COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

FLIGHT CONTROLS MODULE ASSEMBLY, P5-3

PART NUMBER 69-37313–104, –106, –108, –401, –403, –405, –410, –99

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COMPONENT MAINTENANCE MANUAL

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To: All holders of FLIGHT CONTROLS MODULE ASSEMBLY, P5-3 31-36-81.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

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For printed manuals, changes are indicated on the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), O (Overflow, i.e. changes to the document structure and/or page layout), or D (Deleted). Each page in the LEP is identified by Chapter-Section-Subject number, page number and page date.

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Location of Change	Description of Change
	NO HIGHLIGHTS

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COMPONENT MAINTENANCE MANUAL

A = Added, R = Revised, D = Deleted, O = Overflow

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COMPONENT MAINTENANCE MANUAL

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
69-37313-31-03		PRR 34766	DEC 05/90 MAR 01/03

All revisions to this manual will be accompanied by transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the revision date, the date filed and the initials of the person filing.

Revision		Filed	
Number	Date	Date	Initials

Revision		Filed	
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All temporary revisions to this manual will be accompanied by a cover sheet bearing the temporary revision number. Enter the temporary revision number in numerical order, together with the temporary revision date, the date the temporary revision is inserted and the initials of the person filing.
When the temporary revision is incorporated or cancelled, and the pages are removed, enter the date the pages are removed and the initials of the person who removed the temporary revision.

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

Temporary Revision		Inserted		Removed	
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INTRODUCTION

1. General

A. The instructions in this manual supply the data necessary to do the maintenance functions together with the test, fault isolation, repair, and replacement of the defective parts.

B. This manual is divided into different parts:

(1) Title Page

(2) Transmittal Letter

(3) Highlights

(4) List of Effective Pages

(5) Table of Contents

(6) Temporary Revision & Service Bulletin Record

(7) Record of Revisions

(8) Record of Temporary Revisions

(9) Introduction

(10) Procedures & IPL Sections

C. Refer to the Table of Contents for the page location of the applicable procedures.

D. All dimensions, measures, quantities and weights included are in English units. When metric equivalents are given they will be in the parentheses that follow the English units.

E. The introduction to the Illustrated Parts List (IPL) shows how the IPL data is used.

F. Design changes, optional parts, configuration differences and Service Bulletin modifications may cause different part numbers. These part numbers are identified in the IPL with an alphabetical letter which is added to the end of the basic item number. This new item number is referred to as an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless shown differently.

G. Verification:

FLIGHT CONTROLS MODULE ASSEMBLY P5-3 - DESCRIPTION AND OPERATION

1. Description

A. The flight controls module assembly consists of printed circuit assemblies, indicator light assemblies, control switches and a wire bundle assembly. The module assembly is located in the pilots' forward overhead panel and may be removed by loosening the six quick-release screws on the baseplate and disconnecting the primary power connectors.

2. Operation

A. The flight controls module assembly contains controls and indicators for operation of the primary and auxiliary flight control system hydraulic supply valves. The module contains lamps and switches as follows:

(1) Lamps

(a) L1 - ELEVATOR AND RUDDER FEEL DIFF PRESSURE

(b) L2 - LOW PRESSURE STANDBY HYDRAULIC

(c) L3 - LOW PRESSURE FLIGHT CONTROL SYSTEM "A"

(d) L4 - LOW QUANTITY STANDBY HYDRAULIC SYSTEM

(e) L5 - LOW PRESSURE FLIGHT CONTROL SYSTEM "B"

(f) L6 - YAW DAMPER

(g) L8 - MACH TRIM FAIL

(h) L9 - SPEED TRIM FAIL

(i) L10 - AUTO SLAT FAIL

(j) L11 - STBY RUD ON HYDRAULIC SYSTEM (69-37313-401, -403, -405, 410 ONLY)

(2) Switches

(3) S1 - ALT FLAP MASTER ARMING

(4) S2 - ALT FLAP DRIVE SWITCH

(5) S3 - FLIGHT CONTROL SYSTEM "A" SWITCH

(6) S4 - FLIGHT CONTROL SYSTEM "B" SWITCH

(7) S5 - SPOILER SHUTOFF SWITCH SYSTEM "B"

(8) S6 - SPOILER SHUTOFF SWITCH SYSTEM "A"

(9) S7 - YAW DAMPER ENGAGE SWITCH

3. Functional Description

A. Indicator Lamps

(1) All the indicator lamps have +28 volt dc power connected at the No. 1 terminal from pin P2-18 and require a ground input to illuminate. The No. 4 terminals are grounded at pin P2-16 so that when the lamps are pressed they will illuminate individually. The No. 3 terminal of all lamps may be connected to ground through the external master test switch connected at pin P2-7 to illuminate them all at once. The lamps serve their indicator function when the No. 2 terminals are grounded.

B. The external master caution indicator is connected at pin P1-27. Pins P1-13 and P2-18 are supplied +28 volts dc and pin P2-16 is grounded (Ref 31-36-07, 69-37313-99, -104, -401, -410, or 33-15-11, 69-37313-106, 108, -403, -405 for description of A1 operation).

(1) Master Caution, L1, L4, L8 and L9 Indicators (DESCRIPTION AND OPERATION, Figure 1)

(a) Grounding pins P2-20, P2-8, P2-2 or P2-1 or P2-53 will illuminate lamps L1, L4, L8, L9, or L11, respectively. Also printed circuit assembly A1 circuitry is activated, completing a ground path from pin P1-27 to pin P2-16, illuminating the master caution indicator. The signal that activates L4 is delayed by A2 before being passed on to A1.

(2) Master Caution, L8, L9, L10 Indicators

(a) Ungrounding of pins P1-36 and P2-2, P1-38 and P2-1, or P1-28 and P2-31 will illuminate L8, L9, or L10 respectively. Also printed circuit assembly A1 circuitry is activated, completing a ground path from pin P1-27 to P2-16, illuminating the master caution indicator.

(3) Master Caution, L2, L3, L5, and L6 Indicators

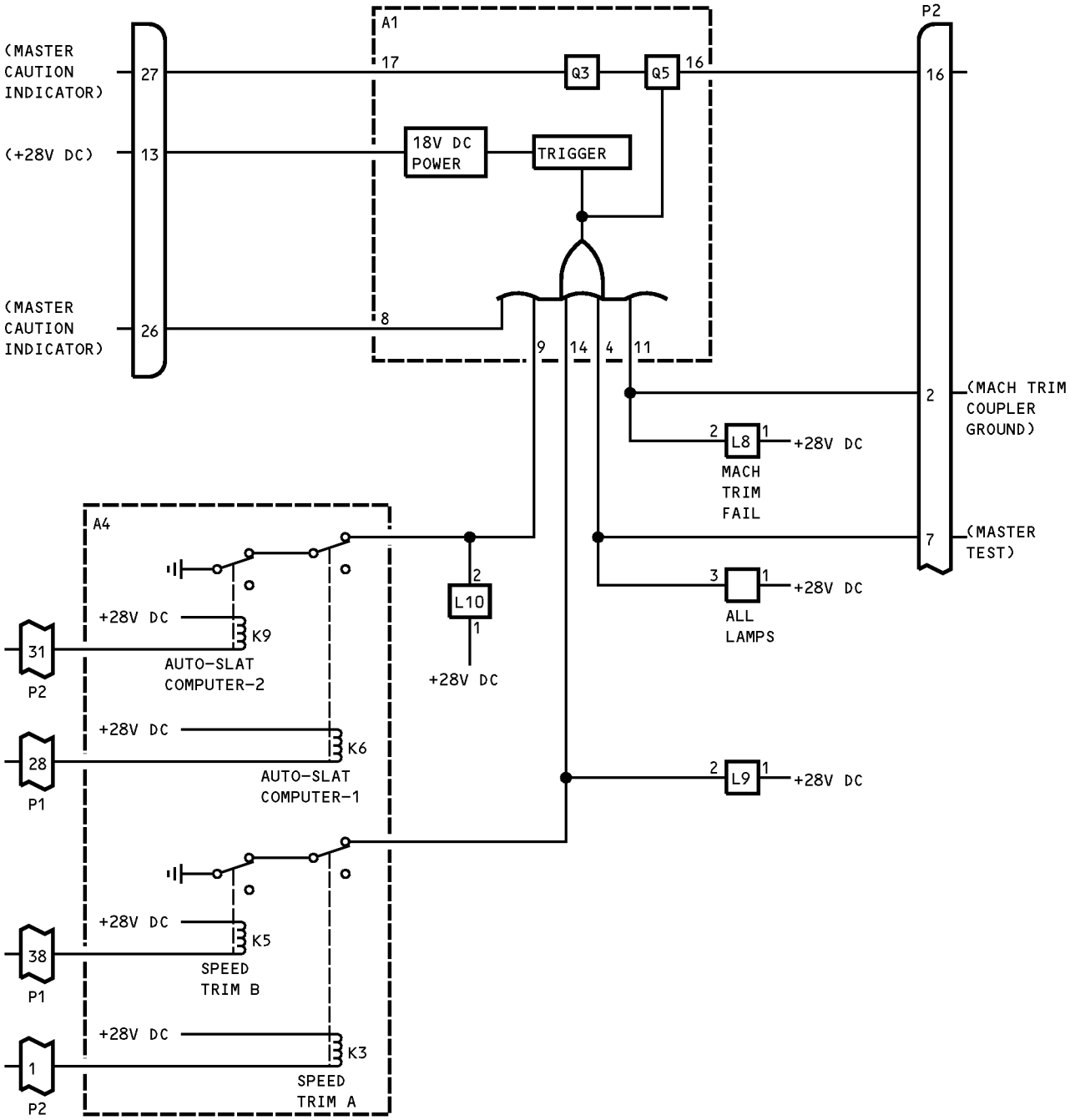
(a) Grounding pins P1-20 (thru S1, S3, and S4), P1-24, or P1-7 (thru S3 or S3 and K1), P2-10, or P1-7 (thru S4 or S4 and K1), or P2-19 will illuminate lamps L2, L3, L5, or L6, respectively. Grounding of the foregoing pins supplies an input to printed circuit assembly A2 or A3. A2 or A3 circuits arm the A1 circuit and after a 0.5 to 2 second delay triggers A1 causing it to illuminate the master caution indicator. The time delay eliminates nuisance triggering of the master caution indicator.

C. Master Caution Recall

(1) The master caution indicator, when illuminated, may be extinguished by opening the ground path from pin P1-27 thru A1 to pin P2-16. At a later time, activating the external master caution recall, which momentarily grounds pin P1-26, will illuminate the master caution indicator provided one or more of the ground inputs to pins P1-7, P1-20, P1-24, P2-2, P2-8, P2-10, P2-19, P2-20, or P2-53 are present.

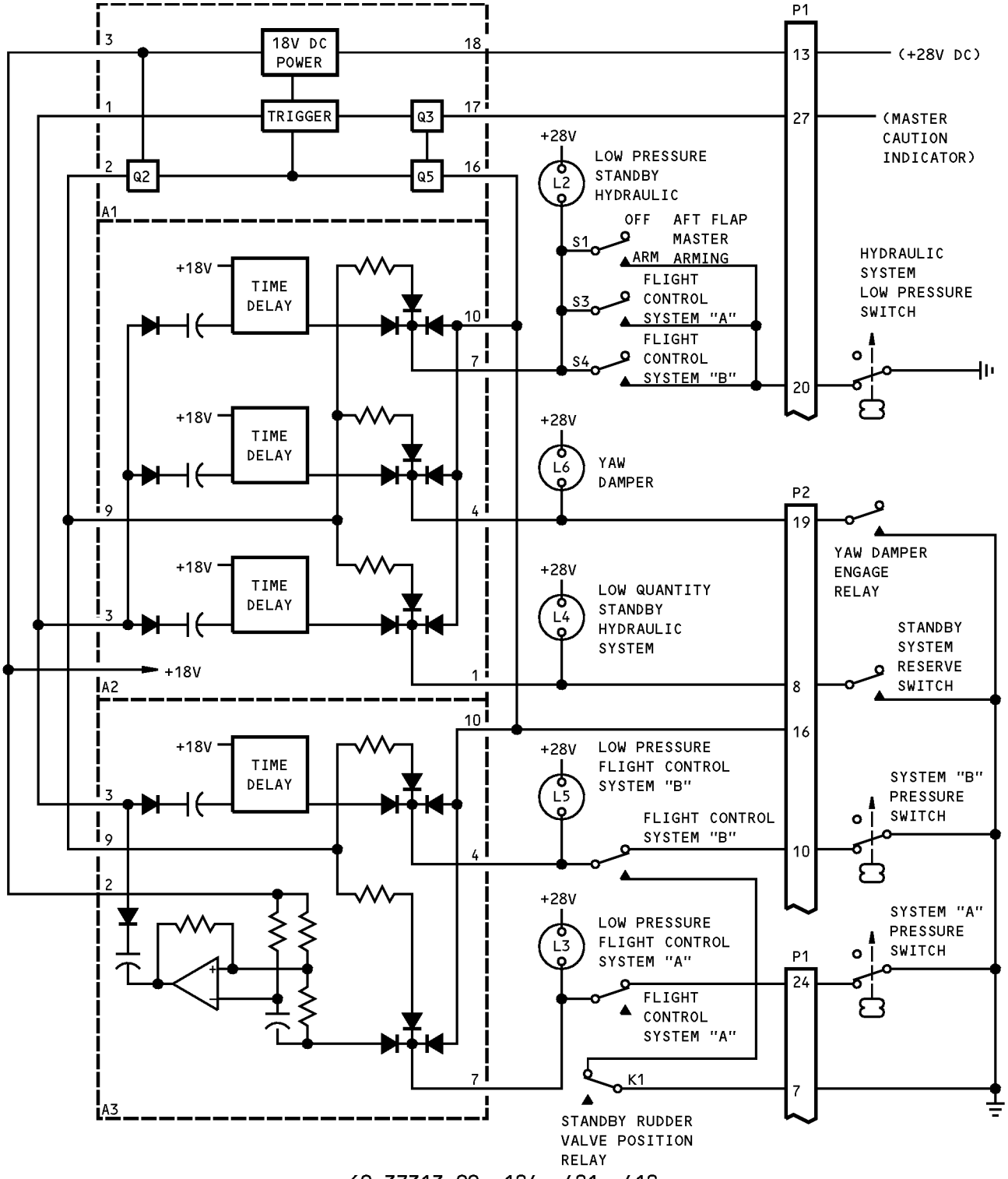
D. Master Test

(1) Activating the master test, which grounds pin P2-7, will illuminate all of lamps L1 thru L6, L8, L9, L10, L11 and the master caution indicator. This is accomplished by providing a ground input to each of the module lamps at terminal No. 3 and completing the ground path thru A1 for the master caution indicator.



69-37313-99,-104,-401,-410

Indicator Diagram
Figure 1 (Sheet 1 of 4)



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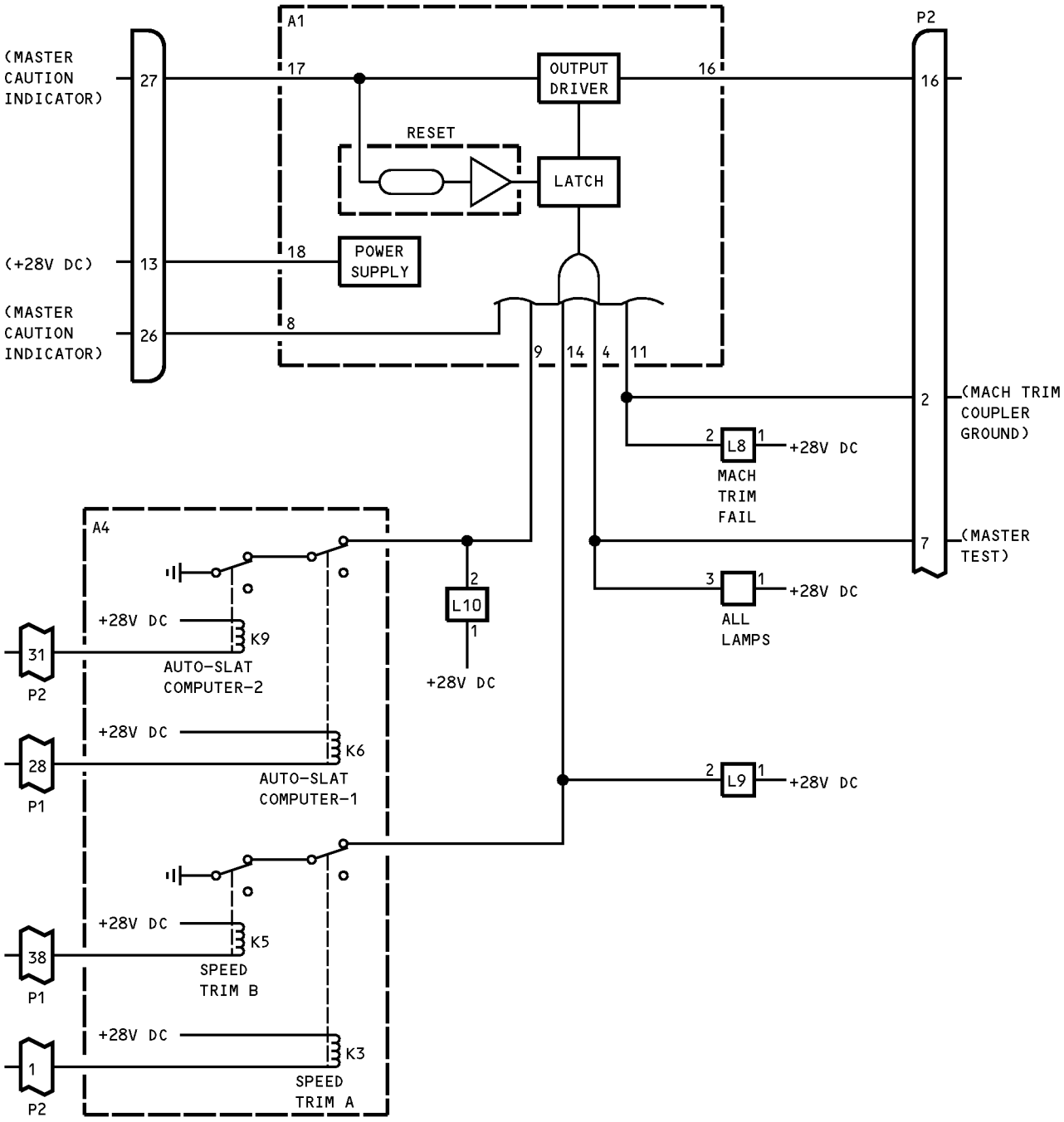
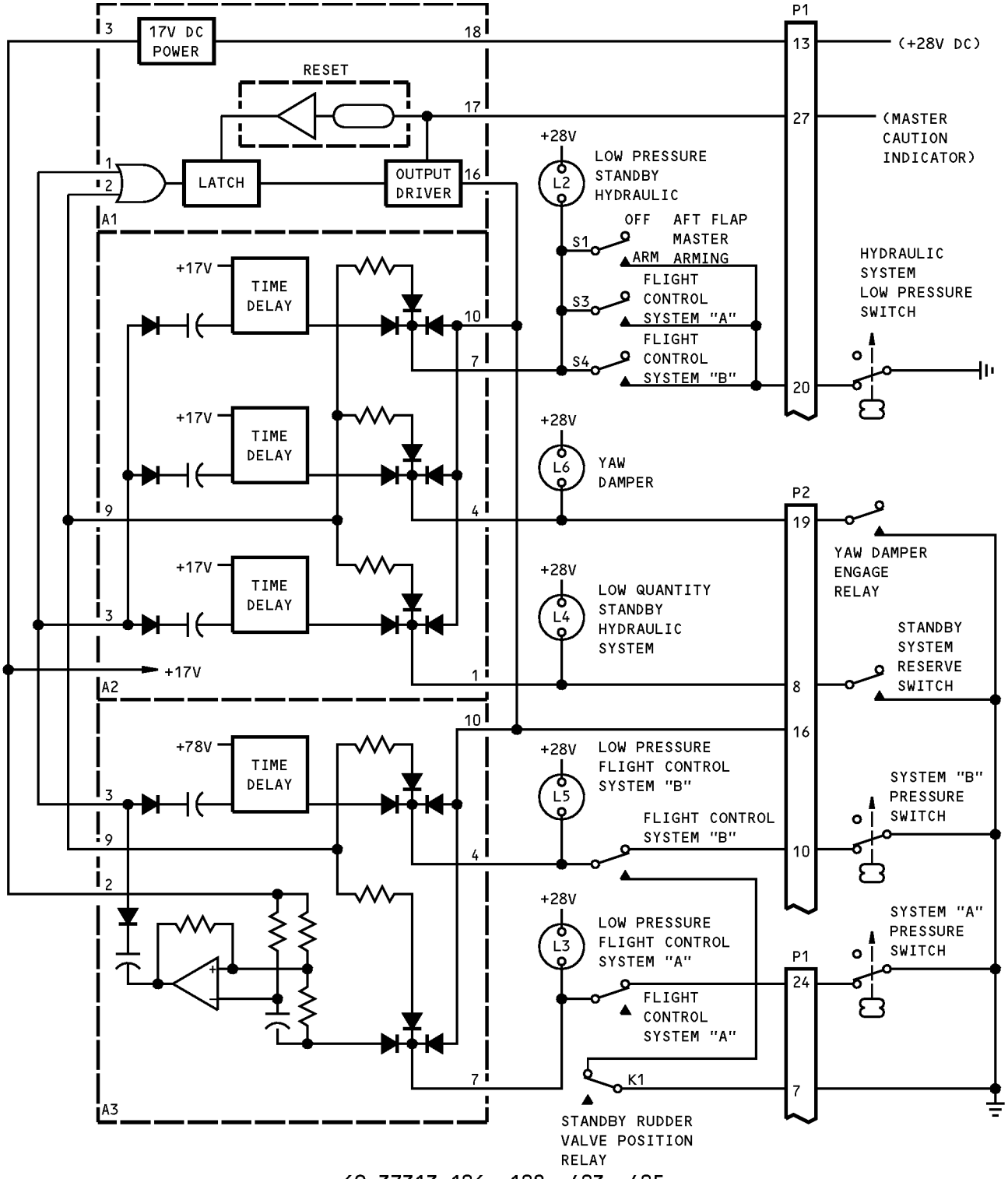
Indicator Diagram
Figure 1 (Sheet 2 of 4)



69-37313-106,-108,-403,-405

Indicator Diagram
Figure 1 (Sheet 3 of 4)



69-37313-106,-108,-403,-405

Indicator Diagram
Figure 1 (Sheet 4 of 4)

TESTING AND FAULT ISOLATION

1. Test Equipment

NOTE: Equivalent substitute may be used.

A. Power Supplies:

(1) 28 ± 1 volt dc at 2 ampere

(2) 115 ±3 volts ac, 400 Hz

B. Multimeter: Triplett Model 625NA

C. Connectors (with pigtail leads) (Boeing breakout box assembly, SPL-4435 (A33003-2) with test cables A33003-59 for P1 and Test Cable Assembly, SPL-4705 (A33003-360) for P2 may be used):

(1) BACC45FT22-55S6 (mate with P1)

(2) BACC45FT22-55S (mate with P2)

D. Test light: 28 volts dc, 80 mA (two 387 in parallel), label L12

E. Switches, Pushbutton:

(1) Normally closed, momentary open, label S10

(2) Normally open, momentary closed, label S11

2. Functional Test

A. Mate test connectors to connectors P1 and P2. Set all module switches to OFF.

B. Perform functional test per TESTING AND FAULT ISOLATION, Table 102.

NOTE: Actuate switches S3 and S4 slowly to prevent contact bounce. Also, avoid snapping switch guard down when switching S3 and S4 to ON, OFF and STBY RUD positions, once the guard has been placed in the UP position.

C. If lightplate is not with module, direction of switch movement may be determined using TESTING AND FAULT ISOLATION, Table 101.

Table 101: Direction of Switch Movement

	SWITCH NOMENCLATURE			
SWITCH POSITION	**S1**	**S2**	**S3, S4**	**S5, S6, S7**
69-37313-104, -108, -401, -405				
Up	OFF	UP	STBY RUD	OFF
Center		OFF	OFF	
Down	ARM	DOWN	ON	ON
69-37313-99, -106, -403, -410				
UP	ARM	UP	ON	ON
Center		OFF	OFF	
Cown	OFF	DOWN	STBY RUD	OFF

D. Unless otherwise specified "Continuity" shall be defined as less than 100 ohms, and "No Continuity" shall be defined as greater than 100K ohms in TESTING AND FAULT ISOLATION, Table 102.

E. Voltage measurements in TESTING AND FAULT ISOLATION, Table 102 of 0v dc and 28v dc shall have a tolerance of ±1.0v dc.

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
1	Use multimeter to test continuity between pins.		
2	Set all switches to OFF.		
3	P1-4 to P1-17	Continuity	K3
4	P1-4 to P1-5	Continuity	S1
5	P1-21 to P1-25	Continuity	S1, K2
6	P1-4 to P1-15	No Continuity	S1
7	P1-4 to P1-30	No Continuity	K3
8	P1-11 to P1-21	No Continuity	S3, S4
8A	P1-53 to P2-53 *[1]	Continuity	Wiring
9	Set S1 to ARM		
10	P1-4 to P1-15	Continuity	S1
11	P1-15 to P1-17	Continuity	S1, K3
12	P1-21 to P1-25	No Continuity	S1
13	P1-4 to P1-5	No Continuity	S1
14	Set S4 to STBY RUD		
15	P1-11 to P1-21	Continuity	S1, K2
16	Set S1 OFF		
17	Set S2 to DOWN (Hold down)		
18	P1-15 to P1-16	Continuity	S2
19	P1-6 to P1-15	No Continuity	S2
20	Set S2 to UP		
21	P1-6 to P1-15	Continuity	S2
22	P1-15 to P1-16	No Continuity	S2
23	P1-44 to P1-45	Continuity	S3
24	P1-46 to P1-50	Continuity	S3
25	P1-43 to P1-45	No Continuity	S3
26	P1-14 to P1-50	No Continuity	S3
27	P1-11 to P1-25	Continuity	S4
28	Set S1 to ARM		
29	P1-9 to P1-11	No Continuity	K2
30	P1-9 to P1-25	No Continuity	S1, K2

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
31	Set S4 to ON		
32	P1-12 to P2-21	Continuity	S3, S4
33	P2-4 to P1-47	Continuity	S3, S4
34	P2-4 to P1-48	No Continuity	S3
35	Set S4 to OFF		
36	P1-12 to P2-9	Continuity	S3, S4
37	P1-11 to P2-22	Continuity	S3, S4, K1
38	P1-11 to P1-25	No Continuity	S3, S4
39	P1-12 to P2-21	No Continuity	S4
39A	Set S1 to OFF		S4
39B	Energize K1 by connecting P1-40 to ground and P1-22 to 28v dc		S4
39C	Set S3 to ON		
39D	P1-32 to P1-20	Continuity	S3, K1
40	De-energize K1 by disconnecting P1-40 from ground and P1-22 from 28v dc		
41	P1-14 to P1-50	Continuity	S3
42	P1-3 to P2-9	Continuity	S3, S4
43	P1-46 to P1-50	No Continuity	S3
44	P1-3 to P2-21	No Continuity	S4
45	Set S4 to ON		
46	P1-3 to P2-21	Continuity	S3, S4
47	P1-3 to P2-9	No Continuity	S4
48	Set S4 to OFF		
49	Set S3 to STBY RUD		
50	P1-43 to P1-45	Continuity	S3
51	P1-11 to P1-25	Continuity	S3
52	P1-11 to P2-22	No Continuity	S3
53	P1-44 to P1-45	No Continuity	S3
53A	P1-20 to P1-32	Continuity	S3
54	Set S3 OFF		
54A	Set S1 ARM		
55	Set S4 ON		
56	P2-14 to P1-23	Continuity	S4

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
57	P2-14 to P2-44	No Continuity	S4
58	Set S4 to OFF		
59	P2-14 to P2-44	Continuity	S4
60	P1-3 to P2-9	No Continuity	S3
61	(+) P1-22 to (-) P2-21	No Continuity	S4
62	P2-14 to P1-23	No Continuity	S4
62A	P2-4 to P1-47	No Continuity	S4
63	Set S4 to STBY RUD		
64	P1-11 to P1-25	Continuity	S4
65	P1-11 to P2-22	No Continuity	S4
66	P2-11 to P2-24	Continuity	S5
67	P2-3 to P2-24	No Continuity	S5
68	P1-31 to P2-11	Continuity	S5, S6
69	P1-19 to P2-11	No Continuity	S6
70	Set S5 to ON		
71	P2-3 to P2-24	Continuity	S5
72	P1-31 to P2-3	Continuity	S5, S6
73	P1-19 to P2-3	No Continuity	S6
74	Set S5 to OFF		
75	Set S6 to ON		
76	P1-19 to P2-11	Continuity	S5, S6
77	P1-31 to P2-11	No Continuity	S6
78	P2-17 to P2-27	Continuity	S7
79	P2-13 to P2-17	Continuity	S7
80	P2-26 to P2-27	No Continuity	S7
81	P2-13 to P2-25	No Continuity	S7
82	Set S7 to ON (Hold ON)		
83	P2-26 to P2-27	Continuity	S7
84	P2-13 to P2-25	Continuity	S7
85	Set all switches to OFF		
86	Set S3 to ON		
87	(+) P1-22 to (-) P1-3	100 ohms max	CR3, S3
88	(+) P1-3 to (-) P1-22	50k ohms min	CR3
89	(+) P1-48 to (-) P2-12	100 ohms max	S3, S7, CR1, A4(CR20)

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
90	(+) P2-12 to (-) P1-48	200 ohms min	S7, CR1, A4(CR20)
91	(+) P1-22 to (-) P1-12	No Continuity	S3
92	(+) P1-47 to (-) P2-12	No Continuity	S3
93	Set S4 to ON		
94	(+) P1-22 to (-) P2-21	100 ohms max	S4, CR3
95	(+) P2-21 to (-) P1-22	50k ohms min	CR3
96	(+) P2-41 to (-) P2-21	100 ohms max	S4, CR2
97	(+) P2-21 to (-) P2-41	50k ohms min	CR2
98	(+) P2-4 to (-) P2-12	100 ohms max	S4, CR1, A4(CR20)
99	(+) P2-12 to (-) P2-4	200 ohms min	S7, CR1, A4(CR20)
100	(+) P2-41 to (-) P2-9	No Continuity	S4
101	Set S3 to OFF		
102	(+) P1-22 to (-) P1-12	100 ohms max	S3, CR3
103	(+) P1-12 to (-) P1-22	50k ohms min	CR3
104	(+) P1-47 to (-) P2-12	100 ohms max	S3, CR1, A4(CR20)
105	(+) P2-12 to (-) P1-47	200 ohms min	S7, CR1, A4(CR20)
106	(+) P1-48 to (-) P2-12	No Continuity	S3
107	(+) P1-22 to (-) P1-3	No Continuity	S3
108	Set S4 to OFF		
109	(+) P1-22 to (-) P2-9	100 ohms max	S4, R3
110	(+) P2-9 to (-) P1-22	50k ohms min	CR3
111	(+) P2-41 to (-) P2-9	100 ohms max	S4, R2
112	(+) P2-9 to (-) P2-41	50k ohms min	CR2
113	(+) P2-4 to (-) P2-12	No Continuity	S4
114	(+) P2-41 to (-) P2-21	No Continuity	S4
115	(+) P2-40 to (-) P2-10	100 ohms max	A4(CR15)
116	(+) P2-10 to (-) P2-40	50k ohms min	A4(CR15)
117	(+) P2-40 to (-) P1-24	100 ohms max	A4(CR17)
118	(+) P1-24 to (-) P2-40	50k ohms min	A4(CR17)
118A	Verify S7 is OFF		S7
119	Connect P2-4 and P1-48 to ground	Verify S7 remains OFF	S7
120	Connect P2-12 to 28v dc	Verify S7 will not latch ON when pressed ON	S7

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
121	Set S3 to ON	Verify S7 will latch ON when pressed ON	S7, S3
122	Set S3 to OFF	Verify S7 will return to OFF	S7, S3
123	Set S4 to ON	Verify S7 will latch ON when pressed ON	S7, S4
124	Set S4 to OFF	Verify S7 will return to OFF	S7, S4
125	Remove all connections		
126	Connect P1-28, P1-29, P1-36, P1-38, P2-1, P2-2 and P2-31 to ground		
127	Connect P1-13, P2-18 and P2-29 to 28v dc		
128	Connect test lamp (L12) and test switch (S10) in series between P1-27 and 28v dc		
129	Connect test switch (S11) between P1-26 and ground		
130	Connect P1-7 and P2-16 to ground		
131	Set S3 to STBY RUD and start timing	L3 on, L12 on after 0.5 to 2.0 second delay	L3, L12, A3
132	Connect P1-18 to 28v dc	L3, L12 off	
133	Set S3 to OFF		
134	Disconnect P1-18 from 28v dc		
135	Check that S1 is OFF		
136	Measure ohms between P1-21 and P1-25	Continuity	S1, K2
137	Connect 115v ac between P1-8 and P1-10		
138	Measure ohms between: P1-9 and P1-25	Continuity	K2, S1
139	Measure ohms between: P1-21 and P1-25	No Continuity	K2
140	Disconnect 115v ac from P1-8 and P1-10		
141	Connect P1-4 to 28v dc		
142	Measure voltage between:		
	P1-17 and ground	28v dc	S1, S2, K3
	P1-30 and ground	0v dc	

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
143	Set S2 to DOWN (Hold down)		
144	Set S1 to ARM		
145	Measure voltage between:		S1, S2, K3
	P1-17 and ground	0v dc	
	P1-30 and ground	28v dc	
146	Release S2 to OFF		
147	Measure voltage between:		S1, S2, K3
	P1-17 and ground	0v dc	
	P1-30 and ground	28v dc	
148	Set S1 to OFF		
149	Measure voltage between:		K3
	P1-17 and ground	28v dc	
	P1-30 and ground	0v dc	
150	Disconnect P1-7 from ground		
151	Connect P1-22 and P2-41 to 28v dc		
152	Connect P1-40 to ground		
153	Check that S1, S3 and S4 are OFF		
154	Measure ohms between: P1-11 and P2-22	Continuity	S3, S4, K1
155	Connect P1-20 to ground		
156	Set S3 to ON and start timing	L2 on, L12 on after 0.5 to 2.0 second delay	L2, L12, A2, S3
157	Measure ohms between: P1-11 and P2-22	No Continuity	S3
158	Set S3 to OFF	L2, L12 off	S3
159	Measure ohms between: P1-11 and P2-22	Continuity	S3
160	Set S4 to ON and start timing	L2 on, L12 on after 0.5 to 2.0 second delay	L2, L12, A2, S4
161	Measure ohms between: P1-11 and P2-22	No Continuity	S4
162	Set S4 to OFF	L2, L12 off	S4
163	Measure ohms between: P1-11 and P2-22	Continuity	S4
164	Disconnect P1-22 and P2-41 from 28v dc		

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
165	Disconnect P1-20 and P1-40 from ground		
166	Connect P2-7 to ground	L1 thru L6, L8, L9, L10, L11 and L12 on	L1 thru L6, L8, L9, L10, A1
167	Disconnect P2-7 from ground	L1 thru L6, L8, L9, L10, L11 and L12 off	L1 thru L6 ,L8, L9, L10, A1
168	Press each module lamp, release	Each lamp illuminated while pressed	L1 thru L6, L8, L9, L10, L11 (WHEN PRESENT)
169	Connect P2-20 to ground	L1, L12 on	L1, A1
170	Press test switch S10, release	L12 off	A1
171	Press test switch S11, release	L12 on	A1
172	Disconnect P2-20 from ground	L1, L12 off	
173	Connect P1-20 to ground		
174	Set S3 to STBY RUD and start timing	L2 on, L12 on after 0.5 to 2.0 second delay	L2, A4
175	Press test switch S10, release	L12 off	A1
176	Press test switch S11, release	L12 on	A1
177	Set S3 to OFF	L2, L12 off	S3
178	Repeat steps 174 thru 177 with S1 set to the ARM position. And, perform steps 174 thru 177 again with S4 set to the STBY RUD position.		
179	Disconnect P1-20 from ground		
180	Connect P2-8 to ground and start timing	L4 on, L12 on after 0.5 to 2.0 second delay	L4, L12, A2
181	Press test switch S10, release	L12 off	A1
182	Press test switch S11, release	L12 on	A1
183	Disconnect P2-8 from ground	L4, L12 off	
184	Set S4 to STBY RUD		
185	Connect P2-10 to ground		
186	Set S4 to OFF and start timing	L5 on, L12 on after 0.5 to 2.0 second delay	L5, L12, A3, S4
187	Press S10, release	L12 off	A1
188	Press S11, release	L12 on	A1
189	Set S4 to STBY RUD	L5, L12 off	
190	Disconnect P2-10 from ground		

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
191	Set S4 to OFF		
192	Connect P1-7 to ground		
193	Set S4 to STBY RUD and start timing	L5 on, L12 on after 0.5 to 2.0 second delay	A4
194	Set S4 to OFF	L5, L12 off	
195	Disconnect P1-7 from ground		
196	Connect P2-19 to ground and start timing	L6 on, L12 on after 0.5 2.0 second delay	L6, L12, A2, A3
197	Press S10, release	L12 off	A1
198	Press S11, release	L12 on	A1
199	Disconnect P2-19 from ground	L6, L12 off	
200	Press and hold S11	L12 on	A1
201	Release S11	L12 off	A1
NOTE: Use pin in parenthesis, in Test Procedure column, when repeating test per the following instructions.			
202	Disconnect P2-2 (P1-36) and P1-36 (P2-2) from ground	L8, L12 on	L8, L12, A4
203	Press S10, release	L12 off	A1
204	Press S11, release	L12 on	A1
205	Connect P2-2 (P1-36) to ground	L8, L12 remain on	A1
206	Connect P1-36 (P2-2) to ground	L8, L12 off	A1
207	Disconnect P2-2 (P1-36) from ground		
208	Press S11, release	L8, L12 on	A1
209	Disconnect P2-29 from 28v dc	L8, L12 off	A4
210	Connect P2-29 to 28v dc	L8, L12 remain off	A4
211	Connect P2-2 (P1-36) to ground		
212	Repeat test steps 202 thru 211 except use pin in parenthesis		
213	Disconnect P2-1 (P1-38) and P1-38 (P2-1) from ground	L9, L12 on	L9, L12, A4
214	Press S10, release	L12 off	A1
215	Press S11, release	L12 on	A1
216	Connect P2-1 (P1-38) to ground	L9, L12 remain on	A1
217	Connect P1-38 (P2-1) to ground	L9, L12 off	A1
218	Disconnect P2-1 (P1-38) from ground		

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
219	Press S11, release	L9, L12 on	A1
220	Disconnect P2-29 from 28v dc	L9, L12 off	A4
221	Connect P2-29 to 28v dc	L9, L12 remain off	A4
222	Connect P2-1 (P1-38) to ground		
223	Repeat steps 213 thru 222 except use pin in paren- thesis		
224	Disconnect P1-28 (P2-31) and P2-31 (P1-28) from ground pin	L10, L12 on	L10, L12, A1, A4
225	Press S10, release	L12 off	A1
226	Press S11, release	L12 on	A1
227	Connect P1-28 (P2-31) to ground	L10, L12 remain on	A1
228	Connect P2-31 (P1-28) to ground	L10, L12 off	A1
229	Disconnect P1-28 (P2-31) from ground		
230	Press S11, release	L10, L12 on	A1
231	Disconnect P2-29 from 28v dc	L10, L12 off	A4
232	Connect P2-29 to 28v dc	L10, L12 remain off	A4
233	Connect P1-28 (P2-31) to ground		
234	Repeat test steps 224 thru 233 except use pin in parenthesis		
235	Disconnect P1-29 from ground		
236	Press S11, release	L10, L12 on	A4, A1
237	Press S10, release	L12 off	A1
238	Press S11, release	L12 on	A1
239	Disconnect P2-29 from 28v dc	L10, L12 off	
240	Connect P2-29 to 28v dc	L10, L12 remain off	A4
241	Connect P1-29 to ground		
242	Set S3 to STBY RUD		
243	Connect P1-24 to ground		
244	Set S3 to OFF and start timing	L3 on, L12 on after 0.5 to 2.0 second delay	L3, L12, A3, S3, A4
245	Set S3 to ON	L3, L12 remain on	
246	Press S10, release	L12 off	A1
247	Press S11, release	L12 on	A1
248	Set S3 to STBY RUD	L3, L12 off	A4
249	Disconnect P1-24 from ground		

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

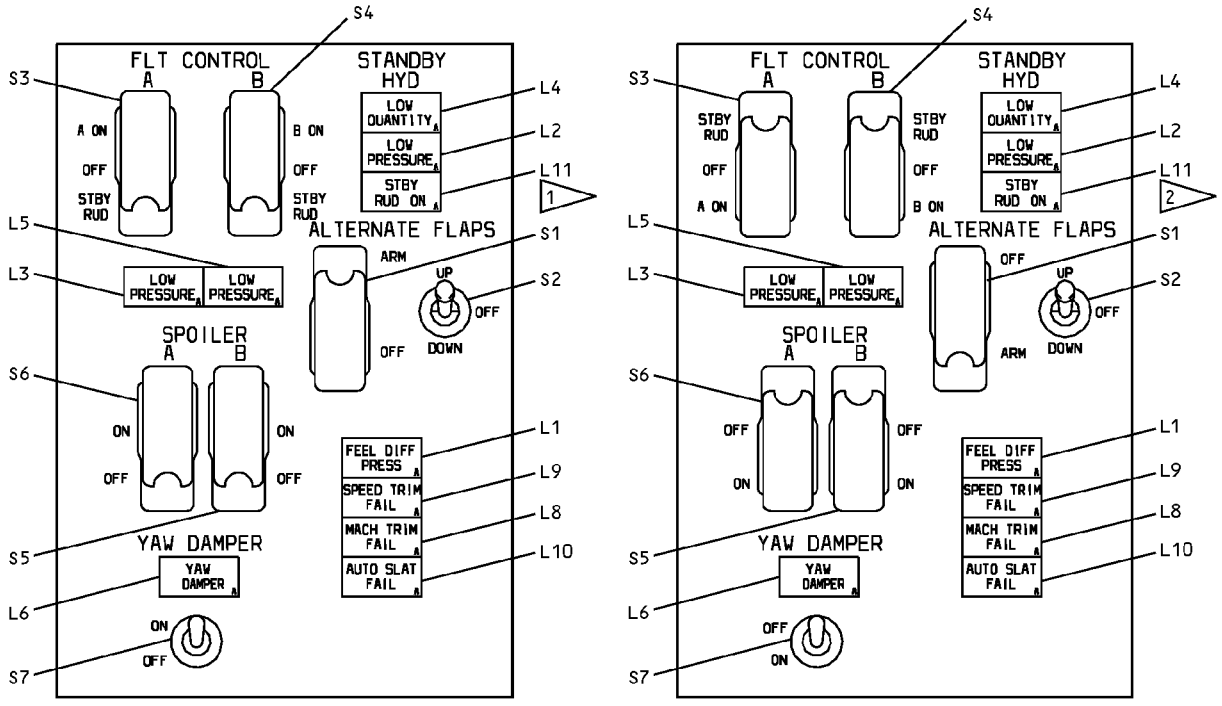
STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
250	Set S3 to OFF		
NOTE: Step 251 applies to 69-37313-99, -104,-106,-108 only.			
251	Measure ohms between:		
	P1-1 and L7 rim	Continuity	L7
	P1-2 and L7 center	Continuity	L7
	P1-1 and P1-2	No Continuity	L7
251A	Remove all connections.		
NOTE: Steps 252A thru 276 apply to the 69-37313-401, -403, -405 and -410 only.			
252A	Make sure that the test connectors for P1 and P2 are connected to the module.		
253	Connect a jumper wire from P2-52 to P2-53.		
254	All UUT switches should be in the OFF position.		
255	Connect ground to P1-37, P2-1, P2-2, P2-16, P2-31 and P2-37.		
256	Apply 28v dc to P2-18, P1-11, P1-13, P1-22 and through test switch S10 and test lamp L12 in series to P1-27.		
257	Set S3 to STBY RUD.	L11, L12 on	K21, S3, L11
258	Measure the voltage at P1-25.	28v dc	S3
259	Set S3 to OFF.	L11, L12 off *[2]	K21, S3, L11
260	Measure the voltage at P1-25.	0v dc	S3
260A	Momentarily press S10, release.		
261	Set S4 to STBY RUD.	L11, L12 on	K21, S4, L11
262	Measure the voltage at P1-25.	28v dc	S3
263	Set S4 to OFF.	L11, L12 off *[2]	K21, S4, L11
264	Measure the voltage at P1-25.	0v dc	S3
264A	Momentarily press S10, release.		
265	Remove 28v dc at each point of application in step 256.		
266	Remove the jumper from P2-52 to P2-53.		

Table 102: Functional Test 69-37313-99, -104, -106, -108, -401, -403, -405, -410 (Continued)

STEP NO.	TEST PROCEDURE	REQUIRED RESULTS	COMPONENT TESTED
267	Connect a jumper from P1-52 to P1-53.		
268	Apply 28v dc to P2-18, P1-11, P1-13, P1-22 and through test switch S10 and test lamp L12 in series to P1-27.		
269	Set S3 and S4 to ON.	L11, L12 off	S3, S4, K1
270	Measure the voltage at P1-25.	0v dc	S3, S4, K1
271	Connect P1-40 to ground.	L11, L12 on	S3, S4, K1
272	Measure the voltage at P1-25.	28v dc	S3, S4, K1
273	Disconnect P1-40 from ground.	L11, L12 off *[2]	S3, S4, K1
274	Measure the voltage at P1-25.	0v dc	S3, S4, K1
274A	Momentarily press S10, release.		
275	Apply ground to P1-1.		
276	Apply +5v dc to P1-2.	Lightplate ON	
277	Remove all connections from the UUT (all units).		

*[1] For 69-37313-401, -403, -405, -410 only

*[2] Momentarily press and release S10 if L12 stays on.



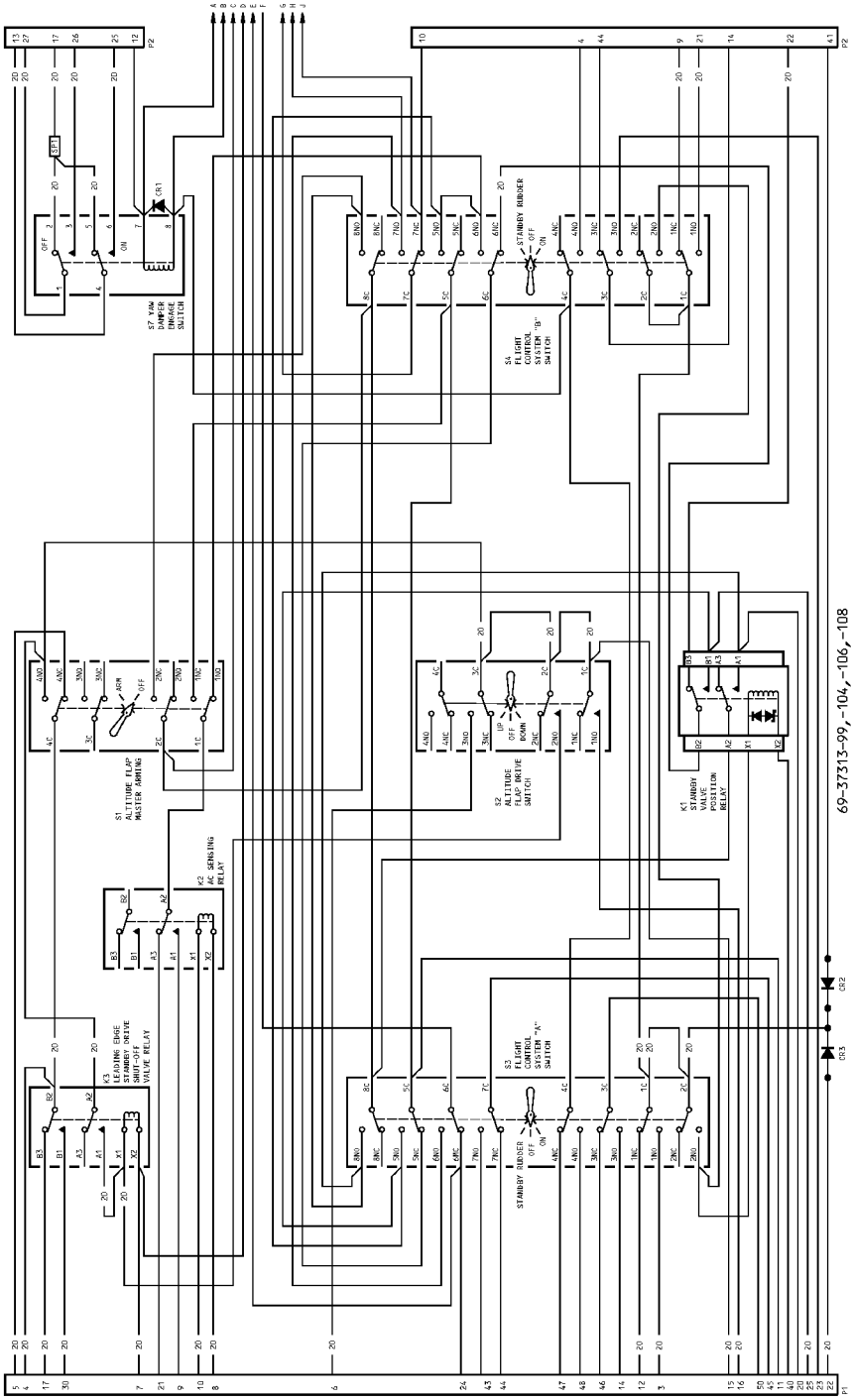
69-37313-99,-106,-403,-410

69-37313-104,-108,-401,-405

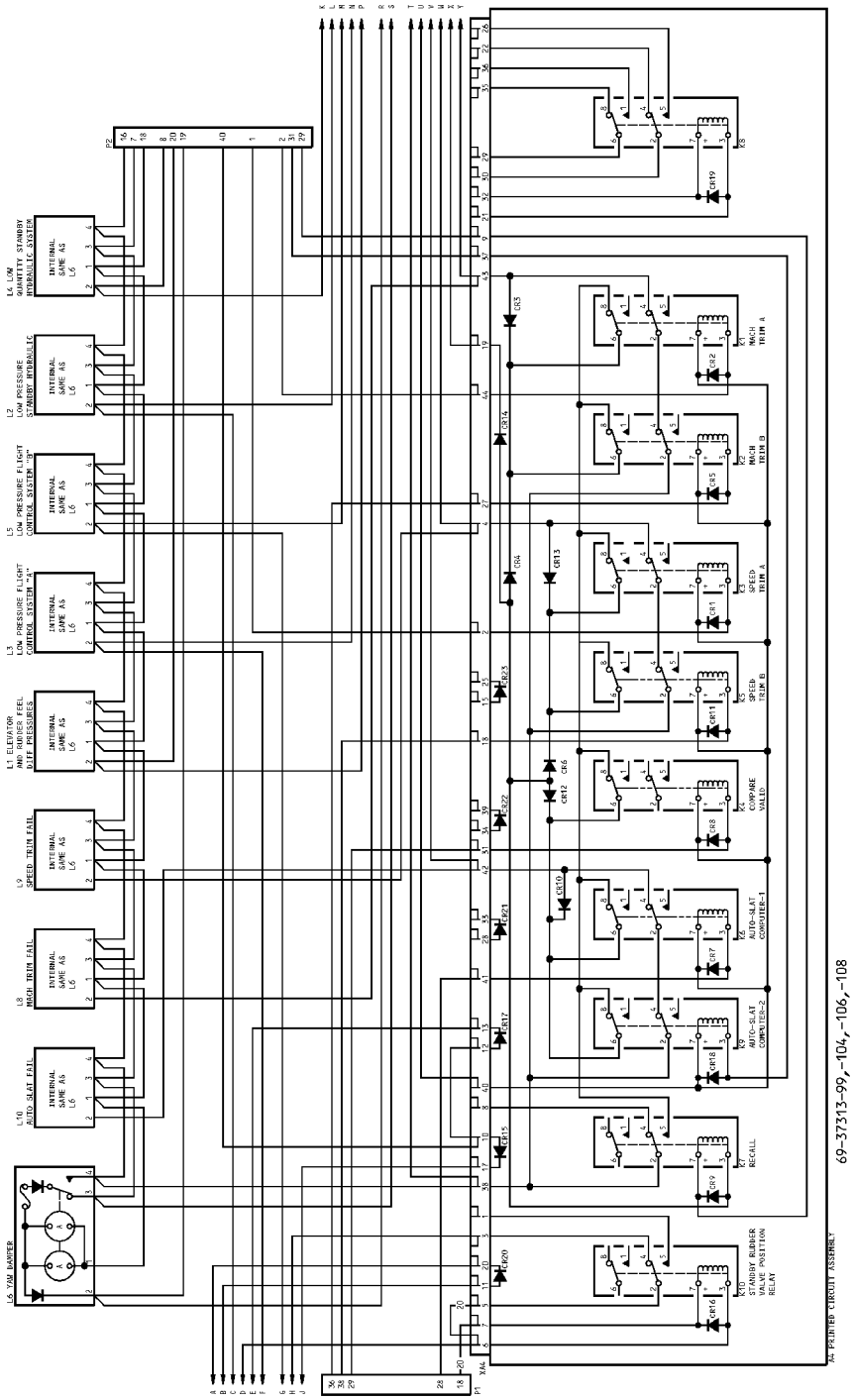
1 69-37313-403,-410

2 69-37313-401,-405

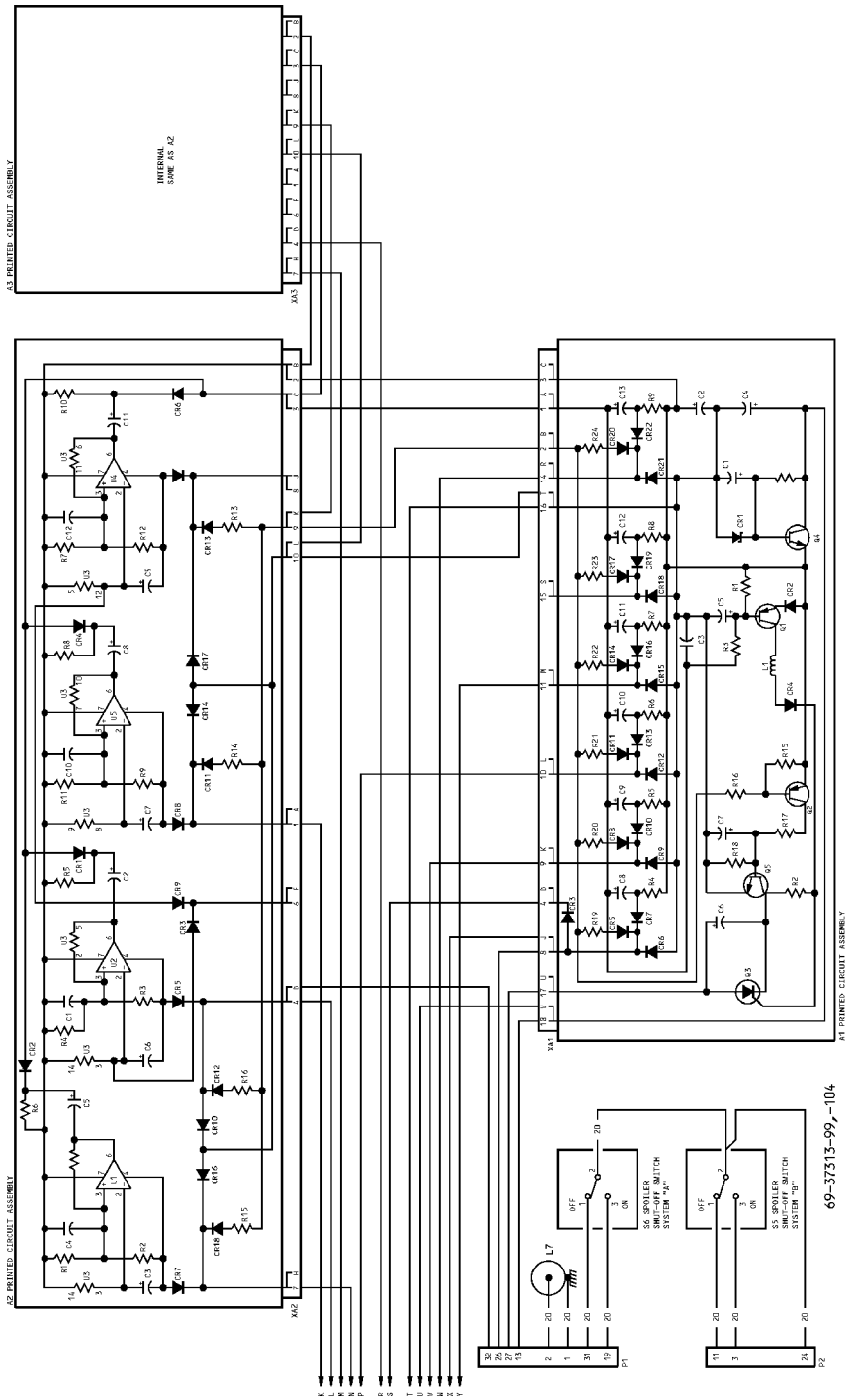
Switch and Indicator Identification
Figure 101



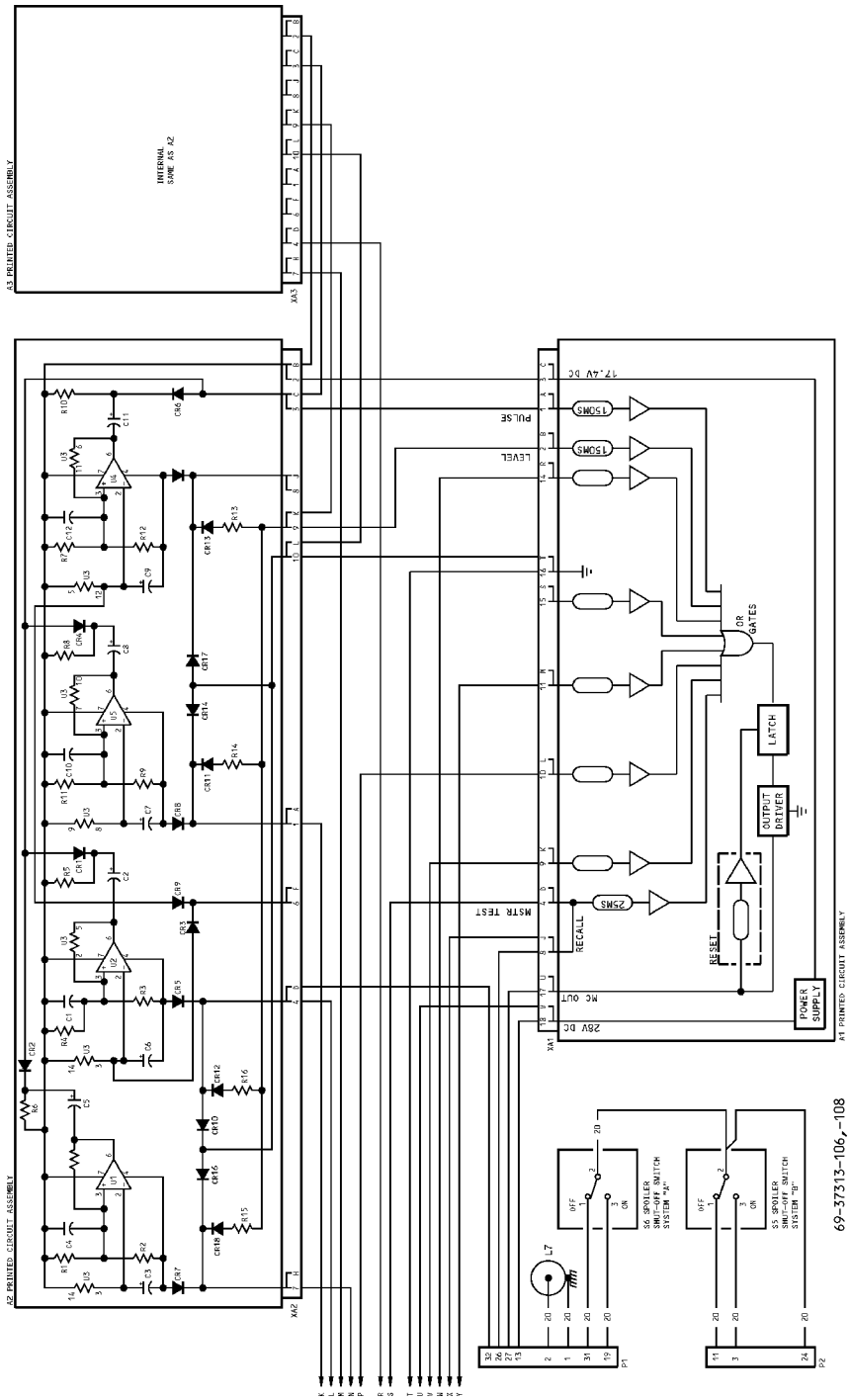
Schematic Diagram
Figure 102 (Sheet 1 of 4)



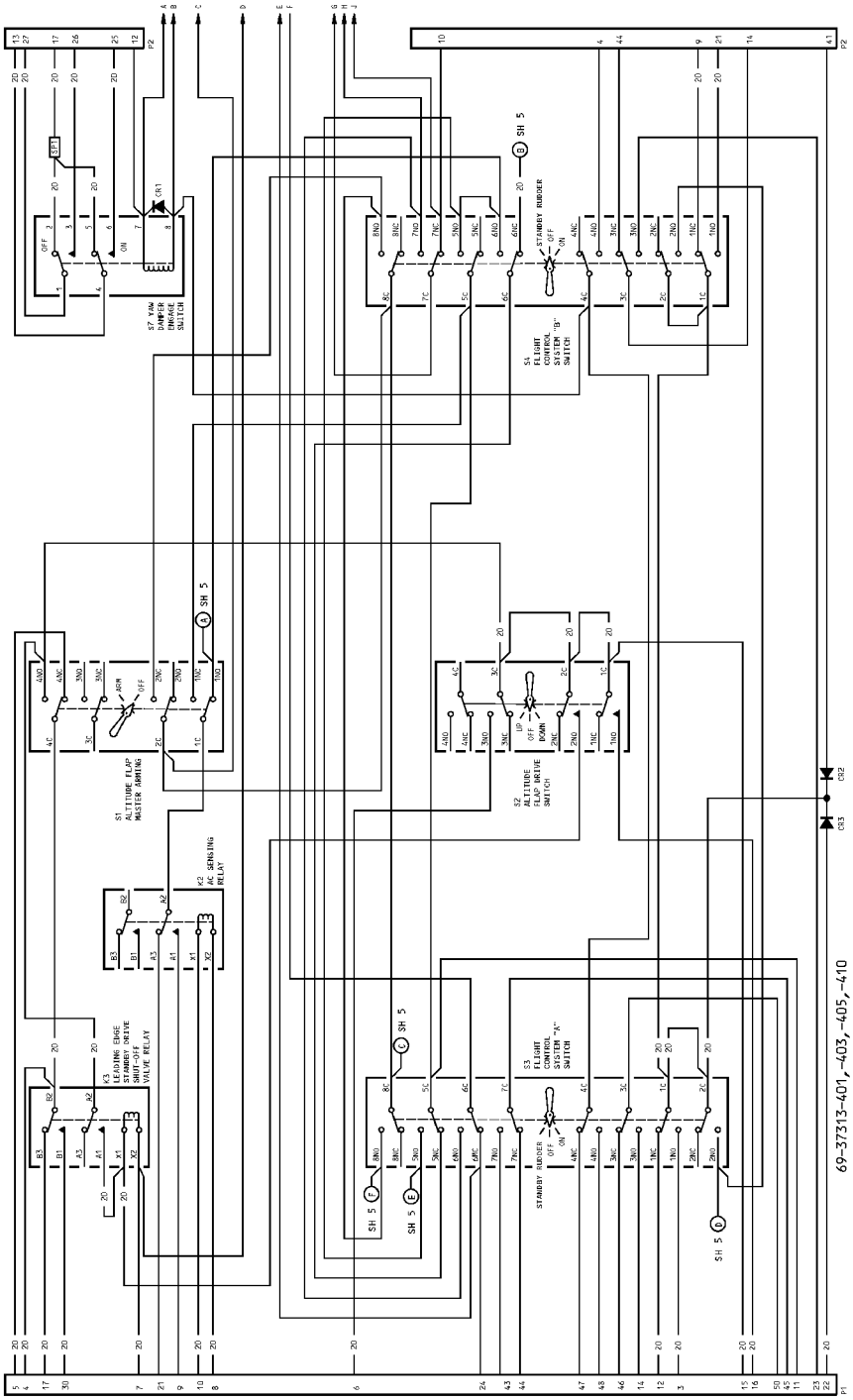
Schematic Diagram
Figure 102 (Sheet 2 of 4)



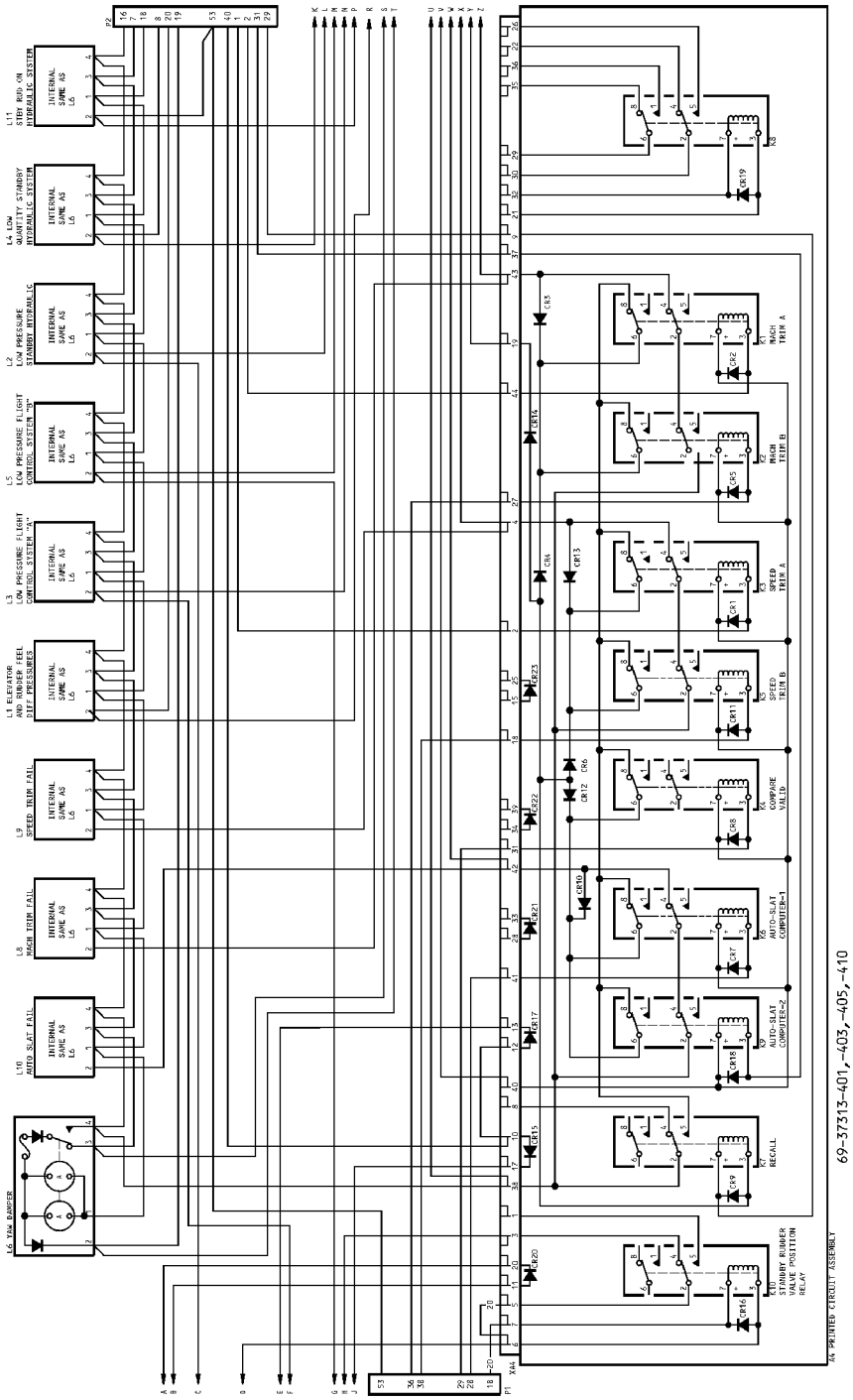
Schematic Diagram
Figure 102 (Sheet 3 of 4)



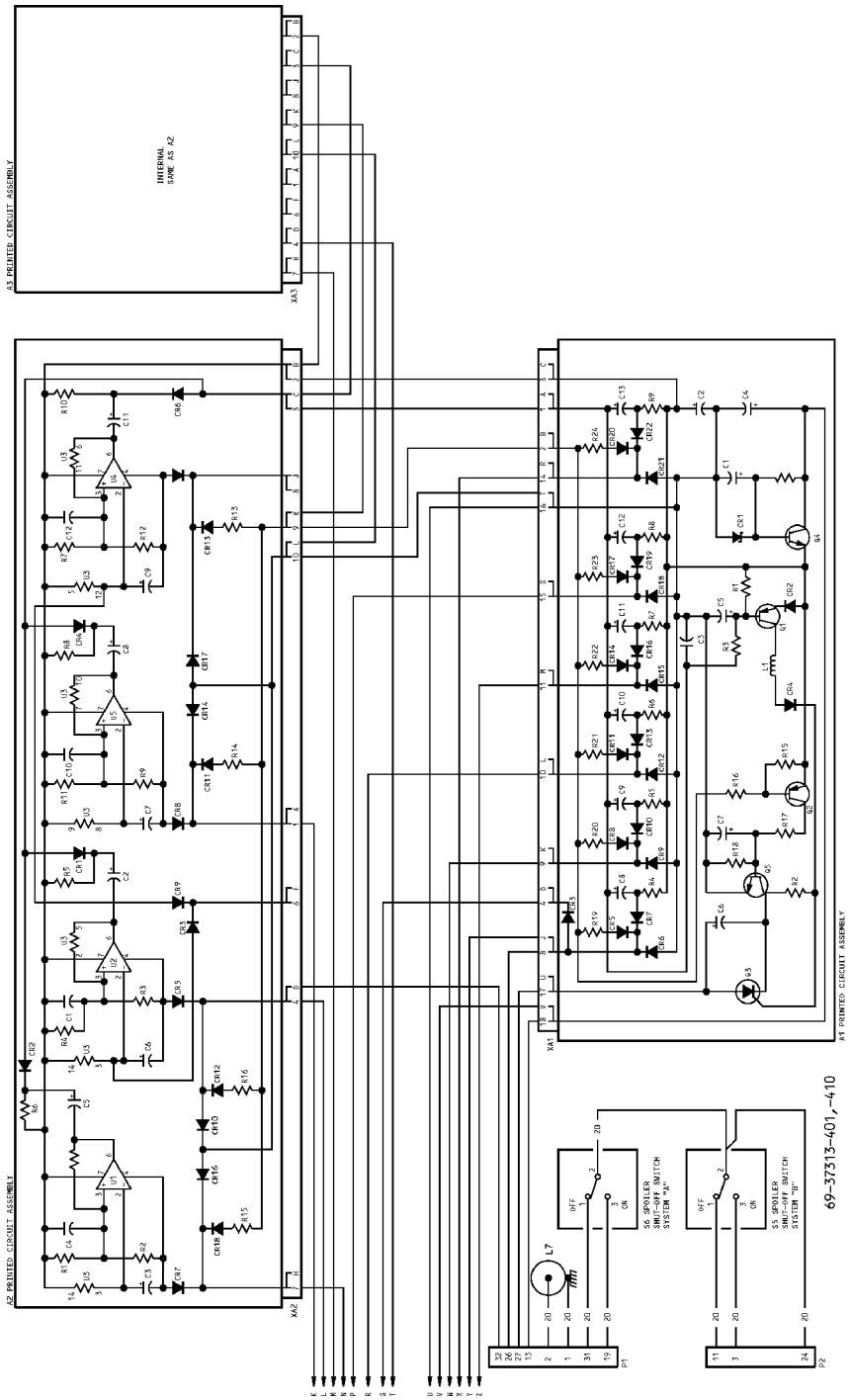
Schematic Diagram
Figure 102 (Sheet 4 of 4)



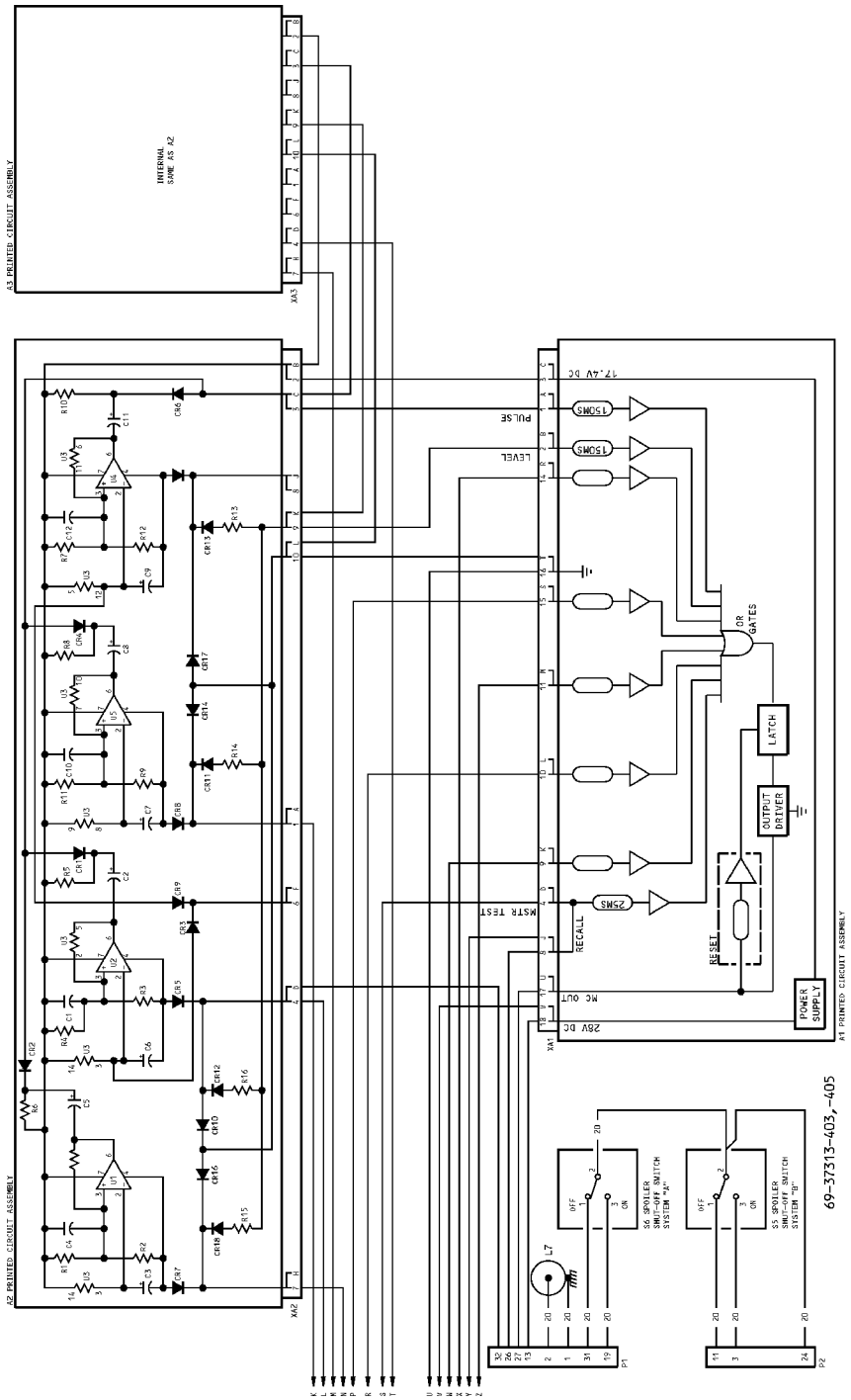
Schematic Diagram
Figure 103 (Sheet 1 of 5)



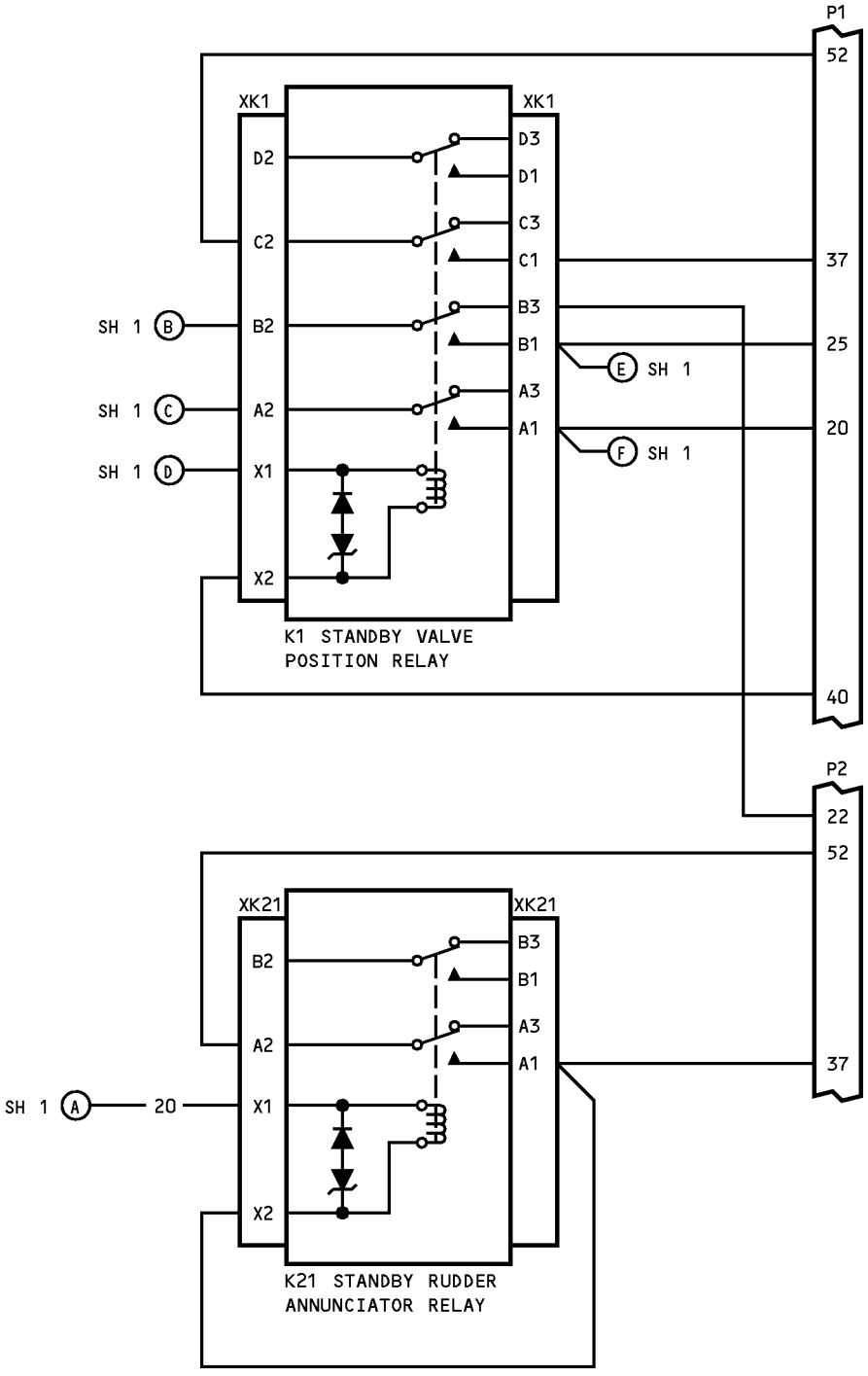
Schematic Diagram
Figure 103 (Sheet 2 of 5)



Schematic Diagram
Figure 103 (Sheet 3 of 5)



Schematic Diagram
Figure 103 (Sheet 4 of 5)



69-37313-401,-403,-405,-410

N71887 S0004996358_V2

Schematic Diagram
Figure 103 (Sheet 5 of 5)

DISASSEMBLY

Use application procedure in SOPM 20-11-04 and standard insdustry practices.

CLEANING

Use application procedure in SOPM 20-11-04 and standard insdustry practices.

CHECK

Use application procedure in SOPM 20-11-04 and standard insdustry practices.

REPAIR

1. **Procedure**

   A. All repair may be accomplished with standard shop procedures and information contained in SOPM 20-11-04 except as noted in the following:

   B. If keying plugs (IPL Figure 1, Item 125) are to be replaced, install in connector position:

      (1) P3 and P4 (XA3 and XA2), position 5.

      (2) P5 (XA1), position 6.

      (3) (XA4), between positions 23 and 24.

   C. When replacing lightplate (IPL Figure 1, Item 3, 3A, 4, 4A) do not use a powered screwdriver or tighten the captive screws too much. Excessive force can cause cracks on the lightplate adjacent to and under the captive screws. Tighten the captive screws slowly and carefully in a cross pattern until flush on the baseplate at each screw. Tighten each screw no more than a quarter (1/4) turn.

ASSEMBLY

Use application procedure in SOPM 20-11-04 and standard insdustry practices.

BOEING®

COMPONENT MAINTENANCE MANUAL

FITS AND CLEARANCES

(NOT APPLICABLE)

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

1. General

A. This section lists the special tools, fixtures, and equipment necessary for maintenance.

NOTE: Equivalent substitutes may be used.

Special Tools

Reference	Description	Part Number	Supplier
SPL-4435	Breakout Box Assembly (-2 is included in the A33003-359 kit)	A33003-2	81205
SPL-4705	Test Cable Assembly	A33003-360	81205

Tool Supplier Information

CAGE Code	Supplier Name	Supplier Address
81205	THE BOEING COMPANY	17930 INTERNATIONAL BLVD. SOUTH SEATAC, WA 98188-4321 Telephone: 206-662-6650 Facsimile: 206-662-7145

ILLUSTRATED PARTS LIST

1. Introduction

A. The Illustrated Parts List (IPL) contains an illustration and a list of component parts you can repair or replace. The Illustrated Parts Catalog (IPC) shows how to use the Boeing part number system.

B. This shows how parts are related: The relation of each item to its next higher assembly (NHA) is shown in the NOMENCLATURE column. Use the indenture system that follows:

1 2 3 4 5 6 7

. Assembly

. Attaching parts for assembly

. . Detail parts for assembly

. . Subassembly

. . Attaching parts for subassembly

. . . Detail parts for subassembly

. . . Sub-subassembly

. . . Attaching parts for subassembly

. . . . . Details parts for sub-subassembly

Detail Installation Parts (Included only if installation parts may be sent to the shop as part of assembly)

C. Each top assembly is given one use code letter (A, B, C, etc.) in the USAGE CODE column. All subsequent component parts in the list can have one or more of the use code letters to show effectivity to top assemblies. A component part without a use code applies to all top assemblies.

D. An alphabetical letter is added after the item number for optional parts, parts changed by a Service Bulletin, configuration differences (except left-handed and right-handed parts), last engineering releases, and parts added between item numbers in a sequence. The alphabetical letter will not be shown on the illustration for equivalent parts of the same part number.

E. Color-coded parts are identified with a single digit alpha following the dash number or with ''SP'' suffix. If the ''SP'' suffix is used, it represents consolidation of all color codes applicable for a given usage which are not separately listed. Orders for color-coded parts should include the registry number of the airplane for which the parts are ordered.

F. If a part number is 15 characters long but will not fit in the part number column, the part number will be displayed with a ''~'' at the end of the line and will be continued on the next line. The ''~'' denotes that the part number continues on the next line.

G. Parts changed by a Service Bulletin are shown by PRE SB XXXX and POST SB XXXX added to the NOMENCLATURE column.

(1) When a new top assembly is added by a Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the top assembly level only. The configuration differences at the detail part level are shown by use code letters.

(2) When the top assembly part number is not changed by the Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the detail level.

H. Interchangeable Parts

Optional (OPT)	The part is optional to and interchangeable with other parts that have the same item number.
Replaces, Replaced by and not interchangeable with (REPLACES, REPLACED BY AND NOT INTCHG/W)	The part replaces and is not interchangeable with the initial part.
Replaces, Replaced by (REPLACES, REPLACED BY)	The part replaces and is interchangeable with, or is an alternative to, the initial part.

VENDOR CODES

Code	Name
00768	WESTERN FILAMENT INC 630 HOLLINGSWORTH DRIVE GRAND JUNCTION, COLORADO 81505 FORMERLY IN GLENDALE, CALIFORNIA
00779	TYCO ELECTRONICS CORP 2800 FULLING MILL ROAD PO BOX 3608 MIDDLETOWN, PENNSYLVANIA 17057 FORMERLY AMP INC; FORMERLY V04618 FORMERLY GENICOM COMP V01526
02660	AMPHENOL CORP INDUSTRIAL TECHNOLOGY DIV 358 HALL AVENUE PO BOX 384 WALLINGFORD, CONNECTICUT 06492 FORMERLY BUNKER RAMO CORP, ELTRA CORP AMPHENOL AND AMPHENOL CORP COMM AND IND DIV
05574	VIKING ELECTRONICS INC. 5455 ENDEAVOUR CT MOORPARK, CALIFORNIA 93021 FORMERLY VIKING IND DATACON DIV; VIKING SPECIAL PROD V53156; FORMERLY VIKING CONN SUB OF CRITON CORP; ARIZONA INTEGRATED ELEC V0P9C6; FORMERLY IN CHATSWORTH, CA
05617	IDD AEROSPACE CORP 18225 NORTHEAST 76TH STREET PO BOX 97056 REDMOND, WASHINGTON 98073-9756 FORMERLY FARWEST ELEC INC;FORMERY IN BELLEVUE, WA; FORMERLY BELL IND FARWEST MFG DIV;FORMERLY BELL IND ILLUMINATED DISPLAYS DIV

Code	Name
06383	PANDUIT CORPORATION 17301 RIDGELAND AVENUE TINLEY PARK, ILLINOIS 60477-3048
09922	SOURIAU USA INC 25 GRUMBACHER DR YORK, PENNSYLVANNIA 17402-9417 FORMERLY FRAMATOME CONNECTORS FRANCE FORMERLY V59610 IIIN VALENCIA, CALIFORNIA
11815	CHERRY AEROSPACE FASTENERS DIV OF TEXTRON 1224 EAST WARNER AVENUE PO BOX 2157 SANTA ANA, CALIFORNIA 92707-0157 FORMERLY IN LOS ANGELES, CALIF , FORMERLY CHERRY FASTENERS TOWNSEND DIV OF TEXTRON INC V71087
12324	DUPREE INC STAKE FASTENER CO 14395 RAMONA PO BOX 1797 CHINO, CALIFORNIA 91708 FORMERLY DUPREE MFG CO IN SOUTH EL MONTE, CALIFORNIA FORMERLY STAKE FASTENER CO DIV OF DUPREE INC
14726	WEARNES HOLLINGSWORTH CORP 1601 NORTH POWERLINE ROAD POMPANO BEACH, FLORIDA 33060-1622 FORMERLY MIDLAND ROSS CORP ELECTRONIC CONNECTOR DIV FORMERLY INTERCONNECTION PRODUCTS INC POMPANO PLANT
15653	ALCOA GLOBAL FASTENERS INC DIV KAYNAR PRODUCTS 800 S STATE COLLEGE BLVD FULLERTON, CALIFORNIA 92831-3001 FORMERLY VK6405 MICRODOT AEROSP LTD; FORMERLY KAYNAR TECH FORMERLY FAIRCHILD FASTENERS KAYNAR DIV
35344	Replaced: [V35344] LEACH CORP RELAY DIV SEE LEACH CORP CONTROL PROD DIV V58657 by Code: Name and Address below 58657: LEACH INTERNATIONAL OF NORTH AMERICA 6900 ORANGETHORPE AVE PO BOX 5032 BUENA PARK, CALIFORNIA 90622-5032 FORMERLY LEACH CORP V35344 AND V00614 FORMERLY LEACH CORP

Code	Name
49367	AMPHENOL CORP AMPHENOL AEROSPACE PYLE-NATIONAL CONNECTORS 40-60 DELAWARE AVE SIDNEY, NEW YORK 13838-1395
51896	SPECTRA LUX CORP 12335 134TH COURT NE REDMOND, WASHINGTON 98052 FORMERLY IN KIRKLAND, WA
52828	REPUBLIC FASTENER MFG CORP 1300 RANCHO CONEJO BLVD NEWBURY PARK, CALIFORNIA 91320-1405 FORMERLY IN SYLMAR, CALIFORNIA
55104	TRI-STAR ELECTRONICS INC 2201 ROSECRANS AVENUE EL SEGUNDO, CALIFORNIA 90245 FORMERLY IN VENICE, CA; FORMERLY V71771 CORY COMPONENTS
56623	BABCOCK INC 14930 E ALONDRA BLVD LA MIRADA, CALIFORNIA 90638-5752 FORMERLY IN COSTS MESA, CA & IN ORANGE, CA
58657	LEACH INTERNATIONAL INC 6900 ORANGETHORPE AVE PO BOX 5032 BUENA PARK, CALIFORNIA 90622-5032 FORMERLY LEACH CORP V35344 AND V00614
58982	PRECISION CONNECTOR DESIGNS INC CENTENNIAL PARK 2 TECHNOLOGY DRIVE PEABODY, MASSACHUSETTS 01960 FORMERLY IN WINCHESTER, MASSACHUSETTS
59610	Replaced: [V59610] SOURIAU INC by Code: Name and Address below 09922: SOURIAU USA INC 25 GRUMBACHER DR YORK, PENNSYLVANNIA 17402-9417 FORMERLY FRAMATOME CONNECTORS FRANCE FORMERLY V59610 IN VALENCIA, CALIFORNIA

Code	Name
60119	MONADNOCK CO THE 18301 ARENTH AVENUE ROWLAND HEIGHTS, CALIFORNIA 91748-1288 FORMERLY UNITED CARR FASTENER CORP VB0051 VB0056 VB0076 FORMERLY TRW ELECTRONIC COMPONENTS CINCH-MONADNOCK DIV FORMERLY CINCH-MONADNOCK DIV OF TRW INC V76530 FORMERLY IN CITY OF INDUSTRY, CALIFORNIA
72794	DFCI SOLUTIONS INC 425 UNION BLVD WEST ISLIP, NEW YORK 11795-3116 FORMERLY DZUS FASTENER
72914	HONEYWELL/GRIMES AEROSPACE 550 STATE RT 55 URBANA, OHIO 43078 FORMERLY AERO-FLOW V70128; MIDLAND-ROSS JANITROL AERO DIV; FORMERLY FL AEROSP CORP V89513; ALLIEDSIGNAL/GRIMES AEROSP FORMERLY GRIMES AEROSPACE V00672 AND HONEYWELL V60187
72962	HARVARD INDUSTRIES INC 3 WERNER WAY SUITE 210 LEBANON, NEW JERSEY 08833 FORMERLY ESNA V7A079 FORMERLY ELASTIC STOP NUT IN UNION, NJ
77820	ALLIED AMPHENOL PRODUCTS BENDIX CONNECTOR OPERATIONS 40-60 DELAWARE ST SIDNEY, NEW YORK 13838 FORMERLY BENDIX CORP THE SCINTILLA DIV AND ELECT COMP DIV FORMERLY BENDIX CORP ELECT CMPNT DIV SANTA ANA PLANT V12143
78290	STRUTHERS-DUNN INC SOUTH WINDSOR, CONNECTICUT 06074 OBSOLETE - SEE V00213
80539	SPS TECHNOLOGIES INC DIV AERPSOACE - SANTA ANA 2701 SOUTH HARBOR BOULEVARD SANTA ANA, CALIFORNIA 92704-5803 FORMERLY NUTT-SHEL DIV OF SPC WESTERN CO V80539 AND STANDARD PRESSED STEEL WESTERN DIV V17279

Code	Name
81590	KORRY ELECTRONIC INC SUB OF CRITON CORP 901 DEXTER AVENUE NORTH SEATTLE, WASHINGTON 98109-3515 FORMERLY KORRY, BORIS VB0021 AND KORRY MFG CO
81640	EATON CORP AEROSPACE AND COMMERCIAL CONTROLS DIV 2250 WHITFIELD AVENUE EAST SARASOTA, FLORIDA 34243-9703 FORMERLY SINGER CO CONTROLS DIV AND CONTROLS CO OF AMERICA AND CONTROL SWITCH A CUTLER-HAMMER CO AND EATON CORP CUTLER-HAMMER GROUP V97198, V81641 IN FOLCROFT, PENNSYLVANIA INFO FROMVDR THRU M2880 FEB 1987 SWITCHES
89954	BAE SYSTEMS CONTROL 600 MAIN STREET JOHNSON CITY, NEW YORK 13790 FORMERLY MARTIN MARIETTA AIRCRAFT CONTROL SYSTEMS; FORMERLY LOCKHEED MARTIN CONTROL SYSTEMS
91929	HONEYWELL INC MICRO SWITCH DIV 11 WEST SPRING STREET FREEPORT, ILLINOIS 61032 FORMERLY MICRO SWITCH A DIV OF HONEYWELL FORMERLY V74059 AND V40228
92215	FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV 3010 W LOMITA BLVD TORRANCE, CALIFORNIA 90505-5102 FORMERLY VOI-SHAN IN CULVER CITY, CALIF
98410	ETC-MOLEX SUB OF MOLEX INC 4820 PARK BLVD PINELLAS PARK, FLORIDA 33565-7246 FORMERLY ETC DIV OF ITT IN SOLON, OHIO

Code	Name
98927	ELECSPEC CORP ELECTRONIC SPECIALITY DIV 14511 NORTHEAST 13TH AVENUE PO BOX 3501 VANCOUVER, WASHINTON 98668-3501 FORMERLY ELECTRONIC SPECIALTY CO PROTLAND ELECTRONCI DIV FORMERLY DATRON SYSTEMS INC ELECTRONIC SPECIALITY DIV FORMERLY IN PORTLAND, OREGON
99699	DEUTSCH RELAYS INC 55 ENGINEERS RD HAUPPAUGE, NEW YORK 11788 FORMERLY DEUTSCH CO ELECTRONIC COMPONENTS DIV DEUTSCH RELAY

REFERENCE DESIGNATOR INDEX

REFERENCE DESIGNATOR	PART NUMBER	FIG-ITEM
A1	69-51813-9	1-115
A1	69-78285-1	1-115A
A2	69-51812-5	1-110
A3	69-51812-5	1-110
A4	69-73639-1	1-120
A4	69-73639-5	1-120A
CR2	1N5331	1-35
CR3	1N5331	1-35
K1	ES410-1538	1-13
K1	61GB2319-1A320	1-15
K2	JG2F009	1-55
K21	ES210-1632	1-14
K3	BACR13CF4A	1-60
L1	BCREF2586	1-200
L10	BCREF7981	1-215
L11	BCREF23240	1-222
L2	BCREF2587	1-195
L3	BCREF2587	1-195
L4	BCREF2583	1-190
L5	BCREF2587	1-195
L6	BCREF2573	1-220
L7	800000121-1	1-185
L8	BCREF2620	1-210
L9	BCREF7980	1-205
S1	64AT22-3	1-255
S1	A3-1110-05-1	1-255A
S1	64AT22-3	1-260
S1	A3-1110-05-1	1-260A
S3	A3-1114-01-1	1-235
S3	A3-1114-01-1	1-240
S4	A3-1114-01-1	1-235
S4	A3-1114-01-1	1-240
S5	MS24523-23	1-285
S5	MS24523-23	1-290

REFERENCE DESIGNATOR	PART NUMBER	FIG-ITEM
S6	MS24523-23	1-285
S6	MS24523-23	1-290
S7	26ET61T	1-305
S7	26ET1T	1-305A
S7	6ET1T	1-310A
S7	26ET61T	1-315
S7	26ET1T	1-315A
S7	6ET1T	1-320
XA1	582555-1	1-100
XA2	582551-1	1-95
XA3	582551-1	1-95
XA4	582589-1	1-105
XK1	RSF116400	1-16
XK1	000300-1538	1-20
XK21	RSF116200	1-17

NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
000300-1538		1	17	1
		1	20	1
000300-1539		1	16	1
019-0248-000		1	341	15
10-61803-17		1	190	1
10-61803-24		1	200	1
10-61803-25		1	195	3
10-61803-395		1	205	1
10-61803-398		1	215	1
10-61803-490		1	222	1
10-61803-5		1	220	1
10-61803-96		1	210	1
101-015-1DJ5		1	341	15
102-006-1		1	17	1
		1	20	1
102-009-1		1	16	1
11170		1	245	1
		1	250	1
11170-1		1	275	2
		1	280	2
1N4384		1	330A	1
		1	340A	1
1N5061		1	325A	1
		1	335A	1
1N5331		1	35	2
233A3209-409		1	24	1
26ET1T		1	305A	1
		1	315A	1
26ET61T		1	305	1
		1	315	1
293162		1	23	4
		1	360	4
317-2020-901		1	342	10
318-1616-802		1	341	15

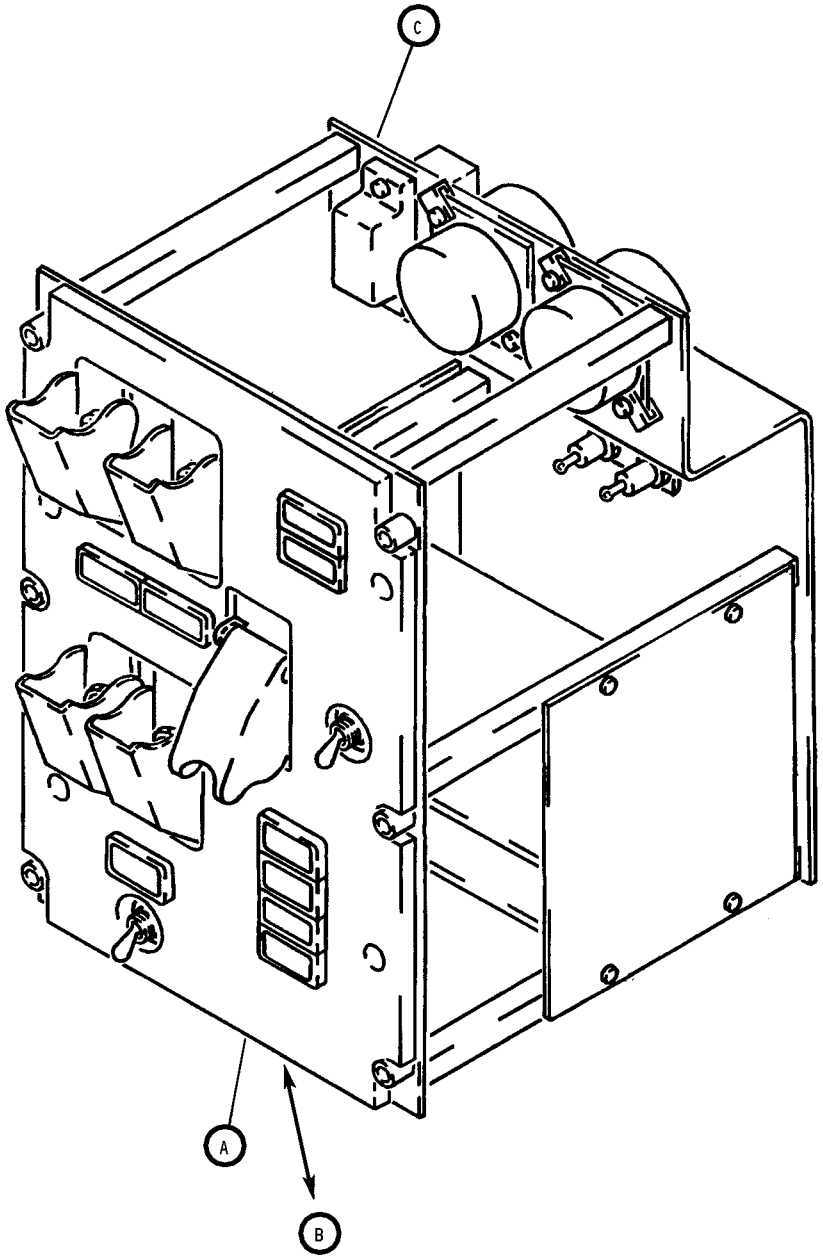
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
318-630-1001-002		1	220	1
318-630-1001-012		1	190	1
318-630-1001-017		1	200	1
318-630-1001-018		1	195	3
318-630-1001-072		1	210	1
318-630-1001-324		1	205	1
318-630-1001-327		1	215	1
318-630-1001-421		1	222	1
320553		1	343	10
425-4		1	3	1
425-5		1	4	1
48-2335-09		1	342	10
		1	342	10
50D0F17G		1	380A	AR
582507-1		1	125	4
582551-1		1	95	2
582555-1		1	100	1
582589-1		1	105	1
60-0730-9		1	225	2
		1	230	2
61GB2319-1A320		1	14	1
		1	15	1
64AT22-3		1	255	1
		1	260	1
64AT22-514		1	270	1
66143-2		1	385	AR
66168-2		1	344	3
69-37268-14		1	160	2
69-37302-273		1	30	1
69-37313-100		1	350	1
69-37313-101		1	365	1
69-37313-104		1	1	RF
69-37313-106		1	1B	RF
69-37313-108		1	1C	RF
69-37313-401		1	1D	RF

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
69-37313-403		1	1E	RF
69-37313-405		1	1F	RF
69-37313-410		1	1G	RF
69-37313-80		1	345	1
69-37313-82		1	165	2
69-37313-83		1	175	1
69-37313-84		1	170	1
69-37313-99		1	1A	RF
69-44578-2		1	265	1
		1	295	1
		1	300	1
69-51812-5		1	110	2
69-51813-9		1	115	1
69-53883-11		1	40	1
69-53883-12		1	150	1
69-53883-13		1	137	1
69-53883-14		1	138	1
69-53883-15		1	140	1
		1	145	1
69-53883-16		1	135	1
69-53883-17		1	40A	1
69-73639-1		1	120	1
69-73639-5		1	120A	1
69-78285-1		1	115A	1
6ET1T		1	310A	1
		1	320	1
800000121-1		1	185	1
8500-5171		1	342	10
96-40		1	90	2
96-62		1	50	4
		1	75	6
A3-1110-03-1		1	270A	1
A3-1110-05-1		1	255A	1
		1	260A	1
A3-1114-01-1		1	235	2

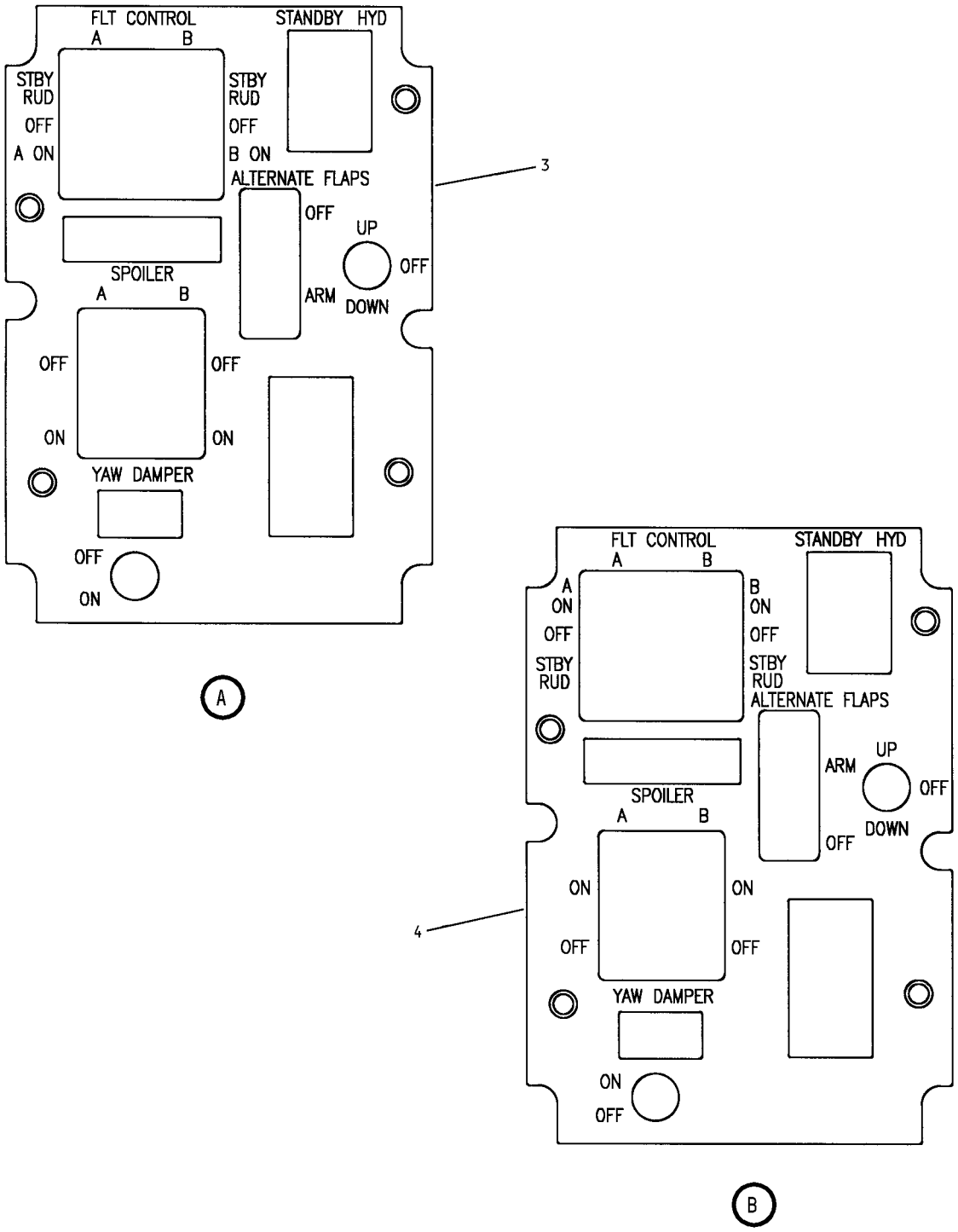
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1	240	2
AA820-04		1	343	10
AN960D8		1	45	12
BAC27DCC351		1	395	1
BAC27EEX510		1	390	1
BACC45FN22-55P		1	375	1
BACC45FN22-55P6		1	370	1
BACC47CN1A		1	342	10
BACC47DJ2		1	341	15
BACN10JC04		1	90	2
BACN10JC06		1	50	4
		1	75	6
BACN10NW1		1	23	4
		1	360	4
BACN10PA06-6		1	180	4
BACR13CF2AB		1	14	1
		1	15	1
BACR13CF4A		1	60	1
BACR13CG2AB		1	13	1
BACR15BB5D		1	25A	2
BACS12CB06-5		1	5	6
BACS12HN04-5		1	22	4
BACS16W1A		1	16	1
BACS16X1A		1	17	1
		1	20	1
BACS21DX1		1	346	6
		1	351	6
BACS38K4F		1	380B	AR
BACT12AC48		1	343	10
BCREF23240		1	222	1
BCREF2573		1	220	1
BCREF2583		1	190	1
BCREF2586		1	200	1
BCREF2587		1	195	3
BCREF2620		1	210	1

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BCREF7980		1	205	1
BCREF7981		1	215	1
BR230DS0115		1	13	1
BR246S0111		1	14	1
		1	15	1
BR64S105		1	14	1
		1	15	1
BRH10A04		1	90	2
BRH10A06		1	50	4
		1	75	6
ES210-1632		1	14	1
		1	15	1
ES410-1538		1	13	1
FCA210-71		1	14	1
		1	15	1
FCA410-63		1	13	1
H10-04BAC		1	90	2
H10-06BAC		1	50	4
		1	75	6
JD4L018		1	14	1
		1	15	1
JD4L031		1	14	1
		1	15	1
JG2F009		1	55	1
K19798-04		1	23	4
		1	360	4
KD4L018		1	13	1
KD4L036		1	13	1
LRM20W16DJ5		1	342	10
MS24523-23		1	285	2
		1	290	2
MS35338-41		1	10	6
NAS1801-04-5		1	355	4
NAS1801-06-14		1	65	6
NAS1801-06-5		1	5A	6

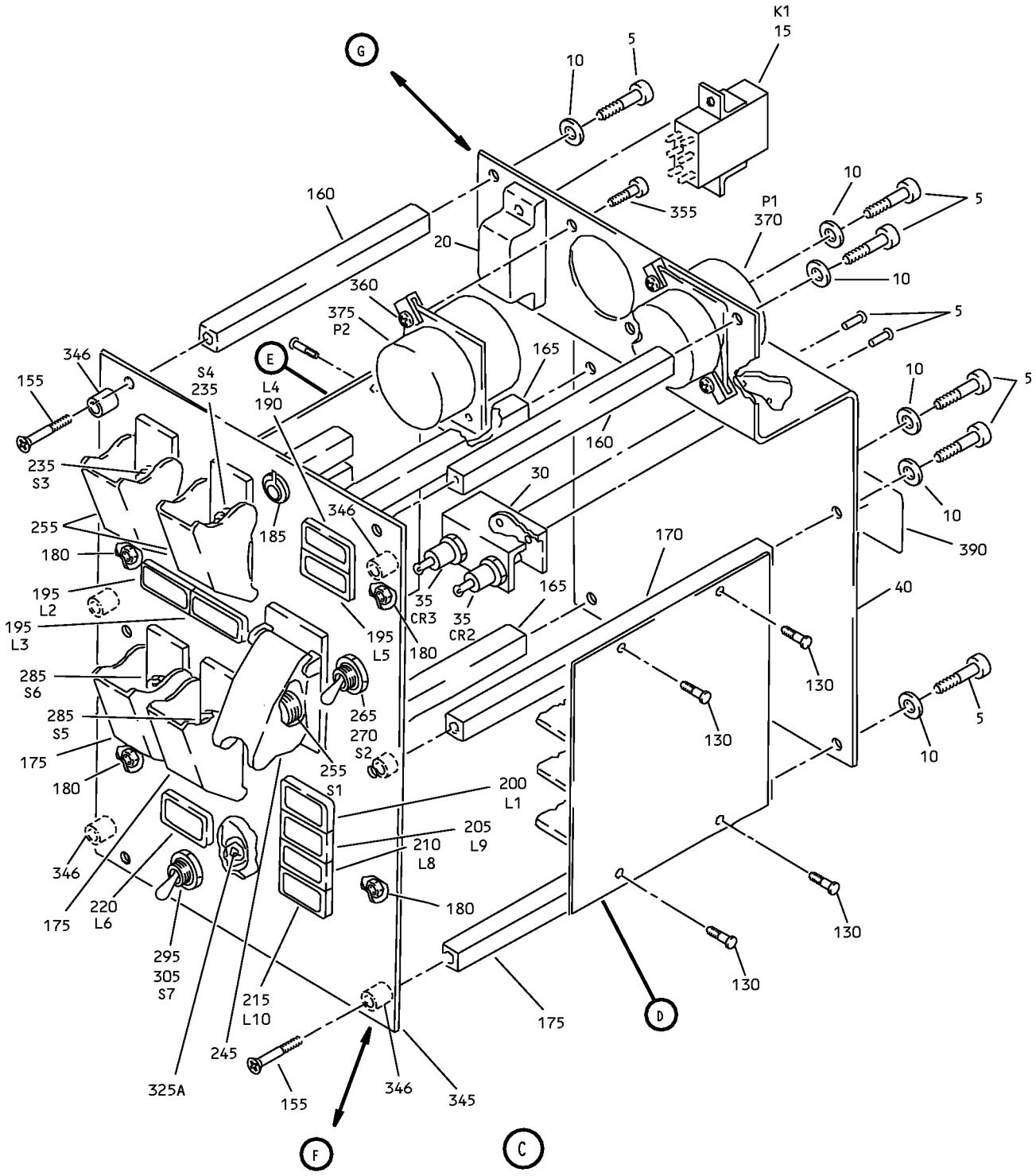
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
NAS43DD1-17		1	70	6
		1	85	2
NAS514P440-4		1	130	8
NAS514P632-5		1	155	6
NAS600-14P		1	80	2
NS202101-40		1	90	2
NS202101-62		1	50	4
		1	75	6
PFSC35-38ACBB		1	346	6
		1	351	6
PFSC35-38AZBB		1	346	6
		1	351	6
R1880SN		1	343	10
RMA4812-160-40		1	23	4
		1	360	4
RMLH9075-40W		1	90	2
RMLH9075-62W		1	50	4
		1	75	6
RSF116200		1	17	1
		1	20	1
RSF116400		1	16	1
SF6G6CBB5D		1	180	4
SLCA002-4		1	3A	1
SLCA002-5		1	4A	1
T6S440J		1	90	2
T6S632J		1	50	4
		1	75	6
TY903-5		1	380	AR
VN303A40		1	90	2
VN303A62		1	50	4
		1	75	6
ZZL4020-36LD		1	342	10
ZZL4020-36LDH13		1	342	10



Flight Controls Module Assembly, P5-3
IPL Figure 1 (Sheet 1 of 5)



Flight Controls Module Assembly, P5-3
IPL Figure 1 (Sheet 2 of 5)



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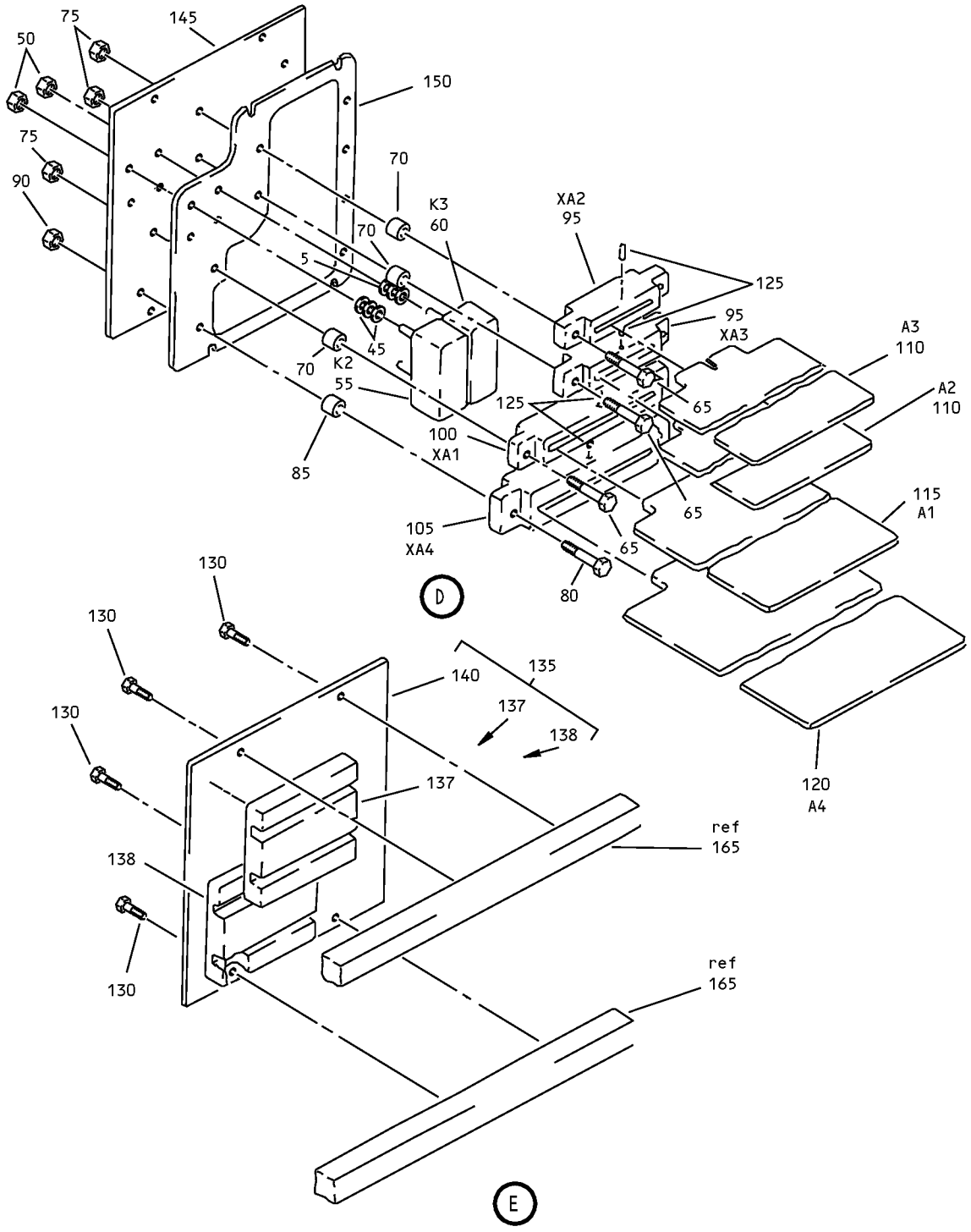
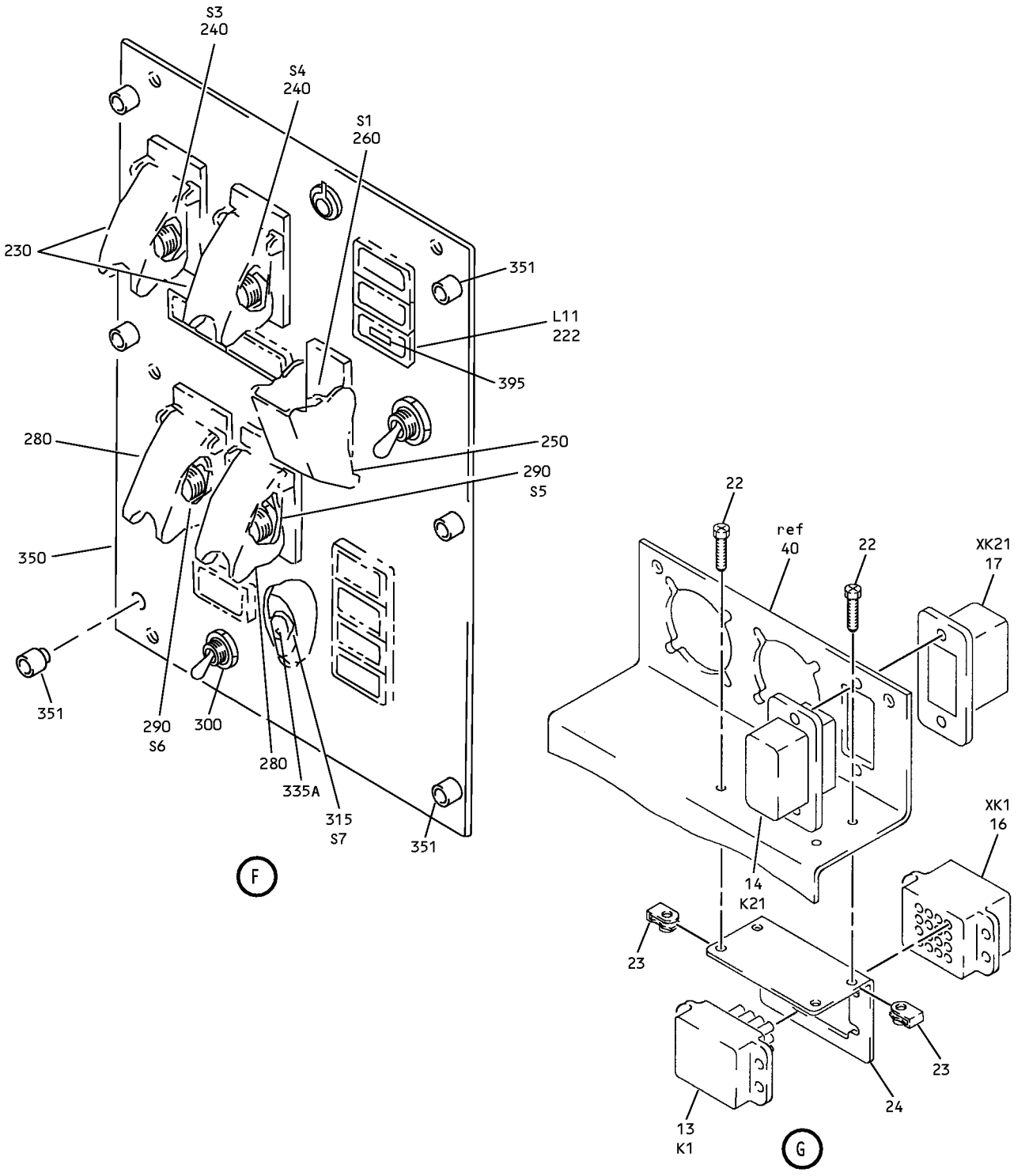
Flight Controls Module Assembly, P5-3
IPL Figure 1 (Sheet 3 of 5)



Flight Controls Module Assembly, P5-3
IPL Figure 1 (Sheet 4 of 5)



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Flight Controls Module Assembly, P5-3
IPL Figure 1 (Sheet 5 of 5)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–1	69-37313-104		MODULE ASSY-FLIGHT CONTROLS, P5-3 (PRE COMPONENT SB 69-37313-31-03)	A	RF
–1A	69-37313-99		MODULE ASSY-FLIGHT CONTROLS, P5-3 (PRE COMPONENT SB 69-37313-31-03)	B	RF
–1B	69-37313-106		MODULE ASSY-FLIGHT CONTROLS, P5-3 (PRE COMPONENT SB 69-37313-31-03)	C	RF
–1C	69-37313-108		MODULE ASSY-FLIGHT CONTROLS, P5-3 (PRE COMPONENT SB 69-37313-31-03)	D	RF
–1D	69-37313-401		MODULE ASSY-FLIGHT CONTROLS, P5-3 (POST COMPONENT SB 69-37313-03)	E	RF
–1E	69-37313-403		MODULE ASSY-FLIGHT CONTROLS, P5-3 (POST COMPONENT SB 69-37313-31-03)	F	RF
–1F	69-37313-405		MODULE ASSY-FLIGHT CONTROLS, P5-3 (POST COMPONENT SB 69-37313-31-03)	G	RF
–1G	69-37313-410		MODULE ASSY-FLIGHT CONTROLS, P5-3 (POST COMPONENT SB 69-37313-31-03)	H	RF
3	425-4		. LIGHTPLATE (V05617) (OPT ITEM 3A) (POST COMPONENT SB 69-37313-31-03)	E, G	1
–3A	SLCA002-4		. LIGHTPLATE (V51896) (OPT ITEM 3) (POST COMPONENT SB 69-37313-31-03)	E, G	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
4	425-5		. LIGHTPLATE (V05617) (OPT ITEM 4A) (POST COMPONENT SB 69-37313-31-03)	F, H	1
–4A	SLCA002-5		. LIGHTPLATE (V51896) (OPT ITEM 4) (POST COMPONENT SB 69-37313-31-03)	F, H	1
5	BACS12CB06-5		. SCREW	A, D	6
–5A	NAS1801-06-5		. SCREW	B, C	6
10	MS35338-41		. WASHER		6
13	ES410-1538		. RELAY (V99699) (SPEC BACR13CG2AB) (OPT KD4L018 (V35344)) (OPT BR230DS0115 (V56623)) (OPT KD4L036 (V58657)) (OPT FCA410-63 (V78290)) (K1)	E-H	1
14	ES210-1632		. RELAY (V99699) (SPEC BACR13CF2AB) (OPT JD4L018 (V35344)) (OPT JD4L031 (V35344)) (OPT BR246S0111 (V56623)) (OPT BR64S105 (V56623)) (OPT FCA210-71 (V78290)) (OPT 61GB2319-1A320 (V98927)) (K21)	E-H	1
15	61GB2319-1A320		. RELAY (V98927) (SPEC BACR13CF2AB) (OPT FCA210-71 (V78290)) (OPT BR64S105 (V56623)) (OPT JD4L018 (V35344)) (OPT JD4L031 (V35344)) (OPT BR246S0111 (V56623)) (OPT ES210-1632 (V99699)) (K1)	A-D	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
16	RSF116400		. SOCKET (V58982) (SPEC BACS16W1A) (OPT 102-009-1 (V09922)) (OPT 000300-1539 (V05574)) (XK1)	E-H	1
17	RSF116200		. SOCKET (V58982) (SPEC BACS16X1A) (OPT 102-006-1 (V09922)) (OPT 000300-1538 (V05574)) (XK21)	E-H	1
20	000300-1538		. SOCKET (V05574) (SPEC BACS16X1A) (OPT 102-006-1 (V09922)) (OPT RSF116200 (V58982)) (XK1)	A-D	1
22	BACS12HN04-5		. SCREW	E-H	4
23	K19798-04		. NUT-CLIP (V15653) (SPEC BACN10NW1) (OPT RMA4812-160-40 (V72962)) (OPT 293162 (V60119))	E-H	4
24	233A3209-409		. BRACKET-RELAY	E-H	1
25	BACR15BA5D		DELETED		
25A	BACR15BB5D		. RIVET (SIZE DETERMINED ON INST)		2
30	69-37302-273		. CHANNEL-DIODE, MTG		1
35	1N5331		. DIODE (CR2, CR3)		2
40	69-53883-11		. BACKPLATE (OPT ITEM 40A)		1
–40A	69-53883-17		. BACKPLATE (OPT ITEM 40)		1
45	AN960D8		. WASHER		12

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
50	H10-06BAC		. NUT (V15653) (SPEC BACN10JC06) (OPT RMLH9075-62W (V72962)) (OPT T6S632J (V11815)) (OPT VN303A62 (V92215)) (OPT 96-62 (V80539)) (OPT BRH10A06 (V52828)) (OPT NS202101-62 (V80539))		4
55	JG2F009		. RELAY (V35344) (K2)		1
60	BACR13CF4A		. RELAY (K3)		1
65	NAS1801-06-14		. SCREW		6
70	NAS43DD1-17		. SPACER		6
75	H10-06BAC		. NUT (V15653) (SPEC BACN10JC06) (OPT RMLH9075-62W (V72962)) (OPT T6S632J (V11815)) (OPT VN303A62 (V92215)) (OPT 96-62 (V80539)) (OPT BRH10A06 (V52828)) (OPT NS202101-62 (V80539))		6
80	NAS600-14P		. SCREW		2
85	NAS43DD1-17		. SPACER		2
90	H10-04BAC		. NUT (V15653) (SPEC BACN10JC04) (OPT NS202101-40 (V80539)) (OPT RMLH9075-40W (V72962)) (OPT T6S440J (V11815)) (OPT VN303A40 (V92215)) (OPT 96-40 (V80539)) (OPT BRH10A04 (V52828))		2
95	582551-1		. CONNECTOR (V00779) (XA2, XA3)		2
100	582555-1		. CONNECTOR (V00779) (XA1)		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
105	582589-1		. CONNECTOR (V00779) (XA4)		1
110	69-51812-5		. PRINTED CIRCUIT ASSY (V89954) (A2, A3)		2
115	69-51813-9		. PRINTED CIRCUIT ASSY (A1) (REF OHM 31-36-07)	A, B, E, H	1
–115A	69-78285-1		. PRINTED CIRCUIT ASSY (STATIC SENSITIVE PART) (V89954) (A1)	C, D, F, G	1
120	69-73639-1		. PRINTED CIRCUIT ASSY (V89954) (A4) (OPT ITEM 120A)		1
–120A	69-73639-5		. PRINTED CIRCUIT ASSY (V89954) (A4) (OPT ITEM 120)		1
125	582507-1		. PLUG-KEYING (V00779)		4
130	NAS514P440-4		. SCREW		8
132	NAS1801-04-4		DELETED		
135	69-53883-16		. COVER ASSY		1
137	69-53883-13		. . FOAM		1
138	69-53883-14		. . FOAM		1
140	69-53883-15		. . COVER		1
145	69-53883-15		. COVER		1
150	69-53883-12		. PLATE-MTG		1
155	NAS514P632-5		. SCREW		6
160	69-37268-14		. STANDOFF		2
165	69-37313-82		. STANDOFF		2
170	69-37313-84		. STANDOFF		1
175	69-37313-83		. STANDOFF		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
180	SF6G6CBB5D		. NUT (V12324) (SPEC BACN10PA06-6)		4
185	800000121-1		. CONNECTOR-POWER (V05617) (L7)		1
190	BCREF2583		. LIGHT ASSY-IND (LOW QUANTITY) (V81590) (318-630-1001-012) (L4) (SPEC 10-61803-17)		1
195	BCREF2587		. LIGHT ASSY-IND (LOW PRESSURE) (V81590) (318-630-1001-018) (L2, L3, L5) (SPEC 10-61803-25)		3
200	BCREF2586		. LIGHT ASSY-IND (FEEL DIF PRESS) (V81590) (318-630-1001-017) (L1) (SPEC 10-61803-24)		1
205	BCREF7980		. LIGHT ASSY-IND (SPEED TRIM FAIL) (V81590) (318-630-1001-324) (L9) (SPEC 10-61803-395)		1
210	BCREF2620		. LIGHT ASSY-IND (MACH TRIM FAIL) (V81590) (318-630-1001-072) (L8) (SPEC 10-61803-96)		1
215	BCREF7981		. LIGHT ASSY-IND (AUTO SLAT FAIL) (V81590) (318-630-1001-327) (L10) (SPEC 10-61803-398)		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
220	BCREF2573		. LIGHT ASSY-IND (YAW DAMPER) (V81590) (318-630-1001-002) (L6) (SPEC 10-61803-5)		1
222	BCREF23240		. . LIGHT ASSY-IND PRESS TO TEST (V81590) (318-630-1001-421) (L11) (SPEC 10-61803-490)	E-H	1
225	60-0730-9		. GUARD-BLACK (V72914)	A, D, E, G	2
230	60-0730-9		. GUARD-BLACK (V72914)	B, C, F, H	2
235	A3-1114-01-1		. SWITCH-TG (V81640) (S3, S4)	A, D, E, G	2
240	A3-1114-01-1		. SWITCH-TG (V81640) (S3, S4)	B, C, F, H	2
245	11170		. GUARD-RED (V72914)	A, D, E, G	1
250	11170		. GUARD-RED (V72914)	B, C, F, H	1
255	64AT22-3		. SWITCH-TG (V91929) (S1) (OPT ITEM 255A)	A, D, E, G	1
–255A	A3-1110-05-1		. SWITCH-TG (V81640) (S1) (OPT ITEM 255)	A, D, E, G	1
260	64AT22-3		. SWITCH-TG (V91929) (S1) (OPT ITEM 260A)	B, C, F, H	1
–260A	A3-1110-05-1		. SWITCH-TG (V81640) (S1) (OPT ITEM 260)	B, C, F, H	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
265	69-44578-2		. CAP-SW		1
270	64AT22-514		. SWITCH-TG (V91929) (OPT ITEM 270A)		1
–270A	A3-1110-03-1		. SWITCH-TG (V81640) (OPT ITEM 270)		1
275	11170-1		. GUARD-BLACK (V72914)	A, D, E, G	2
280	11170-1		. GUARD-BLACK (V72914)	B, C, F, H	2
285	MS24523-23		. SWITCH (S5, S6)	A, D, E, G	2
290	MS24523-23		. SWITCH (S5, S6)	B, C, F, H	2
295	69-44578-2		. CAP-SW	A, D, E, G	1
300	69-44578-2		. CAP-SW	B, C, F, H	1
305	26ET61T		. SWITCH (V91929) (S7) (OPT ITEM 305A, 310A)	A, D, E, G	1
–305A	26ET1T		. SWITCH (V91929) (S7) (OPT ITEM 305, 310A)	A, D, E, G	1
–310	26ET1T		DELETED		
–310A	6ET1T		. SWITCH (V91929) (S7) (OPT ITEM 305, 305A)	A, D, E, G	1
315	26ET61T		. SWITCH (V91929) (S7) (OPT ITEM 315A, 320)	B, C, F, H	1
–315A	26ET1T		. SWITCH (V91929) (S7) (OPT ITEM 315, 320)	B, C, F, H	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–320	6ET1T		. SWITCH (V91929) (S7) (OPT ITEM 315, 315A)	B, C, F, H	1
325	IN5061		DELETED		
325A	1N5061		. DIODE (OPT ITEM 330A)	A, D, E, G	1
–330	IN4384		DELETED		
–330A	1N4384		. DIODE (OPT ITEM 325A)	A, D, E, G	1
335	IN5061		DELETED		
335A	1N5061		. DIODE (OPT ITEM 340A)	B, C, F, H	1
–340	IN4384		DELETED		
–340A	1N4384		. DIODE (OPT ITEM 335A)	B, C, F, H	1
–341	318-1616-802		. CONTACT-SOCKET (V55104) (SPEC BACC47DJ2) (OPT 101-015-1DJ5 (V09922)) (OPT 019-0248-000 (V05574))	E-H	15
–342	48-2335-09		. CONTACT-PIN (V77820) (SPEC BACC47CN1A) (OPT 48-2335-09 (V02660)) (OPT 8500-5171 (V59610)) (OPT ZZL4020-36LD (V49367)) (OPT 317-2020-901 (V55104)) (OPT ZZL4020-36LDH13 (V49367)) (OPT LRM20W16DJ5 (V09922))	E-H	10
–343	AA820-04		. TERMINAL-LUG (V98410) (SPEC BACT12AC48) (OPT R1880SN (V14726)) (OPT 320553 (V00779))	E-H	10
–344	66168-2		. TERMINAL-TAB (V00779)	E-H	3
345	69-37313-80		. BASEPLATE	A, D, E, G	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
346	PFSC35-38AZBB		. STUD ASSY (V72794) (SPEC BACS21DX1) (OPT PFSC35-38ACBB (V72794))	A, D, E, G	6
350	69-37313-100		. BASEPLATE	B, C, F, H	1
351	PFSC35-38AZBB		. STUD ASSY (V72794) (SPEC BACS21DX1) (OPT PFSC35-38ACBB (V72794))	B, C, F, H	6
355	NAS1801-04-5		. SCREW		4
360	K19798-04		. NUT (V15653) (SPEC BACN10NW1) (OPT RMA4812-160-40 (V72962)) (OPT 293162 (V60119))		4
–365	69-37313-101		. WIRE BUNDLE ASSY		1
370	BACC45FN22-55P6		. . CONNECTOR-(P1)		1
375	BACC45FN22-55P		. . CONNECTOR-(P2)		1
–380	TY903-5		. . CLAMP (V06383) (OPT ITEM 380A, 380B)		AR
–380A	50D0F17G		. . CLAMP (V00768) (OPT ITEM 380, 380B)		AR
–380B	BACS38K4F		. . STRAP (OPT ITEM 380, 380A)		AR
–385	66143-2		. . TERMINAL (V00779)		AR
390	BAC27EEX510		. DECAL	C, D, F, G	1
395	BAC27DCC351		. MARKER-INOP	E-H	1

–Item not Illustrated