

## INCANDESCENT FLIGHT COMPARTMENT LIGHTING - MAINTENANCE PRACTICES

### 1. General

- A. Flight compartment lights include instrument lights, three overhead floodlights, post lights for the instruments and overhead console, left sidewall circuit breaker panel, lower instrument panel, and a maplight mounted internally in control wheel.

### 2. Rheostat Control Removal/Installation

- A. Remove Rheostat Control (Refer to Figure 201).
  - (1) Align setscrew holes in both knobs (8) and (10), then loosen setscrew (9) and remove knobs (10) and (8).
  - (2) Remove nut (7) securing rheostat to instrument panel.
  - (3) Remove rheostats (1), (2), (3) or (4) from back of panel and retain lockwasher (6) and nut (5) for reinstallation.
  - (4) Remove shrink tubing (12).
  - (5) Unsolder electrical lead (11) and tag for reinstallation.
- B. Install Rheostat Control (Refer to Figure 201).
  - (1) Place a one-inch section of shrink tubing (12) over each electrical lead (11).
  - (2) Solder electrical lead to rheostat terminal, slide shrink tubing over terminals, and shrink tubing using a heating gun.
  - (3) Remove tags from electrical leads.
  - (4) Assemble nut (5) lockwasher (6) to rheostats (1), (2), (3) or (4).
  - (5) Insert rheostat through instrument panel and secure using nut (7).
  - (6) Install knobs (8) and (10), align setscrew holes in knobs, insert setscrew (9), and tighten.

### 3. Solid State Dimming Assembly Removal/Installation

- A. Remove Solid State Dimming Assembly (Refer to Figure 202).
  - (1) Remove left sidewall circuit breaker panel by removing screws securing panel to side of airplane.
  - (2) Disconnect electrical connector (4).
  - (3) Remove screws (1) and washers (2) securing dimming assembly to back of panel.
  - (4) To remove transistors for circuit checking, remove screws (5) and washers (6), and retain insulators (15) for reinstallation.
- B. Install Solid State Dimming Assembly (Refer to Figure 202).
  - (1) Install transistors and insulators (15) on dimming assembly using screws (5) and washers (6).  
**NOTE: Apply Thermal Compound (Dow Corning #4 or equivalent) to all transistors.**
  - (2) Install dimming assembly using screws (1) and washers (2).
  - (3) Connect electrical connector (4).
  - (4) Install left sidewall circuit breaker panel to side of airplane using screws.

### 4. Instrument Panel Post Light Removal/Installation

- A. Remove Instrument Panel Post Light (Refer to Figure 203).
  - (1) Remove cap assembly (1) from socket assembly (3).
  - (2) Remove bulb (2) from socket assembly (3).
  - (3) Unscrew connector (8) from socket assembly (3), and retain nut (7), lockwasher (6), washer (5), and lockwasher (4) for reinstallation.
  - (4) Remove socket assembly (3) from instrument panel.
- B. Install Instrument Panel Post Light (Refer to Figure 203).
  - (1) Assemble lockwasher (4) and insert socket assembly (3) through instrument panel.
  - (2) Assemble washer (5), lockwasher (6), and nut (7), and screw connector (8) onto socket assembly (3).
  - (3) Insert bulb (2) into socket assembly (3).
  - (4) Push cap assembly (1) over socket assembly (3).

### 5. Overhead Console Floodlight Removal/Installation

- A. Remove Overhead Console Floodlight (Refer to Figure 204).

- (1) Unscrew cap (7) from socket assembly (6).
- (2) Remove two screws (8) securing socket assembly (6) to overhead console.
- (3) Remove socket assembly (6) from overhead console.
- (4) Slide shield (4) off of socket assembly.
- (5) Press in slightly on bulb (5) and turn counterclockwise to remove from socket assembly (6).
- (6) Remove electrical leads (9) and tag for reinstallation.

B. Install Overhead Console Floodlight (Refer to Figure 204 ).

- (1) Connect electrical leads (9) and remove tags.
- (2) Insert bulb (5) into socket assembly (6), press in slightly, and turn clockwise.
- (3) Slide shield (4) over socket assembly (6).
- (4) Insert socket assembly (6) into overhead console and secure using two screws (8).
- (5) Screw cap (7) onto socket assembly (6).

**6. Overhead Console Post Light Removal/Installation**

A. Remove Overhead Console Post Light (Refer to Figure 204).

- (1) Remove cap assembly (3) from socket assembly (1).
- (2) Remove bulb (2) from cap assembly (3).

B. Install Overhead Console Post Light (Refer to Figure 204).

- (1) Insert bulb (2) into cap assembly (3).
- (2) Push cap assembly (3) over socket assembly (1).

**7. Fuel Tank Selector and Oxygen Control Annunciator Light Removal/Installation**

A. Remove Fuel Tank Selector and Oxygen Control Annunciator Light (Refer to Figure 204).

- (1) Remove socket (12) by unscrewing from overhead console.
- (2) Remove bulb (10) from socket and retain shield (11) for reinstallation.

B. Install Fuel Tank Selector and Oxygen Control Annunciator Light (Refer to Figure 204).

- (1) Assemble shield (11) to socket (12).
- (2) Insert bulb (10) into socket (12) and screw socket into overhead console.

**8. Lower Instrument Panel Floodlight Removal/Installation**

A. Remove Lower Instrument Panel Floodlight (Refer to Figure 205 ).

- (1) Remove screws (1) securing shield (2) to pedestal.
- (2) Press in slightly on bulb (3) and turn counterclockwise to remove from socket (4).

B. Install Lower Instrument Panel Floodlight (Refer to Figure 205).

- (1) Insert bulb (3) into socket (4), press in slightly and turn clockwise.
- (2) Install screws (1) securing shield (2) to pedestal.

**9. Left Sidewall Circuit Breaker Panel Floodlight Removal/Installation (Bottom Left Side of Instrument Panel Glareshield)**

A. Remove Floodlight (Refer to Figure 206).

- (1) Grasp hood (13) and gently pull to remove hood.
- (2) Push in slightly on bulb (12) and turn counterclockwise to remove bulb from socket (11).
- (3) Remove two screws (10) securing bracket (9) to glareshield.
- (4) Unscrew housing (7) from socket (11) and keep retainer clip (8) for reinstallation.

B. Install Floodlight (Refer to Figure 206).

- (1) Place socket (11) through bracket (9) and retainer clip (8), and screw into housing (7).
- (2) Install two screws (10) securing bracket (9) to glareshield.
- (3) Insert bulb (12) into socket (11), push in slightly and turn clockwise.

- (4) Push hood (13) over socket (11) after ensuring alignment pin matches alignment groove in hood.

#### **10. Left Sidewall Circuit Breaker Panel Floodlight Removal/Installation (Under Lower Left Side of Instrument Panel Glareshield)**

- A. Remove Left Sidewall Circuit Breaker Panel Floodlight (Refer to Figure 206).
  - (1) Grasp hood (15) and gently pull to remove hood.
  - (2) Push in slightly on bulb (16) and turn counterclockwise to remove bulb from socket (17).
  - (3) Remove two screws (19) and two nuts (23) securing bracket (18) to plate (22).
  - (4) Unscrew housing (21) from socket (17) and retain retainer clip (20) for reinstallation.
- B. Install Left Sidewall Circuit Breaker Panel Floodlight (Refer to Figure 206).
  - (1) Place socket (17) through bracket (18) and retainer clip (20) and screw into housing (21).
  - (2) Install two screws (19) and two nuts (23) securing bracket (18) to plate (22).
  - (3) Insert bulb (16) into socket (17), push in slightly and turn clockwise.
  - (4) Push hood (15) over socket (17) after ensuring alignment pin matches alignment groove in hood.

#### **11. Control Wheel Maplight Removal/Installation**

- A. Remove Control Wheel Maplight (Refer to Figure 207).
  - (1) Rotate pilot's control wheel approximately 90 degrees clockwise for access to maplight.
  - (2) Press in on bulb (1) and turn counterclockwise to remove bulb.
  - (3) Remove nut (3), washer (4), and socket (2).
  - (4) Loosen setscrew (6) in knob (5) and remove knob.
  - (5) Remove nut (7) and rheostat (8) from lower left side of control wheel.
- B. Install Control Wheel Maplight (Refer to Figure 207).
  - (1) Rotate pilot's control wheel approximately 90 degrees clockwise for access to maplight.
  - (2) Place rheostat (8) through hole in lower side of control wheel.
  - (3) Install nut (7) on rheostat (8) and tighten.
  - (4) Install knob (5) on rheostat (8) and tighten setscrew (6).
  - (5) Install socket (2), washer (4), and nut (3) and tighten.
  - (6) Press bulb (1) into socket (2) and turn clockwise.

#### **12. Cargo Dome Light Removal/Installation**

- A. Remove Cargo Dome Light (Refer to Figure 208).
  - (1) Remove lens assembly (6) by removing screws.
  - (2) Press in slightly on bulb (4) and turn counterclockwise to remove bulb from socket assembly (2).
  - (3) Remove screws (5) and remove socket assembly (2) from splice plate (1).
- B. Install Cargo Dome Light (Refer to Figure 208).
  - (1) Install screws (5) securing socket assembly (2) to splice plate (1).
  - (2) Insert bulb (4) into socket assembly (2), press in slightly, and turn clockwise.
  - (3) Ensure gasket (3) is in place.
  - (4) Secure lens assembly (6) using screws.

#### **13. Outside Air Temperature Gage Post Light Removal/Installation**

- A. Remove Outside Air Temperature Gage Post Light (Refer to Figure 209 ).
  - (1) Remove outside air temperature gage to gain access to post light connector.
  - (2) Remove cap assembly (1) from socket assembly (3).
  - (3) Remove bulb (2) from socket assembly (3).
  - (4) Unscrew electrical connector (8) from socket assembly (3).
  - (5) Unscrew nut (7) from socket assembly (3) and retain nut (7), lockwasher (6), washer (5), and lockwasher (4) for reinstallation.

- B. Install Outside Air Temperature Gage Post Light (Refer to Figure 209).
- (1) Assemble lockwasher (4) on socket assembly (3) and insert socket assembly (3) through trim panel.
  - (2) Tighten nut (7) and screw electrical connector (8) onto socket assembly (3).
  - (3) Install bulb (2) to socket assembly (3).
  - (4) Install cap assembly (1) to socket assembly (3).
  - (5) Install outside air temperature gage.