TO: ALL HOLDERS OF GENERATOR DRIVE AND STANDBY POWER MODULE ASSEMBLY P5-5 OVERHAUL MANUAL, 31-10-05

REVISION NO. 5, DATED DEC 5/93

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D&O	D/Assy	Cleaning	Insp/Chk	Repair	Assy	F/C	Test	T/Shooting	S/Tools	Storage	IPL	L/Overhaul
Changed pin P2-3 on A2 PCA to read pin P2-8 instead, on Schematic Diagram Fig. 7A (Sheet 3) for 69-76472-4, -5, -6									X				
Added optional printed circuit assembly P/N 69-54338-7 (A3) to IPL Fig. 8 (Item 17A) and IPL Fig. 9 (Item 85A)												X	

GENERATOR DRIVE AND STANDBY POWER MODULE ASSEMBLY P5-5

31-10-05

BOEING P/N 69-76472-1 thru -13

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
24-1056		MRR 3245-036	Sep 5/86

LIST OF EFFECTIVE PAGES

* Indicates pages revised, added or deleted in latest revision
F Indicates foldout pages - print one side only

	PAGE	DATE		PAGE	DATE		PAGE	DATE
	31-10-05			F 39	Dec 5/86			
	T-1	Dec 5/86		40	BLANK			
	T-2	BLANK		41	Jun 5/92			
*	LEP-1	Dec 5/93		42	BLANK			
	LEP-2	BLANK		43	BLANK			
	T/C-1	Jun 5/92		44	Dec 5/86			
	T/C-2	BLANK		F 45	Dec 5/86			
	1	Sep 5/86		46	BLANK			
	2	Sep 5/86		47	Dec 5/86			
	3	Sep 5/86		48	Dec 5/86			
	4	Dec 5/86	*	49	Dec 5/93			
	5	Dec 5/86		50	Dec 5/86			
	6	Dec 5/86	*	51	Dec 5/93			
	7	Dec 5/88		52	BLANK			
	8	Dec 5/86		53	Dec 5/86			
	9	Dec 5/86		54	Dec 5/86			
	10	Dec 5/87		55	Dec 5/86			
	11	Dec 5/86	*	56	Dec 5/93			
	12	Dec 5/86		57	Dec 5/86			
	13	Dec 5/86	*	58	Dec 5/93			
	14	Dec 5/86		59	Dec 5/86			
	15	Dec 5/86		60	BLANK			
	16	Dec 5/86						
	17	Dec 5/86						
	18	BLANK						
	19	Jun 5/92						
	20	BLANK						
	21	BLANK						
	22	Dec 5/87						
F	23	Dec 5/87						
	24	BLANK						
	25	Jun 5/92						
	26	BLANK						
	27	Dec 5/86						
	28	BLANK						
	29	BLANK						
*	30	Dec 5/93						
F	31	Dec 5/86						
	32	BLANK						
	33	Jun 5/92						
	34	BLANK						
	35	Dec 5/86						
	36	BLANK						
	37	BLANK						
	38	Dec 5/86						

TABLE OF CONTENTS

*[1] Use applicable procedures in 20-11-04 and standard industry practices.

*[2] Special instructions not required.

GENERATOR DRIVE AND STANDBY POWER MODULE ASSEMBLY P5-5

1. DESCRIPTION AND OPERATION

A. The generator drive and standby power module assembly consists of switches, indicator lights, and printed circuit assemblies mounted on support plates that are attached to the baseplate along with a rear mounted connector to mate with the airplane wire bundle. Six quick disconnect studs are provided to mount the module on the captain's and first officer's forward overhead instrument panel.

B. The module assembly controls the performance of the main power generators. Indicator lights on the module assembly alert the crew of generator drive low oil pressure and high oil temperature. Switches are provided to disconnect the generators from the line and to convert to a standby power system in the event of a complete loss of AC power.

C. Functional Description (Fig. 1)

(1) Indicator Lamps

(a) Indicator lamps L1 thru L4 terminal number 4 are grounded from pin P4-10. Voltage of +28 volts dc is applied at terminal number 1 from P4-21 and P5-51, L1 thru L4 will illuminate individually when pressed. The number 3 terminals of L1 thru L4 may be connected to ground through the external master test switch connected at pin P4-3 to illuminate them all at once. The lamps serve their indicator function when the terminal number 2 are grounded.

(b) Indicator lamp L5 terminal number 2 is grounded from P5-28. Voltage of +28 volts dc is applied at terminal number 4 from P5-13, L5 will illuminate when pressed. Terminal number 3 may be connected to +28 volts dc through the external master test switch connected at pin P5-12 to illuminate L5. The lamp serve its indicator function when +28 volts dc is applied to terminal number 1.

(2) The external master caution indicator is connected at pin P5-41. Voltage of +28 volts dc is applied at pin P5-13 and ground is connected at pin P4-10. The master caution indicator is illuminated by completing a ground path from pin P5-41 through printed circuit assembly A1 to pin P4-10. (Refer to 31-36-05 for A1 operation.)

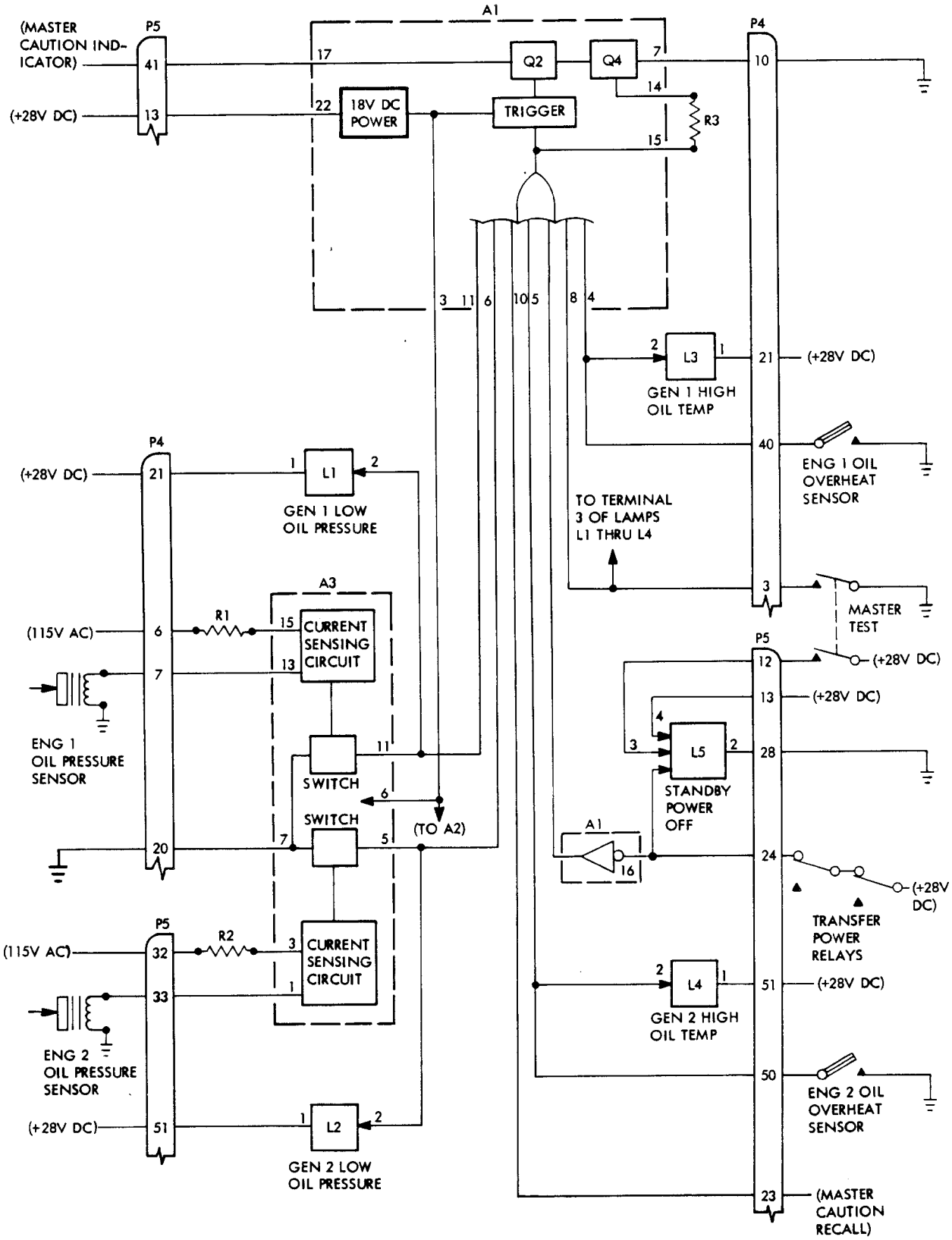
(a) Master Caution, L1 and L2 Indicators

1) Pin P4-20 is grounded, 115 vac is applied to pins P4-6 and P5-32, and the engine 1 and 2 oil pressure sensors are connected to pins P4-7 and P5-33, respectively. If either of the pressure sensors sense low oil pressure, they reduce the impedance to the printed circuit assembly A3. The A3 current sensing circuit senses an increase in current and A3 operates to apply a ground to L1 or L2 and A1. L1 or L2 and the external master caution indicator are illuminated. (Refer to 31-10-70 for A3 operation.)

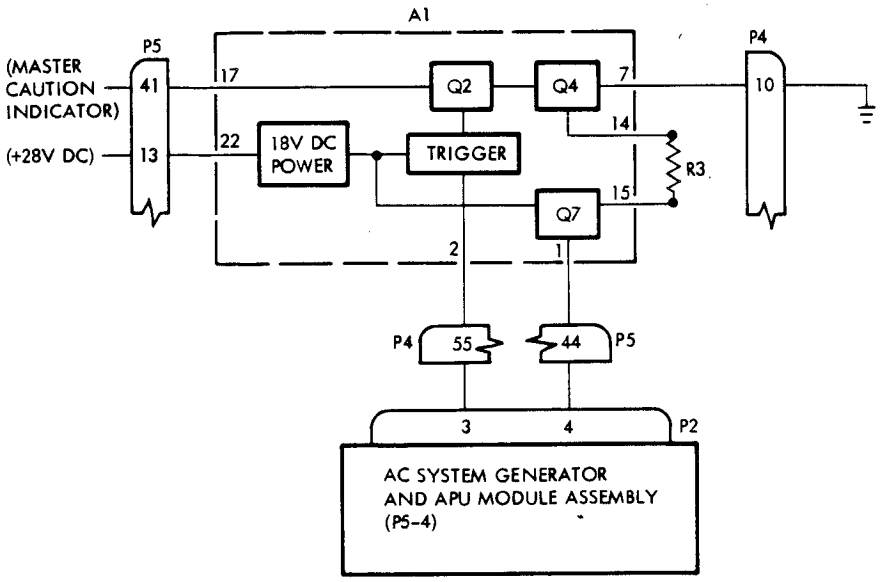
(b) Master Caution, L3, L4, and L5 indicators

1) If pins P4-40 or P5-50 are grounded through the engine 1 or 2 overheat sensors, respectively, lamps L3 or L4, and the master caution indicator will illuminate. If +28 volts dc is applied (through the transfer power relays) to pin P5-24, lamp L5 and the master caution indicator will illuminate.

(c) The ac system generator and APU module assembly (P5-4) supplies a ground input to pin P5-44 and an input pulse to pin P4-55 to illuminate the master caution indicator (Fig. 2). (Refer to 31-36-30 for P5-4 operation.)



Master Caution, L1, L2, L3, L4, and L5
Indicator Diagram
Figure 1



Master Caution Indicator Diagram
Figure 2

(3) Master Caution Recall (Fig. 2)

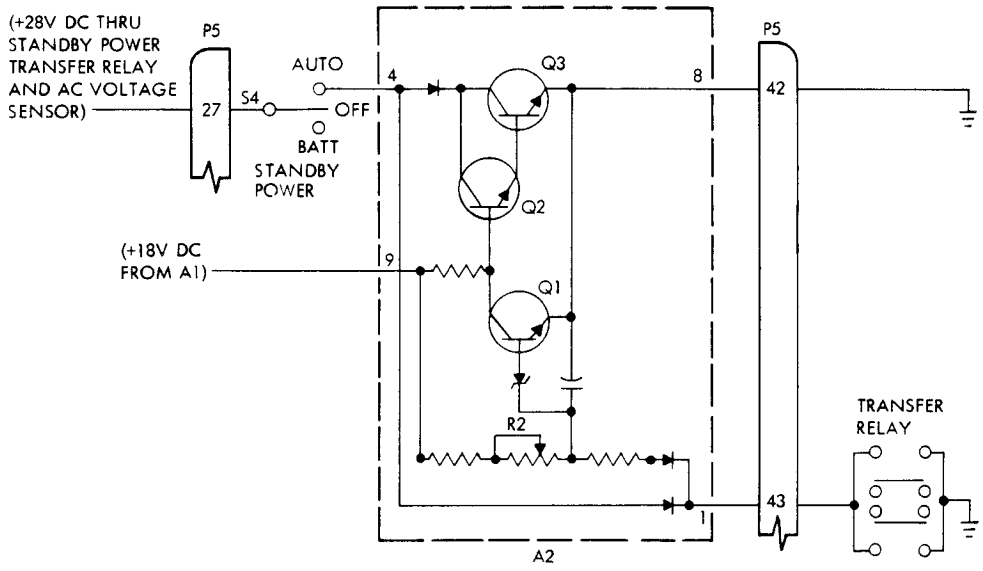
(a) The master caution indicator, when illuminated, may be extinguished by opening the ground path from pin P5-41 through A1 to pin P4-10. At a later time, activating the external master caution recall, which momentarily grounds pin P5-23, will illuminate the master caution indicator provided one or more of the inputs discussed in paragraph 3.C.(1), 3.C.(2) or the ground input discussed in paragraph 3.C.(3) are present.

(4) Master Test

(a) Activating master test illuminates lamps L1 through L5 and the master caution indicator by providing a ground input to terminal number 3 of lamps L1 through L4, supplying +28 volts dc to terminal number 3 of lamp L5 and completing the ground path through A1 for the master caution indicator.

(5) Standby Power Transfer Time Delay (Fig. 2A).

(a) On those assemblies with printed circuit assembly A2, the circuit operates as a time delay in the standby power transfer circuit. (Refer to 31-10-69, for description of A2 operation.) Pin P5-42 is grounded and +18 volts dc is supplied to A2 from A1. With pin P5-43 grounded through an external transfer relay, S4 in AUTO, and +28 volts dc supplied (through the external standby power transfer relay and ac voltage sensor) to pin P5-27, the A2 circuit is activated, supplying a ground path from pin P5-27 through A2 to pin P5-42. Removing ground from pin P5-43 causes the A2 circuit to open the ground path from pin P5-27 to P5-42 after a delay of 225 to 600 milliseconds. The time delay prevents nuisance transfers of the standby buses during switching of the transfer relay.



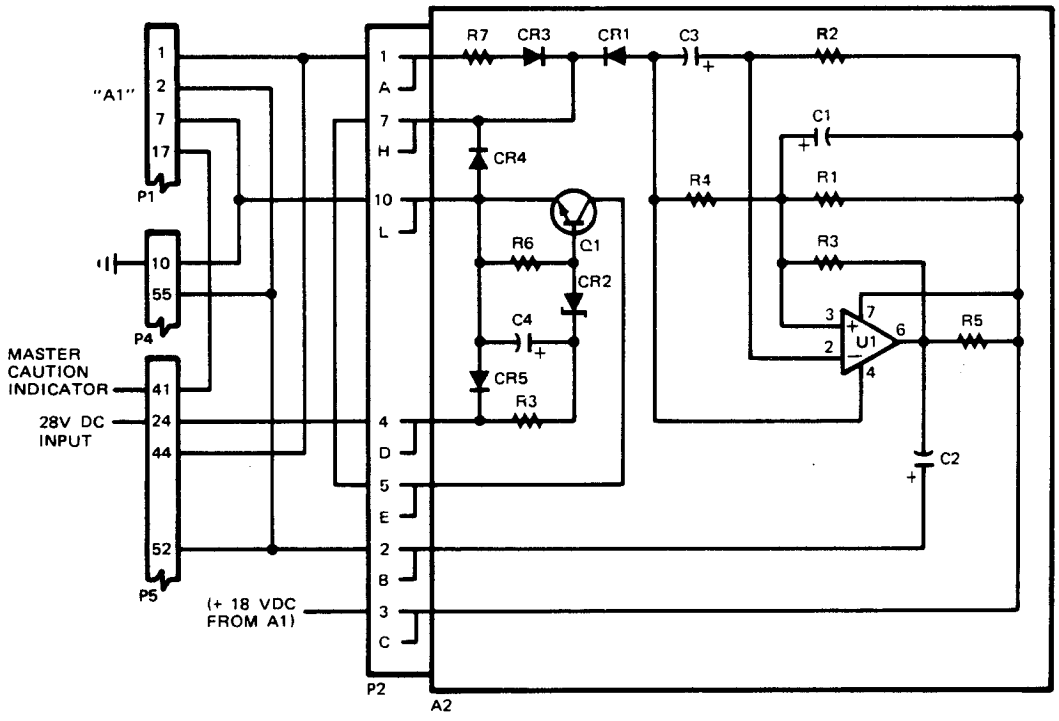
Standby Power Transfer Time Delay
Figure 2A

(6) Master Caution 1 Second Time Delay with Power and Ground Seeking Circuits (Fig. 2B).

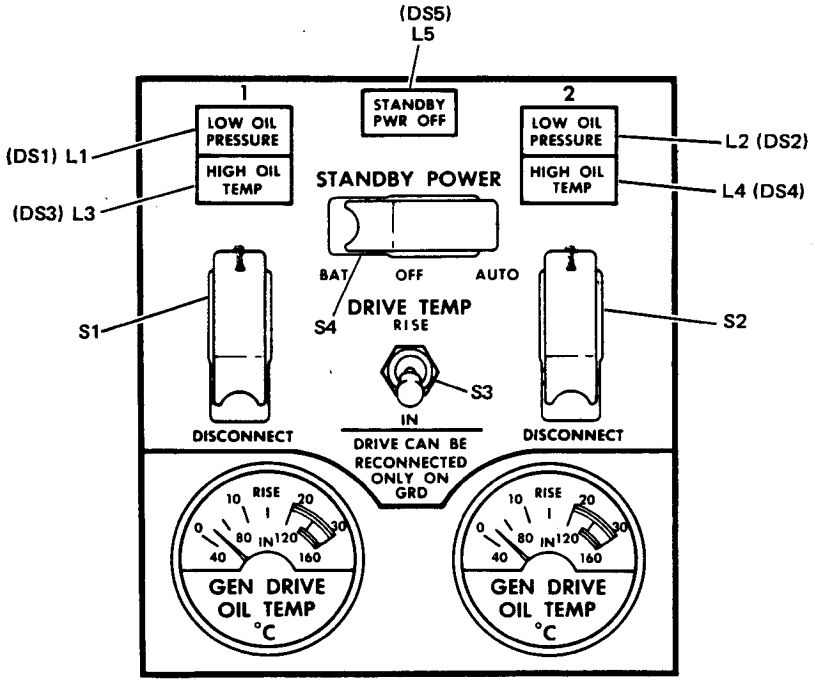
(a) On those assemblies with printed circuit assembly A2 (69-71571-3), the circuit operates as a master caution 1 second time delay with power or ground seeking inputs (refer to 33-10-06).

(b) In the ground seeking circuit pin P4-10 is grounded and +18 volts dc is supplied to A2 from A1, and pin P2-7 (A2) is the ground seeking input. When pin P2-7 is grounded, amplifier U1's output is initially high and in approximately 1 second C3 charges to a voltage which is higher than the voltage at U1-3, then U1 switches low and supplies a master caution negative pulse at pin P2-2. Pin P2-1 has a ground path thru R7, CR3 for the master caution holding circuit.

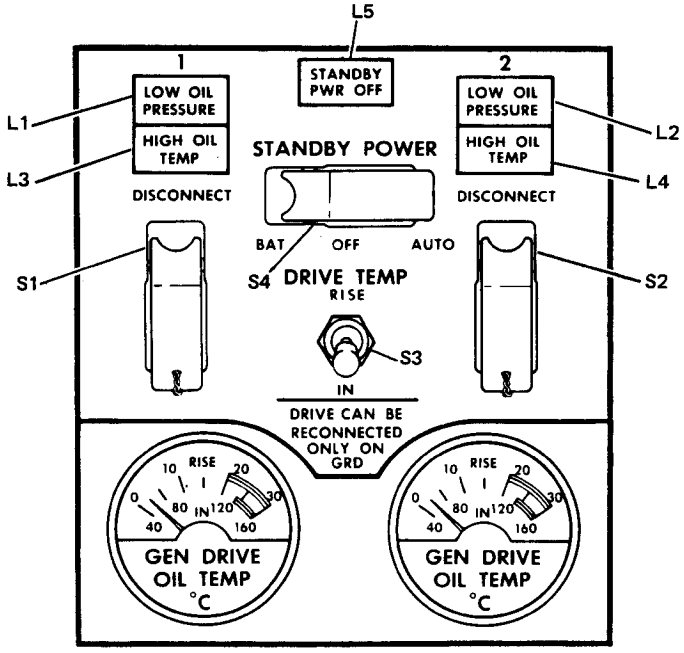
(c) The preceding circuit is converted to a power seeking circuit by connecting pins P2-5 and P2-7. Then when power is applied at pin P2-4, Q1 turns on supplying the ground path previously obtained by grounding pin P2-7.



Master Caution 1 Second Time Delay Circuit
Figure 2B



69–76472–1



69–76472–2, –3

2. REPAIR

A. All repair can be accomplished with standard industry practices and instructions contained in 20-11-04 except as noted in paragraphs below:

(1) If keying plugs (23, Fig. 8) require replacement, insert as follows:

NOTE: On assemblies 69-76472-1, -2, -3, -13, reference designators P1 and P3 have been replaced by XA1 and XA3.

(a) Connector P1: Install keying plug into contact position 9.

(b) Connector P2: Install keying plug into contact position 13.

(c) Connector P3: Install keying plug into contact position 10.

(2) If screws (29, 44, Fig. 1101) are replaced, coat threaded areas with Loctite primer Grade T, and nutlock compound 74 (Loctite Corporation, 705 North Mountain Road, Newington, Connecticut 06111) per manufacturer's instructions.

3. TESTING

A. Test Equipment (69-76472-1, -2, -3)

(1) Power Supplies

(a) 28 volts dc

(b) 115 volts ac, 400Hz

(2) Test lamp (LA), 28 volts dc, 440 mA

(3) Capacitor, 1uf (C1)

(4) Switches

(a) SPST switch, 11 required (S2 thru S11)

(b) Pushbutton switch, normally closed (S1)

(5) Connectors

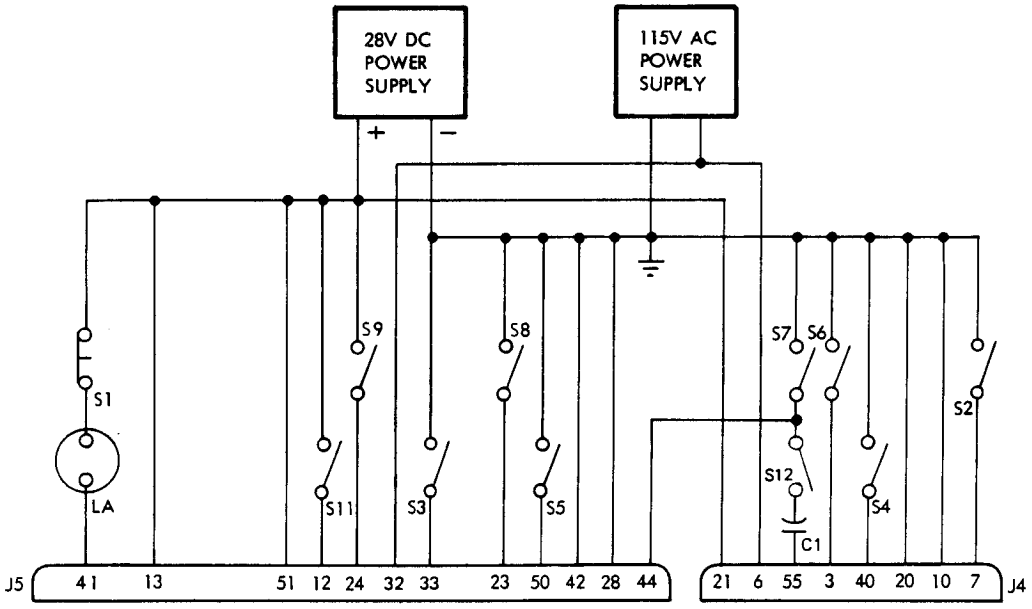
(a) BACC45FT22-55S (J4) mates with P4

(b) BACC45FT22-55S6 (J5) mates with P5

B. Test Preparation

(1) Connect test setup shown in Fig. 4.

(2) Refer to Fig. 3 for component identification, Fig. 7 for schematic diagram



Test Setup, 69-76472-1, -2, -3
Figure 4

C. Functional Test (69-76472-1, -2, -3)

NOTE: On assembly 69-76472-3 use lamp designators DS1 through DS5 wherever L1 thru L5 appears in test.

(1) Connect test setup to module assembly, set test switches S2 through S12 to OFF, and turn on power supplies.

(2) Depress indicators L1 through L5. Each shall illuminate when pressed and extinguish when released.

(3) Set switches and verify lamp indications per Fig. 5.

(4) Set test switches and power supplies to OFF and disconnect test setup.

Test Step	Test Switch Position	Lamps Illuminated
1	S9 ON	L5 and LA
2	S6 ON	L1 thru L5, LA
3	S6 OFF	L5 and LA
4	S9 OFF	NONE
5	S11 ON	L5
6	S11 OFF	NONE
7	S2 ON	L1 and LA
8	S2 OFF	NONE
9	S3 ON	L2 and LA
10	S3 OFF	NONE
11	S4 ON	L3 and LA
12	S4 OFF	NONE
13	S5 ON	L4 and LA
14	S5 OFF	NONE
15	S12 ON	NONE
16	S7 ON	LA
17	S1 PRESSED	NONE
18	S1 RELEASED	NONE
19	S12 OFF	NONE
20	S8 ON	LA
21	S7, S8 OFF	NONE

(5) Verify continuity between pin P5-2 and center of power connector L6, and between pin P5-1 and chassis ground.

(6) Verify continuity or no continuity as specified in Fig. 6.

(7) Verify continuity between pins P5-19 and P4-34.

Test Step	Switch Position	Continuity		No Continuity	
		P4	P5	P4	P5
1	S1 OFF	52-53		51-50 51-53	
2	S1 ON	51-50 51-53		52-53	
3	S2 OFF		36-37		35-34 35-37
4	S2 ON		35-34 35-37		36-37
5	S3 RISE	39-34 32-33 32-35 37-38	16-18 16-55 17-19 20-39	39-37 39-38 32-36 33-36	16-38 18-38 17-20 17-39
6	S3 IN	32-36 39-37	16-38 17-20	32-35 39-34	16-55 17-19
7	S4 OFF				26-11 26-25 27-42
8	S4 AUTO		26-11 27-42		26-25
9	S4 BATT		26-25		26-11 27-42

D. Test Equipment (69-76472-4 thru -13)

(1) Power Supplies

(a) 28 volts dc

(b) 115 volts ac, 400 Hz

(2) Test Setup, consisting of the following items: (See Fig. 6A)

(a) Switches, SPST (11 required)

(b) Switch, pushbutton, N.C.

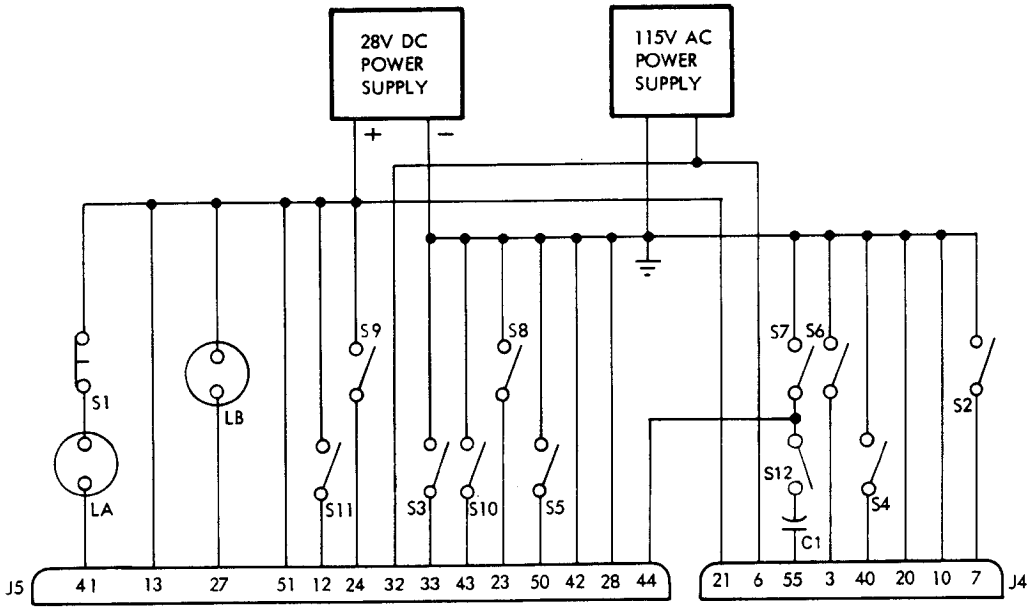
(c) Test Lamp (LB) 28 volts dc, 40 mA, 327 (General Electric Company, Lamp Division of Consumer Products Group, Nela Park, Cleveland, Ohio)

(d) Connectors, BACC45FT22-55S (J4) and BACC45FT22-55S6 (J5)

(e) Capacitor, 1 uf

(f) Oscilloscope, capable of measuring from 225 to 600 millisecond time intervals (69-76472-4, -5, -6, only).

(g) Test Lamp (LA), 28 volts dc, 440 mA



Test Setup, 69-76472-4 thru -13
Figure 6A

E. Functional Test (69-76472-4 thru -13)

NOTE: On assemblies 69-76472-13, use lamp designators DS1 thru DS5 wherever L1 thru L5 appears in test.

(1) Connect test setup to module assembly, set test switches S2 through S12 to OFF, and turn on power supplies.

(2) Depress indicators L1 thru L5. Each shall illuminate when pressed and extinguish when released.

(3) Set switches and verify lamp indications per Fig. 6B.

(4) Set test switches and power supplies to OFF and disconnect test setup.

	Test Switch		Module Switch		Lamp Indications
Step	Number	Position	Number	Position	Illuminated
1	S1, S10	ON	S4	OFF	NONE
1a	S9	ON			L5 and LA
2	S6	ON			L1 thru L5, LA
3	S6	OFF			L5 and LA
4	S9	OFF			NONE
5	S11	ON			L5
6	S11	OFF			NONE
7	S2	ON			L1 and LA
8	S2	OFF			NONE
9	S3	ON			L2 and LA
10	S3	OFF			NONE
11	S4	ON			L3 and LA
12	S4	OFF			NONE
13	S5	ON			L4 and LA
14	S5	OFF			NONE
14A	S12	ON			NONE
15	S7	ON			LA
16	S1	PRESSED			NONE
17	S1	RELEASED			NONE
18	S8	ON			LA
19	S7, S8	OFF			NONE
20			S4	AUTO	LB
21	S10	OFF			LB *[1]
22			S4	OFF	NONE

*[1] On 69-76472-4, -5, -6 lamp LB shall extinguish within 225 to 600 milliseconds after setting S10 to OFF. Connect vertical lead "V" of oscilloscope to J5-27. Adjust vertical sensitivity of oscilloscope for a 28-volt dc signal and set the sweep frequency to provide for a 225 to 600 millisecond pulse. Pin J5-43 may be used as an external trigger.

(5) Verify continuity between pin P5-2 and center of power connector L6, and between pin P5-1 and chassis ground.

(6) Verify continuity or no continuity as specified in Fig. 703.

(7) Verify continuity between pins P5-19 and P4-34.

Step	Switch	Position	Continuity		No Continuity	
			P4	P5	P4	P5
1	S1	OFF	52-53		51-50 51-53	
2	S1	ON	51-50 51-53		52-53	
3	S2	OFF		36-37		35-34 35-37
4	S2	ON		35-34 35-37		36-37
5 *[1]	S3	RISE	39-34 32-33 32-35 37-38	16-18 16-55 17-19 20-39	39-37 39-38 32-36 33-36	16-38 18-38 17-20 17-39
6 *[2]	S3	RISE	32-33 39-34 33-35	16-18 17-19 16-55	32-36 39-32	16-38 17-16
7 *[1]	S3	IN	32-36 39-37	16-38 17-20	32-35 39-34	16-55 17-19
8 *[2]	S3	OUT	39-33 36-33	16-17 16-38	39-34 33-35	16-55 17-19
9 *[3]	S4	AUTO		26-11		26-25
10 *[4]	S4	AUTO		26-11 27-42		26-25
11 *[3]	S4	BATT		26-25		26-11 27-43
12 *[4]	S4	BATT		26-25		26-11 27-42
13 *[3]	S4	OFF				26-11 26-25 27-43
14 *[4]	S4	OFF				26-11 26-25 27-42

*[1] 69-76472-4, -6, -7, -9, -10, -12, -13
*[2] 69-76472-5, -8, -11
*[3] 69-76472-4, -5, -6
*[4] 69-76472-7 thru -13

4. TROUBLE SHOOTING

A. Trouble shooting is keyed to the steps of the test procedures. Paragraph and step references are to that portion of TESTING wherein the fault specified could occur. The presumption is made that when a fault indication is encountered, the results of all previous steps were normal.

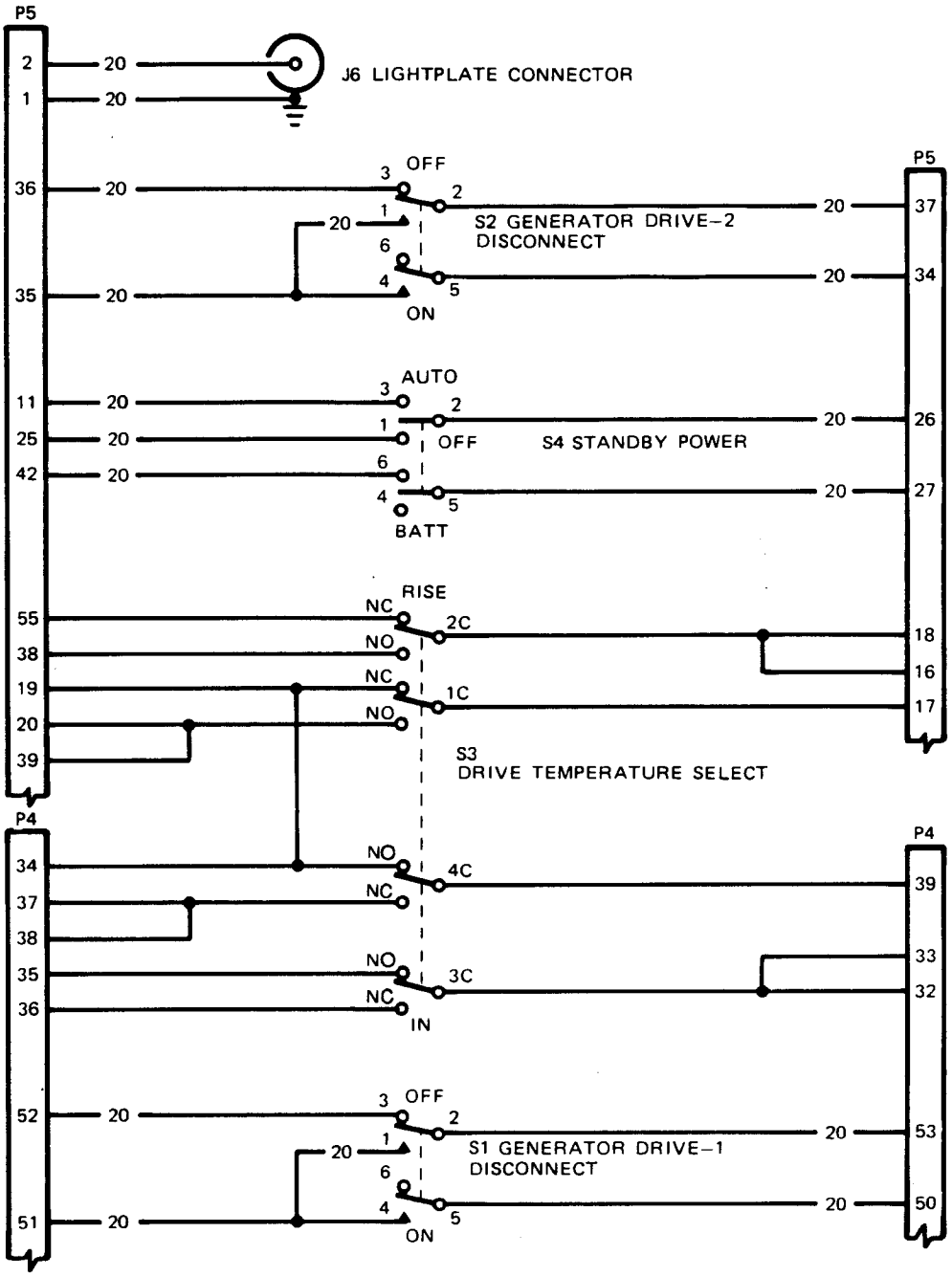
B. (69-76472-1, -2, -3) Whenever a fault has been isolated to a printed circuit assembly, the assembly must be repaired or replaced. Refer to 31-36-05 for A1 and 31-10-70 for A3.

Trouble	Possible Cause and Corrective Action
(1) Failure of test par. 3.C.	1, L2, L3, L4, or L5
(2) Failure of test par. 3.C.	
Step 1	A1, L5 or R3
Step 2	L1, L2, L3, L4, L5 or A1
Step 3	A1, L5, or R3
Step 5	L5
Step 7	R1, A1, or A3
Step 9	R2, A1, or A3
Step 11	L3 or A1
Step 13	L4 or A1
Step 15 thru 21	A1
(3) Failure of test par. 3.C.(5)	L6
(4) Failure of test par. 3.C.(6)	Switch noted in Fig. 6
(5) Failure of test par. 3.C.(7)	Incorrect wiring connection on S3

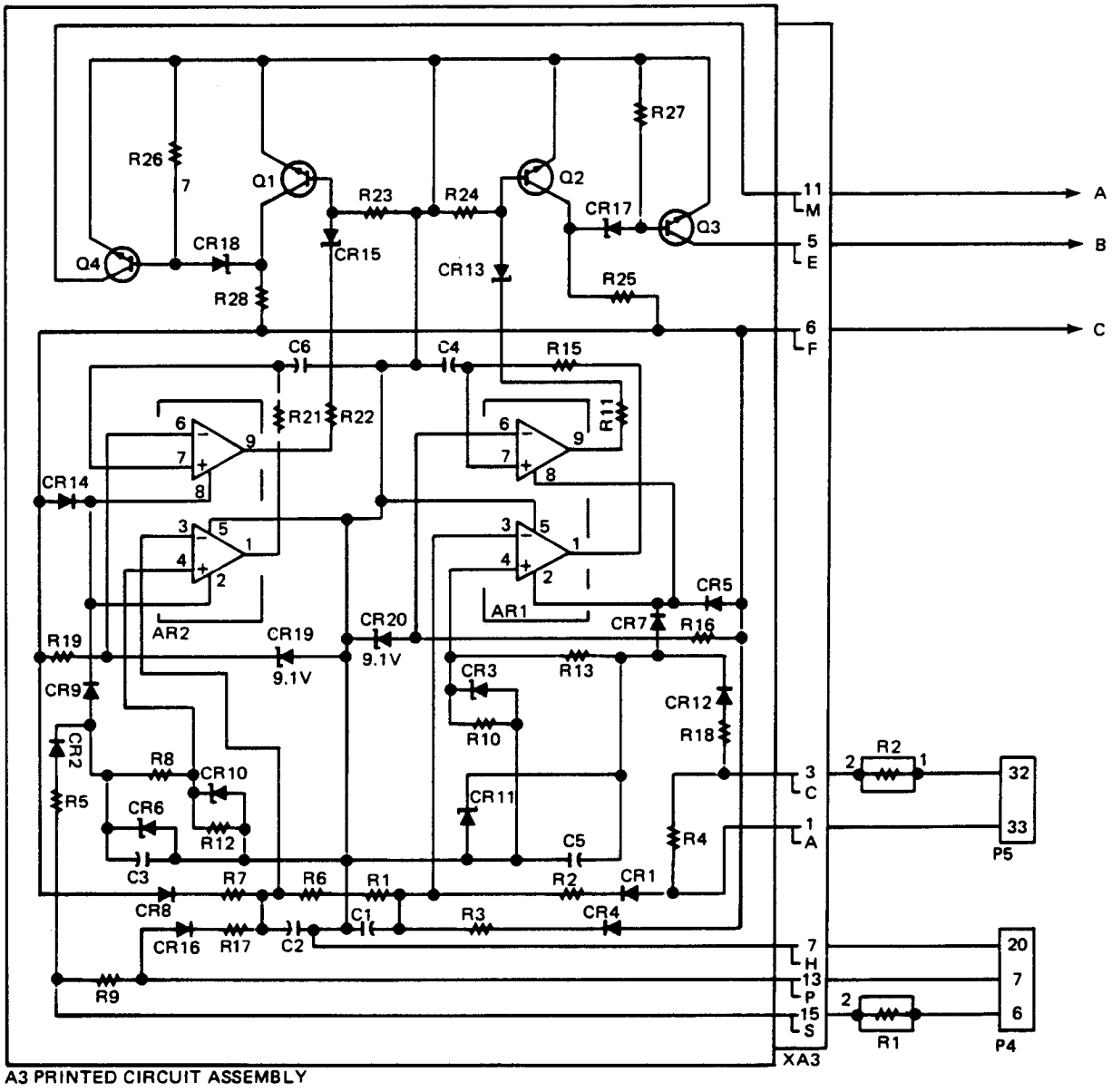
C. (69-76472-4 thru -13) Whenever a fault has been isolated to a printed circuit assembly, the assembly must be repaired or replaced. Refer to 31-36-05 for A1, 31-10-69 (for 69-76472-4, -5, -6 only) for A2, and 31-10-70 for A3.

Trouble	Possible Cause and Corrective Action
(1) Failure of test paragraph 3.E.	L1, L2, L3, L4, or L5
(2) Failure of test paragraph 3.E.	
Step 1	S4
Step 1a	L5, A2 or A1
Step 2	L1, L2, L3, L4, L5 or A1
Step 3	A1, R3, L5 or A2
Step 5	L5
Step 7	R1, A1, or A3
Step 9	R2, A1 or A3
Step 11	L3 or A1
Step 13	L4 or A1
Step 15, 16, 17, or 18	A1
Step 20	S4 or A2
Step 21	Calibrate A2. Refer to 31-10-69

	Trouble	Possible Cause and Corrective Action
(3)	Failure of test paragraph 3.E.(5)	L6
(4)	Failure of test paragraph 3.E.(6)	Switch noted in figure 703
(5)	Failure of test paragraph 3.E.(7)	Incorrect wiring connection on S3


P5
2
1
20
20
J6 LIGHTPLATE CONNECTOR
36
35
3
OFF
2
1
6
4
5
ON
S2 GENERATOR DRIVE-2
DISCONNECT
37
34
11
25
42
AUTO
OFF
BATT
S4 STANDBY POWER
26
27
55
38
19
20
39
RISE
NC
NO
2C
1C
S3
DRIVE TEMPERATURE SELECT
18
16
17
P4
34
37
38
35
36
4C
3C
IN
39
33
32
52
51
S1 GENERATOR DRIVE-1
DISCONNECT
53
50

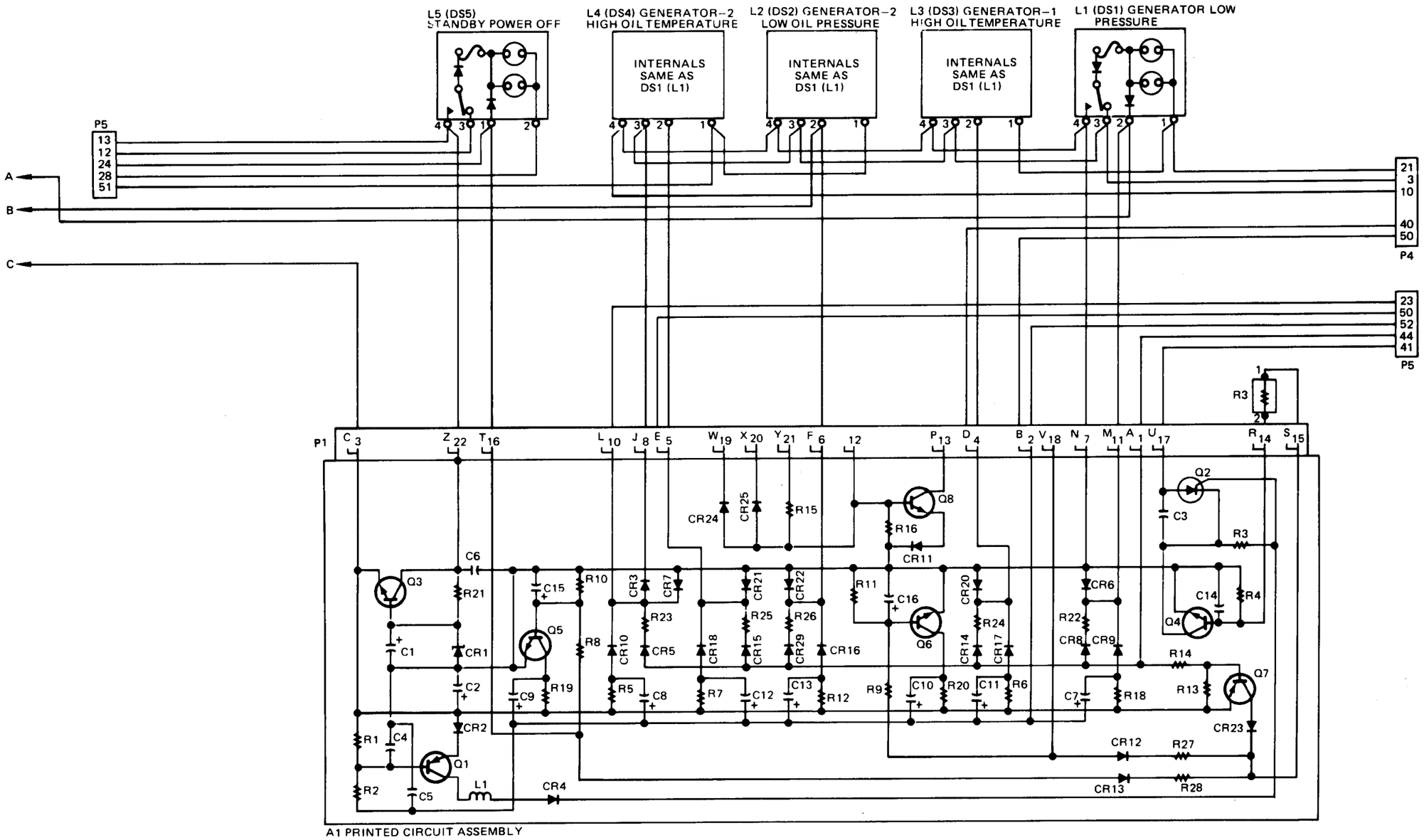
69–76472–1, –2, –3



A3 PRINTED CIRCUIT ASSEMBLY

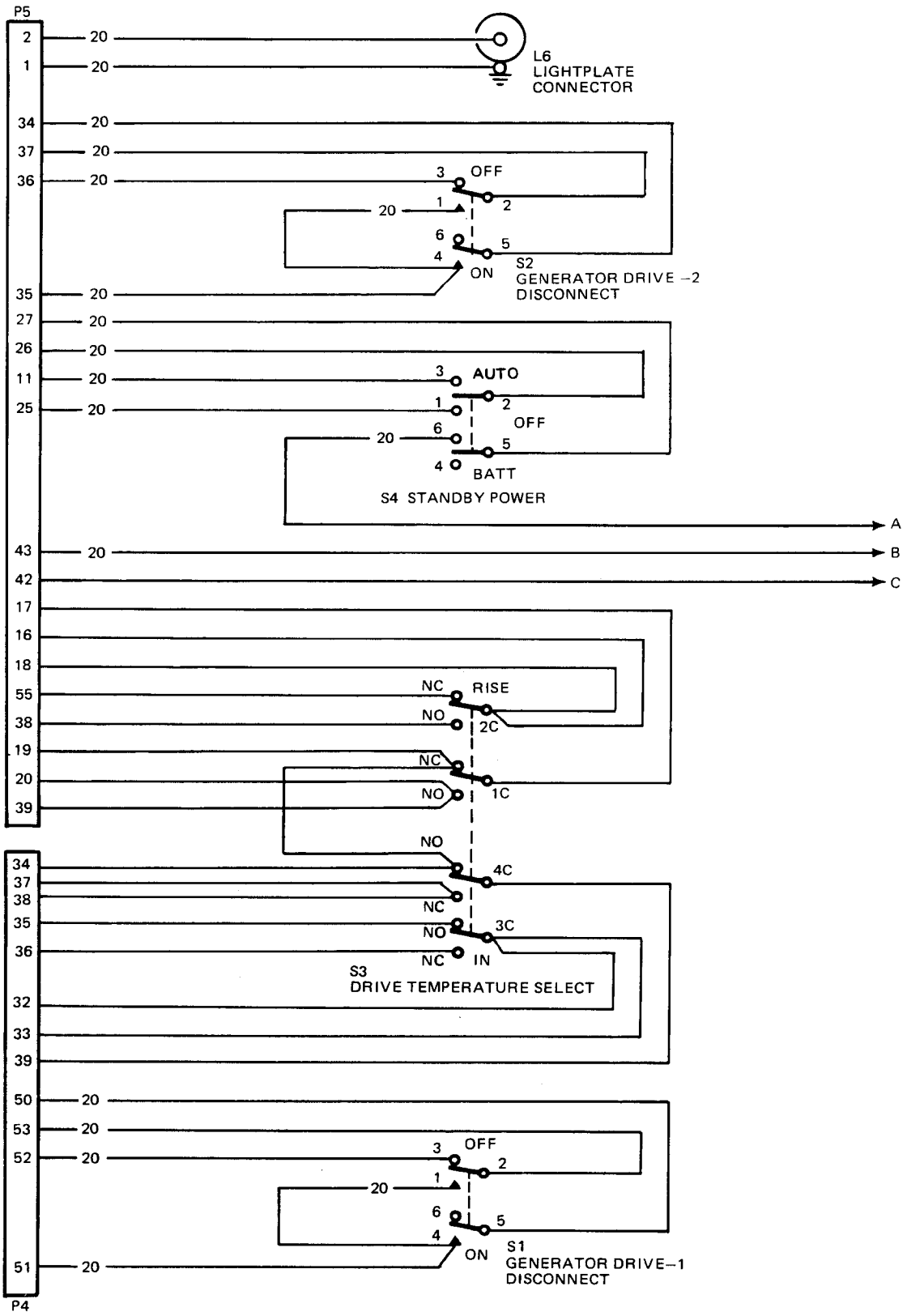
69-76472-1, -2, -3

Schematic Diagram
Figure 7 (Sheet 2)



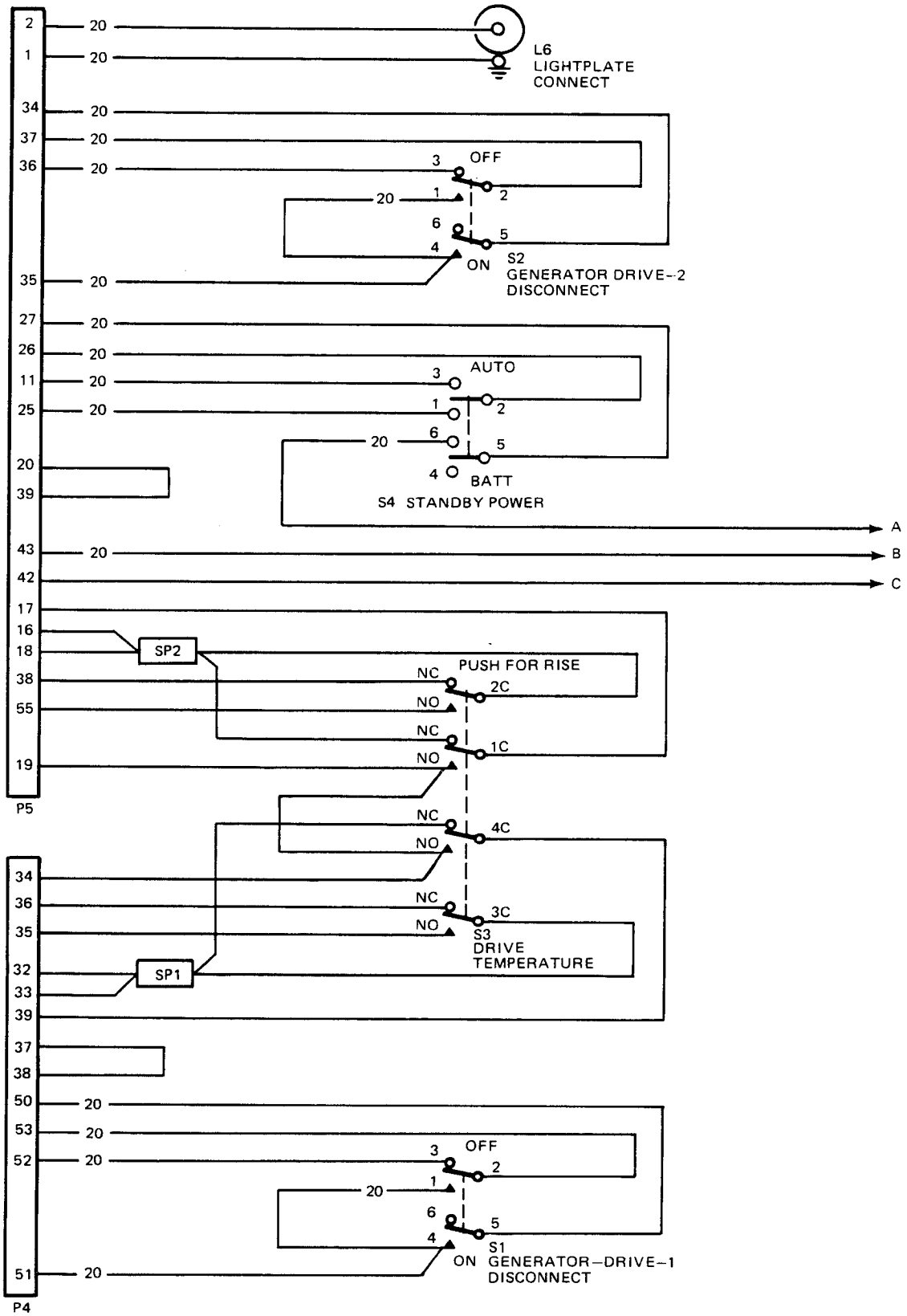
69–76472–1, –2, –3

Schematic Diagram
Figure 7 (Sheet 3)



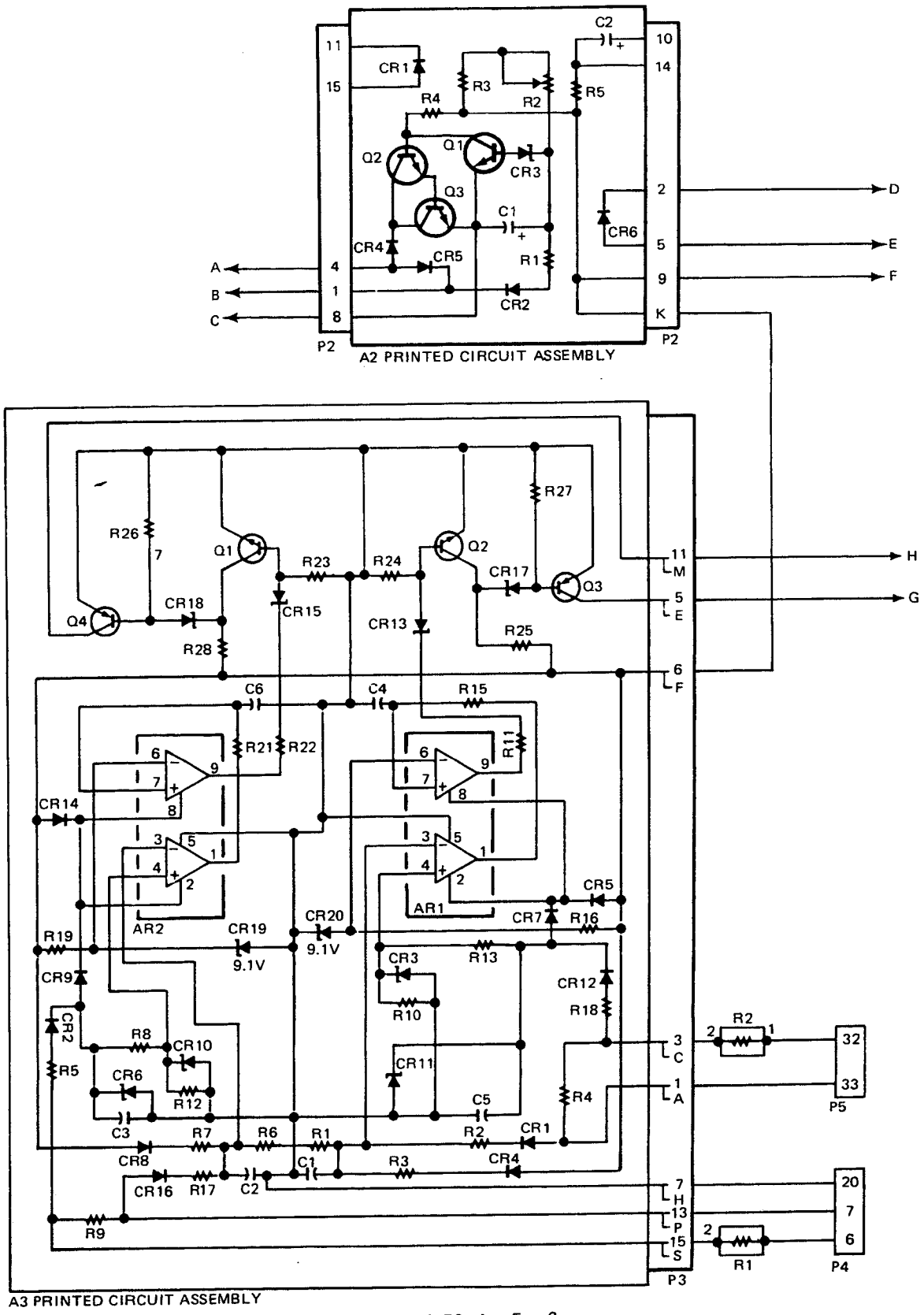
69–76472–4, –6

Schematic Diagram
Figure 7A (Sheet 1)



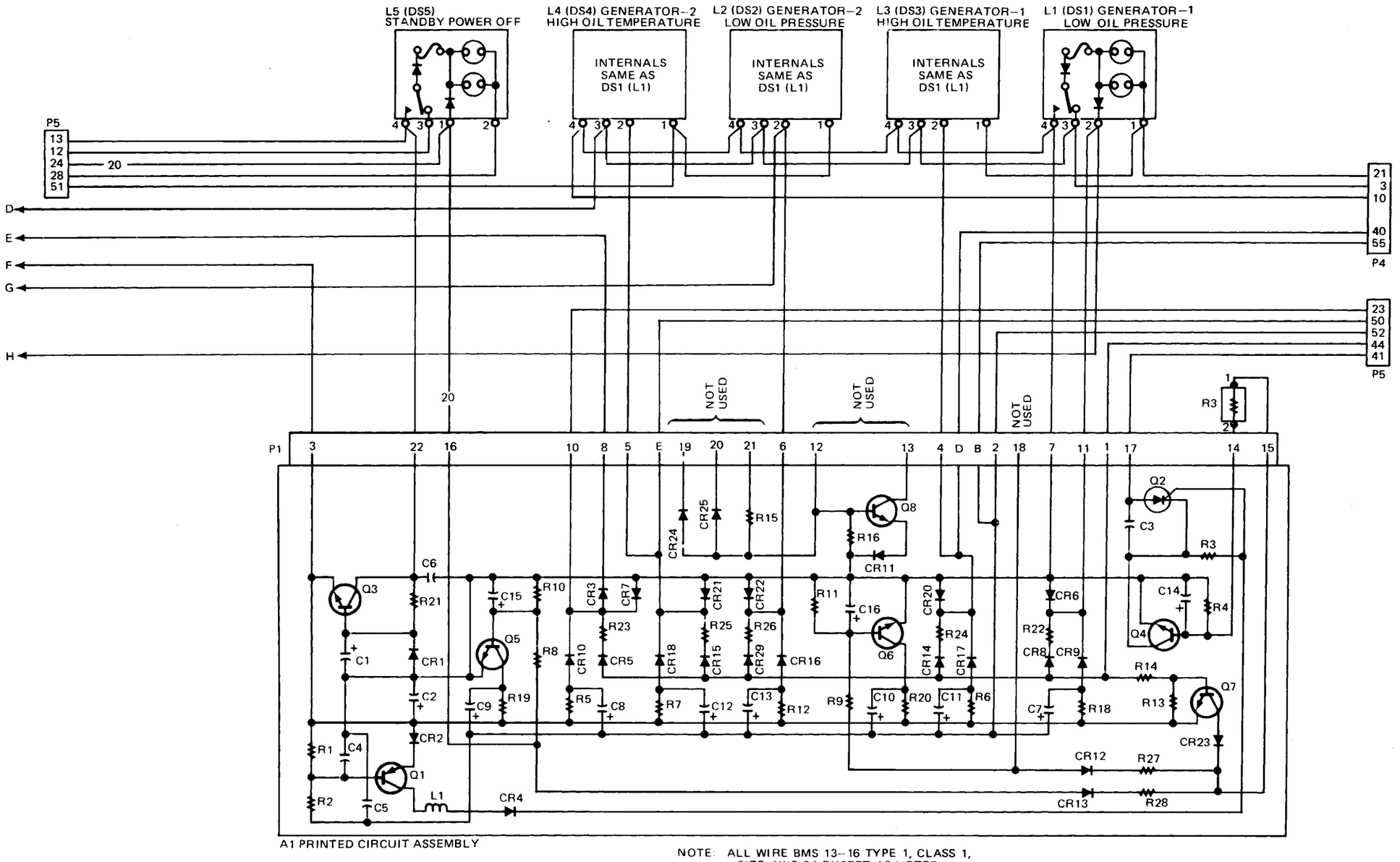
69-76472-5

Schematic Diagram
Figure 7A (Sheet 2)



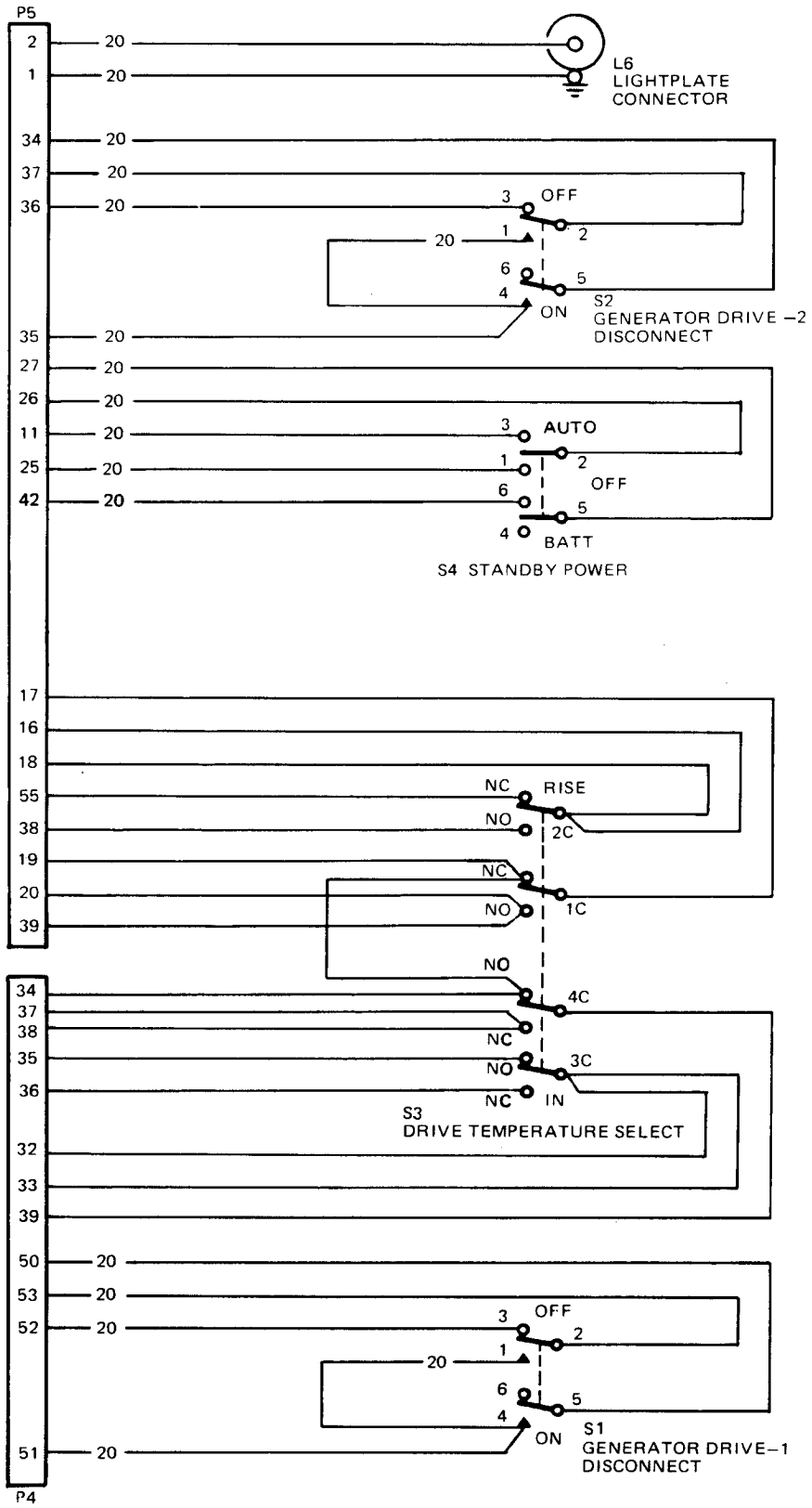
69-76472-4, -5, -6

Schematic Diagram
Figure 7A (Sheet 3)



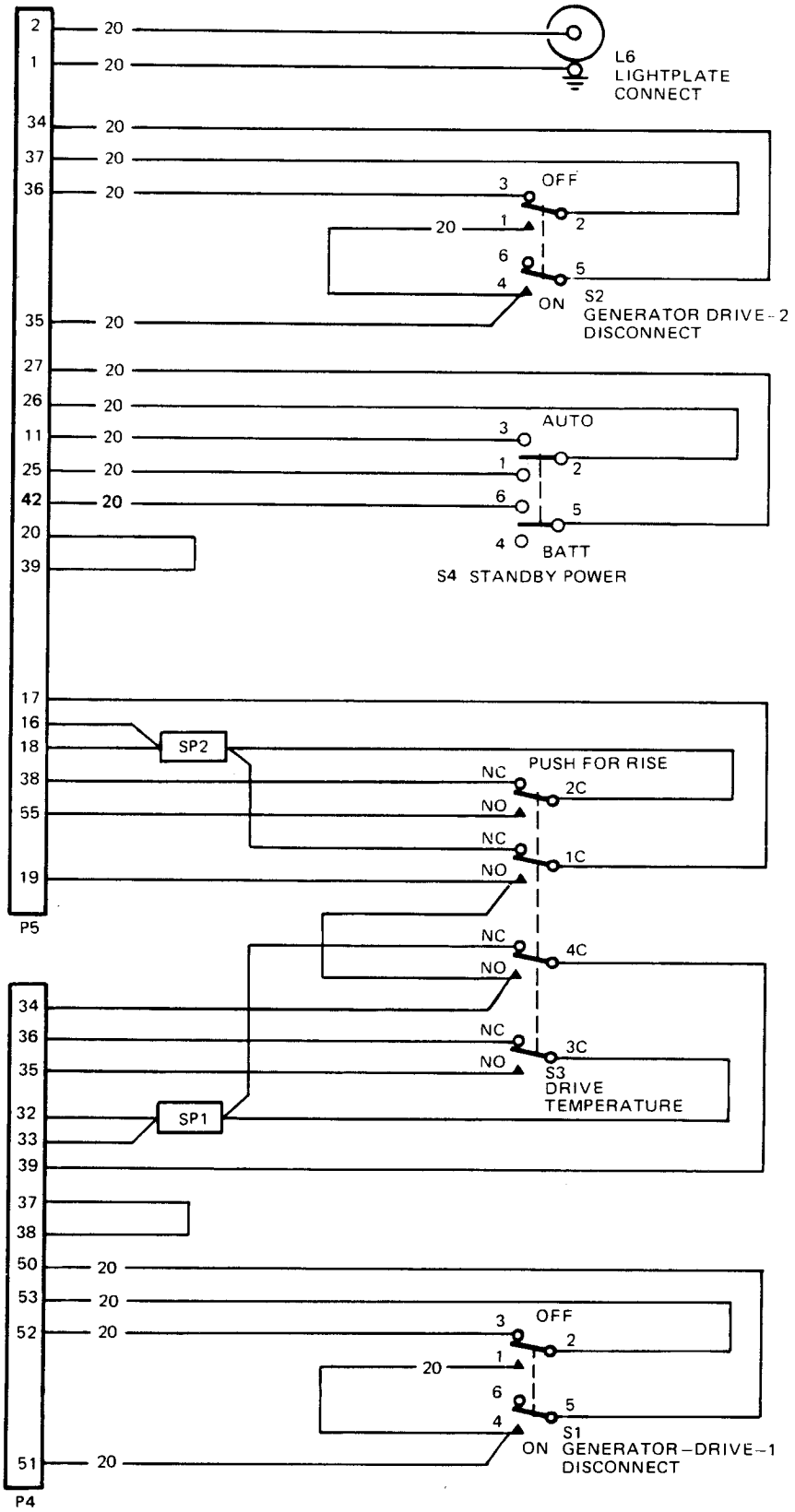
NOTE: ALL WIRE BMS 13–16 TYPE 1, CLASS 1, SIZE AWG 24 EXCEPT AS NOTED

69–76472–4, –5, –6



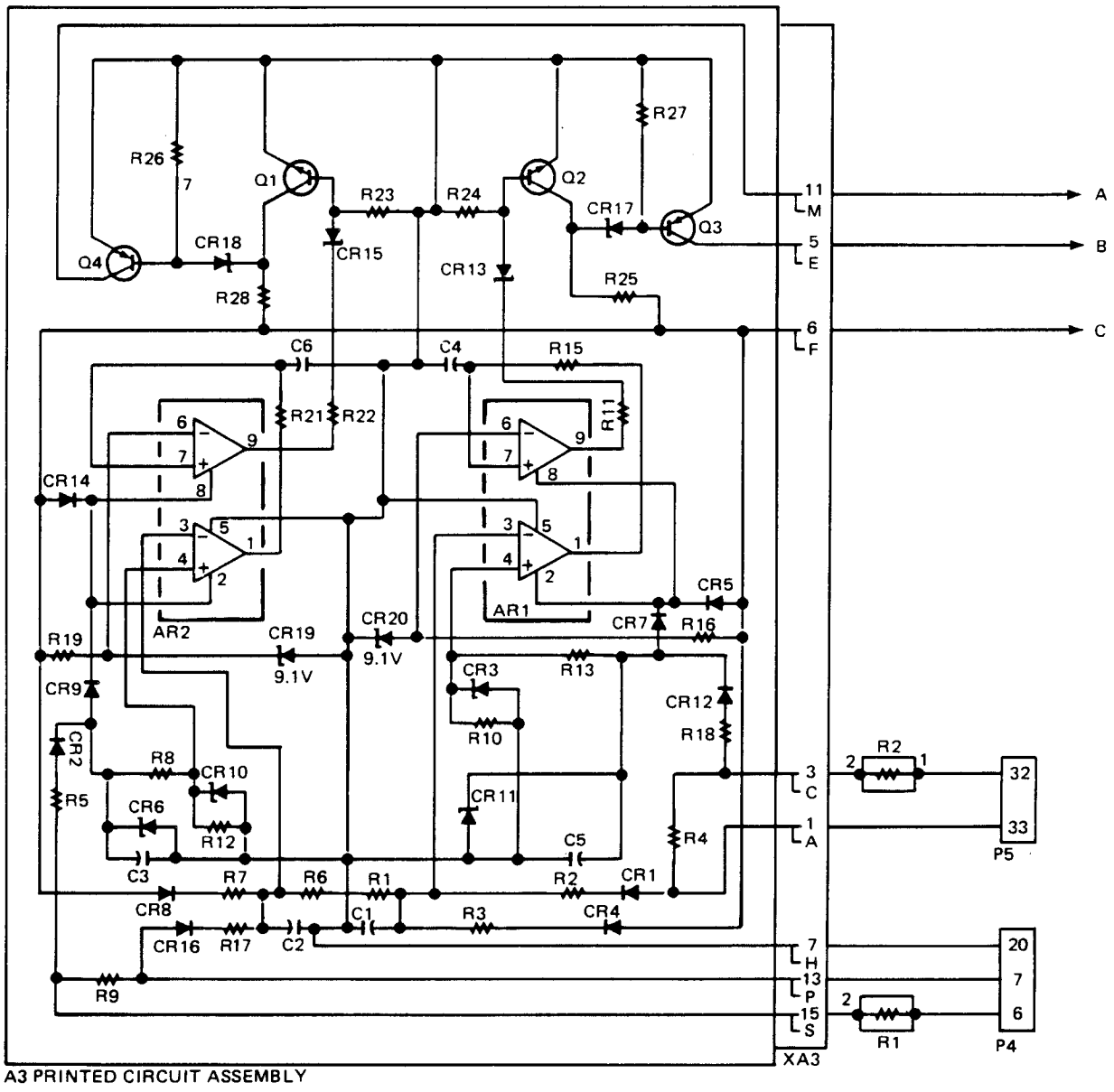
69–76472–7, –9, –10, –12

Schematic Diagram
Figure 7B (Sheet 1)

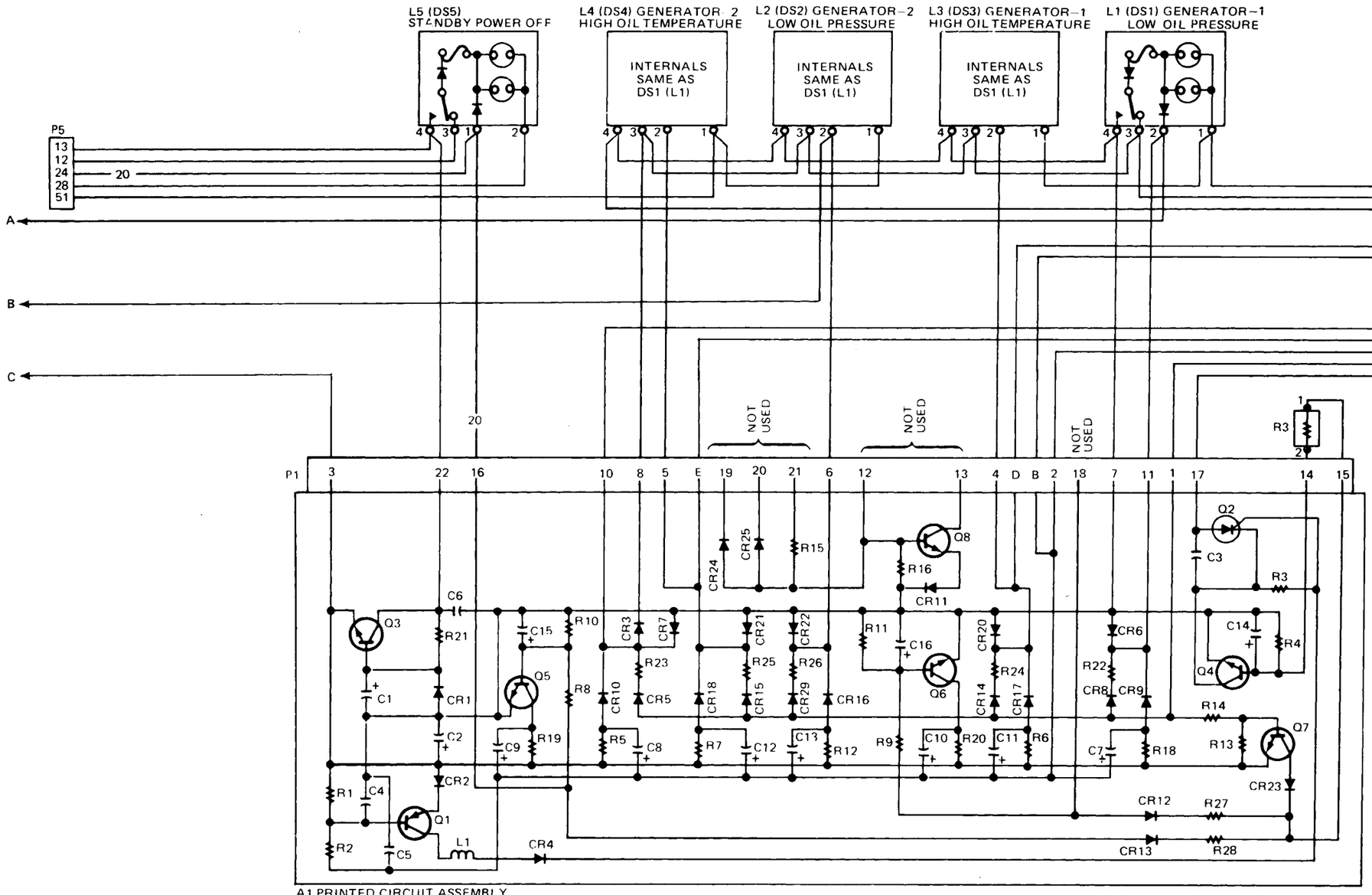


69-76472-8, -11

Schematic Diagram
Figure 7B (Sheet 2)



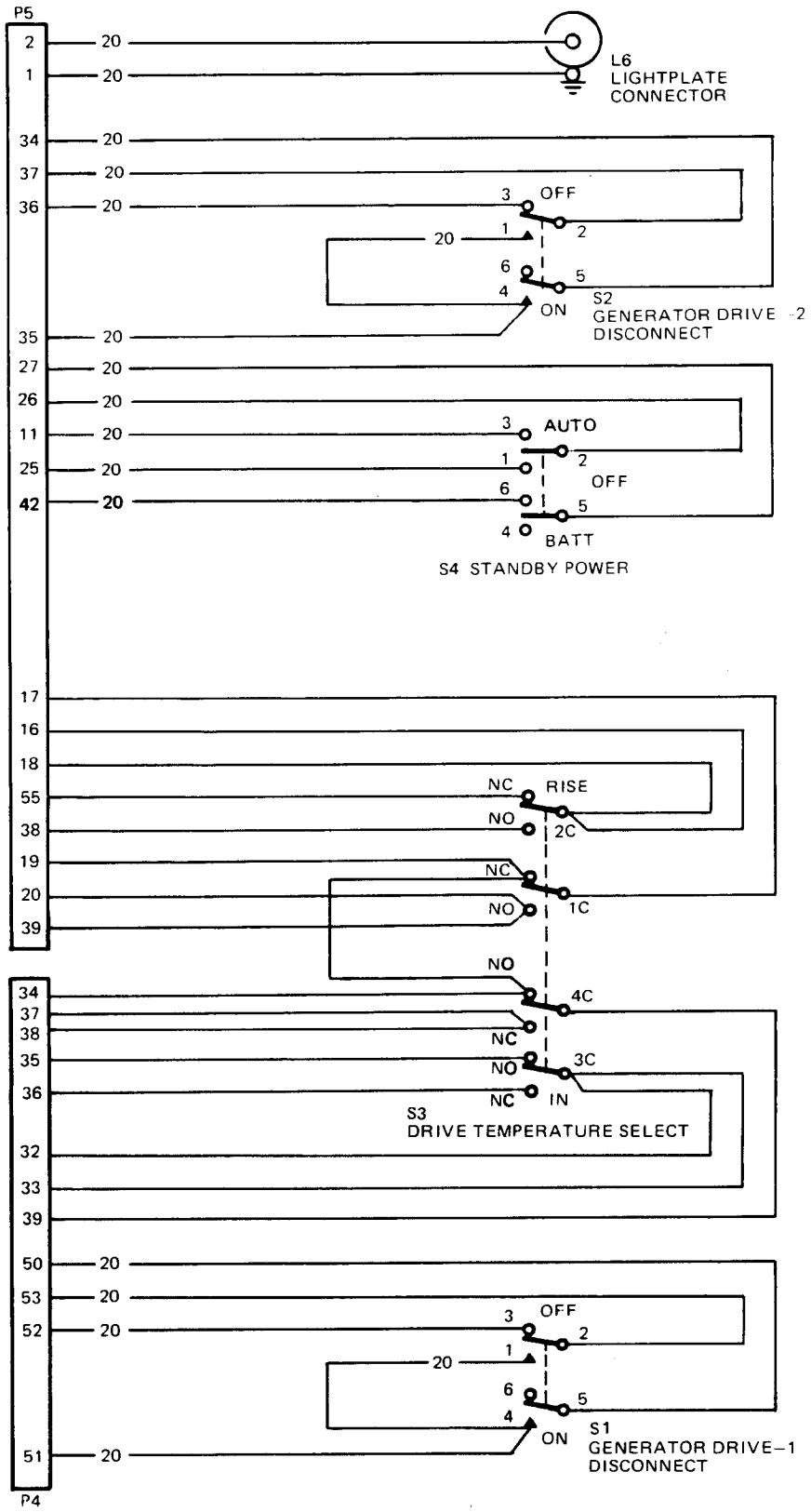
69-76472-7 THRU -12



A1 PRINTED CIRCUIT ASSEMBLY

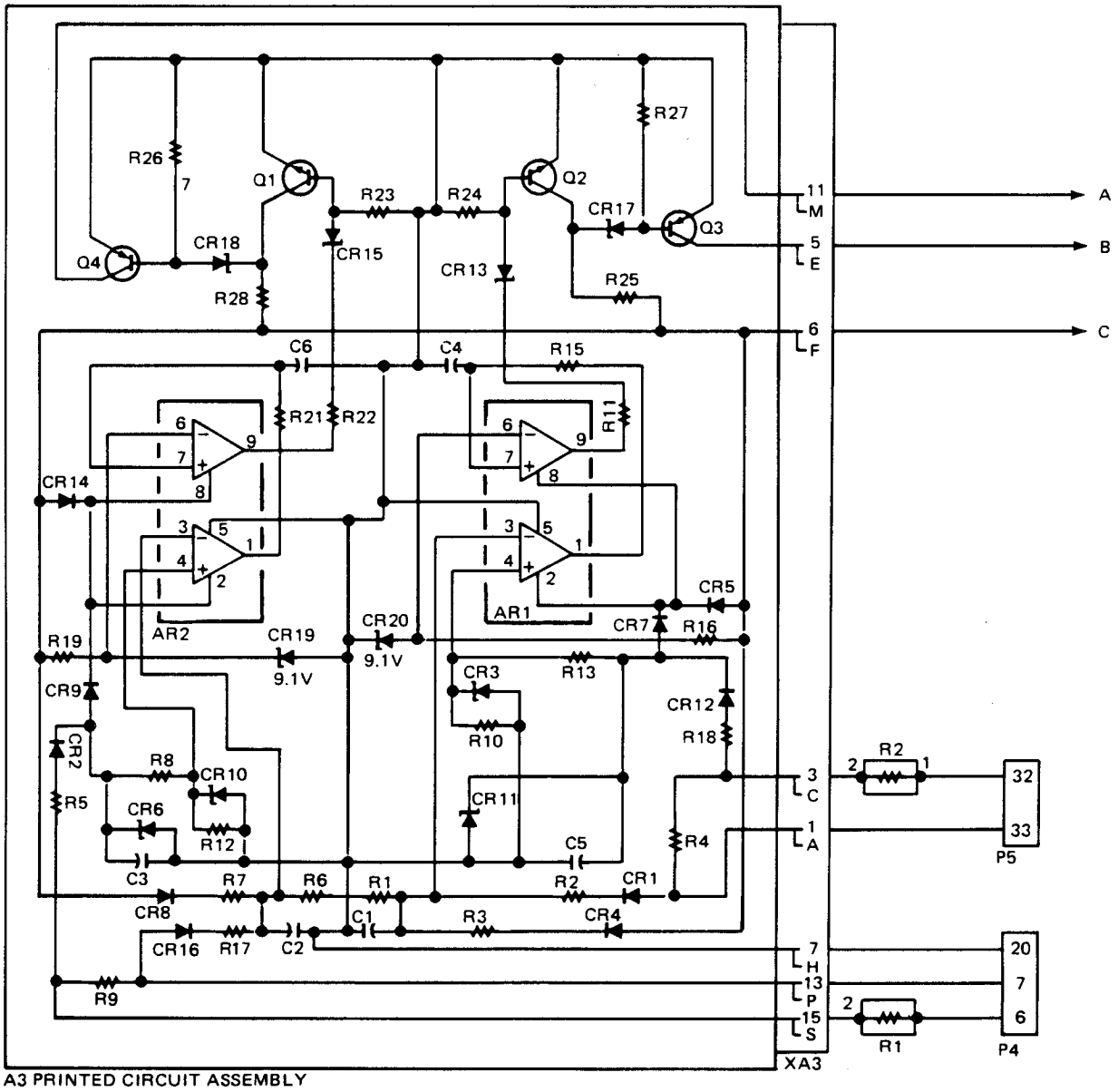
NOTE ALL WIRE BMS 13-16 TYPE 1, CLASS 1, SIZE AWG 24 EXCEPT AS NOTED

69-76472-7 THRU -12



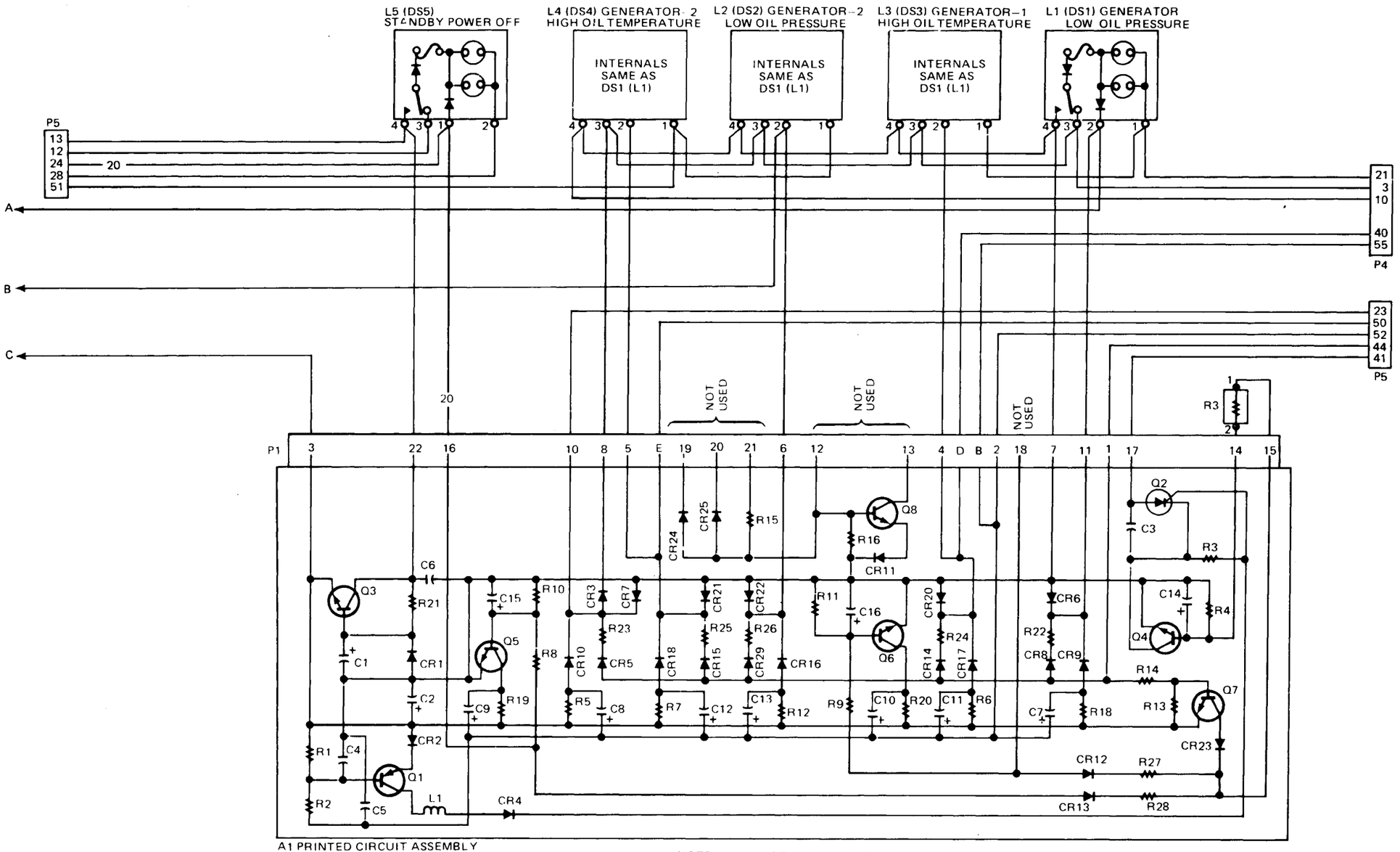
69-76472-13

Schematic Diagram
Figure 7C (Sheet 1)



A3 PRINTED CIRCUIT ASSEMBLY

69-76472-13

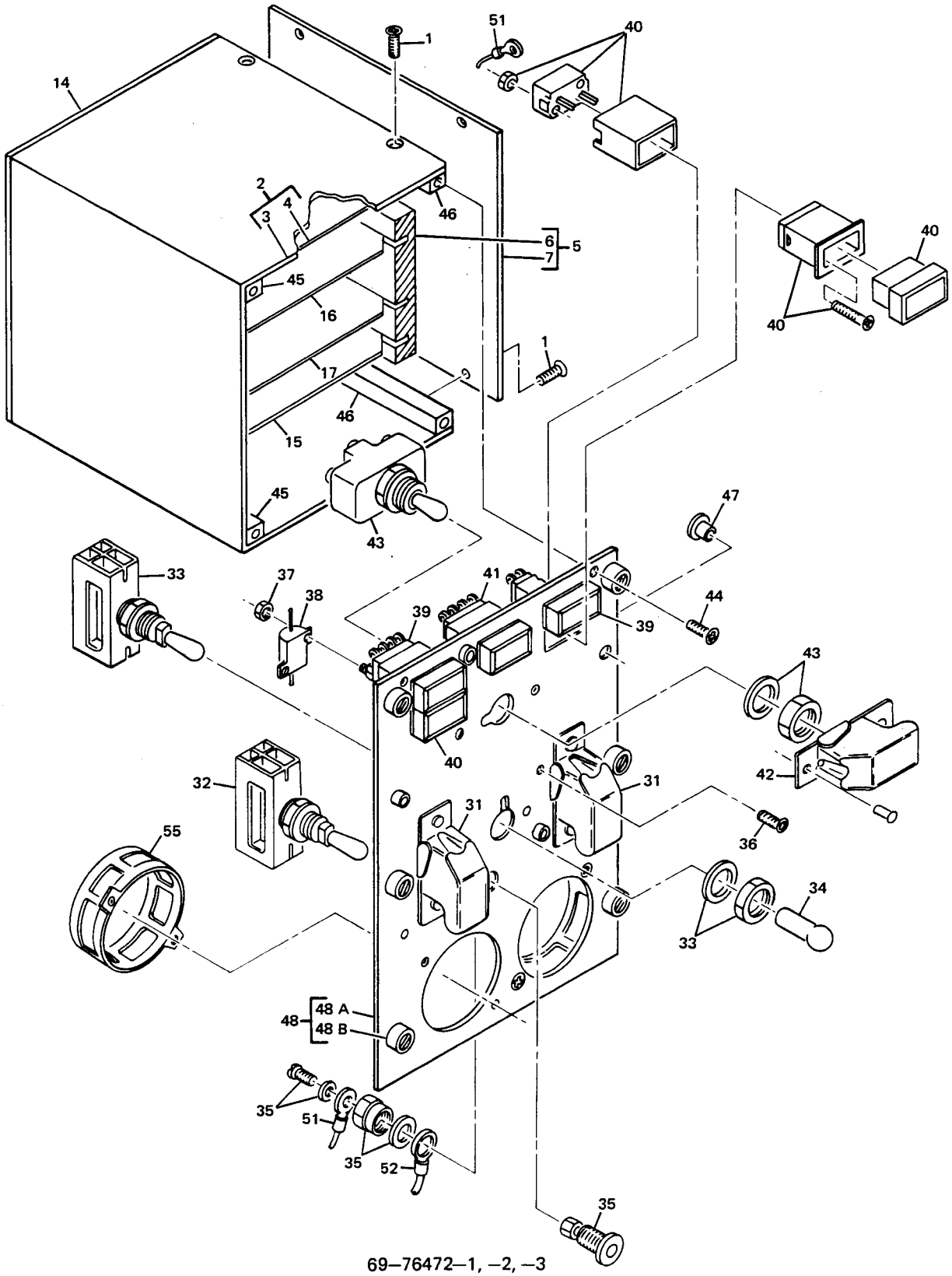


NOTE ALL WIRE BMS 13-16 TYPE 1, CLASS 1, SIZE AWG 24 EXCEPT AS NOTED

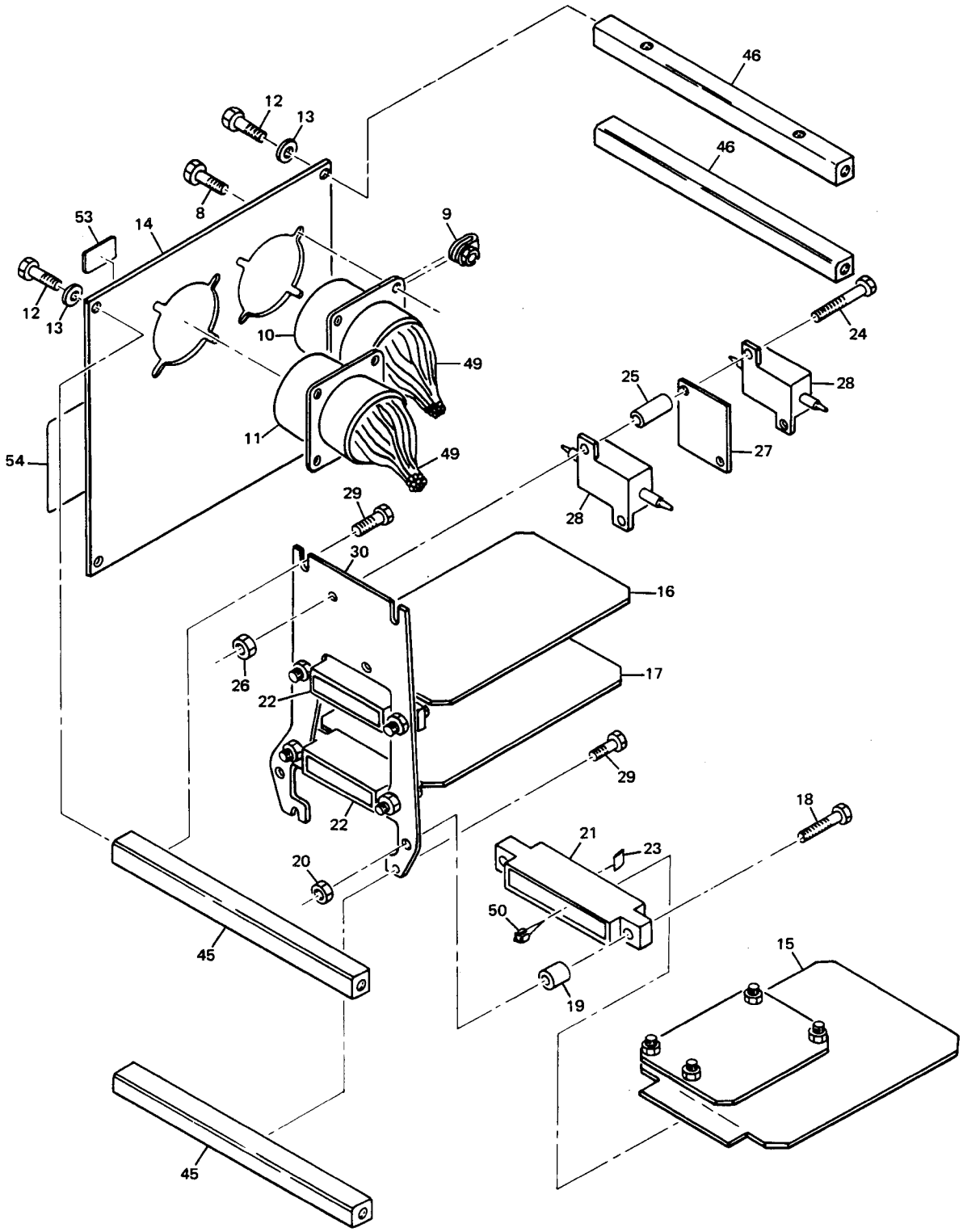
69-76472-13

Schematic Diagram
Figure 7C (Sheet 3)

5. Illustrated Parts List



Generator Drive and Standby Power Module Assembly (P5-5)
Figure 8 (Sheet 1)



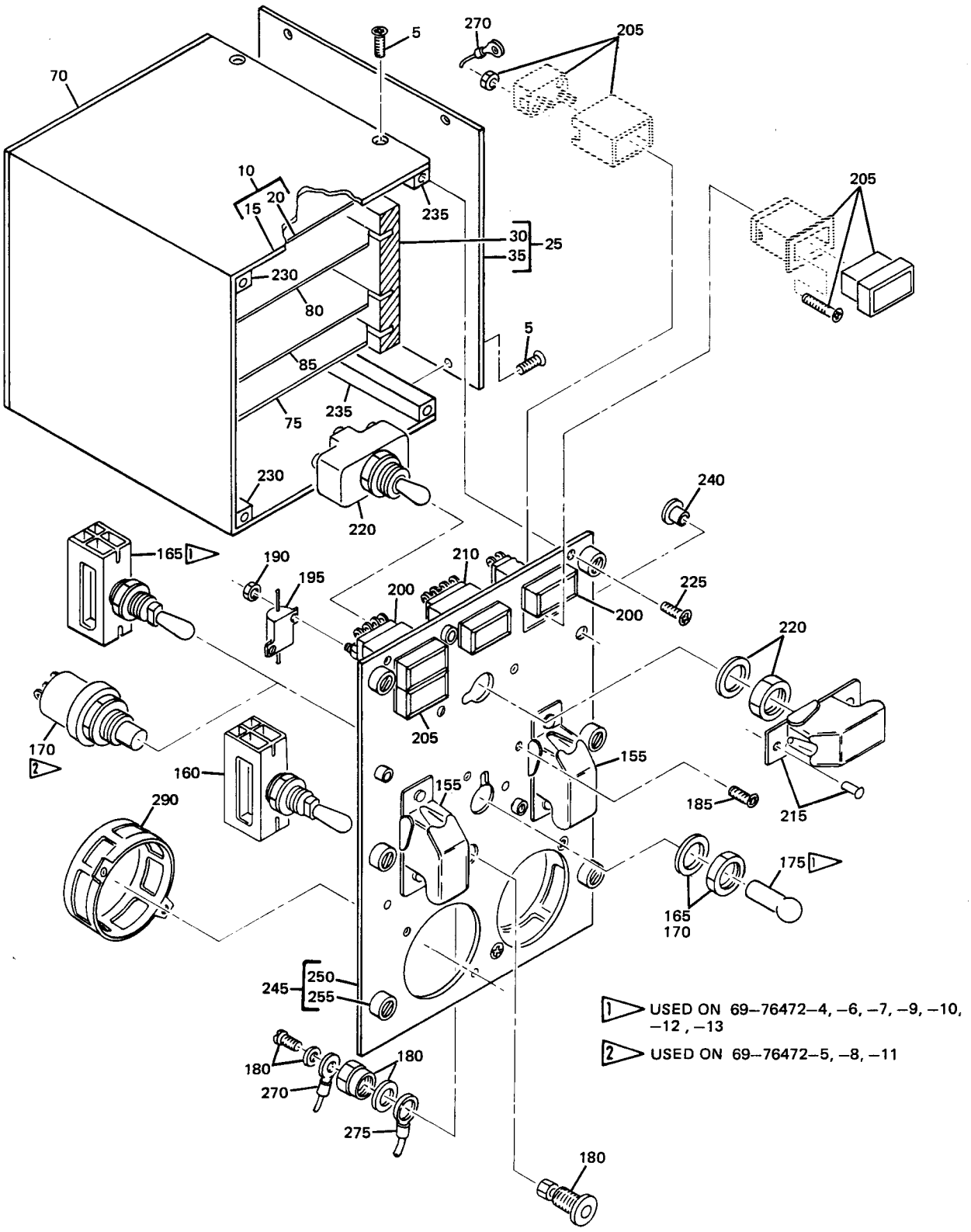
Generator Drive and Standby Power Module Assembly (P5-5)
Figure 8 (Sheet 2)

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
8-					
	69-76472-1		GENERATOR DRIVE AND STANDBY POWER MODULE ASSY (P5-5) (SB 24-1056)	A	RF
	69-76472-2		GENERATOR DRIVE AND STANDBY POWER MODULE ASSY (P5-5) (SB 24-1056)	B	RF
	69-76472-3		GENERATOR DRIVE AND STANDBY POWER MODULE ASSY (P5-5) (SB 24-1056)	C	RF
1	NAS514P440-4		. SCREW		8
2	69-39694-22		. COVER ASSY		1
3	69-39694-23		. . COVER		1
4	69-39694-15		. . INSULATOR		2
5	69-39694-24		. . COVER ASSY		1
6	69-39694-25		. . COVER		1
7	69-39694-21		. . FOAM SUPPORT		1
7	69-39694-20		. . FOAM (OPT)		1
8	BACS12CB04-5		. SCREW		4
9	BACN10NW1		. CLIP NUT		4
10	BACC45FN22-55P		. CONNECTOR		1
11	BACC45FN22-55P6		. CONNECTOR		1
12	BACS12CB06-5		. SCREW		4
13	MS35338-41		. WASHER		4
14	69-39694-3		. BACKPLATE		1
15	69-51810-8		. PRINTED CIRCUIT ASSY (REF 31-36-05)		1
17	69-54338-6		. PRINTED CIRCUIT ASSY (REF 31-10-70)		1
17A	69-54338-7		. PRINTED CIRCUIT ASSY (REF 31-10-70) (OPT)		1
18	BACS12CB06-14		. SCREW		4
19	NAS43DD1-17		. SPACER		4
20	BACN10JC06		. NUT		4
21	582557-1		. CONNECTOR, V00779		1
22	582553-1		. CONNECTOR, V00779		1
23	582507-1		. KEYING PLUG, V00779		2
24	BACS12CB04-16		. SCREW		2
25	NAS43DD1-35		. SPACER		2
26	BACN10JC06		. NUT		2
27	69-39694-7		. HEAT SINK		1
28	RE70G1001		. RESISTOR, 1K OHM, 1%, 20W		2
29	BACS12CB04-4		. SCREW		4
30	69-39694-16		. SUPPORT PLATE		1
31	11170		. GUARD, V72914		2
32	MS24524-26		. SWITCH		2
33	64ATT22-3		. SWITCH, TOGGLE, V81640		1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
33	A3-1110-05-01		. SWITCH, TOGGLE (OPT), V91929		1
34	69-44578-2		. CAP		1
35	138-102		. POWER CONNECTOR, V95354		1
35	SCN001		. POWER CONNECTOR, V95354		1
36	BACS12BF02-4		. SCREW		2
37	BACN10DN26		. NUT		2
38	RER60F5110FM		. RESISTOR, 511 OHM, 1%, 5W		1
39	318-630-1001-014		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-20)	AB	2
39	318-630-1001-152		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-194)	C	2
40	318-630-1001-020		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-27)	AB	2
40	318-630-1001-166		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-217)	C	2
41	318-630-1002-008		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-30)	AB	1
41	318-630-1002-036		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-218)	C	1
42	60-0730-5		. GUARD, V72914		1
43	MS24524-21		. SWITCH		1
44	NAS514P632-5		. SCREW		4
45	69-37315-4		. STANDOFF		2
46	69-37268-21		. STANDOFF		2
47	BACN10PA06-6		. NUT, PRESS		4
48	69-37315-6		. BASEPLATE ASSY	A	1
48	69-37315-24		. BASEPLATE ASSY	BC	1
48A	BACP10U0637G		. . BASEPLATE		1
48B	BACS21DDIG		. . STUD ASSY		6
49	69-37315-42		. WIRE BUNDLE	AB	1
49	69-37315-44		. WIRE BUNDLE	C	1
50	66143-2LP		. TAB TERMINAL, V00779		AR
50	66144-2LP		. TAB TERMINAL, V00779		AR
51	BACT12S		. TERMINAL LUG		AR
52	BACT12AC		. TERMINAL LUG		AR
53	BACM10L001CU		. MARKER		1
54	BAC27DCC229		. MARKER		1
55	BACC10EL3		. CLAMP		2

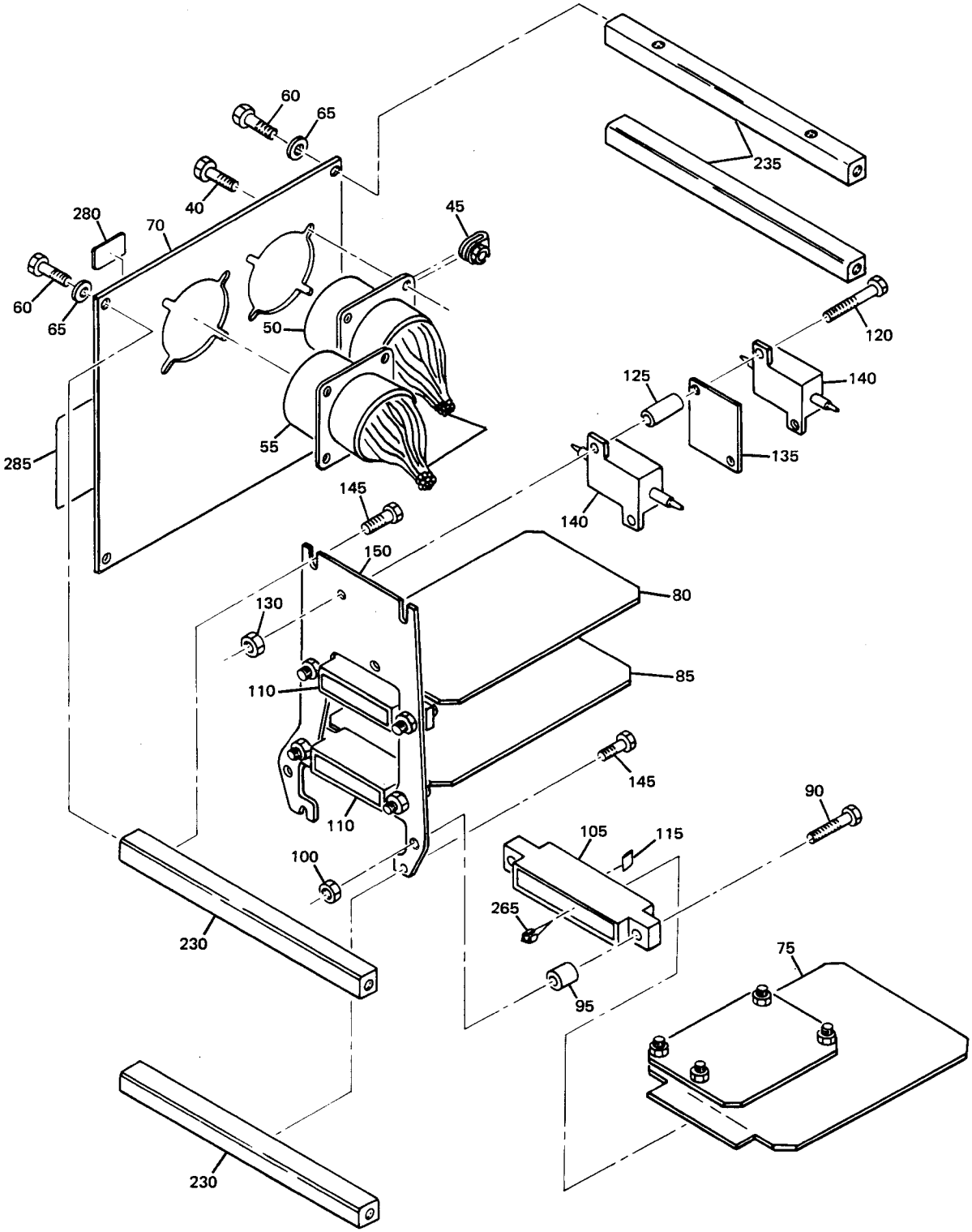
REFERENCE DESIGNATION INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.
A1	69-51810-8	15
A3	69-54338-6	17
A3	69-54338-7	17A
L1, L2 *[1]	318-630-1001-014	39
L1, L2 *[1]	318-630-1001-152	39
L3, L4 *[1]	318-630-1001-020	40
L3, L4 *[1]	318-630-1001-166	40
L5 *[1]	318-630-1002-008	41
L5 *[1]	318-630-1002-036	41
P4	BACC45FN22-55P	10
P5	BACC45FN22-55P6	11
R1, R2	RE70G1001	28
R3	RER60F5110FM	38
S1, S2	MS24524-26	32
S3	A3-1110-05-1	33
S3	64ATT22-3*	33
S4	MS24524-21	43
XA1	582557-1	21
XA3	582553-1	22

* PREFERRED PART
*[1] DS1 THRU DS5 FOR 69-76472-3



69-76472-4 THRU -13

Generator Drive and Standby Power Module Assembly (P5-5)
Fgiure 9 (Sheet 1)



Generator Drive and Standby Power Module Assembly (P5-5)
Figure 9 (Sheet 2)

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
9-					
1	69-76472-4		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	A	
1A	69-76472-5		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) SB 24-1056)	B	
1B	69-76472-6		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	C	
1C	69-76472-7		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	D	
1D	69-76472-8		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	E	
1E	69-76472-9		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	F	
1F	69-76472-10		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SBV 24-1056)	G	
1G	69-76472-11		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	H	
1H	69-76472-12		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	J	
1J	69-76472-13		GENERATOR DRIVE AND STBY POWER MODULE ASSY (P5-5) (SB 24-1056)	K	
5	NAS514P440-4		. SCREW		8
10	69-39694-22		. COVER ASSY		1
15	69-39694-23		. . COVER		1
22	69-39694-15		. . INSULATOR		2
25	69-39694-24		. COVER ASSY		1
30	69-39694-25		. . COVER		1
35	69-39694-21		. . FOAM SUPPORT		1
35A	69-39694-20		. . FOAM (OPT)		1
40	BACS12CB04-5		. SCREW		4
45	BACN10NW1		. CLIP NUT		4
50	BACC45FN22-55P		. CONNECTOR		1
55	BACC45FN22-55P6		. CONNECTOR		1
60	BACS12CB06-5		. SCREW		4
65	MS35337-41		. WASHER		4
70	69-39694-3		. BACKPLATE		1
75	69-51810-8		. PRINTED CIRCUIT ASSY (REF 31-36-05)	ABC	
75A	69-51810-1		. PRINTED CIRCUIT ASSY (REF 31-36-05) (OPT)		
75B	69-51810-8		. PRINTED CIRCUIT ASSY (REF 31-36-05)		

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
9-					
80	69-41756-3		. PRINTED CIRCUIT ASSY (REF 31-10-69)	ABC	1
85	69-54338-6		. PRINTED CIRCUIT ASSY (REF 31-10-70)		1
85A	69-54338-7		. PRINTED CIRCUIT ASSY (REF 31-10-70) (OPT)		1
90	BACS12CB06-14		. SCREW	ABC	6
90A	BACS12CB06-14		. SCREW	D-K	4
95	NAS43DD1-17		. SPACER	ABC	6
95A	NAS43DD1-17		. SPACER	D-K	4
100	NAS679A06W		. NUT	ABC	6
100A	NAS679A06W		. NUT	D-K	4
105	582557-1		. CONNECTOR, V00779		1
110	582553-1		. CONNECTOR, V00779	ABC	2
110A	582553-1		. CONNECTOR, V00779	D-K	1
115	582507-1		. KEYING PLUG, V00779	ABC	
115A	582507-1		. KEYING PLUG, V00779	D-K	2
120	BACS12CB04-16		. SCREW		2
125	NAS43DD1-35		. SPACER		2
130	NAS679A04W		. NUT	A-K	2
135	69-39694-7		. HEAT SINK		1
140	RE70G1001		. RESISTOR, 1K ±1%, 20 W		2
145	BACS12CB04-4		. SCREW		4
150	69-39694-16		. SUPPORT PLATE		1
155	11170		. GUARD, V72914		2
160	MS24524-26		. SWITCH		2
165	A3-127T7		. SWITCH, V81640	ACDFG JK	1
165A	64AT11-3		. SWITCH, V91929 (OPT)	ACDFG JK	1
170	4PB11T2		. SWITCH, V91929	BEH	1
175	69-44578-2		. CAP	ACDFG JK	1
180	138-102		. POWER CONNECTOR, V95354		1
180A	SCN001		. POWER CONNECTOR, V95354 (OPT)		1
185	BACS12BF02-4		. SCREW		2
190	BACN10DN26		. NUT		2
195	RH5-330-1PCT		. RESISTOR, 330 OHMS ±1%, 5 W, V91637	ABC	1
195A	3105M330-1PCT		. RESISTOR, 330 OHMS ±1%, 5 W, V00213	ABC	1
195B	RH5-510-3PCT		. RESISTOR, 510 OHMS ±3%, 5 W V91637	D-K	1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
9-195C	3105M510-3PCT		. RESISTOR, 510 OHMS ±3%, 5 W, V00213	D-K	1
200	319-619-1001-014		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61305-20)	A-F	2
200A	318-630-1001-014		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-20)	G-J	2
200B	318-630-1001-152		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-194)	K	2
205	319-610-1001-021		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61305-27)	A-F	2
205A	318-630-1001-020		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-27)	G-J	2
205B	318-630-1001-166		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-217)	K	2
210	319-619-1002-008		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61305-30)	A-F	1
210A	318-630-1002-008		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-30)	G-J	1
210B	318-630-1002-036		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-218)	K	1
215	60-0730-5		. GUARD, V72914		1
220	MS24524-21		. SWITCH		1
225	NAS514P632-5		. SCREW		4
230	69-37315-4		. STANDOFF		2
235	69-37268-21		. STANDOFF		2
240	BACN10PA06-6		. NUT, PRESS		4
245	69-37315-6		. BASEPLATE ASSY	ADG	1
245A	69-37315-11		. BASEPLATE ASSY	BEH	1
245B	69-37315-24		. BASEPLATE ASSY	CFJK	1
250	BACP10U0637G		. . BASEPLATE		1
255	BACS21DD1G		. . STUD ASSY		6
260	69-37315-20		. WIRE BUNDLE	AC	1
260A	69-37315-21		. WIRE BUNDLE	B	1
260B	69-37315-28		. WIRE BUNDLE	DFGJ	
260C	69-37315-29		. WIRE BUNDLE	EH	
260D	69-37315-34		. WIRE BUNDLE	K	
265	66143-2		. TAB TERMINAL, V00779	ABC	33
265A	66143-2		. TAB TERMINAL, V00779	D-H	25
265B	66143-2LP		. TAB TERMINAL, V00779	J	AR
265C	66144-2LP		. TAB TERMINAL, V00779	J	AR
270	BACT12S		. TERMINAL LUG		AR
275	BACT12AC		. TERMINAL LUG		AR
280	BACM10L001CU		. MARKER		1
285	BAC27DCC229		. MARKER		1
290	BACC10EL3		. CLAMP		2

REFERENCE DESIGNATION INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.
A1	69-51810-1	75A
A1	69-51810-8	75,75B
A2	69-41756-3	80
A3	69-54338-6	85
A3	69-54338-7	85A
DS1, DS2	318-630-1001-152	200B
DS3, DS4	318-630-1001-166	205B
DS5	318-630-1002-036	210B
J6	138-102	180
J6	SCN001	180A
L1, L2	319-619-1001-014	200
L1, L2	318-630-1001-014	200A
L3, L4	319-619-1001-021	205
L3, L4	318-630-1001-020	205A
L5	319-619-1002-008	210
L5	318-630-1002-008	210A
L6	138-102	180
L6	SCN001	180A
P1	582557-1	105
P2, P3	582553-1	110
P4	BACC45FN22-55P	50
P5	BACC45FN22-55P6	55
R1, R2	RE70GF1001	140
R3	RH5-330-1PCT	195
R3	3105M330-1PCT	195A
R3	RH5-510-3PCT	195B
R3	3105M510-3PCT	195C
S1, S2	MS24524-26	160
S3	A3-127T7	165
S3	64AT11-3	165A
S3	4PB11T-2	170
S4	MS24524-21	220
XA1	582557-1	105
XA3	582553-1	110A

VENDORS

V00213	NYTRONICS COMPONENTS GROUP INC., SUBSIDIARY OF NYTRONICS INC., ORANGE STREET, DARLINGTON, SOUTH CAROLINA 29532
V00779	AMP INC., P.O. BOX 3608, HARRISBURG, PENNSYLVANIA 17105
V05617	BELL INDUSTRIES INC., FARWEST MFG DIV., 18225 NE 76TH ST., REDMOND, WA 98052
V72914	MIDLAND-ROSS CORP., GRIMES DIV., 550 STATE ROUTE 55 CHAMPAIGN, URBANA, OHIO 43078
V81590	KORRY ELECTRONICS INCORPORATED, SUBDIVISION OF CRITON CORPORATION, 901 DEXTER AVENUE NORTH, SEATTLE, WASHINGTON 98109
V81640	EATON CORP., AEROSPACE CONTROL/SYSTEM DIV., MANATEE PLANT, 2074 WHITFIELD AVE., E. P.O. BOX 1978, SARASOTA, FLORIDA 34243
V91637	DALE ELECTRONICS INC., P.O. BOX 609, COLUMBUS, NEBRASKA 68601
V91929	HONEYWELL INC., MICRO SWITCH DIV., 11 W. SPRING STREET, FREEPORT, ILLINOIS 61032
V95354	METHODE MFG. CORP., 1700 SOUTH HICKS ROAD, ROLLING MEADOWS, ILLINOIS 60008