

TO: ALL HOLDERS OF CENTER INSTRUMENT MODULE ASSEMBLY P2-1 OVERHAUL MANUAL,  
 31-13-02

REVISION NO. 3, DATED NOV 1/08

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D & O	D / Assy	Cleaning	Inspection / Check	Repair	Assy	F / C	Test	T / Shooting	S / Tools	Storage	IPL	L / Overhaul
Removed BAE Systems assemblies from manual	X				X			X				X	

# CENTER INSTRUMENT MODULE ASSEMBLY P2-1

## 31-13-02

I BOEING P/N 69-68858-2

AIRLINE P/N

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THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
31-1012		MC 3500-3 MC 3600-14 MC 3600-18 MC 3600-20 MC 3600-73 PRR 30714 PRR 31253 PRR 31429-5 MC 3600-18K PRR 32106 PRR 32106-1 MC 3912-76K	Jun 10/70 Jun 10/70 Jun 10/70 Jun 10/70 Jun 10/70 Jun 10/70 Jun 10/70 Jun 10/70 Jun 10/70 Mar 10/72 Mar 10/72 Mar 10/72 Jan 5/77

Nov 1/08

31-13-02  
Page T-1

## 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
31-13-02					
* T-1	Nov 1/08				
T-2	BLANK				
* LEP-1	Nov 1/08				
LEP-2	BLANK				
* T/C-1	Nov 1/08				
T/C-2	BLANK				
* 1	Nov 1/08				
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* 9	Nov 1/08				
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* 11	Nov 1/08				
* 12	DELETED				
* 13	DELETED				
* 14	DELETED				

Nov 1/08

 31-13-02  
 Page LEP-1

TABLE OF CONTENTS

<u>Paragraph Title</u>	<u>Page</u>
Description and Operation .....	1
Disassembly.....*[1]	
Cleaning.....*[1]	
Inspection/Check .....	*[1]
Repair.....*[1]	
Assembly.....*[2]	
Fits and Clearances (not applicable)	
Testing .....	2
Trouble Shooting.....*[2]	
Storage Instructions .....	*[1]
Special Tools, Fixtures, and Equipment .....	*[1]
Illustrated Parts List .....	7

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

\*[2] Special instructions not required.



## CENTER INSTRUMENT MODULE ASSEMBLY (P2-1)

**NOTE:** For coverage of 69-37304-28, -39, -42, -84, -87, -94, -107, -108, -110, -112, -113, -115, -146, -147, refer to BAE Systems Controls Inc., (V89954 BAE Systems Controls Inc., 600 Main St., Johnson City, NY 13790-1806) CMM 31-13-02.

### 1. DESCRIPTION AND OPERATION

- A. The center instrument panel consists of a baseplate assembly which provides support for switches, lights, instrument mounting clamps, and a wire bundle assembly.
- B. The center instrument panel contains switches and lights as follows:
  - (1) Speed brake test switches (S289, S315, and S316) to test autospeed brake fault detection system.
  - (2) A yaw damper test switch (S295) which tests yaw damper operation. When the test switch is moved to L position, the yaw damper indicator will move left, and when the test switch is moved to R position, the yaw damper indicator will move right.
  - (3) A fuel quantity test switch (S257) which tests the fuel quantity indicating system. Pressing switch drives indicators towards O.
  - (4) A fuel flow reset switch (S300) which resets the fuel consumed indicator when the switch is pressed.
  - (5) A light switch (S270) which provides intensity control and test of approach progress display lighting.
  - (6) A SPEED BRAKE DO NOT ARM light (L442) which illuminates when a fault or failure in the system occurs. The light also illuminates during roll-out if speed brakes have not been lowered and wheel speed is below 20 mph.
  - (7) A SPEED BRAKE ARMED light (L441) which illuminates when lever is in armed position and no fault exists. Also during roll-out when wheel speed is above 20 mph.
  - (8) A STAB OUT OF TRIM light (L334) is activated when the stabilizer system is out of trim for the condition required by the autopilot.

**2. REPAIR**

- A. Screws (12, 13 and 29) are installed with Loctite sealant and may be difficult to remove. When installing screws (12, 13 and 29), apply Loctite primer, Grade T, and Nut Lock Compound 74 (Loctite Corporation, 705 North Mountain Road, Newington, Connecticut) to threaded areas of screws per manufacturer's instructions.

**3. TESTING**
**A. Test Equipment**

- (1) Power Supply: 28 volts dc
- (2) Multimeter: Model 260 (Simpson) or equivalent
- (3) Mating Connectors: BACC45FT22C19S (D4246P) and BACC45FT22C55S (D4256P) with pigtail leads

**B. Functional Test**

- (1) Install mating connectors and identify pigtail leads. Label upper connector A (D4246J). Label lower connector B (D4256J).
- (2) Verify continuity as specified in Fig. 1.

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

Switch Positions		Measure Between Pins	Required Results
Switch	Position		
S257	Released	B-1 and B-2 B-3 and B-4 B-5 and B-14 B-6 and B-13	No Con Con No Con No Con
S257	Pressed	B-1 and B-2 B-3 and B-4	Con No Con

Continuity Test  
Figure 1 (Sheet 1)

Switch Positions		Measure Between Pins	Required Results
Switch	Position		
S270	BRT	B-5 and B-14	Con
		B-6 and B-13	Con
		A-9 and A-8	No Con
		A-9 and A-10	No Con
		A-9 and A-11	Con
		A-14 and A-13	Con
S270	TEST	A-14 and B-34	No Con
		B-36 and B-35	No Con
		B-36 and B-37	Con
		A-9 and A-8	No Con
		A-9 and A-10	Con
		A-9 and A-11	No Con
S270	DIM	A-14 and A-13	No Con
		A-14 and B-34	Con
		B-36 and B-35	Con
		B-36 and B-37	No Con
		A-9 and A-8	Con
		A-9 and A-10	No Con
S289	Released	A-9 and A-11	Con
		A-14 and A-13	Con
		A-14 and B-34	No Con
		B-36 and B-35	No Con
		B-36 and B-37	Con
		A-15 and A-16	No Con
S289	Pressed	A-15 and A-16	Con
S315	Released	A-17 and B-55	No Con
S315	Pressed	A-17 and B-55	Con
S316	Released	A-16 and A-17	No Con
		B-54 and B-55	No Con
		A-16 and A-17	Con
S316	Pressed	B-54 and B-55	Con

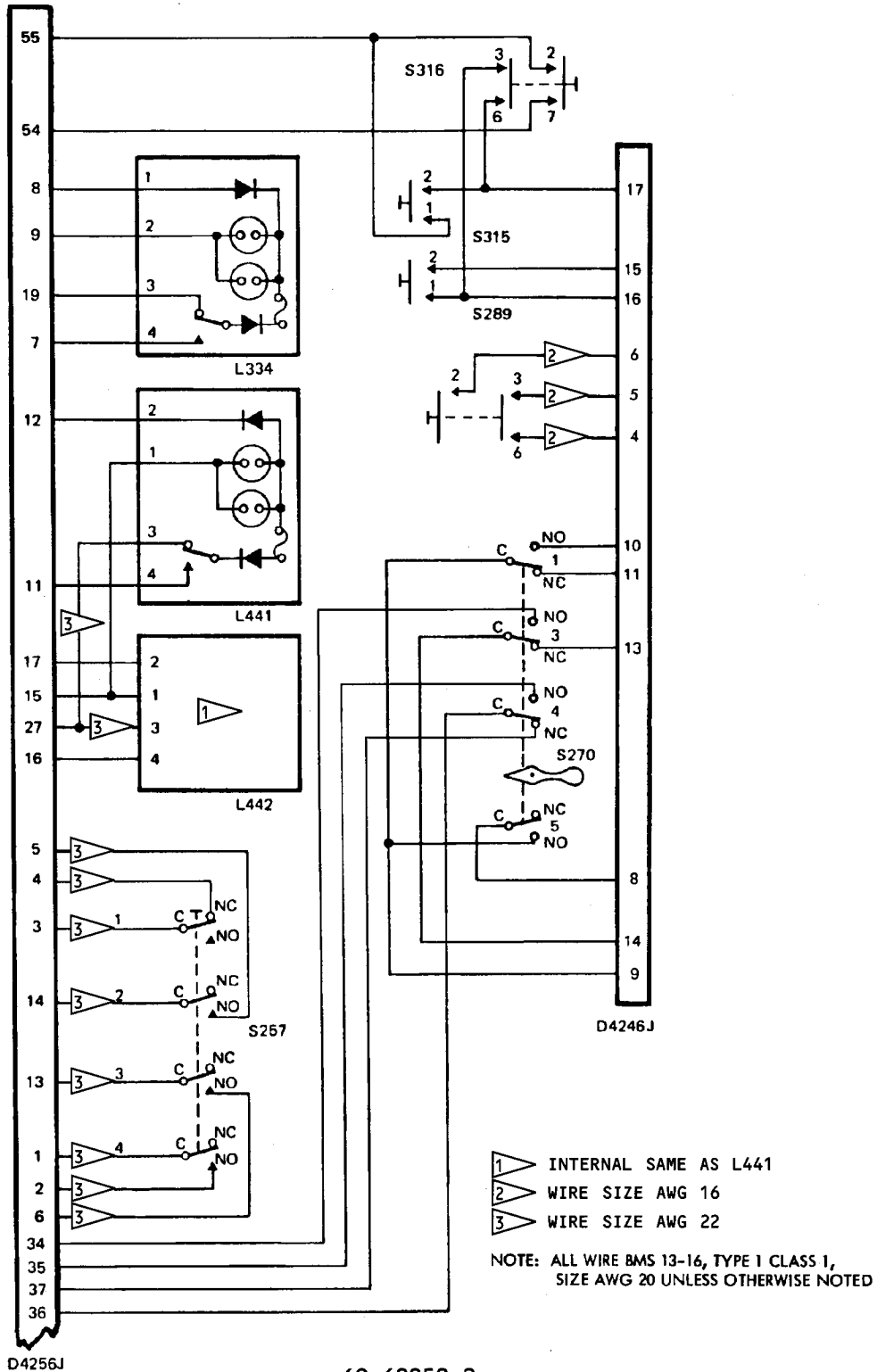
Continuity Test  
 Figure 1 (Sheet 2)

(3) Test indicator light assemblies per Figure 2.

Component	Apply 28 VDC to D4256J pin:	Ground to D4256J pin:	Indicator Position	Indicator	
				Illuminated	Extinguished
L334	8	9		X	
	9	8			X
	7	9	Pressed	X	
	9	7	Pressed		X
L441	19	9	Released	X	
	15	12		X	
	12	15			X
	15	27	Released	X	
L442	27	15	Released		X
	15	11	Pressed	X	
	15	17		X	
	17	15			X
	15	27	Released	X	
	27	15	Released		X
	15	16	Pressed	X	

Indicator Light Assembly Tests  
Figure 2





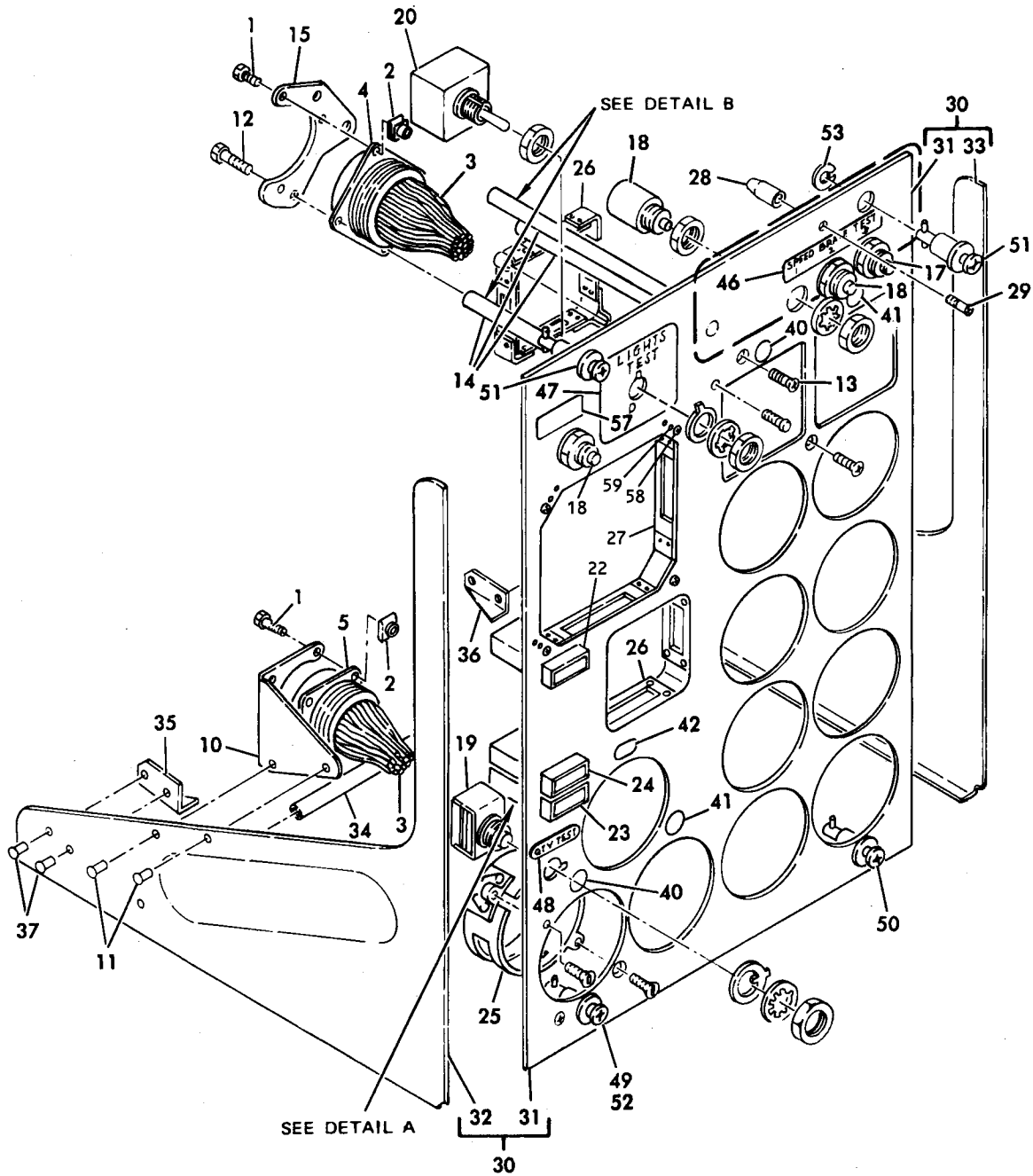
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Schematic Diagram  
Figure 3

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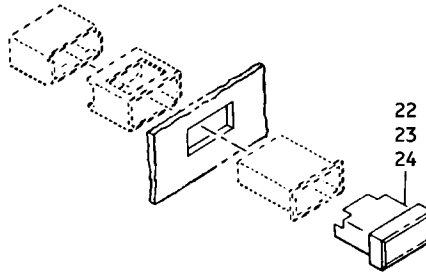
Nov 1/08

4. ILLUSTRATED PARTS LIST

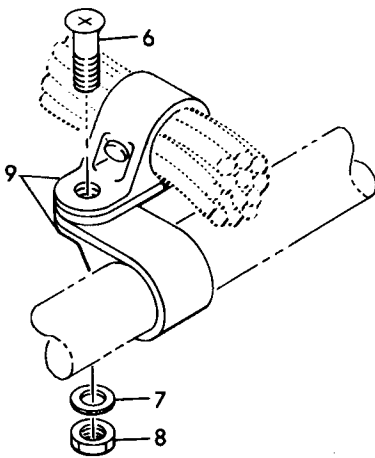


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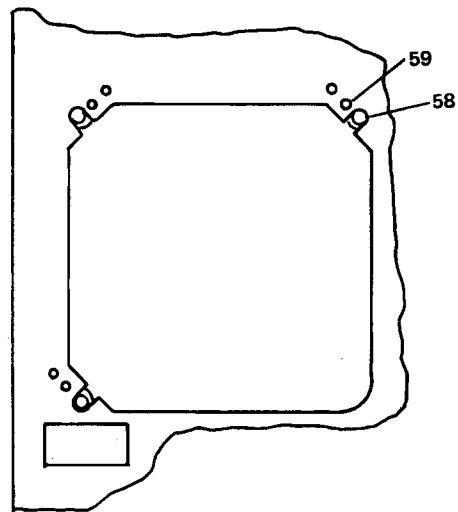
Center Instrument Module Assembly (P2-1)  
Figure 4 (Sheet 1)



DETAIL A



DETAIL B



DETAIL C

Center Instrument Module Assembly (P2-1)  
Figure 4 (Sheet 2)

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-	69-68858-2		CENTER INSTRUMENT MODULE ASSY, P2-1 (MC 3912-76K)								
1	BACS12CB04-6		. SCREW								6
2	BACN10NW1		. NUT								6
3	61-30064-008		. WIRE BUNDLE								1
4	BACC45FN22-19P		. . CONNECTOR								1
5	BACC45FN22-55P		. . CONNECTOR								1
6	BACS12CB3-( )		. SCREW								AR
7	AN960D( )		. WASHER								AR
8	BACN10JC3		. NUT (REPLS NAS679A3W)								AR
9	BACC10DK-( )		. CLAMP								AR
10	69-43873-9		. PLATE								1
11	BACR15BA5D		. RIVET (REPLS MS20426D5)								2
12	BACS12B06-5		. SCREW								3
13	NAS514P632-6		. SCREW								3
14	66-13524-12		. SPACER								3
15	69-49743-2		. PLATE								1
17	W20163-03		. SWITCH, V81640								1
19	4PB11T2		. SWITCH, V91929								1
20	68AT11-1		. SWITCH, V91929								1
22	318-630-1002-005		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-19)								1
23	318-630-1001-066		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-89)								1
24	318-630-1001-067		. INDICATOR LIGHT ASSY, V81590 (BOEING 10-61803-90)								1
25	BACC10EL3		. CLAMP, INSTRUMENT								11
26	19748		. CLAMP, INSTRUMENT, V98625								2
28	69-42739-1		. PIN, INDEX								2
29	NAS514P832-6		. SCREW								2

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-											
30	69-37304-95		.								1
31	69-37304-96		.	.							1
32	69-41277-3		.	.							1
33	69-41277-4		.	.							1
34	69-42851-9		.	.							1
35	69-43831-1		.								1
36	69-43831-2		.								1
37	MS20426D4		.								4
40	BACM10N00-2S		.								2
41	BACM10N00-2T		.								2
42	BAC27DCC16		.								1
46	BAC27DCC268		.								1
46	BAC27DCC659		.								1
47	BAC27DCC31		.								1
48	BAC27DCC65		.								1
49	BACS21Y5RB		.								1
50	26S55-5AB		.								1
51	26S55-6AB		.								2
52	BACW10X2		.								1
53	BACW10X4		.								3
58	BACN10JP06B		.								3
59	BACR15BA3D		.								6

REFERENCE DESIGNATION INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.
D4246J	BACC45FN22-19P	4
D4256J	BACC45FN22-55P	5
L334	318-630-1002-005	22
L441	318-630-1001-066	23
L442	318-630-1001-067	24
S257	4PB11T2	19
S270	68AT11-1	20
S316	W20163-03	17

#### VENDORS

V71286	ALCOA GLOBAL FASTENERS, INC., DBA CAMLOCK PRODUCTS SOUTH BAY OPERATIONS DIV., CAMLOCK PRODUCTS, 3014 W. LOMITA AVE., TORRANCE, CALIFORNIA 90505-5103
V81590	KORRY ELECTRONICS CO., 901 DEXTER AVE. N., SEATTLE, WASHINGTON 98109-3515
V81640	EATON CORP., DBA FLUID POWER DIV., 2250 WHITFIELD AVE., SARASOTA, FLORIDA 34243-3926
V91929	HONEYWELL INTERNATIONAL, INC., 11 W. SPRING ST., FREEPORT, ILLINOIS 61032-4316
V98625	AEROQUIP CORP., MARMAN DIV., 11214 EXPOSITION BLVD., LOS ANGELES, CALIFORNIA 90064