

BOEING 
COMMERCIAL JET
OVERHAUL MANUAL

TO: ALL HOLDERS OF INSTRUMENT SWITCHING MODULE ASSEMBLY P5-32 OVERHAUL
MANUAL, 31-36-45

REVISION NO. 1, DATED DEC 5/87

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D & O	D / A s s y	C l e a n i n g	I n s p / C h k	R e p a i r	A s s y	F / C	T e s t	T / S h o o t i n g	S / T o o l s	S t o r a g e	I P L	L / O v e r h a u l
Beginning with this revision separate consecutively numbered highlight sheets will be provided whenever this subject is revised.													
Added coverage for assemblies 69-37367-8, -10 per basic release	X							X				X	

INSTRUMENT SWITCHING MODULE ASSEMBLY

P5-32

31-36-45

BOEING P/N 69-37367-1, -8, -10

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT

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LIST OF EFFECTIVE PAGES					
* Indicates pages revised, added or deleted in latest revision					
F Indicates foldout pages - print one side only					
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* T-1	Dec 5/87				
T-2	BLANK				
* LEP-1	Dec 5/87				
LEP-2	BLANK				
* T/C-1	Dec 5/87				
T/C-2	BLANK				
* 1	Dec 5/87				
* 2	Dec 5/87				
3	Jun 10/72				
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*[2] Special instructions not required.	

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INSTRUMENT SWITCHING MODULE P5-32

1. DESCRIPTION AND OPERATION

- A. The instrument switching module assembly contains flight instrument selector switches and the auxiliary vertical gyro inoperative indicator. On assy 69-37367-1, -8, the INOP indicator is held out of sight by power present at pin 13, and ground present at pin 12. If the circuit on the power or ground side is open, the INOP indicator is permitted to swing into view, and is lighted by the 5-volt ac instrument panel lighting power supply.

2. TESTING

A. Test equipment

- (1) Power Supplies: +28 volts dc, and 5 volts ac or dc
- (2) Ohmmeter: Simpson 260, or equivalent
- (3) Connector with pigtail leads: BACC45FT22-55S

B. Functional Test

- (1) Plug test connector into module receptacle. Identify and tag pigtail leads.

STEPS (2) - (8), 69-37367-1, -8 ONLY

- (2) Remove back cover and disconnect connector J2 from indicator DS1.
- (3) Verify greater than 50k between pin 12 (+) and pin 13, and between pin 13 (+) and pin 12. (CR1 and CR2 test.)
- (4) Connect J2 to indicator DS1.
- (5) Connect 5 volts ac or dc at pin 14, and ground at pin 15. INOP indicator shall show illuminated in indicator DS1 window. Verify both lamps lighted (even illumination of window).
- (6) Connect 28 volts dc at pin 13, and ground at pin 12. INOP indicator shall disappear from view in DS1 window.

- (7) Disconnect 28 volts dc at pin 13. The INOP indicator shall reappear.
- (8) Remove all connections.

STEPS (9) - (13), ALL ASSEMBLIES

- (9) Verify wiring continuity between pins 15 and 44.
- (10) Verify continuity from pin 14 to X1 center contact.
- (11) Verify continuity from pin 15 to X1 outer rim.
- (12) Set switches and make continuity observations as listed in Fig. 1.
- (13) Replace back cover and disconnect test connector.

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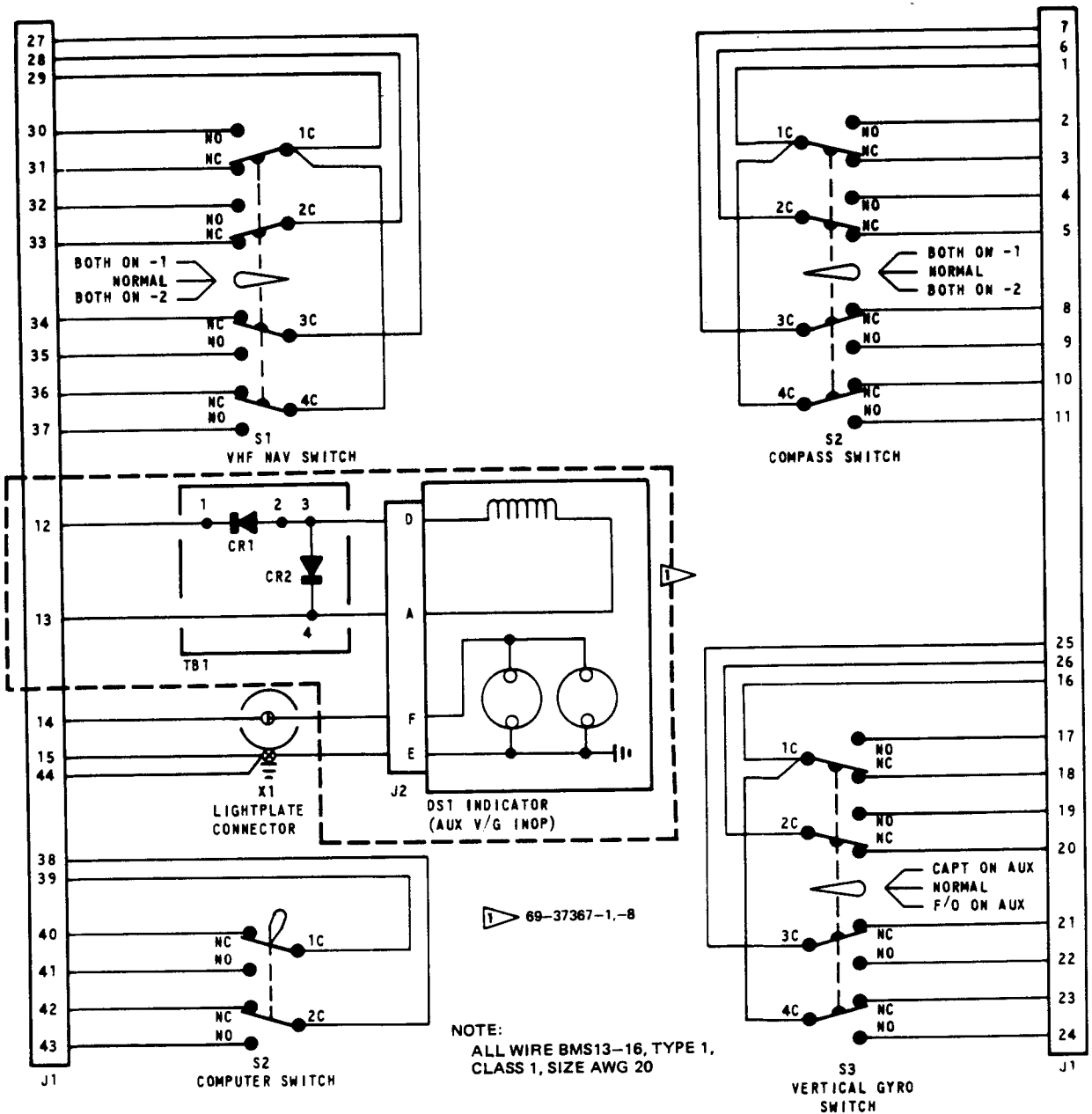
Step	Component Tested	Procedure	Measure Between Pins	Required Results	
1	S1	Set S1 to BOTH ON 1 (right)	37 to 29	Continuity	
2	S1		37 to 31	Continuity	
3	S1		36 to 31	No Continuity	
4	S1		35 to 27	Continuity	
5	S1		34 to 27	No Continuity	
6	S1		33 to 28	Continuity	
7	S1		32 to 28	No Continuity	
8	S1		30 to 29	No Continuity	
9	S1	Set S1 to BOTH ON 2 (left)	37 to 29	No Continuity ^o	
10	S1		36 to 29	Continuity	
11	S1		35 to 27	No Continuity	
12	S1		34 to 27	Continuity	
13	S1		33 to 28	No Continuity	
14	S1		32 to 28	Continuity	
15	S1		31 to 29	No Continuity	
16	S1		30 to 29	Continuity	
17	S1	Set S1 to NORMAL (center)			
18	S2	Set S2 to BOTH ON 1 (right)	11 to 1	Continuity	
19	S2		11 to 3	Continuity	
20	S2		10 to 3	No Continuity	
21	S2		9 to 7	Continuity	
22	S2		8 to 7	No Continuity	
23	S2		5 to 6	Continuity	
24	S2		4 to 6	No Continuity	
25	S2		2 to 1	No Continuity	
26	S2		Set S2 to BOTH ON 2 (left)	11 to 1	No Continuity
27	S2			10 to 1	Continuity
28	S2			9 to 7	No Continuity
29	S2			8 to 7	Continuity
30	S2			5 to 6	No Continuity
31	S2			4 to 6	Continuity
32	S2			3 to 1	No Continuity
33	S2			2 to 1	Continuity
34	S2	Set S2 to NORMAL (center)			
35	S3	Set S3 to BOTH ON 1 (right)	24 to 16	Continuity	
36	S3		24 to 18	Continuity	
37	S3		23 to 18	No Continuity	
38	S3		22 to 25	Continuity	
39	S3		21 to 25	No Continuity	
40	S3		20 to 26	Continuity	
41	S3		19 to 26	No Continuity	
42	S3		17 to 16	No Continuity	

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Step	Component Tested	Procedure	Measure Between Pins	Required Results	
43	S3	Set S3 to BOTH ON 2 (left)	24 to 16	No Continuity	
44	S3		23 to 16	Continuity	
45	S3		22 to 25	No Continuity	
46	S3		21 to 25	Continuity	
47	S3		20 to 26	No Continuity	
48	S3		19 to 26	Continuity	
49	S3		18 to 16	No Continuity	
50	S3		17 to 16	Continuity	
51			Set S3 to NORMAL (center)		
52	S4		Set S4 to left	39 to 40	Continuity
53	S4	Set S4 to right	39 to 41	No Continuity	
54	S4		38 to 42	Continuity	
55	S4		38 to 43	No Continuity	
56	S4		39 to 40	No Continuity	
57	S4		39 to 41	Continuity	
58	S4		38 to 42	No Continuity	
59	S4		38 to 43	Continuity	

Switch Continuity Tests
 Figure 1 (Sheet 2)



ASSEMBLY 69-37367-1, -8, -10

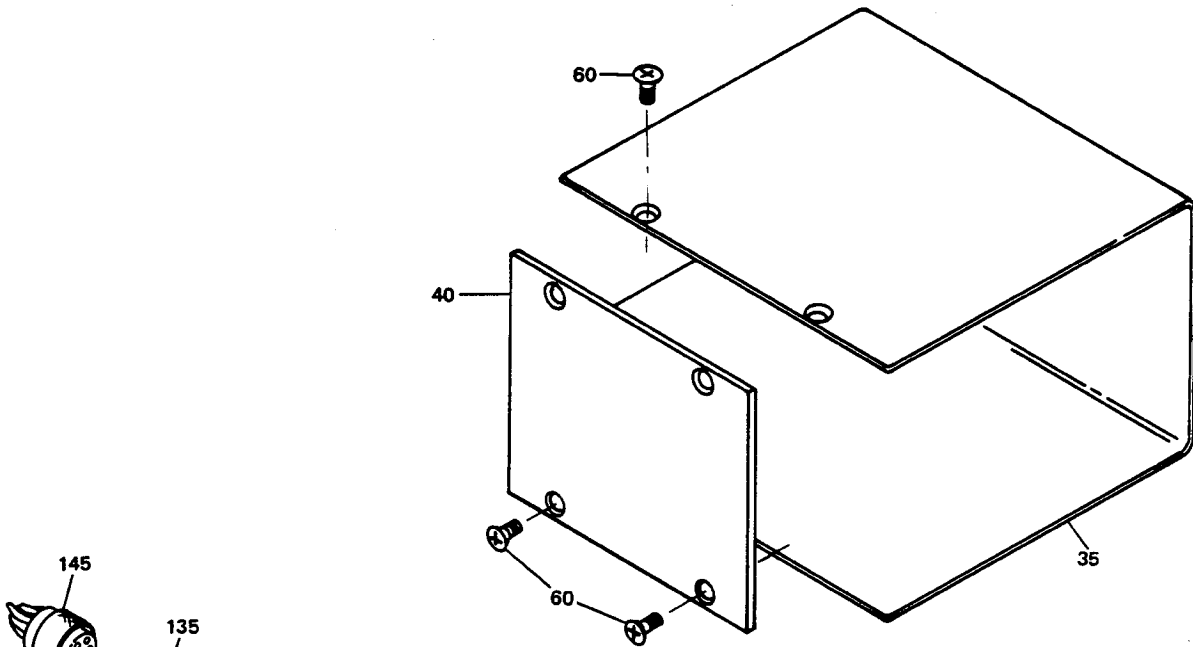
Schematic Diagram
 Figure 2

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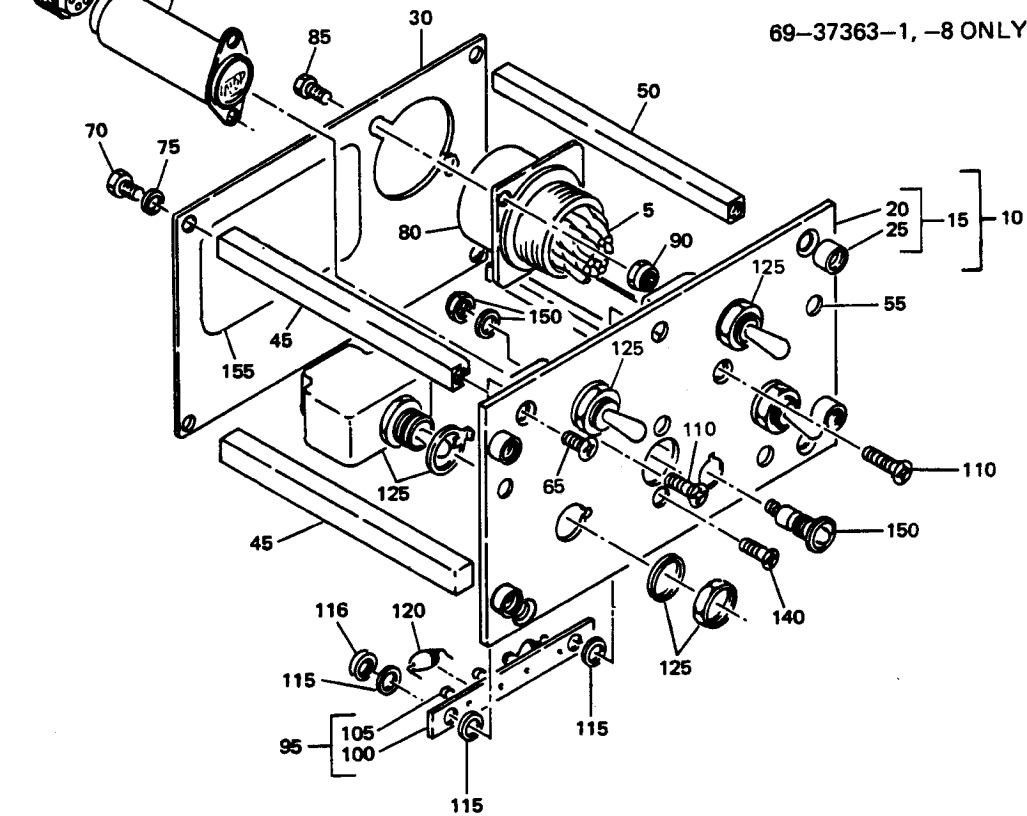
4. ILLUSTRATED PARTS LISTVENDORS

V05617	BELL INDUSTRIES INC., FARWEST MFG. DIV., 18225 NE 76TH ST., REDMOND, WASHINGTON 98052
V09959	AIRCRAFT INSTRUMENTS COMPANY, 4039 SKYRON DR., DOYLESTOWN, PENNSYLVANIA 18901
V26742	METHODE ELECTRONICS, INCORPORATED, 7447 WEST WILSON AVE., CHICAGO, ILLINOIS 60656
V77820	ALLIED CORP., AMPHENOL PRODUCTS DIV., BENDIX CONNECTOR OPERATIONS, 40-60 DELAWARE STREET, SIDNEY, NEW YORK 13838
V81640	EATON CORP., AEROSPACE AND COMMERCIAL CONTROLS DIV., 2074 WHITFIELD AVE. E., SARASOTA, FLORIDA 34243
V91929	HONEYWELL INC., MICROSWITCH DIV., 11 W. SPRING ST., FREEPORT, ILLINOIS 61032

REFERENCE DESIGNATION INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.
CR1, CR2	1N5061	120
DS1	2802-433L5A	135
J1	BACC45FN22-55P	80
J2	PT06SE10-6S	145
S1, S2, S3	BACS30EN11A	125
S1, S2, S3	64AT22-1A	125
S4	BACS30EL11D	130
S4	62AT22-3D	130
TB1	69-61285-3	95
X1	SCN001	150
X1	800000121-1	150



69-37363-1, -8 ONLY



69-37367-1, -8, -10

Instrument Switching Module Assembly P5-32
 Figure 3

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FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	N O M E N C L A T U R E							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
3-	69-37376-1		INSTRUMENT SWITCHING MODULE ASSY							A	
			P5-32								
	69-37367-8		INSTRUMENT SWITCHING MODULE ASSY							B	
			P5-32								
	69-37367-10		INSTRUMENT SWITCHING MODULE ASSY							C	
			P5-32								
5	69-37367-2		. WIRE BUNDLE							A	1
5	69-37367-9		. WIRE BUNDLE							B	1
5	69-37367-11		. WIRE BUNDLE							C	1
10	69-37367-3		. BASEPLATE ASSY								1
15	69-37367-4		. . BASEPLATE ASSY								1
20	BACP10U0337G		. . . BASEPLATE								1
25	BACS21DD1G		. . . STUD								4
30	69-37367-5		. BACKPLATE								1
35	69-37367-6		. COVER (OPT)							AB	1
40	69-37367-7		. COVER (OPT)							AB	1
45	69-37268-11		. STANDOFF								2
50	69-37268-12		. STANDOFF								2
55	BACN10PA06-6		. PRESS NUT								4
60	NAS514P440-5		. SCREW (USED WITH ITEMS 35 AND 40)								8
65	NAS514P632-5		. SCREW								4
70	BACS12CB06-5		. SCREW								4
75	MS35338-41		. WASHER								4
80	BACC45FN22-55P		. CONNECTOR								1
85	BACS12CB04-5		. SCREW								2
90	BACN10DN40		. NUT								2
95	69-61285-3		. TERMINAL BOARD ASSY							AB	1
100	69-61285-4		. . TERMINAL BOARD							AB	1
105	BACT40A7G		. . TERMINAL							AB	1
110	NAS514P440-6		. SCREW							AB	2
115	NAS43DD0-12		. SPACER							AB	2
115	AN960PD4L		DELETED								
116	BACN10DN40		. NUT							AB	2
120	1N5061		. DIODE							AB	2
125	BACS30EN11A		. SWITCH							A	3
125	64AT22-1A		. SWITCH, V91929							BC	3
125	A3-1111-011A1		. SWITCH, V81640 (OPT)							BC	3
130	BACS30EL11D		. SWITCH							A	1
130	62AT22-3D		. SWITCH, V91929							BC	1
130	A3-1117-011A1		. SWITCH, V81640 (OPT)							BC	1

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FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	N O M E N C L A T U R E							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
3-											
135	2802-433L5A		.							AB	1
140	NAS514P632-3		.							AB	2
145	PT06SE10-6S		.							AB	1
150	SCN001		.							AB	1
150	800000121-1		.							C	1
155	BAC27DEX1187		.								1