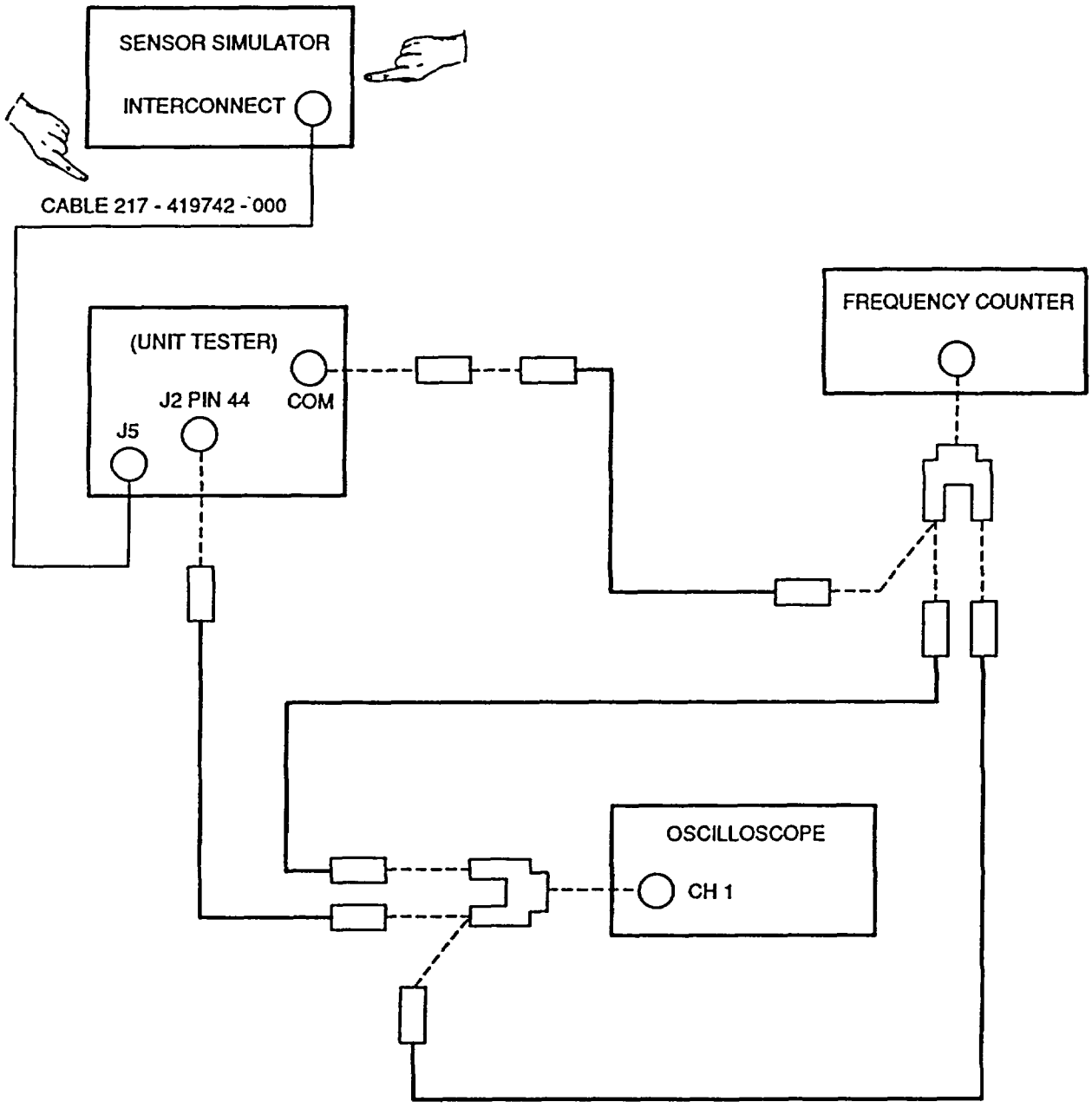

Figure 4-17. Display Control - Equipment Setup.

(5) Repeat technique of (1) thru (4) above, connecting lead to pin connections listed in Table 4-28. Oscilloscope and frequency counter will indicate within limits specified. If not, see Troubleshooting Table 4-27.

j. Digits ONIOFF.

(1) Set ON-OFF-SIM ONLY to OFF with test equipment connected as Figure 4-1, unit tester connected.

(2) Connect digital multimeter leads to 11 pin 3 (+) and COM. Set ON-OFF-SIM ONLY to ON and set DIGITS ON-OFF to ON.

(3) Digital multimeter will indicate between 4.5 and 5.5 vdc. If not, see Troubleshooting Table 4-27.

(4) Hold DIGITS ON/OFF to UP. Digital multimeter will indicate between -0.5 and +0.5 vdc.

(5) Disconnect digital multimeter leads from unit tester.

k. Analog Set.

(1) Set ON-OFF-SIM ONLY to OFF.

(2) Connect test equipment as shown in Figure 4-1, unit tester connected.

(3) Set ON-OFF-SIM ONLY to ON.

(4) Set INTER SELECT switch to 21 and ANALOG set switch to SLOW and then to FAST while observing analog INTERFACE MONITOR which will count at a faster rate and reset after counting to 1827. If not, see Troubleshooting Table 4-27.

(5) Set ON-OFF-SIM ONLY to OFF.

Table 4-27. Troubleshooting Rotor Overspeed, Digital Set, Digits, Reset, Display Update and Analog Set Circuits

Trouble	Probable Cause	Remedy
Digital Set B C D output voltage missing on J2	Digital Set B C D Switch (S 18) TB2. Regulator board (A4).	Replace defective components or board (A4). Figures 4-14, FO-6, FO-8.
Rotor Overspeed 127% switch does not change voltage readings	Rotor Overspeed 127% switch (S14). Regulator board (A4).	Replace defective components or board (A4) Figures 4-14, FO-6, FO-8.
Rotor Overspeed 137% switch does not change voltage readings	Rotor Overspeed 137% switch (S13). Regulator Board (A4).	Replace defective components or board (A4). Figures 4-14, FO-6, FO-8.
Rotor Overspeed 142% switch does not change voltage readings	Rotor Overspeed 142% switch (S12). Regulator Board (A4).	Replace defective components or board. Figures 4-14, FO-6, FO-8.
Digits ON/OFF switch does not change voltage readings	Digits ON/OFF switch (S17). Regulator Board (A4).	Replace defective components or board. Figures 4-14, FO-6, FO-8.
Faulty Reset switch circuit	Rotor Overspeed switch (S11).	Replace defective components FO-6.
Faulty Display Update switch circuit	OSC Control Board (A6), Digital Update switch (S16).	Replace defective components or board. Figures 4-16, FO-6, FO-10.
Faulty Analog Set switch circuit.	OSC Control Board (A6). B C D Counter Board (AS). Analog Set switch (S15) Digital Display Board (A12).	Replace defective components or boards. See figures 4-16, 4-18, 4-19, FO-10, FO-11, FO-12.

Table 4-28. Display Update (Unit Tester)

Unit Tester Pin Connections	Oscilloscope Indications	Frequency Counter Indications
J2 Pin 44 45 46 47 48 49 50 J3 Pin 44 45 46 47 48 49 50 J6 Pin 17 18 19 20 21 22 23	Negative pulses between +4.0 and +6.0 v	Between 1300 and 1900 Hz
J2 Pin 51 52 J3 Pin 51 52 J6 Pin 14 15	Square wave between +4.0 and +6.0 v	Between 700 and 800 ms

l. Inter Cal Select Circuit.

(1) Set ON-OFF-SIM ONLY to OFF.

(2) Connect simulator INTERCONNECT jack to unit tester J5 INTERCONNECT jack using cable 217-419742-000.

(3) Connect digital multimeter to unit tester connector J8 pin 17 (HI) and COM test point, using leads and adapter and set controls as follows:

(a) Set INTER CAL SELECT switch to 1.

(b) Set ON-OFF-SIM ONLY switch to ON. Digital multimeter will indicate between +4 and +6 vdc. If not see Troubleshooting Table 4-29 (Inter Cal Select).

(c) Set ON-OFF-SIM ONLY switch to OFF.

(4) Repeat technique of (3) above for INTER CAL SELECT switch positions and pin connections listed in Table 4-30. Digital multimeter will indicate within limits specified. Refer to Figure 4-20 for pin locations on J2, J3 and J9. If not, see Troubleshooting Table 4-29 (Inter Cal Select).

(5) Disconnect digital multimeter and set ON-OFF-SIM ONLY to OFF.

m. Warn Outputs, Failures Proc, Test Freq, Clock Inhibit and PIS Control Circuits.

(1) Set ON-OFF-SIM ONLY to OFF.

NOTE

Troubleshooting Table 4-29 or Fig. FO-6 used for the above circuits.

(1) Set ON-OFF-SIM ONLY to OFF.

(2) Connect digital multimeter leads to J8 pin 24 and COM on unit tester.

(3) Set CLOCK INHIBIT to ANA.

(4) Set LOGIC P/S switch to 1.

(5) Set ON-OFF-SIM ONLY switch to ON. Digital multimeter will indicate between +4.0 and +6 0 vdc. If not, see Troubleshooting Table 4-29.

(6) Set ON-OFF-SIM ONLY to OFF.

(7) Disconnect from J8 pin 24 on Unit Tester.

(8) Repeat technique (1) thru (7) above using switches and pin connections as listed in Table 4-31. Digital multimeter will indicate within the limits specified. If not, see troubleshooting table 4-29.

Table 4-29. Troubleshooting Warn Outputs, Failures-Test Freq-Proc, Clock Inhibit and P.S Control and Inter Cal Select circuits.

Trouble	Probable Cause	Remedy
Warn Output circuit defective	Warn Output Switch (S3).	Replace defective components, FO-6.
Failures Test Freq circuit defective	B C D Counter Board (AS). Test frequency switch (SI).	Replace defective components, Figures 4-18, FO-6, FO-11. Replace board (A5) if required.
Failures-Proc defective	Failure Proc (S2).	Replace defective component, FO-6.
Clock Inhibit DIG-ANA circuit defective	Pot R2, clock inhibited (SS5). Regulator board (A4).	Replace defective components, Figures 4-14, FO-6, FO-8. Replace board (A4) if required.
P/S Control does not vary voltage	Pot R1	Replace defective component, FO-6.
Inter Cal Select switch circuit	Regulator board (A4). OSC Control Board (A6). Inter Cal Select switch (S6).	Replace defective components, FO-6, FO-8, FO-10 and Figures 4-14, 4-16. Replace (A4) or (A6) if required.

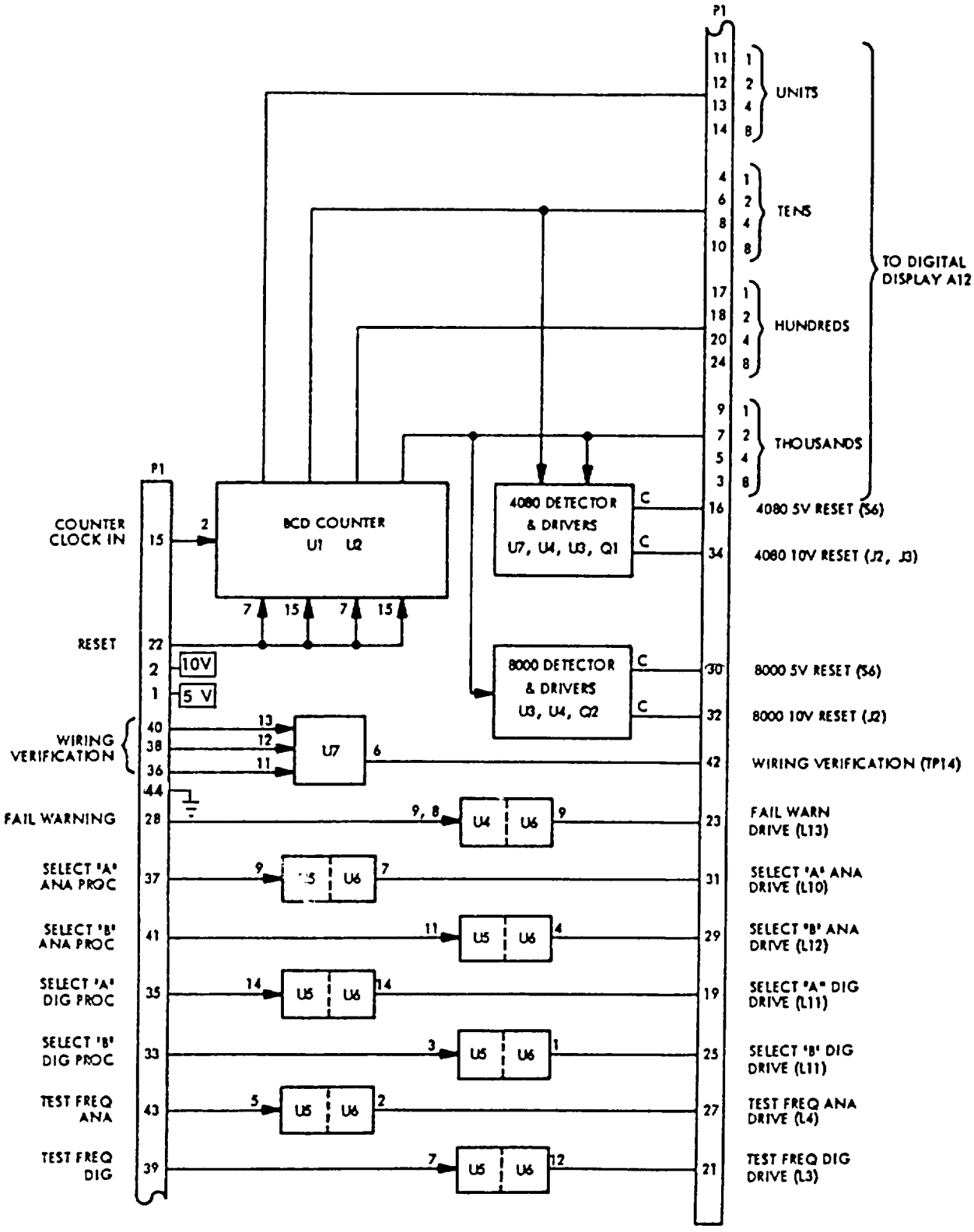

Figure 4-18. BCD Counter BoardAssemblyA5.

Table 4-30. Inter Cal Select (Unit Tester)

Unit Tester		Digital Multimeter Indications (vdc)	
INTER CAL SELECT Switch Position Number	Pin Connections	Min	Max
2	J8 Pin 19	4	6
3	J8Pin 18	4	6
4	J8 Pin 20	4	6
S	J8 Pin 21	4	6
6	J9 Pin 44	4	6
7	J9 Pin 45	4	6
8	J9 Pin 46	4	6
9	J9 Pin 47	4	6
10	J8 Pin 22	4	6
11	J8 Pin 23	4	6
12	J9 Pin 48	4	6
13	J9 Pin 49	4	6
14	J9 Pin 50	4	6
15	J2 Pin 37	45	5.5
16	J3 Pin 37	4.5	5.5
17	J3 Pin 37	45	55
18	J3 Pin 37	45	5.5
19	J2 Pin 43	4.5	5.5

n. Shift Register Drive, ANA-DIG UPDATE, Internal Clock, Reset Pulse, Clock Inhibits, Test Freq, PIS Control Auto Dim, DIG Display Update (Oscillator Board A6), Circuits.

(1) Set ON-OFF-SIM ONLY to OFF.

(2) Connect test equipment as shown in Figure 4-1, unit tester connected.

(3) Disconnect Oscillator Board (A6) from unit Test and reconnect extender board to oscillator board.

(4) Connect OSCILLOSCOPE between test loops 30 (HI) and 44 (LO) (Shift Register Drive). Set Power to ON.

(5) Set INTER CAL SELECT to position 21.

(6) Set ANALOG SET switch STOP/SLOW/FAST to STOP and THEN SLOW. Oscilloscope will display positive-going square wave pulses 4.5 to 5.5, Volts peak to peak (Vp-p). If not, see Troubleshooting Table 4-32.

(7) Set ANALOG SET switch to FAST.

(8) Oscilloscope will display positive-going square wave pulses 4.5 to 5.5 Vp-p. If not, see Troubleshooting Table 4-32.

(9) Place ANALOG SET to STOP position. Oscilloscope will indicate ground.

(10) Place ANALOG SET to FAST. Interface Monitor will reset after counting 1827. If not, see Troubleshooting Table 4-32.

(11) Disconnect from Test loop 30 after setting power to OFF.

(12) Connect oscilloscope counter to test loop 38 (Digital display Update and clock inhibits). Set Power to ON.

(13) Oscilloscope will display negative-going digital update pulses, 4.5 to 5.5 Vp-p. If not, see Troubleshooting Table 4-32. Repeat technique (11) and (12) above for test loop 28 for negative-going update pulses.

(14) Set Power to OFF and repeat technique (11) and (12) above. Disconnect oscilloscope from test loop 28 and reconnect to each test loops 31,33,35,29, one at a time. Oscilloscope will display positive-going clock inhibit pulses 4.5 to 5.5 Vp-p for each connection. If not, see Troubleshooting Table 4-32.

(15) Set power to OFF and disconnect oscilloscope from test loop 29.

(16) Connect oscilloscope to test loop 4 (Analog-Digital Update Pulses).

(17) Set Power Switch to ON and place Analog Set switch to SLOW.

(18) Oscilloscope will display negative going update pulses between 4.5 and 5.5 Vp-p. If not, see Troubleshooting Table 4-32. Repeat technique (15) through (18) above for test loop 9.

(19) Set Power Switch to OFF and disconnect from test loop 9 and connect oscilloscope and frequency counter to test loop 26 (Internal clock).

Table 4-31. Signal Data Converter Section

Unit Tester		Digital Voltmeter Indications (vdc)	
Switch Settings	Pin Connections	Min	Max
CLOCK INHIBIT to ANA	J8 Pin 24	45	5.5
CLOCK INHIBIT to DIG	J8 Pin 25	4.5	5.5
CLOCK INHIBIT to DIG	J9 Pin 36	4.5	5.5
CLOCK INHIBIT to ANA	J9 Pin 37	4.5	55
P/S CONTROL fully CW and P/S CONT to REMOTE (connect jumper between J3-26 and J3-27)	ILS test point	4.5	5.5

(20) Set Power Switch to ON. Oscilloscope will display a rectangular pulse 4.5 to 5.5 Vp-p. Frequency counter will indicate between 126 and 130 kHz. If not, see Troubleshooting Table 4-32. Disconnect oscilloscope and frequency counter after setting power to OFF.

(21) Connect digital multimeter leads between J9 pin 19 and COM (P/S Control Normal).

(22) Adjust P/S Control fully CW and set Power Switch to ON.

Table 4-32. Troubleshooting Oscillator Board (A6) Circuits

Trouble	Probable Cause	Remedy
Shift Register Drive-pulses incorrect when ANALOG set to SLOW or FAST	Analog Set Switch (S15). Oscillator board (A6).	Replace defective components or replace board (A6) if required. See figs. 4-16, FO-6. FO-10.
Shift Register, 183 O/P pulses incorrect	Analog Set Switch (S15). Analogue Processor Board No. 2 (A10). Oscillator board (A6).	Replace defective components or replace boards (A6)(A10) if required. See figs. 4-16, 4-21, FO-6, FO-10, FO-13.
ANA-DIG UPDATE pulses incorrect (continuous)	Analogue Set switch (S 15). Oscillator board (A6).	Replace defective components or replace board (A6) if required. See figs. 4-16, FO-6, FO-10.
INTERNAL CLOCK OUTPUT and display pulses incorrect Board (A5).	Inter Cal Select Switch (S6). Oscillator board (A6). B C D Counter	Replace defective components or replace boards (A6XA5) if required. See figs. 4-16, 4-18, FO-6, FO-10, FO-11.
10 vdc, -10 vdc, + vdc (Input) Low or missing	Voltage Regulator Board (A4).	Replace Regulator Board (A4). See figs. 4-14, FO-8.
TEST FREQ-puleas incorrect	Oscillator board (A6).	Replace defective components orreplace board (A6) if required. See figs. 4-16, FO-10.
DIGITAL DISPLAY UPDATE-display pulses incorrect	Inter Cal Select switch (S6). Oscillator Board (A6).	Replace defective components orreplace board (A6). See figs 4-16, FO-4, FO-10.
DIGITAL DISPLAY CLOCK INHIBIT pulses and Freq incorrect	Inter Cal Select switch (S6). Oscillator board (A6).	Replace defective components or replace board (A6). See figs. 4-16, FO-6, FO-10.
RESET PULSE missing	Oscillator board (A6). Analog Processor No. 2 (A10) Board.	Replace defective components or replace boards (A6) (A10) if required. See figs. 4-16, 4-21, FO-10, FO-13.
P/S CONTROL AUTO-DIM voltage low or missing	Regulator Board (A4).	Replace defective components or replace board (A4). See figs. 4-14, FO-8.
P/S LAMP SENSE incorrect voltage low or missing	Lamp Power Supply (A2).	Replace defective components or replace board (A2) if required. See figs. 4-15, FO-9.

(23) Digital multimeter will indicate between +4.5 and +5.5 vdc. If not, see Troubleshooting Table 4-32.

(24) Set P/S control to REMOTE. Disconnect digital multimeter LEAD from J9 pin 19 and reconnect to ILS test point Digital multimeter will indicate between 4.5 and 5.5 vdc. If not, see Troubleshooting Table 4-32.

(25) Set Power Switch to OFF. Disconnect digital multimeter.

(26) Connect oscilloscope to test loop 37 (TIEST FREQ). Set Power Switch to ON.

(27) Oscilloscope will display positive-going test frequency pulses 4.5 to 5.5 Vp-p. If not, see troubleshooting table 4-32.

(28) Set Power Switch to OFF and disconnect oscilloscope lead from test loop 37 and connect digital voltmeter leads to test loop 10. Set Power Switch to ON. Digital multimeter will indicate between -4.5 to -5.5 vdc. If not, see troubleshooting table 4-32.

(29) Set Power Switch to OFF and disconnect digital multimeter from test loop 10.

(30) Connect oscilloscope to test loop 7. Set power switch to ON. Oscilloscope will display positive-going reset pulse approximately 1.6 seconds in direction when interface monitor is resetting. If not, see troubleshooting table 4-32.

(31) Set Power Switch to OFF and disconnect oscilloscope from test loop 7 and reconnect to test loop 13.

(32) Set Power Switch to ON and observe approximately 10 micro seconds reset pulse momentarily when interface monitor is resetting. If not, see troubleshooting table 4-32.

o. Processors Selection - Analog AB/Digital A3, Wiring Verification, Fail Warn Lamp, Test Freq-ANAIDIG. B C D Counter Board (AS) Circuits.

(1) Set Power Switch to OFF.

(2) Remove B C D Counter Board (A5) and reconnect extender board.

(3) Connect jumper between loops 44 (ground) and 28 on extender board.

(4) Set Power Switch to ON. Fail Warn Light. If not, see Troubleshooting Table 4-33.

(5) Set Power Switch to OFF.

(6) Remove jumper from extender board.

(7) Connect jumper between test loops 39 and 1 (5v).

(8) Set Power Switch to ON. Test Freq Dig Light will light. If not, see troubleshooting table 4-33.

(9) Set Power Switch to OFF.

(10) Remove jumper from extender board.

(11) Connect jumper between test loops 43 and 1 (Sv).

(12) Set Power switch to ON. Test Freq ANA Light will light. If not, see troubleshooting table 4-33.

(13) Set Power switch to OFF.

(14) Repeat technique (9) through (13) above for each test loop connections 33 and 1 (Select B DIG PROC); 35 and (Select A DIG PROC); 37 and 1 (Select A ANA PROC); 41 and 1 (Select B ANA PROC). Lights will light for each circuit connection. If not, see troubleshooting table 4-33.

(15) Set power switch to OFF.

(16) Disconnect jumper lead from test loop 41 and 1.

(17) Connect oscilloscope and Frequency Counter between test loops 15 (HI) and 44 (LO).

(18) Set Power Switch to ON. Oscilloscope shall display positive going square wave pulses between 4.5 and 5.5 Vp-p. If not, see troubleshooting table 4-33.

(19) Set Power Switch to OFF.

(20) Repeat techniques (15),(17) and (19) above, connecting oscilloscope to each test loop output as shown in fig 4-18 for units, tens, hundreds and thousands. Check in order shown for positive going square wave pulses between 4.5 and 5.5 Vp-p with successively longer periods. If not, see troubleshooting table 4-33.

(21) Oscilloscope shall display each output momentarily going to +5 vdc and returning to zero.

(22) Set Power Switch to OFF.

(23) Disconnect oscilloscope from test loop 3.

(24) Connect to test loop 22 and set power to ON.

(25) Oscilloscope should display reset pulse input. Interface Monitor will reset to zero and begin counting.

Table 4-33. Troubleshooting Processors Selection-Analog AB/DIGITAL AB, Wiring Verification Fail Warn Lamp, Test Freq, ANA-DIG (B C D Counter Board A5)

Trouble	Probable Cause	Remedy
Fail Warn Lamp does not light	Lamp Test Board. Regulator Board (A4). B C D (A5).	Replace defective components or replace boards (A4) and (A5). See figs. 4-14, 4-18, FO-6, FO-8, FO-11.
Test Frequency Lamps ANA-DIG do not light	Test Frequency Switch (S1). Regulator Board (A4). B C D (A5). Lamp Test Board.	Replace defective components or replace boards (A4) and (A5). See figs. 4-14, 4-18, FO-6, FO-8, FO-11.
Wiring verification check voltage low or missing.	B C D Board (A5)	Replace defective components or replace board (A5). See figs. 4-18, FO-6, FO-11.
B C D Counter circuit defective.	Inter Cal Select switch (S6). Regulator Board (A4). Oscillator Board (A6) B C D Board (A5).	Replace defective components or boards (A4), (A5), (A6). See figs. 4-14, 4-16, 4-18, FO-6, FO-8, FO-10, FO-11.
Select A Digital PROC, Select A Analog PROC, Select B Digital PROC, and Select B Analog PROC does not light	Regulator Board (A4). B C D Board (A5).	Replace defective components or boards (A4), (A5). See Figs. 4-14, 4-18, FO-8, FO-11.
Reset Pulse Input missing output.	Inter Cal Select Switch (S6). OSC Board (A6). Analog Monitor Board No. 2 (A10).	Replace defective components or replace boards (A6), (A10). See figs. 4-16, 4-21, FO-6, FO-10, FO-13.
Reset Pulse	Switch (S6), Oscillator Board (A6), Analog Monitor Board (A10).	Replace components or replace boards (A6), (A10). See figs. FO-6, FO-10, FO-13, 4-16, 4-21.
Input 5v, 10v missing.	B C D Board (A5), Regulator Board (A4).	Replace components or boards (A4, A5). See fig. FO-8, FO-11, 4-14, 4-18

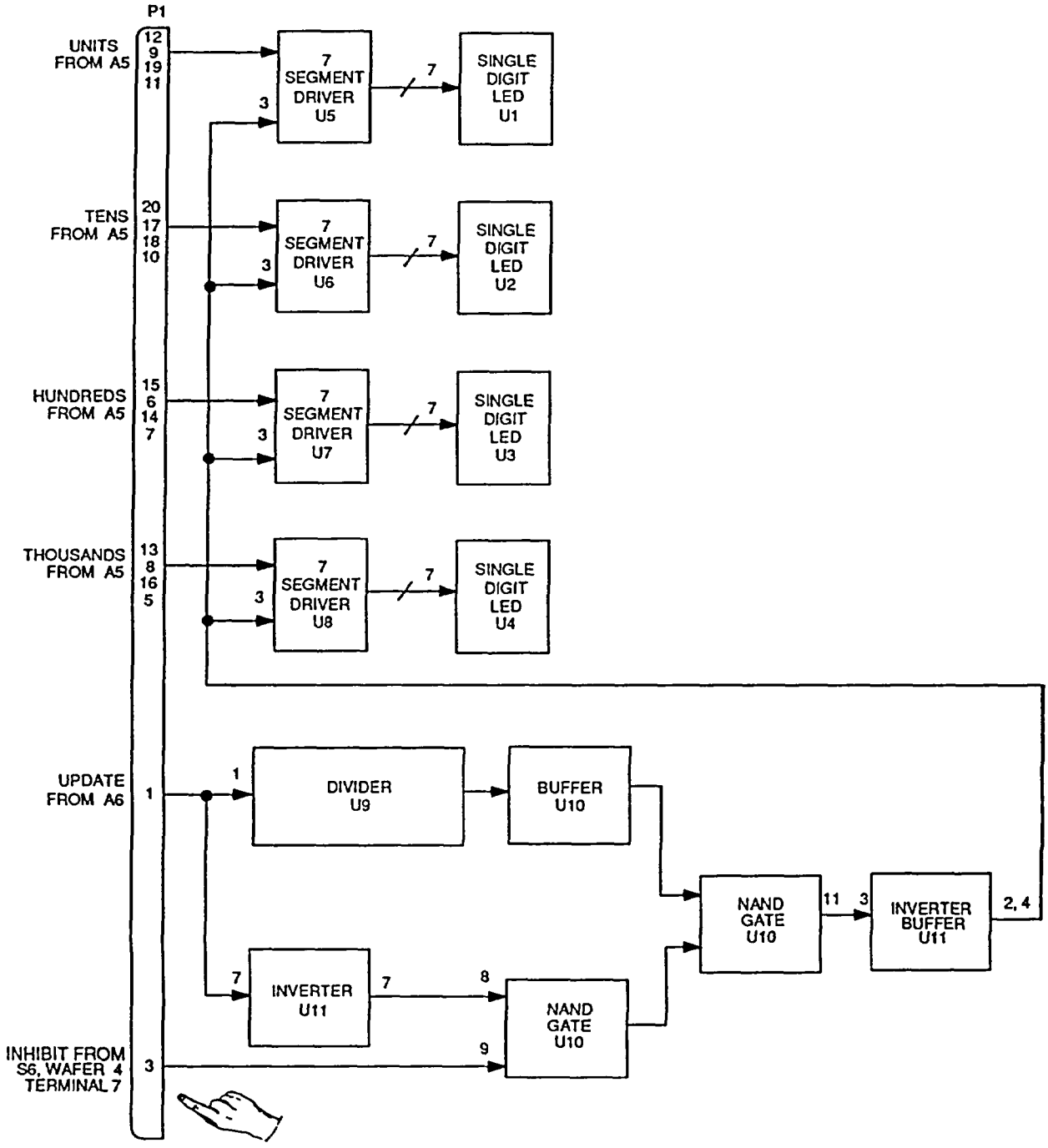

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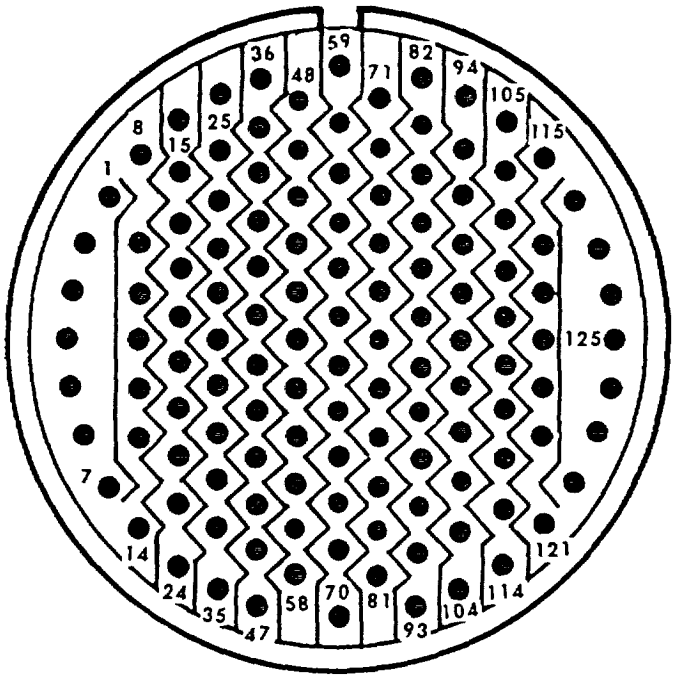
Figure 4-19. Digital Display Board Assembly A12.



J2, J3, OR J9

Figure 4-20. Unit Tester -Pin Connections.

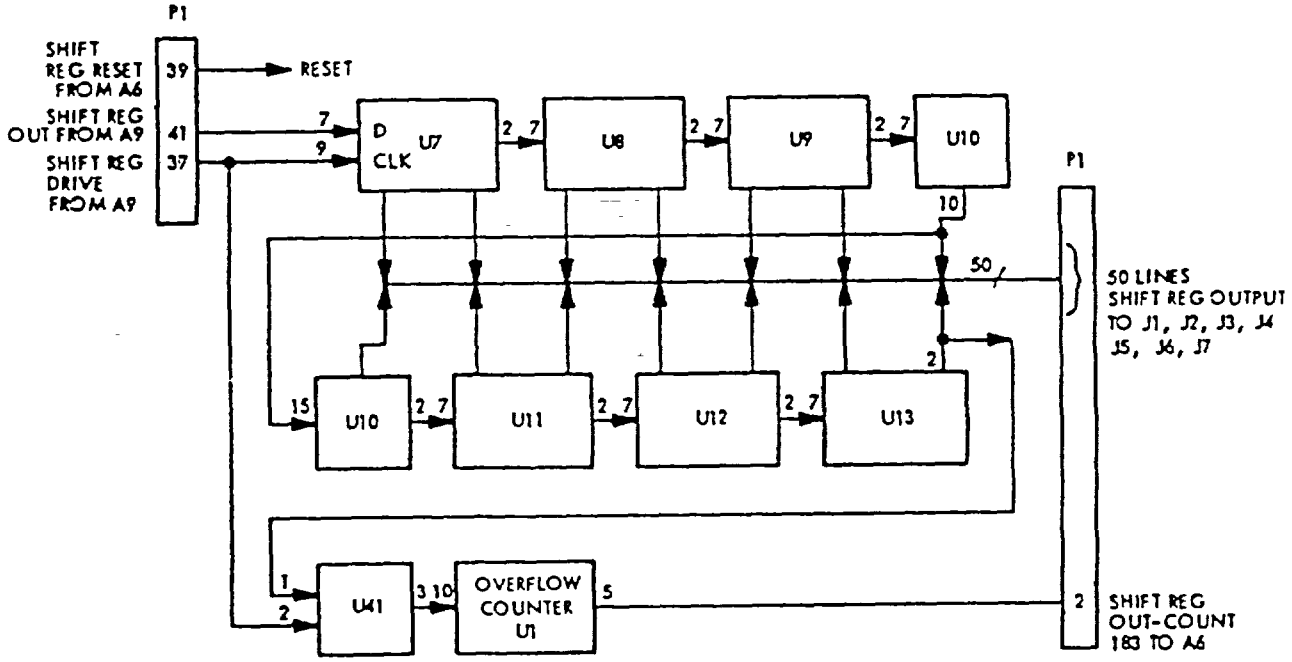


Figure 4-21. Analog Processor No. 2 Assembly A10.

p. Analog Processor No. 1 Assembly (A9). Shift Reg Drive and reset from (A6) and ANA PROC No. 2 Circuits.

(1) Connect test equipment as shown in Figure 4-1, unit tester connected. Set Power to OFF and remove Analog Processor Board on extender board. Insert extender board into unit tester.

(2) Place INTER CAL SELECT switch to 21. Connect digital voltmeter leads between test loops 4 (+) and 118 (-). Set Power to ON. Digital voltmeter will indicate between 4.5 and 5.5 vdc. If not, see troubleshooting table 4-34.

(3) Set Power to OFF. Disconnect digital voltmeter leads from unit tester.

(4) Set Power to OFF and connect oscilloscope between test loops 54 (HI) and 118 (LO). Set power to ON. Oscilloscope will display positive-going square wave pulses 4.5 to 5.0 V p-p. If not, see troubleshooting table 4-34.

(5) Set power to OFF. Disconnect from test loop 54.

(6) Connect oscilloscope to test loop 38 and set power to ON. Oscilloscope will display approximately 10 micro seconds reset pulse momentarily as indicated when Inter Face Monitor is resetting. If not, see troubleshooting table 4-34.

(7) Set power to OFF and disconnect oscilloscope from test loop 38 and reconnect oscilloscope to test loop 42.

(8) Set power to ON. Oscilloscope will display positive going pulse, 4.5 to 5.5 V p-p. If not, see troubleshooting table 4-34.

(9) Set power OFF and disconnect oscilloscope from test loop 42 and reconnect to 22.

(10) Set power to ON. Oscilloscope will display positive going pulses 4.5 to 5.5 V p-p. Observe oscilloscope DC level shifting from ground to +5 v with Interface Monitor count between 950 and 1000, shifting back from ground when Interface Monitor resets to zero. If not, see troubleshooting table 4-34.

Table 4-34. Troubleshooting Analog Processor Board No. 1 (A9), Shift Reg Drive and Reset, Ana Proc No. 2

Trouble	Probable Cause	Remedy
5 vdc low or missing	Logic Power Supply A3. INPUT 8V missing to Regulator Board (A4) or Output 5V missing. Analog Processor #2 (A10).	Replace defective components or Regulator Board (A4). See figs. 4-13, 4-14, 4-21, FO-6, FO-7, FO-8, FO-13.
Shift Reg Drive has incorrect Input from Board (A6)	Inter Cal Select switch, interwiring Board. OSC Board (A6). Analog Processor No. 2 (A10).	Replace defective components or replace board (A6). See figs. 4-14, 4-16, 4-21, FO-6, FO-8, FO-10, FO-13.
Shift Reg Reset input missing from Board (A6)	Inter Cal Select switch, interwiring Board. OSC Board (A6). Analog Processor No. 2 (A10)	Replace defective components or replace board (A6). See figs. 4-16, 4-21, FO-6, FO-10, FO-13.
ANA PROC No 2 Output incorrect	Analog Processor No. 1 (A9). OSC Board (A6).	Replace defective components or replace boards (A6), (A9). See figs. 4-16, 4-22, FO-10, FO-14.

q. Analog Processor Board No. 2 (A10). Shift Reg Reset, Shift Reg Out, Shift Reg Drive, Shift Reg Out Count.

(1) Set Power to OFF and connect test equipment as shown in Figure 4-1, unit tester connected.

(2) Remove Analog Processor No.2 (A10) from unit tester and reinstall Analog Processor Board on extender board. Insert extender board into unit tester.

(3) Place INIER CAL SELECT to 21.

(4) Connect digital multimeter leads between test loops 4(+) and 118(-). Set Power to ON. Digital multimeter will indicate between 4.5 and 5.5 vdc. If not, see troubleshooting table 4-35.

(5) Set Power to OFF and disconnect digital multimeter from unit tester.

(6) Connect oscilloscope to extender board test loops, 37 and 118. Set Power to ON.

(7) Oscilloscope will display positive-going square wave pulses 4.5 to 5.5 Vp-p. If not, see troubleshooting table 4-35.

(8) Set Power switch to OFF. Disconnect oscilloscope from test loop 37 and reconnect to test loop 41.

(9) Set Power Switch to ON. Oscilloscope will display positive going square wave pulses 4.5 to 5.5 Vp-p. If not, see troubleshooting table 4-35.

(10) Set Power switch to OFF. Disconnect oscilloscope from test loop 41 and reconnect to test loop 39.

(11) Set Power switch to ON. Oscilloscope will display approximately 10 micro seconds reset pulse momentarily as indicated when Interface Monitor is resetting. If not, see troubleshooting table 4-35.

(12) Set Power switch to OFF. Disconnect oscilloscope from test loop 39 and reconnect to test loop 2.

(13) Set Power switch to ON. Oscilloscope will display positive going square wave reset pulses approximately 1.6 sec duration momentarily as indicated when Interface Monitor is resetting. If not, see troubleshooting table 4-35.

Table 4-35. Troubleshooting Analog Processor Board No. 2 (A10). Shift Reg Reset, Shift Reg Out, Shift Reg Drive, Shift Reg Out Count

Trouble	Probable Cause	Remedy
Shift Reg Reset missing from Board (A6)	Inter Cal Select switch. OSC Board (A6). Analog Processor board No. 1.	Replace defective components orre-place boards (A6),(A9). See figs. 4-16, 4-22, FO-4, FO-10, FO-14.
Shift Reg Out missing from Board (A6)	Analog Processor Board No. I (A9).	Replace defective components or board (A9). See figs. 4-22, FO-6, FO-14.
Shift Reg Drive missing from Board (A9)	Analog Processor Board No. 1 (A9).	Replace defective components or board (A9). See figs. 4-22, FO-6. FO-14.
No Shift Reg Out-count count 183 to A6	Analog Processor Board No. 1 (A9).	Replace defective components or board (A9). See figs. 4-22, FO-6, FO-14.
No Shift Reg Output to J1,J2J3, J4J5,J6,J7	Analog Processor Board No. 2 (A 10).	Replace defective components or board (A10). See figs. 4-21, FO-6, FO-13.
5 vdc low or missing	Logic Power Supply (A3). Regulator Board (A4). Analog Processor Board No. 1 (A9).	Replace defective components or boards (A3),(A4),(A9). See figs. 4-13, 4-14, 4-22, FO-6, FO-7, FO-8, FO-14.

r. Digital Display Board (A12).

(1) Set Power Switch to ON and set controls on unit tester as follows:

(a) Inter Cal Select Switch to 21.
(b) Display Update Switch ON.
(c) Analog Set Switch to STOP then SLOW, then FAST.

(2) Set Power Switch to OFF. Inter Monitor will count up displaying 1827 and then reset. If not, see troubleshooting Table 4-36.

NOTE

Isolation of defective monitor boards NO 1 (A7) and NO. 2 (A8) requires a known good signal data converter (SDC). If monitor boards do not pass performance tests, substitute a known good SDC. If they still do not pass send the VIDS test set, along with the known good SDC, to the area TMDE support team (ATST).

Table 4-36. Troubleshooting Digital Display Board (A12) Units, Tens, Hundreds, Thousands, Update, Inhibit Circuits.

NOTE

Use extender board as applicable when troubleshooting circuits.

Trouble	Probable Cause	Remedy
Analog Monitor does not count up displaying units digits 0 thru 9 and reset.	Digital Display Board (A12). Regulator Board (A4). B C D Counter Boards (AS). Analog Processor (A9), (A10). OSC Board (A6) (Reset Pulses).	Replace defective components or replace boards. See figs. 4-14, 4-18, 4-19, 4-21, 4-22, FO-6, FO-8, FO-11, FO-12, FO-13, FO-14.
Analog Monitor does not count up displaying tens digits 0 thru 9 and reset.	Digital Display Board (A12). Regulator Board (A4). B C D Counter Boards (A5). Analog Processor (A9), (A10). OSC Board (A6) (Reset Pulses).	Replace defective components or replace boards. See figs. 4-14, 4-18, 4-19, 4-21, 4-22, FO-6, FO-8, FO-11, FO-12, FO-13, FO-14.
Analog Monitor does not count up displaying hundreds and reset.	Digital Display Board (A12). Regulator Board (A4). B C D Counter Boards (AS). Analog Processor (A9), (A10). OSC Board (A6) (Reset Pulses).	Replace defective components or replace boards. See figs. 4-14, 4-18, 4-19, 4-21, 4-22, FO-6, FO-8, FO-11, FO-12, FO-13, FO-14.
Analog Monitor does not count up displaying thousands and reset.	Digital Display Board (A12). Regulator Board (A4). B C D Counter Boards (AS). Analog Processor (A9), (A10). OSC Board (A6) (Reset Pulses).	Replace defective components or replace boards. See figs. 4-14, 4-18, 4-19, 4-21, 4-22, FO-6, FO-8, FO-11, FO-12, FO-13, FO-14.
Update Rate Control Input 5 Vp-p missing from pin 2.	OSC Board (A6).	Replace defective components or board (A6). See figs. 4-16, FO-4, FO-10.
5 vdc low or missing	Logic Power Supply (A3). Input 8v missing to Regulator Board (A4) or output 5v missing.	Replace defective components or replace boards (A3), (A4). See figs. 4-13, 4-14, FO-6, FO-7, FO-8.

s. Monitor Boards NO 1 (A7) and NO 2 (A8).

The following performance tests check Display Pulses, Shift Register Monitor, Digital O/P, MUX Analog, MUX Digital, Digital MUX, Analog MUX circuits and CONVERSION switch.

(1) Set Power to OFF and connect test equipment as shown in figure 4-1 and figure 2-2 with unit tester connected to interconnect cable.

(2) Connect (VIDS) cable assembly P/N 217-41941-000, between simulator tester NO. 1 connector and SDC (P/N 245-476850-000 (listed as 476850-000 on the SDC nameplate) or P/N 100401562-000) J1 connector.

(3) Connect (VIDS) cable assembly P/N 217-419747-000, between unit tester J8 connector and SDC J2 connector.

(4) Connect (VIDS) cable assembly P/N 217-419748-000, between unit tester J9 connector and SDC J3 connector.

(5) Place simulator test switches and controls as follows.

(a) ALL CAL-NOR switches NOR.
(b) ALL HI-LO switches LO.
(c) ALL NOR controls fully ccw.
(d) INTEGRAL LIGHTING switch EXT.

(6) Place Unit Tester SDC switches and controls as follows:

(a) Clock INHIBITOFF.
(b) Failures PROC OFF.
(c) Failures TES FREQ OFF.
(d) P/S CONTROL Midposition.
(e) P/S CONTREMOTE.
(f) DISPLAY UPDATE ON.
(g) INTERCAL SELECT OFF.
(h) CONVERSION Switch A(1) position.

(7) Connect Digital multimeter between TEST POINTS 1 (+) and SDC COM (-) on front panel of unit tester.

(8) Set Power to ON. Digital multimeter will indicate between +4.5 and +5.5 Vdc.

(9) Set Power to OFF and disconnect TEST LEAD from TEST POINT (+) and reconnect to TEST POINT 2 (+). Set Power to ON. Indication will be as specified for TEST POINT 1. Observe that SHIFT REG MONITOR lamp is ON. Set CONVERSION switch to L (2) position. SHIFT REG MONITOR lamp will go off.

(10) Set POWER switch to OFF position. Disconnect SDC and replace with SDC PIN 100-481440-001 or P/N 100-601147-000 or P/N 100-601572-000. Set POWER switch to ON position, The SHIFT REG MONITOR lamp will turn on. Set CONVERSION switch to A(1) position. The SHIFT REG MONITOR lamp shall remain on. If indications are normal, go to step (17) below. If not perform (11) thru (16) below.

NOTE

Care must be exercised when installing and removing extender cards. Be certain the plugged socket on the circuit card does not bend the pin on the extender card.

(11) Set Power to OFF. Remove monitor board NO. 1 (A7) and carefully reinstall using extender board.

Table 4-37. Troubleshooting Monitor Board 1 (A7) Display and Pulses to Monitor Board (A8) Circuits

Trouble	Probable Cause	Remedy
5 vdc low or missing (input) (test loop 3)	Logic Power Supply A3 Input 8V missing to Regulator Board (A4) or Output 5V missing from (A4).	Replace defective components or boards (A3),(A4). See figs. FO-7, FO-8 and FO-15.
OUTPUT A display pulses incorrect (test loop 114)	U15,U13,U11,U7,U5,UU1U 9. U9, U35.	Replace Board (A7) or components. See figs 4-23 and FO-15.
OUTPUT B display pulses incorrect (Test loop 116)	U16,U14,U12,U8,U6,U4,U2, U10, U20, U36.	Replace Board (A7) or components See figs 4-23 and FO-15.
SHIFT REG MONITOR lamp does not indicate conversion between UH-60A and UH-60L SDCs	U 15,U6,U17,U18,U19,U20, Switch S-19.	Replace Board (A7) or switch S-19. See figs 4-23, 4-24 and FO-15.

(12) Connect Digital multimeter to test loop 3 (+) and 117 (-) on extender board. Set Power to ON. Digital multimeter will indicate between +4.5 and +5.5 Vdc. If not, see Troubleshooting Table 4-37.

(13) Set Power to OFF and disconnect Digital multimeter from test loops 3 and 117 on extender board.

(14) Connect Oscilloscope between test loops 114 (+) and 117 (-) on extender board. Set Power to ON. Oscilloscope will display a negative-going pulse with an amplitude of 4.5 to 5.5 Vp-p, and a duration of approximately 31 milliseconds. If not, refer to troubleshooting table 4-37.

(15) Set Power to OFF and repeat Technique (13) above using test loop 115 (+) on extender board. Oscilloscope will display a rectangular wave 4.5 to 5.5 Vp-p. Oscilloscope will indicate approximately 31 milliseconds duration. If not, see troubleshooting table 4-37.

(16) Set Power to OFF and reinstall monitor board NO. 1 (A7).

(17) Connect Digital multimeter between TEST POINTS 3 (+) and SDC (-) on front panel of unit tester.

(18) Set Power to ON. Digital multimeter will indicate between 4.5 and 5.5 vdc. Set Power to OFF and disconnect from TEST POINT 3(+) and reconnect to TEST POINT 4 (+). Set Power to ON. Indications will be as specified for TEST POINT 3. Observe that MUX Analog, MUX Digital and Digital O/P Monitor lamps are ON. If indications are normal go to step (25). If not, perform (19) thru (25) below.

(19) Set Power to OFF. Remove monitor board NO. 2 (A8) 3 and carefully reinstall using extender board.

(20) Connect Digital multimeter to test loops 3 (+) and 117 (-) on extender board. Set Power to ON. Digital multimeter will indicate between +4.5 and +5.5 Vdc. If not, see Troubleshooting Table 4-38.

(21) Sct Power to OFF and disconnect digital multimeter from test loops 3 and 117 on extender board.

Table 4-38. Troubleshooting Monitor Board No. 2 (AS) Test Points, Shift Reg Monitor, Digital O/P, Mux Analog, Mux Digital, Digital Mux, and Analog Mux Circuits.

NOTE

Troubleshoot Monitor Board A7 (Table 4-37) Before Making Checks Below.

Trouble	Probable Cause	Remedy
5 vdc low or missing (Input) (Test loop 3)	Logic Power Supply A3 Input 8V missing to Regulator Board (A4) or Output 5V missing from (A4).	Replace boards (A3) or (A4). See figs FO-7 and FO-8.
DIGITAL O/P MONITOR does not light (Test loop 102)	U38,U35,U36,U34,U35,U37,U33, CR7,CR8,U32,Q2,U24,U25,U26, U30,U27,U28,U9, Board (AS).	Replace Board (A8), figures 4-24 and FO-16.
Test Points 1 2. missing 5 vdc or (Test Loops 91 and 94)	Monitor Board NO 1. (A7) or Monitor Board NO. 2 (A8). (Check (A7) Board First).	Replace board (A7) or board (AS). See figs 4-23, 4-24, FO-15, FO-16.
Test Points 3, and 4 missing 5 vdc or (Test loops 103 and 104)	Monitor Board NO. 2 (A8).	Replace board (A8). See figures 4-24, FO-16.
MUX ANALOG MONITOR does not light (Test loop 28)	CRR,CRI0,CRI 1,U39,U40,U41, U21,U22,Q3, Board (AS).	Replace board (A8). See figures 4-24, FO-16.
SHIFT REO MONITOR does not light (Test loop 93)	U1 thru U23, Q1, CR1 thru CR4, Board (AS), and Board (A7).	Replace board (A8), or (A7). See figs. 4-23, 4-24, FO-15, FO-16.
MUX DIGITAL does not light (Test loop 30)	U41,UQ.CR13, Board (A8).	Replace board (AS). See figs 4-24, FO-16.

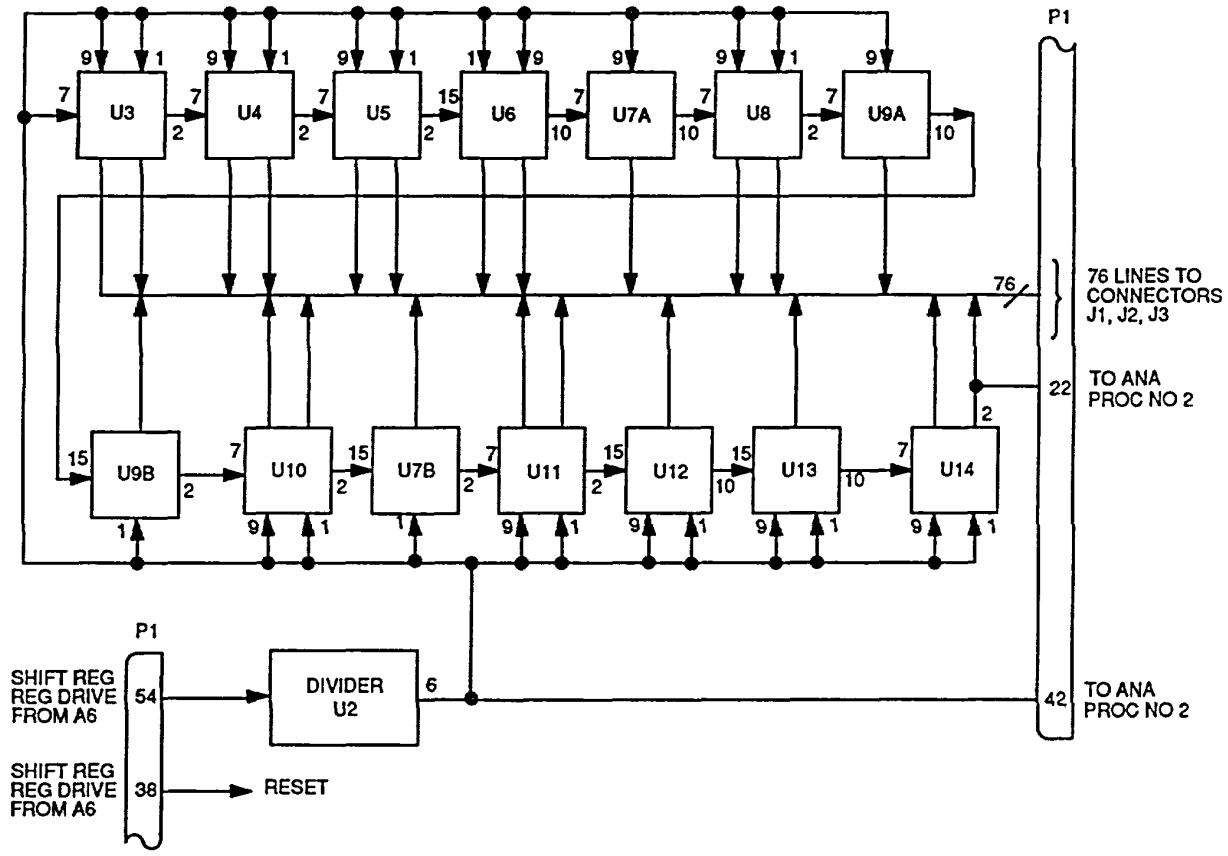


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Figure 4-22. Analog-Processor No. 1 Assembly A9.

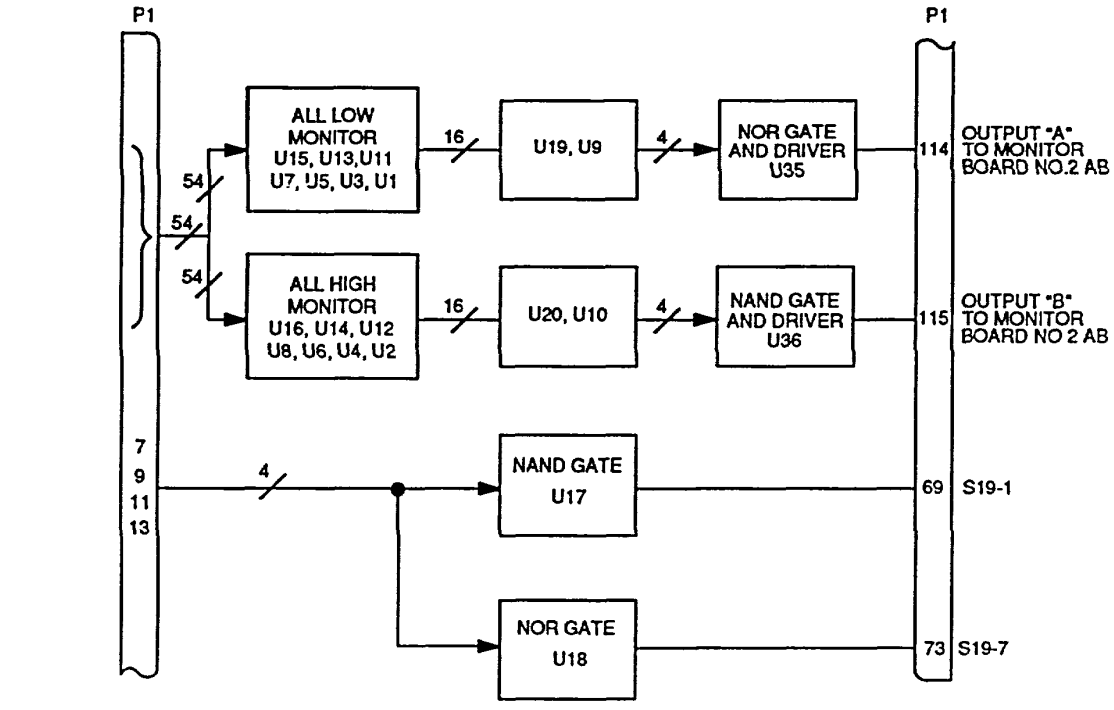

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Figure 4-23. Monitor Board No. 1 Assembly A7.

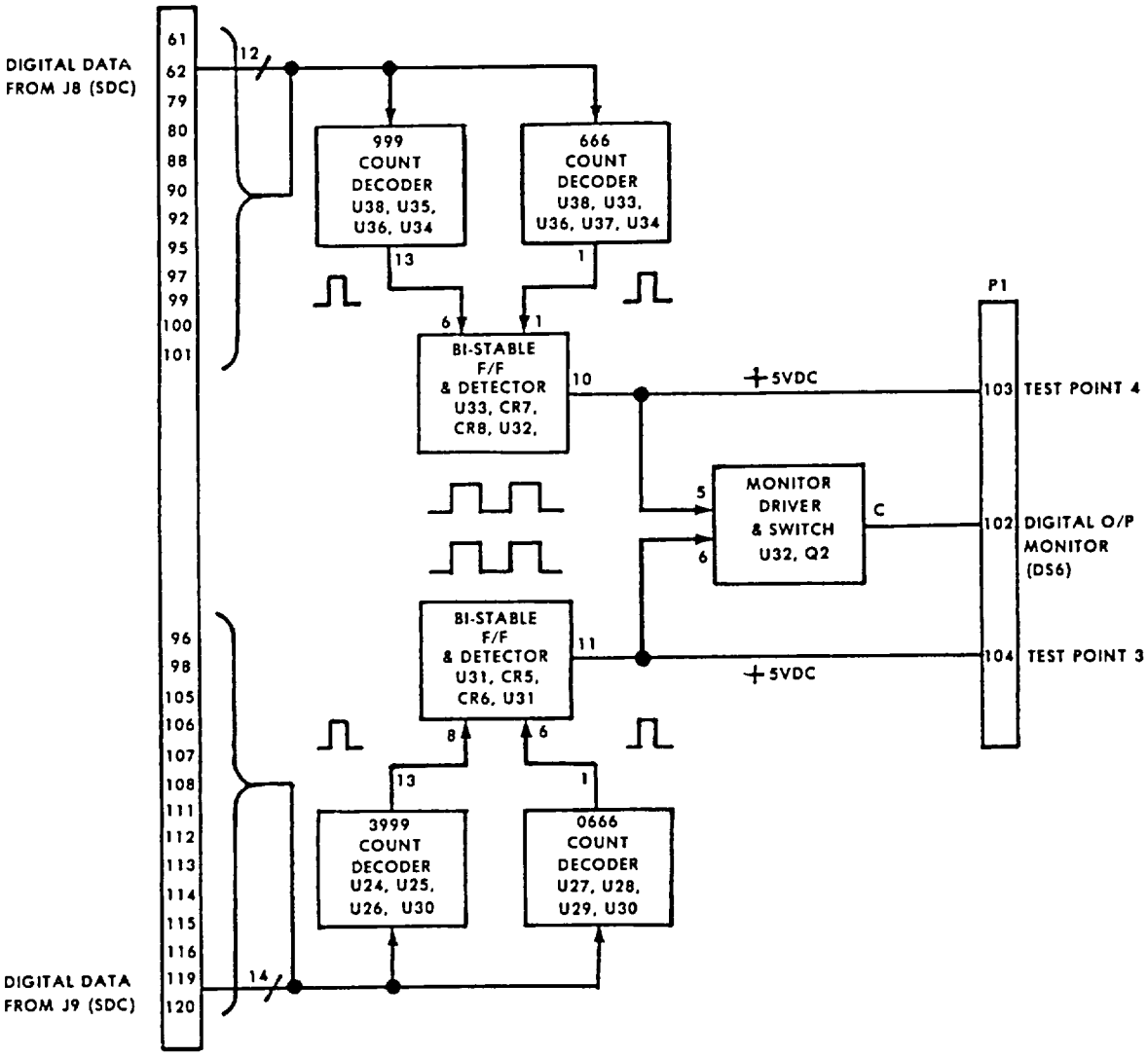

Figure 4-24. Monitor Board No. 2 Assembly A8. (Sheet 1 of 3)

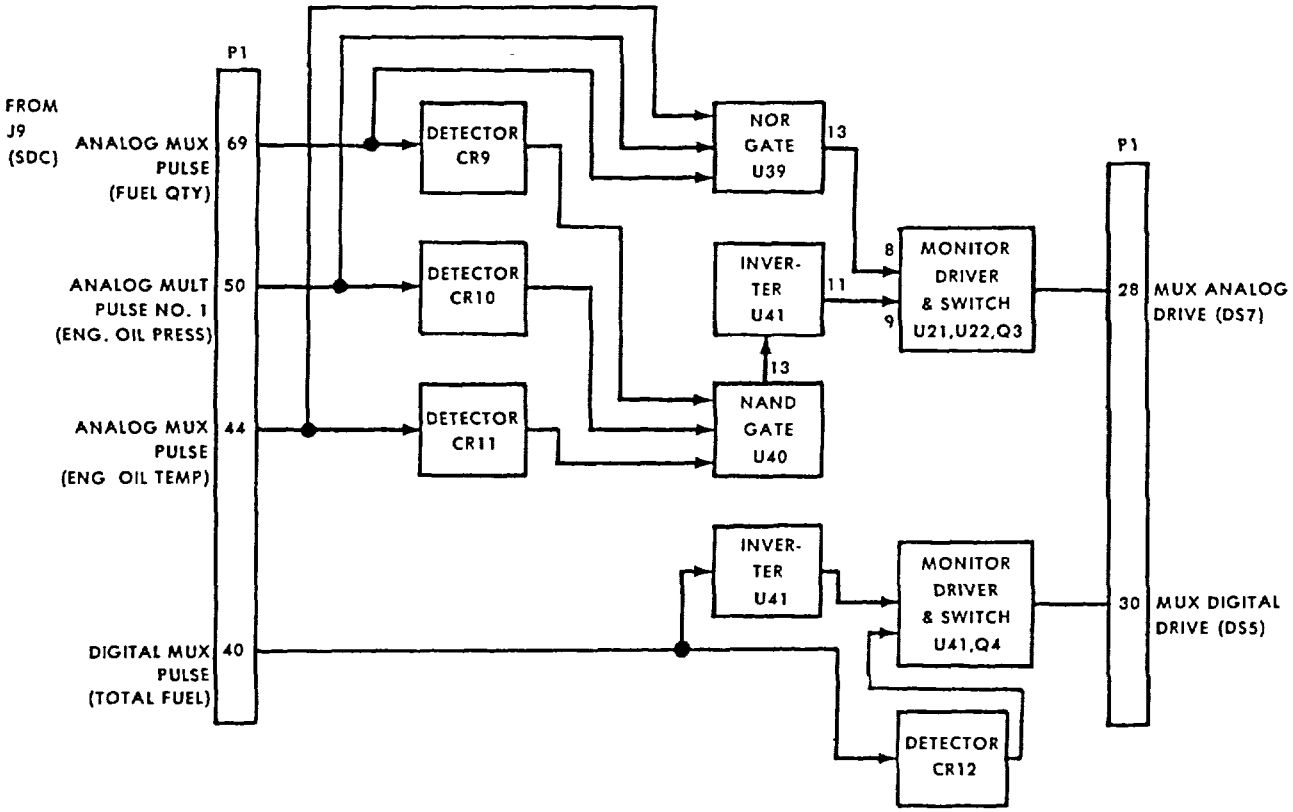

Figure 4-24. Monitor Board No. 2 Assembly A8. (Sheet 2 of 3)

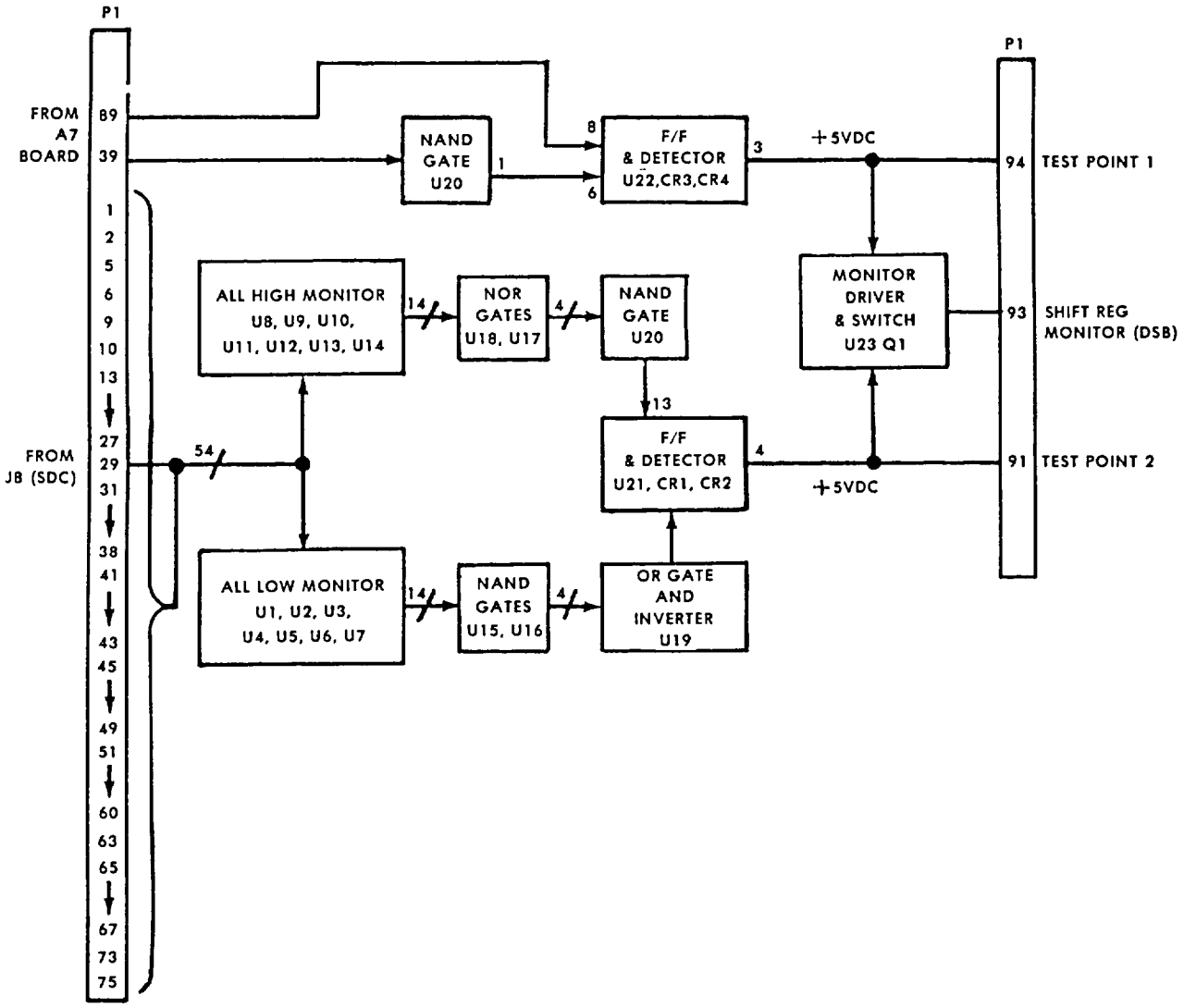

Figure 4-24. Monitor Board No. 2AssemblyA8. (Sheet 3 of 3)

(22) Connect Digital multimeter positive lead to test loops 28,30,93 and 102 one at a time after setting Power to ON. Digital multimeter will indicate less than one volt. If not, see Troubleshooting Table 4-38.

(23) Set Power to OFF and disconnect from test loop 102. Reconnect to test loops 91, 94, 103 and 104 one at a time after setting Power to ON. Digital multimeter will indicate between 4.5 and 5.5 Vdc. If not, see Troubleshooting Table 4-38.

(24) Set Power to OFF and disconnect lead from test loop 104. 1 Connect oscilloscope positive lead to test loop 40, 44, 50, 69 one at a time after setting Power to ON. Oscilloscope will display a rectangular wave 4.5 to 55 v p-p with a duration of approximately 500 milliseconds. If not, SDC is probable cause of trouble.

(25) Set Power to OFF. Disconnect test equipment.

Section VI. PREPARATION FOR SHIPMENT AND STORAGE

4-15. General.

Preparation for shipment and/or storage depends upon whether ,test set is retained in unit area or evacuated. Storage in unit area, when authorized, is on a rotational basis and is known as Administrative Storage. For Administrative Storage see TM55-1500-204-2S/1.

4-16. Levels of Protection.

Select the level of protection which best suits the circumstances and follow the instructions for that level.

a. Level A. Use this level if shipment is into or out of a combat theater or is destined for outdoor storage or is destined for indoor storage exceeding five years.

b. Level B. Use this level if the shipment involves overseas surface transit and/or is destined for indoor storage up to five years.

c. Level C. Use this level if shipment is entirely within CONUS and storage will not exceed two years.

4-17. Procedures.

a. For All Levels. Clean the test set thoroughly of all contaminations and debris. Use no cleaning fluids or preservative materials. Package each test set individually. Each individual package can be shipped without packing. Cushion the test set in 2 inches of one pound density polyethylene foam conforming to PPP-C-1752 and include eight units of desiccant conforming to MI-D-3464 within the unit.

b. Unit Container. Provide a snug fitting unit container as follows:

(1) Level A. Wood-cleated, plywood conforming to style I, overseas type of PPP-B-601.

(2) Level B. Weather-resistant fiberboard container conforming to PPP-B-636.

(3) Level C. Domestic class fiberboard container conforming to PPP-B-636.

(4) Marking. Mark all shipments in accordance with MIL-STD-129.

APPENDIX A

REFERENCES

A-1. Publication Index.

DA PAM 310-1	Consolidated Index of Army Publications and Blank Forms.
DA PAM 738-751	The Army Maintenance Management System - Aviation (TAMIMS-A).

A-2. Logistics and Storage.

TM 740-90-1	Administrative Storage of Equipment

A-3. Maintenance of Supplies and Equipment.

AR 700-58	Packaging Improvement Report

A-4. Other Publications.

TB 43-180	Index of Calibration Bulletins
TM 55-1520-237-23-23	Aircraft Fault Isolation Procedures Manual
FMA 55411	Maintenance Quality Control and Technical Inspection Guide for Army Aircraft
TM 750-244-2	Procedures for Destruction of Electronic Material to Prevent Enemy Use (Electronics Command)

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. MAINTENANCE ALLOCATION CHART.

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the Three Levels of Maintenance concept for army aircraft. These maintenance levels: Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM) and Depot Maintenance are depicted on the MAC as:

AVUM WHICH CORRESPONDS TO THE O CODE IN THE REPAIR PARTS AND SPECIAL TOOLS LIST (RBT)

AVIM WHICH CORRESPONDS TO THE F CODE IN THE REPAIR PARTS AND SPECIAL TOOLS LIST (RBT)

DEPOT WHICH CORRESPONDS TO THE D CODE IN THE REPAIR PARTS AND SPECIAL TOOLS LIST (RBT)

b. The maintenance to be performed below depot and in the field is described as follows:

(1) Aviation Unit Maintenance (AVUM) AVUM activities will be staffed and equipped to perform high frequency "On-Equipment" maintenance tasks required to retain or return equipment to a serviceable condition. The maintenance capability of the AVUM will be governed by the MAC and limited by the amount and complexity of support equipment, facilities required, and number of spaces and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignment of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources and air mobility requirements).

(a) Company Size Aviation Units' Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of equipment operational readiness. Perform maintenance inspections and servicing to include daily, intermediate, periodic and special inspections as authorized by the MAC or higher headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual troubleshooting instructions, Built-In-Test Equipment (BITE), installed instruments, or easy to use Test Measurement and Diagnostic Equipment (TMDE). Replace worn or damaged modules/components which do not require complex adjustments or system alignment and which can be removed/installed with available skills, tools and equipment. Perform operational and continuity checks and make minor repairs. Perform servicing, functional adjustments, and minor repair/replacement. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

(b) Less than Company Size Aviation Units: Aviation elements organic to brigade, group, battalion headquarters and detachment size units are normally small and have less than ten aircraft assigned. Maintenance tasks performed by the aircraft crew chief or assigned aircraft repairman will normally be limited to preventive maintenance, inspections, servicing, spot painting, stop drilling, minor adjustments, module/ component fault diagnosis and replacement of selected modules/components. Repair functions will normally be accomplished by the supporting AVIM unit.

(2) Aviation Intermediate Maintenance (AVIM) AVIM provides mobile, responsive "One Stop" maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance). Performs all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/ components and end items which can be accomplished efficiently with available skills, tools, and equipment. Establishes the Direct Exchange (DX) program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level Inspects, troubleshoots, tests, diagnoses,

repairs, adjusts, calibrates, and aligns system modules/ components. Module/component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings and items of common hardware. Unserviceable reparable modules/ components and end items which are beyond the capability of AVIM to repair will be evacuated to Depot Maintenance. This level will perform special inspections which exceed AVUM capability. Provides quick response maintenance support, on-the-job training, and technical assistance through the use of mobile maintenance contact teams. Maintains authorized operational readiness float. Provides collections and classification services for serviceable/ unserviceable material Operates a cannibalization activity in accordance with AR 750-50. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting non-divisional AVIM unit).

B-2. USE OF THE MAINTENANCE ALLOCATION CHART.

a. The MAC assigns maintenance functions to the lowest level of maintenance based on past experience and the following consideration:

(1) Skills available.

(2) Time required.

(3) Tools and test equipment required and/or available.

b. Only the lowest level of maintenance authorized to perform a maintenance function is indicated If the lowest level of maintenance cannot perform all tasks of any single maintenance function (e.g., test, repair), then the higher maintenance level(s) than can accomplish additional tasks will also be indicated.

c. A maintenance function assigned to a maintenance level will automatically be authorized to be performed at any higher maintenance level.

d. A maintenance function that cannot be performed at the assigned level of maintenance for any reason may be evacuated to the next higher maintenance organization. Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required or directed by the appropriate commander.

e The assignment of a maintenance function will not be construed as authorization to carry the associated repair parts in stock. Authority to requisition, stock, or otherwise secure necessary repair parts will be as specified in the repair parts and special tools list appendix.

f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, maintenance functions assigned to a maintenance level may, on a one-time basis and at the request of the lower maintenance level, be specifically authorized by the maintenance officer of the level of maintenance to which the function is assigned. The special tools, equipment, etc. required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility of the function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower level.

g. Organizational through depot maintenance of the US Army Electronics Command equipment will be performed by designated US Army Electronics Command personnel.

h. Changes to the MAC will be based on continuing evaluation and analysis by responsible technical personnel and on reports received from field activities.

B-3. DEFINITIONS.

a. Inspect. To determine serviceability of an item by comparing its physical, mechanical and electrical characteristics with established standards.

b. Test. To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents and air.

d. Adjust. To rectify to the extent necessary to bring into proper operating range.

e. Align. To adjust specified variable elements of an item to bring to optimum performance.

f. Calibrate. To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy

in the accuracy of the instrument or test equipment being compared with the certified standard.

g. Install. To set up for use in an operational environment such as an emplacement, site or vehicle.

h. Replace. To replace unserviceable items with serviceable assemblies, subassemblies or parts.

i. Repair. To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This includes, but is not limited to, inspection, cleaning, preserving, adjusting, replacing, welding, riveting, and strengthening.

j. Overhaul. To restore an item to a completely serviceable condition as prescribed by maintenance serviceability standards prepared and published for the specific item to be overhauled.

k. Rebuild. To restore an item to a standard as nearly as possible to the original or new condition in appearance, performance, and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements (items) using original manufacturing tolerances and specifications, and subsequent reassembly of the item.

B-4. FUNCTIONAL GROUPS.

Standard functional groupings are not considered feasible for aviation ground support equipment due to variation and complexity. Therefore, variations to functional groupings may occur.

B-5. MAINTENANCE CATEGORIES AND WORK ' TIMES.

The maintenance categories (levels) AVUM, AVIM, and DEPOT are listed on the Maintenance Allocation Chart with individual columns that indicate the work times for maintenance functions at each maintenance level. Work time presentations such as 0.1 indicate the average time it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the columnar presentation shall indicate "_•_". Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function.

B-6. TOOLS AND TEST EQUIPMENT (Section III).

Common tool sets (not individual tools), special tools, test and support equipment required to perform maintenance functions are listed alphabetically with a reference number to permit cross-referencing to column 5 in the MAC. In addition, the maintenance category authorized to use the device is listed along with the item National stock Number (NSN) and, if applicable, the tool number to aid in identifying the tool/device.

Section II. MAINTENANCE ALLOCATION CHART

Nomenclature of end item

VERTICAL INSTRUMENT DISPLAY SYSTEM BENCH TEST SET

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Category AVUM	*AVIM	DEPOT	(5) Tools and Equip (Note)	(6) Remarks
01	Vertical Instrument Display System Bench Test Set	Test		1.0	1.0		
		Repair*		1.5	1 5		
		Calibrate*			1.0		*Refer to TB43-180
	Indicator Lamp	Replace		.05			
	Fuse	Replace		.05			
	Fuse	Replace		.05			
	Knob	Replace		1.0			
	Lens, White	Replace		.05			
	Lens, Yellow	Replace		.05			
	Lens, Red	Replace		.05			
	Cable Assy	Replace		.01			
	Cable Assy	Replace		.01			
	Cable Assy	Replace		.01			
	Cable Assy	Replace		.01			
	Cable Assy	Replace		.01			

*Performed by (USATSG)- US Army Test Measurement, and Diagnostic Equipment Support Group.

Section II. MAINTENANCE ALLOCATION CHART (Continued)

Nomenclature of end item

INSTRUMENT DISPLAY SYSTEM BENCH TEST SET

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Category AVUM	*AVIM	DEPOT	(5) Tools and Equip (Note)	(6) Remarks
	Power Supply Card (A1)	Replace		5			
		Repair		1.0	2.0		
	Oil Press Sim. Card (A2)	Replace		5			
		Repair		1.0	1.0		
	Frequency Input Sim. Card (A3)	Replace		5			
		Repair		1.0	2.0		
	D C. Input Sim. Card (A4)	Replace		.5			
		Repair		1.0	2.0		
	Switch, toggle (S9 thru S37)	Test		.2			
		Replace		.5			
	Switch, Push (S8)	Test		.2			
		Replace		.5			
	Switch, toggle (S19)	Test		.2			
		Replace		.5			
	Switch, toggle (S2 thru S7)	Test		.2			
		Replace		.5			
	Switch, toggle (S38)	Test		.2			
		Replace		.5			
	Switch, toggle (S39)	Test		.2			
		Replace		.5			
	Switch, toggle (S I)	Test		.2			
		Replace		.5			
	Resistor, variable (R I thru R8, R16, R17)	Test		.2			
		Replace		.5			
	Resistor, variable (R 12 & R13)	Test		.2			
		Replace		.5			
	Resistor, variable (R9, RIO)	Test		.2			
		Replace		.5			
	Lamp Power Supply	Replace		.5			
		Repair		1.5	3.0	I	
	Regulator Board	Replace		.5			
		Repair		1.5	2.5		
	BCD Counter Board	Replace		.5			
		Repair		1.0	2.0		
	Oscillator Control Board	Replace		.5			
		Repair		2.0	3.5		
	Analog Processor # I	Replace		.5			
		Repair		1.5	3.0		
	Analog Processor #2	Replace		.5			
		Repair		1.5	3.0		
	Monitor No. # 1	Replace		.5			
		Repair		2.0	3.5		
	Monitor No. # 2	Replace		.5			
		Repair		2.5	4.5		
	Diode (CR I thru CR39) (Lamp Test Cd)	Test		.2			
		Replace		.5			
	Logic Power Supply	Replace		.6			
		Repair		2.0	4.0		

*Maintenance performed by ATST

NOTE Use Electrical Repairman's Tool Kit, NSN 5180-00-323-4915.

APPENDIX C
REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

1. Scope

This manual lists spares and repair parts required for performance of Aviation Intermediate Maintenance (AVIM) of the Vertical Instrument Display System Bench Test Set. It authorizes the requisitioning and issue of spares and repair parts as Indicated by the source and maintenance codes.

2. General

This Repair Parts and Special Tools List is divided into the following sections.

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use In the performance of maintenance Parts are listed In figure and item number sequence Items are indented when required to indicate the relationship to the next higher assembly.

b. Section III. Special Tools List. (Not Applicable).

c. Section IV. National Stock Number and Part Number Index. A list, in descending National Item Identification Number (NIIN) sequence, of all National Stock Numbers (NSN), or Management Control Numbers (MCN) appearing In the listings, followed by a list in alphanumeric sequence, of all part numbers appearing in the listings National Stock Numbers or Management Control Numbers and part numbers are cross-referenced to each illustration figure and item number appearance

3. Explanation of Columns.

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure number of the illustration in which the Item is shown.

(2) Item Number. The number used to identify each item called out In the illustration.

b. Source, Maintenance, and Recoverability Codes (SMR).

(1) Source Code. Source codes are assigned to support items to indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code		Definition
PA	---	Item procured and stocked for anticipated or known usage.
AD	---	Item to be assembled at depot maintenance level

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except aircraft support items as restricted by AR 700-42.

(2) A Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will Indicate the lowest maintenance level authorized to remove, replace, and use the support item The maintenance code entered in the third position will indicate the following level of maintenance.

Code		Application/Explanation
F	---	Support item is removed, replaced, used at the Aviation Intermediate Maintenance (AVIM) level

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i e., all authorized maintenance functions) This position will contain the following maintenance code.

Code		Application/Explanation
D	---	The lowest maintenance level capable of complete repair of the support item is the depot level, performed by depot, mobile depot or specialized repair activity.
Z	---	Nonreparable No repair is authorized

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Code	Definition
Z	Nonrepairable item. When unserviceable, condemn and dispose at the level indicated in position 3.
D	Repairable item. When beyond lower level repair capability. send to depot Condemnation and disposal not authorized below depot level.

c. National Stock Number. Indicates the National Stock Number assigned to the item and will be used for requisitioning purposes. Note: NSNs have not as yet been assigned to all those items that require them, i.e., all "P" source coded items. Until such time as NSNs are assigned, these parts may be requisitioned by part number and Federal Supply Code for Manufacturers, or Management Control Number (MCN).

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements, to identify an item or range of items.

NOTE

When a stock numbered item is requisitioned, the repair part received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. Description. Indicates the Federal item name and any additional description required to identify the item. Basis of Issue (BOI) for Special Tools, Ground Support, and Flyaway Equipment. The Usable On Code designates to which Bench Test Set (BTS) variation the subassembly or component belongs. An "A" under the Usable On Code designates the part to BTS PIN 245-476854-000; a "B" designates the part to BTS PIN 245-476854-001. No entry under the Usable On Code implies used by both variations.

g. Unit of Measure (UIM). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two character alphabetical abbreviation (e g., ca, in, pr, etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Incorporated in Unit. Indicates the quantity of the item required for one assembly only, including instances when similar assemblies are broken down together. A "V' appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, (e.g., shims, spacers, etc.).

4. How to Locate Repair Parts.

a. When National Stock Number, or Management Control Number, or Part Number is Unknown:

(1) First. Find the illustration covering the assembly group to which the repair part belongs.

(2) Second. Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(3) Third. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number, or Management Control Number, or Part Number is 'Known:

(1) First. Using the Index of National Stock Numbers or Management Control Numbers and Part Numbers, find the pertinent National Stock Number, Management Control Number or part number. This index is in descending National Item Identification Number (NIN) sequence followed by a list of part numbers in descending alphanumeric sequence, cross-referenced to the illustrations figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the Repair Parts List.

5. Abbreviations. (Not Applicable).

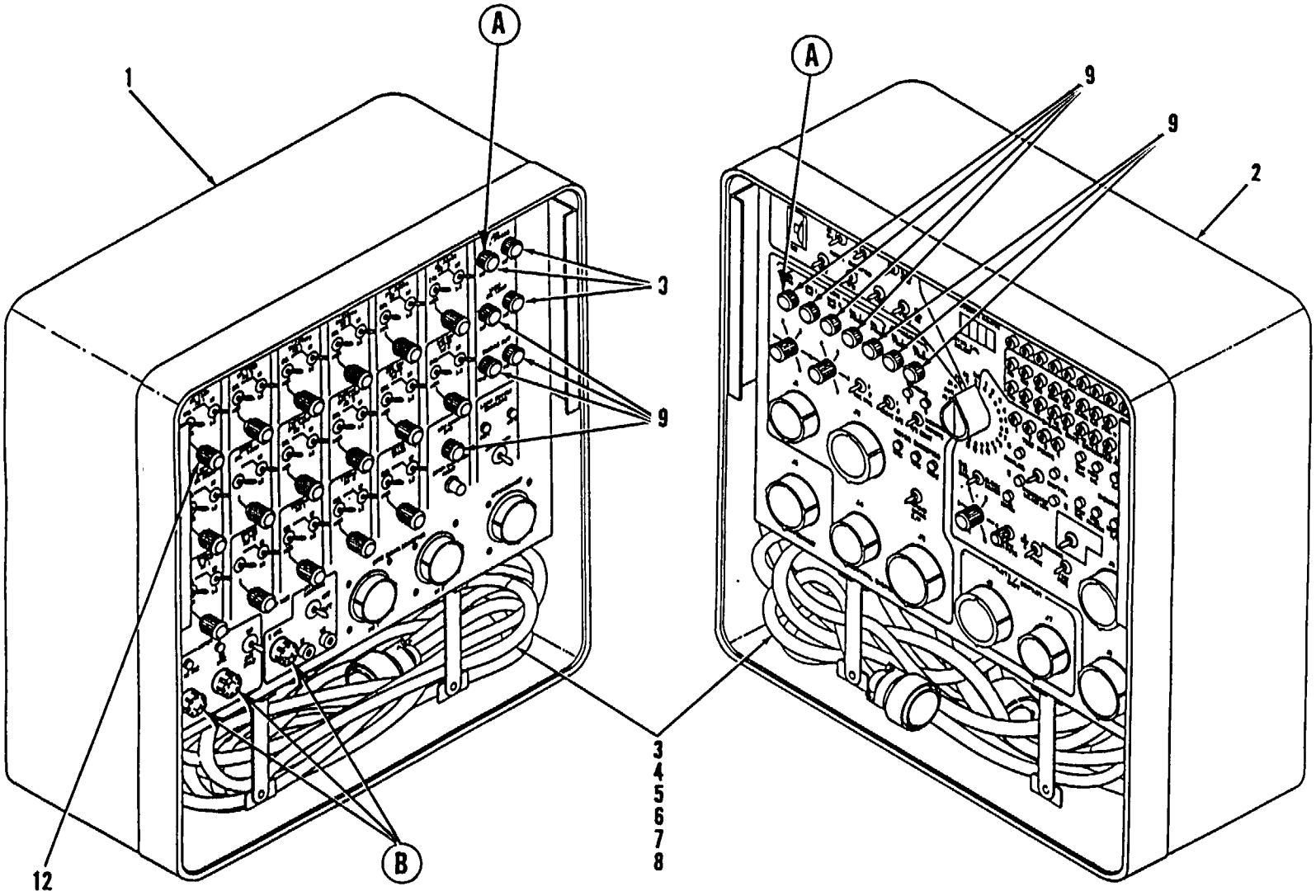

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Figure C-1. Vertical Instrument Display System Bench Test Set (Sheet 1 of2)

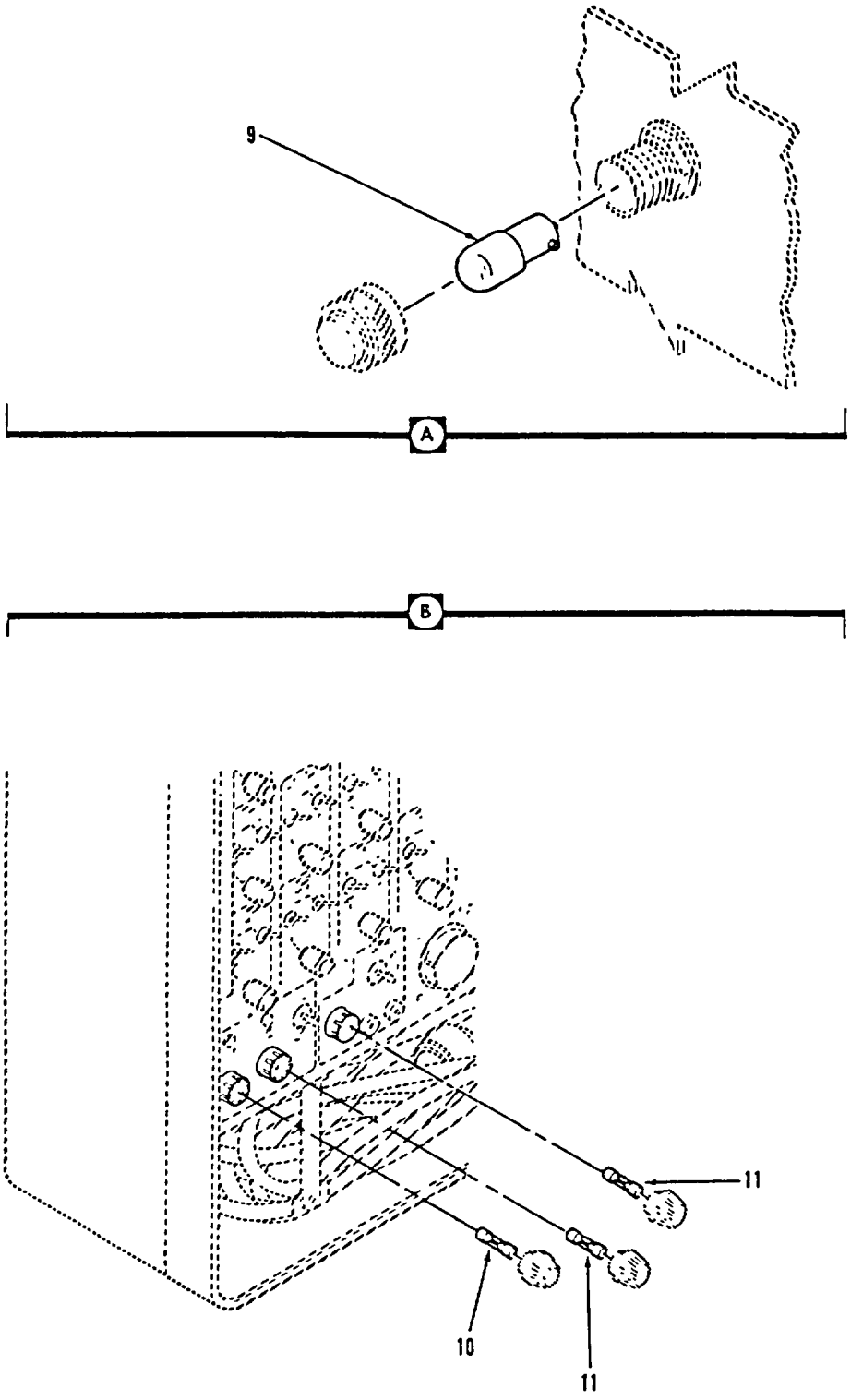

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Figure C-1. Vertical Instrument Display System Bench Test Set (Sheet 2 of 2)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 01. VERTICAL INSTRUMENT DISPLAY SYSTEM BENCH TEST SET		
C-1	1	XDFDD		90073	244-476862-000	SENSOR SIMULATOR	EA	1
C-1	2	XDFFF		90073	244-476863-000	UNIT TESTER	EA	1
C-1	3	XDFZZ		90073	217419741-000	CABLE ASSEMBLY, SIMULATOR TOSDC	EA	1
C-1	4	PBFZZ	1560-01-165-5460	90073	217-419742-000	CABLEASSEMBLY, INTERCONNECT	EA	1
C-1	5	XDFZZ		90073	217-419744-000	CABLEASSEMBLY, UNIT TESTERTOCDU	EA	2
C-1	6	XDFZZ		90073	217-419745-000	CABLEASSEMBLY, UNITTESTERTO PDU	EA	1
C-1	7	XDFZZ		90073	217-419747-000	CABLE ASSEMBLY, UNIT TESTER TO SDC	EA	1
C-1	8	XDFZZ		90073	217-419748-000	CABLE ASSEMBLY, UNITTESTERTO SDC.	EA	2
C-1	9	PAFZZ	6210-00-690-1569	72619	508-7538-504	LAMP	EA	14
C-1	10	PAFZZ	5920-00-054-0173	81349	FMG1A125V2A	FUSE, 2A	EA	1
C-1	11	PAFZZ	5920-00-557-5033	71400	ABC8	FUSE, 8A	EA	2
C-1	12	PAFZZ	5355-00-133-2459	95146	K500B1-8	KNOB	EA	17

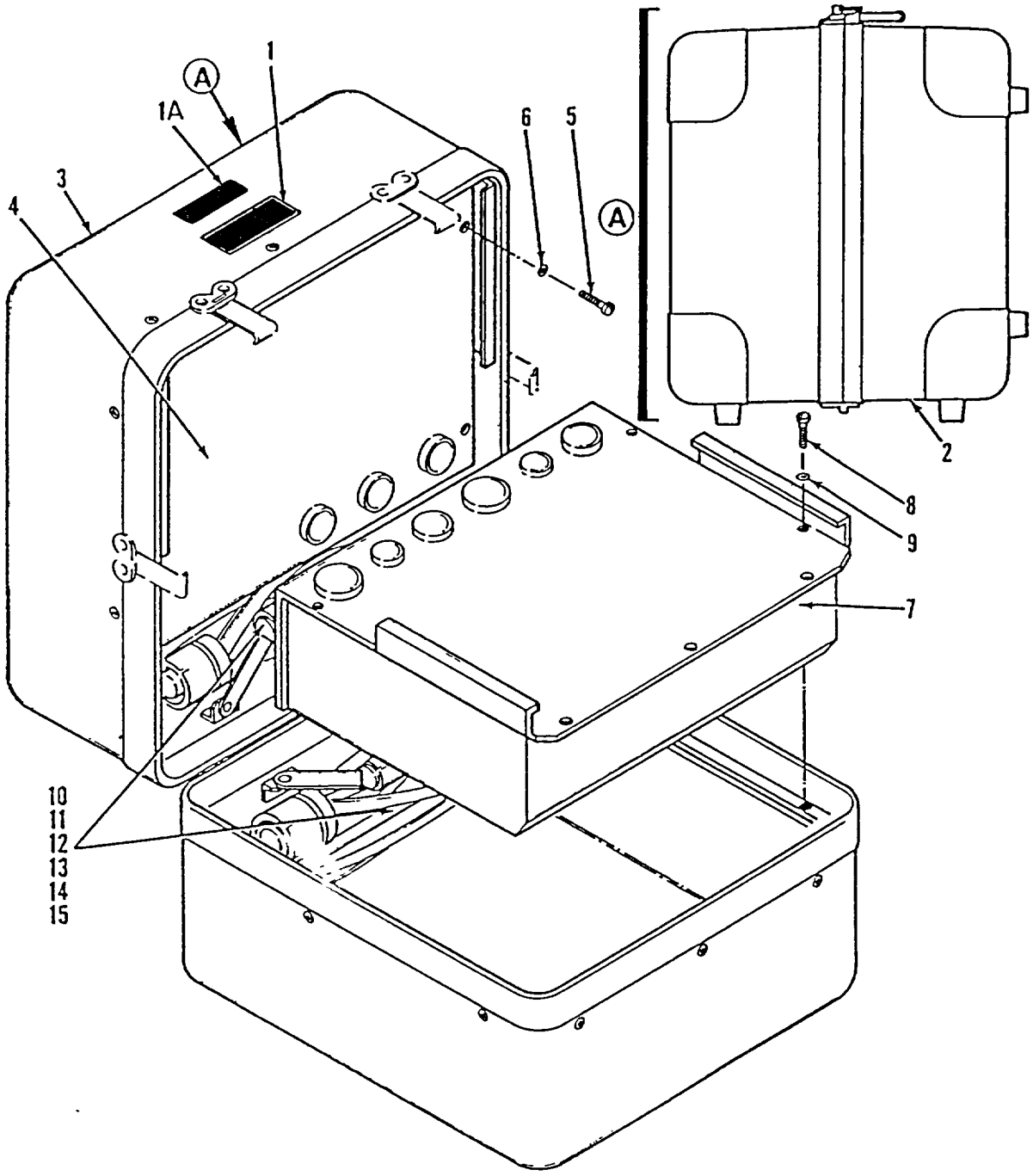

Figure C-2. Bench Test Set

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-2		PBFDD	4920-01-112-5905	90073	245-476854-000	BENCH TEST .....(A)	REF	REF
C-2		PBFDD	4020-01-327-1312	90073	245-476854-001	BENCHTESTSET .....(B)	REF	REF
C-2	1	XDFZZ		90073	624-354092-000	. PLATE, IDENTIFICATION .....(A)	EA	1
C-2		XDFZZ		90073	624-601589-000	. PLATE, IDENTIFICATION .....(B)	EA	1
C-2	1A	XDFZZ		90073	624-352270-000	. PLATE, MOD RECORD.....EA	1	
C-2	2	XAFDD		90073	244-459655-000	. BENCH,TESTSET .....(A)	EA	1
C-2		XAFDD		90073	245-601109-001	. BENCH, TEST SET .....(B)	EA	1
C-2	3	XDFZZ		90073	538-473940-000	. . CASE, BENCH TEST SET (SEE FIG C-3 FOR BREAKDOWN	EA	1
C-2	4	XDFFF		90073	244-476862-002	. . SIMULATOR (SEE FIG C-4 FOR BREAKDOWN	EA	1
C-2	5	PAFZZ	5305-00-054-6654	96906	MS51957-30	. . SCREW, MACHINE	EA	7
C-2	6	PAFZZ	5310-00-773-7624	80205	NAS620C6	. . WASHER, FLAT	EA	7
C-2	7	XDFFF		90073	244-476863-000	. . UNIT TESTER (SEE FIG C-9 FOR BREAKDOWN. .....(A)	EA	1
C-2		XDFFF		90073	245-601115-000	. . UNITTESTER(SEEFIG C-9FORBREAKDOWN) .....(B)	EA	1
C-2	8	PAFZZ	5305-00-054-6654	96906	MS51957-30	. . SCREW, MACHINE	EA	7
C-2	9	PAFZZ	5310-00-773-7624	80205	NAS620C6	. . WASHER,FLAT	EA	7
C-2	10	XDFZZ		90073	217-419741-000	. . CABLE, ASSEMBLY SIMULATOR TO SDC (SEE FIG C-24 FOR BREAKDOWN)	EA	1
C-2	11	PBFZZ	1560-01-165-9460	90073	217-419742-000	. . CABLE, ASSEMBLY INTERCONNECT (SEE FIG C-25 FOR BREAKDOWN)	EA	1
C-2	12	XDFZZ		90073	217-419744-000	. . CABLE, ASSEMBLY UNIT TESTER TO CDU (SEE FIG C-26 FOR BREAKDOWN)	EA	2
C-2	13	XDFZZ		90073	217-419745-000	. . CABLE, ASSEMBLY UNIT TESTER TOPDU (SEE FIG C-27 FOR BREAKDOWN)	EA	1
C-2	14	XDFZZ		90073	217-419747-000	. . CABLE, ASSEMBLY UNIT TESTER TO SDC (SEE FIG C-28 FOR BREAKDOWN)	EA	1
C-2	15	XDFZZ		90073	217-419748-000	. . CABLE, ASSEMBLY UNIT TESTER TO SDC (SEE FIG C-29 FOR BREAKDOWN)	EA	2

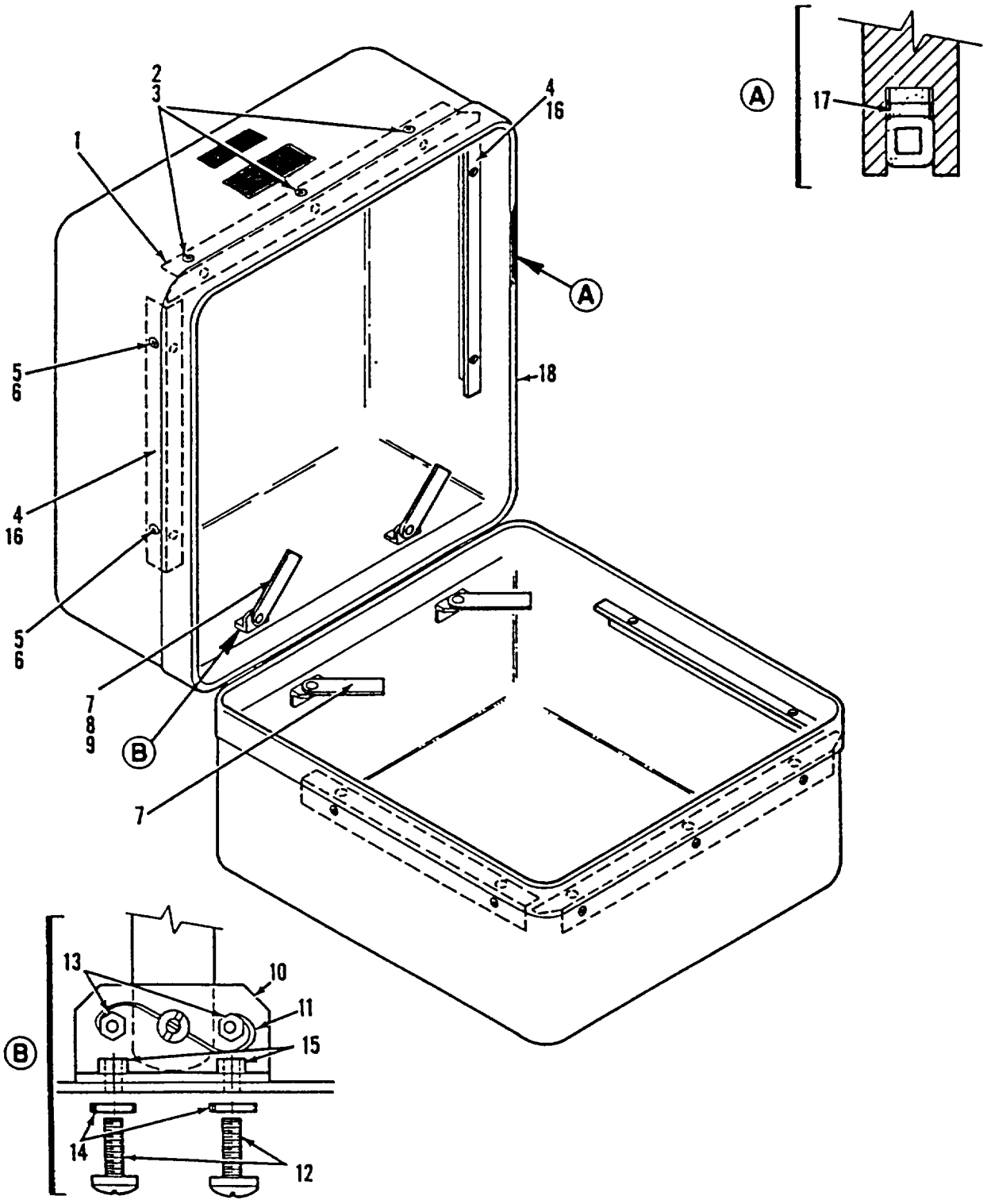

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Figure C-3. Case, Bench Test Set

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-3		XDFZZ		90073	538-473940-000	CASE. BENCH TEST SET (SEE FIG. C-2 FOR NRA)	REF	REF
C-3	1	XDFZZ		90073	524-354066-000	. BRACKET ANGLE, TOP	EA	2
C-3	2	PAFZZ	5305-00-054-6667	81349	MS51957-42	. SCREW, MACHINE	EA	6
C-3	3	XDFZZ		90073	732-355264-000	. SHIM	EA	V
C-3	4	XDFZZ		90073	524-354067-000	. BRACKET, ANGLE, SIDE	EA	4
C-3	5	PAFZZ	5305-00-054-6667	96906	1S51957-42	. SCREW, MACHINE	EA	8
C-3	6	XDFZZ		90073	732-355264-000	. SHIM	EA	V
C-3	7	XDFZZ		90073	619-354346-000	. BAR, RETAINER	EA	4
C-3	8	PAFZZ	5325-00-292-8138	72794	AJ3-25	. STUD, OVAL HEAD, LONG UNDERCUT	EA	4
C-3	9	PAFZZ	5325-00-631-4301	72794	GH3	. GROMMET	EA	4
C-3	10	XDFZZ		90073	524-354344-000	. BRACKET, RETAINER	EA	4
C-3	11	PAFZZ	5325-00-171-4600	72794	83-175	. SPRING	EA	4
C-3	12	PAFZZ	5305-00-054-6651	96906	MS51957-27	. SCREW, MACHIN	EA	8
C-3	13	PAFZZ	5305-00-727-8833	96906	MS51959-3	. SCREW, MACHINE	EA	8
C-3	14	PAFZZ	5310-00-043-4708	80205	NAS620C2	. WASHER, FLAT	EA	8
C-3	15	PAFZZ	5310-00-725-1270	72962	LE-3158-26	. NUT, SELF-LOCKING	EA	8
C-3	16	XDFZZ		90073	732-355264-000	. SHIM	EA	4
C-3	17	XDFZZ		90073	728-354688-000	. GASKET	EA	2
C-3	13	XDFZZ		90073	536-473941-000	. CASE	EA	1

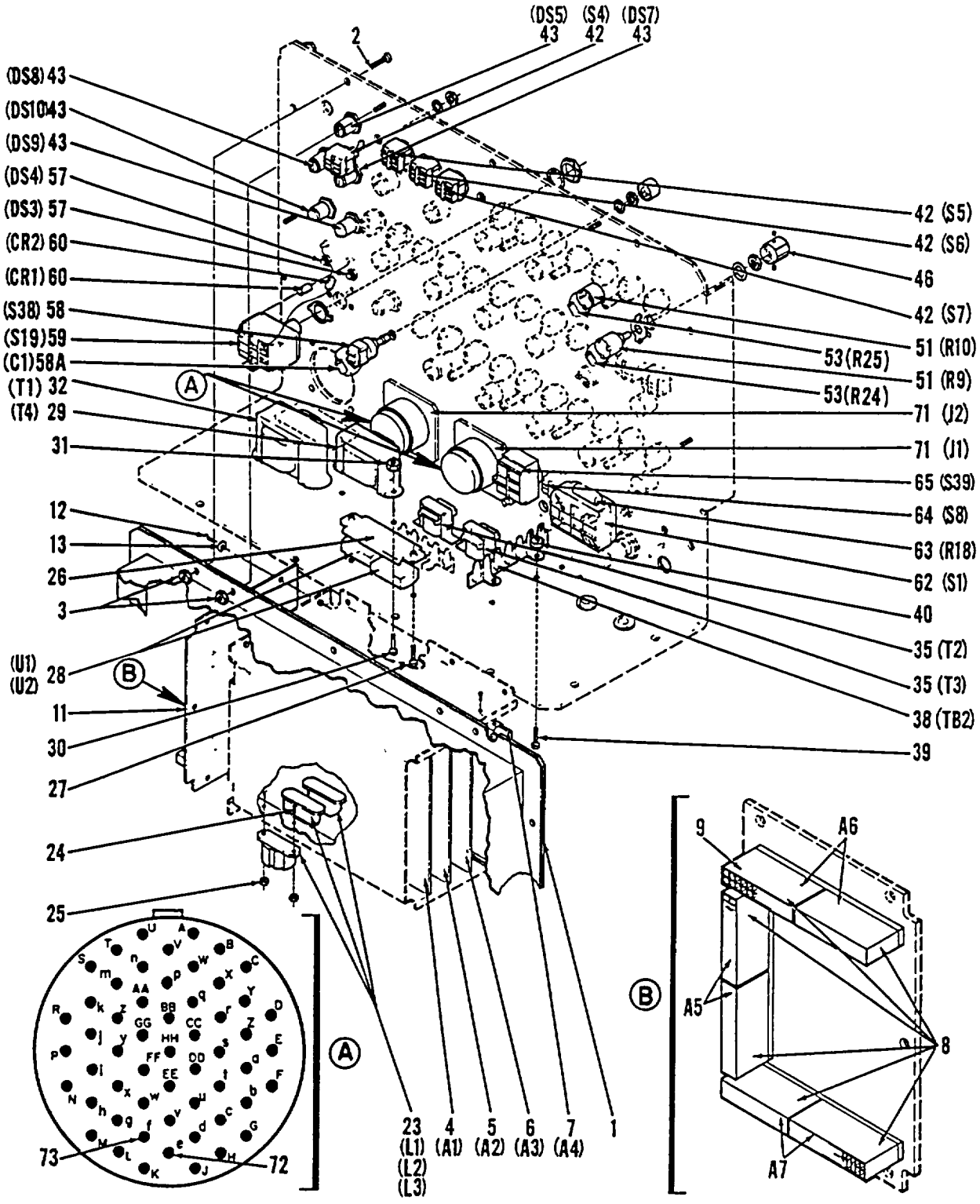
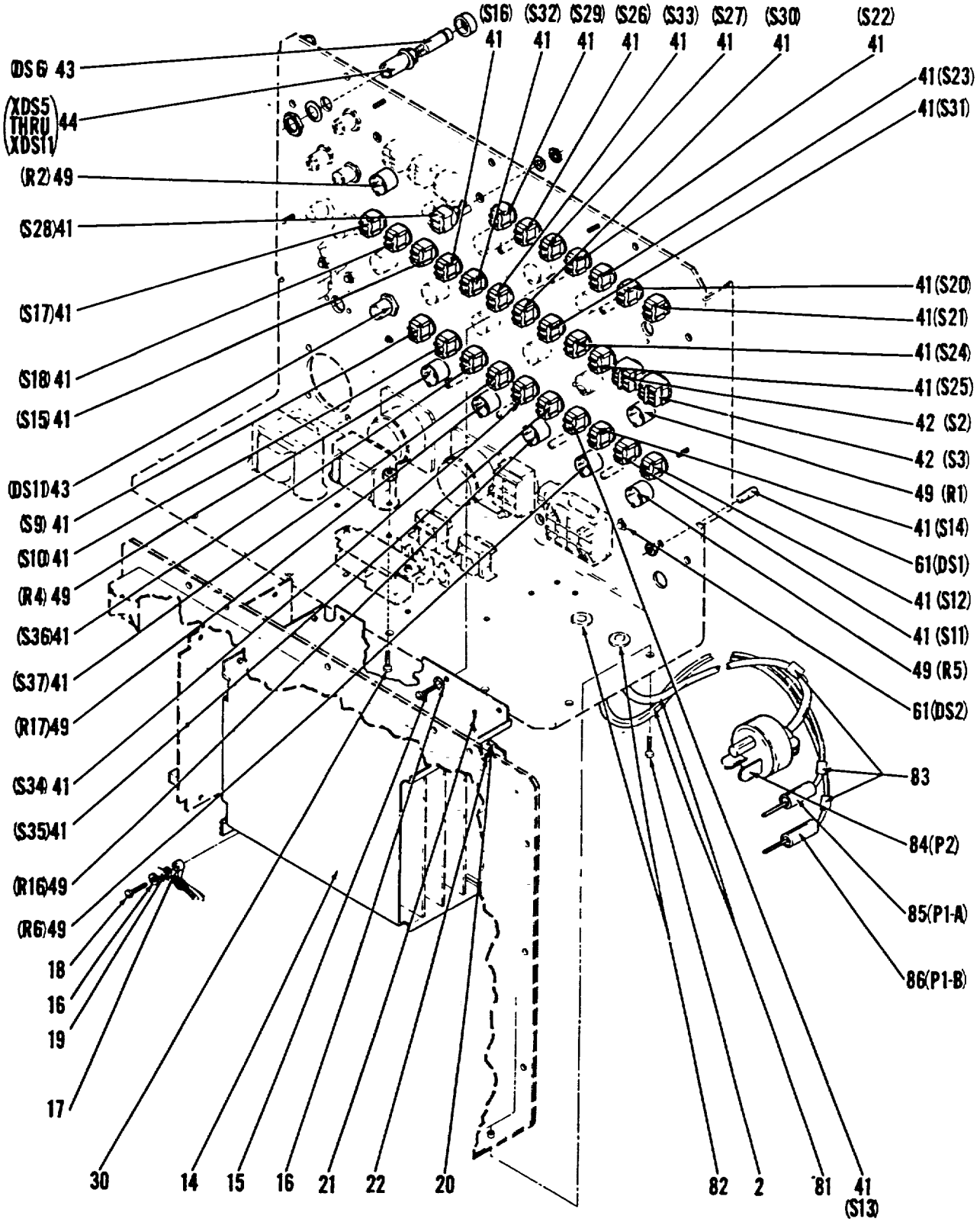


Figure C-4. Simulator (Sheet 1 of 3)



S 69467.2(B)

Figure C-4. Simulator (Sheet 2 of 3)

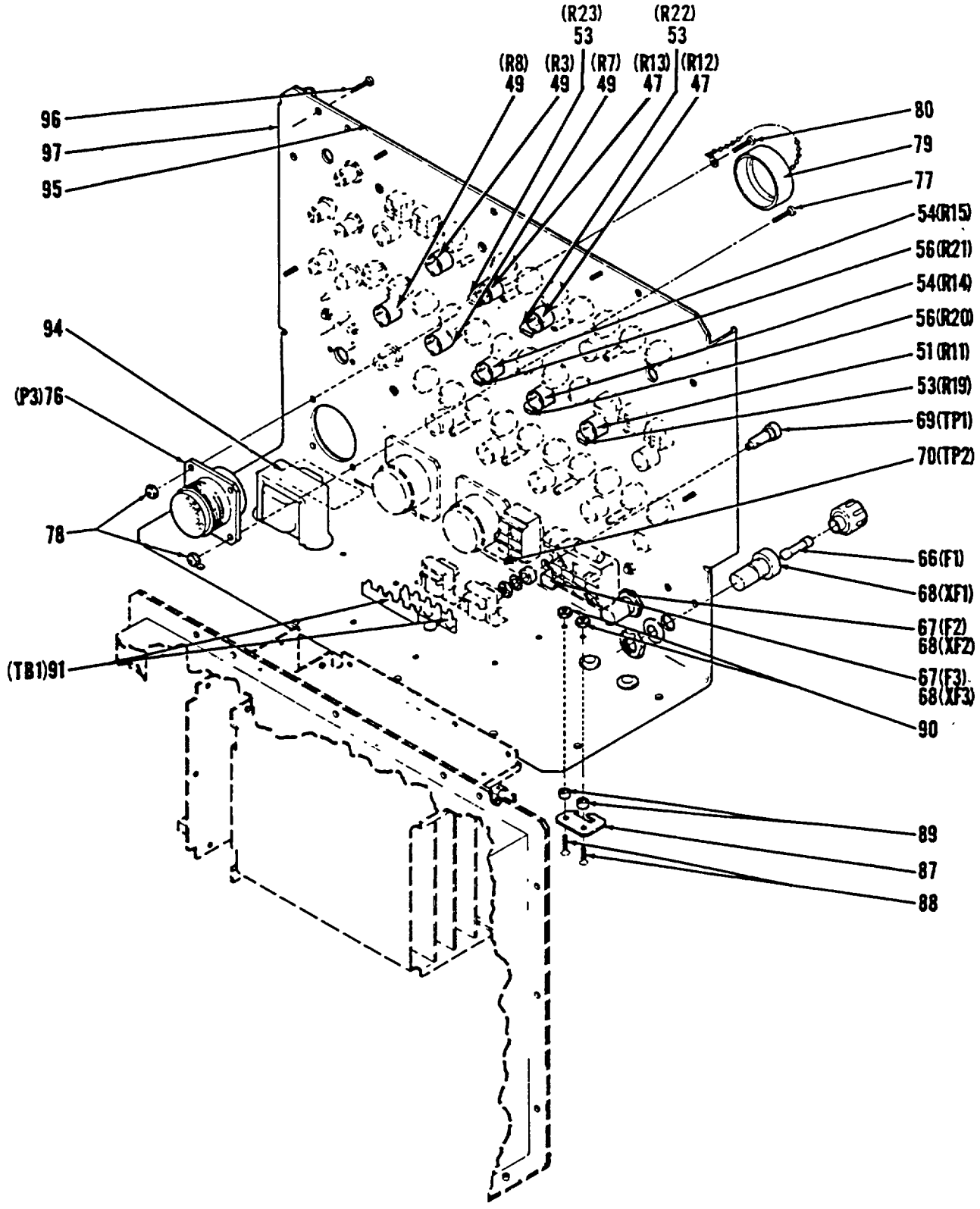
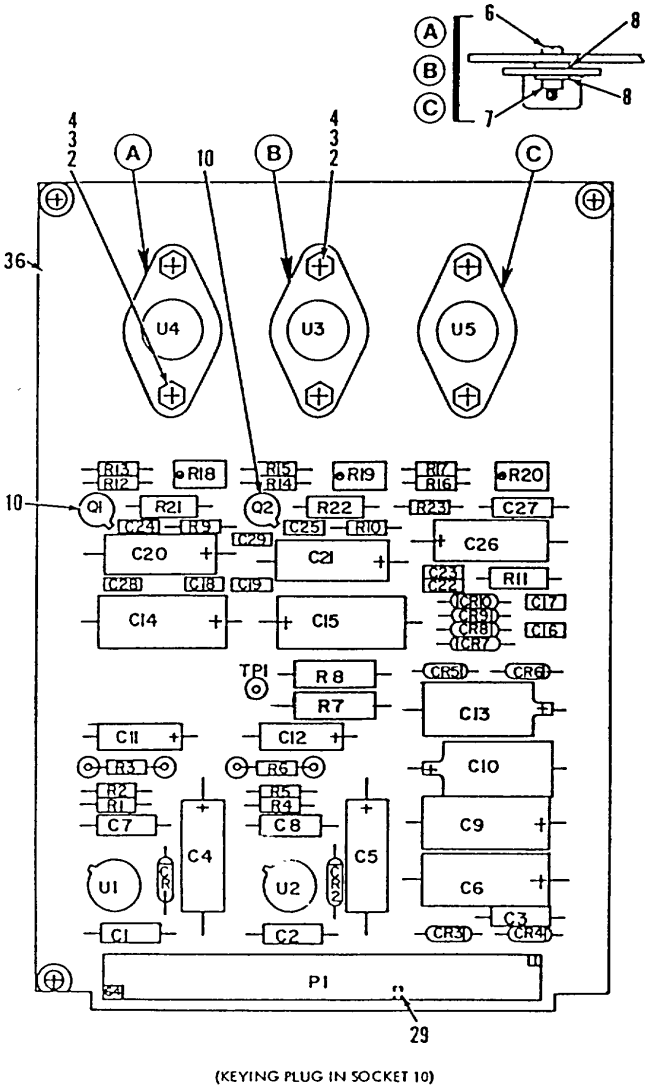


Figure C-4. Simulator (Sheet 3 of 3)

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-4		XDFFF		90073	244-476862-002	SIMULATOR (SEE FIGURE C-2 FOR NHA)	REF	REF
C-4	1	XDFZZ		90073	656473839-000	. SHIELD, SIMULATOR	EA	1
C-4	2	PAFZZ	5305-00-054-6652	96906	MS51957-28	. SCREW, MACHINE	EA	8
C-4	3	PAFZZ	5310-00-878-3293	96906	MS21043-06	. NUT, SELF-LOCKING	EA	4
C-4	4	PBFFF	5999-01-116-2636	90073	220-419918-000	. POWER SUPPLY CARD (SEE FIGURE C-5 FOR BREAKDOWN)	EA	1
C-4	5	PBFFF	5999-01-116-2633	90073	220-419920-000	. OIL PRESSURE SIMULATOR CARD (SEE FIGURE C-6 FOR BREAKDOWN)	EA	1
C-4	6	PBFFF	5999-01-116-2639	90073	220-419922-000	. FREQUENCY INPUT SIMULATOR CARD (SEE FIGURE C-7 FOR BREAKDOWN)	EA	1
C-4	7	PBFFF	5999-01-116-2638	90073	220-419924-000	. DC INPUT SIMULATOR CARD (SEE FIGURE C-8 FOR BREAKDOWN)	EA	1
C-4	8	PAFZZ	5935-00-828-1856	00779	86148-7	. CONNECTOR, RECEPTACLE, ELECTRICAL 32-CONTACT, FEMALE	EA	6
C-4	9	PAFZZ	5999-01-063-1866	00779	102128-1	. CONTACT, ELECTRICAL(FOR AMP86148 CONNECTOR)	EA	186
C-4	10	PAFZZ	5935-00426-3083	00779	86286-1	. KEYING PLUG	EA	5
C-4	11	PAFDD	5999-01-116-2637	90073	220-419914-000	. SIMULATOR INTERCONNECTING BOARD	EA	1
C-4	12	PAFZZ	5305-00-054-5648	96906	MS51957-14	. SCREW, MACHINE	EA	5
C-4	13	PAFZZ	5310-00-595-6211	96906	MS15795-803	. WASHER,FLAT	EA	5
C-4	14	XDFZZ		90073	664-473814-000	. SUPPORT MOUNTING GUIDE	EA	1
C-4	15	PAFZZ	5305-00-054-5648	96906	MS51957-14	. SCREW. MACHINE	EA	7
C-4	16	PAFZZ	5310-00-933-8118	96906	MS35338-135	. LOCKWASHER	EA	8
C4	17	PAFZZ	5340-01-230-3262	59730	TY-33M	. CLAMP, CABLE, SELF-LOCKING	EA	1
C-4	18	PAFZZ	5305-00-054-5651	96906	MS51957-17	. SCREW, MACHINE	EA	1
C-4	19	PAFZZ	5310-01-595-6211	96906	MS15795-803	. WASHER, FLAT	EA	1
C-4	20	PAFZZ	5999-01-194-8069	18915	35-1B-2-11-3	. RETAINER, PCS	EA	8
C-4	21	PAFZZ	5305-00-929-6421	80205	NAS1635-00-3	. SCREW, MACHINE	EA	16
C-4	22	PAFZZ	5310-00-405-9866	72962	92-1660-00	. NUT, HEX, MINIATURE, 0-80	EA	16
C-4	23	PBFZZ	5950-01-0974883	90073	260-475350-000	. CHOKE	EA	3
C-4	24	PAFZZ	5305-00-054-5638	96906	MSS51957-4	. SCREW, MACHINE	EA	6
C-4	25	PAFZZ	5310-00-727-0725	80205	NAS1291-C02	. HEXNUT	EA	6
C-4	26	PAFZZ	6620-01-087-4361	90073	628-354273-000	. PLATE, RETAINING, THERMOCOUPLE, DUAL	EA	2
C-4	27	PAFZZ	5305-00-054-5651	96906	MS51957-17	. SCREW MACHINE	EA	2
C-4	28	PBFZZ	6685-01-075-7866	51578	NC15OLKOC	. THERMOCOUPLE REFERENCEJUNCTION SUBMIN, . FULLBRIDGE COMPENSATORS	EA	2
C-4	29	XDFZZ		90073	322-215856-000	. TRANSFORMER, POWER	EA	1
C-4	30	PAFZZ	5305-00-054-6651	96906	MS51957-27	SCREW, MACHINE	EA	2
C-4	31	PAFZZ	5310-00-878-3291	96906	MS2104306	. NUT, SELF-LOCKING	EA	2
C-4	32	XDFZZ		90073	322-215855-000	. TRANSFORMER, POWER	EA	1
C-4	33	PAFZZ	5305-00-054-6651	96906	MS51957-27	. SCREW, MACHINE	EA	1
C-4	34	PAFZZ	5310-00-878-3291	96906	MS21043-06	. NUT, SELF-LOCKING	EA	2
C-4	35	XDFZZ		90073	322-215854-000	. TRANSFORMER, POWER	EA	2
C-4	36	PAFZZ	5305-00-054-5648	96906	MS51957-14	. SCREW, MACHINE	EA	2
C-4	37	PAFZZ	5310-00-878-3292	96906	MS21043-04	. NUT, SELF-LOCKING	EA	2
C-4	38	XDFZZ		90073	666-131065-009	. TERMINALSTRIP	EA	1
C-4	39	PAFZZ	5305-00-054-6651	96906	MS51957-27	. SCREW, MACHINE	EA	2
C-4	40	PAFZZ	5310-00-878-3291	96906	MS21043-06	. NUT, SELF-LOCKING	EA	2
C-4	41	PAFZZ	5930-00-105-8202	95146	MTE-106D	. SWITCH, TOGGLE, WATERPROOF SPDT	EA	28

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-4	42	PAFZZ	5930-00-471-4962	95146	MTE-206N	. SWITCH, TOGGLE, WATERPROOF DPDT	EA	6
C-4	43	PAFZZ	6240-00-573-0629	72619	507-3917-1471-500	. LAMP, INCANDESCENT, RED, 28V	EA	7
C-4	44	PAFZZ	6210-00-690-1565	72619	508-7538-504	. LAMP, HOLDER	EA	7
C-4	45					(DELETED)		
C-4	46	PAFZZ	5335-00-133-2459	95146	K-500B 1-8	. KNOB	EA	2
C-4	47	XDFZZ		32097	3882C162-502A	. RESISTOR, VARIABLE,CERMET	EA	2
C-4	48	PAFZZ	5355-00-133-2459	95146	K-500B 1-8	. KNOB	EA	2
C-4	49	XDFZZ		32997	3862C162-103A	. RESISTOR,VARIABLE	EA	10
C-4	50	PAFZZ	5355-00-133-2459	95146	K-500B 1-8	. KNOB	EA	10
C-4	51	XDFZZ		32997	3862C182-251A	. RESISTOR, VARIABLE, CERMET	EA	3
C-4	52	PAFZZ	5355-00-133-2459	95146	K-500B 1-8	. KNOB	EA	1
C-4	53	XAFZZ		81349	RN55C5103F THROUGH RN55C5602F	. RESISTOR, FIXED, FILM SELECT ON TEST	EA	5
C-4	54	XDFZZ		32997	38262C162-501A	. RESISTOR, VARIABLE, CERMET	EA	2
C-4	55	PAFZZ	5355-00-133-2459	95146	K-500B 1-8	. KNOB	EA	2
C-4	56	PAFZZ	5905-00-468-3019	81349	RN55C2671F	. RESISTOR,FIXED,FILM	EA	2
C-4	57	PAFZZ	6210-00-064-2998	96906	MS25446-5	. LIGHTS, IND ENCAP	EA	2
C-4	58	PAFZZ	5930-01-068-5556	95146	MPE-106F	. SWITCH, PUSHBUTTON, SPDT	EA	1
C-4	58A	PAFZZ	5910-00-022-2760	81349	CK06BX104K	. CAPACITOR, FIXED CERAMIC DIELECTRIC	EA	1
C-4	59	PBFZZ	5930-00-615-7882	96906	MS35059-27	. SWITCH, TOGGLE	EA	1
C-4	60	PAFZZ	5961-00-938-1135	81349	JAN1N4148	. SEMICONDUCTORDEVICE,DIODE	EA	2
C-4	61	PAFZZ	6210-00-978-2546	96906	MS25446-6	. LIGHTS, IND ENCAP	EA	2
C-4	62	PBFZZ	5930-00-615-7883	96906	MS25068-21	. SWITCH, TOGGLE 4PDT	EA	1
C-4	63	PAFZZ	5905-00-689-4716	81349	RCR42G331J S	. RESISTOR, FIXED, COMPOSITION	EA	1
C-4	64	PAFZZ	5930-00-105-5551	95146	MPE-2068	. SWITCH, PUSHBOTTON DPDT	EA	1
C-4	65	PAFZZ	5930-00-655-1582	96906	MS35059-23	. SWITCH, TOGGLE	EA	1
C-4	66	PAFZZ	5920-00-280-4960	75915	312002	. FUSE, 3AG (FAST BLO)	EA	2
C-4	68	PAFZZ	5920-00-556-0144	81349	FHN20G	. FUSEHOLDER	EA	3
C-4	69	PAFZZ	5935-00-039-5129	03902	930-176-101	. JACK(RED)	EA	1
C-4	70	PAFZZ	5935-00-096-1844	03902	930-176-100	. JACK, (BLACK)	EA	1
C-4	71	PAFZZ	5935-01-061-9237	96906	MS3472622-55P	. CONNECTOR, RECEPTACLE ELECTRICAL	EA	2
C-4	72	PAFZZ	5999-01-059-2243	17419	0641-14-2001	. CONTACT PIN, ELECTRICAL, CHROMEL.	EA	2
C-4	73	PAFZZ	5999-01-058-8965	17419	0641-15-2001	. CONTACT PIN, ELECTRICAL, CHROMEL.	EA	2
C-4	74	PAFZZ	5305-00-054-6652	96906	MS51957-28	. SCREW, MACHINE	EA	8
C-4	75	PAFZZ	5310-00-878-3291	96906	MS21041-06	. NUT,SELF-LOCKING	EA	8
C-4	76	PAFZZ	5935-00-518-3458	96906	M53472008-55S	. CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
C-4	77	PAFZZ	5305-00-054-6652	96906	MS51???????	. SCREW, MACHINE	EA	3
C-4	78	PAFZZ	5310-00-878-3291	96906	MS21???????	. NUT,SELF-LOCKING	EA	4
C-4	79	PAFZZ	5935-00-823-0986	77820	10-10???????	. CAP, RECEPTACLE PROTECTION	EA	1
C-4	80	PAFZZ	5305-00-054-6653	96906	MS51?????	. SCREW, MACHINE	EA	1
C-4	81	PAFZZ	6145-00-538-8445	18428	8453	. CABLE, UNSCHIELDED	EA	2
C-4	82	XDFZZ		28520	SB-375-4	. BUSHING, SNAP .	EA	2

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-4	83	XDFZZ		22421	TY-51M	. MARKER Plate	EA	3
C-4	84	PAFZZ	5935-01-050-8411	74545	5929	. CONNECTOR. Plug Electrical	EA	1
C-4	85	XDFZZ		D1865	930726101	. PLUG.(Red)	EA	1
C-4	86	XDFZZ		D1865	930726-100	. PLUG(Black)	EA	1
C-4	87	XDFZZ		90073	628-354345-000	. PLATE, Retainer	EA	2
C-4	88	PAFZZ	5305-00-066-7328	96906	MS24693C27	. SCREW, Machine	EA	4
C-4	89	XDFZZ		90073	734-109096-001	. SPACER, Tubular	EA	4
C-4	90	PAFZZ	5310-00-878-3291	96906	MS21043-06	. NUT, Self-Locking	EA	4
C-4	91	XDFZZ		90073	666-131065-009	. TERMINAL STRIP	EA	2
C-4	92	PAFZZ	5305-00-054-6651	96906	M551957-27	. SCREW, Machine	EA	2
C-4	93	PAFZZ	5310-00-878-3291	96906	MS21043-06	. NUT, Self-Locking	EA	2
C-4	94	XDFZZ		90073	624-354094-00	. PLATE, Identification .	EA	1
C-4	95	XDFZZ		90073	622-459669-000	. PANEL, Front, Marking	EA	1
C-4	96	PAFZZ	5305-00-940-9442	30205	NAS1635-00-2	. SCREW, Machine	EA	4
C-4	97	XDFZZ		90073	626-459667-000	. PLATE, Front, Subassembly	EA	1



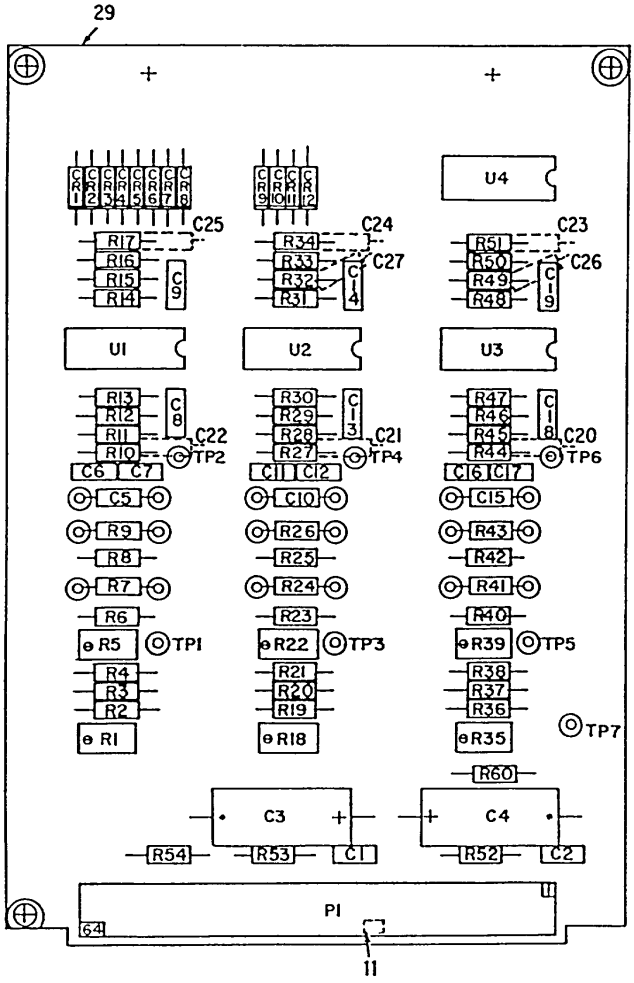
(KEYING PLUG IN SOCKET 10)

REF DES	INDEX NO.	REF DES	INDEX NO.
CR1	26	C26	17
CR2	26	C27	16
CR3	26	C28	18
CR4	26	C29	18
CR5	21	P1	27
CR6	21	Q1	10
CR7	20	Q2	10
CR8	20	R1	31
CR9	20	R2	32
CR10	20	R3	33
C1	16	R4	31
C2	16	RS	32
C3	16	R6	33
C4	28	R7	23
C5	28	R8	23
C6	24	R9	35
C7	16	R10	35
C8	16	R11	14
C9	24	R12	13
C10	22	R13	12
C11	25	R14	13
C12	25	R15	12
C13	22	R16	13
C14	34	R17	12
C15	34	R18	9
C16	16	R19	9
C17	16	R20	9
C18	16	R21	14
C19	16	R22	14
C20	17	R23	15
C21	17	U1	30
C22	19	U2	30
C23	18	U3	1
C24	18	U4	1
C25	18	U5	5

S 69468 (B)

Figure C-5. Power Supply Card

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-5		PBFFF	5999-01-116-2636	90073	220-419918-000	.POWER SUPPLY CARD (SEE FIGURE C4 FOR NHA)	REF	REF
C-5	1	PAFZZ	5962-01-130-2996	04713	MC1569R	.INTEGRATED CKT, UNEAR, VOLTAGE REGULATOR	EA	2
C-5	2	PAFZZ	5305-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	4
C-5	3	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	4
C-5	4	PAFZZ	5310-00-773-7624	80205	NAS620C6	.WASHER, FLAT .	EA	8
C-5	5	PBFZZ	5962-00-451-5843	04713	MC1563R	.INTEGRATEDCKT, LINEAR, VOLTAGE REGULATOR	EA	1
C-5	6	PAFZZ	5305-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	2
C-5	7	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	2
C-5	8	PAFZZ	5310-00-773-7624	80205	NAS620C6	.WASHER, FLAT	EA	4
C-5	9	PAFZZ	5905-00-931-2025	81349	RT24C2W102	.RESISTOR, VARIABLE	EA	3
C-5	10	PAFZZ	5961-00-951-8757	81349	JAN2N2222A	.TRANSISTOR	EA	2
C-5	11	PAFZZ	5970-01-091-8535	90073	606-202049-000	.INSULATOR DISK	EA	2
C-5	12	PAFZZ	5905-00469-4697	81349	RN55E1692B	.RESISTOR, FIXED, FILM.	EA	3
C-5	13	PAFZZ	5905-00-982-0932	81349	RN55C6811F	.RESISTOR, FIXED, FILM	EA	3
C-5	14	PAFZZ	5905-00-104-5755	81349	RCR20G100JS	.RESISTOR, FIXED, COMPOSITION	EA	3
C-5	15	PAFZZ	5905-00-116-8556	81349	RCR07G223JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-5	16	PAFZZ	5910-00-111-4811	81349	CK05BX103K	.CAPACITOR, FIXED,CERAMIC	EA	10
C-5	17	PAFZZ	5910-00-236-8766	81349	M39003/01-2374	.CAPACITOR, FIXED,ELECTROLYTIC	EA	3
C-5	18	PAFZZ	5910-00-893-6745	81349	CK05BX102K	.CAPACITOR, FIXED, CERAMIC	EA	5
C-5	19	PAFZZ	5910-00-113-7672	81349	CK05BX104K	.CAPACITOR, FIXED, CERAMIC	EA	1
C-5	20	PAFZZ	5961-00-723-3602	81349	1N4004	.SEMICONDUCTOR DEVICE, DIODE, RECTIFIER	EA	4
C-5	21	PAFZZ	5961-00-752-6163	04713	1N4744A	.SEMICONDUCTOR DEVICE, DIODE, ZENER	EA	2
C-5	22	XDFZZ		90073	211469009-105	.CAPACITOR, FIXED, NON-SOLID, ELECTRICAL, TANTALUM	EA	2
C-5	23	PAFZZ	5905-00-931-1587	81349	RW81US110F	.RESISTOR,FIXED,COMPOSITION	EA	2
C-5	24	PAFZZ	5910-00-236-8767	81349	M39003/01-2380	.CAPACITOR, FIXED, ELECTROLYTIC	EA	2
C-5	25	PAFZZ	5910-00-1444381	81349	M39003/01-2304	.CAPACITOR, FIXED, ELECTROLYTIC	EA	2
C-5	26	PAFZZ	5961-00-985-4900	81349	JAN1N647	.SEMICONNECTOR, DEVICE, DIODE, RECTIFIER	EA	4
C-5	27	PAFZZ	5935-00-131-1261	00779	2-85930-6	.CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
C-5	28	PAFZZ	5910-00-1444383	81349	M39003/01-2306	.CAPACITOR, FIXED, ELECTROLYTIC	EA	2
C-5	29	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING PLUG	EA	1
C-5	30	PAFZZ	5962-00-486-6059	27014	LM1OSM	.INTEGRATED CKT, LINEAR, VOLTAGE REGULATOR	EA	2
C-5	31	PAFZZ	5905-00-107-0656	81349	RCR07G100JS	.RESISTOR, FIXED. COMPOSITIO	EA	2
C-5	32	PAFZZ	5905-00-904-4400	81349	RN55C5901F	.RESISTOR, FIXED, FILM	EA	2
C-5	33	XAFZZ		81349	RN55C2491F THROUGH RN55C3481F	.RESISTOR, FIXED, FILM, SELECT ON TEST	EA	2
C-5	34	XDFZZ		90073	211-469009-111	.CAPACITOR, FIXED, NON-SOLID ELECTRICAL TANTALUM	EA	2
C-5	35	PAFZZ	5905-00-105-7764	81349	RCR07G222JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-5	36	XDFZZ		90073	????-419917-000	.PRINTEDWIRINGBOARD	EA	1



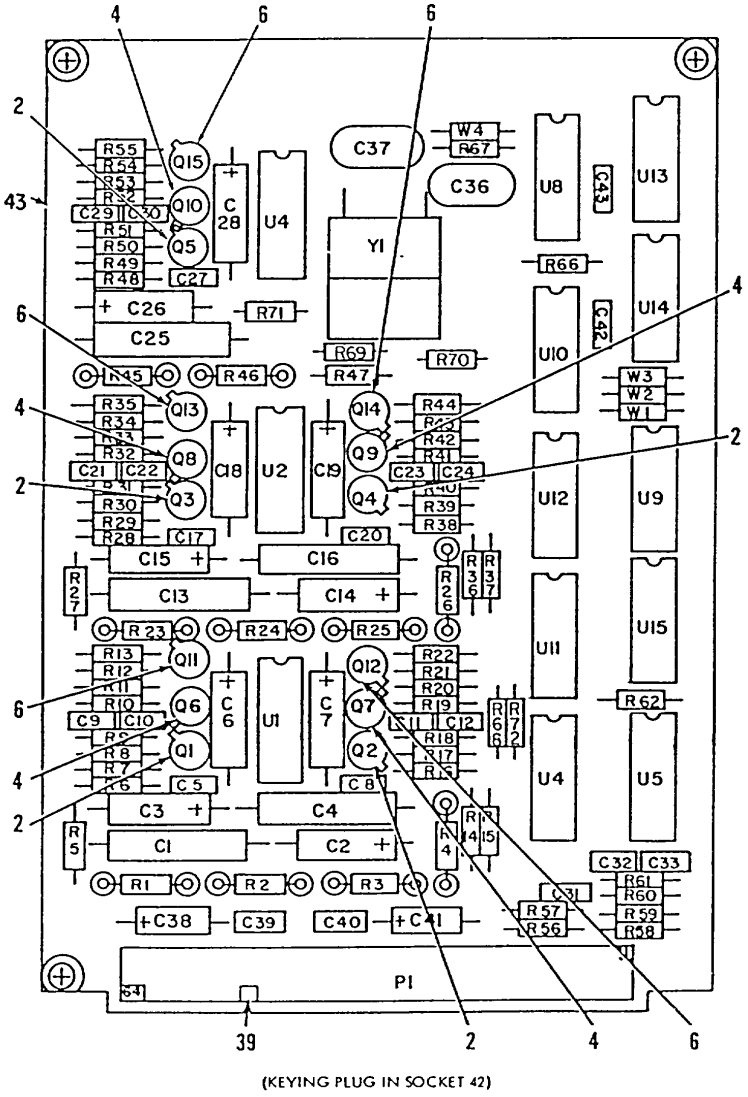
(KEYING PLUG IN SOCKET 26)

REF DES	INDEX NO.	REF DES	INDEX NO.
CR1	13	R11	16
CR2	13	R12	16
CR3	13	R13	4
CR4	13	R14	4
CRS	13	R1S	15
CR6	13	R16	14
CR7	13	R17	14
CR8	13	R18	9
CR9	13	R19	22
CR10	13	R20	22
CR11	13	R21	21
CR12	13	R22	8
C11	1	R23	25
C2	1	R24	7
C3	10	R25	19
C4	10	R26	7
C5	18	R27	17
C6	6	R28	16
C7	5	R29	16
C8	1	R30	4
C9	1	R31	4
C10	18	R32	15
C11	6	R33	14
C12	5	R34	14
C13	1	R35	9
C14	1	R36	22
C15	18	R37	22
C16	6	R38	21
C17	5	R39	8
C18	1	R40	20
C19	1	R41	7
C20	26	R42	19
C21	26	R43	7
C22	26	R44	17
C23	27	R45	16
C24	27	R46	16
C25	27	R47	4
C26	28	R48	4
C27	28	R49	15
P1	12	R50	14
R1	9	R51	14
R2	22	R52	24
R3	22	R53	24
R4	21	R54	24
RS	8	R60	23
R6	25	U1	2
R7	7	U2	2
R8	19	U3	2
R9	7	U4	3
R10	17		

S 69469 (B)

Figure C-6. Oil Pressure Simulator Card

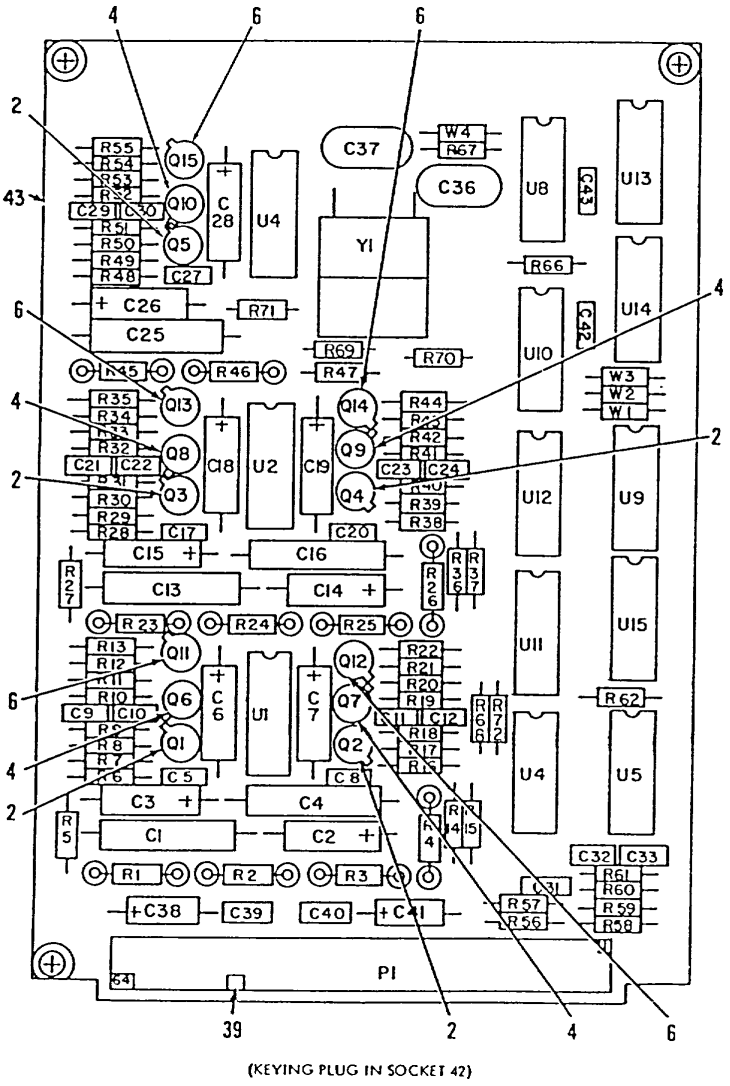
(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-6		PBFFF	5999-01-116-2633	90073	220-419920-000	OIL PRESSURE SIMULATOR CARD (SEE FIGURE C-4 FOR NHA)	REF	REF
C-6	1	PAFZZ	5910-00-113-7672	81349	CK05BX104K	. CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	8
C-6	2	PAFZZ	5962-01-091-4456	07263	UA747DM	. INTEGRATED CKT, LINEAR, OPERATIONAL AMP, DUAL-FREQ COMP	EA	3
C-6	3	PAFZZ	5962-01-113-6179	81349	M38510f 058028 CB	. INTEGRATED CKT,CMOS.QUAD BILATERAL SWITCH	EA	1
C-6	4	PAFZZ	5905-00-284-8928	81349	RN55E5002B	. RESISTOR, FIXED, FILM	EA	6
C-6	5	PAFZZ	5910-01-058-9590	81349	CM05ED240J03	. CAPACITOR, FIXED. MICA DIELECTRIC	EA	3
C-6	6	PAFZZ	5910-00-702-8057	81349	CM05FD331F03	. CAPACITOR, FIXED, MICA DIELECTRIC	EA	3
C-6	7	XAFZZ		81349	RN55E1001B THROUGH RN55E78718	. RESISTOR,FIXED,FILM. SELECTONTEST	EA	6
C-6	8	PAFZZ	5905-00-412-3622	81349	RJ24CW203	. RESISTOR, VARIABLE	EA	3
C-6	9	PAFZZ	5905-01-037-9673	81349	RJ24FW503	. RESISTOR, VARIABLE	EA	3
C-6	10	PAFZZ'	5910-00-236-8767	81349	M39003/01-2380	. CAPACITOR, FIXED ELECTROLYTIC	EA	2
C-6	11	PAFZZ	5935-00-426-3083	00779	86286-1	. KEYING PLUG	EA	1
C-6	12	PAFZZ	5935-00-131-1261	00779	2-85930-6	. CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
C-6	13	PAFZZ	5961-00-938-1135	81349	JAN1N4148	. SEMICONDUCTOR DEVICE, DIODE, SWITCHING	EA	12
C-6	14	PAFZZ	5905-01-072-5266	81349	RN55E4002B	. RESISTOR, FIXED, FILM	EA	6
C-6	15	PAFZZ	5905-00-228-5510	81349	RN55E2002B	. RESISTOR., FIXED., FILM	EA	3
C-6	16	PAFZZ	5905-00-401-7432	81349	RN55E1003B	. RESISTOR, FIXED, FILM	EA	6
C-6	17	PAFZZ	5905-00-236-0995	81349	RN55C4992F	. RESISTOR. FIXED, FILM	EA	3
C-6	18	XAFZZ		81349	CMO4CD100D03 THROUGH CMO4FD101F03	. CAPACITOR, FIXED, MICADIELECTRIC SELECT ON TEST	EA	3
C-6	19	PAFZZ	5905-00-982-8296	81349	RN55C2742F	. RESISTOR, FIXED, FILM	EA	3
C-6	20	PAFZZ	5905-00-468-3019	81349	RN55C6191F	. RESISTOR, FIXED, FILM	EA	1
C-6	21	PAFZZ	5905-00-982-0214	81349	RN55C1502F	. RESISTOR, FIXED, FILM	EA	3
C-6	22	PAFZZ	5905-00-982-0198	81349	RN55C1003F	. RESISTOR, FIXED, FILM	EA	6
C-6	23	PAFZZ	5905-00-043-1338	81349	RW80U2150F	. RESISTOR, FIXED, WW	EA	1
C-6	24	PAFZZ	5905-00-116-8556	81349	RCR07G223JS	. RESISTOR, FIXED,COMPOSITION	EA	3
C-6	25	PAFZZ	5905-00-934-2868	81349	RN55C9761F	. RESISTOR, FIXED, FILM	EA	2
C-6	26	PAFZZ	5910-00-113-5488	81349	CKR11BX103KL	. CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	3
C-6	27	PAFZZ	5910-00-010-9166	81349	M39014/05-2207	. CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	3
C-6	28	PAFZZ	5910-00-098-9281	81349	CK12BX102K	. CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	3
C-6	29	XDFZZ		90073	636-419919-000	. PRINTEDWIRINGBOARD	EA	1



REF DES	INDEX NO.	REF DES	INDEX NO.
C1	27	C31	15
C2	22	C32	15
C3	22	C33	15
C4	26	C36	13
C5	19	C37	9
C6	7	C38	7
C7	7	C39	15
C8	19	C40	15
C9	40	C41	7
C10	18	C42	I5
C11	18	C43	15
C12	18	P1	39
C13	26	Q1	1
C14	22	Q2	1
C15	22	03	1
C16	20	04	1
C17	19	05	1
C18	7	06	3
C19	7	07	3
C20	19	Q8	3
C21	18	Q9	3
C22	18	010	3
C23	18	Q11	5
C24	18	012	5
C25	20	013	5
C26	22	014	5
C27	19	0Q5	5
C28	7	R1	21
C29	18	R2	21
C30	18	R3	21

(TABLE CONTINUED ON SHEET 2)

Figure C-7. Frequency Input Simulator Card (Sheet 1 of 2)



REF DES	INDEX NO.	REF DES	INDEX NO.
R4	21	R46	21
R5	33	R47	33
R6	35	R48	35
R7	32	R49	32
R8	34	R50	34
R9	31	R51	31
RIO	41	R52	30
R11	29	R53	29
R12	32	R54	32
R13	28	R55	28
R14	37	R56	25
RIS	35	P57	36
R16	32	R58	24
R17	34	R59	36
R18	31	R0O	23
R19	30	R61	36
R20	29	R62	28
R21	32	R66	16
R22	28	R67	12
R23	21	R68	42
R24	21	R69	42
R25	21	R70	42
R26	21	R71	42
R27	37	R72	42
R28	35	U1	8
R29	32	U2	8
R30	34	U3	8
P31	31	U4	8
R32	30	US	8
R33	29	U8	14
R34	32	U9	14
R35	28	U10	17
R35	33	U11	17
R37	35	U12	17
R38	32	U13	17
R39	34	U14	17
R40	31	U15	17
R41	30	W1	17
R42	29	W2	11
R43	32	W3	11
R44	28	W4	11
R45	21	Y1	10

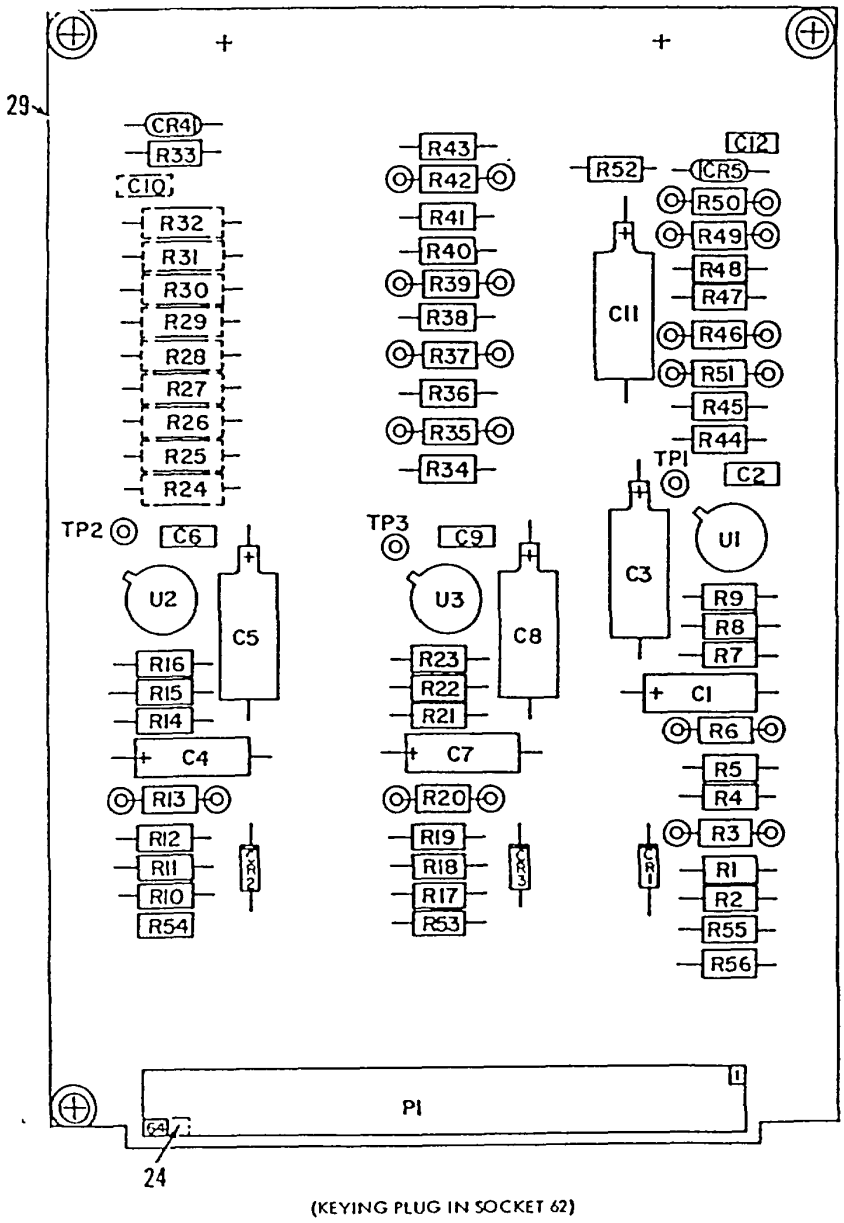
W=WIREJUUPER
Y=CRYSTAL

S 69470.2 (8)

Figure C-7. Frequency Input Simulator Card (Sheet 2 of 2)

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-7		PBFFF	5999-01-116-2636	90073	220-419922-000	FREQUENCY INPUT SIMULATOR CARD (SEE FIGURE C-4 FOR NHA)	REF	REF
C-7	1	PAFZZ	5961-00-925-3777	81349	JAN2N2907A	. TRANSISTOR	EA	5
C-7	2	PAFZZ	5970-01-091-8535	90073	606-202049-000	. INSULATOR DISK	EA	5
C-7	3	PAFZZ	5961-00-761-4504	81349	JAN2N4949	. TRANSISTOR	EA	5
C-7	4	PAFZZ	5970-01-091-8535	90073	606-202049-000	. INSULATOR DISK	EA	5
C-7	5	PAFZZ	5961-00-951-8757	81349	JAN2N2222A	. TRANSISTOR, SWITCHING, NPN,SILICON	EA	5
C-7	6	PAFZZ	5970-01-0910-8535	90073	606-202049-000	. INSULATOR DISK	EA	5
C-7	7	PAFZZ	5910-00-997-4079	81349	M39003-01-2271	. CAPACITOR, FIXED, ELECTROLYTIC	EA	7
C-7	8	PAFZZ	5962-01-058-5774	02735	CD4013BF	. INSTEGRATED CKT, CMOS, DUAL-D FLIP-FLOP W/RESET	EA	5
C-7	9	PAFZZ	5910-00-061-3210	81349	CM5ED560F03	. CAPACITOR, FIXED, MICA DIELECTRIC	EA	1
C-7	10	PAFZZ	5955-00-079-5733	81349	CR-65/U25 954 160MHZ	. CRYSTAL, UNIT, QUARTZ	EA	1
C-7	11	PAFZZ	6680-01-182-4139	90073	267-200199-000	. JUMPER, CIRCUIT	EA	4
C-7	12	PAFZZ	5905-00-121-9919	81349	RCR07G106JS	. RESISTOR, FIXED, COMPOSITION	EA	1
C-7	13	PAFZZ	5910-00-497-9194	81349	CM05FD201F03	. CAPACITOR, FIXED, MICADIELECTRIC	EA	1
C-7	14	PAFZZ	5962-01-139-3507	02735	CD4001BF	. INREGRATEDCKT,CMOS, QUAD, 2-INPNORGATE	EA	2
C-7	15	PAFZZ	5910-00-113-7622	81349	CK05BX104K	. CAPACITOR. FIXED, CERAMIC DIELECTRIC	EA	7
C-7	16	PAFZZ	5905-00-982-0476	81349	RN55C2001F	. RESISTOR, FIXED, FILM	EA	1
C-7	17	PAFZZ	5962-01-003-2226	04713	MC14029BAL	. INTEGRATED CKT, CMOS, BINARY, OR BCD DECADECOUNTER	EA	6
C-7	18	PAFZZ	5910-00-113-7671	81349	CK05BX473K	CAPACITOR, FIXED, CERAMIC, DIELECTRIC	EA	9
C-7	19	PAFZZ	5910-00-111-4811	81349	CK05BX103K	. CAPACITOR, FIXED, CERAMIC, DIELECTRIC	EA	5
C-7	20	PAFZZ	5910-01-073-9879	81349	M83421/01-6089M	. CAPACITOR, FIXED, FILM	EA	2
C-7	21	XAFZZ		81349	RN55C4990F THROUGH RN55C7871F	. RESISTOR, FIXED, FILM, SELECT ON TEST	EA	10
C-7	22	PAFZZ	5910-00-144-4381	81349	MS9003/01-2304	. CAPACITOR, FIXED, ELECTROLYTIC	EA	5
C-7	23	PAFZZ	5905-00-981-2649	81349	RN55C1021F	. RESISTOR, FIXED, FILM	EA	1
C-7	24	PAFZZ	5905-00-975-1647	81349	RN55C1152F	. RESISTOR, FIXED, FILM	EA	1
C-7	25	PAFZZ	590500-945-5146	81349	RN55C1331F	. RESISTOR, FIXED, FILM	EA	1
C-7	26	PAFZZ	5910-01-058-9682	81349	M83421/01-6113M	. CAPACITOR, FIXED, FILM	EA	2
C-7	27	PAFZZ	5910-00-071-7399	81349	CM06FD152F03	. CAPACITOR, FIXED, MICA, DIELECTRIC	EA	1
C-7	28	PAFZZ	5905-00-106-3666	81349	RCRO7G103JS	. RESISTOR, FIXED, COMPOSITION	EA	6
C-7	29	PAFZZ	5905-00-135-3973	81349	RCR07G221JS	. RESISTOR, FIXED, COMPOSITION	EA	5
C-7	30	PAFZZ	5905-00-982-0466	81349	RN55C1000F	. RESISTOR, FIXED, FILM	EA	4
C-7	31	PAFZZ	5905-00-982-0209	81349	RN55C4750F	. RESISTOR, FIXED, FILM	EA	5
C-7	32	PAFZZ	5905-00-107-0656	81349	RCR07G100JS	. RESISTOR, FIXED, COMPOSITION	EA	10
C-7	33	PAFZZ	5905-00-088-2726	81349	RN55C2492F	. RESISTOR, FIXED, FILM	EA	3
C-7	34	PAFZZ	5905-00-413-0624	81349	RN55C2211F	. RESISTOR. FIXED, FILM	EA	5
C-7	35	PAFZZ	5905-00-114-0711	81349	RCR07G472JS	. RESISTOR. FIXED, FILM	EA	3
C-7	37	PAFZZ	5905-00-982-0933	81349	RN55C1302F	. RESISTOR, FIXED, FILM	EA	2
C-7	38	PAFZZ	5935-00-131-1261	00779	2-85930-6	. CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
C-7	39	PAFZZ	5935-00-426-3083	00779	86286-1	. KEYING PLUG	EA	1
C-7	40	PAFZZ	5910-00-194-9261	81349	CK05BX122K	. CAPACITOR, FIXED, FILM	EA	1
C-7	41	PAFZZ	5905-00-135-6045	81349	RCR07G330JS	. RESISTOR, FIXED, COMPOSITION	EA	1
C-7	42	PAFZZ	5905-00-116-8556	81349	RCR07G223JS	. RESISTOR, FIXED, COMPOSITION	EA	5
C-7	43	XDFZZ		90073	636-419921-000	. PRINTED WIRING BOARD	EA	1

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-8		PBFFF	5999-01-116-2638	90073	220-419924-000	DC INPUT SIMULATOR CARD (SEE FIGURE C-4 FOR NHA).....	REF	REF
C-8	1	PAFZZ	5905-00-105-7764	81349	RCR07G222JS	. RESISTOR, FIXED, COMPOSITION	EA	1
C-8	2	PAFZZ	5961-00-995-2310	81349	JAN1N752A	. SENICONDUCTOR DEVICE, DIODE.	EA	1
C-8	3	PAFZZ	5905-00-975-1642	81349	RN55C90R9F	. RESISTOR, FIXED, FILM	EA	1
C-8	4	XAFZZ		81349	RN55C49R9D THROUGH RN55C1052F	. RESISTOR, FIXED, FILM, SELECT ON TEST	EA	12
C-8	5	PAFZZ	5905-00-903-5706	81349	RN55C81R6F	. RESISTOR, FIXED, FILM	EA	2
C-8	6	PAFZZ	5905-00-728-3276	81349	RN55E75ROB	. RESISTOR, FIXED, FILM	EA	2
C-8	7	PAFZZ	5905-00-905-7711	81349	RN55C1670F	. RESISTOR, FIXED, FILM	EA	1
C-8	8	PAFZZ	5905-00-982-0908	81349	RN55C5620F	. RESISTOR, FIXED, FILM	EA	1
C-8	9	PAFZZ	5910-00-154-0547	81349	M39003-01-2312	. CAPACITOR, FIXED,ELECTROLYTIC.....	EA	4
C-8	10	PAFZZ	5961-00-950-9887	81349	JAN1N827	. SEMICONDUCTORDEVICE. DIODE	EA	1
C-8	11	PAFZZ	5910-00-113-7672	81349	CK05BX104K	. CAPACITOR, FIXED, CERAMIC, DIELECTRIC	EA	1
C-8	12	PAFZZ	5905-00-982-0476	81349	RN55C2001F	. RESISTOR, FIXED, FILM	EA	2
C-8	13	PAFZZ	5905-00-480-4023	81349	RN55C1051F	. RESISTOR, FIXED, FILM	EA	2
C-8	14	PAFZZ	5910-01-045-4225	81349	CM05ED470G03	. CAPACITOR, FIXED, MICA.....	EA	3
C-8	15	PAFZZ	5962-00-486-6059	27014	LM105H	. INTEGRATED CKT, UNEAR, VOLTAGE REGULATOR	EA	3
C-8	16	PAFZZ	5905-00-992-5347	81349	RN55C2151B	. RESISTOR, FIXED, FILM	EA	3
C-8	17	PAFZZ	5905-00-992-5341	81349	RN55C1332B	. RESISTOR, FIXED, FILM	EA	3
C-8	18	PAFZZ	5905-00-135-3972	81349	RCR07G200JS	. RESISTOR, FIXED, COMPOSITION	EA	3
C-8	19	PAFZZ	5910-00-144-4381	81349	M39003/01-2304	. CAPACITOR, FIXED, ELETROLYTIC	EA	3
C-8	20	PAFZZ	5905-00-228-3510	81349	RN55E2002B	. RESISTOR, FIXED, FILM	EA	4
C-8	21	PAFZZ	5905-00-403-4447	81349	RN55C2261F	. RESISTOR, FIXED, FILM	EA	2
C-8	22	PAFZZ	5961-00-938-1135	81349	JAN1N4148	. SEMICONDUCTORDEVICE, DIODE.....	EA	3
C-8	23	PAFZZ	5935-00-131-1261	00779	2-85930-6	. CONNECTOR, RECEPTACLE, ELECTRICAL, 64-CONTACT	EA	1
C-8	24	PAFZZ	5935-00-426-3083	00779	86286-1	. KEYING PLUG.	EA	1
C-8	25	PAFZZ	5905-00-011-3377	81349	RN55C3400F	. RESISTOR, FIXED, FILM	EA	2
C-8	26	PAFZZ	5905-00-982-0465	81349	RN55C49R9F	. RESISTOR, FIXED, FILM	EA	2
C-8	27	PAFZZ	5905-00-984-1467	81349	RN55C2491F	. RESISTOR, FIXED, FILM	EA	2
C-8	28	PAFZZ	5905-00-900-9670	81349	RN55C1581F	. RESISTOR, FIXED, FILM	EA	2
C-8	29	XDFZZ		90071	636-419923-000	. PRINTEDWIRINGBOARD.....	EA	1



(KEYING PLUG IN SOCKET 62)

REF DES	INDEX NO.	REF DES	INDEX NO.
CRI	22	R18B	27
CR2	22	R19	28
CR3	22	R20	4
CR4	2	R21	18
CR5	10	R22	17
C1	19	R23	16
C2	14	R33	1
C3	9	R34	3
C4	19	R35	4
C5	9	R36	7
C6	14	R37	4
C7	19	R38	6
C8	9	R39	4
C9	14	R40	5
C11	9	R41	6
C12	11	R42	4
P1	23	R43	5
R1	21	R44	13
R2	20	R45	12
R3	4	R46	4
R4	21	R47	13
R5	20	R48	12
R6	4	R49	4
R7	18	R50	4
R8	17	R51	4
R9	16	R52	8
R10	26	R53	25
R11	27	R54	25
R12	28	R55	20
R13	4	R56	20
R14	18	U1	15
R15	17	U2	15
R16	16	U3	15
R17	26		

S 69471 (B)

Figure C-8. DC Input Simulator Card

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-8		PBFDD	5999-01-116-2638	90073	220-419924-000	DC INPUT SIMULATOR CARD (See Figure C-4 for NRA)	REF	REF
C-8	1	PAFZZ		81349	RCR07G222JS	. RESISTOR, Fixed, Composition	EA	1
C-8	2	PAFZZ	5961-00-995-2310	81349	JAN1N752A	. SEMICONDUCTOR DEVICE, Diode	EA	1
C-8	3	PAFZZ	5905-00-975-1642	81349	RN55C90OR9F	. RESISTOR, Fixed, Film	EA	1
C-8	4	XAFZZ		81349	RNSSC49R9F Through RNSSC1052F	. RESISTOR, Fixed, Film, Select on Test	EA	12
C-8	5	PAFZZ	5905-00-903-5706	81349	RN5SC81R6F	. RESISTOR, Fixed, Film	EA	2
C-8	6	PAFZZ	5905-00-728-3276	81349	RNSSE75ROB	. RESISTOR, Fixed, Film	EA	2
C-8	7	PAFIZ	5905-00-905-7711	81349	RN55C1670F	. RESISTOR, Fixed, Film	EA	1
C-8	8	FAFZZ	5905-00-982-0908	81349	RNSSCS620F	. RESISTOR, Fixed, Film	EA	1
C-8	9	PAFZZ	5910-00-154-0547	81349	M39003-01-2312	. CAPACITOR, Fixed, Electrolytic	EA	4
C-8	10	PAFZZ	5961-00-950-9887	81349	JAN1N827	. SEMICONDUCTOR DEVICE, Diode	EA	1
C-8	11	PAFZZ	5910-00-113-7672	81349	CK05BXI04X	. CAPACITOR, Fixed, Ceramic, Dielectric	EA	1
C-8	12	PAFZZ	5905-00-982-0476	81349	RN55C2001F	. RESISTOR, Fixed, Film	EA	2
C-8	13	PAFZZ		81349	RNSC1051F	. RESISTOR, Fixed, Film	EA	2
C-8	14	PAFZZ	5910-01-045-4225	81349	CM05ED470G03	. CAPACITOR, Fixed, Mica	EA	3
C-8	15	PAFZZ	5962-00-486-6059	27014	LM0OSH	. INTEGRATED CKT, Linear, Voltage Regulator	EA	3
C-8	16	PAFZZ	5905-00-992-5347	81349	RNS5C2151B	. RESISTOR, Fixed, Film	EA	3
C-8	17	PAFZZ	5905-00-992-5341	81349	RNSC1332B	. RESISTOR, Fixed, Film	EA	3
C-8	16	PAFZZ		81349	RCR07G200JS	. RESISTOR, Fixed, Composition	EA	3
C-8	19	PAFZZ	5910-00-144-4381	81349	N39003/01-2304	. CAPACITOR, Fixed, Electrolytic	EA	3
C-8	20	PAFZZ	5905-00-228-3510	81349	RNSSE2002B	. RESISTOR, Fixed, Film	EA	4
C-8	21	PAFZZ		81349	RNSSC2261F	. RESISTOR, Fixed, Film	EA	2
C-8	22	PAFZZ	5961-00-938-1135	81349	JAN1N4148	. SEMICONDUCTOR DEVICE. Diode	EA	3
C-8	23	PAFZZ	5935-00-131-1261	00779	2-85930-6	. CONNECTOR, Receptacle, Electrical, 64-Contact	EA	1
C-8	24	PAFZZ	5935-00-426-3083	00779	86286-1	. KEYING PLUG	EA	1
C-8	25	PAFZZ	5905-00-011-3377	81349	RN55C3400F	. RESISTOR, Fixed, Film	EA	2
C-8	26	PAFZZ	5905-00-982-0465	81349	RNSSC49R9F	. RESISTOR, Fixed, Film	EA	2
C-8	27	PAFZZ	5905-00-984-1467	81349	RN5SSC2491F	. RESISTOR, Fixed, Film	EA	2
C-8	28	PAFZZ	5905-00-900-9670	81349	RN55C15SSF	. RESISTOR, Fixed, Film	EA	2
C-8	29	XDFZZ		90073	636-419923-000	. PRINTED WIRING BOARD	EA	1

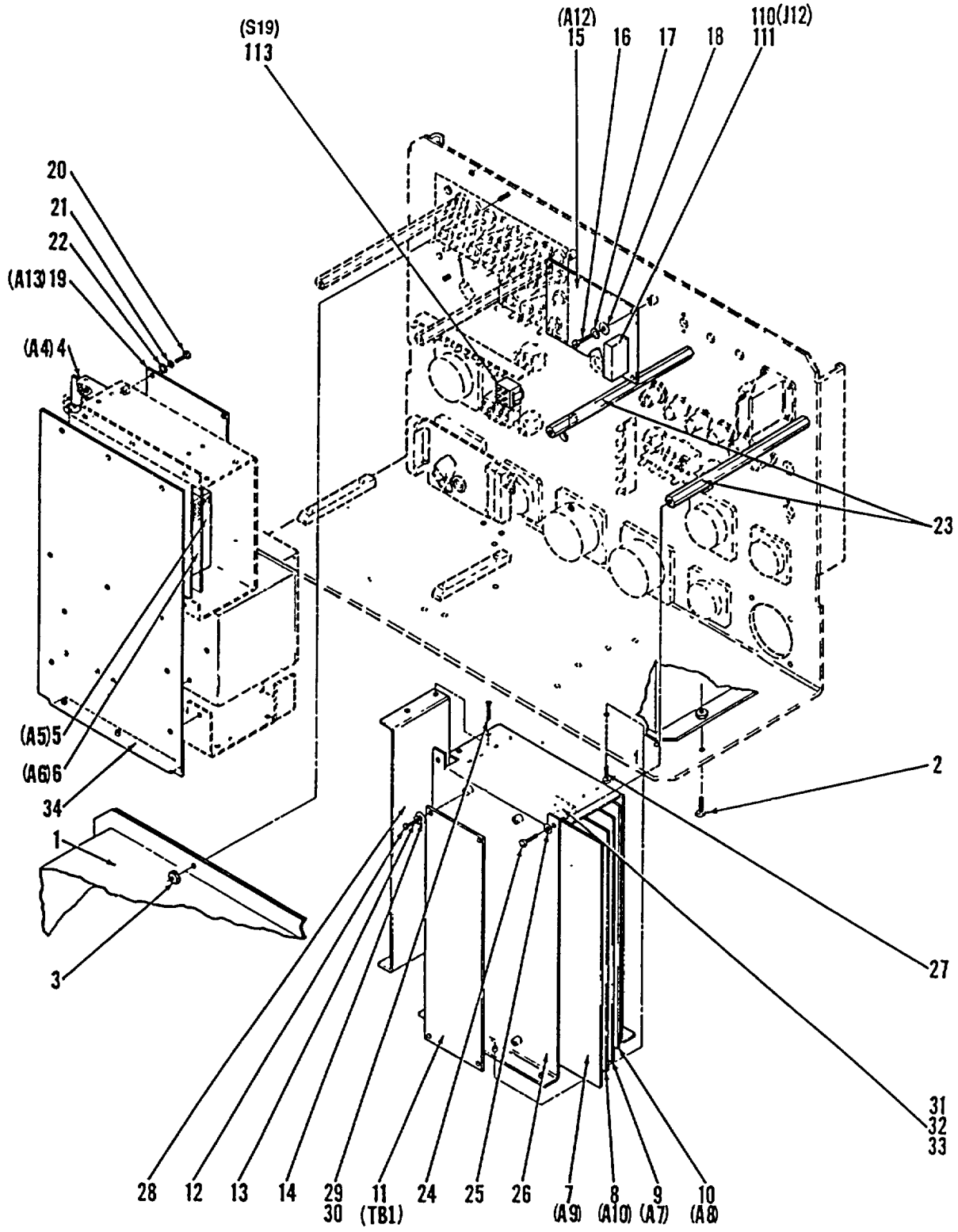
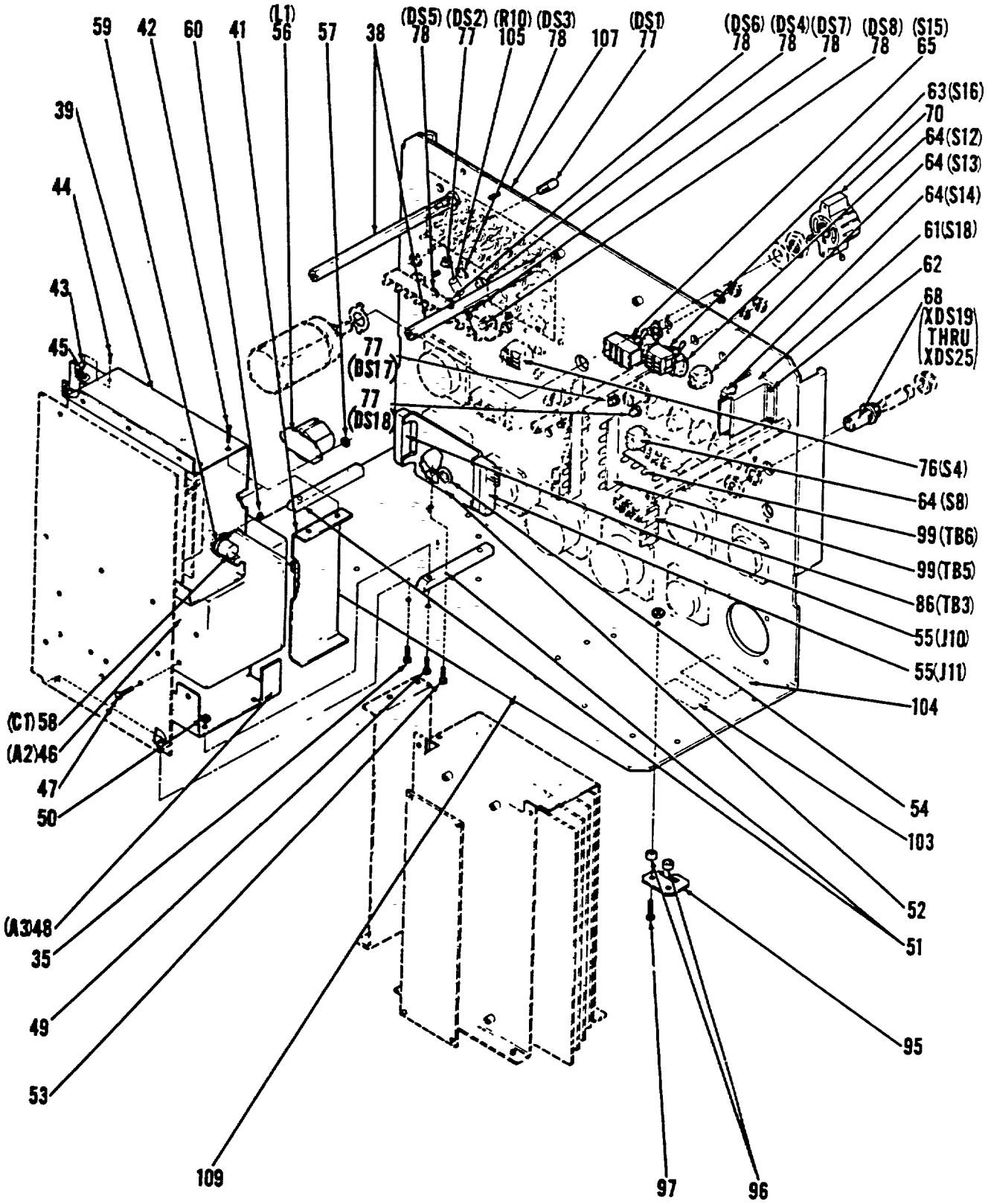


Figure C-9. Unit Tester (Sheet 1 of 3)



S 69472.2 (B)

Figure C-9. Unit Tester (Sheet 2 of 3)

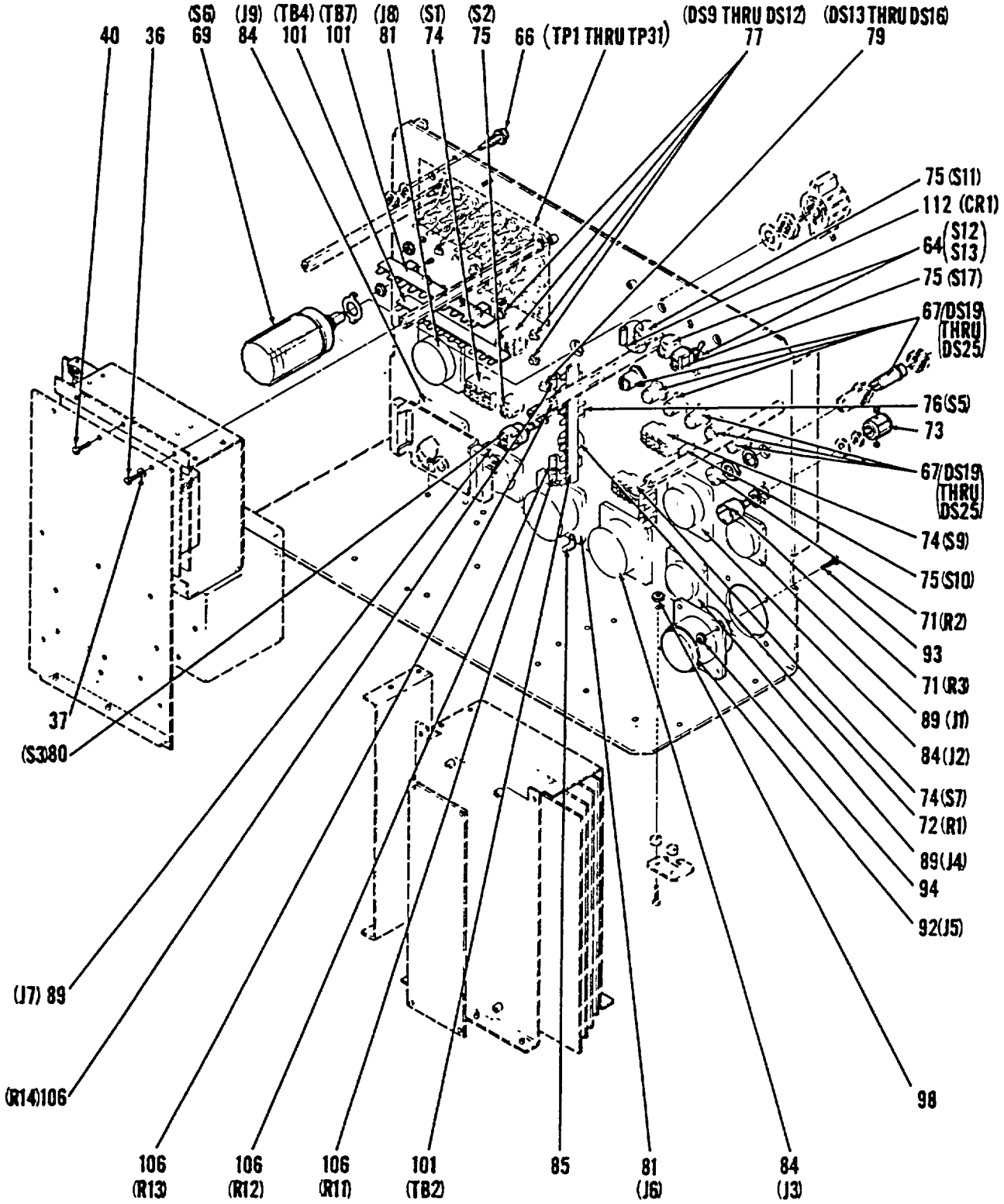
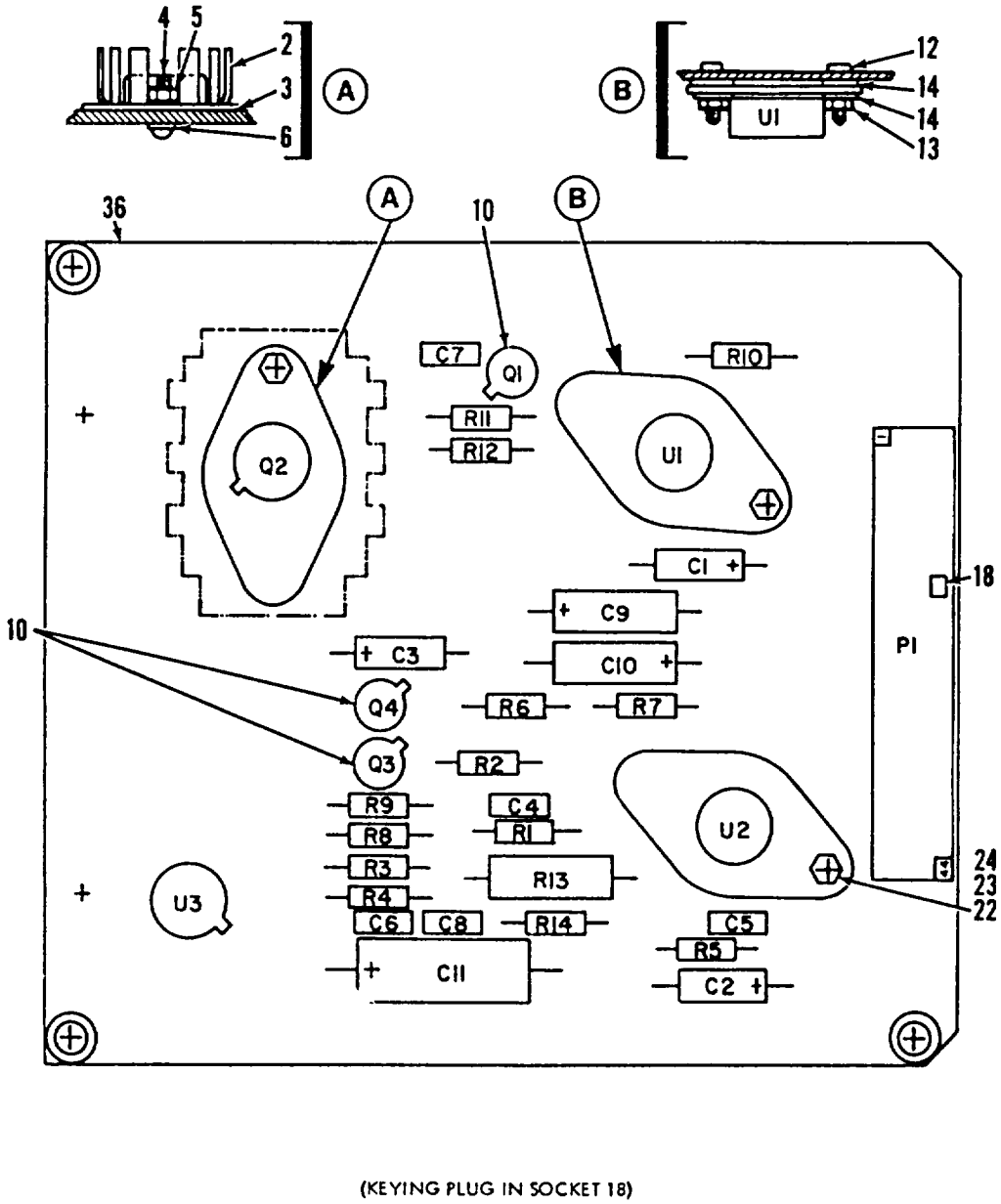


Figure C-9. Unit Tester (Sheet 3 of 3)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-9		XDFZZ		90073	244-476863-000	UNIT TESTER (SEE FIGURE C-2 FOR NHA) .....(A)	REF	REF
C-9		XDFZZ		90073	245-601115-000	UNIT TESTER (SEE FIGURE C-2 FOR NHA .....(B)	REF	REF
C-9	1	XDFZZ		90073	656-473939-000	.SHIELD, UNIT TESTER	EA	1
C-9	2	PAFZZ	5305-00-054-6651	96906	MS51957-27	.SCREW, MACHINE.....	EA	8
C-9	3	PAFZZ	5310-00-878-3291	96906	M521043-06	.NUT, SELF-LOCKING.....	EA	4
C-9	4	PAFFF	5999-01-121-5114	90073	220-420064-00	.TEST SET REGULATOR BOARD (SEE FIGURE C-10 FOR BREAKDOWN).....	EA	1
C-9	5	PBFFF	5999-01-116-3027	90073	220-420067-000	.TEST SET B C D COUNTER BOARD (SEE FIGURE C-11 FOR BREAKDOWN).....	EA	1
C-9	6	PBFFF	4920-01-114-6124	90073	220-420070-000	.TEST SET OSCILLATOR CONTROL BOARD (SEE FIGURE C-12 FOR BREAKDOWN).....	EA	1
C-9	7	PAFFF	4920-01-119-3420	90073	220-420080-000	TEST SET ANALOG PROCESSOR #1 (SEE FIGURE C-13 FOR BREAKDOWN).....(A)	EA	1
C-9	7	PBFFF		90073	220-601172-000	.TEST SET ANALOG PROCESSOR #1 (SEE FIGURE C-13 FOR BREAKDOWN).....(B)	EA	1
C-9	8	PBFFF	4920-01-117-7209	90073	220-420083-000	.TEST SET ANALOG PROCESSOR #2 (SEE FIGURE C-14 FOR BREAKDOWN).....	EA	1
C-9	9	PBFFF	4920-01-116-3026	90073	220-420073-000	.TEST SET MONITOR #1 (SEE FIGURE C-15 FOR BREAKDOWN).....(A)	EA	1
C-9	9	PBFFF	5998-01-344-0793	90073	220-601392-000	.TEST SET MONITOR #1 (SEE FIGURE C-1 5 FOR BREAKDOWN).....(B)	EA	1
C-9	10	PBFFF	4920-01-116-3028	90073	220-420076-000	.TEST SET MONITOR #2 (SEE FIGURE C-16 FOR BREAKDOWN).....	EA	1
C-9	11	PBFFF	5999-01-112-2936	90073	220-420150-000	.TEST SET JUNCTION BOARD (SEE FIGURE C-17 FOR BREAKDOWN)	EA	1
C-9	12	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE.....		6
C-9	13	PAFZZ	5310-00-595-6211	96906	MS15795-803	.WASHER, FLAT	EA	6
C-9	14	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER.....	EA	6
C-9	15	PBFFF	5999-01-114-9294	90073	220-420153-000	.TEST SET DIGITAL DISPLAY BOARD (SEE FIGURE C-18 FOR BRKDWN)	EA	1
C-9	16	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE.....	EA	4
C-9	17	PAFZZ	5310-00-595-6211	96906	MS15795-803	.WASHER, FLAT.....	EA	4
C-9	18	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER.....	EA	4
C-9	19	PBFFF	5999-01-116-2634	90073	220-420148-000	.LAMP TEST BOARD (SEE FIGURE C-19 FOR BREAKDOWN)...	EA	1
C-9	20	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE.....	EA	4
C-9	21	PAFZZ	5310-00-595-6211	96906	MS15795-803	.WASHER, FLAT	EA	4
C-9	22	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER.....	EA	4
C-9	23	XDFZZ		90073	734-354070-001	.SPACER, TEST SET	EA	2
C-9	24	PAFZZ	5305-00-054-5649	96906	MS51957-15	.SCREW, MACHINE.....	EA	2
C-9	25	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER.....	EA	2
C-9	26	XDFZZ		90073	664-420145-000	.SUPPORT, MOUNTING GUIDE.....	EA	1
C-9	27	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE	EA	8
C-9	28	XDFZZ		90073	524-420146-000	.BRACKET, MOUNTING CONTACTS.....	EA	1
C-9	29	PAFZZ	5305-00-933-9189	96906	MS24693C2	.SCREW. MACHINE.	EA	2
C-9	30	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE.....	EA	2
C-9	31	XDFZZ		33962	35-1B-2-7-3	.RETAINED, PC BOARD	EA	8
C-9	32	PAFZZ	5305-00-929-6421	80205	NAS1635-00-3	.SCREW, MACHINE.....	EA	16
C-9	33	PAFZZ	5310-00-405-9866	72962	92-1660-00	.HEXNUT, MINIATURE 0-80	EA	16
C-9	34	XDFZZ		90073	524-420142-000	.BRACKET, ANGLE P/S.....	EA	1
C-9	35	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE.....	EA	6
C-9	36	PAFZZ	5305-00-054-5649	96906	MS51957-15	.SCREW, MACHINE.....	EA	2
C-9	37	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER	EA	2
C-9	38	XDFZZ		90073	734-354070-002	.SPACER, TEST SET	EA	2
C-9	39	XDFZZ		90073	664-420143-000	.SUPPORT, MOUNTING GUIDE	EA	2
C-9	40	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE.....	EA	4

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-9	41	XDFZZ		90073	524-420144-000	.BRACKET, MOUNTING CONTACTS	EA	1
C-9	42	PAFZZ	5305-00-993-9189	96906	MS24693C2	.SCREW, MACHINE	EA	2
C-9	43	XDFZZ		90073	35-1B-2-7-3	.RETAINER, PC BOARD	EA	6
C-9	44	PAFZZ	5305-00-774-9700	96906	MS51960-2	.SCREW, MACHINE	EA	12
C-9	45	PAFZZ	5310-00-405-9866	72962	92-1660-00	.HEXNUT, MINIATURE 0-80	EA	12
C-9	46	PBFFF	6620-01-105-1649	90073	244-473806-000	.LAMP POWER SUPPLY (SEE FIGURE C-20 FOR BREAKDOWN)	EA	1
C-9	47	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE	EA	6
C-9	48	PAFFF	4920-01-112-2938	90073	244-473808-000	.LOGIC POWER SUPPLY (SEE FIGURE C-23 FOR BREAKDOWN)	EA	1
C-9	49	PAFZZ	5305-00-177-5545	96906	MS51957-120	.SCREW, MACHINE	EA	4
C-9	50	PAFZZ	5310-00-878-3292	96906	MS21043-04	.NUT, SELF-LOCKING	EA	4
C-9	51	XDFZZ		90073	619-354069-000	.BAR, MOUNTING P/S	EA	2
C-9	52	XDFZZ		90073	524-420147-000	.BRACKET, MOUNTING CONNECTOR P/S	EA	1
C-9	53	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE	EA	2
C-9	54	XDFZZ		28520	SB-500-6	.BUSHING, SNAP	EA	1
C-9	55	PAFZZ	5935-00-805-3514	81312	SRM-26SF0000	.CONNECTOR, RECEPTACLE. ELECTRICAL 26-CONTACT, FEMALE	EA	2
C-9	56	PAFZZ	5950-01-105-5695	90073	260-475846-000	.COIL	EA	1
C-9	57	PAFZZ	5310-00-727-0725	80205	NAS1291-C02	.HEXNUT, LOCKING	EA	2
C-9	58	PAFZZ	5910-01-218-2310	56289	LP9A1A185G	.CAPACITOR, FIXED PLASTIC DIELECTRIC.	EA	1
C-9	59	PAFZZ	5340-00-792-0943	59730	TY-33M	.CLAMP, CABLE, SELF- LOCKING	EA	1
C-9	60	PAFZZ	5310-00-878-3292	96906	MS21043-04	.NUT, SELF-LOCKING	EA	1
C-9	61	XDFZZ		01963	T38J02M1	.SWITCH, THUMB W/END PLATES 009-2256	EA	1
C-9	62	PAFZZ	5310-00-727-0725	80205	NAS1291-C02	.NUT, HEX, LOCKING	EA	4
C-9	63	PAFZZ	5930-00-471-4902	95146	MTE-206N	.SWITCH, TOGGLE WATERPROOF DPDT	EA	1
C-9	64	PAFZZ	5930-00-105-8202	95146	MTE-106D	.SWITCH, TOGGLE WATERPROOF SPDT	EA	4
C-9	65	PAFZZ	5930-00-180-3153	55459	JMT432	.SWITCH	EA	4
C-9	66	XDFZZ		71279	450-3382-01-0319	.CONNECTOR JACK	EA	31
C-9	67	PAFZZ	6240-00-573-0629	72619	507-3917-1471500	.LAMP, INCANDESCENT RED, 28V	EA	7
C-9	68	PAFZZ	6210-00-421-1832	81349	LH90/1	.LAMPHOLDER	EA	7
C-9	69	PAFZZ	5930-01-068-9452	81073	53HS15-04-1-24NC	.SWITCH, ROTARY	EA	1
C-9	70	PAFZZ	5355-00-471-5644	23480	2P2B	.KNOB, POINTER(MS9152B-2P2B).	EA	1
C-9	71	XDFZZ		32997	3826C162-102A	.RESISTOR, VARIABLE	EA	2
C-9	72	XDFZZ		32997	3826C126-103A	.RESISTOR, VARIABLE	EA	1
C-9	73	PAFZZ	5355-01-133-2459	95146	K-500B 1-8	.KNOB	EA	3
C-9	74	PAFZZ	5930-00-154-0153	95146	MTE-406N	.SWITCH, TOGGLE	EA	3
C-9	75	PAFZZ	5930-01-073-9291	95146	MTE-106G	.SWITCH, TOGGLE, WATERPROOF, SPDT	EA	4
C-9	76	PAFZZ	5930-01-051-1273	95146	MTE-206S	.SWITCH, TOGGLE	EA	2
C-9	77	PAFZZ	6210-00-064-2998	96906	MS25446-5	.LIGHTS, IND, WHITE	EA	8
C-9	78	PAFZZ	6210-00-978-2546	96906	MS25446-6	.LIGHTS, IND, YELLOW	EA	6
C-9	79	PAFZZ	6210-00-226-4542	96906	MS25446-4	.LIGHTS, IND, RED	EA	4
C-9	80	PAFZZ	5930-01-068-5556	95146	MPE106F	.SWITCH, PUSHBUTTON, SPDT	EA	1
C-9	81	PAFZZ	5935-01-081-4718	96906	MS27656T23F35P	.CONNECTOR, RECEPTACLE, ELECTRICAL	EA	2
C-9	82	PAFZZ	5305-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	8

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-9	83	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF, LOCKING	EA	8
C-9	84	PAFZZ	5935-01-071-1965	96906	MS27656T25F35P	.CONNECTOR, RECEPTACLE, ELECTRICAL	EA	3
C-9	85	PAFZZ	5940-01-193-0008	90073	316-115007-001	.TERMINAL PLAIN NO 6	EA	4
C-9	86	PAFZZ	5940-00-229-9644	90073	666-131065-005	.TERMINAL, PLAIN, STRIP	EA	1
C-9	87	PAFZZ	5305-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	8
C-9	87A	PAFZZ	5305-00-054-6653	80205	MS51957-29	.SCREW, MACHINE	EA	4
C-9	88	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	12
C-9	89	PAFZZ	5935-01-082-8744	96906	MS27656T19F35P	.CONNECTOR, RECEPTACLE, ELECTRICAL.	EA	3
C-9	90	PAFZZ	5305-00-054-5649	96906	MS51957-15	.SCREW, MACHINE	EA	12
C-9	91	PAFZZ	5310-00-878-3292	96906	MS21043-04	.NUT, SELF-LOCKING	EA	12
C-9	92	PAFZZ	5935-00-518-3458	96906	MS3472L22-55S	.CONNECTOR, RECEPTACLE, ELECTRICAL .	EA	1
C-9	93	PAFZZ	5305-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	4
C-9	94	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	4
C-9	95	XDFZZ		90073	628-354345-000	.PLATE. RETAINER	EA	2
C-9	96	XDFZZ		90073	734-109096-001	.SPACER	EA	4
C-9	97	PAFZZ	5305-00-066-7328	96906	MS24693C27	.SCREW, MACHINE	EA	4
C-9	88	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	4
C-9	99	XDFZZ		90073	666-131065-009	.TERMINAL, STRIP	EA	2
C-9	100	PAFZZ	5310-00-878-3292	96906	MS21043-04	.NUT, SELF-LOCKING	EA	4
C-9	101	PAFZZ	5940-01-045-7615	90073	66-131065-011	.TERMINAL, STRIP	EA	3
C-9	102	PAFZZ	5310-00-878-3292	96906	MS21043-04	.NUT, SELF-LOCKING	EA	6
C-9	103	XDFZZ		90073	624-352270-000	.PLATE, MODIFICATION RECORD	EA	1
C-9	104	XDFZZ		90073	624-344096-000	.PLATE, IDENTIFICATION (A)	EA	1
C-9	104	XDFZZ		90073	624-601166-000	.PLATE, IDENTIFICATION (B)	EA	1
C-9	105	PAFZZ	5905-00-116-8556	81349	RCR07G223JS	.RESISTOR, FIXED, COMP	EA	1
C-9	106	PAFZZ	5905-00-1168555	81349	RCR07G153JS	.RESISTOR, FIXED. COMP	EA	4
C-9	107	XDFZZ		90073	622-459659-000	.PANEL, FRONT MARKING (A)	EA	1
C-9	107	XDFZZ		90073	622-601191-000	.PANEL, FRONT, MACH (B)	EA	1
C-9	108	PAFZZ	5905-00-940-9442	80205	NAS1635-00-2	.SCREW, MACHINE	EA	4
C-9	109	XDFZZ		90073	626-459657-000	.PLATE, FRONT SUBASSY (A)	EA	1
C-9	109	XDFZZ		90073	626-601160-000	.PANEL, FRONT, SUBASSY (B)	EA	1
C-9	110	PAFZZ	5935-00-1974684	00779	86148-1	.CONNECTOR RECEPTACLE, ELECTRICAL, 20-CONTACT, FEMALE	EA	1
C-9	111	PAFZZ	5999-01-063-1866	00779	102128-1	.CONTACT, RECEPTACLE	EA	20
C-9	112	PAFZZ	5961-00-893-6761	81349	JAN1N969B	.SEMICONDUCTOR DEVICE, DIODE, ZENER	EA	1
C-9	113	PAFZZ	5930-00-419-0226	95146	MTE-306D	.SWITCH, TOGGLE, WATERPROOF 3 PDT (B)	EA	1



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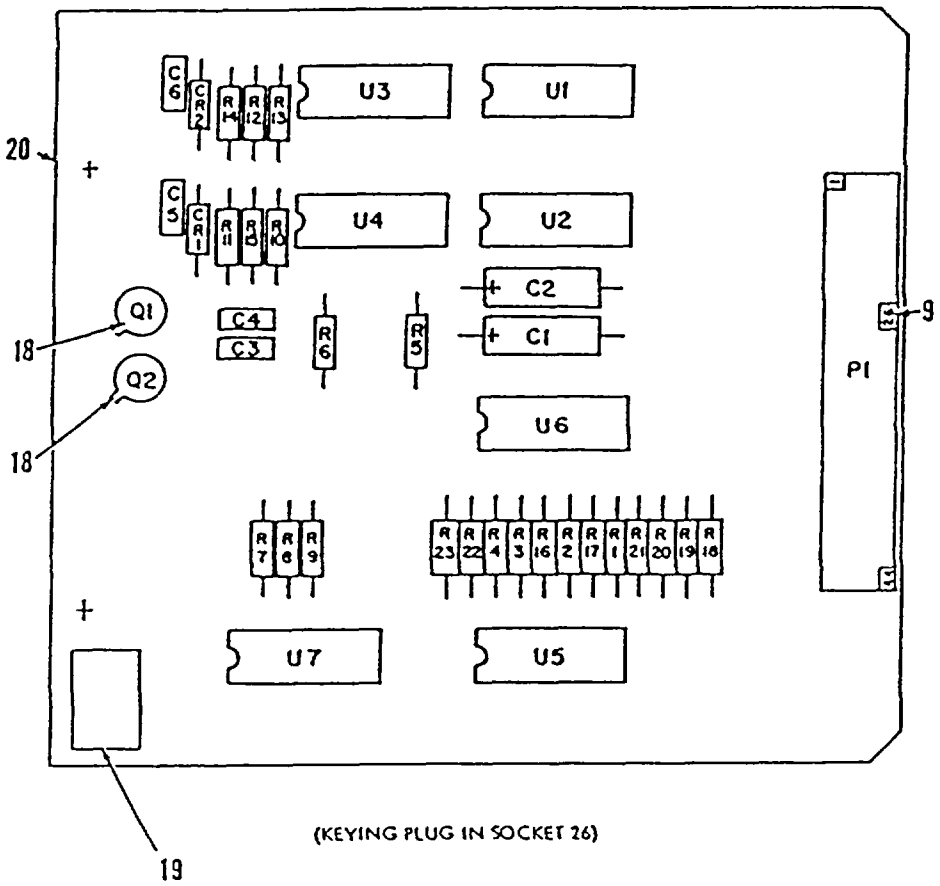
C3	16
C4	27
C5	8
C6	27
C7	8
C8	8
C9	19
C10	19
C11	31
P1	17
Q1	9
Q2	1
Q3	9
Q4	9
R1	29
R2	26
R3	33
R4	29
R5	25
R6	20
R7	20
R8	34
R9	35
R10	15
R11	7
R12	7
R13	30
R14	28
U1	11
U2	21
U3	32

S 69473 (B)

Figure C-10. Test Set Regulator Board

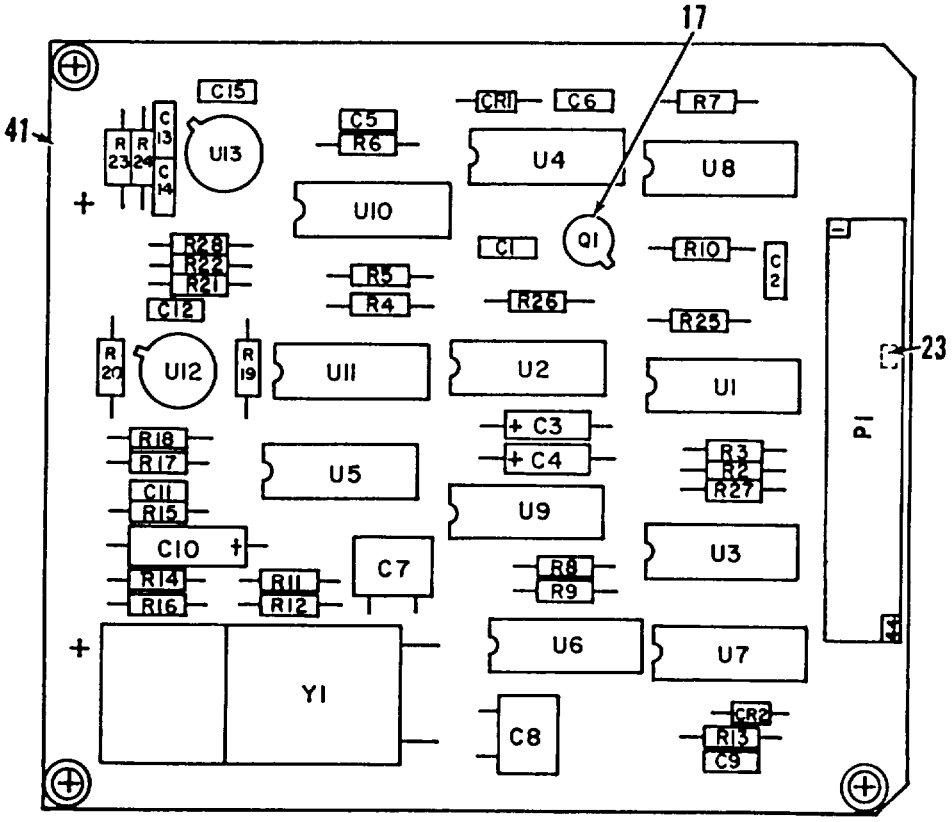
(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-10		PBFFF	5999-01-121-5114	90073	220-420064-000	TEST SET REGULATOR BOARD (SEE FIGURE C-9 FOR NHA) .	REF	REF
C-10	1	PAFZZ	5961-00-054-4141	81349	JAN2N3441	.TRANSISTOR, POWER, UPPER SILICON	EA	1
C-10	2	PBFZZ	5999-01-214-7307	98978	LB66B1-67B	.HEAT SINK	EA	1
C-10	3	XDFZZ		81483	7403-10-10	.INSULATOR, PAD	EA	1
C-10	4	PAFZZ	5305-00-054-6653	96906	MS51957-29	.SCREW, MACHINE	EA	2
C-11	5	PAFZZ	5310-80-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	2
C-10	6	PAFZZ	5310-00-773-7624	80205	NAS620C6	.WASHER, FLAT	EA	2
C-10	7	PAFZZ	5905-00-982-0935	81349	RN55C3011F	.RESISTOR, FIXED, FILM	EA	2
C-10	8	PAFZZ	5910-00-893-6745	81349	CK05BX102K	.CAPACITOR, FIXED, CERAMIC	EA	3
C-10	9	PAFZZ	5961-00-951-8757	81349	JAN2N2222A	.TRANSISTOR	EA	3
C-10	10	PAFZZ	5970-01-091-8535	90073	606-202049-000	.INSULATOR DISK	EA	3
C-10	11	PAFZZ	5962-01-130-2996	04713	MC1569R	.INTEGRATED CKT, LINEAR, VOLTAGE REGULATOR	EA	1
C-10	12	PAFZZ	5305-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	2
C-10	13	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	2
C-10	14	PAFZZ	5310-00-773-7624	80205	NAS620C6	.WASHER, FLAT .	EA	4
C-10	15	PAFZZ	5905-00-431-7840	81349	RW80U2R43F	.RESISTOR, FIXED, WW	EA	1
C-10	16	PAFZZ	5910-00-078-7227	81349	M39003-01-2283	.CAPACITOR, FIXED, ELECTOLYTIC	EA	3
C-10	17	PAFZZ	5935-00-131-1261	00779	1-85930-6	.CONNECTOR, RECEPTACLE ELECTRICAL	EA	1
C-10	18	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING, PLUG	EA	1
C-10	19	PAFZZ	5910-00-997-4079	81349	MS9003-01-2271	.CAPACITOR, FIXED, ELECTROLYTIC	EA	2
C-10	20	PAFZZ	5905-00-119-8768	81349	RCR07G821JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-10	21	PAFZZ	5962-00-451-5843	04713	MC1563R	.INTEGRATED, CKT, LINEAR VOLTAGE REGULATOR	EA	1
C-10	22	PAFZZ	5305-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	2
C-10	23	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	2
C-10	24	PAFZZ	5310-00-773-7624	80205	NAS620C6	.WASHER, FLAT	EA	2
C-10	25	PAFZZ	5905-00-126-6688	81349	RCRO7G8R2JS	.RESISTOR, FIXED, FILM	EA	1
C-10	26	PAFZZ	5905-00-985-6251	81349	RN55C1242F	.RESISTOR, FIXED, FILM	EA	1
C-10	27	PAFZZ	5910-00-113-7662	81349	CK05BX104K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	2
C-10	28	PAFZZ	5905-00-126-6683	81349	RCR07G332JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-10	29	PAFZZ	5905-00-982-0932	81349	RN55C6811F	.RESISTOR, FIXED, FILM	EA	2
C-10	30	PAFZZ	5905-00-763-7765	81349	RW80UR243F	.RESISTOR, FIXED, WW	EA	1
C-10	31	PAFZZ	5910-00-253-5213	81349	M39003-01-2263	.CAPACITOR, FIXED, ELECTROLYTE	EA	1
C-10	32	PAFZZ	5962-00-140-1714	04713	MC1569G	.INTEGRATED CKT, LINEAR VOLTAGE REGULATOR	EA	1
C-10	33	PAFZZ	5905-00-982-0935	81349	RN55C3011F	.RESISTOR, FIXED, FILM	EA	1
C-10	34	PAFZZ	5905-00-246-9393	81349	RCR07G4R7JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-10	35	PAFZZ	5905-00-106-1249	81349	RCR07G510JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-10	36	XDFZZ		90073	636-420065-000	.PRINTED WIRING BOARD	EA	1



REF DES	INDEX NO.	REF DES	INDEX NO.
CR1	2	R20	11
CR2	2	R21	11
C1	7	R22	11
C2	7	R23	11
C3	1	U1	6
C4	1	U2	6
C5	1	U3	5
C6	1	U4	5
P1	8	U5	13
Q1	17	U6	10
Q2	17	U7	14
R1	12		
R2	12		
R3	12		
R4	12		
R5	16		
R6	12		
R7	15		
R8	15		
R9	15		
R10	15		
R11	15		
R12	4		
R13	3		
R14	3		
R15	4		
R16	12		
R17	12		
R18	11		
R19	11		

Figure C-11. Test Set BCD Counter Board

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-11		PBFFF	5999-01-116-3027	90073	220-420067-000	TEST SET B C D COUNTER BOARD (SEE FIGURE C-9 FOR NHA).	REF	REF
C-11	1	PAFZZ	5910-00-978-7690	81349	CK05BX471K	.CAPACITOR, CERAMIC DIELECTRIC	EA	4
C-11	2	PAFZZ	5961-00-938-1135	81349	JAN1N4148	.SEMICONDUCTOR DEVICE, DIODE	EA	2
C-11	3	PAFZZ	5905-00-114-0711	81349	RCR07G472XS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-11	4	PAFZZ	5905-00-111-1679	81349	RCRO7G512JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-11	5	PAFZZ	5962-01-012-5828	81349	M38510/05001BCB	.INTEGRATED CKT CMOS, QUAD 2-INPUT NAND GATE	EA	2
C-11	6	PBFZZ	5962-01-072-0324	04713	MC14518BCL	.INTEGRATED CKT, CMOS, DUAL BCD UP-COUNTER	EA	2
C-11	7	PAFZZ	5910-00-997-4079	81349	M39003-01-2271	.CAPACITOR, FIXED, ELECTROLYTE	EA	2
C-11	8	PAFZZ	5935-00-131-1261	00779	1-85930-6	.CONNECTOR, RECTP ELECTRICAL	EA	1
C-11	9	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING PLUG .	EA	1
C-11	10	PAFZZ	5961-01-047-1756	02735	CA3081F	.INTEGRATED CKT, 7- SEGMENT, NPN, XSTR, COMMON EMITTER	EA	1
C-11	11	PAFZZ	5905-00-121-9920	81349	RCR07G303JS	.RESISTOR, FIXED, COMPOSITION	EA	6
C-11	12	PAFZZ	5905-00-110-7260	81349	RCR07G102JS	.RESISTOR, FIXED, COMPOSITION	EA	7
C-11	13	PAFZZ	5962-01-015-8539	81349	M38510/05504BEB	.INTEGRATED CKT, CMOS, HEX BUFFER, CONV NON-INVERTER	EA	1
C-11	14	PAFZZ	5962-01-012-6507	81349	M38510-05003BCB	.INTEGRATED CKT, CMOS, TRIPLE 3-INPUT NAND GATE .	EA	1
C-11	15	PAFZZ	5905-00-106-3666	81349	RCR07G103JS	.RESISTOR, FIXED, COMPOSITION	EA	5
C-11	16	PAFZZ	5905-00-116-8555	81349	RCR07G153JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-11	17	PAFZZ	5961-00-951-8757	81349	JAN2N2222A	.TRANSISTOR	EA	2
C-11	18	PAFZZ	5970-01-091-8535	90073	606-202049-000	.INTSULATOR DISK	EA	2
C-11	19	XDFZZ		90073	612-354223-001	.LABEL, MOD RECORD	EA	1
C-11	20	XDFZZ		90073	636-420068-000	.PRINTED CIRCUIT BOARD	EA	1

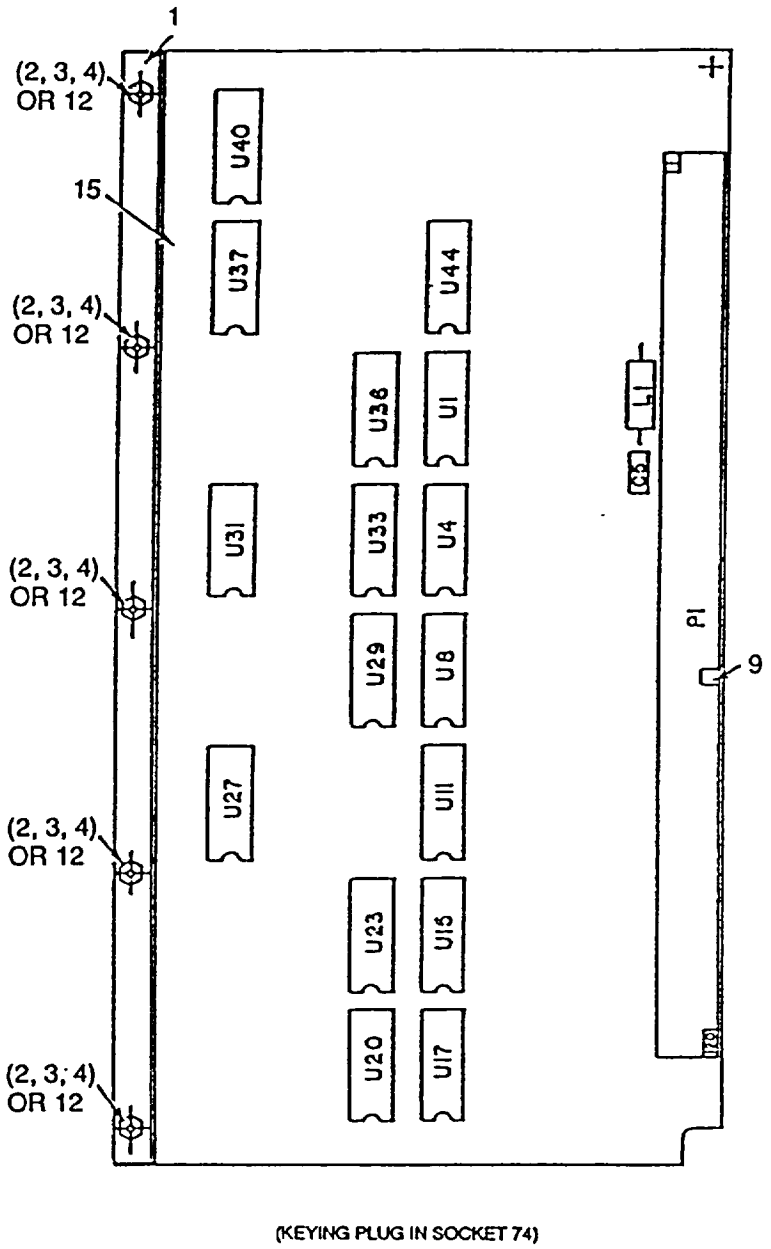


(KEYING PLUG IN SOCKET 22)

REF DES	INDEX NO.	REF DES	INDEX NO.
CR1	11	R13	19
CR2	11	R14	19
C1	8	R15	36
C2	20	R16	19
C3	25	R17	19
C4	25	R18	19
C5	8	R19	15
C6	13	R20	15
C7	32	R21	37
C8	30	R22	38
C9	28	R23	1
C10	35	R24	2
C11	3	R25	21
C12	5	R26	18
C13	4	R27	26
C14	3	R28	39
C15	5	U1	24
P1	22	U2	24
Q1	16	U3	27
R2	21	U4	14
R3	21	U5	24
R4	12	U6	31
R5	10	U7	29
R6	9	U8	14
R7	15	U9	14
R8	21	U10	7
R9	10	U11	7
R10	19	U12	6
R11	34	U13	6
R12	33	V1	40

Figure C-12. Test Set Oscillator Control Board

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-12		PBFFF	4920-01-114-6124	90073	220-420070-000	TEST SET OSCILLATOR CONTROL BOARD (SEE FIGURE C-9 FOR NHA	REF	REF
C-12	1	PAFZZ	5905-00-400-4528	81349	RCR07G124JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	2	PAFZZ	5905-00-106-1278	81349	RCR07G123JS	.RESISTOR, FIXED, COMPOSITION .	EA	1
C-12	3	PAFZZ	5910-00-103-7553	81349	CK05BX472K	.CAPACITOR, FIXED, COMPOSITION	EA	2
C-12	4	PAFZZ	5910-00-113-7671	81349	CK05BX473K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	1
C-12	5	PAFZZ	5910-00-113-7672	81349	CK05XB104K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC.	EA	2
C-12	6	XDFZZ		90073	264-206741-001	.AMPLIFIER, OPERATIONAL, HIGH-GAIN, FREQUENCY COMPENSATING	EA	2
C-12	7	PAFZZ	5962-01-003-2226	02735	CD4029AD3	.INTEGRATED CKT, CMOS, BINARY OR BCD DECADE COUNTER	EA	2
C-12	8	PAFZZ	5910-00-111-4811	81349	CK05BX103K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	2
C-12	9	PAFZZ	5905-00-228-5506	81349	RCR07G622JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	10	PAFZZ	5905-00-119-3504	81349	RCR07G273JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-12	11	PAFZZ	5961-00-938-1135	81349	JAN1N4148	.SEMICONDUCTOR, DEVICE, DIODE	EA	2
C-12	12	PAFZZ	5905-00-111-1679	81349	RCR07G512JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	13	PAFZZ	5910-00-702-8057	81349	CM05FD331F03	.CAPACITOR, FIXED. MICA DIELECTRIC	EA	1
C-12	14	PAFZZ	5962-01-264-5248	02735	CD4049UBF	.INTEGRATED CKT, CMOS, HEX BUFFER CONV INVERTER	EA	3
C-12	15	PAFZZ	5905-00-121-9920	81349	RCR07G303JS	.RESISTOR, FIXED, COMPOSITION	EA	3
C-12	16	PAFZZ	5961-00-951-8757	81349	JAN2N2222A	.TRANSISTOR, SWITCHING, NPN, SILICON.	EA	1
C-12	17	PAFZZ	5970-01-091-8535	90073	606-202049-000	.INSULATOR DISK	EA	1
C-12	18	PAFZZ	5905-00-982-0197	81349	RN55C1501F	.RESISTOR, FIXED, FILM	EA	1
C-12	19	PAFZZ	5905-00-116-8555	81349	RCR07G153JS	.RESISTOR, FIXED, COMPOSITION	EA	6
C-12	20	PAFZZ	5910-00-114-5268	81349	CK05BX222K	.CAPACITOR, FIXED, CERAMIC	EA	1
C-12	21	PAFZZ	5905-00-141-0717	81349	RCR07G473JS	.RESISTOR, FIXED, COMPOSITION	EA	4
C-12	22	PAFZZ	5935-00-131-1261	00779	1-85930-6	.CONNECTOR, RECEPTACLE, ELECTRICAL, 44-CONTACT.	EA	1
C-12	23	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING PLUG.	EA	1
C-12	24	PAFZZ	5962-01-012-5828	81349	M38510/05001BCB	.INTEGRATED CKT, CMOS, QUAD, 2-INP NAND GATE.	EA	3
C-12	25	PAFZZ	5910-00-997-4079	81349	M39003-01-2271	.CAPACITOR, FIXED, ELECTROLYTE	EA	2
C-12	26	PAFZZ	5905-00-116-8556	81349	RCR07G223JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	27	PAFZZ	5962-01-015-8539	81349	M38510/05504BEB	.INTEGRATED CKT, CMOS HEX BUFFER CONV NON-INV	EA	1
C-12	28	PAFZZ	5910-00-990-4881	81349	CK05BX221K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	1
C-12	29	PAFZZ	5962-01-288-0222	81349	M38510/052038CA	.INTEGRATED CKT, CMOS, DUAL 4-IMP NOR GATE.	EA	1
C-12	30	PAFZZ	5910-00-829-2821	81349	CM05FD181F03	.CAPACITOR, FIXED MICA	EA	1
C-12	31	PAFZZ	5962-01-012-6507	81349	M38510-05003BCB	.INTEGRATED CKT, CMOS, TRIPLE 3-INPUT.	EA	1
C-12	32	PAFZZ	5910-00-954-5496	81349	CM05ED200J03	.CAPACITOR, FIXED, MICA DIELECTRIC	EA	1
C-13	33	PAFZZ	5905-00-104-8365	81349	RCR07G133JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	34	PAFZZ	5905-00-104-8374	81349	RCR07G156JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	35	PAFZZ	5910-00-935-3511	81349	M39003-01-2286	.CAPACITOR, FIXED, ELECTROLYTIC	EA	1
C-12	36	PAFZZ	5905-00-105-7764	81349	RCR07G222JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	37	PAFZZ	5905-00-106-9356	81349	RCR07G203JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	38	PAFZZ	5905-00-928-8159	81349	RN55C1692F	.RESISTOR, FIXED, COMPOSITION	EA	1
C-12	39	PAFZZ	5905-00-141-0743	81349	RCR07G392JS	.RESISTOR, FIXED. COMPOSITION	EA	1
C-12	40	XDFZZ		02533	238-601019-000	.CRYSTAL UNIT, QUARTZ	EA	1
C-12	41	XDFZZ		90073	636-470071-000	.PRINTED WIRING BOARD.	EA	1



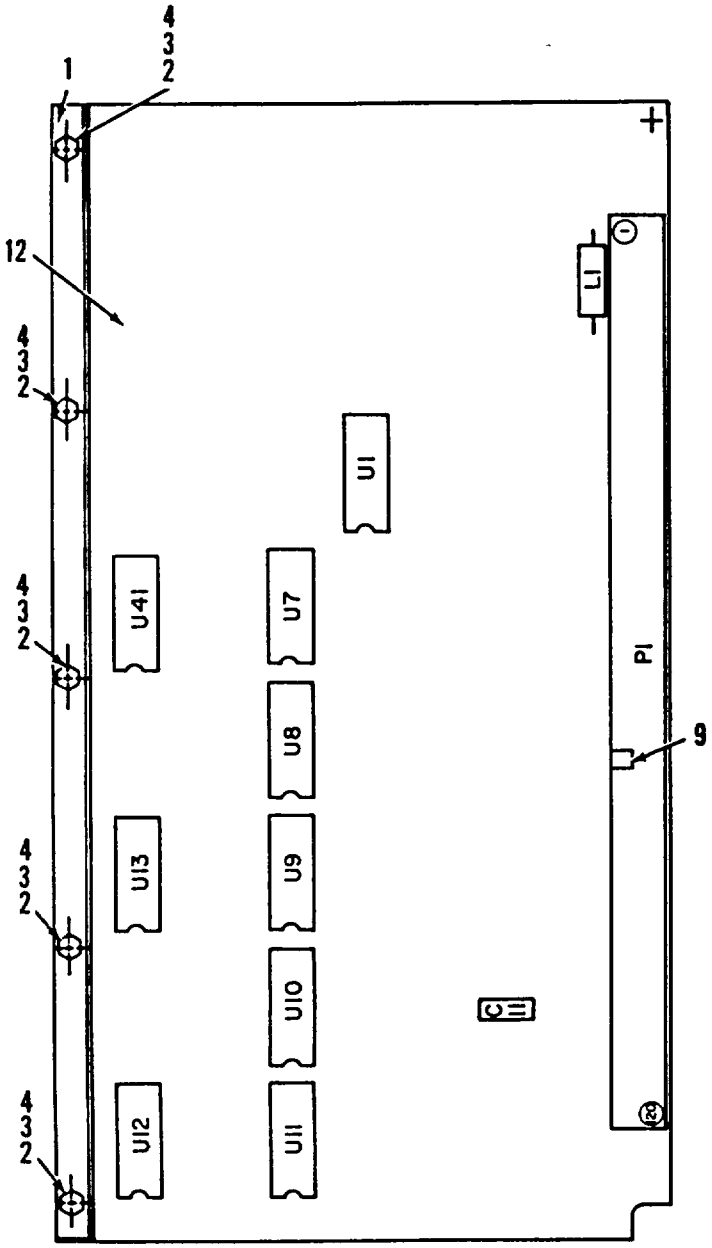
REF DES	INDEX NO.
C5	11
L1	10
P1	8
U1	4
U4	4
U8	4
U11	4
U15	4
U17	4
U20	4
U23	4
U27	4
U29	4
U31	4
U33	4
U36	4
U37	4
U40	4
U44	6

91720

Figure C-13. Test Set Analog Processor No. 1 (Sheet 1 of 2)
(Usable on Code A)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-13		PAFFF	4920-01-119-3420	90073	220-420080-000	TEST SET ANALOG PROCESSOR #1 (SEE FIGURE C-9 FOR NHA) ....(A)	REF	REF
C-13		PBFFF	5998-01-343-3402	90073	220-601172-000	TEST SET ANALOG PR OCESSOR #1 (SEE FIGURE C-9 FOR NHA) ....(B)	REF	REF
C-13	1	XDFZZ		90073	524-354327-000	.BRACKET, ANGLE	EA	1
C-13	2	XDFZZ		80205	NAS1635-00-4	.SCREW. MACHINE (SUPEDED BY ITEM 12)	EA	5
C-13	3	PAFZZ	5310-00-764-1962	80205	NASG20C0	.WASHER, FLAT(SU PEDED BY ITEM 12)	EA	5
C-13	4	PAFZZ	5310-00-727-0725	80205	NAS1291C02	.HEXNUT, CREW, 0-80 (SUPEDED BY ITEM 12)....	EA	5
C-13	5	PAFZZ	5962-01-007-6753	81349	M38510/05703BEA	.INTERGRATED CKT, CMOS, OUAD, 4-STG SHIFT REGISTER ....(A)	EA	15
C-13	6	PAFZZ	5962-01-003-2285	99167	26618101-42	.INTEGRATED CKT, CMOS DUAL BCD UP-COUNTER	EA	1
C-13	7					(DELETED)		
C-13	8	PAFZZ	5935-01-032-6519	00779	5-85930-2	.CONNECTOR, RECEPTACLE ELECTRICAL 120 CONTACT	EA	1
C-13	9	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING, PLUG	EA	1
C-13	10	PAFZZ	5950-00-583-8894	96906	MS75089-7	.COIL, R. F....	EA	1
C-13	11	PAFZZ	5910-00-113-7622	81349	CK05BX104K	.CAPACITOR, FIXED CERAMIC ....(A)	EA	1
C-13	11	PAFZZ	5910-00-113-7672	81349	CK05BX104K	.CAPACITOR. FIXED CERAMIC ....(B)	EA	5
C-13	12	PAFZZ	5320-00-558-9040	96906	MS20470A2-3	.RIVET, SOILD, UNIV HED (SUPEDS ITEMS 2,3 AND 4)	EA	5
C-13	13	XDFZZ		90073	267-200199-001	.JUMPER CIRCUIT ....(A)	EA	52
C-13	14	PAFZZ	5962-01-055-8210	27014	CD4015BCN	.INTEGRATED CKT, CMOS, DUAL 4-STG SHIFT REGISTER ....(B)	EA	12
C-13	15	XDFZZ		90073	636-473873-000	.PRINTING WIRING BOARD....(A)	EA	1
C-13	15	XDFZZ		90073	636-601171-000	.PRINTED WIRING BOARD....(B)	EA	1

*** Not Illustrated**

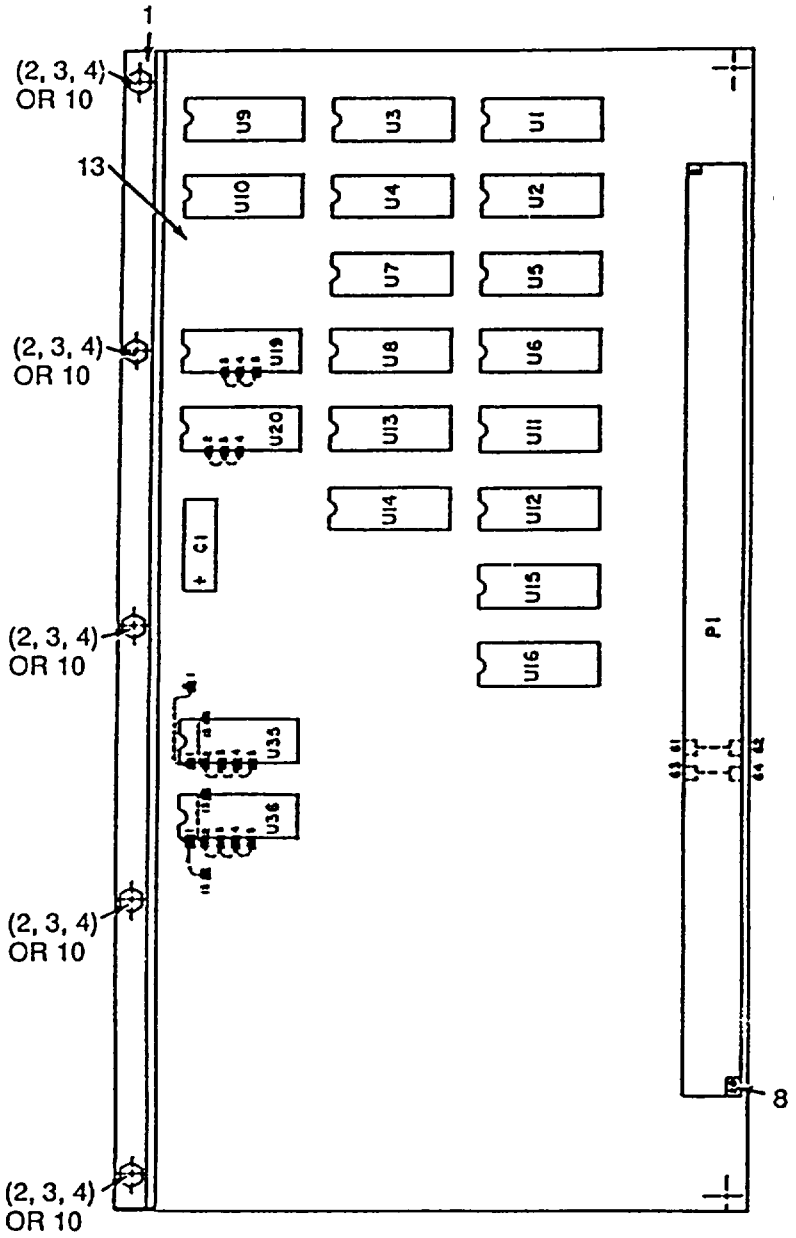


REF. DES.	INDEX NO.
C11	10
L1	5
P1	8
U1	6
U7	7
U8	7
U9	7
U10	7
U11	7
U12	7
U13	7
U41	11

S 69477 (B)

Figure C-14. Test Set Analog Processor No. 2

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-14		PBFFF	4920-01-117-7209	90073	220-420083-000	TEST SET ANALOG PROCESSOR #2 (SEE FIGURE C-9 FOR NHA)	REF	REF
C-14	1	XDFZZ		90073	524-354327-000	.BRACKET ANGLE	EA	1
C-14	2	PAFZZ	5320-00-558-9040	96906	MS20470A2-3	.RIVET, SOLID	EA	5
C-14	3					(DELETED)		
C-14	4					(DELETED)		
C-14	5	PAFZZ	5950-00-583-8894	96906	MS75089-7	.COIL R P	EA	1
C-14	6	PAFZZ	5962-01-083-7495	81349	M38510/05603BEB	.INTEGRATED CKT, CMOS, 14-STAGE TRIPLE COUNTER	EA	1
C-14	7	PAFZZ	5962-01-037-4510	81349	M38510/05703BEB	.INTEGRATED CKT, CMOS, 4-STG SHIFT REGISTER	EA	7
C-14	8	PAFZZ	5935-01-032-6519	00779	5-85930-2	.CONNECTOR, 120-CONTACT	EA	1
C-14	9	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING PLUG	EA	1
C-14	10	PAFZZ	5910-00-113-7622	81349	CK05BX104K	.CAPACITOR, FIXED, CERAMIC	EA	1
C-14	11	PAFZZ	5962-01-012-5828	81349	M38510/05001BCB	.INTEGRATED CKT, CMOS, OUAD, 2-INP NAND GATE	EA	1
C-14	12	XDFZZ		90073	636-473876-000	.PRINTED WIRING BOARD	EA	1

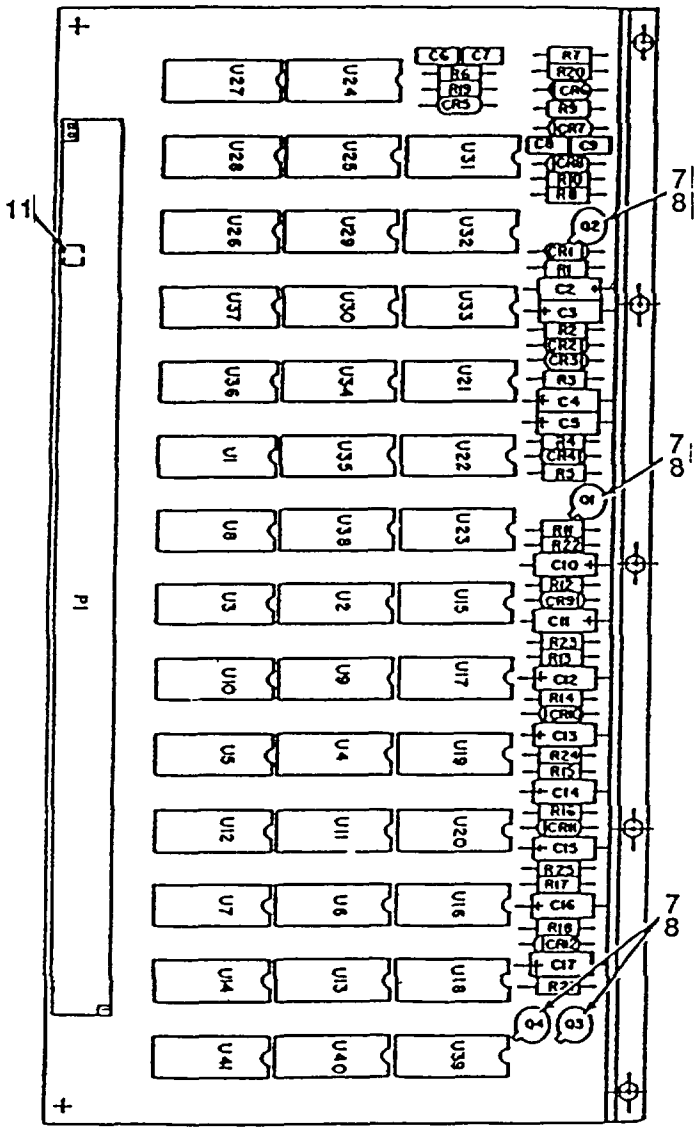


REF. DES.	INDEX NO.
C1	9
P1	7
U1	6
U2	5
U3	6
U4	5
U5	6
U6	5
U7	6
U8	5
U9	5
U10	6
U11	6
U12	5
U13	6
U14	5
U15	6
U16	5
U19	5
U20	6
U35	6
U36	5

91722

Figure C-15. Test Set Monitor No. 1 (Sheet 1 of 2)
(Usable on Code A)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-15		PBFZZ	4920-01-116-3026	90073	220-420073-000	TEST SET MONITOR #1 (SEE FIGURE C-9 FOR NEA) ....(A)	REF	REF
C-15		PBFDD	5998-01-344-0793	90073	220-601392-000	TEST SET MONITOR #1 (SEE FIGURE C-9 FOR NHA) ....(B)	REF	REF
C-15	1	XDFZZ		90073	524-354327-000	.BRACKET, ANGLE	EA	1
C-15	2	XDFZZ		80205	NAS1635-00-4-4	.SCREW, MACHINE (SUPEDED BY ITEM 10)	EA	5
C-15	3	PAFZZ	5310-00-764-1962	80205	NAS620C0	.WAHER, FLAT (SUPEDED BY ITEM 10)....	EA	5
C-15	4	PAFZZ	5310-00-727-0725	80205	NAS1291C02	.HEXNUT, CRES, 0-80 (SUPEDED BY ITEM 10)	EA	5
C-15	5	PAFZZ	5962-01-049-9495	81349	M38510/05002BCB	.INTEGRATED CKT, CMOS, 4-INP NAND GATE....(A)	EA	10
C-15	5	PAFZZ	5962-01-226-5682	27104	CD4012BCN	.INTEGRATED CKT, CMOS, DUAL 4 INP NAND GATE....(B)	EA	11
C-15	6	PAFZZ	5962-01-112-2354	81349	M38510/05203BCA	.INTEGRATED CKT, CMOS, DUAL 4-INP NANDGATE....	EA	10
C-15	7	PAFZZ	5935-01-032-6519	00779	5-85930-2	.CONNECTOR, RECEPTACLE ELECTRICAL, 120-CONTACT	EA	1
C-15	8	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING, PLUG....	EA	1
C-15	9	PAFZZ	5910-00-997-4079	81349	M39003-01-2991	.CAPACITOR, FIXED, ELECTROLYTIC....	EA	1
C-15	10	PAFZZ	5320-00-558-9040	96906	MS20470A2-3	.RIVET, SOILD, UNIV HEAD(SUPEDS ITEMS 23 AND 4)....	EA	5
C-15	11	PAFZZ	5910-00-010-8717	81349	M39014/01-1593	.CAPACITOR, FIXED, CERAMIC ....(B)	EA	3
C-15	12	PAFZZ	5905-00-110-0388	81349	RCR07G104JS	.RESISTOR, FIXED, COMPOSITION ....(B)	EA	4
C-15	13	XDFZZ		90073	636-420074-000	.PRINTED WIRING BOARD....(A)	EA	1
C-15	13	XDFZZ		90073	636-601341-000	.PRINTED WIRING BOARD ....(B)	EA	1



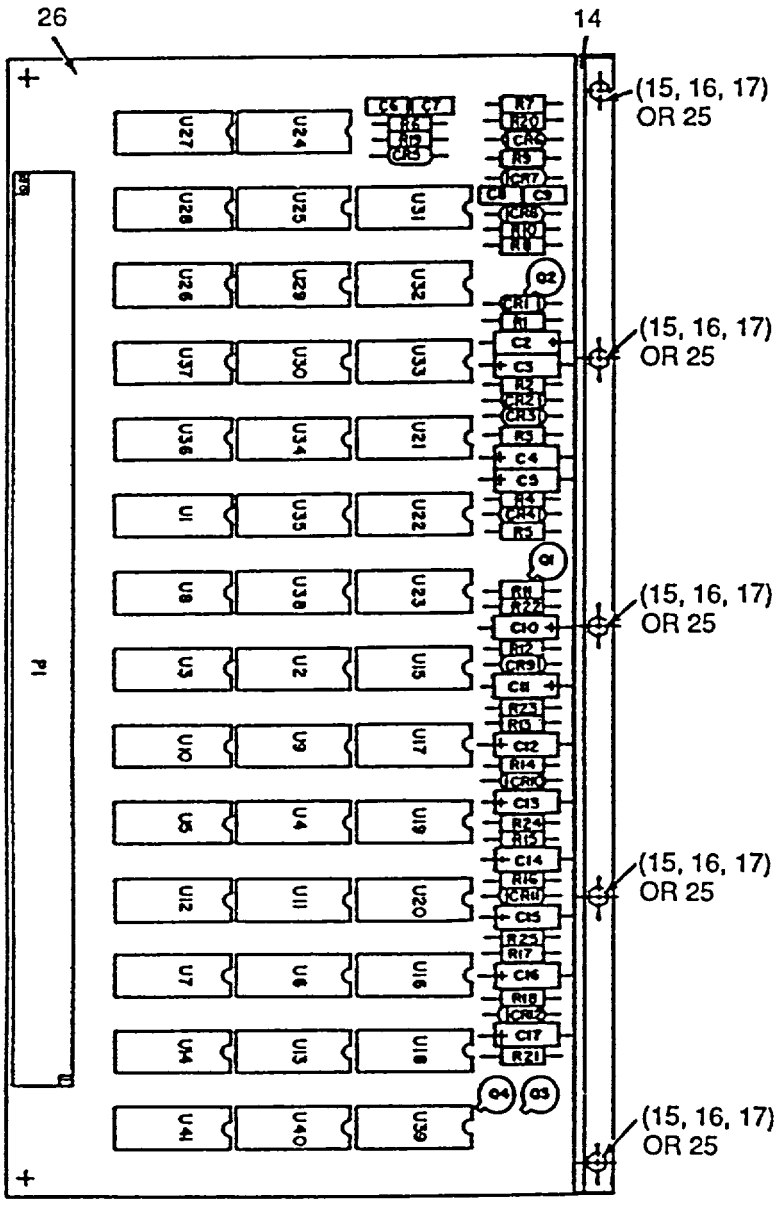
(KEYING PLUG IN SOCKET 70)

REF DES	INDEX NO.	REF DES	INDEX NO.
CR1	12	R2	17
CR2	12	R3	17
CR3	12	R4	17
CR4	12	R5	18
CR5	12	R6	4
CR6	12	R7	6
CR7	12	R8	16
CR8	12	R9	6
CR9	12	R10	6
CR10	12	R11	19
CR11	12	R12	21
CR12	12	R13	19
C2	9	R14	21
C3	9	R15	19
C4	9	R16	21
C5	9	R17	19
C6	13	R18	21
C7	13	R19	5
C8	13	R20	5
C9	13	R21	18
C10	20	R22	5
C11	22	R23	5
C12	20	R24	5
C13	22	R25	5
C14	20	U1	2
C15	22	U2	2
C16	20	U3	2
C17	22	U4	2
P1	10	U5	2
R1	17	U6	2

(CONT'D ON TO SHEET 2)

91724

Figure C-16. Test Set Monitor No. 2 (Sheet 1 of 2)

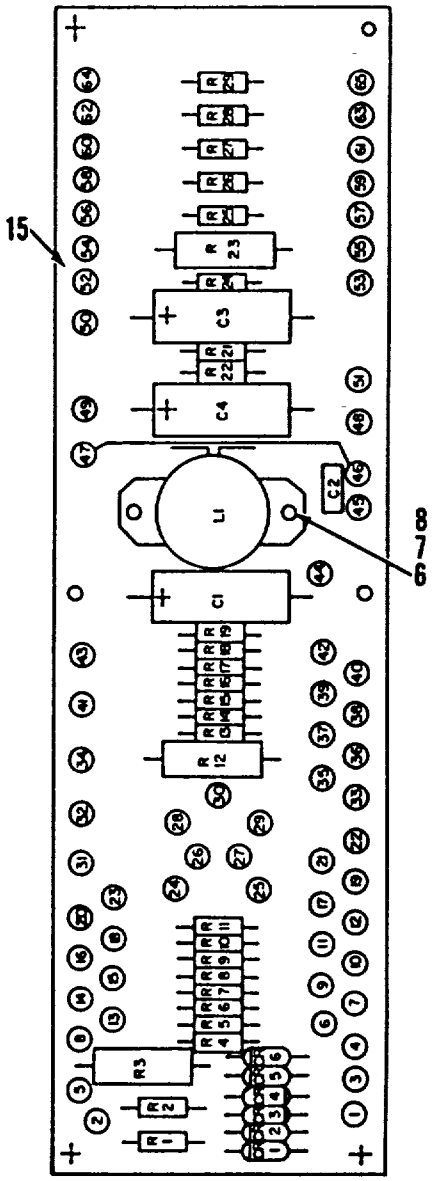


REF DES	INDEX NO.	REF DES	INDEX NO.
U7	2	U37	2
U8	3	U38	1
U9	3	U39	2
U10	3	U40	3
U11	3	U41	1
U12	3		
U13	3		
U14	3		
U15	3		
U16	3		
U17	2		
U18	2		
U19	2		
U20	3		
U21	1		
U22	1		
U23	1		
U24	1		
U25	2		
U26	2		
U27	2		
U28	1		
U29	2		
U30	3		
U31	1		
U32	1		
U33	1		
U34	3		
U35	2		
U36	2		

91725

Figure C-16. Test Set Monitor No. 2 (Sheet 2 of 2)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-16		PBFFF		90073	220-420076-000	TEST SET MONITOR #2 (SEE FIGURE C-9 FOR NHA).....	REF	REF
C-16	1	PAFZZ	5962-01-012-5828	81349	M38510/05001BCB	.INTEGRATED CKT, CMOS, OUAD, 2-INP NAND GATE.....	EA	10
C-16	2	PAFZZ	5962-01-019-6671	81349	M38510/05203BCA	.INTEGRATED CKT, CMOS, DUAL 4-INP NOR GATE.....	EA	18
C-16	3	PAFZZ	5962-01-049-9495	81349	M38510/05002BCB	.INTEGRATED CKT, CMOS, DUAL 4-INP NOR GATE.	EA	13
C-16	4	PAFZZ	5905-00-244-6934	81349	RCR07G824JS	.RESISTOR, FIXED, COMPOSITION.	EA	1
C-16	5	PAFZZ	5905-00-116-8556	81349	RCR07G223JS	.RESISTOR, FIXED, COMPOSITION	EA	6
C-16	6	PAFZZ	5905-00-485-4545	81349	RCR07G334JS	.RESISTOR, FIXED, COMPOSITION	EA	3
C-16	7	PAFZZ	5961-00-951-8757	81349	JAN2N2222A	.TRANSISTOR	EA	4
C-16	8	PAFZZ	5920-01-091-8535	90073	606-202049-000	.INSULATOR DISK.	EA	4
C-16	9	PAFZZ	5910-00-851-0464	81349	M39003-01-2350	.CAPACITOR, FIXED, ELECTROLYTIC.....	EA	4
C-16	10	PAFZZ	5935-01-032-6519	00779	5-85930-2	.CONNECTOR, RECEPTACLE, ELEC 120-CONTACT.	EA	1
C-16	11	PAFZZ	5935-00-426-3083	00779	86286-1	.KEYING, PLUG.....	EA	1
C-16	12	PAFZZ	5961-00-938-1135	81349	JAN1N4148	.SEMICONDUCTOR DEVISER, DIODE	EA	12
C-16	13	PAFZZ	5910-00-113-7622	81349	CK05BX104K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC.	EA	4
C-16	14	XDFZZ		90073	524-354327-000	.BRACKET, ANGLE	EA	1
C-16	15	XDFZZ		80205	NAS1635-00-4-4	.SCREW, MACHIN E(SUPEDED BY ITEM 25)	EA	5
C-16	16	PAFZZ	5310-00-764-1962	80205	NAS620CO	.WASHER, FLAT (SUPEDED BY ITEM 25).....	EA	5
C-16	17	XDFZZ		70318	NAS129C02	.HEXNUT, CRES, 0-80(SUPEDED BY ITEM 25).....	EA	5
C-16	18	PAFZZ	5905-00-114-0708	81349	RCR07G202JS	.RESISTOR, FIXED. COMPOSITION	EA	1
C-16	19	PAFZZ	5905-00-114-5339	81349	RCR07G154JS	.RESISTOR, FIXED, COMPOSITION	EA	4
C-16	20	PAFZZ	5905-00-110-7620	81349	RCR07G102JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-16	21	PAFZZ	5905-00-110-0388	81349	RCR07G104JS	.RESIST OR, FIXED, COMPOSITION	EA	4
C-16	22	PAFZZ	5910-00-078-7227	81349	M39003-01-2283	.CAPACITOR. FIXED, ELECTROLYTE.....	EA	4
C-16	23	PAFZZ	5905-00-120-9152	81349	RCR07G27-JS	.RESISTOR, FIXED, COMPOSITION	EA	4
C-16	24	PAFZZ	5910-00-144-4381	81349	M39003-01-2304	.CAPACITOR, FIXED, ELECTROLYTE.....	EA	4
C-16	25	PAFZZ	5320-00-558-9040	96906	MS20470A2-3	.RIVER, SOILD, UNIV HEAD(SUPEDS ITEM 15, 16 AND 17).....	EA	5
C-16	26	XDFZZ		90073	636-420077-000	.PRINT WIRING BOARD.....	EA	1

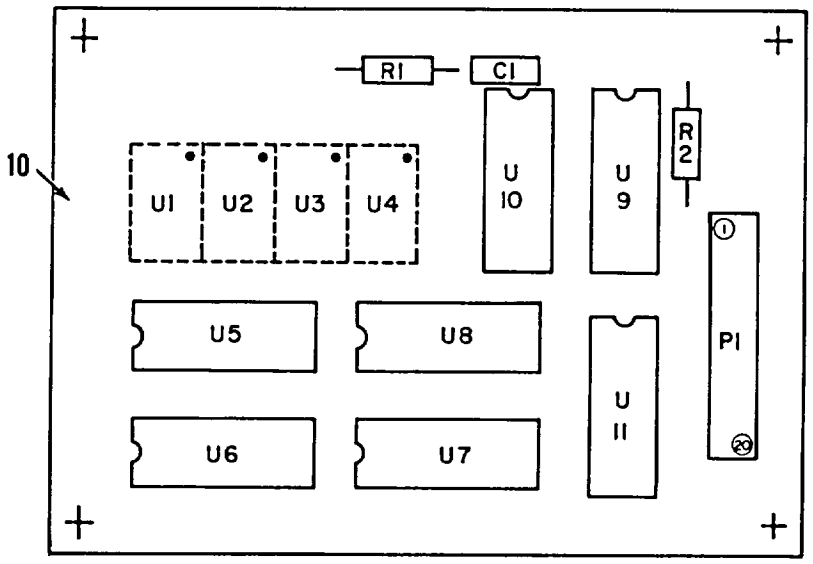


REF. DES.	INDEX NO.
CR1	12
CR2	12
CR3	12
CR4	12
CR5	12
CR6	12
C1	3
C2	11
C3	3
C4	3
L1	5
R1	13
R2	13
R3	14
R4	1
R5	1
R6	1
R7	1
R8	1
R9	1
R10	1
R11	1
R12	2
R13	10
R14	10
R15	10
R16	10
R17	10
R18	10
R19	9
R21	4
R22	4
R23	2
R24	1
R25	1
R26	1
R27	1
R28	1
R29	1

S 69480 (B)

Figure C-17. Test Set Junction Board

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-17		PBFFF		90073	220-420150-000	TEST SET JUNCTION BOARD (SEE FIGURE C-9 FOR NHA).....	REF	REF
C-17	1	PAFZZ	5905-00-116-8555	81349	RCR07G153JS	.RESISTOR, FIXED, COMPOSITION	EA	14
C-17	2	PAFZZ	5905-00-924-6692	81349	RW79U22R1F	.RESISTOR, FIXED, W/W POWER	EA	2
C-17	3	PAFZZ	5910-00-253-5213	81349	M39003-01-2263	.CAPACITOR, FIXED, ELECTROLYTIC.....	EA	3
C-17	4	PAFZZ	5905-00-922-9756	81349	RN55C3091F	.RESISTOR, FIXED, FILM	EA	2
C-17	5	PAFZZ	5905-01-097-4883	90073	260-475350-000	.CHOKE.....	EA	1
C-17	6	PAFZZ	5305-00-054-5638	96906	MS51957-4	.SCREW, MACHINE	EA	2
C-17	7	PAFZZ	5310-00-043-4708	80205	NAS620C2	.WASHER, FLAT	EA	2
C-17	8	PAFZZ	5310-00-727-0725	80205	NAS1291-C02	.HEXNUT, LOCKING, CRES.....	EA	2
C-17	9	PAFZZ	5905-00-900-9657	81349	RN55C1131F	.RESISTOR, FIXED, FILM	EA	1
C-17	10	PAFZZ	5905-00-110-7622	81349	RCR07G682JS	.RESISTOR, FIXED, COMPOSITION	EA	6
C-17	11	PAFZZ	5910-00-113-7622	81349	CY05BX104K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	1
C-17	12	PAEZZ	5961-00-985-4900	81349	JAN1N647	.SEMICONDUCTOR DEVICE, DIODE	EA	6
C-17	13	PAFZZ	5905-00-109-9842	81349	RW81U4750F	.RESISTOR, FIXED W/W POWER	EA	2
C-17	14	PAFZZ	5905-00-924-6681	81349	RW79U68R1F	.RESISTOR, FIXED W/W POWER	EA	1
C-17	15	XDFZZ		90073	636-420151-000	.PRINTED WIRING BOARD.....	EA	1

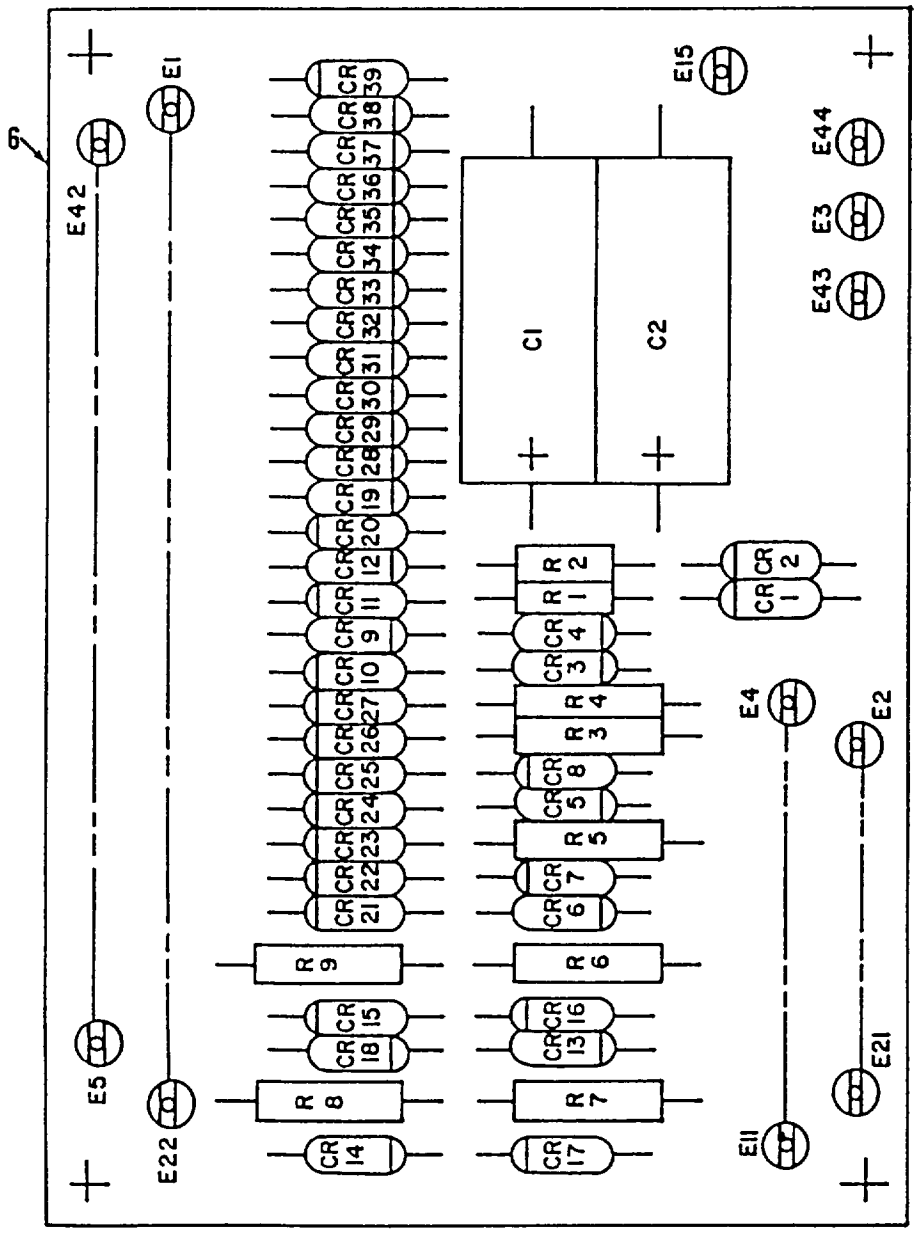


REF. DES.	INDEX NO.
C1	3
P1	7
R1	2
R2	6
U1	1
U2	1
U3	1
U4	1
U5	9
U6	9
U7	9
U8	9
U9	5
U10	4
U11	8

S 69481 (8)

Figure C-18. Test Set Digital Display Board

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-18		PBFFF	5999-01-114-9294	90073	220-420153-000	TEST SET DIGITAL DISPLAY BOARD (SEE FIGURE C-9 FOR NHA)	REF	REF
C-18	1	XDFZZ		58361	FND357	.SEMICONDUCTOR DEVICE LED, SINGLE DIGIT 3/8 CHARACTER, COMMON CATHODE	EA	4
C-18	2	PAFZZ	5905-00-111-1682	81349	RCR07G163JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-18	3	PAFZZ	5910-00-978-7690	81349	CK05BK471K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	1
C-18	4	PAFZZ	5962-01-012-5828	81349	M38510/05001BCB	.INTEGRATED CKT, CMOS, 2-INP NAND GATE	EA	1
C-18	5	PAFZZ	5962-01-063-1966	02735	CD4024BF	.INTEGRATED CKT, CMOS, 7-STAGE BINARY COUNTER	EA	1
C-18	6	PAFZZ	5905-00-106-3666	81349	RCR07G103JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-18	7	PAFZZ	5935-01-053-4021	00779	87215-7	.CONNECTOR, STRAIGHT HEADER, 20-CONTACT, MALE	EA	1
C-18	8	PAFZZ	5962-01-264-5248	02735	CD4049BF	.INTEGRATED CKT, CMOS. HEX BUFFER CONV INVERTER	EA	1
C-18	9	XDFZZ		07263	9368DC	.INTEGRATED CKT, TTL, 7-SEG LED DISPLAY DRIVER	EA	4
C-18	10	XDFZZ		90073	636-420154-000	.PRINTED WIRING BOARD	EA	1



REF DES	INDEX NO.	REF DES	INDEX NO.
CR1	2	CR28	2
CR2	2	CR29	2
CR3	2	CR30	2
CR4	2	CR31	2
CR5	2	CR32	2
CR6	2	CR33	2
CR7	2	CR34	2
CR8	2	CR35	2
CR9	2	CR36	2
CR10	2	CR37	2
CR11	2	CR38	2
CR12	2	CR39	2
CR13	2	C1	3
CR14	2	C2	3
CR15	2	R1	5
CR16	2	R2	5
CR17	2	R3	1
CR18	2	R4	1
CR19	2	R5	1
CR20	2	R6	1
CR21	2	R7	1
CR22	2	R8	1
CR23	2	R9	1
CR24	2		
CR25	2		
CR26	2		
CR27	2		

S 69482(B)

Figure C-19. Lamp Test Board

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-19		PBFFF	5999-01-116-2634	81349	220-420148-000	LAMP TEST BOARD (SEE FIGURE C-9 FOR NHA).....	REF	REF
C-19	1	PAFZZ	5905-00-109-9942	81349	RWBOU4750F	.RESISTOR, FIXED, W/W POWER	EA	7
C-19	2	PAFZZ	5961-00-985-4900	81349	JAN1N647	.SEMICONDUCTOR DEVICE, DIODE.....	EA	39
C-19	3	PAFZZ	5910-00-253-5213	81349	M39003-01-2263	.CAPACITOR, FIXED, ELECTROLYTIC.....	EA	2
C-19	4					(DELETED)		
C-19	5	PAFZZ	5905-00-113-4860	81349	RCR07G270JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-19	6	XAFZZ		90073	636-420149-000	.PRINTED WIRING BOARD.....	EA	1

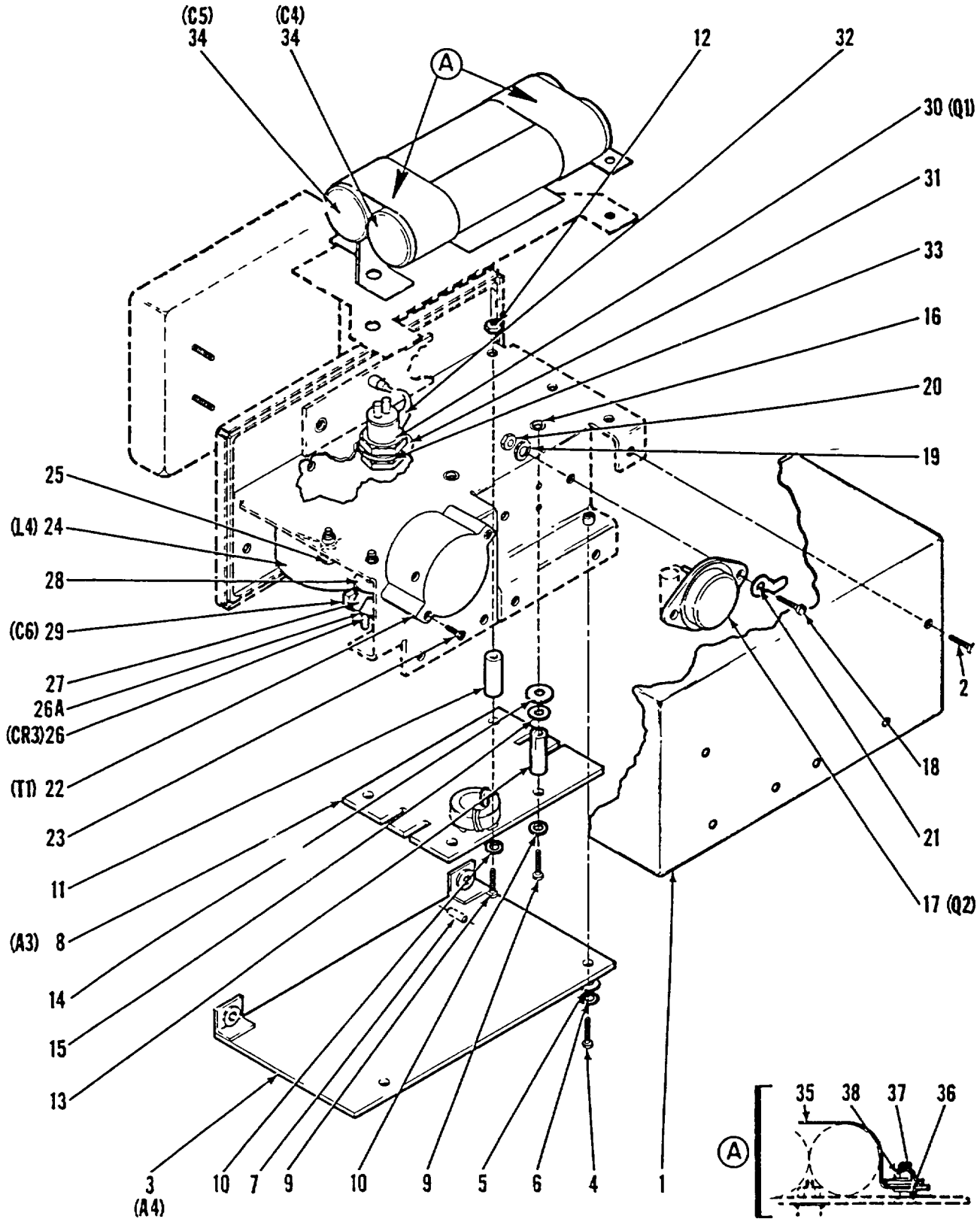


Figure C-20. Lamp Power Supply (Sheet 1 of 2)

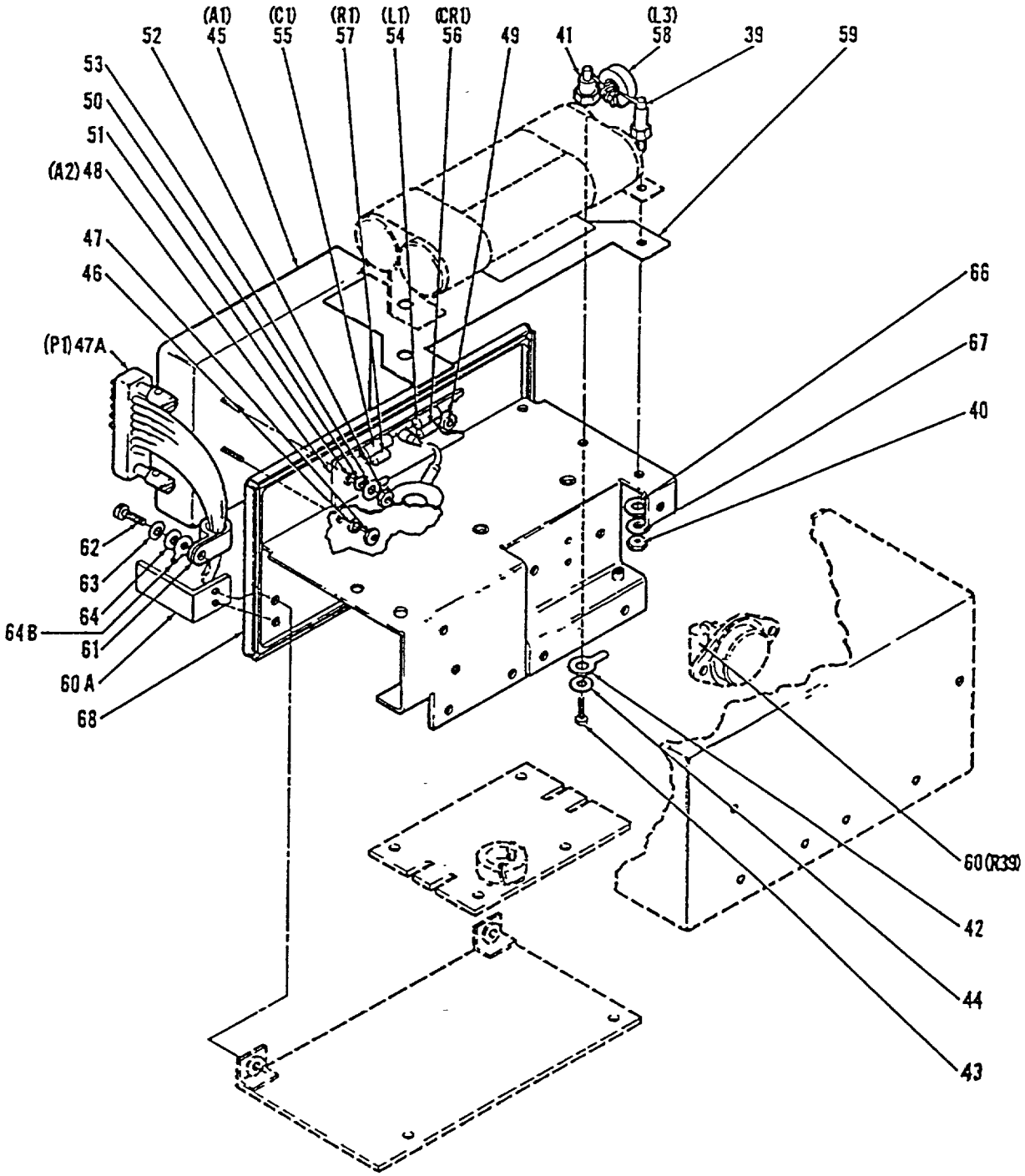
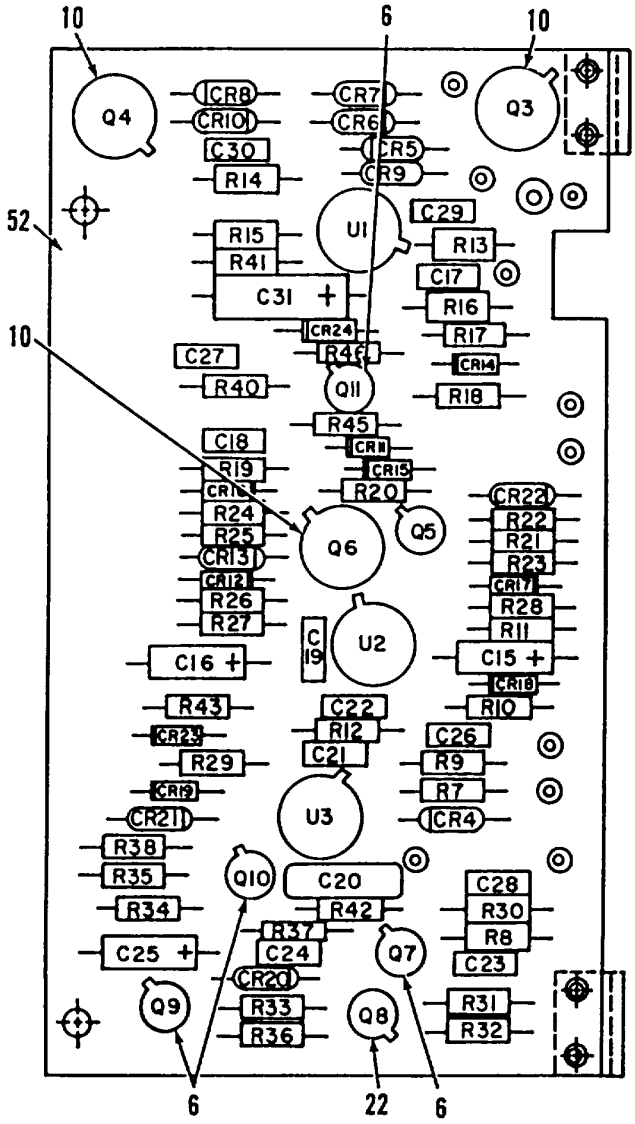


Figure C-20. Lamp Power Supply (Sheet 2 of 2)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-20		PBFFF	6620-01-105-1649	90073	244-473806-000	LAMP POWER SUPPLY (SEE FIGURE C-9 FOR NHA)	REF	REF
C-20	1	XDFZZ		90073	550-417099-002	.COVER, SUBASSEMBLY	EA	1
C-20	2	PAFZZ	5305-00-054-5648	96906	MS51957-14	.SCREW, MACHINE	EA	6
C-20	3	PBFFF	6620-01-105-1761	90073	220-471802-002	.REGULATOR BOARD (SEE FIGURE C-21 FOR BREAKDOWN)	EA	1
C-20	4	PAFZZ	5305-00-054-5648	96906	MS51957-14	.SCREW, MACHINE	EA	4
C-20	5	PAFZZ	5310-00-057-0573	80205	NAS620C4	.WASHER, FLAT	EA	4
C-20	6	PAFZZ	5310-00-933-8118	96906	MS35338-125	.LOCKWASHER	EA	4
C-20	7	XAFZZ		96906	RN55C1501F THROUGH RN55C2490F	.RESISTOR SELECTION FOR A4R6	EA	1
C-20	8	PBFFF	5915-01-112-2937	90073	220-471854-00	.FILTER BOARD 5-VOLT (SEE FIGURE C-22 FOR BREAKDOWN)	EA	1
C-20	9	PAFZZ	5305-00-054-5647	96906	MS51957-13	.SCREW, MACHINE	EA	4
C-20	10	PAFZZ	5310-00-057-0573	80205	NAS620C4	.WASHER, FLAT	EA	4
C-20	11	XDFZZ		90073	734-350151-001	.SPACER, THREADED	EA	2
C-20	12	PAFZZ	5310-01-079-8603	72962	79LH1660-40	.NUT	EA	2
C-20	13	XDFZZ		90073	734-350151-002	.SPACER, THREADED	EA	2
C-20	14	PAFZZ	5970-01-218-2296	90073	606-350160-000	.INSULATOR, WASHER	EA	2
C-20	15	PAFZZ	5310-00-782-1349	96906	MS15795-804	.WASHER, FLAT	EA	2
C-20	16	XDFZZ		90073	530-350188-001	.BUSHING, INSULATING	EA	2
C-20	17	PAFZZ	5961-00-481-4205	80131	2N5671	.TRANSISTOR C/W INSULATING HDW	EA	1
C-20	18	PAFZZ	5303-00-054-6652	96906	MS51957-28	.SCREW, MACHINE	EA	2
C-20	19	PAFZZ	5310-00-880-5976	96906	MS15795-806	.WASHER, PLAIN	EA	2
C-20	20	PAFZZ	5310-00-878-3291	96906	MS21043-06	.NUT, SELF-LOCKING	EA	2
C-20	21	PAFZZ	5940-01-193-0008	90073	316-115007-001	.TERMINAL PLAIN	EA	1
C-20	22	PBFZZ	5950-01-116-4155	90073	322-475842-000	.TRANSFORMER, SWITCHING	EA	1
C-20	23	PAFZZ	5305-00-814-1707	80205	NAS662C2R4	.SCREW, MACHINE	EA	2
C-20	24	PAFZZ	5950-01-120-7516	90073	260-475841-000	.COIL STORAGE	EA	1
C-20	25	PAFZZ	5305-00-068-5276	96906	MS16995-9	.SCREW, CAP	EA	2
C-20	26	PAFZZ	5961-01-077-2739	12969	IN5814R	.SEMICONDUCTOR DEVICE, DIODE	EA	1
C-20	26A	PAFZZ		13103	4860	.MOUNTING KIT	EA	1
C-20	27	XDFZZ		90073	316-115007-003	.TERMINAL NO. 10 PLAIN	EA	1
C-20	28	XDFZZ		81483	7403-09FR-22	.INSULATOR PAD	EA	1
C-20	29	PAFZZ	5910-00-114-5268	81349	CK05BX222K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	1
C-20	30	PBFZZ	5961-01-114-1397	90073	324-202639-00	.THYRISTOR, SILICON, BIDIRECTIONAL	EA	1
C-20	31	XDFZZ		90073	113	.BUSHING, TEFLON (SUPEDED BY ITEM 31A)	EA	1
C-20	31A	XDFZZ		86928	5610-122-040	.WASHER,(SUPEDS ITEM 31)	EA	1
C-20	32	PAFZZ	5940-01-074-4474	06540	20214	.TERMINAL LUG	EA	1
C-20	33	PAFZZ	5310-00-582-5677	96906	MS15795-810	.WASHER, FLAT	EA	1
C-20	34	PAFZZ	5910-01-114-5049	90073	211-475044-001	.CAPACITOR, FIXED, ELECTROLYTIC	EA	2
C-20	35	XDFZZ		90073	702-417126-000	.CLAMP, HEATSINK	EA	1
C-20	36	PAFZZ	5970-01-112-7531	90073	530-350168-000	.BUSHING, INSULATOR	EA	2
C-20	37	PAFZZ	5310-00-595-6761	96906	MS15795-802	.WASHER, FLAT	EA	2
C-20	38	PAFZZ	5310-00-812-4294	80205	NAS671C2	.NUT, PLAIN	EA	1
C-20	39	XDFZZ		90073	316-132216-002	.TERMINAL, STAND-OFF	EA	1
C-20	40	PAFZZ	5310-00-721-7413	80205	NAS671C3	.NUT, PLAIN	EA	1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-20	41	PAFZZ	5940-00-259-8456	71279	570-3648-02-0100	.TERMINAL, STAND-OFF, CERAMIC	EA	1
C-20	42	PAFZZ	5940-01-193-0008	90073	316-115007-001	.TERMINAL, PLAIN	EA	1
C-20	43	PAFZZ	5305-00-054-6649	96906	MS51957-25	.SCREW, MACHINE	EA	1
C-20	44	PAFZZ	5310-00-616-3555	96906	MS35333-71	.LOCKWASHER	EA	1
C-20	45	PAFZZ	5915-01-113-9045	90073	245-417149-000	.R.F.I FILTER	EA	1
C-20	46	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER	EA	2
C-20	47	PAFZZ	5310-00-208-3786	80205	NAS67104	.NUT, PLAIN	EA	2
C-20	47A	PAFZZ	5935-00-110-1588	95238	SM26-20PSLGD	.CONNECTOR, PLUG, ELECTRICAL, 26-CONTACT, MALE	EA	1
C-20	48	PBFDD	6620-01-105-2214	90073	220-350153-000	.CROWBAR PROTECTION BOARD	EA	1
C-20	49	XDFZZ		90073	734-350164-00	.SPACER, SLEEVE	EA	2
C-20	50	PAFZZ	5310-00-057-0573	80205	NAS62004	.WASHER, FLAT	EA	2
C-20	51	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER	EA	2
C-20	52	PAFZZ	5210-00-208-3786	80205	NAS671C4	.NUT, PLAIN	EA	2
C-20	53	PAFZZ	5940-01-206-6561	90073	316-115007-004	.TERMINAL, PLAIN	EA	1
C-20	54	PAFZZ	5950-01-004-7259	96906	MS75089-28	.COIL, RF	EA	1
C-20	55	PAFZZ	5910-00-007-2001	81349	M39003-01-2246	.CAPACITOR, FIXED, ELECTROLYTIC	EA	1
C-20	56	PAFZZ	5961-00-852-7549	81349	JAN1N754A	.SEMICONDUCTOR DEVICE, DIODE	EA	1
C-20	57	PAFZZ	5905-00-110-7620	81349	RCR07G102JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-20	58	PBFZZ	5950-01-119-3486	90073	260-475851-000	.COIL, RF1 SUPPRESSION	EA	1
C-20	59	XDFZZ		90073	606-350155-000	.INSULATING SHEET	EA	1
C-20	60	PAFZZ	5905-00-935-8543	81349	RCR20G330JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-20	60A	XDFZZ		90073	524-350167-000	.BRACKET, ANGLE	EA	2
C-20	61	PAFZZ	5975-00-727-5153	59730	TY-23M	.CLAMP CABLE NYLON	EA	1
C-20	62	PAFZZ	5303-00-054-5648	96906	MS51957-14	.SCREW, MACHINE	EA	1
C-20	63	PAFZZ	5210-00-057-0573	80205	NAS62004	.WASHER, FLAT	EA	1
C-20	64	PAFZZ	5310-00-933-8118	96906	MS35338-135	.LOCKWASHER	EA	1
C-20	64A	XDFZZ		59730	TC-104	.MOUNTING BASE	EA	1
C-20	64B	XDFZZ		90073	316-115007-000	.TERMINAL, PLAIN	EA	2
C-20	66	PAFZZ	5970-01-218-2296	90073	606-350160-000	.INSULATOR, WASHER	EA	1
C-20	67	PAFZZ	5310-00-782-1349	96906	MS15795-804	.WASHER	EA	1
C-20	68	XDFZZ		90073	542-471273-000	.CHASSIS, SUBASSY	EA	1



REF DES	INDEX NO.	REF DES	INDEX NO.	REF DES	INDEX NO.
CR4	19	C24	45	R20	36
CR5	4	C25	26	R21	13
CR6	7	C26	39	R22	15
CR7	7	C27	33	R23	38
CR8	4	C28	33	R24	49
CR9	34	C29	33	R25	18
CR10	34	C30	33	R26	28
CR11	12	C31	32	R27	30
CR12	12	Q3	9	R28	27
CR13	48	Q4	1	R29	27
CR14	12	Q5	14	R30	41
CR15	12	Q6	9	R31	42
CR16	12	Q7	5	R32	20
CR17	12	Q8	21	R33	20
CR18	12	Q9	5	R34	27
CR19	12	Q10	5	R35	28
CR20	44	Q11	5	R36	24
CR21	29	R7	40	R37	27
CR22	37	R8	17	R38	47
CR23	12	R9	18	R40	11
CR24	12	R10	17	R41	3
C15	26	R11	16	R42	23
C16	26	R12	30	R43	27
C17	33	R13	2	R45	35
C18	33	R14	3	R46	27
C19	46	R15	2	U1	8
C20	43	R16	3	U2	31
C21	46	R17	11	U3	25
C22	51	R18	13		
C23	33	R19	50		

S 69484 (B)

Figure C-21. Regulator Board

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-21		PBFFF		90073	220-471802-002	REGULATOR BOARD (SEE FIGURE C-20 FOR NHA)	REF	REF
C-21	1	PAFZZ	5961-00-880-4779	81349	JAN2N2905	.TRANSISTOR	EA	1
C-21	2	PAFZZ	5905-00-900-0021	81349	RN55C8060F	.RESISTOR, FIXED, FILM	EA	2
C-21	3	PAFZZ	5905-00-985-5882	81349	RN55C8662F	.RESISTOR, FIXED, FILM	EA	3
C-21	4	PBFZZ	5961-00-241-5960	04713	IN5305	.SEMICONDUCTOR DEVICE, DIODE	EA	2
C-21	5	PAFZZ	5961-00-951-8757	81349	JAN2N2222A	.TRANSISTOR	EA	4
C-21	6	PAFZZ	5970-01-091-0535	90073	606-202049-000	.INSULATOR DISK	EA	4
C-21	7	PAFZZ	5961-00-892-1009	81349	JAN1N963B	.SEMICONDUCTOR DEVICE, DIODE	EA	2
C-21	8	PAFZZ	5962-00-469-4598	07263	UA741HM	.INTEGRATED, CKT, LINEAR OPERATIONAL AMP, FREQ COMP	EA	1
C-21	9	PAFZZ	5961-00-949-1432	81349	JAN2N2219A	.TRANSISTOR	EA	2
C-21	10	PAFZZ	5999-00-946-4423	81349	M38527/02-021D	.MOUNTING PAD	EA	3
C-21	11	PAFZZ	5905-00-105-7764	81349	RCR07G222JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-21	12	PAFZZ	5961-00-938-1135	81349	JAN1N4148	.SEMICONDUCTOR DEVICE, DIODE	EA	10
C-21	13	PAFZZ	5905-00-110-7620	81349	RCR07G102JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-21	14	PAFZZ	5961-00-925-3777	81349	JAN2N2907A	.TRANSISTOR	EA	1
C-21	14A	PAFZZ	5970-01-091-8535	81349	606-202049-000	.INSULATOR DISK	EA	1
C-21	15	PAFZZ	5905-00-114-0711	81349	RCR07G472JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-21	16	PAFZZ	5905-00-110-0388	81349	RCR07G104JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-21	17	PAFZZ	5905-00-126-683	81349	RCR07G332JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-21	18	PAFZZ	5905-00-136-3891	81349	RCR07G621JS	.RESISTOR., FIXED, COMPOSITION	EA	2
C-21	19	PAFZZ	5961-00-131-8267	01281	LVA56A	.SEMICONDUCTOR DEVICE, DIODE (CMC SOURCE CONTROL NO 294469697-000)	EA	1
C-21	20	PAFZZ	5905-00-141-1183	81349	RCR07G101JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-21	21	PAFZZ	5961-00-761-4504	81349	JAN2N4948	.TRANSISTOR (IF UNAVAILABLE, CAN BE REPLACED BY JAN2N5431)	EA	1
C-21	22	PAFZZ	5970-01-091-8535	90073	606-202049-000	.INSULATOR DISK.	EA	1
C-21	23	PAFZZ	5905-00-141-0717	81349	RCR07G753JS	.RESISTOR, FIXED, COM POSITION	EA	1
C-21	24	PAFZZ	5905-00-485-4545	81349	RCR07G334JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-21	25	PAFZZ	5962-00-861-3220	01295	SN52709L	.INTEGRATED, CKT, LINEAR OPERATIONAL AMP	EA	1
C-21	26	PAFZZ	5910-00-068-4298	81349	M39003-01-2356	.CAPACITOR, FIXED, ELECTROLYTIC	EA	3
C-21	27	PAFZZ	5905-00-106-3666	81349	RCR07G103JS	.RESISTOR, FIXED, COMPOSITIO	EA	6
C-21	28	PAFZZ	5905-00-116-8555	81349	RCR07G153JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-21	29	PAFZZ	5961-00-894-0684	81349	JAN1N758A	.SEMICONDUCTOR DEVICE, DIODE	EA	1
C-21	30	PAFZZ	5905-00-106-1356	81349	RCR07G152JS	.RESISTOR, FIXED, COMPOSITION	EA	2
C-21	31	PAFZZ	5962-00-131-9460	27014	LM11H	.INTEGRATED CKT, LINEAR VOLTAGE COMPARATOR	EA	1
C-21	32	PAFZZ	5910-00-998-6949	81349	M39003-01-2306	.CAPACITOR, FIXED, ELECTROLYTIC	EA	1
C-21	33	PAFZZ	5910-00-113-7672	81349	CK05BX104K	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	7
C-21	34	PAFZZ	5961-00-985-4900	81349	JAN1N647	.SEMICONDUCTOR DEVICES, DIODE	EA	2
C-21	35	PAFZZ	5905-00-115-3560	81349	RCR07G183JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-21	36	PAFZZ	5905-00-135-3972	81349	RCR07G200JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-21	37	PAFZZ	5961-00-752-6163	81349	JAN1N965B	.SEMICONDUCTOR DEVICE, DIODE	EA	1
C-21	38	PAFZZ	5905-00-104-8369	81349	RCR07G362JS	.RESISTOR, FIXED, COMPOSITION	EA	1
C-21	39	PAFZZ	5910-00-988-6171	81349	CK05BX220K	.CAPACITOR, FIXED, COMPOSITION	EA	1
C-21	40	PAFZZ	5905-00-135-3973	81349	RCR07G221JS	.RESISTOR, FIXED, COMPOSITION	EA	1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-21	41	PAFZZ	5905-00-932-2952	81349	RNSSC2102F	.RESISTOR, Fixed, Composition	EA	1
C-21	42	PAFZZ	5905-00-982-0482	81349	RNSSC3572F	.RESISTOR, Fixed, Composition	EA	1
C-21	43	PAFZZ	5910-00-902-0031	81349	CM05CD050D03	.CAPACITOR, Fixed, Mica Dielectric	EA	1
C-21	44	PAFZZ	5961-00-995-2310	81349	JAN1N752A	.SEMICONDUCTOR DEVICE, Diode	EA	1
C-21	45	PAFZZ	5910-00-983-8214	81349	CK05BX681K	.CAPACITOR, Fixed, Ceramic Dielectric	EA	1
C-21	46	PAFZZ	5910-00-893-6748	81349	CK05BX101K	.CAPACITOR, Fixed, Ceramic Dielectric	EA	2
C-21	47	PAFZZ	5905-00-110-7622	81349	RCR07G682JS	.RESISTOR, Fixed, Composition	EA	1
C-21	48	PAFZZ	5961-00-893-6761	81349	JAN1N9698	.SEMICONDUCTOR, DEVICE, Diode	EA	1
C-21	49	PAFZZ	5905-00-114-0708	81349	RCR07G202JS	.RESISTOR, Fixed, Composition	EA	1
C-21	50	PAFZZ	5905-00-947-5657	81349	RW81U2000F	.RESISTOR, Fixed, W/W Power	EA	1
C-21	51	PAFZZ	5910-00-111-4811	81349	CK05BX103K	.CAPACITOR, Fixed, Ceramic Dielectric	EA	1
C-21	52	XDFZZ		90073	636-471803-000	.PRINTING WIRING BOARD	EA	1

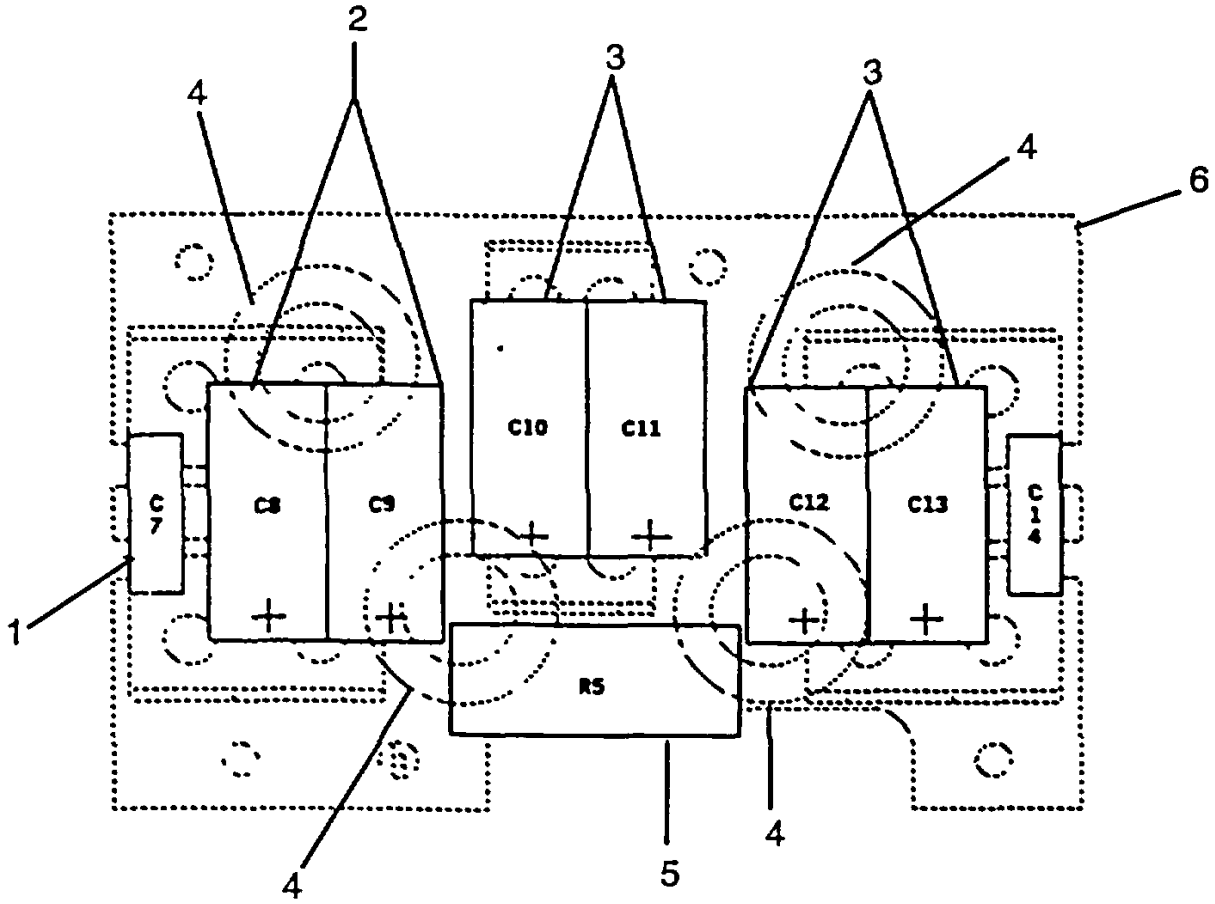


Figure C-22. 5-Volt Filter Board

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-22		PBFFF	5915-01-112-2937	90073	220-471854-000	5-VOLT FILTER BOARD (SEE FIGURE C-20 FOR NHA)	REF	REF
C-22	1	PAFZZ	5910-00-113-5272	81349	M39014/05-2297	.CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	2
C-22	2	PAFZZ	5910-00-154-0547	81349	M39003/01-3032	.CAPACITOR, FIXED, CERAMIC, ELECTROLYTIC	EA	2
C-22	3	PAFZZ	5310-01-267-7119	81349	M39003/01-8043	.CAPACITOR, FIXED, ELECTROLYTIC.....	EA	4
C-22	4	PAFZZ	5950-01-217-9177	90073	260-4758340-000	.COIL RFI SUPPRESSION	EA	4
C-22	5	PAFZZ	5905-01-085-4854	90073	288-469532-000	.RESISTOR, FIXED, W/W	EA	1
C-22	6	XDFZZ		90073	220-417134-000	.PLATE, MOUNTING, SUBASSEMBLY	EA	1

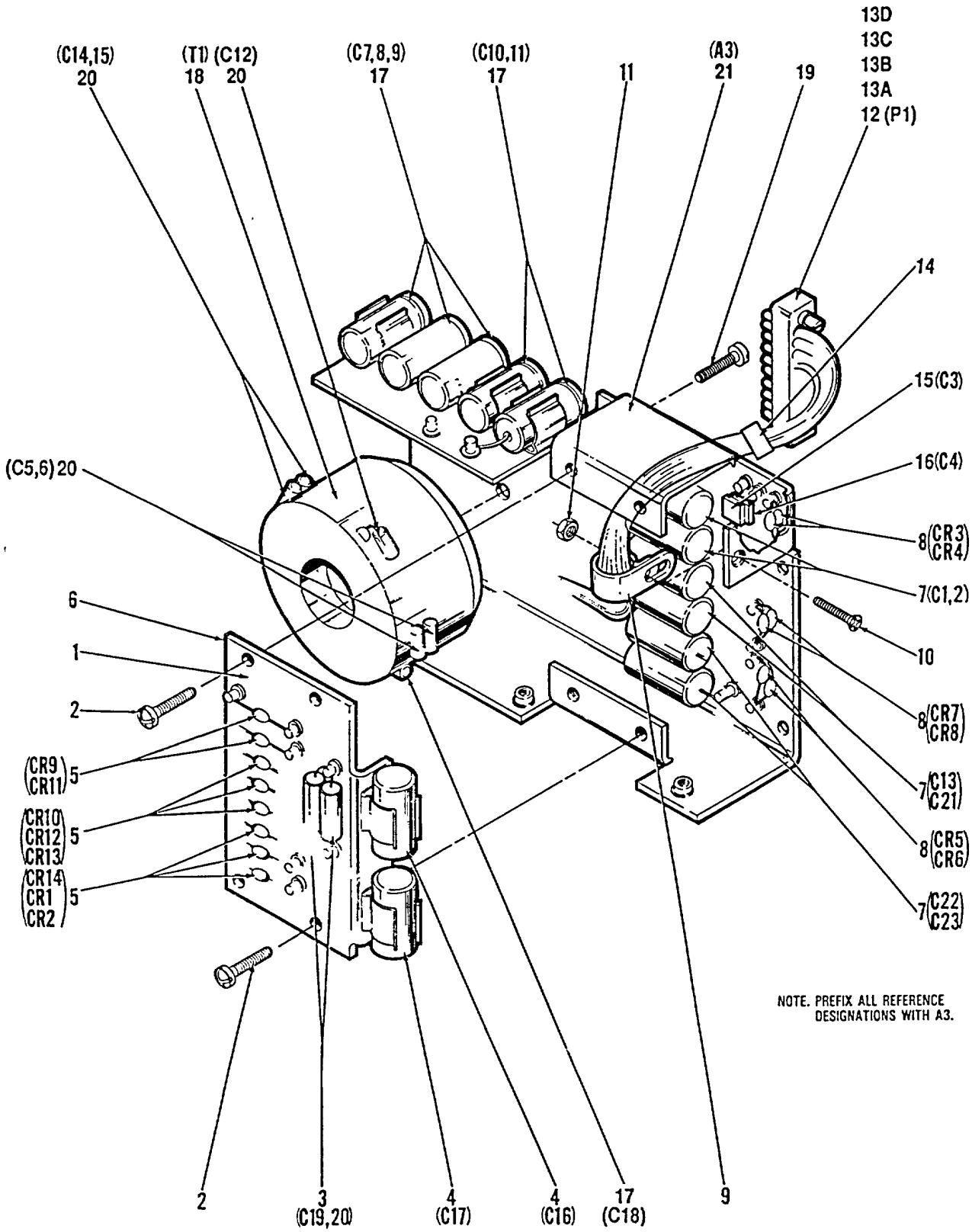


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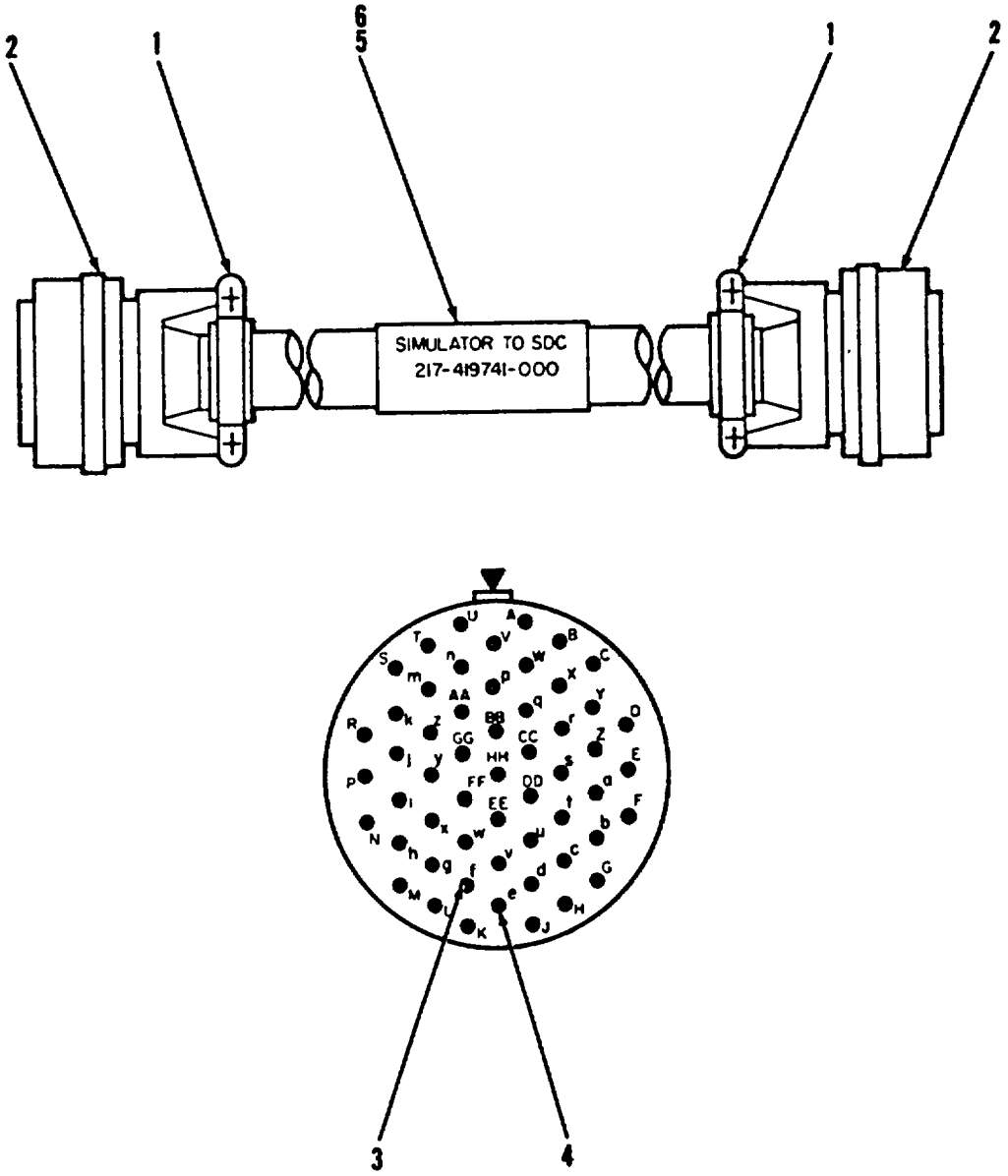
Figure C-23. Logic Power Supply

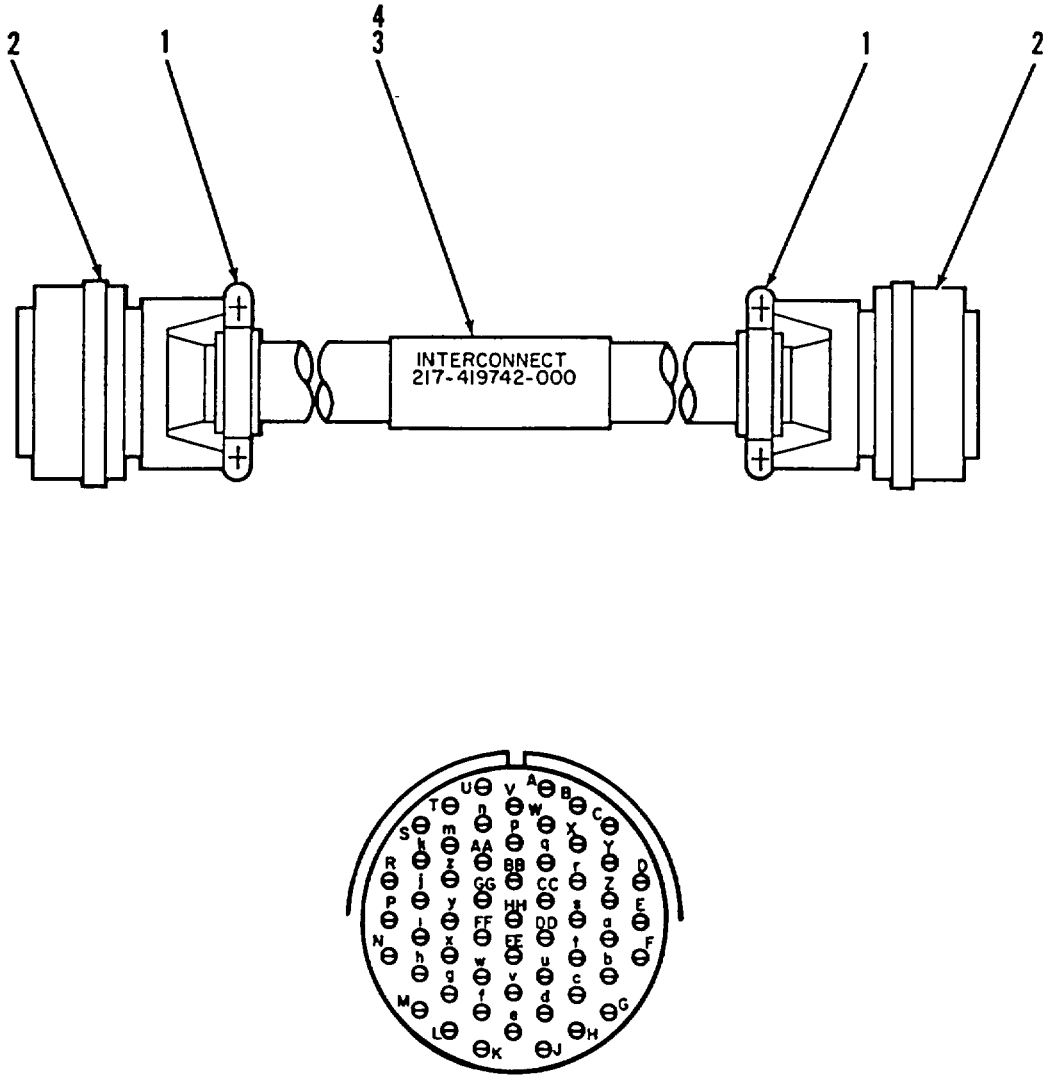
(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-23		PBFFF	4920-01-112-2938	90073	244-473808-000	LOGIC POWER SUPPLY(SEE FIGURE C-9 FOR NHA)	REF	REF
C-23	1	PBFDD	4920-01-112-2939	90073	243-473854-000	.PLATE, ELECTRICAL COMPONENTS ASSY	EA	1
C-23	2	PAFZZ	5305-00-054-5648	96906	MS51957-14	.SCREW, MACHINE.....	EA	4
C-23	3	PAFZZ	5910-00-932-4455	81349	M39003-01-2289	.CAPACITOR, FIXED, ELECTROLYTIC.....	EA	2
C-21	4	PAFZZ	5910-01-117-8139	90073	211-469009-093	.CAPACITOR, FIXED, NON-SOLID TANTALUM	EA	2
C-23	5	PAFZZ	5961-00-421-3002	81349	JAN1N5550	.SEMICONDUCTOR DEVICE, DIODE.....	EA	8
C-23	6	PAFZZ	6620-01-112-2961	90073	626-47855-000	.PLATE MOUNTING COMPONENTS ASSY	EA	1
C-23	7	PAFZZ	5910-01-098-7796	81349	M39003-03-0145	.CAPACITOR, FIXED, ELECTROLYTIC	EA	6
C-23	8	PAFZZ	5961-00-421-3002	81349	JAN1N5550	.SEMICONDUCTOR DEVICE, DIODE.....	EA	6
C-23	9	PAFZZ	5340-01-209-6140	90073	702-192233-002	.CLAMP, LOOP.....	EA	1
C-23	10	PAFZZ	5305-00-225-6400	96906	MS24693C3	.SCREW, MACHINE.....	EA	1
C-23	11	PAFZZ	5310-00-878-3292	96906	MS21043-04	.NUT, SELF-LOCKING.....	EA	1
C-23	12	PAFZZ	5935-00-110-1588	95238	SM26-20PSLGD	.CONNECTOR, PLUG, ELECTRICAL, 26-CONTACT, MALE.	EA	1
C-23	13	XDFZZ	5940-01-087-4215	90073	666-348762-000	.TERMINAL STRIP(SUPSDED BY ITEM 13 THRU 13D).....	EA	1
C-23	13A	PAFZZ	5999-01-347-0622	90073	267-601005-000	.JUMPER. STRIP (SUPSDS ITEM 13).....	EA	3
C-23	13B	PAFZZ	5999-01-347-0623	90073	267-6010005-001	.JUMPER. STRIP(SUPSDS ITEM 13).....	EA	1
C-23	13C	PAFZZ	5999-01-347-0624	90073	267-601005-002	.JUMPER, STRIP(SUPSDS ITEM 13).....	EA	1
C-23	13D	PAFZZ	5999-01-347-5555	90073	267-601000-003	.JUMPER, STRIP (SUPSDS ITEM 13).....	EA	1
C-23	14	XDFZZ	5975-00-111-1226	59730	TY-51M	.MARKER, PLATE	EA	1
C-23	15	PAFZZ	5910-00-113-7622	81349	CK05BX104K	.CAPACITOR, FIXED, CERAMIC	EA	1
C-23	16	PAFZZ	5910-00-893-6745	81349	CK50BX102K	.CAPACITOR, FIXED, CERAMIC	EA	1
C-13	17	PAFZZ	5910-00-117-8139	90073	211-469009-093	.CAPACITOR, FIXED, NON-SOLID TANTALUM	EA	5
C-23	18	PAFZZ	5950-01-115-7145	90073	322.475862-000	.TRANSFORMER, POWER 400-HZ.....	EA	1
C-13	19	PAFZZ	5305-00-054-6668	96906	MS51957-43	.SCREW, MACHINE.....	EA	1
C-23	20	PAFZZ	5910-00-113-5272	81349	M39014/05-2297	.CAPACITOR, FIXED, CERAMIC	EA	6
C-23	21	PAFZZ	6620-01-112-2962	90073	542-473853-000	.LOGIC POWER SUPPLY SUB-ASSY.....	EA	1



S 60487 (B)

Figure C-24. Cable Assembly Simulator to SDC (217-419741-00)

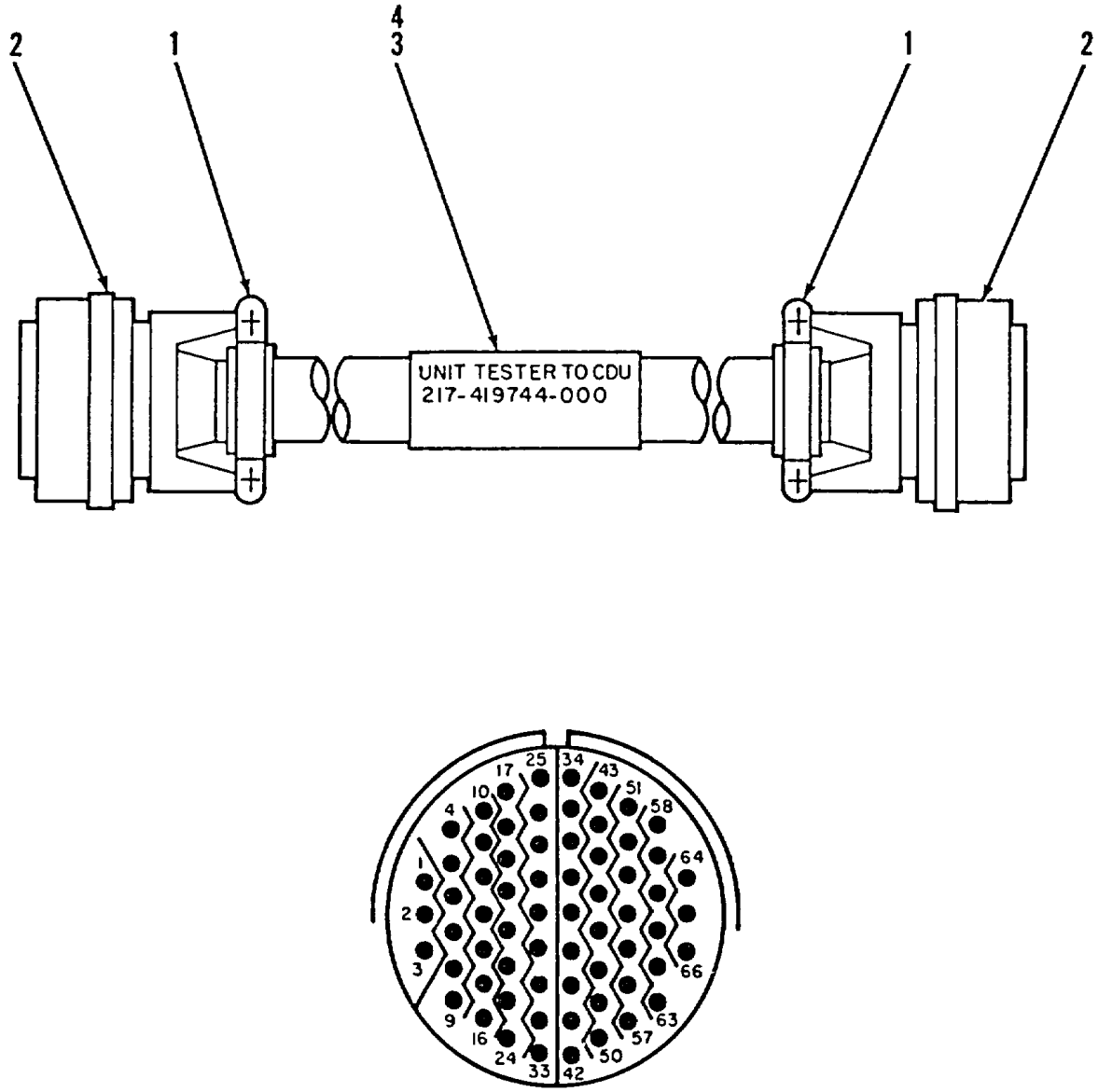
(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-24		XDFZZ		90073	217-419741-000	CABLE ASSEMBLY(SEE FIGURE C-2 FOR NHA)	REF	
C-24	1	PAFZZ	5935-01-010-6222	96906	MS3417-22N	.CLAMP, STRAIN-RELIEF	EA	2
C-24	2	PAFZZ	5935-00-728-6769	96906	MS3476L22-55S	.CONNECTOR, PLUG, ELECTRICAL. 55-CONTACT	EA	2
C-24	3	PAFZZ	5999-01-091-1778	81349	M39029/10-2020C3	.CONTACT SOCKET, ELECTRICAL, ALUMEL.....	EA	2
C-24	4	PAFZZ	5999-01-089-6597	81349	M39029/10-2020C4	.CONTAC T SOCKET, ELECTRICAL, ALUMEL.....	EA	2
C-24	5	PAFZZ	9905-00-115-5035	59730	TC-226	.MARKER, PLATE	EA	1
C-24	6	PAFZZ	5975-01-727-5153	22421	TY23M	.CLAMP CABLE, NYLON	EA	3



S 69488 (B)

Figure C-25. Cable Assembly Interconnect (217-419742-000)

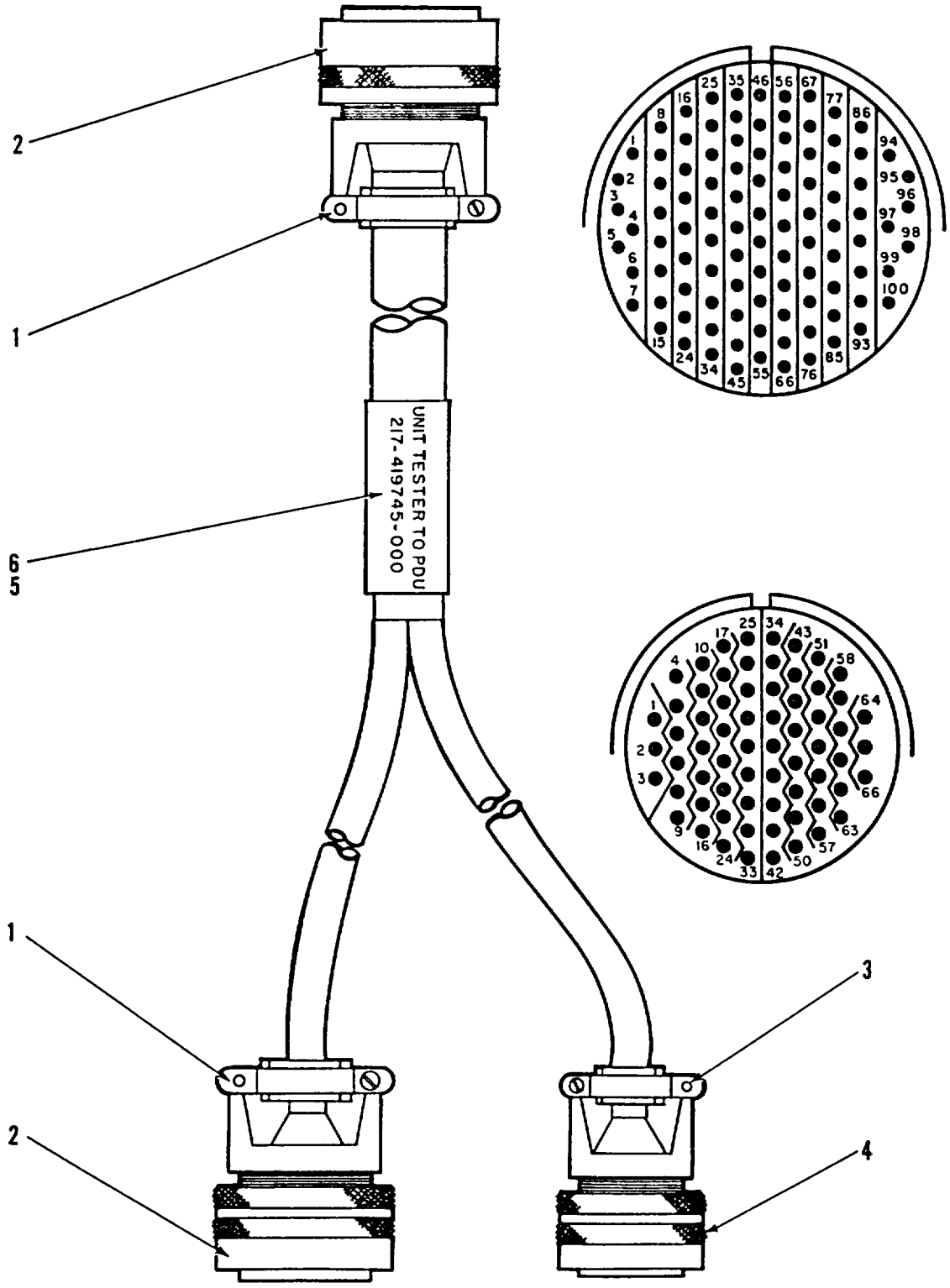
(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-25		PAFZZ	1560-01-165-9460	90073	217-419742-000	CABLE ASSEMBLY INTERCONNECT (SEE FIGURE C-2 FOR NHA)	REF	REF
C-25	1	PAFZZ	5935-01-010-6222	96906	MS3417-22N	.CLAMP, STRAIN-RELIEF	EA	2
C-25	2	PAFZZ	5935-00-410-1756	96906	MS3476L22-55PN	.CONNECTOR, PLUG, ELECTRICAL. 55-CONTACT.....	EA	2
C-25	3	PAFZZ	9905-00-115-5035	22431	TC-226	.MARKER, PLATE	EA	1
C-25	4	PAFZZ	5975-01-727-5153	22431	TY23M	.CLAMP CABLE, NYLON	EA	3



S 69489 (B)

Figure C-26. Cable Assembly, Unit Tester to CDU (217-419744-000)

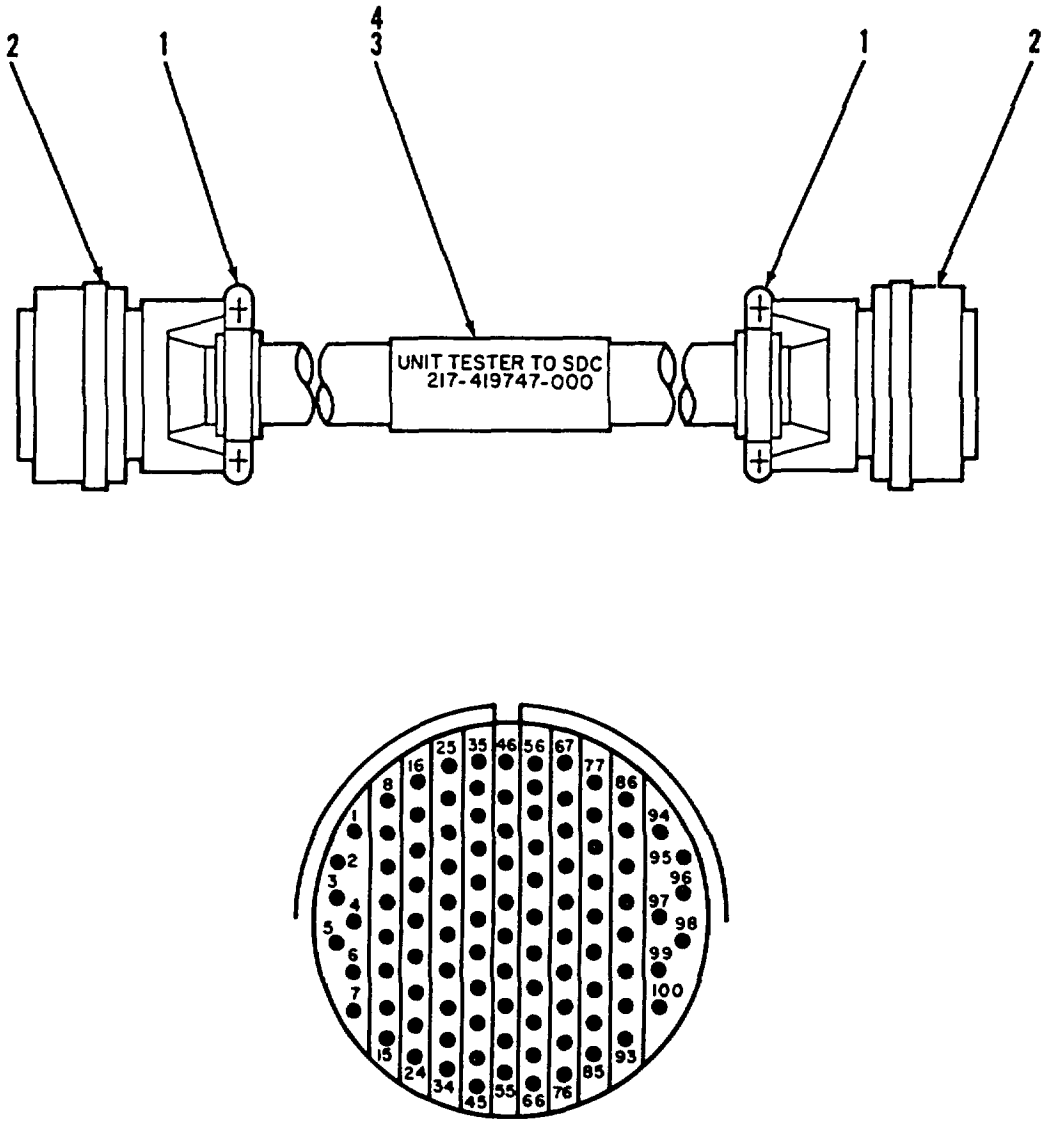
(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-26		XDFZZ		90073	217-419744-000	CABLE ASSEMBLY, UNIT TESTER TO CDU (SEE FIGURE C-2 FOR NHA)	REF	REF
C-26	1	PAFZZ	5935-01-201-4467	81349	M85049149-2-18W	.CLAMP, STRAIN-RELIEF	EA	2
C-26	2	PAFZZ	5935-00-521-2548	96906	MS27467T19F35S	.CONNECTOR, PLUG, ELECTRICAL, 66-CONTACT	EA	2
C-26	3	PAFZZ	9905-00-115-5035	22431	TC-226	.MARKER, PLATE	EA	1
C-26	4	PAFZZ	5975-01-727-5153	22431	TY23M	.CLAMP, CABLE, NYLON	EA	3



S 69490 (B)

Figure C-27. Cable Assembly, Unit Tester to PDU (217-419745-000)

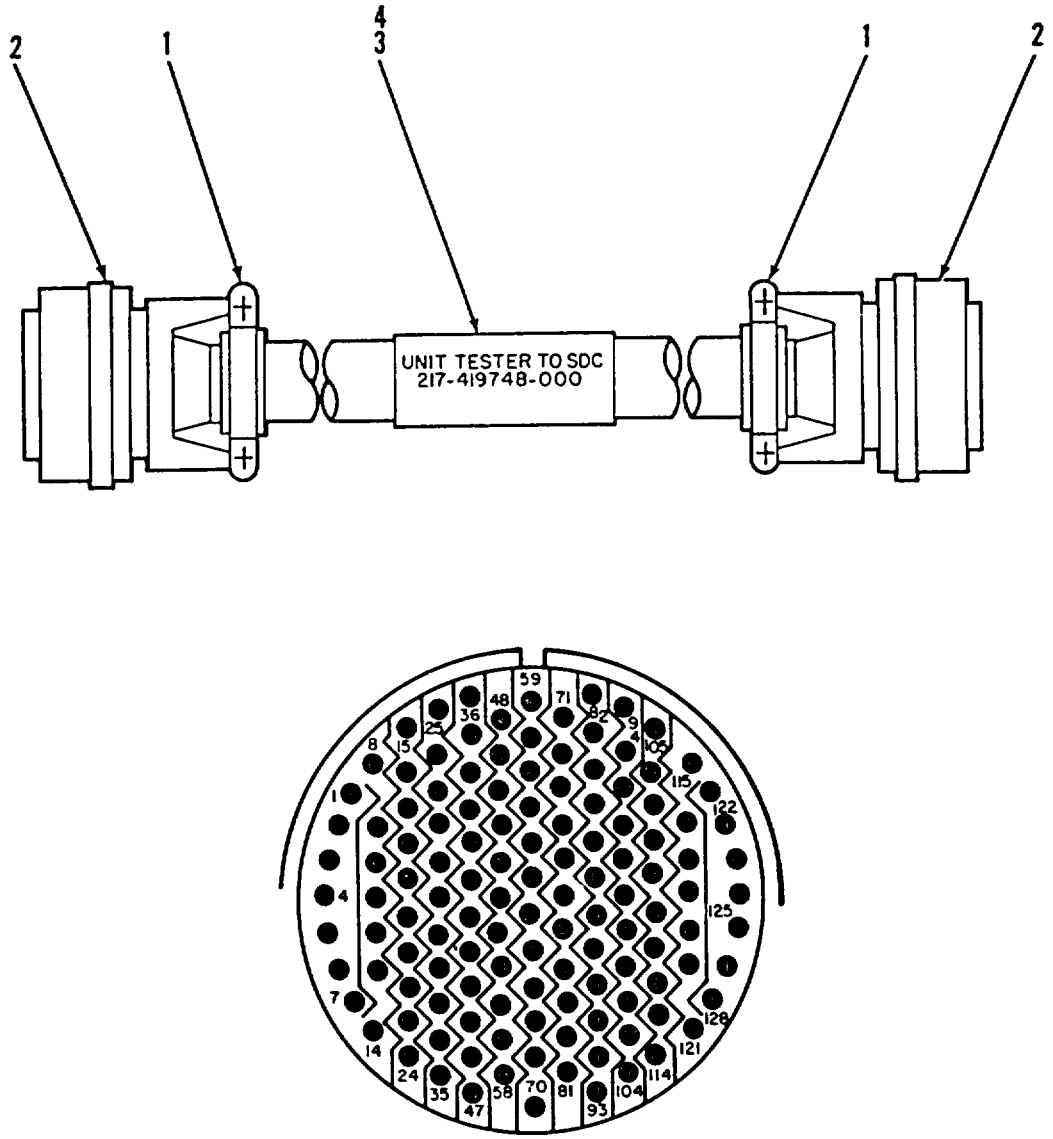
(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-27		XDFZZ		90073	217-419745-000	CABLE ASSEMBLY, UNIT TESTER TO PDU (SEE FIGURE C-2 FOR NHA)	REF	REF
C-27	1	PAFZZ	5935-01-201-3909	81349	M85049/49-2-22W	.CLAMP, STRAIN-RELIEF	EA	2
C-27	2	PAFZZ	5915-01-077-0227	96906	MS27467T23F35S	.CONNECTOR, PLUG, ELECTRICAL 100-CONTACT.....	EA	2
C-27	3	PAFZZ	5935-01-201-4467	81349	M85049/49-2-18W	.CLAMP, STRAIN-RELIEF	EA	1
C-27	4	PAFZZ	5935-00-521-2548	96906	MS27467T19F35S	.CONNECTOR, PLUG, ELECTRICAL, 66-CONTACT.....	EA	1
C-27	5	PAFZZ	9905-00-115-5035	59730	TC-226	.MARKER, PLATE	EA	1
C-27	6	PAFZZ	5975-01-727-5153	22421	TY23M	.CLAMP CABLE, NYLON	EA	3



S 69491 (B)

Figure C-28. Cable Assembly, Unit Tester to SDC (217-419747-000)

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-28		XDFZZ		90073	217-419747-000	CABLE ASSEMBLY, UNIT TESTER TO SDC (SEE FIGURE C-2 FOR NHA)	REF	REF
C-28	1	PAFZZ	5935-01-201-3909	81349	M85049149-2-22W	.CLAMP, STRAIN-RELIEF	EA	2
C-28	2	PAFZZ	5935-01-077-0227	96906	MS27467T23F35S	.CONNECTOR, PLUG ELECTRICAL, 100-CONTACT.....	EA	2
C-28	3	PAFZZ	9905-00-115-5035	59730	TC-226	.MARKER, PLATE	EA	1
C-28	4	PAFZZ	5975-01-727-5153	22421	TY23M	.CLAMP CABLE, NYLON	EA	3



S 69492 (B)

Figure C-29. Cable Assembly, Unit Tester to SDC (217-419748-0000)

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-29		XDFZZ		90073	217-419748-000	CABLE ASSEMBLY, UNIT TESTER TO SDC (SEE FIGURE C-2 FOR NHA)	REF	REF
C-29	1	PAFZZ	5935-01-178-5256	81349	M85049/49-2-24W	.CLAMP, STRAIN-RELIEF	EA	2
C-29	2	PAFZZ	5935-01-035-5137	96906	MS27467T25F35S	.CONNECTOR, PLUG, ELECTRICAL, 128-CONTACT	EA	2
C-29	3	PAFZZ	9905-00-115-5035	59730	TC-226	.MARKER, PLATE	EA	1
C-29	4	PAFZZ	5975-01-727-5153	22421	TY23M	.CLAMP CABLE, NYLON	EA	3

SECTION IV. NATIONAL STOCK

NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5305-00-054-5638	C-4	24	5305-00-054-6654	C-2	8
5305-00-054-5638	C-17	6	5305-00-054-6654	C-2	5
5305-00-054-5647	C-9	12	5305-00-066-7328	C-4	88
5305-00-054-5647	C-9	16	5305-00-066-7328	C-9	97
5305-00-054-5647	C-9	20	5305-00-068-5276	C-20	25
5305-00-054-5647	C-9	27	5305-00-177-5545	C-9	49
5305-00-054-5647	C-9	30	5305-00-727-8833	C-3	13
5305-00-054-5647	C-9	35	5305-00-774-9700	C-9	44
5305-00-054-5647	C-9	40	5305-00-814-1707	C-20	23
5305-00-054-5647	C-9	47	5305-00-929-6421	C-4	21
S305-00-054-5647	C-9	53	5305-00-929-6421	C-9	32
5305-00-054-5647	C-20	9	5305-00-933-9189	C-9	29
5305-00-054-5648	C-4	12	5305-00-934-0147	C-13	2
5305-00-054-5648	C-4	15	5305-00-934-0147	C-14	2
5305-00-054-5648	C-4	36	5305-00-934-0147	C-15	2
5305-00-054-5648	C-20	2	5305-00-934-0147	C-16	15
5305-00-054-5648	C-20	4	5305-00-940-9442	C-4	96
5305-00-054-5649	C-9	24	5305-00-993-9189	C-9	42
5305-00-054-5649	C-9	36	5310-00-043-4708	C-3	14
5305-00-054-5649	C-9	90	5310-00-043-4708	C-17	7
5305-00-054-6651	C-3	12	5310-00-057-0573	C-20	5
5305-00-054-5651	C-4	18	5310-00-057-0573	C-20	10
5305-00-054-5651	C-4	27	5310-00-405-9866	C-4	22
5305-00-054-6651	C-4	30	5305-00-054-6667	C-3	2
5305-00-054-6651	C-4	2	5305-00-054-6667	C-3	5
5305-00-054-6651	C-4	33	5310-00-405-9866	C-9	33
5305-00-054-6651	C-4	39	5310-00-405-9866	C-9	45
5305-00-054-6651	C-4	92	5310-00-582-5677	C-20	33
5305-00-054-6651	C-9	2	5310-00-595-6211	C-4	13
5305-00-054-6652	C-4	74	5310-00-595-6211	C-4	19
5305-00-054-6652	C-4	77	5310-00-595-6211	C-9	13
5305-00-054-6652	C-S	2	5310-00-595-6211	C-9	17
5305-00-054-6652	C-5	6	5310-00-595-6211	C-9	21
5305-00-054-6652	C-9	82	5310-00-595-6761	C-20	37
5305-00-054-6652	C-9	87	5310-00-721-7413	C-20	40
5305-00-054-6652	C-9	93	5310-00-725-8270	C-3	15
5305-00-054-6652	C-20	18	5310-00-727-0725	C-4	25
5305-00-054-6653	C-4	80	5310-00-727-0725	C-9	57

SECTION IV. NATIONAL STOCK

NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5310-00-727-0725	C-9	62	5310-00-933-8118	C-4	16
5310-00-727-0725	C-13	4	5310-00-933-8118	C-9	14
5310-00-727-0725	C-14	4	5310-00-933-8118	C-9	18
5310-00-727-0725	C-15	4	5310-00-933-8118	C-9	22
5310-00-727-0725	C-17	8	5310-00-933-8118	C-9	25
5310-00-764-1962	C-13	3	5310-00-933-8118	C-9	37
5310-00-764-1962	C-14	3	5310-00-933-8118	C-20	6
5310-00-764-1962	C-15	3	5325-00-282-8138	C-3	8
5310-00-764-1962	C-16	16	5325-00-638-4301	C-3	9
5310-00-773-7624	C-2	6	5325-00-171-4680	C-3	11
5310-00-773-7624	C-2	9	5340-00-792-0943	C-4	17
5310-00-773-7624	C-5	4	5340-00-792-0943	C-9	59
5310-00-773-7624	C-5	8	5355-00-133-2459	C-1	12
5310-00-782-1349	C-20	15	5355-00-133-2459	C-4	46
5310-00-812-4294	C-20	38	5355-00-133-2459	C-4	48
5310-00-878-3291	C-4	3	5355-00-133-2459	C-4	50
5310-00-878-3291	C-4	31	5355-00-133-2459	C-4	52
5310-00-878-3291	C-4	34	5355-00-133-2459	C-4	55
5310-00-878-3291	C-4	40	5355-00-471-5644	C-9	70
5310-00-878-3291	C-4	75	5905-00-011-3377	C-8	25
5310-00-878-3291	C-4	78	5905-00-043-1338	C-6	23
5310-00-878-3291	C-4	90	5905-00-078-7059	C-5	14
5310-00-878-3291	C-4	93	5905-00-088-2726	C-7	33
5310-00-878-3291	C-5	3	5905-00-102-5625	C-16	4
5310-00-878-3291	C-5	7	5905-00-109-9842	C-17	13
5310-00-878-3291	C-9	3	5905-00-109-9842	C-19	1
5310-00-878-3291	C-9	83	5905-00-228-3510	C-8	20
5310-00-878-3291	C-9	88	5905-00-228-5510	C-6	15
5310-00-878-3291	C-9	94	5905-00-236-0895	C-6	17
5310-00-878-3291	C-9	98	5905-00-284-8928	C-6	4
5310-00-878-3291	C-20	20	5905-00-412-3622	C-6	8
5310-00-878-3292	C-4	37	5905-00-413-0624	C-7	34
5310-00-878-3292	C-9	50	5905-00-455-2293	C-16	21
5310-00-878-3292	C-9	60	5905-00-455-2293	C-21	16
5310-00-878-3292	C-9	91	5905-00-468-3019	C-4	56
5310-00-878-3292	C-9	100	5905-00-468-3019	C-6	20
5310-00-878-3292	C-9	102	5905-00-469-4697	C-5	12
5310-00-880-5976	C-20	19	5905-00-483-6940	C-5	23

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.
5905-00-489-0217	C-12	34
5905-00-728-3276	C-8	6
5905-00-728-6124	C-5	31
5905-00-728-6124	C-7	32
5905-00-728-6132	C-9	106
5905-00-728-6132	C-11	16
5905-00-728-6132	C-12	19
5905-00-728-6132	C-17	1
5905-00-728-6132	C-21	28
5905-00-728-6138	C-7	29
5905-00-728-6138	C-21	40
5905-00-728-6139	C-8	1
5905-00-728-6139	C-12	36
5905-00-728-6139	C-21	11
5905-00-728-6141	C-5	15
5905-00-728-6141	C-6	24
5905-00-728-6141	C-9	105
5905-00-728-6141	C-12	26
5905-00-728-6141	C-16	5
5905-00-728-6141	C-17	10
5905-00-734-0804	C-11	12
5905-00-734-0804	C-21	13
5905-00-734-0804	C-16	20
5905-00-734-1003	C-7	28
5905-00-734-1003	C-11	15
5905-00-734-1003	C-18	6
5905-00-734-1003	C-21	27
5905-00-734-1021	C-21	30
5905-00-734-1035	C-19	5
5905-00-734-1036	C-21	17
5905-00-734-1039	C-12	39
5905-00-734-1046	C-7	35
5905-00-734-1046	C-11	3
5905-00-734-1046	C-21	15
5905-00-734-1062	C-21	47
5905-00-734-2221	C-7	12
5905-00-734-4523	C-16	19
5905-00-739-5021	C-12	1
5905-00-754-7891	C-12	2
5905-00-754-7892	C-12	10
5905-00-764-2180	C-21	20
5905-00-764-2186	C-11	4
5905-00-769-2186	C-12	12
5905-00-764-2490	C-12	9
5905-00-764-2773	C-16	18
5905-00-764-2773	C-21	49
5905-00-764-2822	C-21	18
5905-00-773-0185	C-18	2
5905-00-773-0865	C-16	23
5905-00-773-1868	C-21	35
5995-00-776-7212	C-12	21
5905-00-780-8236	C-11	11
5905-0O-780-8236	C-12	15
5905-00-813-5880	C-8	18
5905-00-813-58P3	C-21	36
5905-00-814-6281	C-12	33
5905-00-816-6166	C-21	23
5905-00-887-9763	C-12	37
5905-00-890-5615	C-16	6
5905-00-890-5615	C-21	24
5905-00-900-0021	C-21	2
5905-00-900-9657	C-17	9
5905-00-900-9670	C-8	28
5905-00-903-5706	C-8	5
5905-00-904-4400	C-5	32
5905-00-905-7711	C-8	7
5905-00-922-9756	C-17	4
5905-00-924-6681	C-17	14
5905-00-924-6692	C-17	2
5905-00-928-8159	C-12	38
5905-00-931-2025	C-5	9
5905-00-934-2868	C-6	25
5905-00-940-9442	C-9	108
5905-00-943-6449	C-6	16
5905-00-945-5146	C-7	25
5905-00-947-5657	C-21	50
5905-00-964-0395	C-8	21
5905-00-975-1398	C-21	41
5905-00-975-1642	C-8	3
5905-00-975-1647	C-7	24
5905-00-981-2649	C-7	23
5905-00-982-0197	C-12	18
5905-00-982-0198	C-6	22
5905-00-982-0209	C-7	31
5905-00-982-0214	C-6	21
5905-00-982-0215	C-21	42
5905-00-982-0465	C-8	26
5905-00-982-0466	C-7	30
5905-00-982-0471	C-8	13
5905-00-982-0476	C-7	16
5905-00-982-0476	C-8	12
5905-00-982-0908	C-8	8
5905-00-982-0928	C-7	36
5905-00-982-0932	C-5	13
5905-00-982-0933	C-7	37
5905-00-982-8296	C-6	19
5905-00-984-1467	C-8	27
5905-00-985-5882	C-21	3
5905-00-992-5341	C-8	17
5905-00-992-5347	C-8	16
5910-00-061-3210	C-6	5
5910-00-061-3210	C-7	9
5910-00-068-4298	C-21	26
5910-00-071-7399	C-7	27
5910-00-078-7227	C-16	22
5910-00-103-7553	C-12	3
5910-00-105-2046	C-22	1
5910-00-111-4811	C-5	16
5910-00-111-4811	C-7	19
5910-00-111-4811	C-12	8
5910-00-111-4811	C-21	51
5910-00-113-7672	C-6	1
5910-00-113-7622	C-7	15
5910-00-113-7622	C-13	11
5910-00-113-7622	C-14	10
5910-00-113-7622	C-16	13
5910-00-113-7622	C-17	11
5910-00-113-7671	C-7	18
5910-00-113-7671	C-12	4
5910-00-113-7672	C-5	19
5910-00-113-7672	C-8	11
5910-00-113-7672	C-12	5
5910-00-113-7672	C-21	33
5910-00-114-5268	C-12	20
5910-00-114-5268	C-20	29
5910-00-118-1129	C-21	45
5910-00-141-4381	C-5	25
5910-00-144-4381	C-7	22
5910-00-144-4381	C-8	19
5910-00-144-4381	C-16	24
5910-00-144-4383	C-5	28
5910-00-154-0547	C-8	9
5910-00-236-8766	C-5	17
5910-00-236-8767	C-5	24
5910-00-236-8767	C-6	10
5910-00-253-5213	C-17	3
5910-00-253-5213	C-19	3
5910-00-497-9194	C-7	13
5910-00-702-8057	C-6	6
5910-00-702-8057	C-12	13
5910-00-780-8853	C-22	3
5910-00-829-2821	C-12	30
5910-00-851-0464	C-16	9
5910-00-893-6745	C-5	18
5910-00-893-6748	C-21	46
5910-00-902-0031	C-21	43
5910-00-935-3511	C-12	35
5910-00-954-5496	C-12	32
5910-00-978-7690	C-11	1
5910-00-978-7690	C-18	3
5910-00-988-6171	C-21	39
5910-00-990-4881	C-12	28

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.
5910-00-997-4079	C-7	7
5910-00-997-4079	C-11	7
5910-00-997-4079	C-12	25
5910-00-997-4079	C-15	9
5910-00-998-4105	C-22	2
5910-00-998-6949	C-21	32
5920-00-054-0173	C-1	10
5920-00-280-4960	C-4	66
5920-00-556-0144	C-4	68
5920-00-557-5033	C-1	11
5920-00-557-5033	C-4	67
5930-00-105-5551	C-4	64
5930-00-471-4962	C-4	42
5930-00-615-7882	C-4	59
5930-00-615-7883	C-4	62
5930-00-105-8202	C-4	41
5930-00-105-8202	C-9	64
5930-00-154-0153	C-9	74
5930-00-180-3153	C-9	65
5930-00-471-4902	C-9	63
5930-00-655-1582	C-4	65
5935-00-131-1261	C-5	27
5935-00-131-1261	C-6	12
5935-00-131-1261	C-7	38
5935-00-131-1261	C-8	23
5935-00-131-1261	C-11	8
5935-00-131-1261	C-12	22
5935-00-197-4684	C-9	110
5935-00-426-3083	C-4	10
5935-00-426-3083	C-5	29
5935-00-426-3083	C-6	11
5935-00-426-3083	C-7	39
5935-00-426-3083	C-11	9
5935-00-426-3083	C-12	23
5935-00-426-3083	C-13	9
5935-00-426-3083	C-14	9
5935-00-426-3083	C-15	8
5935-00-426-3083	C-16	11
5935-00-457-8069	C-29	1
5935-00-518-3458	C-4	76
5935-00-518-3458	C-9	92
5935-00-716-2019	C-4	69
5935-00-716-2019	C-4	70
5935-00-805-3514	C-9	55
5935-00-823-0986	C-4	79
5935-00-828-1856	C-4	8
5940-00-229-9644	C-9	86
5950-00-583-8894	C-13	10
5950-00-583-8894	C-14	5
5955-00-667-2722	C-7	10
5961-00-131-8267	C-21	19
5961-00-241-9560	C-21	4
5961-00-421-3002	C-19	4
5961-00-481-4205	C-20	17
5961-00-490-0318	C-7	3
5961-00-723-3602	C-5	20
5961-00-752-6163	C-5	21
5961-00-752-6163	C-21	37
5961-00-761-4504	C-21	21
5961-00-880-4779	C-21	1
5961-00-892-1009	C-21	7
596S-00-893-6761	C-21	48
5961-00-894-0684	C-21	29
5961-00-925-3777	C-7	1
5961-00-925-3777	C-21	14
5961-00-938-1135	C-4	60
5961-00-938-1135	C-6	13
5961-00-938-1135	C-8	22
5961-00-938-1135	C-11	2
5961-00-938-1135	C-12	11
5961-00-938-1135	C-16	12
5961-00-938-1135	C-21	12
5961-00-949-1432	C-21	9
5961-00-950-9887	C-8	10
5961-00-951-8757	C-5	10
5961-00-951-8757	C-7	5
5961-00-951-8757	C-11	17
5961-00-951-8757	C-12	16
5961-00-951-8757	C-16	7
5961-00-951-8757	C-21	5
5961-00-985-4900	C-5	26
5961-00-985-4900	C-17	12
5961-00-985-4900	C-19	2
5961-00-985-4900	C-21	34
5961-00-995-2310	C-8	2
5961-00-995-2310	C-21	44
5962-00-451-5843	C-5	5
5962-00-469-4598	C-21	8
5962-00-486-6059	C-5	30
5962-00-486-6059	C-8	15
5962-00-861-3220	C-21	25
5999-00-946-4423	C-21	10
6145-00-538-8445	C-4	81
6210-00-064-2998	C-4	57
6210-00-064-2998	C-9	77
6210-00-226-4542	C-9	79
6210-00-421-1832	C-9	68
6210-00-690-1569	C-1	9
6210-00-690-1569	C-4	44
6210-00-978-2546	C-4	61
6210-00-978-2546	C-9	78
6240-00-573-0629	C-4	43
6240-00-573-0629	C-9	67
9905-00-115-5035	C-28	3
9905-00-115-5035	C-29	3
1560-01-165-9460	C-1	4
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4920-01-114-6124	C-12	
4920-01-116-3026	C-9	9
4920-01-116-3026	C-15	
4920-01-116-3028	C-9	10
4920-01-117-7209	C-9	8
4920-01-117-7209	C-14	
4920-01-119-3420	C-9	7
4920-01-119-3420	C-13	
4935-01-021-3628	C-18	5
4935-01-021-7254	C-7	8
4935-01-021-7255	C-7	14
5310-01-079-8603	C-20	12
5355-01-133-2459	C-9	73
5905-01-037-9673	C-6	9
5905-01-047-6842	C-4	63
5905-01-072-5266	C-6	14
5905-01-085-4854	C-22	5
5905-01-097-4883	C-17	5
5910-01-045-4225	C-8	14
5910-01-058-9682	C-7	26
5910-01-073-9879	C-7	20
5910-01-114-5049	C-20	34
5910-01-218-2310	C-9	58
5915-01-112-2937	C-20	8
5915-01-112-2937	C-22	
5920-01-091-8535	C-16	8
5930-01-051-1273	C-9	76
5930-01-068-5556	C-4	58
5930-01-068-9452	C-9	69
5930-01-073-9291	C-9	75
5935-01-015-2082	C-28	1
5935-01-032-6519	C-13	8
5935-01-032-6519	C-14	8
5935-01-032-6519	C-15	7
5935-01-032-6519	C-16	10
5935-01-035-5317	C-29	2
5935-01-050-8411	C-4	84
5935-01-053-4021	C-18	7
5930-01-068-5556	C-9	80
5935-01-061-9237	C-4	71
5935-01-077-0227	C-28	2
5935-01-077-1965	C-9	84
5935-01-081-4718	C-9	81
5935-01-082-8744	C-9	89

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5940-01-045-7615	C-9	101	5970-01-091-8535	C-7	4
5940-01-074-4474	C-20	32	5970-01-091-8535	C-7	6
5940-01-193-0008	C-9	85	5970-01-091-8535	C-11	18
5940-01-193-0008	C-20	21	5970-01-091-8535	C-12	17
5950-01-097-4883	C-4	23	5970-01-112-7531	C-20	36
5950-01-105-5695	C-9	56	5970-01-091-8535	C-5	11
5950-01-116-4155	C-20	22	5970-01-091-8535	C-21	22
5950-01-120-7516	C-20	24	5970-01-218-2296	C-20	14
5950-01-217-9177	C-22	4	5975-01-727-5153	C-29	4
5961-01-077-2739	C-20	26	5975-01-727-5153	C-28	4
5961-01-114-1397	C-20	30	5999-01-058-8965	C-4	73
5962-01-011-0387	C-13	6	5999-01-059-2243	C-4	72
5962-01-013-9221	C-11	13	5999-01-063-1866	C-4	9
5962-01-013-9221	C-12	27	5999-01-063-1866	C-9	111
5962-01-015-5159	C-12	14	5999-01-112-2936	C-9	11
5962-01-015-5159	C-18	8	5999-01-114-9294	C-9	15
5962-01-015-5160	C-13	5	5999-01-114-9294	C-18	
5962-01-015-5160	C-14	7	5999-01-116-2633	C-4	5
5962-01-C15-5314	C-11	5	5935-00-426-3083	C-8	24
5962-01-015-5314	C-12	24	5999-01-116-2634	C-9	19
5962-01-015-5314	C-14	11	5999-01-116-2634	C-19	
5962-01-015-5314	C-16	1	5999-01-116-2636	C-5	
5962-01-015-5314	C-18	4	5999-01-116-2636	C-7	
5962-01-015-5758	C-11	14	5999-01-116-2637	C-4	11
5962-01-015-5758	C-12	31	5999-01-116-2638	C-4	7
5962-01-016-0926	C-12	29	5999-01-116-2638	C-8	
5962-01-016-0926	C-15	6	5999-01-116-2639	C-4	4
5962-01-016-0926	C-16	2	5999-01-116-2639	C-4	6
5962-01-021-7255	C-13	7	5999-01-116-3027	C-9	5
5962-01-044-8973	C-14	6	5999-01-116-3027	C-11	
5962-01-072-0324	C-11	6	5999-01-121-5114	C-9	4
5962-01-091-4456	C-6	2	5999-01-194-8069	C-4	20
5962-01-113-6179	C-6	3	6620-01-087-4361	C-4	26
5962-01-130-2996	C-5	1	6620-01-105-1649	C-9	46
5962-01-136-6638	C-7	17	6620-01-105-1649	C-20	
5962-01-136-6638	C-12	7	6620-01-105-1761	C-20	3
5962-01-534-4079	C-15	5	6620-01-105-1761	C-21	
5962-01-534-4679	C-16	3	6680-01-182-4139	C-7	11
5970-01-091-0535	C-21	6	6685-01-075-7866	C-4	28

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ABC8	71400	C-4	67
AJ3-25	72794	C-3	8
CA3081F	12672	C-11	10
CD4001BF	02735	C-7	14
CD4002BF	02735	C-12	29
CD4002BF	02735	C-15	6
CD4002BF	02735	C-16	2
CD4011BF	02735	C-11	5
CD4011BF	02735	C-12	24
CD4011BF	02735	C-14	11
CD4011BF	02735	C-16	1
CD4011BF	02735	C-18	4
CD4012BCN	27014	C-15	5
CD4012BF	02735	C-15	5
CD4012BF	02735	C-16	3
CD4013BF	02735	C-7	8
CD4015BCN	27014	C-13	5
CD4015BF	02735	C-13	5
CD4015BF	02735	C-14	7
CD4020BF	02735	C-14	6
CD4023BF	02735	C-11	14
CD4023BF	02735	C-12	31
CD4024BF	02735	C-18	5
CD4029BF	02735	C-12	7
CD4049BF	02735	C-12	14
CD4049BF	02735	C-18	8
CD4050BF	02735	C-11	13
CD4050BF	02735	C-12	27
CD4066BF	02735	C-6	3
CK05BX101K	81349	C-l21	46
CK05BX102K	81349	C-5	18
CK05BX103K	81349	C-5	16
CK05BX103K	81349	C-7	19
CK05BX103K	81349	C-12	8
CK05BX103K	81349	C-21	51
CK05BX104K	81349	C-5	19
CK05BX104K	81349	C-6	1
CK05BX104K	81349	C-7	15
CK05BX104K	81349	C-8	11
CK05BX104K	81349	C-12	5
CK05BX104K	81349	C-13	11
CK05BX104K	81349	C-14	10
CK05BX104K	81349	C-15	3
CK05BX104K	81349	C-16	13
CK05BX104K	81349	C-17	11
CK05BX104K	81349	C-21	33
CK05BX122K	81349	C-7	40
CK05BX220K	81349	C-21	39
CK05BX221K	81349	C-12	28
CK05BX222K	81349	C-12	20
CK05BX222K	81349	C-20	29
CK05BX471K	81349	C-11	1
CK05BX471K	81349	C-18	3
CK05BX472K	81349	C-12	3
CK05BX473K	81349	C-7	18
CK05BX473K	81349	C-12	4
CK05BX681K	81349	C-21	45
CK06BX104K	81349	C-4	58A
CK12BX102K	81349	C-6	28
CK12BX103K	81349	C-6	26
CK12BX220K	81349	C-6	27
CK14BR104K	81349	C-22	1
CK14BR104K	81349	C-23	20
CM04CD100D03 Through CM04FD101F03	81349	C-6	18
CM050CD05003	81349	C-21	43
CM05ED200J03	81349	C-12	32
CM05ED240J03	81349	C-6	5
CM05ED470G03	81349	C-8	14
CM05ED560F03	81349	C-7	9
CM05ED181F03	81349	C-12	30
CM05ED201F03	81349	C-7	13
CM05FD331F03	81349	C-6	6
CM05FD331F03	81349	C-12	13
CM06FD152F03	81349	C-7	27
CM05FD331F03	81349	C-6	6
FHN20G	81349	C-4	68
FM01A125V2A	81349	C-1	10
FND357	58361	C-18	1
GH372794	C-3	9	
IN5305	04713	C-21	4
IN5814R	12969	C-20	26
JAN1N4148	81349	C-4	60
JAN1N4148	81349	C-6	13
JAN1N4148	81349	C-8	22
JAN1N4148	81349	C-11	2
JAN1N4148	81349	C-12	14
JAN1N4148	81349	C-16	12
JAN1N4148	81349	C-21	12
JAN1N4148	81349	C-4	60
JAN1N647	81349	C-5	26
JAN1N647	81349	C-17	12
JAN1N647	81349	C-19	2
JAN1N647	81349	C-21	34
JAN1N752A	81349	C-8	2
JAN1N752A	81349	C-21	44
JAN1N758A	81349	C-21	29
JAN1N827	81349	C-8	10
JAN1N963B	81349	C-21	7
JAN1N965B	81349	C-21	37
JAN1N969B	81349	C-9	112
JAN1N969B	81349	C-21	48
JAN2N2219A	81349	C-21	9
JAN2N2222A	81349	C-5	10
JAN2N2222A	81349	C-7	5
JAN2N2222A	81349	C-11	17
JAN2N2222A	81349	C-12	16
JAN2N2222A	81349	C-16	7
JAN2N2222A	81349	C-21	5
JAN2N2905	81349	C-21	1
JAN2N2907A	81349	C-7	1
JAN2N2907A	81349	C-21	14
JAN2N4948	81349	C-21	21
JAN2N5431	81349	C-7	3
JMT432	55459	C-9	65
K500B1-8	95146	C-1	12
K-500B 1-8	95146	C-4	46
K-500B 1-8	95146	C-4	48
K-500B 1-8	95146	C-4	50
K-500B 1-8	95146	C-4	52
K-500B 1-8	95146	C-4	55
K-500B 1-8	95146	C-9	73
LH-3858-26	72962	C-3	15
LH90/1	81349	C-9	68
LM105H	27014	C-5	30
LM105H	27014	C-8	15
LM111H	27014	C-21	31
LP9A1A185G	56289	C-9	58
LVA56A	01281	C-21	19
MC14029BAL	04713	C-7	17
MC14518BAL	04713	C-13	6
MC14518BCL	04713	C-11	6
MC1563R	04713	C-5	5
MC1569R	04713	C-5	1
MPE-106F	95146	C-4	58
MPE106F	95146	C-9	80
MPE-206R	95146	C-4	64
MS15795-802	96906	C-20	37
MS15795-803	96906	C-4	13
MS15795-803	96906	C-4	19
MS15795-803	96906	C-9	13
MS15795-803	96906	C-9	17
MS15795-803	96906	C-9	21
MS15795-804	96906	C-20	15
MS15795-806	96906	C-20	19
MS15795-810	96906	C-20	33
MS16995-9	96906	C-20	25
MS20470A2-3	96906	C-13	2
MS20470A2-3	96906	C-14	2
MS20470A2-3	96906	C-15	2
MS20470A2-3	96906	C-16	15
MS21043-04	96906	C-4	37
MS21043-04	96906	C-9	50
MS21043-04	96906	C-9	60
MS21043-04	96906	C-9	91
MS21043-04	96906	C-9	100
MS21043-04	96906	C-9	102
MS21043-04	96906	C-4	3
MS21043-06	96906	C-4	31
MS21043-06	96906	C-4	34
MS21043-06	96906	C-4	40
MS21043-06	96906	C-4	75
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MS21043-06	96906	C-4	90	MS51957-30	96906	C-2	5
MS21043-06	96906	C-4	93	MS51957-30	96906	C-2	8
MS21043-06	96906	C-5	3	MS51957-4	96906	C-4	24
MS21043-06	96906	C-5	7	MS51957-4	96906	C-17	6
MS21043-06	96906	C-9	3	MS51957-42	81349	C-3	2
MS21043-06	96906	C-9	83	MS51957-42	96906	C-3	5
MS21043-06	96906	C-9	88	MS51959-3	96906	C-3	13
MS21043-06	96906	C-9	31	MS51960-2	96906	C-9	44
MS21043-06	96906	C-9	94	MS75089-7	96906	C-13	10
MS21043-06	96906	C-9	98	MS75089-7	96906	C-14	5
MS21043-06	96906	C-20	20	MTE-106D	95146	C-4	41
MS24693C2	96906	C-9	29	MTE-106D	95146	C-9	64
MS24693C2	96906	C-9	42	MTE-106G	95146	C-9	75
MS24693C27	96906	C-4	88	MTE-206N	95146	C-4	42
MS24693C27	96906	C-9	97	MTE-206N	95146	C-9	63
MS25068-21	96906	C-4	62	MTE-206S	95146	C-9	76
MS25446-4	96906	C-9	79	MTE-306D	95146	C-9	113
MS25446-5	96906	C-4	57	MTE-406N	95146	C-9	74
MS25446-5	96906	C-9	77	M38527/02-021D	81349	C-21	10
MS25446-6	96906	C-4	61	M39003-01-2263	81349	C-17	3
MS25446-6	96906	C-9	78	M39003-01-2263	81349	C-19	3
MS27467T23F35S	96906	C-28	2	M39003-01-2265	81349	C-22	3
MS27467T25F35S	96906	C-29	2	M39003-01-2271	81349	C-7	7
MS27506F18-2	96906	C-26	1	M39003-01-2271	81349	C-11	7
MS27506F18-2	96906	C-27	3	M39003-01-2271	81349	C-12	25
MS27506F22-2	96906	C-27	1	M39003-01-2271	81349	C-15	9
MS27506F22-2	96906	C-28	1	M39003-01-2283	81349	C-16	22
MS27656T23F35P	96906	C-9	81	M39003-01-2286	81349	C-12	35
MS27656T25F35P	96906	C-9	84	M39003-01-2304	81349	C-5	25
MS27656T19F35P	96906	C-9	89	M39003-01-2304	81349	C-7	22
MS3472L22-55P	96906	C-4	71	M39003-01-2304	81349	C-8	19
MS3472L22-55S	96906	C-4	76	M39003-01-2304	81349	C-16	24
MS3472L22-55S	96906	C-9	92	M39003-01-2306	81349	C-5	28
MS35059-23	96906	C-4	65	M39003-01-2306	81349	C-21	32
MS35059-27	96906	C-4	59	M39003-01-2312	81349	C-8	9
MS35338-135	96906	C-4	16	M39003-01-2312	81349	C-22	2
MS35338-135	96906	C-9	14	M39003-01-2350	81349	C-16	9
MS35338-135	96906	C-9	18	M39003-01-2356	81349	C-21	26
MS35338-135	96906	C-9	22	M39003-01-2374	81349	C-5	17
MS35338-135	96906	C-9	25	M39003-01-2380	81349	C-5	24
MS35338-135	96906	C-9	37	M39003-01-2380	81349	C-6	10
MS35338-135	96906	C-20	6	M83421/01-6089M	81349	C-7	20
MS51957-120	96906	C-9	49	M83421/01-6113M	81349	C-7	26
MS51957-13	96906	C-9	12	NAS129C02	80205	C-13	4
MS51957-13	96906	C-9	16	NAS129C02	80205	C-15	4
MS51957-13	96906	C-9	20	NAS129C02	80205	C-16	17
MS51957-13	96906	C-9	27	NAS129C02	80205	C-14	4
MS51957-13	96906	C-9	30	NAS1291-C02	80205	C-4	25
MS51957-13	96906	C-9	35	NAS1291-C02	80205	C-9	57
MS51957-13	96906	C-9	40	NAS1291-C02	80205	C-9	62
MS51957-13	96906	C-9	47	NAS1291-C02	80205	C-17	8
MS51957-13	96906	C-9	53	NAS1635-00-2	80205	C-4	96
MS51957-13	96906	C-20	9	NAS1635-00-2	80205	C-9	108
MS51957-16	96906	C-4	12	NAS1635-00-3	80205	C-4	21
MS51957-14	96906	C-4	15	NAS1635-00-3	80205	C-9	32
MS51957-14	96906	C-4	36	NAS1635-00-4	80205	C-13	2
MS51957-14	96906	C-20	2	NAS1635-00-4	80205	C-15	2
MS51957-14	96906	C-20	4	NAS1635-00-4	80205	C-16	15
MS51957-15	96906	C-9	24	NAS1635-00-4	96906	C-14	2
MS51957-15	96906	C-9	36	NAS620C0	80205	C-13	3
MS51957-15	96906	C-9	90	NAS620C0	80205	C-15	3
MS51957-17	96906	C-4	18	NAS620C0	80205	C-16	16
MS51957-17	96906	C-4	27	NAS620C2	80205	C-3	14
MS51957-27	96906	C-3	12	NAS620C2	80205	C-17	7
MS51957-27	96906	C-4	30	NAS620C4	80205	C-20	5
MS51957-27	96906	C-4	33	NAS620C4	80205	C-20	10
MS51957-27	96906	C-4	39	NAS620C6	80205	C-2	6
MS51957-27	96906	C-4	92	NAS620C6	80205	C-2	9
MS51957-27	96906	C-9	2	NAS620C6	80205	C-5	4
MS51957-28	96906	C-4	2	NAS620C6	80205	C-5	8
MS51957-28	96906	C-4	74	NAS620C6	80205	C-10	6
MS51957-28	96906	C-4	77	NAS662C2R4	80205	C-20	23
MS51957-28	96906	C-5	2	NAS671C2	80205	C-20	38
MS51957-28	96906	C-5	6	NAS671C3	80205	C-20	40
MS51957-28	96906	C-9	82	NC150LKOC	51578	C-4	28
MS51957-28	96906	C-9	87	RCR07G100JS	81349	C-7	32
MS51957-28	96906	C-9	93	RCR07G100JS	81349	C-5	31
MS51957-28	96906	C-20	18	RCR07G102JS	81349	C-16	18
MS51957-29	96906	C-4	80	RCR07G102JS	81349	C-11	12
MS51957-29	96906	C-9	87A				

PART NUMBER INDEX

PART NUMBER	FSCM	FIGURE NO.	ITEM NO.
RCR07G102JS	81349	C-20	57
RCR07G101JS	81349	C-21	20
RCR07G102JS	81349	C-21	13
RCR07G103JS	81349	C-7	28
RCR07G103JS	81349	C-11	15
RCR07G103JS	81349	C-18	6
RCR07G103JS	81349	C-21	27
RCR07G104JS	81349	C-15	12
RCR07G104JS	81349	C-16	21
RCR07G104JS	81349	C-21	16
RCR07G106JS	81349	C-7	12
RCR07G123JS	81349	C-12	2
RCR07G124JS	81349	C-12	1
RCR07G133JS	81349	C-12	33
RCR07G152JS	81349	C-21	30
RCR07G153JS	81349	C-9	106
RCR07G153JS	81349	C-11	16
RCR07G153JS	81349	C-12	19
RCR07G153JS	81349	C-17	1
RCR07G153JS	81349	C-21	28
RCR07G154JS	81349	C-16	19
RCR07G156JS	81349	C-12	34
RCR07G163JS	81349	C-18	2
RCR07G183JS	81349	C-21	35
RCR07G200JS	81349	C-8	18
RCR07G200JS	81349	C-21	36
RCR07G202JS	81349	C-16	18
RCR07G201JS	81349	C-21	49
RCR07G203JS	81349	C-12	37
RCR07G221JS	81349	C-7	29
RCR07G221JS	81349	C-21	40
RCR07G222JS	81349	C-5	35
RCR07G222JS	81349	C-8	1
RCR07G222JS	81349	C-12	36
RCR07G222JS	81349	C-21	11
RCR07G223JS	81349	C-5	15
RCR07G223JS	81349	C-6	24
RCR07G223JS	81349	C-7	42
RCR07C223JS	81349	C-9	105
RCR07G223JS	81349	C-12	26
RCR07G223JS	81349	C-16	5
RCR07G270JS	81349	C-19	5
RCR07G273JS	81349	C-12	10
RCR07G274JS	81349	C-16	23
RCR07G303JS	81349	C-11	11
RCR07G303JS	81349	C-12	15
RCR07G330JS	81349	C-7	41
RCR07G332JS	81349	C-10	28
RCR07G332JS	81349	C-21	17
RCR07G334JS	81349	C-16	6
RCR07G334JS	81349	C-21	24
RCR07G362JS	81349	C-21	38
RCR07G392JS	81349	C-12	39
RCR07G4R7JS	81349	C-10	34
RCR07G472JS	81349	C-7	35
RCR07G472JS	81349	C-11	3
RCR07G472JS	81349	C-21	15
RCR07G473JS	81349	C-12	21
RCR07G510JS	81349	C-10	35
RCR07G512JS	81349	C-11	4
RCR07G512JS	81349	C-12	12
RCR07G621JS	81349	C-21	18
RCR07G622JS	81349	C-12	9
RCR07G682JS	81349	C-17	10
RCR07G682JS	81349	C-21	47
RCR07G753JS	81349	C-21	23
RCR07G8R2JS	81349	C-10	25
RCR07G821JS	81349	C-10	20
RCR07G824JS	81349	C-16	4
RCR20G100JS	81349	C-5	14
RCR24G331JS	81349	C-4	63
RJ24C2W203	81349	C-6	8
RJ24FW503	81349	C-6	9
RN55C1000F	81349	C-7	30
RN55C1003F	81349	C-6	22
RN55C1021F	81349	C-7	23
RN55C1051F	81349	C-8	13
RN55C1152F	81349	C-7	24
RN55C1181F	81349	C-17	9
RN55C1302F	81349	C-7	37
RN55C1331F	81349	C-7	25
RN55C1332B	81349	C-8	17
RN55C1501F	81349	C-12	18
RN55C1501F	81349	C-20	7
Through			
RN55C2490F			
RN55C1502F	81349	C-6	21
RN55C1581F	81349	C-8	28
RN55C1670F	81349	C-8	7
RN55C1692F	81349	C-12	38
RN55C2001F	81349	C-7	16
RN55C2001F	81349	C-8	12
RN55C2102F	81349	C-21	41
RN55C21518	81349	C-8	16
RN55C2211F	81349	C-7	34
RN55C2261F	81349	C-8	21
RN55C2491F	81349	C-8	27
RN55C2491F	81349	C-5	33
Through			
RN55C3481F			
RN55C2492F	81349	C-7	33
RN55C2671F	81349	C-4	56
RN55C2742F	81349	C-6	19
RN55C3091F	81349	C-17	4
RN55C3400F	81349	C-8	25
RN55C3572F	81349	C-21	42
RN55C4750F	81349	C-7	31
RN55C49R9F	81349	C-8	26
RN55C49R9F	81349	C-8	4
Through			
RN55C1052F			
RN55C4990F	81349	C-7	21
Through			
RN55C7871F			
RN55C4992F	81349	C-6	17
RN55C5103F	81349	C-4	53
Through			
RN55C5602F			
RN55C5620F	81349	C-8	8
RN55C5901F	81349	C-5	32
RN55C6191F	81349	C-6	20
RN55C6811F	81349	C-5	13
RN55C8060F	81349	C-21	2
RN55C81R6F	81349	C-8	5
RN55C8662F	81349	C-21	3
RN55C90R9F	81349	C-8	3
RN55C9091F	81349	C-7	36
RN55C9761F	81349	C-6	25
RN55E1001B	81349	C-6	7
Through			
RN55E7871B			
RN55E1003B	81349	C-6	16
RN55E1692B	81349	C-5	12
RN55E2002B	81349	C-6	15
RN55E2002B	81349	C-8	20
RN55E4002B	81349	C-6	14
RN55E5002B	81349	C-6	4
RN55E75R0B	81349	C-8	6
RN551622F	81349	C-21	42
RT24C2W102	81349	C-5	9
RW79U22R1F	81349	C-17	2
RW79U68R1F	81349	C-17	14
RW80U2150F	81349	C-6	23
RW80U4750F	81349	C-19	1
RW81U2000F	81349	C-21	50
RW81U4750F	81349	C-17	13
RW81U5110F	81349	C-5	23
SB-375-4	28520	C-4	82
SB-500-6	28520	C-9	54
SM26-20PSLGD	95238	C-20	47A
SN52709L	01295	C-21	25
RM-26F0000	81312	C-9	55
S3-175	72794	C-3	11
TC-104	59730	C-20	64A
TC-226	59730	C-28	3
TC-226	59730	C-29	3
TY-23M	59730	C-20	61
TY-23M	22421	C-28	4
TY-23M	22421	C-29	4
TY-33M	59730	C-4	17
TY-33M	59730	C-9	59

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PART NUMBER	FSCM	FIGURE NO.	ITEM NO.	PART NUMBER	FSCM	FIGURE NO.	ITEM NO.
TY-51M	22421	C-4	83	244-476863-000	90073	C-2	7
T38J02M1	01963	C-9	61	244-476863-000	90073	C-9	
UA741HM	07263	C-21	8	245-476856-000	90073	C-2	
UA747DM	07263	C-6	2	245-476854-001	90073	C-2	
0641-14-2001	17419	C-4	72	245-601109-001	90073	C-2	2
0641-15-2001	17419	C-4	73	245-601115-000	90073	C-2	7
1N4004	81349	C-5	20	245-601115-000	90073	C-9	
1N4744A	04713	C-5	21	260-475350-000	90073	C-4	23
10-101960-225	77820	C-4	79	260-475350-000	90073	C-17	5
1-85930-6	00779	C-11	8	260-475810-000	90073	C-22	4
1-85930-6	00779	C-12	22	260-475841-000	90073	C-20	24
102128-1	00779	C-4	9	260-475846-000	90073	C-9	56
102128-1	00779	C-9	111	264-206741-001	90073	C-12	6
2N5671	80131	C-20	17	267-200199-000	90073	C-7	11
2P2B	23480	C-9	70	267-200199-001	90073	C-13	13
20214	06540	C-20	32	267-601005-000	90073	C-23	13A
211-469009-105	90073	C-5	22	267-601005-001	90073	C-23	13B
211-469009-111	90073	C-5	34	267-601005-002	90073	C-23	13C
211-475044-001	90073	C-20	34	267-601005-003	90073	C-23	13D
217-419741-000	90073	C-1	3	2-85930-6	00779	C-5	27
217-419741-000	90073	C-2	10	2-85930-6	00779	C-6	12
217-419742-000	90073	C-1	4	2-85930-6	00779	C-7	38
217-419742-000	90073	C-2	11	2-85930-6	00779	C-8	23
217-417744-000	90073	C-1	5	288-469532-000	90073	C-22	5
217-419744-000	90073	C-2	12	312002	75915	C-4	66
217-419745-000	90073	C-1	6	35-1B-2-7-3	33962	C-9	31
217-419745-000	90073	C-2	13	35-1B-2-7-3	90073	C-9	43
217-419747-000	90073	C-1	7	35-1B-2-11-3	18915	C-4	20
217-419747-000	90073	C-2	14	316-115007-000	90073	C-20	64B
217-419747-000	90073	C-28		316-115007-001	90073	C-9	85
217-419748-000	90073	C-1	8	316-115007-001	90073	C-20	21
217-419748-000	90073	C-2	15	316-115007-003	90073	C-20	27
217-419748-000	90073	C-29		316-115007-004	90073	C-20	53
220-417134-000	90073	C-22	6	316-132216-002	90073	C-20	39
220-419914-000	90073	C-4	11	322-215856-000	90073	C-4	35
220-419918-000	90073	C-4	4	322-215855-000	90073	C-4	32
220-419918-000	90073	C-5		322-215856-000	90073	C-4	29
220-419920-000	90073	C-4	5	322-475842-000	90073	C-20	22
220-419920-000	90073	C-6		324-202639-000	90073	C-20	30
220-419922-000	90073	C-4	6	3862C162-102A	32997	C-9	71
220-419922-000	90073	C-7		3862C162-103A	32997	C-4	49
220-419924-000	90073	C-4	7	3862C162-103A	32997	C-9	72
220-419924-000	90073	C-8		3862C162-251A	32997	C-4	51
220-420064-000	90073	C-9	4	3862C162-501A	32997	C-4	54
220-420067-000	90073	C-9	5	3862C162-502A	32997	C-4	47
220-420067-000	90073	C-11		450-3382-01-0319	71279	C-9	66
220-420070-000	90073	C-9	6	4860	13103	C-20	26A
220-420070-000	90073	C-12		507-3917-1471-500	72619	C-4	43
220-420073-000	90073	C-9	9	507-3917-1471-500	72619	C-9	67
220-420073-000	90073	C-15		508-7538-504	72619	C-1	9
220-420076-000	90073	C-9	10	508-7538-504	72619	C-4	44
220-420076-000	90073	C-16		524-350167-000	90073	C-20	60A
220-420080-000	90073	C-9	7	524-354066-000	90073	C-3	1
220-420080-000	90073	C-13		524-354067-000	90073	C-3	4
220-420083-000	90073	C-9	8	524-354327-000	90073	C-13	1
220-420083-000	90073	C-16		524-354327-000	90073	C-14	1
220-420148-000	90073	C-9	19	524-354327-000	90073	C-15	1
220-420148-000	81349	C-19		524-354327-000	90073	C-16	14
220-420150-000	90073	C-9	11	524-354-44-000	90073	C-3	10
220-420150-000	90073	C-17		524-420142-000	90073	C-9	34
220-420153-000	90073	C-9	15	524-420144-000	90073	C-9	41
220-420153-000	90073	C-18		526-420167-000	90073	C-9	28
220-471802-002	90073	C-21		524-420167-000	90073	C-9	52
220-471802-002	90073	C-20	3	53HS15-04-1-24NC	81073	C-9	69
220-471854-000	90073	C-20	8	530-350168-000	90073	C-20	366
220-471854-000	90073	C-22		530-350188-001	90073	C-20	16
220-601172-000	90073	C-9	7	538-473940-000	90073	C-2	3
220-601172-000	90073	C-13		538-473940-000	90073	C-3	3
220-601392-000	90073	C-9	9	538-473941-000	90073	C-3	18
220-601392-000	90073	C-15		550-417099-002	90073	C-20	1
238-601015-000	90073	C-7	10	5-85930-2	00779	C-13	8
338-601019-000	90073	C-12	40	5-85930-2	00779	C-14	8
244-459655-000	90073	C-2	2	5-85930-2	00779	C-15	7
240-473806-000	90073	C-9	46	5-85930-2	00779	C-16	10
244-473806-000	90073	C-20		5610-122-040	86928	C-20	31A
244-473808-000	90073	C-9	48	5929	74545	C-4	84
244-476862-000	90073	C-1	1	606-202049-000	90073	C-5	11
244-476862-002	90073	C-2	4	606-202049-000	90073	C-7	2
244-476862-002	90073	C-4		606-202049-000	90073	C-7	4
244-476863-000	90073	C-1	2	606-202049-000	90073	C-7	6

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PART NUMBER	FSCM	FIGURE NO.	ITEM NO.	PART NUMBER	FSCM	FIGURE NO.	ITEM NO.
606-202049-000	90073	C-11	18	664-420145-000	90073	C-9	26
606-202049-000	90073	C-12	17	664-473814-000	90073	C-4	14
606-202049-000	90073	C-16	8	666-131065-005	90073	C-9	86
606-202049-000	90073	C-21	6	666-131065-009	90073	C-4	38
606-202049-000	90073	C-21	14A	666-131065-009	90073	C-4	91
604-202049-000	90073	C-21	22	666-131065-009	90073	C-9	99
606-350160-000	90073	C-20	14	666-131065-011	90073	C-9	101
612-354223-001	90073	C-11	19	702-417126-000	90073	C-20	35
619-354069-000	90073	C-9	51	728-354688-000	90073	C-3	17
619-354346-000	90073	C-3	7	732-355264-000	90073	C-3	3
622-459659-000	90073	C-9	107	732-355264-000	90073	C-3	6
622-659669-000	90073	C-4	95	732-355264-000	90073	C-3	16
622-601191-000	90073	C-9	107	734-109096-001	90073	C-4	89
624-352270-000	90073	C-2	1A	734-109096-001	90073	C-9	96
624-352270-000	90073	C-9	103	734-350151-001	90073	C-20	11
624-354092-000	90073	C-2	1	734-350151-002	90073	C-20	13
624-354094-000	90073	C-4	94	734-354070-001	90073	C-9	23
624-354096-000	90073	C-9	104	734-354070-002	90073	C-9	38
624-601166-000	90073	C-9	104	7403-09FR-22	81483	C-20	28
624-601589-000	90073	C-2	1	7403-10-10	81483	C-10	3
626-459657-000	90073	C-9	109	79L31660-40	72962	C-20	12
626-459667-000	90073	C-4	97	8453	16428	C-4	81
626-601160-000	90073	C-9	109	86148-1	00779	C-9	110
628-354273-000	90073	C-4	26	86148-7	00779	C-4	8
628-354345-000	90073	C-4	87	86286-1	00779	C-4	10
628-354345-000	90073	C-9	95	86286-1	00779	C-5	29
636-419917-000	90073	C-5	35	86286-1	00779	C-6	11
636-419919-000	90073	C-6	26	86286-1	00779	C-7	39
636-419921-000	90073	C-7	40	86286-1	00779	C-8	24
636-419923-000	90073	C-8	29	86286-1	00779	C-11	9
636-420068-000	90073	C-11	20	86286-1	00779	C-12	23
636-420074-000	90073	C-15	13	86286-1	00779	C-13	9
636-420077-000	90073	C-16	26	86286-1	00779	C-14	9
636-420151-000	90073	C-17	15	86286-1	00779	C-15	8
636-420149-000	90073	C-19	6	86286-1	00779	C-16	11
636-420154-000	90073	C-18	10	87215-7	00779	C-18	7
636-470071-000	90073	C-12	41	92-1660-00	72962	C-4	22
636-471803-000	90073	C-21	52	92-1660-00	72962	C-9	33
636-473873-000	90073	C-13	15	92-1660-00	72962	C-9	45
434-473876-000	90073	C-14	12	930-176-100	03902	C-4	70
636-601171-000	90073	C-13	15	930-176-101	03902	C-4	69
636-601341-000	90073	C-15	13	930726-100	06165	C-4	86
656-473839-000	90073	C-41	1	930726-101	D0165	C-4	85
656-473939-000	90073	C-9	1	93680C	07263	C-18	9
664-420143-000	90073	C-9	39				

APPENDIX D
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

1. Scope.

This appendix lists expendable supplies and materials you will need to operate and maintain the BTS. These items are authorized to you by CTA 50-970. Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

2. Explanation of Columns.

a. Column 1 - Item number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, App. D").

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

(enter as applicable)

C- Operator/Crew
O - Organizational Maintenance
F - Direct Support Maintenance
H - General Support Maintenance

c. Column 3 - National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column 4 - Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

(1)	(2)	(3)	(4)	(5)
ITEM NUMBER	LEVEL	NATIONAL STOCK NUMBER	DESCRIPTION	U/M
1	0	8010-00-598-5934	Paint, Fed Std 595 #36231	PT
2	0	8010-00-527-2884	Paint, Fed Std 595 #37038	GL
3	0	6850-00-285-8011	Solvent, Dry-Cleaning, P-D-680, Type II	GL
4	0	8305-00-267-3015	Cloth, CCC-C-440	FT

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever@avma27.army.mil>
To: mpmt%/avma28@st-louis-emh7.army.mil

Subject: DA Form 2028
1. ***From***: Joe Smith
2. *Unit*: home
3. ***Address*:**4300 Park
4. ***City:*** Hometown
5. ***St****:* MO
6. ***Zip*:** 77777
7. ***Date Sent***: 19-OCT-93
8. ***Pub no***: 55-2840-229-23
9. ***Pub Title*:** TM
10. ***Publication Date***: 04-JUL-85
11. *Change Number*: 7
12. *Submitter Rank* : MSG
13. ***Submitter FName***: Joe
14. *Submitter MName*: T
15. ***Submitter LName***: Smith
16. ***Submitter Phone***: 123-123-1234
17. ***Problem***: 1
18. *Page:* 2
19. *Paragraph*: 3
20. *Line*: 4
21. *NSN*: 5
22. *Reference*: 6
23. *Figure:* 7
24. *Table*: 8
25. *Item*: 9
26. *Total*. 123
27. ***Text***:

This is the text for the problem below line 27.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)
CDR, 1st Br, 65th ADA
ATTN: SP4 J. Brown
Key West, FL 33040

DATE SENT
10 Jun 79

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-1430-550-34-1	7 Sep 72 .	Unit of Radar Set AN/MPQ-50 Tested at the HFC

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
9-19		9-5	
21-2	step 1C	21-2	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

"B" Ready Relay K11 is shown with two #9 contacts. That contact which is wired to pin 8 of relay K16 should be changed to contact #10.

Reads: Multimeter B indicates 600 K ohms to 9000 K ohms.

Change to read: Multimeter B indicates 600 K ohms minimum.

Reason: Circuit being checked could measure infinity. Multimeter can read above 9000 K ohms and still be correct.

SAMPLE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER
SP4 J.T. Brown, Jr.

SIGN HERE
SP4 James Brown, Jr.

DA FORM 2 JUL 79 2028-2

REPLACES DA FORM 2028-2, 1 APR 78 WHICH WILL BE USED UNTIL EXHAUSTED
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PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 55-4920-412-13&P	1 Nov 1986	VERTICAL INSTRUMENT DISPLAY SYSTEM BENCH TEST SET

BE EXACT. PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

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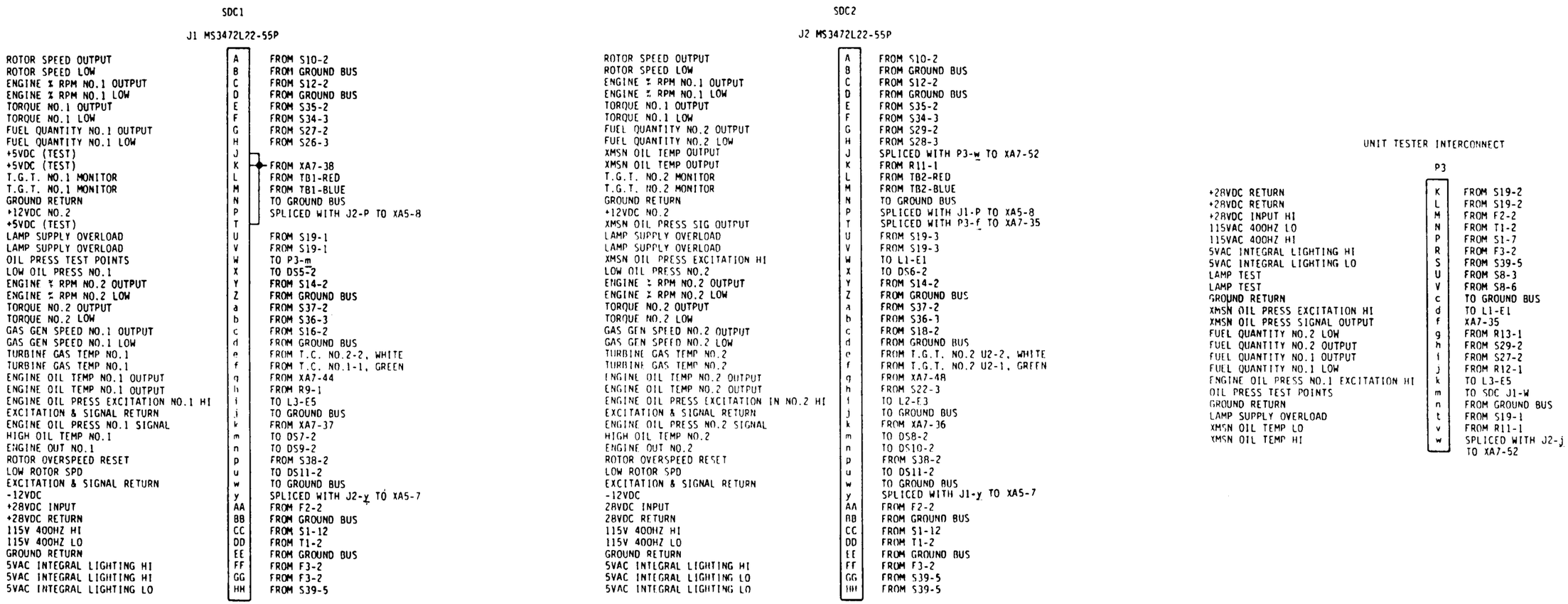


FO-1. Interwiring Diagram, Simulator (Sheet 1 of 6)

POWER SUPPLY CARD

	XA1	(MOTHERBOARD)
+37 VDC OUTPUT	1	TO XA5-15 SPARE
24 VDC HI INPUT	2	FROM XA6-9 (T1-9)
-15 VDC OUTPUT	3	TO XA2-3, XA5-17
24 VAC HI INPUT	4	FROM XA6-7 (T1-7)
+15 VDC OUTPUT	5	TO XA2-5, XA5-18
26 VAC HI INPUT	7	FROM XA6-1 (T1-5)
24 VAC COMMON	8	FROM XA6-8 (T1-8)
KEYING PIN	10	
26 VAC LO INPUT	11	FROM XA6-10, 19, 2, XA2-8, XA4-61
-12 VDC OUTPUT	13	TO XA3-46, XA5-7
DC GND	14	FROM XA6-11 (GND BUS)
+12 VDC NO. 1 OUTPUT	18	TO XA7-60, XA5-9, XA3-18
-37 VDC OUTPUT	19	TO XA5-16 (SPARE)
+5 VFL NO. 2 OUTPUT	23	TO XA5-11 (TB2-BRN TGT U2-5 BROWN)
SPARE	26	
+5 VFL NO. 2 RETURN	27	TO XA5-19 (TB2-YEL TGT U2-6 YELLOW)
8 VAC HI INPUT	29	FROM XA6-5 (T1-12)
SPARE	42	
8 VAC LO INPUT	43	FROM XA6-6 (T1-13)
SIGNAL GND	44	FROM XA6-12 (GND BUS)
+12 VDC NO. 2 OUTPUT	46	TO XA5-8, XA4-18, 46
+5 VFL NO. 1 OUTPUT	47	TO XA5-13 (TB1-BRN TGT U1-5 BROWN
8 VAC LO INPUT	49	FROM XA6-4 (TI-11)
8 VAC HI INPUT	53	FROM XA6-3 (T1-10)
SPARE	62	
+5 VFL NO. 1 RETURN	63	TO XA5-12 (TB1-YEL TGT U1-6 YELLOW)

OIL PRESSURE SIMULATOR CARD

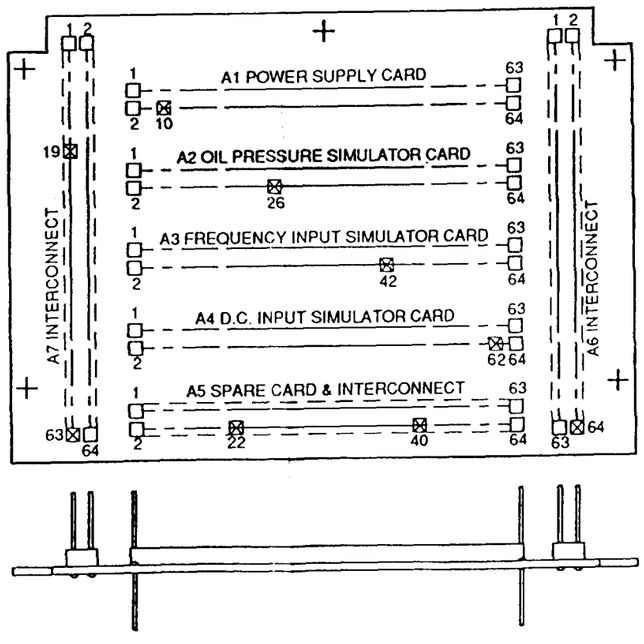
	XA2	(MOTHERBOARD)
-15 VDC	3	FROM XA1-3
+15 VDC	5	FROM XA1-5
XMSN OIL PRESS CAL LO OUTPUT	7	TO XA6-16 (S2-6)
XMSN OIL PRESS EXCITATION LO	8	FROM XA6-19 (LI-E2)
XMSN OIL PRESS CAL HI OUTPUT	9	TO XA6-17 (S2-4)
XMSN OIL PRESS VAR CONT EXC HI	11	TO XA6-22 (R1-1)
+28 VDC (NOT USED)	12	FROM XA6-13 (XA4-59)
XMSN OIL PRESS EXCITATION HI	13	FROM XA6-18 (L1-E1)
GND	14	FROM XA6-10 (GND BUS)
SWITCHED +15 VDC TO U4-12	15	FROM XA6-14
+28 VDC LAMP TEST	16	FROM XA7-20, -25
XMSN OIL PRESS CAL/NOR INPUT	17	FROM XA6-20 (S3-5)
+15 VDC	19	TO XA6-15 (S2-3)
XMSN OIL PRESS VAR CONT EXC LO	20	TO XA6-21 (R1-3)
XMSN OIL PRESS SIGNAL OUTPUT	21	TO XA7-35 (P3-f, J2-t)
KEYING PIN	26	
SPARE	28	TO XA7-22
CR11 CATHODE (LAMP TEST)	30	TO XA7-23 (DS4-1)
SWITCHED +28 VDC LAMP TEST	31	TO XA7-25
CR12 CATHODE (LAMP TEST)	32	TO XA7-24 (DS3-1)
ENGINE OIL PRESS NO. 2 CAL HI OUTPUT	33	TO XA7-3 (S4-5)
ENGINE OIL PRESS NO. 2 EXCITATION LO	34	FROM XA7-6 (L2-E4 GND)
ENGINE OIL PRESS NO. 2 CAL LO OUTPUT	35	TO XA7-4 (S4-4)
CR1 CATHODE LAMP TEST	36	TO XA7-34
ENGINE OIL PRESS NO. 2 VAR CONT EXC HI	37	TO XA7-9 (R2-1)
CR2 CATHODE (LAMP TEST)	38	TO XA7-33 (DS11-2)
ENGINE OIL PRESS NO. 2 EXCITATION HI	39	FROM XA7-5 (L2-E3)
+15 VDC	40	TO XA7-2 (S4-3)
SWITCHED +15 VDC TO U4-5	41	FROM XA7-1 (S4-2)
ENGINE OIL PRESS EXCITATION NO. 2 CAL/NOR INPUT	43	FROM XA7-7 (S5-5)
GND	44	FROM XA6-12 (GND BUS)
ENGINE OIL PRESS NO. 2 SIGNAL OUTPUT	45	TO XA7-36 (J2-k)
ENGINE OIL PRESS NO. 2 VAR CONT EXC LO	46	TO XA7-8 (R2-3)
+28 VDC LAMP TEST	47	FROM XA7-26 (S8-6)
CR3 CATHODE (LAMP TEST)	48	TO XA7-32 (DS10-2)
ENGINE OIL PRESS NO. 1 CAL HI OUTPUT	49	TO XA7-12 (S6-6)
CR4 CATHODE (LAMP TEST)	50	TO XA7-31 (DS9-2)
ENGINE OIL PRESS NO. 1 CAL LO OUTPUT	51	TO XA7-13 (S6-4)
CR5 CATHODE (LAMP TEST)	52	TO XA7-30 (DS8-2)
ENGINE OIL PRESS NO. 1 VAR CONT EXC HI	53	TO XA7-18 (R3-1)
ENGINE OIL PRESS NO. 1 VAR CONT EXC LO	54	TO XA7-17 (R3-3)
ENGINE OIL PRESS NO. 1 EXCITATION HI	55	FROM XA7-14 (L3-E5)
CR6 CATHODE (LAMP TEST)	56	TO XA7-29 (DS7-2)
SWITCHED +15 VDC TO U4-13	57	FROM XA7-10 (S6-2)
CR7 CATHODE (LAMP TEST)	58	TO XA7-28 (DS6-2)
ENGINE OIL PRESS NO. 1 CAL/NOR INPUT	59	FROM XA7-16 (S7-5)
ENGINE OIL PRESS NO.1 EXCITATION LO	60	FROM XA7-15 (L3-E6)
+15 VDC	61	TO XA7-11 (S6-3)
ENGINE OIL PRESS NO. 1 SIGNAL OUTPUT	63	TO XA7-37 (J1-k)
CR8 CATHODE (LAMP TEST)	64	TO XA7-27 (DS5-2)

TABLE	
REFERENCE DESIGNATION	CUT PIN NO. SEE NOTE 2
A1	10
A2	26
A3	42
A4	62

FREQUENCY SIMULATOR CARD

	XA3	(MOTHERBOARD)
ENGINE % RPM NO. 1, NO. 2 FX1 OUTPUT	3	TO XA6-40 (S11-1)
ROTOR SPEED FX3 OUTPUT	5	YO XA6-39 (S9-1)
GND	14, 44	FROM XA6-11 12 TO GND BUS
GAS GEN SPEED NO. 1 VARIABLE FREQUENCY OUTPUT	15	TO XA6-36 (S16-3)
GAS GEN SPEED NO. 1, NO. 2 FX2 OUTPUT	17	TO XA6-38 (S15-1)
+12 VDC NO.1	18	FROM XA1-18
ENGINE % RPM NO.1 VARIABLE CONTROL RETURN	21	FROM XA6-26 (R5-3)
ENGINE % RPM NO.1 VARIABLE FREQUENCY CONTROL INPUT	23	FROM XA6-25(R5-2)
GAS GEN SPEED NO. 1 VARIABLE CONTROL RETURN	29	FROM XA6-30 (R7-3)
GAS GEN SPEED NO. 1 VARIABLE FREQUENCY CONTROL INPUT	31	FROM XA6-29 (R7-2)
GAS GEN SPEED NO. 2 VARIABLE CONTROL RETURN	33	FROM XA6-32 (R8-3)
ENGINE % RPM NO. 1 VARIABLE FREQUENCY OUTPUT	35	TO XA6-34 (S12-3)
GAS GEN SPEED NO. 2 VARIABLE FREQUENCY OUTPUT	37	TO XA6-37 (S18-3)
KEYING PIN	42	
-12 VDC	46	FROM XA1-13
GAS GEN SPEED NO. 2 VARIABLE FREQUENCY CONTROL INPUT	47	FROM XA6-31 (R8-2)
ROTOR SPEED VARIABLE SPEED OUTPUT	49	FROM XA6-33 (S10-3)
ENGINE % RPM NO. 2 VARIABLE FREQUENCY OUTPUT	55	FROM XA6-35 (S14-3)
ENGINE % RPM NO. 2 VARIABLE FREQUENCY CONTROL INPUT	57	FROM XA6-27 (R6-2)
ENGINE % RPM NO. 2 VARIABLE CONTROL RETURN	59	FROM XA6-28 (R6-3)
ROTOR SPEED VARIABLE FREQUENCY CONTROL INPUT	61	FROM XA6-23 (R4-2)
ROTOR SPEED VARIABLE CONTROL RETURN	63	FROM XA6-24 (R4-3)

MOTHERBOARD



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FO-1. Interwiring Diagram, Simulator (Sheet 2 of 6)

D.C. SIMULATOR CARD

	XA4	(MOTHERBOARD)
FUEL QUANTITY NO. 1 VARIABLE CONTROL HI	1	TO XA6-47 (R12-3)
FUEL QUANTITY NO. 1 CAL HI	2	TO XA6-48 (S26-1)
FUEL QUANTITY NO. 2 VARIABLE CONTROL HI	3	TO XA6-50 (R13-3)
FUEL QUANTITY NO. 2 CAL HI	4	TO XA6-51 (S28-1)
FUEL QUANTITY NO. 1 VARIABLE CONTROL LO	5	TO XA6-49 (R12-1)
FUEL QUANTITY NO. 2 VARIABLE CONTROL LO	6	TO XA6-52 (R13-1)
15VAC HI	7	FROM XA6-41 (T2-3)
15VAC LO	8	FROM XA6-42 (T2-4)
TROQUE NO. 1 VARIABLE CONTROL HI	11	TO XA5-1 (R16-3)
TORQUE NO. 1 CAL HI	12	TO XA5-2 (S34-1)
TORQUE NO. 2 CAL LO	13	TO XA5-6 (S36-3)
GND	14	XA6-11 (FROM GND BUS)
TORQUE NO. 1 CAL LO	15	TO XA5-3 (S34-3)
TORQUE NO. 2 VARIABLE CONTROL HI	16	TO XA5-4 (R17-3)
TORQUE NO. 2 CAL HI	17	TO XA5-5 (S36-1)
+12V NO. 2	18	FROM XA1-46
ENGINE OIL TEMP NO. 1 CAL/NOR OUTPUT	19	TO XA7-44 (J1-g)
ENGINE OIL TEMP NO. 1 CAL/NOR	20	FROM XA7-43 (S21-2)
ENGINE OIL TEMP NO. 1 CAL HI	21	TO XA7-42 (S20-1)
ENGINE OIL TEMP NO. 1 CAL LO	22	TO XA7-41 (S20-3)
ENGINE OIL TEMP NO. 2 CAL/NOR	23	FROM XA7-47 (S23-2)
ENGINE OIL TEMP NO. 2 CAL/NOR OUTPUT	24	TO XA7-48 (J2-g)
15VAC HI	27	FROM XA6-45 (T3-5)
TURBINE GAS TEMP NO. 2 LO	29	TO XA6-58 (S32-2)
15VAC LO	30	FROM XA6-46 (T3-6)
TURBINE GAS TEMP NO. 2	31	FROM XA6-59 (S33-2)
TURBINE GAS TEMP NO. 2 CAL LO	32	TO XA6- 60 (S32-3)
TURBINE GAS TEMP NO. 2	33	TO XA6-57 (TGT NO. 2 U2-3)
MAIN XMSN OIL TEMP CAL/NOR OUTPUT	35	TO XA7-52 (P3-w)
MAIN XMSN OIL TEMP CAL/NOR	36	FROM XA7-51 (S25-2)
MAIN XMSN OIL TEMP CAL HI	38	TO XA7-50 (S24-1)
MAIN XMSN OIL TEMP CAL LO	39	TO XA7-49 (S24-3)
ENGINE OIL TEMP NO. 2 CAL HI	40	TO XA7-46 (S22-1)
ENGINE OIL TEMP NO. 2 CAL LO	41	TO XA7-45 (S22-3)
GND	44	FROM XA6-12 (FROM GND BUS)
+5VDC (TEST)	45	TO XA7-38 (J1-J-K-T)
+12VDC NO. 2	46	FROM XA1-46
SPARE	47	FROM XA7-40
SPARE	48	TO XA7-39
15VAC HI	56	FROM XA6-43 (T3-3)
TURBINE GAS TEMP NO. 1 LO	57	TO XA6-54 (S30-2)
15 VAC LO	58	FROM XA6-44 (T3-4)
28VDC (NOT USED)	59	FROM XA6-13 (F2-2)
TURBINE GAS TEMP NO. 1 CAL/NOR	60	TO XA6-55 (S31-2)
GND	61	FROM XA6-10 (GND BUS)
KEYING PIN	62	
TURBINE GAS TEMP NO. 1	63	TO XA6-53 (TBI, U1-3(RED))
TURBINE GAS TEMP NO. 1 CAL HI/LO	64	TO XA6-5[illegible] (S30-3)

SPARE CARD

	XA5	(MOTHERBOARD)
TORQUE NO. 1 VARIABLE CONTROL HI	1	TO R16-3 (XA4-11)
TORQUE NO. 1 CAL HII	2	TO S34-1 (XA4-12)
TORQUE NO. 1 CAL LO	3	TO S34-3 (XA4-15)
TORQUE NO. 2 VARIABLE CONTROL HI	4	TO R17-3 (XA4-16)
TORQUE NO. 2 CAL HI	5	TO S36-1 (XA4-17)
TORQUE NO. 2 CAL LO	6	TO S36-3 (XA4-13)
-12 VDC	7	TO J1-y
+12 VDC NO. 2	8	TO J2-P, J1-P (XA1-46)
ROTOR SPEED VARIABLE CONTROL HI	9	TO R4-1 (+12 VDC NO. 1)
TGT NO. 2 TEMP COMP EXCITATION HI	11	TO TB2-5 BRN U2-5 (+5 VFL NO 2)(XA1-23)
TGT NO. 1 TEMP COMP EXCITATION LO	12	TO TB1-4 YEL U1-6 (+5 VFL NO. ; RETURN)(XA1-63)
TGT NO. 1 TEMP COMP EXCITATION HI	13	TO TB1-5 BRN U1-5 (+5 VFL NO 1)(XA1-47)
GND	14	TO GND BUS
+37 VDC	15	SPARE (XA1-1)
-37 VDC	16	SPARE (XA4-19)
-15 VDC	17	SPARE (XA1-3)
+15 VDC	18	SPARE
TGT NO. 2 TEMP COMP EXCITATION LO	19	TO TB2-4 YEL U2-6 (+5 VFL NO 2 RETURN)(XA1-27)
GROUND RETURN	44	TO GND BUS

	XA6	MOTHERBOARD (INTERCONNECT)
26VAC HI	1	FROM T1-1 (XA1-7)
26VAC LO	2	FROM T1-6 (XA1-11)
8VAC HI	3	FROM T1-10 (XA1-53)
8VAC LO	4	FROM T1-11 (XA1-49)
8VAC HI	5	FROM T1-12 (XA1-29)
8VAC LO	6	FROM T1-13 (XA1-43)
24VAC HI	7	FROM T1-7 (XA1-4)
24VAC LO COMMON	8	FROM T1-8 CENTER TAP (XA1-8)
24VAC HI	9	FROM T1-9 (XA1-2)
GROUND RETURN	10	FROM GND BUS (XA4-61)(XA1-11)
GROUND RETURN	11	FROM GND BUS (XA4-14)(XA1-14)
GROUND RETURN	12	FROM GND BUS (XA4-44)(XA1-44)(XA2-44)
+28VDC INPUT	13	FROM F2-2 (XA4-59)(XA2-12)
XMSN OIL PRESS SWITCH VOLTAGE	14	FROM S2-2 (XA2-15)
XMSN OIL PRESS +15VDC SWITCH SUPPLY	15	TO S3-3 (XA2-19)
XMSN OIL PRESS LO	16	TO S2-6 (XA2-7)
XMSN OIL PRESS HI	17	TO S2-4 (XA2-9)
XMSN OIL PRESS EXCITATION INPUT HI	18	FROM L1-E1 (XA2-13)
XMSN OIL PRESS EXCITATION INPUT LO	19	FROM L1-E2 (XA2-8)
XMSN OIL PRESS CAL/NOR SELECT	20	FROM S3-5 (XA2-17)
XMSN OIL PRESS NOR LO	21	TO R1-3 (XA2-20)
XMSN OIL PRESS NOR HI	22	TO R1-1 (XA2-11)
ROTOR SPEED VARIABLE CONTROL	23	FROM R4-2 (XA3-61)
ROTOR SPEED VARIABLE CONTROL LO	24	TO R4-3 (XA3-63)
ENGINE % RPM NO. 1 VARIABLE CONTROL	25	FROM R5-2 (XA3-23)
ENGINE % RPM NO. 1 VARIABLE CONTROL LO	26	TO R5-3 (XA3-21)
ENGINE % RPM NO. 2 VARIABLE CONTROL	27	FROM R6-2 (XA3-57)
ENGINE % RPM NO. 2 VARIABLE CONTROL LO	28	TO R6-3 (XA3-59)
GAS GEN SPEED NO. 1 VARIABLE CONTROL	29	FROM R7-2 (XA3-31)
GAS GEN SPEED NO. 1 VARIABLE CONTROL LO	30	TO R7-3 (XA3-29)
GAS GEN SPEED NO. 2 VARIABLE CONTROL	31	FROM R8-2 (XA3-47)
GAS GEN SPEED NO. 2 VARIABLE CONTROL LO	32	TO R8-3 (XA3-33)
ROTOR SPEED VARIABLE OUTPUT	33	TO S10-3 (XA3-49)
ENGINE % RPM NO. 1 VARIABLE OUTPUT	34	TO S12-3 (XA3-35)
ENGINE % RPM NO. 2 VARIABLE OUTPUT	35	TO S14-3 (XA3-55)
GAS GEN SPEED NO. 1 VARIABLE OUTPUT	36	TO S16-3 (XA3-15)
GAS GEN SPEED NO. 2 VARIABLE OUTPUT	37	TO S18-3 (XA3-37)
FX2=2135 HZ OUTPUT	38	TO S15-1 (XA3-17)
FX3=11246 HZ OUTPUT	39	TO S9-1 (XA3-5)
FX1=1333.5 HZ OUTPUT	40	TO S11-1 (XA3-3)
15 VAC HI	41	FROM T2-3 (XA4-7)
15 VAC LO	42	FROM T2-4 (XA4-8)
15 VAC HI	43	FROM T3-3 (XA4-56)
15 VAC LO	44	FROM T3-4 (XA4-58)
15 VAC HI	45	FROM T3-5 (XA4-27)
15 VAC LO	46	FROM T3-6 (XA4-30)
FUEL QUANTITY NO. 1 VARIABLE CONTROL HI	47	TO R12-3 (XA4-1)
FUEL QUANTITY NO. 1 CAL HI	48	TO S26-1 (XA4-2)
FUEL QUANTITY NO. 1 VARIABLE CONTROL LO	49	TO R12-1 (XA4-5)
FUEL QUANTITY NO. 2 VARIABLE CONTROL HI	50	TO R13-3 (XA4-3)
FUEL QUANTITY NO. 2 CAL HI	51	TO S28-1 (XA4-4)
FUEL QUANTITY NO. 2 VARIABLE CONTROL LO	52	TO R13-1 (XA4-6)
TURBINE GAS TEMP NO. 1 TEMP COMP U1-3	53	TO TB1-3-RED INPUT PIN 3 (XA4-63)
TURBINE GAS TEMP NO. 1 CAL HI-LO	54	TO S30-2 (XA4-57) (XA6-62)
TURBINE GAS TEMP NO. 1 CAL/NOR	55	TO S31-2 (XA4-60)
TURBINE GAS TEMP NO. 1 CAL LO	56	TO S30-3 (XA4-64)
TURBINE GAS TEMP NO. 2 TEMP COMP U2-3	57	TO TB2-RED INPUT PIN 3 (XA4-33)
TURBINE GAS TEMP NO. 2 CAL HI-LO	58	TO S32-2 (XA4-29)
TURBINE GAS TEMP NO. 2 CAL/NOR	59	TO S33-2 (XA4-31)
TURBINE GAS TEMP NO. 2 CAL LO	60	TO S32-3 (XA4-32)
TURBINE GAS TEMP NO. 2 MONITOR	61	TO TB2-1-BLUE (J2-M)
TURBINE GAS TEMP NO. 1 MONITOR	62	TO TB1-1-BLUE (J1-M) (XA6-54)

	XA7	MOTHERBOARD (INTERCONNECT)
ENGINE OIL PRESS NO. 2 U4 SWITCH VOLTAGE	1	FROM S4-2 (XA2-41)
ENGINE OIL PRESS NO. 2 U4 SWITCH VOLTAGE SUPPLY	2	TO S4-3 (XA2-40)
ENGINE OIL PRESS NO. 2 CAL HI	3	TO S4-6 (XA2-33)
ENGINE OIL PRESS NO. 2 CAL LO	4	TO S4-4 (XA2-35)
ENGINE OIL PRESS NO. 2 EXCITATION HI	5	FROM L2-E3 (XA2-39)
ENGINE OIL PRESS NO. 2 EXCITATION LO	6	FROM L2-E4 (GND)(XA2-34)
ENGINE OIL PRESS NO. 2 CAL/NOR INPUT	7	FROM S5-5 (XA2-43)
ENGINE OIL PRESS NO. 2 VARIABLE CONTROL LO	8	TO R2-3 (XA2-46
ENGINE OIL PRESS NO. 2 VARIABLE CONTROL HI	9	TO R2-1 (XA2-37)
ENGINE OIL PRESS NO. 1 U4 SWITCH VOLTAGE	10	FROM S6-2 (XA2-57)
ENGINE OIL PRESS NO. 1 U4 VOLTAGE SUPPLY	11	TO S6-3 (XA2-61)
ENGINE OIL PRESS NO. 1 CAL HI	12	TO S6-6 (XA2-49)
ENGINE OIL PRESS NO. 1 CAL LO	13	TO S6-4 (XA2-51)
ENGINE OIL PRESS NO. 1 EXCITATION HI	14	FROM L3-E5 (XA2-55)
ENGINE OIL PRESS NO. 1 EXCITATION LO	15	FROM L3-E6 (GND) (XA2-60)
ENGINE OIL PRESS NO. 1 CAL/NOR INPUT	16	FROM S7-5 (XA2-59)
ENGINE OIL PRESS NO. 1 VARIABLE CONTROL LO	17	TO R3-3 (XA2-54)
ENGINE OIL PRESS NO. 1 VARIABLE CONTROL HI	18	TO R3-1 (XA2-53)
+28 VDC LAMP TEST	20	XA2-28
SPARE	21	JUMPER
HIGH TGT NO. 2	22	TO DS13-2 (XA2-28)
LAMP SUPPLY OVERLOAD NO. 2	23	TO DS4-1 (XA2-30)
LAMP SUPPLY OVERLOAD NO. 1	24	TO DS3-1 (XA2-32)
+28 VDC LAMP TEST	25	XA2-31
LAMP TEST (XA2-47)	26	FROM S8-6 (XA2-47)
LOW OIL PRESS NO. 1 HI INPUT	27	TO DS5-2 (XA2-64)
LOW OIL PRESS NO. 2 HI INPUT	28	TO DS6-2 (XA2-58)
HIGH OIL TEMP NO. 1 HI INPUT	29	TO DS7-2 (XA2-56)
HIGH OIL TEMP NO. 2 HI INPUT	30	TO DS8-2 (XA2-52)
ENGINE OUT NO. 1 HI INPUT	31	TO DS9-2 (XA2-50)
ENGINE OUT NO. 2 HI INPUT	32	TO DS10-2 (XA2-48)
LOW ROTOR SPD HI INPUT	33	TO DS11-2 (XA2-38)
HIGH TGT NO. 1	34	TO TO DS12-2 (XA2-36)
XMSN OIL PRESS SIGNAL OUTPUT	35	TO P3-f, J2-T (XA2-21)
ENGINE OIL PRESS NO. 2 SIGNAL OUTPUT	36	TO J2-k, (XA2-45)
ENGINE OIL PRESS NO. 1 SIGNAL OUTPUT	37	TO J1-k, (XA2-63)
+5 VDC (TEST)	38	TO J1-J, K, T (XA4-45)
SPARE	39	XA4-48
SPARE	40	XA4-47
ENGINE OIL TEMP NO. 1 CAL LO	41	TO S20-3 (XA4-22)
ENGINE OIL TEMP NO. 1 CAL HI	42	TO S20-1 (XA4-21)
ENGINE OIL TEMP NO. 1 CAL/NOR	43	FROM S21-2 (XA4-20)
ENGINE OIL TEMP NO. 1 HI	44	TO J1-g (XA4-19)
ENGINE OIL TEMP NO. 2 CAL LO	45	TO S22-3 (XA4-41)
ENGINE OIL TEMP NO. 2 CAL HI	46	TO S22-1 (XA4-40)
ENGINE OIL TEMP NO. 2 CAL/NOR	47	TO S23-2 (XA4-23)
ENGINE OIL TEMP NO. 2 HI	48	TO J2-g (XA4-24)
XMSN OIL TEMP CAL LO	49	TO S24-3 (XA4-39)
XMSN OIL TEMP CAL HI	50	TO S24-1 (XA4-38)
XMSN OIL TEMP CAL/NOR	51	TO S25-2 (XA4-36)
XMSN OIL TEMP HI	52	TO P3-w (XA4-35)
	53	XA4-49
	54	XA4-50
	55	XA4-51
	56	XA4-52
	57	XA4-53
	58	XA4-54
	59	XA4-55
+12 VDC NO. 1	60	TO R4-1 (XA1-18)

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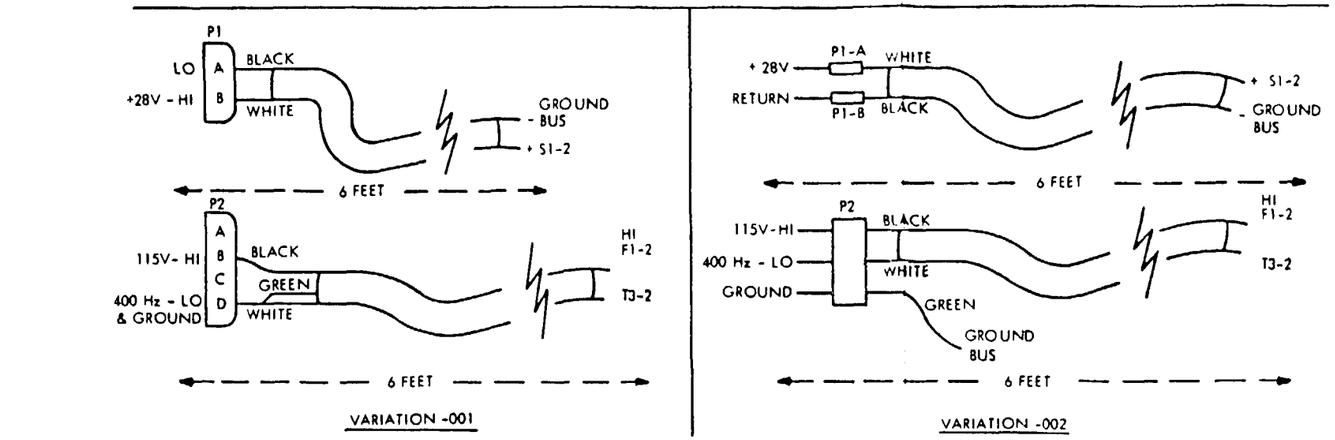
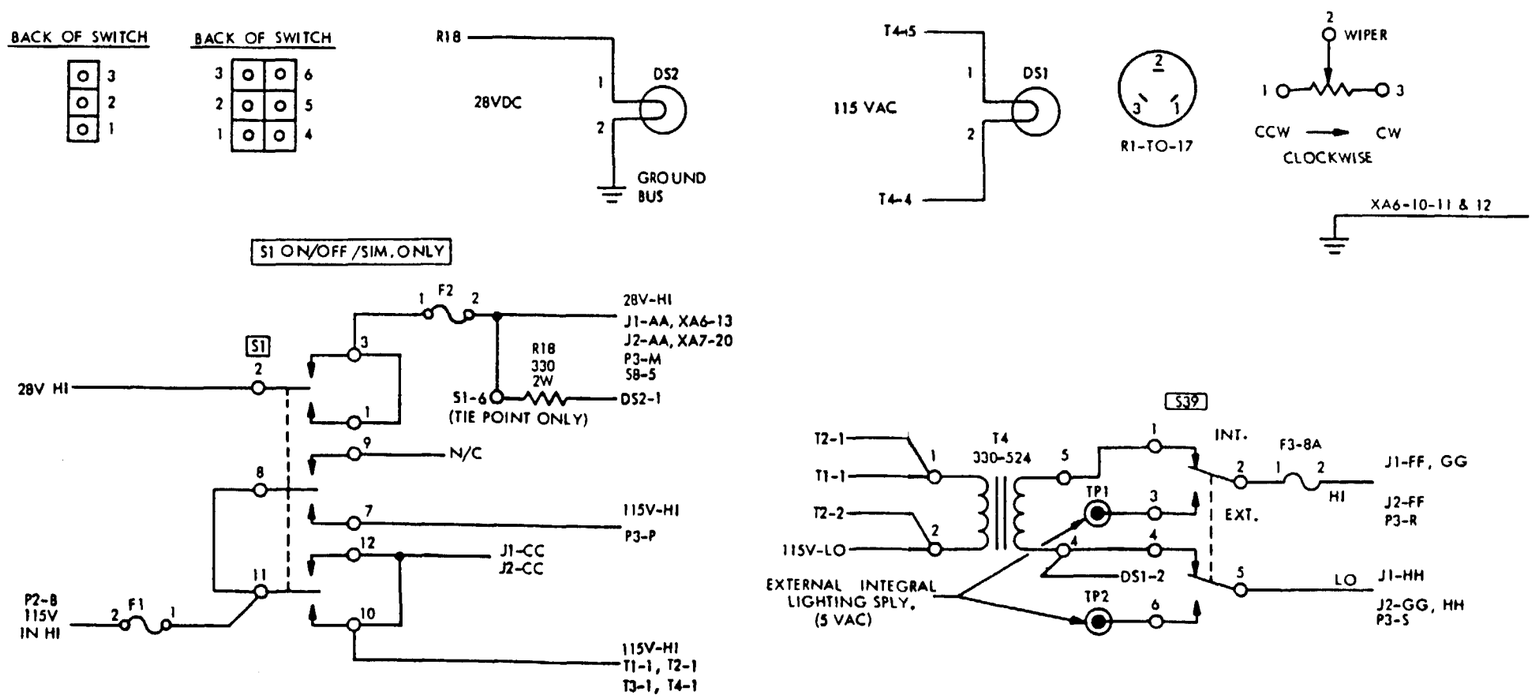
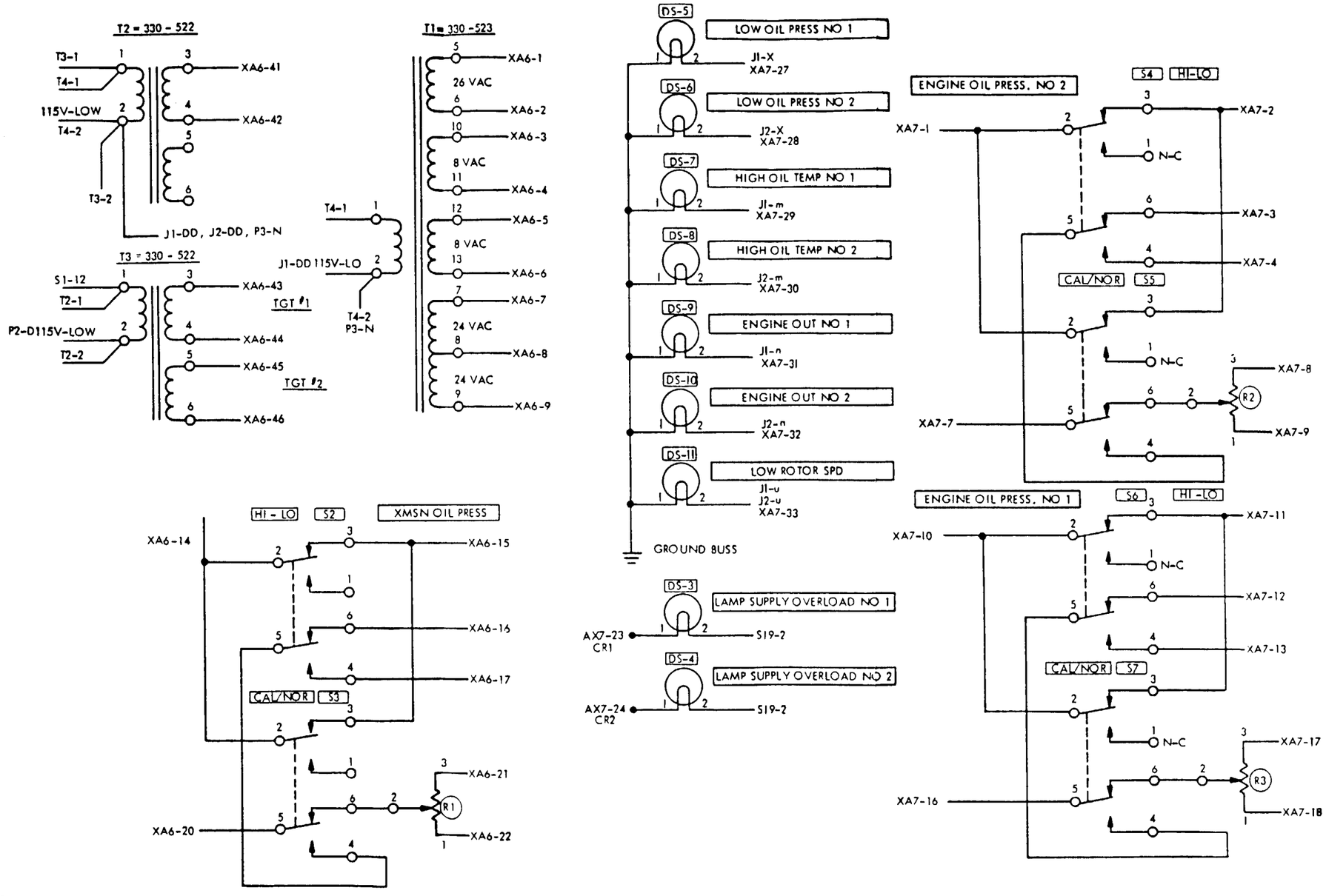
FO-1. Interwiring Diagram, Simulator (Sheet 3 of 6)

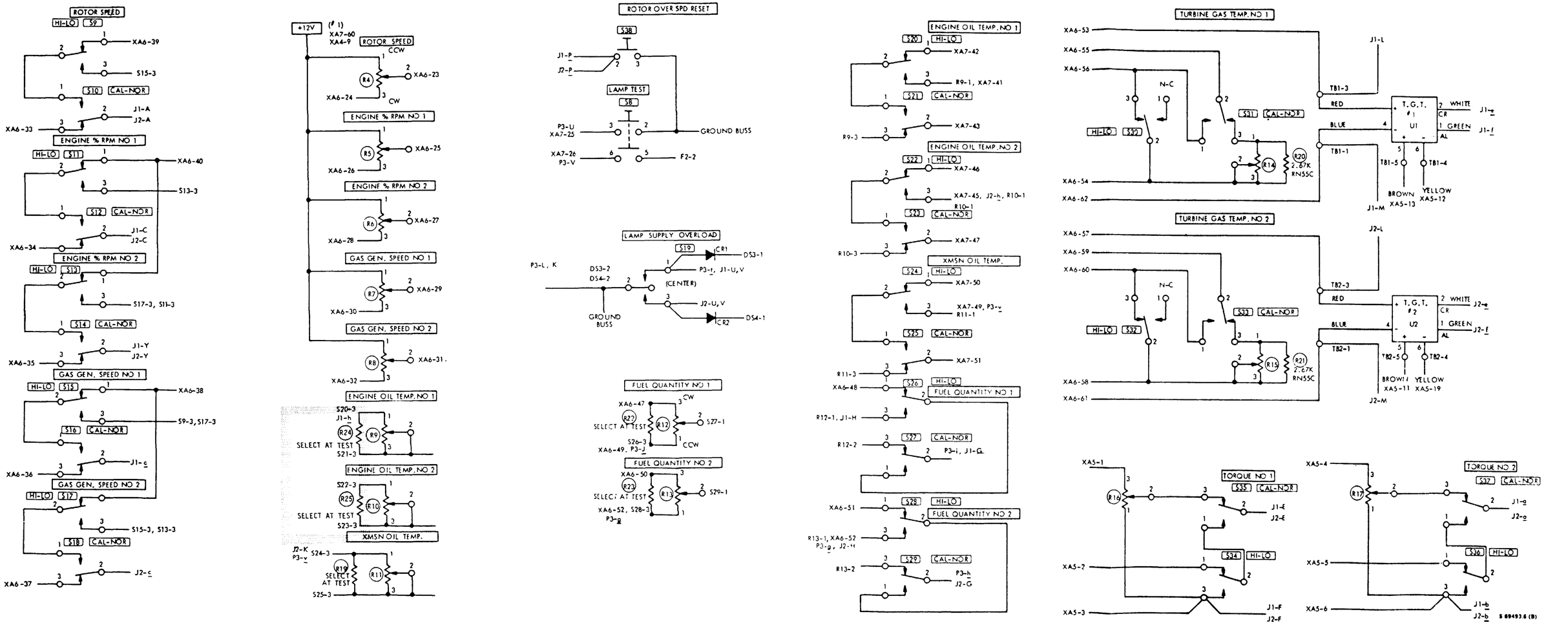




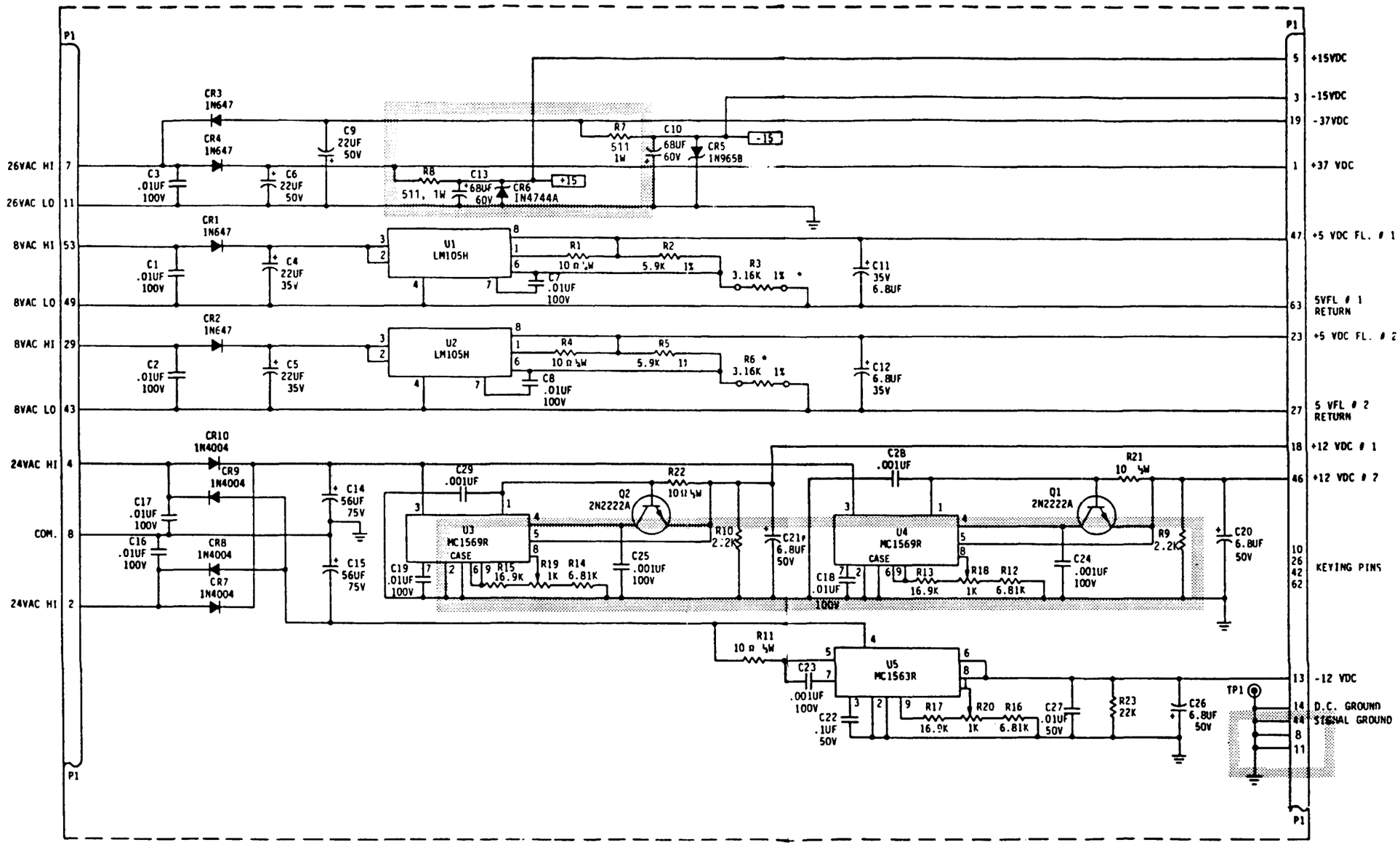
FO-1. Interwiring Diagram, Simulator (Sheet 4 of 6)



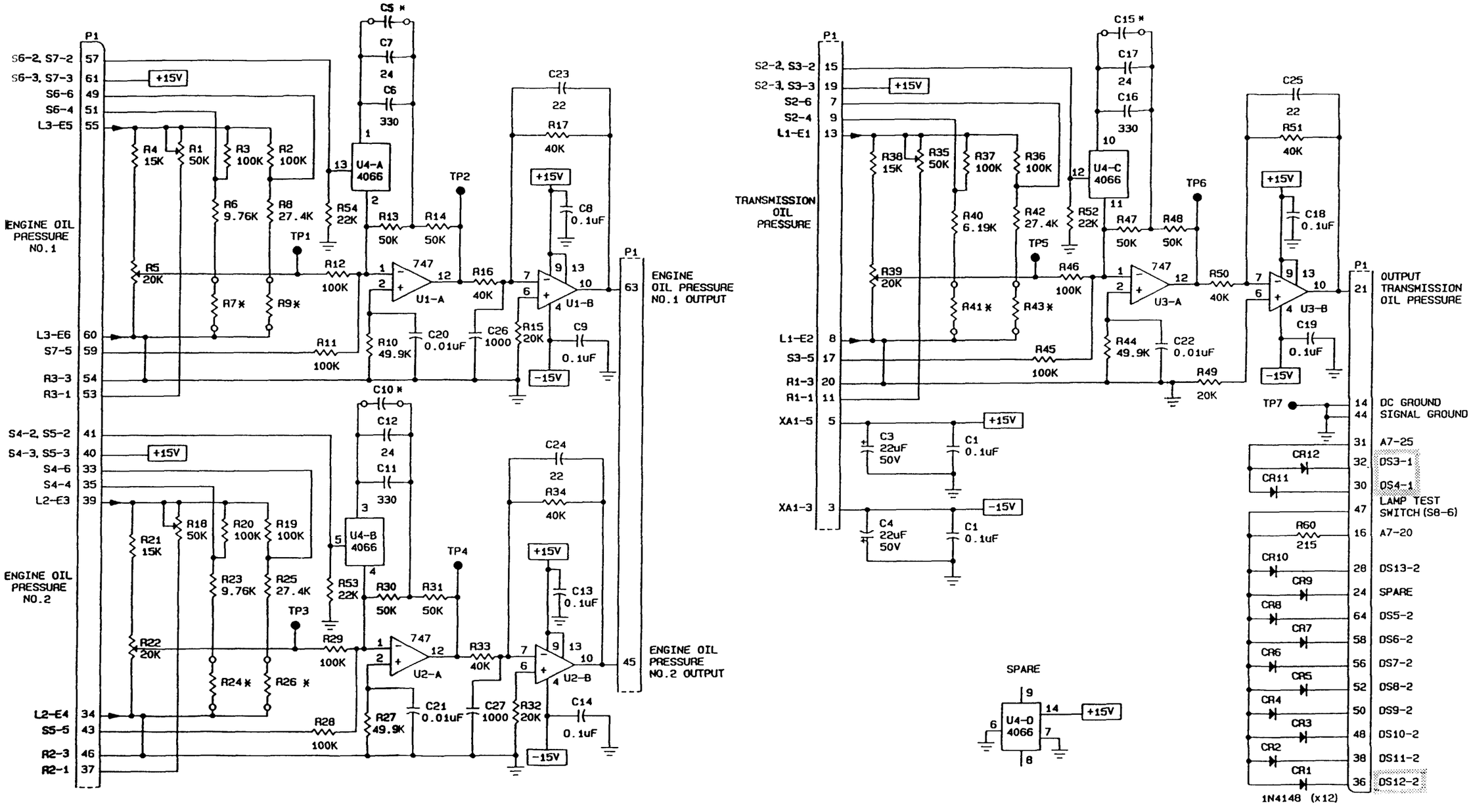
FO-1. Interwiring Diagram, Simulator (Sheet 5 of 6)



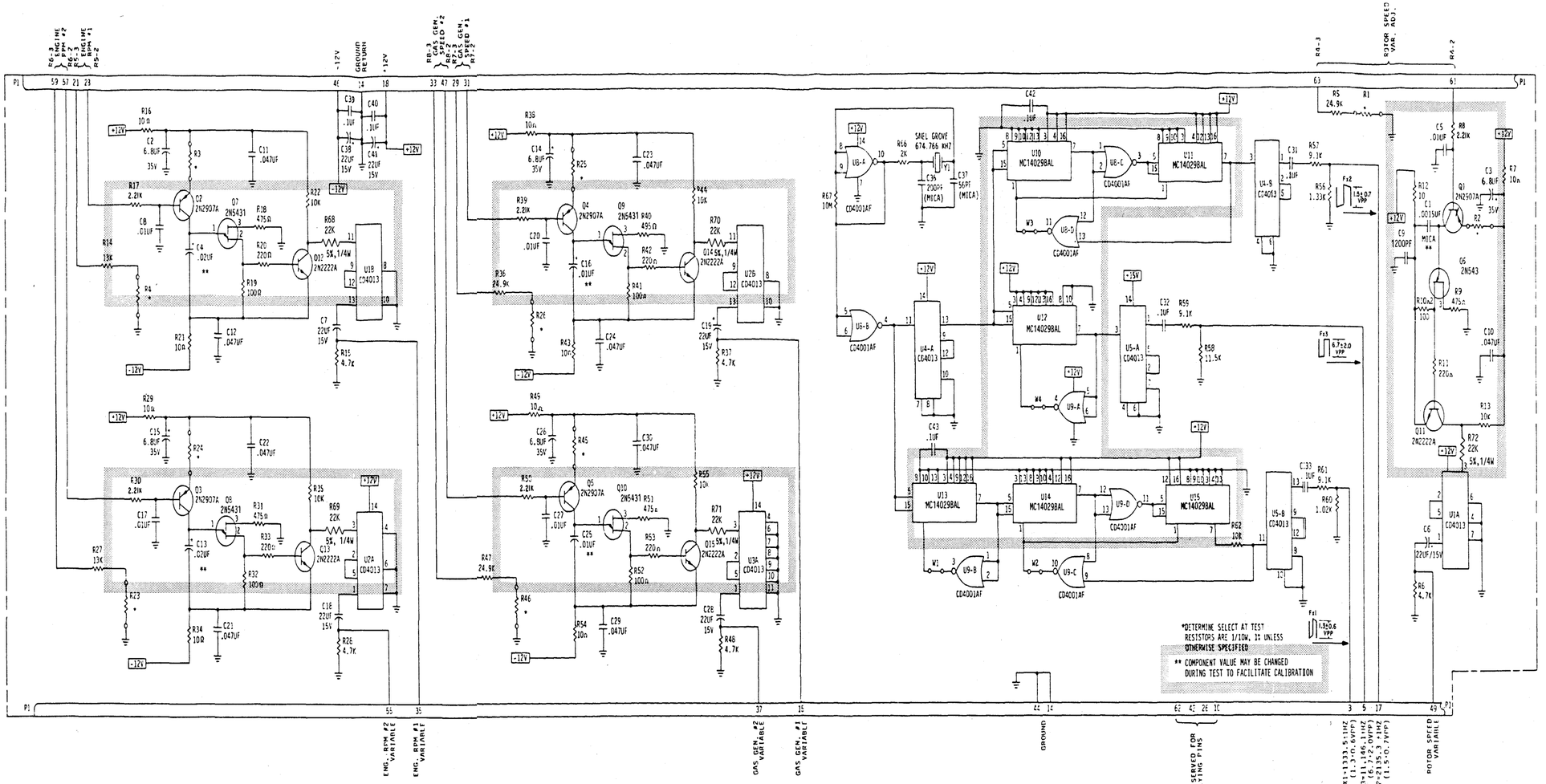
FO-1. Interwiring Diagram, Simulator (Sheet 6 of 6)



FO-2. Power Supply Assembly A1, Schematic Diagram



FO-3. Oil Pressure Simulator Assembly A2, Schematic Diagram



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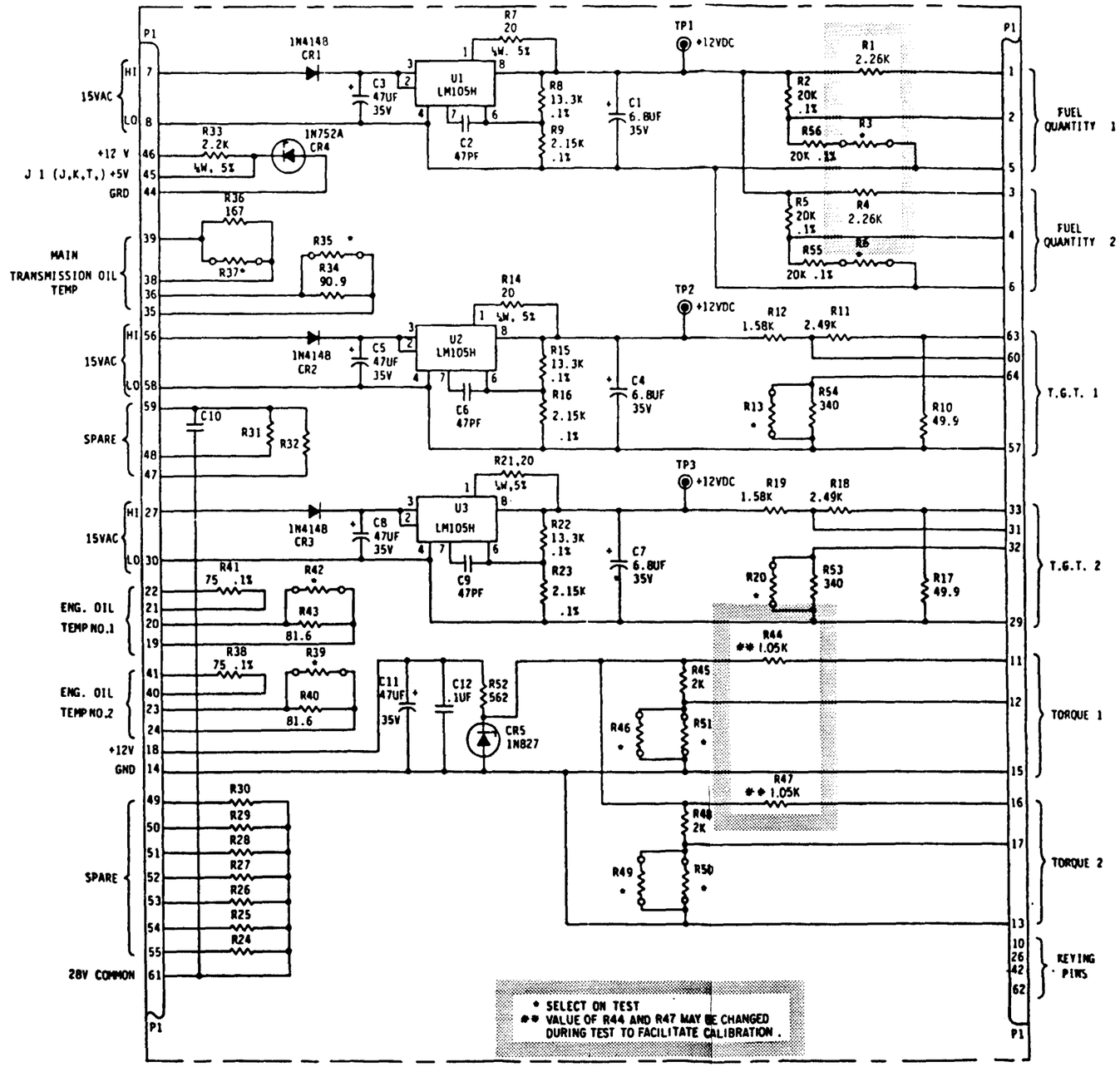
FO-4. Frequency Input Simulator Assembly A3, Schematic Diagram



FO-5. DC Input Simulator Assembly A4, Schematic Diagram

CENTRAL DISPLAY UNIT J1

J1

CHAN LAMPS EXCIT (OUT)	1	
CHAN LAMPS EXCIT (IN)	2	
DIGITS ON-OFF	3	TO SWITCH S17, TERM-3
LAMP SUPPLY REF	4	TO WIPER OF VARIABLE RESISTOR (R3 TERM-2)
RTR OVSPD LEVEL 127%	5	TO SWITCH S7, TERM-9
RTR OVSPD LEVEL 137%	6	TO SWITCH S7, TERM-6
RTR OVSPD LEVEL 142%	7	TO SWITCH S7, TERM-3
SPARE	8	
SPARE	9	
DIGITAL DATA A1	10	TO TERM STRIP TB-2 TERM-1
DIGITAL DATA B1	11	TO TERM STRIP TB-2 TERM-2
DIGITAL DATA C1	12	TO TERM STRIP TB-2 TERM-3
DIGITAL DATA D1	13	TO TERM STRIP TB-2 TERM-4
DIGITAL DATA A2	14	TO TERM STRIP TB-2 TERM-1
DIGITAL DATA B2	15	TO TERM STRIP TB-2 TERM-2
DIGITAL DATA C2	16	TO TERM STRIP TB-2 TERM-3
DIGITAL DATA D2	17	TO TERM STRIP TB-2 TERM-4
DIGITAL DATA A3	18	TO TERM STRIP TB-2 TERM-1
SHIFT REG O/P TAP 5	19	TO ANALOG PROCESSOR BOARD NO. 1 PIN-32
SHIFT REG O/P TAP 10	20	TO ANALOG PROCESSOR BOARD NO. 1 PIN-49
SHIFT REG O/P TAP 15	21	TO ANALOG PROCESSOR BOARD NO. 1 PIN-69
SHIFT REG O/P TAP 20	22	TO ANALOG PROCESSOR BOARD NO. 1 PIN-63
SHIFT REG O/P TAP 25	23	TO ANALOG PROCESSOR BOARD NO. 1 PIN-79
SHIFT REG O/P TAP 30	24	TO ANALOG PROCESSOR BOARD NO. 1 PIN-97
SHIFT REG O/P TAP 35	25	TO ANALOG PROCESSOR BOARD NO. 1 PIN-95
SHIFT REG O/P TAP 40	26	TO ANALOG PROCESSOR BOARD NO. 1 PIN-100
SHIFT REG O/P TAP 45	27	TO ANALOG PROCESSOR BOARD NO. 1 PIN-120
SHIFT REG O/P TAP 50	28	TO ANALOG PROCESSOR BOARD NO. 1 PIN-110
SHIFT REG O/P TAP 55	29	TO ANALOG PROCESSOR BOARD NO. 1 PIN-115
SHIFT REG O/P TAP 60	30	TO ANALOG PROCESSOR BOARD NO. 1 PIN-75
SHIFT REG O/P TAP 65	31	TO ANALOG PROCESSOR BOARD NO. 1 PIN-107
SHIFT REG O/P TAP 70	32	TO ANALOG PROCESSOR BOARD NO. 1 PIN-57
SHIFT REG O/P TAP 75	33	TO ANALOG PROCESSOR BOARD NO. 1 PIN-43
SHIFT REG O/P TAP 80	34	TO ANALOG PROCESSOR BOARD NO. 1 PIN-35
SHIFT REG O/P TAP 85	35	TO ANALOG PROCESSOR BOARD NO. 1 PIN-25
SHIFT REG O/P TAP 90	36	TO ANALOG PROCESSOR BOARD NO. 1 PIN-13
SHIFT REG O/P TAP 92	37	TO ANALOG PROCESSOR BOARD NO. 1 PIN-9
SPARE	38	
SHIFT REG O/P TAP 94	39	TO ANALOG PROCESSOR BOARD NO. 1 PIN-5
SHIFT REG O/P TAP 95	40	TO ANALOG PROCESSOR BOARD NO. 1 PIN-28
SHIFT REG O/P TAP 96	41	TO ANALOG PROCESSOR BOARD NO. 1 PIN-22
SPARE	42	
SHIFT REG O/P TAP 98	43	TO ANALOG PROCESSOR BOARD NO. 2 PIN-47
SHIFT REG O/P TAP 99	44	TO ANALOG PROCESSOR BOARD NO. 2 PIN-45
SHIFT REG O/P TAP 100	45	TO ANALOG PROCESSOR BOARD NO. 2 PIN-43
SPARE	46	
SHIFT REG O/P TAP 102	47	TO ANALOG PROCESSOR BOARD NO. 2 PIN-50
SHIFT REG O/P TAP 104	48	TO ANALOG PROCESSOR BOARD NO. 2 PIN-46
SHIFT REG O/P TAP 105	49	TO ANALOG PROCESSOR BOARD NO. 2 PIN-71
SHIFT REG O/P TAP 106	50	TO ANALOG PROCESSOR BOARD NO. 2 PIN-65
SHIFT REG O/P TAP 108	51	TO ANALOG PROCESSOR BOARD NO. 2 PIN-61
SHIFT REG O/P TAP 110	52	TO ANALOG PROCESSOR BOARD NO. 2 PIN-68
SPARE	53	
SHIFT REG O/P TAP 114	54	TO ANALOG PROCESSOR BOARD NO. 2 PIN-85
SHIFT REG O/P TAP 115	55	TO ANALOG PROCESSOR BOARD NO. 2 PIN-83
DEDICATED SPARE	56	
SHIFT REG O/P TAP 120	57	TO ANALOG PROCESSOR BOARD NO. 2 PIN-78
SHIFT REG O/P TAP 125	58	TO ANALOG PROCESSOR BOARD NO. 2 PIN-99
DEDICATED SPARE	59	
SPARE	60	
SHIFT REG O/P TAP 130	61	TO ANALOG PROCESSOR BOARD NO. 2 PIN-100
SHIFT REG O/P TAP 135	62	TO ANALOG PROCESSOR BOARD NO. 2 PIN-106
SHIFT REG O/P TAP 140	63	TO ANALOG PROCESSOR BOARD NO. 2 PIN-120
SHIFT REG O/P TAP 145	64	TO ANALOG PROCESSOR BOARD NO. 2 PIN-109
SHIFT REG O/P TAP 150	65	TO ANALOG PROCESSOR BOARD NO. 2 PIN-93
SPARE	66	

CENTRAL DISPLAY UNIT J2

J2

	1	+15 VDC FROM P/S
	2	+15 VDC LOGIC
	3	-15 VDC FROM P/S
	4	-15 VDC LOGIC
	5	+8 VDC FROM P/S
	6	+8 VDC FROM P/S
	7	+8 VDC
	8	LOGIC SUPPLY RETURN
	9	LOGIC SUPPLY RETURN
	10	LOGIC SUPPLY RETURN
	11	LAMP SUPPLY (HI)
	12	LAMP SUPPLY (HI)
	13	LAMP SUPPLY (HI)
	14	LAMP SUPPLY (HI)
	15	LAMP SUPPLY RETURN
	16	LAMP SUPPLY RETURN
	17	LAMP SUPPLY RETURN
	18	LAMP SUPPLY RETURN
	19	LAMP SUPPLY CONTROL
	20	LAMP SENSE (HI)
	21	LAMP SENSE (LO)
	22	SPARE
	23	SPARE
	24	FUEL QTY NO. 1 SIG (HI)
	25	FUEL QTY NO. 1 SIG (LO)
	26	SPARE
	27	SPARE
	28	SPARE
	29	LOW ROTOR SPD WARN
	30	LOW OIL PRESS NO. 1 WARN
	31	LOW NG NO. 1 WARNING
	32	HIGH OIL TEMP NO. 1 WARN
	33	RTR OVSPD WARN RESET
	34	SPARE
	35	FAILURE WARNING
	36	DIG CLOCK INHIBIT
	37	ANA CLOCK INHIBIT
	38	ANALOG RESET
	39	DIGITAL RESET
	40	SPARE
	41	FUEL QTY ANA MUX
	42	SPARE
	43	TOTAL FUEL DIG MUX
	44	ENG OIL TEMP NO. 1 UPDATE
	45	ENG OIL PRESS NO. 1 UPDATE
	46	TGT NO. 1 UPDATE ANA
	47	NG NO. 1 UPDATE ANA
	48	TGT NO. 1 UPDATE DIG
	49	NG NO. 1 UPDATE DIG
	50	ROTOR SPEED UPDATE
	51	ANALOG TEST FREQ
	52	DIGITAL TEST FREQ
	53	+10 VDC (TEST)
	54	-10 VDC (TEST)
	55	COMMON UPDATE (TEST)
	56	RTR OVSPD WARN SUPPLY (HI)
	57	+5 VOLTS DC
	58	LOGIC GROUND
	59	CHASSIS GROUND
	60	DIGITAL DATA AO
	61	DIGITAL DATA BO
	62	DIGITAL DATA CO
	63	DIGITAL DATA DO
	64	DIGITAL DATA B3
	65	SPARE
	66	SPARE

J2

	1	SWITCH S9 TERM-3
	2	TERMINAL BOARD TB1 - TERM-1
	3	SWITCH S9 TERM-6
	4	TERMINAL BOARD TB1 - TERM-4
	5	SWITCH S9 TERM-9
	6	
	7	TERM BOARD TB1 - TERM-7
	8	TO GROUND POINT "B"
	9	TO GROUND POINT "B"
	10	TO GROUND POINT "B"
	11	TERMINAL BOARD TB1 - TERM-24
	12	TERMINAL BOARD TB1 - TERM-24
	13	TERMINAL BOARD TB1 - TERM-25
	14	TERMINAL BOARD TB1 - TERM 25
	15	TO GROUND POINT "A"
	16	TO GROUND POINT "A"
	17	TO GROUND POINT "A"
	18	TO GROUND POINT "A"
	19	TO SWITCH S9 TERM-12
	20	TO LAMP TEST BOARD TERM-7
	21	TO LAMP TEST BOARD TERM-9
	22	
	23	
	24	INTERCONNECT J5 PIN - 1
	25	INTERCONNECT J5 PIN - 2
	26	
	27	
	28	
	29	TO SWITCH S7 TERM-12
	30	LAMP L22 LEAD-"A"
	31	LAMP L24 LEAD-"A"
	32	LAMP L20 LEAD-"A"
	33	SWITCH S11 TERM-3
	34	
	35	SWITCH S10 TERM-3
	36	OSC CONTROL BD, PIN-41
	37	SWITCH S6 WAFER 3 TERM-15
	38	BCD COUNTER BOARD PIN-34
	39	BCD COUNTER BOARD PIN-32
	40	
	41	SWITCH S6 WAFER 4 TERM-15
	42	
	43	SWITCH S6 WAFER 4 TERM-19
	44	TERMINAL STRIP TB3 TERM-1
	45	TERMINAL STRIP TB3 TERM-1
	46	TERMINAL STRIP TB3 TERM-1
	47	TERMINAL STRIP TB3 TERM-1
	48	TERMINAL BOARD TB1 TERM-35
	49	TERMINAL BOARD TB1 TERM-36
	50	SWITCH S16 TERM-2
	51	OSC CONTROL BOARD PIN-37
	52	
	53	TEST POINT NO. 30
	54	TEST POINT NO. 29
	55	SWITCH S16 TERM-6
	56	
	57	
	58	GROUND LUG . TB3 MTG LUG
	59	GROUND LUG
	60	TO TERM STRIP TB2 TERM-1
	61	TO TERM STRIP TB2 TERM-2
	62	TO TERM STRIP TB2 TERM-3
	63	TO TERM STRIP TB2 TERM-4
	64	TO TERM STRIP TB2 TERM-2
	65	
	66	

SHIFT REG O/P TAP 8	67	
SHIFT REG O/P TAP 12	68	
SHIFT REG O/P TAP 16	69	
SHIFT REG O/P TAP 18	70	
SHIFT REG O/P TAP 21	71	
SHIFT REG O/P TAP 23	72	
SHIFT REG O/P TAP 24	73	
SPARE	74	
SHIFT REG O/P TAP 27	75	
SHIFT REG O/P TAP 28	76	
SHIFT REG O/P TAP 31	77	
SHIFT REG O/P TAP 32	78	
SHIFT REG O/P TAP 34	79	
SHIFT REG O/P TAP 36	80	
SHIFT REG O/P TAP 38	81	
SHIFT REG O/P TAP 42	82	
SHIFT REG O/P TAP 44	83	
SHIFT REG O/P TAP 46	84	
SHIFT REG O/P TAP 48	85	
SHIFT REG O/P TAP 7	86	
SHIFT REG O/P TAP 52	87	
SHIFT REG O/P TAP 54	88	
SHIFT REG O/P TAP 56	89	
SHIFT REG O/P TAP 58	90	
SHIFT REG O/P TAP 9	91	
SHIFT REG O/P TAP 62	92	
SPARE	93	
SHIFT REG O/P TAP 64	94	
SHIFT REG O/P TAP 66	95	
SHIFT REG O/P TAP 68	96	
SPARE	97	
SHIFT REG O/P TAP 72	98	
SHIFT REG O/P TAP 74	99	
SHIFT REG O/P TAP 76	100	
SHIFT REG O/P TAP 78	101	
SPARE	102	
SHIFT REG O/P TAP 11	103	
SHIFT REG O/P TAP 82	104	
SPARE	105	
SHIFT REG O/P TAP 84	106	
SHIFT REG O/P TAP 86	107	
SHIFT REG O/P TAP 13	108	
SHIFT REG O/P TAP 88	109	
SHIFT REG O/P TAP 14	110	
SHIFT REG O/P TAP 113	111	
SHIFT REG O/P TAP 117	112	
SHIFT REG O/P TAP 121	113	
SHIFT REG O/P TAP 129	114	
SPARE	115	
SHIFT REG O/P TAP 132	116	
SHIFT REG O/P TAP 133	117	
SPARE	118	
SHIFT REG O/P TAP 137	119	
SHIFT REG O/P TAP 141	120	
SHIFT REG O/P TAP 142	121	
SHIFT REG O/P TAP 144	122	
SHIFT REG O/P TAP 127	123	
SHIFT REG O/P TAP 148	124	
SPARE	125	
SPARE	126	
+5 VOLTS (TEST)	127	
INTEGRAL LIGHTING (HI)	128	

CENTRAL DISPLAY UNIT J2

J2

67	TO ANALOG PROCESSOR BOARD NO. 1 PIN-51
68	TO ANALOG PROCESSOR BOARD NO. 1 PIN-47
69	TO ANALOG PROCESSOR BOARD NO. 1 PIN-67
70	TO ANALOG PROCESSOR BOARD NO. 1 PIN-65
71	TO ANALOG PROCESSOR BOARD NO. 1 PIN-85
72	TO ANALOG PROCESSOR BOARD NO. 1 PIN-83
73	TO ANALOG PROCESSOR BOARD NO. 1 PIN-81
74	
75	TO ANALOG PROCESSOR BOARD NO. 1 PIN-101
76	TO ANALOG PROCESSOR BOARD NO. 1 PIN-99
77	TO ANALOG PROCESSOR BOARD NO. 1 PIN-45
78	TO ANALOG PROCESSOR BOARD NO. 1 PIN-106
79	TO ANALOG PROCESSOR BOARD NO. 1 PIN-105
80	TO ANALOG PROCESSOR BOARD NO. 1 PIN-93
81	TO ANALOG PROCESSOR BOARD NO. 1 PIN-102
82	TO ANALOG PROCESSOR BOARD NO. 1 PIN-98
83	TO ANALOG PROCESSOR BOARD NO. 1 PIN-96
84	TO ANALOG PROCESSOR BOARD NO. 1 PIN-116
85	TO ANALOG PROCESSOR BOARD NO. 1 PIN-114
86	TO ANALOG PROCESSOR BOARD NO. 1 PIN-8
87	TO ANALOG PROCESSOR BOARD NO. 1 PIN-108
88	TO ANALOG PROCESSOR BOARD NO. 1 PIN-119
89	TO ANALOG PROCESSOR BOARD NO. 1 PIN-89
90	TO ANALOG PROCESSOR BOARD NO. 1 PIN-87
91	TO ANALOG PROCESSOR BOARD NO. 1 PIN-16
92	TO ANALOG PROCESSOR BOARD NO. 1 PIN-113
93	
94	TO ANALOG PROCESSOR BOARD NO. 1 PIN-109
95	TO ANALOG PROCESSOR BOARD NO. 1 PIN-71
96	TO ANALOG PROCESSOR BOARD NO. 1 PIN-61
97	
98	TO ANALOG PROCESSOR BOARD NO. 1 PIN-55
99	TO ANALOG PROCESSOR BOARD NO. 1 PIN-53
100	TO ANALOG PROCESSOR BOARD NO. 1 PIN-41
101	TO ANALOG PROCESSOR BOARD NO. 1 PIN-39
102	
103	TO ANALOG PROCESSOR BOARD NO. 1 PIN-18
104	TO ANALOG PROCESSOR BOARD NO. 1 PIN-31
105	
106	TO ANALOG PROCESSOR BOARD NO. 1 PIN-27
107	TO ANALOG PROCESSOR BOARD NO. 1 PIN-23
108	TO ANALOG PROCESSOR BOARD NO. 1 PIN-20
109	TO ANALOG PROCESSOR BOARD NO. 1 PIN-19
110	TO ANALOG PROCESSOR BOARD NO. 1 PIN-24
111	TO ANALOG PROCESSOR BOARD NO. 2 PIN-87
112	TO ANALOG PROCESSOR BOARD NO. 2 PIN-82
113	TO ANALOG PROCESSOR BOARD NO. 2 PIN-81
114	TO ANALOG PROCESSOR BOARD NO. 2 PIN-102
115	
116	TO ANALOG PROCESSOR BOARD NO. 2 PIN-112
117	TO ANALOG PROCESSOR BOARD NO. 2 PIN-110
118	
119	TO ANALOG PROCESSOR BOARD NO. 2 PIN-116
120	TO ANALOG PROCESSOR BOARD NO. 2 PIN-115
121	TO ANALOG PROCESSOR BOARD NO. 2 PIN-113
122	TO ANALOG PROCESSOR BOARD NO. 2 PIN-111
123	TO ANALOG PROCESSOR BOARD NO. 2 PIN-98
124	TO ANALOG PROCESSOR BOARD NO. 2 PIN-95
125	
126	
127	TEST POINT NO. 27
128	TERMINAL BOARD TB1 TERM-31

91363-1

FO-6. Interwiring Diagram, Unit Test (Sheet 1 of 16)

CENTRAL DISPLAY UNIT J3

	J3	
+15 VOLTS LOGIC	1	SWITCH S9 TERM-1
+15 VOLTS LOGIC	2	TERMINAL BOARD TB1 - TERM-3
-15 VOLTS LOGIC	3	SWITCH S9 TERM-4
-15 VOLTS LOGIC	4	TERMINAL BOARD TB1 - TERM-6
+8 VDC LOGIC	5	SWITCH S9 TERM-7
+8 VDC LOGIC	6	
+8 VDC LOGIC	7	TERMINAL BOARD TB1 - TERM-9
LOGIC SUPPLY RETURN	8	TO GROUND POINT "B"
LOGIC SUPPLY RETURN	9	TO GROUND POINT "B"
LOGIC SUPPLY RETURN	10	TO GROUND POINT "B"
LAMP SUPPLY (HI)	11	TERMINAL BOARD TB1 - TERM-28
LAMP SUPPLY (HI)	12	TERMINAL BOARD TB1 - TERM-29
LAMP SUPPLY (HI)	13	TERMINAL BOARD TB1 - TERM-30
LAMP SUPPLY (HI)	14	TERMINAL BOARD TB1 - TERM 30
LAMP SUPPLY RETURN	15	TO GROUND POINT "A"
LAMP SUPPLY RETURN	16	TO GROUND POINT "A"
LAMP SUPPLY RETURN	17	TO GROUND POINT "A"
LAMP SUPPLY RETURN	18	TO GROUND POINT "A"
LAMP SUPPLY CONTROL	19	TO SWITCH S9 TERM-10
LAMP SENSE (HI)	20	TO LAMP TEST BOARD TERM-6
LAMP SENSE (LO)	21	TO LAMP TEST BOARD TERM-8
XMSN OIL TEMP SIG (HI)	22	INTERCONNECT J5 PIN - w
XMSN OIL TEMP SIG (LO)	23	INTERCONNECT J5 PIN - v
FUEL QTY NO. 2 SIG (HI)	24	INTERCONNECT J5 PIN - h
FUEL QTY NO. 2 SIG (LO)	25	INTERCONNECT J5 PIN - g
XMSN OIL PRESS EXCIT (HI)	26	FRAME COMPONENT TERM-E2
XMSN OIL PRESS EXCIT (TEST)	27	INTERCONNECT J5 PIN - d
XMSN OIL PRESS SIG (HI)	28	INTERCONNECT J5 PIN - f
LOW ROTOR SPD WARN	29	TO SWITCH S7 TERM-10
LOW OIL PRESS NO. 2 WARN	30	LAMP L21 LEAD-"A"
LOW NG NO. 2 WARNING	31	LAMP L23 LEAD-"A"
HIGH OIL TEMP NO. 2 WARN	32	LAMP L19 LEAD-"A"
RTR OVSPD WARN RESET	33	SWITCH S11 TERM-1
28 VDC RELAY SUPPLY	34	LAMP POWER SUPPLY J10 PIN - X
FAILURE WARNING	35	SWITCH S10 TERM-1
SPARE	36	
ANA CLOCK INHIBIT	37	SWITCH S6 WAFER 3 TERM-17
ANALOG RESET	38	BCD COUNTER BOARD PIN-34
SPARE	39	
XMSN OIL PRESS ANA MUX	40	SWITCH S6 WAFER 4 TERM-18
FUEL QTY NO. 2 ANA MUX	41	SWITCH S6 WAFER 4 TERM-16
XMSN OIL TEMP ANA MUX	42	SWITCH S6 WAFER 4 TERM-17
SPARE	43	
ENG OIL TEMP NO. 2 UPDATE	44	TERMINAL STRIP TB3 TERM-1
ENG OIL PRESS NO. 2 UPDATE	45	TERMINAL STRIP TB3 TERM-1
TGT NO. 2 ANA UPDATE	46	TERMINAL STRIP TB3 TERM-1
NG NO. 2 ANA UPDATE	47	TERMINAL STRIP TB3 TERM-1
TGT NO. 2 DIG UPDATE	48	TERMINAL BOARD TB1 TERM-37
NG NO. 2 DIG UPDATE	49	TERMINAL BOARD TB1 TERM-38
ROTOR SPEED UPDATE	50	SWITCH S16 TERM-2
ANALOG TEST FREQ	51	OSCILLATOR CONTROL BOARD PIN-37
DIGITAL TEST FREQ	52	
SPARE	53	
SPARE	54	
SPARE	55	
SPARE	56	
SPARE	57	
SPARE	58	
SPARE	59	
DIGITAL DATA A0	60	TO TERM STRIP TB2 TERM-1
DIGITAL DATA B0	61	TO TERM STRIP TB2 TERM-2
DIGITAL DATA C0	62	TO TERM STRIP TB2 TERM-3
DIGITAL DATA D0	63	TO TERM STRIP TB2 TERM-4
SPARE	64	
SHIFT REG O/P TAP 4	65	TO ANALOG PROCESSOR BOARD NO. 1 PIN-34
SHIFT REG O/P TAP 6	66	TO ANALOG PROCESSOR BOARD NO. 1 PIN-30
SHIFT REG O/P TAP 8	67	TO ANALOG PROCESSOR BOARD NO. 1 PIN-51
SHIFT REG O/P TAP 12	68	TO ANALOG PROCESSOR BOARD NO. 1 PIN-47
SHIFT REG O/P TAP 16	69	TO ANALOG PROCESSOR BOARD NO. 1 PIN-67
SHIFT REG O/P TAP 18	70	TO ANALOG PROCESSOR BOARD NO. 1 PIN-65
SHIFT REG O/P TAP 21	71	TO ANALOG PROCESSOR BOARD NO. 1 PIN-85
SHIFT REG O/P TAP 23	72	TO ANALOG PROCESSOR BOARD NO. 1 PIN-83
SHIFT REG O/P TAP 24	73	TO ANALOG PROCESSOR BOARD NO. 1 PIN-81
SHIFT REG O/P TAP 26	74	TO ANALOG PROCESSOR BOARD NO. 1 PIN-103
SHIFT REG O/P TAP 27	75	TO ANALOG PROCESSOR BOARD NO. 1 PIN-101
SHIFT REG O/P TAP 28	76	TO ANALOG PROCESSOR BOARD NO. 1 PIN-99
SHIFT REG O/P TAP 31	77	TO ANALOG PROCESSOR BOARD NO. 1 PIN-45
SHIFT REG O/P TAP 32	78	TO ANALOG PROCESSOR BOARD NO. 1 PIN-106
SHIFT REG O/P TAP 34	79	TO ANALOG PROCESSOR BOARD NO. 1 PIN-105
SHIFT REG O/P TAP 36	80	TO ANALOG PROCESSOR BOARD NO. 1 PIN-93
SHIFT REG O/P TAP 38	81	TO ANALOG PROCESSOR BOARD NO. 1 PIN-102
SHIFT REG O/P TAP 42	82	TO ANALOG PROCESSOR BOARD NO. 1 PIN-98
SHIFT REG O/P TAP 44	83	TO ANALOG PROCESSOR BOARD NO. 1 PIN-96
SHIFT REG O/P TAP 46	84	TO ANALOG PROCESSOR BOARD NO. 1 PIN-116
SHIFT REG O/P TAP 48	85	TO ANALOG PROCESSOR BOARD NO. 1 PIN-114
SHIFT REG O/P TAP 7	86	TO ANALOG PROCESSOR BOARD NO 1 PIN-8
SHIFT REG O/P TAP 52	87	TO ANALOG PROCESSOR BOARD NO. 1 PIN-108
SHIFT REG O/P TAP 54	88	TO ANALOG PROCESSOR BOARD NO. 1 PIN-119
SHIFT REG O/P TAP 56	89	TO ANALOG PROCESSOR BOARD NO. 1 PIN-89
SHIFT REG O/P TAP 58	90	TO ANALOG PROCESSOR BOARD NO. 1 PIN-87
SHIFT REG O/P TAP 9	91	TO ANALOG PROCESSOR BOARD NO. 1 PIN-16
SHIFT REG O/P TAP 62	92	TO ANALOG PROCESSOR BOARD NO. 1 PIN-113
XMSN OIL PRESS SIG LO	93	FRAME MOUNTED COMPONENT, TERM-E3
SHIFT REG O/P TAP 64	94	TO ANALOG PROCESSOR BOARD NO. 1 PIN-109
SHIFT REG O/P TAP 66	95	TO ANALOG PROCESSOR BOARD NO. 1 PIN-71
SHIFT REG O/P TAP 68	96	TO ANALOG PROCESSOR BOARD NO. 1 PIN-61
SHIFT REG O/P TAP 69	97	TO ANALOG PROCESSOR BOARD NO. 1 PIN-59
SHIFT REG O/P TAP 72	98	TO ANALOG PROCESSOR BOARD NO. 1 PIN-55
SHIFT REG O/P TAP 74	99	TO ANALOG PROCESSOR BOARD NO. 1 PIN-53
SHIFT REG O/P TAP 76	100	TO ANALOG PROCESSOR BOARD NO. 1 PIN-41
SHIFT REG O/P TAP 78	101	TO ANALOG PROCESSOR BOARD NO. 1 PIN-39
SHIFT REG O/P TAP 79	102	TO ANALOG PROCESSOR BOARD NO. 1 PIN-37
SHIFT REG O/P TAP 11	103	TO ANALOG PROCESSOR BOARD NO. 1 PIN-18
SHIFT REG O/P TAP 82	104	TO ANALOG PROCESSOR BOARD NO. 1 PIN-31
SHIFT REG O/P TAP 83	105	TO ANALOG PROCESSOR BOARD NO. 1 PIN-29
SHIFT REG O/P TAP 84	106	TO ANALOG PROCESSOR BOARD NO. 1 PIN-27
SHIFT REG O/P TAP 86	107	TO ANALOG PROCESSOR BOARD NO. 1 PIN-23
SHIFT REG O/P TAP 13	108	TO ANALOG PROCESSOR BOARD NO. 1 PIN-20
SHIFT REG O/P TAP 88	109	TO ANALOG PROCESSOR BOARD NO. 1 PIN-19
SHIFT REG O/P TAP 14	110	TO ANALOG PROCESSOR BOARD NO. 1 PIN-24
SHIFT REG O/P TAP 113	111	TO ANALOG PROCESSOR BOARD NO. 2 PIN-87
SHIFT REG O/P TAP 117	112	TO ANALOG PROCESSOR BOARD NO. 2 PIN-82
SHIFT REG O/P TAP 121	113	TO ANALOG PROCESSOR BOARD NO. 2 PIN-81
SHIFT REG O/P TAP 129	114	TO ANALOG PROCESSOR BOARD NO. 2 PIN-102
SPARE	115	
SHIFT REG O/P TAP 132	116	TO ANALOG PROCESSOR BOARD NO. 2 PIN-112
SHIFT REG O/P TAP 133	117	TO ANALOG PROCESSOR BOARD NO. 2 PIN-110
SHIFT REG O/P TAP 136	118	TO ANALOG PROCESSOR BOARD NO. 2 PIN-114
SHIFT REG O/P TAP 137	119	TO ANALOG PROCESSOR BOARD NO. 2 PIN-116
SHIFT REG O/P TAP 141	120	TO ANALOG PROCESSOR BOARD NO. 2 PIN-115
SHIFT REG O/P TAP 142	121	TO ANALOG PROCESSOR BOARD NO. 2 PIN-113
SHIFT REG O/P TAP 144	122	TO ANALOG PROCESSOR BOARD NO. 2 PIN-111
SHIFT REG O/P TAP 127	123	TO ANALOG PROCESSOR BOARD NO. 2 PIN-98
SHIFT REG O/P TAP 148	124	TO ANALOG PROCESSOR BOARD NO. 2 PIN-95
SPARE	125	
SHIFT REG O/P TAP 152	126	TO ANALOG PROCESSOR BOARD NO. 2 PIN-75
SPARE	127	
INTEGRAL LIGHTING (LO)	128	TERMINAL BOARD TB1 TERM-32

CENTRAL DISPLAY UNIT J3

J3	
67	SPARE
68	SPARE
69	DIGITS ON/OFF
70	LAMP SUPPLY REF
71	RTR OVSPD LEVEL 127%
72	RTR OVSPD LEVEL 137%
73	RTR OVSPD LEVEL 142%
74	SPARE
75	SPARE
76	DIGITAL DATA A1
77	DIGITAL DATA B1
78	DIGITAL DATA C1
79	DIGITAL DATA D1
80	DIGITAL DATA A2
81	DIGITAL DATA B2
82	DIGITAL DATA C2
83	DIGITAL DATA D2
84	DIGITAL DATA A3
85	SHIFT REG O/P TAP 5
86	SHIFT REG O/P TAP 10
87	SHIFT REG O/P TAP 15
88	SHIFT REG O/P TAP 20
89	SHIFT REG O/P TAP 25
90	SHIFT REG O/P TAP 30
91	SHIFT REG O/P TAP 35
92	SHIFT REG O/P TAP 40
93	SHIFT REG O/P TAP 45
94	SHIFT REG O/P TAP 50
95	SHIFT REG O/P TAP 55
96	SHIFT REG O/P TAP 60
97	SHIFT REG O/P TAP 65
98	SHIFT REG O/P TAP 70
99	SHIFT REG O/P TAP 75
100	SHIFT REG O/P TAP 80
101	SHIFT REG O/P TAP 85
102	SHIFT REG O/P TAP 90
103	SHIFT REG O/P TAP 92
104	SHIFT REG O/P TAP 93
105	SHIFT REG O/P TAP 94
106	SHIFT REG O/P TAP 95
107	SHIFT REG O/P TAP 96
108	SHIFT REG O/P TAP 97
109	SHIFT REG O/P TAP 98
110	SHIFT REG O/P TAP 99
111	SHIFT REG O/P TAP 100
112	SHIFT REG O/P TAP 101
113	SHIFT REG O/P TAP 102
114	SHIFT REG O/P TAP 104
115	SHIFT REG O/P TAP 105
116	SHIFT REG O/P TAP 106
117	SHIFT REG O/P TAP 108
118	SHIFT REG O/P TAP 110
119	SHIFT REG O/P TAP 112
120	SHIFT REG O/P TAP 114
121	SHIFT REG O/P TAP 115
122	DEDICATED SPARE
123	SHIFT REG O/P TAP 120
124	SHIFT REG O/P TAP 125
125	DEDICATED SPARE
126	SHIFT REG O/P TAP 128
127	SHIFT REG O/P TAP 130
128	SHIFT REG O/P TAP 135
	SHIFT REG O/P TAP 140
	SHIFT REG O/P TAP 145
	SHIFT REG O/P TAP 150
	SPARE

CENTRAL DISPLAY UNIT J4

J4	
1	
2	
3	TO SWITCH S17 TERM-1
4	TO WIPER OF VARIABLE RESISTOR (R2 TERM-2)
5	TO SWITCH S7 TERM-7
6	TO SWITCH S7 TERM-4
7	TO SWITCH S7 TERM-1
8	
9	
10	TO TERMINAL STRIP TB2 TERM-1
11	TO TERMINAL STRIP TB2 TERM-2
12	TO TERMINAL STRIP TB2 TERM-3
13	TO TERMINAL STRIP TB2 TERM-4
14	TO TERMINAL STRIP TB2 TERM-1
15	TO TERMINAL STRIP TB2 TERM-2
16	TO TERMINAL STRIP TB2 TERM-3
17	TO TERMINAL STRIP TB2 TERM-4
18	TO TERMINAL STRIP TB2 TERM-1
19	TO ANALOG PROCESSOR BOARD NO. 1 PIN-32
20	TO ANALOG PROCESSOR BOARD NO. 1 PIN-49
21	TO ANALOG PROCESSOR BOARD NO. 1 PIN-69
22	TO ANALOG PROCESSOR BOARD NO. 1 PIN-63
23	TO ANALOG PROCESSOR BOARD NO. 1 PIN-79
24	TO ANALOG PROCESSOR BOARD NO. 1 PIN-97
25	TO ANALOG PROCESSOR BOARD NO. 1 PIN-95
26	TO ANALOG PROCESSOR BOARD NO. 1 PIN-100
27	TO ANALOG PROCESSOR BOARD NO. 1 PIN-120
28	TO ANALOG PROCESSOR BOARD NO. 1 PIN-110
29	TO ANALOG PROCESSOR BOARD NO. 1 PIN-115
30	TO ANALOG PROCESSOR BOARD NO. 1 PIN-75
31	TO ANALOG PROCESSOR BOARD NO. 1 PIN-107
32	TO ANALOG PROCESSOR BOARD NO. 1 PIN-57
33	TO ANALOG PROCESSOR BOARD NO. 1 PIN-43
34	TO ANALOG PROCESSOR BOARD NO. 1 PIN-35
35	TO ANALOG PROCESSOR BOARD NO. 1 PIN-25
36	TO ANALOG PROCESSOR BOARD NO. 1 PIN-13
37	TO ANALOG PROCESSOR BOARD NO. 1 PIN-9
38	TO ANALOG PROCESSOR BOARD NO. 1 PIN-7
39	TO ANALOG PROCESSOR BOARD NO. 1 PIN-5
40	TO ANALOG PROCESSOR BOARD NO. 1 PIN-28
41	TO ANALOG PROCESSOR BOARD NO. 1 PIN-22
42	TO ANALOG PROCESSOR BOARD NO. 2 PIN-49
43	TO ANALOG PROCESSOR BOARD NO. 2 PIN-47
44	TO ANALOG PROCESSOR BOARD NO. 2 PIN-45
45	TO ANALOG PROCESSOR BOARD NO. 2 PIN-43
46	TO ANALOG PROCESSOR BOARD NO. 2 PIN-52
47	TO ANALOG PROCESSOR BOARD NO. 2 PIN-50
48	TO ANALOG PROCESSOR BOARD NO. 2 PIN-46
49	TO ANALOG PROCESSOR BOARD NO. 2 PIN-71
50	TO ANALOG PROCESSOR BOARD NO. 2 PIN-65
51	TO ANALOG PROCESSOR BOARD NO. 2 PIN-61
52	TO ANALOG PROCESSOR BOARD NO. 2 PIN-68
53	TO ANALOG PROCESSOR BOARD NO. 2 PIN-64
54	TO ANALOG PROCESSOR BOARD NO. 2 PIN-85
55	TO ANALOG PROCESSOR BOARD NO. 2 PIN-83
56	
57	TO ANALOG PROCESSOR BOARD NO. 2 PIN-78
58	TO ANALOG PROCESSOR BOARD NO. 2 PIN-99
59	
60	TO ANALOG PROCESSOR BOARD NO. 2 PIN-104
61	TO ANALOG PROCESSOR BOARD NO. 2 PIN-100
62	TO ANALOG PROCESSOR BOARD NO. 2 PIN-106
63	TO ANALOG PROCESSOR BOARD NO. 2 PIN-120
64	TO ANALOG PROCESSOR BOARD NO. 2 PIN-109
65	TO ANALOG PROCESSOR BOARD NO. 2 PIN-93
66	

FO-6. Interwiring Diagram, Unit Test (Sheet 2 of 16)

INTERCONNECT

J5

	A	
	B	
	C	
	D	
	E	
	F	
	G	
	H	
	J	
28 VDC RETURN	K	TO LAMP L25, TERM-B
28 VDC RETURN	L	LAMP POWER SUPPLY J10 PIN-B
28 VDC AIRCRAFT (HI)	M	LAMP POWER SUPPLY J10 PIN-a
115 VAC 400 HZ (LO)	N	LOGIC POWER SUPPLY J11 PIN-C
115 VAC 400 HZ (HI)	P	LOGIC POWER SUPPLY J11 PIN-A
INTEGRAL LIGHTING (HI)	R	TERMINAL BOARD TB1 TERM-31
INTEGRAL LIGHTING (LO)	S	TERMINAL BOARD TB1 TERM-32
	T	
L/T GROUND SWITCHED	U	LAMP TEST BOARD TERM-1
L/T 28 VDC SWITCHED	V	LAMP TEST BOARD TERM-5
	W	
	X	
	Y	
CASE GROUND	Z	TO GROUND LUG
	a	
	b	
XMSN OIL PRESS EXCIT (LO)	c	FRAME COMPONENT TERM-E3
XMSN OIL PRESS EXCIT (TEST)	d	CONNECTOR J3 PIN-27
	e	
XMSN OIL PRESS SIG (HI)	f	CONNECTOR J3 PIN-28
FUEL QTY NO. 2 SIG (LO)	g	CONNECTOR J3 PIN-25
FUEL QTY NO. 2 SIG (HI)	h	CONNECTOR J3 PIN-24
FUEL QTY NO. 1 SIG (HI)	i	CONNECTOR J2 PIN-24
FUEL QTY NO. 1 SIG (LO)	j	CONNECTOR J2 PIN-25
EXCITATION SUPPLY NO. 1	k	TEST POINT NO. 22
EXCITATION SUPPLY NO. 2	m	TEST POINT NO. 21
AC COMMON	n	GROUND LUG
	p	
	q	
	r	
	s	
	t	
	u	
XMSN OIL TEMP SIG (LO)	v	CONNECTOR J3 PIN-23
XMSN OIL TEMP SIG (HI)	w	CONNECTOR J3 PIN-22
	x	
	y	
	z	
	AA	
	BB	
	CC	
	DD	
	EE	
	FF	
	GG	
	HH	

PILOT'S DISPLAY UNIT (J1)

J6

LAMP SUPPLY (HI)	1	TERMINAL BOARD TB1 TERM-26
LAMP SUPPLY (HI)	2	TERMINAL BOARD TB1 TERM-27
LAMP SUPPLY (HI)	3	TERMINAL BOARD TB1 TERM-27
LAMP SUPPLY RETURN	4	TO GROUND POINT "A"
LAMP SUPPLY RETURN	5	TO GROUND POINT "A"
LAMP SUPPLY RETURN	6	TO GROUND POINT "A"
+5 VOLTS (TEST)	7	TEST POINT NO. 24
PDU CHASSIS GROUND	8	TO GROUND LUG
DEDICATED SPARE	9	
+8 VOLTS	10	LOGIC POWER SUPPLY J11, PIN-H
LOGIC SUPPLY GROUND	11	TO GROUND POINT "B"
PDU AUTO DIM JUMPER	12	TERMINAL BOARD TB1 TERM-44
PDU AUTO DIM JUMPER	13	GROUND LUG
TEST FREQ ANALOG	14	OSCILLATOR CONTROL BOARD PIN-37
TEST FREQ DIGITAL	15	
FAILURE WARNING	16	BCD COUNTER BOARD PIN-28
NO. 1 NP UPDATE	17	TERMINAL STRIP TB3 TERM-3
ROTOR SPEED UPDATE	18	TERMINAL STRIP TB3 TERM-3
NO. 2 NP UPDATE	19	TERMINAL STRIP TB3 TERM-3
NO. 1 TORQUE ANA UPDATE	20	TERMINAL STRIP TB3 TERM-3
NO. 2 TORQUE ANA UPDATE	21	TERMINAL STRIP TB3 TERM-3
NO. 1 TORQUE DIG UPDATE	22	TERMINAL BOARD TB1 TERM-39
NO. 2 TORQUE DIG UPDATE	23	TERMINAL BOARD TB1 TERM-40
CLOCK INHIBIT ANALOG	24	TEST POINT NO. 25
CLOCK INHIBIT DIGITAL	25	TEST POINT NO. 23
+10 VDC	26	REGULATOR BOARD PIN-5
-10 VDC	27	REGULATOR BOARD PIN-27
SPARE	28	
DIGITS ON/OFF	29	TERMINAL BOARD TB1 TERM-22
LAMP P/S REF	30	TERMINAL BOARD TB1 TERM-42
ROTOR OVSPD 127%	31	SWITCH S14 TERM-3
ROTOR OVSPD 137%	32	SWITCH S13 TERM-3
ROTOR OVSPD 142%	33	SWITCH S12 TERM-3
DIGITAL DATA A1	34	
DIGITAL DATA B1	35	
DIGITAL DATA C1	36	
DIGITAL DATA D1	37	
DIGITAL DATA A2	38	
DIGITAL DATA B2	39	
DIGITAL DATA C2	40	
DIGITAL DATA D2	41	
DIGITAL DATA A3	42	
SHIFT REG O/P TAP 5	43	SHIFT REG O/P TAP 97
SHIFT REG O/P TAP 10	44	SHIFT REG O/P TAP 98
SHIFT REG O/P TAP 15	45	SHIFT REG O/P TAP 99
SHIFT REG O/P TAP 20	46	SHIFT REG O/P TAP 100
SHIFT REG O/P TAP 25	47	SHIFT REG O/P TAP 101
SHIFT REG O/P TAP 30	48	SHIFT REG O/P TAP 102
SHIFT REG O/P TAP 35	49	SHIFT REG O/P TAP 104
SHIFT REG O/P TAP 40	50	SHIFT REG O/P TAP 105
SHIFT REG O/P TAP 45	51	SHIFT REG O/P TAP 106
SHIFT REG O/P TAP 50	52	SHIFT REG O/P TAP 108
SHIFT REG O/P TAP 55	53	SHIFT REG O/P TAP 110
SHIFT REG O/P TAP 60	54	SHIFT REG O/P TAP 112
SHIFT REG O/P TAP 65	55	SHIFT REG O/P TAP 114
SHIFT REG O/P TAP 70	56	SHIFT REG O/P TAP 115
SHIFT REG O/P TAP 75	57	SHIFT REG O/P TAP 116
SHIFT REG O/P TAP 80	58	SHIFT REG O/P TAP 120
SHIFT REG O/P TAP 85	59	SHIFT REG O/P TAP 125
SHIFT REG O/P TAP 90	60	SHIFT REG O/P TAP 126
SHIFT REG O/P TAP 92	61	SHIFT REG O/P TAP 128
SHIFT REG O/P TAP 93	62	SHIFT REG O/P TAP 130
SHIFT REG O/P TAP 94	63	SHIFT REG O/P TAP 135
SHIFT REG O/P TAP 95	64	SHIFT REG O/P TAP 140
SHIFT REG O/P TAP 96	65	SHIFT REG O/P TAP 145

PILOT'S DISPLAY UNIT (J1)

J6

	66	
	67	
	68	
	69	
	70	
	71	
	72	
	73	
	74	
	75	
	76	
	77	
	78	
	79	
	80	TO ANALOG PROCESSOR BOARD NO. 2 PIN-79
	81	
	82	
	83	TO ANALOG PROCESSOR BOARD NO. 2 PIN-97
	84	
	85	
	86	
	87	
	88	
	89	
SHIFT REG O/P TAP 150	90	TO ANALOG PROCESSOR BOARD NO. 1 PIN-11
SHIFT REG O/P TAP 91	91	TO ANALOG PROCESSOR BOARD NO. 2 PIN-48
SHIFT REG O/P TAP 103	92	TO ANALOG PROCESSOR BOARD NO. 2 PIN-63
SHIFT REG O/P TAP 107	93	TO ANALOG PROCESSOR BOARD NO. 2 PIN-70
SHIFT REG O/P TAP 109	94	TO ANALOG PROCESSOR BOARD NO. 2 PIN-80
SHIFT REG O/P TAP 118	95	TO ANALOG PROCESSOR BOARD NO. 2 PIN-103
SHIFT REG O/P TAP 122	96	TO ANALOG PROCESSOR BOARD NO. 2 PIN-101
SHIFT REG O/P TAP 124		
RTR OVSPD WARN SUPPLY (LO)	97	
LOGIC GROUND	98	
INTEGRAL LIGHTING (HI)	99	TERMINAL BOARD TB1 TERM-31
INTEGRAL LIGHTING (LO)	100	TERMINAL BOARD TB1 TERM-32

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FO-6. Interwiring Diagram, Unit Test (Sheet 3 of 16)

PILOT'S DISPLAY UNIT (J2)

	J7	
DIGITAL DATA A1	1	TERMINAL STRIP TB2 TERM-1
DIGITAL DATA B1	2	TERMINAL STRIP TB2 TERM-2
DIGITAL DATA C1	3	TERMINAL STRIP TB2 TERM-3
DIGITAL DATA D1	4	TERMINAL STRIP TB2 TERM-4
DIGITAL DATA A2	5	TERMINAL STRIP TB2 TERM-1
DIGITAL DATA B2	6	TERMINAL STRIP TB2 TERM-2
DIGITAL DATA C2	7	TERMINAL STRIP TB2 TERM-3
DIGITAL DATA D2	8	TERMINAL STRIP TB2 TERM-4
DIGITAL DATA A3	9	TERMINAL STRIP TB2 TERM-1
SHIFT REG O/P TAP 5	10	TO ANALOG PROCESSOR BOARD NO. 1 PIN-32
SHIFT REG O/P TAP 10	11	TO ANALOG PROCESSOR BOARD NO. 1 PIN-49
SHIFT REG O/P TAP 15	12	TO ANALOG PROCESSOR BOARD NO. 1 PIN-69
SHIFT REG O/P TAP 20	13	TO ANALOG PROCESSOR BOARD NO. 1 PIN-63
SHIFT REG O/P TAP 25	14	TO ANALOG PROCESSOR BOARD NO. 1 PIN-79
SHIFT REG O/P TAP 30	15	TO ANALOG PROCESSOR BOARD NO. 1 PIN-97
SHIFT REG O/P TAP 35	16	TO ANALOG PROCESSOR BOARD NO. 1 PIN-95
SHIFT REG O/P TAP 40	17	TO ANALOG PROCESSOR BOARD NO. 1 PIN-100
SHIFT REG O/P TAP 45	18	TO ANALOG PROCESSOR BOARD NO. 1 PIN-120
SHIFT REG O/P TAP 50	19	TO ANALOG PROCESSOR BOARD NO. 1 PIN-110
SHIFT REG O/P TAP 55	20	TO ANALOG PROCESSOR BOARD NO. 1 PIN-115
SHIFT REG O/P TAP 60	21	TO ANALOG PROCESSOR BOARD NO. 1 PIN-75
SHIFT REG O/P TAP 65	22	TO ANALOG PROCESSOR BOARD NO. 1 PIN-107
SHIFT REG O/P TAP 70	23	TO ANALOG PROCESSOR BOARD NO. 1 PIN-57
SHIFT REG O/P TAP 75	24	TO ANALOG PROCESSOR BOARD NO. 1 PIN-43
SHIFT REG O/P TAP 80	25	TO ANALOG PROCESSOR BOARD NO. 1 PIN-35
SHIFT REG O/P TAP 85	26	TO ANALOG PROCESSOR BOARD NO. 1 PIN-25
SHIFT REG O/P TAP 90	27	TO ANALOG PROCESSOR BOARD NO. 1 PIN-13
SHIFT REG O/P TAP 92	28	TO ANALOG PROCESSOR BOARD NO. 1 PIN-9
SHIFT REG O/P TAP 93	29	TO ANALOG PROCESSOR BOARD NO. 1 PIN-7
SHIFT REG O/P TAP 94	30	TO ANALOG PROCESSOR BOARD NO. 1 PIN-5
SHIFT REG O/P TAP 95	31	TO ANALOG PROCESSOR BOARD NO. 1 PIN-28
SHIFT REG O/P TAP 96	32	TO ANALOG PROCESSOR BOARD NO. 1 PIN-22
SHIFT REG O/P TAP 97	33	TO ANALOG PROCESSOR BOARD NO. 2 PIN-49
SHIFT REG O/P TAP 98	34	TO ANALOG PROCESSOR BOARD NO. 2 PIN-47
SHIFT REG O/P TAP 99	35	TO ANALOG PROCESSOR BOARD NO. 2 PIN-45
SHIFT REG O/P TAP 100	36	TO ANALOG PROCESSOR BOARD NO. 2 PIN-43
SHIFT REG O/P TAP 101	37	TO ANALOG PROCESSOR BOARD NO. 2 PIN-52
SHIFT REG O/P TAP 102	38	TO ANALOG PROCESSOR BOARD NO. 2 PIN-50
SHIFT REG O/P TAP 104	39	TO ANALOG PROCESSOR BOARD NO. 2 PIN-46
SHIFT REG O/P TAP 105	40	TO ANALOG PROCESSOR BOARD NO. 2 PIN-71
SHIFT REG O/P TAP 106	41	TO ANALOG PROCESSOR BOARD NO. 2 PIN-65
SHIFT REG O/P TAP 108	42	TO ANALOG PROCESSOR BOARD NO. 2 PIN-61
SHIFT REG O/P TAP 110	43	TO ANALOG PROCESSOR BOARD NO. 2 PIN-68
SHIFT REG O/P TAP 112	44	TO ANALOG PROCESSOR BOARD NO. 2 PIN-64
SHIFT REG O/P TAP 114	45	TO ANALOG PROCESSOR BOARD NO. 2 PIN-85
SHIFT REG O/P TAP 115	46	TO ANALOG PROCESSOR BOARD NO. 2 PIN-83
DEDICATED SPARE	47	
SHIFT REG O/P TAP 120	48	TO ANALOG PROCESSOR BOARD NO. 2 PIN-78
SHIFT REG O/P TAP 125	49	TO ANALOG PROCESSOR BOARD NO. 2 PIN-99
DEDICATED SPARE	50	
SHIFT REG O/P TAP 128	51	TO ANALOG PROCESSOR BOARD NO. 2 PIN-104
SHIFT REG O/P TAP 130	52	TO ANALOG PROCESSOR BOARD NO. 2 PIN-100
SHIFT REG O/P TAP 135	53	TO ANALOG PROCESSOR BOARD NO. 2 PIN-106
SHIFT REG O/P TAP 140	54	TO ANALOG PROCESSOR BOARD NO. 2 PIN-120
SHIFT REG O/P TAP 145	55	TO ANALOG PROCESSOR BOARD NO. 2 PIN-109
SHIFT REG O/P TAP 150	56	TO ANALOG PROCESSOR BOARD NO. 2 PIN-93
SPARE	57	
SPARE	58	
SPARE	59	
SPARE	60	
SPARE	61	
SPARE	62	
SPARE	63	
SPARE	64	
SPARE	65	
SPARE	66	

SIGNAL DATA CONVERTOR (J2)

	J8	
LAMP SUPPLY (HI)	1	TERMINAL BOARD TB1 TERM-33
LAMP SUPPLY (HI)	2	
LAMP SUPPLY (HI)	3	
LAMP SUPPLY RETURN	4	TO TERMINAL BOARD TB1 TERM-34
LAMP SUPPLY RETURN	5	
LAMP SUPPLY RETURN	6	
PDU CHASSIS GROUND	7	TO GROUND LUG
SPARE (5V TEST SDC)	8	TO TEST POINT NO. 11
DEDICATED SPARE	9	
+8 VOLTS	10	TO SWITCH S1 TERM-9
LOGIC SUPPLY GROUND	11	TO TESTPOINT NO. 5
128 KHZ CLOCK (TEST)	12	TO SWITCH S6 WAFER NO. 2 TERM-7
ANA CLOCK ENABLE (TEST)	13	TO POT R1 TERM-1
TEST FREQ ANALOG	14	TO SWITCH S1 TERM-3
TEST FREQ DIGITAL	15	TO SWITCH S1 TERM-6
FAILURE WARNING	16	TO SWITCH S10 TERM-3
NO. 1 NP UPDATE	17	TO SWITCH S6 WAFER 3 TERM-1
ROTOR SPEED UPDATE	18	TO SWITCH S6 WAFER 3 TERM-3
NO. 2 NP UPDATE	19	TO SWITCH S6 WAFER 3 TERM-2
NO. 1 TORQUE ANA UPDATE	20	TO SWITCH S6 WAFER 3 TERM-4
NO. 2 TORQUE ANA UPDATE	21	TO SWITCH S6 WAFER 3 TERM-5
NO. 1 TORQUE DIG UPDATE	22	TO SWITCH S6 WAFER 3 TERM-10
NO. 2 TORQUE DIG UPDATE	23	TO SWITCH S6 WAFER 3 TERM-11
CLOCK INHIBIT ANALOG	24	TO SWITCH S5 TERM-4
CLOCK INHIBIT DIGITAL	25	TO SWITCH S5 TERM-6
+10 VOLTS DC	26	TO TEST POINT NO. 13
-10 VOLTS DC	27	TO TEST POINT NO. 12
ANALOG SELECT "A" (TEST)	28	TO SWITCH S4 TERM-3
ANALOG SELECT "B" (TEST)	29	TO SWITCH S4 TERM-1
DIGITAL SELECT "A" (TEST)	30	TO SWITCH S4 TERM-6
DIGITAL SELECT "B" (TEST)	31	TO SWITCH S4 TERM-4
ANALOG FAIL "A" (TEST)	32	TO SWITCH S2 TERM-3
ANALOG FAIL "B" (TEST)	33	TO SWITCH S2 TERM-1
DIGITAL DATA A1	34	TO MONITOR BOARD NO. 2 - PIN-99
DIGITAL DATA B1	35	TO MONITOR BOARD NO. 2 - PIN-101
DIGITAL DATA C1	36	TO MONITOR BOARD NO. 2 - PIN-92
DIGITAL DATA D1	37	TO MONITOR BOARD NO. 2 - PIN-100
DIGITAL DATA A2	38	TO MONITOR BOARD NO. 2 - PIN-95
DIGITAL DATA B2	39	TO MONITOR BOARD NO. 2 - PIN-88
DIGITAL DATA C2	40	TO MONITOR BOARD NO. 2 - PIN-90
DIGITAL DATA D2	41	TO MONITOR BOARD NO. 2 - PIN-79
DIGITAL DATA A3	42	TO MONITOR BOARD NO. 2 - PIN-80
SHIFT REG O/P TAP 5	43	TO MONITOR BOARD NO. 2 - PIN-21
SHIFT REG O/P TAP 10	44	TO MONITOR BOARD NO. 2 - PIN-9
SHIFT REG O/P TAP 15	45	TO MONITOR BOARD NO. 2 - PIN-5
SHIFT REG O/P TAP 20	46	TO MONITOR BOARD NO. 2 - PIN-6
SHIFT REG O/P TAP 25	47	TO MONITOR BOARD NO. 2 - PIN-2
SHIFT REG O/P TAP 30	48	TO MONITOR BOARD NO. 2 - PIN-1
SHIFT REG O/P TAP 35	49	TO MONITOR BOARD NO. 2 - PIN-22
SHIFT REG O/P TAP 40	50	TO MONITOR BOARD NO. 2 - PIN-20
SHIFT REG O/P TAP 45	51	TO MONITOR BOARD NO. 2 - PIN-16
SHIFT REG O/P TAP 50	52	TO MONITOR BOARD NO. 2 - PIN-17
SHIFT REG O/P TAP 55	53	TO MONITOR BOARD NO. 2 - PIN-18
SHIFT REG O/P TAP 60	54	TO MONITOR BOARD NO. 2 - PIN-19
SHIFT REG O/P TAP 65	55	TO MONITOR BOARD NO. 2 - PIN-10
SHIFT REG O/P TAP 70	56	TO MONITOR BOARD NO. 2 - PIN-13
SHIFT REG O/P TAP 75	57	TO MONITOR BOARD NO. 2 - PIN-14
SHIFT REG O/P TAP 80	58	TO MONITOR BOARD NO. 2 - PIN-15
SHIFT REG O/P TAP 85	59	TO MONITOR BOARD NO. 2 - PIN-25
SHIFT REG O/P TAP 90	60	TO MONITOR BOARD NO. 2 - PIN-26
SHIFT REG O/P TAP 92	61	TO MONITOR BOARD NO. 2 - PIN-36
SHIFT REG O/P TAP 93	62	TO MONITOR BOARD NO. 2 - PIN-23
SHIFT REG O/P TAP 94	63	TO MONITOR BOARD NO. 2 - PIN-24
SHIFT REG O/P TAP 95	64	TO MONITOR BOARD NO. 2 - PIN-35
SHIFT REG O/P TAP 96	65	TO MONITOR BOARD NO. 2 - PIN-32
SHIFT REG O/P TAP 97	66	TO MONITOR BOARD NO. 2 - PIN-63

SIGNAL DATA CONVERTOR (J2)

	J8	
SHIFT REG O/P TAP 98	67	TO MONITOR BOARD NO. 2 - PIN-73
SHIFT REG O/P TAP 99	68	TO MONITOR BOARD NO. 2 - PIN-37
SHIFT REG O/P TAP 100	69	TO MONITOR BOARD NO. 2 - PIN-38
SHIFT REG O/P TAP 101	70	TO MONITOR BOARD NO. 2 - PIN-41
SHIFT REG O/P TAP 102	71	TO MONITOR BOARD NO. 2 - PIN-42
SHIFT REG O/P TAP 104	72	TO MONITOR BOARD NO. 2 - PIN-31
SHIFT REG O/P TAP 105	73	TO MONITOR BOARD NO. 2 - PIN-33
SHIFT REG O/P TAP 106	74	TO MONITOR BOARD NO. 2 - PIN-34
SHIFT REG O/P TAP 108	75	TO MONITOR BOARD NO. 2 - PIN-47
SHIFT REG O/P TAP 110	76	TO MONITOR BOARD NO. 2 - PIN-54
SHIFT REG O/P TAP 112	77	TO MONITOR BOARD NO. 2 - PIN-43
SHIFT REG O/P TAP 114	78	TO MONITOR BOARD NO. 2 - PIN-49
SHIFT REG O/P TAP 115	79	TO MONITOR BOARD NO. 2 - PIN-46
SHIFT REG O/P TAP 116	80	TO MONITOR BOARD NO. 2 - PIN-52
SHIFT REG O/P TAP 120	81	TO MONITOR BOARD NO. 2 - PIN-58
SHIFT REG O/P TAP 125	82	TO MONITOR BOARD NO. 2 - PIN-51
SHIFT REG O/P TAP 126	83	TO MONITOR BOARD NO. 2 - PIN-53
SHIFT REG O/P TAP 128	84	TO MONITOR BOARD NO. 2 - PIN-55
SHIFT REG O/P TAP 130	85	TO MONITOR BOARD NO. 2 - PIN-56
SHIFT REG O/P TAP 135	86	TO MONITOR BOARD NO. 2 - PIN-65
SHIFT REG O/P TAP 140	87	TO MONITOR BOARD NO. 2 - PIN-66
SHIFT REG O/P TAP 145	88	TO MONITOR BOARD NO. 2 - PIN-67
SHIFT REG O/P TAP 150	89	TO MONITOR BOARD NO. 2 - PIN-75
SHIFT REG O/P TAP 91	90	TO MONITOR BOARD NO. 2 - PIN-27
SHIFT REG O/P TAP 103	91	TO MONITOR BOARD NO. 2 - PIN-29
SHIFT REG O/P TAP 107	92	TO MONITOR BOARD NO. 2 - PIN-45
SHIFT REG O/P TAP 109	93	TO MONITOR BOARD NO. 2 - PIN-48
SHIFT REG O/P TAP 118	94	TO MONITOR BOARD NO. 2 - PIN-57
SHIFT REG O/P TAP 122	95	TO MONITOR BOARD NO. 2 - PIN-59
SHIFT REG O/P TAP 124	96	TO MONITOR BOARD NO. 2 - PIN-60
SPARE	97	
SPARE	98	
INTEGRAL LIGHTING (HI)	99	TO LAMP TEST BOARD TERM-2
INTEGRAL LIGHTING (LO)	100	TO LAMP TEST BOARD TERM-3

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FO-6. Interwiring Diagram, Unit Test (Sheet 4 of 16)

SIGNAL DATA CONVERTOR (J3)

J9

+15 VOLTS LOGIC	1	TO TEST POINT NO. 10
+15 VOLTS LOGIC	2	SWITCH S9 TERM-3
-15 VOLTS LOGIC	3	TO TEST POINT NO.8
-15 VOLTS LOGIC	4	SWITCH S9 TERM-6
+8 VOLTS LOGIC	5	TO SWITCH S1 TERM-7
+8 VOLTS LOGIC	6	
+8 VOLTS LOGIC	7	SWITCH S9 TERM-9
LOGIC SUPPLY RETURN	8	TO GROUND LUG
LOGIC SUPPLY RETURN	9	
LOGIC SUPPLY RETURN	10	
LAMP SUPPLY (HI)	11	
LAMP SUPPLY (HI)	12	
LAMP SUPPLY (HI)	13	
LAMP SUPPLY (HI)	14	
LAMP SUPPLY RETURN	15	
LAMP SUPPLY RETURN	16	
LAMP SUPPLY RETURN	17	
LAMP SUPPLY RETURN	18	
LAMP SUPPLY CONTROL	19	TERMINAL BOARD TB1 TERM-50
LAMP SENSE (HI)	20	
LAMP SENSE (LO)	21	
XMSN OIL TEMP SIG (HI)	22	BCD COUNTER BOARD PIN-36
XMSN OIL TEMP SIG (LO)	23	BCD COUNTER BOARD PIN-38
FUEL QTY SIG (HI)	24	TEST POINT NO. 15 (FUEL H)
FUEL QTY SIG (LO)	25	TEST POINT NO. 6 (FUEL L)
XMSN OIL PRESS EXC (HI)	26	TEST POINT NO. 20
SPARE	27	
XMSN OIL PRESS SIG(HI)	28	BCD COUNTER BOARD PIN-40
LOW ROTOR SPD WARN	29	SWITCH S3 TERM-1
LOW OIL PRESS WARN	30	
LOW NG WARNING	31	SWITCH S3 TERM-1
HIGH OIL TEMP WARN	32	
RTR OVSPD RESET	33	TO TEST POINT NO.7
28 VDC RELAY SUPPLY	34	SWITCH S3 TERM-2
FAILURE WARNING	35	TO BCD COUNTER BOARD PIN-28
DIGITAL CLOCK INHIBIT	36	TO SWITCH S5 TERM-3
ANALOG CLOCK INHIBIT	37	TO SWITCH S5 TERM-1
ANALOG RESET	38	TO SWITCH S6 WAFER 1 TERM-5
DIGITAL RESET	39	TO SWITCH S6 WAFER 1 TERM-13
XMSN OIL PRESS ANA MUX	40	TO MONITOR BOARD NO. 2 PIN-50
FUEL QTY ANALOG MUX	41	TO MONITOR BOARD NO. 2 PIN-69
XMSN OIL TEMP ANA MUX	42	TO MONITOR BOARD NO. 2 PIN-44
TOTAL FUEL DIGITAL MUX	43	TO MONITOR BOARD NO. 2 PIN-40
ENG OIL TEMP ANA UPDATE	44	TO SWITCH S6 WAFER 3 TERM-6
ENG OIL PRESS ANA UPDATE	45	TO SWITCH S6 WAFER 3 TERM-7
TGT ANALOG UPDATE	46	TO SWITCH S6 WAFER 3 TERM-8
NG ANALOG UPDATE	47	TO SWITCH S6 WAFER 3 TERM-9
TGT DIGITAL UPDATE	48	TO SWITCH S6 WAFER 3 TERM-12
NG DIGITAL UPDATE	49	TO SWITCH S6 WAFER 3 TERM-13
ROTOR SPEED UPDATE	50	TO SWITCH S6 WAFER 3 TERM-14
ANALOG TEST FREQ	51	TO SWITCH S1 TERM-1
DIGITAL TEST FREQ	52	TO SWITCH S1 TERM-4
SPARE	53	
SPARE	54	
SPARE	55	
SPARE	56	
SPARE	57	
SPARE	58	
CDU CHASSIS GROUND	59	TO GROUND LUG
DIGITAL DATA AO	60	TO MONITOR BOARD NO. 2 PIN-106
DIGITAL DATA BO	61	TO MONITOR BOARD NO. 2 PIN-98
DIGITAL DATA CO	62	TO MONITOR BOARD NO. 2 PIN-96
DIGITAL DATA DO	63	TO MONITOR BOARD NO. 2 PIN-105
DIGITAL DATA B3	64	TO MONITOR BOARD NO. 2 PIN-119
SHIFT REG O/P TAP 4	65	TO MONITOR BOARD NO. 1 PIN-5
SHIFT REG O/P TAP 6	66	TO MONITOR BOARD NO. 1 PIN-6

SIGNAL DATA CONVERTOR (J3)

J9

SHIFT REG O/P TAP 8	67	TO MONITOR BOARD NO. 1 PIN-7
SHIFT REG O/P TAP 12	68	TO MONITOR BOARD NO. 1 PIN-8
SHIFT REG O/P TAP 16	69	TO MONITOR BOARD NO. 1 PIN-9
SHIFT REG O/P TAP 18	70	TO MONITOR BOARD NO. 1 PIN-10
SHIFT REG O/P TAP 21	71	TO MONITOR BOARD NO. 1 PIN-11
SHIFT REG O/P TAP 23	72	TO MONITOR BOARD NO. 1 PIN-12
SHIFT REG O/P TAP 24	73	TO MONITOR BOARD NO. 1 PIN-13
SHIFT REG O/P TAP 26	74	TO MONITOR BOARD NO. 1 PIN-14
SHIFT REG O/P TAP 27	75	TO MONITOR BOARD NO. 1 PIN-15
SHIFT REG O/P TAP 28	76	TO MONITOR BOARD NO. 1 PIN-16
SHIFT REG O/P TAP 31	77	TO MONITOR BOARD NO. 1 PIN-17
SHIFT REG O/P TAP 32	78	TO MONITOR BOARD NO. 1 PIN-18
SHIFT REG O/P TAP 34	79	TO MONITOR BOARD NO. 1 PIN-19
SHIFT REG O/P TAP 36	80	TO MONITOR BOARD NO. 1 PIN-20
SHIFT REG O/P TAP 38	81	TO MONITOR BOARD NO. 1 PIN-21
SHIFT REG O/P TAP 42	82	TO MONITOR BOARD NO. 1 PIN-22
SHIFT REG O/P TAP 44	83	TO MONITOR BOARD NO. 1 PIN-23
SHIFT REG O/P TAP 46	84	TO MONITOR BOARD NO. 1 PIN-24
SHIFT REG O/P TAP 48	85	TO MONITOR BOARD NO. 1 PIN-25
SHIFT REG O/P TAP 7	86	TO MONITOR BOARD NO. 1 PIN-53
SHIFT REG O/P TAP 52	87	TO MONITOR BOARD NO. 1 PIN-26
SHIFT REG O/P TAP 54	88	TO MONITOR BOARD NO. 1 PIN-27
SHIFT REG O/P TAP 56	89	TO MONITOR BOARD NO. 1 PIN-28
SHIFT REG O/P TAP 58	90	TO MONITOR BOARD NO. 1 PIN-29
SHIFT REG O/P TAP 9	91	TO MONITOR BOARD NO. 1 PIN-54
SHIFT REG O/P TAP 62	92	TO MONITOR BOARD NO. 1 PIN-30
XMSN OIL PRESS EXC(LO)	93	
SHIFT REG O/P TAP 64	94	TO MONITOR BOARD NO. 1 PIN-31
SHIFT REG O/P TAP 66	95	TO MONITOR BOARD NO. 1 PIN-32
SHIFT REG O/P TAP 68	96	TO MONITOR BOARD NO. 1 PIN-33
SHIFT REG O/P TAP 69	97	TO MONITOR BOARD NO. 1 PIN-34
SHIFT REG O/P TAP 72	98	TO MONITOR BOARD NO. 1 PIN-35
SHIFT REG O/P TAP 74	99	TO MONITOR BOARD NO. 1 PIN-36
SHIFT REG O/P TAP 76	100	TO MONITOR BOARD NO. 1 PIN-37
SHIFT REG O/P TAP 78	101	TO MONITOR BOARD NO. 1 PIN-38
SHIFT REG O/P TAP 79	102	TO MONITOR BOARD NO. 1 PIN-39
SHIFT REG O/P TAP 11	103	TO MONITOR BOARD NO. 1 PIN-55
SHIFT REG O/P TAP 82	104	TO MONITOR BOARD NO. 1 PIN-40
SHIFT REG O/P TAP 83	105	TO MONITOR BOARD NO. 1 PIN-41
SHIFT REG O/P TAP 84	106	TO MONITOR BOARD NO. 1 PIN-42
SHIFT REG O/P TAP 86	107	TO MONITOR BOARD NO. 1 PIN-43
SHIFT REG O/P TAP 13	108	TO MONITOR BOARD NO. 1 PIN-56
SHIFT REG O/P TAP 88	109	TO MONITOR BOARD NO. 1 PIN-44
SHIFT REG O/P TAP 14	110	TO S19-4
SHIFT REG O/P TAP 113	111	TO MONITOR BOARD NO. 1 PIN-45
SHIFT REG O/P TAP 117	112	TO MONITOR BOARD NO. 1 PIN-46
SHIFT REG O/P TAP 121	113	TO MONITOR BOARD NO. 1 PIN-47
SHIFT REG O/P TAP 129	114	TO MONITOR BOARD NO. 1 PIN-48
SPARE	115	
SHIFT REG O/P TAP 132	116	TO MONITOR BOARD NO. 1 PIN-49
SHIFT REG O/P TAP 133	117	TO MONITOR BOARD NO. 1 PIN-50
SHIFT REG O/P TAP 136	118	TO MONITOR BOARD NO. 1 PIN-51
SHIFT REG O/P TAP 137	119	TO MONITOR BOARD NO. 1 PIN-52
SHIFT REG O/P TAP 141	120	TO MONITOR BOARD NO. 1 PIN-65
SHIFT REG O/P TAP 142	121	TO MONITOR BOARD NO. 1 PIN-66
SHIFT REG O/P TAP 144	122	TO MONITOR BOARD NO. 1 PIN-67
SHIFT REG O/P TAP 127	123	TO MONITOR BOARD NO. 1 PIN-68
SHIFT REG O/P TAP 148	124	TO MONITOR BOARD NO. 1 PIN-61
DEDICATED SPARE	125	
SHIFT REG O/P TAP 152	126	TO MONITOR BOARD NO. 1 PIN-64
+5 VDC TEST FUNCTION	127	
INTEGRAL LIGHTING	128	TO LAMP TEST BOARD TERM-4

LAMP POWER SUPPLY A2

J10

+5 VOLTS LAMP SUPPLY PDU	A	TERMINAL BOARD TB1 TERM-25
28 VOLTS RETURN	B	CONNECTOR J5 PIN-L
LAMP SUPPLY RETURN PDU	C	TO GROUND POINT "A"
+5 VOLTS LAMP SUPPLY PDU	D	TERMINAL BOARD TB1 TERM-27
	E	
LAMP SUPPLY RETURN PDU	F	TO GROUND POINT "A"
+5 VOLTS LAMP SUPPLY PDU	H	TERMINAL BOARD TB1 TERM-29
	J	
LAMP SUPPLY RETURN PDU	K	TO GROUND POINT "A"
+5 VOLTS LAMP SUPPLY CDU	L	TERMINAL BOARD TB1 TERM-24
	M	
LAMP SUPPLY RETURN CDU	N	TO GROUND POINT "A"
+5 VOLTS LAMP SUPPLY CDU	P	TERMINAL BOARD TB1 TERM-26
	R	
LAMP SUPPLY RETURN CDU	S	TO GROUND POINT "A"
+5 VOLTS LAMP SUPPLY CDU	T	TERMINAL BOARD TB1 TERM-28
	U	
LAMP SUPPLY RETURN CDU	V	TO GROUND POINT "A"
+5 VOLTS LAMP SUPPLY CDU	W	TERMINAL BOARD TB1 TERM-30
28 VDC TO RELAYS	X	CONNECTOR J3 PIN-34
LAMP SUPPLY RETURN CDU	Y	TO GROUND POINT "A"
LAMP SUPPLY CONTROL	Z	OSC CONTROL BOARD PIN-10
28 VDC HI (INPUT)	a	CONNECTOR J5 PIN-M
+15.5 VOLTS	b	
	c	
-15.5 VOLTS	d	

LOGIC POWER SUPPLY

J11

115 VAC 400 HZ (HI)	A	CONNECTOR J5 PIN-P
	B	
115 VAC 400 HZ (LO)	C	CONNECTOR J5 PIN-N
+8 VOLTS LOGIC SUPPLY	D	TO SWITCH S9 TERM-8
	E	
GROUND	F	VOLTAGE REGULATOR BOARD PIN-36
+8 VOLTS LOGIC SUPPLY	H	CONNECTOR J6 PIN-10
EXCITATION (LO)	J	FRAME COMPONENT TERM-E3
GROUND	K	VOLTAGE REGULATOR BOARD PIN-44
+8 VOLTS LOGIC SUPPLY	L	VOLTAGE REGULATOR BOARD PIN-2
	M	
GROUND	N	TO GROUND LUG
+8 VOLTS LOGIC SUPPLY	P	VOLTAGE REGULATOR BOARD PIN-1
	R	
GROUND	S	TO GROUND LUG
	T	
	U	
GROUND	V	TO GROUND LUG
EXCITATION (HI)	W	FRAME COMPONENTS TERM-E1
	X	
GROUND	Y	TO GROUND LUG
+15.5 VOLTS LOGIC	Z	TO SWITCH S9 TERM-2
	a	
-15.5 VOLTS LOGIC	b	TO SWITCH S9 TERM-5
+15.5 VOLTS LOGIC	c	VOLTAGE REGULATOR BOARD PIN-9
-15.5 VOLTS LOGIC	d	VOLTAGE REGULATOR BOARD PIN-43

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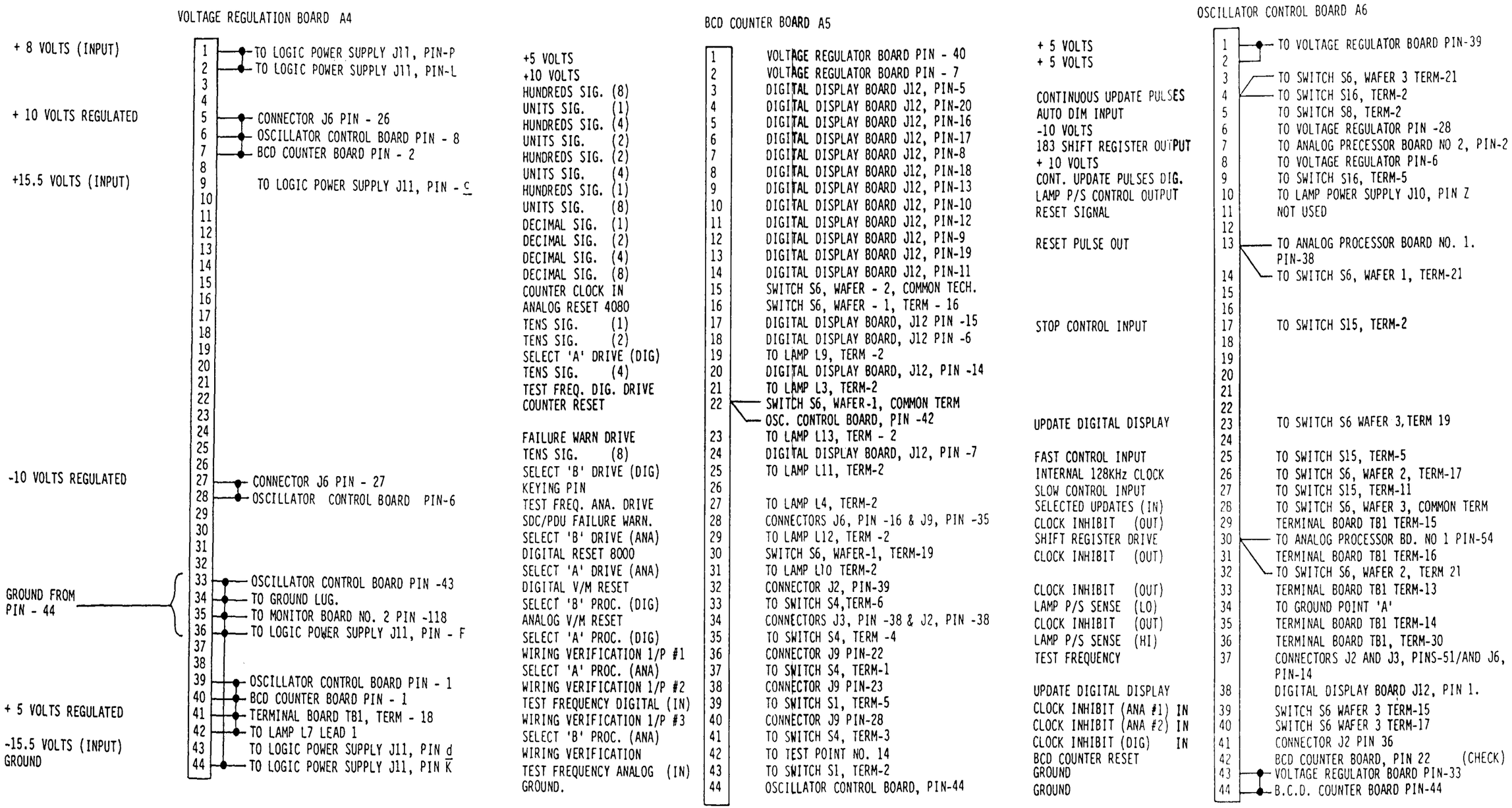
FO-6. Interwiring Diagram, Unit Test (Sheet 5 of 16)



FO-6. Interwiring Diagram, Unit Test (Sheet 6 of 16)

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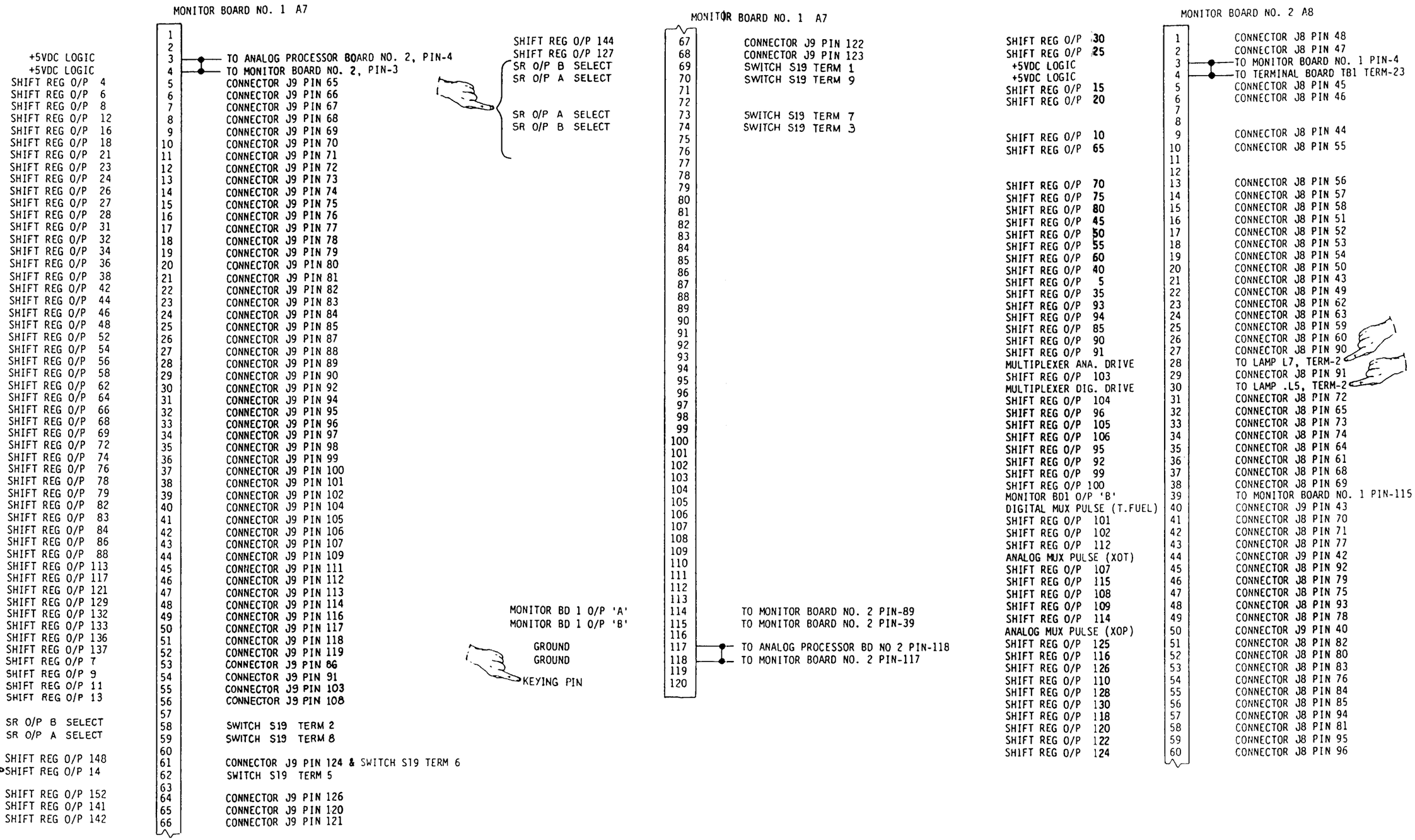

FO-6. Interwiring Diagram, Unit Test (Sheet 7 of 16)

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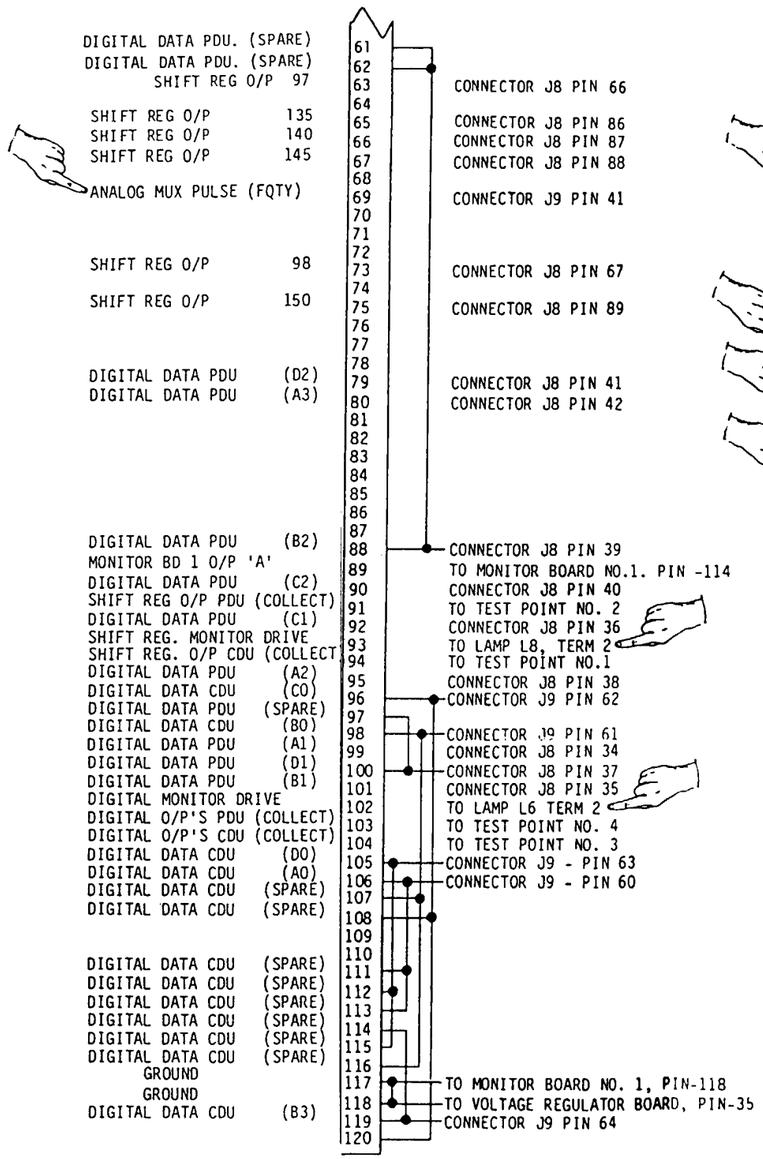
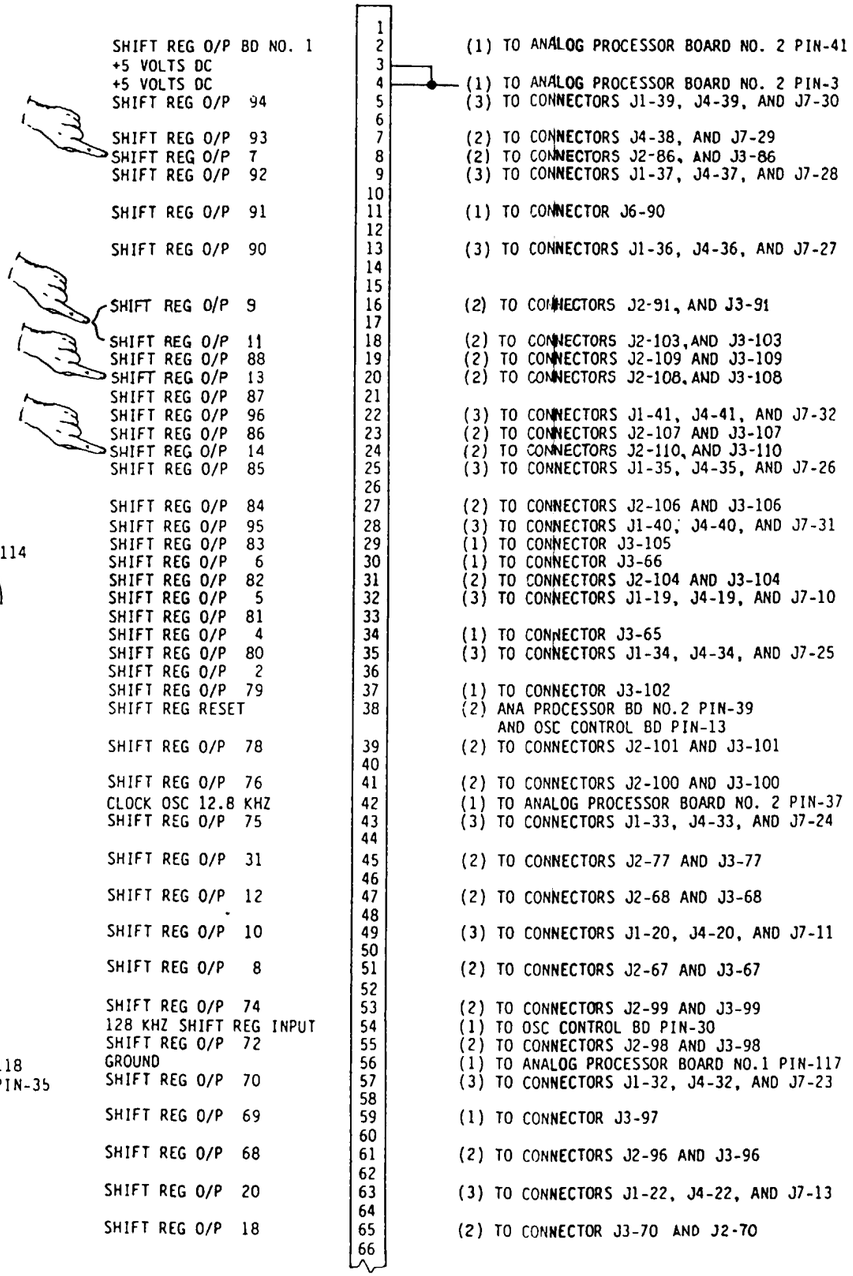
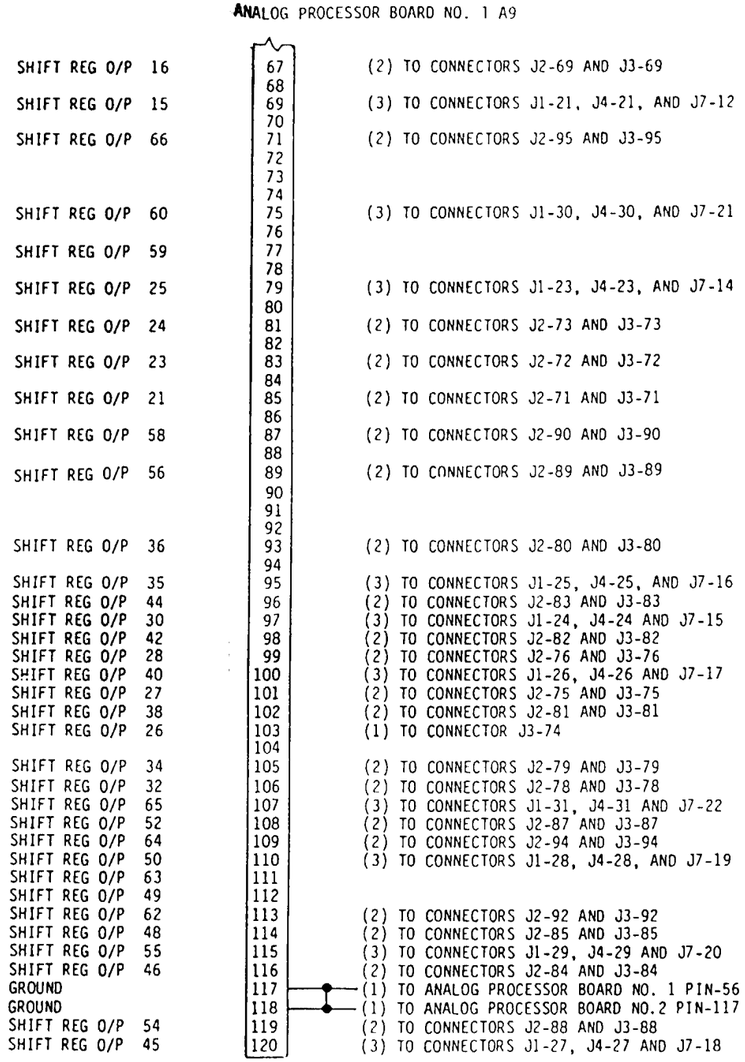






FO-6. Interwiring Diagram, Unit Test (Sheet 8 of 16)

ANALOG PROCESSOR BOARD NO. 2 A10

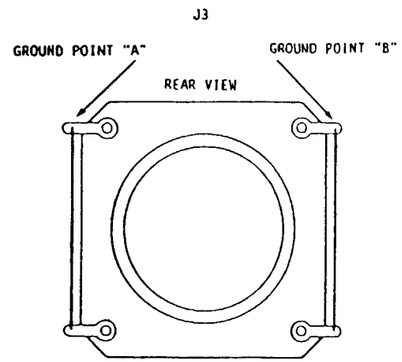
SHIFT REG Q5 O/P RESET 183	2	(1) TO OSCILLATOR CONTROL BOARD PIN-7
+5 VOLTS DC	3	(1) TO ANALOG PROCESSOR BOARD NO. 1 PIN-4
+5 VOLTS DC	4	(1) TO MONITOR BOARD NO. 1 PIN-3
	1, 5, 6, 7, 8, 10, 11, 14, 18, 20, 22, 23, 24, 25, 26, 28, 29, 31, 32, 33, 34, 35, 36, 38, 40, 42, 44, 51, 53, 54, 55, 56, 57, 58, 59, 60, 62, 66	
CLOCK FROM BD NO. 1	37	(1) TO ANALOG PROCESSOR BD NO. 1 PIN-42
SHIFT REG RESET (POS)	39	(1) TO ANALOG PROCESSOR BD NO. 1 PIN-38
SHIFT REG O/P FROM BD NO.1	41	(1) TO ANALOG PROCESSOR BD NO. 1 PIN 2
SHIFT REG O/P 100	43	(3) TO CONNECTORS J1-45, J4-45 AND J7-36
SHIFT REG O/P 99	45	(3) TO CONNECTORS J1-44, J4-44 AND J7-35
SHIFT REG O/P 104	46	(3) TO CONNECTORS J1-48, J4-48 AND J7-39
SHIFT REG O/P 98	47	(3) TO CONNECTORS J1-43, J4-43 AND J7-34
SHIFT REG O/P 103	48	(1) TO CONNECTOR J6-91
SHIFT REG O/P 97	49	(2) TO CONNECTORS J4-42 AND J7-33
SHIFT REG O/P 102	50	(3) TO CONNECTORS J1-47, J4-47 AND J7-38
SHIFT REG O/P 101	52	(2) TO CONNECTORS J4-46 AND J7-37
SHIFT REG O/P 108	61	(3) TO CONNECTORS J1-51, J4-51 AND J7-42
SHIFT REG O/P 107	63	(1) TO CONNECTOR J6-92
SHIFT REG O/P 112	64	(2) TO CONNECTORS J4-53 AND J7-44
SHIFT REG O/P 106	65	(3) TO CONNECTORS J1-50, J4-50, AND J7-41
SHIFT REG O/P 111	66	

ANALOG PROCESSOR BOARD NO. 2 A10

SHIFT REG O/P 110	67, 68	(3) TO CONNECTORS J1-52, J4-52, AND J7-43
SHIFT REG O/P 109	69, 70	(1) TO CONNECTOR J6-93
SHIFT REG O/P 105	71	(3) TO CONNECTORS J1-49, J4-49 AND J7-40
	72, 73, 74	
SHIFT REG O/P 152	75	(1) TO CONNECTOR J3-126
	76, 77	
SHIFT REG O/P 151	78	(3) TO CONNECTORS J1-57, J4-57 AND J7-48
SHIFT REG O/P 120	79	(1) TO CONNECTOR J6-80
SHIFT REG O/P 116	80	(1) TO CONNECTOR J6-94
SHIFT REG O/P 118	81	(2) TO CONNECTORS J2-113 AND J3-113
SHIFT REG O/P 121	82	(2) TO CONNECTORS J2-112, AND J3-112,
SHIFT REG O/P 117	83	(3) TO CONNECTORS J1-55, J4-55 AND J7-46
SHIFT REG O/P 115	84	
SHIFT REG O/P 114	85	(3) TO CONNECTORS J1-54, J4-54 AND J7-45
	86	
SHIFT REG O/P 113	87	(2) TO CONNECTORS J2-111 AND J3-111
	88, 89, 90, 91, 92	
SHIFT REG O/P 150	93	(3) TO CONNECTORS J1-65, J4-65 AND J7-56
SHIFT REG O/P 148	95	(2) TO CONNECTORS J2-124 AND J3-124
	96	
SHIFT REG O/P 126	97	(1) TO CONNECTOR J6-83
SHIFT REG O/P 127	98	(2) TO CONNECTORS J2-123 AND J3-123
SHIFT REG O/P 125	99	(3) TO CONNECTORS J1-58, J4-58 AND J7-49
SHIFT REG O/P 130	100	(3) TO CONNECTORS J1-61, J4-61 AND J7-52
SHIFT REG O/P 124	101	(1) TO CONNECTOR J6-96
SHIFT REG O/P 129	102	(2) TO CONNECTORS J2-114 AND J3-114
SHIFT REG O/P 122	103	(1) TO CONNECTOR J6-95
SHIFT REG O/P 128	104	(2) TO CONNECTORS J4-60 AND J7-51
	105	
SHIFT REG O/P 135	106	(3) TO CONNECTORS J1-62, J4-62 AND J7-53
SHIFT REG O/P 147	107	
	108	
SHIFT REG O/P 145	109	(3) TO CONNECTORS J1-64, J4-64 AND J7-55
SHIFT REG O/P 133	110	(2) TO CONNECTORS J2-117 AND J3-117
SHIFT REG O/P 144	111	(2) TO CONNECTORS J2-122 AND J3-122
SHIFT REG O/P 132	112	(2) TO CONNECTORS J2-116 AND J3-116
SHIFT REG O/P 142	113	(2) TO CONNECTORS J2-121 AND J3-121
SHIFT REG O/P 136	114	(1) TO CONNECTOR J3-118
SHIFT REG O/P 141	115	(2) TO CONNECTORS J2-120 AND J3-120
SHIFT REG O/P 137	116	(2) TO CONNECTORS J2-119 AND J3-119
GROUND	117	(1) TO ANALOG PROCESSOR BOARD NO 1 PIN-118
GROUND	118	(1) TO MONITOR BOARD NO 1, PIN-117
	119	
SHIFT REG O/P 140	120	(3) TO CONNECTORS J1-63, J4-63 AND J7-54

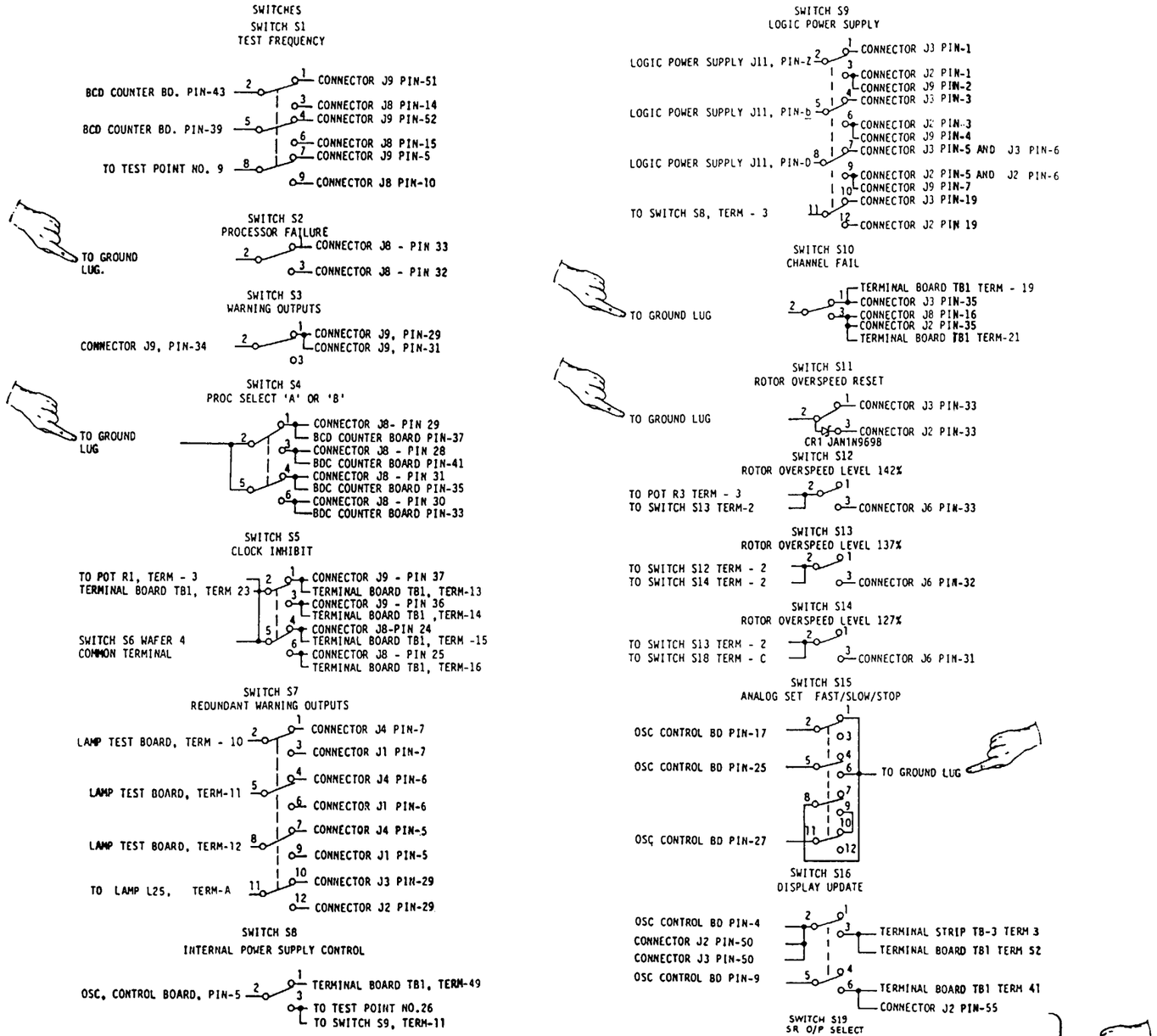
DIGITAL DISPLAY BOARD A12

UPDATE DIG DISPLAY	J12-1	OSC CONTROL BOARD PIN-38
+5 VOLTS LOGIC	J12-2	TERMINAL BOARD TB1 - TERM-23
UPDATE RATE CONTROL	J12-3	SWITCH S6 WAFER 4 TERM-7
GROUND	J12-4	TO GROUND LUG
HUNDREDS SIG (8)	J12-5	BCD COUNTER BOARD PIN-3
TENS SIG (2)	J12-6	BCD COUNTER BOARD PIN-18
TENS SIG (8)	J12-7	BCD COUNTER BOARD PIN-24
HUNDREDS SIG (2)	J12-8	BCD COUNTER BOARD PIN-7
DECIMAL SIG (2)	J12-9	BCD COUNTER BOARD PIN-12
UNITS SIG (8)	J12-10	BCD COUNTER BOARD PIN-10
DECIMAL SIG (8)	J12-11	BCD COUNTER BOARD PIN-14
DECIMAL SIG (1)	J12-12	BCD COUNTER BOARD PIN-11
HUNDREDS SIG (1)	J12-13	BCD COUNTER BOARD PIN-9
TENS SIG (4)	J12-14	BCD COUNTER BOARD PIN-20
TENS SIG (1)	J12-15	BCD COUNTER BOARD PIN-17
HUNDREDS SIG (4)	J12-16	BCD COUNTER BOARD PIN-5
UNITS SIG (2)	J12-17	BCD COUNTER BOARD PIN-6
UNITS SIG (4)	J12-18	BCD COUNTER BOARD PIN-8
DECIMAL SIG (4)	J12-19	BCD COUNTER BOARD PIN-13
UNITS SIG (1)	J12-20	BCD COUNTER BOARD PIN-4



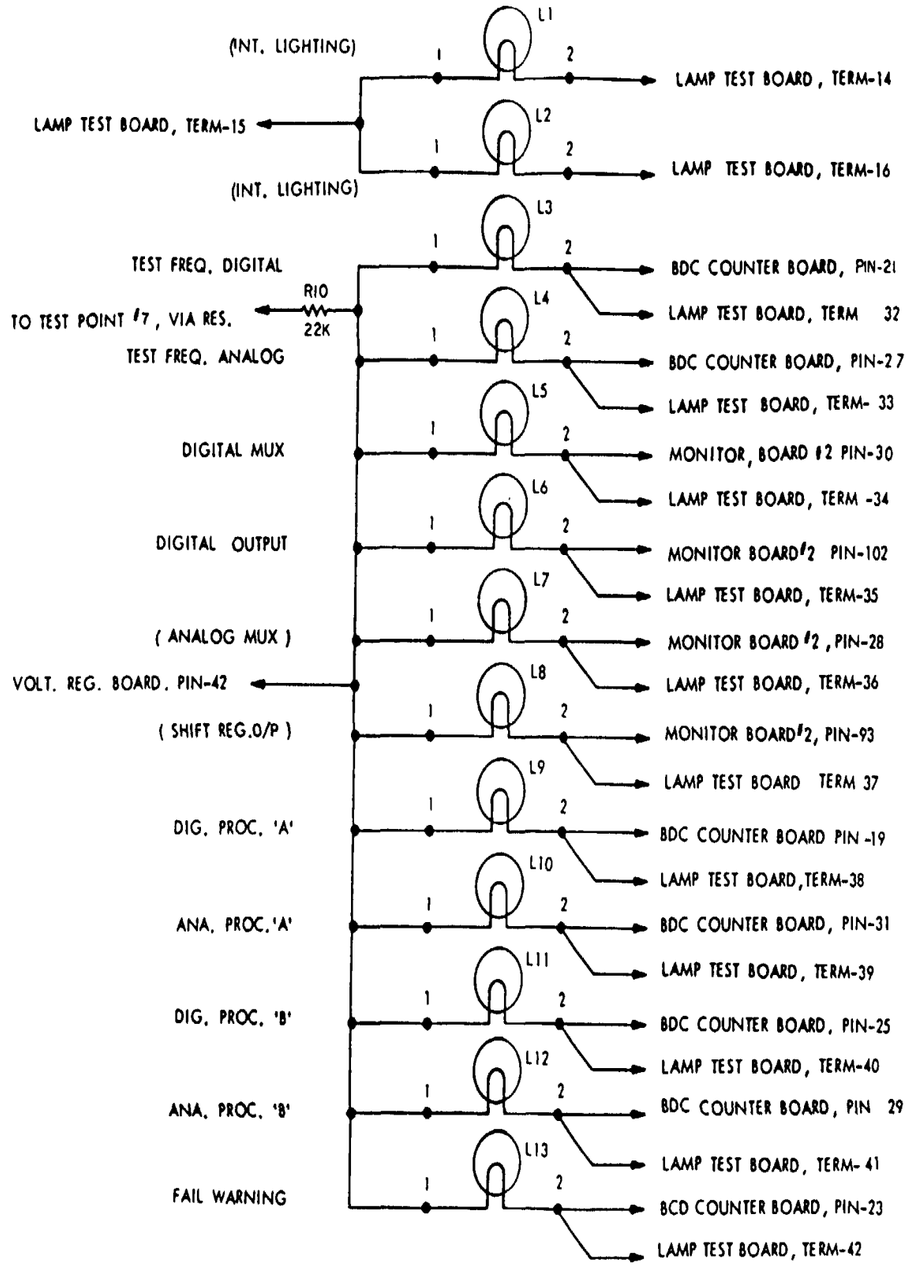
FO-6. Interwiring Diagram, Unit Test (Sheet 9 of 16)

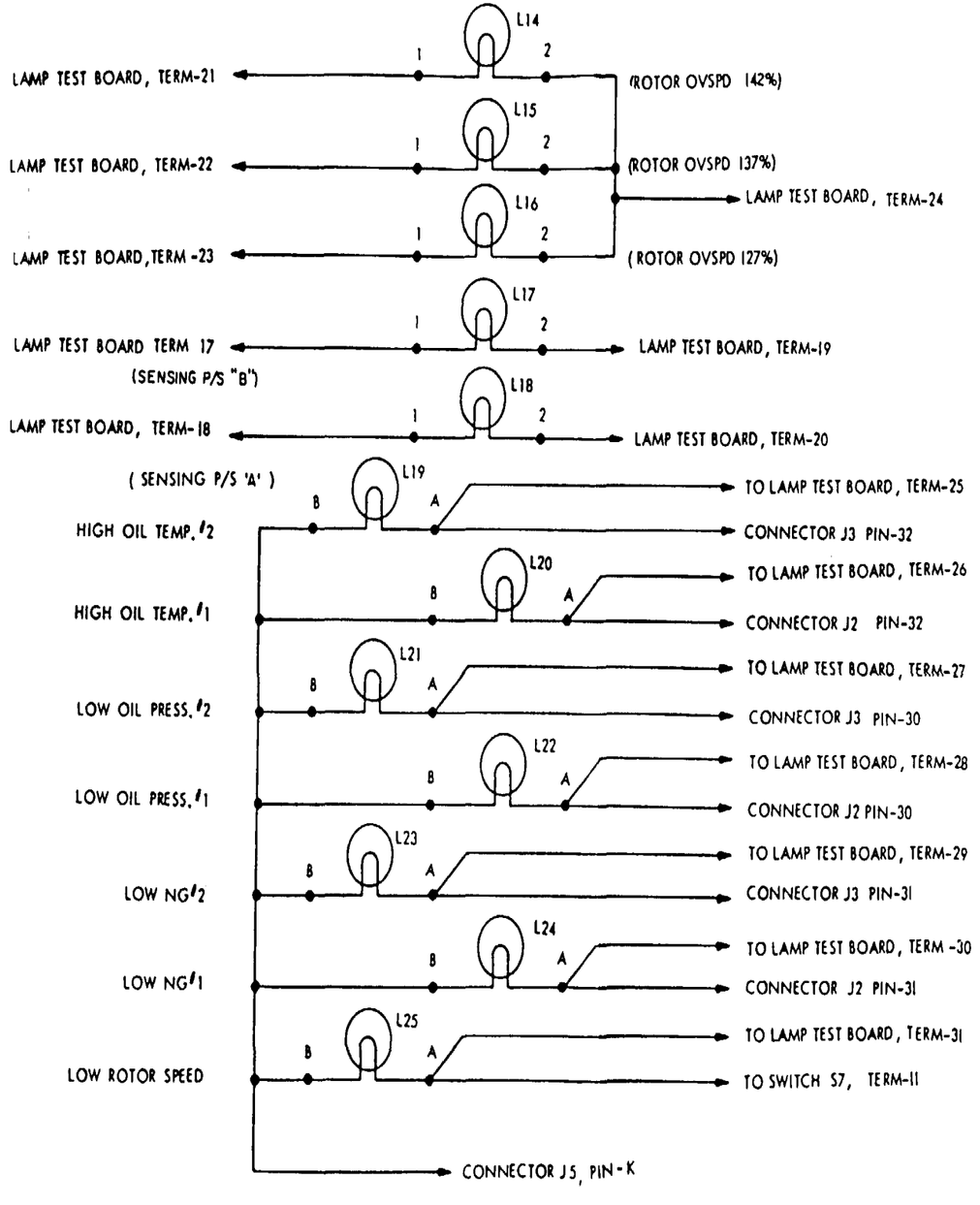
91363-9



91363-10

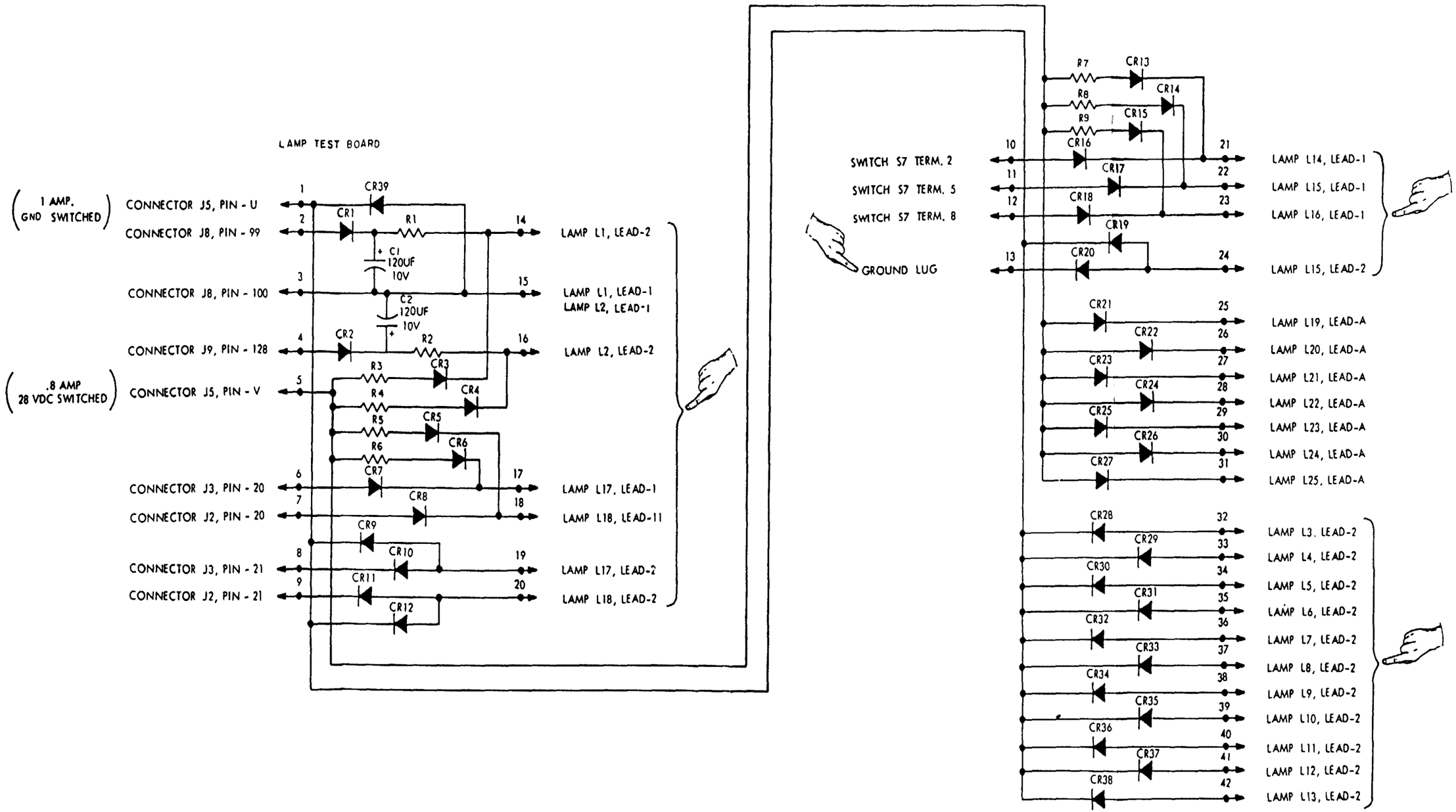
FO-6. Interwiring Diagram, Unit Test (Sheet 10 of 16)



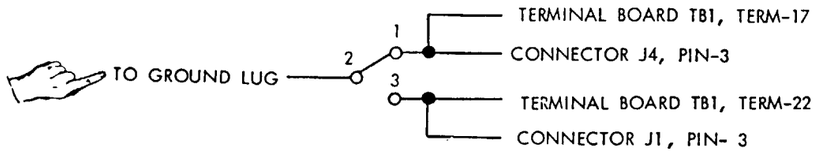


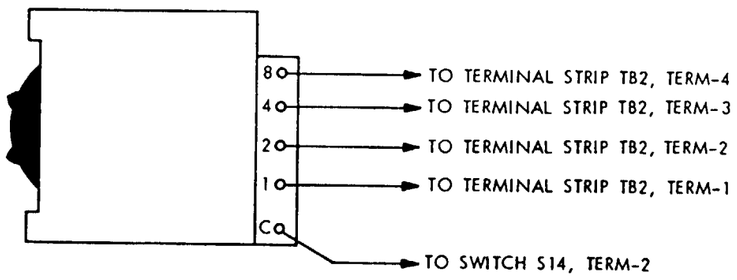
FO-6. Interwiring Diagram, Unit Test (Sheet 11 of 16)

91363-11

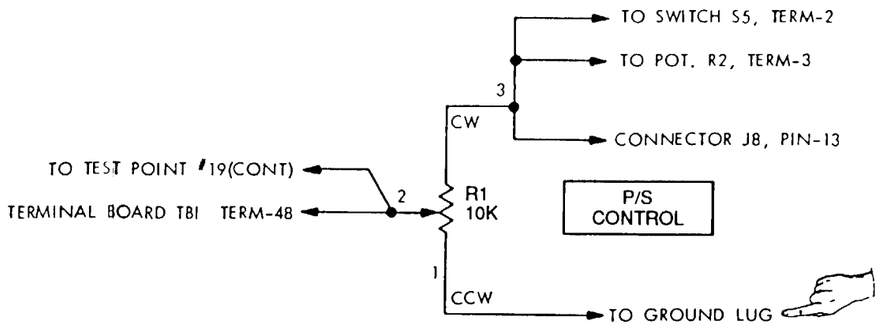


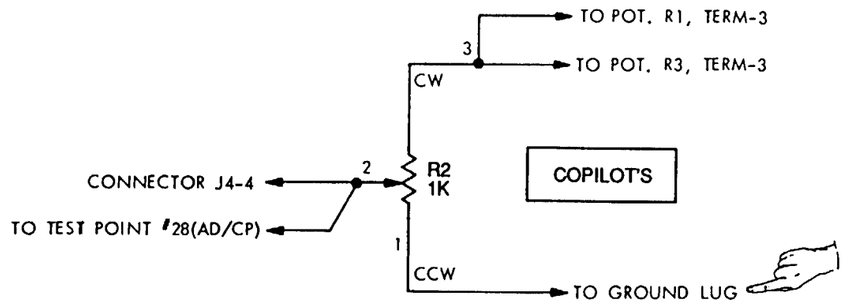
FO-6. Interwiring Diagram, Unit Test (Sheet 12 of 16)

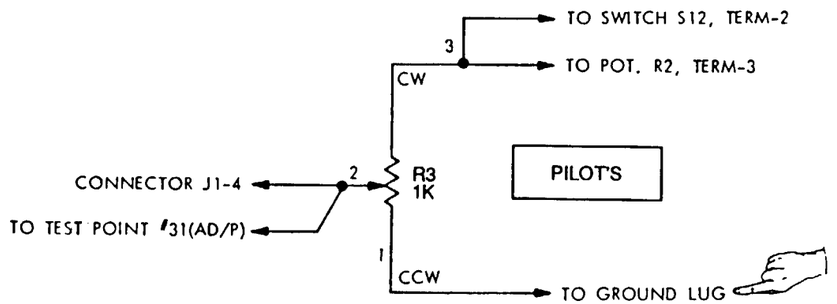




SWITCH S18
DIGITS SET BCD THUMB WHEEL



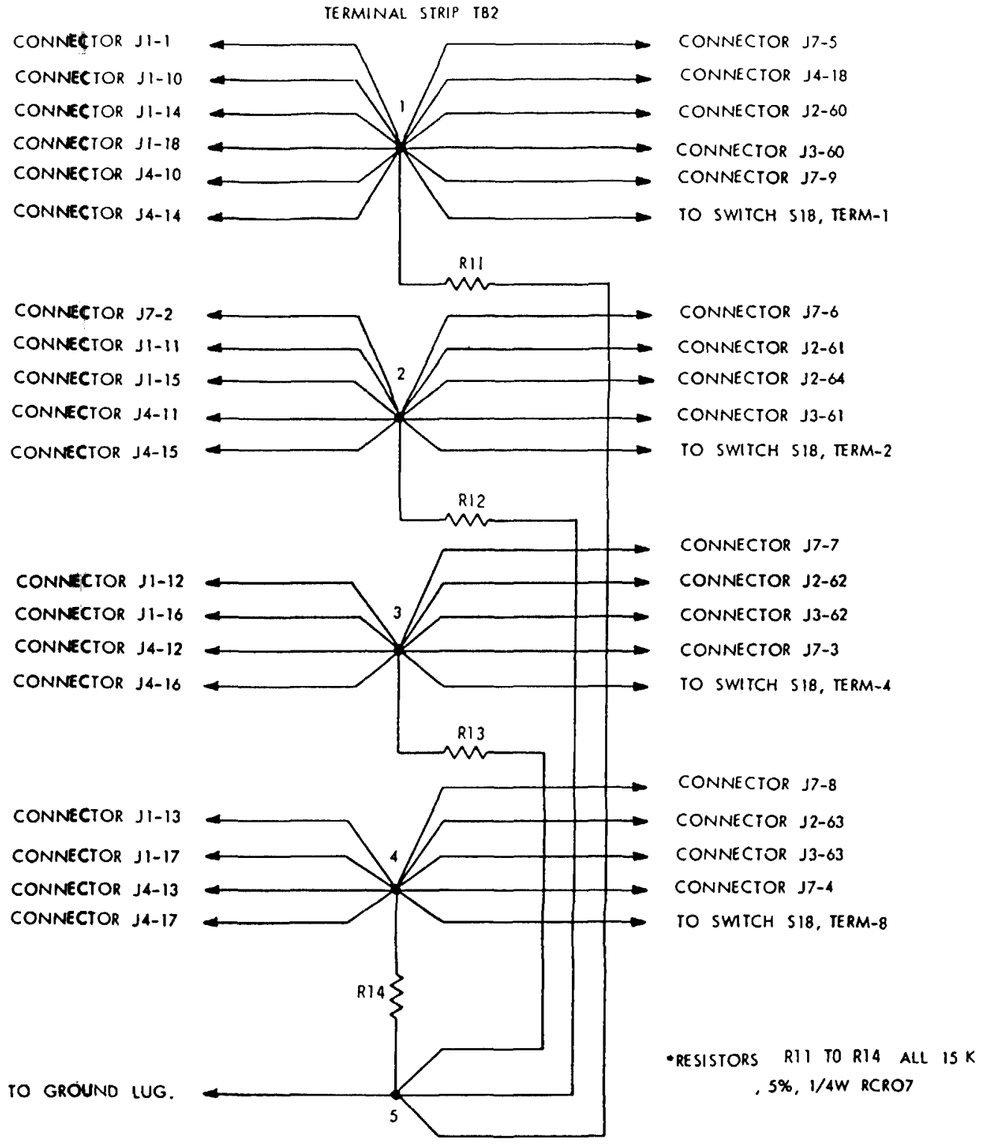


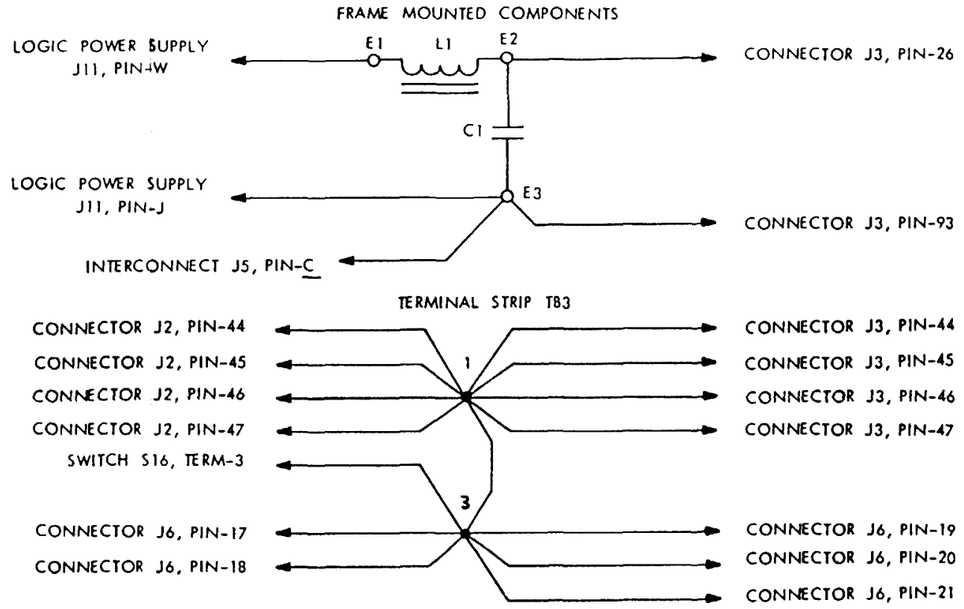


POTENTIOMETERS

91363-13

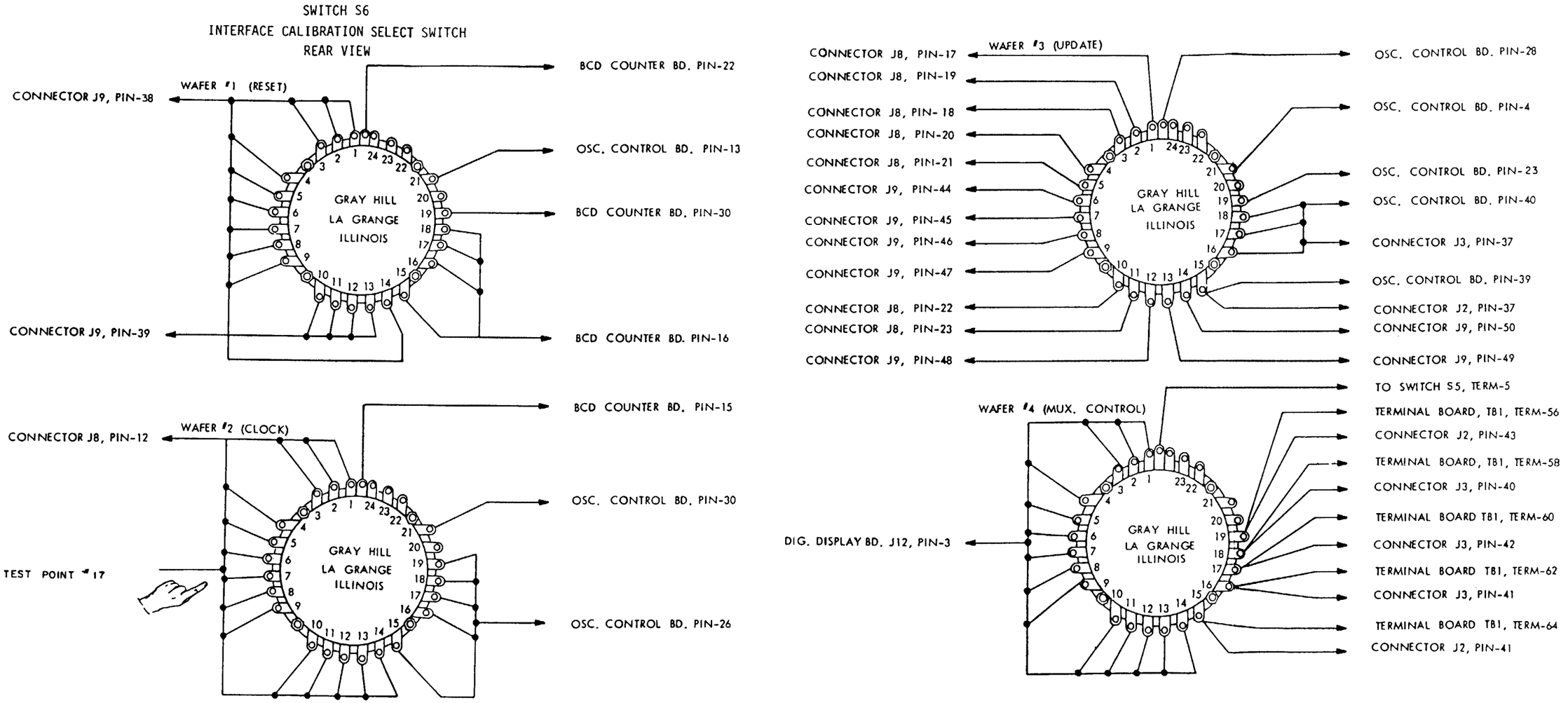
FO-6. Interwiring Diagram, Unit Test (Sheet 13 of 16)





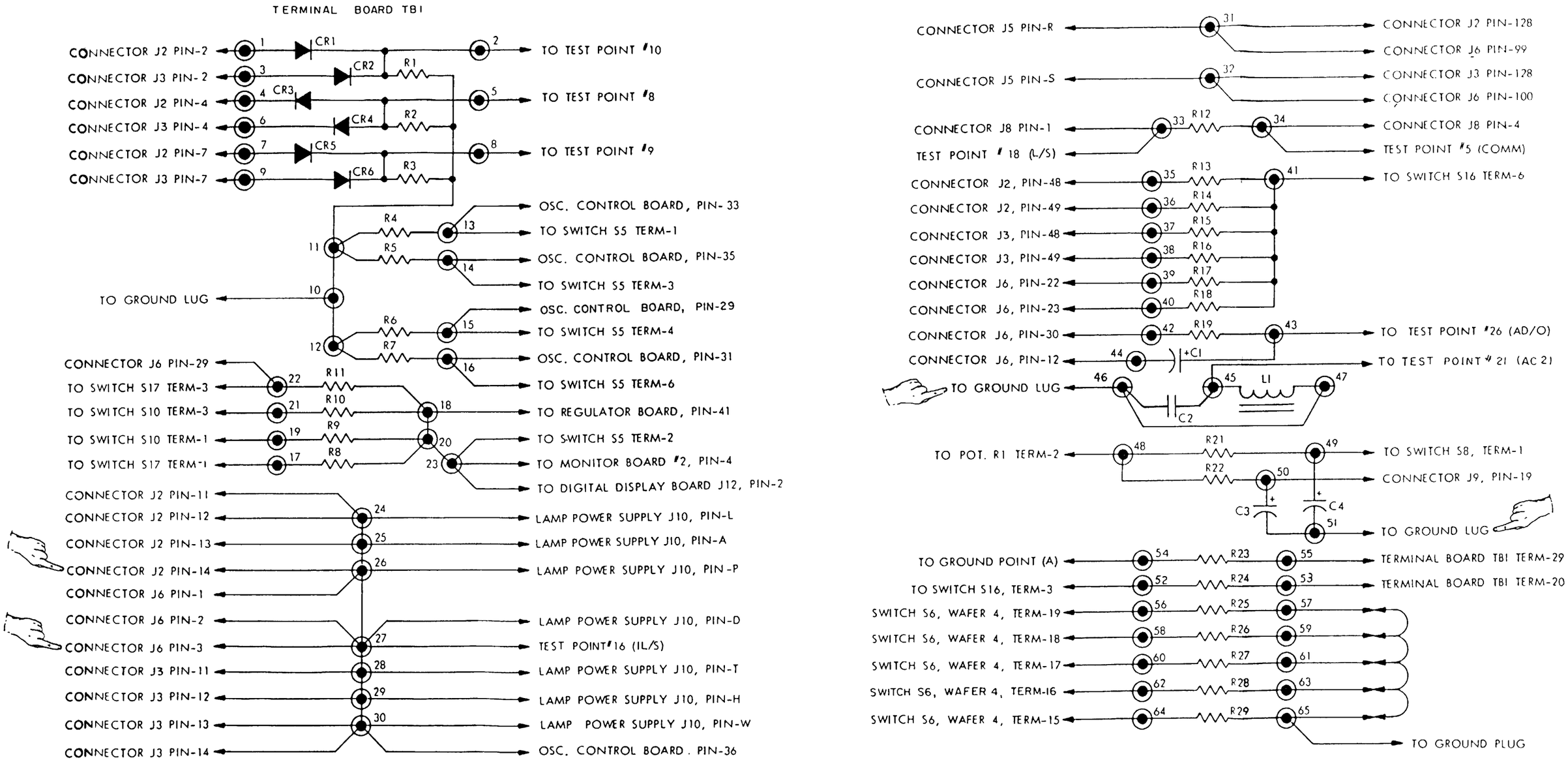
91363-14

FO-6. Interwiring Diagram, Unit Test (Sheet 14 of 16)



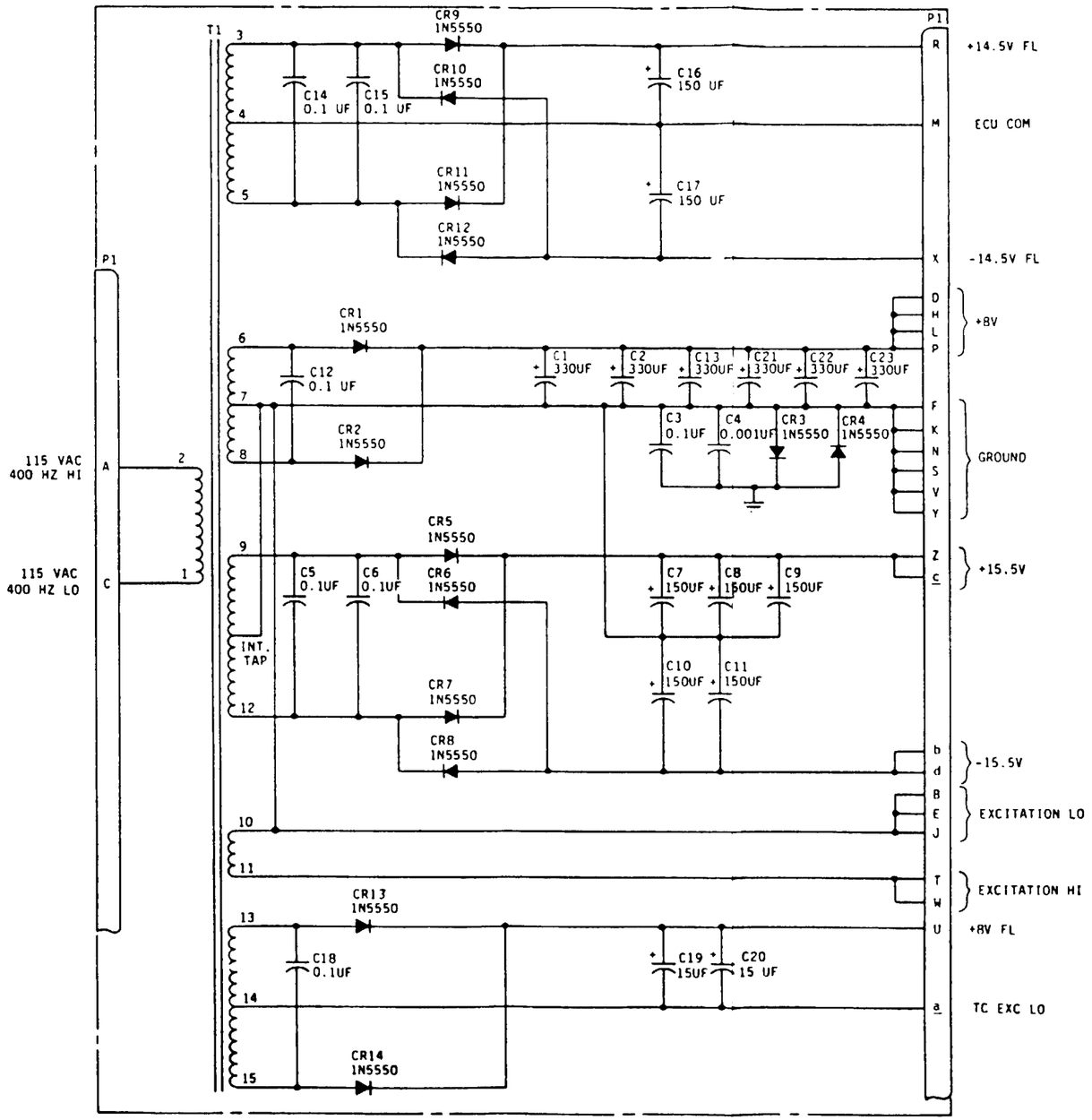
91363-15

FO-6. Interwiring Diagram, Unit Test (Sheet 15 of 16)

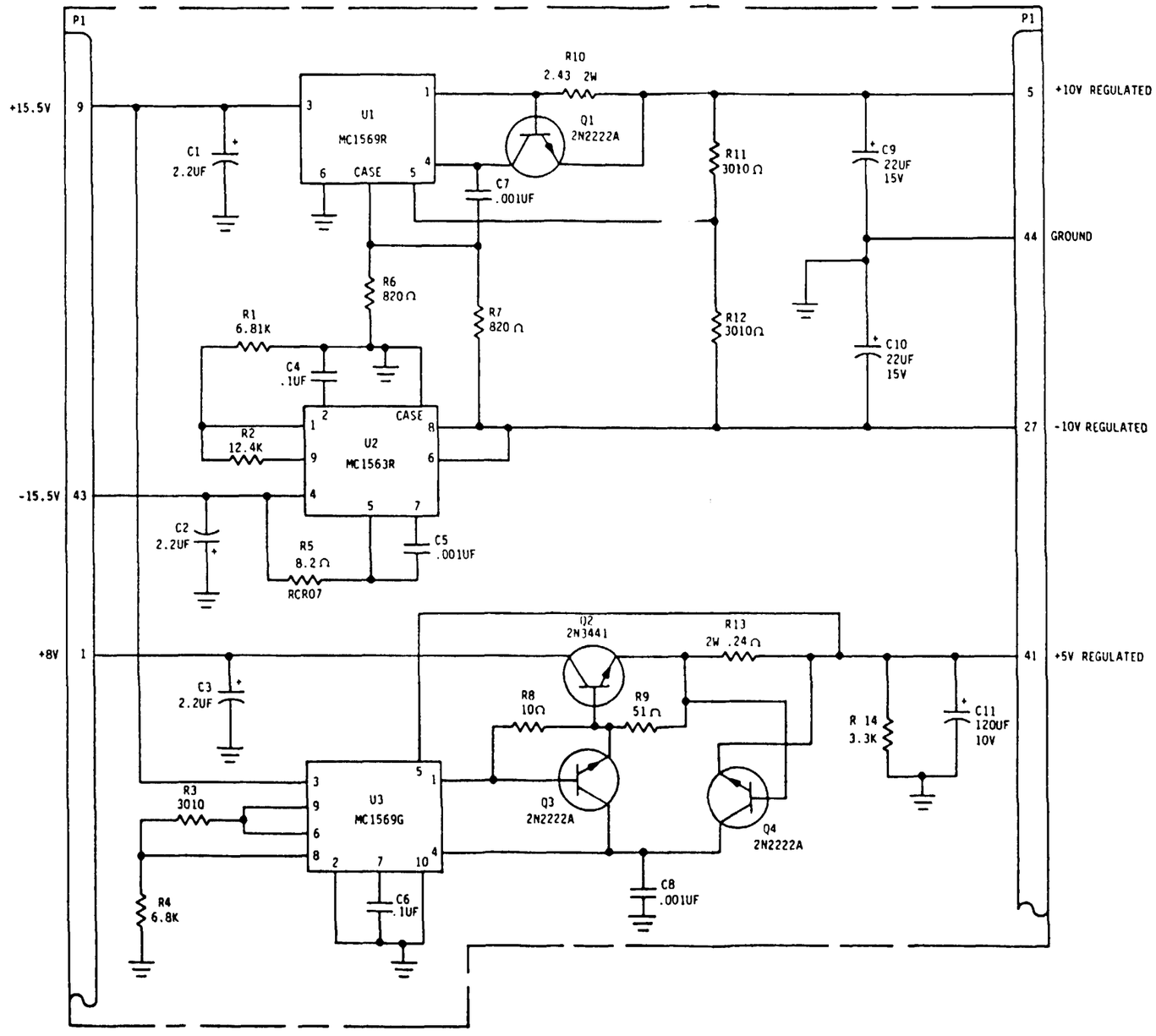


91363-16

FO-6. Interwiring Diagram, Unit Test (Sheet 16 of 16)

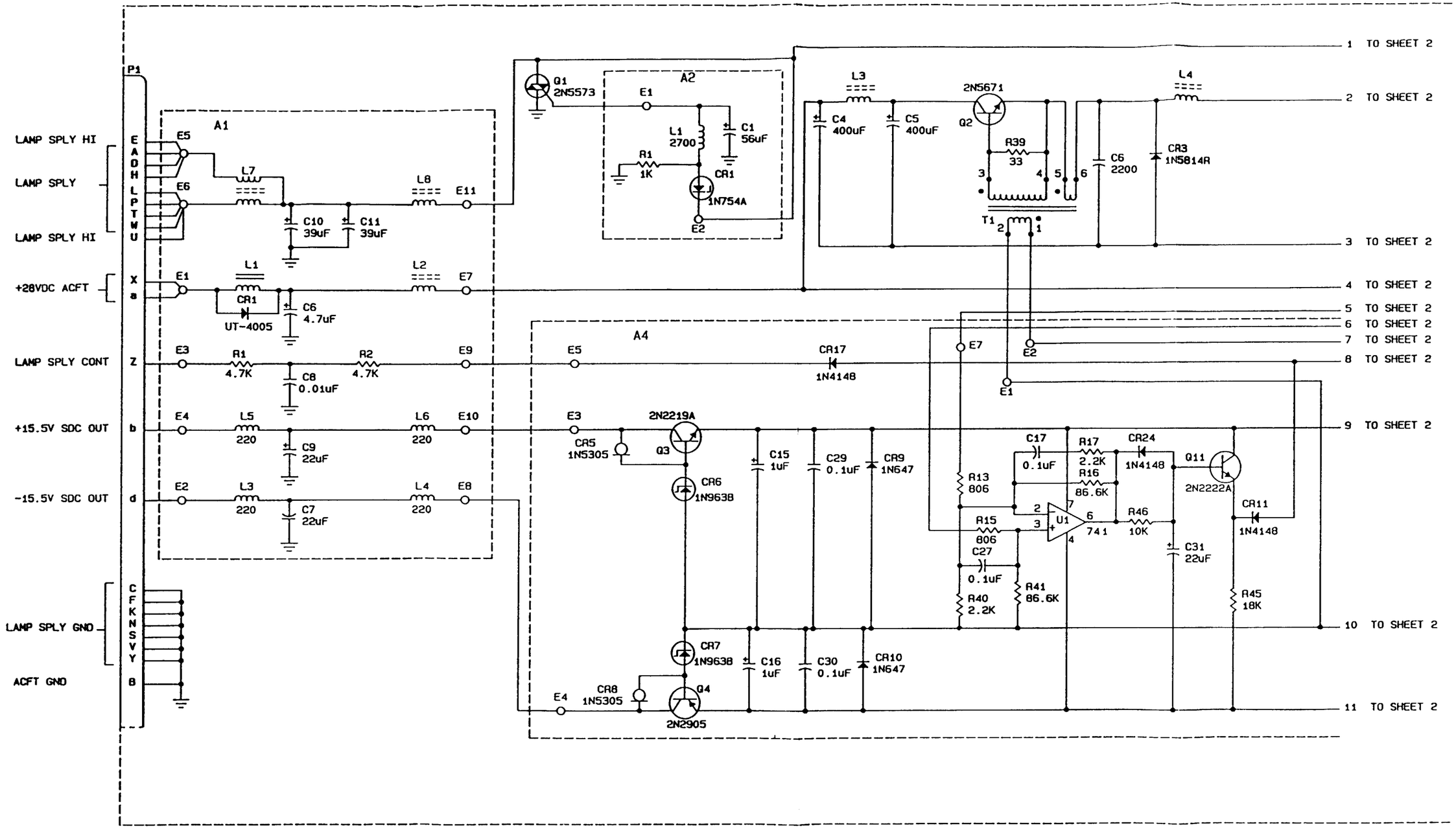


FO-7. Logic Power Supply A3, Schematic Diagram



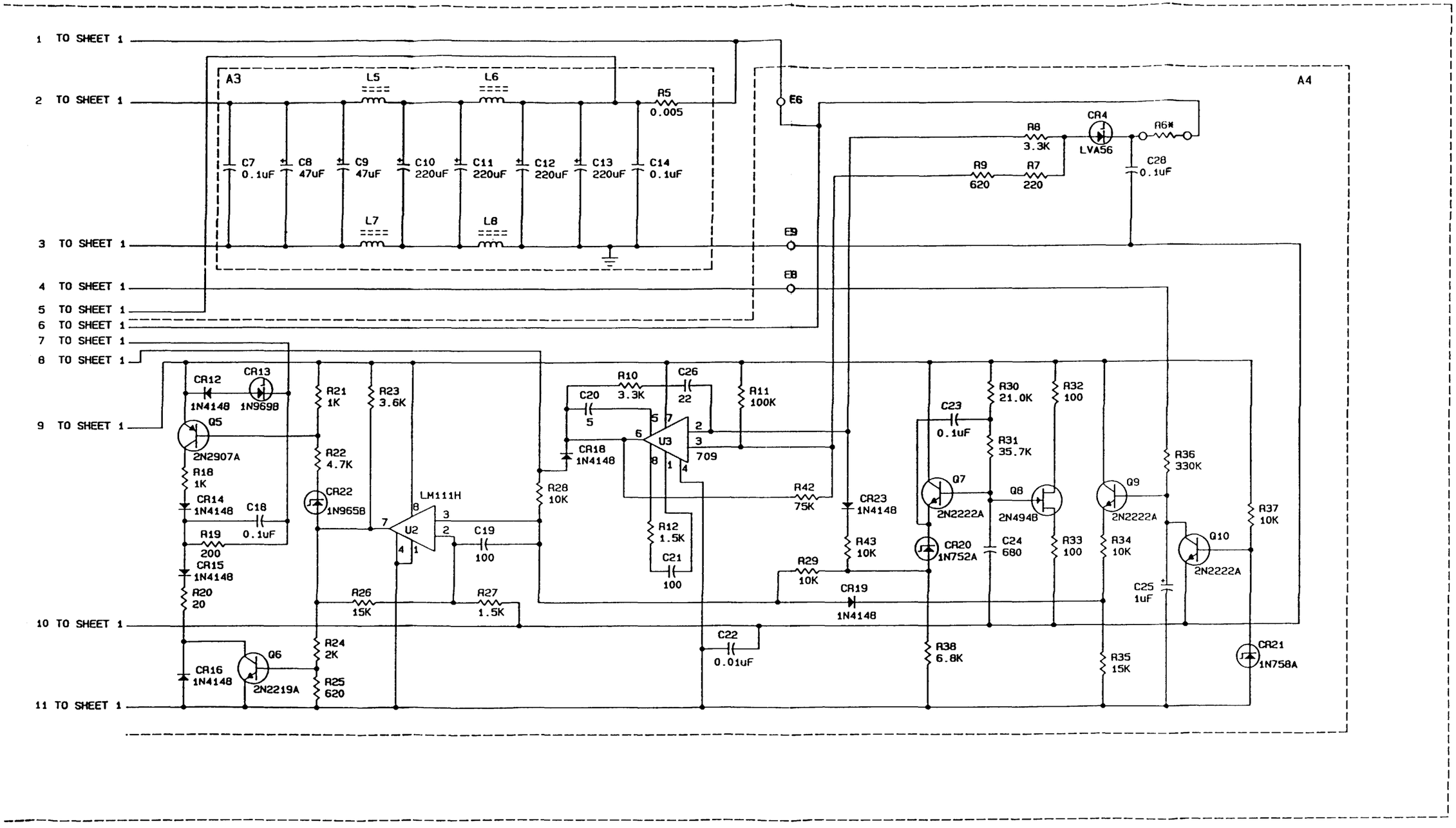
s69500(B)

FO-8. Test Set Regulator Board A4, Schematic Diagram



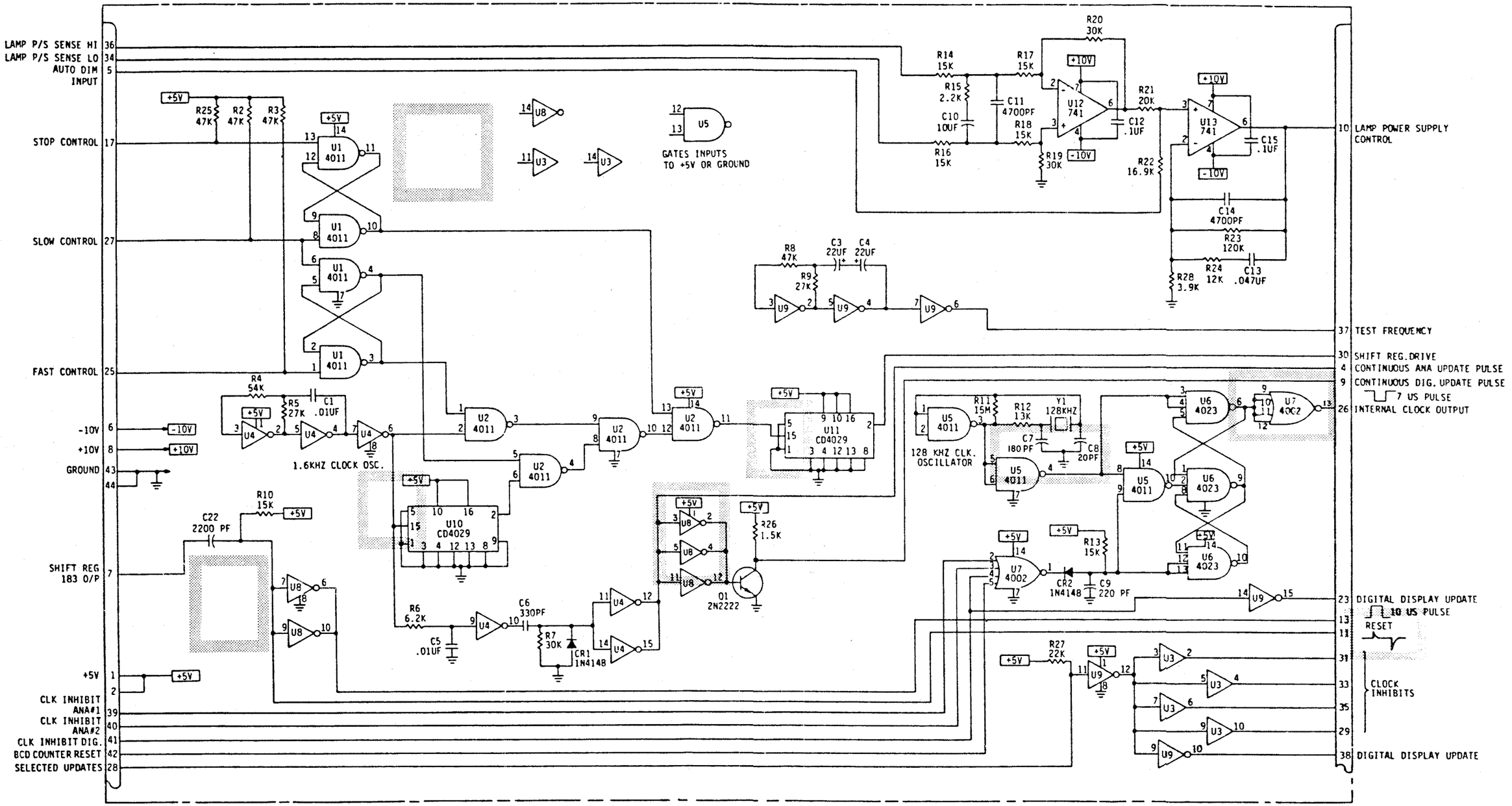
90922-1

FO-9. Lamp Power Supply A2, Schematic Diagram (Sheet 1 of 2)



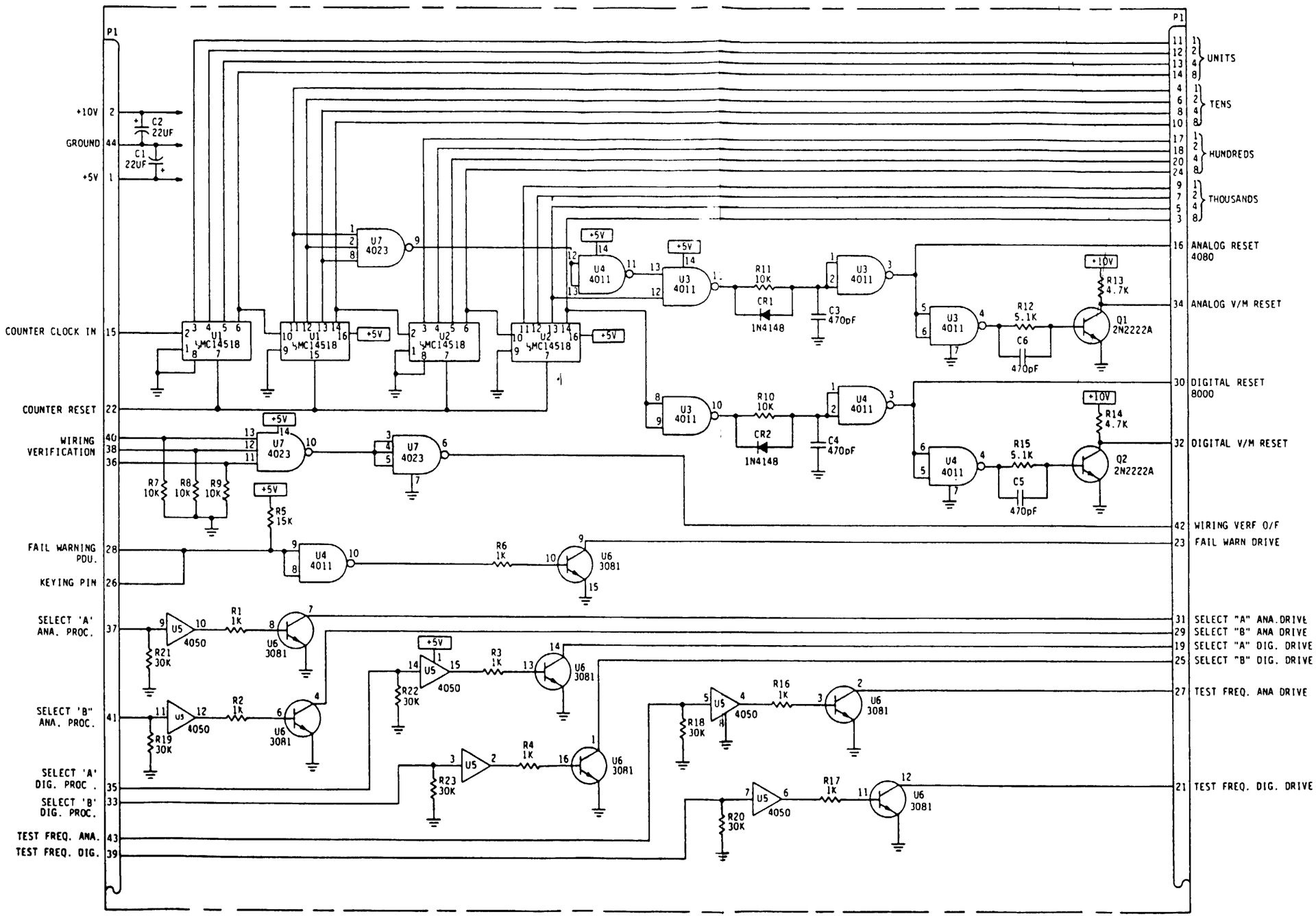
90922-2

FO-9. Lamp Power Supply A2, Schematic Diagram (Sheet 2 of 2)

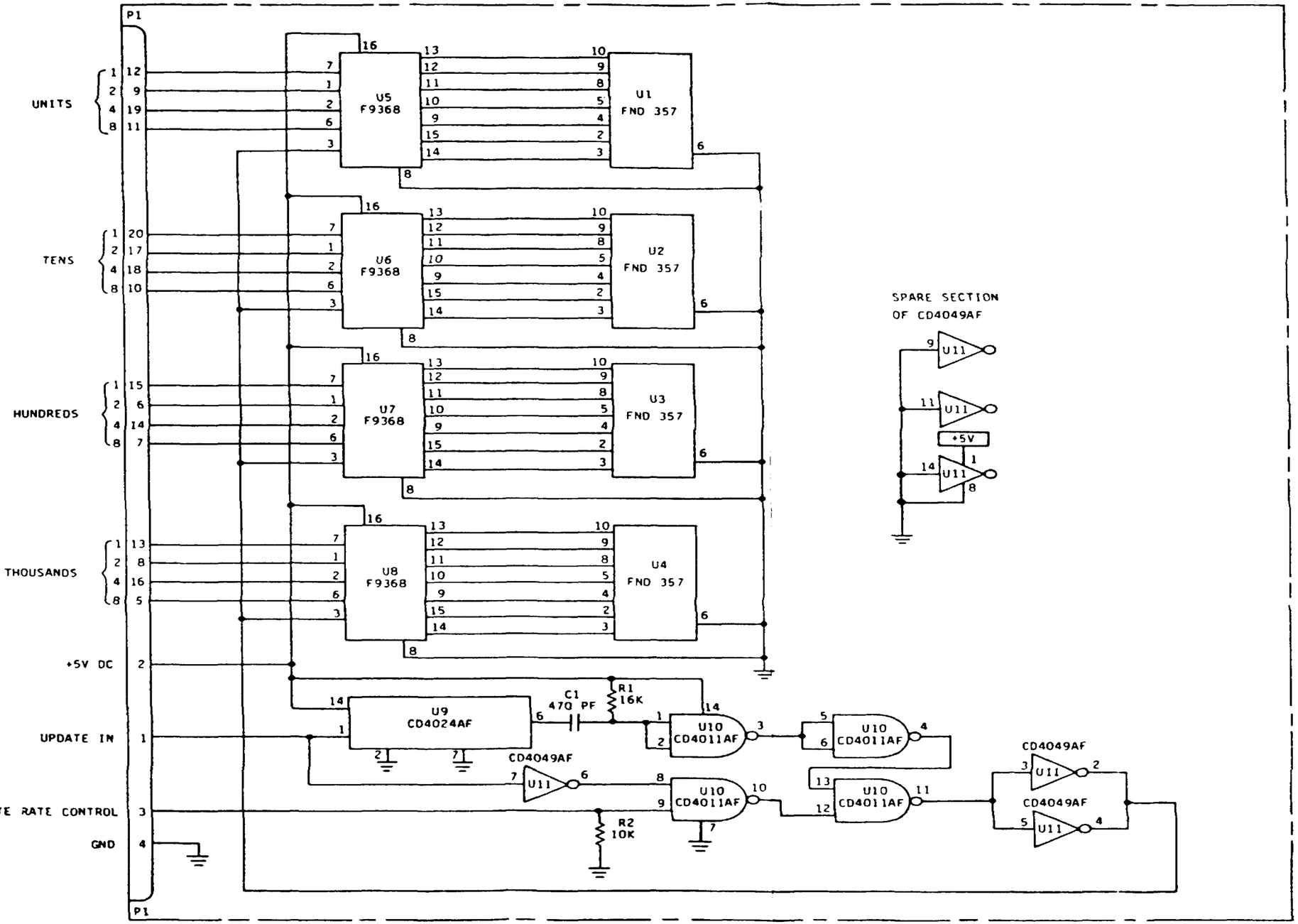


S 69503 (B)

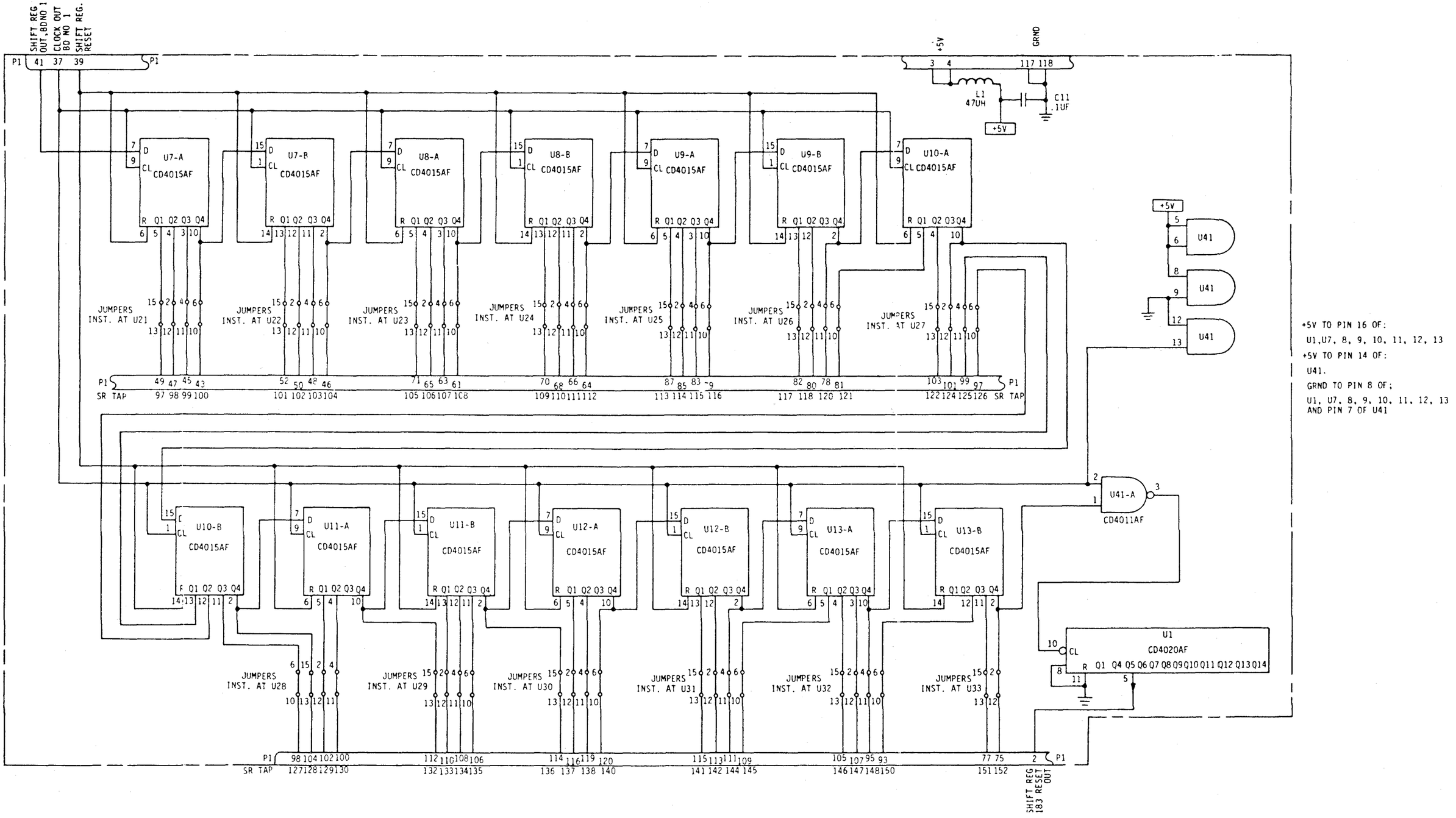
FO-10. Test Set Oscillator Control Board A6, Schematic Diagram



FO-11. Test Set BCD Counter Board A5, Schematic Diagram

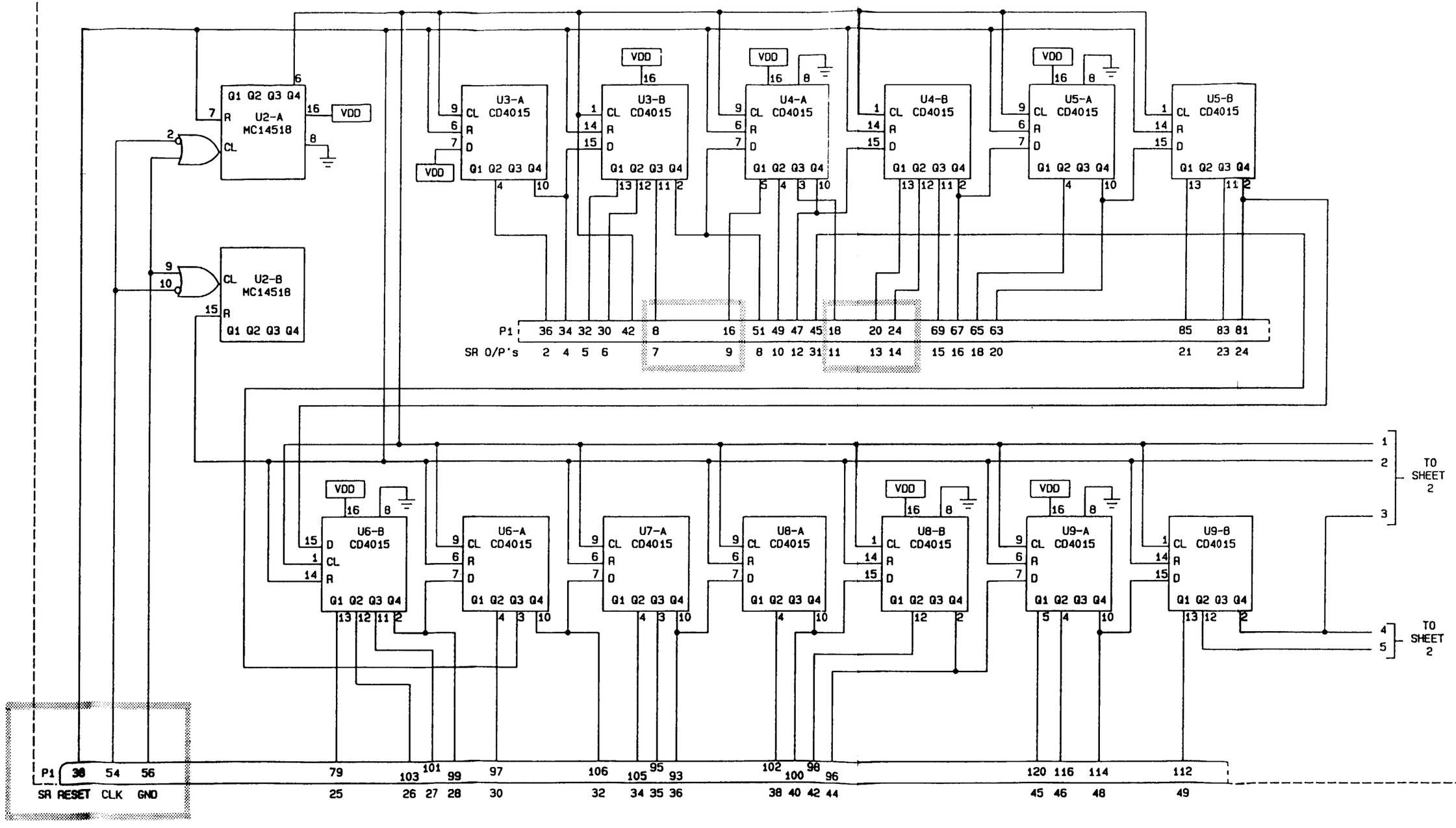


FO-12. Test Set Digital Display Board A12, Schematic Diagram



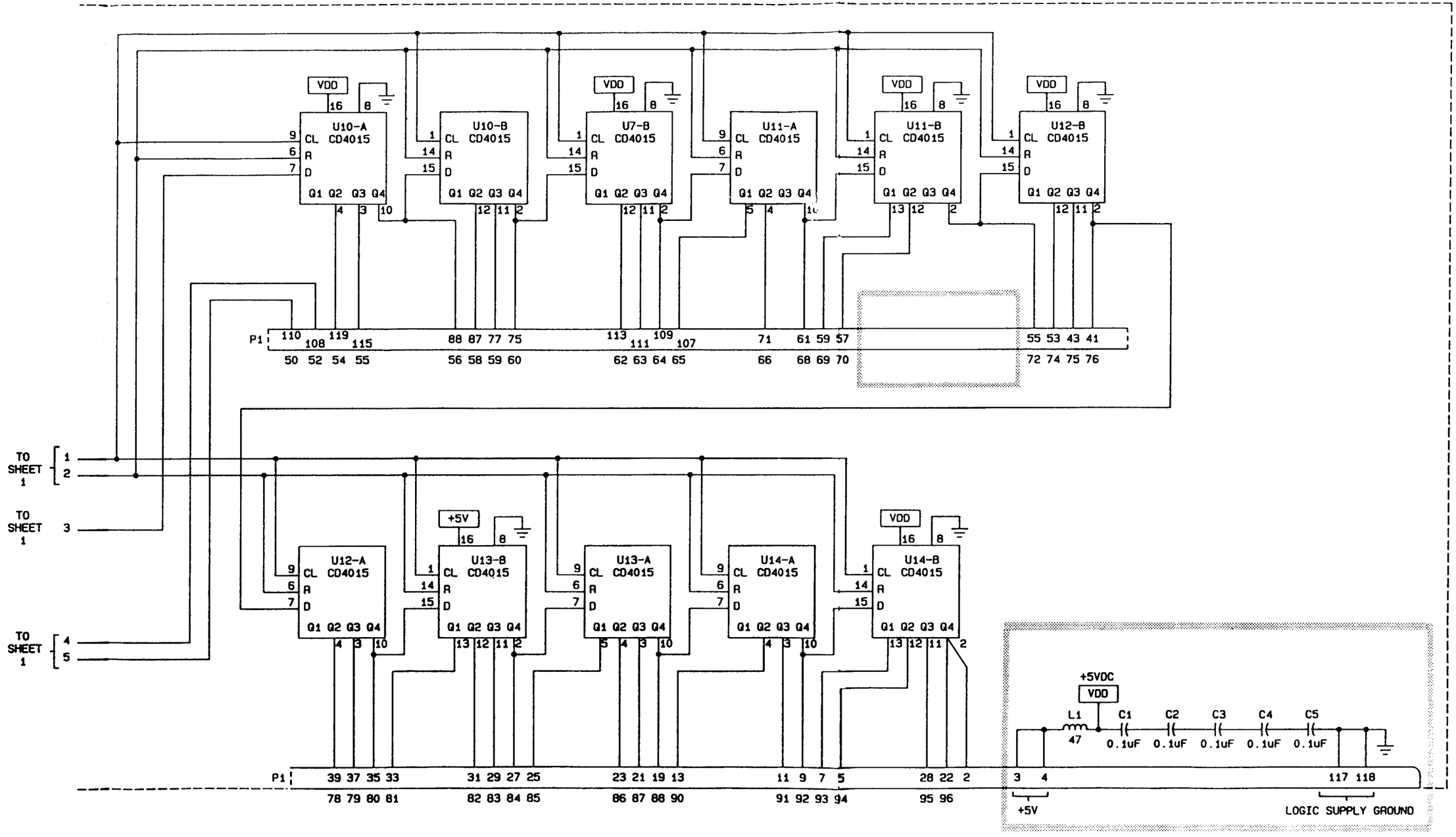
+5V TO PIN 16 OF:
U1,U7, 8, 9, 10, 11, 12, 13
+5V TO PIN 14 OF:
U41.
GRND TO PIN 8 OF;
U1, U7, 8, 9, 10, 11, 12, 13 AND PIN 7 OF U41

FO-13. Test Set Analog Processor No. 2 A10, Schematic Diagram



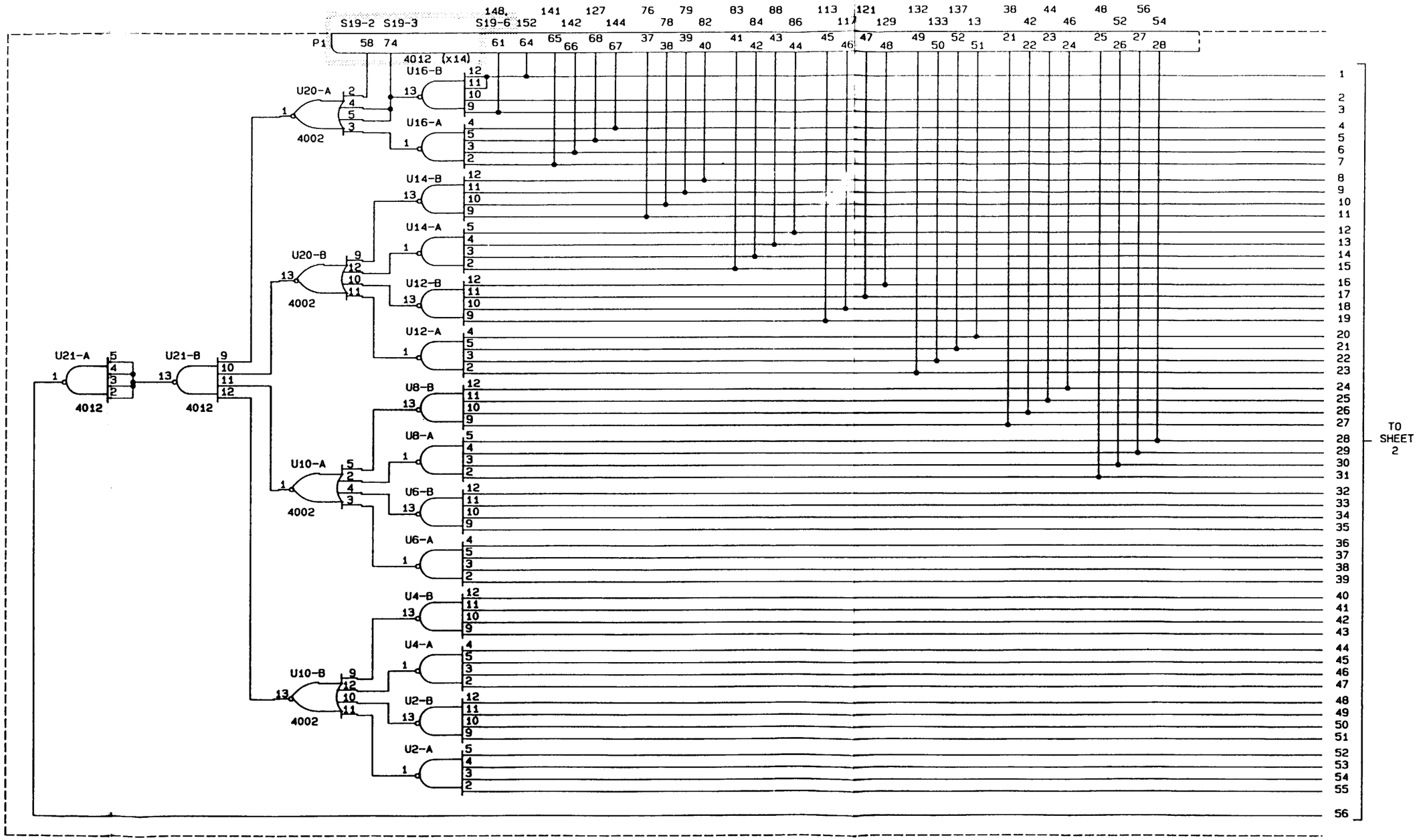
90924-1

FO-14. Test Set Analog Processor No. 1 A9, Schematic Diagram (Sheet 1 of 2)



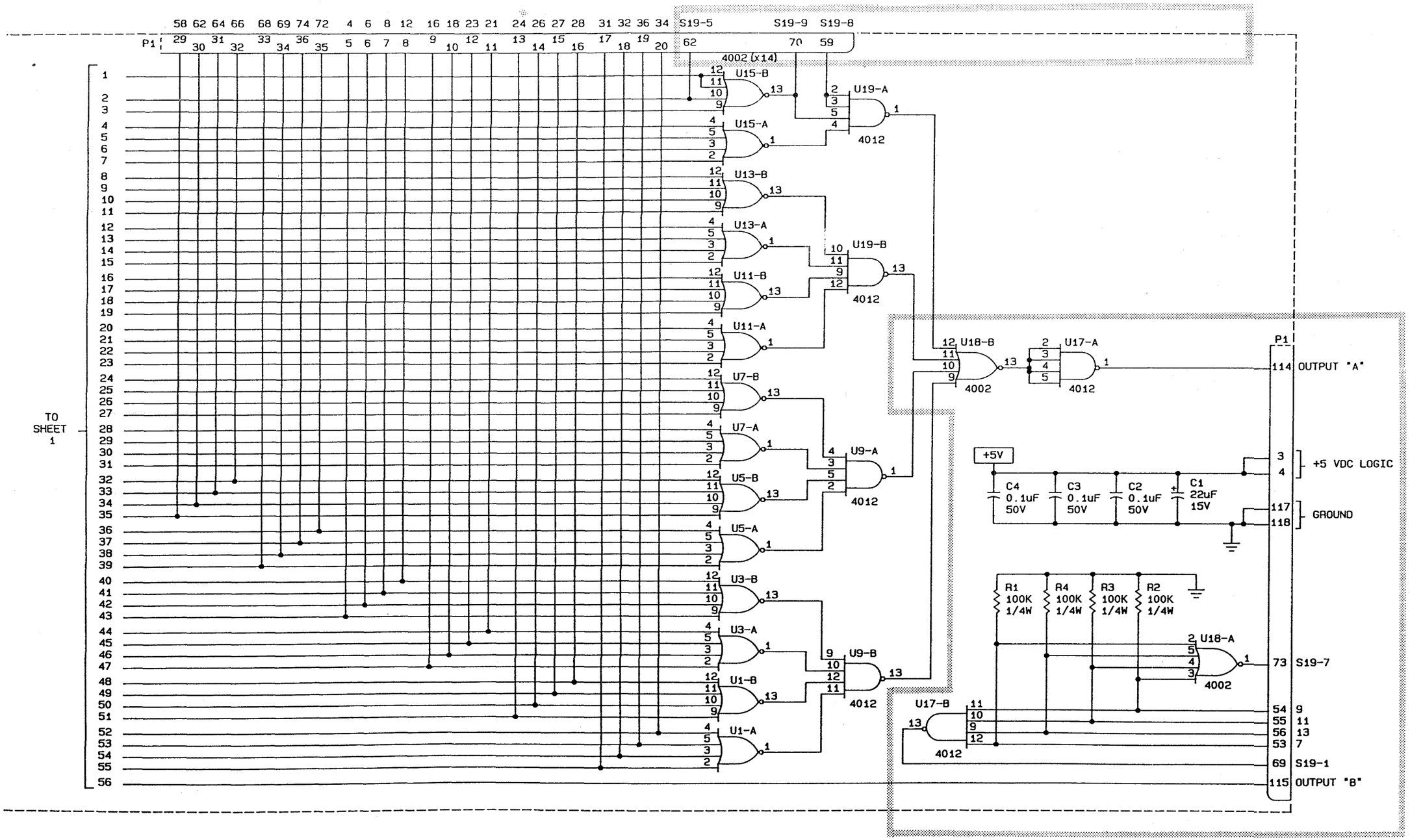
90924-2

FO-14. Test Set Analog Processor No. 1 A9, Schematic Diagram (Sheet 2 of 2)



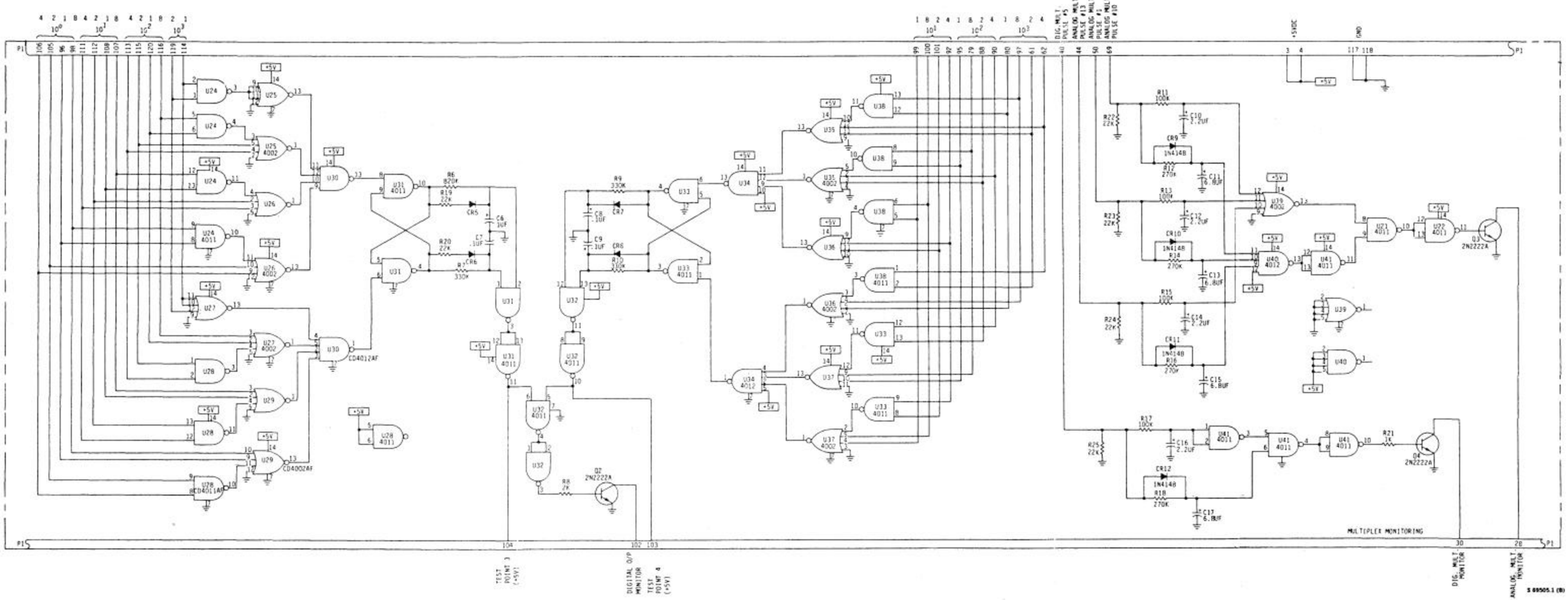
90925-1

FO-15. Test Set Monitor No. 1 A7, Schematic Diagram (Sheet 1 of 2)

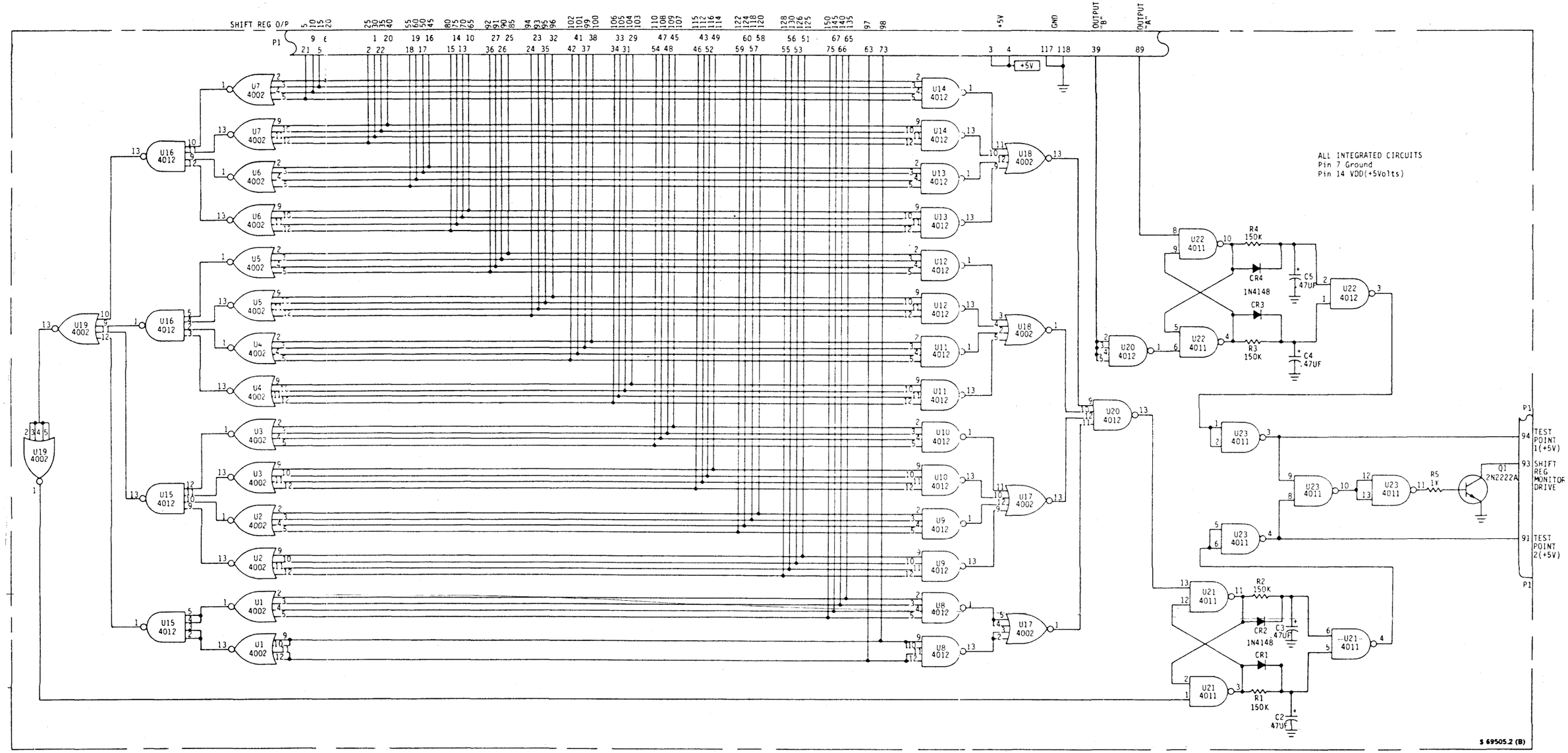


90925-2

FO-15. Test Set Monitor No. 1 A7, Schematic Diagram (Sheet 2 of 2)



FO-16. Test Monitor No. 2 A8, Schematic Diagram (Sheet 1 of 2)



FO-16. Test Monitor No. 2 A8, Schematic Diagram (Sheet 2 of 2)

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters =2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.461	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C