TO: ALL HOLDERS OF FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST MODULE ASSEMBLY P5-19 OVERHAUL MANUAL, 31-36-08

REVISION NO. 13, DATED NOV 1/02

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
Updated vendor list												X	
Deleted step C.(1) of Functional Test								X					
Added flagnote 2 to Fig. 3 and flagnote 3 to Fig. 3A								X					

FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST MODULE ASSEMBLY P5-19

31-36-08

BOEING P/N 69-37325-39, -46, -49, -51, -52, -53, -62
69-71799-2

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
		PRR 32321	Mar 25/74
		PRR 32373	Dec 25/74
31-1030		PRR 32972R	Jul 5/81

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
31-36-08						
	T-1	Dec 5/90				
	T-2	BLANK				
*	LEP-1	Nov 1/02				
	LEP-2	BLANK				
	T/C-1	Jul 5/79				
	T/C-2	BLANK				
	1	Jul 5/79				
	2	Dec 5/90				
*	3	Nov 1/02				
	4	Nov 1/98				
	5	Jul 5/79				
	6	Dec 5/90				
	6A	Dec 25/74				
	6B	Dec 25/74				
	6C	Mar 25/74				
	6D	Jul 5/79				
	6E	Jul 5/79				
	6F	Dec 5/90				
	7	Jul 5/79				
	8	BLANK				
* F	9	Nov 1/02				
	10	BLANK				
* F	10A	Nov 1/02				
	10B	BLANK				
F	10C	Dec 1/96				
	10D	BLANK				
	11	Dec 5/90				
	12	BLANK				
	13	Dec 5/89				
	14	Dec 5/89				
	15	Jul 1/98				
	16	Jul 1/98				
	17	Dec 5/90				
*	18	Nov 1/02				

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*[1] Use applicable procedures in 31-10-01 and standard industry practices.

*[2] Special instructions not required.

FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST MODULE ASSEMBLY (P5-19)

1. DESCRIPTION AND OPERATION

A. The flight recorder and mach airspeed warning test module assembly is located in the P5 overhead panel. The module may be easily removed by loosening quick-release fasteners on the baseplate and disconnecting the rear-mounted receptacle from the airplane wire bundle. The module contains switches, indicator lamp, and electronic components in the flight recorder, mach airspeed warning, and master caution indicator systems.

B. Functional Description

(1) Card A1 contains two circuits; transistor Q8 which is a simple transistor switch, and SCR Q2 in series with transistor Q4 which provide a ground path for the master caution indicator. The master caution triggering inputs are positive on some pins and ground on others. After triggering, SCR Q2 may be reset to extinguish the master caution indication, and retriggered to recall the indication if the original triggering input remains.

(2) Circuit ground is connected to pin 23 (XA1-7). Circuit power for the master caution triggering circuitry is connected to pin 29 (XA1-22). A1Q8 provides a path to ground at XA1-13 when turned on by a positive input at XA1-21, unless that input is shunted to ground at XA1-12, -19, or -20. A1Q3 is a voltage regulator for the master caution triggering circuitry controlled by 18-volt zener diode A1CR1.

(3) Any momentary turn on of A1Q1 provides a pulse through A1L1/A1CR4 to trigger A1Q2 into conduction. If A1Q4 is turned on, the master caution indicator ground path is completed. Ground inputs at any one of pins 2, 20, 22, 24, 26, or 27; positive inputs at either pin 8 or 28; or a combined ground input at pins 1 and 21, will activate the master caution indicator.

NOTE: Some triggering inputs are not connected on some modules. Refer to schematics for actual connections.

(4) A ground input at pin 2 performs two functions. A1Q7 base circuit is completed to turn A1Q7 on, and A1C13 couples the ground input to the base circuit of A1Q1 to turn A1Q1 on during the charging period of A1C13. A1Q7 provides base drive for A1Q4 thru R1. A1Q1 turn-on triggers SCR A1Q2 thru A1L1 and A1CR4. A1Q2 conduction and A1Q4 turn-on complete the master caution indicator ground circuit.

(5) If SCR A1Q2 is reset by external interruption of the master caution indicator circuit, the indicator is extinguished. As long as A1Q4 is held on by the pin 2 ground input, the indication may be recalled by momentary turn-on of A1Q1. A momentary ground input at pin 26 will be coupled to the base circuit of A1Q1 by A1C8 to perform the recall function. Any of the other ground input pins will activate the master caution circuitry in the same manner.

(6) If A1Q5 or A1Q6 is turned on by a positive input at pin 8 or 28, A1Q4 will also be turned on through A1R28 or A1R27. A1Q1 will be turned on momentarily by coupling of the ground input through A1C9 or A1C10. SCR A1Q2 will be triggered and the master caution ground path completed. The circuit may be reset and the indication recalled (if the positive input remains) by momentary grounding of pin 26.

(7) A ground input at pin 21 (A1Q1 on) must be combined with a ground input at pin 1 (A1Q7/A1Q4 on) to activate the master caution circuit.

(8) Deleted.

(9) Pin 22 receives a ground input from master test. Pin 26 receives the recall input (ground) to retrigger the SCR.

2. REPAIR (Fig. 4)

A. Repair can be accomplished using applicable procedures in 31-10-01 and standard industry practices, except as noted in par. B. and C.

B. If keying plug (23) is replaced, insert at contact position 9.

C. Install connector (22) with contact position 1 adjacent to resistor R1.

3. TESTING

A. Test Equipment

(1) Multimeter: Simpson 260P or equivalent

(2) Power Supply: 28 $\pm$2 volts dc, 1 ampere

(3) Connector (with pigtail leads): BACC45FT18-31S (J1)

(4) Switch: SPDT

(5) Switch: SPST (11 required, 69-37325-39, -51, -52, -53, -62; 69-71799-2; and 12 required, 69-37325-46, -49)

(6) Capacitor: 1 uf, 35 volts (C1)

(7) Resistor: 330 ohms (±5%), 1/2 w (R1)

(8) Diode: 1N4385 (CR1)

(9) Lamp Load (L3): 420 to 460 ma (GE1819 and two 1873 lamps in parallel)

(10) Lamp Load (L1) (69-37325-46, -49 only): 80 ma (two GE387 lamps in parallel)

B. Prepare for test

(1) Connect assembly to test connector.

(2) Identify and tag pigtail leads.

C. Functional Test, 69-37325-39, -51, -52, -53; 69-71799-2

I (1) Deleted

(2) Remove screws (1) and cover (5). Measure forward resistance of CR1 diode across terminals E2 (+) and E1 (-). Verify less than 15 ohms. Replace cover (5) and secure with screws (1).

(3) Verify continuity between pins 16 and 17 and no continuity between pins 15 and 16.

(4) Press NO. 1 MACH AIRSPEED WARNING TEST switch and verify continuity between pins 15 and 16 and no continuity between pins 16 and 17.

(4A) (69-37325-52; 69-71799-2 only): Verify continuity between pins 3 and 6 and no continuity between pins 4 and 6.

(4B) (69-37325-52; 69-71799-2 only): Press NO. 2 MACH AIRSPEED WARNING TEST switch and verify continuity between pins 4 and 6 and no continuity between pins 3 and 6.

(5) Verify continuity between pin 10 and 11 and between 13 and 14. Verify no continuity between pins 9 and 10 and between 12 and 13.

(6) Measure diode resistance. Set FLIGHT RECORDER TEST switch to ON (TEST position), and verify 15 ohms maximum between pin 23(+) and 18(-) and between 23(+) and 5(-). There shall be 15k minimum between pins 18(+) and 23(-) and between pins 5(+) and 23(-) (back diode test).

(7) Set FLIGHT RECORDER TEST switch to OFF (NORMAL position).

(8) Connect assembly to test setup as shown in Fig. 1. Set all switches to OFF. Turn on power supply.

(9) Set switch S1 and S2 to ON. Verify continuity between pins 9 and 10 and between 12 and 13. There shall be no continuity between pins 10 and 11 nor between 13 and 14.

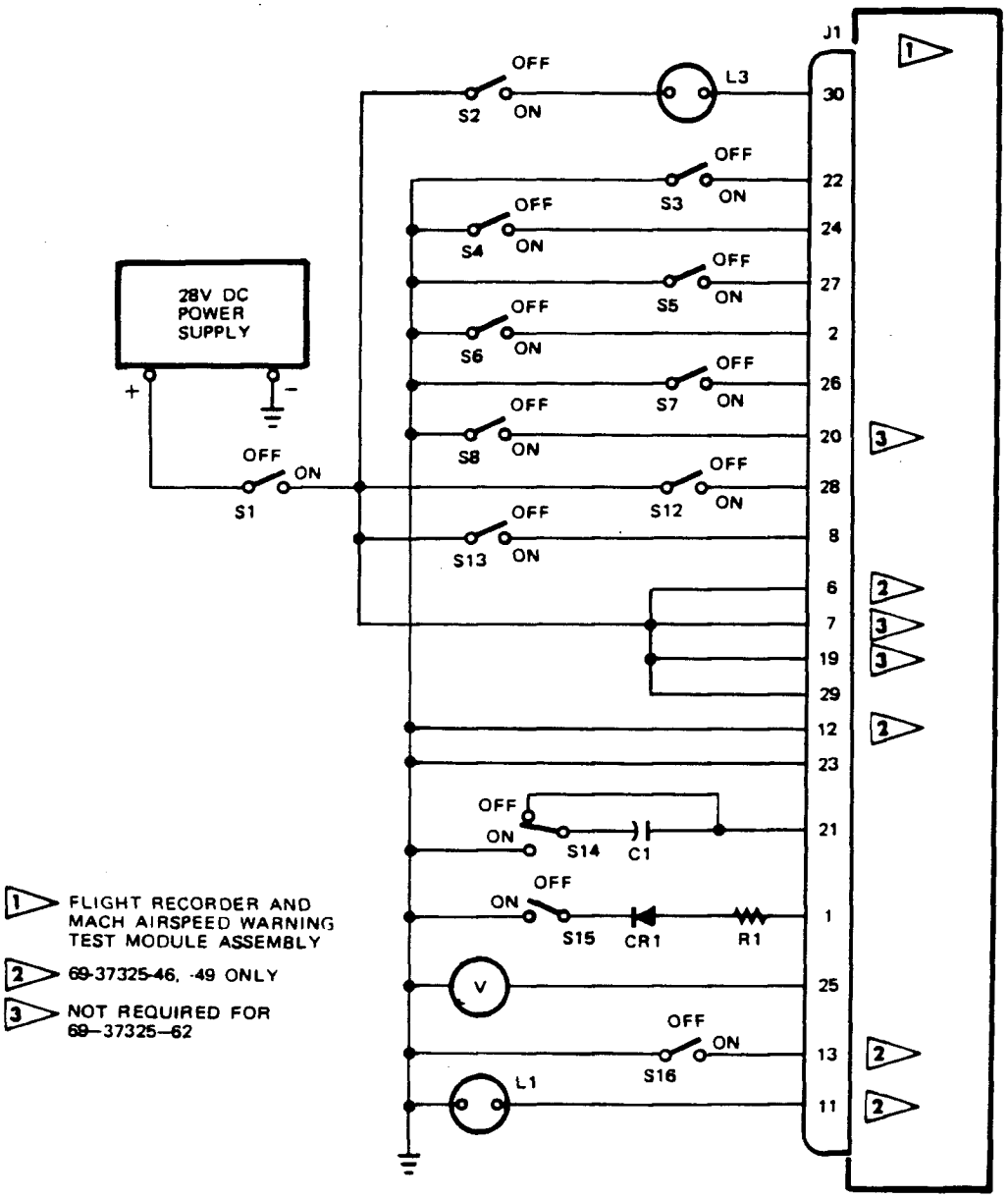
(10) Set FLIGHT RECORDER TEST switch to ON (TEST position). Verify continuity between pins 10 and 11 and between 13 and 14. There shall be no continuity between pins 9 and 10 nor between 12 and 13.

11) Set FLIGHT RECORDER TEST switch to OFF (NORMAL position). Verify continuity between pins 9 and 10 and between 12 and 13. There shall be no continuity between pins 10 and 11 nor between 13 and 14.

(12) Press and release FLIGHT RECORDER OFF indicator on assembly. Indicator shall illuminate when pressed and shall extinguish when released.

(13) Set S3 to ON. FLIGHT RECORDER OFF indicator on module assembly and lamp L3 shall illuminate.

(14) Set S3 to OFF. FLIGHT RECORDER OFF indicator and lamp L3 shall extinguish.



Test Setup
Figure 1

(15) Set switches as listed and verify indications as specified in Fig. 2. Any deviation constitutes a failure. Leave all switches in last specified position.

Test Switch			Test Lamp Indications		
Step	Number	Position	Illuminated	Not Illuminated	V
A	1 and 2	ON			
B	4	ON	L3		
C	4	OFF		L3	
D	5	ON	L3		
E	5	OFF		L3	
F	6	ON	L3		
G	6	OFF		L3	
H	7	ON	L3		
I	7	OFF		L3	
J	8	ON	L3 *[1]		
K	8	OFF		L3 *[1]	
L	12	ON	L3		
M	12	OFF		L3	
N	13	ON	L3		
O	13	OFF		L3	
P	4 thru 7, 12, 13	ON	L3		
Q	2	OFF		L3	
R	2	ON		L3	
S	8	ON	L3 *[1]		
T	2	OFF	*[1]	L3	
U	2	ON	*[1]	L3	
V	4 thru 7, 12, 13	OFF	*[1]	L3	
W	8	OFF		L3 *[1]	
X	15	ON		L3	18 ±3V*[2]
Y	14	ON	L3		18 ±3V*[2]
Z	15	OFF		L3	18 ±3V*[2]
AA	14	OFF		L3	18 ±3V*[2]

*[1] FLIGHT RECORDER OFF indicator on module

*[2] 69-37325-39, -51, -53 only

Test Procedures
Figure 2

(16) Turn off power supply and disconnect assembly from test setup.

D. Functional Test, 69-37325-46, -49

(1) Verify forward and reverse diode resistance as indicated in Fig. 2A.

Component Tested	Measure Between Pins	20 Ohms Max with + at Pin	50 K Min with + at Pin
A1CR22	2 to 23	23	2
A1CR24	5 to 13	13	5
A1CR25	13 to 18	13	18
DS1	19 to 20	-	20
DS1	19 to 22	-	22
A1CR3	22 to 26	26	22
A1CR18	23 to 24	23	24
A1CR7	23 to 26	23	26
A1CR20	23 to 27	23	27

Diode Resistance Tests
Figure 2A

(2) Verify continuity or no continuity with switches set as indicated in Fig. 2B.

NOTE: "Con" means that continuity exists and that resistance must be less than 1 ohm. "No Con" means that circuit is open (infinite resistance).

Module Switch	Measure Between Pins	Required Results	
		Depressed	Released
S1	15 to 16	Con	No Con
S1	17 to 16	No Con	Con
		Normal	Test
S2	12 to 23 (69-37325-46)	No Con	Con
S2	10 to 9 (69-37325-49)	No Con	Con

Switch Continuity Tests
Figure 2B

(3) Test relay K1 per Fig. 2C.

Step	Procedure	Measure Between Pins:	Required Results
1	Connect pin 12 to ground		
2 *[1]		9 to 10	No Con
3		14 to 23	No Con
4		20 to 23	Con
5	Connect pin 7 to 28 v dc		
6 *[1]		9 to 10	Con
7		14 to 23	Con
8	(K1/A1CR6 test)	23(+) to 20	50 ohms max
9	(K1/A1CR6 test)	20(+) to 23	50k min
10	Remove all connections		

*[1] Step applicable to 69-37325-46 only

Relay Tests
Figure 2C

(4) Connect test setup per Fig. 1. Set all switches to OFF. Turn on power supply.

(5) Depress and release DIGITAL FLIGHT DATA RECORDER indicator on module. Indicator must illuminate when pressed and extinguish when released.

(6) Set switches and verify indications as specified in Fig. 2D. L1 will be illuminated at all steps where it is not listed.

Step	Test Switch		Test Lamp Indications		V
	Number	Position	Illuminated	Not Illuminated	
A	1 and 2	ON	L1		18 ±3 V
B	3	ON	L3 *[1]		
C	3	OFF		L3 *[1]	
D	4	ON	L3		
E	4	OFF		L3	
F	5	ON	L3		
G	5	OFF		L3	
H	6	ON	L3		
I	6	OFF		L3	
J	7	ON	L3		
K	7	OFF		L3	
L	8	ON	L3 *[1]		
M	8	OFF		L3 *[1]	
N	12	ON	L3		
O	12	OFF		L3	
P	13	ON	L3		
Q	13	OFF		L3	
R	4	ON	L3		
S	2	OFF		L3	
T	2	ON		L3	
U	5	ON	L3		
V	2	OFF		L3	
W	2	ON		L3	
X	6	ON	L3		
Y	2	OFF		L3	
Z	2	ON		L3	
AA	7	ON	L3		
AB	2	OFF		L3	
AC	2	ON		L3	
AD	8	ON	L3 *[1]		
AE	2	OFF	*[1]	L3	
AF	2	ON	*[1]	L3	
AG	12	ON	L3 *[1]		
AH	2	OFF	*[1]	L3	
AI	2	ON	*[1]	L3	
AJ	13	ON	L3 *[1]		

Step	Test Switch		Test Lamp Indications		V
	Number	Position	Illuminated	Not Illuminated	
AK	2	OFF	*[1]	L3	
AL	2	ON	*[1]	L3	
AM	14	ON	L3 *[1]		
AN	14	OFF	L3 *[1]		
AO	2 thru 8, 12,13	OFF		L3 *[1)	
AP	14,15	ON	L3		18 ±3 V
AQ	14,15	OFF		L3	18 ±3 V
AR	16	ON		L1	
AS	16	OFF	L1		

*[1] DIGITAL FLIGHT DATA RECORDER INDICATOR ON MODULE MUST ILLUMINATE.

Test Procedures
Figure 2D (Sheet 2)

(8) Turn off power supply and disconnect assembly from test setup.

E. Functional Test, 69-37325-62

(1) Perform test steps listed in Fig. 2E.

Component Tested	Procedure		Required Results	
	Measure between pins:			
A1CR22		+2 to 23	20 ohms maximum	
A1CR22		+23 to 2	50k minimum	
A1CR3		+26 to 22	20 ohms maximum	
A1CR3		+22 to 26	50k minimum	
A1CR6		+23 to 24	20 ohms maximum	
A1CR7		+23 to 26	20 ohms maximum	
A1CR20		+23 to 27	20 ohms maximum	
A1CR20		+27 to 23	50k minimum	
A1CR7		+26 to 23	50k minimum	
A1CR6		+24 to 23	50k minimum	
	Press, release, switch		Pressed	Released
S1	S1	16 to 17	No Con	Con
		16 to 15	Con	No Con
S3	S3	6 to 3	No Con	Con
		6 to 4	Con	No Con

Diode and Switch Tests
Figure 2E

(2) Connect test setup per Fig. 1 with all switches set to OFF.

(3) Perform test steps listed in Fig. 2F.

Step	Procedure	Required Results
1	Set S1, S2 to ON	L3 OFF, voltmeter indication 15 to 21 volts dc
2	Set S3 to ON, then to OFF	L3 ON while S3 ON
3	Set S4 to ON, then to OFF	L3 ON while S4 ON
4	Set S5 to ON, then to OFF	L3 ON while S5 ON
5	Set S6 to ON, then to OFF	L3 ON while S6 ON
6	Set S7 to ON, then to OFF	L3 ON while S7 ON
7	Set S12 to ON, then to OFF	L3 ON while S12 ON
8	Set S13 to ON, then to OFF	L3 ON while S13 ON
9	Set S3 to ON	L3 ON
10	Set S2 to OFF, then to ON	L3 OFF
11	Set S4 to ON	L3 ON
12	Set S2 to OFF, then to ON	L3 OFF
13	Set S5 to ON	L3 ON
14	Set S2 to OFF, then to ON	L3 OFF
15	Set S6 to ON	L3 ON
16	Set S2 to OFF, then to ON	L3 OFF
17	Set S12 to ON	L3 ON
18	Set S2 to OFF, then to ON	L3 OFF
19	Set S13 to ON	L3 ON
20	Set S2 to OFF, then to ON	L3 OFF
21	Set all switches (except S1) to OFF	L3 OFF
22	Set S2 to ON	L3 OFF
23	Set S15 to ON	L3 OFF
24	Set S14 to ON	L3 ON, voltmeter indication 15 to 21 volts dc
25	Set S14 to OFF	L3 ON
26	Set S15 to OFF	L3 OFF
27	Set all switches to OFF. Disconnect test setup.	

Functional Tests
Figure 2F

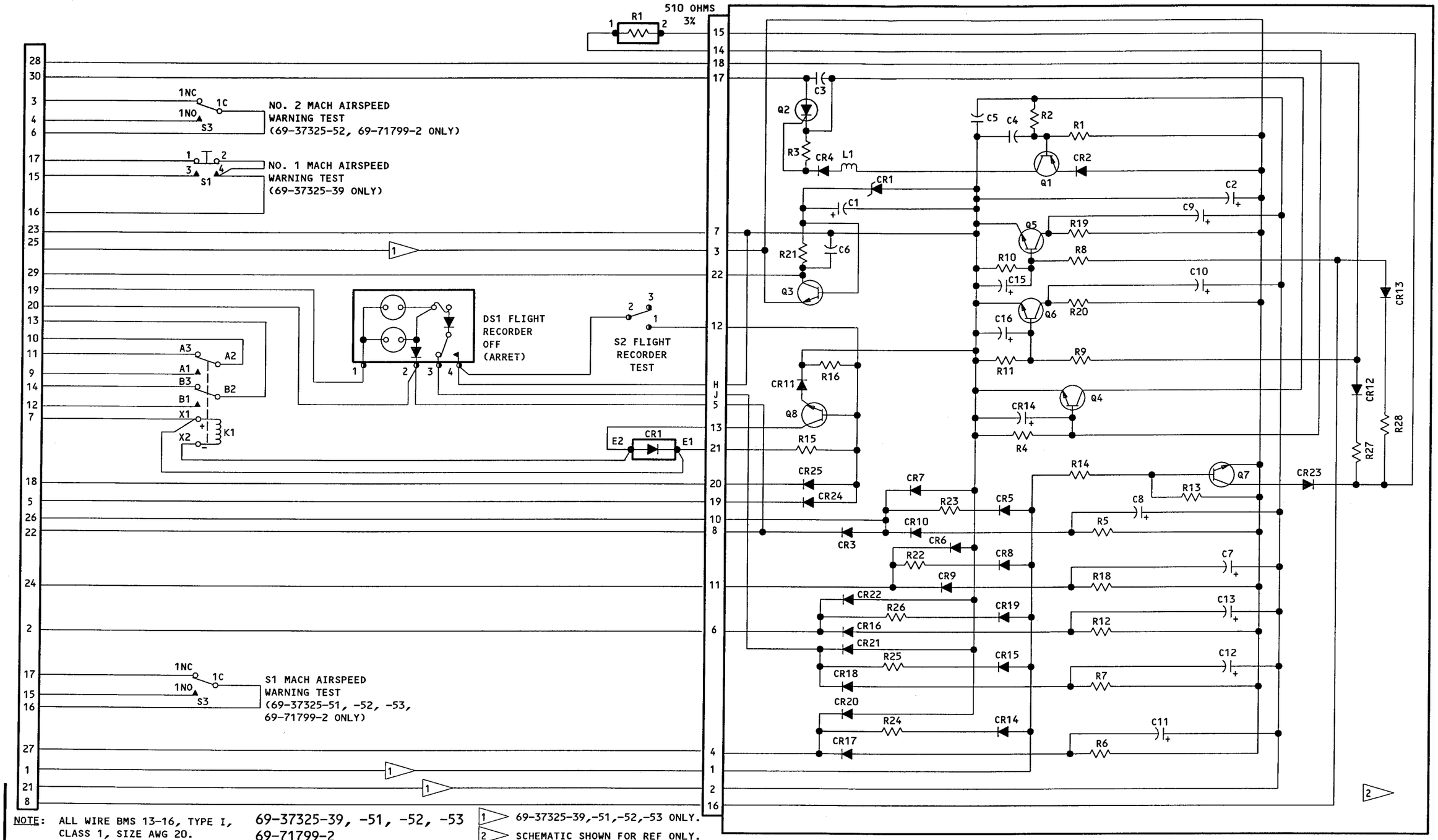
4. Trouble Shooting

A. If failure of a test occurs, check for defective connections and incorrect wiring connections, prior to replacement of components.

NOTE: Trouble shooting is keyed to functional test procedures.

Trouble	Possible Cause and Correction
69-37325-39,-51,-52,-53; 69-71799-2	
Step (1)	A1 (diode open)
Step (2)	CR1
Step (3), (4), (4A) or (4B)	Switch
Step (5)	K1

Trouble	Possible Cause and Correction
Step (6)	A1 or S2
Step (9)	K1 or A1
Step (10), (11)	K1 or A1
Step (12)	DS1
Step (13)	A1, R1, or DS1
Step (14)	A1
Fig. 2	A1
Steps B thru H	
Step J	
L3 extinguished	A1
Indicator DS1 extinguished	DS1
Steps L thru end	A1
69-37325-46, -49	
Fig. 2A, 2B and 2C	Component noted in figure
Step (5)	DS1
Fig. 2D	
Step A	A1
Steps B and C	A1, R1 or DS1
Steps D thru AS	A1
69-37325-62	
Fig. 2E	Component noted in figure
Fig. 2F	A1 card, except, if L3 fails to turn on at all steps, R1 might be open preventing completion of A1Q4 base circuit



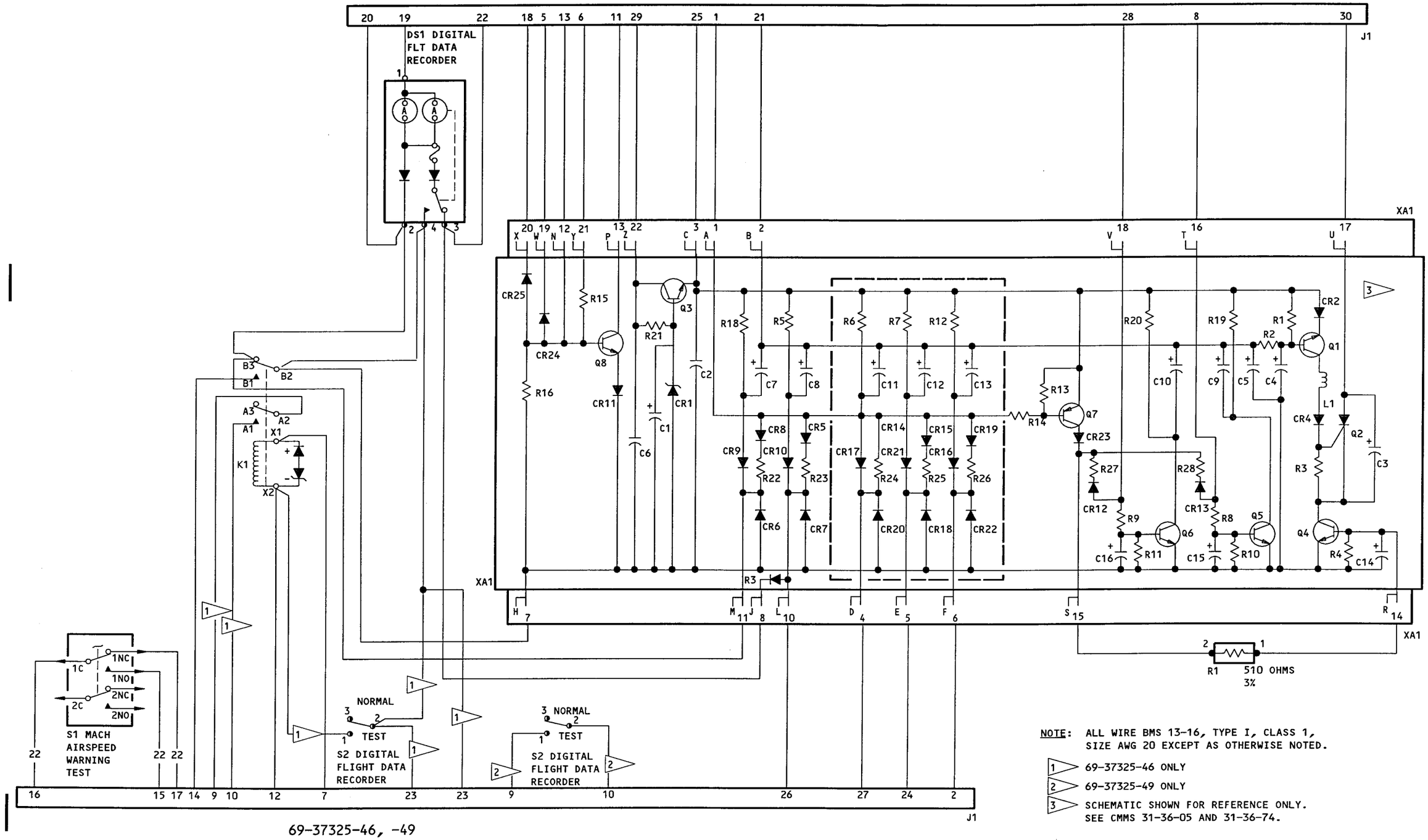
NOTE: ALL WIRE BMS 13-16, TYPE I, CLASS 1, SIZE AWG 20. SIZE AWG 24 FOR -39 ONLY.

69-37325-39, -51, -52, -53
69-71799-2

1 69-37325-39,-51,-52,-53 ONLY.

2 SCHEMATIC SHOWN FOR REF ONLY. SEE CMMS 31-36-05 AND 31-36-74.

Schematic Diagram
Figure 3



NOTE: ALL WIRE BMS 13-16, TYPE I, CLASS 1, SIZE AWG 20 EXCEPT AS OTHERWISE NOTED.

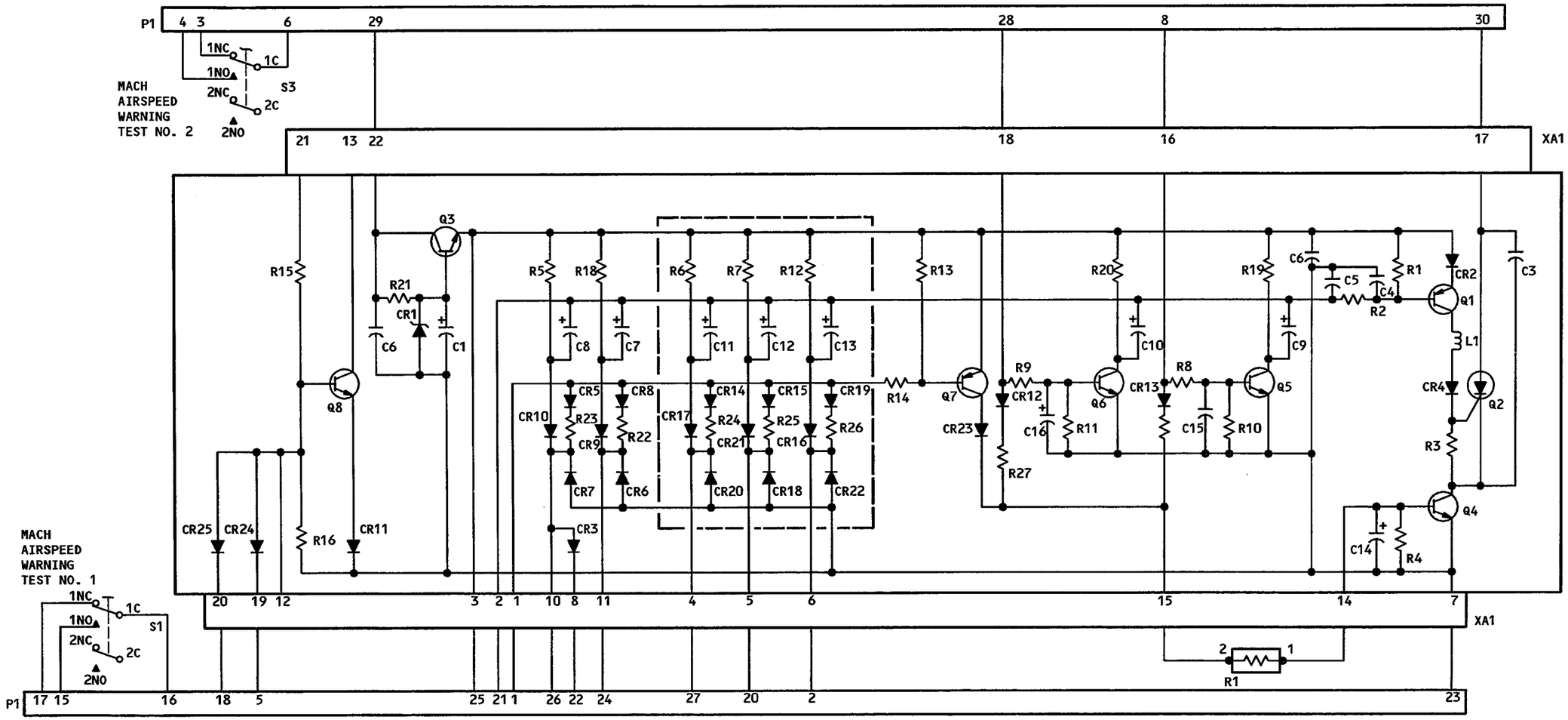
1 69-37325-46 ONLY

2 69-37325-49 ONLY

3 SCHEMATIC SHOWN FOR REFERENCE ONLY. SEE CMMS 31-36-05 AND 31-36-74.

69-37325-46, -49

Schematic Diagram
Figure 3A



NOTE: ALL WIRE BMS 13-16, TYPE I, CLASS 1, SIZE AWG 20.

69-37325-62

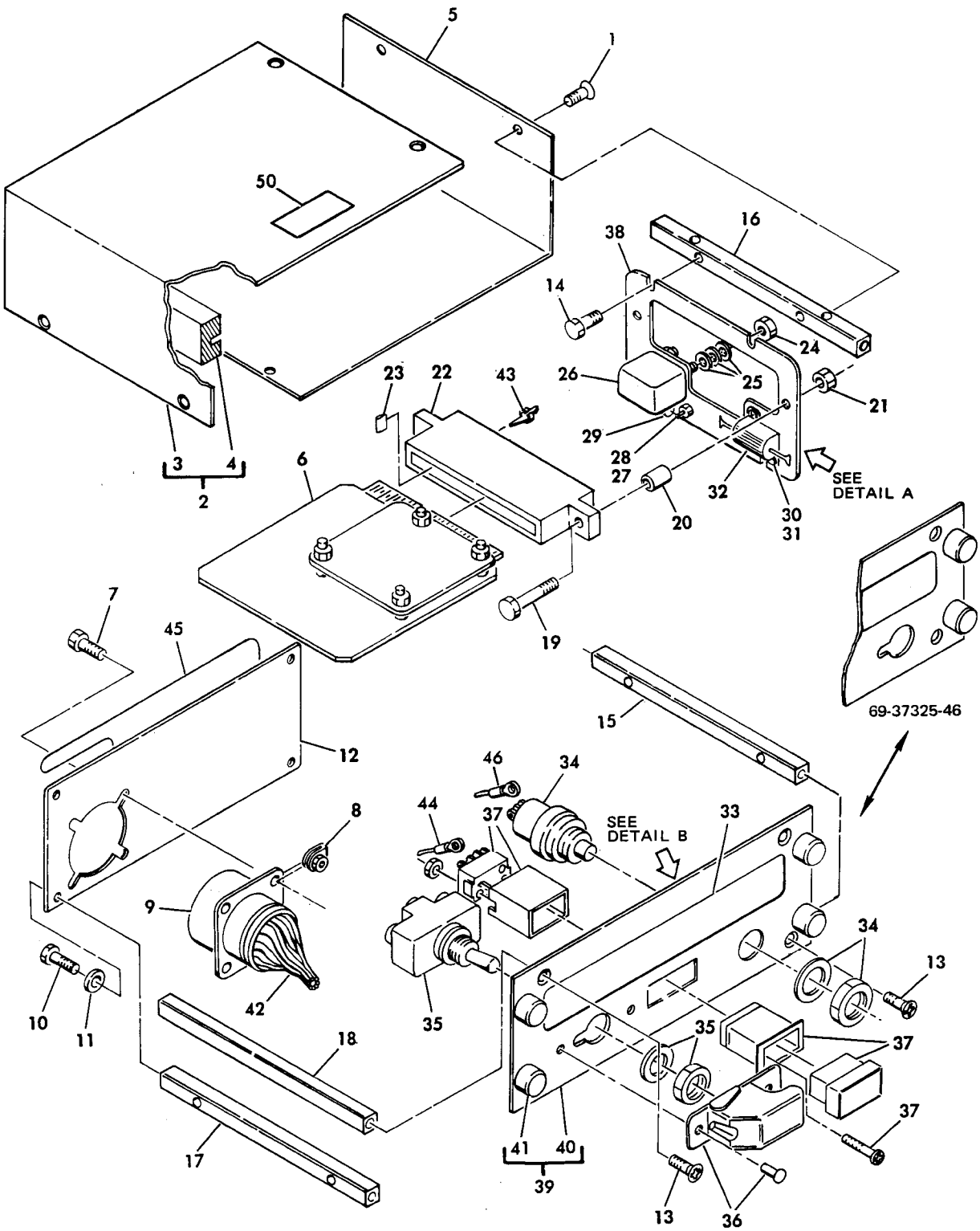
Schematic Diagram
Figure 3B

G15469

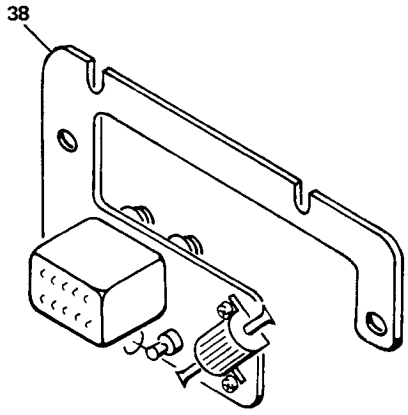
5. ILLUSTRATED PARTS LIST

REFERENCE DESIGNATION INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.
A1	69-51810-8	6
A1	69-51810-22	6
A1	69-51810-33	6
CR1	1N4384	29
DS1	318-630-1001-195	37
DS1	318-630-1001-008	37
E1, E2	1491A	28
K1	BACR13CF4A	
K1	*BACR13CF4	26
K1	JG2A	26
K1	JG2L020	26
P1	BACC45FN18-31P	9
R1	*RH5-510-3PCT	32
R1	3105M-510-3PCT	32
S1	W20161-03	34
S1	2PB11H58	34
S2	MS24523-23	35
S3	2PB11H58	47
XA1	582557-1	22

* PREFERRED PART

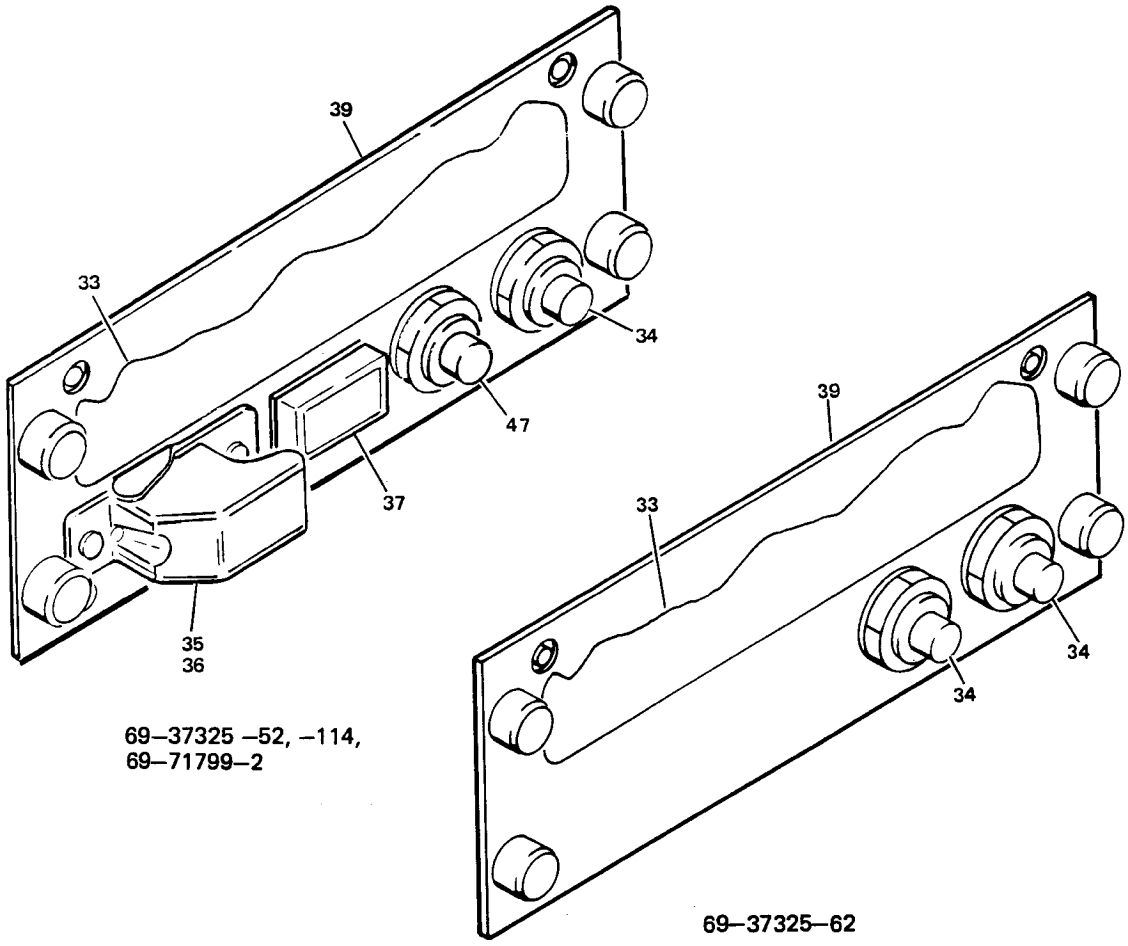


Flight Recorder and Mach Airspeed Warning Test Module Assembly (P5-19)
Figure 4 (Sheet 1)



69–37325–52, –114,
69–71799–2

DETAIL A



69–37325 –52, –114,
69–71799–2

69–37325–62

DETAIL B

Flight Recorder and Mach Airspeed Warning Test Module Assembly (P5-19)

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
4-					
	69-37325-39		FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST MODULE ASSY (P5-19)	A	
	69-37325-46		FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST MODULE ASSY (P5-19)	B	
	69-37325-49		MODULE ASSY P5-19, FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST	C	
	69-37325-53		MODULE ASSY P5-19, FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST	D	
	69-37325-51		MODULE ASSY P5-19, FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST	E	
	69-37325-52		MODULE ASSY P5-19, FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST (SB 31-1030)	F	
	69-37325-62		FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST MODULE ASSY (P5-19) (SB 31-1030)	G	
	69-71799-2		FLIGHT RECORDER AND MACH AIRSPEED WARNING TEST MODULE ASSY (P5-19) (SB 31-1030)	H	
	69-37325-114		DELETED		
	69-37325-125		DELETED		
	69-37325-127		DELETED		
	69-37325-128		DELETED		
	69-37325-130		DELETED		
1	NAS514P440-4		. SCREW		8
2	69-43948-20		. COVER ASSY	A-FH	1
2	69-43948-23		. COVER ASSY	G	1
3	69-43948-19		. . COVER	A-FH	1
3	69-43948-22		. . COVER	G	1
4	69-43948-21		. . FOAM		1
5	69-43948-19		. COVER		1
5	69-43948-22		. COVER	G	1
6	69-51810-8		. PRINTED CIRCUIT ASSY (REF 31-36-05)	A-H	1
6	69-51810-18		DELETED		
6	69-51810-20		DELETED		
6	69-51810-33		. PRINTED CIRCUIT ASSY (REF 31-36-74)	A-F	1
6	69-51810-22		. PRINTED CIRCUIT ASSY (REF 31-36-74) (OPT)	A-F	1
6	69-51810-8		DELETED		
7	BACS12CB04-5		. SCREW		2
8	BACN10NW1		. CLIP NUT		2
9	BACC45FN18-31P		. CONNECTOR		1
10	BACS12CB06-5		. SCREW		4
11	MS35338-41		. WASHER		4
12	69-43948-12		. BACKPLATE		1
13	NAS514P632-5		. SCREW		

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
4-					
14	BACS12CB04-4		. SCREW	A-EG	4
14	BACS12CB04-4		. SCREW	FH	3
15	69-37325-5		. STANDOFF		1
16	69-37325-8		. STANDOFF		1
17	69-37268-13		. STANDOFF		1
18	69-37268-14		. STANDOFF		2
19	BACS12CB06-14		. SCREW		2
20	NAS43DD1-17		. SPACER		2
21	NAS679A06W		. NUT (REPLD BY BACN10JC06)		2
21	BACN10JC06		. NUT (REPL NAS679A06W)		2
22	582557-1		. CONNECTOR, V00779		1
23	582507-1		. KEYING PLUG, V00779		1
24	NAS679A06W		. NUT (REPLD BY BACN10JC06)		2
24	BACN10JC06		. NUT (REPL NAS679A06W)		2
25	AN960PD6		. WASHER	A-FH	6
26	BACR13CF4		. RELAY (PREF)	AEFH	1
26	JG2A		. RELAY (OPT) V35344	A	1
26	JG21020		. RELAY, V35344	B	1
26	BACR13CF4A		. RELAY	C	1
27	BACS12BE02-3		. SCREW	ADEFH	2
28	1491A		. INSULATED TERMINAL, V88245 (OPT)	ADEFH	2
28	1625-4-12		. INSULATED TERMINAL, V88245 (PREF)	ADEFH	2
29	1N4384		. DIODE, V14936	ADEFH	1
30	BACS12BE02-5		. SCREW		2
31	BACN10DN26		. NUT		2
32	RH5-510-3PCT		. RESISTOR, 510 OHMS ±3%, 5 W, V91637	AD-H	1
32	3105M5-10-3PCT		. RESISTOR, 510 OHMS ±3%, 5 W, V00213 (OPT)	AD-H	1
33	BAC27DCC666		. ALUMINUM FOIL MARKER	AD	1
33	BAC27DCC571		. ALUMINUM FOIL MARKER	E	1
33	BAC27DEX1875		. ALUMINUM FOIL MARKER	BC	1
33	BAC27DCC572		. ALUMINUM FOIL MARKER	FH	1
33	BAC27DCC933		. MARKER	G	1
34	W20161-03		. SWITCH, V81640	A	1
34	2PB11H58		. PUSHBUTTON SWITCH, V91929	B-FH	1
34	2PB11H58		. PUSHBUTTON SWITCH, V91929	G	2
35	MS24523-23		. SWITCH	A-FH	1
36	11170-1		. SWITCH GUARD, V72914	A-FH	1
37	318-630-1001-195		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-251)	AD	1
37	318-630-1001-008		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-12)	BCEFH	1
38	69-43948-14		. SUPPORT PLATE	A-EG	1
38	69-43948-17		. SUPPORT PLATE	FH	1
39	69-37325-21		. BASEPLATE ASSY	ADE	1
39	69-37325-148		. BASEPLATE ASSY	BC	1
39	69-37325-18		. BASEPLATE ASSY	FH	1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
4-					
39	69-37325-63		. BASEPLATE ASSY	G	1
40	BACP10U0225G		. . BASEPLATE		1
41	BACS21DD1G		. . STUD ASSY		4
42	69-37325-40		. WIRE BUNDLE ASSY	A	1
42	69-37325-47		. WIRE BUNDLE ASSY	B	1
42	69-37325-50		. WIRE BUNDLE	C	1
42	69-37325-58		. WIRE BUNDLE	D	1
42	69-37325-54		. WIRE BUNDLE	E	1
42	69-37325-55		. WIRE BUNDLE (SB 31-1030)	FH	1
42	69-37325-64		. WIRE BUNDLE	G	1
43	66143-2		. TAB TERMINAL, V00779		AR
44	BACT12S		. TERMINAL LUG	A-FH	AR
45	BAC27DCC239		. ALUMINUM FOIL MARKER	AD-H	1
46	640024-1		DELETED		
47	2PB11H58		. PUSHBUTTON SWITCH, V91929	FH	1
50	BAC27EEX510		DELETED		

VENDORS

V00213	NYTRONICS COMPONENTS GROUP, SUBSIDIARY OF NYTRONICS, INC., ORANGE ST., DARLINGTON, SOUTH CAROLINA 29532
V00779	TYCO ELECTRONICS CORP., 2800 FULLING MILL, MIDDLETON, PENNSYLVANIA 17057
V14936	GENERAL INSTRUMENTS CORP., POWER SEMICONDUCTOR DIV., 600 W. JOHN ST., HICKSVILLE, NEW YORK 11802
V35344	SEE V58657
V58657	LEACH INTERNATIONAL OF NORTH AMERICA, 6900 ORANGETHORPE AVE., P.O. BOX 5032, BUENA PARK, CALIFORNIA 90622-5032
V72914	GRIMES DIV., MIDLAND-ROSS, 550 STATE ROUTE 55, P.O. BOX 247, CHAMPAIGN COUNTY, URBANA, OHIO 43078-0247
V81590	KORRY ELECTRONIC, INC., SUBDIVISION OF CRITON CORP., 901 DEXTER AVE. N., SEATTLE, WASHINGTON 98109-3515
V81640	EATON CORP., AEROSPACE AND COMMERCIAL CONTROLS DIV., 2250 WHITFIELD AVE. E., SARASOTA, FLORIDA 34243-9703
V88245	WINCHESTER ELECTRONICS, LITTON SYSTEM, INC., USECO DIV., 13536 SATICOY ST., VAN NUYS, CALIFORNIA 91409
V91637	DALE ELECTRONIC, INC., P.O. BOX 609, 1122 23RD ST., COLUMBUS, NEBRASKA 68601-3632
V91929	HONEYWELL, INC., MICRO SWITCH DIV., 11 W. SPRING ST., FREEPORT, ILLINOIS 61032