



# **COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST**

## **AUTOFLIGHT CONTROL SYSTEM (AFCS) FLOODLIGHT CONTROL MODULE ASSEMBLY**

**PART NUMBER  
65C37270-10, 69-77729-10**

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## COMPONENT MAINTENANCE MANUAL

Revision No. 14  
Jul 01/2009

To: All holders of AUTOFLIGHT CONTROL SYSTEM (AFCS) FLOODLIGHT CONTROL MODULE ASSEMBLY 33-40-02.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

The COMPONENT MAINTENANCE MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

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.

Pages replaced or made obsolete by this revision should be removed and destroyed.

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TRANSMITTAL LETTER

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## COMPONENT MAINTENANCE MANUAL

Location of Change

Description of Change

NO HIGHLIGHTS

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HIGHLIGHTS

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## COMPONENT MAINTENANCE MANUAL

Subject/Page	Date	Subject/Page	Date	Subject/Page	Date
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2	BLANK	602	BLANK		
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1	Jul 01/2009	701	Nov 01/2008		
2	BLANK	702	BLANK		
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2	BLANK	802	BLANK		
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2	BLANK	902	BLANK		
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1	Nov 01/2008	1004	Nov 01/2008		
2	Nov 01/2008	1005	Nov 01/2008		
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1	Mar 01/2009				
2	BLANK				
33-40-02 DESCRIPTION AND OPERATION					
1	Nov 01/2008				
2	BLANK				
33-40-02 TESTING AND FAULT ISOLATION					
101	Nov 01/2008				
102	Nov 01/2008				
103	Nov 01/2008				
104	Nov 01/2008				
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302	BLANK				

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

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## COMPONENT MAINTENANCE MANUAL

### 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:

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INTRODUCTION

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## COMPONENT MAINTENANCE MANUAL

### AFCS (AUTO FLIGHT CONTROL SYSTEM) FLOODLIGHT CONTROL MODULE ASSEMBLY - DESCRIPTION AND OPERATION

#### 1. Description

**NOTE:** For coverage of 69-72067-1, -11, -5, -8, refer to BAE Systems (V89954 BAE Systems Controls Inc., 600 Main St., Johnson City, NY 13790-1806) CMM 33-40-02.

- A. The (AFCS) Auto Flight Control System floodlight control module assembly consists of a baseplate with a power switch and a rheostat mounted on it. The rheostat and power switch control AFCS floodlights and background lighting control.

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DESCRIPTION AND OPERATION

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## COMPONENT MAINTENANCE MANUAL

### TESTING AND FAULT ISOLATION

#### 1. Test Equipment

**NOTE:** Equivalent substitutes may be used.

- A. Multimeter: Multimeter, SPL-4524 (Simpson 260)
- B. Connector:
  - (1) BACC45FT14-12S (Test Connector, SPL-5716) to mate with J1
- C. Power Supply: 28  $\pm$  1V ac, 400 Hz (power supply, STD-5467)

#### 2. Function Test

- A. Connect test connector to module assembly.
- B. Test module assembly per TESTING AND FAULT ISOLATION, Table 101.

**NOTE:** Continuity (CON) is 3 ohms maximum and No Continuity (No Con) is 50k minimum.

**Table 101:** Test Procedure

Procedure	Required Results	Component Tested
69-77729-10 and 65C37270-10		
Measure resistance from:		
Pin J1-1 to power connector L1 outer rim	Con	L1
Pin J1-2 to power connector L1 center conductor	Con	L1
Pin J1-1 to J1-2	No Con	L1
Measure resistance between pins J1-4 and J1-12 while rotates rheostat from fully cw to fully ccw position.	Resistance should vary from approximately 0 ohms to approximately 250 ohms.	R1
69-77729-10		
Measure resistance between pins J1-3 and J1-9 as follows:		
1) Push left rheostat shaft to inward detent.	*[1]	R2
2) Pull rheostat shaft to outward detent while rotates rheostat shaft to fully cw.	Con	R2
3) Pull rheostat shaft to outward detent while rotates rheostat shaft from fully cw to fully ccw.	Resistance increases to maximum at fully ccw position.	R2
65C37270-10		
1) Connect the output lead of the power supply to J1-3 and the ground lead of the power supply to J1-8.		
2) Connect the positive lead of the multimeter to J1-9 and negative lead of the multimeter to J1-8.		

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## COMPONENT MAINTENANCE MANUAL

**Table 101:** Test Procedure (Continued)

Procedure	Required Results	Component Tested
3) Adjust the voltage output of the power supply to read.	28 ± 1 Vac	
4) Pull left transformer shaft to outward detent.		
5) Turn the left transformer to fully clockwise (cw) position.		
6) Make sure the the voltage at J1-9 reads	28 ± 1 Vac	T2
7) Turn the left transformer to fully counterclockwise (ccw) position.		
8) Make sure that the voltage at J1-9 reads	9 ± 1 Vac	T2
9) Push left transformer shaft to inward detent.		
10) Make sure that the voltage at J1-9 reads	0 Vac	T2

\*[1] Open circuit at all shaft rotation positions.

C. Disconnect test equipment.

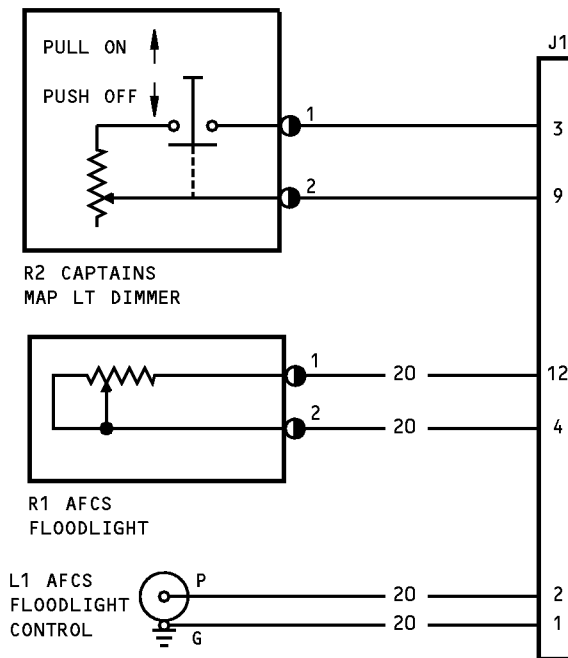
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TESTING AND FAULT ISOLATION

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**NOTE:** ALL WIRES BMS 13-16, TYPE I, CLASS 1  
SIZE AWG 22 EXCEPT AS NOTED.

602042 S0004999920\_V2

69-77729-10, Schematic Diagram  
Figure 101

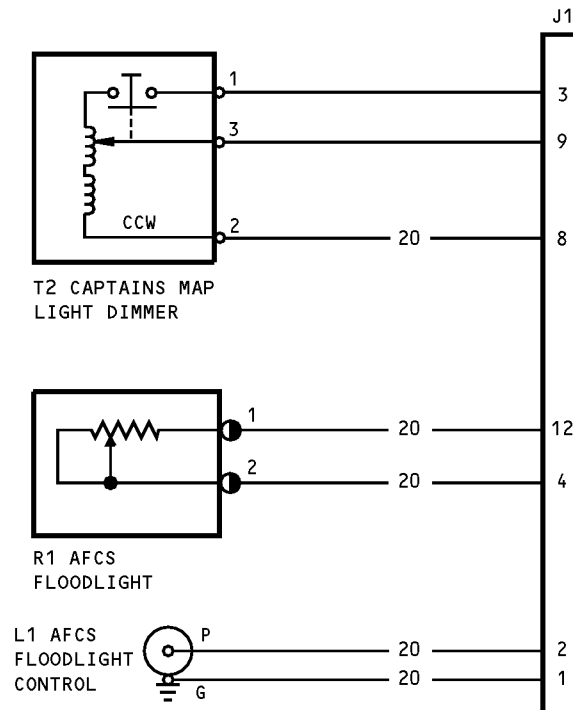
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**NOTE:** ALL WIRES BMS 13-16, TYPE I, CLASS 1  
SIZE AWG 22 UNLESS SHOWN DIFFERENTLY.

65C37270-10

Schematic Diagram  
Figure 102

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TESTING AND FAULT ISOLATION

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DISASSEMBLY

**(NOT APPLICABLE)**

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DISASSEMBLY

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CLEANING

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CLEANING  
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CHECK

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CHECK

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REPAIR

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REPAIR - GENERAL

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ASSEMBLY

**(NOT APPLICABLE)**

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ASSEMBLY

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**FITS AND CLEARANCES**

**(NOT APPLICABLE)**

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FITS AND CLEARANCES

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## COMPONENT MAINTENANCE MANUAL

### 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-4524	Multimeter	260	55026
SPL-5716	Connector - Test	BACC45FT14-12S	81205

#### Tool Supplier Information

CAGE Code	Supplier Name	Supplier Address
55026	SIMPSON ELECTRIC CO.	853 DUNDEE AVENUE ELGIN, IL 60120-3090 Telephone: (847) 697-2260 Facsimile: (847) 697 - 2272 www.simpsonelectric.com
81205	THE BOEING COMPANY	17930 INTERNATIONAL BLVD. SOUTH SEATAC, WA 98188-4321 Telephone: 206-662-6650 Facsimile: 206-662-7145

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SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

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## COMPONENT MAINTENANCE MANUAL

### 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

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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
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
95266	O E C O CORP 4607 SE INTERNATIONAL WAY MILWAUKIE, OREGON 97222 FORMERLY OSBOURNE ELECTRIC IN PORTLAND, OREGON

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### NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
200-26546-01		1	45	1
200-26569-01		1	40	1
200-26604-02		1	40B	1
65C37270-10		1	1B	RF
69-37332-4		1	30	1
69-72067-10		1	10	1
		1	10A	1
69-72067-9		1	5A	1
69-77729-10		1	1	RF
800000121-1		1	50	1
BACC45FN14-12P		1	15	1
BACN10NW1		1	25	2
BACN10PA06-6		1	55	2
BACP10U0375AG		1	7	1
BACP10U0375G		1	6	1
BACR15BA4D		1	35	2
BACS21DD1		1	8	4
NAS1801-04-5		1	20	2

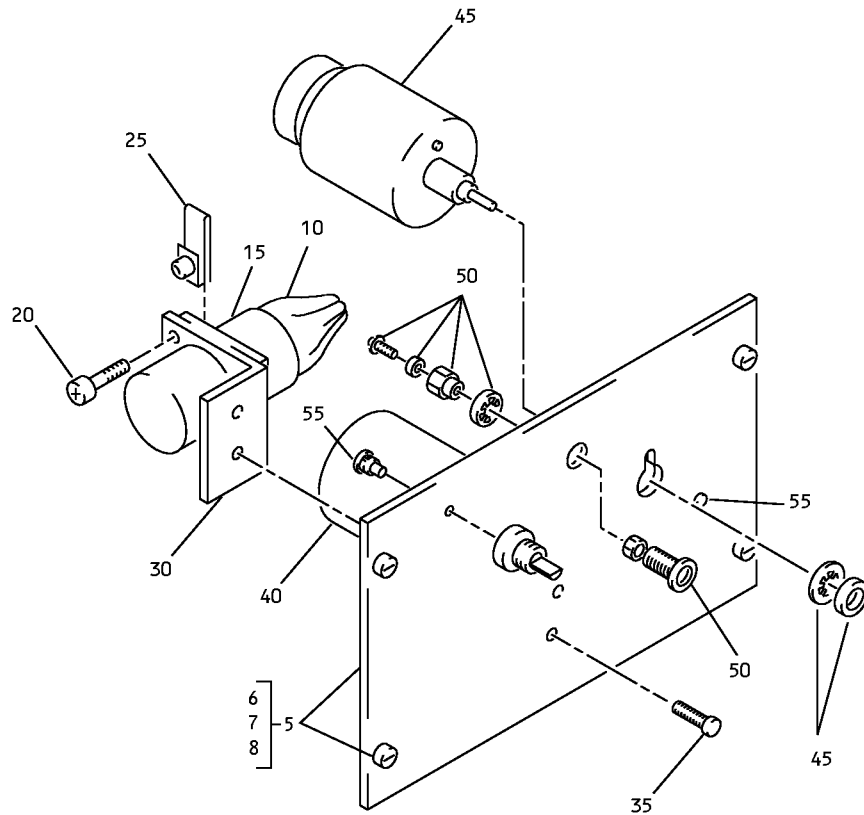
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275603 S0004999924\_V2

AFCS Floodlight Control Module Assembly  
IPL Figure 1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
-1	69-77729-10									A	RF
-1B	65C37270-10									B	RF
5A	69-72067-9									A, B	1
6	BACP10U0375G										1
7	BACP10U0375AG										1
8	BACS21DD1										4
10	69-72067-10									A	1
10A	69-72067-10									B	1
15	BACC45FN14-12P										1
20	NAS1801-04-5										2
25	BACN10NW1										2
30	69-37332-4										1
35	BACR15BA4D										2
40	200-26569-01									A	1
40B	200-26604-02									B	1
45	200-26546-01										1
50	800000121-1										1
55	BACN10PA06-6										2

-Item not Illustrated

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