

TO: ALL HOLDERS OF CENTER INSTRUMENT MODULE ASSEMBLY P2-2 OVERHAUL MANUAL,
 31-36-13

REVISION NO. 6, DATED NOV 1/08

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
Removed BAE Systems assemblies from manual	X				X			X				X	

CENTER INSTRUMENT MODULE ASSEMBLY P2-2

31-36-13

I BOEING P/N 65C14964-41, -44, -46, -48, -50
 69-73033-12

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
27-1079		PRR 32116R PRR 33060-8 PRR 32976 PRR 33046	Jan 5/77 Jul 5/81 Jan 5/82 Jan 5/82
80-1005 80-1049			Dec 5/85 Dec 5/88

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
31-36-13		* 24G	DELETED		
* T-1	Nov 1/08	* 24H	DELETED		
T-2	BLANK	* 24I	DELETED		
* LEP-1	Nov 1/08	* 24J	DELETED		
LEP-2	BLANK	* F 24K	DELETED		
* T/C-1	Nov 1/08	* 24L	DELETED		
T/C-2	BLANK	* 25	Nov 1/08		
* 1	Nov 1/08	* 26	DELETED		
* 2	Nov 1/08	* 26A	DELETED		
* 3	Nov 1/08	* 26B	DELETED		
* 4	Nov 1/08	* 27	Nov 1/08		
* 5	Nov 1/08	* 28	Nov 1/08		
* 6	Nov 1/08	* 28A	DELETED		
* 7	DELETED	* 28B	DELETED		
* 8	DELETED	* 29	Nov 1/08		
* 8A	DELETED	* 30	Nov 1/08		
* 8B	DELETED	* 31	Nov 1/08		
* 8C	DELETED	* 32	Nov 1/08		
* 8D	DELETED	* 33	Nov 1/08		
* 8E	DELETED	* 34	Nov 1/08		
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* 8G	DELETED	* 36	DELETED		
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* 23	Nov 1/08				
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* 24C	DELETED				
* 24D	DELETED				
* 24E	DELETED				
* 24F	DELETED				

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█ * [1] Use applicable procedures in OHM 31-10-01 and standard industry practices.	
* [2] Special instructions not required.	

CENTER INSTRUMENT MODULE ASSEMBLY P2-2

NOTE: For coverage of 69-37305-107, -110, -111, -141, -151, -155, -158, -163, -173, -176, -236, -240, -241, -245, -246, -247, refer to BAE Systems Controls Inc., (V89954 BAE Systems Controls Inc., 600 Main St., Johnson City, NY 13790-1806) CMM 31-36-13.

1. DESCRIPTION AND OPERATION

A. The center instrument module assemblies contain switches, indicators, and instrument mountings for the flight instrument system. Components are mounted on a baseplate assembly with rear-mounted connectors for mating with the airplane wire bundle. Four quick-disconnect studs are provided for mounting in the control cabin.

2. REPAIR

A. All repair can be accomplished with standard industry practices and information contained in OHM 31-10-01.

B. When replacing relay R290, insert with contrasting bead matching pin 2 of socket.

3. TESTING

A. Test Equipment

(1) Power Supply: 28 volts dc, 1 ampere

(2) Multimeter: Simpson 260P or equivalent

(3) Test Connectors with pigtail leads:

(a) BACC45FT18-31S6 - Mate with D4258J, identify as connector A (69-73033-12).

(b) BACC45FT18-31S7 - Mate with D4260J, identify as connector B.

NOTE: Throughout testing, identifiers A and B will be used instead of D4258J and D4260J.

B. Functional Test

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

Component Tested	Procedure	Required Results
L358 L360 L362 L550*[1]	Connect B-17 to 28 v dc Connect A-15 to ground Depress L358, release Depress L360, release Depress L362, release Depress L550, release	All indicators extinguished Illuminated while depressed Illuminated while depressed Illuminated while depressed Illuminated while depressed

Test Procedures
Figure 1 (Sheet 1)

Component Tested	Procedure	Required Results
L736*[1] L822*[4]	Depress L736, release Depress L822, release Disconnect A-15 Connect B-16 to ground	Illuminated while depressed Illuminated while depressed
L358 L360 L362 L550*[1] L736*[1] L822*[4]	Depress L358, release Depress L360, release Depress L362, release Depress L550, release Depress L736, release Depress L822, release Disconnect B-16	L358,L360,L362, *[1] L550 L736, L822*[4] Illuminated Extinguished while depressed Extinguished while depressed Extinguished while depressed Extinguished while depressed Extinguished while depressed Indicators extinguished
L358 L360 L362 L550*[1] L736*[1] S583	Connect A-25 to ground Connect A-18 to ground Connect A-19 to ground Connect A-10 to ground Connect A-13 to ground, set S583 full clockwise, one step left, two steps left, then full counterclockwise. Return S583 to full clockwise.	L358 illuminated L360 illuminated L362 illuminated L550 illuminated L736 illuminated at each switch position except full counter- clockwise
L822*[4]	Connect B-6 to ground Remove all connections	L822 illuminated Indicators extinguished
L351 L352 L353*[2] L556*[1] L359 L361 L363 L821*[4]	Connect A-17 to 28 V dc Connect A-15 to ground Depress L351, release Depress L352, release Depress L353, release Depress L556, release Depress L359, release Depress L361, release Depress L363, release Depress L821, release Disconnect A-15	Indicators extinguished Illuminated while depressed Illuminated while depressed Illuminated while depressed Illuminated while depressed Illuminated while depressed Illuminated while depressed Illuminated while depressed Illuminated while depressed
	Connect B-16 to ground	L351,L352,L359,L361,L363 *[1] L556, *[2] L353, *[4] L821 Illuminated
L351 L352 L353*[2] L556*[1] L359 L361 L363 L821*[4]	Depress L351, release Depress L352, release Depress L353, release Depress L556, release Depress L359, release Depress L361, release Depress L363, release Depress L821, release Disconnect B-16	Extinguished while depressed Extinguished while depressed Extinguished while depressed Extinguished while depressed Extinguished while depressed Extinguished while depressed Extinguished while depressed Extinguished while depressed

Test Procedures
Figure 1 (Sheet 2)

Component Tested	Procedure	Required Results
L351 L352 L353*[2] L556*[1] L359 L361 L363 L821*[4]	Connect A-26 to ground Connect A-27 to ground Connect A-28 to ground Connect A-12 to ground Connect B-25 to ground Connect B-18 to ground Connect B-19 to ground Connect B-5 to ground Remove all connections	L351 illuminated L352 illuminated L353 illuminated L556 illuminated L359 illuminated L361 illuminated L363 illuminated L821 illuminated Indicators extinguished
L356 L354	Connect A-24, B-24 to 28 v dc Connect A-15 to ground Depress L356, release Depress L354, release Disconnect A-15	Indicators extinguished Illuminated while depressed Illuminated while depressed
L354 L356	Connect B-16 to ground Depress L354, release Depress L356, release Disconnect B-16	L354,L356 illuminated Extinguished while depressed Extinguished while depressed Indicators extinguished
L356 L354	Connect A-30 to ground Connect B-4 to ground *[3] Remove all connections	L356 illuminated L354 illuminated Indicators extinguished
Diodes	Connect pins to ground: A-17, B-17, A-24, B-24 Connect pins, one at a time, momentarily to 28 v dc: A-10, A-12, A-13, A-18, A-19, A-25, A-26, A-27, A-28, A-30, B-4, *[4]B-5, *[4]B-6, B-16, B-18, B-19, B-25, B-31 Remove all connections	All indicators extinguished
S251	Set switches as indicated Measure between listed pins: Set to OFF (down) A-21 to A-22	No Continuity Continuity
S250	Set to ON (up) A-21 to A-22 Set to ON (up) B-21 to B-22	Continuity Continuity
Wiring	Set to OFF (Down) B-21 to B-22 A-23 to A-29 B-23 to B-3	No Continuity Continuity Continuity
<p>NOTE: If 65-14964-48 was modified from 69-37305-35, wiring will be from A-23 to A-20, and B-23 to B-12.</p>		

Test Procedures
Figure 1 (Sheet 3)

Component Tested	Procedure	Required Results
S185	Set to left (hold) A-4 to A-5 A-3 to A-5 Set to right (hold) A-3 to A-5 A-4 to A-5 Release S185 A-4 to A-5 A-3 to A-5	Continuity No Continuity Continuity No Continuity No Continuity No Continuity
S256	Depress (hold) B-26 to B-27 B-26 to B-28 Release S256 B-26 to B-28 B-26 to B-27	Continuity Continuity No Continuity No Continuity
L378	Measure from L378 rim to B-1 Measure from L378 center to B-2 Measure from B-1 to B-2	Continuity Continuity No Continuity
<u>69-73033-12</u>		
S583	Set S583 full clockwise Measure: A-14to A-16 A-20to A-9 A-20to A-11 A-8 to A-6 A-8 to A-7 Set one step left A-8 to A-7 A-8 to A-6 A-20to A-9 A-20to A-11 A-14to A-16 Set one step left A-14to A-16 A-20to A-11 A-20to A-9 A-8 to A-7 A-8 to A-6 Set full counterclockwise A-8 to A-7 A-20to A-11 A-14to A-16	Continuity No Continuity No Continuity No Continuity No Continuity No Continuity No Continuity Continuity Continuity No Continuity Continuity No Continuity Continuity No Continuity Continuity No Continuity No Continuity No Continuity No Continuity

 Test Procedures
 Figure 1 (Sheet 4)

Component Tested	Procedure	Required Results
S102	<u>65C14964-41, -44, -48 only</u> Depress S102, hold Measure A-20 to A-29 Release S102 A-20 to A-29	Continuity No Continuity
Wiring	<u>65C14964-41, -44, -48 only</u> Measure: A-20 to A-14 A-13 to A-30	Continuity Continuity
S239	Set to down A-13 to A-8 Set to up A-13 to A-8	Continuity No Continuity
S239	<u>65C14964-46 only</u> Set to down A-13 to A-8 Set to up A-13 to A-8	Continuity No Continuity
Wiring	A-13 to A-30	Continuity
S102	Depress S102, hold Measure: A-30 to A-20 Release S102 A-30 to A-20	Continuity No Continuity
Wiring	<u>65C14964-48 only</u> Measure: D954-2 to B-6 -3 to B-5 -4 to B-2 -5 to B-1 D956-2 to B-3 -3 to B-4 -4 to B-2 -5 to B-1	Continuity Continuity Continuity Continuity Continuity Continuity Continuity Continuity

Test Procedures
 Figure 1 (Sheet 5)

Component Tested	Procedure	Required Results	
Wiring	<u>65C14964-50 only</u>		
	Measure continuity between pins listed in result column	D956-A to A-14 -B to A-12 -C to B-31 -D to B-30 -J to A-7 -K to A-8 -S to A-9 -T to A-10	D954-A to A-14 -B to A-12 -C to B-29 -D to B-15 -J to A-1 -K to A-2 -S to A-6 -T to A-31 -E to A-11
	Set S239 to down Set S239 to up	D956-R to A-11	-R to A-11
	Measure: D954-R to A-11 Depress S102, hold Measure: D954-R to A-11 D956-P to A-11 Release S102 D956-P to A-11	No Continuity Continuity Continuity No Continuity	

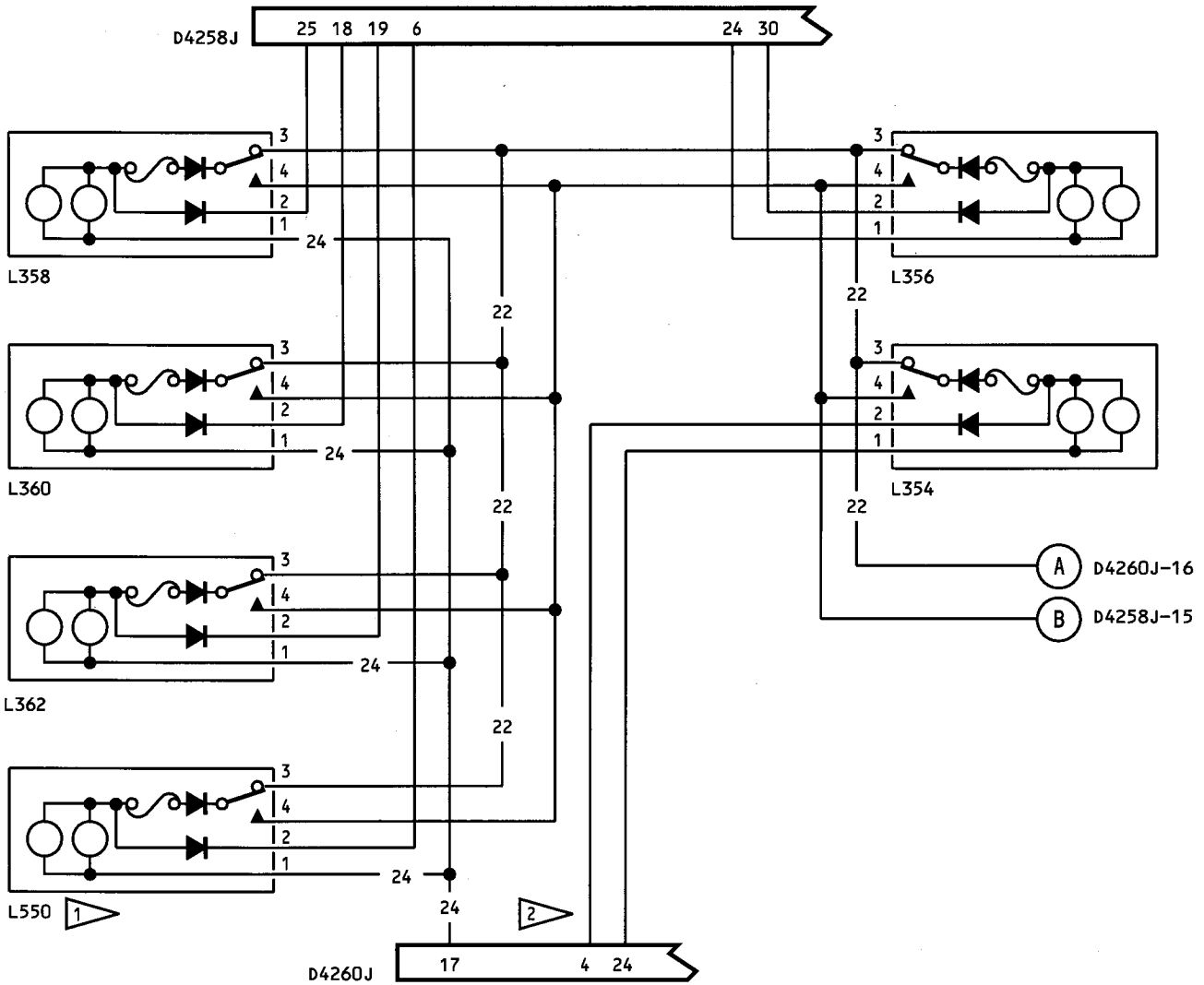
*[1] L550, L556 not installed on 65C14964-42 thru -48

L736 test for 69-73033-12



*[2] L353 not installed on 69-73033-12

*[3] Use pin B-31 for 65C14964-48

*[4] 69-73033-12 only

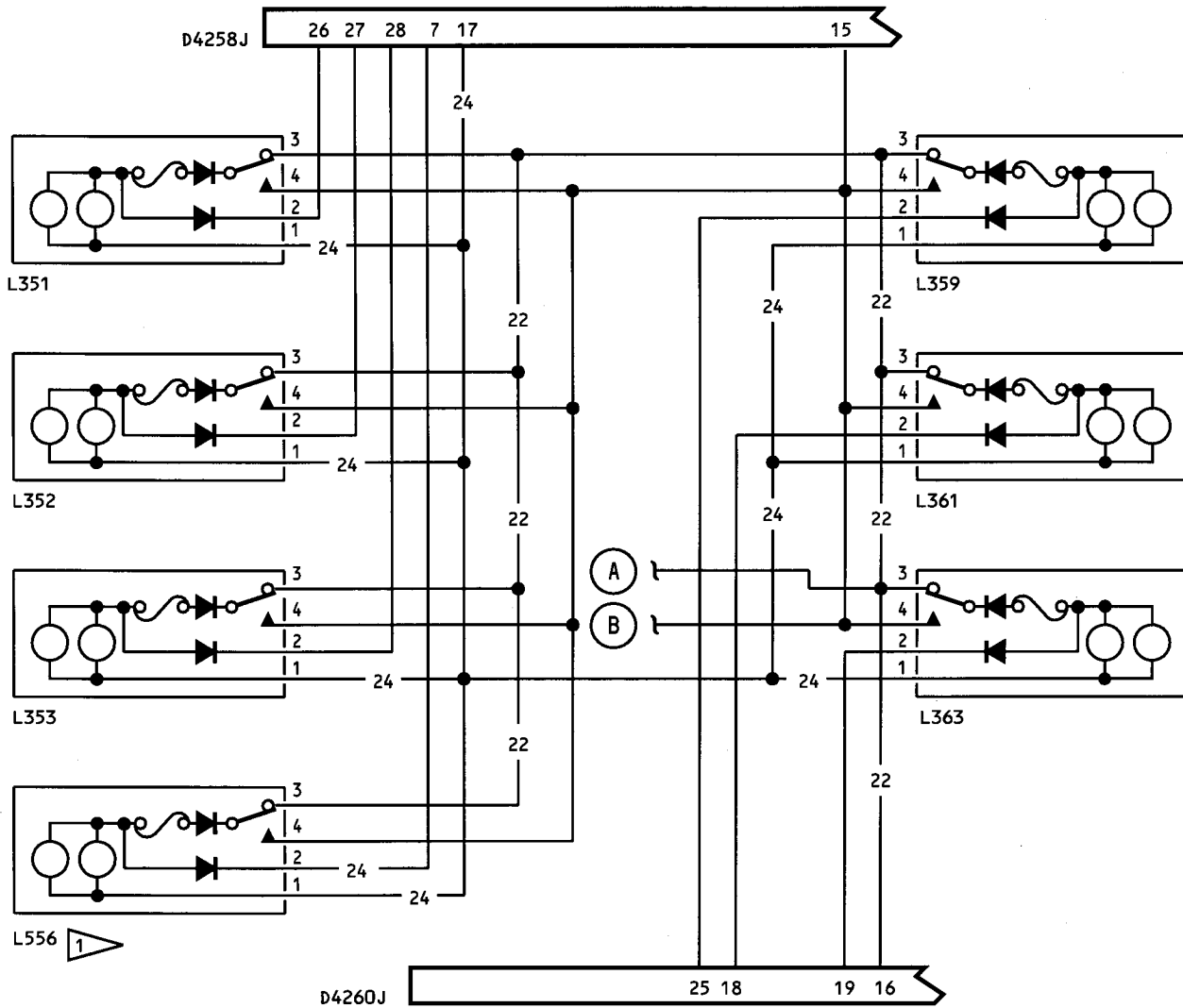


NOTE: ALL WIRE BMS 13-16 TYPE 1 CLASS 1
 SIZE AWG 20 EXCEPT AS NOTED

-  INSTALLED ON 65C14964-41
-  PIN 31 FOR 65C14964-48

65C14964-41,-44,-46,-48,-50

Schematic Diagram
 Figure 2 (Sheet 1)

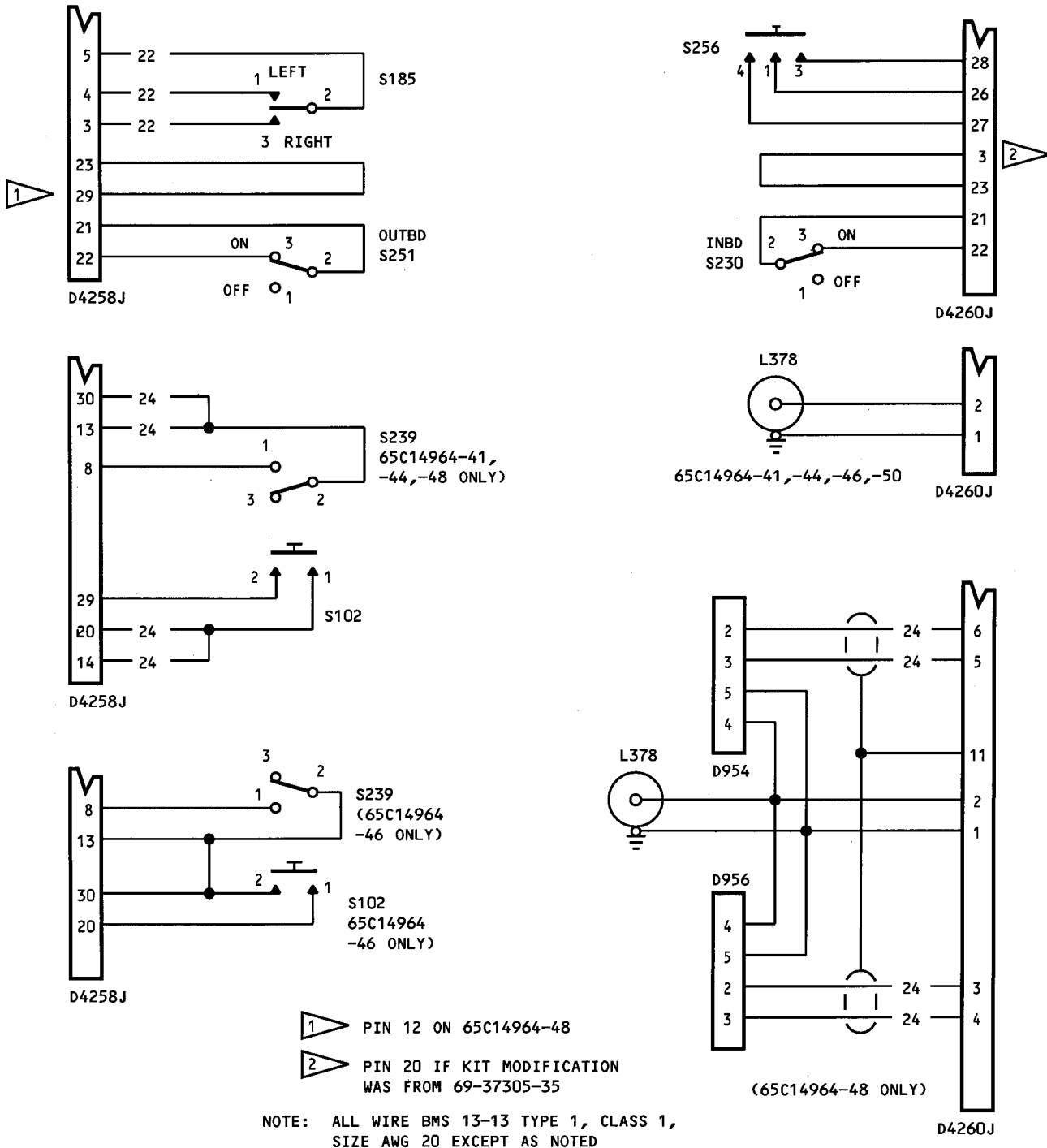


NOTE: ALL WIRE BMS 13-16 TYPE 1 CLASS 1
 SIZE AWG 20 EXCEPT AS NOTED

1 INSTALLED ON 65C14964-41

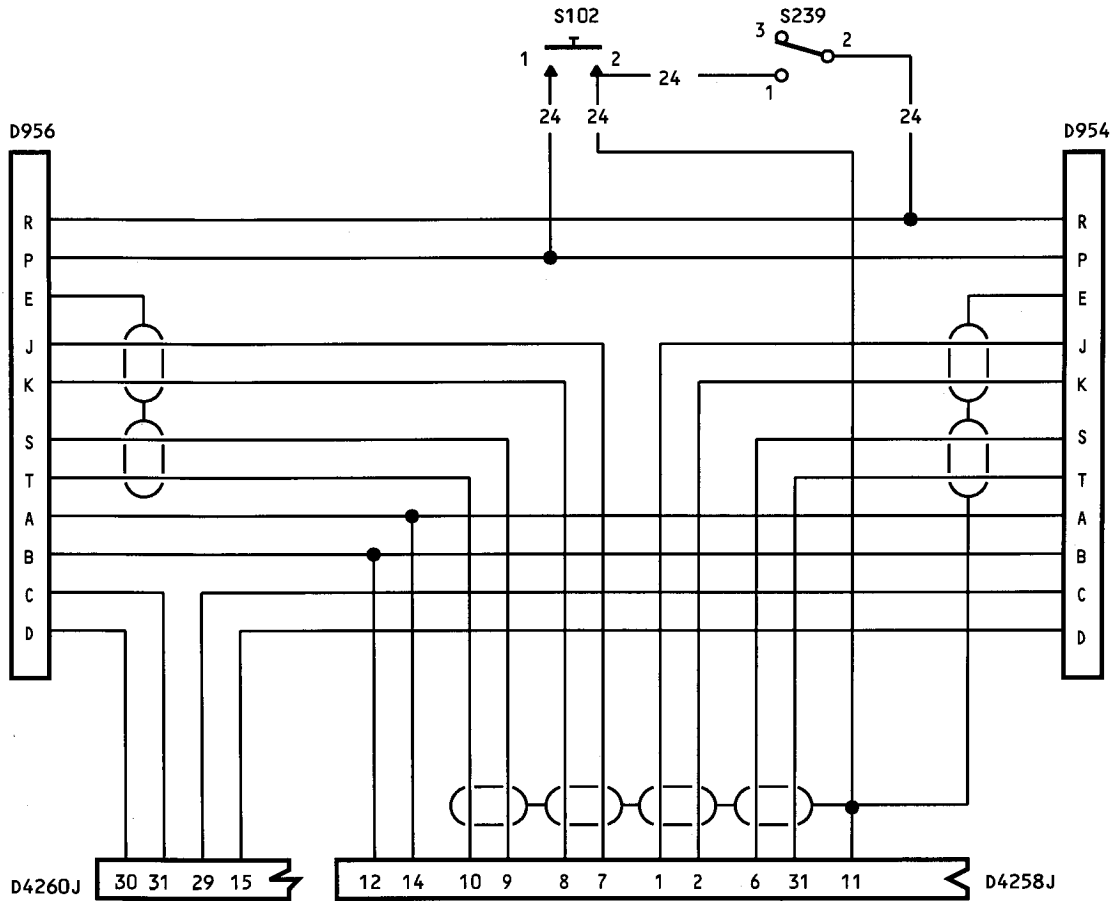
65C14964-41,-44,-46,-48,-50

Schematic Diagram
 Figure 2 (Sheet 2)



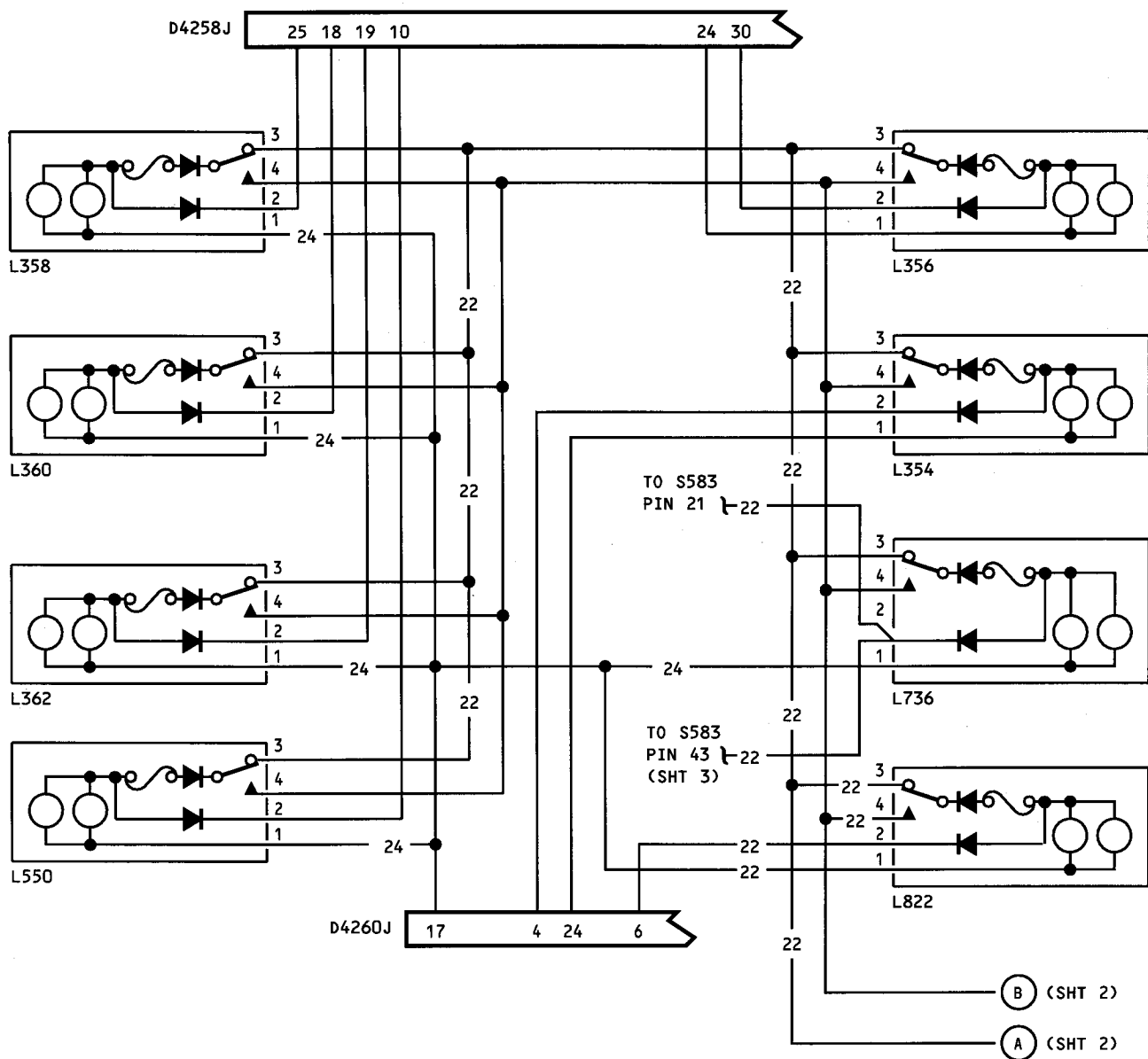
65C14964-41, -44, -46, -48, -50

Schematic Diagram
Figure 2 (Sheet 3)



65C14964-50 ONLY

Schematic Diagram
 Figure 2 (Sheet 4)



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

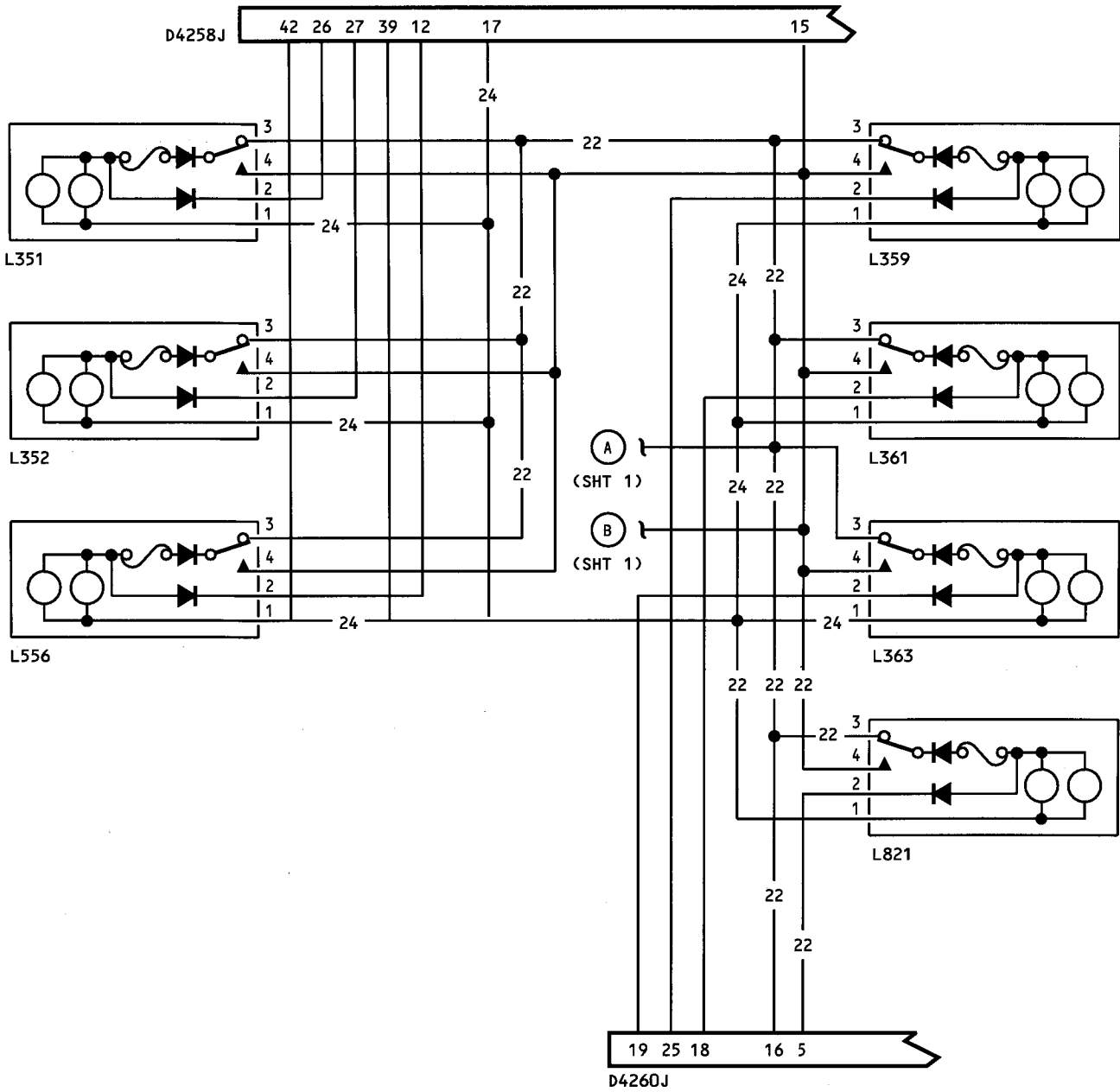
69-73033-12

Schematic Diagram
Figure 3 (Sheet 1)

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

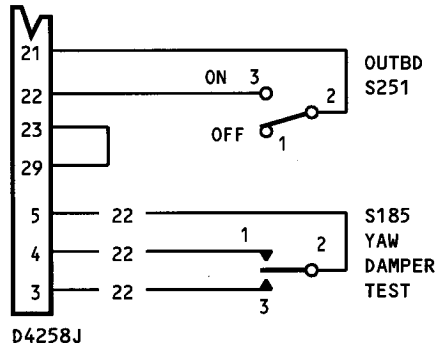
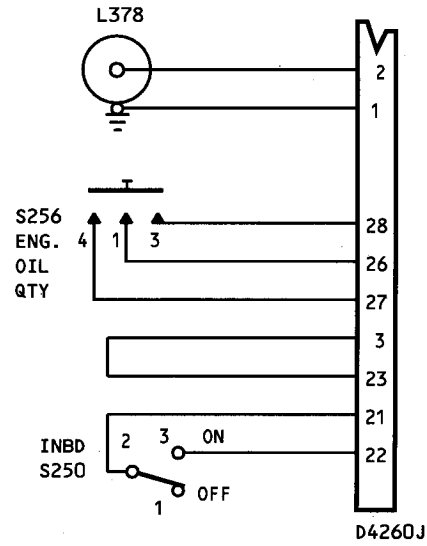
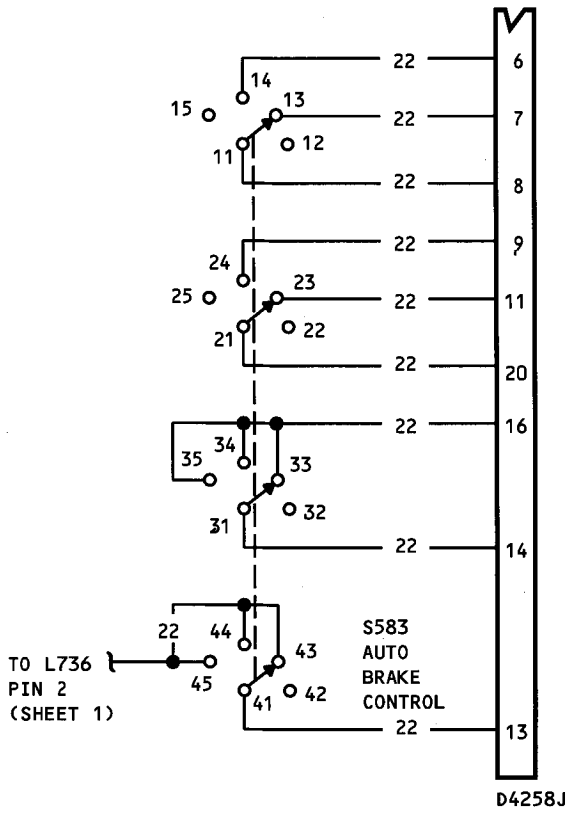
69-73033-12

Schematic Diagram
 Figure 3 (Sheet 2)

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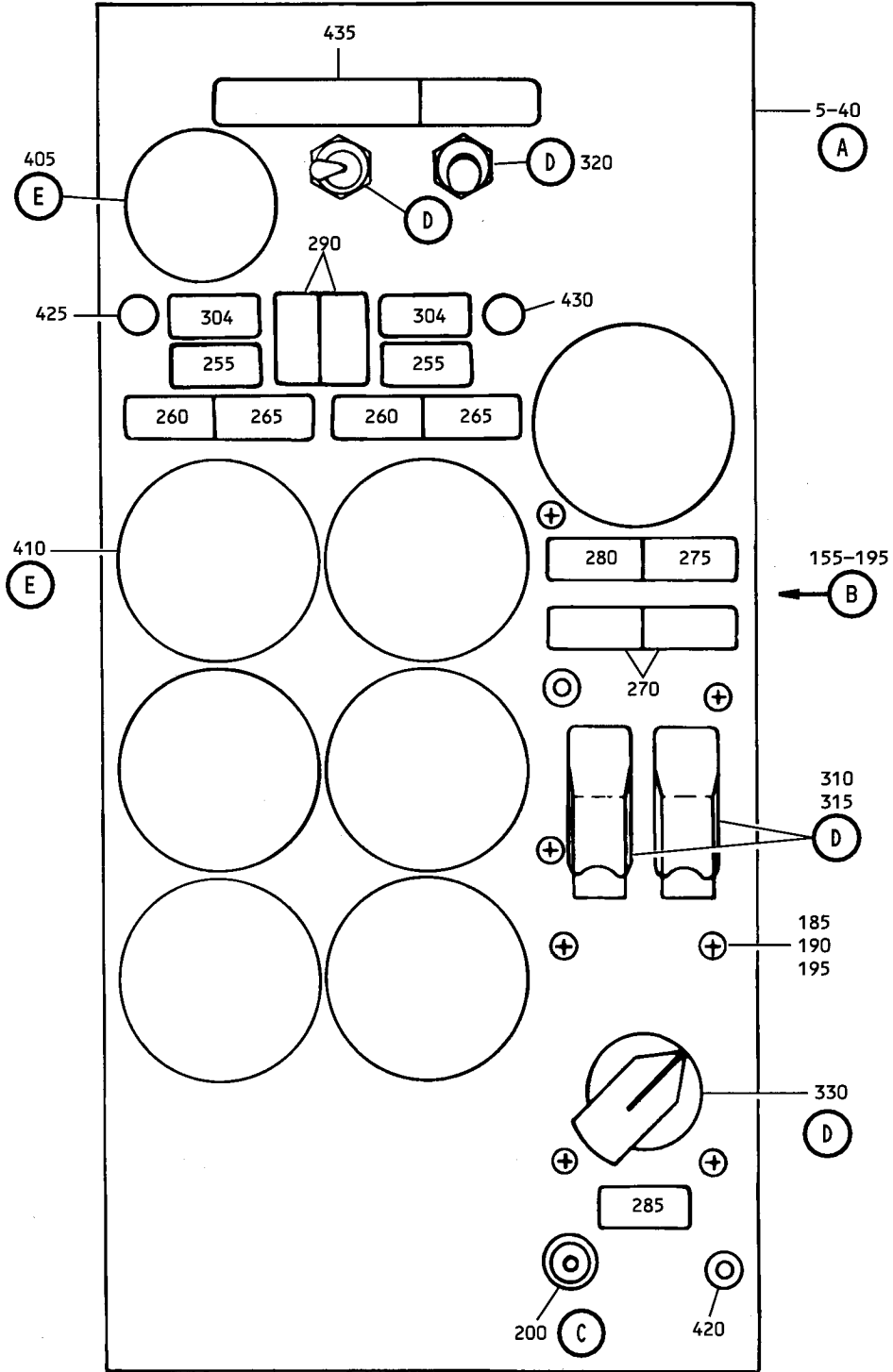
69-73033-12

Schematic Diagram
Figure 3 (Sheet 3)

4. ILLUSTRATED PARTS LIST

VENDORS

V05617	IDD AEROSPACE CORP., 18225 N.E. 76TH ST, REDMOND, WASHINGTON 98052-5021
V12522	STACOSWITCH, INC., 1139 BAKER ST., COSTA MESA, CALIFORNIA 92626-4114
V26742	METHODE ELECTRONICS, INC., 7401 W. WILSON AVE., HARWOOD HEIGHTS, ILLINOIS 60706-4548
V71286	ALCOA GLOBAL FASTENERS, INC., 3014 W. LOMITA AVE., TORRANCE, CALIFORNIA 90505-5103
V72914	GRIMES AEROSPACE CO., 550 STATE ROUTE 55, URBANA, OHIO 43078-9482
V81590	KORRY ELECTRONICS CO., 901 DEXTER AVE., SEATTLE, WASHINGTON 98109-3575
V91812	JANCO CORP., 13955 BALBOA BLVD., SYLMAR, CALIFORNIA 91342-1084

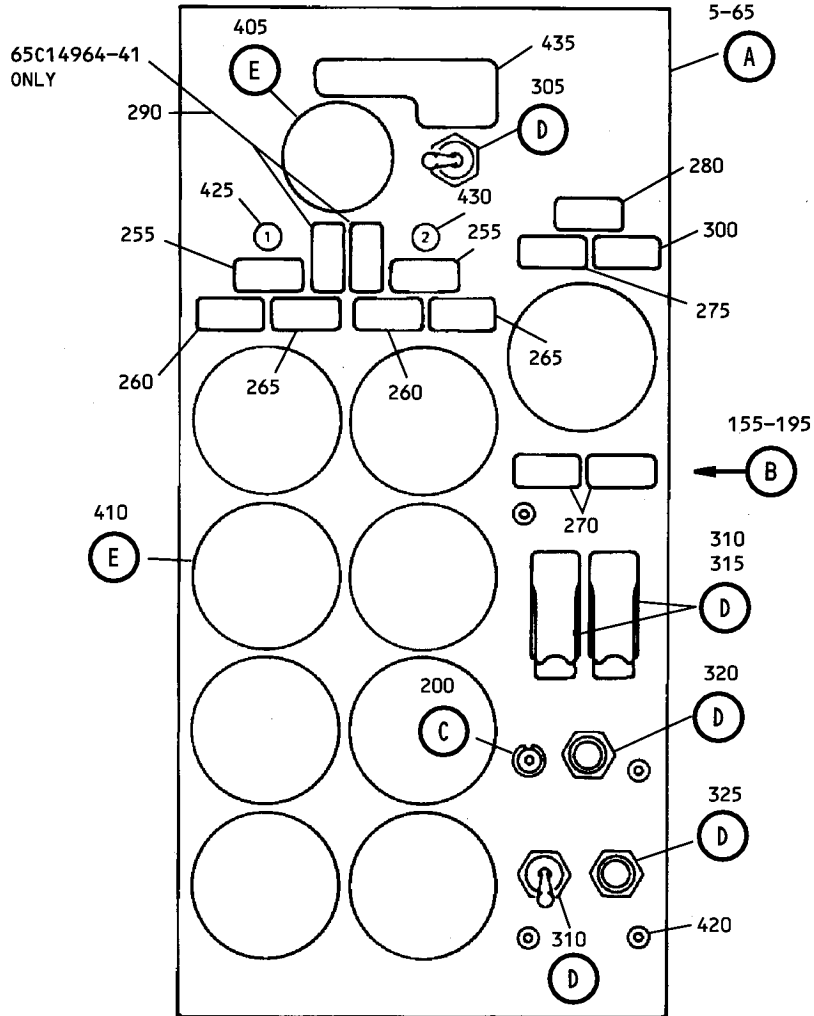


69-73033-12

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

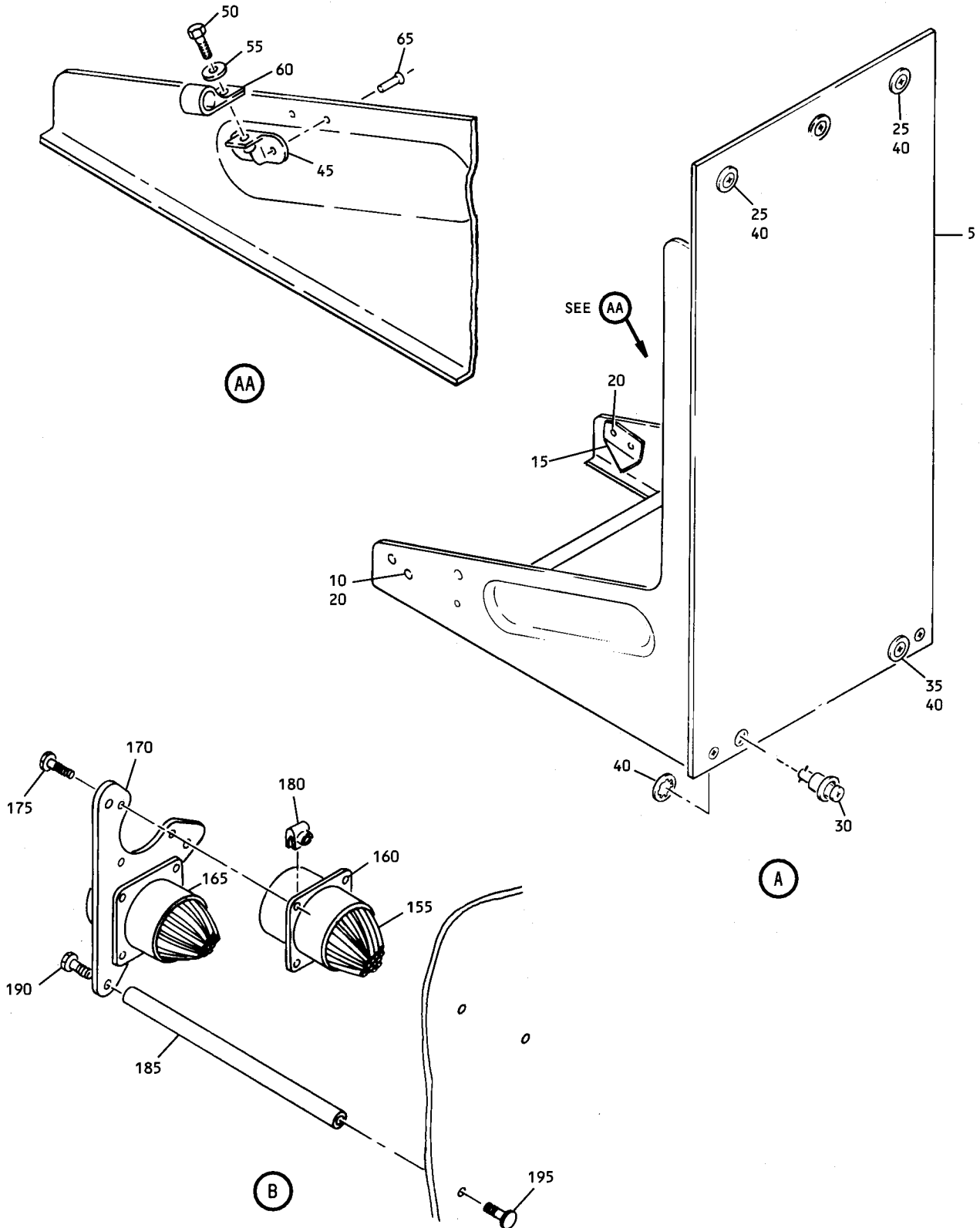
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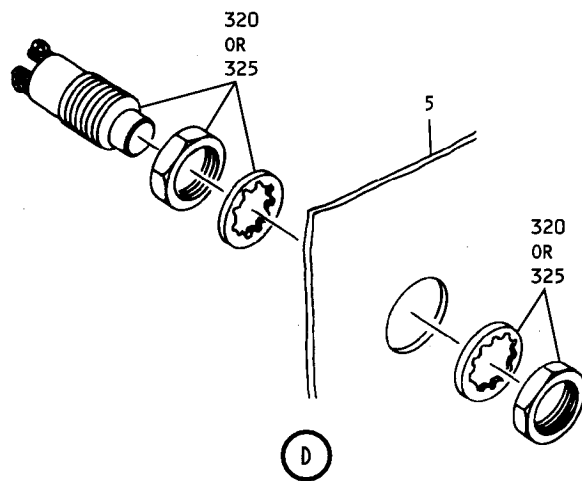
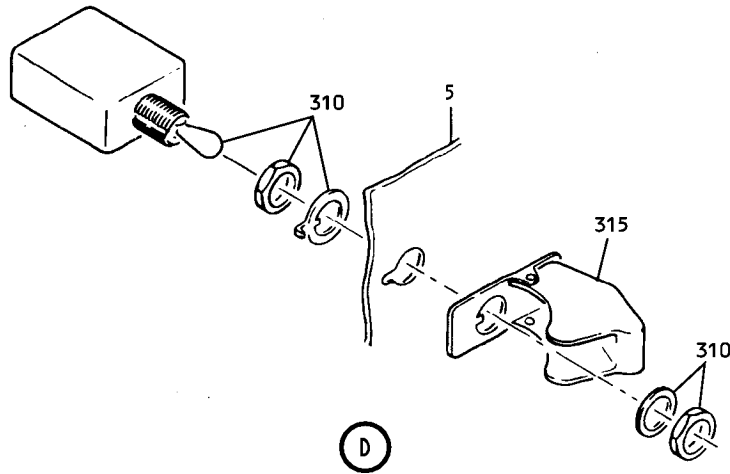
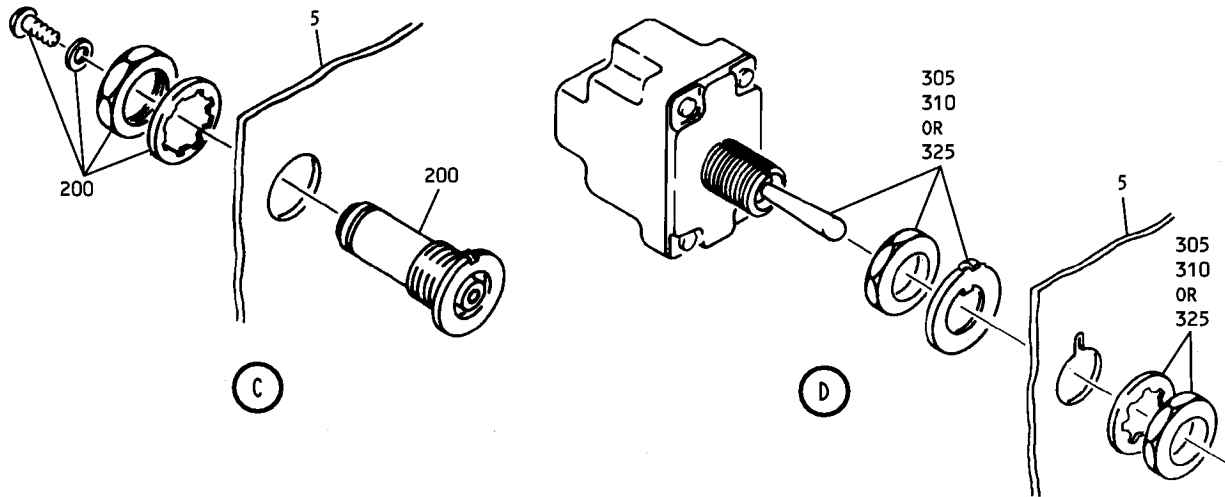


65C14964-41,-44,-46,-48,-50

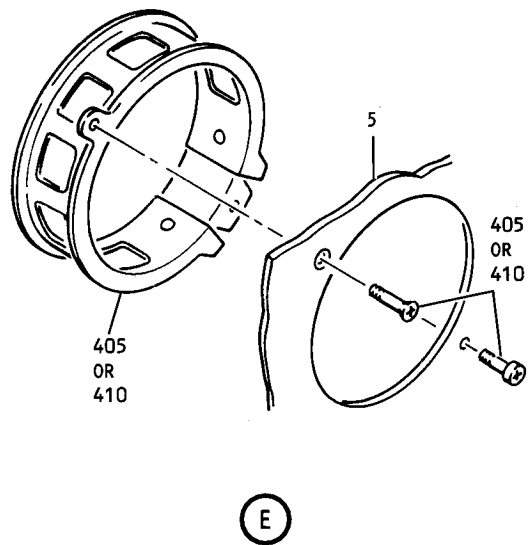
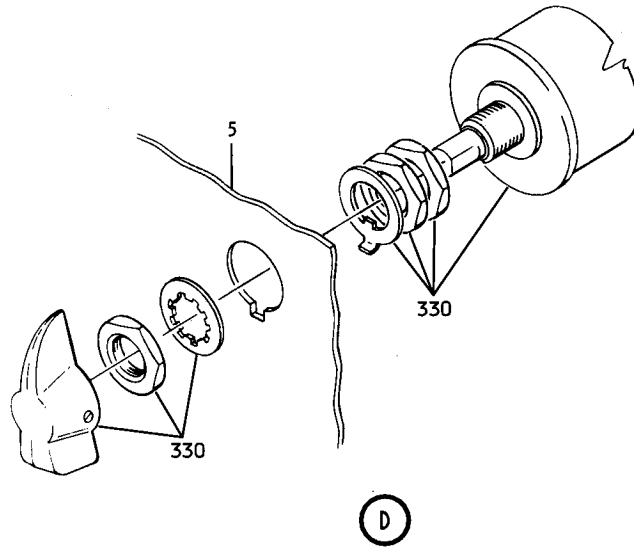
Center Instrument Module Assembly P2-2
Figure 4 (Sheet 2)



Center Instrument Module Assembly P2-2
Figure 4 (Sheet 3)



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



Center Instrument Module Assembly P2-2
Figure 4 (Sheet 5)

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-1	69-73033-12		CENTER INSTR, MODULE ASSY P2-2 (SB 80-1005)							A	
1	65C14964-41		CENTER INSTR, MODULE ASSY P2-2							B	
1	65C14964-44		CENTER INSTR, MODULE ASSY P2-2							C	
1	65C14964-46		CENTER INSTR, MODULE ASSY P2-2							D	
1	65C14964-48		CENTER INSTR, MODULE ASSY P2-2							E	
1	65C14964-50		CENTER INSTR, MODULE ASSY P2-2							F	
5	69-37305-142		. BASEPLATE							B	1
5	69-37305-145		. BASEPLATE							C-F	1
5	69-37305-108		. BASEPLATE (MODIFIED BY SB 80-1005)							A	1
10	69-43831-1		. MODULE STOP								1
15	69-43831-2		. MODULE STOP								1
20	BACR15BA4D		. RIVET								4
25	26S55-6AB		. STUD, V71286								2
30	26S55-5AB		. STUD, V71286								1
35	BACS21Y5RB		. STUD								1
40	BACW10X4		. WASHER								4
45	BACN120MK3		. NUTPLATE							B-F	1
50	BACS12CB3-()		. SCREW							B-F	1
55	AN960D		. WASHER							B-F	1
60	BACC10KD		. CLAMP							B-F	1
65	BACR15BA3D		. RIVET							B-F	2
70											
THRU											
150	NOT USED										
155	61-30066-019		. WIRE BUNDLE							B	1
155	61-30066-010		. WIRE BUNDLE							C	1
155	61-30066-014		. WIRE BUNDLE							D	1
155	61-30066-015		. WIRE BUNDLE							E	1
155	61-30066-016		. WIRE BUNDLE							F	1
155	69-37305-262		. WIRE BUNDLE (MODIFIED BY SB 80-1005)							A	1
160	BACC45FT18-31P6		. CONNECTOR							B-F	1
165	BACC45FT18-31P7		. CONNECTOR								1
170	69-43873-31		. PLATE							A	1
170	69-43873-22		. PLATE							B-F	1
175	BACS12CB04-6		. SCREW								6

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-180	BACN10NW1		.								6
185	66-13524-6		.								3
190	BACS12CB06-5		.								3
195	NAS514P632-6		.								3
200	800000121-1		.								1
200	SCN001		.								1
210											
THRU											
250	NOT USED										
255	318-630-1001-013		.								2
260	318-630-1001-014		.								2
265	318-630-1001-015		.								2
270	318-630-1001-016		.								2
275	318-630-1001-045		.								1
280	318-630-1001-046		.								1
285	318-630-1001-145		.						A		1
290	318-630-1001-133		.						AB		2
300	318-630-1001-044		.						B-F		1
304	318-630-1001-229		.						A		2
305	MS24523-27		.								1
310	MS24523-23		.						A		2
310	MS24523-23		.						B-F		3
315	11170-1		.								2
320	D20011-05		.								1
325	D20011-01		.						B-F		1
330	69-1963JANCO		.						A		1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY	
			1	2	3	4	5	6	7			
4-330	53304-4SC		.								A	1
345 THRU												
400	NOT USED											
405	BACC10EL2		.									1
410	BACC10EL3		.							A		2
410	BACC10EL3		.							B-F		9
420	BACN10PA06-12		.							A		2
420	BACN10PA06-12		.							B-F		4
425	BACM10N00-2S		.									1
425	BACM10N00-2S		.							A		1
430	BACM10N00-2T		.									1
430	BACM10N00-2T		.							A		1
435	BAC27DC779		.							A		1
435	BAC27DCC376		.							B-F		1
445	MS25082		.							A		2
450	MS25081		.							A		1
455	MS25333		.							A		1

REFERENCE DESIGNATION INDEX (SEE SCHEMATIC DIAGRAM)		
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.
D4258J	BACC45FT18-31P6	160
D4260J	BACC45FT18-31P7	165
L351	318-630-1001-046	280
L352	318-630-1001-045	275
L353	318-630-1001-044	300
L354, L356	318-630-1001-016	270
L358, L359	318-630-1001-013	255
L360, L361	318-630-1001-014	260
L362, L363	318-630-1001-015	265
L378	SCN001	200
L378	*800000121-1	200
L550, L556	318-630-1001-133	290
L736	318-630-1001-145	285
L821, L822	318-630-1001-229	304
S102	D20011-01	325
S185	MS24523-27	305
S239	MS24523-23	310
S250, S251	MS24523-23	310
S256	D20011-05	320
S583	53304-4SC	330

* PREFERRED PARTS