A. File the attached Temporary Revision/Alerts in the Manual Supplement in ATA Chapter/Section/Subject/Page sequence

B. File this Control Page in front of the Chapter TRs/Alerts.

C. The following list shows active TRs/Alerts together with TRs/Alerts added by this control page.

Chapter Section Subject	Page	TR/Alert No.
33-24-00	201	* BA 33-559
33-37-00	401	BA 33-552
33-40-00	201	* BA 33-561
33-51-08	401	* BA 33-555

D. Remove and Destroy the following TRs/Alerts:

* Indicates TRs/Alerts issued with this control page

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TEMPORARY REVISION No. 33-559

THIS TEMPORARY REVISION IS ISSUED BY BRITISH AIRWAYS ENGINEERING (TECHNICAL INFORMATION SERVICES, G2, TB S401, P. O. BOX 10, HEATHROW AIRPORT, HOUNSLOW, MIDDLESEX TW6 2JA).
CAA DESIGN APPROVAL No. DAI/8566/78.

Manual Reference 33-24-00 Page 201

REASON FOR REVISION

To carry out the requirements of the Safety and Technical Strategy Board Cross-Connection Project G/38/98.

ACTION

After the existing paragraph 1.A.(3) add the following:

(4) Remove the Passenger Sign Control Panel.
(5) Install the Passenger Sign Control Panel.

After paragraph 4.add a new paragraph:

5. Remove the Passenger Sign Control Panel.
A. References
(1) AMM 24-22-00/201, Electrical Power - Control
B. Access
(1)Location Zone
Flight Compartment
C. Procedure.
(1) Set the FASTEN SEAT BELT switch to OFF.
(2) Set the NO SMOKING switch to OFF.
(3) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
a) 11P9, PASS SIGN CONT
(4) Loosen the screws on the control panel that hold it in position.
(5) Lower the control panel.

CAUTION: CROSS CONNECTION POSSIBILITY WHEN WORKING WITH THIS COMPONENT. CLEARLY IDENTIFY CONNECTIONS UPON DISCONNECTION AND FUNCTION CHECK UPON RECONNECTION.

(6) Disconnect the electrical connector.
(7) Remove the panel.

6. Install the Passenger Signs Control Panel.
A. References
(1) AMM 24-22-00/201, Electrical Power - Control
B. Access
(1) Location Zone
211/212 Flight Compartment
C. Procedure
(1) Make sure the following circuit breaker on the overhead circuit breaker panel, P11, is open
11P9, PASS SIGN CONT

CAUTION: CROSS CONNECTION POSSIBILITY WHEN WORKING WITH THIS COMPONENT. POSITIVELY IDENTIFY CONNECTIONS PRIOR TO RECONNECTION.

(2) Connect the electrical cable to the rear of the Passenger Signs Control Panel.
(3) Install the control panel and tighten the screws.
(4) Remove the DO-NOT-CLOSE tags and close this P11 circuit breaker:
11P9, PASS SIGN CONT
D. Passenger Signs Control Panel Test
(1) Supply electrical power (Ref **24-22-00/201**).
(2) Put the NO SMOKING switch to AUTO
(a) Make sure that the NO SMOKING signs in the passenger cabin come on.
(3) Put the NO SMOKING switch to ON.
(a) Make sure the NO SMOKING signs in the passenger cabin remain on.
(4) Put the NO SMOKING switch to OFF.
(a) Make sure the NO SMOKING signs in the passenger cabin go out.
(5) Put the FASTEN SEAT BELTS switch to AUTO
(a) Make sure the FASTEN SEAT BELTS signs in the passenger cabin come on.
(b) Make sure the RETURN TO SEAT SIGNS in the lavatories come on.
(6) Put the FASTEN SEAT BELTS switch to ON.
(a) Make sure the FASTEN SEAT BELTS signs in the passenger cabin remain on.

(b) Make sure the RETURN TO SEAT SIGNS in the lavatories remain on.

(7) Put the FASTEN SEAT BELTS switch to OFF.
   (a) Make sure the FASTEN SEAT BELTS signs in the passenger cabin go out.
   (b) Make sure the RETURN TO SEAT SIGNS in the lavatories go out.

(8) Remove electrical power if it is not necessary **(24-22-00/201)**.

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TEMPORARY REVISION No. 33-552

THIS TEMPORARY REVISION IS ISSUED BY BRITISH AIRWAYS ENGINEERING (TECHNICAL INFORMATION SERVICES, G2, TBA, S401, P. O. BOX 10, HEATHROW AIRPORT, HOUNSLOW, MIDDLESEX TW6 2JA).
CAA DESIGN APPROVAL No. DAI/8566/78.

Manual Reference 33-37-00 Page 401

REASON FOR REVISION

Prolonged contact of the overhead cargo lighting power cables with the adjacent moving engine control cables has been known to cause chafing through the wire insulation and arcing. This may lead to control cable severance and loss of engine speed control. This TR has been issued to highlight this problem.

ACTION

Task 33-37-00-422-027

Subtask 422-012

Read the following additional text after item 5C(1) (d):

CAUTION

On fitting the ceiling light unit assembly; ensure that the power cable loom is not overlong and that clearance with the adjacent engine throttle control cables TRA/ TRB/ TLA/ TLB is satisfactory.

Boeing Standard Wiring Practices Manual quotes a wire harness clearance requirement of 2.0 inches minimum in this case. (SPM ref 20-10-11).

MAINTENANCE MANUAL

TEMPORARY REVISION No. 33-561

THIS TEMPORARY REVISION IS ISSUED BY BRITISH AIRWAYS ENGINEERING (TECHNICAL INFORMATION SERVICES, G2, TBA, S401, P. O. BOX 10, HEATHROW AIRPORT, HOUNSLOW, MIDDLESEX TW6 2JA).
CAA DESIGN APPROVAL No. DAI/8566/78.

Manual Reference 33-40-00 Page 201

REASON FOR REVISION

To carry out the requirements of the safety and Technical Strategy Board Cross-Connection Project G/38/98

ACTION

Insert the following into the MM

ANI COLLISION & LANDING LIGHTING CONTROL PANEL - MAINTENANCE PRACTICE

1. General.
   A. Anti Collision & Landing Lighting control panel is positioned on the pilots overhead panel. It allows operation of the anti collision and landing lights via selection of the appropriate switch.
   B. This procedure has these tasks:
      (1) Remove the Anti Collision & Landing Lighting Control Panel.
      (2) Install the Anti Collision & Landing Lighting Control Panel.
2. Remove the Anti Collision & Landing Lighting Control Panel.
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
   B. Access
      (1) Location Zone
          211/212 Flight Compartment
   C. Procedure.
      (1) Set the following switches to OFF:
          (a) Left wing landing light
          (b) Right wing landing light
          (c) Nose landing light
          (d) Position light
          (e) Red anti-collision light
          (f) White anti-collision light
          (g) Wing illumination light

(2) Open the following circuit breakers on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
   (a) 11M34, RED ANTI-COLL LIGHT
   (b) 11M7, WHITE ANTI-COLL LIGHT
   (c) 11M5, L WING LANDING LT PWR
   (d) 11M3, L NOSE GEAR LDG LT PWR
   (e) 11M32, R WING LDG LIGHT PWR
   (f) 11M35, WING ILLUM LIGHTS
   (g) 11M30, R NOSE GEAR LDG LT PWR
   (h) 11Q30, RIGHT "A" POSITION LIGHT
   (i) 11Q28, LEFT "A" POSITION LIGHT
(3) Loosen the screws on the control panel that hold it in position.
(4) Lower the control panel.

CAUTION:CROSS CONNECTION POSSIBILITY WHEN WORKING WITH THIS COMPONENT. CLEARLY IDENTIFY CONNECTIONS UPON DISCONNECTION AND FUNCTION CHECK UPON RECONNECTION.

(5) Disconnect the electrical connector.
(6) Remove the panel.

3. Install the Anti Collision & Landing Lighting Control Panel.
   A. References
      (1) AMM **24-22-00/201**, Electrical Power - Control
   B. Access
      (1) Location Zone
          211/212 Flight Compartment
   C. Procedure
      (1) Make sure the following circuit breakers on the overhead circuit breaker panel, P11, are open
          (a) 11M34, RED ANTI-COLL LIGHT
          (b) 11M7, WHITE ANTI-COLL LIGHT
          (c) 11M5, L WING LANDING LT PWR
          (d) 11M3, L NOSE GEAR LDG LT PWR
          (e) 11M32, R WING LDG LIGHT PWR
          (f) 11M35, WING ILLUM LIGHTS
          (g) 11M30, R NOSE GEAR LDG LT PWR
          (h) 11Q30, RIGHT "A" POSITION LIGHT
          (i) 11Q28, LEFT "A" POSITION LIGHT

CAUTION: CROSS CONNECTION POSSIBILITY WHEN WORKING WITH THIS COMPONENT. POSITIVELY IDENTIFY CONNECTIONS PRIOR TO RECONNECTION.

(2) Connect the electrical cable to the rear of the Anti Collision & Landing Lighting Control Panel.
(3) Install the control panel and tighten the screws.
(4) Remove the DO-NOT-CLOSE tags and close these P11 circuit breakers:
   (a) 11M34, RED ANTI-COLL LIGHT
   (b) 11M7, WHITE ANTI-COLL LIGHT
   (c) 11M5, L WING LANDING LT PWR
   (d) 11M3, L NOSE GEAR LDG LT PWR
   (e) 11M32, R WING LDG LIGHT PWR
   (f) 11M35, WING ILLUM LIGHTS
   (g) 11M30, R NOSE GEAR LDG LT PWR
   (h) 11Q30, RIGHT "A" POSITION LIGHT
   (I) 11Q28, LEFT "A" POSITION LIGHT

D. Anti Collision & Landing Lighting Control Panel Test
(5) Supply electrical power (Ref **24-22-00/201**).
(6) Make sure the panel lights illuminate.
(7) Put the WHITE ANTI-COLLISION light switch to ON.
   (a) Make sure the white anti-collision lights come on.
(8) Put the WHITE ANTI-COLLISION light switch to OFF.
   (a) Make sure the white anti-collision lights go off.
(9) Put the RIGHT WING LANDING light switch to ON.
   (a) Make sure the right wing landing light comes on.
(10) Put the RIGHT WING LANDING light switch to OFF.
   (a) Make sure the right wing landing light goes out.
(11) Remove electrical power if it is not necessary (**24-22-00/201**).

MAINTENANCE MANUAL

TEMPORARY REVISION No. 33-555

THIS TEMPORARY REVISION IS ISSUED BY BRITISH AIRWAYS ENGINEERING (TECHNICAL INFORMATION SERVICES, G2, TBA, S401, P. O. BOX 10, HEATHROW AIRPORT, HOUNSLOW, MIDDLESEX TW6 2JA).
CAA DESIGN APPROVAL No. DAI/8566/78.

Manual Reference 33-51-08 Page 401 para 2 and 3

(Tasks 33-51-08-004-001 and 33-51-08-404-011)

REASON FOR REVISION

To carry out the requirements of the Safety and Technical Strategy Board Cross-Connection Project G/38/98.

ACTION

After the existing caution before 2.D.(2) add the following:

CAUTION: CROSS CONNECTION POSSIBILITY WHEN WORKING WITH THIS COMPONENT. CLEARLY IDENTIFY CONNECTIONS UPON DISCONNECTION AND FUNCTION CHECK UPON RECONNECTION.

After the existing paragraph 3.C. and before 3.C.(1) add the following:

CAUTION: CROSS CONNECTION POSSIBILITY WHEN WORKING WITH THIS COMPONENT. POSITIVELY IDENTIFY CONNECTIONS PRIOR TO RECONNECTION.

REASON FOR REVISION

ACTION

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205	JAN 28/06	01
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GPA Group plc

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303	JAN 20/98	02
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PAGE	DATE	CODE

PAGE	DATE	CODE

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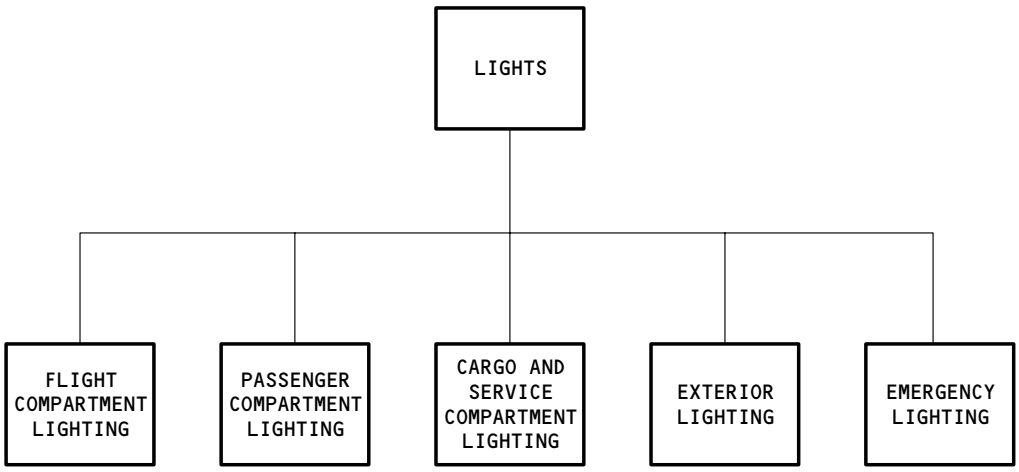
LIGHTS - GENERAL - DESCRIPTION AND OPERATION

1. General (Fig. 1)
   A. The airplane lighting systems provide illumination of areas within and around the airplane. The lighting is used by the flight crew, passengers and ground servicing personnel.
   B. These are the lighting systems:
      (1) Flight Compartment Lights (Ref 33-10-00)
         (a) Flight compartment lighting includes general and specific lighting of work areas and control panels. A master dim and test system for testing the annunciators is provided.
      (2) Passenger Compartment Lights (Ref 33-20-00)
         (a) Passenger compartment lights illuminate seats, aisles, entryways, lavatories, and galley areas. Passenger reading lights are in each passenger's service unit. Call lights and passenger information signs provide messages for the flight crew, flight attendants, and passengers.
      (3) Cargo and Service Compartment Lights (Ref 33-30-00)
         (a) Cargo and service compartment lights illuminate maintenance and cargo loading areas during ground operations.



Airplane Lighting
Figure 1

(4) Exterior Lights (Ref 33-40-00)
    (a) Exterior lights illuminate the airplane and landing area during flight operations. They illuminate the runway and taxi areas during ground operations.
(5) Emergency Lighting (Ref 33-51-00)
    (a) Interior emergency lights provide lighting of aisles and exits. Exterior emergency lights provide lighting of escape slides and associated areas.

FLIGHT COMPARTMENT LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. The flight compartment lighting provides high/low and variable lighting at each crewmembers station. Annunciator lights are all dimmed and tested from a master control.
   B. Flight compartment lighting is divided into four sections:
      (1) Flight Compartment Illumination (Ref 33-11-00)
         (a) Incandescent dome lights in the ceiling panels provide general flight compartment lighting. Incandescent and fluorescent floodlights provide additional lighting for instrument panels.
      (2) Integral Panel Lights (Ref 33-13-00)
         (a) The instruments, annunciators and systems control panels have integral incandescent lights. The lights illuminate dials, annunciators, and switch position lettering.
      (3) Flight Compartment Miscellaneous Lights (Ref 33-14-00)
         (a) Specific area lights such as map, chart, threshold step, and flight kit lights are provided.
      (4) Master Dim and Test (Ref 33-16-00)
         (a) A master dim and test system allows the crew to dim and test all annunciator lights in the flight compartment.
   C. Lighting control panels at each crewmembers station and overhead panel P5 allow the lights to be turned on/off and dimmed.
2. Component Details
   A. Control Components
      (1) Lighting Control Panels
         (a) Lighting control panels at each crew station and overhead panel P5 contain controls for operating the various lights. Potentiometers or rheostats are used for lights requiring a variable voltage. Some control assemblies have dual functions. They have two potentiometers or rheostats. Each is mounted on inner and outer knobs for control of integral panel lights and floodlights. The inner knob controls the floodlights.
      (2) Floodlight Dimmer Control Units
         (a) Floodlight dimmer control units provide starting and dimming voltages for the fluorescent and incandescent floodlights in the flight compartment. The dimmer control units are on the forward end of the aisle stand under the P2 panel, and above the P61 panel.

(3) Panel Dimmer Control Units
(a) Panel dimmer control units provide dimming voltages for incandescent panel lights. The dimmer control units are under the floor next to the aisle stand, on the outboard side panels below P1 and P3, above the panels P5 and P11, above the outboard ceiling panels forward of the P5 panel, and (on some airplanes) on the P12 panel behind the 115AL access panel in the nose gear wheel well.

NOTE: On airplanes with one aisle stand floodlight the dimmer control units for the P5 and P11 are on the P12 panel, behind the 115AL access panel in the nose gear wheel well.
On airplanes with two aisle stand floodlights, dimmer control units are in the ceiling of the flight compartment.

(4) Autobright Sensor Unit
(a) An autobright sensor unit in the P1-3 panel automatically overrides the dim function of annunciators on the P1-3 panel when ambient light exceeds a certain intensity. It is part of the master dim and test system.
(5) Discrete Warning Display Module
(a) The discrete warning display module in the P1-3 panel contains caution lights for various systems. It is part of the master dim and test system.
(6) Flight Compartment Lighting Equipment Panel, P26
(a) The flight compartment lighting equipment panel contains most of the flight compartment lighting systems relays. The following items are in the P26 panel:
1) Type I Dimmer Control Cards for dimming the indicator lights connected to the master dim and test system.
2) Override and Standby Relays for the flight compartment lighting system.
3) Bright/Dim Relays for the master dim and test system.
4) Secondary distribution circuit breakers for the master dim and test system.
(7) Standby Instrument Lighting Relays
(a) The relays are on the forward end of the aisle stand under the P1-3 panel and above the overhead P5 panel.

B. AIRPLANES WITH A SPARE LAMP BOX;
Spare Lamp Box
(1) Spare lamp stowage is in a box on the aft wall of the flight compartment.

FLIGHT COMPARTMENT ILLUMINATION - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-11-01 thru 33-11-99
      (2) WDM 33-11-11 thru 33-11-99
   B. Flight compartment illumination is provided by floodlights and dome lights. Floodlights provide specific area lighting of the instrument panels, aisle stand, and main power distribution panel P6. Dome lights provide general area lighting of the flight compartment. Adjustable light intensity at each panel compensates for varying light conditions.
2. Operation
   A. Functional Description
      (1) Captain, Center and First Officer Panel Floodlights
         (a) The normal 115v ac for captain's (P1) and center panel fluorescent floodlights is from the right transfer bus. The normal 115v ac for first officer's (P3) panel fluorescent floodlight is from the left transfer bus. Electrical power to the right or left transfer bus energizes the captain's or first officer's standby relay. The captain's standby relay connects right transfer bus 115v ac to the captain's and center panel floodlight control (P7), and the first officer's standby relay connects left transfer bus 115v ac to the first officer's panel floodlight control (P7).
         (b) Pressing and then rotating the floodlight control clockwise completes electrical power to the floodlight dimmer control unit. A potentiometer varies the control voltage to the dimmer control unit circuit. This causes the dimmer control units trigger circuit and power switch to rapidly pulse the lights on and off in proportion to potentiometer position. A line replaceable fuse on the 115v ac input to the dimmer control unit power transformer provides current protection. Automatic resetting thermal switches provide overheat protection on input and output circuits of the unit. A fail-safe circuit in the dimmer control unit reduces the light intensity when a silicon-control rectifier (SCR) failure occurs. The fail-safe circuit does this by bypassing the primary lamp power and maintaining the lamps at a reduced setting.

(c) Loss of electrical power to the left or right transfer bus causes the first officer's or captain's standby relay to de-energize. This transfers the power for the first officer's or captain's and center panel floodlights to the 115v ac standby bus. The standby relays also switch the first officer's or captain's and center panel floodlight dimmer control unit to standby override mode. The dimmer control unit standby mode limits the light intensity for both override and normal control for power conservation.

(2) Glareshield, Aisle Stand, and Auxiliary Circuit Breaker (P6) Panel Floodlights

(a) The glareshield floodlights are incandescent. The lights are mounted in 2 separate assemblies on the P7 panel. The lamps in each assembly are soldered and are not line replaceable. Each assembly is replaced as a unit. Poke-home pins connect the wiring to each assembly. A dimmer control unit with a line replaceable fuse uses 115v ac from the left bus. A rotary dimmer control on the left lighting control panel (P5) has 2 knobs. The inner knob controls the potentiometer that varies the dimmer control unit 0-5v ac output to the floodlights. The outer knob controls the potentiometer for the integral panel lights (Ref 33-13-00). The glareshield floodlight control does not have an on-off switch; it is connected directly to the dimmer control unit. The dimmer control unit does not have a separate bright/dim control circuit to standby and override relays. The override switch on the left lighting control panel (P5) bypasses the potentiometer circuit and lights the glareshield floodlights at maximum brightness whenever the override switch is ON.

(b) The aisle stand floodlights in the overhead, left and right of the P5 panel, are incandescent lights. They use 28v dc from the right bus. A rotary control (potentiometer) on the left lighting control panel (P5) completes electrical power to the lights. The override switch (P5) bypasses the potentiometer and illuminates the lights at maximum brightness when the override switch is ON. The lights shine thru cutouts in the overhead panel (P5). The covers are removed to relamp the assembly.

(c) The auxiliary circuit breaker panel floodlight is mounted on the bottom of the P61 panel. It is powered from the 28v ac right bus and is controlled by the overhead circuit breaker panel lights control on the right lighting control panel (P5). The control has a rheostat and a potentiometer connected to its shaft.

(3) Flight Deck Dome Lights and Light Override

(a) Three incandescent dome lights are on the ceiling panels. Two illuminate the captain's and first officer's seating areas, the other lights the aft area. You control the intensity of the lights lights with a switch that is a dimmer transformer. The lights normally use 28v ac from the ground service bus. Alternate electrical power for the two forward lights is from the 28v dc battery bus. The aft light does not have an alternate power source. Loss of normal power causes the dome lights relay to de-energize, connects battery bus 28v dc thru a loading resistor to the forward dome lights, and disconnects the dimmer circuit.

(b) An override switch on the left lighting control panel (P5) permits the crew to simultaneously turn on all floodlights, dome lights, panel lights (Ref 33-13-00), and lighted annunciators (Ref 33-16-00) to maximum brightness, regardless of normal control switch positions. Pressing the switch causes the ON legend to be displayed within the switch and completes 28v dc from the battery bus to energize 3 override relays. The energized relays bypass the various rotary dimmer controls, and connects electrical power directly to the floodlight dimmer control units and dome lights. This causes the floodlights and dome lights to illuminate at maximum brightness. The dimming function of the master dim and test system is disabled when the flight deck override relay is energized (Ref 33-16-00).

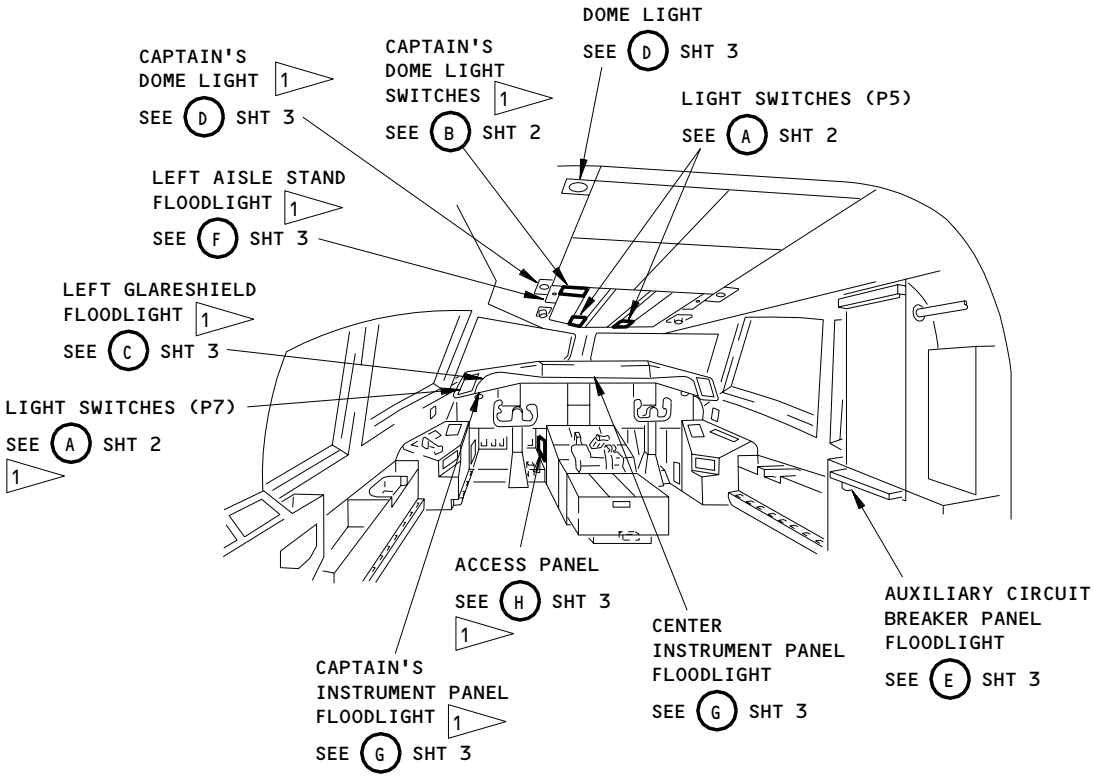
(4) Fluorescent lights and incandescent lights can be relamped after opening or removing the plastic lens. Lamp part numbers are indicated on the light assembly.

FLIGHT COMPARTMENT ILLUMINATION

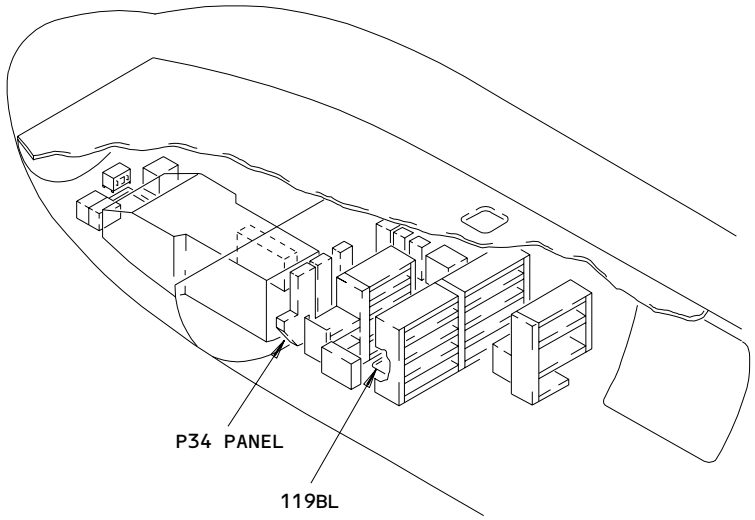
COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, OVHD CB PNL, P11	*
CIRCUIT BREAKER –			119BL, MAIN EQUIP CTR, P34	*
DIMMER CONTROL UNIT –				
GLRSHLD FLOOD LT	3		FLT COMPT, ACCESS PANEL	33-11-03
INST PANEL FLOODLIGHTS	3		FLT COMPT, ACCESS PANEL	33-11-03
LIGHT – DOME AND FLOOD	1		FLT COMPT	33-11-00
RELAY –			FLT COMPT	*
SWITCH –			FLT COMPT	
DOME LIGHT AND FLOODLIGHT	2		FLT COMPT	*

* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

Flight Compartment Illumination – Component Index
Figure 101



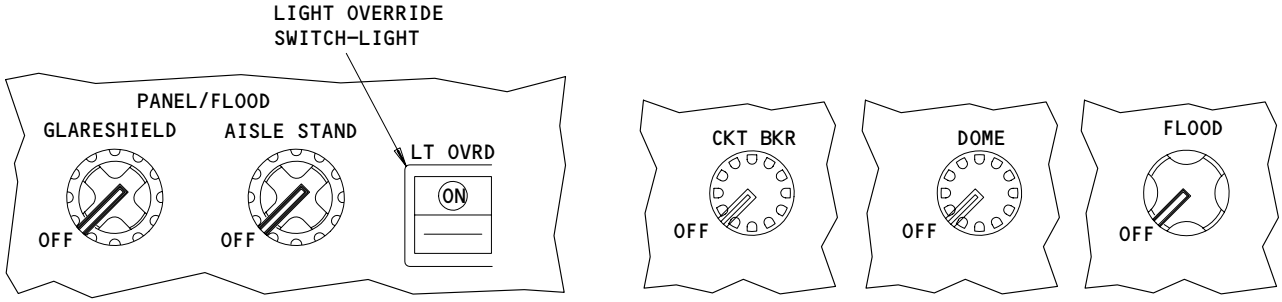
FLIGHT COMPARTMENT



MAIN EQUIPMENT CENTER

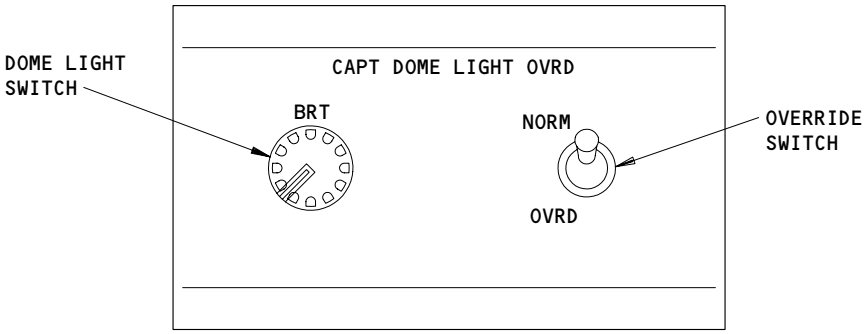
1 CAPTAIN AND LEFT SIDE SHOWN, FIRST OFFICER AND RIGHT SIDE EQUIVALENT

Flight Compartment Illumination - Component Location
Figure 102 (Sheet 1)



LIGHT SWITCHES
(EXAMPLE)

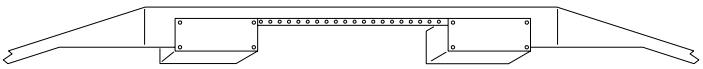
A



DOME LIGHT SWITCHES
(EXAMPLE)

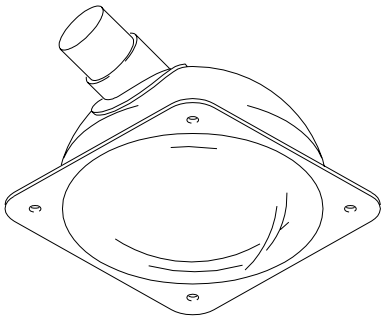
B

Flight Compartment Illumination – Component Location (Details from Sht 1)
Figure 102 (Sheet 2)



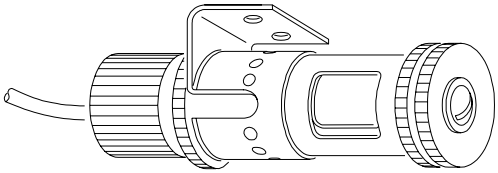
GLARESHIELD FLOODLIGHTS

(C) FROM SHT 1



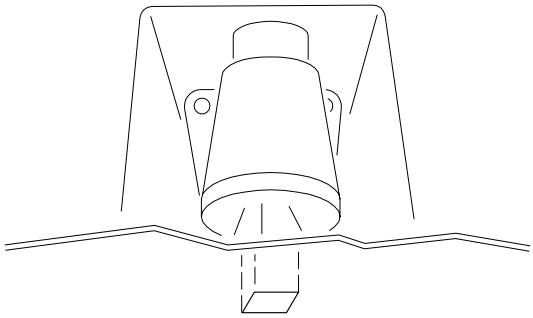
DOME LIGHT
(EXAMPLE)

(D) FROM SHTS 1 AND 4



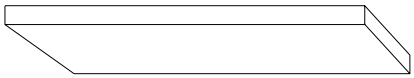
AUXILIARY CIRCUIT BREAKER
PANEL FLOODLIGHT

(E) FROM SHT 1



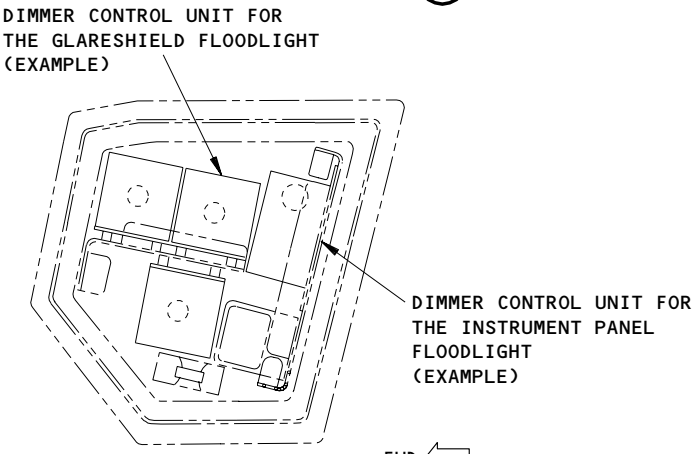
AISLE STAND FLOODLIGHT
(EXAMPLE)

(F) FROM SHT 1



INSTRUMENT PANEL FLOODLIGHT
(EXAMPLE)

(G) FROM SHT 1



ACCESS PANEL
(EXAMPLE)

(H) FROM SHT 1

Flight Compartment Illumination - Component Location
Figure 102 (Sheet 3)

FLIGHT COMPARTMENT ILLUMINATION - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks for the flight compartment lighting:
      (1) Dome Light - Lamp Replacement
      (2) Instrument Panel Floodlight - Lamp Replacement
      (3) Glareshield Floodlight - Lamp Replacement
      (4) Aisle Stand Floodlight - Lamp Replacement
      (5) Auxiliary Circuit Breaker Panel Floodlight - Lamp Replacement

   TASK 33-11-00-962-007
2. Dome Light - Lamp Replacement
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-11-03
      (3) WDM 33-00-01
      (4) WDM 33-11-31
   B. Access
      (1) Location Zones
          211/212 Flight compartment
   C. Procedure

      S 962-008
      (1) Replace the lamp.
          (a) Remove electrical power from the light.
              1) Open each applicable circuit breaker for the dome light and attach the DO-NOT-CLOSE tag:
                 a) On the overhead circuit breaker panel, P11.
                 b) On the APU/EXT power panel, P34.
          (b) Turn the lens counterclockwise to remove it.
          (c) Carefully replace the lamp.
          (d) Install the lens.

      S 712-009
      (2) Do a test of the new lamp.
          (a) Supply electrical power (AMM 24-22-00/201).
          (b) Remove the DO-NOT-CLOSE tag and cLose each circuit breaker that was opened.
          (c) At the overhead panel, P5, set the switch for the dome light to the on position.
              1) Make sure the new lamp comes on correctly.

(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-11-00-962-001

3. Instrument Panel Floodlight - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-11-01
(3) WDM 33-00-01
(4) WDM 33-11-11

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 962-005
(1) Replace the lamp.
(a) Loosen the fasteners and lower the lens.
(b) At the glareshield, P7, set the switch for the floodlight to the on position.
1) Identify each lamp that does not come on.
(c) Set the switch to the off position.
(d) Remove electrical power from the light.
1) Open each applicable circuit breaker for the instrument panel floodlight and attach the DO-NOT-CLOSE tag:
a) On the overhead circuit breaker panel, P11.
(e) Carefully replace the lamp.

S 712-018
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) Set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.

(e) Close the lens and tighten the fasteners.
(f) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-11-00-962-008

4. Glareshield Floodlight - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-11-02
(3) WDM 33-00-01
(4) WDM 33-11-21

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 962-009
(1) Replace the lightplate.
(a) Remove electrical power from the light.
1) Open each applicable circuit breaker for the glareshield floodlight and attach the DO-NOT-CLOSE tag:
a) On the overhead circuit breaker panel, P11.
(b) Loosen the fasteners and remove the floodlight lightplate.
(c) Replace the circuit board of the lightplate.

NOTE: Onboard repair of lightplates is not recommended. Replacement of the complete lightplate assembly is the preferred maintenance practice. Instructions for lamp replacement can be found in the Standard Overhaul Practices Manual (SOPM), Chapter 20-11-05 or the lightplate vendor's manual.

1) Remove the screws and remove the circuit board from the lightplate assembly.
2) Install a new lightplate.

S 712-010
(2) Do the test of the new lightplate.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) At the overhead panel, P5, set the switch for the floodlight to the on position.
1) Make sure the new lightplate comes on correctly.

(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-11-00-962-009

5. Aisle Stand Floodlight - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-11-02
(3) WDM 33-00-01
(4) WDM 33-11-21

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 962-010
(1) Replace the lamp.
(a) Remove electrical power from the light.
1) Open each applicable circuit breaker for the aisle stand floodlight and attach the DO-NOT-CLOSE tag:
a) On the overhead circuit breaker panel, P11.
(b) Remove the screws and remove the lens.
(c) Carefully replace the lamp.
(d) Install the lens.

S 712-011
(2) Do the test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) At the overhead panel, P5, set the switch for the floodlight to the on position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-11-00-962-010

6. Auxiliary Circuit Breaker Panel Floodlight - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-11-04

(3) WDM 33-00-01
(4) WDM 33-11-61

B. Access

(1) Location Zones
211/212 Flight compartment

C. Procedure

S 962-011

(1) Replace the lamp.
(a) Remove electrical power from the light.
1) Open each applicable circuit breaker for the auxiliary circuit breaker panel floodlight and attach the DO-NOT-CLOSE tag:
a) On the overhead circuit breaker panel, P11.
(b) Pull the lens to remove it from the springs that hold it in position.
(c) Carefully replace the lamp.
(d) Install the lens.

S 712-012

(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) At the overhead panel, P5, set the switch for the floodlight to the on position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

FLIGHT COMPARTMENT ILLUMINATION - ADJUSTMENT/TEST

1. General
   A. This procedure has these tasks:
      (1) Flight Compartment Lighting - Operational Test
      (2) Flight Compartment Lighting - Functional Test
   B. The flight compartment lighting is the general lighting supplied with the dome lights and floodlights.

TASK 33-11-00-715-024

2. Flight Compartment Lighting - Operational Test
   A. General
      (1) This task contains a test of the flight compartment lighting while operated with the usual electrical power.
   B. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-11-01 thru SSM 33-11-99
      (3) WDM 33-11-11 thru WDM 33-11-99
   C. Access
      (1) Location Zones
          211/212 Flight compartment
   D. Procedure

      S 865-032
      (1) Supply electrical power (AMM 24-22-00/201).

      S 715-025
      (2) Do a test of the dome lights.
          (a) At the overhead panel, P5, make sure the light override switch-light is set to the off position.
          (b) At the P5 panel, slowly set the switch for the dome lights from the off to bright position.
              1) Make sure each dome light comes on correctly.

      S 715-028
      (3) Do a test of the floodlights.
          (a) At the glareshield panel, P7, set the switches for the instrument panel floodlights from the off to bright position.
              1) Make sure each floodlight comes on correctly.
          (b) At the overhead panel, P5, slowly set the switch for the aisle stand floodlights from the off to bright position.
              1) Make sure each floodlight comes on correctly.
          (c) At the P5 panel, slowly set the switch for the glareshield floodlights from the off to the bright position.
              1) Make sure all floodlights come on correctly.
          (d) At the overhead panel, P5, slowly set the switch for the overhead circuit breaker panel floodlight from the off to bright position.
              1) Make sure the floodlight comes on correctly.
          (e) Set each switch to the usual position.

S 865-031
(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-11-00-725-027

3. Flight Compartment Lighting - Functional Test

A. General
(1) This task contains a test of the flight compartment lighting while operated with the override and standby electrical power.

B. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-11-01 thru SSM 33-11-99
(3) WDM 33-11-11 thru WDM 33-11-99

C. Access
(1) Location Zones
211/212 Flight compartment

D. Procedure

S 865-034
(1) Supply electrical power (AMM 24-22-00/201).

S 725-029
(2) Do a test of the lights with the override electrical power.
(a) Set the switches for the dome lights and floodlights to the off position.
(b) At the overhead panel, P5, set the light override switch-light to the on position.
1) Make sure each dome light above the pilots' seats becomes bright.
2) Make sure each floodlight becomes bright.
(c) At the P5 panel, set the switch for the dome lights from the off to bright position.
1) Make sure each dome light above the pilots' seats stays bright.
(d) Set each floodlight switch from the off to bright position.
1) Make sure each floodlight stays bright.
(e) Set the light override switch-light to the off position.
1) Make sure each dome light above the pilots' seats stays bright.
2) Make sure each floodlight stays bright.

S 725-030
(3) Do a test of the lights with the standby electrical power.
(a) Open the circuit breaker for the flight compartment dome lights:
1) On the APU external power panel, P34.
2) Make sure each dome light above the pilots' seats becomes dim.
(b) Open the circuit breakers for the captain's and first officer's instrument panel floodlights:
1) On the overhead circuit breaker panel, P11.

2) Make sure each floodlight above the captain's instrument panel and above the main instrument panel becomes dim.

(c) At the glareshield, P7, set the captain's switch for the instrument panel floodlights from the off to bright position.

1) Make sure the floodlights for the captain's instrument panel and the main instrument panel stayed bright.

(d) At the glareshield, P7, set the first officer's switch for the floodlights to the off to bright position.

1) Make sure the floodlights for the first officer's instrument panel stayed bright.

(e) Close each circuit breaker that was opened.

(f) Set each switch for the instrument panel floodlights to the usual position.

S 865-033

(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

FLOODLIGHT DIMMER CONTROL UNIT - REMOVAL/INSTALLATION

1. General
   A. This procedure contains these tasks:
      (1) Dimmer Control Unit - Removal
      (2) Dimmer Control Unit - Installation

TASK 33-11-03-004-001

2. Dimmer Control Unit - Removal (Fig. 401)
   A. References
      (1) SSM 33-11-01
      (2) WDM 33-11-11
   B. Access
      (1) Location Zones
          211/212 Flight compartment
   C. Procedure

S 014-002

      (1) Get access to the dimmer control unit.
          (a) Remove electrical power from the dimmer control unit.
              1) Open each applicable circuit breaker for the dimmer control unit and attach the DO-NOT-OPEN tag:
                 a) On the overhead circuit breaker panel, P11.
          (b) Push the inboard rudder pedal forward.

              NOTE: If necessary, turn the adjustment for the rudder pedals to the fully forward position.

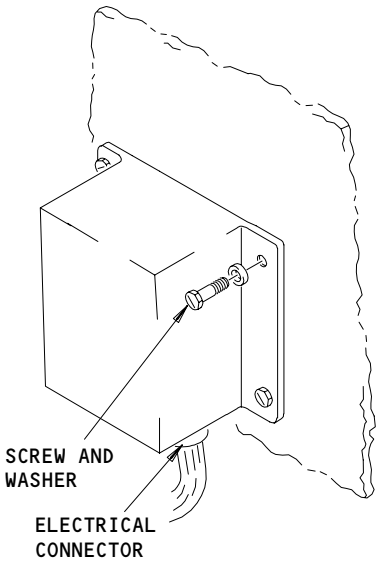
          (c) Remove the access panel that is forward of the side of the aisle stand.

S 024-005

      (2) Remove the dimmer control unit.
          (a) Disconnect the electrical connector.
          (b) Remove the screws and the washers.

TASK 33-11-03-404-003

3. Dimmer Control Unit - Installation (Fig. 401)
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control



DIMMER CONTROL UNIT
(EXAMPLE)

NOTE: FOR THE LOCATION OF THE DIMMER CONTROL UNIT, REFER TO FIM 33-11-00/101

Dimmer Control Unit Installation
Figure 401

(2) SSM 33-11-01
(3) WDM 33-11-11

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 424-006
(1) Install the dimmer control unit.
(a) Install the dimmer control unit with the screws and the washers.
(b) Connect the electrical connector.

S 714-004
(2) Do the test of the new dimmer control unit.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened. (Refer to the task for the Dimmer Control Unit - Removal.)
(c) Set the applicable floodlight switch from the dim to the bright position.
1) Make sure the floodlight comes on correctly.
(d) Set the switch to the usual position.
(e) Replace the access panel.
(f) Remove electrical power if it is not necessary (AMM 24-22-00/201).

INTEGRAL PANEL LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-13-01 thru 33-13-99
      (2) WDM 33-13-11 thru 33-13-99
   B. The integral panel lights provide lighting of the instruments, switch/lights, modules and panels in the flight compartment. Separate rotary controls at each crew station and overhead panel provide inputs to dimmer control units which provide 0-5v ac to the lights.
2. Operation
   A. Functional Description
      (1) Integral Panel Lights
         (a) Instruments, lightplate panels and switch-lights have integral incandescent bulbs. The lightplate bulbs are soldered to a printed circuit board attached to the back of a plastic light panel. The lightplate is painted on the front except for the panel markings. An electrical connector soldered to the printed circuit board mates with the front panel of the module.
         (b) The left 115v ac bus provides power for lights in the instruments, switch-lights and panels at the captain's station, center instrument panel, the aisle stand panels and overhead panels. The right 115v ac bus provides power for lights in the instruments, switch-lights, and panels at the first officer's station, glareshield, and (when applicable) the right side panel. An alternate power source for the standby instruments is from the 115v ac standby bus. All instrument and panel light circuit breakers are on overhead panel P11.
         (c) The 115v ac is reduced to 0-5v ac for use by the various incandescent lights installed within the instruments, switch-lights, annunciators, and panels. Rotary controls labeled PANEL at each crew station vary the output voltage of 1 or more panel dimmer control units. The dimmer control units reduce the output voltage in proportion to rotary control position. When the control is positioned to OFF, panel dimmer control units provide a zero output. Initial movement from the OFF position causes the panel dimmer control units to provide a 1v ac step output. Continued rotation of the control causes dimmer control units output to vary from 1v ac to 5v ac. A replaceable fuse on each dimmer control unit provides current protection for the 115v ac input circuit.

(d) The standby instrument lighting relay is energized by 115v ac from the left bus. When de-energized, the standby relay switches power for the center panel dimmer control unit from the left 115v ac bus to the standby 115v ac bus, removes 0-5v ac from all instruments on the P1-3 panel except the standby instruments, and transfers the captain's RDMI lighting control to the center panel dimmer control unit. The center panel dimmer control unit then provides standby power to all standby instruments during primary power failures.

(e) AIRPLANES WITH PANEL LIGHTS ON THE RIGHT SIDE PANEL;
The right side panel rotary control knob controls the integral panel lights potentiometer. The right side panel rotary control potentiometer is connected to a dimmer control unit. Power for overhead circuit breaker panel integral lights is from the left 115v ac bus. The right side panel uses 115v ac from the right bus.

(f) Lightplates can be replaced after removing switch knobs, etc. Individual switch-lights can be relamped from the front. Lights within instruments require removal of the instrument for relamping.

INTEGRAL PANEL LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1		FLT COMPT, P11	*
DIMMER CONTROL UNIT –				
AISLE STAND PNL LIGHTS			FLT COMPT	33-13-02
AISLE STAND PNL LIGHTS	1		FLT COMPT	33-13-02
CENTER INST AND GLARESHIELD PNL LIGHTS			FLT COMPT	33-13-02
OVERHEAD AND CIRCUIT BREAKER PNL LIGHTS			FLT COMPT/NLG WHEEL WELL, P12 2	33-13-02
PILOTS' INST PNL LIGHTS			FLT COMPT	33-13-02
RIGHT SIDE PNL INST LIGHTS 1			FLT COMPT, ABOVE P61	33-13-02
LIGHT – INSTRUMENT AND PANEL	*		FLT COMPT	*
SWITCH – INST AND PNL LIGHTS	1		FLT COMPT	*
RELAY –	1		FLT COMPT	*

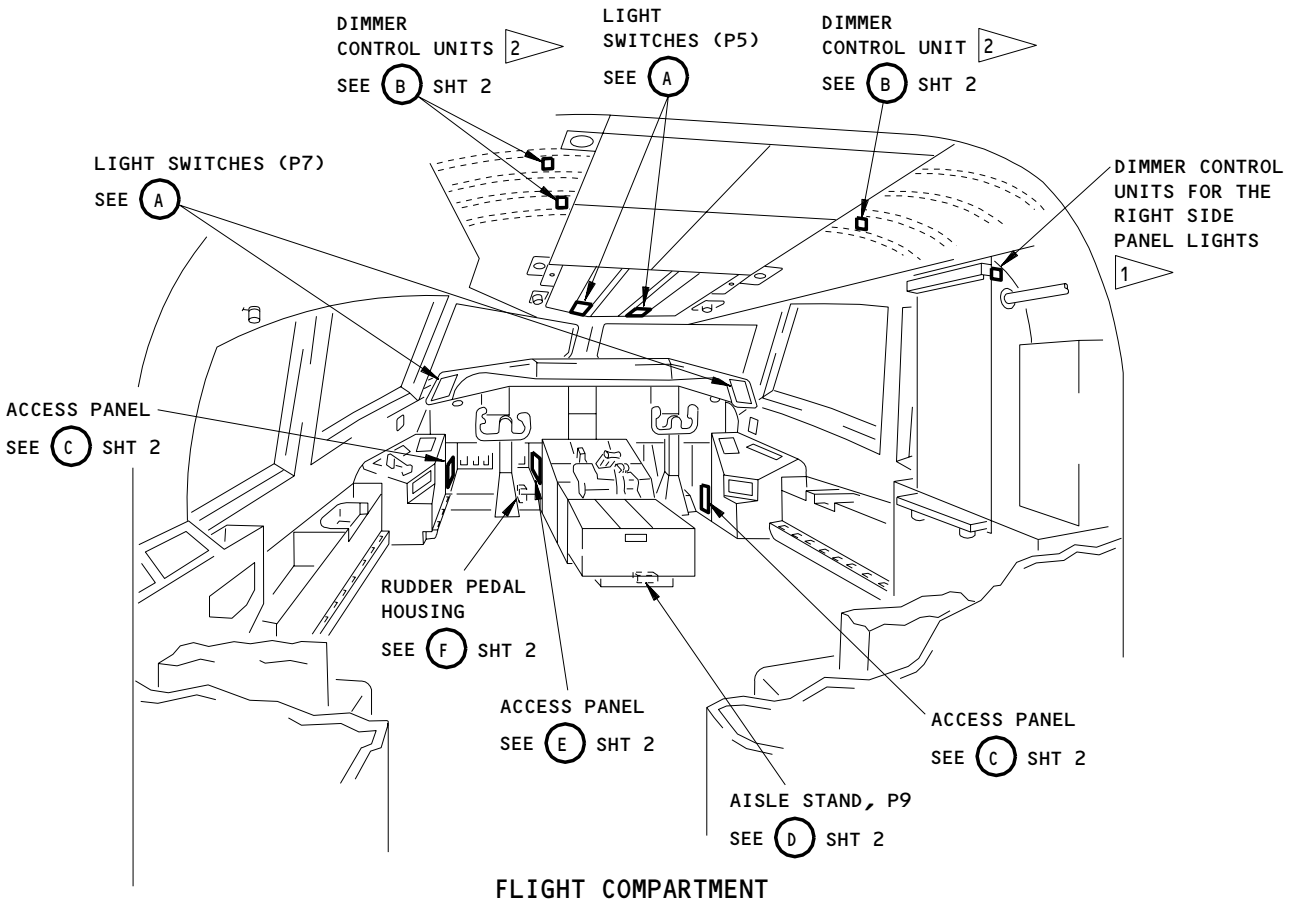
* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

1 NOT INSTALLED ON ALL AIRPLANES

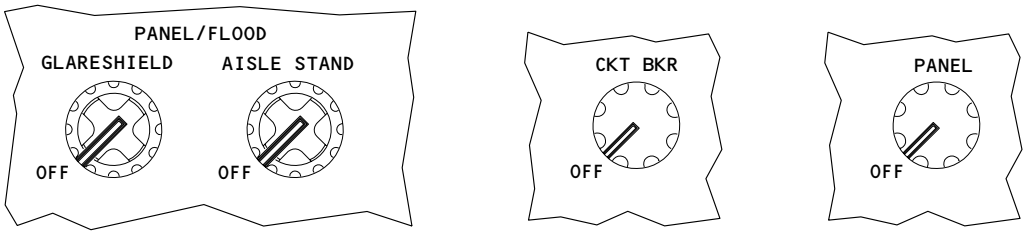
2 AIRPLANES WITH A P12 PANEL (POST PRR 54360), THE P12 PANEL IS BEHIND ACCESS PANEL 115AL IN THE FORWARD LEFT SECTION OF THE NLG WHEEL WELL.

NOTE: AIRPLANES WITH ONE AISLE STAND FLOOD LIGHT HAVE DIMMER CONTROL UNITS INSTALLED ON P12 PANEL. AIRPLANES WITH TWO AISLE STAND FLOOD LIGHTS HAVE DIMMER CONTROL UNITS INSTALLED BEHIND CEILING PANELS. (WDM 33-13-31, 33-13-32)

Integral Panel Lights – Component Index
Figure 101



FLIGHT COMPARTMENT



LIGHT SWITCHES
(EXAMPLE)

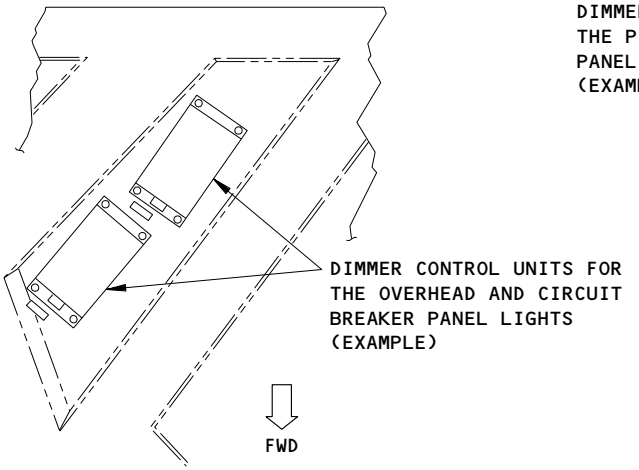
A

1 NOT INSTALLED ON ALL AIRPLANES

2 AIRPLANES WITH A P12 PANEL (POST PRR 54360),
THE P12 PANEL IS BEHIND ACCESS PANEL 115AL
IN THE FORWARD LEFT SECTION OF THE NLG WHEEL WELL.

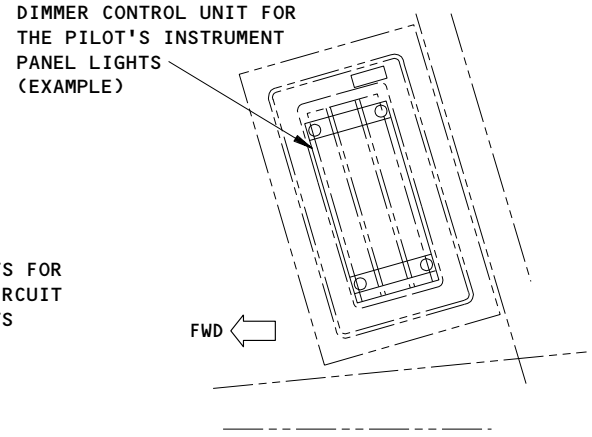
NOTE: AIRPLANES WITH ONE AISLE STAND FLOOD LIGHT
HAVE DIMMER CONTROL UNITS INSTALLED ON P12 PANEL.
AIRPLANES WITH TWO AISLE STAND FLOOD LIGHTS
HAVE DIMMER CONTROL UNITS INSTALLED BEHIND
CEILING PANELS.
(WDM 33-13-31, 33-13-32)

Integral Panel Lights - Component Location
Figure 102 (Sheet 1)



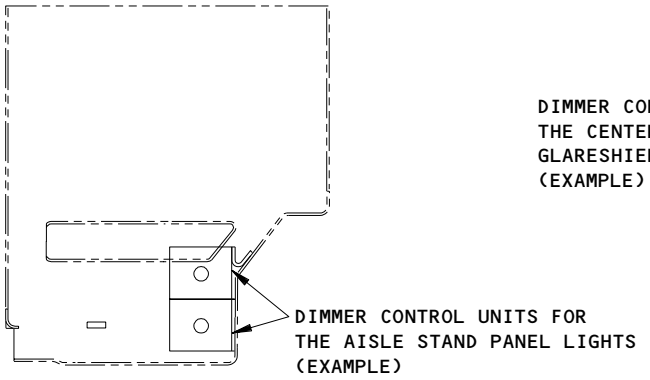
DIMMER CONTROL UNITS

B



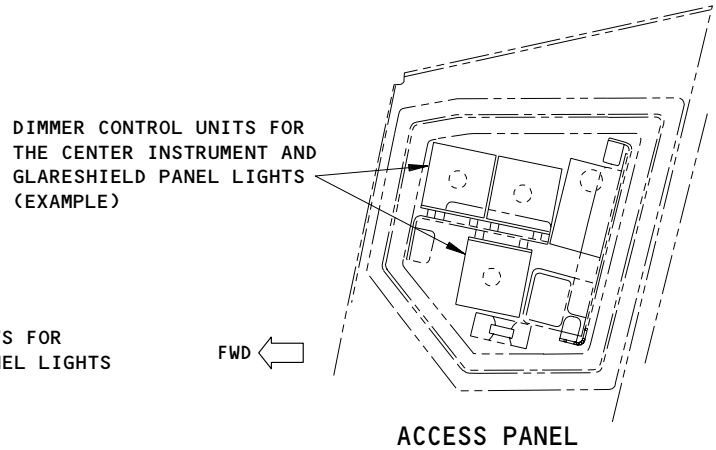
ACCESS PANEL
(LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)

C



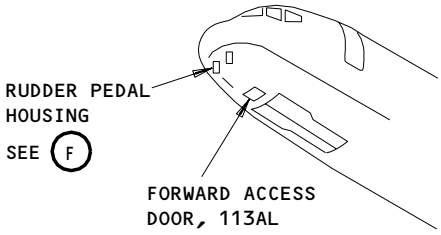
AISLE STAND, P9

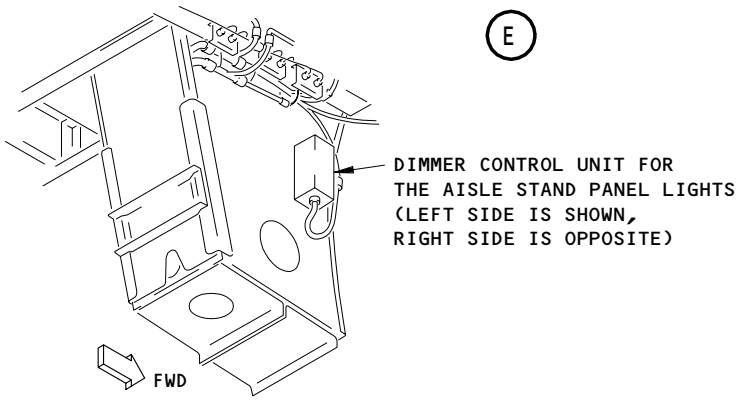
D



ACCESS PANEL

E



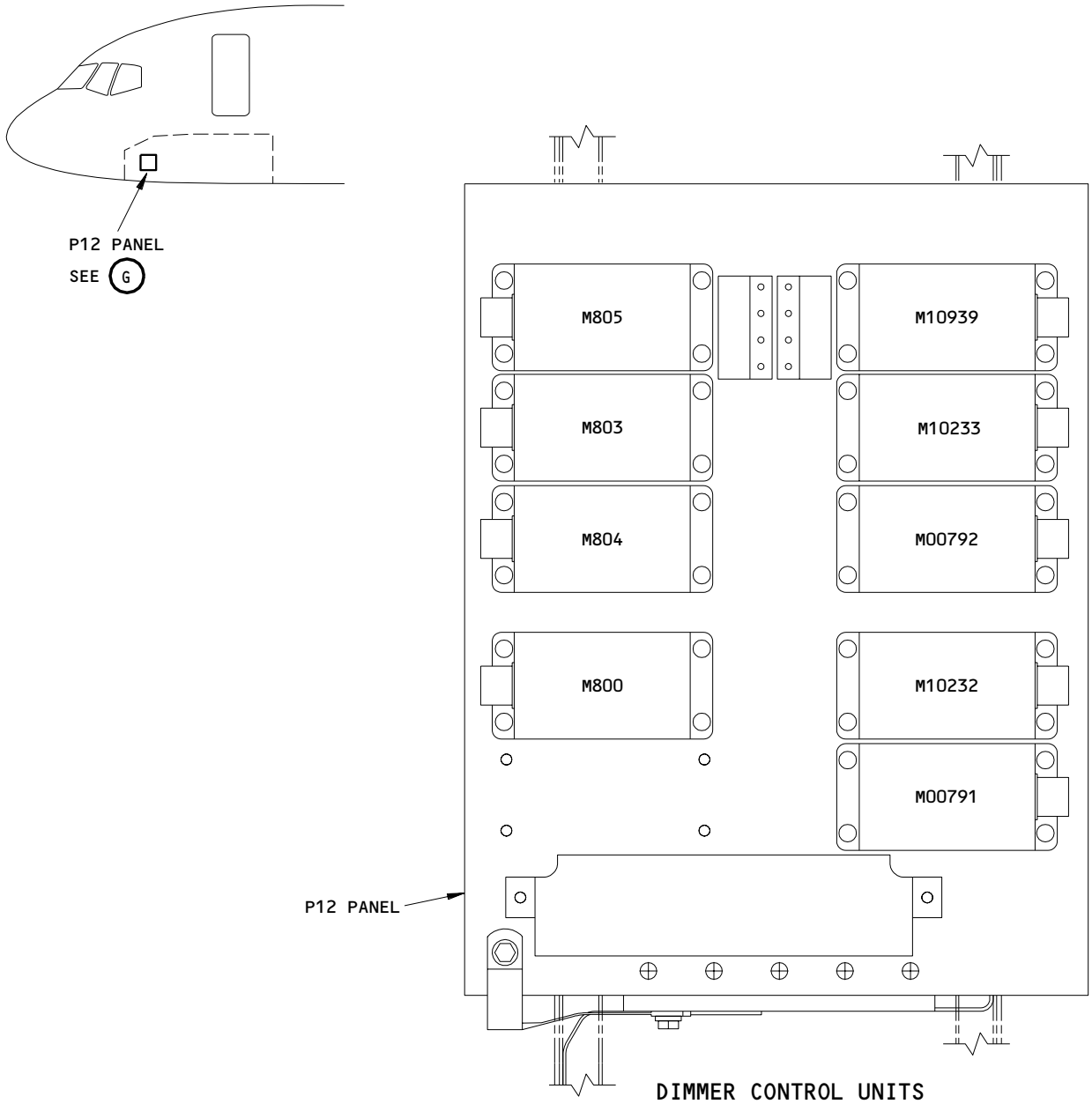


RUDDER PEDAL HOUSING

F

Integral Panel Lights - Component Location
Figure 102 (Sheet 2)

A73814



2 AIRPLANES WITH A P12 PANEL (POST PRR 54360), THE P12 PANEL IS BEHIND ACCESS PANEL 115AL IN THE FORWARD LEFT SECTION OF THE NLG WHEEL WELL.

NOTE: AIRPLANES WITH ONE AISLE STAND FLOOD LIGHT HAVE DIMMER CONTROL UNITS INSTALLED ON P12 PANEL. AIRPLANES WITH TWO AISLE STAND FLOOD LIGHTS HAVE DIMMER CONTROL UNITS INSTALLED BEHIND CEILING PANELS. (WDM 33-13-31, 33-13-32)

Integral Panel Lights - Component Location
Figure 102 (Sheet 3)

PUSHBUTTON SWITCH-LIGHTS - MAINTENANCE PRACTICES

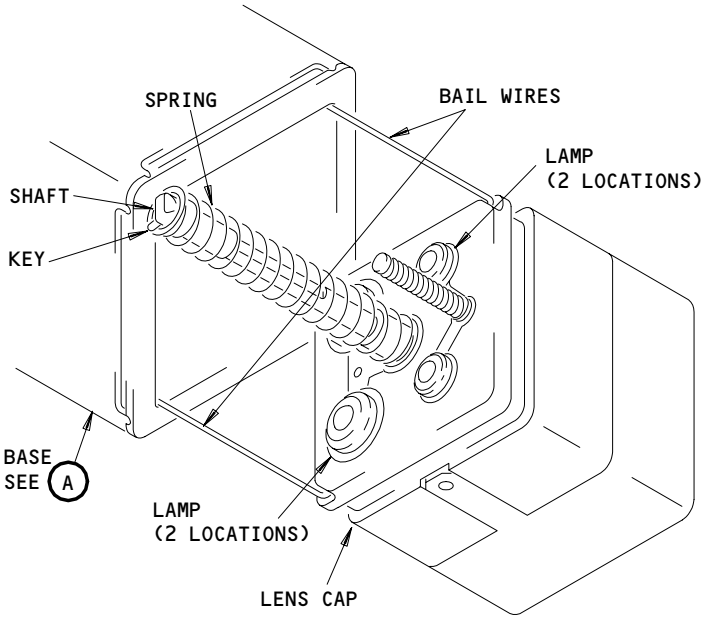
1. General
   A. This procedure contains these tasks:
      (1) Prepare to Do the Maintenance
      (2) Repair the Lens Cap Assembly (-2000 Switch-Lights)
      (3) Replace the Lamps (-2000 and -3000 Switch-Lights)
      (4) Remove/Install the Diode/Fuse Card (-2000 and -3000 Switch-Lights)
      (5) Remove/Install the Switch-Light (-2000 and -3000 Switch-Lights)
      (6) Replace the Lamps (-1000 and -4000 Switch-Lights)
      (7) Remove/Install the Diode/Fuse Card (-1000 and -4000 Switch-Lights)
      (8) Remove/Install the Master Module (-1000 and -4000 Switch-Lights)
      (9) Remove/Install the Lens Cap (-1000 and -4000 Switch-Lights)
      (10) Remove/Install the Switch-Light (-1000 and -4000 Switch-Lights)
      (11) Switch-Lights - Operational Test
   B. When the PANEL control is turned clockwise, some lamps in each switch-light come on when the switch-light is on (pushed in). To do the test of the remaining lamp(s), do a test of the related system.
   C. The labels (such as ON, AUTO, etc.) come on only when the PANEL control is turned clockwise and the switch-lights are on.
   D. You will find the diode/fuse cards in the switch-lights.

   TASK 33-13-00-862-029
2. Prepare to Do the Maintenance
   A. Access
      (1) Location Zones
          211/212 Flight compartment
   B. Procedure

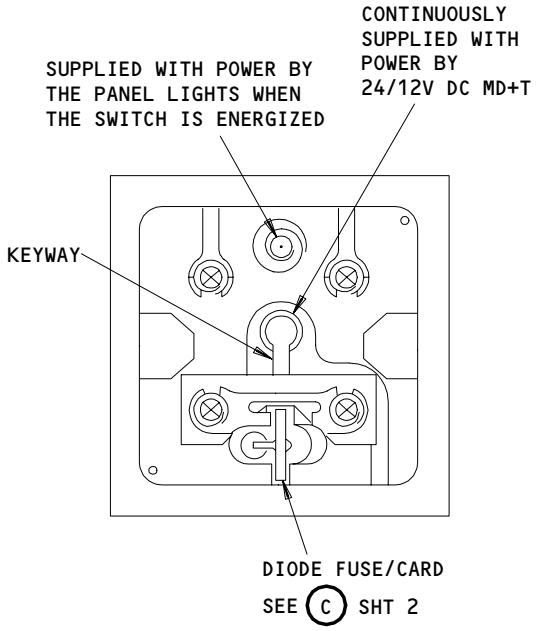
      S 862-003

      WARNING: OPEN THE APPLICABLE SYSTEM CIRCUIT BREAKER(S) CONTROLLED BY THE SWITCH-LIGHTS. THE INSTALLATION OF THE LENS CAP INTO THE SWITCH CAN OPERATE THE SWITCH AND CAUSE ITS SYSTEM TO OPERATE. THE ACCIDENTAL OPERATION OF A SYSTEM CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

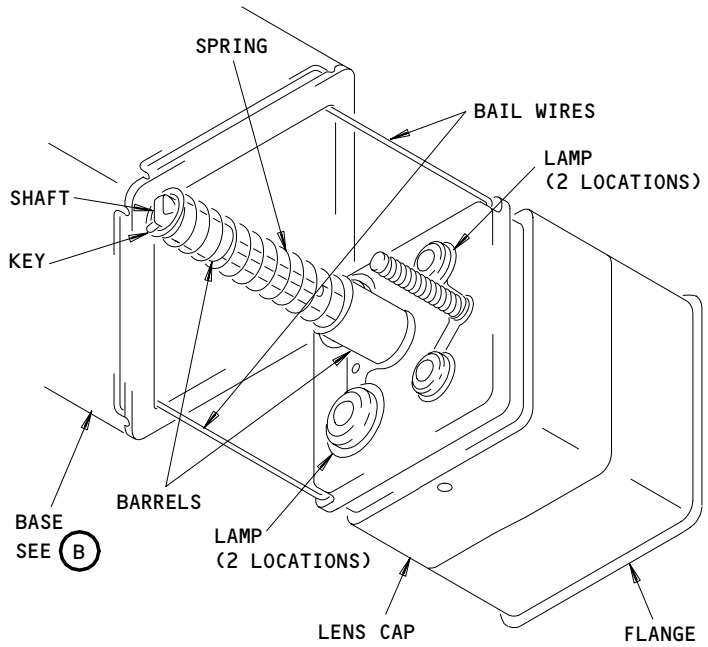
      (1) Do these steps to turn the applicable control to OFF:
          (a) Open the circuit breaker(s) that controls the power to the annunciator-half of the switch-light(s) and attach the DO-NOT-CLOSE tag(s). Refer to the Schematic Manual, 33-16-00, for necessary circuit breaker data.



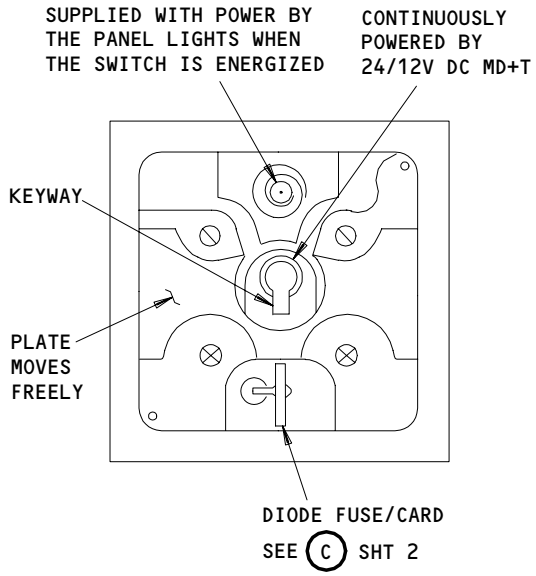
-2000 SWITCH-LIGHT
(ALTERNATE ACTION)



BASE
(FRONT VIEW)
A

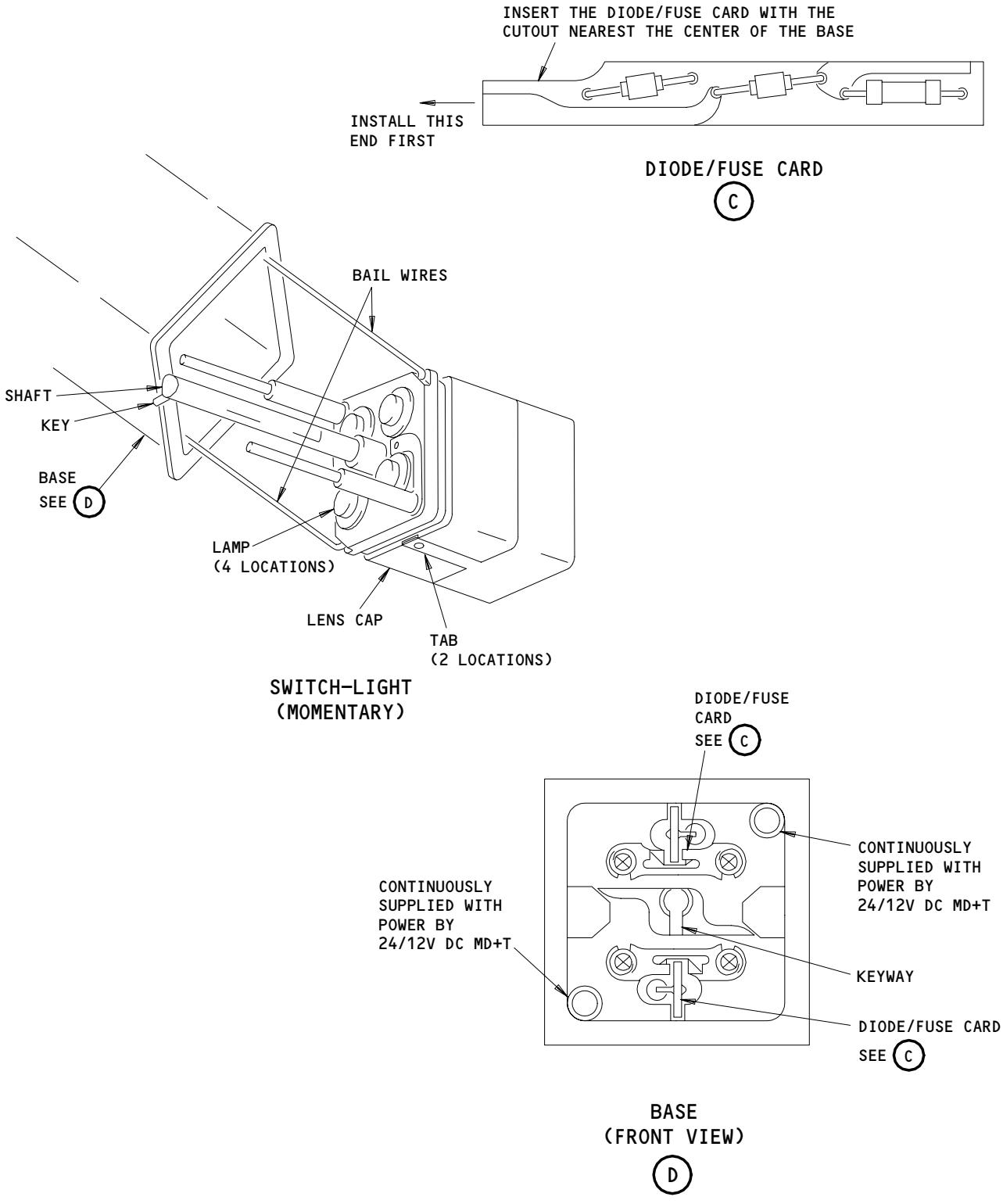


-3000 SWITCH-LIGHT
(ALTERNATE ACTION)

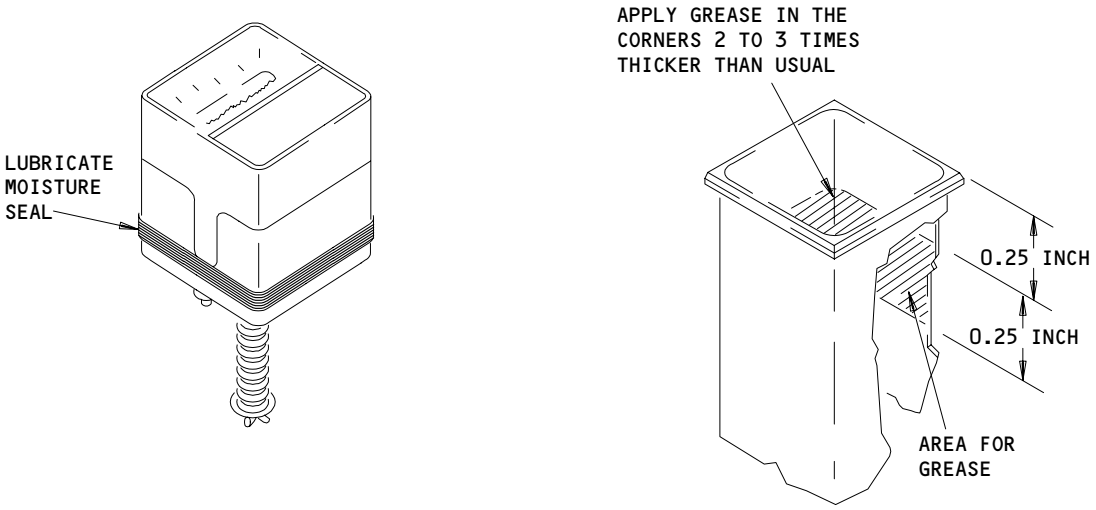


BASE
(FRONT VIEW)
B

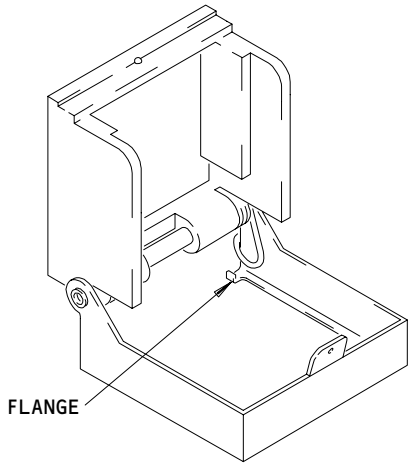
Switch-Light Maintenance Practices
Figure 201 (Sheet 1)



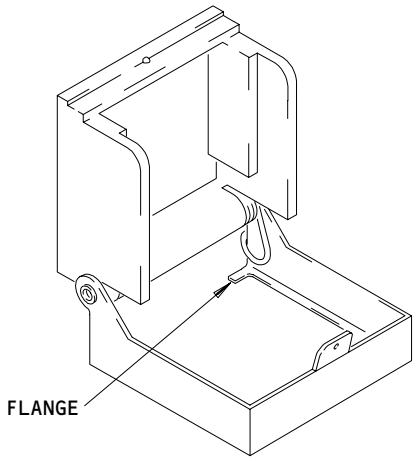
Switch-Light Maintenance Practices
Figure 201 (Sheet 2)



-2000 SWITCH-LIGHT SEAL

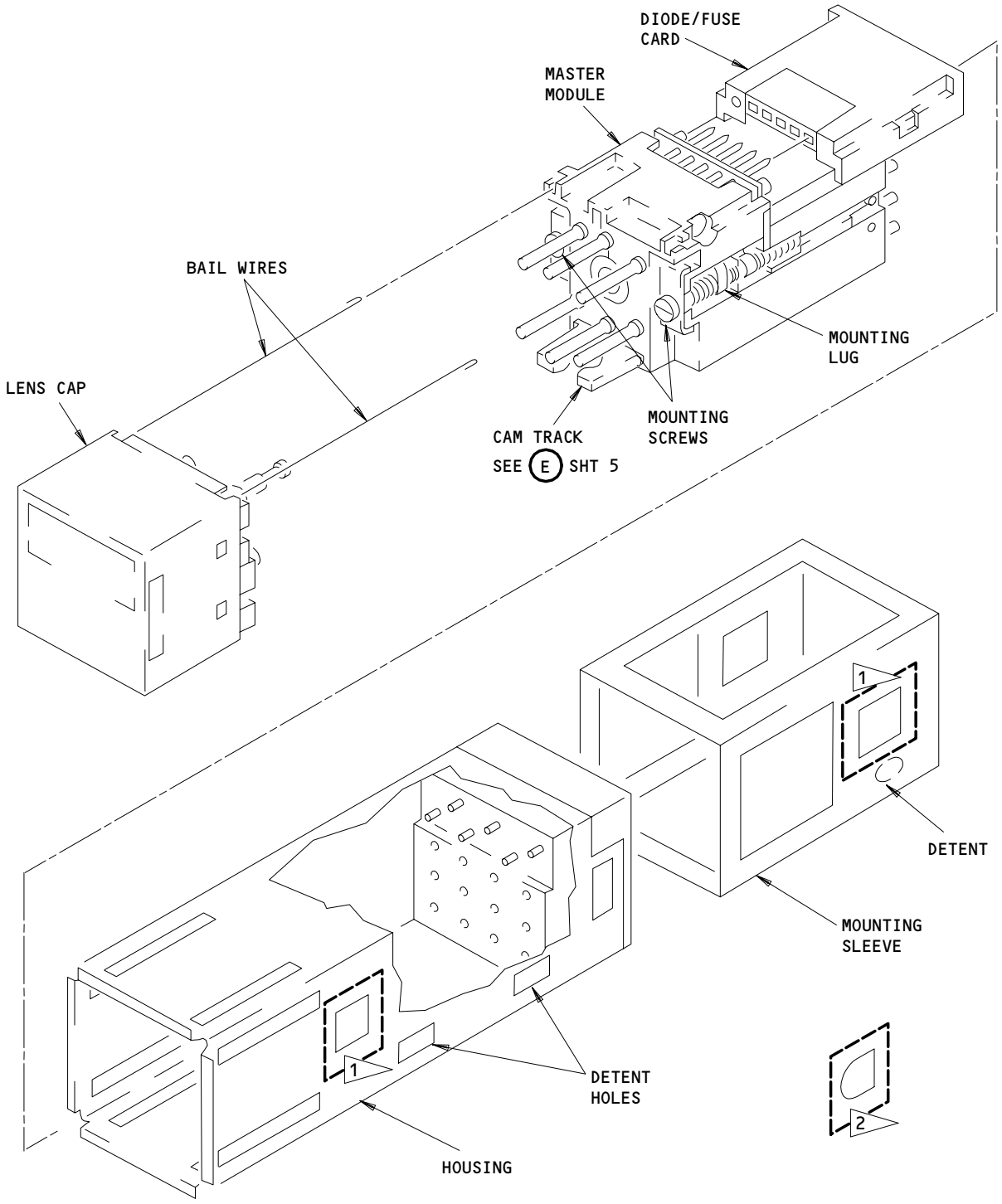


-2000 SWITCH GUARD

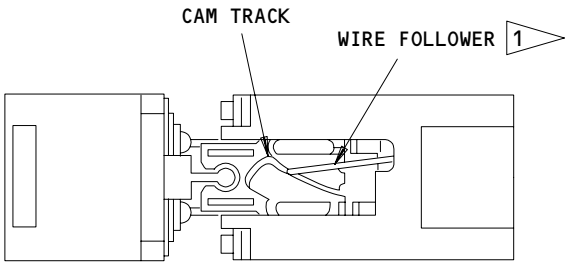


-3000 SWITCH GUARD

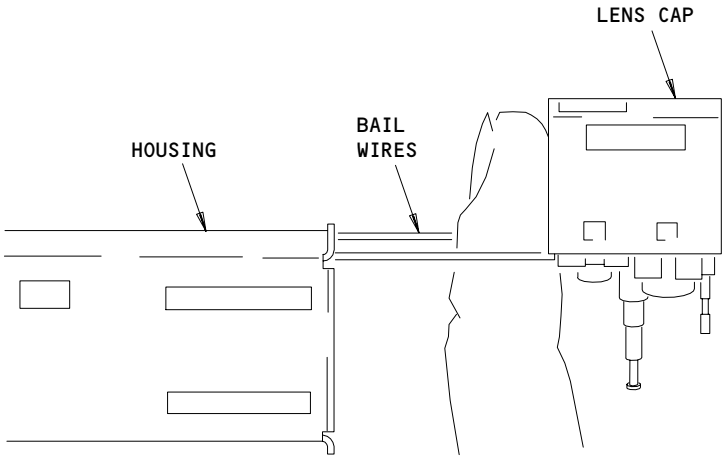
Switch-Light Maintenance Practices
Figure 201 (Sheet 3)

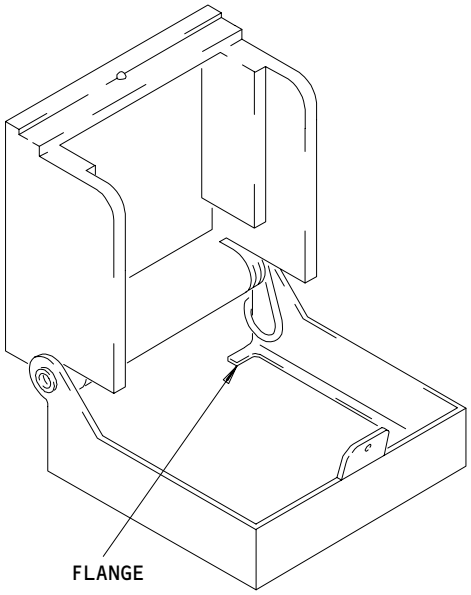


Switch-Light Maintenance Practices
Figure 201 (Sheet 4)



CAM TRACK
E





SWITCH GUARD

1 -1000 SWITCH-LIGHTS

Switch-Light Maintenance Practices
Figure 201 (Sheet 5)

(b) Open the circuit breaker(s) that controls the power to the system(s) connected to the switch-light(s) and attach the DO-NOT-CLOSE tag(s). Refer to the Schematic Manual, 33-16-00, for necessary circuit breaker data.

TASK 33-13-00-342-005

3. Repair the Lens Cap Assembly (-2000 Switch-Lights, Fig. 201)

A. Consumable Materials

(1) B00130 Solvent - Spec, TT-I-735, Isopropyl Alcohol

(2) A00272 Adhesive - Loctite 416

B. Access

(1) Location Zones

211/212 Flight compartment

C. Procedure

S 342-012

(1) Do these steps to repair the lens cap assembly:

(a) Remove the two tabs from the lens cap.

(b) Clean the inner edge of the lens cap and the mating lens with the solvent, isopropyl alcohol.

(c) Assemble the lens and the lens cap.

(d) Loosen the lens from the lens cap to permit a 0.05 inch space between the two.

(e) Fill all four sides with the adhesive, Locatite No. 406.

(f) Hold the lens and lens cap together while you apply pressure to the two with your fingers.

(g) Remove the unwanted adhesive.

(h) Keep the pressure on the lens cap for 15 seconds.

S 342-006

(2) Permit the adhesive to cure for 15 minutes before you use the switch-lights.

S 342-007

(3) Permit the adhesive to cure for 12 hours before you replace the lamps in the switch-light.

TASK 33-13-00-962-008

4. Replace the Lamps (-2000 and -3000 Switch-Lights, Fig. 201)

A. General

(1) Each switch-light uses two or four lamps. The four lamps, or the two lamps plus the two plugs, must be installed in the lens cap at all times. Get access to the lens cap from the front side of the panels; replace the lamps behind the lens cap. Make sure the switch-light is off (not pushed in) before you do this procedure.

B. Consumable Materials

(1) D00385 Grease - Molykote No. 33

C. Access

(1) Location Zones

211/212 Flight compartment

D. Procedure

S 842-009

(1) Do the task given above: Prepare to Do the Maintenance.

S 962-014

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

(2) Do these steps to replace the lamps:

(a) ON THE -2000 SWITCH-LIGHTS;
with the switch-light off, carefully push it until the shutters open to the width of the flow bar or the label, but no more. Then release the switch-light. (The shutters return to the closed position. The switch-light does not operate its related system; you do not hear a click).

NOTE: On switch-lights with no shutters (such as the master caution/warning switch-lights), push the switch-light in, about 1/8-inch, but no more. Then release it. Do not push it in more than the panel. If you do, you will operate the related system.

(b) Carefully pull the lens cap out until it extends from the panel.

(c) Turn the lens cap on the bail wires to get access to the lamps.

NOTE: You can turn the lens cap in two possible directions.

(d) Replace the lamps.

(e) ON THE -2000 SWITCH-LIGHTS ON THE AISLE STAND (P8); apply grease, Molykote No. 33, to the seal and in the housing (Fig. 201).

NOTE: Keep the grease away from the lamp contacts and the circuit boards at the base of the switch-lights.

CAUTION: WHEN YOU INSTALL THE LENS CAP INTO THE BASE, MAKE SURE YOU ALIGN THE KEY AND KEYWAY. IF YOU DO NOT, THE KEYWAY CAN BREAK AND CAUSE THE SWITCH-LIGHT TO OPERATE INCORRECTLY.

(f) Carefully push the lens cap into the base with one movement to prevent the operation of the switch-light. (If, in error, you push the lens cap a second time, you will operate the related system.)

S 712-015

(3) Do this Task: Switch-Lights - Operational Test.

NOTE: If the two lamps in the annunciator-half of the switch-light do not come on after you replace the lamps, replace the diode/fuse card in the switch-light.

TASK 33-13-00-962-021

5. Remove/Install the Diode/Fuse Card (-2000 and -3000 Light Switch-Lights Fig. 201)

A. Consumable Materials

(1) D00385 Grease - Molykote No. 33

(2) G00000 Tape - Commercially Available

B. Access

(1) Location Zones

211/212 Flight compartment

C. Procedure

S 842-016

(1) Do the procedure given above: Prepare to Do the Maintenance.

S 022-018

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. THE USE OF TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

(2) Do these steps to remove the diode/fuse card:
(a) ON THE -2000 SWITCH-LIGHT ASSEMBLIES;
with the switch-light off, slowly push it until the shutter opens to the width of the flow bar or the label, but no more. Then release the switch-light. (The shutters return to the closed position. The switch-light does not operate; you do not hear a click.)

NOTE: On the switch-lights with no shutters (such as the master caution/warning switch-lights), push the switch-light in, about 1/8-inch, but no more. Then release it. Do not push it in more than the panel. If you do, you will operate the related system.

(b) Carefully pull the lens cap straight out so it extends from the panel.
(c) Turn the lens cap on the bail wires to get access to the diode/fuse card.

NOTE: You can turn the lens cap in two possible directions.

(d) Disconnect the lens cap from the bail wires.
(e) ON -2000 SWITCH-LIGHT ASSEMBLIES;
if the face of the switch-light points up, prevent retraction of the bail wires into the base. To do so, put tape on the bail wires.
(f) Remove the diode/fuse card from the base. To do so, use a small pair of needle-nose pliers.

S 422-019
(3) Do these steps to install the diode/fuse card:
(a) Install the new diode/fuse card in the base.

NOTE: DO NOT USE FORCE TO INSTALL THE DIODE/FUSE CARD.

(b) Connect the lens cap to the bail wires.
(c) ON -2000 AISLE STAND (P8) SWITCH-LIGHTS;
lightly lubricate the outer seal and the inner side of the housing (Fig. 201) with grease, Molykote No. 33. Do not permit the grease to touch the lamp contact or the circuit board on the base.

CAUTION: WHEN YOU INSTALL THE LENS CAP INTO THE BASE, MAKE SURE YOU ALIGN THE KEY AND KEYWAY. IF YOU DO NOT, THE KEYWAY CAN BREAK AND CAUSE THE SWITCH-LIGHT TO OPERATE INCORRECTLY.

(d) Carefully push the lens cap into the base with one movement to prevent the operation of the switch-light. (If you push the lens cap a second time, you will operate the related system.)

S 712-020

(4) Do this Task: Switch-Lights - Operational Test.

TASK 33-13-00-962-023

6. Remove/Install the Switch-Light (-2000 and -3000 Switch-Lights, Fig. 201)

A. Access

(1) Location Zones

211/212 Flight compartment

B. Procedure

S 842-032

(1) Do the task given above: Prepare to Do the Maintenance.

S 022-026

(2) Do these steps to remove the switch-light:

(a) Remove/lower the panel to get access to the wires behind the switch-light.

(b) Remove the contacts for the wires from behind the switch-light.

1) Use the correct tool from Table 201 below.

CONTACT WIRE BARREL SIZE	TOOL PART NUMBER
22	M83723/31-20
20	M83723/31-20
16	M83723/31-16
12	M83723/31-12

Insertion/Removal Tools
Table 201

2) Move the wire to the rear of the tool, then move it suddenly into the front part of the tool.

3) With the tool and the wire together, remove the two from the hole at the same time.

4) Identify the wires to aid during the installation of the switch-light.

(c) Remove the two screws on the end of the switch-light.
(d) Remove the switch-light.
1) Move the mounting sleeve.
2) Remove the switch-light from the panel.
3) If it is applicable, keep the switch guard. You will use it when you install the switch-light.

S 422-027
(3) Do these steps to install the switch-light:
(a) If it is applicable, install the switch guard on the switch-light.
(b) Put the switch-light into the panel and move the sleeve over the switch-light.
1) Pull open the end of the flange on the switch-guard and move it over the flange on the housing.

CAUTION: DO NOT TIGHTEN THE SCREWS TOO MUCH. DAMAGE TO THE SCREWS CAN OCCUR.

(c) Install the two screws on the end of the switch-light.

NOTE: A clearance between the back of the switch-light and the tabs on the sleeve is permitted.

(d) Install the contacts for the wires behind the switch-light.
1) Use the correct tool from Table 201.
2) Move the contact into the end of the tool.
3) Put the contact into the hole and lightly push it into its position.
4) Pull lightly on the wire to make sure the contact is attached.
(e) Put the access panel back.

S 712-028
(4) Do this Task: Switch-Lights - Operational Test.

TASK 33-13-00-962-033
7. Replace the Lamps (-1000 and -4000 Switch-Lights, Fig. 201)
A. Access
(1) Location Zones
211/212 Flight compartment
B. Procedure

S 842-061
(1) Do the task given above: Prepare to Do the Maintenance.

S 962-034
(2) Do these steps to replace the lamps:

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

(a) Make sure the lens cap is off (not pushed in) before you replace the lamps.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE BAIL WIRES WHEN THE LENS CAP IS DISENGAGED. DAMAGE TO THE BAIL WIRES OR THE WIRE ATTACHMENT CAN OCCUR.

(b) Carefully pull the lens cap out until it extends from the master module.
(c) Turn the lens cap on the bail wires to get access to the lamps.
(d) Replace the lamps.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE LENS CAP WHEN YOU INSTALL IT. DAMAGE TO THE EQUIPMENT CAN OCCUR.

(e) Turn the lens cap on the bail wire.
(f) Move the lens cap into the master module until it engages.
(g) ON -1000 SWITCH-LIGHT ASSEMBLIES;
if the lens cap will not engage in the master module, do the steps that follow:
1) Remove the lens cap.
2) With an 1/8-inch wooden dowel or equivalent, push and immediately release the actuator in the center of the master module.
3) Install the lens cap.

S 712-035
(3) Do this Task: Switch-Lights - Operational Test.

TASK 33-13-00-962-036

8. Remove/Install the Diode/Fuse Card (-1000 and -4000 Switch-Lights, Fig. 201)
A. Access
(1) Location Zones
211/212 Flight compartment
B. Procedure

S 842-037
(1) Do the task given above: Prepare to Do the Maintenance.

S 022-038
(2) Do these steps to remove the diode/fuse card:
(a) Make sure the lens cap is off (not pushed in) before you do this procedure.

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE BAIL WIRES WHEN THE LENS CAP IS DISENGAGED. DAMAGE TO THE BAIL WIRES OR THE WIRE ATTACHMENT CAN OCCUR.

(b) Carefully pull the lens cap out until it extends from the master module.
(c) Turn the lens cap on the bail wires to get access to the mounting screws.
(d) Turn the mounting screws counterclockwise eight times.
(e) Remove the lens cap.
    1) Turn the lens cap approximately 90°.
    2) Put a finger between the bail wires, then pull the lens cap out while you hold the housing in its position as shown in Fig. 201.
    3) If the bail wires move apart from the master module during this procedure, do these steps:
        a) Make sure the mounting lugs are in a recess.
        b) Remove the master module with needle-nose pliers that have insulation.
(f) Pull the diode/fuse card back to disconnect it.
(g) Remove the diode/fuse card.

S 422-039

(3) Do these steps to install the diode/fuse card:
(a) Install the diode/fuse card on the master module. Move the diode/fuse card forward from the rear of the master module until it engages.
(b) ON -1000 SWITCH-LIGHT ASSEMBLIES;
make sure the wire follower is in the cam track as shown in (Fig. 201).
(c) Put the master module (with the lens cap disengaged) into the housing.
(d) Make sure the master module is in its position. To do this, use your finger to push the master module in.
(e) Tighten the two mounting screws equally.
    1) Tighten one then the other mounting screw in 1/4-turn increments. Use a jeweler's screwdriver.
    2) Do not make more than 1-1/4 turns.
    3) Make sure the mounting lugs engage with the mounting sleeve.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE LENS CAP WHEN YOU PUT IT BACK IN THE MASTER MODULE. DAMAGE TO THE MASTER MODULE CAN OCCUR.

(f) Carefully move the lens cap into the master module until it engages.
(g) ON -1000 SWITCH-LIGHT ASSEMBLIES;
if the lens cap does not engage in the master module, do these steps:
1) Remove the lens cap.
2) With an 1/8-inch wooden dowel or equivalent, push and immediately release the actuator in the center of the master module.
3) Install the lens cap.

S 712-040
(4) Do this Task: Switch-Lights - Operational Test.

TASK 33-13-00-962-041
9. Remove/Install the Master Module (-1000 and -4000 Switch-Lights, Fig. 201)
A. Access
(1) Location Zones
211/212 Flight compartment
B. Procedure

S 842-042
(1) Do the task given above: Prepare do Do the Maintenance.

S 022-043
(2) Do these steps to remove the master module:
(a) Push and release the lens cap to put it in its extended position.

CAUTION: USE ONLY YOU HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE BAIL WIRES WHEN THE LENS CAP IS DISENGAGED. DAMAGE TO THE BAIL WIRES OR THE WIRE ATTACHMENT CAN OCCUR.

(b) Carefully pull the lens cap out until it extends from the master module.
(c) Turn the lens cap on the bail wires to get access to the mounting screws.
(d) Turn the mounting screws counterclockwise eight times.
(e) Remove the master module.
1) Turn the lens cap approximately 90°.

2) Put a finger between the bail wires, then pull the lens cap out while you hold the housing in its position as shown in Fig. 201.
3) If the bail wires move apart from the master module during this procedure, do these steps:
a) Make sure the mounting lugs are in a recess.
b) Remove the master module with needle-nose pliers that have insulation.

S 422-044

(3) Do these steps to install the master module:
(a) ON -1000 SWITCH/LIGHT ASSEMBLIES;
make sure the wire follower is in the cam track (Fig. 201).
(b) Put the master module (with the lens cap disengaged) into the housing.
(c) Make sure the master module is in its position. To do this, use your finger to push the master module in.
(d) Tighten the two mounting screws equally.
1) Tighten one then the other mounting screw in 1/4-turn increments. Use a jeweler's screwdriver.
2) Do not make more than 1-1/4 turns.
3) Make sure the mounting lugs engage with the mounting sleeve.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE LENS CAP WHEN YOU PUT IT BACK IN THE MASTER MODULE. DAMAGE TO THE MASTER MODULE CAN OCCUR.

(e) Carefully move the lens cap into the master module until it engages.
(f) ON -1000 SWITCH/LIGHT ASSEMBLIES;
if the lens cap does not engage in the master module, do these steps:
1) Remove the lens cap.
2) With an 1/8-inch wooden dowel or equivalent, push and immediately release the actuator in the center of the master module.
3) Install the lens cap.

S 712-064

(4) Do this Task: Switch-Lights - Operational Test.

TASK 33-13-00-962-045

10. Remove/Install the Lens Cap (-1000 and -4000 Switch-Lights, Fig. 201)
A. Access
(1) Location Zones
211/212 Flight compartment

B. Procedure

S 022-060

(1) Do these steps to remove the lens cap:

(a) Do the steps to remove the master module as given in the task above: Remove/Install the Master Module.

(b) With the switch-light off (not pushed in), lift the lens cap until the bail wires turn away from the master module.

1) When the bail wires turn approximately 45 degrees, the bail wires and the master module will disconnect.

S 422-047

(2) Do these steps to install the lens cap:

(a) Put the bail wires on the slots on the side of the master module.

(b) Carefully push the bail wires in.

NOTE: Do not bend the bail wires.

(c) Do the steps to install the master module as given in the task: Remove/Install the Master Module.

TASK 33-13-00-962-048

11. Remove/Install the Switch-Light (-1000 and -4000 Switch-Lights, Fig. 201)

A. Access

(1) Location Zones

211/212 Flight compartment

B. Procedure

S 842-049

(1) Do the task given above: Prepare to Do the Maintenance.

S 022-051

(2) Do these steps to remove the switch-light:

(a) Remove/lower the panel to get access to the wires behind the switch-light.

(b) Remove the contacts for the wires from behind the switch-light.
1) Use the correct tool from Table 201.
2) Move the wire into the rear of the tool, then move it suddenly into the front part of the tool.
3) With the tool and the wire together, remove the two from the hole at the same time.
a) Identify the wires to aid during the installation of the switch-light.

(c) Make sure the switch-light is off (not pushed in) before you do this procedure.

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE BAIL WIRES WHEN THE LENS CAP IS DISENGAGED. DAMAGE TO THE BAIL WIRES OR THE WIRE ATTACHMENT CAN OCCUR.

(d) Carefully pull the lens cap straight out until it extends from the master module.
(e) Turn the lens cap on the bail wires to get access to the mounting screws.
(f) Turn the mounting screws counterclockwise eight times.
(g) Remove the mounting sleeve from behind the panel.
(h) Remove the housing from the front side of the panel.

S 422-052
(3) Do these steps to install the switch-light:
(a) If it is applicable, install the switch guard on the switch-light.
1) Pull open the end of the flange on the switch guard and move it over the flange on the housing (Ref Fig. 201).
(b) Remove the mounting sleeve from the housing.
(c) Make sure the switch-light is off (not pushed in).
1) If it is necessary, push and release the switch-light.

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE BAIL WIRES WHEN THE LENS CAP IS DISENGAGED. DAMAGE TO THE BAIL WIRES OR THE WIRE ATTACHMENT CAN OCCUR.

(d) Carefully pull the lens cap from the master module.
(e) Put the master module with its housing into the front side of the panel.
(f) Remove/lower the panel to get access to the wires.
(g) Install the mounting sleeve behind the panel on the housing.
(h) Make sure the master module is in its position. To do this, use your finger to push the master module in.
(i) Tighten the two mounting screws equally.
    1) Tighten one then the other mounting screw in 1/4-turn increments. Use a jeweler's screwdriver.
    2) Do not make more than 1-1/4 turns.
    3) Make sure the mounting lugs engage with the mounting sleeve.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE LENS CAP WHEN YOU PUT IT BACK IN THE MASTER MODULE. DAMAGE TO THE MASTER MODULE CAN OCCUR.

(j) Carefully move the lens cap into the master module until it engages.
(k) ON -1000 SWITCH/LIGHT ASSEMBLIES;
    if the lens cap does not engage in the master module, do these steps:
    1) Remove the lens cap.
    2) With an 1/8-inch wooden dowel or equivalent, push and immediately release the actuator in the center of the master module.

3) Install the lens cap.

(l) Install the contacts for the wires from behind the switch-lights.
1) Use the correct tool from Table 201.
2) Move the contact into the end of the tool.
3) Put the contact into the hole and lightly push it into its position.
4) Pull lightly on the wire to make sure the contact is in its position.

(m) Install/close the access panel.

S 712-053

(4) Do this Task: Switch-Lights - Operational Test.

TASK 33-13-00-712-054

12. Switch-Lights - Operational Test

A. Access

(1) Location Zones
211/212 Flight compartment

B. Procedure

S 862-055

(1) Supply electrical power (Ref 24-22-00).

S 862-056

(2) Remove the DO-NOT-CLOSE tag(s), and close the circuit breaker(s) that controls the power to the annunciator-half of the switch-light(s). Refer to the task: Prepare to Do the Maintenance.

S 862-057

(3) Remove the DO-NOT-CLOSE tag(s) and close the circuit breaker(s) that controls the power to the system(s) connected to the switch-light(s). Refer to the task: Prepare to Do the Maintenance.

S 712-058

(4) Do these steps to do the test of the switch-lights:
(a) Push the TEST switch on the right lighting control panel (P5).
(b) Make sure the annunciator-half of the switch-lights comes on.
(c) Push the TEST switch again to remove electrical power.
(d) Do a check of the signal input to the switch-light(s) from its related system; do a system test.

S 862-059

(5) Remove electrical power if it is not necessary (Ref 24-22-00).

INTEGRAL PANEL LIGHTS - ADJUSTMENT/TEST

TASK 33-13-00-725-001

1. Integral Panel Lights - Functional Test

A. General

(1) Integral panel lights are referred to as panel lights in this procedure. These lights include the lightplates and instrument lights.

(2) This task contains a test of the panel lights on these panels:

(a) Captain's instrument panels, P1-1 and P1-3

(b) First officer's instrument panels, P3-1 and P3-3

(c) Glareshield panels, P7 and P55

(d) Aisle stand panels, P8, P9, and P10

(e) Overhead panel, P5

(f) Overhead circuit breaker panel, P11

(g) Right side panel, P61

B. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) SSM 33-13-01 thru 33-13-99

(3) WDM 33-13-11 thru 33-13-99

C. Access

(1) Location Zones

211/212 Flight compartment

D. Procedure

S 865-002

(1) Supply electrical power (AMM 24-22-00/201).

S 715-005

(2) Do a test of the captain's panel lights.

(a) At the glareshield, P7, slowly set the switch for the captain's panel lights from the off to bright position.

1) Make sure the panel lights come on correctly at these locations:

a) Captain's instrument panels, P1-1 and P1-3

b) Pilots' standby magnetic compass on the overhead panel, P5

c) Captain's auxiliary instrument panel, P13

d) First observer's audio selector panel, P17

(b) Open each applicable circuit breaker for the captain's panel lights:

1) On the overhead circuit breaker panel, P11.

2) Make sure each captain's panel light, connected to the standby electrical power, stays on brightly (SSM 33-13-03 or WDM 33-13-11 thru 33-13-12).

3) Make sure the other captain's panel lights go off.

(c) Slowly set the switch to the off position.

1) Make sure each captain's panel light, connected to the standby electrical power, goes off correctly.

(d) Close each circuit breaker that was opened.

1) Make sure the captain's panel lights are off.

(e) Set the switch to the usual position.

S 715-006

(3) Do a test of the first officer's panel lights.

(a) At the glareshield, P7, slowly set the switch for the first officer's panel lights from the off to bright position.

1) Make sure the panel lights come on correctly at these locations:

a) The first officer's instrument panels, P3-1 and P3-3

b) The first officer's auxiliary panel, P14

(b) Set the switch to the usual position.

S 715-007

(4) Do a test of the glareshield panel lights.

(a) At the overhead panel, P5, slowly set the switch for the glareshield panel lights from the off to bright position.

1) At the glareshield, P7 and P55, make sure the panel lights come on correctly.

(b) Set the switch to the usual position.

S 715-010

(5) Do a test of the panel lights on the aisle stand.

(a) At the overhead panel, P5, slowly set the switch for the panel lights on the aisle stand from the off to bright position.

1) At the aisle stand panels, P8, P9, and P10, make sure the panel lights come on correctly.

(b) Open each applicable circuit breaker for the panel lights on the aisle stand:

1) On the overhead circuit breaker panel, P11.

2) Make sure each panel light on the aisle stand, connected to the standby electrical power, stays on brightly (SSM 33-13-06 or WDM 33-13-52).

3) Make sure the other panel lights on the aisle stand go off.

(c) Slowly set the switch to the off position.

1) Make sure each panel light on the aisle stand, connected to the standby electrical power, goes off correctly.

(d) Close each circuit breaker that was opened.

1) Make sure the panel lights on the aisle stand are off.

(e) Set the switch to the usual position.

S 715-011

(6) Do a test of the panel lights on the overhead panel.

(a) At the overhead panel, P5, slowly set the switch for the overhead panel lights from the off to the bright position.

1) At the overhead panel, P5, make sure the panel lights come on correctly.

(b) Open each applicable circuit breaker for the overhead panel lights:

1) On the overhead circuit breaker panel, P11.

2) Make sure each overhead panel light, connected to the standby electrical power, stays on brightly (SSM 33-13-04 or WDM 33-13-31 thru 33-13-32).

3) Make sure the other overhead panel lights go off.

(c) Slowly set the switch to the off position.

1) Make sure each overhead panel light, that is connected to the standby electrical power, goes off correctly.

(d) Close each circuit breaker that was opened.

1) Make sure all the overhead panel lights are off.

(e) Set the switch to the usual position.

S 715-008

(7) Do a test of the panel lights on the overhead circuit breaker panel.

(a) At the overhead panel, P5, set the switch for the overhead panel lights from the off to bright position.

1) At the overhead circuit breaker panel, P11, make sure the panel lights come on correctly.

(b) Set the switch to the usual position.

S 715-009

(8) AIRPLANES WITH PANEL LIGHTS ON THE RIGHT SIDE PANEL;
Do a test of the panel lights of the right side panel.

(a) At the glareshield, P7, set the first officer's switch for the panel lights from the off to bright position.

1) At the right side panel, P61, make sure the panel lights come on correctly.

(b) Set the switch to the usual position.

S 865-011

(9) Remove electrical power if it is not necessary (AMM 24-22-00/201).

LIGHTPLATES - REMOVAL/INSTALLATION

1. General
   A. This procedure contains these tasks:
      (1) Lightplate Removal
      (2) Lightplate Installation
   B. Lightplates give lighting to the components and words on the pilot's panels.
   C. When the lighting becomes too dim, you must replace the lightplate. Before you use a lightplate again, you must send it to the shop for lamp replacement. Do not try to replace the lamp in a lightplate while you are on the airplane. Instructions for lamp replacement are in the vendor's manual.
   D. This procedure includes lightplates in modules and on the aisle stand. The maintenance instructions are different for the two types of lightplates.

TASK 33-13-01-004-001

2. Lightplate Removal
   A. Access
      (1) Location Zones
          211/212 Flight compartment
   B. Procedure to Remove a Lightplate in a Module

      S 024-002
      (1) Do these steps to remove a lightplate in a module:
          (a) Remove the knobs if it is necessary.
          (b) Remove the screws that hold the module in position.
          (c) Lift the lightplate from the module.
   C. Procedure to Remove a Lightplate on the Aisle Stand

      NOTE: When you pull the wires and the string through the aisle stand, make sure they stay attached. If they do not stay attached, the wires can accidentally go through incorrect holes in the aisle stand and prevent you from access to the wires.

      S 864-004
      (1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
          (a) 11N1, INSTRUMENT AND PANEL AISLE STAND

      S 024-005
      (2) Do these steps to remove a lightplate on the aisle stand:
          (a) Remove the access panel on the right side of the aisle stand.
          (b) Remove the fastener that holds the loose wires together.

(c) Identify the wires to the lightplate that will be removed from the terminal blocks.
(d) Remove the terminals from the wires at the terminal block.
(e) Attach some string to the applicable wires at the terminal block.
1) Connect the string to the wire with a clove-hitch knot and approximately six half-hitch knots.
(f) Remove the screws that hold the lightplate in position.
(g) Lift out the lightplate along with its attached wires.
1) For the speedbrake lightplate, also remove the seal assembly.
2) For the flap lightplate, also do these steps:
a) Remove the cover assembly.
b) Remove the seal assembly.
(h) Pull the wires for the lightplate and the attached string through the aisle stand until you can get access to the string.
(i) Remove the lightplate wires but not the string.

TASK 33-13-01-404-006

3. Lightplate Installation

A. Parts
(1) Crimp-type electric contact pins - Burndy YHMM-18-2F50
B. References
(1) 24-22-00/201, Electrical Power - Control
C. Access
(1) Location Zones
211/212 Flight compartment
D. Procedure to Install a Lightplate in a Module

S 424-007
(1) Do these steps to install a lightplate in a module:
(a) Attach the lightplate to the module with the screws.
(b) Attach the knobs if it is necessary.

S 714-009
(2) Do these steps to do the test of the installed lightplate:
(a) Turn the applicable light control fully clockwise.

(b) Make sure the lightplate comes on.

E. Procedure to Install a Lightplate in the Aisle Stand

S 424-008

(1) Do these steps to install a lightplate in the aisle stand:
  (a) Attach the string that stayed in the aisle stand to the end of the lightplate wires.
  (b) At the access panel on the right side, pull the string with the attached wires through the aisle stand until you can get access to the wires.
    1) For the speedbrake lightplate, also install the seal assembly.
    2) For the flap lightplate, also do these steps:
      a) Install the seal assembly.
      b) Install the cover assembly.
  (c) Pull the wires in the access panel on the right side until the lightplate moves into its correct position.
  (d) Remove the string from the wires.
  (e) Install the screws that hold the lightplate in position.
  (f) At the access panel on the right side of the aisle stand, let there be approximately eight inches of the loose wires, but no more.
  (g) Install the crimp-type electrical contact pins to the wires in the access panel.
  (h) Make a loop of the loose wires.
  (i) Lock the loose wires together.
  (j) Insert the pins into the terminal blocks.
  (k) Install the access panel on the right side of the aisle stand.

S 714-010

(2) Do these steps to do the test of the installed lightplate:
  (a) Supply electrical power (Ref 24-22-00).
  (b) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
    1) 11N1, INSTRUMENT AND PANEL AISLE STAND

(c) On the left lighting control panelin the P5 panel, turn the outer PANEL/FLOOD AISLE STAND light control fully clockwise.
(d) Make sure the lightplate comes on.

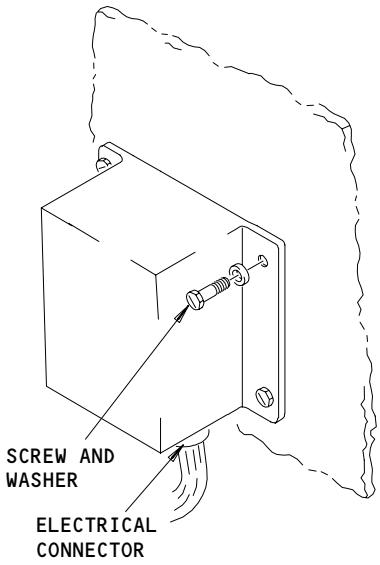
S 864-011
(3) Remove electrical power if it is not necessary (Ref 24-22-00).

PANEL DIMMER CONTROL UNIT - REMOVAL/INSTALLATION

TASK 33-13-02-004-001

1. Dimmer Control Unit - Removal (Fig. 401)
   A. References
      (1) SSM 33-13-01 thru 33-13-99
      (2) WDM 33-13-11 thru 33-13-99
   B. Access
      (1) Location Zone
          211/212 Flight compartment
      (2) Access Panel
          113AL Access Panel
   C. Procedure

      S 014-017
      (1) Get access to the dimmer control unit.
          (a) Remove electrical power from the dimmer control unit.
              1) Open each applicable circuit breaker for the dimmer control unit and attach the DO-NOT-CLOSE tag:
                 a) On the overhead circuit breaker panel, P11.
          (b) To get access to a dimmer control unit for the center instrument or glareshield panel lights (P1, P3, P7):
              1) Push the inboard rudder pedal forward.
              2) Remove the access panel that is forward of the side of the aisle stand.
          (c) To get access a dimmer control unit for the captain's instrument panel lights (P1):
              1) Remove the access panel that is on the sidewall below the captain's forward auxiliary instrument panel, P13.
          (d) To get access a dimmer control unit for the first officer's instrument panel lights (P3):
              1) Remove the access panel that is on the sidewall below the first officer's forward auxiliary instrument panel, P14.
          (e) To get access to a dimmer control unit for the aisle stand panel lights (P8, P9, P10):
              1) For a dimmer control unit installed below the floor on the rudder panel housing, open the access panel, 113AL.



DIMMER CONTROL UNIT
(EXAMPLE)

NOTE: FOR THE LOCATION OF THE DIMMER CONTROL UNIT, REFER TO FIM 33-13-00/101

Dimmer Control Unit Installation
Figure 401

2) For a dimmer control unit in the aisle stand, put your hand through the lower aft part of the aisle stand.

(f) To get access to a dimmer control unit for the overhead panel lights (P5, P11):

(g) AIRPLANES WITH DIMMER CONTROL UNITS ON THE P12 PANEL;
Remove the 115AL panel in the forward left section of the nose gear wheel well.

NOTE: Airplanes with one aisle stand floodlight have dimmer control units mounted on the P12 panel.

NOTE: Airplanes with two aisle stand floodlights have dimmer control units mounted in flight compartment above the ceiling panels.

(h) AIRPLANES WITH DIMMER CONTROL UNITS IN THE FLIGHT COMPARTMENT;
Remove the applicable ceiling panel.

(i) AIRPLANES WITH PANEL LIGHTS ON THE RIGHT SIDE PANEL;
To get access to a dimmer control unit for the right side panel lights (P61):
1) Remove the access panel above the right side panel.

S 024-008

(2) Remove the dimmer control unit.
(a) Remove the electrical connector.
(b) Remove the screws and washers.

TASK 33-13-02-404-009

2. Dimmer Control Unit - Installation (Fig. 401)

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-13-01 thru 33-13-99
(3) WDM 33-13-11 thru 33-13-99

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 424-010

(1) Install the new dimmer control unit.
(a) Install the dimmer control unit with screws and washers.
(b) Connect the electrical connector.
(c) Close or install the access panel.

S 714-018

(2) Do a test of the new dimmer control unit.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker for the dimmer control unit:
1) On the overhead circuit breaker panel, P11.

(c) Slowly set the switch for the panel lights connected to the dimmer control unit from the off to bright position.
1) Make sure the applicable panel lights come on correctly.

S 414-019

(3) Install the panel that was removed to get access to the dimmer control unit.
(a) Remove electrical power if it is not necessary (AMM 24-22-00/201).

INSTRUMENT LIGHTS - SERVICING

1. General
   A. This procedure contains the task to replace the lamp assembly in the brake pressure indicator instrument light.
   B. In this procedure, indicator refers to the brake pressure indicator. Light refers to the brake pressure indicator instrument light.

TASK 33-13-03-963-004

2. Replace the Lamp Assembly in the Brake Pressure Indicator Instrument Light
   A. References
      (1) 24-22-00/201, Electrical Power - Control
   B. Access
      (1) Location Zones
          211/212 Flight compartment
   C. Procedure

      S 863-001
      (1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
          (a) 11N28, INSTRUMENT & PANEL F/O

      S 963-003
      (2) Do these steps to replace the lamp assembly:
          (a) On the P3-1 panel, loosen the screw in the lower left corner of the indicator.
          (b) Pull the indicator out of the panel.
          (c) Disconnect the indicator connector.
          (d) Loosen the two screws on the lamp case assembly, equally, until the lamp case assembly is free.
          (e) Loosen the lamp assembly from the lamp case assembly.
          (f) Install the new lamp assembly into the lamp case assembly.
          (g) To attach the lamp case assembly to the indicator, equally tighten the two screws on the lamp case assembly.
          (h) Install the indicator connector.
          (i) Install the indicator into the panel.
          (j) On the panel, tighten the screw in the lower left corner of the indicator.

(k) Do the test of the light as given below.

D. Do the Test of the Light

S 863-006

(1) Supply electrical power (Ref 24-22-00).

S 863-007

(2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
(a) 11N28, INSTRUMENT & PANEL F/O

S 713-008

(3) Do these steps to do the test of the light:
(a) Turn the PANEL control on the first officer's lighting control panel, P7, clockwise.
(b) Make sure the light becomes bright.

S 863-009

(4) Remove electrical power if it is not necessary (Ref 24-22-00).

FLIGHT COMPARTMENT MISCELLANEOUS LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-14-01 thru 33-14-99
      (2) WDM 33-14-11 thru 33-14-99
   B. Flight compartment miscellaneous lights provide incandescent lighting at each crew and observer's station and the flight deck step. The lights at each station are for reading maps, charts and other items needing bright direct controllable lighting. Each crewmember and observer has a flight kit or utility light that can be hand held. A threshold light provides low intensity lighting of the flight deck step.
   C. Each map and chart light is controlled by rotary on/off dimming controls. The flight kit and utility lights on/off dimming controls are part of the light assembly.
   D. AIRPLANES WITH A SPARE LAMP BOX;
      A spare lamp and fuse test system is provided in spare bulb stowage. The spare bulb stowage is located on the partition behind first officer's station.
2. Operation
   A. Functional Description
      (1) Map Lights and Controls
         (a) Incandescent map lights in the overhead of the captain's and first officer's stations use 28v ac from the right bus on the P11 panel. The map light angle is adjusted by moving the ball lens assembly.
         (b) A MAP rotary control is on the lighting control panel at each end of the glareshield. The control consists of a pull on/push off switch with a rheostat. The control is pulled to turn on the light and rotated clockwise to increase brightness.
      (2) Chart Lights and Controls
         (a) Incandescent chart lights located under panel P7 at the captain's and first officer's stations use 28v ac. Power is from the left bus on the P11 panel. The lights angle is not adjustable.
         (b) A CHART rotary control is on the lighting control panel at each end of the glareshield. The control is the same as for the MAP light control.
      (3) Flight Kit and Utility Lights
         (a) Incandescent flight kit and utility lights are provided at the captain's, first officer's, and observer's stations. They use 28v ac from the right bus on the P11 panel.
         (b) The portable lights are released from a mounting stand with a snap release tensioner. A red/white filter in each unit is selected by rotating the front lens assembly. Two switches and a rheostat are built into the assembly. One switch is in series with the rheostat. The other bypasses the rheostat and provides maximum brightness when pressed. The rotary control is on the back of the light assembly.

(4) Threshold Step Light

(a) The incandescent threshold step light uses 28v ac supplied by the ground service bus through the LIGHTS FWD ENTRY ATTND circuit breaker on the P34 panel. The threshold step light is controlled by the Flight Deck Door Open/Close relay. The relay energizes when the flight deck door is open and turns on the threshold step light. The light is located forward and above the flight deck step.

(5) AIRPLANES WITH A SPARE LAMP BOX;
Spare Lamp and Fuse Test System

(a) The spare lamp and fuse test system located in spare bulb stowage uses 28v dc supplied by the right main bus through the SPARE LAMP TEST circuit breaker on the P11 panel. The test light is wired in series with 28v dc power and a test clip. The test socket is wired to ground. A spare lamp or fuse is tested by attaching the test clip at one end and positioning the other end on the test socket. The test light will illuminate in green if the lamp or fuse under test is good.

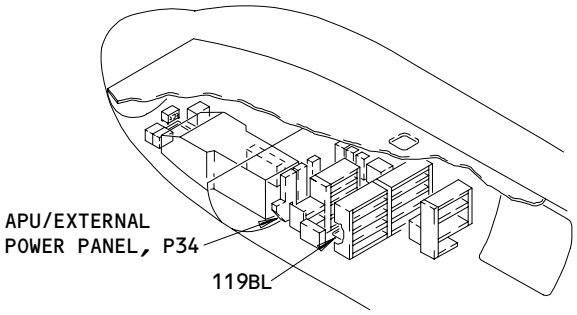
FLIGHT COMPARTMENT MISCELLANEOUS LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
BOX – SPARE LAMP 1>	2		FLT COMPT	*
CIRCUIT BREAKER –	1		FLT COMPT, OVHD CB PNL, P11	*
CIRCUIT BREAKER –	1		119BL, MAIN EQUIP CTR PNL, P34	*
LIGHT –				
CHART	1		FLT COMPT	33-14-00
FLIGHT KIT	1		FLT COMPT	33-14-00
MAP	1		FLT COMPT	33-14-00
UTILITY	1		FLT COMPT	33-14-00
THRESHOLD STEP	2		FLT COMPT	33-14-00
SWITCH –	1		FLT COMPT	*

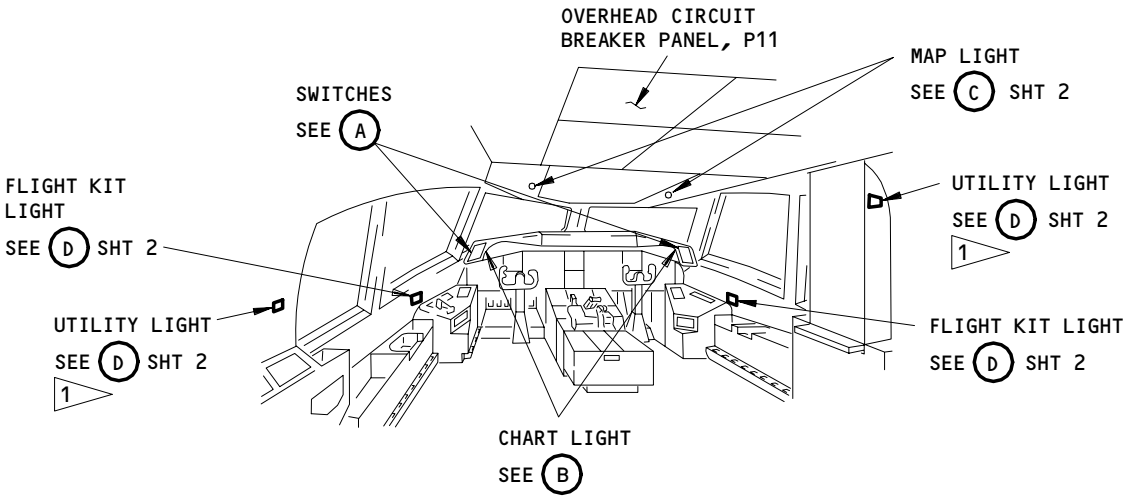
* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

1> NOT INSTALLED ON ALL AIRPLANES

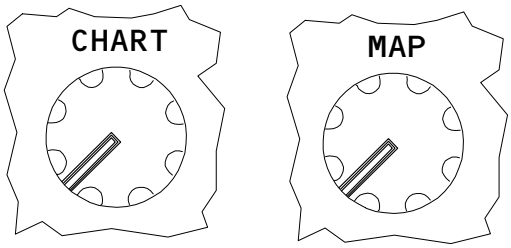
Flight Compartment Miscellaneous Lights – Component Index
Figure 101



MAIN EQUIPMENT CENTER



FLIGHT COMPARTMENT



SWITCHES
(EXAMPLES)
A

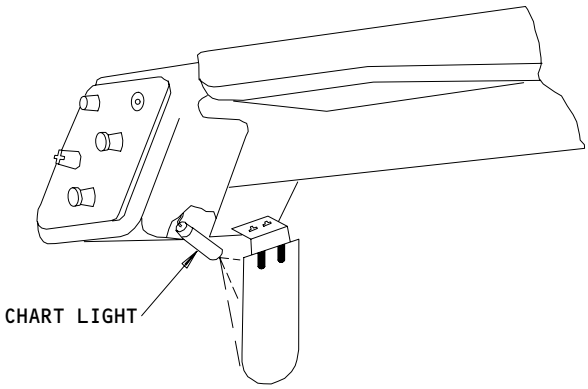
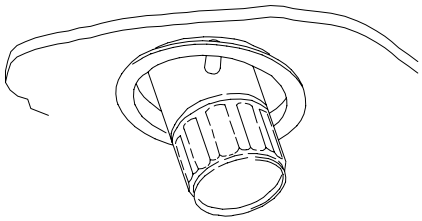


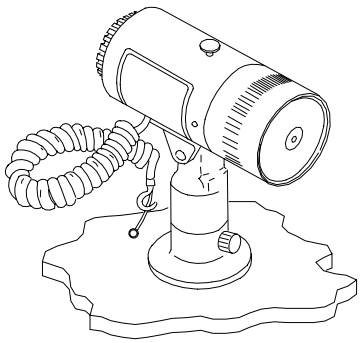
CHART LIGHT
(EXAMPLE)
B

1 NOT INSTALLED ON ALL AIRPLANES

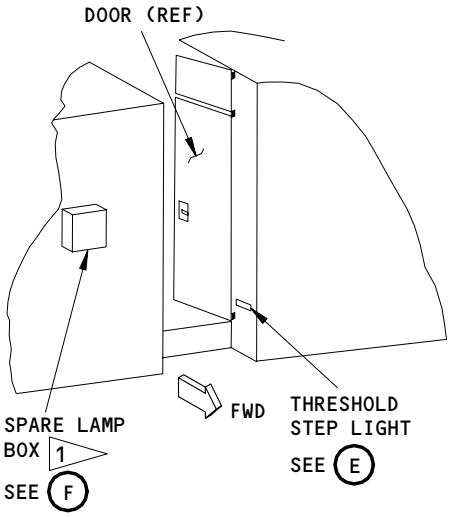
Flight Compartment Miscellaneous Lights - Component Location
Figure 102 (Sheet 1)



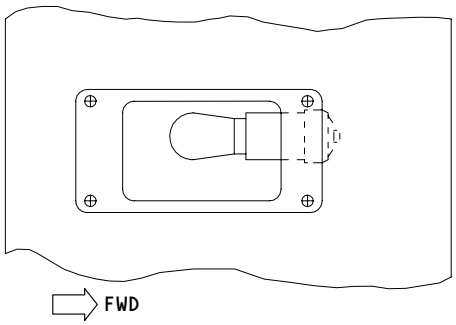
MAP LIGHT
(EXAMPLE)
SEE (C) FROM SHT 1



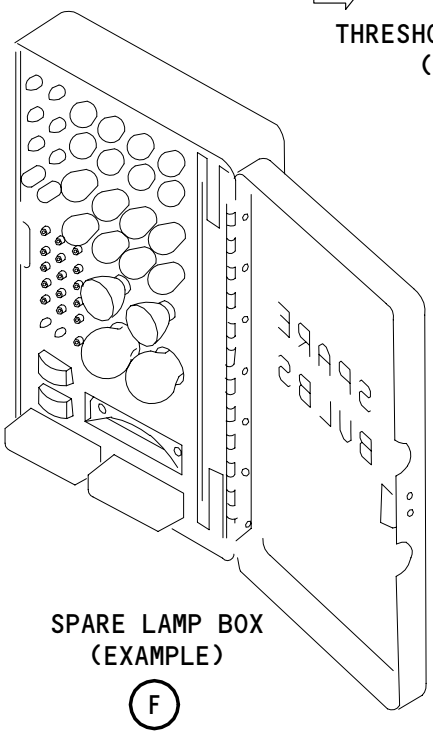
FLIGHT KIT/UTILITY LIGHT
(EXAMPLE)
(D) FROM SHT 1



FLIGHT COMPARTMENT
ENTRY



THRESHOLD STEP LIGHT
(EXAMPLE)
(E)



SPARE LAMP BOX
(EXAMPLE)
(F)

1 NOT INSTALLED ON ALL AIRPLANES

Flight Compartment Miscellaneous Lights - Component Location
Figure 102 (Sheet 2)

FLIGHT COMPARTMENT MISCELLANEOUS LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks for the flight compartment miscellaneous lights:
      (1) Map Light - Lamp Replacement
      (2) Chart Light - Lamp Replacement
      (3) Flight Kit Light or Utility Light - Lamp Replacement
      (4) Threshold Step Light - Lamp Replacement

   TASK 33-14-00-962-002
2. Map Light - Lamp Replacement
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-14-01
      (3) WDM 33-00-01, Lamp Usage Chart
      (4) WDM 33-14-11
   B. Access
      (1) Location Zones
          211/212 Flight compartment
   C. Procedure

      S 962-024
      (1) Replace the lamp.
          (a) Remove electrical power from the light:
              1) Open each applicable circuit breaker for the map light and attach the DO-NOT-CLOSE tag:
                 a) On the overhead circuit breaker panel, P11.
          (b) Turn the lens assembly counterclockwise to remove it from the socket assembly.
          (c) Carefully replace the lamp.
          (d) Install the lens assembly.

      S 712-025
      (2) Do a test of the new lamp.
          (a) Supply electrical power (AMM 24-22-00/201).

(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) At the glareshield, P7, set the switch for the map light from the dim to bright position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-14-00-962-008

3. Chart Light - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-14-01
(3) WDM 33-00-01, Lamp Usage Chart
(4) WDM 33-14-21

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 962-009
(1) Replace the lamp.
(a) Remove electrical power from the light:
1) Open each applicable circuit breaker for the chart light and attach the DO-NOT-CLOSE tag:
a) On the overhead circuit breaker panel, P11.
(b) Pull the lens free of the springs that hold it in position.
(c) Carefully replace the lamp.
(d) Install the lens.

S 712-010
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) At the glareshield, P7, set the switch for the chart light from the dim to bright position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-14-00-962-010

4. Flight Kit Light or Utility Light - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-14-02

(3) WDM 33-00-01, Lamp Usage Chart
(4) WDM 33-14-31

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 962-011
(1) Replace the lamp.
(a) Remove electrical power from the light:
1) Open each applicable circuit breaker for the light and attach the DO-NOT-CLOSE tag:
a) On the overhead circuit breaker panel, P11.
(b) Remove the clip that holds the lens in position.
(c) Remove the lens.
(d) Carefully replace the lamp.
(e) Install the lens.
(f) Replace the clip.

S 712-012
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) Set the switch on the rear of the light from the dim to bright position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-14-00-962-011

5. Threshold Step Light - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-14-02
(3) WDM 33-00-01, Lamp Usage Chart
(4) WDM 33-14-41

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 962-012
(1) Replace the lamp.
(a) Remove electrical power from the light:
1) Open each applicable circuit breaker for the threshold light and attach the DO-NOT-CLOSE tag:
a) On the APU/EXT power panel, P34.
(b) Remove the screws that hold the light assembly in position.
(c) Remove the lens assembly.
(d) Carefully replace the lamp.
(e) Install the lens assembly and light assembly with the screws.

S 712-013
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove the DO-NOT-CLOSE tag and close each circuit breaker that was opened.
(c) Open the flight compartment door.
1) Make sure the new lamp comes on correctly.
(d) Close the flight compartment door.
1) Make sure the light goes off correctly.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

MASTER DIM AND TEST - DESCRIPTION AND OPERATION

1. General
   A. For more information this lighting system, refer to these sources:
      (1) SSM 33-16-01 thru 33-16-99
      (2) WDM 33-16-11 thru 33-16-99
   B. A master dim and test system allows the crew to test and control the brightness of all annunciators in the flight compartment. A dim/bright switch on overhead panel P5 allows the crew to control the brightness of all lighted annunciators.
   C. Dimming control cards dim lighted annunciators when DIM is selected. Operating the test switch causes all annunciators to light for checking the lamps. Associated relays, dimming control cards, and secondary circuit breakers are in flight deck lighting equipment panel P26.
   D. An autobright sensor unit in the P1-3 instrument panel automatically switches all annunciators to full bright when a certain ambient light intensity is sensed and DIM is selected.
2. Operation
   A. Functional Description
      (1) Master Dim and Test
         (a) The master dim and test system controls all annunciators including those on right side panel P61. They are controlled with a rotary IND LTS DIM/BRT switch and a push-on/push-off TEST switch on overhead panel P5. A LT OVRD switch-light on overhead panel P5 returns lighted annunciators to full brightness when pressed (Ref 33-11-00).
         (b) Type I annunciators are used for all annunciators except for the IRS MODE SEL panel annunciators which are Type II. Type I annunciators use a controlled ground while Type II annunciators use a controlled power source. The Type I annunciators used in the flight compartment use voltage from Type I dimmer control cards. Type I dimmer control cards and associated master dim and test relays are in the lighting equipment panel P26 located on the right side of the flight deck. Each dimmer control card has a Light Emitting Diode (LED) which lights when the card is operating properly. If the LED is off, the card is faulty or has no power to it. The cards provide a constant output regardless of the number of lights loading the circuit.
         (c) The Type II annunciators on the IRS Mode Select panel receive power from their associated IRU. The master dim and test system provides power to the annunciators during testing in BRT mode only. The dim function of the IRS annunciators is created by connecting the annunciators ground to the IRUs DIM output. The annunciator is supplied with 28v dc, but the IRUs DIM output lead is outputting 14v dc. The 14v dc voltage potential causes the annunciators to light dim. The dim function of the IRS Mode Select panel can only be tested if at least one of the annunciators for the IRU is lighted by the IRU. The IRU output turns on the dimming output transistor. With the transistor off the annunciators will not have a ground when in DIM mode.

(d) An autobright sensor in the P1-3 panel uses photocells with amplifier circuits to sense ambient light conditions. The sensor provides two levels of output, off when the ambient light is bright, and on when it has reduced to a set level. When off and DIM is selected, the sensor opens a ground to de-energize the autobright control relays. This disconnects all annunciators from their dimming cards. This causes all annunciators to go from dim to bright.

(e) Under normal conditions, 28v dc from the dim control circuit breaker energizes a power control relay which sends 28v dc to the dim control relays. The dim control relays are energized by the DIM position of the control switch providing a ground. When air conditioning airflow sensors or rack overheat sensors detect insufficient airflow for equipment cooling, a ground is removed from the power control relay by the air conditioning trim valve controller. The power control relay then removes 28v dc from the dim control relays and disables the automatic dimming function. This ensures all warning and caution annunciations are visible even if cooling is lost.

(f) Positioning the rotary switch to BRT also removes the ground from the control relays. They de-energize and connect the annunciators to 28v dc.

(g) When the TEST switch is pressed, the test relays are energized. The relays contacts provide a ground for all the flight compartment annunciators. The annunciators then light to the brightness selected by the DIM/BRT switch. Faulty bulbs can then be located and replaced as necessary.

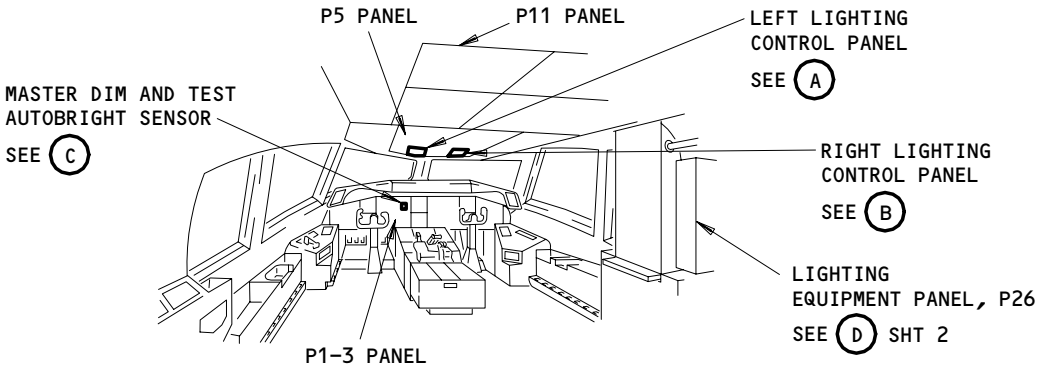
(h) All primary 28v dc circuit breakers for master dim and test systems are on overhead panel P11. Secondary circuit breakers are in the P26 panel to isolate the dimmer card loads from each other.

MASTER DIM AND TEST

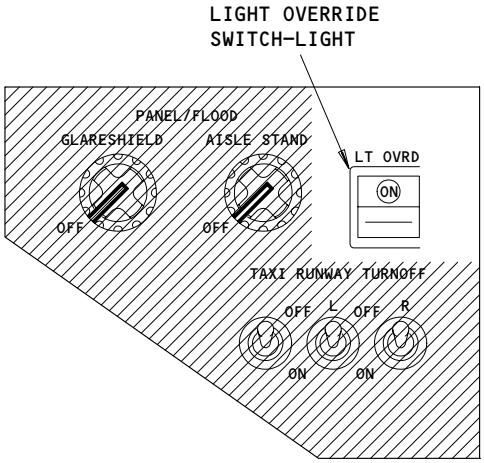
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CARD –	2	*	FLT COMPT, P26	33-16-01
CIRCUIT BREAKER –	1	*	FLT COMPT, P11 AND P26	33-16-01
PANEL –				
LIGHTING CONTROL			FLT COMPT, P5	
LIGHTING EQUIPMENT			FLT COMPT, P26	
RELAY –		*	119BL, MAIN EQUIP. CTR, P36	
RELAY –	2	*	FLT COMPT, P26	
SENSOR –	1		FLT COMPT, P1-3	
SWITCH –	1		FLT COMPT, LIGHTING CONTROL PANEL, P5	

* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

Master Dim and Test – Component Index
Figure 101

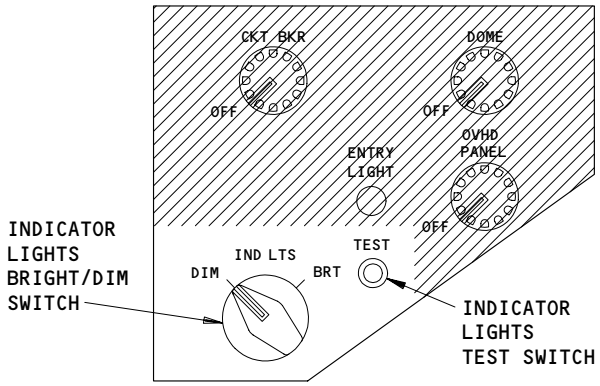


FLIGHT COMPARTMENT



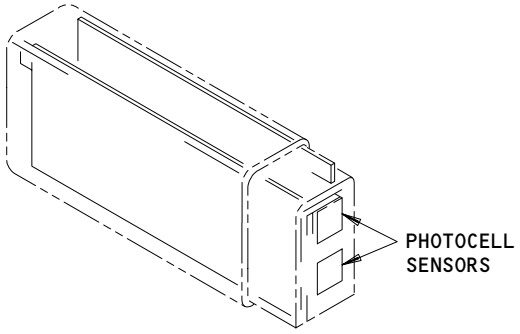
LEFT LIGHTING CONTROL PANEL (P5)

A



RIGHT LIGHTING CONTROL PANEL (P5)

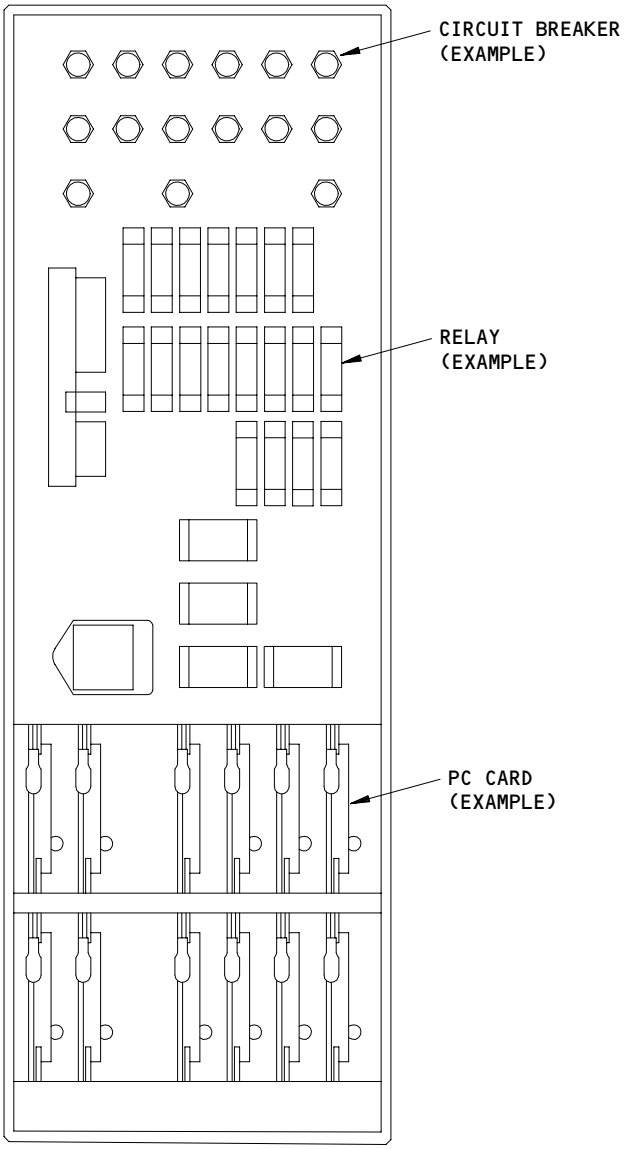
B



MASTER DIM AND TEST AUTOBRIGHT SENSOR (P1-3)

C

Master Dim and Test - Component Location
Figure 102 (Sheet 1)



LIGHTING EQUIPMENT PANEL, P26

D

Master Dim and Test - Component Location (Detail from Sht 1)
Figure 102 (Sheet 2)

MASTER DIM AND TEST - ADJUSTMENT/TEST

1. General
   A. This procedure contains the operational test of the master dim and test system. Do these tasks to complete the operational test:
      (1) Prepare to Do The Operational Test
      (2) Do The Test of The Pilots' Master Dim and Test Indicator Lights
      (3) Do The Tests of The Pilots' Override System, EFIS System, Autobright Control, and Annunciators for The Landing Gear
      (4) Put The Airplane Back to Its Initial Condition
   B. When you do the test, you do a check of the lights in the annunciators and in the switch-lights. You also do a check of the dim control (to include the EHSI, EADI, and EICAS panels), autobright system, EFIS air/ground relay, and EHSI and EADI test patterns.
   C. To do a test of the function that goes with the light(s) in an annunciator or a switch-light, you must do the test of the related system.

TASK 33-16-00-865-027

2. Prepare to Do The Operational Test
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) AMM 31-41-00/501, EICAS
      (3) AMM 34-22-00/501, Flight Instrument System
   B. Access
      (1) Location Zones
          211/212 Flight Compartment
   C. Procedure

      S 865-002
      (1) Supply electrical power (AMM 24-22-00).

      S 865-003
      (2) Make sure the top and the bottom displays of the EICAS system are on (AMM 31-41-00).
          (a) Turn the EICAS BRT control on the pilots' display select panel clockwise to the fully bright position.

      S 865-004
      (3) Make sure the EFIS system is on (AMM 34-22-00).

S 865-011
(4) Push the LT OVRD switch-light on the left lighting control panel (P5) to off.

S 865-012
(5) Make sure the RECIRC FAN L switch-light on the air condition control module (P5) is ON.

S 865-013
(6) Put some tape over the two photocells on the autobright sensor in the P1-3 panel.

S 865-015
(7) Set the captain's and first officer's EFIS controls on the P10 panel to MAP.

S 865-017
(8) Make sure the CDUs on the left and right FMC system are on (AMM 34-61-00).

TASK 33-16-00-715-028

3. Do The Test of The Pilots' Master Dim And Test Indicator Lights

A. References
(1) AMM 34-22-00/501, Flight Instrument System

B. Access
(1) Location Zones
211/212 Flight Compartment

C. Procedure

S 865-029
(1) Do the task: Prepare to Do The Operational Test.

S 715-001
(2) Do these steps to do the test of the pilots' master dim and test indicator lights:
(a) Turn all the BRT controls on the left and right EFIS control modules (P10) clockwise to the fully bright position. There are four BRT control knobs, two on each side.

(b) Turn the BRT control on the EICAS control panel (P9) clockwise to the fully bright position.
(c) Set the IND LTS control on the right lighting control panel (P5) to BRT.
(d) Push the TEST switch on the right lighting control panel.
1) Make sure the right side of these switch-lights on the P5 panel come on brightly:
a) C PUMPS LEFT in the fuel management control module
b) R ENG and APU in the bleed air control module
2) Make sure the left side of all other switch-lights mounted vertically in the P5 panel come on brightly.
3) Make sure the top and the bottom of these switch-lights in the P5 panel come on brightly:
a) RAM AIR TURB in the engine start control module
b) EXT PWR in the electrical power control module
c) L PACK RESET and R PACK RESET in the air condition control module
4) Make sure the top and the bottom of the master CAUTION/WARNING switch-lights on the captain's and the first officer's P7 panels come on brightly.
5) Make sure the top and the bottom of the switch-lights for the L VOR and the R VOR control modules in the P55 panel come on brightly.
a) AIRPLANES WITH COLLINS 822-1492-102 MODE CONTROL PANEL (MCP);
Make sure the LCD's display 8's and blink.

NOTE: Collins 822-1492-102 MCP's are identified by LCD type SPD, ALT, and HDG windows.

6) Make sure the top and the bottom of the GND PROX G/S INHIB switch-light on the P1-3 panel comes on brightly.
7) Make sure the EHSI and EADI for the captain and the first officer show the word TEST with a test pattern.

NOTE: When you push the TEST switch on the P5 panel, an internal test of the EFIS system starts. TEST OK must show on the EHSI and EADI displays. If TEST FAIL shows on these displays, do the operational test for the flight instrument system (AMM 34-22-00).

8) Make sure the bottom half of all the other switch-lights on the P5, P8, P55, and P61 panels come on brightly, but not these switch-lights:
   a) On the P1-1, P1-3, P3-1, and P3-3 panels:
      1. INSTR SOURCE SEL FLT DIR on the captain's and the first officer's instrument panels
      2. LEADING EDGE
      3. TRAILING EDGE
      4. GND PROX FLAP OVRD
      5. GND PROX/CONFIG GEAR OVRD
      6. RESERVE BRAKES
   b) On the P5 panel:
      1. All the switch-lights on the anti-collision and landing lights control panel
      2. WING on the anti-ice control module
      3. LT OVRD on the left lighting control panel
9) Make sure these lights come on brightly:
   a) All annunciators on the P1-3, P3-1, P3-3, P5, P8, P10, and P61 panels:
   b) All annunciators in the shape of an oval on the left and the right FMC CDUs in the P9 panel
   c) The ALT lights on the captain's and the first officer's altimeters in the P1-3 and the P3-3 panels

(e) Set the IND LTS control on the right lighting control panel in the P5 panel to DIM.
   1) Make sure all the annunciators and switch-lights you used to do the test up to this time go from bright to dim, but not the STBY POWER OFF annunciator (P5).

(f) Push the TEST switch on the right lighting control panel (P5) again.

(g) Remove the tape from the bottom photocell on the autobright sensor in the P1-3 panel.

(h) Remove the tape from the top photocell on the autobright sensor in the P1-3 panel.

S 865-035

(3) Do this task: "Put The Aiplane Back to Its Initial Condition."

TASK 33-16-00-715-030

4. Do The Tests of The Pilots' Override System, EFIS System, Autobright Control, and Annunciators for The Landing Gear

A. References
   (1) AMM 27-61-00/201, Spoiler/Speedbrake Control System
   (2) AMM 32-09-02/201, Air/Ground Relays
   (3) SSM 33-16-01
   (4) WDM 33-16-21 and 33-16-41

B. Access
   (1) Location Zones
       211/212 Flight Compartment

C. Procedure

S 845-036

(1) Do this task: "Prepare to Do The Operational Test."

S 715-018

(2) Do these steps to do the test of the pilots' override system:
   (a) Set the IND LTS control on the right lighting control panel (P5) to DIM.
   (b) Push the TEST switch on the right lighting control panel (P5).
   (c) Push the LT OVRD switch-light on the left lighting control panel (P5) to ON.
       1) Make sure all the annunciators you used in the test up to this time go from dim to bright.
   (d) Push the LT OVRD switch-light on the left lighting control panel again, to the off position.
   (e) Push the RECIRC FAN L switch-light on the air condition control module (P5) to INOP.
       1) Make sure all the annunciators you used to do the test up to this time go from dim to bright.
   (f) Push the RECIRC FAN L switch-light on the air condition control module (P5) to ON.
   (g) Push the TEST switch on the right lighting control panel (P5).

S 715-019

(3) Do these steps to do the test of the EFIS system:

WARNING: DO THE DEACTIVATION PROCEDURE FOR FLIGHT MODE SIMULATION BEFORE YOU OPEN THE AIR/GROUND CIRCUIT BREAKERS. WHEN YOU OPEN THE AIR/GROUND CIRCUIT BREAKERS, THE AIRPLANE IS IN THE FLIGHT MODE. IN THE FLIGHT MODE, MANY OF THE AIRPLANE SYSTEMS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(a) Do the deactivation procedure for flight mode simulation (AMM 32-09-02).

WARNING: DO THE DEACTIVATION PROCEDURE FOR THE SPOILERS OR MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE SPOILERS. THE SPOILERS CAN RETRACT QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(b) Do the deactivation procedure for the spoilers (AMM 27-61-00) or move all persons and equipment away from the spoilers.
(c) If you did not do the deactivation procedure for the spoilers, open these circuit breakers on the P11 panel and attach DO-NOT-CLOSE tags:
1) 11C30, LANDING GEAR POS SYS 1
2) 11S15, AIR/GND SYS 1
(d) Push the TEST switch on the right lighting control panel (P5).
(e) Make sure all the annunciators you used to do the test up to this time come on.
(f) Make sure the EHSI and the EADI for the captain the first officer do not show the word TEST with a test pattern.
(g) If you did not do the deactivation procedure for the spoilers, remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
1) 11C30, LANDING GEAR POS SYS 1
2) 11S15, AIR/GND SYS 1
(h) Put the airplane back to the ground mode (AMM 32-09-02).
(i) Do the activation procedure for the spoilers if you did the deactivation procedure (AMM 27-61-00).
(j) Make sure the EHSI and the EADI for the captain and the first officer show the word TEST with a test pattern.
(k) Push the TEST switch on the right lighting control panel (P5) again.

S 715-020

(4) Do these steps to do the test of the autobright control:
(a) Set the IND LTS control on the right lighting control panel (P5) to DIM.
(b) Push the TEST switch on the right lighting control panel (P5).
(c) Remove the tape from the bottom photocell on the autobright sensor in the P1-3 panel.

(d) Point a light on the bottom photocell on the autobright sensor in the P1-3 panel.
1) At the captain's instrument panel, P1-3, make sure each annunciator light connected to the autobright control comes on (SSM 33-16-01, or WDM 33-16-21 and WDM 33-16-41).
(e) Remove the tape from the top photocell on the autobright sensor in the P1-3 panel.
(f) Point a light on the top photocell on the autobright sensor in the P1-3 panel.
(g) Make sure all the annunciators you used to do the test up to this time change from dim to bright.
(h) Push the TEST switch on the right lighting control panel (P5) again.

S 715-022
(5) Do these steps to do the test of the annunciators for the landing gear:
(a) Set the IND LTS control on the right lighting control panel (P5) to DIM.
(b) Push the TEST switch on the right lighting control panel (P5).
(c) Open this circuit breaker on the P11 panel:
1) 11P28, R IND LTS 1
(d) Make sure these lights go off:
1) The left side of the NOSE, LEFT and RIGHT annunciators
2) The top of the GEAR and DOORS annunciators
(e) Close this circuit breaker on the P11 panel:
1) 11P28, R IND LTS 1
(f) Open this circuit breaker on the P11 panel:
1) 11A35, INDICATOR LIGHTS 4
(g) Make sure these lights go off:
1) The right side of the NOSE, LEFT, and RIGHT annunciators
2) The bottom of the GEAR and DOORS annunciators
(h) Close this circuit breaker on the P11 panel:
1) 11A35, INDICATOR LIGHTS 4
(i) Push the TEST switch on the right lighting control panel (P5) again.

S 865-033
(6) Do this task: "Put The Aiplane Back to Its Initial Condition."

TASK 33-16-00-865-032

5. Put The Airplane Back to Its Initial Condition

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

B. Access

(1) Location Zones

211/212 Flight Compartment

C. Procedure

S 865-023

(1) Remove electrical power if it is not necessary (AMM 24-22-00).

MASTER DIM AND TEST PRINTED CIRCUIT CARDS - REMOVAL/INSTALLATION

1. General (Fig. 401)
   A. This procedure contains these tasks:
      (1) Remove the Master Dim and Test Printed Circuit Cards
      (2) Install the Master Dim and Test Printed Circuit Cards
   B. The master dim and test printed circuit cards include these items:
      (1) Eleven dimmer control cards, M10261 thru 10270 and M10438
      (2) One diode card, M10480.
   C. These items are in the lighting equipment panel, P26, aft the P61 panel and above the P6 panel.
   D. This procedure uses "printed circuit cards" to refer to the master dim and test printed circuit cards.

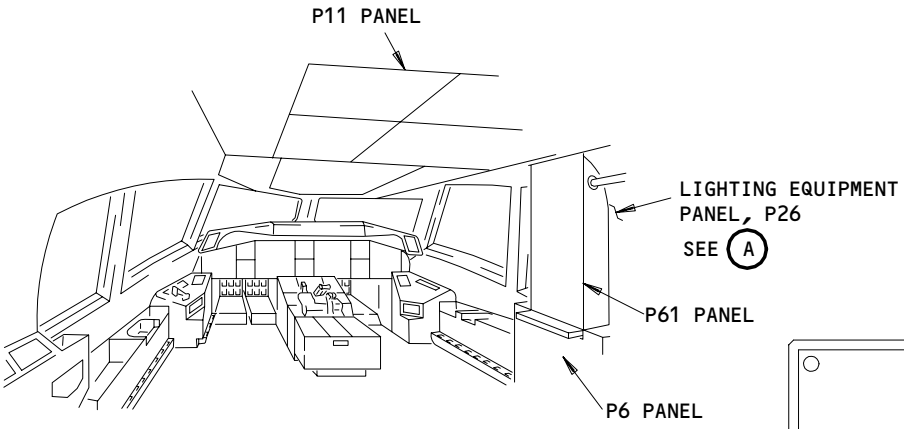
TASK 33-16-01-004-001

2. Remove the Master Dim and Test Printed Circuit Cards
   A. Access
      (1) Location Zones
          211/212 Flight compartment
   B. Procedure

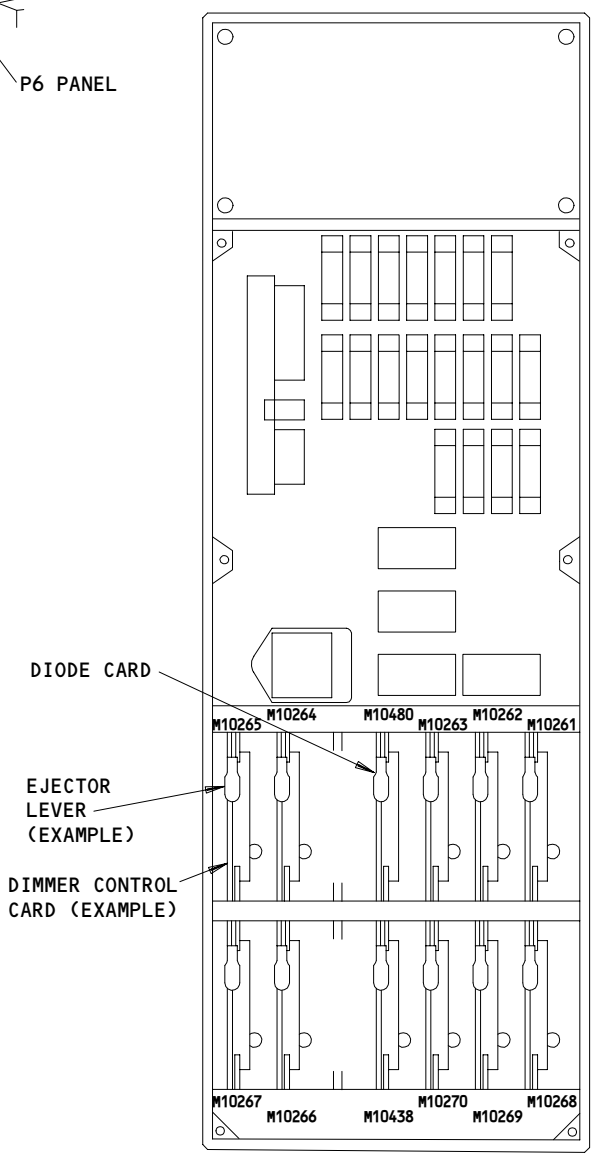
      S 864-002
      (1) Refer to Table 401 below. Open the applicable circuit breaker(s) on the overhead circuit breaker panel, P11, and attach the DO-NOT-CLOSE tag(s).

TABLE 401

MODULE	CIRCUIT BREAKER(S)
M10261	11P1, L IND LTS 1
M10262	11P2, L IND LTS 2
M10263	11P2, L IND LTS 2
M10264	11P28, R IND LTS 1
M10265	11P28, R IND LTS 1
M10266	11P29, R IND LTS 2
M10267	11P29, R IND LTS 2
M10268	11A34, INDICATOR LIGHTS 3
M10269	11A32, INDICATOR LIGHTS 1
M10270	11A33, INDICATOR LIGHTS 2
M10438	11A35, INDICATOR LIGHTS 4
M10480	Open circuit breakers for card modules M10261 thru M10438.



FLIGHT COMPARTMENT



LIGHTING EQUIPMENT PANEL, P26
A

Master Dim and Test Printed Circuit Cards Removal/Installation
Figure 401

S 024-003
(2) Do these steps to remove the master dim and test printed circuit cards:
(a) Open the P26 panel door.
(b) On the printed circuit card to be removed, pull up on the ejector lever.
(c) Remove the printed circuit card from the slot.

TASK 33-16-01-404-004

3. Install the Master Dim and Test Printed Circuit Card

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 424-005
(1) Do these steps to install the master dim and test printed circuit cards:
(a) Move the printed circuit card into the correct slot.
(b) Push the ejector lever down to lock the printed circuit card in position.

D. Do the Test of the Master Dim and Test Printed Circuit Card

S 864-006
(1) Remove the DO-NOT-CLOSE tag(s) and close the applicable circuit breaker(s) on the P11 panel. Refer to Table 401.

S 864-007
(2) Set the IND LTS light control on the right side of the pilots' overhead panel, P5, to DIM.

S 864-008
(3) Make sure the LT OVRD switch-light on the left side of the pilots' overhead panel, P5, is in the off position.

S 864-009
(4) Put some tape on the two photocells of the master dim and test autobright sensor in the P1-3 panel.

S 864-010
(5) Supply electrical power (Ref 24-22-00).

S 714-011
(6) Do this step to do the test of the dimmer control cards M10261, thru M10270 and M10438:
(a) Make sure the LED on the dimmer control card comes on.

NOTE: If the LED does not come on, the printed circuit card is defective or it does not receive power.

S 714-012
(7) Do these steps to do the test of the diode card, M10480:
(a) Make sure the LEDs on all nine dimmer control cards come on.
(b) Push the TEST switch on the right lighting control panel, P5.
(c) Make sure all annunciators come on dimly.
(d) Push the TEST switch again to remove electrical power.

E. Restore the Airplane Back to Its Initial Condition

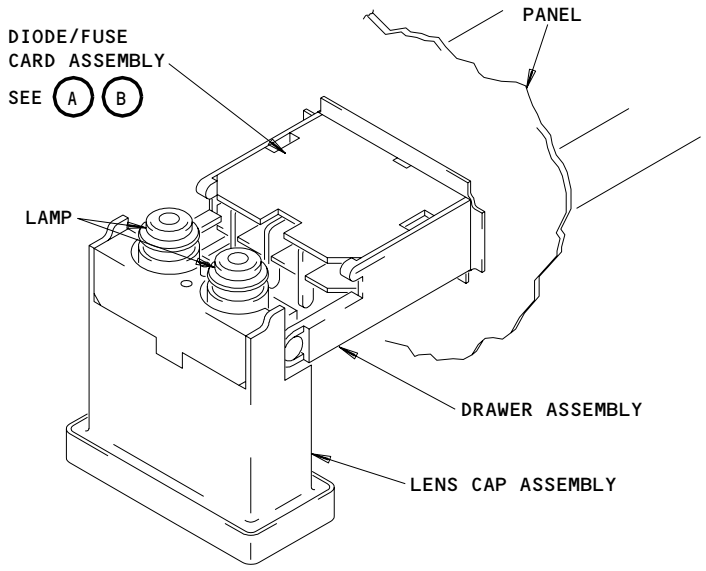
S 864-012
(1) Remove the tape from the two photocell sensors on the P1-3 panel.

S 864-013
(2) Close the P26 panel.

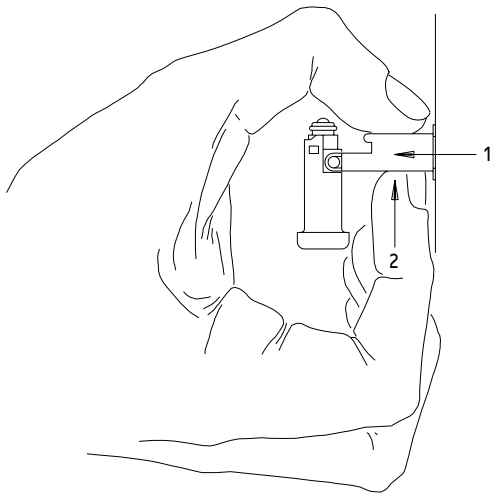
S 864-014
(3) Remove electrical power if it is not necessary (Ref 24-22-00).

ANNUNCIATOR - MAINTENANCE PRACTICES

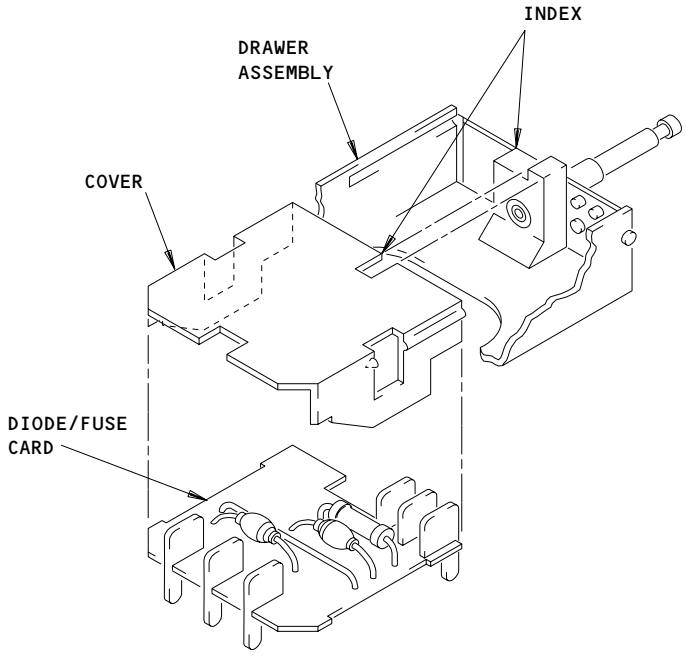
1. General
   A. This procedure contains these tasks:
      (1) Replace the Lamps in the Annunciator
      (2) Replace the Diode/Fuse Card in the Annunciator
      (3) Remove the Annunciator
      (4) Install the Annunciator
      (5) Remove the Discrete Warning Display Module (M779)
      (6) Install the Discrete Warning Display Module (M779)
      (7) Replace the LEDs in the LED Annunciators.
   B. The annunciators go directly in the pilots' instrument panels and modules.
   C. Each incandescent annunciator contains two lamps. Although one lamp possibly does not operate, make sure two lamps are installed in the lens cap at all times.
   D. You will find four types of annunciators:
      (1) The Type I annunciators with one source of power
      (2) The Type I annunciators with two sources of power
      (3) The Type II annunciators.
      (4) The LED annunciators.
   E. Make sure you use the correct diode/fuse card; they are not interchangeable. Identify diode/fuse cards and drawer assemblies for Type I annunciators by their color:
      (1) Black for those in annunciators with one source of power
      (2) White for those in annunciators with two sources of power
   F. You will find only Type II annunciators in the Inertial Reference Mode Panel (M59). All other annunciators in the flight compartment are Type I.
   G. LED Annunciators:
      (1) The LED annunciators use a single LED cap module to replace the twin-lamp incandescent lens cap assembly, circiut module assembly and drawer assembly.
      (2) The bases and mounting sleeves for the LED and incandescent annunciators are the same for interchangeable annunciators.



INCANDESCENT ANNUNCIATOR
(EXAMPLE)

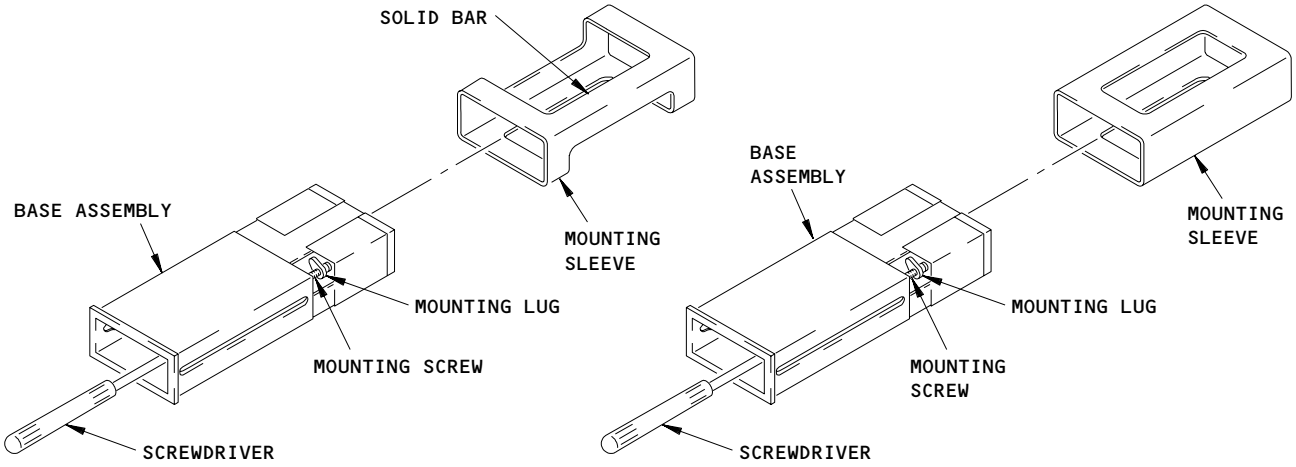


DIODE/FUSE CARD ASSEMBLY
A



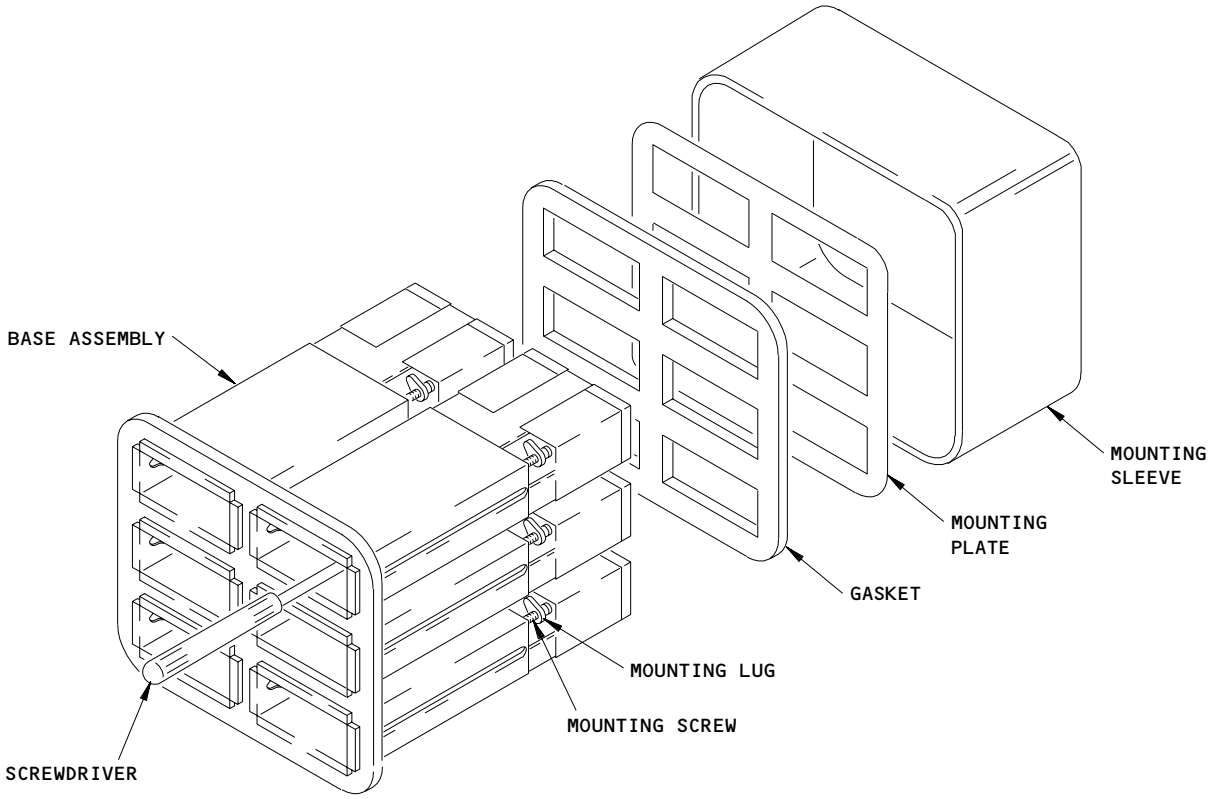
DIODE/FUSE CARD ASSEMBLY
B

Annunciator Maintenance Practices
Figure 201 (Sheet 1)



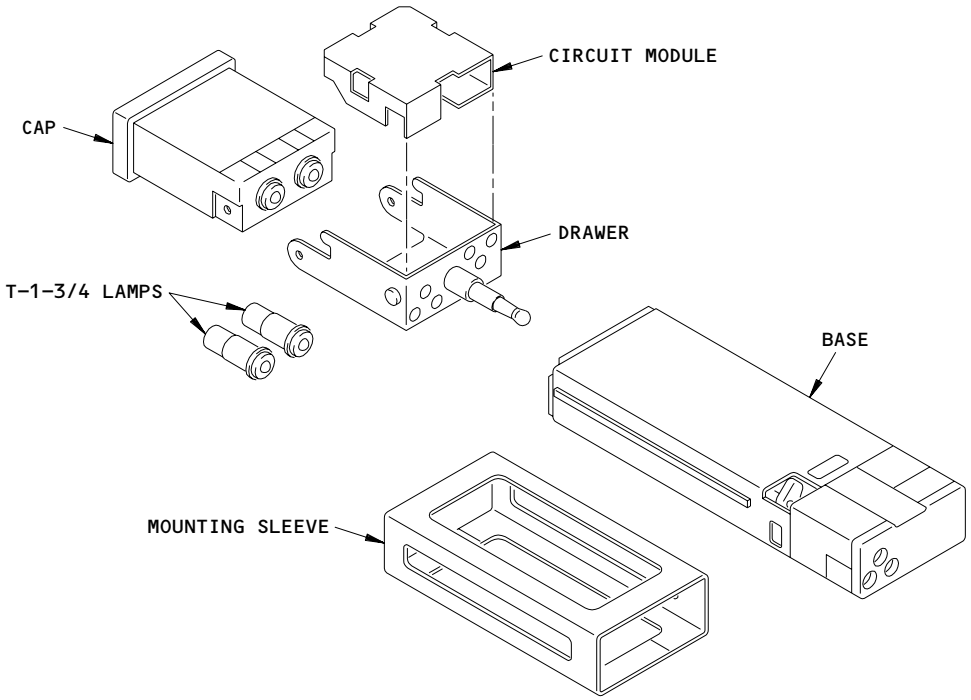
-1000 ANNUNCIATORS -2000/-3000 ANNUNCIATORS

MOUNTING LUGS ADJUSTMENT

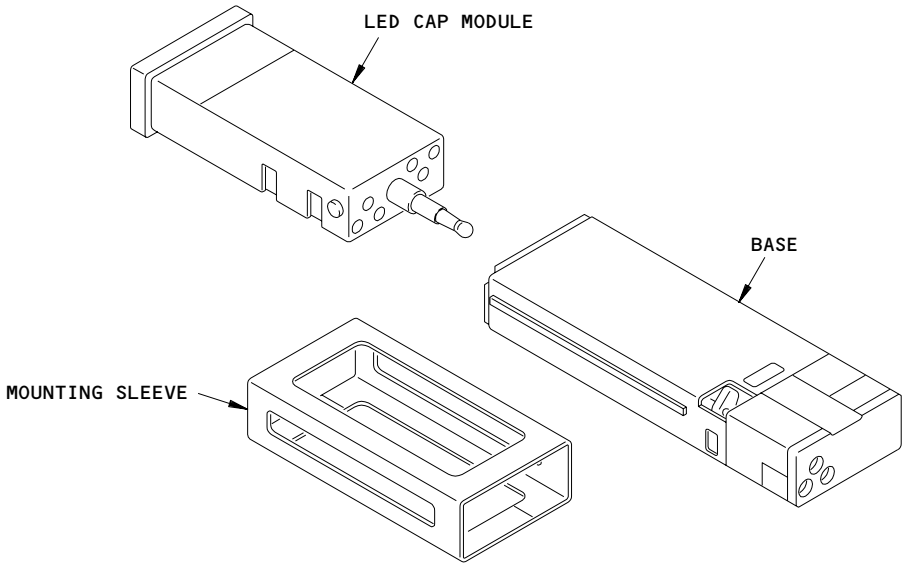


DISCRETE WARNING DISPLAY MODULE, M779

Annunciator Maintenance Practices
Figure 201 (Sheet 2)



INCANDESCENT VERSION OVERVIEW



LED VERSION OVERVIEW

Annunciator Maintenance Practices
Figure 201 (Sheet 3)

(3) The LED cap module combines the LEDs, electrical circuitry and power connections into a single line replaceable module.
(4) A simple drop-in retrofit lets you change incandescent annunciators to LED annunciators.
(5) Power conditioning and dimming functions are integrated into the indicator modules.
(6) The LEDs provide greater life, lower maintenance, lower power consumption, lower temperature and more uniform color and brightness than the incandescent annunciators.

TASK 33-16-02-962-001

2. Replace the Lamps in the Annunciators

A. References
(1) 24-22-00/201, Electrical Power - Control
(2) 33-16-00/501, Master Dim and Test

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure (Fig. 201)

S 862-002
(1) Supply electrical power (Ref 24-22-00).

S 862-003
(2) Push the TEST switch on the right lighting control panel in the P5 panel and identify the annunciator(s) to be replaced.

S 862-041
(3) Push the TEST switch again to remove electrical power from the test (Ref 33-16-00).

S 962-004
(4) Do these steps to replace the lamps in the annunciator.

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

(a) Carefully remove the lens cap assembly.
1) Hold the sides of the lens cap assembly between your fingers.

2) With a side-to-side movement, pull the lens cap assembly out until it releases.

NOTE: When the lens cap assembly is fully extended, it releases suddenly. Do not let it hit the slide-mechanism-stops.

(b) Turn the lens cap assembly down as shown in Fig. 201.
(c) Replace the lamp(s).
(d) Turn the lens cap assembly up.
(e) Push the lens cap assembly straight back until it locks into position.

S 712-018
(5) Do the test of the annunciator (Ref 33-16-00).

NOTE: If the two lamps in an annunciator do not come on, replace the diode/fuse card. Also, clean the contacts on the diode/fuse card with an eraser. Use a wooden dowel to push the contacts in the center of the base assembly; make sure contacts move freely.

S 862-005
(6) Remove electrical power if it is not necessary (Ref 24-22-00).

TASK 33-16-02-962-007

3. Replace the Diode/Fuse Card in the Annunciator (Fig. 201)

A. References
(1) 24-22-00/201, Electrical Power - Control
(2) 33-16-00/501, Master Dim and Test

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 862-006
(1) Supply electrical power (Ref 24-22-00).

S 862-008

(2) Push the TEST switch on the right lighting control panel, P5, to identify the annunciators that do not operate.

NOTE: Replace the diode/fuse card if you get these results:
The two lamps do not come on after you replaced them,
Or, the annunciator comes on during the system test but not when you pushed the TEST switch.

S 862-009

(3) Push the TEST switch again to remove electrical power from the test (Ref 33-16-00).

S 962-010

(4) Do these steps to replace the diode/fuse card in the annunciator:

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

(a) Carefully remove the lens cap assembly.
1) Hold the sides of the lens cap assembly between your fingers.
2) With a side-to-side movement, pull the lens cap assembly out until it releases.

NOTE: When the lens cap assembly is fully extended, it releases suddenly. Do not let it hit the slide-mechanism-stops.

(b) Turn the lens cap assembly down as shown in Fig. 201.
(c) Remove the diode/fuse card assembly.
1) Hold the top and bottom of the diode/fuse card assembly with your fingers as shown in Fig. 201.

2) Pull the diode/fuse card straight out until it is clear of the base assembly.
3) Push up on the diode/fuse card to remove it.

(d) Install the cover on the new diode/fuse card as shown in Fig. 201.

(e) Install the diode/fuse card in the drawer assembly.
1) Put the diode/fuse card in the drawer assembly with the rear end first. Make sure the index points are aligned.
2) Carefully push the front end of the diode/fuse card down until you hear a click.

NOTE: Make sure the front end (with the three prongs) points to the lamps. Also, do not hold the sides of the drawer assembly too tightly while you push the diode/fuse card into position.

(f) Turn the lens cap assembly up.

(g) Push the lens cap assembly straight back until it locks into position.

S 712-011

(5) Do the test of the annunciator (Ref 33-16-00).

S 862-012

(6) Remove electrical power if it is not necessary (Ref 24-22-00).

TASK 33-16-02-002-013

4. Remove the Annunciator (Fig. 201)

A. References
(1) 33-16-00/501, Master Dim and Test

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 862-014

(1) For all annunciators, but not those in the Inertial Reference Mode Panel, open the applicable circuit breakers for the master dim and test system and attach DO-NOT-CLOSE tags. Refer to the Schematic Manual, 33-16-00, for the necessary circuit breaker data.

S 862-015

(2) For the annunciators in the Inertial Reference Mode Panel, open these circuit breakers on the main power distribution panel, P6, and attach DO-NOT-CLOSE tags:
(a) 6D3, IRS L
(b) 6D4, IRS C
(c) 6D5, IRS R

S 862-016

(3) For the annunciators in the Inertial Reference Mode Panel, open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:
(a) 11F1, IRS LEFT
(b) 11F21, IRS CENTER
(c) 11F22, IRS RIGHT

S 022-020

(4) Do these steps to remove the annunciator:
(a) Remove/lower the access panel to get access to the wires behind the annunciator.
(b) Remove the wires from the contacts behind the annunciator.
1) Use the correct tool from Table 201.

CONTACT WIRE BARREL SIZE	TOOL PART NUMBER
22	M83723/31-20
20	M83723/31-20
16	M83723/31-16
12	M83723/31-12

Insertion/Removal Tools
Table 201

2) Put the wire to the rear part of the tool, then move it suddenly into the front part of the tool.
3) With the tool and wire together, remove the two from the hole at the same time.
4) Identify the wires to aid during the installation of the annunciator.

(c) Do these steps to remove the lens cap assembly, diode/fuse card assembly, and drawer assembly from the incandescent annunciator:

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

1) Carefully remove the lens cap assembly.
   a) Hold the sides of the lens cap assembly between your fingers.
   b) With a side-to-side movement, pull the lens cap assembly out until it releases.

      NOTE: When the lens cap assembly is fully extended, it releases suddenly. Do not let it hit the slide-mechanism-stops.

2) Turn the lens cap assembly down as shown in Fig. 201.
3) Remove the diode/fuse card assembly.
   a) Hold the top and bottom of the diode/fuse card assembly with your fingers as shown in Fig. 201.
   b) Pull the diode/fuse card straight out until it is clear of the base assembly.
   c) Push up on the diode/fuse card to remove it.
4) Remove the drawer assembly. To do so, lightly apply pressure to its sides while you pull it out.

(d) Do these steps to remove the LED cap module in the LED annunciator:

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LED CAP MODULE. TOOLS CAN CAUSE DAMAGE TO THE MODULE.

1) Carefully remove the LED cap module.
   a) Hold the sides of the LED cap module between your fingers.

b) Using a side-to-side movement, pull the LED cap module out until it releases.
2) Remove the LED cap module.
(e) Remove the mounting sleeve from the base assembly.
1) Use a small screwdriver to loosen the mounting screws in the base assembly.
2) When it is free, remove the mounting sleeve from the base assembly.
(f) Remove the base assembly of the annunciator from the panel.

TASK 33-16-02-402-019

5. Install the Annunciator

NOTE: Make sure you disassemble the annunciator before you install it. Refer to the steps that remove the annunciator.

A. References
(1) 24-22-00/201, Electrical Power - Control
(2) 33-16-00/501, Master Dim and Test
B. Access
(1) Location Zones
211/212 Flight compartment
C. Procedure

S 422-021
(1) Do these steps to install the annunciator:
(a) Put the base assembly into the panel with the label TOP pointed up.

CAUTION: FOR -1000 ANNUNCIATORS, MAKE SURE THE MOUNTING SLEEVE IS TURNED TO THE CORRECT POSITION. WHEN YOU TIGHTEN THE MOUNTING SCREWS, THE PINS CAN ALIGN INCORRECTLY AND PREVENT CORRECT INSTALLATION OF THE ANNUNCIATOR.

(b) Move the mounting sleeve around the rear of the base assembly.
1) FOR -1000 ANNUNCIATORS; align the solid bars between the ends of the mounting sleeve with the mounting screws.

CAUTION: DO NOT TIGHTEN THE MOUNTING SCREWS MORE THAN IT IS NECESSARY. IF THEY ARE TOO TIGHT, DAMAGE TO THE INTERNAL CONTACTS CAN OCCUR.

(c) Carefully turn the mounting screws to engage them with the mounting lugs in the mounting sleeve.
1) Do not tighten the mounting screws.

2) Make sure the mounting lugs are engaged and the mounting sleeve attaches correctly on the panel.

CAUTION: DO NOT USE A SCREWDRIVER IF IT IS TOO LARGE. IF THE SCREWS ARE TIGHTENED MORE THAN IT IS NECESSARY, DAMAGE TO THE ANNUNCIATOR CAN OCCUR.

(d) With a three-inch screwdriver, tighten one then the other mounting screws with quarter turns.

(e) Do these steps to install the lens cap assembly, diode/fuse card assembly, and drawer assembly in the incandescent annunciator:

1) Install the diode/fuse card.
   a) Put in the rear end first with the index points aligned correctly.
   b) Make sure the front end (with the three prongs) points to the lamps.
   c) Carefully push the front end of the diode/fuse card down until you hear a click.
   d) If you hold the sides of the drawer too tightly, you cannot install the diode/fuse card.
2) Turn the lens cap assembly up.
3) Push the lens cap assembly straight back until it locks into position.

(f) Do these steps to install the LED cap module in the LED annunciator:

1) Install the LED cap module into the annunciator base.
2) Push the LED cap module straight into the annunciator base until it locks into position.

S 412-022

(2) Install the contacts for the wires behind the annunciator:

(a) Use the correct tool from Table 201.
(b) Move the contact into the end of the insertion tool.
(c) Carefully put the contact through the hole and push on it lightly until the contact is in position.
(d) Carefully pull on the wire to make sure the contact is in position. Be careful that you do not cause damage to the insulation around the wire with your fingernails.

S 412-023

(3) Install/close the panel.

D. Do the Test of the Annunciator

S 862-024

(1) Supply electrical power (Ref 24-22-00).

S 862-025
(2) For all annunciators, but not those in Inertial Reference Mode Panel, remove the DO-NOT-CLOSE tag(s) and close the applicable circuit breaker(s) for the master dim and test system.

S 862-026
(3) For the annunciators in the Inertial Reference Mode Panel, remove the DO-NOT-CLOSE tags and close these circuit breakers on the main power distribution panel, P6:
(a) 6D3, IRS L
(b) 6D4, IRS C
(c) 6D5, IRS R

S 862-027
(4) For the annunciators in the Inertial Reference Mode Panel, remove the DO-NOT-CLOSE tags and close these circuit breakers on the overhead circuit breaker panel, P11:
(a) 11F1, IRS LEFT
(b) 11F21, IRS CENTER
(c) 11F22, IRS RIGHT

S 712-028
(5) Do these steps to do the test of the annunciators:
(a) Push the TEST switch on the right lighting control panel, P5.
(b) Make sure the annunciator comes on.
(c) Push the TEST switch again to remove electrical power from the test (Ref 33-16-00).
(d) Do the applicable system test to make sure the annunciator receives input from that system.

S 862-029
(6) Remove electrical power if it is not necessary (Ref 24-22-00).

TASK 33-16-02-002-030
6. Remove the Discrete Warning Display Module (M779) (Fig. 201)
A. References
(1) 33-16-00/501, Master Dim and Test
B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 862-040
(1) Open the applicable circuit breaker for the master dim and test system and attach DO-NOT-CLOSE tags. Refer to the Schematic Manual, 33-16-00, for the necessary circuit breaker data.

S 012-031
(2) Lower the panel to get access to the wires behind the module.

S 012-032
(3) Do these steps to remove the discrete warning display module (M779):
(a) Remove the contacts for the wires from behind the module:
1) Use the correct tool from Table 201.

CONTACT WIRE BARREL SIZE	TOOL PART NUMBER
22	M83723/31-20
20	M83723/31-20
16	M83723/31-16
12	M83723/31-12

Insertion/Removal Tools
Table 201

2) Put the wire in the rear part of the tool, then move it suddenly into the front part of the tool.
3) With the tool and wire together, remove the two from the hole at the same time.
4) Identify the wires to aid during the installation of the discrete warning display module.
(b) Remove the top two annunciators and the bottom two annunciators from the module.

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LENS CAP. TOOLS CAN CAUSE DAMAGE TO THE LENS CAP.

1) Remove the lens cap assembly.
a) Hold the sides of the lens cap assembly between fingers.
b) With a side-to-side movement, pull the lens cap assembly out until it releases.

NOTE: When the lens cap assembly is fully extended, it releases suddenly. Do not let it hit the slide-mechanism-stops.

2) Turn the lens cap assembly down as shown in Fig. 201.

3) Remove the diode/fuse card.
a) To remove the diode/fuse card assembly, hold it on the top and bottom with your fingers as shown in Fig. 201.
b) Pull the diode/fuse card straight out until it is clear of the base assembly.
c) Push up on the diode/fuse card to remove it.

(c) Remove the drawer assembly. Lightly apply pressure to its sides while you pull it out.

(d) Remove the mounting sleeve from the base assembly.
1) Use a small screwdriver to loosen the mounting screws in the mounting sleeve.
2) When the mounting sleeve is free, remove it from the base assembly.

(e) Remove the mounting sleeve, mounting plate and gasket from the module.

(f) Remove the discrete warning display module from the panel.

TASK 33-16-02-402-033

7. Install the Discrete Warning Display Module (M779) (Fig. 201)

NOTE: Make sure the two top and the two bottom annunciators are removed from the discrete warning display module before you do this procedure. Refer to the steps that remove the discrete warning display module.

A. References
(1) 24-22-00/201, Electrical Power - Control
(2) 33-16-00/501, Master Dim and Test

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 422-039

(1) Do these steps to install the discrete warning display module:
(a) Put the base assembly into the panel with the label TOP pointed up.
(b) Move the gasket, mounting plate and mounting sleeve around the rear of the base assembly.

CAUTION: DO NOT TIGHTEN THE MOUNTING SCREWS TOO MUCH. IF THEY ARE TOO TIGHT, DAMAGE TO THE INTERNAL CONTACTS CAN OCCUR.

(c) Carefully turn the mounting screws to engage them with the mounting lugs in the mounting sleeve.
1) Do not tighten the mounting screws.
2) Make sure the mounting lugs are engaged and the mounting sleeve attaches correctly on the panel.

CAUTION: DO NOT USE A SCREWDRIVER IF IT IS TOO LARGE. IF THE SCREWS ARE TIGHTENED MORE THAN IT IS NECESSARY, DAMAGE TO THE ANNUNCIATOR CAN OCCUR.

(d) With a three-inch screwdriver, tighten one then the other mounting screws with quarter turns.
(e) Install each annunciator in the discrete warning display module.
1) With the index points aligned, put the diode/fuse card in the drawer assembly with the rear end first.
2) Carefully push the front end of the diode/fuse card down until you hear a click.

NOTE: Make sure the front end (with the three prongs) points to the lamps. Also, do not hold the sides of the drawer assembly too tightly while you push the diode/fuse card into position.

(f) Turn the lens cap assembly up.
(g) Push the lens cap assembly straight back until it locks into position.
(h) Install the contacts for the wires behind the module.
1) Use the correct tool from Table 201.
2) Move the contact into the end of the insertion tool.
3) Carefully put the contact through the hole and push on it lightly until the contact is in position.
4) Carefully pull on the wire to make sure the contact is in position. Be careful that you do not cause damage to the insulation around the wire with your fingernails.

S 412-034
(2) Close the panel.

D. Do the Test of the Discrete Warning Display Module

S 862-035
(1) Supply electrical power (Ref 24-22-00).

S 862-036
(2) Remove the DO-NOT-CLOSE tags and close the applicable circuit breaker(s) for the master dim and test system.

S 712-037
(3) Do these steps to do the test of the annunciators:
(a) Push the TEST switch on the right lighting control panel, P5.
(b) Make sure the annunciators come on.
(c) Push the TEST switch again to remove electrical power from the test (Ref 33-16-00).
(d) Do the test of the related system to make sure the annunciator receives input from that system.

S 862-038
(4) Remove electrical power if it is not necesssary (Ref 24-22-00).

TASK 33-16-02-962-043
8. Replace the LEDs in the LED Annunciators
A. References
(1) 24-22-00/201. Electrical Power - Control
(2) 33-16-00/501, Master Dim and Test
B. Access
(1) Location Zones
(a) 211/212 Flight Compartment
C. Procedure (Fig 201)

S 862-044
(1) Supply electrical power (Ref 24-22-00).

S 712-045
(2) Push the TEST switch on the right lighting control panel in the P5 panel and identify the annunciator(s) to be replaced.

S 712-046
(3) Push the TEST switch again to remove from the annunciators.

S 962-049

(4) Do these steps to replace the LEDs in the annunciator, by replacing the entire LED cap module.

CAUTION: USE ONLY YOUR HANDS TO REMOVE THE LED CAP MODULE. TOOLS CAN CAUSE DAMAGE TO THE MODULE.

(a) Carefully remove the LED cap module.
    1) Hold the sides of the LED cap module between your fingers.
    2) Using a side-to-side movement, pull the LED cap module out until it releases.
(b) Remove the LED cap module.
(c) Check the base assembly for damage.
(d) Do these steps to replace the used base assembly:
    1) Do this task to remove the used base assembly: Remove the Annunciator.
    2) Do this task to install the new base assembly: Install the Annunciator.
(e) Install a new LED cap module into the annunciator base.
(f) Push the LED cap module straight into the annunciator base until it locks into position.

S 712-047

(5) Do a test of the annunciator (Ref 33-16-00).

S 862-048

(6) Remove electrical power if it is not necessary (Ref 24-22-00).

PASSENGER COMPARTMENT LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. The passenger compartment lighting is divided into 7 sections.
      (1) Passenger Compartment Illumination (Ref 33-21-00)
         (a) Compartment illumination is provided by fluorescent lights installed in the ceiling and sidewall panels throughout the passenger cabin. Incandescent lights installed in the ceiling panels provide subdued lighting.
      (2) Passenger Loading Lights (Ref 33-22-00)
         (a) Door threshold, attendant stations, galley and lavatory areas are brightly illuminated with incandescent and fluorescent lights. The lights are installed in ceiling panels.
      (3) Reading Lights (Ref 33-23-00)
         (a) Reading lights are in groups of two or three. They are installed in the passenger service units (PSUs) and attendant service units (ASUs). Switches are located adjacent to the respective reading light on PSUs and ASUs.
      (4) Passenger Signs (Ref 33-24-00)
         (a) Passenger information signs are installed throughout the passenger compartment in the passenger service units (PSU) and lavatories. Switches on the pilot's overhead panel, P5, control the signs.
      (5) Passenger Call Lights (Ref 33-25-00)
         (a) The passenger call system consists of lavatory call lights and passenger call lights installed near each attendant station. They are activated by the call switch on each PSU and in each lavatory.
      (6) Lavatory Lights (Ref 33-26-00)
         (a) Lavatories are illuminated with dome lights in the ceiling, threshold lights above the lavatory door, and fluorescent lights adjacent to the mirrors.
      (7) Galley Lights (Ref 33-27-00)
         (a) Each galley area is illuminated with fluorescent lights in the ceiling panels.

2. Component Details
   A. Passenger Compartment Illumination, Passenger Loading Lights and Reading Lights
      (1) Ceiling and Sidewall Light Ballasts
         (a) Ceiling and sidewall light ballasts are mounted to selected fluorescent light assemblies.
      (2) Transformer and Relays
         (a) Left and right lighting transformers and relays are located in APU/external power panel P34. Panel P34 is located in the E/E bay.
      (3) Work Light Switches
         (a) Work light switches are located on the attendant panel near the attendant work areas.
      (4) AIRPLANES WITH CLOSET LIGHTS;
         Closet Light Switches
         (a) For each closet, the light switch is above the door.
      (5) Flight Deck Door Switch
         (a) A flight deck door switch in the flight deck door header is a magnetic actuator. The actuator controls fluorescent entry lights in the forward cabin area.
      (6) Reading Light Switches
         (a) Reading light switches are located adjacent to the respective lights on the passenger service units and attendant service units.
      (7) Forward Attendant's Panel
         (a) The forward attendant's panel can contain ceiling, window, entry, threshold, work and galley light switches.
      (8) Mid or Aft Attendant's Panel
         (a) The mid or aft attendant panel can contain galley, threshold, and work light switches.
   B. Passenger Signs, Passenger Call, Lavatories, and Galley Lights
      (1) Passenger Signs Control Switches
         (a) Passenger signs control switches include a fasten-seat-belt switch and a no-smoking switch. Both switches are on overhead panel P5 in the flight compartment.
      (2) Passenger Signs Relays
         (a) Passenger signs relays are in APU/external power panel P34.
      (3) Passenger Call Lights
         (a) Passenger call lights located on exit locator signs near the forward, mid, and aft attendants stations indicate a call for assistance from a passenger.

(4) Lavatory Call Lights
  (a) Lavatory call lights located on exit locator signs near the forward, mid, and aft attendants stations indicate a call for assistance from a passenger in a lavatory.
(5) Passenger Call Switches
  (a) An attendant call switch in each PSU operate the passenger call lights.
(6) Lavatory Call Switches and Reset Relays
  (a) An attendant call switch, an attendant call reset switch and associated relay are in each lavatory and operate the lavatory call lights.
(7) Lavatory Door Latch Switch
  (a) A lavatory door latch switch on each lavatory door operates the fluorescent mirror lights inside the corresponding lavatory. The lights illuminate when the lavatory door is latched.
(8) Lavatory Lights Ballasts
  (a) Lavatory lights ballasts are inside the fluorescent light box of the forward lavatories and on top of the fluorescent light box on the aft lavatories.
(9) Galley Lights Ballasts
  (a) Galley lights ballasts are on top of the fluorescent light box in the ceiling panels of each galley work area.
(10) Galley Lights Control Switches and Relays
  (a) Galley lights control relays are on top of the fluorescent light box. An OFF/DIM/BRIGHT switch controls the fluorescent lights.

PASSENGER COMPARTMENT ILLUMINATION - DESCRIPTION AND OPERATION

1. General
   A. Passenger compartment lighting comes from these sources:
      (1) Ceiling lights which are fluorescent lamps installed on the outboard edge of each sculptured ceiling panel.
      (2) Night lights which are incandescent lamps installed the ends of ceiling lights.
      (3) Sidewall lights which are fluorescent lamps installed in each sculputured sidewall panel.
   B. The lights are installed throughout the length of the passenger compartment.
   C. The control relays for these lights are in the APU external power panel, P34.
   D. The switches for the ceiling, night, and sidewall lights are on the attendant's panels.
   E. For more information about this lighting system, refer to these sources:
      (1) SSM 33-21-01 thru 33-21-99
      (2) WDM 33-21-11 thru 33-21-99
2. Operation
   A. Functional Description
      (1) Ceiling Lights
         (a) The ceiling lights give general lighting to the passenger compartment from above.
         (b) These lights are installed on the outboard edges of the sculptured ceiling panels.
         (c) You operate the ceiling lights with a switch on the attendant's panel.
         (d) The 115 volts ac of electrical power for these lights comes from the right miscellaneous electrical equipment panel, P37.
         (e) Ballasts supply the electrical power to the fluorescent lamps in the ceiling lights.
         (f) You control the ceiling lights with a switch on the attendant's panel.
            1) When you set the switch to the dim position, a transformer increases the 115 volts ac to 280 volts ac. This electrical power is supplied to each ballast to make the ceiling lights come on dimly. When you set the switch to the bright position, 115 volts ac more electrical power is supplied to each ballast. This makes the ceiling lights come on brightly.

2) AIRPLANES WITH THE CEILING LIGHTS CONNECTED TO THE OXYGEN DEPLOYMENT RELAY;
If the air pressure in the passenger compartment decreases to less then the air pressure at 14,000 feet, the ceiling lights will come on brightly automatically.

(2) Night Lights
(a) The night lights give dim lighting to the passenger compartment from above.
(b) There is a night light installed on an end of some ceiling lights.
(c) The 28 volts ac of electrical power for these lights comes from the APU/external power panel, P34.
1) In an electrical power failure, the hydraulic motor-driven generator supplies electrical power to the night lights.
(d) You control the night lights with a switch on the attendant's panel.
(e) When you set the switch for the ceiling lights to the night position, the night lights come on.

(3) Sidewall Lights
(a) The sidewall lights give general lighting to the passenger compartment from each side.
(b) AIRPLANES WITH LIGHTS IN THE SIDEWALL;
Each light is behind the sculptured panel immediately above a window.
(c) AIRPLANES WITH LIGHTS ABOVE THE SIDEWALL;
Each light is in the air conditioning extrusion outboard of the passenger service unit.
(d) The 115 volts ac of electrical power for the sidewall lights come from the P34 and P37 panels.
(e) Ballasts supply the electrical power to the lamps in the sidewall lights.
1) Some sidewall lights do not have a ballast. Each of these lights operate from the ballast in an adjacent sidewall light.
(f) You control the sidewall lights with a switch on the attendant's panel.
(g) AIRPLANES WITH LIGHTS IN THE SIDEWALL;
When you set the switch to the dim position, a transformer increases the 115 volts ac to 280 volts ac. This electrical power is supplied to the ballasts to make the sidewall lights come on dimly. When you set the switch to the bright position, 115 volts ac more electrical power is supplied to the ballasts. This makes the sidewall lights come on brightly.

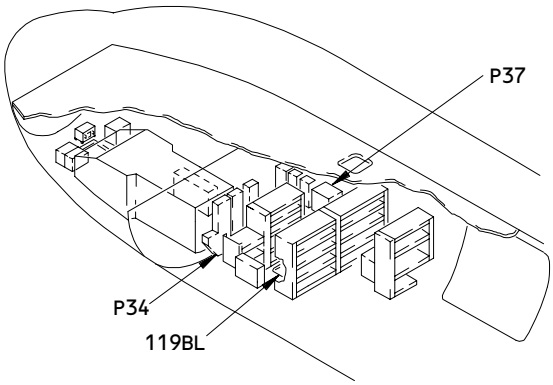
(h) AIRPLANES WITH LIGHTS ABOVE THE SIDEWALL;
When you set the switch to the dim position, each ballast supplies some of the current from the 115 volts ac electrical power source. This makes the sidewall lights come on dimly. When you set the switch to the bright position, all of the current from the 115 volts ac electrical power source is supplied. This makes the sidewall lights come on brightly.

PASSENGER COMPARTMENT ILLUMINATION

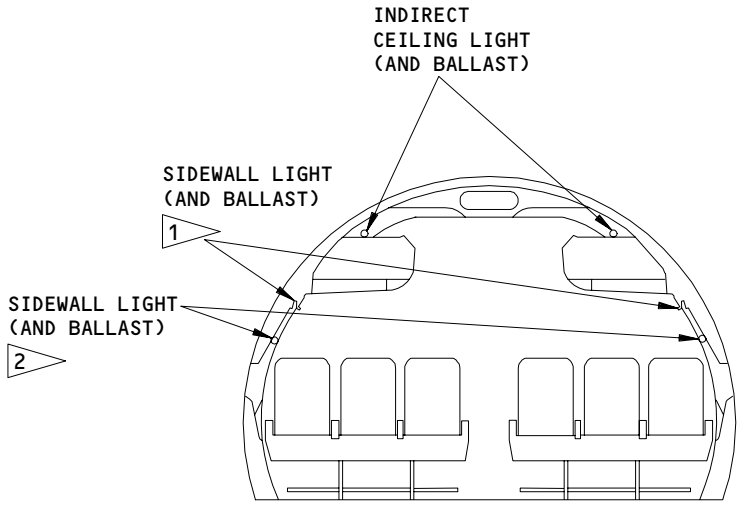
COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
BALLAST –				
INDIRECT CEILING LIGHT			PASS. COMPT	33-21-10
SIDEWALL LIGHT			PASS. COMPT	33-21-30
CIRCUIT BREAKER –			119BL, MAIN EQUIP CTR, P34 AND P37	*
LIGHT –				
INDIRECT CEILING			PASS. COMPT	33-21-10
NIGHT			PASS. COMPT	33-21-20
SIDEWALL			PASS. COMPT	33-21-30
RELAY –			119BL, MAIN EQUIP CTR, P34 AND P37	*
SWITCH –			PASS. COMPT	*
TRANSFORMER –			119BL, MAIN EQUIP CTR, P34	*

* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

Passenger Compartment Illumination – Component Index
Figure 101



MAIN EQUIPMENT CENTER



1 AIRPLANES WITH THE SIDEWALL LIGHTS INSTALLED ABOVE THE SIDEWALL

2 AIRPLANES WITH THE SIDEWALL LIGHTS INSTALLED IN THE SIDEWALL

Passenger Compartment Illumination - Component Location
Figure 102

PASSENGER COMPARTMENT ILLUMINATION - ADJUSTMENT/TEST

1. General
   A. This procedure has this task:
      (1) Passenger Compartment Lighting - Operational Test
      (2) To do a test of the passenger compartment lights operated with electrical power from the hydraulic motor-driven generator, refer to Emergency Lights (AMM 33-51-00/501).

TASK 33-21-00-715-016

2. Passenger Compartment Lighting - Operational Test
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-21-01 thru SSM 33-21-99
      (3) WDM 33-21-11 thru WDM 33-21-99
   B. Access
      (1) Location Zones
          200 Upper Half of Fuselage
   C. Procedure

      S 715-018
      (1) Do a test of the ceiling lights and night lights.
          (a) Supply external or APU generator electrical power to the main ac buses (AMM 24-22-00/201).
          (b) At the overhead panel, P5, set the switches for the utility bus to the on position.
          (c) At the attendant's panel, set the ceiling lights switch to make the night lights come on.
              1) Make sure the night lights come on.
              2) Make sure the ceiling lights are off.
          (d) Set the switch to the dim position.
              1) Make sure the ceiling lights come on dimly.
              2) Make sure all the night lights go off.
          (e) Set the switch to the bright position.
              1) Make sure the ceiling lights become bright.

2) Make sure the night lights stay off.
(f) Set the switch to the off position.
1) Make sure the ceiling lights go off.
2) Make sure the night lights stay off.
(g) Set the switch to the usual position.

S 715-015
(2) Do a test of the sidewall lights.
(a) At the attendant's panel, set the switch for the sidewall lights to the dim position.
1) Make sure the sidewall lights come on dimly.
(b) Set the switch to the bright position.
1) Make sure the sidewall lights become bright correctly.
(c) Open each circuit breaker for the sidewall lights:
1) On the APU/EXT power panel, P34.
2) Make sure the sidewall lights stay on.
(d) Close each circuit breaker that was opened.
(e) Open each circuit breaker for the sidewall lights:
1) On the right miscellaneous electrical equipment panel, P37.
2) Make sure the sidewall lights stay on.
(f) Close each circuit breaker that was opened.
(g) Set the switch for the sidewall lights to the off position.
1) Make sure the sidewall lights go off correctly.
(h) Set the switch to the usual position.
(i) Remove electrical power if it is not necessary (AMM 24-22-00/201).

INDIRECT CEILING LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure has these tasks:
      (1) INDIRECT CEILING LIGHT WITH A COVER SCREEN;
          Indirect Ceiling Light - Lamp Replacement
      (2) INDIRECT CEILING LIGHT WITHOUT A COVER SCREEN;
          Indirect Ceiling Light - Lamp Replacement
      (3) INDIRECT CEILING LIGHT WITH A COVER SCREEN;
          Indirect Ceiling Light - Ballast Replacement
      (4) INDIRECT CEILING LIGHT WITHOUT A COVER SCREEN;
          Indirect Ceiling Light - Ballast Replacement
      (5) Indirect Ceiling Light - Light Assembly Replacement
   B. AIRPLANES WITH TWO-ZONE CONTROL CABIN LIGHTING;
      There are two switches for the ceiling lights on the attendants panel, P21. One switch controls the aft cabin and one switch controls the forward cabin lights. Use the applicable switch for all tests in this procedure.

TASK 33-21-10-962-031

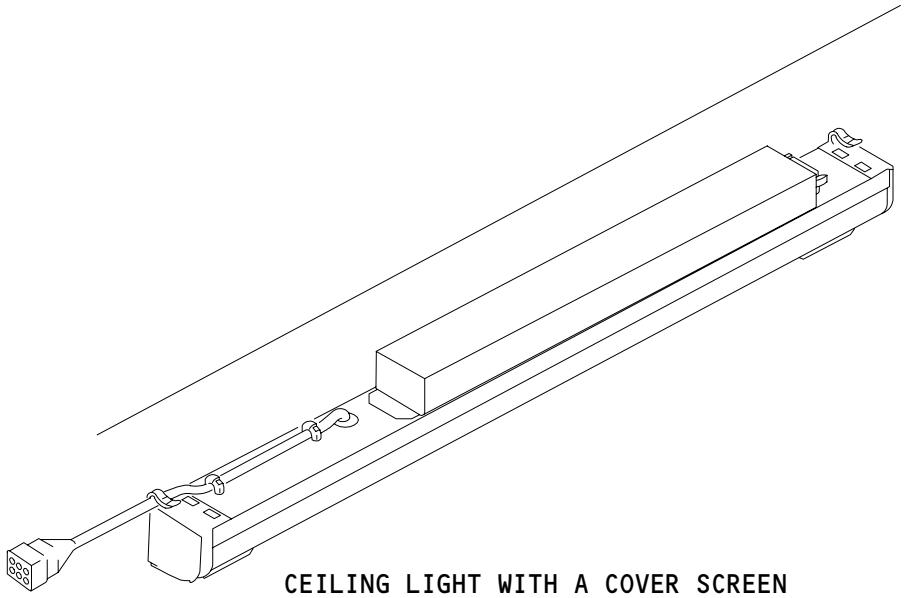
2. INDIRECT CEILING LIGHT WITH A COVER SCREEN;
   Indirect Ceiling Light - Lamp Replacement (Fig. 201)
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-21-01 thru 33-21-02
      (3) WDM 33-00-01, Lamp Usage Chart
      (4) WDM 33-21-11 thru 33-21-23
   B. Access
      (1) Location Zones
          200 Upper Half of Fuselage
   C. Lamp Replacement

      S 962-032

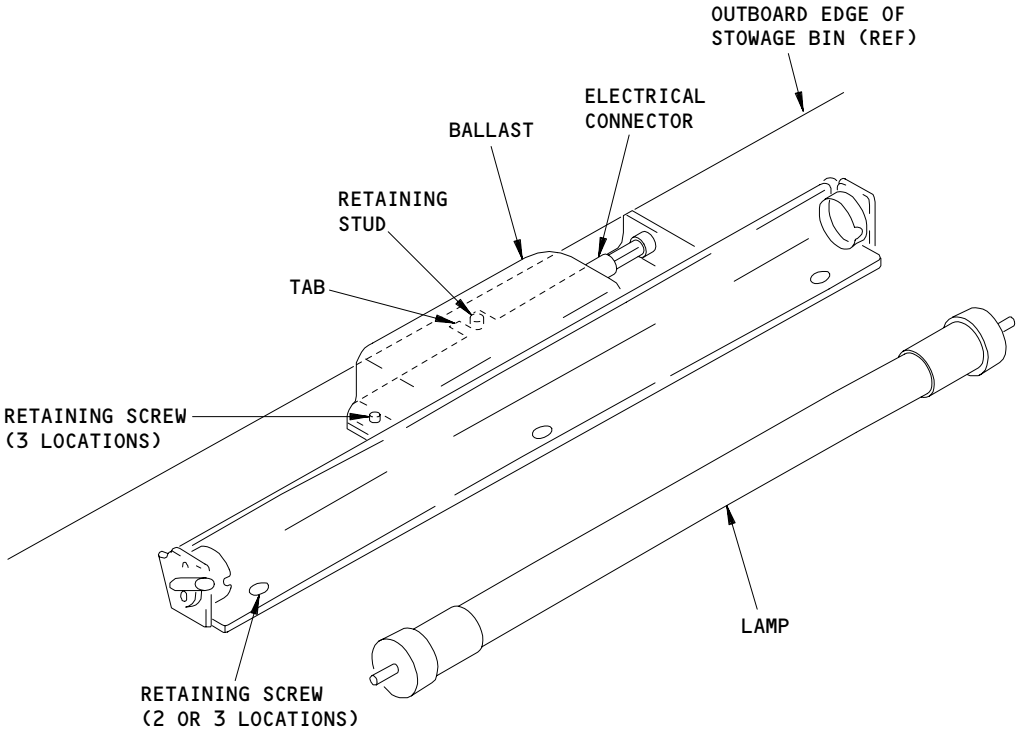
      WARNING: DO NOT TOUCH THE SOCKETS OR THE METAL ENDS OF THE LAMP. WHEN ELECTRICAL POWER IS SUPPLIED TO THE LIGHT, ELECTRICAL SHOCK CAN OCCUR.

      (1) Replace the lamp.
          (a) Pull open the cover screen.
          (b) Carefully replace the lamp.

              NOTE: The lamp replacement is easier if you put the right end of the new lamp in its socket first. This will make the light come on immediately, if the other ceiling lights are on.



CEILING LIGHT WITH A COVER SCREEN
(EXAMPLE)



CEILING LIGHT WITHOUT A COVER SCREEN
(EXAMPLE)

Ceiling Lights - Lamp and Ballast Replacement
Figure 201

(c) Close the cover screen.

D. Lamp Test

NOTE: Only do these steps if the light stayed off after you replaced the lamp.

S 862-033

(1) Supply electrical power (AMM 24-22-00/201).

S 712-034

(2) At the attendant's panel, set the switch for the indirect ceiling light to the off position and then to the on position.
(a) Make sure the new lamp comes on correctly.

S 862-035

(3) Set the switch to the usual position.

S 862-036

(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-21-10-962-012

3. INDIRECT CEILING LIGHT WITHOUT A COVER SCREEN;
Indirect Ceiling Light - Lamp Replacement (Fig. 201)

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-21-01 thru 33-21-02
(3) WDM 33-00-01, Lamp Usage Chart
(4) WDM 33-21-11 thru 33-21-23

B. Access
(1) Location Zones
200 Upper Half of Fuselage

C. Procedure

S 962-002

(1) Replace the lamp.
(a) Do one of these steps to remove electrical power from the light:
1) At the attendant's panel, set the switch to the off position and attach the DO-NOT-OPERATE tag.
2) Open each applicable circuit breaker for the indirect ceiling light and attach the DO-NOT-CLOSE tag:
a) On the APU/EXT power panel, P34.
b) On the right miscellaneous electrical equipment panel, P37.
(b) Carefully replace the lamp.

NOTE: If the lamp has a cover or end caps, remove these parts and install them on the new lamp.

S 712-003
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the attendant's panel, set the switch to the bright position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-21-10-962-013

4. CEILING LIGHT WITH A COVER SCREEN;
Indirect Ceiling Light - Ballast Replacement (Fig. 201)

A. General
(1) Frequently a ballast can be repaired with the replacement of a fuse under the right end of the lamp.

B. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-21-01 thru 33-21-02
(3) WDM 33-21-11 thru 33-21-23

C. Access
(1) Location Zone
200 Upper Half of Fuselage

D. Ballast Replacement

S 962-014
(1) Do one of these steps to remove electrical power from the ballast:
(a) At the attendant's panel, set the switch for the indirect ceiling light to the off position and attach the DO-NOT-OPERATE tag.
(b) Open each applicable circuit breaker and attach the DO-NOT-CLOSE tag:
1) On the APU/external power panel, P34.
2) On the right miscellaneous electrical equipment panel, P37.

S 962-015
(2) Replace the light assembly.

NOTE: The ballast is part of the light assembly. To replace the ballast, you must replace the light assembly.

(a) Pull open the cover screen.
(b) Carefully remove the lamp.
(c) Disconnect the electrical connector.
(d) Pull off the light assembly.
(e) Push down the new light assembly in its position.
(f) Connect the electrical connector.
(g) Carefully install the lamp.

(h) Close the cover screen.

E. Ballast Test

S 862-016

(1) Supply electrical power (AMM 24-22-00/201).

S 862-017

(2) Remove each DO-NOT-CLOSE or DO-NOT-OPERATE tag.
(a) Close each circuit breaker that was opened.

S 712-018

(3) Set the switch to the on position.
(a) Make sure the indirect ceiling light comes on correctly.

S 862-019

(4) Set the switch to the usual position.

S 862-020

(5) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-21-10-962-021

5. INDIRECT CEILING LIGHT WITHOUT A COVER SCREEN;
Indirect Ceiling Light - Ballast Replacement (Fig. 201)

A. General
(1) Frequently a ballast can be repaired in the shop with the replacement of a fuse that is in the ballast.
(2) Some ballasts supply electrical power to a pair of lights. When this type of ballast is bad, two adjacent lights will not come on correctly.

B. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-21-01 thru 33-21-02
(3) WDM 33-21-11 thru 33-21-23

C. Access
(1) Location Zone
200 Upper Half of Fuselage

D. Ballast Replacement

S 962-046

WARNING: DO NOT TOUCH THE LAMP SOCKETS AND THE METAL ENDS OF THE LAMP AND FUSE. WHEN ELECTRICAL POWER IS SUPPLIED TO THE LIGHT, ELECTRICAL SHOCK CAN OCCUR.

(1) Do these steps to replace the fuse:
(a) Remove the lamp.

(b) Check and replace the fuse if is unserviceable.
(c) Install the lamp.

S 862-022
(2) Do one of these steps to remove electrical power from the ballast:
(a) At the attendant's panel, set the switch for the indirect ceiling light to the off position and attach the DO-NOT-OPERATE tag.
(b) Open each applicable circuit breaker for the indirect ceiling light and attach the DO-NOT-CLOSE tag:
1) On the APU/external power panel, P34.
2) On the right miscellaneous electrical equipment panel, P37.

S 022-023
(3) Remove the light assembly.
(a) Carefully remove the lamp.
(b) Remove the retaining screws along the inboard edge of the light.
(c) Move the light assembly inboard.
(d) Disconnect the electrical connector and remove the light.

S 962-024
(4) Replace the ballast on the light assembly.
(a) Remove the retaining screws from the edges of the ballast.
(b) Disconnect the electrical connector and remove the ballast.
(c) Attach the electrical connector to the new ballast.
(d) Install the retaining screws.

S 422-025
(5) Install the light assembly.
(a) Connect the electrical connector.
(b) Move the light in its position and install the retaining screws.

NOTE: The tab on the outboard edge of the light must engage the retaining stud on the stowage bin.

(c) Carefully install the lamp.

E. Ballast Test

S 862-026
(1) Supply electrical power (AMM 24-22-00/201).

S 862-027
(2) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
(a) Close each circuit breaker that was opened.

S 712-028
(3) Set the switch to the on position.
(a) Make sure the ceiling light comes on correctly.

S 862-029
(4) Set the switch to the usual position.

S 862-030
(5) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-21-10-962-044

6. Ceiling Light, Indirect - Light Assembly Replacement (Fig. 202)

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-21-07 thru 33-21-08
(3) WDM 33-21-11 thru 33-21-23

B. Access
(1) Location Zone
200 Upper Half of Fuselage

C. Procedure

S 962-038
(1) Replace the fuse.
(a) If the new fuse corrects the problem, you do not need to replace the light assembly.

S 862-040

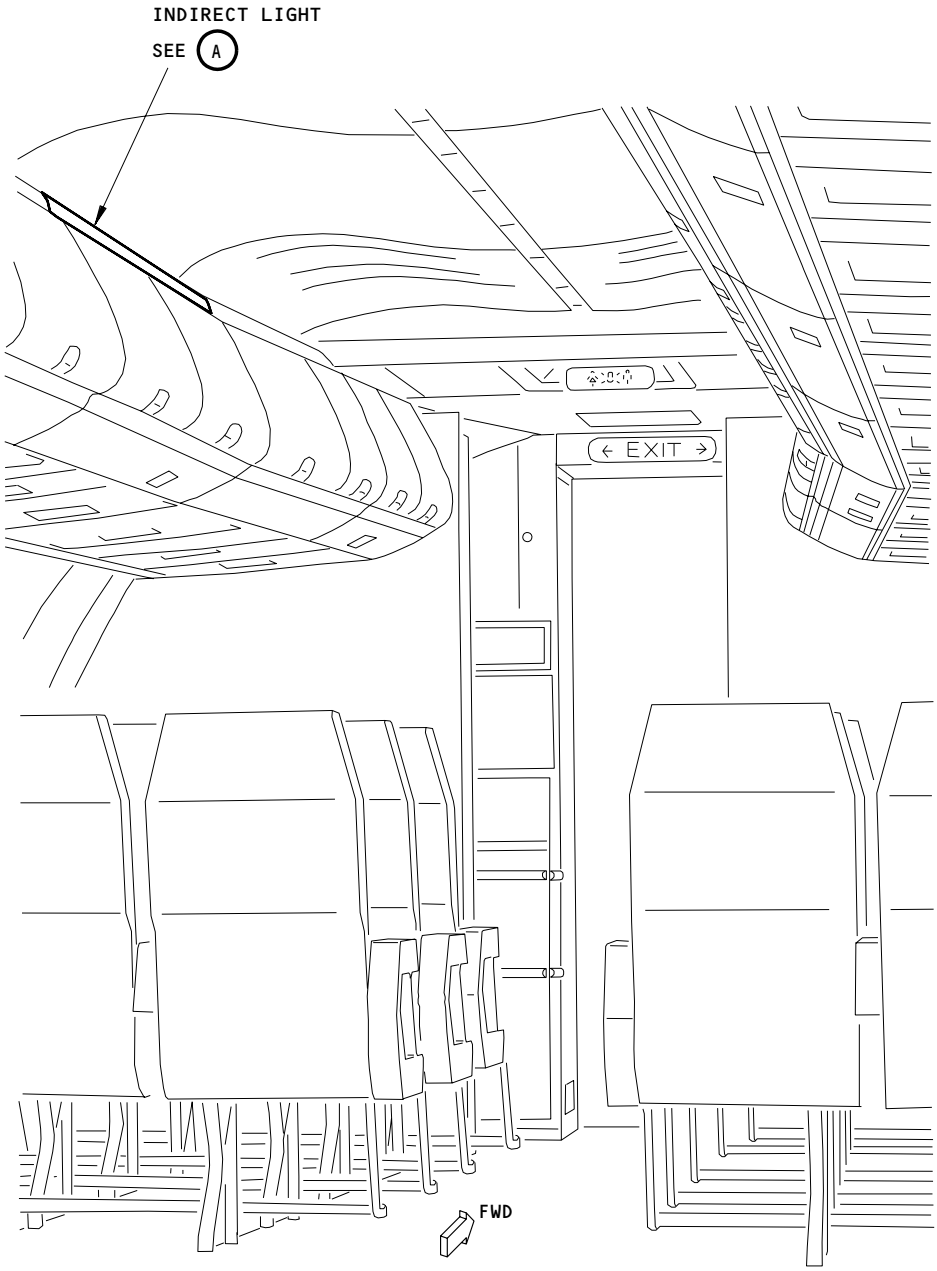
CAUTION: DO NOT REPLACE THE LIGHT ASSEMBLY UNTIL ELECTRICAL POWER IS REMOVED FROM THE CIRCUIT. IF YOU DO NOT REMOVE ELECTRICAL POWER, YOU CAN CAUSE DAMAGE TO THE FUSE IN THE LIGHT ASSEMBLY.

(2) Do these steps to replace the light assembly:
(a) Open the applicable circuit breaker and attach the DO-NOT-CLOSE tag:
1) Right miscellaneous electrical equipment panel, P37:
2) 37G6, LIGHTS CEILING L
3) 37G7, LIGHTS CEILING R
(b) Remove the lamp (Indirect Ceiling Light - Lamp Replacement).
(c) Disconnect the electrical connector.
(d) Lift the light assembly to remove it from the velcro pad.

NOTE: You might need to apply some force to remove the light assembly from the velcro pad.

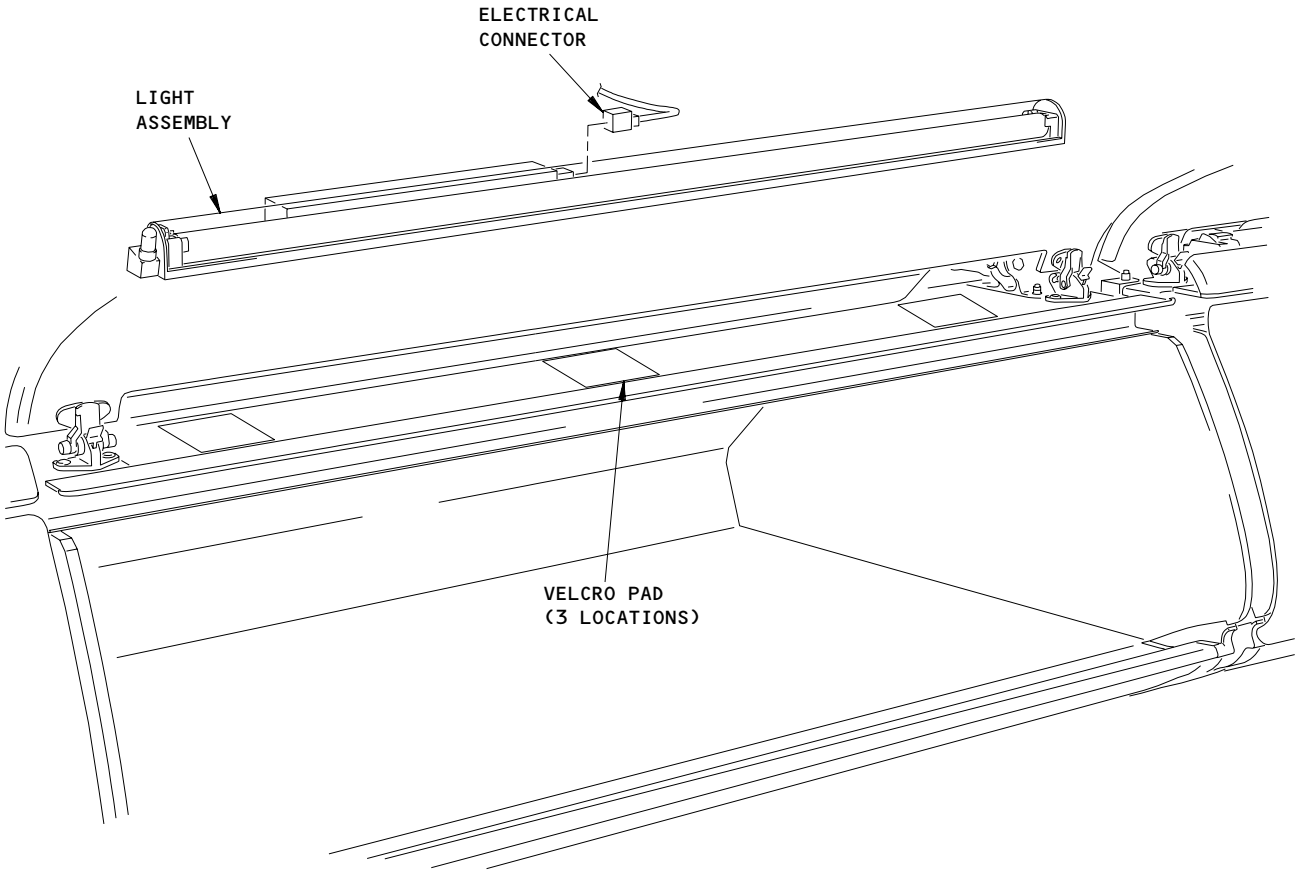
(e) Install the new light assembly.
1) Make sure the lamp is installed.
(f) Connect the electrical connector to the new light assembly.

S 862-042
(3) Supply electrical power (AMM 24-22-00/201).



PASSENGER COMPARTMENT

Ceiling Light – Light Assembly Replacement
Figure 202 (Sheet 1)



INDIRECT LIGHT
(EXAMPLE)

A

NOTE: LIGHTSHIELD AND STOWAGE BIN DOORS
ARE NOT SHOWN.

Ceiling Light - Light Assembly Replacement
Figure 202 (Sheet 2)

J68727

S 712-045

(4) Do a test of the new light assembly:

(a) Remove the DO-NOT-CLOSE tag and close the applicable circuit breaker:

1) Right miscellaneous electrical equipment panel, P37:

a) 37G6, LIGHTS CEILING L

b) 37G7, LIGHTS CEILING R

(b) At the forward attendant panel, set the CEILING switch to the BRIGHT position.

1) Make sure the lamp comes on brightly.

(c) Set the CEILING switch to the usual position.

S 862-043

(5) Remove electrical power if it is not necessary (AMM 24-22-00/201).

NIGHT LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure has this task:
      (1) Night Light - Lamp Replacement

   TASK 33-21-20-962-014

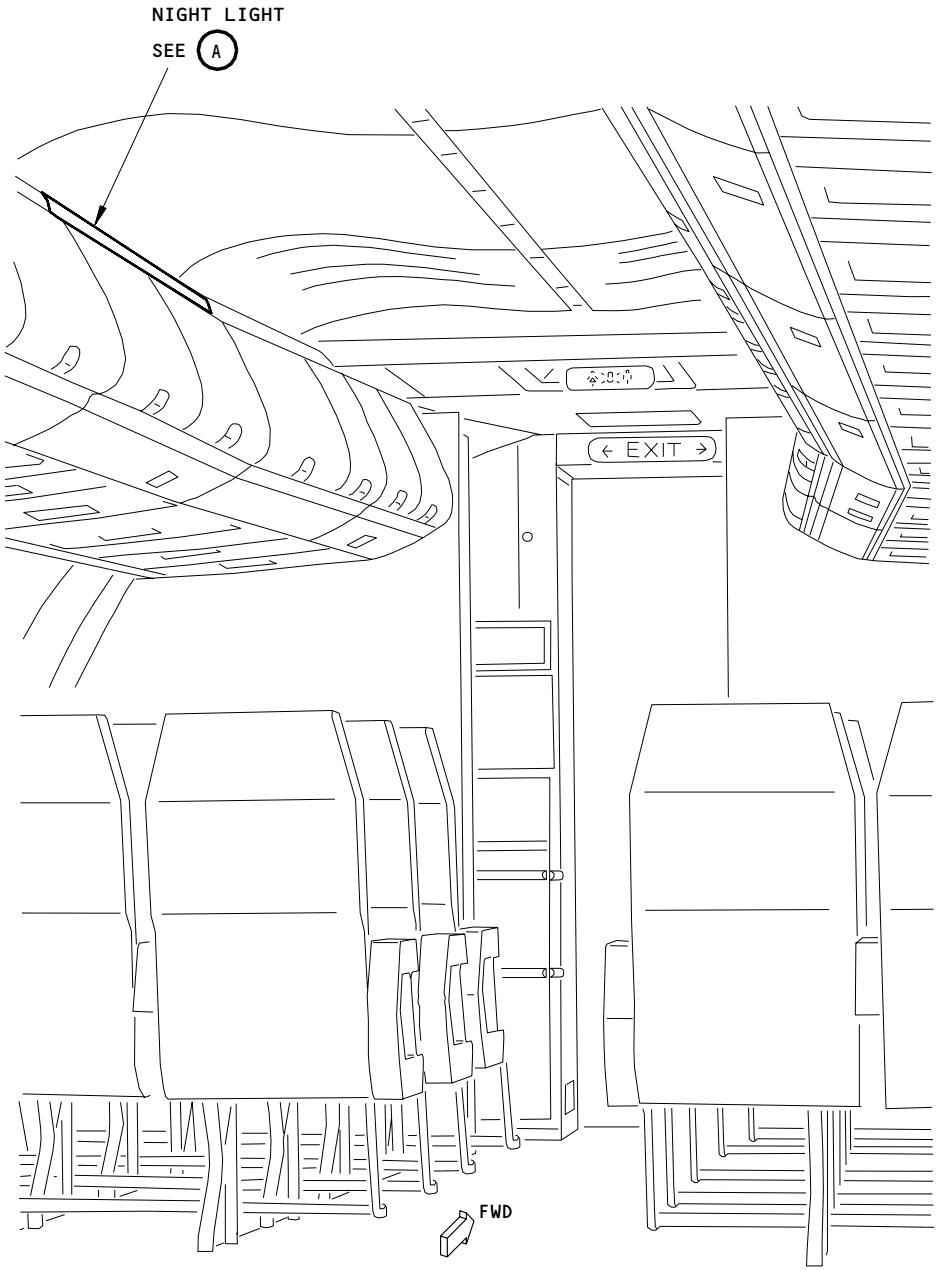
2. Night Light - Lamp Replacement
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-21-05
      (3) WDM 33-00-01, Lamp Usage Chart
      (4) WDM 33-21-51
   B. Access
      (1) Location Zones
          200 Upper Half of Fuselage
   C. Procedure

      S 962-012
      (1) Replace the lamp.
          (a) Do one of these steps to remove electrical power from the light:
              1) At the attendant's panel, set the switch to the off position and attach the DO-NOT-OPERATE tag.
              2) Open each applicable circuit breaker for the night light and attach the DO-NOT-CLOSE tag:
                 a) On the APU/EXT power panel, P34.
          (b) Carefully replace the lamp.

      S 712-013
      (2) Do a test of the new lamp.
          (a) Supply electrical power (AMM 24-22-00/201).
          (b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
              1) Close each circuit breaker that was opened.
          (c) At the attendant's panel, set the switch to make the night lights come on.
              1) Make sure the new lamp comes on correctly.
          (d) Set the switch to the usual position.
          (e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

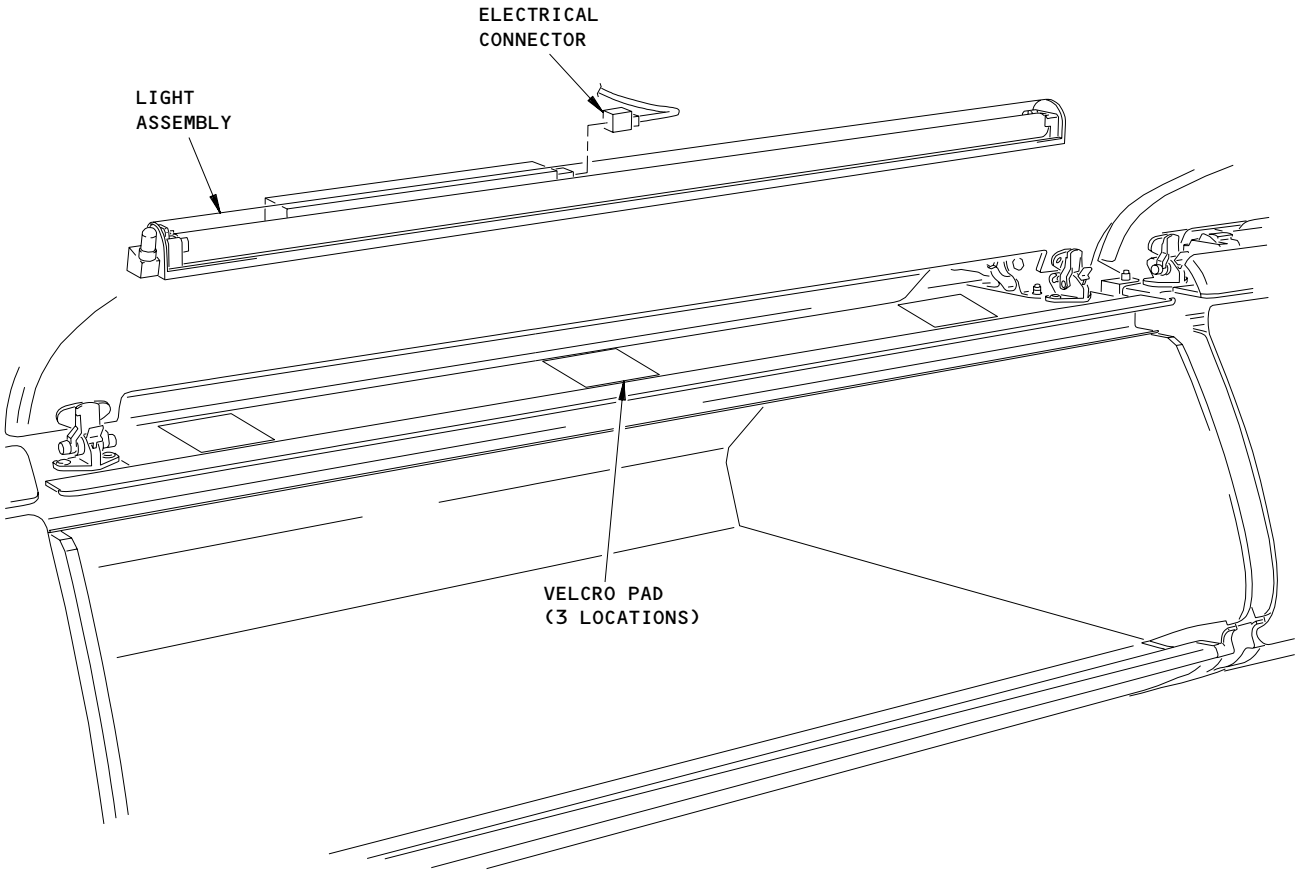
   TASK 33-21-20-962-016

3. Night Light Assembly Replacement (Fig. 201)
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control



PASSENGER COMPARTMENT

Night Light - Lamp Replacement
Figure 201 (Sheet 1)



INDIRECT LIGHT
(EXAMPLE)

A

NOTE: LIGHTSHIELD AND STOWAGE BIN DOORS
ARE NOT SHOWN.

Night Light Assembly Replacement
Figure 201 (Sheet 2)

(2) AMM 33-21-10/201, Indirect Ceiling Lights
(3) SSM 33-21-07 thru 33-21-08
(4) WDM 33-21-11 thru 33-21-23

B. Access
(1) Location Zone
200 Upper Half of Fuselage

C. Procedure

S 962-017
(1) Replace the fuse.
(a) If the new fuse corrects the problem, you do not need to replace the light assembly.

S 862-018

CAUTION: DO NOT REPLACE THE LIGHT ASSEMBLY UNTIL ELECTRICAL POWER IS REMOVED FROM THE CIRCUIT. IF YOU DO NOT REMOVE ELECTRICAL POWER, YOU CAN CAUSE DAMAGE TO THE FUSE IN THE LIGHT ASSEMBLY.

(2) Do these steps to replace the light assembly:
(a) Open the applicable circuit breaker and attach the DO-NOT-CLOSE tag:
1) Right miscellaneous electrical equipment panel, P37:
2) 37G6, LIGHTS CEILING L
3) 37G7, LIGHTS CEILING R
(b) Remove the lamp (AMM 33-21-10/201).
(c) Disconnect the electrical connector.
(d) Lift the light assembly to remove it from the velcro pad.

NOTE: You might need to apply some force to remove the light assembly from the velcro pad.

(e) Install the new light assembly.
1) Make sure the lamp is installed.
(f) Connect the electrical connector to the new light assembly.

S 862-019
(3) Supply electrical power (AMM 24-22-00/201).

S 712-020
(4) Do a test of the new light assembly:
(a) Remove the DO-NOT-CLOSE tag and close the applicable circuit breaker:
1) Right miscellaneous electrical equipment panel, P37:
a) 37G6, LIGHTS CEILING L
b) 37G7, LIGHTS CEILING R
(b) At the forward attendant panel, set the CEILING switch to the BRIGHT position.
1) Make sure the lamp comes on brightly.
(c) Set the CEILING switch to the usual position.

S 862-021

(5) Remove electrical power if it is not necessary (AMM 24-22-00/201).

SIDEWALL LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Sidewall Light (In the Sidewall) - Lamp Replacement
      (2) Sidewall Light (Above the Sidewall) - Lamp Replacement
      (3) Sidewall Light (In the Sidewall) - Ballast Replacement
      (4) Sidewall Light (Above the Sidewall) - Ballast Replacement
   B. Sidewall lights are also referred to as window lights.

   TASK 33-21-30-962-004
2. Sidewall Light (In the Sidewall) - Lamp Replacement (Fig. 201)
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-21-04 and 33-21-06
      (3) WDM 33-00-01, Lamp Usage Chart
      (4) WDM 33-21-31 thru 33-21-43
   B. Access
      (1) Location Zones
          200 Upper Half of Fuselage
   C. Procedure

      S 962-005
      (1) Replace the lamp.
          (a) Do one of these steps to remove electrical power from the light:
              1) At the attendant's panel, set the switch to the off position and attach the DO-NOT-OPERATE tag.
              2) Open each applicable circuit breaker for the sidewall light and attach the DO-NOT-CLOSE tag:
                 a) On the right miscellaneous electrical equipment panel, P37.
                 b) On the APU/EXT power panel, P34.
          (b) Remove the lens.
              1) Remove each screw that holds the lens.
              2) Lower the lens and turn it vertically.

3) Pull the lens away from the light.
(c) Carefully replace the lamp.
1) If the lamp has a cover or end cap, remove these parts and install them on the new lamp.

S 712-006
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the attendant's panel, set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).
(f) Install the lens.
1) Put the lens into the light with the inboard edge pointed up.
2) Turn the lens until the clips on its inboard edge are on the inboard side of the sidewall panel.
3) Install each screw that holds the lens.

TASK 33-21-30-962-012

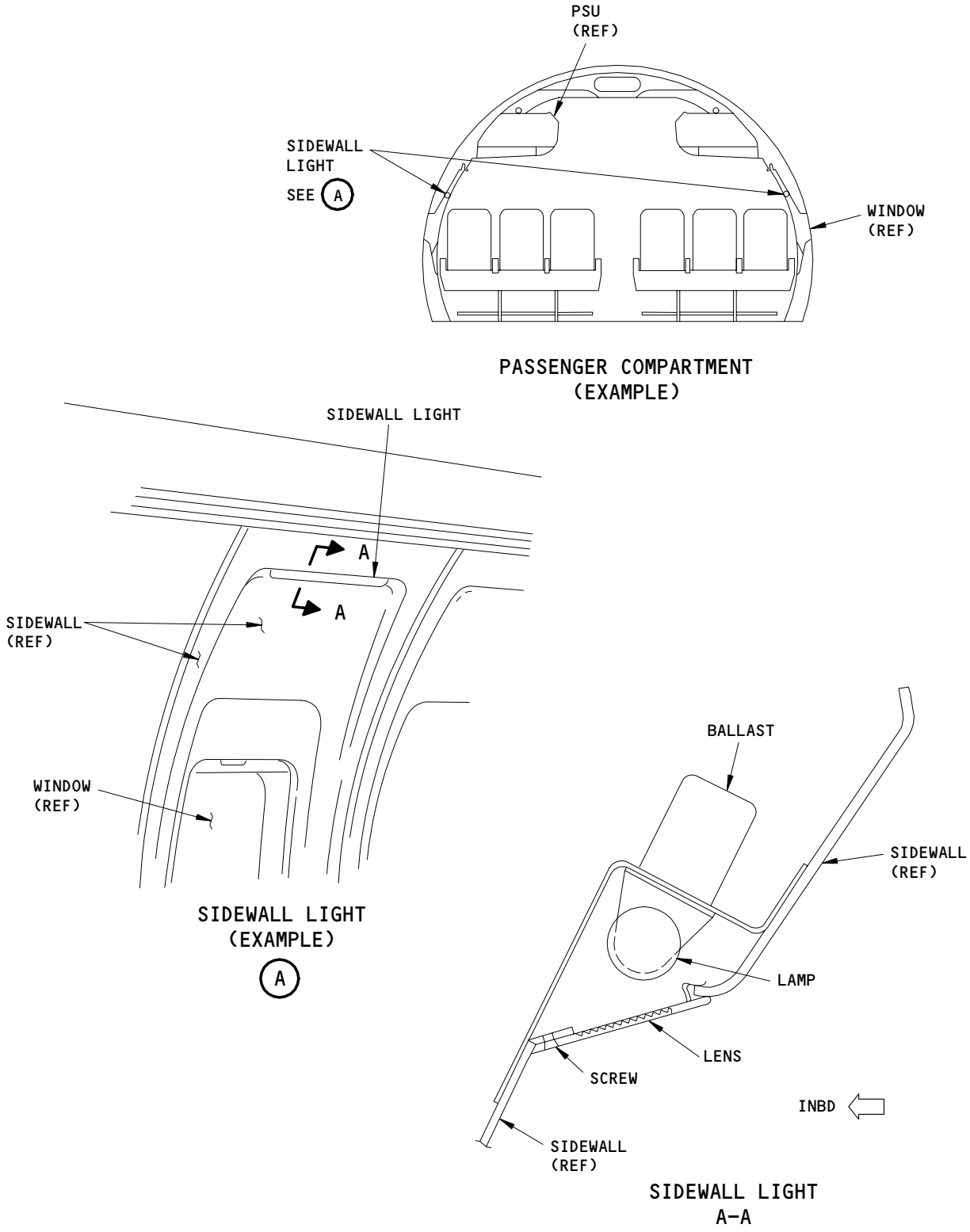
3. Sidewall Light (Above the Sidewall) - Lamp Replacement (Fig. 201)

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-21-04 and 33-21-06
(3) WDM 33-00-01, Lamp Usage Chart
(4) WDM 33-21-31 thru 33-21-43

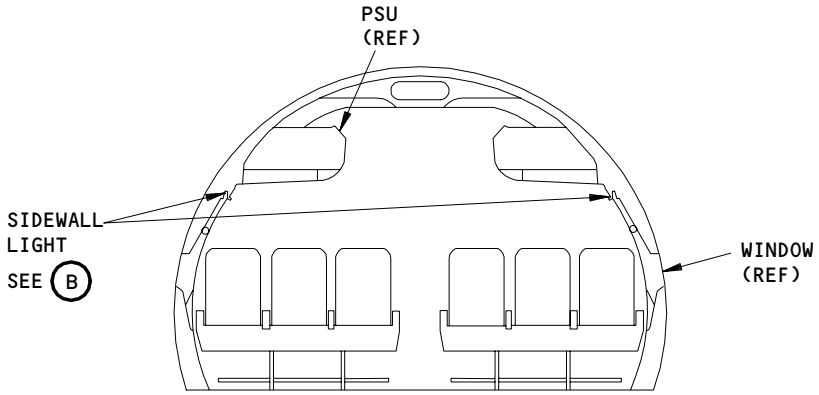
B. Access
(1) Location Zones
200 Upper Half of Fuselage

C. Procedure

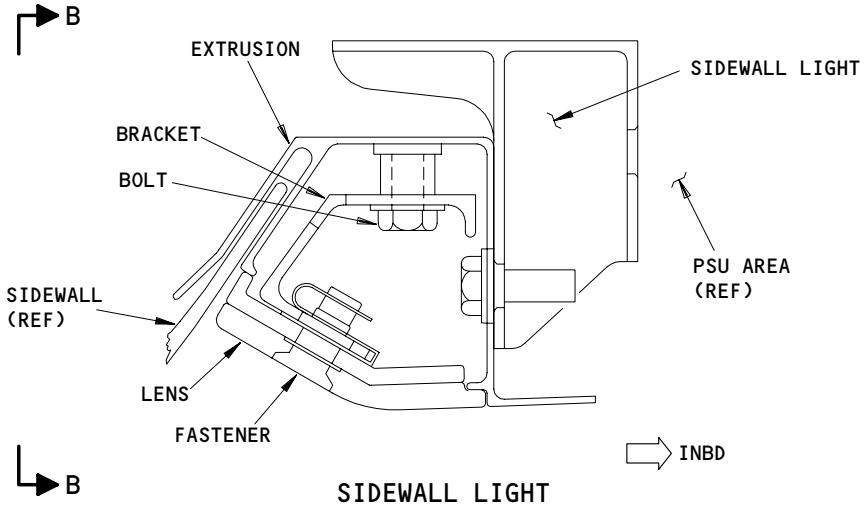
S 962-011
(1) Replace the lamp.
(a) Do one of these steps to remove electrical power from the light:
1) At the attendant's panel, set the switch to the off position and attach the DO-NOT-OPERATE tag.
2) Open each applicable circuit breaker for the sidewall light and attach the DO-NOT-CLOSE tag:
a) On the right miscellaneous electrical equipment panel, P37.
b) On the APU/EXT power panel, P34.
(b) Remove the lens.
1) Loosen each fastener that holds the lens.
2) Pull the front edge of the lens a small distance down and then pull the lens inboard.



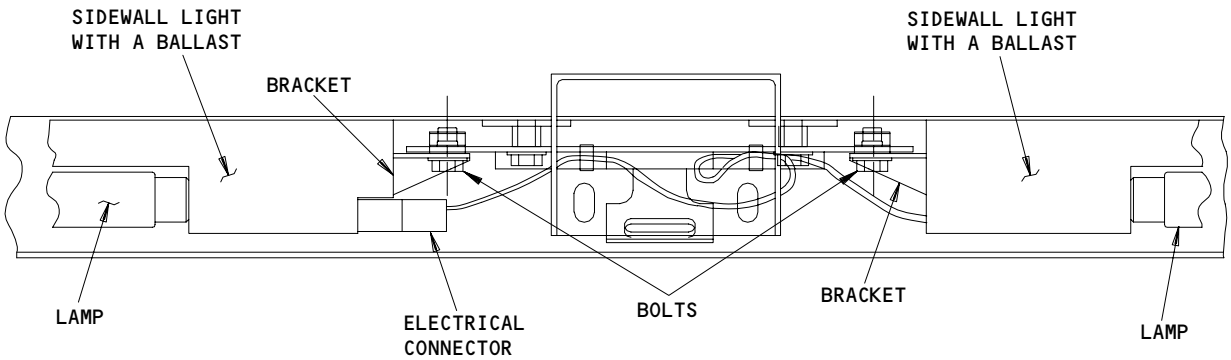
Sidewall Light - Lamp and Ballast Replacement
Figure 201 (Sheet 1)



PASSENGER COMPARTMENT
(EXAMPLE)



SIDEWALL LIGHT
B



SIDEWALL LIGHT
B-B

Sidewall Light - Lamp and Ballast Replacement
Figure 201 (Sheet 2)

(c) Carefully replace the lamp.
1) If the lamp has a cover or end caps, remove these parts and install them on the new lamp.

S 962-013
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the attendant's panel, set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).
(f) Install the lens.
1) Put the outboard edge of the lens against the outboard edge of the extrusion.
2) Push the inboard edge of the lens against the inboard edge of the extrusion.
3) Hold the lens in its position and tighten the fasteners.

TASK 33-21-30-962-005
4. Sidewall Light (In the Sidewall) - Ballast Replacement (Fig. 201)
A. General
(1) Frequently a ballast can be repaired in the shop with the replacement of a fuse that is in the ballast.
(2) Some ballasts operate a pair of lights. When this type of ballast is defective, two adjacent lights will not come on correctly.
B. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-21-04 and 33-21-06
(3) WDM 33-21-31 thru 33-21-43
C. Access
(1) Location Zones
200 Upper Half of Fuselage
D. Procedure

S 962-006
(1) Replace the ballast.
(a) Do one of these steps to remove electrical power from the ballast:
1) At the attendant's panel, set the switch for the sidewall lights to the off position and attach the DO-NOT-OPERATE tag.

2) Open each applicable circuit breaker for the sidewall light and attach the DO-NOT-CLOSE tag:
a) On the right miscellaneous electrical equipment panel, P37.
b) On the APU/EXT power panel, P34.

(b) Remove the lens.
1) Remove each screw that holds the lens.
2) Lower the lens and turn it vertically.
3) Pull the lens away from the light.

(c) Carefully remove the lamp.

(d) Remove the ballast.
1) Remove the screws while you hold the ballast.
2) Disconnect the electrical connector.

(e) Install the new ballast.
1) Connect the electrical connector.
2) Install the screws.

(f) Install the lamp.

S 712-007

(2) Do a test of the new ballast.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the attendant's panel, set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-21-30-962-008

5. Sidewall Light (Above the Sidewall) - Ballast Replacement (Fig. 201)

A. General

(1) The ballast is part of the light assembly. To replace the ballast, you must replace the light assembly.

(2) Frequently a ballast can be repaired in the shop with the replacement of a fuse that is in the ballast.

(3) Some ballasts operate a pair of lights. When this type of ballast is defective, two adjacent lights will not come on correctly.

B. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-21-04 and 33-21-06
(3) WDM 33-21-31 thru 33-21-43

C. Access
(1) Location Zones
200 Upper Half of Fuselage

D. Procedure

S 962-009
(1) Replace the light assembly.
(a) Do one of these steps to remove electrical power from the light:
1) At the attendant's panel, set the switch to the off position and attach the DO-NOT-OPERATE tag.
2) Open each applicable circuit breaker for the sidewall light and attach the DO-NOT-CLOSE tag:
a) On the right miscellaneous electrical equipment panel, P37.
b) On the APU/EXT power panel, P34.
(b) Loosen each fastener that holds the lens.
(c) Pull the front edge of the lens a small distance down and pull the lens inboard.
(d) Carefully remove the lamp.
(e) Remove the light assembly.
1) Disconnect each electrical connector.
2) Remove each bolt that holds the light assembly.

NOTE: Remove the bolt from each end of the light before you remove each bolt in the center of the light.

3) Pull the light assembly from the extrusions.
(f) Install the new light assembly.
1) Install each bolt that holds the light.

NOTE: Install each bolt in the center of the light before you install the bolt at each end of the light.

2) Connect each electrical connector.

NOTE: On some airplanes, a case grounding wire is installed on pin 5 of the electrical connector, reference 757-SL-33-026.

(g) Carefully install the lamp.

S 712-010
(2) Do a test of the new light assembly.
(a) Supply electrical power (AMM 24-22-00/201).

(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
    1) Open each circuit breaker that was opened.
(c) At the attendant's panel, set the switch to the on position.
    1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).
(f) Install the lens.
    1) Put the outboard edge of the lens in the edge along the bottom of the outboard extrusion.
    2) Push the inboard edge of the lens against the inboard extrusion.
    3) Hold the lens in its position and tighten each fastener.

PASSENGER LOADING LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-22-01 thru 33-22-99
      (2) WDM 33-22-11 thru 33-22-99
   B. Passenger loading lights consists of these lighting systems: threshold entry lights, closet lights (if installed), and attendant's work lights. Threshold entry lights are both fluorescent and incandescent lights. The lights are mounted immediately inside the passenger loading and service doors. Closet and attendant's work lights are incandescent lights mounted on ceilings in closets and above attendant work areas. Each closet light is controlled with a switch above the closet door. Each attendant's work light and threshold entry light is controlled with a switch on the nearest attendant's panel.
2. Operation
   A. Functional Description
      (1) Threshold Entry Lights
         (a) Threshold entry lights consist of both incandescent threshold lights and fluorescent forward ceiling entry light. The incandescent lights are mounted on ceiling panels just inside passenger loading and service door areas. The forward ceiling entry light consists of four fluorescent tubes mounted on ceiling panels near the flight deck door. They provide illumination for passenger loading and service entry areas.
         (b) The ENTRY rotary switch for the fluorescent entry light is on forward attendant's panel P21. The THRESHOLD switch for the forward incandescent threshold light is on forward attendant's panel, P21. The THRESHOLD switch for the aft incandescent threshold light is on the aft attendant's panel, P22. The switch for the mid incandescent entry spot lights is on the mid attendant's panel, P23 or P76. The switch is labeled THRESHOLD or ENTRY THRESH. Control relays in the APU/external power panel P34 are powered by 28v ac right bus through a circuit breaker on the overhead panel, P11. The control relay in the forward entry light assembly is powered by the 115v ac ground service bus through a circuit breaker on right miscellaneous relay panel, P37.
         (c) The forward ceiling entry light is controlled from a three position (OFF, dim, HI) ENTRY light switch on the forward attendant's panel P21. The OFF position energizes the on/off relay on the light assembly removing power from the ballasts. This control relay is also energized with the left forward entry door closed and flight deck door opened. The dim switch position provides 28v ac to the light ballasts through the contacts of the on/off relay turning the fluorescent lamps on in the dim mode. The HI switch position applies an additional 115 Vac to the ballasts causing the fluorescent lamps to illuminate in full brightness.

(d) The threshold entry lights are controlled from switch-lights on the adjacent attendant panels, P21, P22, and P23 or P76. When the switch-light is activated, 28v ac is applied to illuminate the lens of switch-light and it's corresponding threshold or entry spot light. The left forward threshold light is inhibited with the left forward entry door closed and flight deck door opened.

(2) Attendant Work Lights

(a) Each attendant work light is installed on the ceiling above an attendant's work station.

(b) During usual operation, this type of light operates on 28 volts ac of electrical power from the ground service bus. In an electrical power failure, the hydraulic motor-driven generator supplies the electrical power through the 28 volts ac transfer bus.

(c) Each attendant's work light is controlled with a switch on the nearest attendant's panel.

(d) If the left forward entry door is closed and the flight deck door is open, the left forward attendant's work light will not come on.

(3) AIRPLANES WITH CLOSET LIGHT;
Closet Lights

(a) Incandescent lamp mounted on the ceiling inside each closet provides illumination for this area.

(b) Power is supplied by the 28v ac ground service bus through circuit breaker on APU/external power panel P34. There is a switch for the light above the closet door.

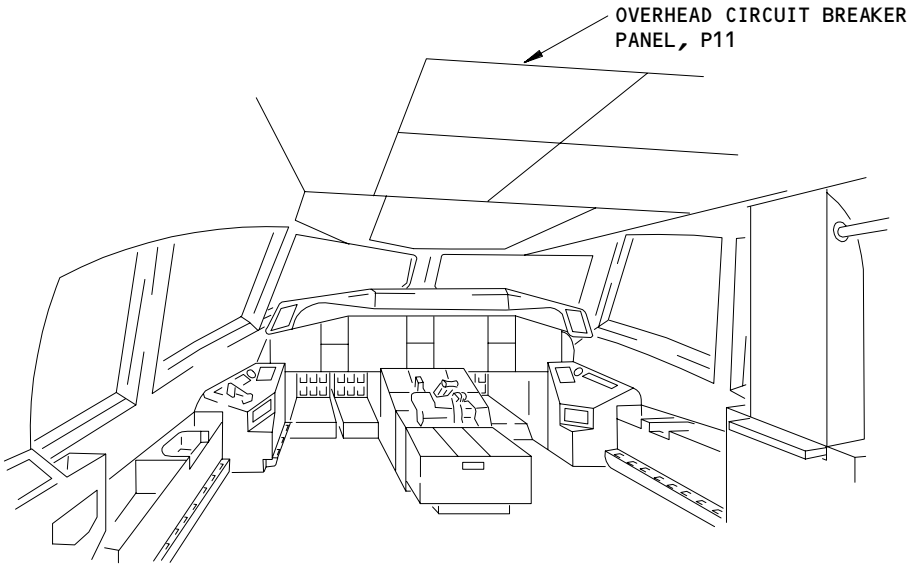
PASSENGER LOADING LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
BALLAST –	2		PASS. COMPT	*
ENTRY FLUORESCENT LIGHT			ENTRY FLUORESCENT LIGHT	33-22-00
CIRCUIT BREAKER –	1		FLT COMPT, OVHD PNL, P11	*
CIRCUIT BREAKER –	1		119BL, MAIN EQUIP CTR, P34 AND P37	*
LIGHT –				
ATTENDANT'S WORK	2		PASS. COMPT	33-22-00
CLOSET 1	2		PASS. COMPT	33-22-00
ENTRY FLUORESCENT	2		PASS. COMPT	33-22-00
ENTRY SPOT	2		PASS. COMPT	33-22-00
THRESHOLD	2		PASS. COMPT	33-22-00
PANEL –				
AFT ATTENDANT'S	2		PASS. COMPT	33-22-07
FORWARD ATTENDANT'S	2		PASS. COMPT	33-22-05
MID ATTENDANT'S	2		PASS. COMPT	33-22-06
RELAY –			119BL, MAIN EQUIP CTR, P34	*
SENSOR – (FIM 25-66-01/101)				*
NO. 1 PASS. DOOR PROXIMITY				
SWITCH – (FIM 52-51-01/101)				*
FLT COMPT DOOR PROXIMITY				
SWITCH–	2		PASS. COMPT, ATTENDANT PANELS	*
TRANSFORMER –			119BL, MAIN EQUIP CTR, P34	*

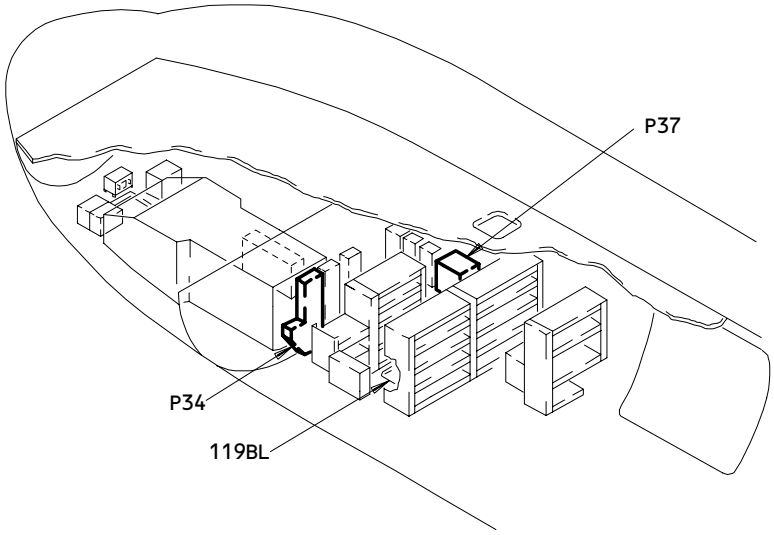
* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

1 NOT INSTALLED ON ALL AIRPLANES

Passenger Loading Lights – Component Index
Figure 101

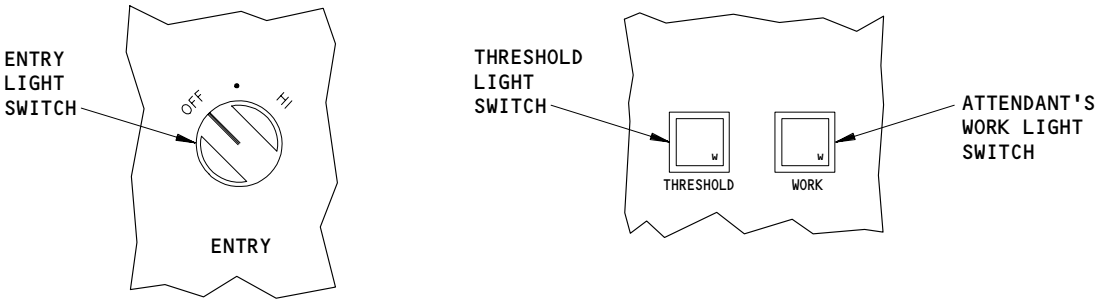


FLIGHT COMPARTMENT

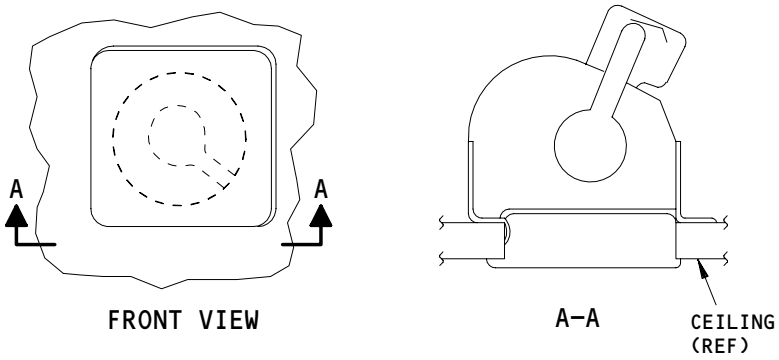


MAIN EQUIPMENT CENTER

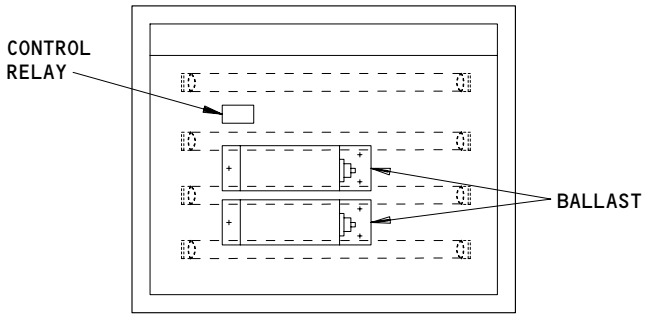
Passenger Loading Lights - Component Location
Figure 102 (Sheet 1)



ATTENDANT'S PANEL CONTROL SWITCH



ATTENDANT'S WORK LIGHT/THRESHOLD LIGHT/ENTRY SPOT LIGHT
(EXAMPLE)



FORWARD ENTRY LIGHT

Passenger Loading Lights - Component Location
Figure 102 (Sheet 2)

PASSENGER LOADING LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Forward Entry Light - Lamp Replacement
      (2) AIRPLANES WITH A CLOSET LIGHT;
          Closet Light - Lamp Replacement
      (3) Attendant's Work Light, Threshold Light, or Entry Spotlight - Lamp Replacement

TASK 33-22-00-962-000

2. Forward Entry Light - Lamp Replacement
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-22-01
      (3) WDM 33-00-01, Lamp Usage Chart
      (4) WDM 33-22-11
   B. Access
      (1) Location Zones
          200 Upper Half of the Fuselage
   C. Procedure

      S 962-001
      (1) Replace the lamp.
          (a) Do one of these steps to remove electrical power from the light:
              1) At the attendant's panel, set the switch to the off position and attach the DO-NOT-OPERATE tag.
              2) Open each applicable circuit breaker for the forward entry light and attach the DO-NOT-CLOSE tag.
                 a) On the right miscellaneous electrical equipment panel, P37.
          (b) Open the lens.
              1) Push an allen wrench into the release holes of the light assembly.
              2) Lower the lens and let it hang with its lanyard.
          (c) Carefully replace the lamp.
              1) Lift the lens and latch it into its position.

S 712-002
(2) Do a test of the new lamp.
(a) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(b) At the attendant's panel, set the switch for the forward entry light to the bright position.
1) Make sure the new lamp comes on correctly.
a) If the light stays off, make sure the flight compartment door is closed or the left forward passenger door is open.
(c) Set the switch to the usual position.
(d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-22-00-962-003
3. AIRPLANES WITH A CLOSET LIGHT;
Closet Light - Lamp Replacement
A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-22-02
(3) WDM 33-00-01, Lamp Usage Chart
(4) WDM 33-22-21
B. Access
(1) Location Zones
200 Upper Half of the Fuselage
C. Procedure

S 962-004
(1) Replace the lamp.
(a) Do one of these steps to remove electrical power from the light:
1) CLOSET WITH A SWITCH;
Set the switch to the off position and attach the DO-NOT-OPERATE tag.
2) Open each applicable circuit breaker for the closet light and attach the DO-NOT-CLOSE tag:
a) On the APU/EXT power panel, P34.
(b) Remove the lens.
(c) Carefully replace the lamp.
(d) Install the lens.

S 712-005
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) CLOSET WITH A SWITCH;
Set the switch to the on position.
(d) Make sure the new lamp comes on correctly.

(e) CLOSET WITH A SWITCH;
Set the switch to the off position.
(f) Remove electrical power if is not necessary (AMM 24-22-00/201).

TASK 33-22-00-962-006

4. Attendant's Work Light, Threshold Light, or Entry Spotlight -Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-22-01
(3) WDM 33-00-01, Lamp Usage Chart
(4) WDM 33-22-11 thru 33-22-14

B. Access
(1) Location Zones
200 Upper Half of the Fuselage

C. Procedure

S 962-007
(1) Replace the lamp.
(a) Do one of these steps to remove electrical power from the light:
1) At the attendant's panel, set the switch for the light to the off position and attach the DO-NOT-OPERATE tag.
2) Open each applicable circuit breaker for the light and attach the DO-NOT-CLOSE tag:
a) On the APU/EXT power panel, P34.
(b) Pull the lens down.
(c) Carefully replace the lamp.
(d) Lift the lens into its position.

S 712-008
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the attendant's panel, set the switch to the on position.
1) Make sure the new lamp comes on correctly.
a) If the light stays off, make sure the flight compartment door is closed or the left forward passenger door is open.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

PASSENGER LOADING LIGHTS - ADJUSTMENT/TEST

TASK 33-22-00-715-004

1. Passenger Loading Lights - Operational Test

A. General

(1) This task is a test of the operation these lights:

(a) Entry lights

(b) Threshold lights

(c) Attendant's work lights

(2) To do a test of the lights that operate with electrical power from the hydraulic motor-driven generator, refer to Emergency Lights (AMM 33-51-00/501).

B. Equipment

(1) Girt Bar Proximity Switches

C. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 25-66-01/201, Girt Bar and Floor Fittings

(3) AMM 25-66-11/201, Girt Bar Proximity Switches

(4) SSM 33-22-01 thru 33-22-99

(5) WDM 33-22-11 thru 33-22-99

D. Access

(1) Location Zones

200 Upper Half of the Fuselage

E. Procedure

S 715-002

(1) Do a test of the forward lights.

(a) Supply electrical power (AMM 24-22-00/201).

(b) Close the flight compartment door.

(c) Do one of these alternative procedures to set the left No. 1 passenger door to the armed mode:

NOTE: In Procedure One, you close the door and set it to the armed mode. If the door is opened, the escape slide will inflate and can cause injury and damage.

In Procedure Two, you remove the girt bar from the slide pack and use the girt bar in the floor fittings to set the door to the armed mode and the door stays open.

1) Procedure One:
Close the left No. 1 passenger door.
a) Move the mode selector lever to put the door in the armed mode.

WARNING: DO NOT OPEN THE DOOR FROM THE INNER SIDE. IF YOU OPEN THE DOOR, THE SLIDE WILL INFLATE AND CAUSE INJURY OR DAMAGE.

b) Attach a DO-NOT-OPERATE tag to the interior handle.
2) Procedure Two:
Open the left No. 1 passenger door.
a) Remove the girt bar (AMM 25-66-10/201).
b) Install the girt bar into the floor fitting.

(d) At the forward attendant's panel, set the switch for the entry lights to the dim position.
1) Make sure the forward entry light comes on dimly.
(e) Set the switch for the threshold lights to the on position.
1) At the attendant's panel, make sure the light in the switch comes on correctly.
2) Make sure each threshold light above the entry door comes on correctly.
(f) Set the switch for the attendant's work lights to the on position.
1) Make sure the light in the switch comes on correctly.
2) Make sure each attendant's work light comes on correctly.
(g) Open the flight compartment door.
1) Make sure the forward entry light goes off correctly.
2) Make sure the switch-light for the threshold lights goes off.
3) Make sure each threshold light goes off correctly.
4) Make sure the switch-light for the attendant's work lights goes off.
5) Make sure each attendant's work light goes off correctly.
(h) Close the flight compartment door.
(i) Set the switch for the entry lights to the bright position.
1) Make sure the forward entry light comes on brightly.
(j) Open the flight compartment door.
1) Make sure the forward entry light goes off correctly.
(k) Close the flight compartment door.

(l) Do one of these alternative procedures to set the left No. 1 passenger door to the disarmed mode:
1) Procedure One:
Move the mode selector lever to put the door in the disarmed mode.
2) Procedure Two:
a) Remove the girt bar from the floor fitting.
b) Install the girt bar (AMM 25-66-10/201).

(m) Make sure the lights that follow come on:
1) Make sure the switch-light for the threshold lights comes on.
2) Make sure each threshold light comes on correctly.
3) Make sure the switch-light for the attendant's work lights comes on.
4) Make sure each attendant's work light comes on correctly.

(n) Set the switch for the threshold lights to the off position.
1) Make sure the switch-light goes off.
2) Make sure each threshold light goes off correctly.

(o) Set the switch for the attendant's work light to the off position.
1) Make sure the switch-light goes off.
2) Make sure each attendant's work light goes off correctly.

(p) Set the switch for the entry lights to the dim position.
1) Make sure the forward entry light come on dimly.

(q) Open the flight compartment door.
1) Make sure the forward entry light stays on dimly.

(r) Close the flight compartment door.

(s) Set the switch for the entry lights to the bright position.
1) Make sure the forward entry light becomes bright.

(t) Open the flight compartment door.
1) Make sure the forward entry light stays on brightly.

(u) Set the switch for the entry lights to the off position.
1) Make sure the forward entry light goes off correctly.

S 715-003

(2) Do a test of the mid and aft lights.
(a) At the attendant's panel, set the switches for the entry, threshold, and attendant's work lights to the on position.
1) Make sure the light in each switch comes on.
2) Make sure the lights that are controlled with each switch come on correctly.

(b) Set each switch to the off position.
1) Make sure the lights go off correctly.

2) Make sure each entry light, threshold light, and attendant's work light goes off.

(c) Remove electrical power if it is not necessary (AMM 24-22-00/201).

FORWARD ATTENDANT'S PANEL - REMOVAL/INSTALLATION

TASK 33-22-05-004-011

1. Forward Attendant's Panel - Removal

A. References

(1) AMM 25-25-02/401, Attendant Seats
(2) SSM 23-31-01
(3) SSM 23-34-01
(4) SSM 33-21-01 thru 33-21-06
(5) SSM 33-22-01
(6) SSM 33-51-01
(7) WDM 23-31-17 thru 23-31-18
(8) WDM 23-34-15
(9) WDM 33-21-11
(10) WDM 33-21-31
(11) WDM 33-21-51
(12) WDM 33-22-11
(13) WDM 33-51-11

B. Access

(1) Location Zones
200 Upper Half of the Fuselage

C. Procedure

S 864-001

(1) Remove electrical power from the forward attendant's panel:
(a) Open each applicable circuit breaker for the lights controlled with the attendant's panel and attach the DO-NOT-CLOSE tag:
1) On the APU/EXT power panel, P34.
2) On the right miscellaneous electrical equipment panel, P37.
(b) Open each applicable circuit breaker for the passenger address functions controlled with the attendant's panel and attach the DO-NOT-CLOSE tag:
1) On the overhead circuit breaker panel, P11.
(c) To remove power from the bus power control unit, open these circuit breakers and attach DO-NOT-CLOSE tags :

NOTE: TWENTY-EIGHT VOLTS DC IS ON PIN 10 OF DISCONNECT D2458 ON THE P21 PANEL. THIS VOLTAGE CANNOT BE REMOVED SEPARATELY FROM THE POWER FROM THE BUS POWER CONTROL UNIT. REMOVAL OF POWER FROM THE BUS POWER CONTROL UNIT STOPS DISTRIBUTION OF EXTERNAL POWER ON THE AIRPLANE.

1) On the APU/EXT power panel, P34:
a) 34B2 - Plate A, GROUND POWER BPCU

2) On the overhead circuit breaker panel, P11:
a) 11R32, BPCU SEC
3) On the main distribution panel, P6:
a) 6B4, BUS PWR CONT UNIT

S 014-012
(2) Remove the attendant's seat headrest (AMM 25-25-02/401).

S 024-027
(3) Remove the forward attendant's panel.
(a) Remove the screws from the lower surface of the panel.
(b) Move the panel up and away to free it from the shoulder screws.
(c) Disconnect each electrical connector from the back of the panel assembly.
1) If the emergency lights come on, quickly install a jumper wire between pins 40 and 41 of the electrical connector.

NOTE: Make sure the emergency lights go off. Do this step in less than one minute to keep the batteries sufficiently charged to operate the emergency lights.

(d) Remove the panel assembly.

TASK 33-22-05-404-018

2. Forward Attendant's Panel - Installation

A. References
(1) AMM 23-31-00/501, Passenger Address System
(2) AMM 24-22-00/201, Electrical Power - Control
(3) AMM 25-25-02/401, Attendant Seats
(4) AMM 33-21-00/501, Passenger Compartment Lighting
(5) AMM 33-22-00/501, Passenger Loading Lights
(6) SSM 23-31-01
(7) SSM 23-34-01
(8) SSM 33-21-01 thru 33-21-06
(9) SSM 33-22-01

(10) SSM 33-51-01
(11) WDM 23-31-17
(12) WDM 23-31-18
(13) WDM 23-34-15
(14) WDM 33-21-11
(15) WDM 33-21-31
(16) WDM 33-21-51
(17) WDM 33-22-11
(18) WDM 33-51-11

B. Access

(1) Location Zones

200 Upper Half of the Fuselage

C. Procedure

S 424-028

(1) Install the forward attendant's panel.

(a) Connect each electrical connector to the back of the panel assembly.

1) Remove the jumper wire from the electrical connector for the emergency lights.

NOTE: The emergency lights will come on.

2) Quickly connect the electrical connector to the back of the panel assembly.

NOTE: Do this step in less than one minute to keep the batteries sufficiently charged to operate the emergency lights.

(b) Put the panel assembly down onto the shoulder screws.
(c) Install the screws on the lower surface of the panel assembly.
(d) Install the attendant seat headrest.

S 714-029

(2) Do a test of the forward attendant's panel.

(a) Supply electrical power (AMM 24-22-00/201).
(b) For the electrical power from the bus power control unit, remove the DO-NOT-CLOSE tags and close these circuit breakers:

1) On the APU/EXT power panel, P34:
a) 34B2 - Plate A, GROUND POWER BPCU
2) On the overhead circuit breaker panel, P11:
a) 11R32, BPCU SEC
3) On the main distribution panel, P6:
a) 6B4, BUS PWR CONT UNIT

(c) Remove the DO-NOT-CLOSE tag and close each circuit breaker for the lights controlled with the forward attendant's panel:

1) On the APU/EXT power panel, P34.

2) On the right miscellaneous equipment panel, P37.

(d) Remove the DO-NOT-CLOSE tag and close each circuit breaker for the passenger address functions controlled with the forward attendant's panel:

1) On the overhead circuit breaker panel, P11.

(e) Do an operational test of the lights controlled with the forward attendant's panel (AMM 33-21-00/501 and AMM 33-22-00/501).

(f) Do an operational test of the passenger address functions controlled with the forward attendant's panel (AMM 23-31-00/501).

(g) Remove electrical power if it is not necessary (AMM 24-22-00/201).

AFT ATTENDANT'S PANEL - REMOVAL/INSTALLATION

TASK 33-22-06-004-006

1. Aft Attendant's Panel - Removal

A. References

(1) AMM 25-25-01/201, Passenger Seats
(2) AMM 25-25-02/401, Attendant Seats
(3) SSM 33-22-01
(4) SSM 33-51-01
(5) WDM 33-22-14
(6) WDM 33-51-11

B. Access

(1) Location Zones

200 Upper Half of the Fuselage

C. Procedure

S 864-039

(1) Remove electrical power from the aft attendant's panel:
(a) Open each applicable circuit breaker for the lights controlled with the attendant's panel and attach the DO-NOT-CLOSE tag:
1) On the APU/EXT power panel, P34.

S 024-040

(2) AFT ATTENDANT'S PANEL BEHIND A PASSENGER SEAT;
Do these steps to remove the aft attendant's panel:
(a) Remove the cover from the opposite side of the windscreen.
1) If it is necessary, remove the backrest and the headrest from the passenger seat (AMM 25-25-01/201).
2) Release the fasteners and remove the cover.
(b) Remove the attendant's panel assembly.
1) Through the opening in the windscreen, remove the screws, washers, nuts, and housing assembly from the mounting brackets.
2) Disconnect the electrical wires from the back of the attendant's panel.
a) If the emergency lights come on, quickly install a jumper between pins 40 and 41 of the electrical connector.

NOTE: Make sure the emergency lights go off. Do this step in less than one minute to keep the batteries sufficiently charged to operate the emergency lights.

3) Carefully pull the attendant's panel away from the windscreen.

S 024-038
(3) AFT ATTENDANT'S PANEL BEHIND AN ATTENDANT'S SEAT;
Do these steps to remove the aft attendant's panel:
(a) Remove the attendant's seat headrest (AMM 25-25-02/401).
(b) Remove the attendant's panel assembly.
1) Remove the screws on the bottom of the attendant's panel.
2) Move the attendant's panel up and away from the shoulder screws.
3) Disconnect the electrical connector on the back of the attendant's panel.

TASK 33-22-06-404-016

2. Aft Attendant's Panel - Installation

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) AMM 25-25-01/201, Passenger Seats
(3) AMM 25-25-02/401, Attendant Seats
(4) SSM 33-22-01
(5) WDM 33-22-14

B. Access
(1) Location Zones
200 Upper Half of the Fuselage

C. Procedure

S 424-037
(1) Install the aft attendant's panel.
(a) Connect the electrical wires to the back of the attendant's panel.
(b) AFT ATTENDANT'S PANEL BEHIND A PASSENGER SEAT;
Do these steps to install the aft attendant's panel:
1) Install the attendant's panel in the opening in the windscreen.
2) On the other side of the opening, do these steps:
a) Install the housing assembly to the mounting bracket with screws, washers and nuts.
b) Install the cover with the fasteners.
(c) AFT ATTENDANT'S PANEL BEHIND AN ATTENDANT'S SEAT;
Do these steps to install the aft attendant's panel:
1) Install the attendant's panel on the shoulder screws.
2) Install the screws at the bottom of the attendant's panel.
(d) Install each part of the seat that was removed (AMM 25-25-01/201 or AMM 25-25-02/401).

S 714-028
(2) Do a test of the aft attendant's panel.
(a) Supply electrical power (AMM 24-22-00/201).

(b) Remove the DO-NOT-CLOSE tag and close each applicable circuit breaker for the lights controlled with this attendant's panel:
1) On the APU/EXT power panel, P34.
(c) At the aft attendant's panel, set each switch for the lights to the on position.
1) Make sure the light in each switch come on.
2) Make sure the lights that are controlled with each switch come on correctly.
(d) Set each switch to the off position.
1) Make sure the lights go off correctly.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

MID ATTENDANT'S PANEL - REMOVAL/INSTALLATION

TASK 33-22-07-004-005

1. Mid Attendant's Panel - Removal
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) AMM 25-23-01/401, Passenger Service Units
      (3) AMM 25-25-01/201, Passenger Seats
      (4) SSM 33-22-01
      (5) WDM 33-22-12
   B. Access
      (1) Location Zones
          200 Upper Half of the Fuselage
   C. Procedure

      S 864-051
      (1) Remove electrical power from the mid attendant's panel:
          (a) Open each applicable circuit breaker for the lights controlled with the attendant's panel and attach the DO-NOT-CLOSE tag:
              1) On the APU/external power panel, P34.
          (b) Get access to the back of the attendant's panel.
              1) AFT ATTENDANT'S PANEL ON AN STOWAGE BIN OR A LAVATORY WALL; Lower the passenger service unit (PSU) near the attendant's panel (AMM 25-23-01/401).
              2) AFT ATTENDANT'S PANEL ON A WINDSCREEN; Remove the cover on the opposite side of the windscreen.
                 a) If it is necessary, remove the head rest and the back rest from the passenger seat (AMM 25-25-01/201).
                 b) Remove the cover behind the attendant's panel.
          (c) Remove the mid attendant's panel.
              1) Through the opening behind the attendant's panel, disconnect the electrical connector.
                 a) If the emergency lights come on, quickly install a jumper between pins 25 and 28 of the electrical connector.

                    NOTE: Make sure the emergency lights go off. Do this step in less than one minute to keep the batteries sufficiently charged to operate the emergency lights.

              2) Through the opening, remove the screws, washers, nuts, clamp, and housing assembly from the mounting brackets.
              3) Go to the front of the attendant's panel and carefully pull it out of the opening.

TASK 33-22-07-404-026

2. Mid Attendant's Panel - Installation

A. References

(1) AMM 24-22-00/201, Electrical Power - Control
(2) AMM 25-23-01/401, Passenger Service Units
(3) AMM 25-25-01/201, Passenger Seats
(4) SSM 33-22-01
(5) WDM 33-22-12

B. Access

(1) Location Zones
200 Upper Half of Fuselage

C. Procedure

S 424-048

(1) Install the mid the attendant's panel.
(a) Put the front side of the attendant's panel back in its position.
(b) Install the clamp on the panel wire bundle.
(c) Install the housing assembly and the clamp to the mounting brackets with the screws, washers, and nuts.
(d) Connect the electrical connector.

S 414-049

(2) If it was necessary to remove a PSU, install it back in its position (AMM 25-23-01/401).

S 414-050

(3) If it was necessary to remove parts of a passenger seat, do these steps:
(a) Install the cover with the fasteners.
(b) Install each part of the seat that was removed (AMM 25-25-01/201).

S 714-036

(4) Do a test of the mid attendant's panel.
(a) Supply electrical power (AMM 24-22-00/201).

(b) Remove the DO-NOT-CLOSE tag and close each applicable circuit breaker for the lights controlled with the attendant's panel:
    1) On the APU/EXT power panel, P34.
(c) At the mid attendant's panel, set each switch for the lights to the on position.
    1) Make sure the light in each switch comes on.
    2) Make sure the lights that are controlled with each switch come on correctly.
(d) Set each switch to the off position.
    1) Make sure the lights go off correctly.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

READING LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-23-01 thru 33-23-99
      (2) WDM 33-23-11 thru 33-23-99
   B. There is a reading light for each passenger seat installed in the Passenger Service Unit (PSU) above the seat. You operate each reading light with a switch adjacent to the light. Each reading light contains a lamp installed in a reflector.
   C. The work lights installed in an Attendant Service Unit (ASU) are the same as the reading lights in the PSUs. The work lights are connected to the same circuits as the reading lights.
2. Operation
   A. Functional Description
      (1) Electrical power is supplied to the lights from the 115 volts ac left and right utility buses.
         (a) Circuit breakers on miscellaneous relay panel P70 supply the electrical power to the left lights.
         (b) Circuit breakers the right miscellaneous relay panel P37 supply the electrical power to the right lights.
      (2) Each circuit breaker is connected to a transformer installed in the passenger compartment. Each transformer changes 115 volts ac to 28 volts ac. This electrical power is supplied to a group of pushbutton switches. Each switch operates the light adjacent to it.

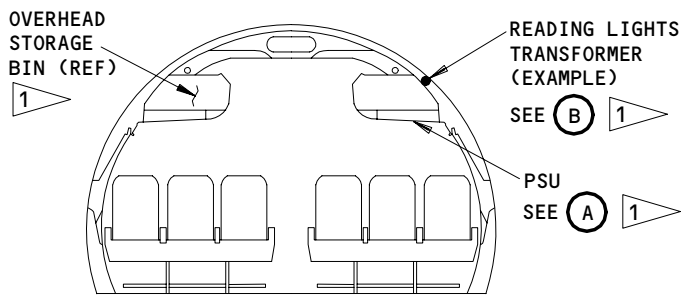
PASSENGER READING LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			119BL, MAIN EQUIP CTR, P37	*
CIRCUIT BREAKER –			119BL, MAIN EQUIP CTR, P70	*
LIGHT –				
ATTENDANT WORK	--		PASS. COMPT, ATTND SERV UNITS	33-23-00
PASSENGER READING			PASS. COMPT, PASSENGER SERV UNITS	33-23-00
SWITCH –				
ATTENDANT WORK LIGHT	--		PASS. COMPT, ATTND SERV UNITS	*
PASSENGER READING LIGHT			PASS. COMPT, PASSENGER SERV UNITS	*
TRANSFORMER –				
READING LIGHTS				*

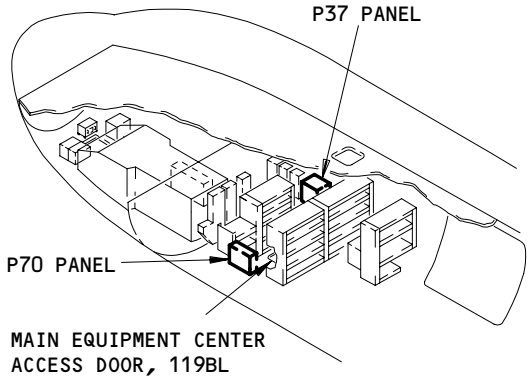
* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

Passenger Reading Lights – Component Index
Figure 101

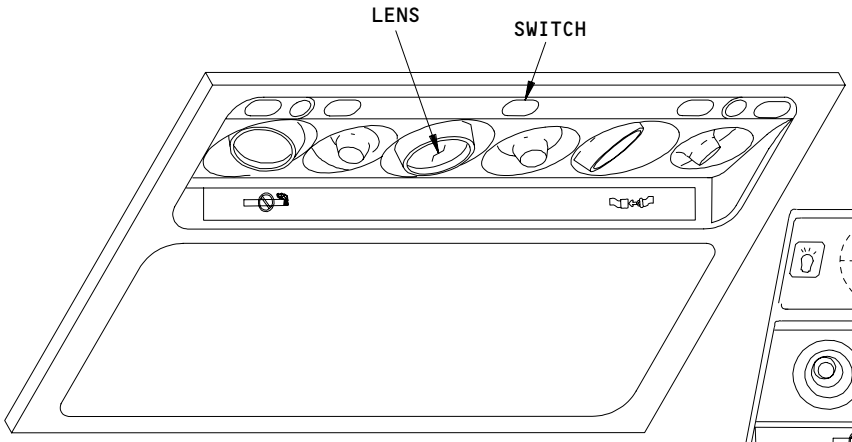
A73786



PASSENGER COMPARTMENT
(EXAMPLE)

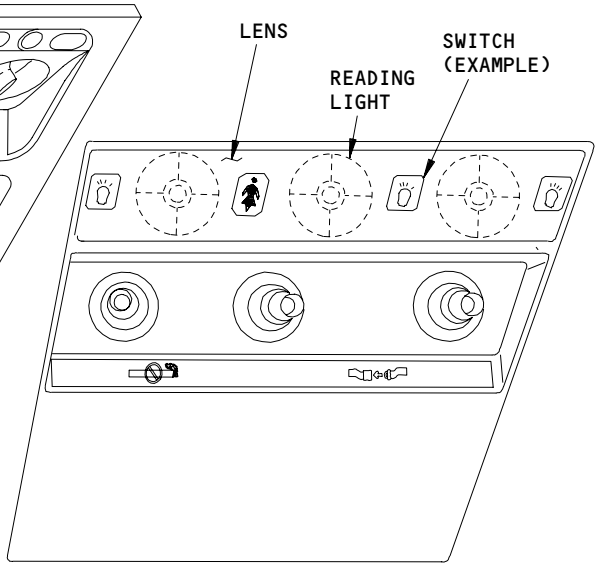


MAIN EQUIPMENT CENTER



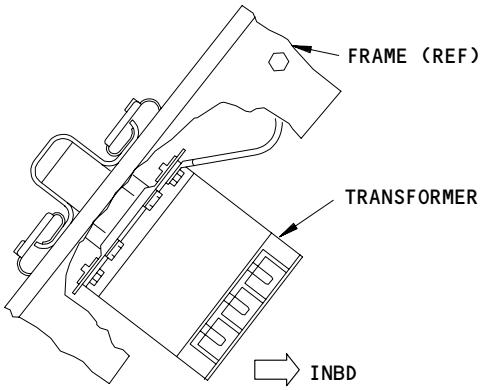
PASSENGER SERVICE UNIT (PSU)
(EXAMPLE)

A 2



PASSENGER SERVICE UNIT (PSU)
(EXAMPLE)

A 3



READING LIGHTS TRANSFORMER
(EXAMPLE)

B

1 THE LEFT AND RIGHT SIDES ARE EQUIVALENT
2 READING LIGHT WITH A CIRCULAR LENS
3 READING LIGHT WITH A RECTANGULAR LENS

Reading Lights - Component Location
Figure 102

READING LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Reading Light - Lamp Replacement
      (2) Reading Light - Adjustment
      (3) PSU Circuit Board - Replacement
   B. The switches for the reading lights are installed on the circuit board in each passenger service unit (PSU).
   C. A work light installed in an attendant's service unit (ASU) is referred to as a reading light in this procedure.

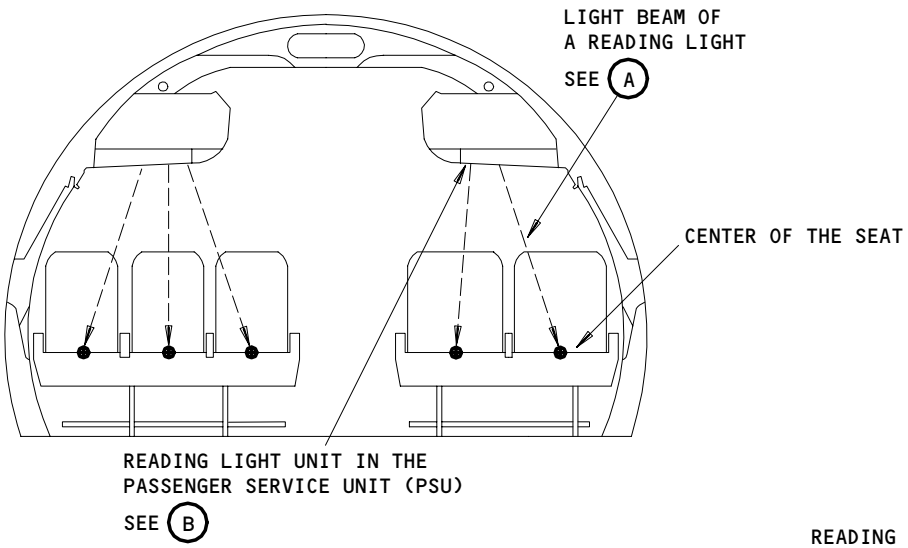
TASK 33-23-00-962-001

2. Reading Light - Lamp Replacement (Fig. 201)
   A. General
      (1) If the reading light has a circular lens, you remove the lens to replace the lamp.
      (2) If the reading light has a rectangular lens, you open the passenger service unit (PSU) or attendant's service unit (ASU) to replace the lamp.
   B. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) AMM 25-23-01/401, Passenger Service Units
      (3) SSM 33-23-01
      (4) WDM 33-23-11 thru 33-23-99
   C. Access
      (1) Location Zone
          200 Upper Half of Fuselage
      (2) Access Panels
          119BL Main equipment access panel

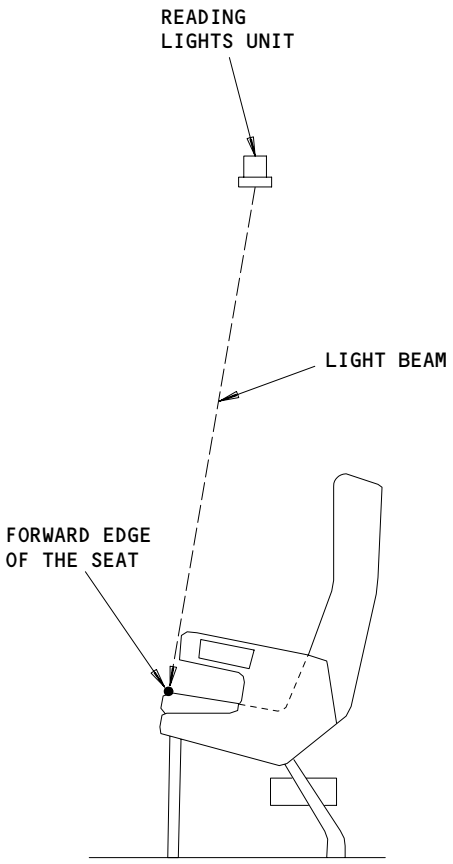
   D. Procedure

      S 962-052
      (1) Replace the lamp.
          (a) Remove electrical power from the light:
              1) Open each applicable circuit breaker for the reading light and attach the DO-NOT-CLOSE tag:
                 a) On the miscellaneous relay panel, P70.
          (b) READING LIGHT WITH A CIRCULAR LENS;
              Carefully replace the lamp.
              1) Remove the lens assembly.

                 NOTE: With two fingers, push together the inner and outer sides of the lens assembly. At the same time, quickly turn the lens assembly counterclockwise to disengage it.

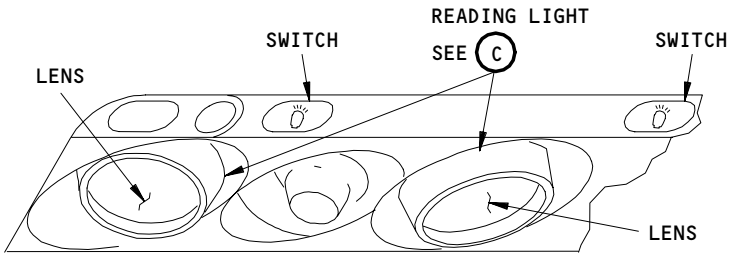


PASSENGER COMPARTMENT
(EXAMPLE)



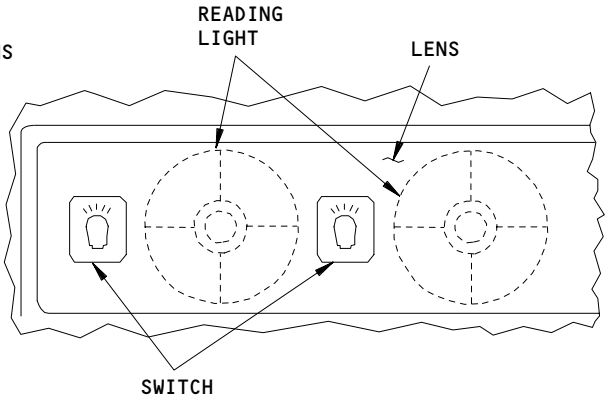
LIGHT BEAM OF
A READING LIGHT
A

Reading Lights - Lamp Replacement and Light Beam Adjustment
Figure 201 (Sheet 1)



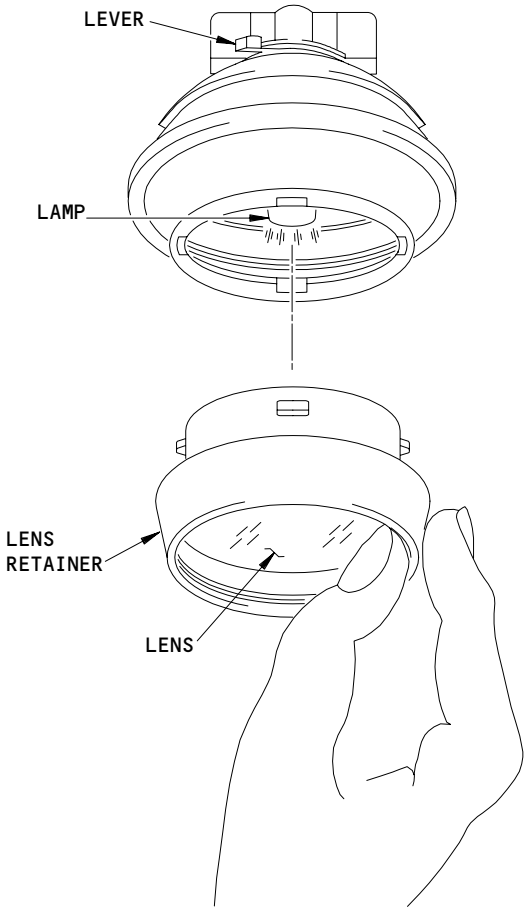
READING LIGHTS UNIT (EXAMPLE)

B 1



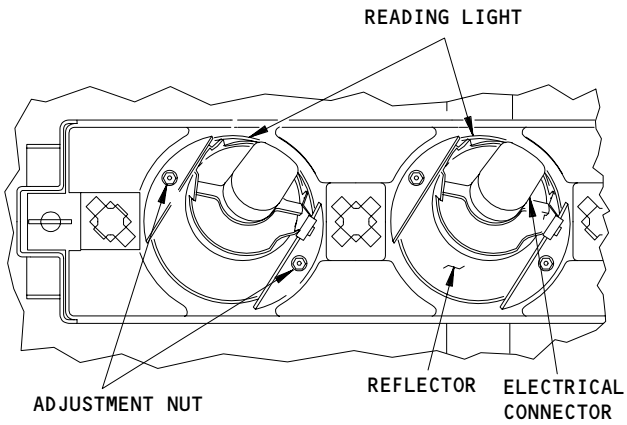
READING LIGHTS UNIT (EXAMPLE)
(FRONT VIEW)

B 2



READING LIGHT (EXAMPLE)

C 1



READING LIGHTS UNIT (EXAMPLE)
(REAR VIEW)

B 2

1 READING LIGHT WITH A CIRCULAR LENS
2 READING LIGHT WITH A RECTANGULAR LENS

Reading Lights - Lamp Replacement and Light Beam Adjustment
Figure 201 (Sheet 2)

C90581

CAUTION: AIRPLANES WITH HALOGEN LAMPS;
DO NOT TOUCH HALOGEN LAMPS WITH YOUR HANDS. WEAR GLOVES OR USE A CLEAN CLOTH WHEN YOU COME IN CONTACT WITH HALOGEN LAMPS. THE OIL/GREASE FROM YOUR HANDS CAN CAUSE HALOGEN LAMPS TO MALFUNCTION.

2) Replace the lamp.
3) Install the lens assembly.

NOTE: With two fingers, push together the inner and outer sides of the lens assembly. At the same time, quickly turn the lens assembly clockwise to engage it.

(c) READING LIGHT WITH A RECTANGULAR LENS;
Carefully replace the lamp.
1) Open the passenger service unit (PSU) or attendant's service unit (ASU) to get access to the rear of the light (AMM 25-23-01/401).
2) Disconnect the electrical connector.
3) Push down and turn the reflector, then pull it out.

CAUTION: AIRPLANES WITH HALOGEN LAMPS;
DO NOT TOUCH HALOGEN LAMPS WITH YOUR HANDS. WEAR GLOVES OR USE A CLEAN CLOTH WHEN YOU COME IN CONTACT WITH HALOGEN LAMPS. THE OIL/GREASE FROM YOUR HANDS CAN CAUSE HALOGEN LAMPS TO MALFUNCTION.

4) Replace the lamp in the reflector.
5) Push and turn the reflector into its position.
6) Connect the electrical connector.
7) Close the PSU or ASU.

S 722-044
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the PSU or ASU, set the switch for the reading light to the on position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-23-00-822-018

3. Reading Lights - Adjustment (Fig. 201)

A. General

(1) If the reading light has a circular lens, you can permit the passengers and attendants to adjust the direction of the light beam. You can also adjust and then lock the reading light in its position. Passengers and attendants cannot change direction of the light beam while the reading light is locked.

(2) If the reading light has a rectangular lens, you adjust where the light beam is pointed. Passengers and attendants cannot adjust the reading light to change the direction of the light beam.

B. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 25-23-01/401, Passenger Service Units

C. Access

(1) Location Zones

200 Upper Half of Fuselage

(2) Access Panels

119BL Main equipment access panel

D. Procedure

S 822-055

(1) Adjust the light.

(a) Supply electrical power (AMM 24-22-00/201).

(b) If the reading light is off, set its switch to the on position.

NOTE: The location of the switch is adjacent to the reading light on the passenger service unit (PSU) or attendant's service unit (ASU).

(c) Examine where the light beam is pointed.

NOTE: The correct adjustment of a reading light is in the direction that gives the best lighting for a person to read a book. This is at approximately the center of the forward edge of the seat.

(d) Set the switch to the off position.

1) Make sure the reading light goes off.

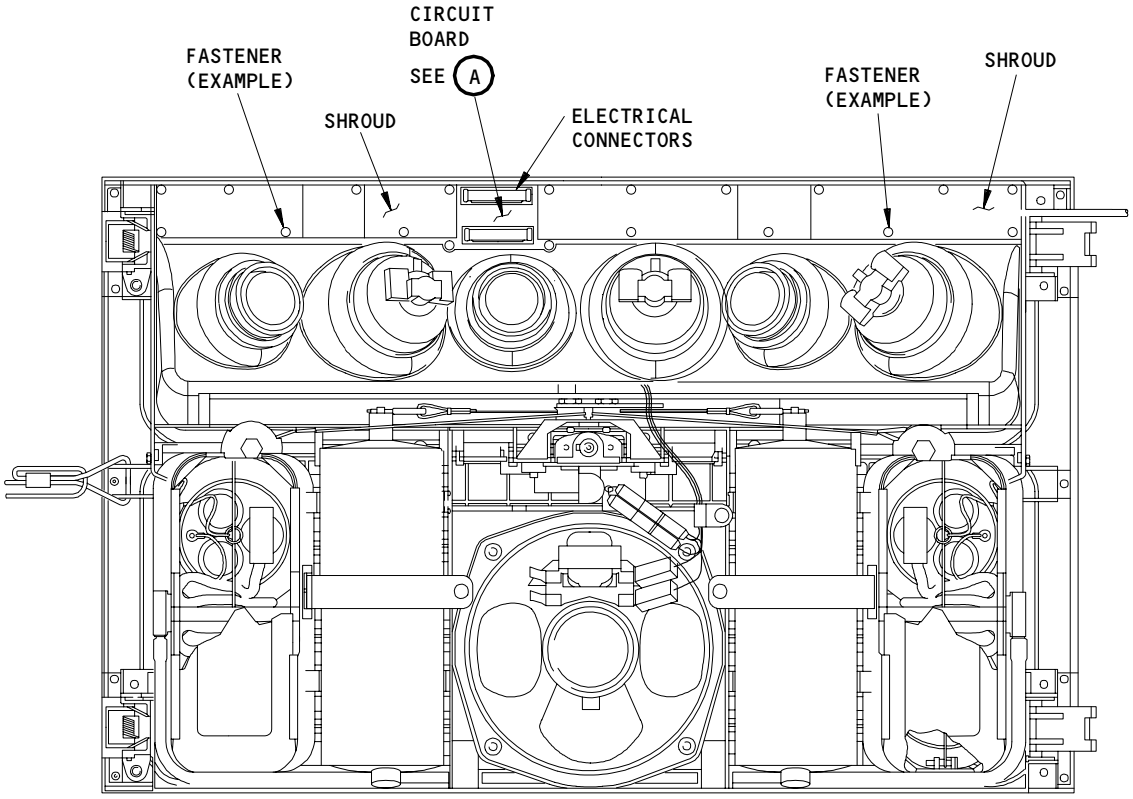
(e) Open the PSU or ASU to get access to the rear of the reading light (AMM 25-23-01/401).

(f) READING LIGHT WITH A CIRCULAR LENS;
Adjust the direction of the light beam.

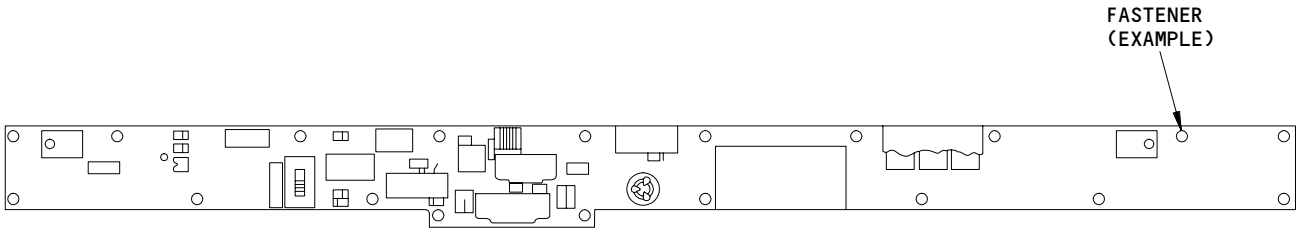
1) Use the lever to release the reading light assembly.

2) Move the lens assembly until the reading light is in its correct position.

3) Use the lever to lock the reading light in its position.



PASSENGER SERVICE UNIT (PSU)
(EXAMPLE)



CIRCUIT BOARD
(EXAMPLE)

A

PSU Circuit Board Installation
Figure 202

(g) READING LIGHT WITH A RECTANGULAR LENS;
Adjust the direction of the light beam.
1) Loosen the two adjustment nuts at the edge of the reflector.
2) Move the reflector until the reading light is in its correct position.
3) Tighten the adjustment nuts.
(h) Close the PSU or ASU (AMM 25-23-01/401).

S 212-056
(2) Do a test of the light beam adjustment.
(a) At the PSU or ASU, set the switch for the reading light to the on position.
1) Make sure the reading light is adjusted to give the best lighting for a person to read a book.

NOTE: This is at approximately the center of the forward edge of the passenger seat.

(b) Set the switch to the usual position.
(c) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-23-00-962-056

4. PSU Circuit Board - Replacement (Fig. 202)

A. General
(1) Frequently a PSU circuit board can be repaired in the shop with the replacement of a fuse.

B. References
(1) AMM 20-41-01/201, Electrostatic Discharge Sensitive Devices
(2) AMM 25-23-01/401, Passenger Service Units (PSUs)

C. Access
(1) Location Zone
200 Upper Half of Fuselage
(2) Access Panels
119BL Main equipment access panel

D. Circuit Board Removal

S 012-057
(1) Remove the PSU to get access to the circuit board (AMM 25-23-01/401).

S 022-058

CAUTION: DO NOT TOUCH THE CIRCUIT BOARD BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CIRCUIT BOARD.

(2) Do this task: Remove the ESDS Printed Circuit Boards (AMM 20-41-01/201).

S 032-059
(3) Disconnect each electrical connector from the circuit board.

S 032-060
(4) Remove each screw from each shroud above the circuit board.

S 032-061
(5) Lift away each shroud.

S 022-062
(6) Remove the circuit board from the PSU.
(a) Remove each screw that holds the circuit board.

E. Circuit Board Installation

S 422-064

CAUTION: DO NOT TOUCH THE CIRCUIT BOARD BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CIRCUIT BOARD.

(1) Do this task: Install the ESDS Printed Circuit Boards (AMM 20-41-01/201).
(a) With the screws, install the circuit board in its position in the PSU.

NOTE: Make sure you do not install screws in the holes for the screws that also hold the shroud.

S 432-067
(2) Install each shroud with its screws.

S 432-065
(3) Connect each electrical connector to the circuit board.

S 412-068
(4) Install the PSU (AMM 25-23-01/401).

PASSENGER SIGNS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-24-01 thru SSM 33-24-99
      (2) WDM 33-24-11 thru WDM 33-24-99
   B. Passenger signs are installed in the passenger service units (PSUs), lavatories, and attendants stations.
   C. The signs show the passengers and attendants when not to smoke, when to put on their seat belts, and when to go back to their seats.
2. Operation
   A. NO SMOKING (NS) Signs
      (1) The NS signs are installed in the PSUs and near the attendant's stations.
      (2) The NS signs are controlled with a three-position switch on the pilot's overhead panel, P5.
         (a) When the NS switch is in the on position, the signs are on. The 28 volts dc power from the left bus energizes relays which supply 28 volts ac from the ground service bus to the lamps in the signs.
         (b) When the NS switch is in the off position, the signs are off. The switch removes the ground, which de-energizes the relays and disconnects electrical power from the signs.
         (c) When the NS switch is in the automatic position, the signs come on and go off automatically.
            1) When a landing gear door opens, the Proximity Switch Electronic Unit (PSEU) connects the ground to the NS relay through a door proximity switch (AMM 32-09-00). All the NS signs then come on.
            2) The NS signs will come on if the air pressure in the passenger compartment decreases. The internal air pressure must become less than that of the usual external air pressure of 10,000 feet. This condition causes the cabin pressure switch to supply the ground to energize the NS relay and operate the signs.
            3) When the internal air pressure becomes less than the usual external air pressure of 14,000 feet, oxygen is supplied to the passengers. In this condition, the oxygen deployment relay connects the ground to the NS switch. This connects a ground to the NS relay to supply 28 volts ac from the ground service bus. The NS signs come on.

(3) When the NS signs come on, the 28 volts dc also supplies the electrical power to make a chime sound (AMM 23-31-00).

B. FASTEN SEAT BELT (FSB) Signs

(1) The FSB signs are installed in the PSUs and near the attendant's stations.

(2) The FSB signs are controlled with a three-position switch on the P5 panel.

(a) When the FSB switch is in the on position, the 28 volts dc from the left bus energizes relays to supply 28 volts ac from the ground service bus. This electrical power operates the lamps in the FSB signs.

(b) When the FSB switch is in the off position, the FSB signs are off. The switch removes the ground, which de-energizes the relays and disconnects electrical power from the signs.

(c) With the FSB switch in the automatic position, the signs come on and go off automatically.

1) When a landing gear door opens, the Proximity Switch Electronic Unit (PSEU) supplies the ground to the FSB relay through a door proximity switch (AMM 32-09-00). All the FSB signs then come on.

2) When the flap proximity switch (AMM 27-51-00) detects a flaps not up condition, the ground is supplied with the Flap/Slat Electronic Unit (FSEU) to energize the FSB relay. The FSB relay supplies 28 volts ac to make the FSB signs come on.

3) The FSB signs will come on if the air pressure in the passenger compartment decreases. The internal air pressure must become less than that of the usual external air pressure of 10,000 feet. This condition causes the cabin pressure switch to supply the ground to energize the FSB relay and operate the signs.

4) When the internal air pressure becomes less than the usual external air pressure of 14,000 feet, oxygen is supplied to the passengers. In this condition, the oxygen deployment relay connects the ground to the FSB switch. This connects a ground to the FSB relay to supply 28 volts ac from the ground service bus. The FSB signs come on.

(3) When the FSB signs come on, the 28 volts dc also supplies the electrical power to make a chime sound (AMM 23-31-00).

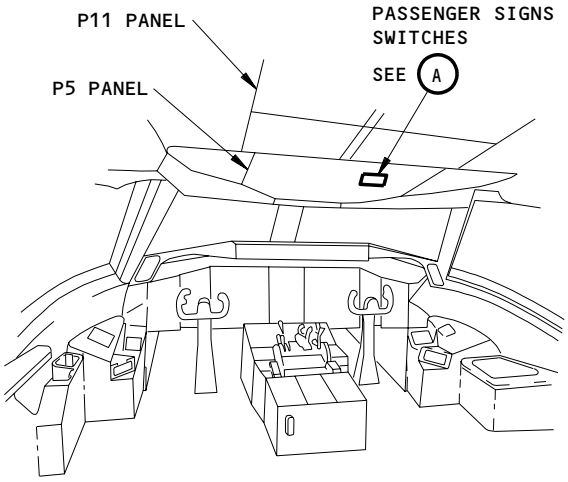
C. RETURN TO SEAT (RTS) Signs
   (1) There is a RTS sign in each lavatory.
   (2) The RTS signs are controlled with the FSB signs circuit.
   (3) When the RTS signs come on, the 28 volts dc also supplies the electrical power to make a chime sound (AMM 23-31-00).

PASSENGER SIGNS

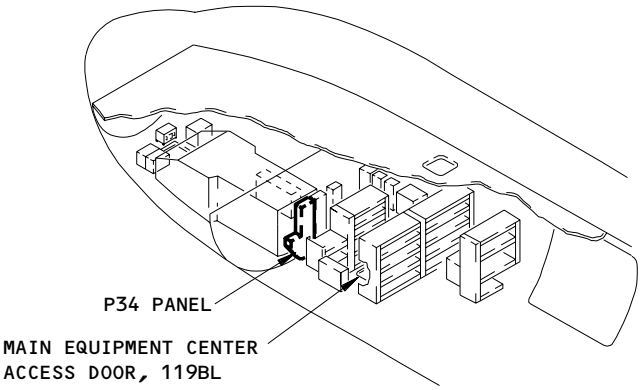
COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, P11	
CIRCUIT BREAKER –			119BL, MAIN EQUIP CTR, P34	
MODULE – (FIM 25-23-00/101)				
PSU UNDER BIN				
MODULE – (FIM 27-51-00/101)				
FLAP/SLAT ELECTRONICS UNIT (FSEU)				
MODULE – (FIM 32-09-03/101)				
PROXIMITY SWITCH ELECTRONICS UNIT (PSEU)				
RELAY –			119BL, MAIN EQUIP CTR, P34 AND P37	*
SIGN – NO SMOKING/FASTEN SEAT BELT	--		PASS. COMPT	33-24-00
SWITCH –			119BL, MAIN EQUIP CTR, P34	
CABIN PRESSURE				
SWITCH – PASS. SIGNS			FLT COMPT, P5	*

* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

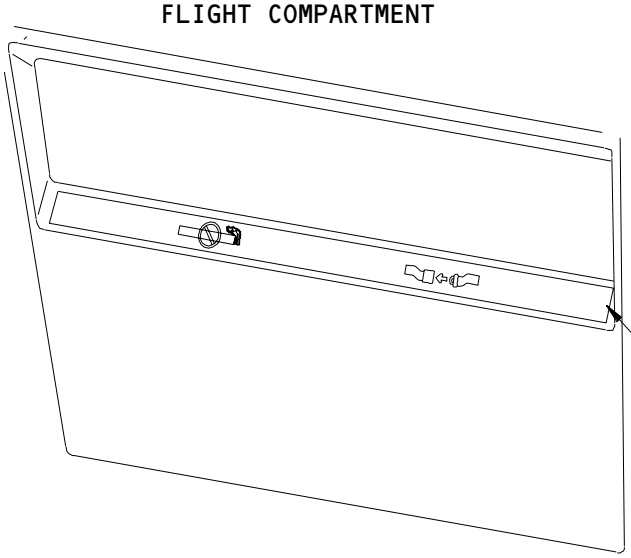
Passenger Signs – Component Index
Figure 101



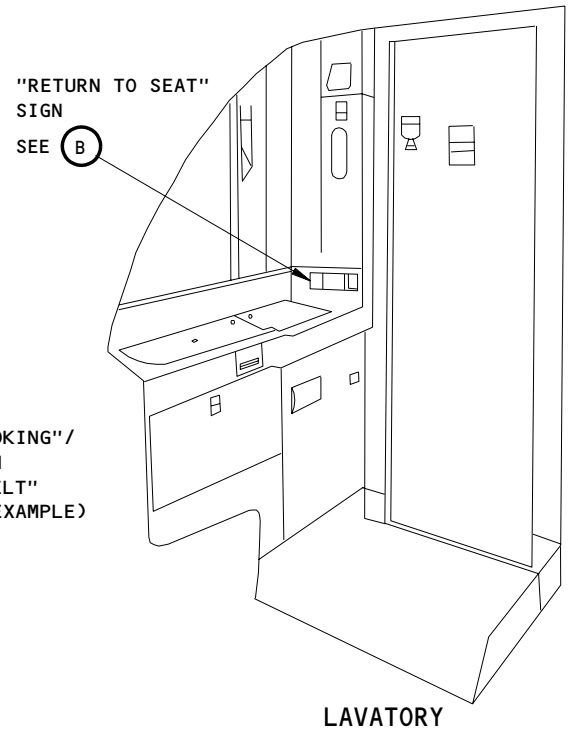
FLIGHT COMPARTMENT



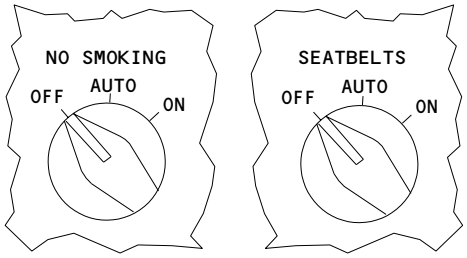
MAIN EQUIPMENT CENTER



PASSENGER SERVICE UNIT (EXAMPLE)

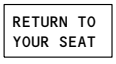


LAVATORY (EXAMPLE)



PASSENGER SIGNS SWITCHES (EXAMPLE)

A



"RETURN TO SEAT" SIGN (EXAMPLE)

B

Passenger Signs – Component Location
Figure 102

PASSENGER SIGNS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) RETURN TO SEAT Sign - Lamp Replacement
      (2) NO SMOKING/FASTEN SEAT BELT Sign - Lamp Replacement
      (3) Passenger Signs - Operational Test

   TASK 33-24-00-962-081

2. RETURN TO SEAT Sign - Lamp Replacement
   A. Reference
      (1) AMM 24-22-00/201, Electrical Power - Control
   B. Access
      (1) Location Zone
          200 Upper Half of the Fuselage
   C. Replace the Lamps in the RETURN TO SEAT signs

      S 862-001
      (1) Supply electrical power (Ref 24-22-00).

      S 862-002
      (2) Turn the PASS SIGNS - SEATBELTS switch on the overhead panel, P5, to the ON position.

      S 212-003
      (3) Identify the RETURN TO SEAT signs that do not come on.

      S 862-004
      (4) Turn the PASS SIGN - SEATBELTS switch to the OFF position.

      S 862-005
      (5) Open this circuit breaker on the circuit breaker panel, P11, and attach DO-NOT-CLOSE tag:
          (a) 11P9, PASSENGER SIGNS CONTROL

      S 012-006
      (6) In the lavatory, open the utility cabinet door above the RETURN TO SEAT sign.

      S 032-007
      (7) Remove the two screws and washers on the mounting bracket to remove the sign assembly.

S 032-008
(8) Remove the screws behind the housing.

S 962-009
(9) Replace the lamp.

S 432-010
(10) Install the housing on the light assembly with the screws.

S 432-011
(11) Install the sign assembly into its position with the two screws and washers.

S 412-012
(12) Close the utility cabinet door in the lavatory.

S 862-013
(13) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
(a) 11P9, PASSENGER SIGNS CONTROL

S 862-014
(14) Turn the PASS SIGNS - SEATBELTS switch to the ON position.

S 212-015
(15) Make sure the RETURN TO SEAT SIGNS come on.

S 862-016
(16) Turn the PASS SIGN - SEATBELTS switch to the OFF position.

S 862-017
(17) Remove electrical power if it is not necessary (Ref 24-22-00).

TASK 33-24-00-962-018

3. NO SMOKING/FASTEN SEAT BELT Sign - Lamp Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 25-23-01/401, Passenger Service Units

B. Access

(1) Location Zone

200 Upper Half of the Fuselage

C. Procedure

S 862-088

(1) Prepare to replace the lamp.

(a) Do one of these steps to remove electrical power from the light:

1) At the overhead panel, P5, set the switch for the passenger sign to the off position and attach the DO-NOT-OPERATE tag.

2) Open each applicable circuit breaker for the passenger sign and attach the DO-NOT-CLOSE tag:

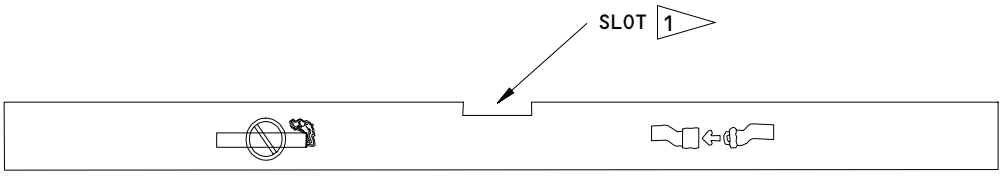
a) On the overhead circuit breaker panel, P11.

S 962-090

(2) PASSENGER SIGN WITH A SLOT AT THE EDGE OF THE LENS;
Replace the lamp in a passenger sign installed in a passenger service unit (PSU).

(a) Carefully remove the lens with a screwdriver.

NOTE: Use a screwdriver with a flat end. Put the screwdriver in the slot at the edge of the lens.



"NO SMOKING"/
"FASTEN SEAT BELT" SIGN
(EXAMPLE)

1 "NO SMOKING"/"FASTEN SEAT BELT" SIGN WITH A SLOT.

Passenger Signs - Lamp Replacement
Figure 201

C90735

(b) Carefully replace the lamp.
(c) Carefully push the lens into its position.

S 962-089
(3) PASSENGER SIGN WITHOUT A SLOT AT THE EDGE OF THE LENS;
Replace the lamp in a passenger sign installed in a PSU.
(a) Open the PSU panel (AMM 25-23-01/401).
(b) Release the fasteners behind the sign assembly.
(c) Remove the rear housing.
(d) Pull the lamp through the rear of the sign assembly.
(e) Carefully replace the lamp.
(f) Install the rear housing and close the fasteners.
(g) Close the PSU panel.

S 962-091
(4) Replace the lamp in a passenger sign that is not on a PSU.
(a) Pull off the sign assembly.
(b) Remove the two screws on the rear doors of the housing.
(c) Carefully replace the lamp.
(d) Install the two screws on the rear doors of the housing.
(e) Push the sign assembly into the correct position.

S 712-092
(5) Do a test of the new lamp.
(a) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(b) Set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(c) Set the switch to the off position.
(d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-24-00-702-045
4. Passenger Signs - Operational Test
A. References
(1) AMM 35-21-00/501, Passenger Oxygen System.
(2) AMM 24-22-00/201, Electrical Power - Control

(3) AMM 27-61-00/201, Spoiler/Speedbrake Control System
(4) AMM 32-09-02/201, Air/Ground Relay

B. Access
(1) Location Zone
200 Upper Half of the Fuselage
(2) Access Panel
119BL Main Equipment Center

C. Procedure

S 862-048
(1) Turn the PASS SIGNS - SEATBELTS switch and the PASS SIGNS - NO SMOKING switch to the AUTO position.

S 212-049
(2) Make sure that all FASTEN SEAT BELT, NO SMOKING and RETURN TO SEAT signs come on.

S 862-050

WARNING: DO THE DEACTIVATION PROCEDURE FOR THE SPOILERS OR MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE SPOILERS. THE SPOILERS CAN RETRACT QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Do the deactivation procedure for the spoilers or move all persons and equipment away from the spoilers (AMM 27-61-00/201).

S 862-051

CAUTION: OPEN THE CIRCUIT BREAKER AND DO THE STEPS REFERRED TO BY THE DEACTIVATION INSTRUCTIONS IN 32-09-02. EQUIPMENT DAMAGE CAN OCCUR WHEN THE AIR/GND SYS CIRCUIT BREAKER IS OPENED WITH POWER SUPPLIED TO THE AIRPLANE.

(4) Open these circuit breakers on the P11 panel and attach DO-NOT-CLOSE tags:
(a) 11C30, LANDING GEAR POS SYS 1
(b) 11S23, POS SYS 2

S 862-052
(5) Set the FLAP lever on the control stand panel, P10, to the 5 position.

S 212-059
(6) Make sure all the FASTEN SEATBELT and RETURN TO SEAT signs come on.

S 212-058
(7) Make sure none of the NO SMOKING signs come on.

S 862-057
(8) Set the FLAP lever to the 0 position.

S 212-056
(9) Make sure all the signs go off.

S 862-055
(10) Turn the PASS SIGNS - SEATBELTS switch from the AUTO to the ON position.

S 212-054
(11) Make sure the FASTEN SEATBELT sign in each PSU comes on.

S 212-053
(12) Make sure the FASTEN SEATBELT sign in each attendant station comes on.

S 212-060
(13) Make sure the RETURN TO SEAT sign in each lavatory comes on.

S 862-061
(14) Turn the PASS SIGNS - NO SMOKING switch from the AUTO to the ON position.

S 212-062
(15) Make sure the NO SMOKING sign in each PSU comes on.

S 212-063
(16) Make sure the NO SMOKING sign in each attendant station comes on.

S 862-064
(17) Turn the PASS SIGNS - NO SMOKING and PASS SIGNS - SEATBELTS switches to the AUTO position.

S 862-188

WARNING: REMOVE ALL PERSONS FROM THE AREA. PUT HIGH PRESSURE TEST IN PROGRESS SIGNS IN THE AREA. HIGH PRESSURE AIR CAN CAUSE INJURY TO PERSONS.

(18) Supply a vacuum of 20.25 in. Hg. to the 10K ft. cabin pressure switch S10259 installed in the APU/EXT power panel P34 (AMM 35-21-00/501).

S 212-067
(19) Make sure all the passenger signs come on.

S 722-068
(20) Release the vacuum to the 10K ft. cabin pressure switch S10259.

S 862-069
(21) Open these circuit breakers on the P11 panel and attach DO-NOT-CLOSE tags:
(a) 11A21 (or 11A23), PASSENGER OXYGEN LEFT
(b) 11A23 (or 11A24), PASSENGER OXYGEN RIGHT

S 862-070
(22) Make sure this circuit breaker on the P11 panel is closed:
(a) 11A24 (or 11A25), PASSENGER OXYGEN CONT

S 722-072
(23) Supply a vacuum of 17.22 in. Hg. to the altitude pressure switch S119 installed in the right miscellaneous relay panel P37 (AMM 35-21-00/501).

S 212-073
(24) Make sure all the FASTEN SEAT BELT signs and the NO SMOKING signs come on.

S 212-074
(25) Make sure all the RETURN TO SEAT signs do not come on.

S 722-075
(26) Release the vacuum to the altitude pressure switch S119.

S 862-107
(27) Do the activation procedure for the spoilers if you did the deactivation procedure (AMM 27-61-00/201).

S 862-094
(28) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
(a) 11A21 (or 11A23), PASSENGER OXYGEN LEFT
(b) 11A23 (or 11A24), PASSENGER OXYGEN RIGHT
(c) 11C30, LANDING GEAR POS SYS 1
(d) 11S23, POS SYS 2

S 862-077
(29) Turn the PASS SIGNS - SEATBELTS and PASS SIGNS - NO SMOKING switches to the OFF position.

S 212-078
(30) Make sure all the passenger signs go off.

S 722-079
(31) Remove the air hose and the adapters from the cabin and altitude pressure switches.

S 862-080
(32) Remove electrical power if it is not necessary (AMM 24-22-00/201).

CALL LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. A call light shows the location of the person who has set a call switch to the on position to make a call for an attendant's aid.
      (1) Each time a call is made, the call light for that location comes on and the passenger address system makes a chime sound.
      (2) Call lights are small lights installed on or near the ceiling.

   B. The color of the call light identifies the location of the person who has made the call and the type of aid that is necessary.
      (1) Amber is for a call from a lavatory.
      (2) AIRPLANES WITHOUT WHITE CALL LIGHTS;
          Blue is for a call from a passenger seat.
      (3) AIRPLANES WITH WHITE CALL LIGHTS;
          Blue is for a call from the flight compartment (AMM Chapter 33). The blue call light comes on when the pilot sets the FASTEN BELTS switch to the CREW position. This lets the attendant's know that it is time to put on their seat belts.
      (4) AIRPLANES WITH GREEN CALL LIGHTS;
          Green is for a call from an other attendant's station (AMM Chapter 23).
      (5) Pink is for a call from the flight crew (AMM Chapter 23).
      (6) AIRPLANES WITH WHITE CALL LIGHTS;
          White is for a call from a passenger seat.
   C. For more information about this lighting system, refer to these sources:
      (1) SSM 23-42-01 thru 23-42-99
      (2) SSM 33-24-01 thru 33-24-99
      (3) SSM 33-25-01 thru 33-25-99
      (4) WDM 23-42-11 thru 23-42-99
      (5) WDM 33-25-11 thru 33-25-99
2. Operation
   A. Functional Description
      (1) Lavatory Call Lights
          (a) When the lavatory call switch in any lavatory (Ref Chapter 25) is pushed, 28 vdc from the left bus is supplied to the lavatory call relay, and to the chime (Ref Chapter 23). The call switch is a push on/off type switch.
          (b) Contacts in the relay provide a latching circuit to hold the relay closed after the call switch is released. Other contacts provide 28 vdc to the amber lavatory call lights located near the passenger cabin attendant areas and to the lavatory call light/reset switch located above the corresponding lavatory door. The high tone chime sound indicates activation of the system.
          (c) When the lavatory call light/reset switch is pressed, power is removed from the lavatory call relay, and the system is deactivated.

(2) Passenger Call Lights

(a) When a passenger call switch at any PSU (Ref Chapter 25) is pressed, 28 vdc from the left bus is also supplied to the chime (Ref Chapter 23). The call switch is a push on/off type switch.

(b) When pushed on, the call switch illuminates. Contacts in the switch provide 28 vdc to the blue call lights located near the passenger cabin attendant areas. The passenger address amplifier emits a high tone chime indicating system activation.

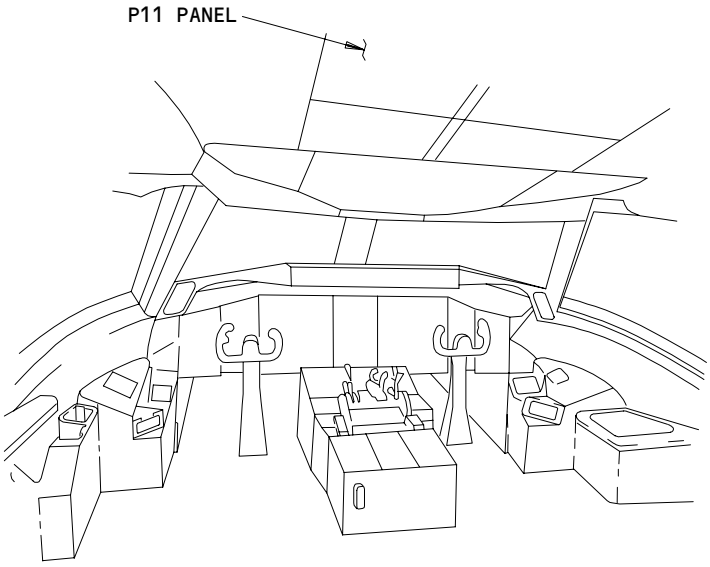
(c) A passenger call select switch is located inside the PSU. The switch is set when the PSU is installed on the airplane. This switch is used to electrically connect PSU call lights to either the forward or aft attendant areas.

CALL LIGHTS

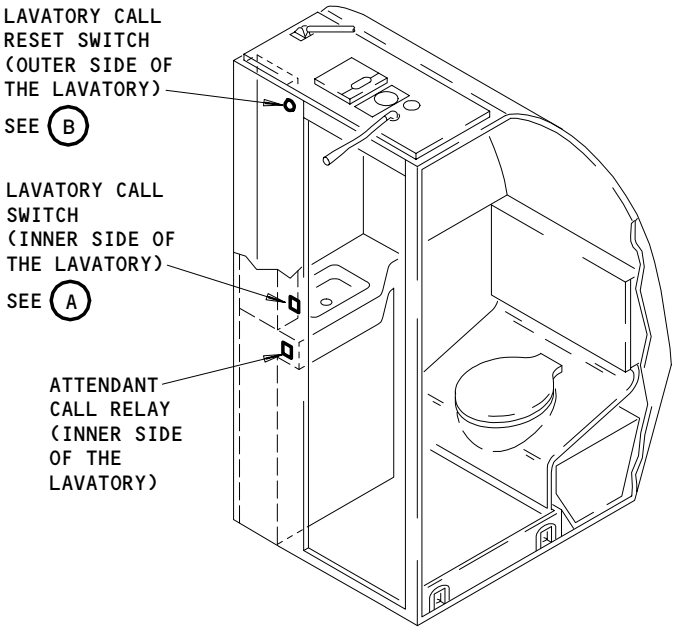
COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1		FLT COMPT, P11	*
LIGHT –				
ATTENDANT CALL	2		PASS. COMPT	33-25-00
LAVATORY CALL	2		PASS. COMPT	33-25-00
PASSENGER CALL	2		PASS. COMPT	33-25-00
RELAY –				
ATTENDANT CALL			PASS. COMPT, LAVATORIES	*
SWITCH –				
LAVATORY CALL	1		PASS. COMPT, LAVATORIES	*
LAVATORY CALL RESET	1		PASS. COMPT, LAVATORIES	*
PASS. CALL	2		PASS. COMPT, PASS. SERV UNITS	*
PASS. CALL LIGHTS CONTROL			PASS. COMPT, EXIT LOCATOR SIGN	*
PASS. CALL SELECT	2		PASS. COMPT, PASS. SERV UNITS	*

* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

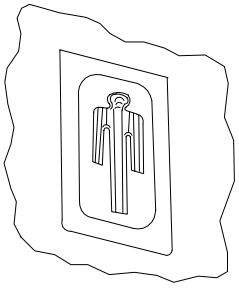
Call Lights – Component Index
Figure 101



FLIGHT COMPARTMENT



LAVATORY (EXAMPLE)



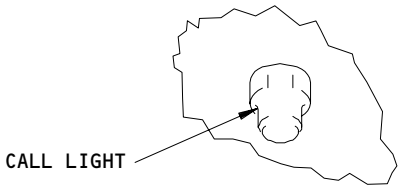
LAVATORY CALL SWITCH

(A)

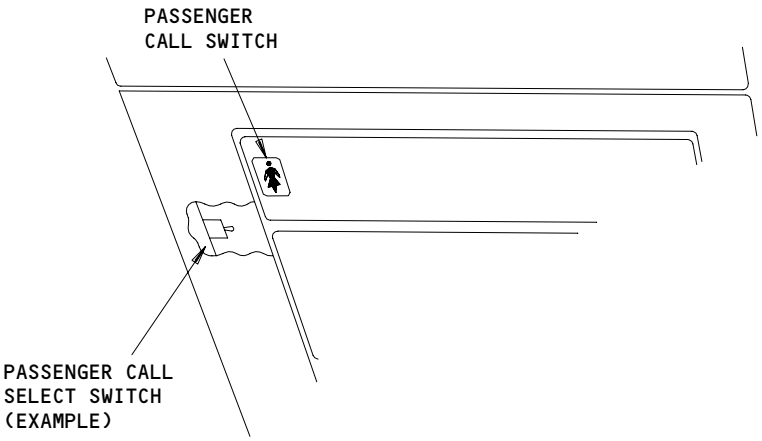
LAVATORY CALL RESET SWITCH

(B)

Call Lights - Component Location
Figure 102 (Sheet 1)



CALL LIGHT
(EXAMPLE)



PASSENGER SERVICE UNIT
(EXAMPLE)

Call Lights - Component Location
Figure 102 (Sheet 2)

CALL LIGHTS - MAINTENANCE PRACTICES

1. General
   A. To replace the switch on a PSU, you replace the PSU circuit board (AMM 33-23-00/201).
   B. This procedure contains these tasks:
      (1) Passenger Call Light - Lamp Replacement
      (2) Passenger Call Switch-Light - Lamp Replacement
      (3) Lavatory Call Light - Lamp Replacement
      (4) Lavatory Call Reset Switch - Lamp Replacement
      (5) Lavatory Call Switch-Light - Lamp Replacement
      (6) Call Lights - Operational Test

TASK 33-25-00-962-001

2. Passenger Call Light - Lamp Replacement
   A. References
      (1) 24-22-00/201, Electrical Power - Control
   B. Access
      (1) Location Zone
          200 Upper Half of Fuselage
   C. Lamp Replacement

      S 862-002
      (1) Supply the electrical power (Ref 24-22-00).

      S 862-003
      (2) Push the passenger call switch/light on the applicable PSUs to the on position (the lights comes on).

      S 972-004
      (3) Identify the passenger call lights that do not come on.

      S 862-005
      (4) Push the passenger call switch/lights on the PSUs to the off position (the light goes off).

S 862-006
(5) Open these circuit-breakers on the overhead circuit-breaker panel, P11, and attach DO-NOT-CLOSE tags:
(a) 11N8, LEFT PASSENGER CALL/LAVATORY SMOKE DETECTOR
(b) 11N9, RIGHT PASSENGER CALL/LAVATORY SMOKE DETECTOR

S 032-007
(6) Turn the lens assembly for the passenger call lights counterclockwise to remove.

S 962-008
(7) Carefully replace the lamp.

S 432-009
(8) Turn the lens assembly clockwise to install.

D. Lamp Test

S 712-010
(1) Do this Task: Call Lights - Operational Test.

TASK 33-25-00-422-065

3. Passenger Call Switch-Light - Lamp Replacement

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zone
200 Upper Half of Fuselage

C. Lamp Replacement

S 862-011
(1) Supply the electrical power (Ref 24-22-00).

S 862-012
(2) Push the passenger call switch/light (switch/light) on all the PSUs to the on position (the light comes on).

S 972-013
(3) Identify the switch/lights that do not come on.

S 862-014
(4) Push the switch/lights on the PSUs to the off position (the light goes off).

S 862-015
(5) Open these circuit-breakers on the overhead circuit-breaker panel, P11, and attach DO-NOT-CLOSE tags:
(a) 11N8, LEFT PASSENGER CALL/LAVATORY SMOKE DETECTOR
(b) 11N9, RIGHT PASSENGER CALL/LAVATORY SMOKE DETECTOR

S 032-018
(6) Pull the lens assembly for the switch/light straight out of the PSU.

S 962-016
(7) Carefully replace the lamp.

S 432-019
(8) Push the lens assembly for the switch/light into the PSU.

D. Lamp Test

S 712-017
(1) Do this Task: Call Lights - Operational Test.

TASK 33-25-00-422-066

4. Lavatory Call Light - Lamp Replacement

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zone
200 Upper Half of Fuselage

C. Lamp Replacement

S 862-020
(1) Supply the electrical power (Ref 24-22-00).

S 862-021
(2) Push the lavatory call switch in the applicable lavatory to make the lavatory call light comes on.

S 972-022
(3) Identify the lavatory call lights that do not come on.

S 862-023
(4) Push the lavatory call light/reset switch on top of the applicable lavatory door.

S 862-024
(5) Open these circuit-breakers on the overhead circuit-breaker panel, P11, and attach the DO-NOT-CLOSE tags.
(a) 11N8, LEFT PASSENGER CALL/LAVATORY SMOKE DETECTOR
(b) 11N9, RIGHT PASSENGER CALL/LAVATORY SMOKE DETECTOR

S 032-025
(6) Turn the lens assembly for the lavatory call light counterclockwise to remove.

S 962-026
(7) Carefully replace the lamp.

S 432-027
(8) Turn the lens assembly clockwise to install.

D. Lamp Test

S 712-028
(1) Do this Task: Call Lights - Operational Test.

TASK 33-25-00-962-029

5. Lavatory Call Reset Switch - Lamp Replacement

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zone
200 Upper Half of Fuselage

C. Lamp Replacement

S 862-030
(1) Supply the electrical power (Ref 24-22-00).

S 862-031
(2) Push the lavatory call switch in all of the lavatories.

S 972-032
(3) Identify the lavatory call light/reset switches (reset switch) that do not come on.

S 862-033
(4) Push the reset switches on top of all the lavatory doors.

S 862-034
(5) Open these circuit-breakers on the overhead circuit-breaker panel, P11, and attach the DO-NOT-CLOSE tags.
(a) 11N8, LEFT PASSENGER CALL/LAVATORY SMOKE DETECTOR
(b) 11N9, RIGHT PASSENGER CALL/LAVATORY SMOKE DETECTOR

S 032-035
(6) Turn the lens assembly for the reset switch counterclockwise to remove.

S 962-036
(7) Replace the defective light behind the lens.

S 432-037
(8) Turn the lens assembly clockwise to install.

D. Lamp Test

S 712-038
(1) Do this Task: Call Lights - Operational Test.

TASK 33-25-00-962-055

6. Lavatory Call Switch-Light - Lamp Replacement

A. References

(1) 24-22-00/201, Electrical Power - Control

B. Access

(1) Location Zone

200 Upper Half of Fuselage

C. Lamp Replacement

S 862-056

(1) Supply the electrical power (Ref 24-22-00).

S 862-057

(2) Push the lavatory call switch/lights in all of the lavatories.

S 972-058

(3) Identify the lavatory call switch/light (switches) that do not come on.

S 862-059

(4) Put the lavatory call switch/lights in the off position.

S 862-060

(5) Open these circuit-breakers on the overhead circuit-breaker panel, P11, and attach DO-NOT-CLOSE tags:

(a) 11N8, LEFT PASSENGER CALL/LAVATORY SMOKE DETECTOR

(b) 11N9, RIGHT PASSENGER CALL/LAVATORY SMOKE DETECTOR

S 032-061

(6) Pull the lens cap assembly from the switch/light.

S 962-062

(7) Carefully replace the lamp.

S 432-063

(8) Attach the lens cap assembly to the switch/light.

D. Lamp Test

S 862-064
(1) Do this task: Call Lights - Operational Test.

TASK 33-25-00-712-039

7. Call Lights - Operational Test

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zone
200 Upper Half of Fuselage

C. Test the Call Lights

S 862-040
(1) Supply the electrical power (Ref 24-22-00).

S 862-041
(2) Remove the DO-NOT-CLOSE tags and close these P11 panel circuit breakers:
(a) 11N8, LEFT PASSENGER CALL/LAVATORY SMOKE DETECTOR
(b) 11N9, RIGHT PASSENGER CALL/LAVATORY SMOKE DETECTOR

S 862-042
(3) Push the lavatory call switch in lavatories.

S 752-043
(4) Make sure the applicable lavatory call light/reset switch and the lavatory call lights come on.

S 752-044
(5) Make sure you hear a chime sound.

S 862-046
(6) Push the lavatory call light/reset switch.

S 752-047
(7) Make sure the applicable lavatory call light/reset switch and the lavatory call lights go off.

S 862-048
(8) Push the passenger call switch/lights on the PSUs to the on position (the light comes on).

S 752-049
(9) Make sure the applicable passenger call lights and the passenger call switch/lights come on.

S 752-050
(10) Make sure you hear a chime sound.

S 862-052
(11) Push the passenger call switch/lights on the PSUs to the off position (the light goes off).

S 752-053
(12) Make sure the applicable passenger call lights and passenger call switch/lights go off.

S 862-054
(13) Remove the electrical power if it is not necessary (Ref. 24-22-00).

LAVATORY LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this system, refer to these sources:
      (1) SSM 33-26-01 thru 33-26-99
      (2) WDM 33-26-11 thru 33-26-99
   B. A lavatory light is one of these lights:
      (1) Lavatory Dome Light
      (2) Lavatory Mirror Light
      (3) Lavatory Threshold Light
      (4) Lavatory/Occupied Sign
2. Operation
   A. Functional Description
      (1) Lavatory Dome Light
         (a) A dome light is installed in the ceiling of each lavatory. This light continuously gives dim general lighting.
            1) This light contains an incandescent lamp.
            2) There are no switches to operate this light. All the dome lights come on automatically when electrical power is supplied.
         (b) The 28 volts ac of electrical power for the lights usually comes from the ground service bus. The electrical power comes from the transfer bus when the hydraulic motor-driven generator is on.
      (2) Lavatory Mirror Light
         (a) There is a mirror light adjacent to the mirror in each lavatory. This light gives general lighting in the lavatory.
            1) When a lavatory door is closed and locked, electrical power from the 115 volts ac ground service bus is supplied through the door latch switch, to the ballasts in the mirror light assembly. There is one ballast for each pair of fluorescent lamps.
            2) When external power is connected to the airplane, the mirror light comes on automatically. The 115 volts ac from the ground handling bus is supplied through the door latch switch to the mirror lights.
      (3) Lavatory Threshold Light
         (a) A threshold light is installed in the ceiling above the area in front of each lavatory.
            1) Each lavatory threshold light has an incandescent lamp.

2) There are no switches for these lights. These lights come on automatically when the electrical power is supplied.

(b) The 28 volts ac of electrical power for the threshold lights comes from the ground service bus.

(4) Lavatory Occupied Sign

(a) Each lavatory occupied sign is installed on the ceiling near a lavatory. The sign lets the passengers know when there is a person in the lavatory.

(b) On some airplanes, there is also an occupied light in the flight compartment on the overhead panel (P5). The light lets the flight crew know when the forward lavatory is occupied.

(c) Each lavatory occupied sign contains incandescent lamps.

1) All the LAVATORY signs come on automatically when electrical power is supplied. There are no switches for these signs.

2) The 28 volts ac of electrical power for the LAVATORY signs comes from the ground service bus.

(d) Each OCCUPIED sign is controlled by a switch in the door latch of a lavatory near the sign.

1) When the door is closed and locked, part of the electrical circuit to the OCCUPIED sign is completed.

a) If there is only one lavatory in the circuit, then the OCCUPIED sign comes on. This is the way the light in the flight compartment functions.

b) If there are other lavatories in the circuit, then the doors of all of the lavatories must be closed and latched before the sign comes on.

2) The OCCUPIED sign goes off when the door is opened. This lets the passengers know that the lavatory is available.

3) The 28 volts ac of electrical power for the OCCUPIED sign usually comes from the ground service bus. The electrical power comes from the transfer bus when the hydraulic motor-driven generator is on.

(5) LAVATORIES WITH AN EXTERNAL (HANDICAPPED) LIGHT SWITCH; External (Handicapped) Switch

(a) This switch is on the outer side of the lavatory. When you use this switch, it controls the same circuit as the door latch switch. It makes the lavatory mirror light and the applicable OCCUPIED sign come on.

(6) LAVATORIES WITH A HOLD-OPEN DEVICE;
Hold-Open Device Switch

(a) A hold-open device switch is part of a hold-open device. The device holds the door open so it cannot latch. This controls the same circuit as the door latch switch. It makes the lavatory mirror light and the applicable OCCUPIED sign come on.

LAVATORY LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
BALLAST –	--		EACH LAVATORY	*
CIRCUIT BREAKER –	--		119BL, MAIN EQUIP CTR, P34	*
CIRCUIT BREAKER –	--		119BL, MAIN EQUIP CTR, P37	*
LIGHT –				
DOME	--		EACH LAVATORY	33-26-00
MIRROR	--		EACH LAVATORY	33-26-00
THRESHOLD	--		PASS. COMPT	33-26-00
RELAY –			119BL, MAIN EQUIP CTR, P34 AND P37	*
SIGN –				
LAVATORY/OCCUPIED	--		PASS. COMPT	33-26-00
FORWARD LAVATORY OCCUPIED LIGHT 2	--		FLIGHT COMPT	33-26-00
SWITCH –				
DOOR LATCH	--		EACH LAVATORY	*
EXTERNAL (HANDICAPPED) 1			EACH LAVATORY	
HOLD-OPEN DEVICE 1			EACH LAVATORY	

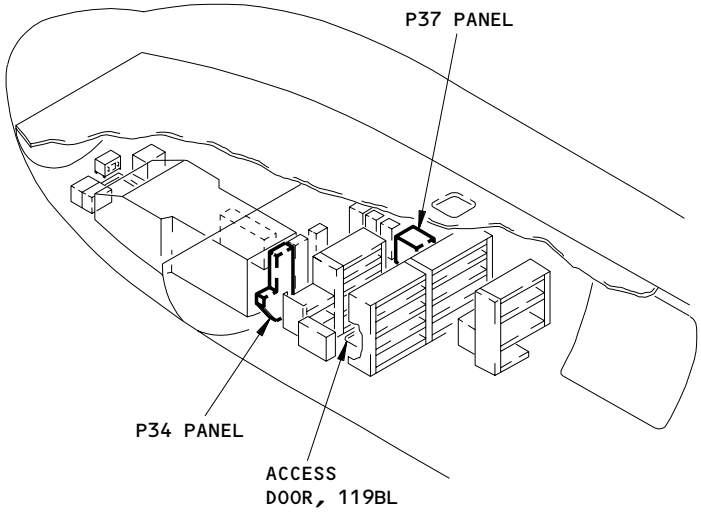
* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

1 NOT INSTALLED ON ALL LAVATORIES

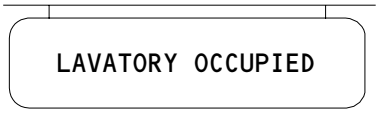
2 NOT ON ALL AIRPLANES

Lavatory Lights – Component Index
Figure 101

A73851

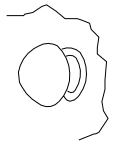


MAIN EQUIPMENT CENTER



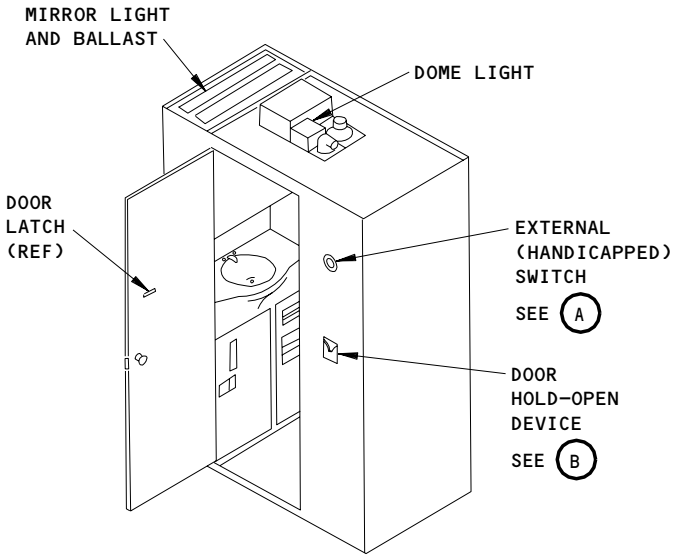
LAVATORY OCCUPIED SIGN
(EXAMPLE)

A

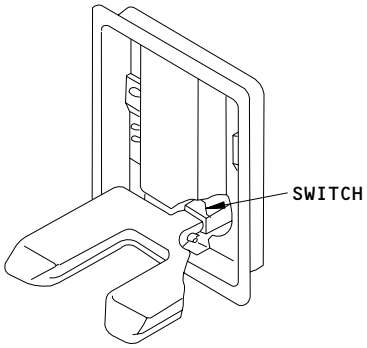


EXTERNAL (HANDICAPPED) SWITCH

A 1

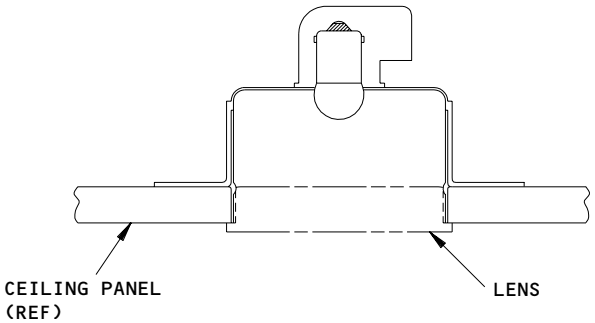


LAVATORY
(EXAMPLE)



DOOR HOLD-OPEN DEVICE
(EXAMPLE)

B 1

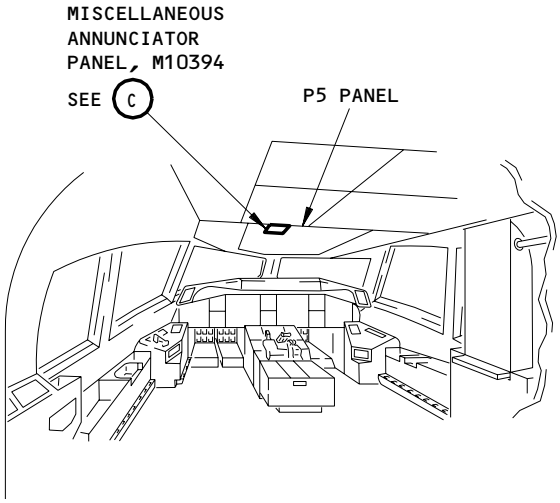


LAVATORY THRESHOLD LIGHT
(EXAMPLE)

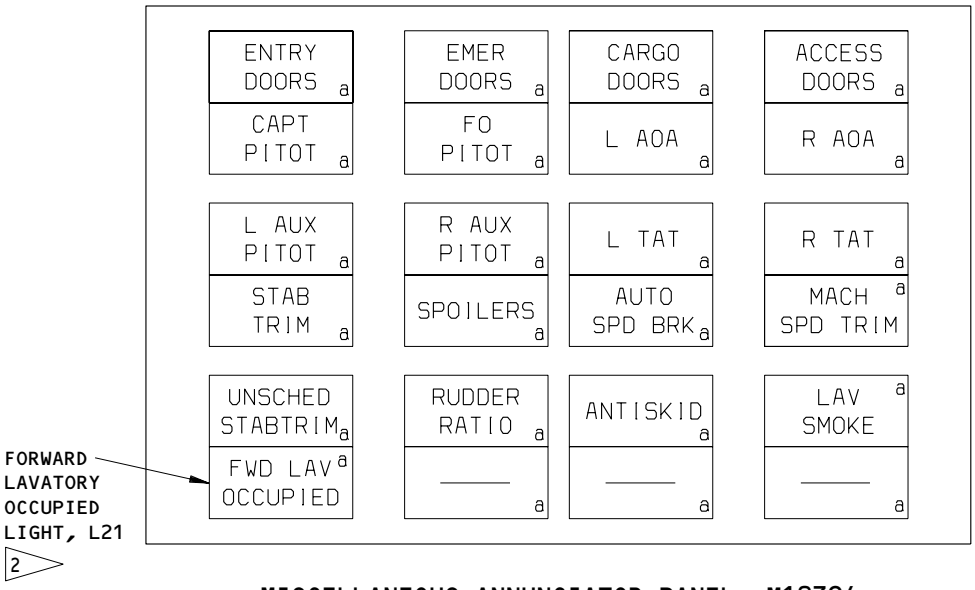
1 NOT INSTALLED ON ALL LAVATORIES

Lavatory Lights - Component Location
Figure 102 (Sheet 1)

A73774



FLIGHT COMPARTMENT



MISCELLANEOUS ANNUNCIATOR PANEL, M10394

C

2 NOT ON ALL AIRPLANES

Lavatory Lights - Component Location
Figure 102 (Sheet 2)

L16794

LAVATORY LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure has these tasks:
      (1) Lavatory Light - Lamp Replacement
      (2) Lavatory Lights - Operational Test
   B. A lavatory light is one of these lights:
      (1) Lavatory Dome Light
      (2) Lavatory Mirror Light
      (3) Lavatory Threshold Light
      (4) Lavatory/Occupied Sign

TASK 33-26-00-962-001

2. Lavatory Light - Lamp Replacement
   A. References
      (1) SSM 33-26-01 thru 33-26-99
      (2) WDM 33-00-11, Lamp Usage Chart
      (3) WDM 33-26-11 thru 33-26-99
   B. Access
      (1) Location Zone
          200 Upper Half of Fuselage
      (2) Access Panels
          119BL Main Equipment Center
   C. Replace the Lavatory Lights

      S 862-004
      (1) Open these circuit-breakers on the APU/external power circuit-breaker panel, P34, and attach DO-NOT-CLOSE tags:
          (a) 34B6 (Plate A), LIGHTS SERVICE LAV
          (b) 34D1 (Plate B), LAV LIGHTS OCCUPY DOME
          (c) 34D2 (Plate B), LAV LIGHTS THSHD
          (d) 34G3 (Plate B), LIGHTS FWD ENTRY ATTND

      S 862-005
      (2) Open this circuit-breaker on the miscellaneous relay circuit-breaker panel, P37, and attach a DO-NOT-CLOSE tag:
          (a) 37G3, LIGHTS LAV

S 962-048
(3) Replace the lamp.
(a) Remove the lens.
(b) Replace the lamp.
(c) Install the lens.

S 862-031
(4) Close each circuit breaker that was opened.

S 712-030
(5) Do this Task: "Lavatory Lights - Operational Test."

TASK 33-26-00-712-017

3. Lavatory Lights - Operational Test

NOTE: To do a test of the lavatory dome and occupied lights supplied with power by the hydraulic motor-driven generator, refer to 33-51-00, Emergency Lights Adjustment Test.

A. References
(1) 24-22-00/201, Electrical Power - Control
B. Access
(1) Location Zone
200 Upper Half of Fuselage
(2) Access Panels
119BL Main Equipment Center
C. Lavatory Lights Test

S 862-032
(1) Supply electrical power (AMM 24-22-00/201).

S 862-033
(2) Open this circuit breaker and attach the DO-NOT-CLOSE tag:
(a) On the APU/external power panel, P34:

(b) 34B6 (Plate A), LIGHTS SERVICE LAV

S 212-020
(3) Make sure the dome light in the lavatory is on.

S 212-021
(4) Make sure the threshold light in front of each lavatory door is on.

NOTE: If a lavatory threshold light does not come on, make sure the No. 1 passenger door (SSM 33-26-02) and the flight deck door (SSM 33-14-02) are open when it is necessary.

S 212-027
(5) Make sure all the LAVATORY signs are on.

S 862-022
(6) Go into the lavatory and lock the door.
(a) Make sure the mirror light comes on.

S 862-024
(7) Open the door.
(a) Make sure the mirror light goes off.

S 862-029
(8) Close and lock all the lavatory doors.
(a) Make sure all the OCCUPIED signs come on.
(b) For those planes with a FWD LAV OCCUPIED light installed on the Overhead Panel (P5) in the flight compartment; Make sure the light comes on.

S 862-027
(9) Open all the lavatory doors.
(a) Make sure all the OCCUPIED signs go off.
(b) For those planes with a FWD LAV OCCUPIED light installed on the Overhead Panel (P5) in the flight compartment; Make sure the light goes off.

S 712-034
(10) LAVATORY WITH A HOLD OPEN DEVICE;
Do a test of the hold open device.
(a) Move the device into the position to hold the door open.
1) Make sure the mirror lights in the lavatory come on.
2) Make sure the "occupied" part of each applicable lavatory occupied sign comes on.
(b) Move the device away from the door.
1) Make sure the mirror lights go off.
2) Make sure the "occupied" part of each applicable lavatory occupied sign goes off.

S 712-035

(11) LAVATORY WITH AN EXTERNAL (HANDICAPPED) LIGHT SWITCH;
Do a test of the light switch.
(a) Set the switch to the on position.
1) Make sure the mirror lights in the lavatory come on.
2) Make sure the "occupied" part of each applicable lavatory occupied sign come on.
(b) Set the switch to the off position.
1) Make sure the mirror lights go off.
2) Make sure the "occupied" part of each applicable lavatory occupied sign goes off.

S 862-038

(12) Remove the DO-NOT-CLOSE tag and close this P34 panel circuit-breaker:
(a) 34B6 (Plate A), LIGHTS SERVICE LAV
(b) Make sure the mirror light in the lavatory is on.

S 862-040

(13) Remove electrical power if it is not necessary (Ref 24-22-00).

GALLEY LIGHTS - DESCRIPTION AND OPERATION

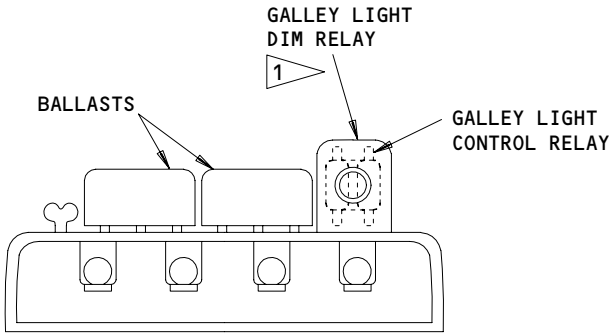
1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-27-01 thru 33-27-99
      (2) WDM 33-27-11 thru 33-27-99
   B. A galley light gives general lighting to each galley.
      (1) Each galley light is installed in the ceiling of the galley area.
      (2) The lamps in each light are fluorescent.
      (3) You control a galley light with a switch in or near the galley.
          (a) The switch has positions to change the intensity of the light form off to dim or bright.
2. Operation
   A. Functional Description
      (1) Galley Lights
          (a) Galley lights operate on the 115 volts ac of electrical power from the ground service bus.
          (b) When the switch is set to the dim position, the 115 volts are supplied to a transformer. The transformer changes the voltage to 280 volts ac and supplies this electrical power to the ballast of the light. The galley light comes on dimly.
          (c) When the switch is set to the bright position, then 115 volts ac more are supplied to the ballasts. The galley light comes on brightly.
              1) For the forward galley light, the flight compartment door also must be closed. If the door is open, a relay stops the 115 volts of electrical power. The light stays dim.

GALLEY LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
BALLAST –	2		PASS. COMPT, EACH GALLEY LIGHT	33-27-00
CIRCUIT BREAKER –			FLT COMPT, P11	
CIRCUIT BREAKER –			119BL, MAIN EQUIP CTR, P37	
LIGHT –	1		PASS. COMPT, GALLEY	33-27-00
RELAY –	2		PASS. COMPT, EACH GALLEY LIGHT	33-27-00
RELAY –			119BL, MAIN EQUIP CTR, P34	*
SWITCH –			PASS. COMPT, EACH GALLEY	*
TRANSFORMER –			119BL, MAIN EQUIP CTR, P34	*

* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

Galley Lights – Component Index
Figure 101



GALLEY LIGHT
(EXAMPLE)

1 ONLY INSTALLED ON THE FORWARD GALLEY LIGHT

Galley Lights - Component Location
Figure 102

GALLEY LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Galley Light - Lamp Replacement
      (2) Galley Light - Ballast Replacement
      (3) Galley Light - Operational Test

   TASK 33-27-00-962-001

2. Galley Light - Lamp Replacement
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-27-01 thru 33-27-99
      (3) WDM 33-00-01
      (4) WDM 33-27-11 thru 33-27-99
   B. Access
      (1) Location Zones
          200 Upper Half of the Fuselage

   C. Procedure

      S 962-067
      (1) Replace the lamp.
          (a) Do one of these steps to remove electrical power from the light:
              1) Set the switch for the galley light to the off position and attach the DO-NOT-OPERATE tag.
              2) Open each applicable circuit breaker for the galley light and attach the DO-NOT-CLOSE tag:
                 a) On the right miscellaneous electrical equipment panel, P37.
          (b) Open the light assembly to get access to the lamp.
              1) Insert an allen wrench into each hole of the light assembly and turn the allen wrench one quarter turn.
              2) Lower the light assembly.

3) Disconnect the shorter of the two lanyards.
4) Lower the light assembly to the fully open position.
5) Release each fastener on the hood assembly.
6) Open the access panel on hood assembly.

(c) Carefully replace the lamp.
(d) Close the light assembly.
1) Attach the hood assembly to the light assembly with the fasteners.
2) Lift the light assembly and attach the lanyard.
3) Lift the light assembly and latch it to the ceiling.

S 712-068

(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-CLOSE or DO-NOT-OPERATE tag.
1) Close each circuit breaker that was opened.
(c) Set the switch for the galley light to the bright position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to the usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-27-00-002-034

3. Galley Light - Ballast Replacement

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-27-01 thru 33-27-99
(3) WDM 33-27-11 thru 33-27-99

B. Access
(1) Location Zones
200 Upper Half of the Fuselage

C. Procedure

S 962-071

(1) Replace the ballast.
(a) Do one of these steps to remove electrical power from the ballast:
1) Set the switch for the galley light to the off position and attach the DO-NOT-OPERATE tag.

2) Open each applicable circuit breaker for the galley light and attach the DO-NOT-CLOSE tag:
a) On the APU/EXT power panel, P34.
b) On the right miscellaneous electrical equipment panel, P37.

(b) Open the light assembly to get access to the ballast.
1) Insert an allen wrench into each hole of the light assembly and turn the allen wrench one quarter turn.
2) Lower the light assembly.
3) Disconnect the shorter of the two lanyards.
4) Lower the light assembly to the fully open position.

(c) Disconnect the electrical connector from the ballast.

(d) Replace the ballast on the hood assembly.

(e) Connect the electrical connector to the ballast.

(f) Close the light assembly.
1) Lift the light assembly and connect the lanyard.
2) Lift the light assembly and latch it to the ceiling.

S 712-072

(2) Do a test of the galley light.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) Set the switch for the galley light to the bright position.
1) Make sure the new lamp comes on correctly.
(d) Set the switch to its usual position.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-27-00-702-066

4. Galley Light - Operational Test

A. Reference
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-27-01 thru 33-27-99
(3) WDM 33-27-11 thru 33-27-99

B. Access
(1) Location Zones
200 Upper Half of the Fuselage

C. Procedure

S 862-054
(1) Supply electrical power (AMM 24-22-00/201).
(a) Set the switch for the galley light to the dim position.
1) Make sure the galley light comes on dimly.

NOTE: Before the forward galley light will come on, the flight compartment door must be closed or the left forward passenger door must be open.

(b) Set the switch to the bright position.
1) Make sure the galley light comes on brightly.

NOTE: Before the forward galley light will come on, the flight compartment door must be closed or the left forward passenger door must be open.

(c) Set the switch to the off position.
1) Make sure the galley light goes off correctly.

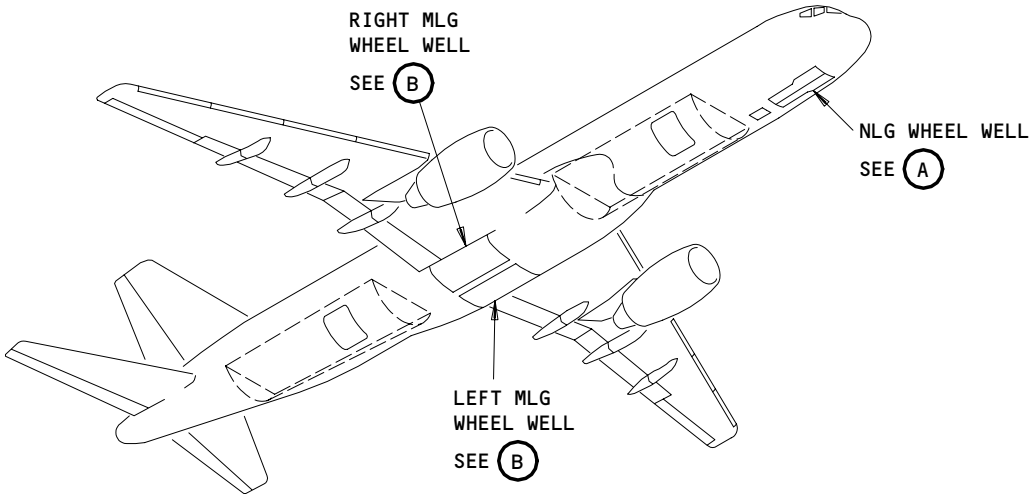
S 862-064
(2) Remove electrical power if it is not necessary (AMM 24-22-00/201).

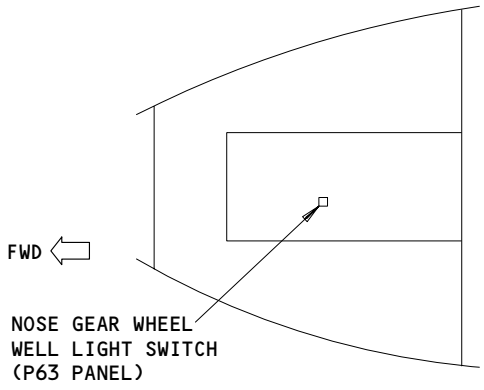
CARGO AND SERVICE COMPARTMENT LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. Lighting is provided in the main gear and nose gear wheel wells; E/E equipment compartments; and air conditioning, APU, hydraulic service center, and tailcone compartments. Lighting is also provided for the forward and aft lower lobe cargo compartments.
   B. Cargo and service compartment lighting is divided into two functional groups.
      (1) Service Lights (Ref 33-31-00)
         (a) Lighting is provided for maintenance and servicing in the nose gear and main gear wheel wells. The on/off switch for the nose wheel area lights is in the nose gear wheel well. For the main gear wheel well lights, the switch is mounted in the right main wheel well.
         (b) Air conditioning compartment lighting consists of a switch and lights in each (right and left) compartment. The forward and aft tailcone compartment lighting is controlled by switches near the respective access doors. The APU compartment lighting has one switch. The hydraulic service center lights are also controlled by one switch.
         (c) The forward E/E equipment center lighting is controlled by a toggle switch adjacent to the forward access door. The main E/E compartment lighting is controlled by a switch right of the main access door.
      (2) Lower Lobe Cargo Compartment Lights (Ref 33-37-00)
         (a) Forward cargo compartment ceiling and door lights are controlled by a switch on the forward outside cargo door control panel (P43). A proximity switch in the cargo door enables the lighting circuit when the door is open. A switch in each ceiling lamp assembly disables the unit whenever the lens is open.
         (b) Ceiling and door lights for the aft cargo compartment are controlled by a switch on the aft outside cargo door control panel (P44). A proximity switch enables the lighting circuit when the cargo door is open.

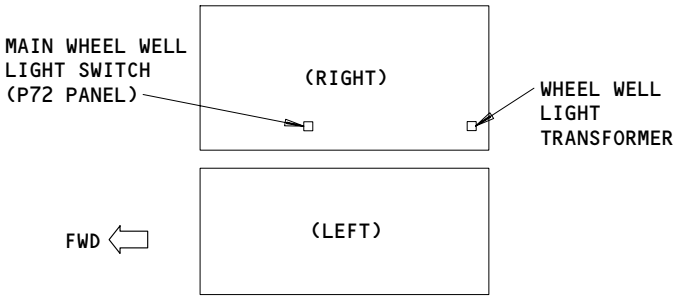
SERVICE LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-31-01 thru 33-31-99
      (2) WDM 33-31-11 thru 33-31-99
   B. Incandescent lighting is provided in the nose gear and main landing gear wheel wells, in the E/E compartments; and in the air conditioning, APU, hydraulic service center, and tailcone compartments.
2. Component Details
   A. Wheel Well Lights
      (1) Lights are installed in the nose and main gear wheel wells to provide general maintenance illumination.
      (2) The nose gear wheel well light switch is on the left nose gear control panel (P63), which is located on the nose gear.
      (3) The main wheel well light switch is on right main wheel well electrical service panel P72, which is located aft of the right main wheel well in the lower fuselage.
      (4) The main wheel well lights transformer is mounted on the aft right wheel well wall inboard of light L72.
   B. Electrical Equipment Center Lights
      (1) Electrical equipment center lights are installed in the ceiling of the forward lower section of the airplane to provide general illumination for electrical equipment centers.
      (2) The forward E/E center light switch is located at the forward right hand corner of the compartment access door.
      (3) The main E/E center light switch is located right of the compartment access door.
   C. Air Conditioning Compartment Lights
      (1) Lights are installed in the left and right air conditioning bays to provide general maintenance illumination.
      (2) Left and right air conditioning bay lights are controlled by switches on the aft wall of the left and right bay.
   D. APU and Tailcone Compartment Lights
      (1) Lights are installed in the APU and tailcone compartments to provide general maintenance illumination.
      (2) Tailcone compartment light switches are located in the forward tailcone compartment adjacent to the aft body access door, and in the aft tailcone compartment adjacent to the elevator controls access door.
      (3) The APU compartment light switch is located at the forward end of the APU compartment.
      (4) The APU/Tailcone compartment lights transformer is located on the forward wall of the tailcone compartments.
   E. Hydraulic Service Center Lights
      (1) Hydraulic service center lights are installed in the hydraulic service center, aft of the left main wheel well, to provide general maintenance illumination.



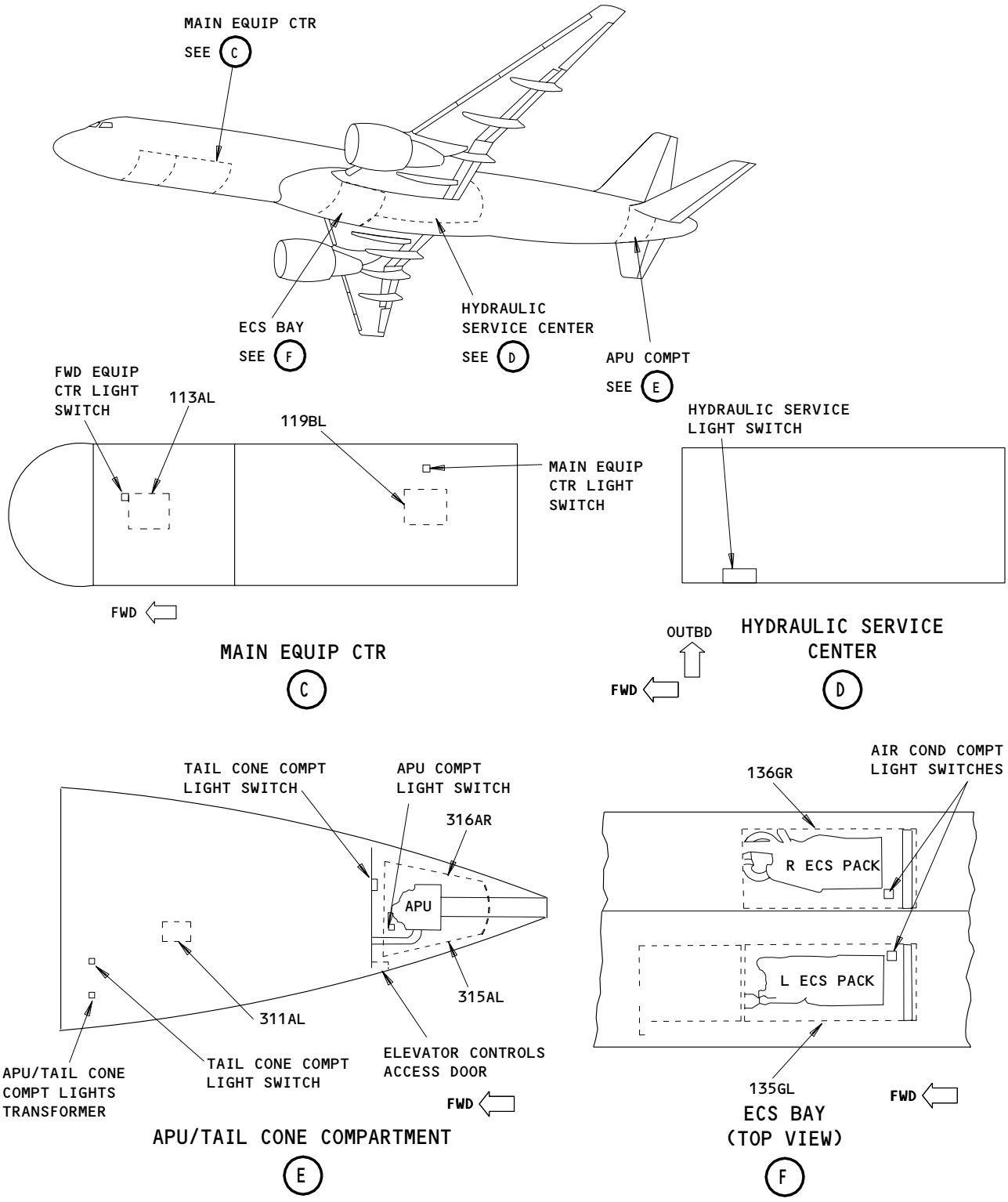


NLG WHEEL WELL
A



MLG WHEEL WELL
B

Service Lights - Component Location
Figure 1 (Sheet 1)



Service Lights - Component Location
Figure 1 (Sheet 2)

(2) The hydraulic service center light switch is on the inboard forward side of the hydraulic service center.

3. Operation

A. Functional Description

(1) Wheel Well Lights

(a) The nose gear wheel well incandescent lights are powered by the 28 Vdc ground handling bus. They are operated by a switch on the P63 panel on the landing gear.

(b) The main landing gear wheel well lights are powered by the 115 vac ground handling bus which is converted to 28 vac by the wheel well lights transformer. Control is by a toggle switch on the P72 panel in the right wheel well.

(2) Electrical Equipment Center Lights

(a) The forward equipment bay incandescent lamps are controlled by a toggle switch adjacent to the forward access door. Power comes from the 28 vac ground service bus.

(b) The main equipment bay incandescent lamps are controlled by a toggle switch adjacent to the E/E bay access door. Power is from the 28 vac ground service bus.

(3) Air Conditioning Compartment Lights

(a) Incandescent lamps in each bay are powered from the 28 vdc ground handling bus. One switch in each bay controls the lights for that bay.

(4) APU and Tailcone Compartment Lights

(a) Incandescent lamps in the APU compartment are controlled by a toggle switch on the forward wall of the compartment. Power from the 115 vac ground handling bus is reduced to 28 vac by the APU and tailcone lights transformer.

(b) The tailcone compartment is illuminated by four incandescent lamps that are controlled by two switches. The switches are adjacent to the aft body access door and the elevator controls access door. Power is from the same source as the APU lights.

(5) Hydraulic Service Center Lights

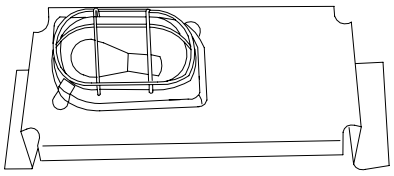
(a) Incandescent lamps in the hydraulic service center are controlled by one toggle switch. The switch connects the lamps with the 28 Vdc ground handling bus.

SERVICE LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			119BL, MAIN EQUIP CTR, P34	*
LIGHT –				
AIR COND COMPT			193HL,194ER, ECS BAY	33-31-00
APU COMPT			315AL,316AR, APU COMPT	*
FWD EQUIP CTR			113AL, FWD OF NLG WHEEL WELL	*
HYDRAULIC SERVICE			197KL, HYD SERV CTR	*
MAIN EQUIP CTR			119BL, MAIN EQUIP CTR	*
TAILCONE COMPT			311AL, AFT OF PRESSURE BULKHEAD	*
WHEEL WELL			WHEEL WELLS	*
SWITCH –				
AIR COND COMPT LIGHT			193HL,194ER, ECS BAY	*
APU COMPT LIGHT			315AL,316AR, APU COMPT	*
FWD EQUIP CTR LIGHT			113AL, FWD OF NLG WHEEL WELL	*
HYDRAULIC SERV LIGHT			197KL, HYD SERV CTR	*
MAIN EQUIP CTR LIGHT			119BL, MAIN EQUIP CTR	*
MAIN AND NOSE GEAR WHEEL WELL LIGHT			MLG WHEEL WELL	*
TRANSFORMER –				
APU AND TAILCONE			311AL, AFT OF PRESS. BULKHEAD	*
WHEEL WELL			R MLG WHEEL WELL	*

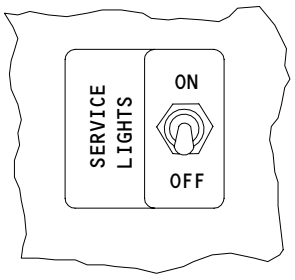
* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

Service Lights – Component Index
Figure 101



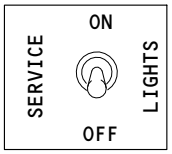
APU, AIR CONDITIONING AND
TAILCONE COMPARTMENT LIGHT
(EXAMPLE)

G

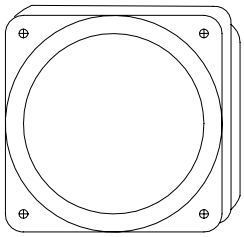


APU, AIR CONDITIONING AND
TAILCONE COMPARTMENT LIGHT SWITCH
(EXAMPLE)

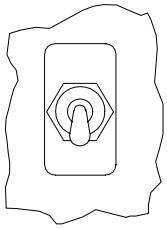
H



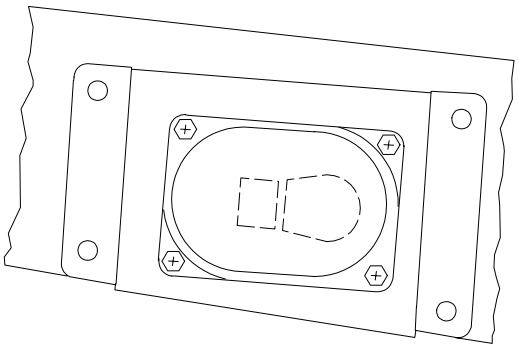
EQUIPMENT CENTER
LIGHTS SWITCH
(EXAMPLE)



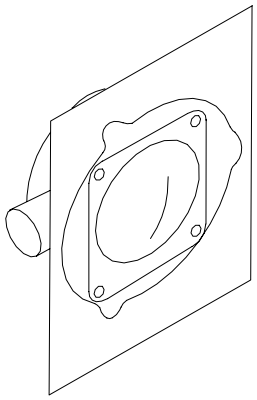
EQUIPMENT CENTER LIGHTS
(EXAMPLE)



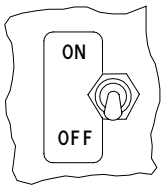
HYDRAULIC SERVICE CENTER
LIGHTS SWITCH



HYDRAULIC SERVICE CENTER LIGHT



WHEEL WELL LIGHT
(EXAMPLE)



WHEEL WELL LIGHTS SWITCH
(EXAMPLE)

Service Lights - Component Location
Figure 102

SERVICE LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains two tasks:
      (1) Replace the Service Lights
      (2) Do the Test of the Service Lights.

   TASK 33-31-00-962-019

2. Replace the Service Lights
   A. Consumable Materials
      (1) G00034 Cheesecloth - new, clean, dry, has no lint.
   B. References
      (1) 24-22-00/201, Electrical Power - Control
   C. Access
      (1) Location Zones

113/114	Area forward of NLG wheel well
115/116	NLG wheel well
117/118	Area outboard and above NLG wheel well
119/120	Main equipment center
135/136	Environmental Control System (ECS) bay
143	Left MLG wheel well
144	Right MLG wheel well
311/312	Area aft of pressure bulkhead to BS 1787.45
313/314	Stabilizer center section compartment
315/316	APU compartment

   D. Procedure to Replace the Service Lights

      S 862-001
      (1) Supply electrical power (Ref 24-22-00).

      S 812-005
      (2) Identify the lights to be replaced.
         (a) Set the applicable light switches to the ON position.
         (b) Identify the lights to be replaced.

(c) Set the applicable light switches back to the OFF position.

S 962-004

(3) Do the steps that follow to replace all (except the hydraulic) service lights:
(a) Loosen the screws that hold the lens assembly in position.
(b) Lower the lens assembly on the retainer cable.
(c) Replace the lamp.
(d) Clean the lens assembly and the reflector with a clean, dry cloth, if necessary.
(e) Attach the lens assembly and secure it with the screws.

TASK 33-31-00-712-007

3. Do the Test of the Service Lights

A. General

(1) This tasks contains the instructions to do the seven tests that follow:
(a) Do the Test of the Nose Gear Wheel Well Lights
(b) Do the Test of the Main Gear Wheel Well Lights
(c) Do the Test of the Air Conditioning Compartment Lights
(d) Do the Test of the Hydraulic Service Lights
(e) Do the Test of the APU Compartment Lights
(f) Do the Test of the Tailcone Compartment Lights
(g) Do the Test of the Main Equipment Center Lights.

B. References

(1) 24-22-00/201, Electrical Power - Control

C. Access

(1) Location Zones

113/114	Area forward of NLG wheel well
115/116	NLG wheel well
117/118	Area outboard and above NLG wheel well
119/120	Main Equipment center
135/136	Environmental Control System (ECS) bay
144	Right MLG wheel well
197/198	Wing to body - aft lower half
211/212	Flight compartment
311/312	Area aft of pressure bulkhed to BS 1787.45
313/314	Stabilizer center section compartment
315/316	APU compartment

D. Prepare to Do the Tests of the Service Lights

S 862-006

(1) Supply electrical power (Ref 24-22-00).

S 862-008
(2) For the nose gear wheel well lights, make sure this circuit breaker on the APU external power panel, P34, is closed:
(a) 34G1 - Plate B, LIGHTS NOSE WHL WELL

S 862-009
(3) For the main gear wheel well lights, make sure this circuit breaker on the APU external power panel, P34, is closed:
(a) 34B5 - Plate A, LIGHTS SERVICE MN GEAR WHL WELL

S 862-010
(4) For the air conditioning compartment lights and the hydraulic service lights, make sure this circuit breaker on the APU external power panel, P34, is closed:
(a) 34B10 - Plate A, AIR CONDITIONING COMPARTMENT LIGHTS

S 862-011
(5) For the APU compartment lights and tailcone compartment lights, make sure this circuit breaker on the APU external power panel, P34, is closed:
(a) 34B7 - Plate A, LIGHTS COMPARTMENT APU & TAILCONE

S 862-012
(6) For the main equipment center lights, make sure these circuit breakers on the APU external power panel, P34, are closed:
(a) 34C1 - Plate B, ELEC EQUIP CTR LIGHTS FWD
(b) 34C2 - Plate B, ELEC EQUIP CTR LIGHTS MAIN

S 712-014
(7) Do these steps to do the test of the nose gear wheel well lights:
(a) Put the nose gear wheel well light switch, S324, on the P63 panel, in the ON position.
(b) Make sure the nose gear wheel well lights, L71 and L78, come on.

(c) Put the nose gear wheel well light switch back to the OFF position.
(d) Make sure all nose gear wheel well lights go off.

S 712-015
(8) Do these steps to do the test of the main gear wheel well lights:
(a) Put the main wheel well light switch, S318, in the ON position.
(b) Make sure the main wheel well lights, L72, L73, L76, and L77, come on.
(c) Put the main wheel well light switch back to the OFF position.
(d) Make sure all main gear wheel well lights go off.

S 712-016
(9) Do these steps to do the test of the air conditioning compartment lights:
(a) Put the right air conditioning compartment light switch, S362, in the ON position.
(b) Make sure the air conditioning lights, L346 and L347, on the right side come on.
(c) Put the left air conditioning compartment light switch, S361, in the ON position.
(d) Make sure the air conditioning compartment lights, L344 and L345, come on.
(e) Put the left and the right air conditioning compartment light switches back to the OFF position.
(f) Make sure all air conditioning compartment lights go off.

S 712-017
(10) Do these steps to do the test of the hydraulic service lights:
(a) Put the hydraulic service light switch, S10328, in the ON position.
(b) Make sure the hydraulic service lights, L487 and L488, come on.
(c) Put the hydraulic center light switch back to the OFF position.
(d) Make sure all hydraulic service lights go off.

S 712-020
(11) Do these steps to do the test of the APU compartment lights:
(a) Put the APU compartment light switch, S428, in the ON position.
(b) Make sure the APU compartment lights, L351, L540, and L541, come on.
(c) Put the APU compartment light switch back to the OFF position.
(d) Make sure all APU compartment lights go off.

S 712-021
(12) Do these steps to do the test of the tailcone compartment lights:
(a) Move the tailcone compartment light switch, S427, to its opposite position.
(b) Make sure the tailcone compartment lights, L348, L349, L350, and L380, come on.
(c) Move the other tailcone compartment light switch, S443, to its opposite position.

(d) Make sure all tailcone compartment lights go off.

S 712-022

(13) Do these steps to do the test of the main equipment center lights:
(a) Put the main equipment center light switch, S355, in the ON position.
(b) Make sure seven main equipment center lights, L337, L338, L339, L340, L341, L342, and L343, come on.
(c) Put the main equipment center light switch back to the OFF position.
(d) Make sure the seven main equipment center lights go off.
(e) Put the forward equipment center light switch, S357, in the 113AL access door, in the ON position.
(f) Make sure the forward equipment center lights, L384, L335, and L336, come on.
(g) Put the forward equipment center light switch back to the OFF position.
(h) Make sure the three forward equipment center lights go off.

S 862-013

(14) Remove electrical power if it is not necessary (Ref 24-22-00).

LOWER LOBE CARGO COMPARTMENT LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-37-01 thru SSM 33-37-99
      (2) WDM 33-37-11 thru WDM 33-37-99
   B. Interior lighting is provided for the forward and aft cargo compartments. Lights are enabled when the cargo doors are open. They are controlled by toggle switches from different locations. Door sills are illuminated by separate lamps when the door is open.
2. Component Details
   A. Forward Cargo Compartment Lights
      (1) Forward cargo compartment lights are controlled by a switch on the forward cargo door control panel (P43).
      (2) AIRPLANES WITHOUT THE FORWARD CARGO COMPARTMENT CONTROL RELAY;
      The forward cargo compartment lights enable relay and transformer are on the miscellaneous equipment panel (P65), located on the right side of the main electrical equipment center.
      (3) AIRPLANES WITH THE FORWARD CARGO COMPARTMENT CONTROL RELAY;
      The forward cargo compartment lights enable relay, control relay and transformer are on the miscellaneous equipment panel (P65), located on the right side of the main electrical equipment center.
   B. Aft Cargo Compartment Lights
      (1) Aft cargo compartment lights are controlled by a switch on the aft cargo door control panel (P44).
      (2) GUI 115;
      There is a second control switch for the aft cargo lights on the E6 equipment rack in the aft equipment center.
      (3) AIRPLANES WITHOUT THE AFT CARGO COMPARTMENT CONTROL RELAY;
      The aft cargo compartment lights enable relay and transformer are located on the E6 equipment rack in the aft equipment center.
      (4) AIRPLANES WITH THE AFT CARGO COMPARTMENT CONTROL RELAY;
      The aft cargo compartment lights enable relay, control relay and transformer are located on the E6 equipment rack in the aft equipment center.
3. Operation
   A. Functional Description
      (1) Forward Cargo Compartment Ceiling and Door Sill Lights
         (a) The forward cargo compartment lighting consists of incandescent ceiling lights and door sill lights.

(b) AIRPLANES WITHOUT THE FORWARD CARGO COMPARTMENT CONTROL RELAY;
Power from the 115 vac ground handling bus is applied to a transformer which provides 28 vac to the lamps. Control of the lights is by a toggle switch on external control panel P43 and one set of contacts on the cargo compartment lights enable relay. This relay is controlled by a proximity switch in the door. The proximity switch provides a ground to enable the relay and lights whenever the cargo door is open.

(c) AIRPLANES WITH THE FORWARD CARGO COMPARTMENT CONTROL RELAY;
The forward cargo compartment lights enable relay (P65) is controlled by a proximity switch in cargo door 1. The proximity switch provides a ground to energize the enable relay when cargo door 1 is open. With the enable relay energized and the forward cargo compartment lights switch (P43) in the ON position, the forward cargo compartment control relay (P65) is energized. With the control relay energized, 115 vac from the ground handling bus is passed through the control relay to the forward cargo compartment lights transformer (P65). The transformer provides 28 vac to the lamps.

(d) When the lens of the ceiling light fixture is open, a microswitch opens the light circuit. The lens is suspended from the light fixture with a lanyard, when the lens is removed for relamping.

(e) The door sill lights receive power from the same source as the ceiling lights. A set of contacts in the cargo compartment lights enable relay arms the sill lights when the door is open.

(2) Aft Cargo Compartment Ceiling and Door Sill Lights

(a) The aft cargo compartment lighting consists of ceiling mounted incandescent lamps and aft cargo door mounted sill lights. The lights are controlled by a toggle switch on exterior control panel P44. Operation is similar to the forward cargo compartment lighting.

(b) GUI 115;
There is a second toggle switch for the control of the aft cargo compartment lights on the aft equipment center rack, E6.

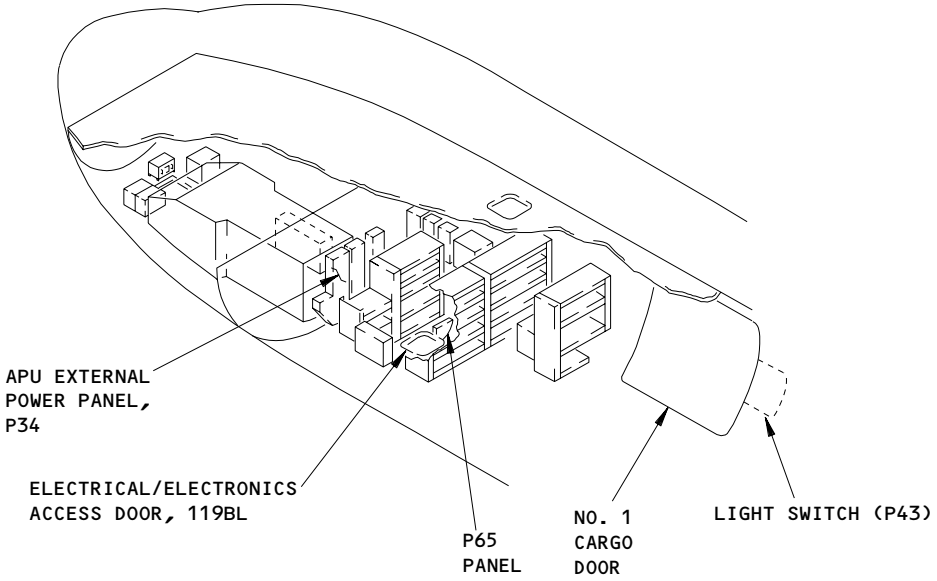
LOWER LOBE CARGO COMPARTMENT LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1		119BL, MAIN EQUIP CTR, P34,P65	*
CIRCUIT BREAKER –	1		AFT CARGO COMPT, E6	*
LIGHT –				
CARGO COMPT	2		CARGO COMPT	33-37-00
CARGO DOOR	2		CARGO DOOR	33-37-00
MAIN EQUIP CENTER	2		119BL, MAIN EQUIP CTR	33-37-00
RELAY –				
AFT CARGO COMPT CONT 1	1		AFT CARGO COMPT, E6	*
AFT CARGO COMPT LIGHTS ENABLE	1		AFT CARGO COMPT, E6	*
FWD CARGO COMPT CONT 1	1		119BL, MAIN EQUIP CTR, P65	*
FWD CARGO COMPT LIGHTS ENABLE	1		119BL, MAIN EQUIP CTR, P65	*
SWITCH –				
AFT CARGO COMPT LIGHTS	1		AFT CARGO COMPT, P44	*
FWD CARGO COMPT LIGHTS	1		FWD CARGO COMPT, P43	*
TRANSFORMER –				
AFT CARGO COMPT LIGHTS	1		AFT CARGO COMPT, E6	*
FWD CARGO COMPT LIGHTS	1		119BL, MAIN EQUIP CTR, P65	*

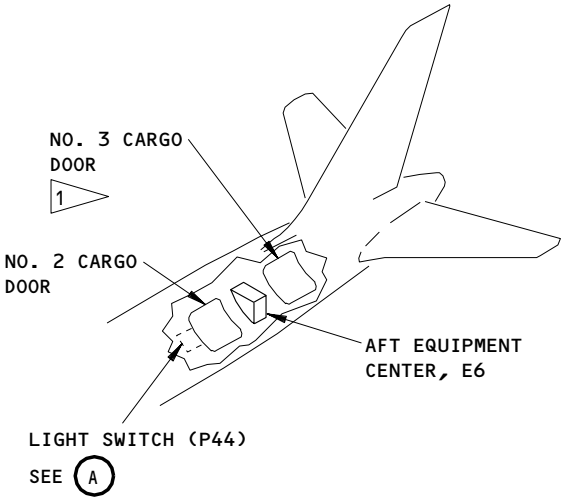
* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

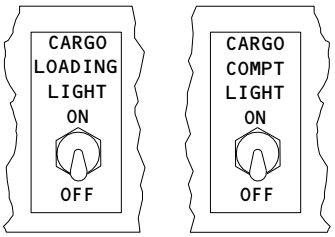
1 AIRPLANES WITH THE AFT AND FWD CARGO COMPARTMENT CONTROL RELAYS

Lower Lobe Cargo Compartment Lights – Component Index
Figure 101



MAIN EQUIPMENT CENTER



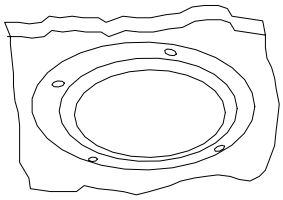


LIGHT SWITCH
(EXAMPLES)

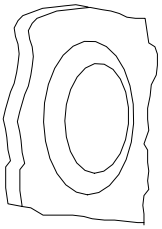
A

1 NOT INSTALLED ON ALL AIRPLANES

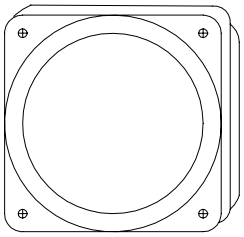
Lower Lobe Cargo Compartment Lights - Component Location
Figure 102 (Sheet 1)



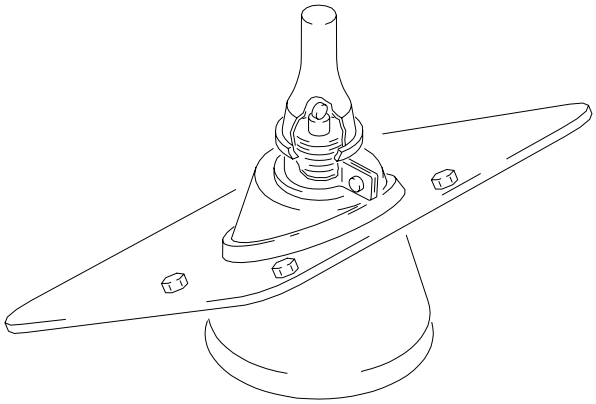
CARGO COMPARTMENT LIGHT
(EXAMPLE)



CARGO DOOR LIGHT
(EXAMPLE)



MAIN EQUIPMENT
CENTER LIGHT, L381



NO. 3 CARGO DOOR LIGHT
(EXAMPLE) 1

Lower Lobe Cargo Compartment Lights - Component Location
Figure 102 (Sheet 2)

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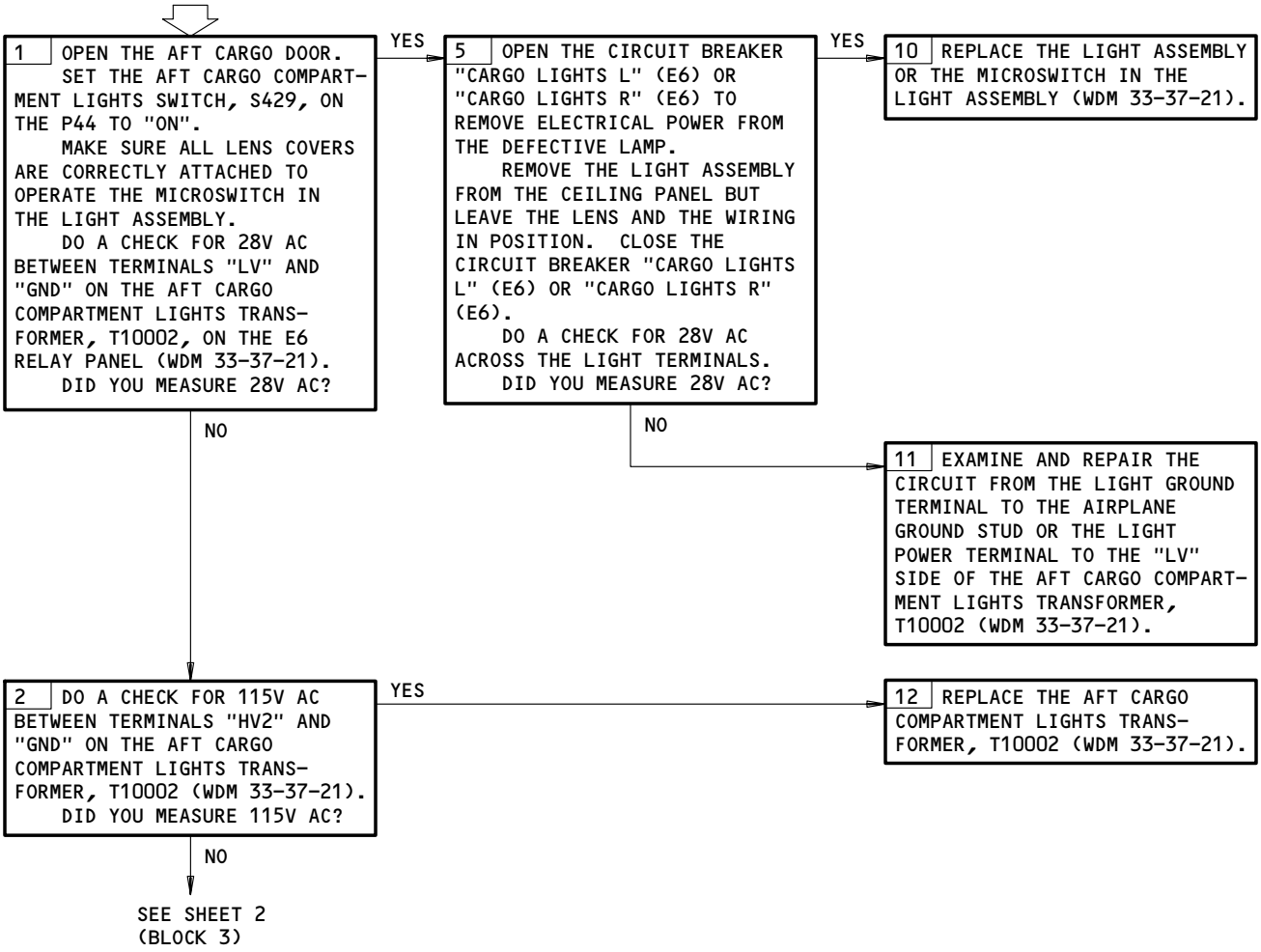
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
34A2,34A5,34B9, CARGO LIGHTS NO. 2 DOOR (E6), CARGO LIGHTS L (E6), CARGO LIGHTS R (E6)

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

AFT CARGO COMPARTMENT LIGHT PROBLEMS



Aft Cargo Compartment Light Problems
Figure 104 (Sheet 1)

54258

LOWER LOBE CARGO COMPARTMENT LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains five tasks:
      (1) Replace the Lower Lobe Cargo Lights
      (2) Remove and Install the Lens Assembly of the Cargo Compartment Lights
      (3) Remove the Cargo Compartment Lights
      (4) Install the Cargo Compartment Lights
      (5) Do the Test of the Lower Lobe Cargo Lights.
   B. When a task refers to the lower lobe cargo lights, it includes up to three types of lights:
      - Cargo compartment lights
      - Cargo door lights
      - Main equipment center light, L381.

TASK 33-37-00-962-001

2. Replace the Lower Lobe Cargo Lights
   A. Consumable Materials
      (1) G00034 Cheesecloth - new, clean, dry, has no lint
   B. Reference
      (1) AMM 24-22-00/201, Electrical Power - Control
   C. Access
      (1) Location Zones

121/122	Forward Cargo Compartment
153/154	Aft Cargo Compartment
161/162	Bulk Cargo Compartment
821	No. 1 Cargo Door
822	No. 2 Cargo Door
823	No. 3 Cargo Door

   D. Procedure to Replace the Lower Lobe Cargo Lights

      S 862-002
      (1) Supply electrical power (AMM 24-22-00/201).

      S 812-005
      (2) Identify the lights to be replaced.
         (a) Put the aft cargo compartment lights switch in the ON position.

(b) Identify the aft cargo compartment lights and the aft cargo door lights to be replaced.
(c) Put the aft cargo compartment lights switch in the OFF position.
(d) Put the forward cargo compartment lights switch in the ON position.
(e) Identify the forward cargo compartment lights and the forward cargo door lights to be replaced.
(f) Put the forward cargo compartment lights switch in the OFF position.

S 962-003
(3) Do these steps to replace the cargo compartment lights:
(a) Lower the lens assembly on the lanyard. To do so, pull down on the two knobs attached to the lens assembly.
(b) Replace the lamp.
(c) If necessary, clean the lens assembly and the reflector with a clean, dry cloth.
(d) Install the lens assembly.

S 962-023
(4) Do these steps to replace the cargo door lights:

WARNING: PUT THE CARGO DOORS IN A SAFE POSITION. IF YOU DO NOT, INJURY TO PERSONS CAN OCCUR IF THEY FALL DURING THIS PROCEDURE.

(a) Put the cargo doors in a safe position.
(b) Remove the screws and the retaining ring from the light assembly.
(c) Replace the lamp.
(d) Install the retaining ring.

TASK 33-37-00-962-022

3. Remove and Install the Lens Assembly of the Cargo Compartment Lights

A. Access
(1) Location Zones

121/122	Forward Cargo Compartment
153/154	Aft Cargo Compartment
161/162	Bulk Cargo Compartment

B. Procedure to Remove the Lens Assembly

S 022-006

(1) Do these steps to remove the lens assembly:
   (a) Lower the lens assembly on the lanyard. To do so, pull down on the two knobs attached to the lens assembly.
   (b) Remove the lens assembly. To do so, pull the lanyard through the lens retaining clip.
   (c) Make a mark by the hole the lanyard was in.

C. Procedure to Install the Lens Assembly

S 422-007

(1) Do these steps to install the lens assembly:
   (a) Put the lanyard through the hole in the light assembly.
   (b) Push the end of the lanyard through the lens retaining clip.
   (c) Attach the lens assembly to the light assembly. To do so, push up on the two knobs until the lens retaining clip engages.

TASK 33-37-00-002-009

4. Remove the Cargo Compartment Lights (Fig. 201)

A. Access

(1) Location Zones

121/122	Forward Cargo Compartment
153/154	Aft Cargo Compartment
161/162	Bulk Cargo Compartment

B. Procedure to Remove the Cargo Compartment Lights

S 862-024

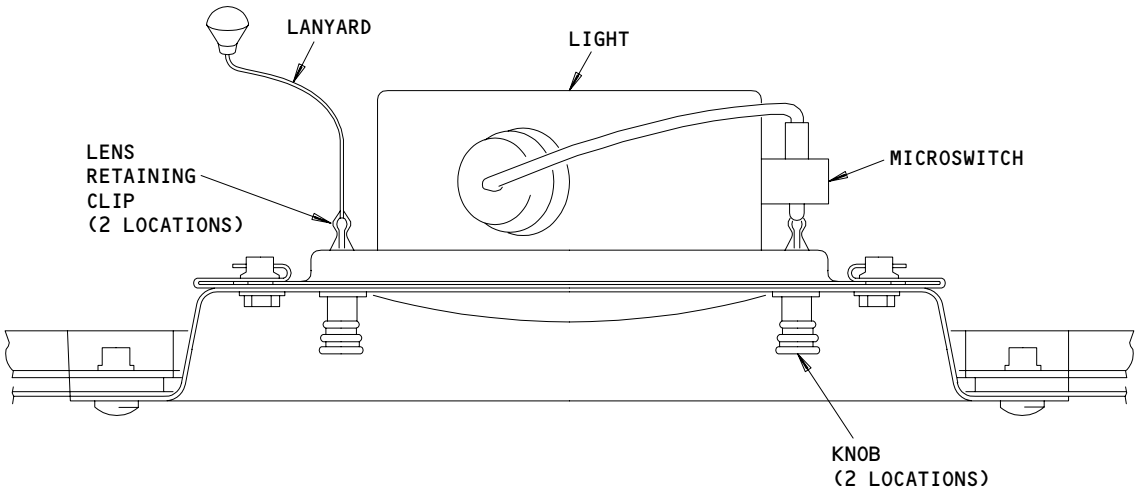
(1) For the forward cargo compartment lights, open this circuit breaker on the miscellaneous equipment panel, P65, and attach a DO-NOT-CLOSE tag:
   (a) P65, FWD COMPT CARGO LIGHTS

S 862-011

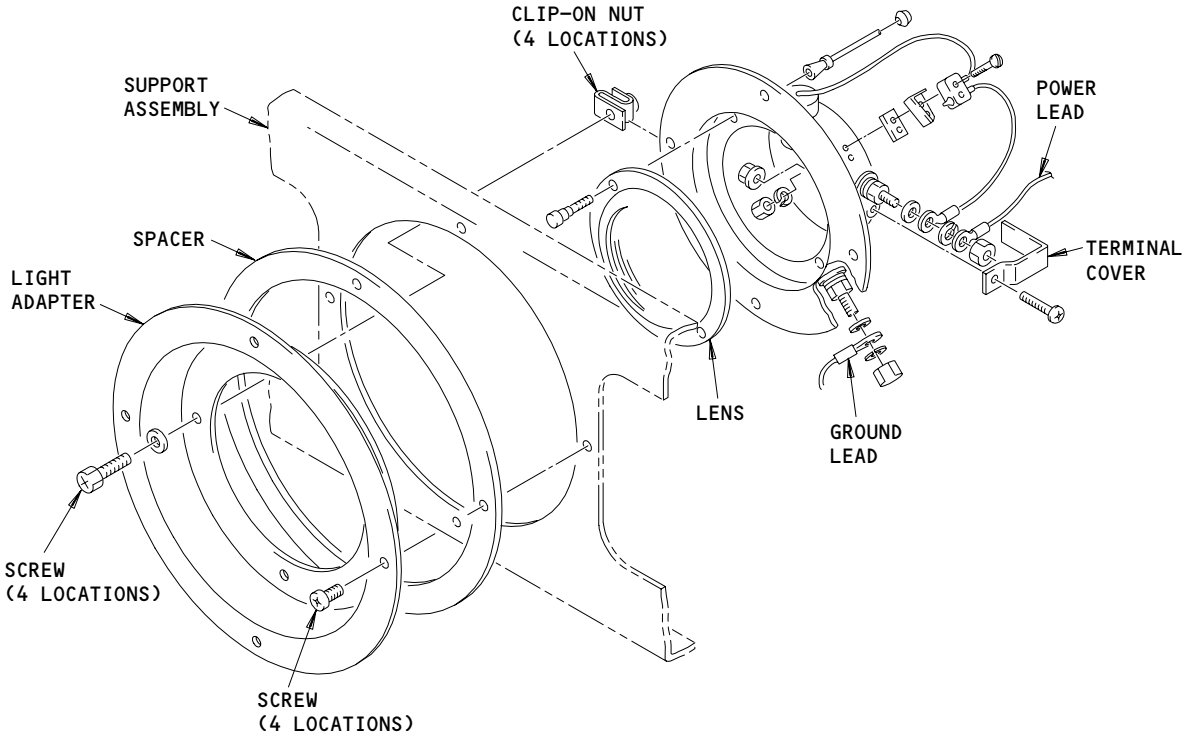
(2) For the aft cargo compartment lights, open these circuit breakers on the aft equipment center rack, E6, and attach DO-NOT-CLOSE tags:
   (a) E6, TOP CARGO LIGHTS L
   (b) E6, TOP CARGO LIGHTS R

S 022-008

(3) Do these steps to remove the cargo compartment lights:
   (a) Loosen the four outer screws to remove the light assembly from the ceiling.



FWD/AFT CARGO COMPARTMENT LIGHT



FWD/AFT CARGO COMPARTMENT LIGHT - EXPANDED VIEW

Lower Lobe Cargo Compartment Light Installation
Figure 201

(b) Loosen the screw to remove the terminal cover.
(c) Disconnect the electrical wires. To do so, remove the nuts and washers from the light assembly terminals (two locations).
(d) Remove the light assembly from the light adapter. To do so, remove the screws and washers (four locations).

TASK 33-37-00-422-027

5. Install the Cargo Compartment Lights (Fig. 201)
   A. Equipment
      (1) Torque wrench - Commercially available
   B. Access
      (1) Location Zones
          121/122 Forward Cargo Compartment
          153/154 Aft Cargo Compartment
          161/162 Bulk Cargo Compartment

   C. Procedure to Install the Cargo Compartment Lights

      S 422-012
      (1) Do these steps to install the cargo compartment lights:

          (a) Put the spacer on the light adapter.
          (b) Attach the light assembly to the light adapter. To do so, use the screws, clip-on nuts and washers (four locations).
          (c) Connect the lugs to the light assembly terminals. To do so, use the nuts and washers (two locations).
          (d) Attach the terminal cover to the light assembly with the screw.
          (e) Insert the light assembly into the ceiling.
              1) Set the panel in the ceiling between the light adapter and the spacer.
              2) Attach the light assembly to the support assembly.
              3) Tighten the screws (four locations) to 8-10 pound-inches.

      S 712-013
      (2) Do the test of the cargo compartment lights as given in the procedure below to Do the Test of the Lower Lobe Cargo Lights.

TASK 33-37-00-712-014

6. Do the Test of the Lower Lobe Cargo Lights
   A. Reference
      (1) AMM 24-22-00/201, Electrical Power Control

B. Access

(1) Location Zones

119/120	Main Equipment Center
121/122	Forward Cargo Compartment
153/154	Aft Cargo Compartment
161/162	Bulk Cargo Compartment
821	No. 1 Cargo Door
822	No. 2 Cargo Coor
823	No. 3 Cargo Door

C. Procedure to Do the Test of the Lower Lobe Cargo Lights

S 862-015

(1) Make sure these circuit breakers on the APU external power panel, P34, are closed:
   (a) 34A1-Plate A, CARGO DOOR 1
   (b) 34A5-Plate A, CARGO DOOR CONT
   (c) 34B8-Plate A, LIGHTS COMPARTMENT FWD CARGO

S 862-016

(2) Make sure these circuit breakers on the miscellaneous equipment panel, P65, are closed:
   (a) P65, FWD CARGO COMPT LIGHTS
   (b) P65, NO. 1 DOOR CARGO LIGHTS

S 862-018

(3) Make sure these circuit breakers on the APU external power panel, P34, are closed:
   (a) 34A2-Plate A, CARGO DOOR 2
   (b) 34B9-Plate A, LIGHT COMPARTMENT AFT CARGO

S 862-017

(4) Make sure these circuit breakers on the aft equipment center rack, E6, are closed:
   (a) E6, CARGO LIGHTS L
   (b) E6, CARGO LIGHTS R
   (c) E6, CARGO LIGHTS NO. 2 DOOR

S 712-019

(5) Do these steps to do the test of the forward cargo compartment lights, the forward cargo door lights, and the main equipment center light, L381:
   (a) Fully open the forward cargo compartment door.
   (b) Set the forward cargo compartment lights switch, S10128, to ON.
   (c) Make sure these lights come on:
      - six forward cargo compartment lights
      - five forward cargo door lights in the No. 1 cargo door
      - one main equipment center light, L381
   (d) Set the forward cargo compartment light switch to OFF.

(e) Make sure these lights go off:
- six forward cargo compartment lights
- five forward cargo door lights
- one main equipment center light, L381

S 712-020

(6) Do these steps to do the test of the aft compartment lights and the aft cargo door lights:
(a) Fully open the No. 2 aft cargo door.
(b) Set the aft cargo compartment lights switch, S429, to ON.
(c) Make sure these lights come on:
- eight aft cargo compartment lights
- five aft cargo door lights in the No. 2 cargo door
(d) Set the aft cargo compartment lights switch, S429, to OFF.
(e) Make sure these lights go off:
- eight aft cargo compartment lights
- five aft cargo door lights in the No. 2 cargo door

S 712-026

(7) AIRPLANES WITH A NO. 3 CARGO DOOR;
also do these steps to complete the test of the aft cargo compartment lights and the aft cargo door lights:
(a) Fully open the No. 3 aft cargo door.
(b) Set the other aft cargo compartment lights switch, S10311, to ON.
(c) Make sure these lights come on:
- eight aft cargo compartment lights
- five aft cargo door lights in the No. 2 cargo door
- one aft cargo door light in the No. 3 cargo door.
(d) Set the aft cargo compartment lights switch, S10311, to OFF.
(e) Make sure these lights go off:
- eight aft cargo compartment lights
- five aft cargo door lights in the No. 2 cargo door
- one aft cargo door light in the No. 3 cargo door.

S 862-021

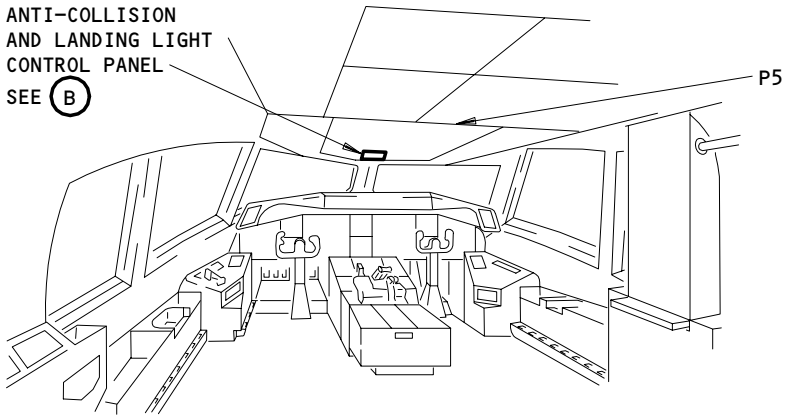
(8) Remove electrical power if it is not necessary (AMM 24-22-00/201).

EXTERIOR LIGHTS - DESCRIPTION AND OPERATION

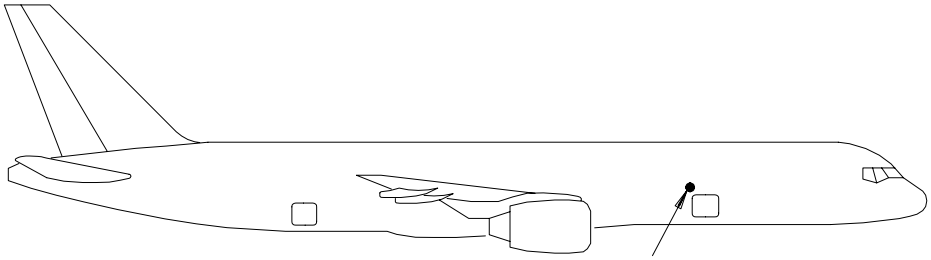
1. General
   A. Airplane exterior lighting provides high intensity light for identification of airplane position (navigation) and orientation. It also provides lighting for landing and taxi areas; and for wings, tail and engines. All lights are controlled from the flight compartment.
   B. The exterior lights are these types of lights:
      (1) Wing Illumination Lights (Ref 33-41-00)
         (a) Wing illumination lights are high intensity quartz halogen light assemblies mounted on each side of the fuselage. A single beam lights the engine and wing. A single on/off switch on overhead panel P5 controls both light assemblies.
      (2) Landing, Runway Turnoff, and Taxi Lights (Ref 33-42-00)
         (a) Two high intensity landing lights are on the nose landing gear. One high intensity landing light is in each wing root strakelet. A separate on/off switch, on overhead panel P5, controls each wing light and both nose gear lights. A landing gear lever position sensing switch changes the brightness of the wing landing lights from dim to bright when the landing gear is lowered. Another switch turns on the nose gear landing lights when the gear is down and locked.
         (b) Runway turnoff lights are high intensity sealed beam lights. These lights are on the nose landing gear to give lighting the ground ahead and to the side of the airplane. Control is with a switch on the overhead panel, P5.
         (c) ON SOME AIRPLANES;
         One or two taxi lights are installed on the nose gear. A taxi light is a high intensity sealed beam lights that gives lighting to the ground ahead of the airplane. Control is with a switch on the overhead panel, P5.
      (3) Position Lights (Ref 33-43-00)
         (a) Halogen position (navigation) lights in the leading and trailing edges of the wingtips provide lighting for recognizing airplane position. Trailing edge lights are white. Left leading edge lights are red. Right leading edge lights are green. A single on/off switch on overhead panel P5 controls all lights.
      (4) Anti-Collision Lights (Ref 33-44-00)
         (a) High intensity Xenon strobe lights on the fuselage and wingtips flash 48 times per minute. The fuselage mounted lights are red; wingtip lights are white. Separate on/off switches on overhead panel P5 control the red and white lights.
      (5) Logo Lights (Ref 33-45-00)
         (a) Two logo lights installed in the upper surface of each horizontal stabilizer illuminate the airline insignia on the vertical fin. The lights are controlled by a single on/off switch-light on overhead panel P5.

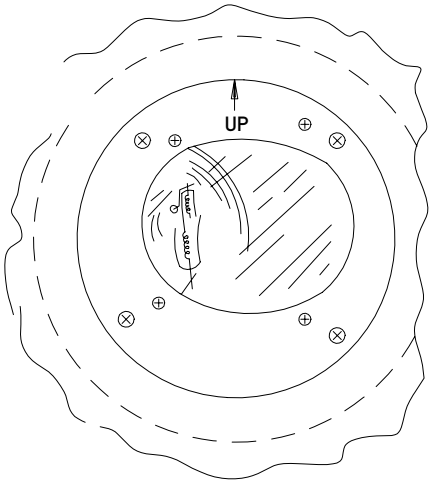
WING ILLUMINATION LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-41-01 thru 33-41-99
      (2) WDM 33-41-11 thru 33-41-99
   B. One quartz halogen lamp is in each side of the fuselage forward of the wing root. A single beam lights the wing and the engine. A single alternate action switch-light controls both lights.
2. Component Details
   A. Wing illumination lights are installed on both sides of the forward body to provide illumination for the engine nacelles and wing leading edges for determining formation of ice on these areas.
   B. A switch-light on the anti-collision and landing light control panel, on the flight deck overhead panel (P5), controls these lights.
   C. Each light assembly includes a transformer, accessible from the passenger compartment.
3. Operation
   A. Functional Description
      (1) Power for the wing illumination lights is from the 115v ac ground service bus on circuit breaker panel P11.
      (2) Pressing the alternate action switch-light on overhead panel P5 applies power to the right and left wing light assemblies. The switch-light then illuminates ON. A transformer in the light assembly reduces the voltage to 13v ac for the lamp. Pressing the switch-light again opens the circuits and shuts off the lights.



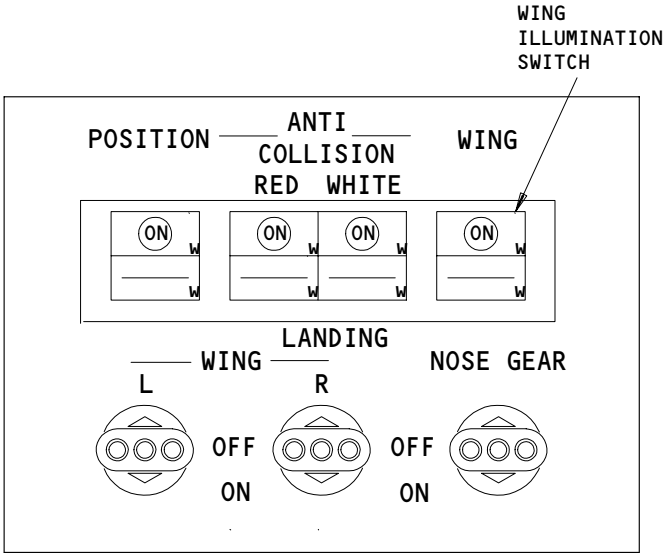
FLT COMPT





WING ILLUMINATION LIGHT
(EXAMPLE)

A



ANTI-COLLISION AND LANDING LIGHT CONTROL PANEL

B

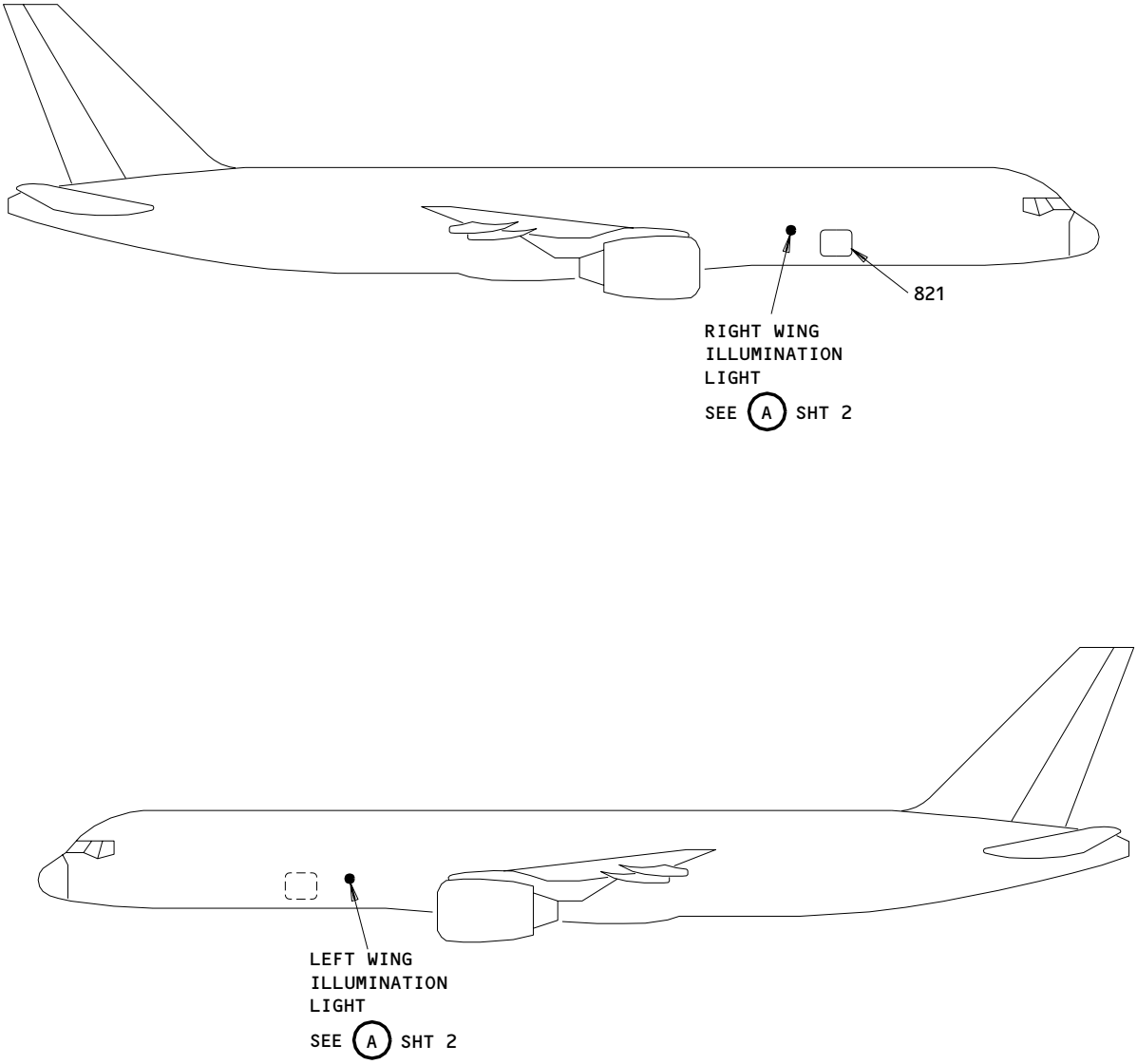
Wing Illumination Lights - Component Location
Figure 1

WING ILLUMINATION LIGHTS

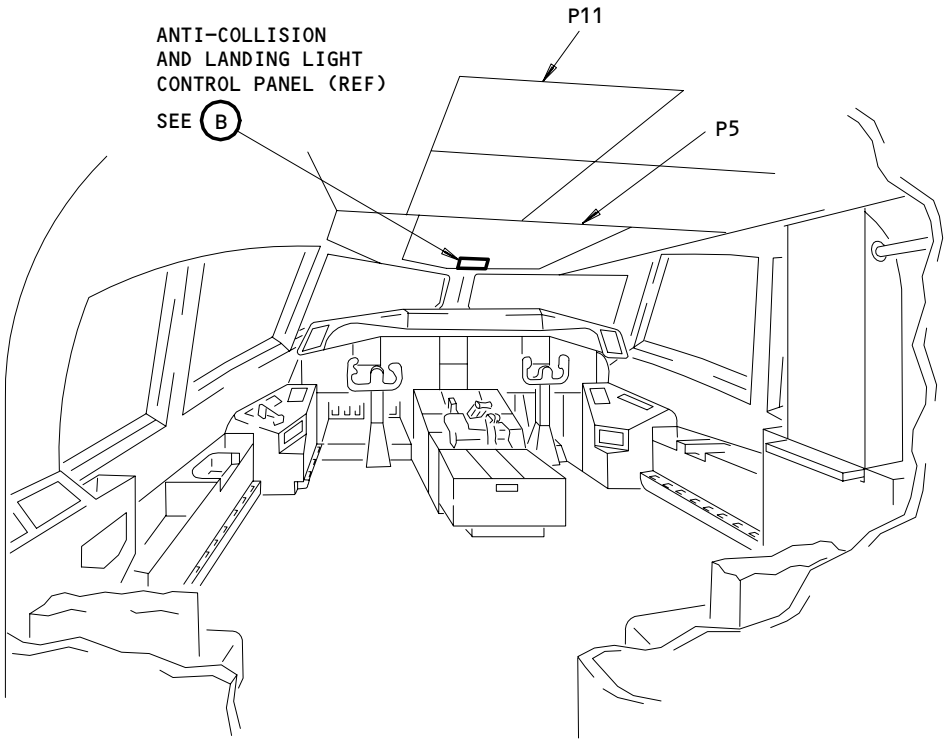
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, P11	
WING ILLUM, C1227	2	1	11M35	*
LIGHT – WING ILLUMINATION, L69,L70	1	2	FWD FUSELAGE SIDE	33-41-00
PANEL – (FIM 33-44-00/101)	2	1		
ANTI-COLLISION AND LANDING LIGHT CONTROL PANEL				
SWITCH – WING ILLUMINATION, S7	2	1	FLT COMPT, P5, ANTI-COLLISION AND LANDING LIGHT CONTROL PANEL	*

* SEE THE WDM EQUIPMENT LIST

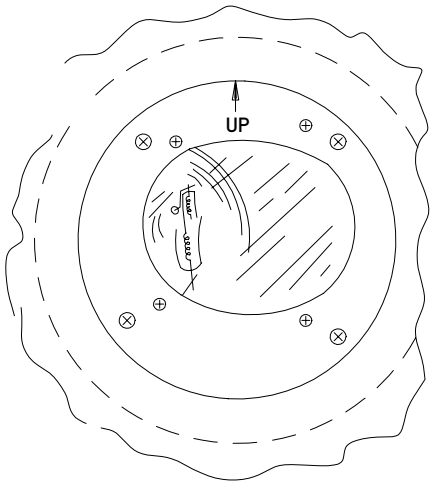
Wing Illumination Lights – Component Location
Figure 101



Wing Illumination Lights - Component Location
Figure 102 (Sheet 1)

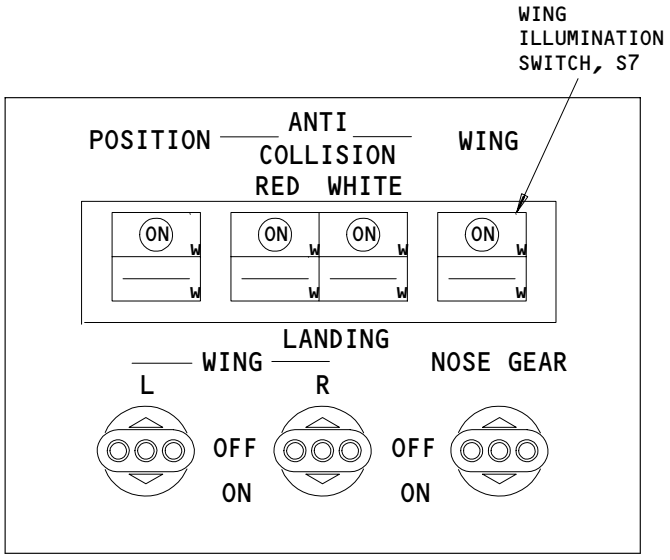


FLIGHT COMPARTMENT



WING ILLUMINATION LIGHT
(EXAMPLE)

A FROM SHT 1



ANTI-COLLISION AND LANDING LIGHT
CONTROL PANEL (REF)

B

Wing Illumination Lights - Component Location
Figure 102 (Sheet 2)

WING ILLUMINATION LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure has these tasks:
      (1) Replace the Wing Illumination Lights.
      (2) Replace the Lens of the Wing Illumination Light.
      (3) Remove the Transformer for the Wing Illumination Light.
      (4) Install the Transformer for the Wing Illumination Light.
      (5) Do the Test of the Wing Illumination Lights.

   TASK 33-41-00-962-001

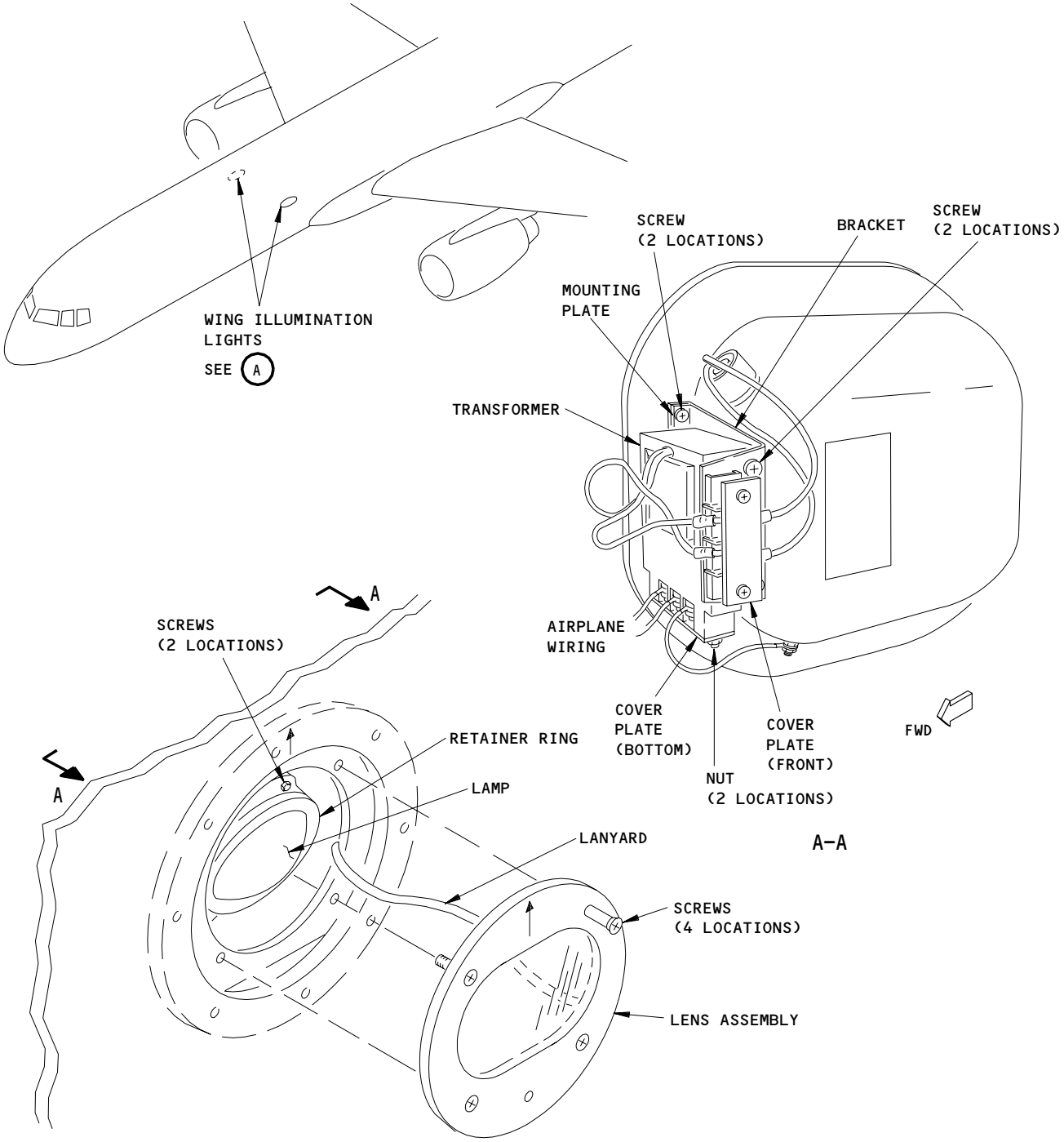
2. Replace the Wing Illumination Lights (Fig. 201)
   A. Consumable Materials
      (1) A00243 Sealant -- BMS 5-32
      (2) G00287 Parting Agent -- Del Chem X-769 or
      (3) G00286 Parting Agent -- 4A-183
   B. References
      (1) AMM 51-31-01/201, Seals and Sealing
   C. Access
      (1) Location Zone
          200 Upper Half of the Fuselage

   D. Procedure to Replace the Wing Illumination Lights (Fig. 201)

      S 862-002
      (1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
          (a) 11M35, WING ILLUM

      S 012-029
      (2) Do this task to remove the sealant between the lens assembly and the skin: Prepare for Sealing (AMM 51-31-01/201).

      S 962-025
      (3) Do these steps to replace the wing illumination lights.
          (a) Loosen the screws that hold the lens assembly in position.
          (b) Remove the lens assembly.



WING ILLUMINATION LIGHT
(EXAMPLE)
A

Wing Illumination Lights Installation
Figure 201

(c) Remove the screws that hold the retainer ring in position.
(d) Remove the retainer ring.
(e) Pull the lamp loose from the lamp housing.
(f) Disconnect the electrical wires from the lamp.
(g) Replace the lamp.
(h) Connect the electrical wires to the new lamp.
(i) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
(j) With the retainer ring on the lamp, put the new lamp in the lamp housing.
(k) Use the correct screws to hold the retainer ring in position.

S 432-004
(4) Install the lens assembly; use the correct screws.

S 712-005
(5) Do the test of the wing illumination lights as given in this procedure.

S 392-006
(6) With the sealant and the parting agent, do this task to seal around the outer edge of the lens assembly: Fillet Seal Application (AMM 51-31-01/201).

TASK 33-41-00-962-032

3. Replace the Lens of the Wing Illumination Light (Fig. 201)
A. Consumable Materials
(1) A00243 Sealant - BMS 5-32
(2) G00287 Parting Agent - Del Chem X-769 or 4A183 (alternate)
B. References
(1) AMM 51-31-01/201, Seals and Sealing
C. Access
(1) Location Zone
200 Upper Half of the Fuselage
D. Procedure to Replace Lens of the Wing Illumination Lights (Fig. 201)

S 862-036
(1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
(a) 11M35, WING ILLUM

S 032-034

(2) Do this task to remove the sealant between the lens assembly and the skin: Prepare for Sealing (AMM 51-31-01/201).

S 962-035

(3) Do these steps to replace the Lens of the wing illumination lights.
  (a) Loosen the screws that hold the Lens assembly in position.
  (b) Swing Lens assembly away from light subassembly.
  (c) Remove machine screw and locknut releasing lanyard from light subassembly.
  (d) Remove Lens from Retainer.
  (e) Float Lens in place on retainer with sealant (AMM 51-31-01/201).
  (f) Attach Lens assembly to light subassembly by securing free end of lanyard to the light subassembly with machine screws and locknut.
  (g) Seal machine screws and locknut inside and outside with sealant.
  (h) Install the Lens assembly; use the correct screws.

S 712-037

(4) Do the test of the wing illumination lights as given in this procedure.

S 432-038

(5) With the sealant and parting agent, do this task to seal around the outer edge of the Lens assembly: Fillet Seal Application (AMM 51-31-01/201).

TASK 33-41-00-002-007

4. Remove the Transformer from the Wing Illumination Light (Fig. 201)
  A. References
    (1) AMM 25-21-02/401, Sidewall Panels
    (2) AMM 25-21-05/401, Sidewall Insulation

(3) AMM 25-24-02/401, Closets
(4) AMM 25-25-01/201, Passenger Seats
(5) AMM 25-41-03/401, Mid Lavatory

B. Access
(1) Location Zone
200 Upper Half of Fuselage

C. Procedure to Remove the Transformer

S 862-009
(1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
(a) 11M35, WING ILLUM

S 012-030
(2) Get access to the transformer.
(a) Find the transformer below the 13th window from the front, on the right and left sides of the airplane.
(b) If you find the transformer behind a closet, a seat or a lavatory, remove the object. To do so, use the applicable procedure shown below:
- Closets (AMM 25-24-02/401)
- Passenger Seats (AMM 25-25-01/201)
- Mid Lavatory (AMM 25-41-03/401).

(c) Remove the sidewall panel at the location of the transformer (AMM 25-21-02/401).
(d) Remove the sidewall insulation around the transformer (AMM 25-21-05/401).

S 022-022
(3) Do these steps to remove the transformer.

NOTE: Keep all hardware: screws, nuts, washers, coverplates and mounting plate. Use the hardware to install the transformer.

(a) Remove the two screws that hold the front coverplate in position.

(b) Disconnect the wires from the front terminal block.
1) Identify each wire to aid during the installation of the transformer.
(c) Remove the four screws that hold the transformer in position.
(d) Move the transformer down to be clear of the bracket.
(e) Turn the transformer to get access to the bottom coverplate.
(f) Remove the two nuts that hold the bottom coverplate in position.
(g) Disconnect the wires from the bottom of the terminal block.
1) Identify each wire to aid during the installation of the transformer.
(h) Remove the two screws that hold the mounting plate and the transformer in position.

TASK 33-41-00-402-023

5. Install the Transformer to the Wing Illumination Light

A. References
(1) AMM 25-21-02/401, Sidewall Panels
(2) AMM 25-21-05/401, Sidewall Insulation
(3) AMM 25-24-02/401, Closets
(4) AMM 25-25-01/201, Passenger Seats
(5) AMM 25-41-03/401, Mid Lavatory

B. Access
(1) Location Zones
200 Upper Half of Fuselage

C. Procedure to Install the Transformer

S 422-023
(1) Do these steps to install the transformer.
(a) Attach the mounting plate to transformer with the two screws.
(b) Connect the airplane wiring and the ground wire to the bottom of the terminal block.
(c) Attach the bottom coverplate with the two nuts.
(d) Attach the transformer to the bracket with the four screws.

(e) Connect the wires to the front of the terminal block.
(f) Attach the front coverplate with the two screws.

S 412-026
(2) Install the passenger compartment furnishings.
(a) Replace the sidewall insulation (AMM 25-21-05/401).
(b) Replace the sidewall panel (AMM 25-21-02/401).
(c) If you removed a closet, a seat, or a lavatory, replace the object. Use the applicable procedure shown below:
- Closets (AMM 25-24-02/401)
- Passenger Seats (AMM 25-25-01/201)
- Mid Lavatory (AMM 25-41-03/401).

S 712-016
(3) Do the test of the wing illumination lights as given in this procedure.

TASK 33-41-00-712-017

6. Do the Test of the Wing Illumination Lights

A. References
(1) AMM 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zones
211/212 Flight Compartment

C. Procedure to Do the Test of the Wing Illumination Lights

S 862-019
(1) Supply electrical power (AMM 24-22-00/201).

S 862-020
(2) Remove the DO-NOT-CLOSE tag as you close this circuit breaker on the overhead circuit breaker panel, P11.
(a) 11M35, WING ILLUM

S 712-018

(3) Do these steps to do the test of the wing illumination lights.

(a) Push the WING light switch on the pilots' overhead panel, P5, to ON.

1) Make sure the wing illumination lights come on.

2) Make sure the light in the switch comes on.

(b) Push the WING light switch again, to OFF.

1) Make sure the light in the switch goes off.

2) Make sure the wing illumination lights go off.

S 862-021

(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

LANDING, RUNWAY TURNOFF AND TAXI LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-42-01 thru 33-42-99
      (2) WDM 33-42-11 thru 33-42-99
   B. Landing lights are quartz halogen lamps. Runway turnoff and taxi lights are sealed beam lamps. Switches on overhead panel P5 control these lights.
   C. The landing lights are installed in each wing root strakelet. A switch on the landing gear lever automatically changes the lights from dim (with gear up) to bright (with gear down). Two nose wheel mounted landing lights are disabled when the nose gear is retracted.
   D. Runway turnoff lights are located above the nose gear landing lights and are aimed ahead and to the side of the airplane.
   E. AIRPLANES WITH TAXI LIGHTS;
      One or two taxi lights are installed between the wheels on the nose gear.
   F. Component Details
      (1) Wing and nose gear landing lights are installed to provide illumination during landing and ground roll. A wing landing light is installed in each wing root strakelet. Two nose gear landing lights are installed on the fixed portion of the nose landing gear.
      (2) Nose gear landing lights are disabled when the nose gear is up by the left (right) nose gear landing light relays, located in the P33 and P34 panels respectively, in the main equipment center.
      (3) Right (left) nose gear landing light transformers are located in the nose gear panels P62 and P63 respectively.
      (4) Left (right) wing landing light dimming relays are located in the P33 and P34 panels respectively in the main equipment center.
      (5) Wing landing light transformers are an integral part of the wing landing light assembly.
   G. Runway Turnoff Lights
      (1) Runway turnoff lights are installed on either side of the nose landing gear to provide general illumination during taxi.
      (2) Runway turnoff lights are disabled when the nose gear is up by the left (right) nose gear landing light relays, located in the P33 and P34 panels respectively, in the main equipment center.
      (3) Right (left) runway turnoff light transformers are located in the nose gear panels P62 and P63 respectively.

H. AIRPLANES WITH TAXI LIGHTS;
Taxi Lights
(1) One or two taxi lights are installed on the nose landing gear to give general lighting during taxi.
(2) When the nose gear is extended, a relay makes the taxi lights come on. This relay is in the main equipment center, P33.

2. Operation
A. Functional Description
(1) Landing Lights
(a) The right and left mounted wing lights receive power from the 115v ac right and left buses respectively. All circuit breakers are on circuit breaker panel P11. A separate toggle switch, on overhead panel P5, controls each light. With the LANDING WING switch in the ON position, power is applied to the fixed landing light transformer through contacts on the landing lights dim relay. The transformer is installed in the wing root just aft of the light assembly. The transformer applies voltage to illuminate the lamp at maximum intensity. When the landing gear is in the UP position, a switch on the landing gear lever provides a ground to energize the landing lights dim relay. This position applies 115v ac to a different terminal on the transformer. The resulting change in turns ratio reduces the output voltage which dims the light.
(b) Two quartz halogen landing lights are mounted on the nose landing gear (NLG) and operate with 115 volts ac of electrical power. A switch, on overhead panel P5, controls both lights. When the NLG is down and locked, a proximity switch in the gear provides a ground to energize the NLG landing lights transformers which supply voltage to the lights. Lights are inhibited when the NLG is retracted.
(2) Runway Turnoff Lights
(a) Right and left runway turnoff lights are mounted above the nose landing gear landing lights. They receive their power from the 115v ac right and left buses respectively. All circuit breakers are on circuit breaker panel P11. A separate switch, on overhead panel P5, controls each light. With the switch in the ON position, and the nose landing gear down and locked, 115v ac is applied to the runway turnoff light transformer which provides 28v ac to the quartz halogen lamp.
(3) AIRPLANES WITH TAXI LIGHTS;
Taxi Lights
(a) One or two quartz halogen taxi lights are installed on the nose landing gear. Power comes from the 115v ac left bus on circuit breaker panel P11. The switch on overhead panel P5 completes 115v ac to the taxi lights transformers which provide 28v ac to the lamps.

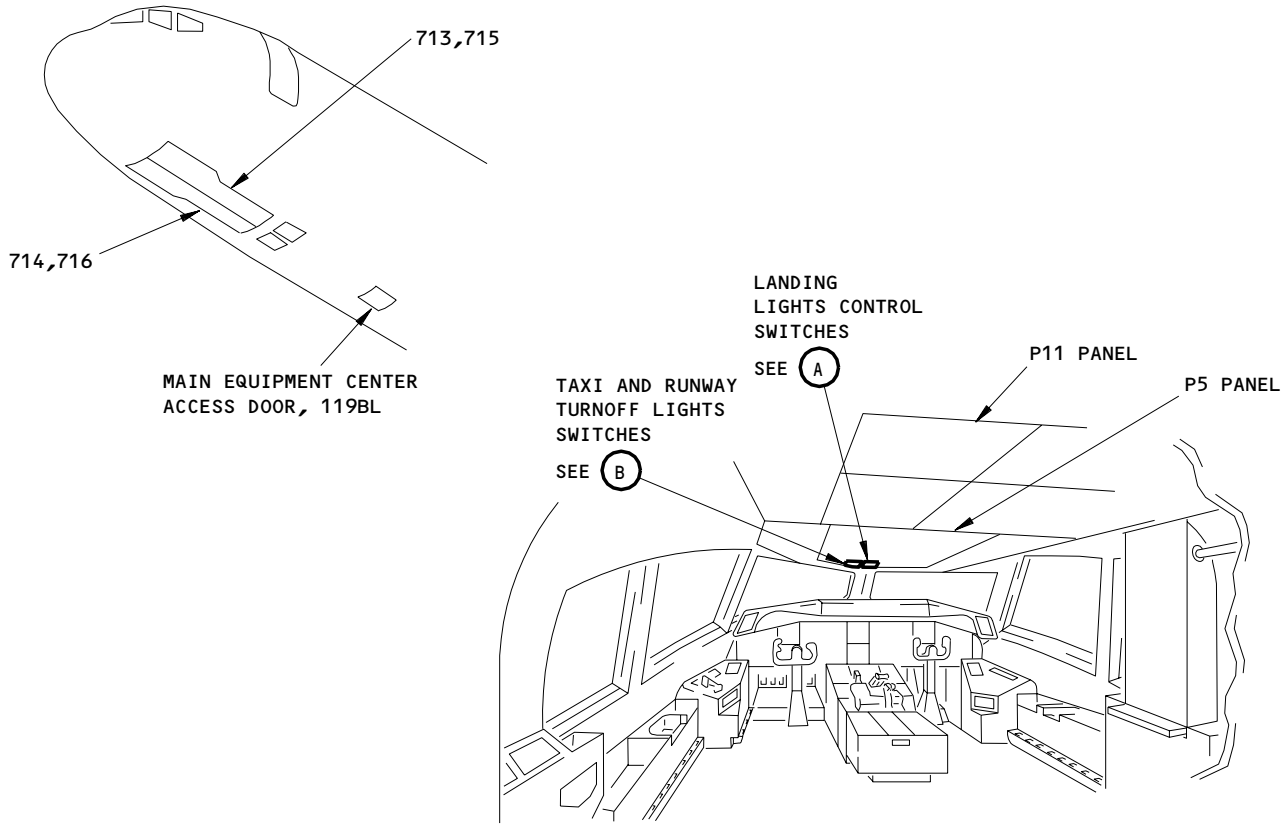
LANDING, RUNWAY TURNOFF, AND TAXI LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1		FLT COMPT, P11	
LIGHT –				
NOSE GEAR LANDING	2		NOSE GEAR STRUT	33-42-01
RUNWAY TURNOFF	2		NOSE GEAR STRUT	*
TAXI 1	2		NOSE LANDING GEAR	33-42-02
WING LANDING	2		EACH WING	33-42-03
RELAY –			MAIN EQUIPMENT CETNER, P33,P34	*
SWITCH –				
ELEX UNIT 1 – PROX	1		MAIN EQUIPMENT CENTER, E5-3	*
NOSE GEAR LANDING LT	1		FLT COMPT, P5	*
RUNWAY TURNOFF LT	1		FLT COMPT, P5	*
TAXI LIGHT 1	1		FLT COMPT, P5	*
WING LANDING LT	1		FLT COMPT, P5	*
TRANSFORMER –	2		NOSE LANDING GEAR, P62,P63	

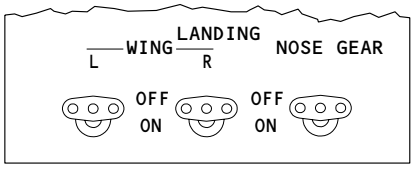
* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

1 NOT INSTALLED ON ALL AIRPLANES

Landing, Runway Turnoff, and Taxi Lights – Component Index
Figure 101

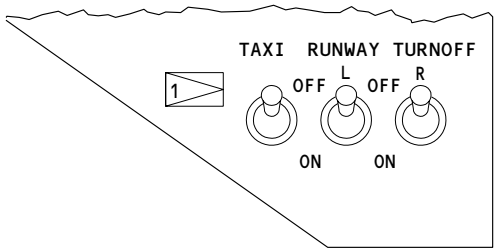


FLIGHT COMPARTMENT



LANDING LIGHTS SWITCHES
(EXAMPLE)

A



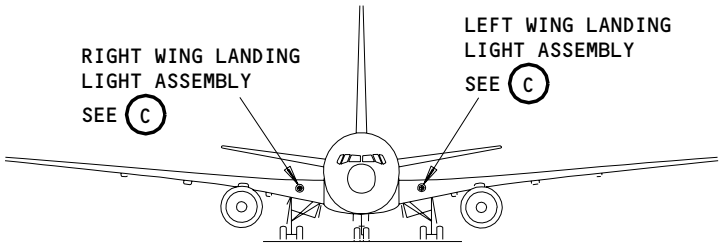
TAXI AND RUNWAY TURNOFF LIGHTS SWITCHES
(EXAMPLE)

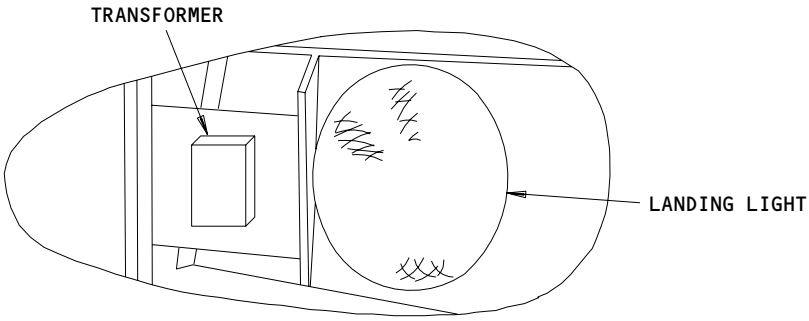
B

1 NOT INSTALLED ON ALL AIRPLANES

Landing, Runway Turnoff, and Taxi Lights - Component Location
Figure 102 (Sheet 1)

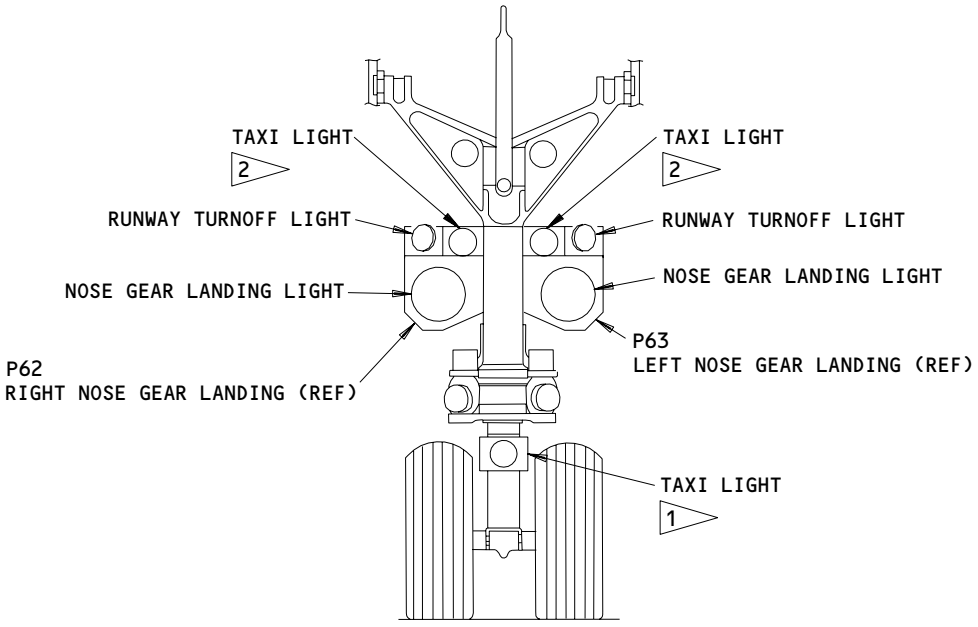
A77848





WING LANDING LIGHT ASSEMBLY (EXAMPLE)

C



NOSE LANDING GEAR

1 AIRPLANES WITH ONE TAXI LIGHT
2 AIRPLANES WITH TWO TAXI LIGHTS

Landing, Runway Turnoff, and Taxi Lights - Component Location
Figure 102 (Sheet 2)

LANDING, RUNWAY TURNOFF AND TAXI LIGHTS - ADJUSTMENT/TEST

1. General
   A. This procedure contains these tasks:
      (1) Landing Lights - Operational Test
      (2) Runway Turnoff Lights - Operational Test
      (3) AIRPLANES WITH ONE TAXI LIGHT;
          Taxi Light - Operational Test

   TASK 33-42-00-715-001

2. Landing Lights - Operational Test
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) AMM 27-61-00/201, Spoiler/Speedbrake Control System
      (3) AMM 32-09-02/201, Air/Ground Relays
      (4) SSM 33-42-01
      (5) WDM 33-42-11 thru 33-42-12
   B. Access
      (1) Location Zones
          211/212 Flight Compartment

   C. Procedure

      S 715-020

      CAUTION: DO THE TEST OF THE LANDING LIGHTS IN LESS THAN 5 MINUTES. THE LANDING LIGHTS USE HIGH-INTENSITY, HIGH-WATTAGE LAMPS. EXTENDED OPERATION DECREASES THE LIFE OF THE LAMPS.

      (1) Do the test of the landing lights in the ground mode.
          (a) Supply electrical power (AMM 24-22-00/201).
          (b) At the overhead panel, P5, set the switches for the left and right landing lights to the on position.
              1) Make sure the landing light on each wing comes on correctly.
          (c) Set the switches to the off position.
          (d) Set the switch for the nose gear landing lights to the on position.
              1) Make sure each landing light on the nose gear comes on correctly.

S 715-029

(2) Do the test of the landing lights in the air mode.

WARNING: DO THE DEACTIVATION PROCEDURE FOR THE SPOILERS OR MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE SPOILERS. THE SPOILERS CAN MOVE QUICKLY AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the control surfaces.

WARNING: OBEY THE PROCEDURE THAT PUTS THE AIRPLANE IN THE AIR MODE. IF YOU DO THE PROCEDURE INCORRECTLY, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Do this task: Put the Air/Ground Relay System in the Air Mode. (AMM 32-09-02/201).

(c) Put deactuators on Nose Landing Gear sensors S10066 and S10079 (ref 32-61-00/101)

1) At the nose gear, make sure each landing light goes off.

(d) Do this task: Put the Air/Ground Relay System in the Ground Mode. (AMM 32-09-02/210)

(e) Remove the deactuators installed above.

1) At the nose gear, make sure the each landing light comes on correctly.

(f) Set the switch for the landing lights on the nose gear to the off position.

1) Make sure each landing light on the nose gear goes off.

(g) Set the switches for the left and right landing lights to the on position.

1) Make sure the landing light on each wing comes on correctly.

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED ON THE NOSE AND MAIN LANDING GEAR BEFORE YOU MOVE THE CONTROL LEVER. WITHOUT THE DOWNLOCKS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(h) Push the override button on the first officer's control lever and move the control lever to the up position.

1) Make sure the landing light on each wing stays on.

(i) Set the control lever to the down position.
1) Make sure the landing light on each wing stays on.

NOTE: The lights change from dim to bright. This change in intensity is much easier to see at night.

(j) Move the control lever to the off position.
(k) Set the switches for the landing lights to the off position.
(l) Put the air/ground relay system back to the ground mode (AMM 32-09-02/201).
(m) Do the activation procedure for the spoilers if you did the deactivation procedure (AMM 27-61-00/201).
(n) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-42-00-715-031

3. Runway Turnoff Lights - Operational Test

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) AMM 27-61-00/201, Spoiler/Speedbrake Control System
(3) AMM 32-09-02/201, Air/Ground Relays
(4) SSM 33-42-02
(5) WDM 33-42-21

B. Access
(1) Location Zones
211/212 Flight Compartment

C. Procedure

S 715-030
(1) Do the test of the runway turnoff lights in the ground mode.
(a) Supply electrical power (AMM 24-22-00/201).
(b) At the overhead panel, P5, set the switches for the left and right runway turnoff lights to the on position.
1) Make sure each runway turnoff light comes on correctly.

S 715-032
(2) Do a test of the runway turnoff lights in the air mode.

WARNING: DO THE DEACTIVATION PROCEDURE FOR THE SPOILERS OR MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE SPOILERS. THE SPOILERS CAN MOVE QUICKLY AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the control surfaces.

WARNING: OBEY THE PROCEDURE THAT PUTS THE AIRPLANE IN THE AIR MODE. IF YOU DO THE PROCEDURE INCORRECTLY, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Put the air/ground relay system in the air mode (AMM 32-09-02/201).
(c) Open these circuit breakers and attach DO-NOT-CLOSE tags:
    1) On the overhead circuit breaker panel, P11:
        a) 11S23, POS SYS 2
        b) 11C19 or 11D25, LANDING GEAR POS SYS 2 ALTN
(d) Make sure each runway turnoff light goes off.
(e) Remove the DO-NOT-CLOSE tags and close these circuit breakers:
    1) On the overhead circuit breaker panel, P11:
        a) 11S23, POS SYS 2
        b) 11C19 or 11D25, LANDING GEAR POS SYS 2 ALTN
(f) Make sure each runway turnoff light comes on correctly.
(g) Set the switches to the off position.
    1) Make sure each runway turnoff light goes off.
(h) Do the activation procedure for the spoilers if you did the deactivation procedure (AMM 27-61-00/201).
(i) Put the air/ground relay system back to the ground mode (AMM 32-09-02/201).
(j) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-42-00-715-036

4. AIRPLANES WITH ONE TAXI LIGHT;
Taxi Light - Operational Test

A. References
    (1) AMM 24-22-00/201, Electrical Power - Control
    (2) SSM 33-42-02

(3) WDM 33-42-31

B. Access

(1) Location Zones

211/212 Flight Compartment

C. Procedure

S 715-016

(1) Do the test of the taxi light.

(a) Supply electrical power (AMM 24-22-00/201).

(b) Set the switch for the taxi light to the on position.

1) Make sure the taxi light comes on correctly.

(c) Set the switch to the off position.

1) Make sure the taxi light goes off.

(d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

NOSE GEAR LANDING AND RUNWAY TURNOFF LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Nose Gear Landing Light or Runway Turnoff Light - Lamp Replacement
      (2) Nose Gear Landing Light or Runway Turnoff Light - Adjustment

   TASK 33-42-01-962-027

2. Nose Gear Landing Light or Runway Turnoff Light - Lamp Replacement (Fig. 201)
   A. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
201	1	Screw	33-42-01	01	110J
	2	Retainer Assy			155J
	3	Gasket			55J
	4	Lamp - Sealed Beam			60
	5	Screw			120J
	6	Shield Assy - Lt			65J
	7	Screw			110J
	8	Retainer Assy			125J
	9	Gasket			27
	10	Lamp - Sealed Beam			30
	11	Screw			115J
	12	Shield Assy - Lt (Left Hand Side)			35
		Shield Assy - Lt (Right Hand Side)			37

   B. References
      (1) AMM 20-10-31/201, Sealing Electrical Terminals in Fuel Vapor Areas
      (2) AMM 24-22-00/201, Electrical Power - Control
      (3) AMM 32-00-20/201, Landing Gear Downlocks
      (4) SSM 33-42-01 thru SSM 33-42-02

(5) WDM 33-00-01
(6) WDM 33-42-11 thru WDM 33-42-21

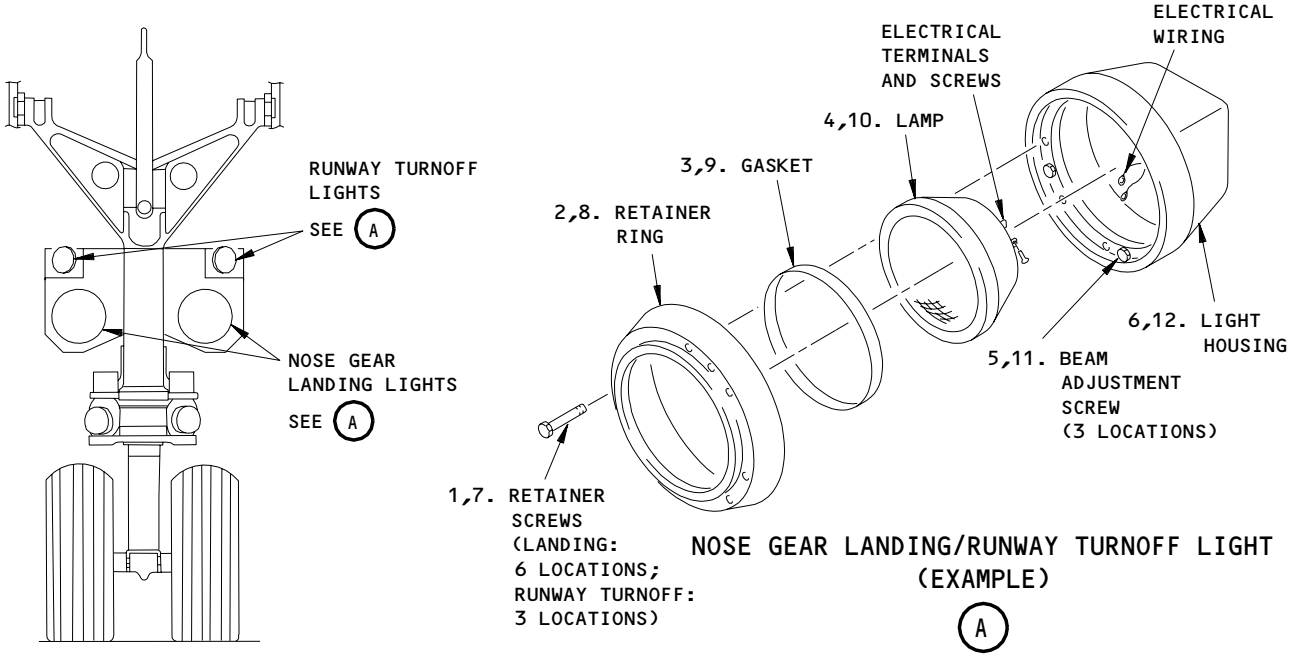
C. Access
(1) Location Zone
711 Nose Landing Gear

D. Procedure

S 862-001

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).



Nose Gear Landing and Runway Turnoff Lights Installation
Figure 201

S 962-030

(2) Replace the lamp.

(a) Do one of these steps to remove electrical power from the light:

1) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-OPERATE tag.

2) Open each applicable circuit breaker for the landing light or runway turnoff light and attach the DO-NOT-CLOSE tag:

a) On the overhead circuit breaker panel, P11.

(b) Carefully remove the lamp.

1) Remove the retainer screws along with the retainer ring.

NOTE: Do not turn the adjustment screws for the light beam.

2) Pull the lamp loose from the housing.

3) Disconnect the electrical wires from the lamp.

4) Remove the gasket from the lamp.

(c) Carefully install the new lamp.

CAUTION: INSTALL A GASKET WITHOUT DAMAGE. IF YOU INSTALL A GASKET WITH DAMAGE, THE LIFE OF THE NEW LAMP WILL BE DECREASED.

1) Install the gasket on the lamp.

NOTE: Install a new gasket if it is necessary.

2) Connect the electrical wires to the lamp.

3) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.

4) Apply a layer of sealant over the electrical terminals (AMM 20-10-31/201).

NOTE: The sealant does not have to become tack-free prior to the completion of this procedure and dispatch of the airplane.

5) Put the lamp in the housing, with the filament in the lamp in the horizontal direction.

6) Install the retainer ring with the screws.

S 712-029

(3) Do a test of the new lamp.

(a) Supply electrical power (AMM 24-22-00/201).

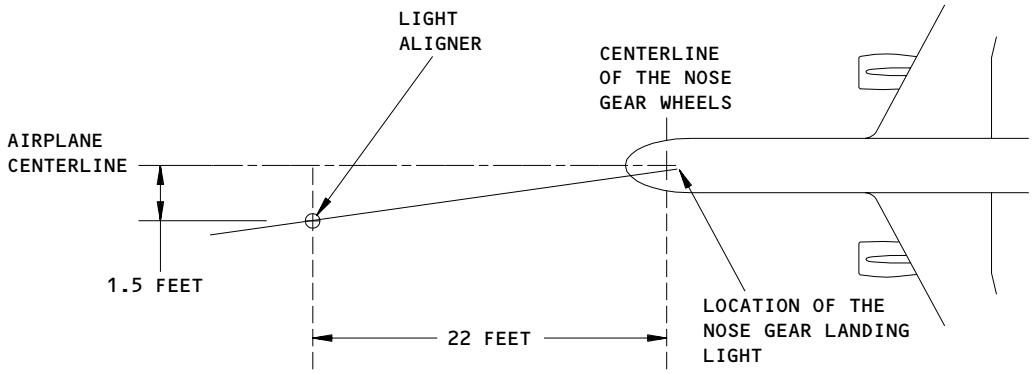
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.

1) Close each circuit breaker that was opened.

(c) At the P5 panel, set the switch to the on position.

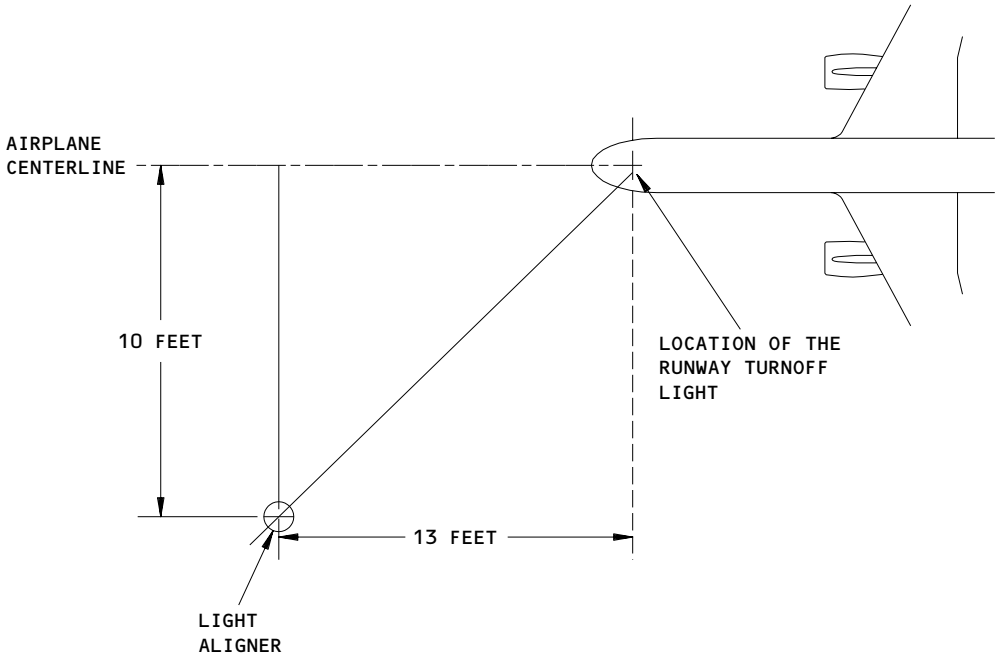
1) Quickly make sure the new lamp comes on correctly.

(d) Set the switch to the off position.



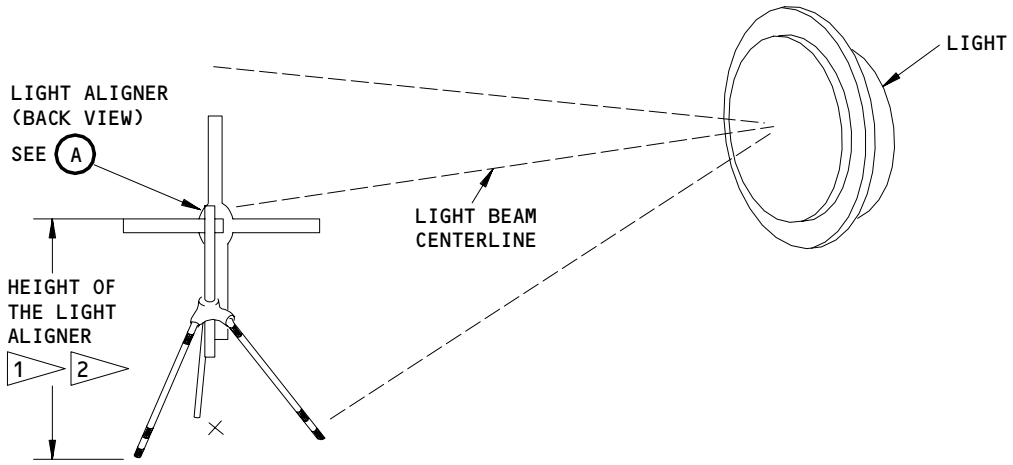
LOCATION OF THE LIGHT ALIGNER FOR
THE LEFT NOSE GEAR LANDING LIGHT
(RIGHT LIGHT IS SYMMETRICAL)

Nose Gear Landing Light-Adjustment with a Light Aligner
Figure 202

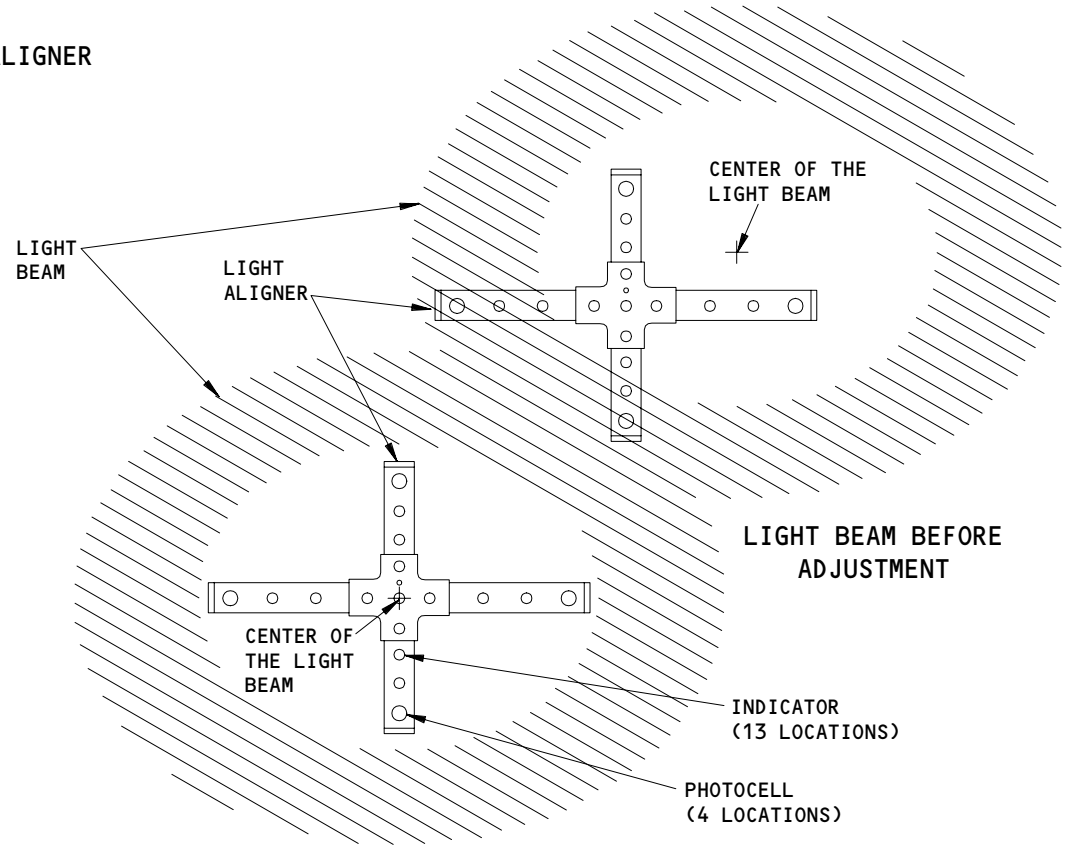


LOCATION OF THE LIGHT ALIGNER FOR
THE LEFT RUNWAY TURNOFF LIGHT
(RIGHT LIGHT IS SYMMETRICAL)

Runway Turnoff Light-Adjustment with a Light Aligner
Figure 203



LIGHT ALIGNER



LIGHT BEAM AFTER
ADJUSTMENT

LIGHT ALIGNER
(FRONT VIEW)

A

1 FOR THE NOSE GEAR LANDING LIGHT, 22 INCHES LESS THAN THE HEIGHT OF THE LIGHT

2 FOR THE RUNWAY TURNOFF LIGHT, 9 INCHES LESS THAN THE HEIGHT OF THE LIGHT

Nose Gear Landing and Runway Turnoff Light-Adjustment with a Light Aligner
Figure 204

(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-42-01-822-009

3. Nose Gear Landing Light or Runway Turnoff Light - Adjustment (Fig. 202, Fig. 203, Fig. 204, Fig. 205, Fig. 206)

A. General

(1) You can adjust the lights with a light aligner or a target.

B. Equipment

(1) Light Aligner (If a light aligner is used.)

(a) LA-87
J. C. Air, 400 Industrial Parkway,
Industrial Airport, Kansas City, Kansas 66031

C. References

(1) AMM 24-22-00/201, Electrical Power Control
(2) AMM 32-00-20/201, Landing Gear Downlocks

D. Access

(1) Location Zones

211/212	Flight Compartment
711	Nose Landing Gear

E. Light Adjustment with a Light Aligner

S 862-010

(1) Make sure the airplane and the test area are on level ground.

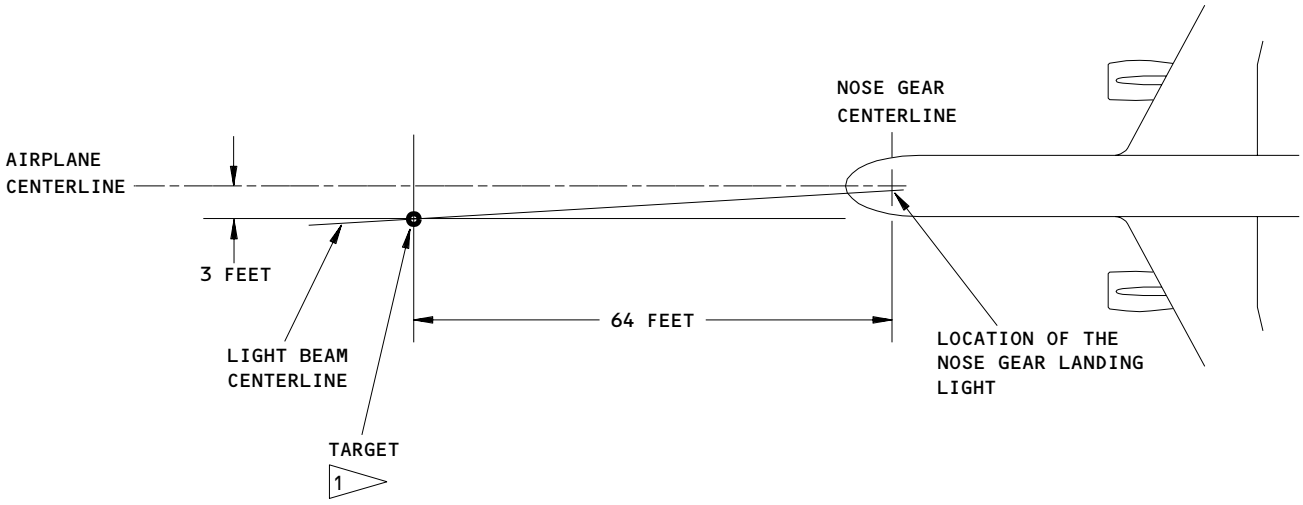
S 862-034

(2) Make sure the airplane is approximately level.

S 862-011

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

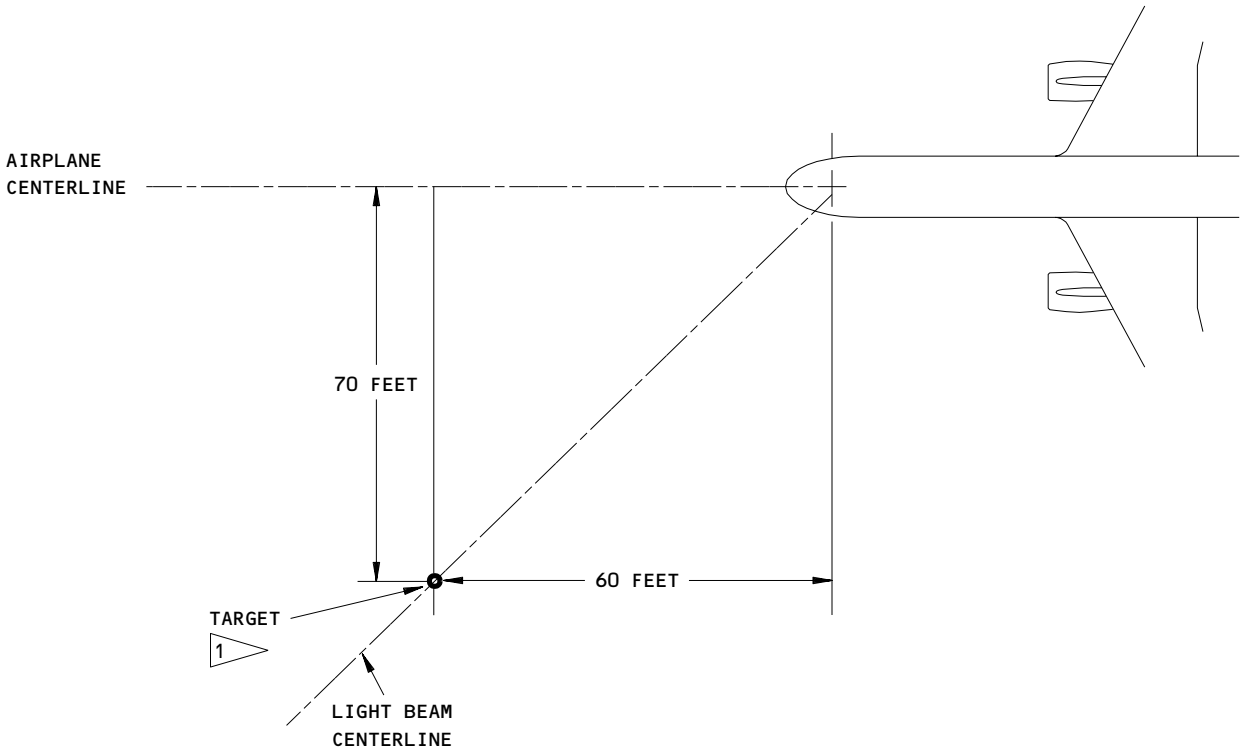
(3) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).



LOCATION OF THE TARGET FOR THE LEFT
NOSE GEAR LANDING LIGHT
(RIGHT LIGHT IS SYMMETRICAL)

1 A TARGET IS A MARK OR AN OBJECT THAT IDENTIFIES A LOCATION ON THE GROUND

Nose Gear Landing Light–Adjustment with a Target
Figure 205



LOCATION OF THE TARGET FOR
THE LEFT RUNWAY TURNOFF LIGHT
(RIGHT LIGHT IS SYMMETRICAL)

1 A TARGET IS A MARK OR AN OBJECT THAT IDENTIFIES A LOCATION ON THE GROUND

Runway Turnoff Light-Adjustment with a Target
Figure 206

S 942-036

(4) Set the light aligner in its position (Fig. 202 or Fig. 203).
  (a) Measure the height of the light from the ground.
  (b) Use the height of the light to adjust the height of the light aligner (Fig. 204).

S 862-031

(5) Supply electrical power (AMM 24-22-00/201).

S 822-014

CAUTION: USE THE LIGHTS FOR THE MINIMUM TIME POSSIBLE. BECAUSE OF THE HEAT, EXTENDED OPERATION DECREASES THE LIFE OF THE LAMPS.

(6) Adjust the light.
  (a) At the overhead panel, P5, set the switch for the light to the on position.

  WARNING: DO NOT TOUCH THE LIGHTS WITH YOUR BARE HANDS. THE LIGHTS ARE HOT. USE GLOVES TO PREVENT INJURY TO YOUR HANDS.

  (b) Turn the beam adjustment screws of the light until only the center indicator on the target is yellow.

    NOTE: All the other indicators on the target must be black.

  (c) Set the switch to the off position.

S 862-037

(7) Remove electrical power if it is not necessary (AMM 24-22-00/201).

S 942-038

(8) Remove the light aligner.

F. Light Adjustment with a Target

S 862-032

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

S 862-019

(2) Make sure the airplane and the test area are on level ground.

S 862-040

(3) Make sure the airplane is approximately level.

S 942-033
(4) Put the target in its position on the ground (Fig. 205 or Fig. 206).

NOTE: The target is a mark or an object sufficiently large to be clearly seen when you point the light at it.

S 862-021
(5) Supply electrical power (AMM 24-22-00/201).

S 822-022

CAUTION: USE THE LIGHTS FOR THE MINIMUM TIME POSSIBLE. BECAUSE OF THE HEAT, EXTENDED OPERATION DECREASES THE LIFE OF THE LAMPS.

(6) Adjust the lights.
(a) At the overhead panel, P5, set the switch for the light to the on position.

WARNING: DO NOT TOUCH THE LIGHTS WITH YOUR BARE HANDS. THE LIGHTS ARE HOT. USE GLOVES TO PREVENT INJURY TO YOUR HANDS.

(b) At the light, turn the beam adjustment screws until the light beam shows on the center of the target.
(c) Put the applicable light switch back to the OFF position.

S 942-039
(7) Remove the target.

S 862-024
(8) Remove electrical power if it is not necessary (AMM 24-22-00/201).

NOSE GEAR TAXI LIGHT - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Nose Gear Taxi Light - Lamp Replacement

TASK 33-42-02-962-001

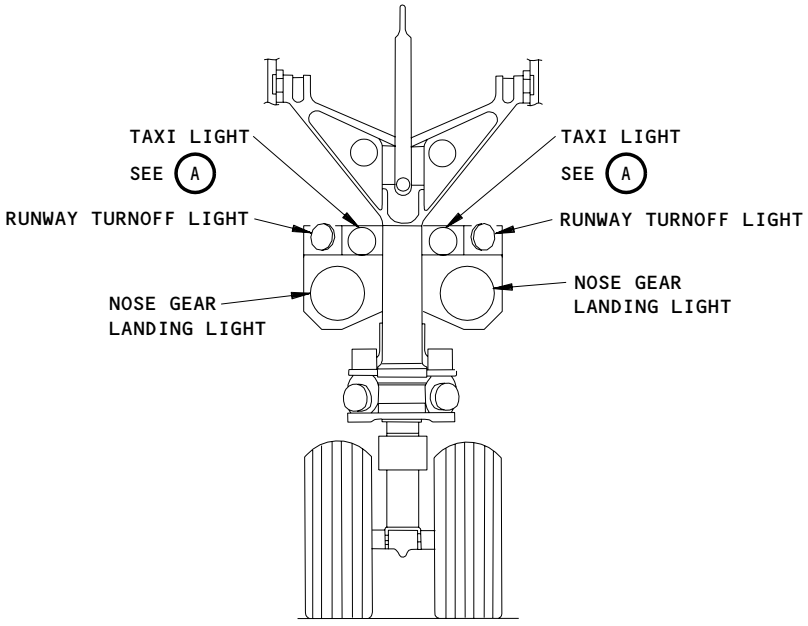
2. Nose Gear Taxi Light - Lamp Replacement (Fig. 201)
   A. Consumable Materials
      (1) A00926 Adhesive - SWS-951 (Option 1)
      (2) A00027 Adhesive - BAC 5010, Type 60 (Option 2)
      (3) B00135 Solvent - Naphtha

   B. Parts

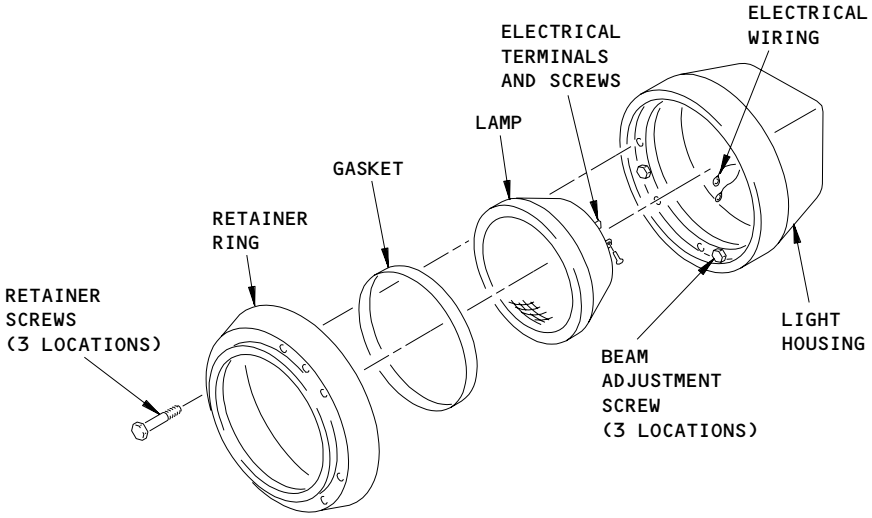
AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	1	Light Assembly	33-42-02	03	05

   C. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) AMM 32-00-20/201, Landing Gear Downlocks
      (3) AMM 20-10-31/201, Sealing of Electrical Terminals in Fuel Vapor Areas
      (4) SSM 33-42-02
      (5) WDM 33-00-01
      (6) WDM 33-42-31
   D. Access
      (1) Location Zone
          711 Nose Landing Gear
   E. Procedure

      S 962-029
      (1) Replace the lamp.



NOSE LANDING GEAR



NOSE GEAR TAXI LIGHT
(EXAMPLE)

A

Nose Gear Taxi Lights Installation
Figure 201

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(a) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).
(b) Do one of these steps to remove electrical power from the light:
    1) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-OPERATE tag.
    2) Open each applicable circuit breaker for the taxi light and attach the DO-NOT-CLOSE tag:
        a) On the overhead circuit breaker panel, P11.
(c) Carefully remove the lamp.
    1) Remove the retainer screws along with the retainer ring.

        NOTE: Do not turn the adjustment screws for the light beam.

    2) Pull the lamp loose from the housing.
    3) Disconnect the electrical wires from the lamp.
    4) Remove the gasket from the lamp.
(d) Carefully install the new lamp.

    CAUTION: INSTALL A GASKET WITHOUT DAMAGE. IF YOU INSTALL A GASKET WITH DAMAGE, THE LIFE OF THE NEW LAMP WILL BE DECREASED.

    1) Install the gasket on the lamp.

        NOTE: Install a new gasket if it is necessary.

    2) Connect the electrical wires to the lamp.
    3) Apply a layer of sealant over the electrical terminals (AMM 20-10-31/201).

        NOTE: The sealant does not have to become tack-free prior to the completion of this procedure and dispatch of the airplane.

    4) Put the lamp in the housing, with the filament in the lamp in the horizontal direction.
    5) Install the retainer ring with the screws.

S 712-006
(2) Do a test of the new lamp.
    (a) Supply electrical power (AMM 24-22-00/201).
    (b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
        1) Close each circuit breaker that was opened.

(c) At the P5 panel, set the switch to the on position.
    1) Make sure the new lamp comes on correctly.
(d) Set the switch to the off position.
    1) Make sure the new lamp goes off.
(e) Remove electrical power if it is not necessary (AMM 24-22-00/201).

WING LANDING LIGHTS - MAINTENANCE PRACTICES

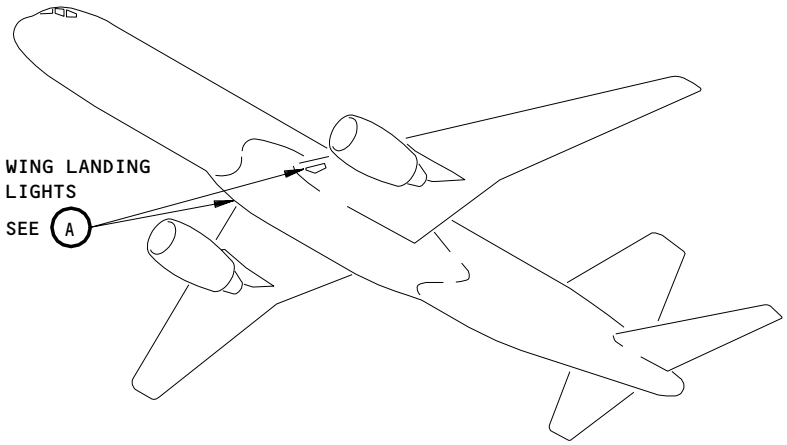
1. General
   A. This procedure contains these tasks:
      (1) Wing Landing Light - Lamp Replacement
      (2) Wing Landing Light - Adjustment With A Light Aligner
      (3) Wing Landing Light - Adjustment With A Target
   B. The wing landing lights are in a fuel vapor area. Each lamp, electrical connection, and lens is sealed to prevent contact with the fuel vapors in the air.
   C. To replace the lens, refer to Landing Light Lens Assembly - Removal/Installation (AMM 57-41-52/401).

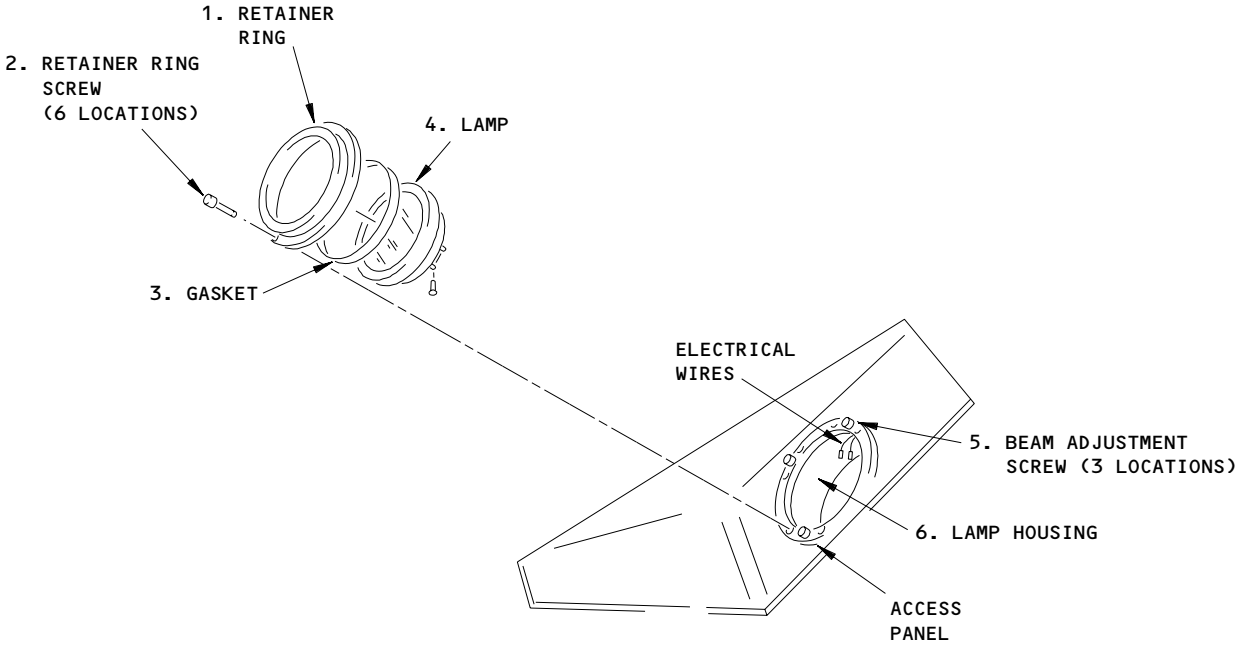
TASK 33-42-03-962-001

2. Wing Landing Light - Lamp Replacement (Fig. 201)
   A. Parts

MM			IPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	1	Retainer Assy	33-42-51	01	65
	2	Screw			45
	3	Gasket			60
	4	Lamp			80
	5	Screw			50
	6	Frame			55

   B. Consumable Material
      (1) B00083 Tape - Scotch 70
   C. References
      (1) AMM 20-10-31/201, Seals On Open Electrical Terminals In Fuel Vapor Areas
      (2) AMM 24-22-00/201, Control
      (3) AMM 27-81-00/201, Leading Edge Slat System
      (4) SSM 33-42-01, Landing Lights
      (5) WDM 33-00-01, Lamp Usage Chart
      (6) WDM 33-42-11, Landing Lights - Left





WING LANDING LIGHT
(EXAMPLE)
A

Wing Landing Lights Installation
Figure 201

(7) WDM 33-42-12, Landing Lights - Right
(8) AMM 57-41-52/401, Remove/Install the Lens Assembly

D. Access
(1) Location Zones
511 Leading Edge To Front Spar (Left Wing)
611 Leading Edge To Front Spar (Right Wing)
(2) Access Panels
511AB Leading Edge To Front Spar (Left Wing)
611AB Leading Edge To Front Spar (Right Wing)

E. Procedure

S 842-043
(1) Deactivate the Leading Edge Slats.

WARNING: DO THE DEACTIVATION PROCEDURE FOR THE LEADING EDGE SLATS. THE SLATS CAN RETRACT QUICKLY AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

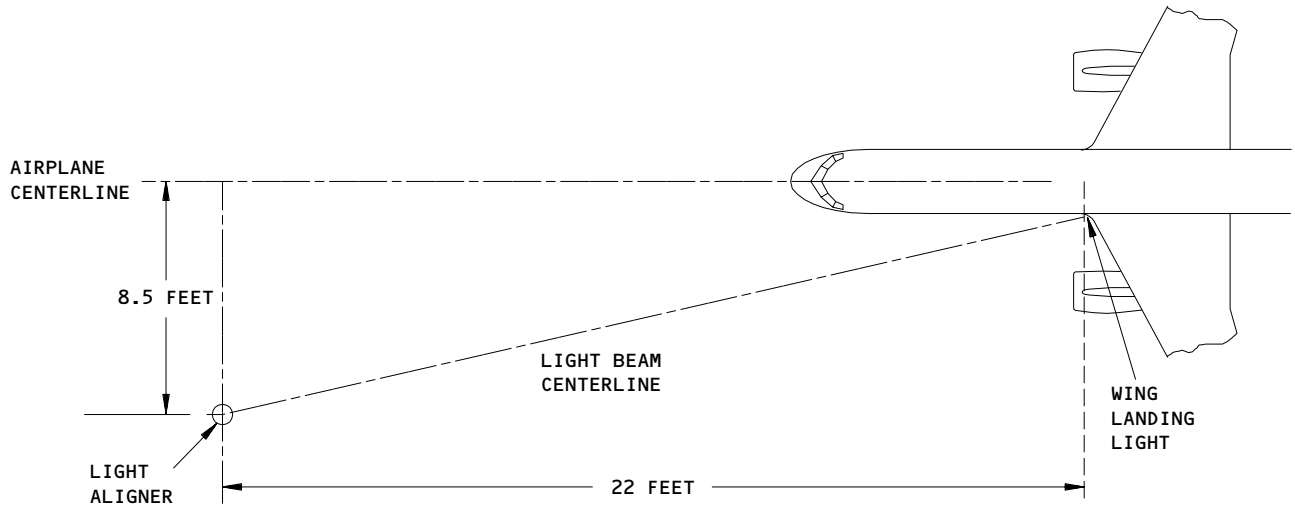
(a) Do this task: "Deactivation of the LE Slats" (AMM 27-81-00/201).

S 962-022
(2) Replace the lamp.
(a) On the overhead panel, P5, set the LANDING - WING L or R switch to the OFF position and attach a DO-NOT-OPERATE tag.
(b) Remove the lens assembly (AMM 57-41-52/401).
(c) Carefully remove the lamp.
1) Remove the six retainer ring screws and remove the retainer ring.

NOTE: Make sure that you do not turn the three light beam adjustment screws.

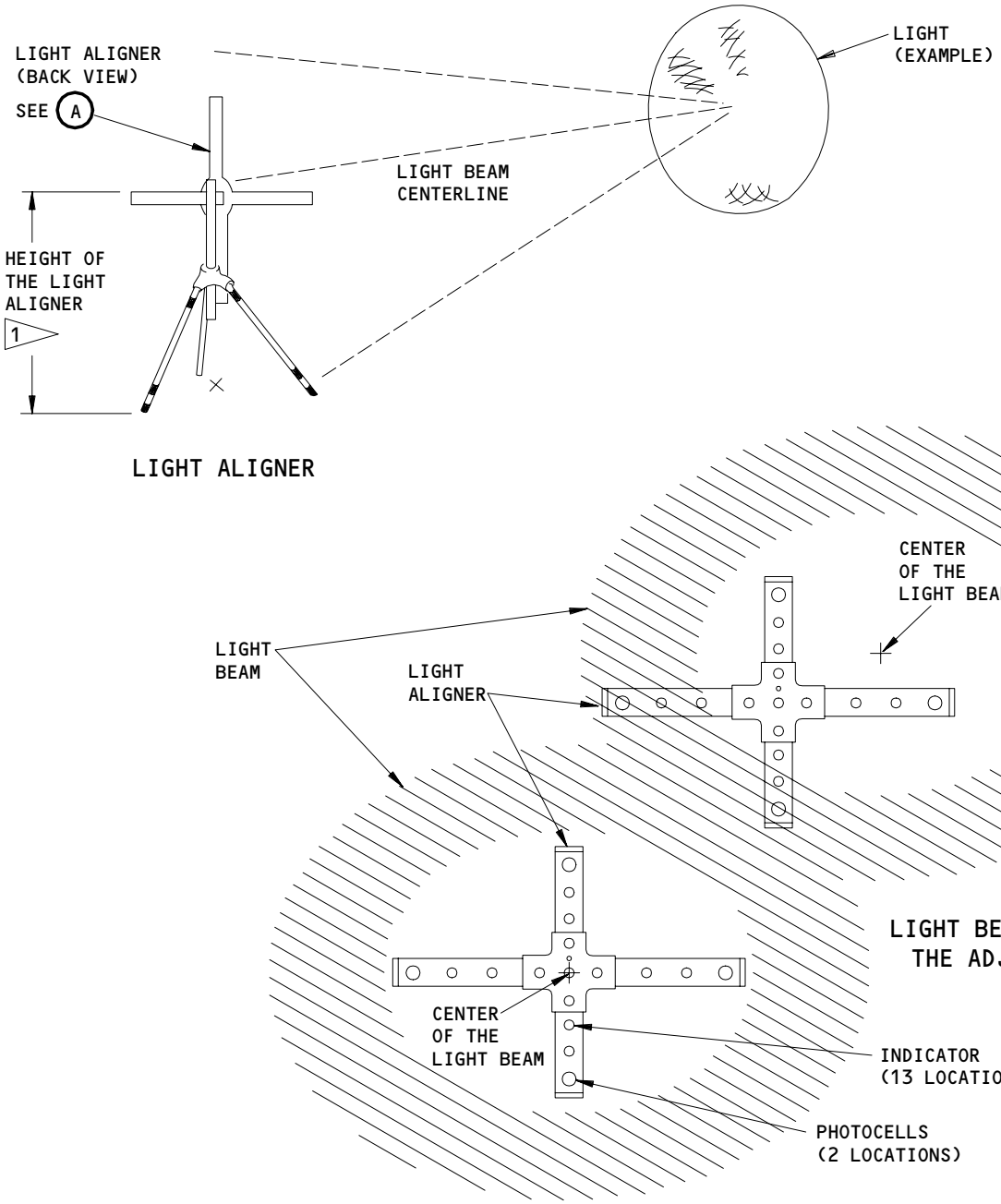
2) Remove the gasket or the silicon tape from the lamp.
3) Pull the lamp away from the lamp housing.
4) Label the electrical wires for the installation.
5) Disconnect the electrical wires.
(d) Carefully install the new lamp.
1) Connect the electrical wires to the lamp.
2) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
3) Seal the open electrical terminals (AMM 20-10-31/201).

NOTE: The sealant does not have to become tack-free prior to the completion of this procedure and dispatch of the airplane.



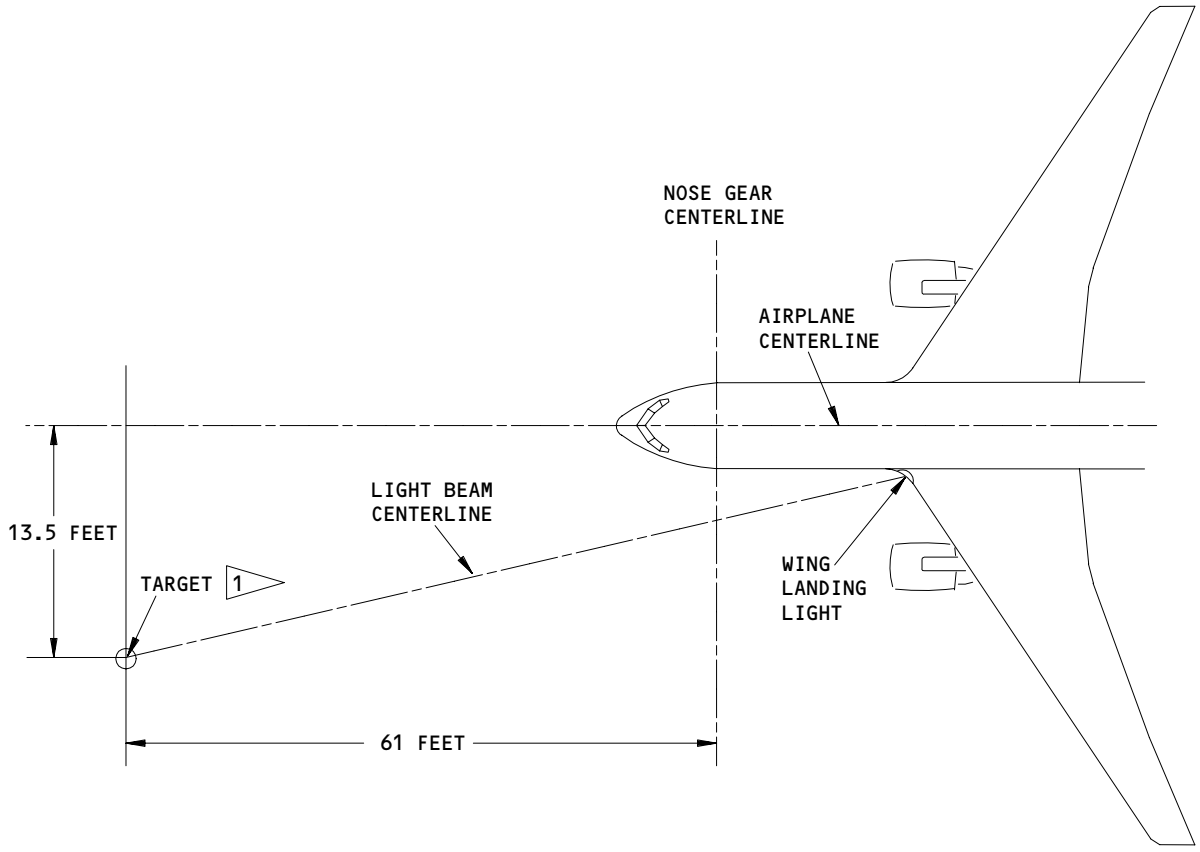
LOCATION OF THE LIGHT ALIGNER
FOR THE LEFT WING LANDING LIGHT
(RIGHT IS SYMMETRICAL)

Wing Landing Light–Adjustment with a Light Aligner
Figure 202 (Sheet 1)



1 25 INCHES LESS THAN THE HEIGHT OF THE LIGHT

Wing Landing Light-Adjustment with a Light Aligner
Figure 202 (Sheet 2)



LOCATION OF THE TARGET FOR THE LEFT WING LANDING LIGHT
(RIGHT LIGHT IS SYMMETRICAL)

1 A TARGET IS A MARK OR AN OBJECT THAT IDENTIFIES A LOCATION ON THE GROUND.

Wing Landing Light–Adjustment with a Target
Figure 203

4) Put the lamp in the lamp housing.

NOTE: Make sure that the filament in the lamp is in a horizontal direction.

CAUTION: INSTALL A GASKET OR SILICON TAPE THAT IS NOT DAMAGED. IF YOU INSTALL A GASKET OR SILICON TAPE THAT IS DAMAGED, THE LIFE OF THE LAMP WILL BE DECREASED.

5) If gasket is used, install the gasket on the lamp.

NOTE: Install a new gasket if it is necessary.

6) If silicon tape is used, wrap the edge of the new lamp with three layers of the silicon tape.
7) Install the retainer ring with the six retainer ring screws.
8) Install the lens assembly (AMM 57-41-52/403).

S 712-023

(3) Do a test of the lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) On the overhead panel, P5, remove the DO-NOT-OPERATE tag from the LANDING - WING L or R switch.
(c) Set the LANDING - WING L or R switch to the ON position.
(d) Make sure the lamp comes on.
(e) Set the LANDING - WING L or R switch to the OFF position.
(f) Remove electrical power if it is not necessary (AMM 24-22-00/201).

S 842-044

(4) Set the Leading Edge Slats to the usual condition.
(a) Do this task: "Put the Airplane Back to Its Usual Condition" (AMM 27-81-00/201).

TASK 33-42-03-822-008

3. Wing Landing Light - Adjustment With A Light Aligner (Fig. 201 and 202)

A. Equipment

(1) LA-87 Light Aligner (recommended)

J.C. Air
400 Industrial Parkway
Industrial Airport, KS 66031

(2) PF33-001 Light Aligner (alternative)

B. References

(1) AMM 24-22-00/201, Control

(2) AMM 27-81-00/201, Leading Edge Slat System
(3) SSM 33-42-01, Landing Lights
(4) WDM 33-42-11, Landing Lights - Left
(5) WDM 33-42-12, Landing Lights - Right

C. Access

(1) Location Zones
511 Leading Edge To Front Spar (Left Wing)
611 Leading Edge To Front Spar (Right Wing)
(2) Access Panels
511AB Leading Edge To Front Spar (Left Wing)
611AB Leading Edge To Front Spar (Right Wing)

D. Procedure

S 862-009
(1) Make sure the airplane and the test area are on level ground.

S 862-027
(2) Make sure the airplane is approximately level.

S 842-042
(3) Deactivate the Leading Edge Slats.

WARNING: DO THE DEACTIVATION PROCEDURE FOR THE LEADING EDGE SLATS. THE SLATS CAN RETRACT QUICKLY AND CAUSE INJURIES TO PERSONS A OR DAMAGE TO EQUIPMENT.

(a) Do this task: "Deactivation of the LE Slats" (Ref 27-81-00/201).

S 942-010
(4) Put the light aligner in position (Fig. 202).
(a) Measure the height from the ground to the light.
(b) Subtract twenty-five inches from the height of the light to get the height of the light aligner.

S 862-028
(5) Supply electrical power (AMM 24-22-00/201).

S 822-037

(6) Adjust the light.

CAUTION: USE THE LIGHTS FOR THE MINIMUM TIME POSSIBLE. EXTENDED OPERATION DECREASES THE LIFE OF THE LAMPS.

(a) On the overhead panel, P5, set the LANDING - WING L or R switch to the ON position.

WARNING: THE LIGHTS ARE HOT. DO NOT TOUCH THE LIGHTS WITH YOUR BARE HANDS. USE GLOVES TO PREVENT INJURY TO YOUR HANDS.

(b) Turn the three light beam adjustment screws until only the center indicator on the light aligner is yellow (Fig. 201 and 202).

NOTE: Make sure that the other indicators on the light aligner are black.

(c) On the overhead panel, P5, set the LANDING - WING L or R switch to the OFF position.

S 862-030

(7) Remove electrical power if it is not necessary (AMM 24-22-00/201).

S 942-031

(8) Remove the light aligner.

TASK 33-42-03-822-038

4. Wing Landing Light - Adjustment With A Target (Fig. 201 and 203)

A. References

(1) AMM 24-22-00/201, Control
(2) AMM 27-81-00/201, Leading Edge Slat System
(3) SSM 33-42-01, Landing Lights

(4) WDM 33-42-11, Landing Lights - Left
(5) WDM 33-42-12, Landing Lights - Right

B. Access

(1) Location Zones
511 Leading Edge To Front Spar (Left Wing)
611 Leading Edge To Front Spar (Right Wing)
(2) Access Panels
511AB Leading Edge To Front Spar (Left Wing)
611AB Leading Edge To Front Spar (Right Wing)

C. Procedure

S 862-016
(1) Make sure the airplane and the test area are on level ground.

S 862-032
(2) Make sure the airplane is approximately level.

S 842-041
(3) Deactivate the Leading Edge Slats.

WARNING: DO THE DEACTIVATION PROCEDURE FOR THE LEADING EDGE SLATS. THE SLATS CAN RETRAXT QUICKLY AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(a) Do this task: "Deactivation of the LE Slats" (Ref 27-81-00/201).

S 942-017
(4) Put the target in position (Fig. 203).

NOTE: The target is a mark or an object sufficiently large to be clearly seen when you shine the light on it.

S 862-033
(5) Supply electrical power (AMM 24-22-00/201).

S 822-039

(6) Adjust the light.

CAUTION: USE THE LIGHTS FOR THE MINIMUM TIME POSSIBLE. EXTENDED OPERATION DECREASES THE LIFE OF THE LAMPS.

(a) On the overhead panel, P5, set the LANDING - WING L or R switch to the ON position.

WARNING: THE LIGHTS ARE HOT. DO NOT TOUCH THE LIGHTS WITH YOUR BARE HANDS. USE GLOVES TO PREVENT INJURY TO YOUR HANDS.

(b) Turn the three light beam adjustment screws until the light shines on the center of the target (Fig. 201).

(c) On the overhead panel, P5, set the LANDING - WING L or R switch to the OFF position.

S 862-035

(7) Remove electrical power if it is not necessary (AMM 24-22-00/201).

S 942-036

(8) Remove the target.

TASK 33-42-03-302-057

5. Landing Light Lens - Temporary Repair (Fig. 201)

A. Equipment

(1) A Small Sheet of Mylar

B. Consumable Materials

(1) A00247 Sealant - BMS 5-95, Class B

(2) B00083 Solvent - TT-N-95 Aliphatic Naptha

C. References

(1) AMM 51-31-01/201, Seals and Sealing

D. Access

(1) Location Zones

511/611 Leading Edge to Front Spar

E. Procedure

S 862-058

(1) On the overhead panel P5, make sure that the applicable switches are in the OFF position with DO-NOT-OPERATE tags attached:
   (a) L RUNWAY TURNOFF LIGHT
   (b) L WING LANDING LIGHT
   (c) R RUNWAY TURNOFF LIGHT
   (d) R WING LANDING LIGHT

S 102-069

(2) Use the solvent to do this task to remove the sealant from the damaged lens assembly and the airplane skin:
Prepare For Sealing (AMM 51-31-01/201).

S 032-060

(3) Loosen the captive fasteners that hold the damaged lens assembly in position.

S 032-061

(4) Disconnect the cable from the damaged lens assembly .

S 022-062

(5) Remove the damaged lens assembly .

S 352-063

(6) Do these steps to make a temporary lens:
   (a) Use Table 203 for the material and the minimum thickness of the temporary lens.

TABLE 203

MATERIAL	THICKNESS (INCHES)
2024-T3 ALUMINUM	0.093
7075-T6 ALUMINUM	0.080
17-7PH STEEL	0.056

   (b) Use the damaged lens assembly and a sheet of mylar to create a template to form the material, trim the material, and determine the fastener locations.
   (c) If the minimum thickness of the temporary lens is less than 0.080 inches, make a shim out of the material in the shape of the rim to bring the temporary lens up to contour, 0.113 ± 0.040 inches.
   (d) Drill countersunk holes in the temporary lens and shim (if necessary), 100 degree head, .406 diameter.

S 142-064

CAUTION: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO REMOVE THE SEALANT. IF YOU DO NOT OBEY THE INSTRUCTIONS, DAMAGE TO THE AIRPLANE SURFACE CAN OCCUR.

(7) Use the solvent to do this task to remove the sealant from the edge of the wing: Prepare For Sealing (AMM 51-31-01/201).

S 432-065

(8) Put the shim (if necessary) and the temporary lens in position on the edge of the wing.

NOTE: If the temporary lens and the shim (if necessary) do not bring the temporary lens up to contour with the edge of the wing, then attach a washer to each stud hole on the inside of the shim (if necessary) or the inside of the temporary lens.

S 432-066

(9) Install the fasteners the temporary lens, shim (if necessary) and washers (if necessary) to the wing.

S 392-067

CAUTION: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO APPLY THE SEALANT. IF YOU DO NOT OBEY THE INSTRUCTIONS, DAMAGE TO THE AIRPLANE SURFACE CAN OCCUR.

(10) Install two layers of aluminum speed tape around the edges of the temporary lens cover in place of sealant.

S 862-068

(11) On the overhead panel P5, remove the DO-NOT-OPERATE tags from the applicable switches:
(a) L RUNWAY TURNOFF LIGHT

(b) L WING LANDING LIGHT
(c) R RUNWAY TURNOFF LIGHT
(d) R WING LANDING LIGHT

NOSE GEAR LANDING AND RUNWAY TURNOFF LIGHTS, P62, AND P63 PANELS - REMOVAL/INSTALLATION

1. General
   A. This procedure has these tasks for the P62 and P63 panels:
      (1) Panel - Removal
      (2) Panel - Installation
      (3) Wiring Harness - Removal
      (4) Wiring Harness - Installation

   TASK 33-42-04-004-001

2. Panel - Removal (Fig. 401)
   A. References
      (1) AMM 06-41-00/201, Fuselage (Major Zones 100 and 200) Access Doors and Panels
      (2) AMM 32-00-20/201, Landing Gear Downlocks
      (3) AMM 32-51-00/501, Nose Wheel Steering System
   B. Access
      (1) Location Zone
          711 Nose Landing Gear

   C. Panel Removal

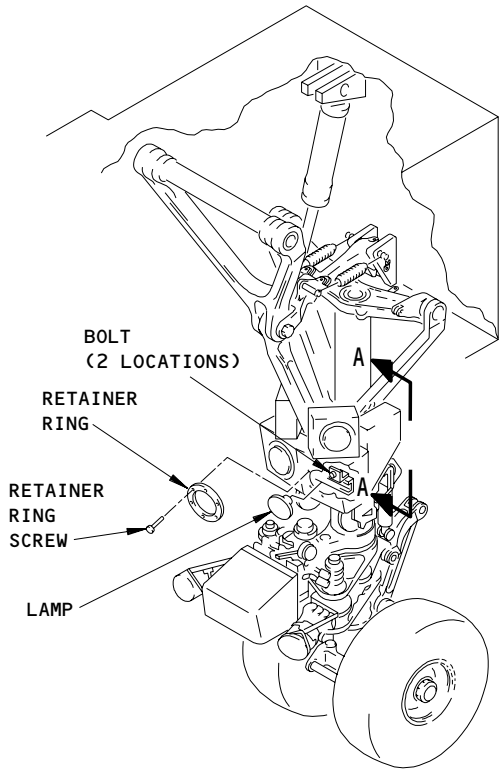
      S 864-022

      WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE GROUND LOCKS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

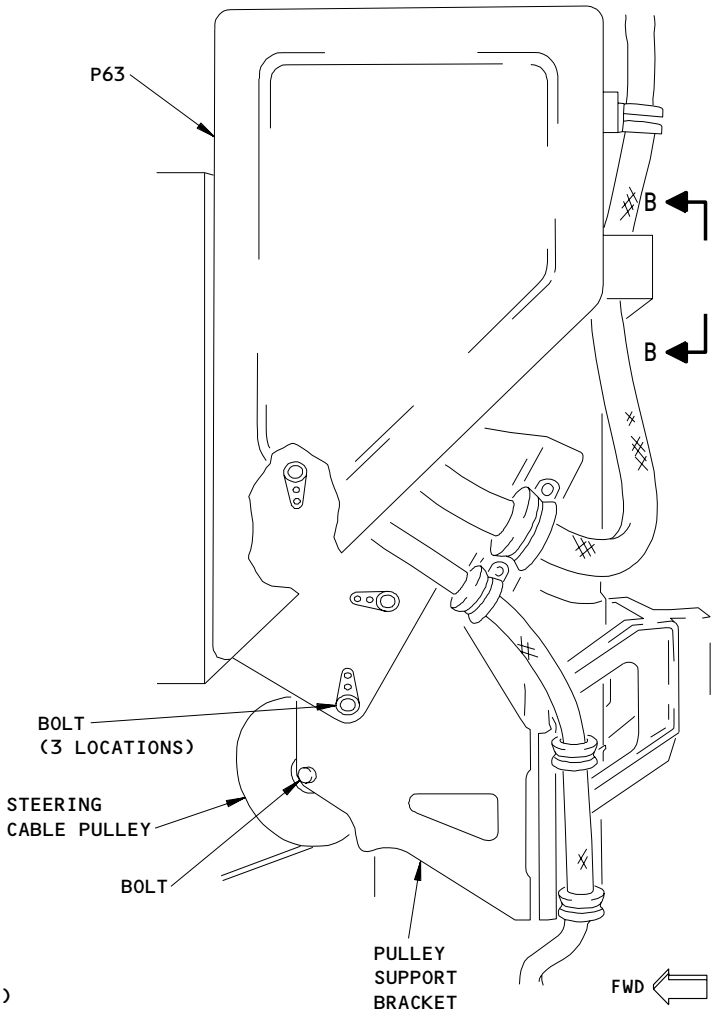
      (1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

      S 864-020
      (2) Open this circuit breaker on the main power distribution panel, P6, and attach a DO-NOT-CLOSE tag:
          (a) 6G1, FIRE EXT APU

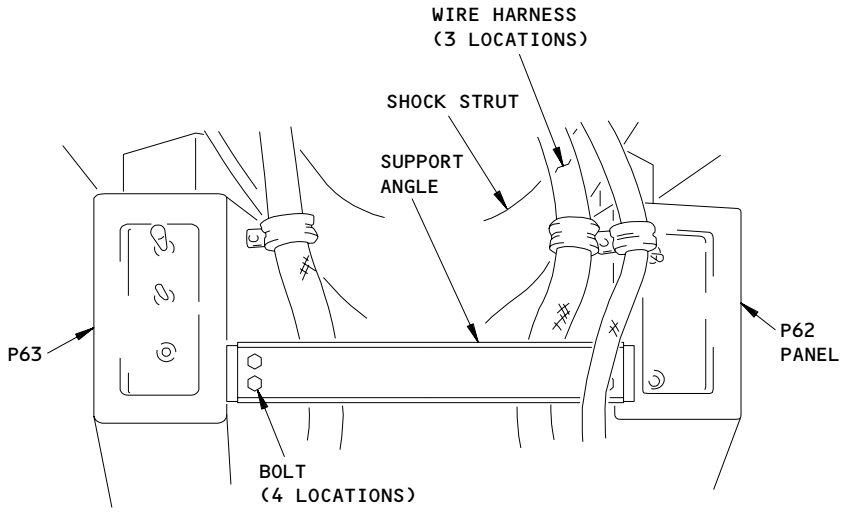
      S 864-005
      (3) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:
          (a) 11B33, APU REMOTE FIRE IND
          (b) 11C23, INTERPHONE CABIN SERVICE



NOSE LANDING GEAR



P63 (P62 EQUIVALENT)
A-A



B-B

Nose Gear Landing and Runway Turnoff Lights,
P62 and P63 Panel Installation
Figure 401

(c) 11C25, INTERPHONE CAPT
(d) 11C26, INTERPHONE F/O AUDIO
(e) GUI 115;
11C29, PARK BRAKE GND IND
(f) 11G29, INTERPHONE CAPT AUDIO
(g) 11G30, INTERPHONE F/O OBS DUAL PWR
(h) 11H31, GND CALL
(i) 11M3, LANDING NOSE GEAR LEFT
(j) GUI 001-114, 116-999;
11M4, LANDING NOSE GEAR RIGHT
(k) 11M6, RUNWAY TURNOFF LEFT
(l) GUI 001-114, 116-999;
11M8, TAXI LIGHT
(m) GUI 115;
11M30, LANDING NOSE GEAR RIGHT
(n) 11M33, RUNWAY TURNOFF RIGHT
(o) 11S15, LANDING GEAR AIR/GND SYS 1
(p) AIRPLANES WITHOUT THE "LANDING GEAR POS SYS 2 ALTN" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C19;
11S19, LANDING GEAR AIR/GND SYS 2
(q) AIRPLANES WITH THE "LANDING GEAR POS SYS 2 ALTN" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C19;
11C19, LANDING GEAR POS SYS 2 ALTN
1) 11S23, LANDING GEAR POS SYS 2

S 864-006
(4) Open this circuit breaker on the APU external power panel, P34, and attach a DO-NOT-CLOSE tag:
(a) 34G1, NOSE WHEELWELL LIGHTS

S 024-007
(5) Remove the panel:
(a) Disconnect the connectors on the wiring harnesses from the connectors on the bracket.

NOTE: The bracket is in the nose landing gear wheel well.

(b) Seal the wire harness with a cap.

S 014-008
(6) Get access to the steering cable turn buckles at the pulley support bracket through 119BL (AMM 06-41-00/201).

S 034-009
(7) Turn the turnbuckles to loosen the tension in the steering cables (AMM 32-51-00/501).

S 014-023
(8) Continue to do these steps to remove the panels:
(a) Remove the clamps to disconnect the wiring harnesses from the shock struts.
(b) Remove the bolts to disconnect the support angle aft of the panels (Fig. 401, B-B).
(c) Remove the bolts to disconnect the lower end of the bonding straps from the shock struts.
(d) Remove the retainer ring screws and the retainer ring from either the left or the right landing light.
(e) Pull the lamp loose from the housing to get to the rear of the light box.
(f) Remove the bolts to disconnect the rear of the light box from the support angles.
(g) Install the lamp back into the housing.
(h) Remove the bolts to disconnect the lower steering cable pulleys from the pulley support brackets (Fig. 401, A-A).
(i) Remove the bolts to disconnect the panel from the pulley support brackets.
(j) Pull the panel forward from around the shock strut to remove it from the nose landing gear.

TASK 33-42-04-414-021

3. Panel - Installation (Fig. 401)

A. Consumable Materials
(1) A00247 Sealant, Chromate Type - BMS 5-95

B. References
(1) AMM 06-41-00/201, Fuselage (Major Zones 100 and 200) Access Doors and Panels
(2) AMM 24-22-00/201, Electrical Power - Control
(3) AMM 32-00-20/201, Landing Gear Downlocks
(4) AMM 32-51-00/501, Nose Wheel Steering System
(5) AMM 33-42-01/201, Nose Gear Landing and Runway Turnoff Lights

C. Access
(1) Location Zone
711 Nose landing gear

D. Panel Installation

S 424-010
(1) Install the panel.
(a) Put the panel around the shock strut.
(b) Install the bolts and the washers to connect the panel to the pulley support brackets (Fig. 401, A-A).
(c) Install the bolts, washers, and nuts to connect the steering cable pulleys to the pulley support brackets.

(d) Remove the retainer ring screws and the retainer ring from either the left or right landing light.
(e) Pull the lamp loose from the housing to get to rear of the light box.
(f) Install the bolts to connect the rear of the light box to the support angles.
(g) Put the lamp in the housing with the filament in the lamp in a horizontal position.
(h) Put the retainer ring on lamp.
(i) Attach the retainer ring with the retainer ring screws.
(j) Install the bolts to connect the support angle aft of the panel (Fig. 401 B-B).
(k) Install the bolts, washers, and nuts to connect the lower end of the bonding straps to the shock strut.
1) Apply the sealant to the head of the bolts and the nuts.
(l) Install the clamps to connect the wiring harnesses to the shock strut.

NOTE: Make sure the wire harness is not longer than 15.25 inches from the last clamp to the panel.

(m) Connect the connectors on the wiring harness to the connectors on the bracket in the nose landing gear wheel well.

S 414-012
(2) Get access to the steering cable turnbuckles at the pulley support brackets through 119BL (AMM 06-41-00/201).

S 434-013
(3) Adjust the steering cables (AMM 32-51-00/501).

E. Installation Test

S 864-014
(1) Remove each DO-NOT-CLOSE tag and close each circuit breaker that was opened.

S 864-017
(2) Remove the downlocks on the nose and main landing gear (AMM 32-00-20/201).

S 864-028
(3) Supply electrical power (AMM 24-22-00/201).

S 714-019
(4) At the overhead panel, P5, set the switches for the left and right runway turnoff lights to the on position.
(a) Make sure each runway turnoff light comes on correctly.

S 864-029
(5) Set the switches to the off position.

S 864-030
(6) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-42-04-004-025

4. Wiring Harness - Removal (Fig. 401)

A. References
(1) AMM 32-00-20/201, Landing Gear Downlocks

B. Access
(1) Location Zone
711 Nose Landing Gear

C. Wiring Harness Removal

S 714-036

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE GROUND LOCKS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

S 864-037
(2) Open this circuit breaker on the main power distribution panel, P6, and attach a DO-NOT-CLOSE tag:
(a) 6G1, FIRE EXT APU

S 864-039
(3) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:
(a) 11B33, APU REMOTE FIRE IND
(b) 11C23, INTERPHONE CABIN SERVICE
(c) 11C25, INTERPHONE CAPT
(d) 11C26, INTERPHONE F/O AUDIO
(e) GUI 115;
11C29, PARK BRAKE GND IND

(f) 11G29, INTERPHONE CAPT AUDIO
(g) 11G30, INTERPHONE F/O DUAL PWR
(h) 11H31, GND CALL
(i) 11M3, LANDING NOSE GEAR LEFT
(j) GUI 001-114, 116-999;
11M4, LANDING NOSE GEAR RIGHT
(k) 11M6, RUNWAY TURNOFF LEFT
(l) GUI 001-114, 116-999;
11M8, TAXI LIGHT
(m) GUI 115;
11M30, LANDING NOSE GEAR RIGHT
(n) 11M33, RUNWAY TURNOFF RIGHT
(o) 11S15, LANDING GEAR AIR/GND SYS 1
(p) AIRPLANES WITHOUT THE "LANDING GEAR POS SYS 2 ALTN" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C19;
11S19, LANDING GEAR AIR/GND SYS 2
(q) AIRPLANES WITH THE "LANDING GEAR POS SYS 2 ALTN" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C19;
11C19, LANDING GEAR POS SYS 2 ALTN
1) 11S23, LANDING GEAR POS SYS 2

S 864-040
(4) Open this circuit breaker on the APU external power panel, P34, and attach a DO-NOT-CLOSE tag:
(a) 34G1, NOSE WHEELWELL LIGHTS

S 024-024
(5) Remove the wiring harness.
(a) Identify the routing of the wiring harness.

NOTE: The routing of the wiring harness must be the same when it is installed again.

(b) Identify each part that holds the wiring harness and its location.

NOTE: Each part must be installed in its same location when the wiring harness is installed again.

(c) Disconnect the electrical connector at each end of the wiring harness.
(d) Remove each clamp that holds the wiring harness in position.
(e) Carefully remove the wiring harness.

TASK 33-42-04-404-026
5. Wiring Harness - Installation (Fig. 401)
A. References
(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 32-00-20/201, Landing Gear Downlocks

B. Access

(1) Location Zone

711 Nose landing gear

C. Wiring Harness Installation

S 424-027

(1) Install the wiring harness.

(a) Carefully put the wiring harness in its correct position.

(b) Connect the electrical connector at each end of the wiring harness.

(c) Carefully install each clamp that holds the wiring harness in its position.

NOTE: Start at the panel (P62 or P63). Continue to install each adjacent clamp, until you come to the other end of the wiring harness. Make sure the wiring harness is the correct length between each clamp.

S 414-041

(2) Get access to the steering cable turnbuckles at the pulley support brackets through 119BL (AMM 06-41-00/201).

NOTE: Make sure the wire harness must not be longer than 15.25 inches from clamp to panel.

S 434-042

(3) Adjust the steering cables (AMM 32-51-00/501).

D. Installation Test

S 864-043

(1) Remove each DO-NOT-CLOSE tag and close each circuit breaker that was opened.

S 864-035

(2) Remove the downlocks on the nose and main landing gear (AMM 32-00-20/201).

S 864-031

(3) Supply electrical power (AMM 24-22-00/201).

S 714-034

(4) At the overhead panel, P5, set the switches for the left and right runway turnoff lights to the on position.

(a) Make sure each runway turnoff light comes on correctly.

S 864-032

(5) Set the switches to the off position.

S 864-033

(6) Remove electrical power if it is not necessary (AMM 24-22-00/201).

RUNWAY TURNOFF LIGHTS TRANSFORMER - REMOVAL/INSTALLATION

1. General
   A. This procedure contains these tasks:
      (1) Runway Turnoff Light - Transformer Removal
      (2) Runway Turnoff Light - Transformer Installation

TASK 33-42-05-004-001

2. Remove the Runway Turnoff Lights Transformer (Fig. 401)
   A. References
      (1) SSM 33-42-02
      (2) WDM 33-42-21
   B. Access
      (1) Location Zones
          711 Nose Landing Gear
   C. Procedure

S 964-002

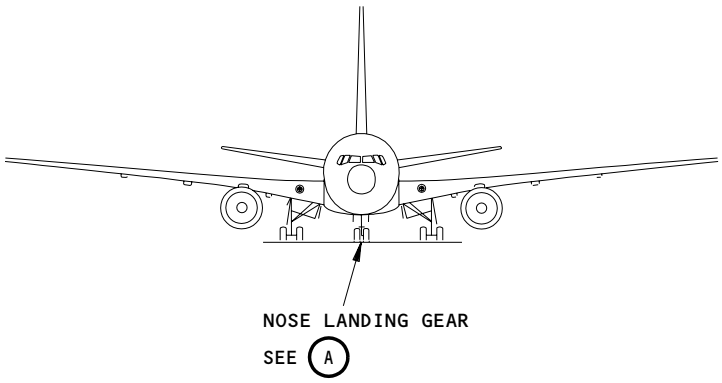
      (1) Do one of these steps to remove electrical power from the light:
          (a) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-OPERATE tag.
          (b) Open each applicable circuit breaker for the runway turnoff light and attach the DO-NOT-CLOSE tag.
              1) On the overhead circuit breaker panel, P11.

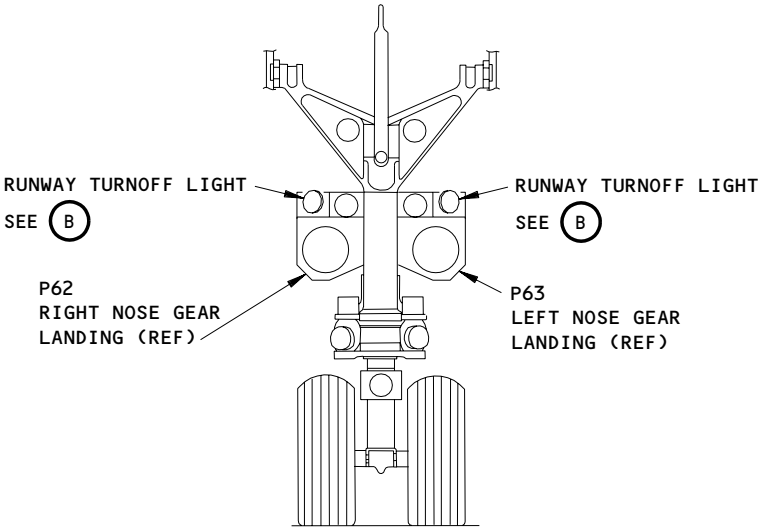
S 024-003

      (2) Remove the transformer.
          (a) Disconnect the electrical connector from the transformer.
          (b) Remove the four screws and washers that hold the transformer in position.
          (c) Remove the transformer.

TASK 33-42-05-404-004

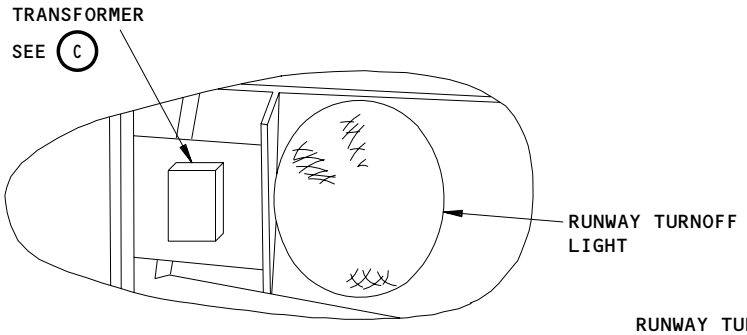
3. Runway Turnoff Light - Transformer Installation (Fig. 401)
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-42-02
      (3) WDM 33-42-21
   B. Access
      (1) Location Zones
          711 Nose Landing Gear





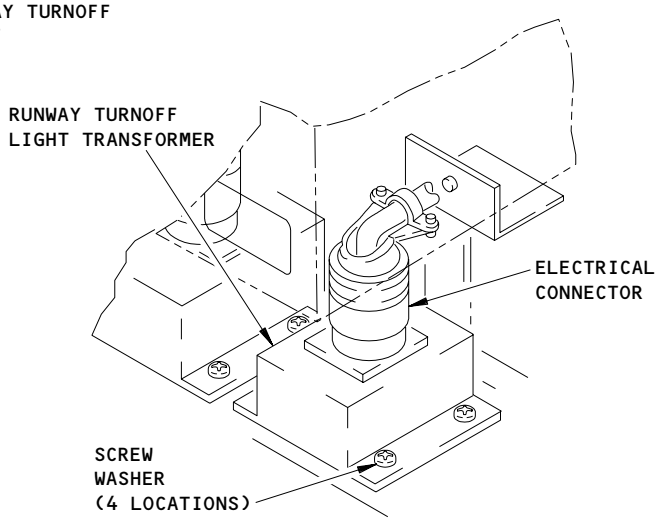
NOSE LANDING GEAR

A



RUNWAY TURNOFF LIGHT ASSEMBLY
(EXAMPLE)

B



RUNWAY TURNOFF LIGHT TRANSFORMER
(EXAMPLE)

C

Runway Turnoff Light Transformer Installation
Figure 401

C. Procedure

S 424-005

(1) Install the transformer.
  (a) Clean the bracket until it is free from corrosion and unwanted materials.
  (b) Put the new transformer in position against the bracket and install it with the four screws and washers.
  (c) Connect the electrical connector.

S 714-006

(2) Do a test of the transformer.
  (a) Supply electrical power (AMM 24-22-00/201).
  (b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
    1) Close each circuit breaker that was opened.
  (c) At the P5 panel, set the switch to the on position.
    1) Make sure each runway turnoff light connected to the transformer comes on correctly.
  (d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

POSITION LIGHTS - DESCRIPTION AND OPERATION

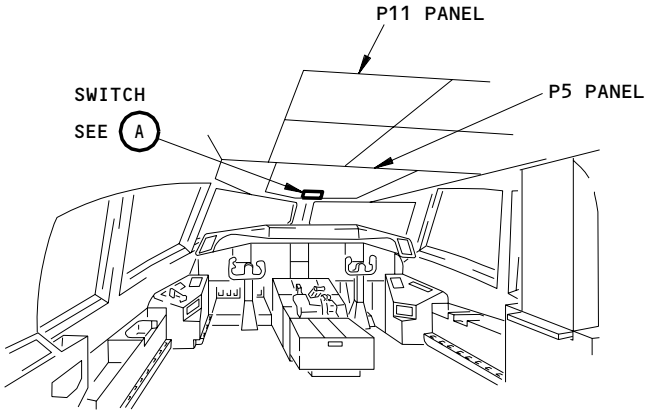
1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-43-01 thru 33-43-99
      (2) WDM 33-43-11 thru 33-43-99
   B. Position lights are mounted on the leading and trailing edges of each wingtip. Trailing edge lights are white. The left leading edge light is red, and the right leading edge light is green.
      (1) Each light assembly has two lamps. Each lamp is connected to a different circuit to reduce the possibility of a complete light failure.
      (2) A switch-light, on overhead panel P5, controls all the lights.
2. Component Details
   A. Position lights are installed on the leading and trailing edge of each wingtip to provide airplane position to other airplanes.
   B. The switch for the wing position lights is on the anti-collision and landing lights control panel of the overhead panel, P5.
   C. The transformers for the position lights are installed in each wingtip. Access is through underwing access panels.
3. Operation
   A. Functional Description
      (1) The electrical power for each position light comes from the 115v ac ground service bus on circuit breaker panel P11. The switch-light connects the electrical power to each transformer. Each transformer then supplies 10 volts ac the lamp in the position light.
      (2) The transformers are located inboard of the forward position light in each wing.

POSITION LIGHTS

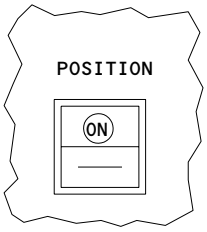
COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, P11	*
LIGHT –				
WING FWD POSITION	1		WINGTIP	33-43-01
WING REAR POSITION	1		WINGTIP	33-43-02
SWITCH –	1		FLT COMPT	*
TRANSFORMER –	2		521TBX, WING POSITION LIGHT TRANSFORMER ACCESS – LEFT WING	33-43-03
TRANSFORMER –	2		621TBX, WING POSITION LIGHT TRANSFORMER ACCESS – RIGHT WING	33-43-03

* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

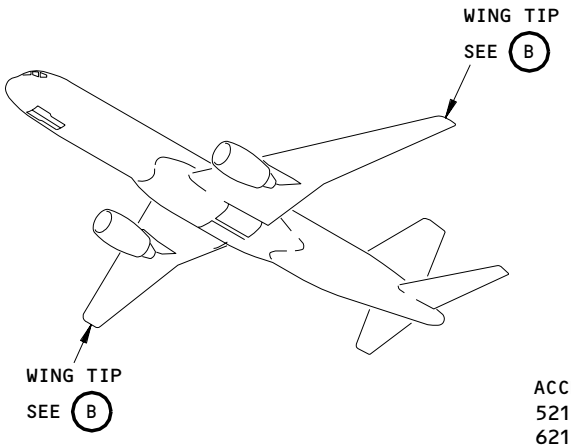
Position Lights – Component Location
Figure 101

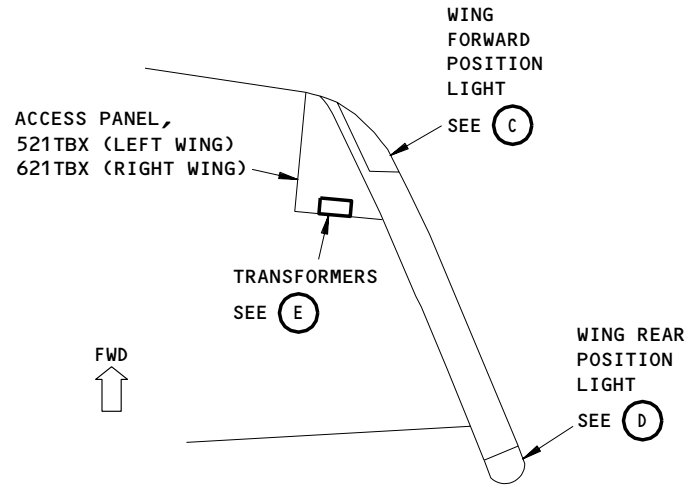


FLIGHT COMPARTMENT



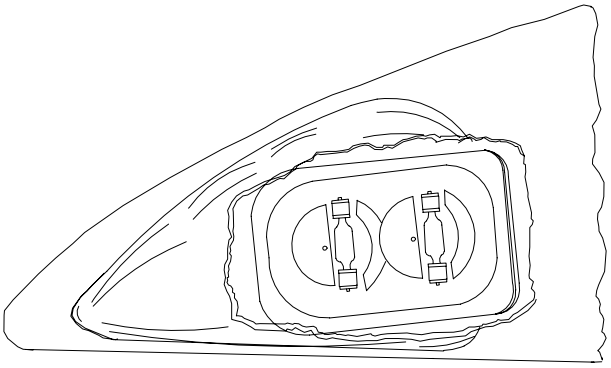
SWITCH
(EXAMPLE)
A





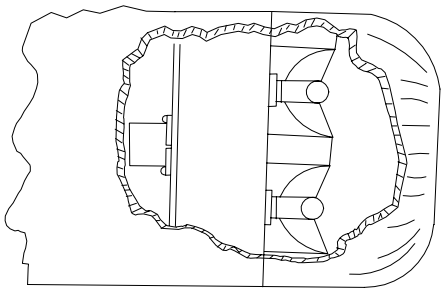
WINGTIP
(EXAMPLE)
B

Position Lights - Component Location
Figure 102 (Sheet 1)



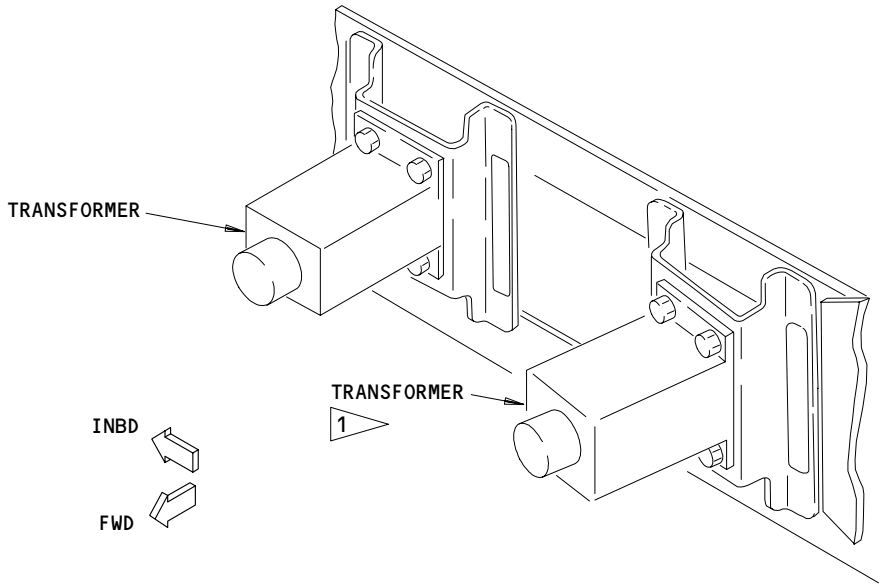
WING FORWARD POSITION LIGHT (EXAMPLE)

C



WING REAR POSITION LIGHT (EXAMPLE)

D



WING POSITION LIGHTS TRANSFORMERS (EXAMPLE)

E

1 AIRPLANES WITH TWO TRANSFORMERS IN EACH WINGTIP

Position Lights - Component Location
Figure 102 (Sheet 2)

POSITION LIGHTS - ADJUSTMENT/TEST

TASK 33-43-00-715-002

1. Position Lights - Operational Test

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) SSM 33-43-01

(3) WDM 33-43-11 thru 33-43-12

B. Access

(1) Location Zones

211/212 Flight compartment

C. Procedure

S 865-003

(1) Supply electrical power (AMM 24-22-00/201).

S 715-006

(2) Do a test of the position lights.

(a) At the overhead panel, P5, set the switch for the position lights to the on position.

1) Make sure each switch comes on.

2) Make sure each position light comes on.

a) Make sure the two lights in each position light come on.

(b) Set the switch to the off position.

1) Make sure the light in the switch goes off.

2) Make sure each position light goes off.

S 865-007

(3) Remove electrical power if it is not necessary (AMM 24-22-00/201).

WING FORWARD POSITION (NAVIGATION) LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Wing Forward Position Light - Lamp Replacement
      (2) Wing Forward Position Light - Removal
      (3) Wing Forward Position Light - Installation

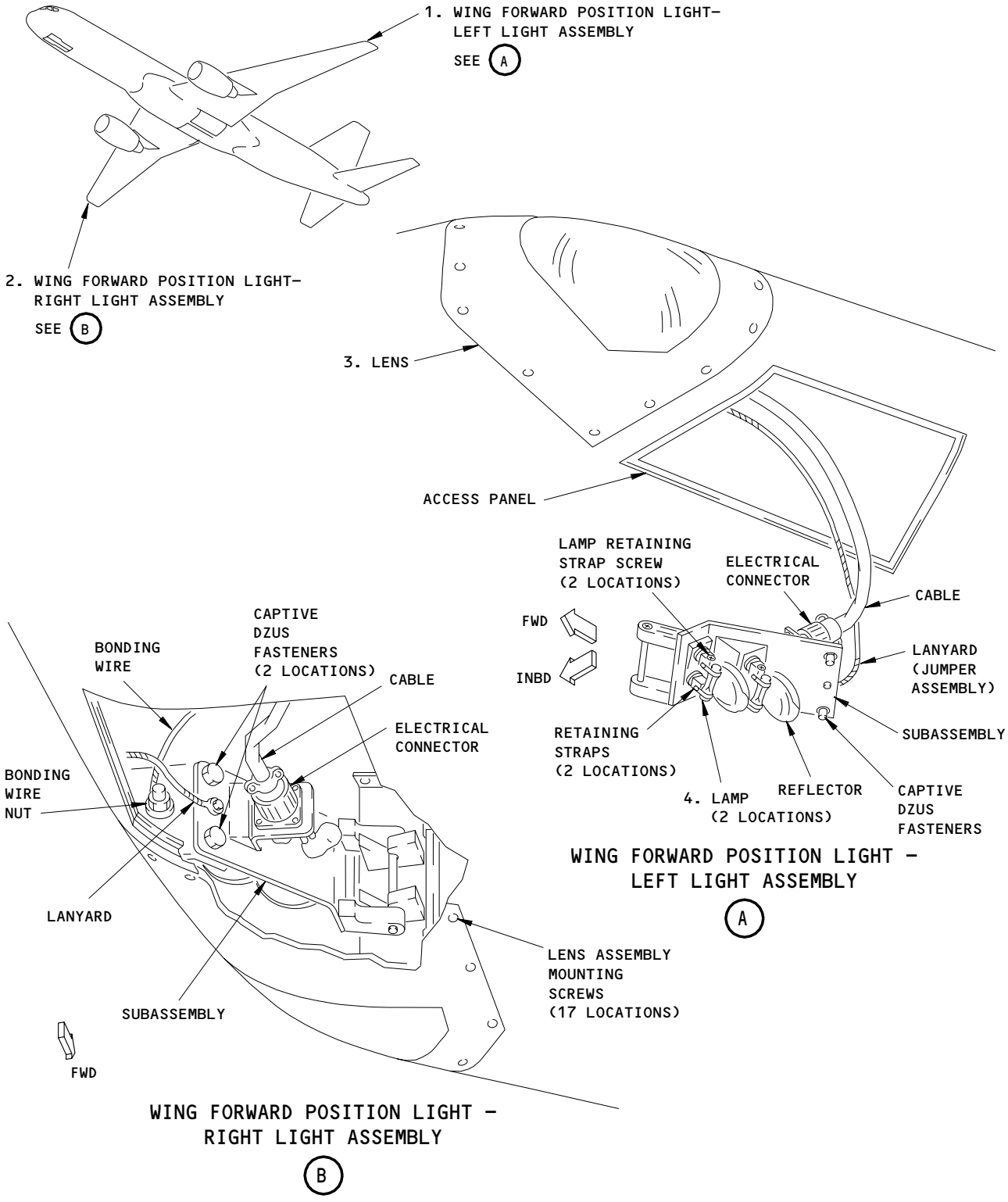
   TASK 33-43-01-962-015

2. Wing Forward Position Light - Lamp Replacement (Fig. 201)
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-43-01
      (3) WDM 33-00-01
      (4) WDM 33-43-11 thru 33-43-12
   B. Access
      (1) Location Zones
          545/645 Wingtip - Outboard of Rib No. 23

      (2) Access Panels
          545AB Left Wingtip
          645AB Right Wingtip

   C. Procedure

      S 962-019
      (1) Replace the lamp.
          (a) Do one of these steps to remove electrical power from the light:
              1) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-CLOSE tag.
              2) Open each applicable circuit breaker for the wing forward position light and attach the DO-NOT-CLOSE tag:
                 a) On the overhead circuit breaker panel, P11.
          (b) Remove the access panel.



Wing Forward Position (Navigation) Light Installation
Figure 201

WARNING: DO NOT TOUCH THE LIGHT WITH YOUR BARE HANDS WHEN THE LIGHT IS HOT. INJURY CAN OCCUR IF YOU TOUCH THE LIGHT BEFORE IT BECOMES COOL.

(c) Remove the light subassembly.
1) Disconnect the electrical connector from the back of the light.
2) Loosen the fasteners on the back of the light.
3) Turn the subassembly and pull it through the access opening.

NOTE: The subassembly will not fall through the opening because a lanyard prevents this.

(d) Carefully remove the lamp.
1) Loosen the screw in each lamp retaining strap.
2) Move each lamp retaining strap and remove the lamp.
3) Clean the contacts on the lamp holder and the surfaces on the reflectors with a soft, clean, dry cloth.

CAUTION: DO NOT TOUCH THE LAMP WITH YOUR HANDS. FINGERPRINTS CAN DECREASE THE INTENSITY AND LIFE OF THE LAMP.

(e) Carefully install the new lamp.

NOTE: If it is possible, put clean gloves on your hands before you touch the lamp.

1) Make sure the lamp is free from grease or fingerprints.

NOTE: If the lamp is dirty, clean it with a solvent such as acetone. Carefully apply the solvent with a cloth that has no lint.

2) With the bottom up, put the lamp in the subassembly.
3) Move the retaining straps over the lamp.

CAUTION: TIGHTEN EACH LAMP RETAINING STRAP TO MAKE THE PRESSURE EQUAL ON EACH END OF THE LAMP. IF A STRAP IS NOT TIGHTENED EQUALLY, THE LAMP CAN BE DAMAGED.

4) Tighten the lamp retaining strap screws so the pressure on each end of the lamp is equal.

(f) Install the light subassembly.
1) Put the subassembly through the access opening and turn it back to its original position.
2) Tighten the fasteners to hold the subassembly in position.
3) Connect the electrical connector.
4) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
(g) Install the access panel.

S 712-003
(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the P5 panel, set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-43-01-002-017

3. Wing Forward Position Light - Removal (Fig. 201)

A. References
(1) SSM 33-43-01
(2) WDM 33-43-11 thru 33-43-12

B. Access
(1) Location Zones
545/645 Wingtip - Outboard of Rib No. 23

(2) Access Panels
545AB Left Wingtip
645AB Right Wingtip

C. Procedure

S 862-021
(1) Do one of these steps to remove electrical power from the light:
(a) At the overhead panel, P5, set the switch for the position light to the off position.
(b) Open each applicable circuit breaker for the position light and attach the DO-NOT-CLOSE tag:
1) On the overhead circuit breaker panel, P11.

S 012-022
(2) Remove the access panel.

S 022-023

WARNING: DO NOT TOUCH THE LIGHT WITH YOUR BARE HANDS WHEN THE LIGHT IS HOT. INJURY CAN OCCUR IF YOU TOUCH THE LIGHT BEFORE IT BECOMES COOL.

(3) Remove the light assembly.
(a) Disconnect the electrical connector.
(b) Remove the bonding wire nut and the bonding wire.
(c) Remove the screws around the lens.
(d) Remove the light assembly.

TASK 33-43-01-402-007

4. Wing Forward Position Lights - Installation (Fig. 201)

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-43-01
(3) WDM 33-43-11 thru 33-43-12

B. Access
(1) Location Zones
545/645 Wingtip - Outboard of Rib No. 23

(2) Access Panels
545AB Left Wingtip
645AB Right Wingtip

C. Procedure

S 422-006
(1) Install the light assembly.

CAUTION: DO NOT TOUCH THE LAMPS WITH YOUR HANDS. FINGERPRINTS CAN DECREASE THE INTENSITY AND LIFE OF THE LAMPS.

(a) Make sure the lamps are free from grease and fingerprints.

NOTE: If the lamps are dirty, clean them with a solvent such as acetone. Carefully apply the solvent with a cloth that has no lint.

(b) Put the light assembly in its position in the wingtip.
(c) Install the screws around the lens.
(d) Connect the electrical connector.
(e) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
(f) Attach the bonding wire with the bonding wire nut.

S 412-008

(2) Install the access panel.

S 712-009

(3) Do a test of the wing forward position light.
(a) Supply electrical power (AMM 24-22-00/201).
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the overhead panel, P5, set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

WING REAR POSITION (NAVIGATION) LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Wing Rear Position Light - Lamp Replacement
      (2) Wing Rear Position Light - Removal
      (3) Wing Rear Position Light - Installation

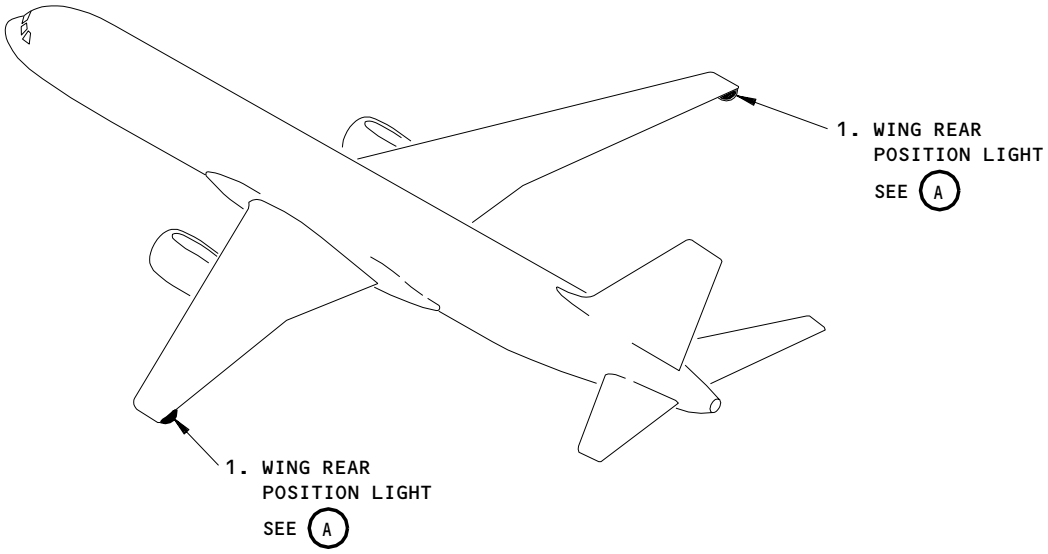
   TASK 33-43-02-962-001

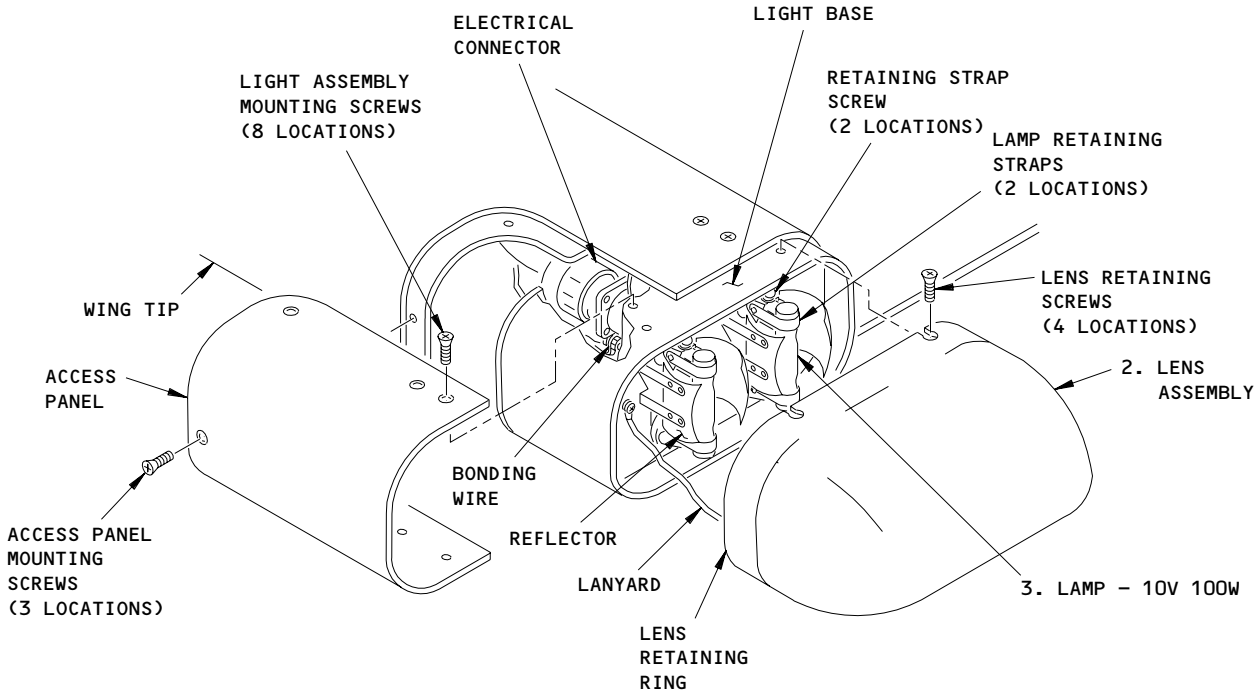
2. Wing Rear Position Light - Lamp Replacement (Fig. 201)
   A. References
      (1) AMM 24-22-00/201, Electrical Power - Control
      (2) SSM 33-43-01
      (3) WDM 33-00-01
      (4) WDM 33-43-11 thru 33-43-12
   B. Access
      (1) Location Zones
          545/645 Wingtip - Outboard of Rib No. 23
   C. Procedure

      S 962-017
      (1) Replace the lamp.
          (a) Do one of these steps to remove electrical power from the light:
              1) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-OPERATE tag.
              2) Open each applicable circuit breaker for the position light and attach the DO-NOT-CLOSE tag:
                 a) On the overhead circuit breaker panel, P11.

          WARNING: DO NOT TOUCH THE LIGHT WITH YOUR BARE HANDS WHEN THE LIGHT IS HOT. INJURY CAN OCCUR IF YOU TOUCH THE LIGHT BEFORE IT IS COOL.

          (b) Remove the lens.





WING REAR POSITION LIGHT
(EXAMPLE)
A

Wing Rear Position (Navigation) Light Installation
Figure 201

CAUTION: DO NOT LOOSEN THE SCREWS TOO MUCH. DAMAGE TO THE LAMPS CAN OCCUR.

1) Loosen the lens retaining screws.
2) Pull the lens free and allow it to hang from the lanyard.

(c) Carefully remove the lamp.
1) Loosen the screw in each lamp retaining strap.
2) Move each lamp retaining strap and remove the lamp.
3) Clean the contacts in the lamp holders and the surfaces of the reflectors with a soft, clean, dry cloth.

CAUTION: DO NOT TOUCH THE LAMP WITH YOUR HANDS. FINGERPRINTS CAN DECREASE THE INTENSITY AND LIFE OF THE LAMP.

(d) Carefully install the new lamp.

NOTE: If it is possible, put clean gloves on your hands before you touch the lamp.

1) Make sure the lamp is free from grease or fingerprints.

NOTE: If the lamp is dirty, clean it with a solvent such as acetone. Carefully apply the solvent with a cloth that has no lint.

2) Install the lamp with the bottom of the lamp away from the lens.
3) Move the retaining strap over the lamp.

CAUTION: TIGHTEN EACH LAMP RETAINING STRAP TO MAKE THE PRESSURE EQUAL ON EACH END OF THE LAMP. IF A STRAP IS NOT TIGHTENED EQUALLY, THE LAMP CAN BE DAMAGED.

4) Tighten the lamp retaining strap screws so the pressure on each end of the lamp is equal.

(e) Install the lens with the screws.

S 712-007

(2) Do a test of the new lamp.
(a) Supply electrical power (AMM 24-22-00/201).

(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
1) Close each circuit breaker that was opened.
(c) At the P5 panel, set the switch to the on position.
1) Make sure the new lamp comes on correctly.
(d) Remove electrical power if it is no longer necessary (AMM 24-22-00/201).

TASK 33-43-02-002-008

3. Wing Rear Position Light - Removal (Fig. 201)

A. References
(1) SSM 33-43-01
(2) WDM 33-43-11 thru 33-43-12

B. Access
(1) Location Zones
545/645 Wingtip - Outboard of Rib No. 23
(2) Access Panels
545CL Left Wingtip Access Panel
645CR Right Wingtip Access Panel

C. Procedure

S 862-018

(1) Do one of these steps to remove electrical power from the light:
(a) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-CLOSE tag.
(b) Open each applicable circuit breaker for the position light and attach the DO-NOT-CLOSE tag:
1) On the overhead circuit breaker panel, P11.

S 022-020

WARNING: DO NOT TOUCH THE LIGHT WITH YOUR BARE HANDS WHEN THE LIGHT IS HOT. INJURY CAN OCCUR IF YOU TOUCH THE LIGHT BEFORE IT BECOMES COOL.

(2) Remove the light assembly.
(a) Remove the mounting screws from the light assembly.
(b) Remove the access panel.
(c) Disconnect the electrical connector.
(d) Disconnect the bonding wire.
(e) Remove the light assembly.

TASK 33-43-02-402-010

4. Wing Rear Position Light - Installation (Fig. 201)

A. References

(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-43-01
(3) WDM 33-43-11 thru 33-43-12

B. Access

(1) Location Zones

545/645 Wingtip - Outboard of Rib No. 23

(2) Access Panels

545CL Left Wingtip Acess Panel
645CR Right Wingtip Access Panel

C. Procedure

S 422-004

(1) Install light assembly.

CAUTION: DO NOT TOUCH THE LAMPS WITH YOUR HANDS. FINGERPRINTS CAN DECREASE THE INTENSITY AND LIFE OF THE LAMPS.

(a) Make sure the lamps are free from grease or fingerprints.

NOTE: If the lamps are dirty, clean them with a solvent such as acetone. Carefully apply the solvent with a cloth that has no lint.

(b) Put the light assembly in its position in the wingtip.
(c) Attach the bonding wire.
(d) Connect the electrical connector.
(e) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
(f) Loosely install the access panel with the screws.

NOTE: Do not tighten the screws.

(g) Install the mounting screws for the light assembly.
(h) Tighten all the mounting screws for the access panel and the light assembly.

S 712-012

(2) Do a test of the wing rear position light.
  (a) Supply electrical power (AMM 24-22-00/201).
  (b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
    1) Close each circuit breaker that was opened.
  (c) At the overhead panel, P5, set the switch to the on position.
    1) Make sure the light comes on correctly.
  (d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

WING POSITION LIGHTS TRANSFORMER - REMOVAL/INSTALLATION

1. General
   A. This procedure contains these tasks:
      (1) Wing Position Light - Transformer Removal
      (2) Wing Position Light - Transformer Installation

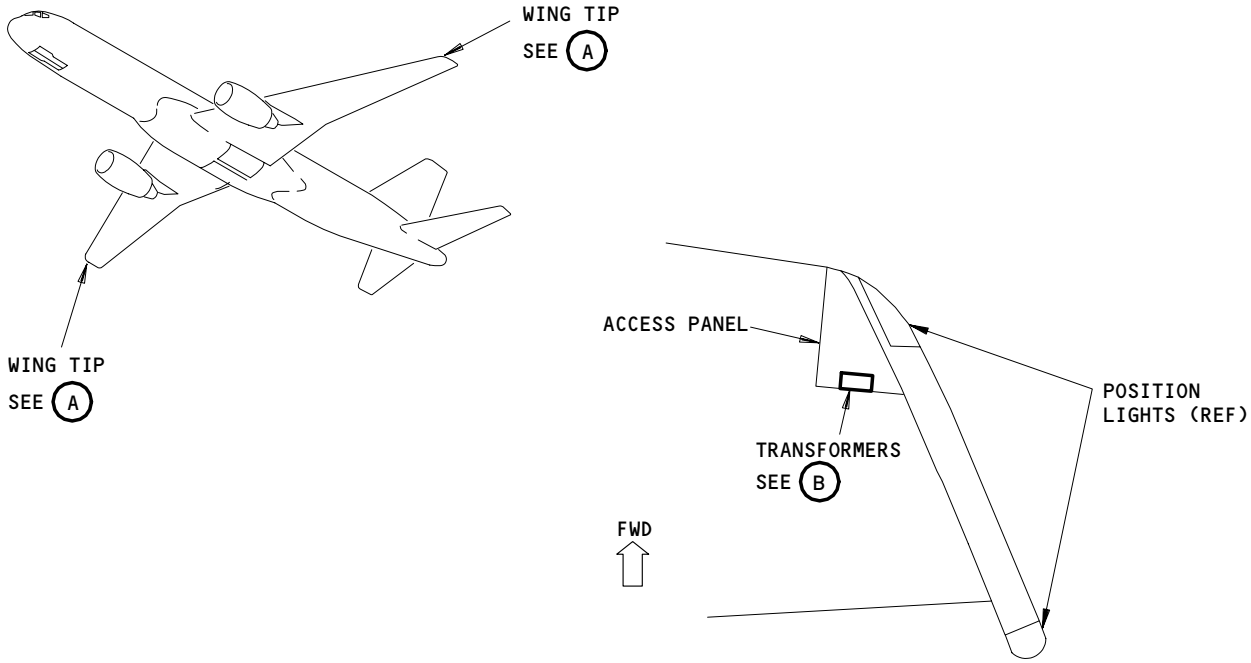
   TASK 33-43-03-004-001

2. Remove the Wing Position Lights Transformer (Fig. 401)
   A. References
      (1) SSM 33-43-01
      (2) WDM 33-43-11 thru 33-43-12
   B. Access
      (1) Location Zones
          521/621 Leading Edge to Front Spar
      (2) Access Panels
          521TBX Wing Position Light Transformer Access - Left Wing
          621TBX Wing Position Light Transformer Access - Right Wing
   C. Procedure

      S 964-013
      (1) Do one of these steps to remove electrical power from the light:
          (a) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-OPERATE tag.
          (b) Open each applicable circuit breaker for the position light and attach the DO-NOT-CLOSE tag.
              1) On the overhead circuit breaker panel, P11.

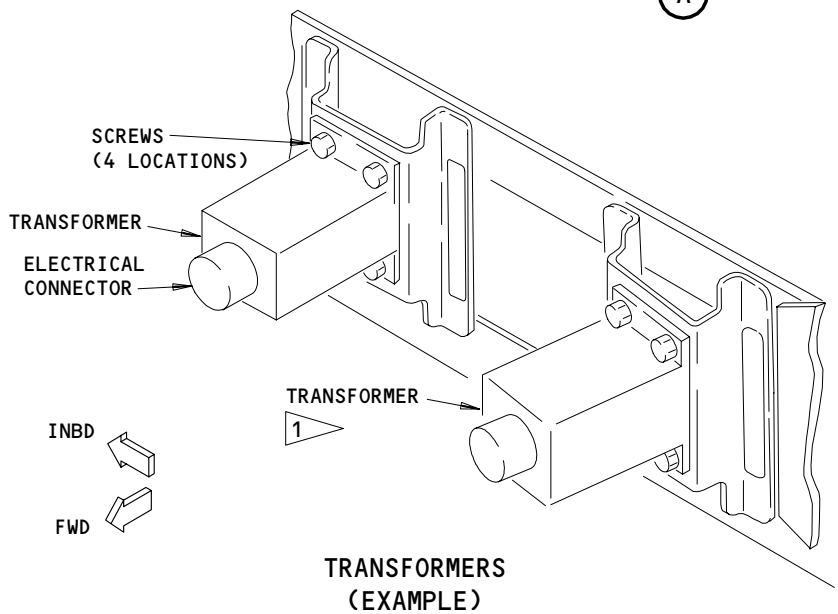
      S 014-003
      (2) Remove the access panel below the end of the wing.

      S 024-004
      (3) Remove the transformer.
          (a) Disconnect the electrical connector.
          (b) Remove the screws and remove the transformer.



WINGTIP (EXAMPLE)

A



TRANSFORMERS
(EXAMPLE)

B

1 AIRPLANES WITH TWO TRANSFORMERS IN EACH WINGTIP

Wing Position Lights Transformer Installation
Figure 401

TASK 33-43-03-404-007

3. Wing Position Light - Transformer Installation (Fig. 401)

A. Equipment

(1) An ohmmeter or equivalent tool that can measure a resistance of 0.0025 ohm

B. References

(1) AMM 20-10-31/201, Seals On Open Electrical Terminals In Fuel Vapor Areas

(2) AMM 24-22-00/201, Electrical Power - Control

(3) SSM 33-43-01

(4) WDM 33-43-11 thru 33-43-12

C. Access

(1) Location Zones

211/212 Flight compartment

521/621 Leading Edge to Front Spar

(2) Access Panels

521TBX Wing Position Light Transformer Access - Left Wing

621TBX Wing Position Light Transformer Access - Right Wing

D. Procedure

S 424-008

(1) Install the transformer.

(a) Clean the bracket until it is free from corrosion and unwanted materials.

(b) Install the transformer with the screws.

(c) Connect the electrical connector.

S 764-005

(2) Make sure the resistance from the transformer to the bracket measures no more than 0.0025 ohm.

S 394-016

WARNING: MAKE SURE THAT YOU SEAL THE TRANSFORMER TO PREVENT AN EXPLOSION OF FUEL FUMES. AN EXPLOSION CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Do this task: "Seal The Open Terminals" (AMM 20-10-31/201) to seal the transformer.

S 414-006

(4) Install the access panel.

S 714-014

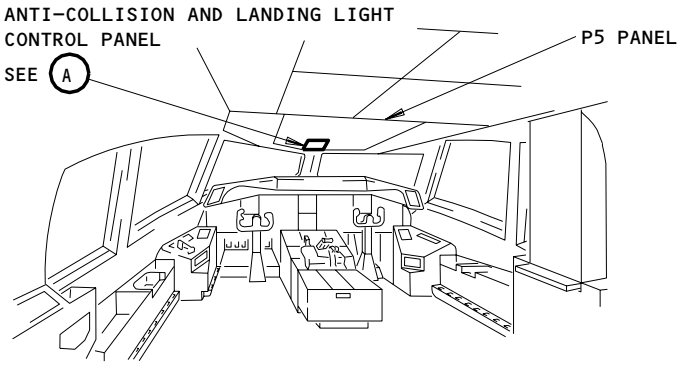
(5) Do a test of the transformer.

(a) Supply electrical power (AMM 24-22-00/201).

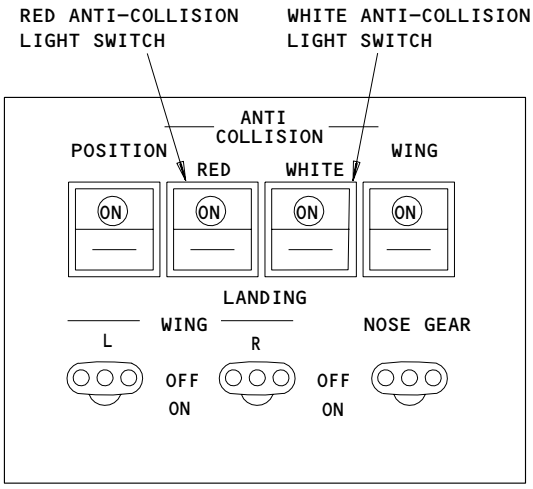
(b) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.
    1) Close each circuit breaker that was opened.
(c) At the P5 panel, set the switch to the on position.
    1) Make sure each wing position light connected to the transformer comes on correctly.
(d) Remove electrical power if it is not necessary (AMM 24-22-00/201).

ANTI-COLLISION LIGHTS - DESCRIPTION AND OPERATION

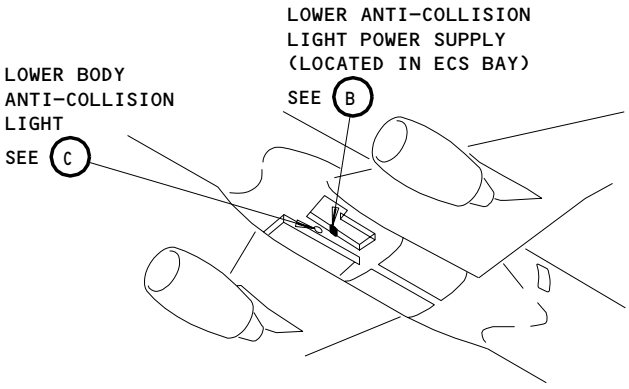
1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-44-01 thru 33-44-99
      (2) WDM 33-44-11 thru 33-44-99
   B. Anti-collision lighting consists of two fuselage mounted lights and two wingtip mounted lights. Fuselage lights are red; wingtip lights are white. All lights are high intensity Xenon strobe units which flash approximately 48 times per minute. Separate switch-lights, on overhead panel P5, control the white and red lights.
2. Component Details
   A. The purpose of the anti-collision light system is to provide flashing lights for greater conspicuosness of the airplane, thus reducing the chance of collision with other aircraft.
   B. The anti-collision light system consists of the following components:
      (1) Red quartz xenon strobe lights installed in the upper and lower fuselage.
      (2) White quartz xenon strobe lights installed in the left and right wingtips.
      (3) One high voltage power supply installed near each of the four light assemblies.
      (4) Cable assembly connecting each power supply to its' light.
      (5) Red anti-collision switch/light and white anti-collision switch/light on anti-collision and landing lights control panel, on flight deck overhead panel (P5).
3. Operation
   A. Functional Description
      (1) The ANTI-COLLISION RED switch-light applies 115v ac (ground service bus) to the fuselage mounted lights. The ANTI-COLLISION WHITE switch-light applies 115v ac left bus to the wingtip mounted lights.
      (2) The anti-collision light power supplies are located adjacent to each light. The power supply uses 115v ac applied through an internal fuse. Each power supply assembly contains transistorized power and timing circuits for flash tube operation. The power converter charges two sets of storage capacitors to a positive and negative 300v dc, producing a 600 volt potential across the Xenon tube. A safety relay stops the charging of the storage capacitors and discharges them through bleeder resistors. This provides protection in the event that the Xenon flash tube assembly is open or the power supply ground circuit is open. Two EMI filters are used in each power supply to eliminate the electromagnetic interference generated by the units.
      (3) Since the power supply unit contains high voltage circuits, wait ten minutes after turning off power before disconnecting cables or opening units. Do not allow fingers to touch lamps. Skin oils may cause the lamp to discolor and crack when current is applied.

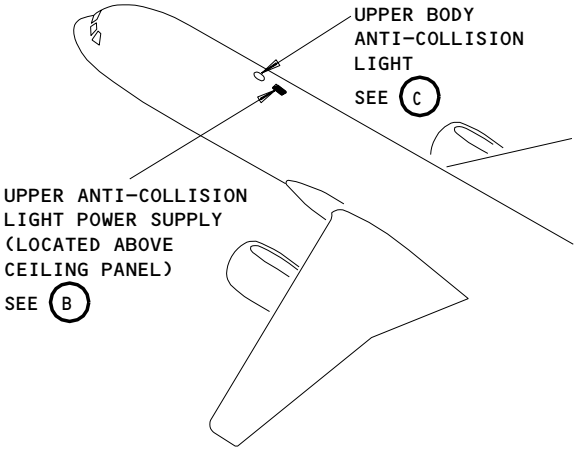


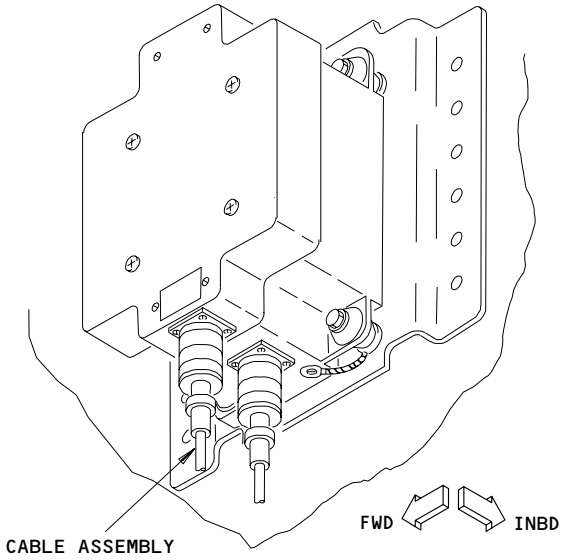
FLIGHT COMPARTMENT



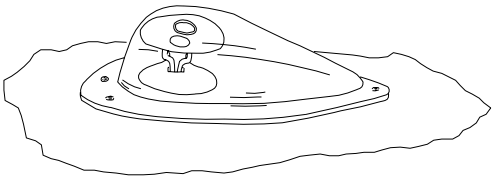
ANTI-COLLISION AND LANDING LIGHT
CONTROL PANEL
A





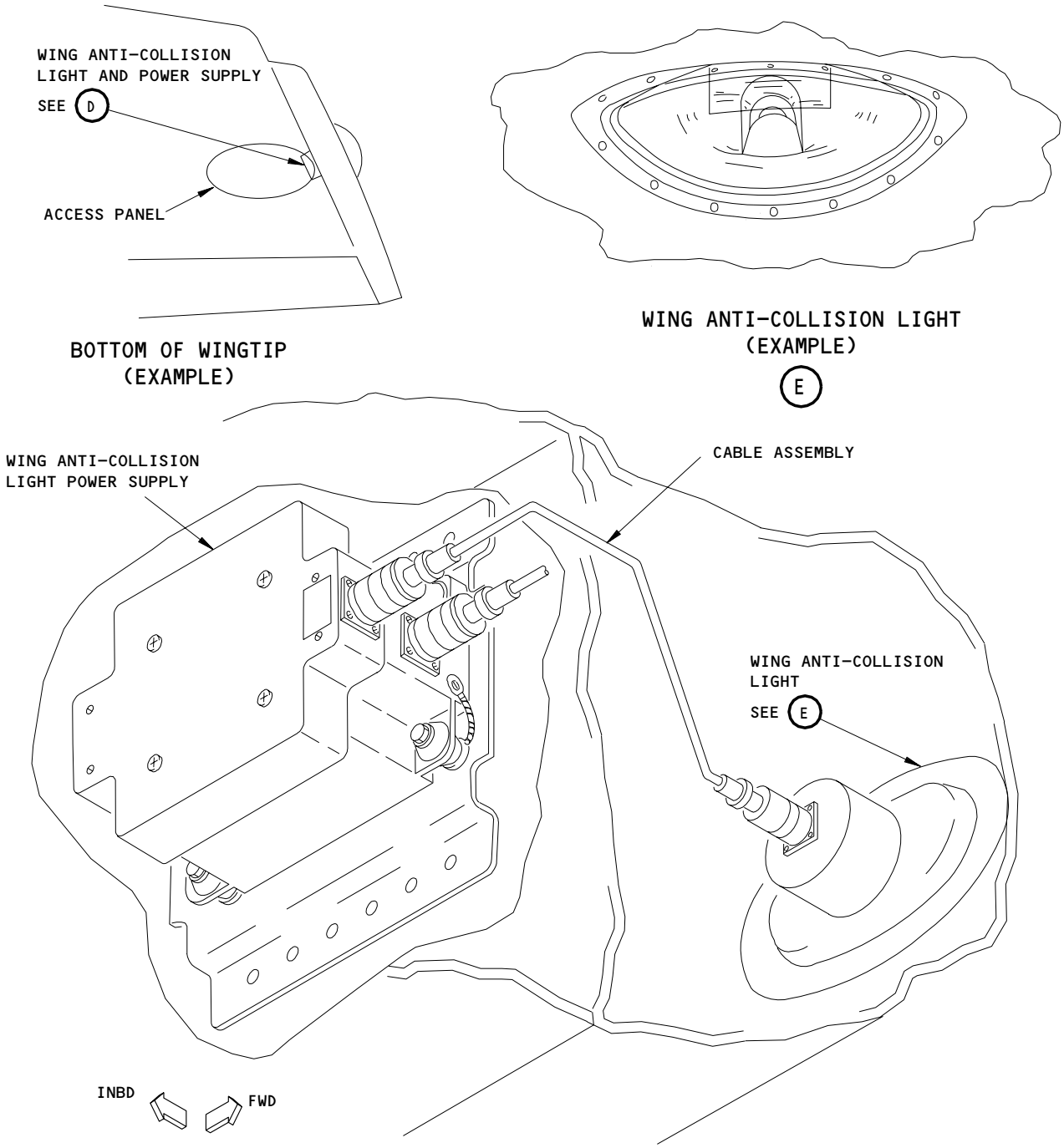


ANTI-COLLISION LIGHT POWER SUPPLY
(EXAMPLE)
B



BODY ANTI-COLLISION LIGHT
(EXAMPLE)
C

Anti-Collision Lights - Component Location
Figure 1 (Sheet 1)



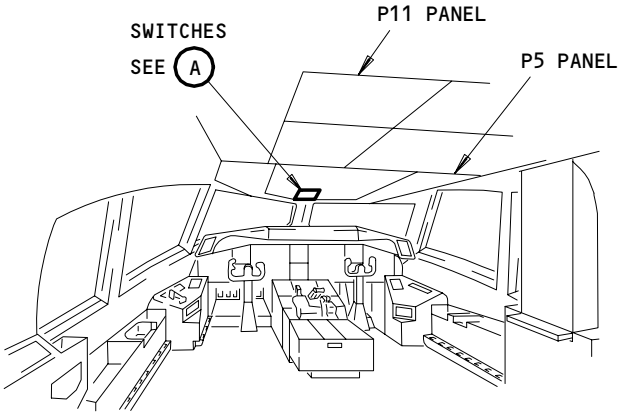
Anti-Collision Lights - Component Location
Figure 1 (Sheet 2)

ANTI-COLLISION LIGHTS

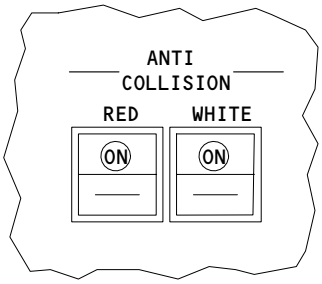
COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER -	1		FLT COMPT, P11	
LIGHT -				
BODY ANTI-COLLISION	1	1	FUSELAGE	33-44-02
WING ANTI-COLLISION	2	1	WINGTIP	33-44-01
SUPPLY - POWER	2	1	FUSELAGE	33-44-04
SUPPLY - POWER	2	1	WINGTIP	33-44-03
SWITCH -		1	FLT COMPT, P5	*

* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT

Anti-Collision Lights - Component Index
Figure 101

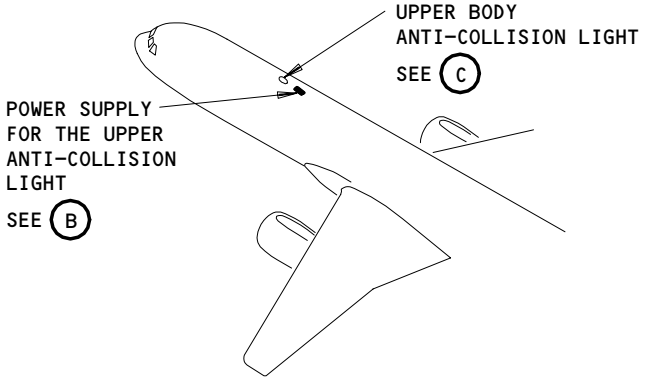


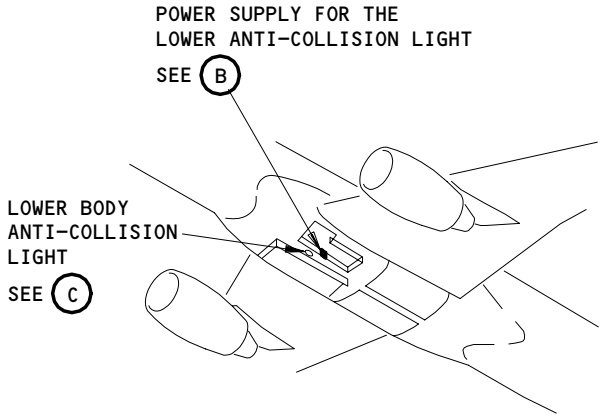
FLIGHT COMPARTMENT

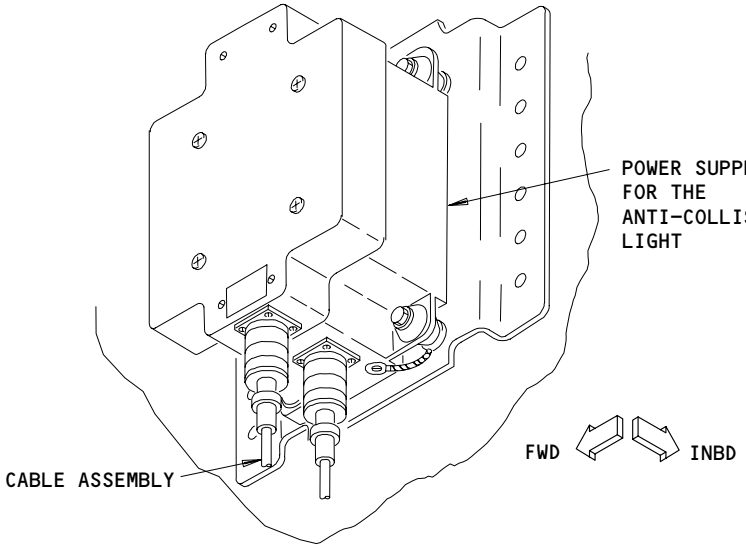


SWITCHES (EXAMPLE)

A

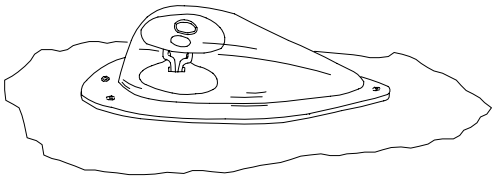






ANTI-COLLISION LIGHT POWER SUPPLY
(EXAMPLE)

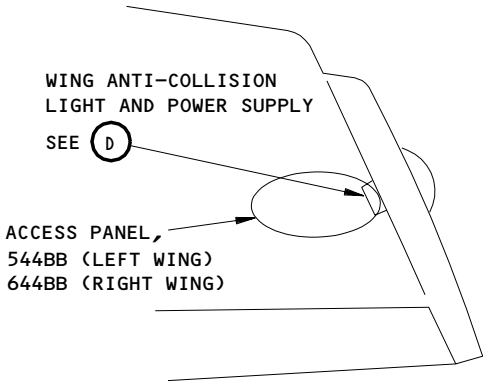
B



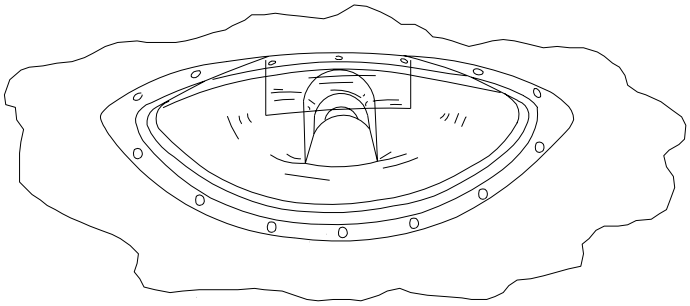
UPPER OR LOWER BODY
ANTI-COLLISION LIGHT
(EXAMPLE)

C

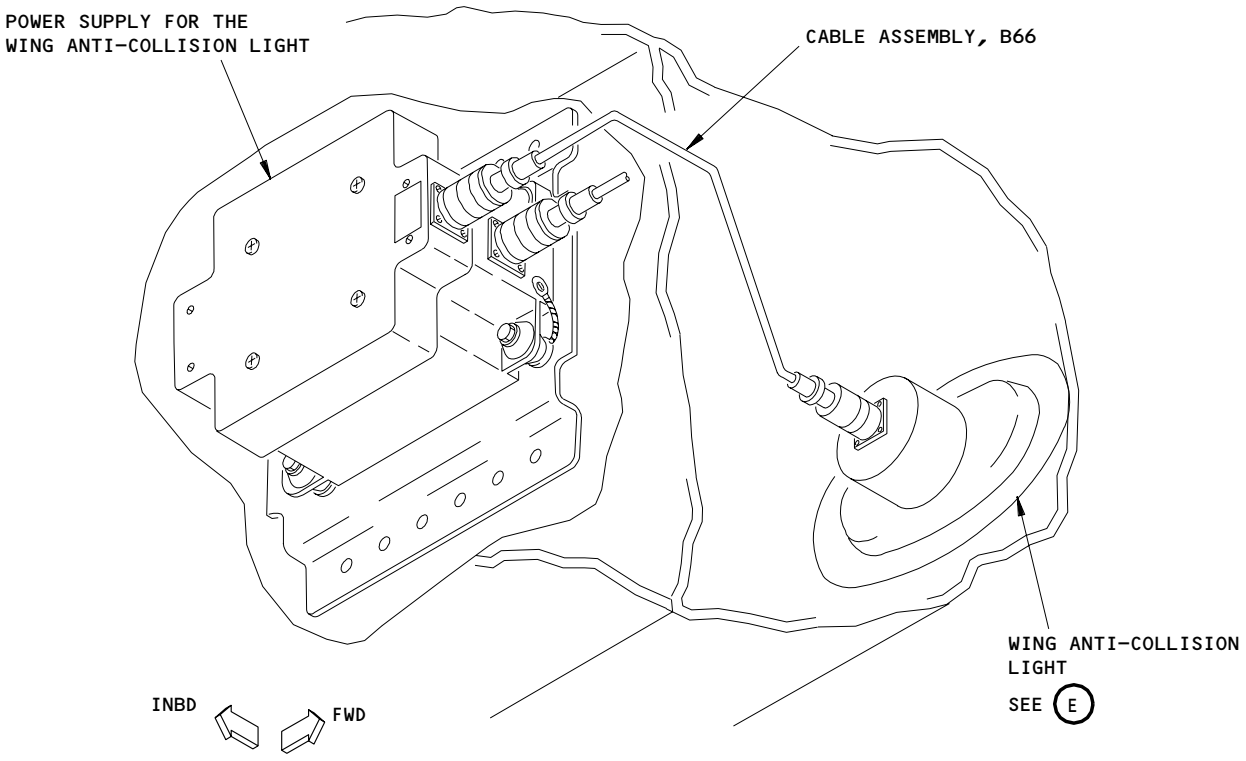
Anti-Collision Lights - Component Location
Figure 102 (Sheet 1)



BOTTOM OF WINGTIP
(EXAMPLE)



WING ANTI-COLLISION LIGHT
(EXAMPLE)
E



WING ANTI-COLLISION LIGHT AND POWER SUPPLY
(EXAMPLE)
D

Anti-Collision Lights - Component Location
Figure 102 (Sheet 2)

ANTI-COLLISION LIGHTS - ADJUSTMENT/TEST

1. General
   A. This procedure contains the operational tests of the anti-collision lights, as follows:
      (1) Do the Test of the Body Anti-Collision Lights
      (2) Do the Test of the Wing Anti-Collision Lights.
   B. When you do this procedure, keep all lights off unless the light is specified for the test.

TASK 33-44-00-715-002

2. Operational Tests - Anti-Collision Lights
   A. References
      (1) 24-22-00/201, Electrical Power - Control
   B. Access
      (1) Location Zones
          211/212 Flight compartment
   C. Prepare to Do the Tests

      S 865-001
      (1) Supply electrical power (Ref 24-22-00).
   D. Procedure to Do the Test of the Body Anti-Collision Lights

      S 865-004
      (1) Make sure this circuit breaker on the overhead circuit breaker panel, P11, is closed:
          (a) 11M34, ANTI COLL RED

      S 715-005
      (2) Do these steps to do the test of the body anti-collision lights:
          (a) Push the ANTI-COLLISION RED light switch on pilot's overhead panel, P5, to the ON position.
          (b) Make sure the upper and lower body anti-collision lights flash red approximately 48 times per minute.
          (c) Make sure the light in the ANTI-COLLISION RED switch comes on.

(d) Push the ANTI-COLLISION RED light switch again, to the OFF position.
(e) Make sure the upper and lower body anit-collision lights go off.
(f) Make sure the light in the ANTI-COLLISION RED switch goes off.

E. Procedure to Do the Test of the Wing Anti-Collision Lights

S 865-006

(1) Make sure this circuit breaker on the overhead circuit breaker panel, P11, is closed:
(a) 11M7, ANTI COLL WHITE

S 715-007

(2) Do these steps to do the test of the wing anti-collision lights:
(a) Push the ANTI-COLLISION WHITE light switch on the pilot's overhead panel, P5, to the ON position.
(b) Make sure the left and right wing anti-collision lights flash white approximately 48 times per minute.
(c) Make sure the light in the ANTI-COLLISION WHITE switch comes on.
(d) Push the ANTI-COLLISION WHITE light switch again, to the OFF position.
(e) Make sure the left and right wing anti-collision lights go off.
(f) Make sure the light in the ANTI-COLLISION WHITE switch goes off.

F. Put the airplane back to its original condition.

S 845-008

(1) Remove electrical power if it is not necessary (Ref 24-22-00).

WING ANTI-COLLISION (STROBE) LIGHT - MAINTENANCE PRACTICES

1. General
   A. This procedure has these tasks:
      (1) Wing Anti-Collision Light - Lamp Replacement
      (2) Wing Anti-Collision Light - Removal
      (3) Wing Anti-Collision Light - Installation
      (4) Wing Anti-Collision Lights - Operational Test
      (5) Wing Anti-Collision Light - Lens Cleaning

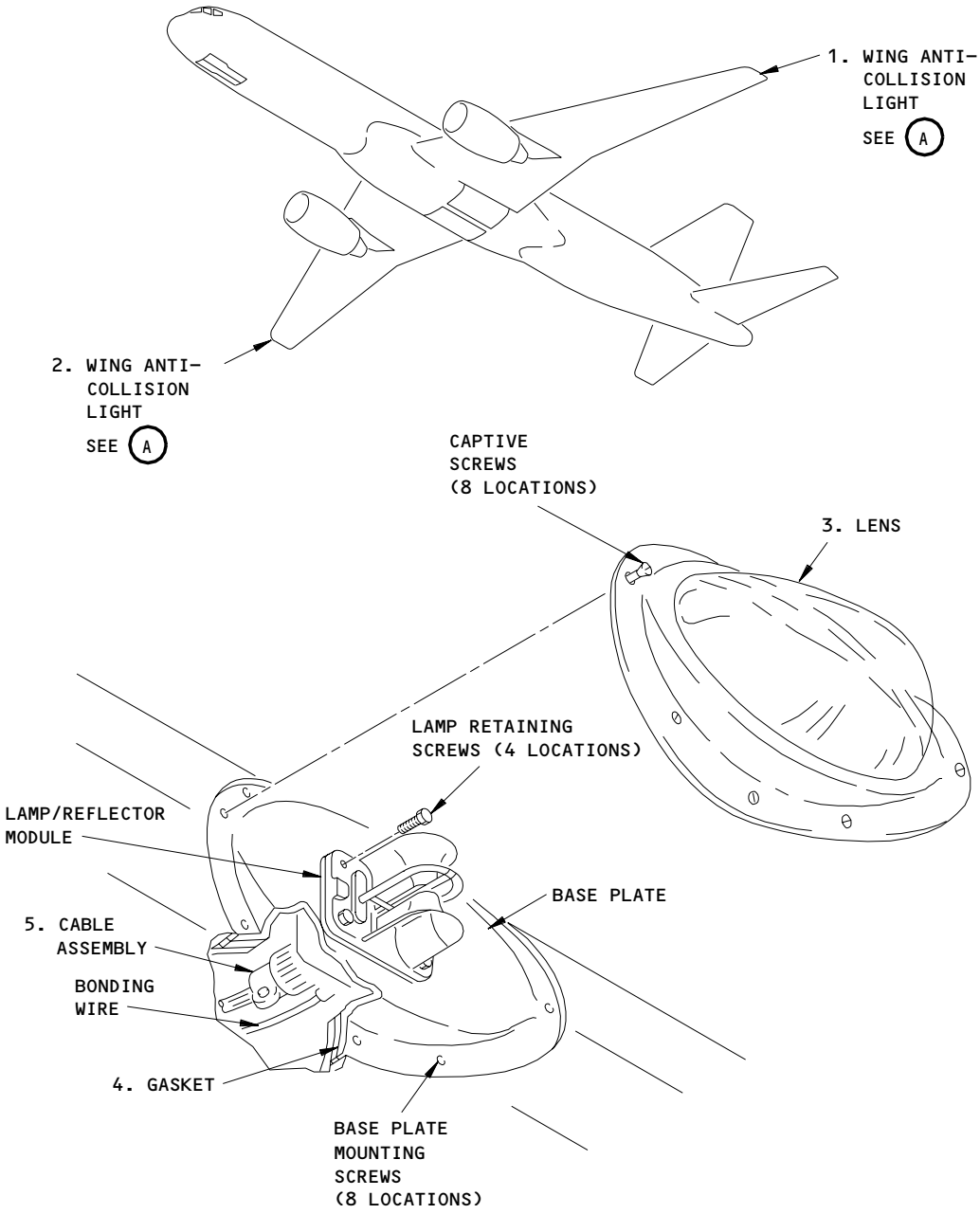
   TASK 33-44-01-962-002

2. Wing Anti-Collision Light - Lamp Replacement
   A. Consumable Materials
      (1) B00065 Denatured Alcohol
   B. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	1	Light Assembly, Left Hand Side	33-44-01	01	31
	2	Light Assembly, Right Hand Side			32
	3	Lens			36
	4	Gasket			47
	5	Cable Assembly			30

   C. Reference
      (1) AMM 51-31-01/201, Seals and Sealing
   D. Access
      (1) Location Zones
          545/645 Wingtip - outboard of rib No. 23
   E. Lamp Replacement

      S 862-001
      (1) Do one of these steps to remove electrical power from the wing anti-collision light:
          (a) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-OPERATE tag.



WING ANTI-COLLISION LIGHT
(EXAMPLE)
A

Wing Anti-Collision (Strobe) Light Installation
Figure 201

(b) Open this circuit breaker on the overhead circuit breaker panel, P11 and attach a DO-NOT-CLOSE tag:
1) 11M7, ANTI-COLL WHITE

S 862-003

WARNING: DO NOT TOUCH THE LIGHT FOR 10 MINUTES AFTER YOU REMOVE THE POWER. INJURY TO PERSONS CAN OCCUR IF YOU TRY TO REPLACE OR REMOVE THE HIGH-VOLTAGE LIGHT BEFORE THE SPECIFIED TIME.

(2) Do not touch the wing anti-collision lights for 10 minutes after you remove the power.

S 012-027
(3) Remove the sealant between the lens assembly and the skin (AMM 51-31-01/201).

S 022-044
(4) Carefully remove the lamp.
(a) Loosen the captive screws.
(b) Remove the retaining ring, the lens, and the gasket.
(c) Remove the four lamp retaining screws that hold the lamp/reflector module in place.
(d) Hold the lamp/reflector base and pull it from the socket.

S 142-045
(5) Clean the fuselage to prepare for the aerodynamic smoother (AMM 51-31-01/201).

S 422-046
(6) Carefully install the new lamp.
(a) Make sure the new lamp is free from grease or fingerprints.

NOTE: If the lamp is dirty, clean it with a solvent that has no grease, such as acetone. Carefully apply the solvent with a cloth that has no lint.

(b) Install the lamp/reflector module with the correct screws.
(c) Clean the residue from the lens with a clean soft cotton cloth or a paper wipe.

NOTE: If the lens is difficult to clean, use alcohol.

(d) Install the gasket, the lens, and the retaining ring with the correct screws.

S 392-029
(7) Apply the aerodynamic smoother (AMM 51-31-01/201).

F. Lamp Test

S 862-047

(1) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.

S 712-004

(2) Do this task: Wing Anti-Collision Lights - Operational Test.

TASK 33-44-01-022-032

3. Wing Anti-Collision Light - Removal (Fig. 201)

A. Reference

(1) AMM 51-31-01/201, Seals and Sealing

B. Access

(1) Location Zones

545/645 Wingtip - outboard of rib No. 23.

C. Light Removal

S 862-005

(1) Do one of these steps to remove electrical power from the wing anti-collision light:

(a) At the overhead panel, P5, set the switch to the off position and attach the DO-NOT-OPERATE tag.

(b) Open this circuit breaker on the overhead circuit breaker panel, P11 and attach a DO-NOT-CLOSE tag:

1) 11M7, ANTI-COLL WHITE

S 862-020

WARNING: DO NOT TOUCH THE LIGHT FOR 10 MINUTES AFTER YOU REMOVE THE POWER. INJURY TO PERSONS CAN OCCUR IF YOU TRY TO REPLACE OR REMOVE THE HIGH-VOLTAGE LIGHT BEFORE THE SPECIFIED TIME.

(2) Do not touch the wing anti collision lights for 10 minutes after you remove the power.

S 012-030

(3) Remove the sealant between the lens assembly and the skin (AMM 51-31-01/201).

S 022-007

(4) Remove the light.

(a) Loosen the captive screws to remove the lens retaining ring, the lens, and the gasket.

(b) Remove the base plate mouting screws.

(c) Loosen the base plate from the gasket.

(d) Pull out the base plate to expose the electrical connectors.

(e) Reach behind the base plate and disconnect the electrical connector.

(f) Disconnect the bonding wire.

(g) Remove the base plate, the gasket, and the lamp/reflector module.

TASK 33-44-01-402-008

4. Wing Anti-Collision Light - Installation (Fig. 201)

A. Consumable Materials

(1) B00065 Denatured Alcohol

B. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
201	1	Light Assembly, Left Hand Side	33-44-01	01	31
	2	Light Assembly, Right Hand Side			32
	3	Lens			36
	4	Gasket			47
	5	Cable Assembly			30

C. References

(1) AMM 51-31-01/201, Seals and Sealing

(2) WDM 20-20-00

D. Access

(1) Location Zones

545/645 Wingtip - outboard of rib No. 23.

E. Light Installation

S 432-010

(1) Fasten bonding wire to lamp/reflector module with nut and washer (WDM 20-20-00).

S 422-026

CAUTION: DO NOT TOUCH THE LAMP WITH YOUR HANDS. FINGERPRINTS DECREASE LIGHT OUTPUT AND CAN CAUSE THE LAMP TO FAIL BEFORE ITS USUAL TIME.

(2) Install the light.

(a) Connect the electrical connector.

(b) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
(c) Put base plate and gasket assembly in position.
(d) Secure them with the correct screws.
(e) Clean the retaining ring and the lens cavity with a soft, clean cloth.
(f) Clean the residue from the lens with a clean soft cotton cloth or a paper wipe.

NOTE: If the lens is difficult to clean, use alcohol.

(g) Install the gasket, the lens, and the retaining ring with the captive screws.

S 392-031
(3) Apply the aerodynamic smoother (AMM 51-31-01/201).

F. Light Test

S 862-048
(1) Remove each DO-NOT-OPERATE or DO-NOT-CLOSE tag.

S 712-012
(2) Do this task: Wing Anti-collision Light - Operational Test.

TASK 33-44-01-712-013

5. Wing Anti-Collision Lights - Operational Test

A. References
(1) AMM 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zones
211/212 Flight compartment

C. Lights Test

S 862-022
(1) Supply electrical power (AMM 24-22-00/201).

S 712-021

WARNING: AT NEAR RANGE, DO NOT LOOK DIRECTLY AT THE LIGHTS WHEN THEY FLASH. DAMAGE TO YOUR VISION CAN OCCUR.

(2) At near range, do not look directly at the wing anti-collision lights when they flash.

S 712-016
(3) Do the test of the wing anti-collision lights:
(a) At the overhead panel, P5, set the switch for the wing anti-collision lights to the on position.
1) Make sure the wing anti-collision lights come on and that they flash correctly.

(b) Set the switch to the off position.
1) Make sure the wing anti-collision lights go off.

S 862-017
(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-44-01-162-033

6. Wing Anti-Collision Light - Lens Cleaning

A. Consumable Materials
(1) B00065 Denatured Alcohol

B. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
201	3 4	Lens Gasket	33-44-01	01	36 47

C. References
(1) AMM 51-31-01/201, Seals and Sealing.

D. Access
(1) Location Zones
545/645 Wingtip - outboard of rib No. 23

E. Lens Removal

S 862-049

WARNING: DO NOT TOUCH THE ANTI-COLLISION LIGHTS FOR 10 MINUTES AFTER YOU REMOVE THE POWER. INJURY TO PERSONS CAN OCCUR IF YOU TOUCH THIS HIGH-VOLTAGE LIGHT BEFORE THE SPECIFIED TIME.

(1) Make sure the lights in the wingtip are off for at least 10 minutes.

S 012-036
(2) Remove the sealant between the lens assembly and the skin (AMM 51-31-01/201).

S 022-037
(3) Loosen the captive screws to remove the lens retaining ring, the lens and the gasket.

F. Lens Cleaning

S 162-038
(1) Clean the residue from the lens with a clean soft cotton cloth or a paper wipe.

NOTE: If the lens is difficult to clean, use alcohol.

G. Lens Installation

S 422-040
(1) Install the gasket, the lens, and the retaining ring with the captive screws.

S 392-041
(2) Apply the aerodynamic smoother (AMM 51-31-01/201).

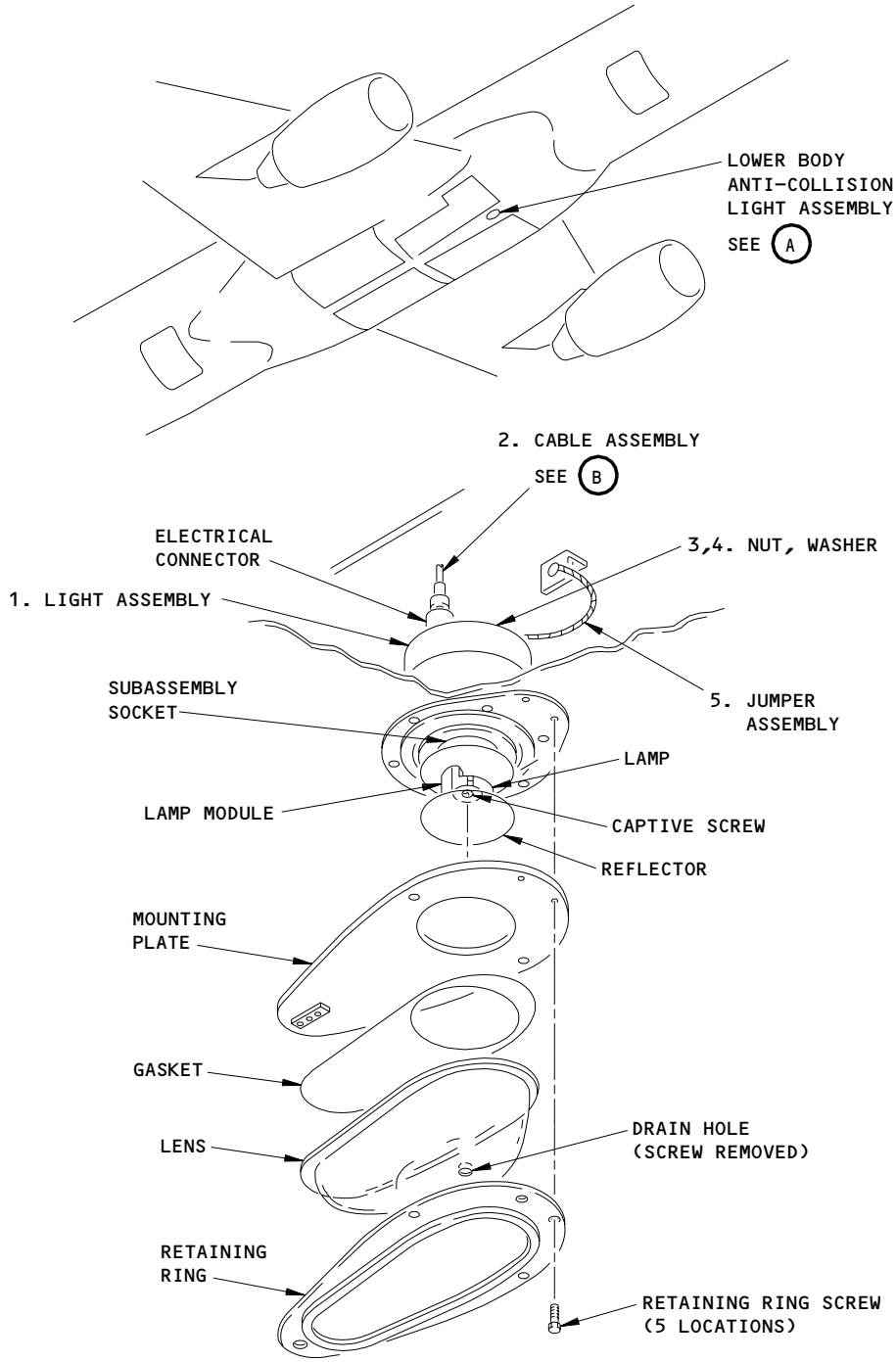
BODY ANTI-COLLISION (STROBE) LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Replace the Lamps in the Body Anti-Collision Lights
      (2) Remove the Body Anti-Collision Lights
      (3) Install the Body Anti-Collision Lights
      (4) Do the Test of the Body Anti-Collision Lights
   B. The body anti-collision lights consist of one lower and one upper body anti-collision light.
   C. Do the maintenance on the lower body anti-collision light below the airplane. Do the maintenance on the upper body anti-collision light from the cabin.

TASK 33-44-02-962-001

2. Replace the Lamps in the Body Anti-Collision Lights
   A. General
      (1) This task gives different steps to replace each of the body anti-collision lights.
   B. Parts

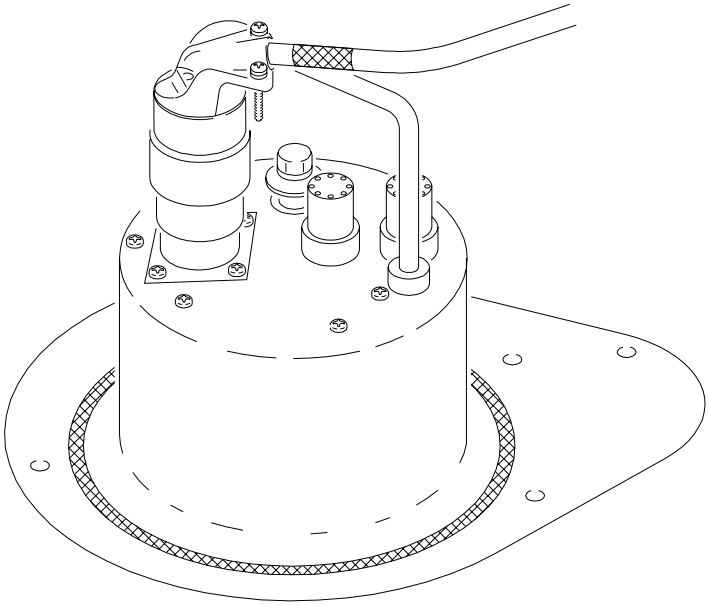
MM		NOMENCLATURE	IPC		
FIG	ITEM		SUBJECT	FIG	ITEM
201	1	Light Assy	33-44-02	02	30
	2	Cable Assembly			25
	3	Nut			54
	4	Washer			55
	5	Jumper Assy			20
202	6	Light Assy - Strobe		01	20
	7	Cable Assy			50



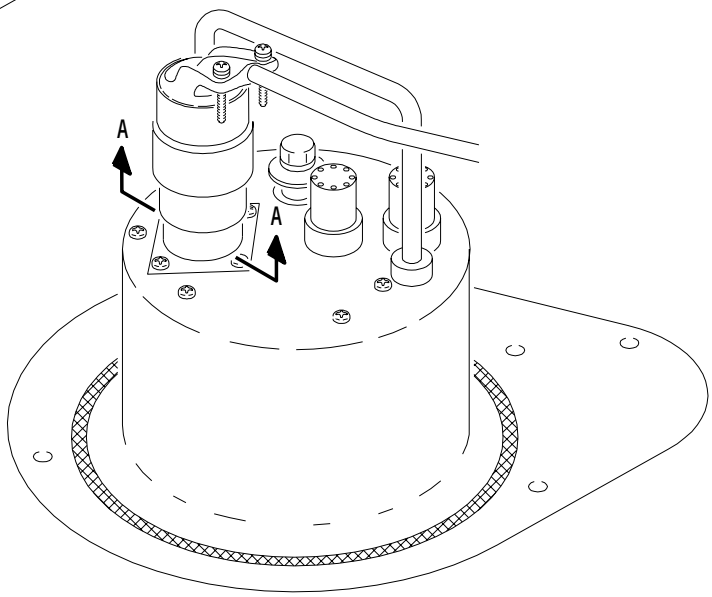
LOWER BODY ANTI-COLLISION LIGHT ASSEMBLY

A

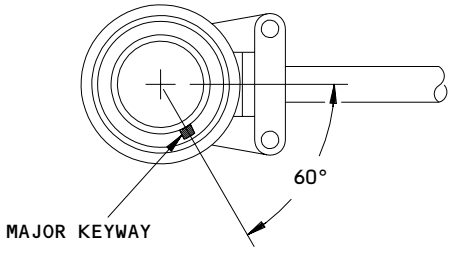
Lower Body Anti-Collision (Strobe) Light Installation
Figure 201 (Sheet 1)



CABLE ASSEMBLY
(NOT PREFERRED)
(B)

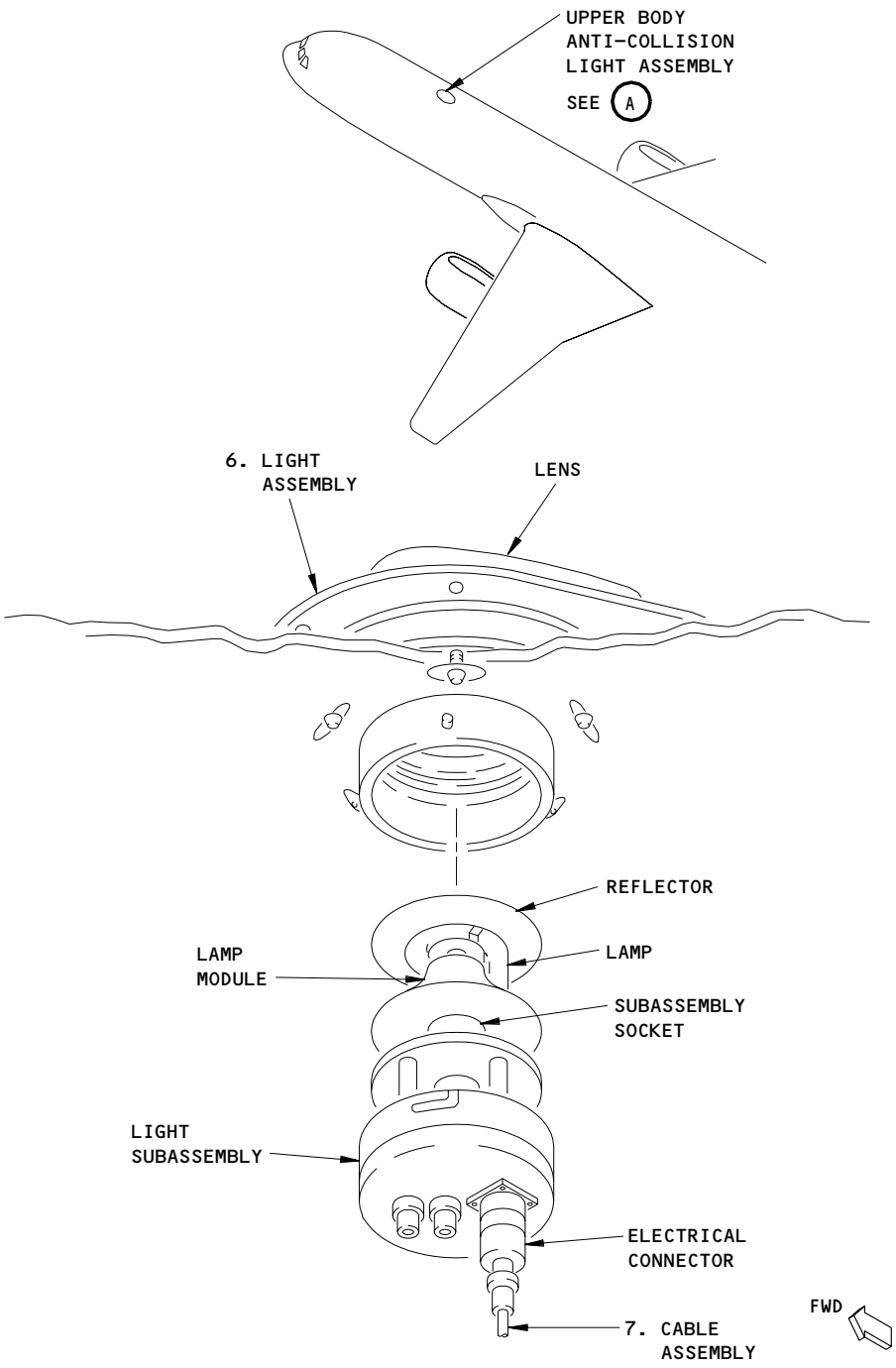


CABLE ASSEMBLY
(PREFERRED)
(B)



A–A

Lower Body Anti-Collision (Strobe) Light Installation
Figure 201 (Sheet 2)



UPPER BODY ANTI-COLLISION LIGHT ASSEMBLY

A

Upper Body Anti-Collision (Strobe) Light Installation
Figure 202

C. Access
(1) Location Zones
135/136 Environmental control system (ECS) bay
234 Area above cabin ceiling - section 43

D. Prepare to Replace the Lamps

S 862-002

(1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
(a) 11M34, ANTI COLL RED

S 862-021

WARNING: DO NOT TOUCH THE LAMPS FOR 10 MINUTES AFTER YOU REMOVE THE POWER. INJURY TO PERSONS CAN OCCUR IF YOU REPLACE OR REMOVE THE LAMPS BEFORE THE SPECIFIED TIME.

(2) Do not touch the lamps for ten minutes after you remove the power.

E. Procedure

S 962-004

(1) Do these steps to replace the lamp in the lower body anti-collision light (Fig. 201):
(a) Remove the screws that hold the retaining ring in position.
(b) Remove the retaining ring and the lens.
(c) Loosen the captive screw in the center of the reflector in the lamp module.
(d) Hold the bottom of the lamp module while you pull it from its socket.

CAUTION: DO NOT TOUCH THE LAMP WITH YOUR BARE HANDS. FINGERPRINTS DECREASE LIGHT OUTPUT AND CAN CAUSE THE FAILURE OF THE LAMP BEFORE THE USUAL TIME.

(e) Make sure the new lamp is free from grease or fingerprints.

NOTE: If the new lamp is dirty, clean it with a solvent that has no grease, such as acetone. Carefully apply the solvent with a cloth that has no lint.

(f) Install the lens and the retaining ring with the correct screws.

NOTE: Seal the retaining ring. (Ref 20-30-01).

(g) Do the test of the body anti-collision lights as given in this procedure.

S 962-006

(2) Do these steps to replace the lamp module in the upper body anti-collision light (Fig. 202):

(a) Remove the Sculptured Ceiling Panels to get access to the upper body anti-collision light (AMM 25-22-01/401).

NOTE: The location of the light is shown on (WDM 33-44-11).

(b) Disconnect the electrical connector.
(c) Turn the light subassembly counterclockwise to disengage it.
(d) Remove the light subassembly.
(e) Loosen the screw in the center of the reflector in the lamp module.
(f) Hold the bottom of the lamp module while you pull the lamp module from its socket.

CAUTION: DO NOT TOUCH THE LAMP WITH YOUR BARE HANDS. FINGERPRINTS DECREASE LIGHT OUTPUT AND CAN CAUSE THE FAILURE OF THE LAMP BEFORE THE USUAL TIME.

(g) Install a new lamp module into its socket.
(h) Make sure the new lamp has no grease or fingerprints.

NOTE: If the lamp is dirty, clean it with a solvent that has no grease, such as acetone. Carefully apply the solvent with a cloth that has no lint.

(i) Tighten the screw in the center of the reflector to hold the lamp module on the light subassembly.
(j) Install the light subassembly.
1) Hold the light subassembly in position.
2) Push the light subassembly in while you turn it clockwise until it engages.
(k) Connect the electrical connector.

(l) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
(m) Do the test of the body anti-collision lights as given in this procedure.
(n) Install the Sculptured Ceiling Panels (AMM 25-22-01/401).

TASK 33-44-02-002-007

3. Remove the Body Anti-Collision Lights

A. General
(1) This task gives different steps to remove each of the body anti-collision lights.

B. Access
(1) Location Zones
135/136 Environmental control system (ECS) bay
234 Area above cabin ceiling - section 43

C. Prepare for Removal

S 862-008
(1) Open this circuit breaker on the P11 panel and attach a DO-NOT-CLOSE tag:
(a) 11M34, ANTI COLL RED

S 862-020

WARNING: DO NOT TOUCH THE LAMPS FOR 10 MINUTES AFTER YOU REMOVE THE POWER. INJURY TO PERSONS CAN OCCUR IF YOU TRY TO REPLACE OR REMOVE THE LAMPS BEFORE THE SPECIFIED TIME.

(2) Do not touch the lamps for ten minutes after you remove the power.

D. Procedure

S 022-010
(1) Do these steps to remove the lower body anti-collision light (Fig. 201):
(a) Remove the retaining ring and the lens.
(b) Remove the screws that hold the light assembly in position.
(c) With your hands around the light assembly, pull the it down for access to the electrical connector and the jumper assembly.
(d) Disconnect the electrical connector.
(e) Remove the nut (3) and the washer (4) from the light assembly.
(f) Disconnect the jumper assembly (5).
(g) Remove the light assembly.

S 022-011
(2) Do these steps to remove the light subassembly in the upper body anti-collision light (Fig. 202):
(a) Remove the Sculptured Ceiling Panels to get access to the upper body anti-collision light (AMM 25-22-01/401).

NOTE: The location of the light is shown on (WDM 33-44-11).

(b) Disconnect the electrical connector.
(c) Push the light subassembly up while you turn it counterclockwise to disengage it.
(d) Remove the light subassembly.
(e) Loosen the captive screw in the center of the reflector in the lamp module.
(f) Hold the bottom of the lamp module while you pull it from its socket.
(g) If it is necessary to replace the lens, do these steps from outside of the airplane:
1) Remove the screws that hold the retaining ring in position.
2) Remove the retaining ring.
3) Remove the lens.

TASK 33-44-02-402-012

4. Install the Body Anti-Collision Lights

A. General

(1) This task provides different steps to install each of the body anti-collision lights.

B. Parts

MM		NOMENCLATURE	IPC		
FIG	ITEM		SUBJECT	FIG	ITEM
201	1	Light Assy	33-44-02	02	30
	2	Cable Assembly			25
	3	Nut			54
	4	Washer			55
	5	Jumper Assy			20
202	6	Light Assy - Strobe		01	20
	7	Cable Assy			50

C. Access
(1) Location Zones
135/136 Environmental control system (ECS) bay
234 Area above cabin ceiling - section 43

D. Procedure

S 422-013
(1) Do these steps to install the lower body anti-collision light:
(a) Attach the jumper assembly (5) to the light assembly with the nut (3) and the washer (4).
(b) Connect the electrical connector.

NOTE: If the cable assembly is routed across the handle (Fig. 201), loosen the locking ring and reposition the backshell (Fig. 201). Retighten the locking ring once sufficient clearance is obtained. Sufficient slack should remain to provide a drip loop between the power supply and the light.

(c) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.
(d) Hold the lower body anti-collision light assembly while you install the screws that hold it in position.
(e) Make sure the new lamp is free from grease or fingerprints.

NOTE: If the lamp is dirty, clean it with a solvent that has no grease, such as acetone. Carefully apply the solvent with a cloth that has no lint.

(f) Install the lens and the retaining ring with the correct screws.

NOTE: Remove the screw from the drain hole in the lens before you install the lens.

(g) Do the test of the body anti-collision lights as given in this procedure.

S 422-022
(2) Do these steps to install the upper body anti-collision light (Fig. 202):
(a) If it is necessary to install only the light subassembly, do these steps:

CAUTION: DO NOT TOUCH THE LAMP WITH YOUR HANDS. FINGERPRINTS DECREASE LIGHT OUTPUT AND CAN CAUSE THE FAILURE OF THE LAMP BEFORE THE USUAL TIME.

1) Install the lamp module into its socket.
2) Make sure the new lamp has no grease or fingerprints.

NOTE: If the lamp is dirty, clean it with a solvent that has no grease, such as acetone. Carefully apply the solvent with a cloth that has no lint.

3) Tighten the screw in the center of the reflector to hold the lamp module on the light subassembly.
4) Hold the light subassembly in position, then push in and turn it clockwise until it engages.
5) Connect the electrical connector.
6) Make sure that the electrical connections and lamp terminals are clean for good electrical contact.

(b) Do the test of the body anti-collision lights as given in this procedure.
(c) Install the Sculptured Ceiling Panels (AMM 25-22-01/401).
(d) If it is necessary to install only the lens, do these steps:
1) Install the lens and the retaining ring.
2) Install the screws that hold the retaining ring.

TASK 33-44-02-712-014

5. Do the Test of the Body Anti-Collision Lights

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zones
211/212 Flight compartment

C. Procedure

S 862-015

(1) Supply electrical power (Ref 24-22-00).

S 942-016

WARNING: AT NEAR RANGE, DO NOT LOOK DIRECTLY AT THE LIGHTS WHEN THEY FLASH. DAMAGE TO YOUR EYES CAN OCCUR.

(2) Before you operate the body anti-collision lights, make sure all personnel in the area do not look directly at the lights when they flash.

S 862-017

(3) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
   (a) 11M34, ANTI COLL RED

S 712-018

(4) Do these steps to do the test of the body anti-collision lights:
   (a) Push the ANTI COLLISION RED light switch on the pilots' overhead panel, P5, to ON.
   (b) Make sure the lower and upper body anti-collision lights come on and flash.
   (c) Push the ANTI-COLLISION RED light switch again, to the off position.
   (d) Make sure the lower and upper body anti-collision lights go off.

S 862-019

(5) Remove electrical power if it is not necessary (Ref 24-22-00).

WING ANTI-COLLISION (STROBE) LIGHTS POWER SUPPLIES - REMOVAL/INSTALLATION

1. General
   A. This procedure contains two tasks:
      (1) Remove the Wing Anti-Collision Lights Power Supplies
      (2) Install the Wing Anti-Collision Lights Power Supplies
   B. In this procedure, the term power supplies refers to the the wing anti-collision lights power supplies.

TASK 33-44-03-004-001

2. Remove the Wing Anti-Collision Lights Power Supplies (Fig. 401)
   A. Access
      (1) Location Zones
          545/645 Wing tip - outboard of rib No. 23
      (2) Access Panels
          544BB Left wing tip
          644BB Right wing tip
   B. Procedure

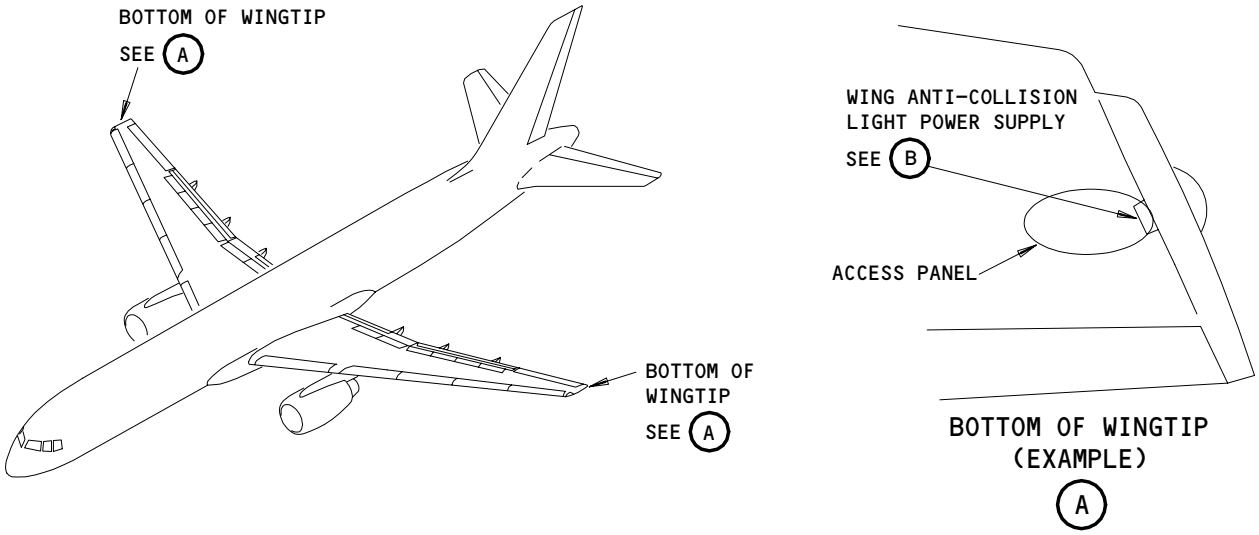
      S 864-002
      (1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
          (a) 11M7, LIGHTING ANTI COLL-WHITE

      S 944-003

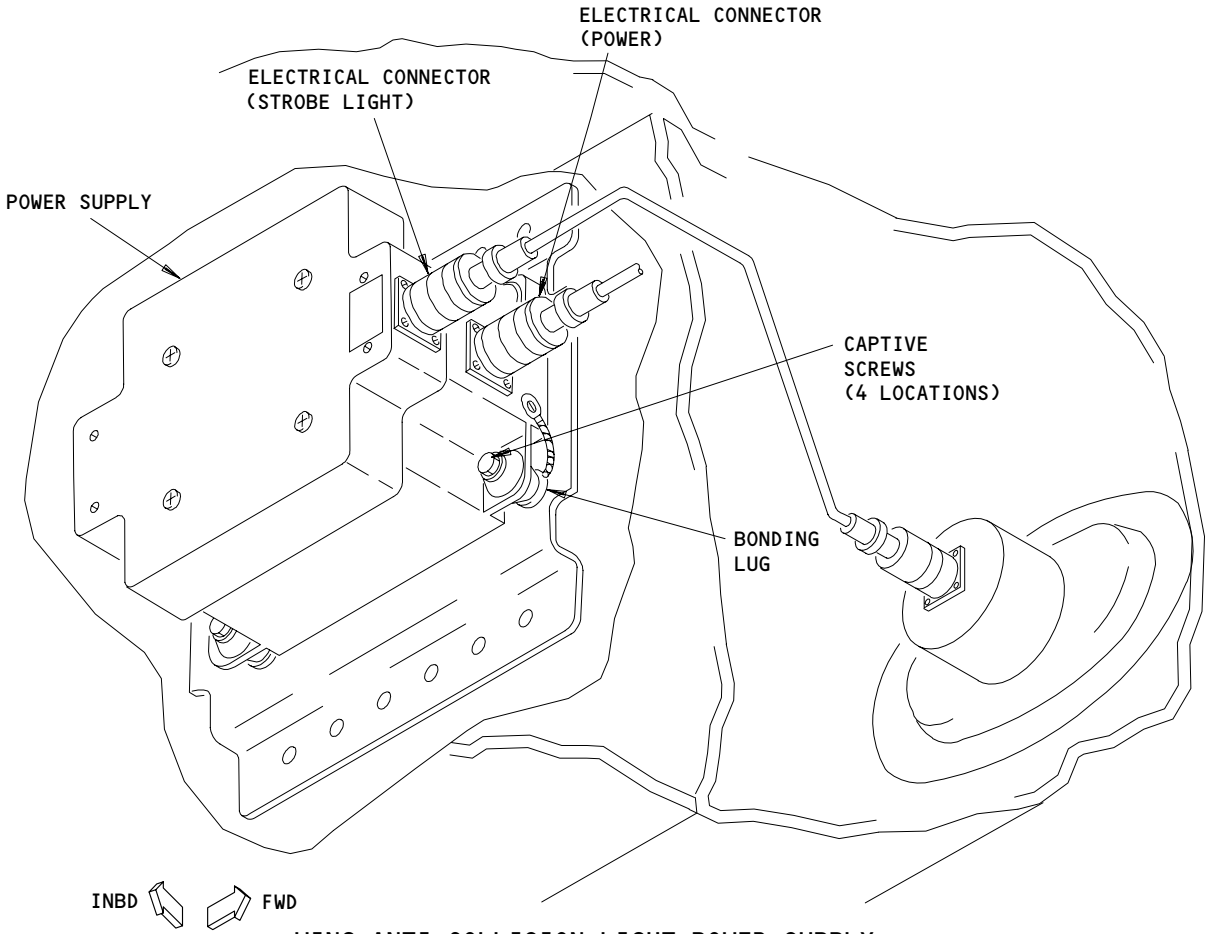
      WARNING: DO NOT TOUCH THE POWER SUPPLY FOR 10 MINUTES AFTER YOU REMOVE THE POWER. INJURY TO PERSONS CAN OCCUR IF YOU REMOVE THE POWER SUPPLY BEFORE THE SPECIFIED TIME.

      (2) Remove the access panel:
          (a) For the left power supply, remove access panel 544BB.
          (b) For the right power supply, remove access panel 644BB.

      S 024-004
      (3) Do these steps to remove the power supplies:
          (a) Put your hand through the opening of the access panel.



BOTTOM OF WINGTIP
(EXAMPLE)
A



WING ANTI-COLLISION LIGHT POWER SUPPLY
(EXAMPLE)
B

Wing Anti-Collision (Strobe) Lights Power Supply Installation
Figure 401

(b) Disconnect the electrical connectors.
(c) Loosen the captive screws.
(d) Remove the power supply.

TASK 33-44-03-404-005

3. Install the Wing Anti-Collision Lights-Power Supplies (Fig. 401)

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zones
211/212 Flight compartment
545/645 Wing tip - outboard of rib No. 23
(2) Access Panels
544BB Left wing tip
644BB Right wing tip

C. Procedure

S 424-006
(1) Do these steps to install the power supplies:
(a) Hold the power supply in position against the bracket while you install the captive screws.
(b) Connect the two electrical connectors.

S 944-007
(2) Install the access panel below the end of the wing.

S 714-008
(3) Do the test of the power supplies as given below.

D. Procedure to Do the Test of the Lights Power Supplies

S 864-010
(1) Supply electrical power (Ref 24-22-00).

S 944-011

WARNING: AT NEAR RANGE, DO NOT LOOK DIRECTLY AT THE LIGHTS WHEN THEY FLASH. DAMAGE TO YOUR EYES CAN OCCUR

(2) Before you operate the wing anti-collision lights, make sure all personnel in the area do not look directly at the lights when they flash.

S 864-012
(3) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
(a) 11M7, LIGHTING ANTI-COLL WHITE

S 714-013
(4) Do these steps to do the test of the power supplies:
(a) Push the ANTI-COLLISION WHITE light switch on the pilots' overhead panel, P5, to ON.

(b) Make sure the wing anti-collision lights come on and that they flash.
(c) Push the ANTI-COLLISION WHITE light switch again, to the off position.

S 864-014
(5) Remove electrical power if it is not necessary (Ref 24-22-00).

BODY ANTI-COLLISION (STROBE) LIGHT POWER SUPPLY - REMOVAL/INSTALLATION

1. General
   A. This procedure contains two tasks:
      (1) Remove the Body Anti-Collision Light Power Supply
      (2) Install the Body Anti-Collision Light Power Supply
   B. The body anti-collision light power supply includes one lower and one upper anti-collision light power supply. When instructions are the same for the two, this procedure refers to them as the power supplies.
   C. Do the maintenance on the lower anti-collision light power supply below the airplane. Do the maintenance on the upper anti-collision light power supply from the cabin.

TASK 33-44-04-004-002

2. Remove the Body Anti-Collision Light Power Supply (Fig. 401)
   A. Access
      (1) Location Zones
          135/136 Environmental Control System (ECS) bay
          234 Area above cabin ceiling - section 43
   B. Procedure to Remove the Power Supplies (Fig. 401)

      S 864-001
      (1) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:
          (a) 11M34, LIGHT ANTI-COLL RED

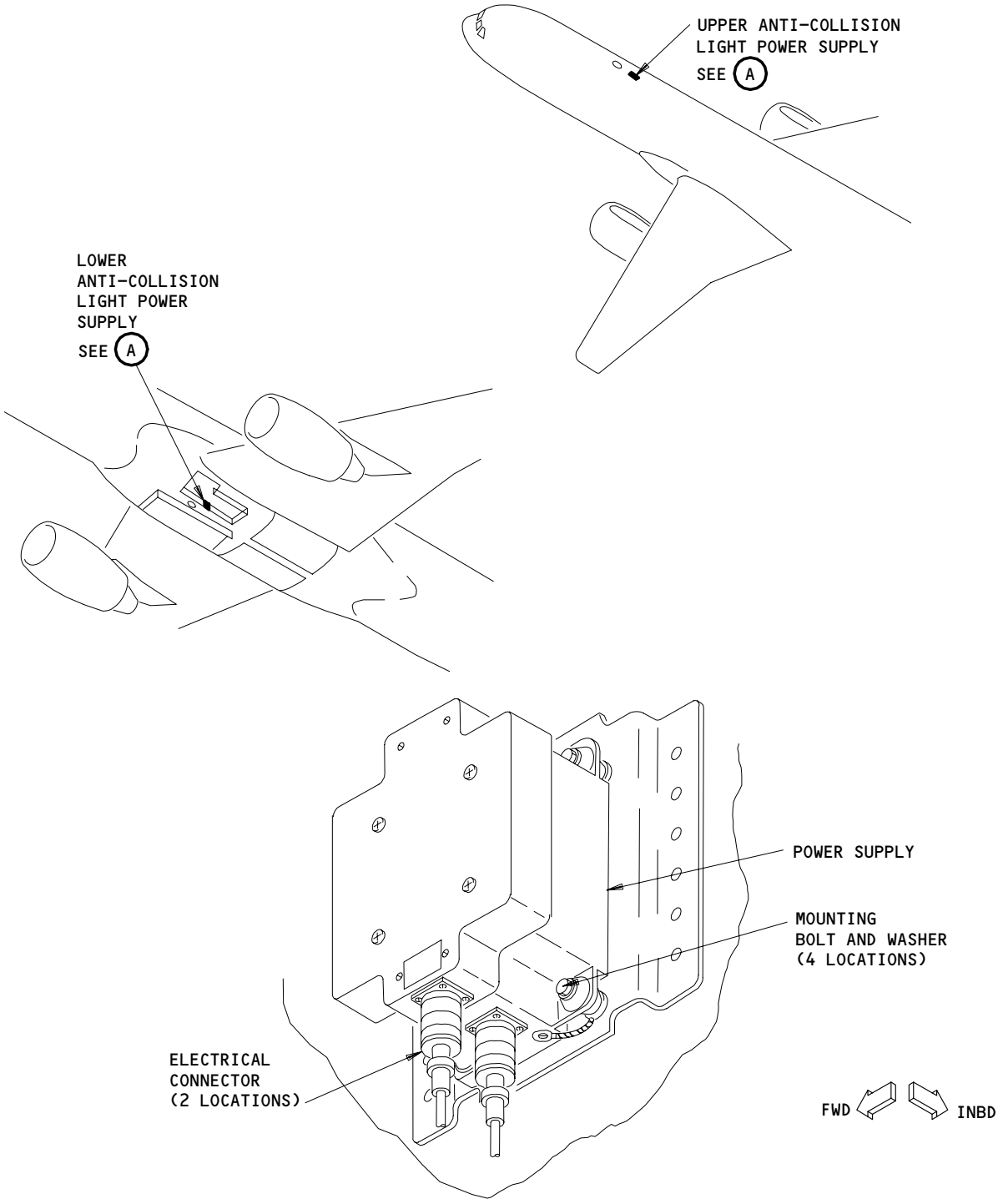
      S 864-003

      WARNING: DO NOT TOUCH THE POWER SUPPLY FOR 10 MINUTES AFTER YOU REMOVE THE POWER. INJURY TO PERSONS CAN OCCUR IF YOU REMOVE THE POWER SUPPLY BEFORE THE SPECIFIED TIME.

      (2) Do not touch the power supply for ten minutes after you remove the power.

      S 014-013
      (3) To get access to the lower anti-collision light power supply, open the left ECS door.

      S 014-004
      (4) To get access to the upper anti-collision light power supply, open the ceiling panel adjacent to it.
          (a) On the right side of the airplane, operate the latches on the inboard side of the ceiling panel.



ANTI-COLLISION LIGHT POWER SUPPLY
(EXAMPLE)

A

Body Anti-Collision (Strobe) Light Power Supply Installation
Figure 401

(b) Lower the ceiling panel.

S 024-004

(5) Do these steps to remove the power supplies:
(a) Disconnect the electrical connectors.
(b) Disconnect the bonding wire.
(c) Loosen the mounting bolts.
(d) Remove the power supply.

TASK 33-44-04-404-005

3. Install the Body Anti-Collision Light Power Supply (Fig. 401)

A. References
(1) 24-22-00/201, Electrical Power - Control

B. Access
(1) Location Zones

135/136	Environmental control system (ECS) bay
211/212	Flight compartment
234	Area above cabin ceiling - section 43

C. Procedure

S 864-007

(1) Do these steps to install the power supplies:
(a) Install the power supply with the mounting bolts.
(b) Connect the bonding wire.
(c) Attach the electrical connectors.

S 414-005

(2) For the upper anti-collision light power supply, install the ceiling panel.

S 414-006

(3) For the lower anti-collision light power supply, close the ECS doors.

S 714-007

(4) Do the test of the body anti-collision lights as given below.

D. Do the Test of the Body Anti-Collision Light Power Supply

S 864-008

(1) Supply electrical power (Ref 24-22-00).

S 864-009

(2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
   (a) 11M34, LIGHTING ANTI-COLL RED

S 944-010

WARNING: AT NEAR RANGE, DO NOT LOOK DIRECTLY AT THE LIGHTS WHEN THEY FLASH. DAMAGE TO YOUR EYES CAN OCCUR.

(3) Before you operate the body anti-collision lights, make sure all personnel in the area do not look directly at the lights when they flash.

S 714-011

(4) Do these steps to do the test of the body anti-collision light power supply:
   (a) Push the ANTI COLLISION RED light switch on the pilots' overhead panel, P5, to ON.
   (b) Make sure the two lights come on and flash.
   (c) Push the ANTI-COLLISION RED light switch again, to the off position.

S 864-012

(5) Remove electrical power if it is not necessary (Ref 24-22-00).

LOGO LIGHTS - DESCRIPTION AND OPERATION

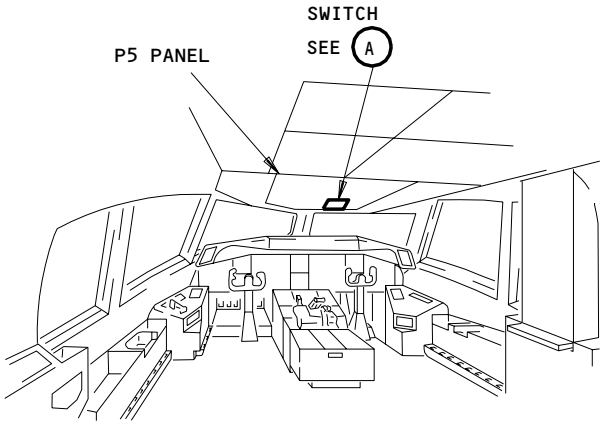
1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-45-01 thru 33-45-99
      (2) WDM 33-45-11 thru 33-45-99
   B. Two logo lights installed in the upper surface of each horizontal stabilizer illuminate the airline insignia on the vertical fin. The installation is weather sealed and aerodynamically flush.
   C. Component Details
      (1) The logo light system consists of the following components:
         (a) Two logo lights installed on each side of the horizontal stabilizer.
         (b) Logo light transformer included as part of the inboard left and right logo light assemblies.
         (c) Logo light control relay installed in the miscellaneous relay panel (P70) in the main equipment center.
         (d) Logo lights switch-light on pilots overhead panel (P5).
2. Operation
   A. Functional Description
      (1) A single switch-light, on overhead panel P5, controls all four logo lights. With the LOGO switch-light in the ON position, power is applied through the logo light control relay to the left and right logo lights transformers. The transformers are in the inboard logo light housing on each side of the airplane. Each transformer applies power to an inboard logo light and an outboard logo light.

LOGO LIGHTS

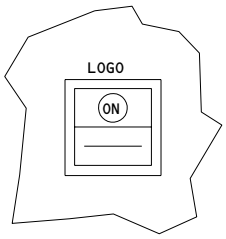
COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1		119BL, MAIN EQUIP CTR, P70	*
LIGHT – LOGO	2		HORIZONTAL STABILIZER	33-45-00
RELAY –			119BL, MAIN EQUIP CTR	*
SWITCH –	2		FLT COMPT	*

* SEE THE SSM OR WDM FOR THE EQUIPMENT NUMBER, QUANTITY AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

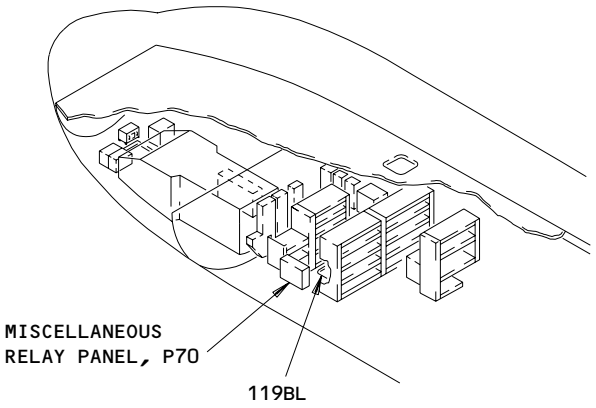
Logo Lights – Component Index
Figure 101



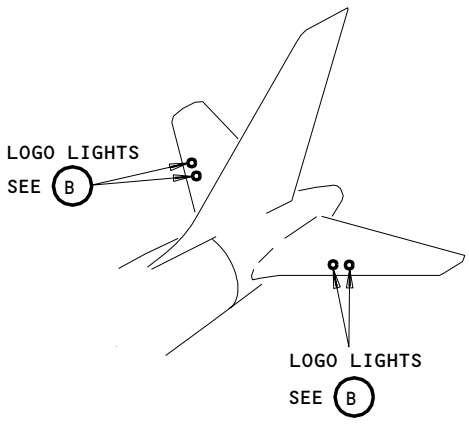
FLIGHT COMPARTMENT

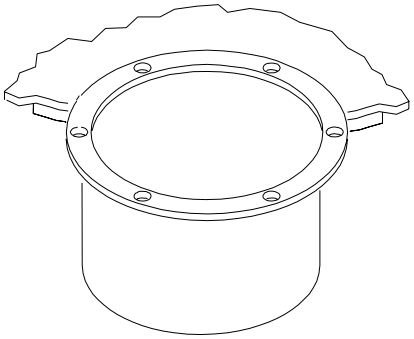


SWITCH
(EXAMPLE)
A



MAIN EQUIPMENT CENTER





LOGO LIGHT
(EXAMPLE)
B

Logo Lights - Component Location
Figure 102

LOGO LIGHTS - MAINTENANCE PRACTICES

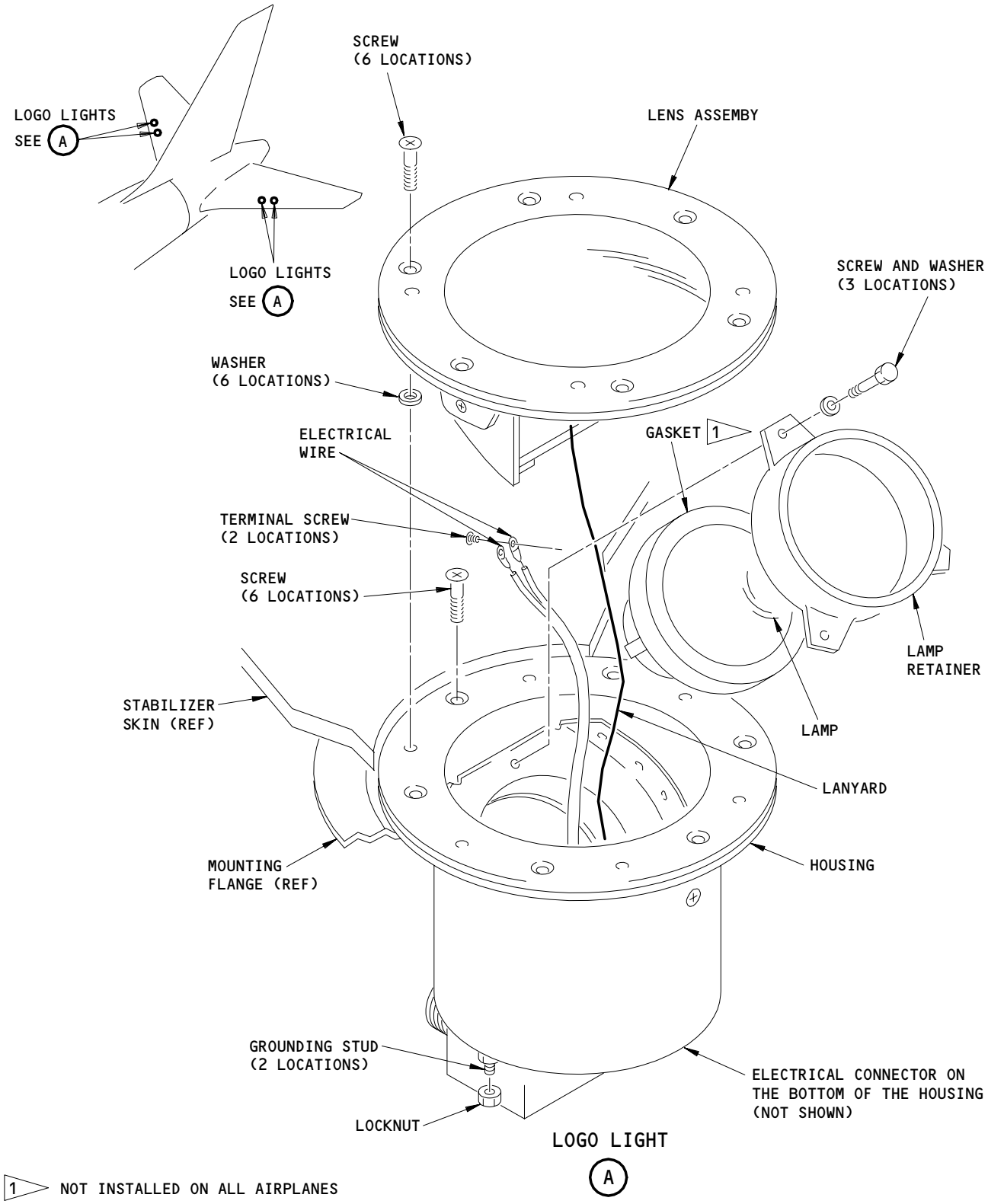
1. General
   A. This procedure contains these tasks:
      (1) Logo Light - Lamp Replacement
      (2) Logo Light - Removal
      (3) Logo Light - Installation
      (4) Logo Lights - Operational Test

   TASK 33-45-00-962-001

2. Logo Light - Lamp Replacement (Fig. 201)
   A. Equipment
      (1) Full-Body Safety Harness
      (2) Attach Lanyard - Wing/Horizontal Stabilizer Safety Harness - B20001-5
      (3) Sealant cutting tool -- hardwood or plexiglass
      (4) Sealing gun -- 6 inch length cartridge, Senco Research, or equivalent
      (5) Spatula
   B. Consumable Materials
      (1) A00247 Sealant -- BMS 5-95, Class B-1/2
      (2) B00184 Solvent -- BMS 11-7
      (3) G00142 Masking Tape -- Permacel Tape No. 70
      (4) G00287 Parting Agent -- Del Chem X-769 or
      (5) G00286 Parting Agent -- 4A-183
   C. References
      (1) AMM 20-10-27/201, Flight Control Surfaces Safety Harness Receptacle
      (2) AMM 24-22-00/201, Control
      (3) AMM 51-31-01/201, Seals and Sealing
      (4) SSM 33-45-01, Logo Lights
      (5) WDM 33-45-11, Stabilizer (Logo) Floodlights
   D. Access
      (1) Location Zones
          212 Control Cabin, Right
          333 Left Horizontal Stabilizer - Auxiliary Spar To Front Spar
          343 Right Horizontal Stabilizer - Auxiliary Spar To Front Spar
   E. Procedure

      S 862-028
      (1) Supply electrical power (AMM 24-22-00/201).

      S 862-019
      (2) On the control stand panel, P10, set the C and the R STAB TRIM switches to the CUTOUT position.



Logo Light Installation
Figure 201

S 862-035

(3) Open these circuit breakers and attach DO-NOT-CLOSE tags:
  (a) Overhead Circuit Breaker Panel, P11
    1) 11C12, STAB TRIM SHUTOFF - L
    2) 11C13, STAB TRIM SHUTOFF - R
  (b) Miscellaneous Relay Panel, P70
    1) 70B22, LOGO LTS L
    2) 70B23, LOGO LTS R

S 942-006

(4) Put on the body harness and attach it to the attach point on the horizontal stabilizer with the attach lanyard (AMM 20-10-27/201).

S 032-027

(5) Remove the sealant between the lens assembly and the airplane skin with the sealant cutting tool (AMM 51-31-01/201).

S 962-008

WARNING: MAKE SURE THAT THE LAMPS ARE COOL BEFORE YOU REPLACE THEM. IF YOU TOUCH THE LAMPS WHEN THEY ARE HOT, INJURY TO PERSON CAN OCCUR.

(6) Do these steps to replace a logo light lamp:
  (a) Remove the screws that hold the lens assembly in position.
  (b) Remove the lens assembly.
  (c) Remove the screws that hold the lamp retainer in position.
  (d) Remove the lamp retainer.
  (e) Lift the lamp from the lamp housing and disconnect the electrical wires from the terminal behind the lamp.

    CAUTION: DO NOT TOUCH THE LAMP WITH YOUR BARE HANDS. FINGERPRINTS CAN DECREASE THE LIGHT OUTPUT AND CAUSE FAILURE OF THE LAMP BEFORE THE USUAL TIME.

  (f) Make sure the surface of the new lamp is clean and has no fingerprints.

    NOTE: If the lamp is dirty, clean it with a grease-free solvent such as acetone. Carefully apply the solvent with a cloth that has no lint.

(g) Connect the electrical wires to the terminals behind the lamp.
(h) On lamps with a gasket,
install the gasket around the new lamp.

NOTE: If the gasket is worn, replace it.

(i) Put the lamp into the lamp housing.
(j) Install the lamp retainer.
(k) Install the lens assembly.
(l) Miscellaneous Relay Panel, P70
1) 70B22, LOGO LTS L
2) 70B23, LOGO LTS R

S 712-014
(7) On the pilot's overhead panel, P5,
push the LOGO switch to the ON position.
(a) Make sure that the lamp comes on.

S 862-050
(8) On the pilot's overhead panel, P5,
push the LOGO switch to the OFF position.

S 392-015
(9) Apply sealant around the outer edge of the lens assembly
(AMM 51-31-01/201).

S 942-049
(10) Remove the attach lanyard from the horizontal stabilizer
(AMM 20-10-27/201).

S 862-037
(11) Remove the DO-NOT-CLOSE tags and close these circuit breakers:
(a) Overhead Circuit Breaker Panel, P11
1) 11C12, STAB TRIM SHUTOFF - L
2) 11C13, STAB TRIM SHUTOFF - R

S 862-052
(12) On the control stand panel, P10,
set the C and the R STAB TRIM switches to the NORM position.

S 862-029
(13) Remove electrical power if it is not necessary for other tasks
(AMM 24-22-00/201).

TASK 33-45-00-002-022

3. Logo Light - Removal (Fig. 201)
A. Equipment
(1) Full-Body Safety Harness
(2) Attach Lanyard - Wing/Horizontal Stabilizer
Safety Harness - B20001-5
B. References
(1) AMM 20-10-27/201, Flight Control Surfaces Safety Harness Receptacle
(2) AMM 24-22-00/201, Control
(3) SSM 33-45-01, Logo Lights
(4) WDM 33-45-11, Stabilizer (Logo) Floodlights
C. Access
(1) Location Zones
333 Left Horizontal Stabilizer - Auxiliary Spar To Front Spar
343 Right Horizontal Stabilizer - Auxiliary Spar To Front Spar
D. Procedure

S 862-038
(1) Open these circuit breakers and attach DO-NOT-CLOSE tags:
(a) Overhead Circuit Breaker Panel, P11
1) 11C12, STAB TRIM SHUTOFF - L
2) 11C13, STAB TRIM SHUTOFF - R
(b) Miscellaneous Relay Panel, P70
1) 70B22, LOGO LTS L
2) 70B23, LOGO LTS R

S 942-051
(2) Put on the body harness and attach it to the attach point on the
horizontal stabilizer with the attach lanyard (AMM 20-10-27/201).

S 022-028

(3) Do these steps to remove a logo light assembly:
  (a) Loosen the screws and remove the lens assembly.
  (b) Remove the screws that hold the housing in position.
  (c) Lift out the housing (with its lamp) from the airplane skin.
  (d) Disconnect the electrical connector and the two grounding wires from the bottom of the housing.
  (e) Remove the logo light assembly.

S 942-043

(4) Remove the attach lanyard from the horizontal stabilizer if it is not necessary for other tasks (AMM 20-10-27/201).

S 862-031

(5) Remove electrical power if it is not necessary for other tasks (AMM 24-22-00/201).

TASK 33-45-00-402-030

4. Logo Light - Installation (Fig. 201)
  A. Equipment
    (1) Full-Body Safety Harness
    (2) Attach Lanyard - Wing/Horizontal Stabilizer Safety Harness - B20001-5
    (3) Resistance measuring bridge or ohmmeter capable of measuring .001 ohm
    (4) Sealing gun -- 6 inch length cartridge, Senco Research, or equivalent
    (5) Spatula
    (6) Stainless steel brush
  B. Consumable Materials
    (1) A00247 Sealant -- BMS 5-95, Class B-1/2
    (2) B00184 Solvent -- BMS 11-7
    (3) G00009 Compound, Corrosion Inhibiting -- BMS 3-23
  C. References
    (1) AMM 20-10-27/201, Flight Control Surfaces Safety Harness Receptacle

(2) AMM 24-22-00/201, Control
(3) AMM 51-24-03/701, Corrosion Inhibiting Coating
(4) AMM 51-31-01/201, Seals and Sealing
(5) SSM 33-45-01, Logo Lights
(6) WDM 33-45-11, Stabilizer (Logo) Floodlights

D. Access

(1) Location Zones
212 Control Cabin, Right
333 Left Horizontal Stabilizer - Auxiliary Spar To Front Spar
343 Right Horizontal Stabilizer - Auxiliary Spar To Front Spar

E. Procedure

S 862-032
(1) Supply electrical power (AMM 24-22-00/201).

S 862-045
(2) Make sure that these circuit breakers are open with DO-NOT-CLOSE tags attached:
(a) Overhead Circuit Breaker Panel, P11
1) 11C12, STAB TRIM SHUTOFF - L
2) 11C13, STAB TRIM SHUTOFF - R
(b) Miscellaneous Relay Panel, P70
1) 70B22, LOGO LTS L
2) 70B23, LOGO LTS R

S 942-046
(3) Put on the body harness and attach it to the attach point on the horizontal stabilizer with the attach lanyard (AMM 20-10-27/201).

S 212-022
(4) Do a visual check of the faying surfaces on the logo light assembly and the airplane for corrosion and dirt.

S 142-000

CAUTION: MAKE SURE THAT THE FAYING SURFACES ARE CLEAN. IF THEY ARE NOT CLEAN, AN UNSATISFACTORY GROUND CAN OCCUR AND CAUSE THE SYSTEM TO OPERATE INCORRECTLY.

(5) Clean faying surfaces with a stainless steel brush until the surface is free from corrosion and dirt (AMM 51-24-03/701).

NOTE: The use of materials other than stainless steel can increase the risk of subsequent corrosion.

S 112-033
(6) With a cloth, apply large quantities of the solvent, BMS 11-7, to the faying surfaces; then rub clean.

S 342-034
(7) Apply the compound, BMS 3-23, to prevent corrosion to the faying surfaces (AMM 51-24-03/701).

S 422-035
(8) Do these steps to install a logo light assembly:
  (a) On the new logo light assembly, remove the screws that hold the lens assembly in position.
  (b) Connect the grounding wires and the electrical connector to the bottom of the housing on the new assembly.
  (c) Put the new assembly in the airplane skin.
  (d) With BMS 5-95, wet install the screws that hold the housing in position.
  (e) Make sure the resistance from the screws in the housing to the airplane skin is not more than .001 ohm.
  (f) Install lens assembly with the correct screws.

S 862-039
(9) Remove the DO-NOT-CLOSE tags and close these circuit breakers:
  (a) Miscellaneous Relay Panel, P70
    1) 70B22, LOGO LTS L
    2) 70B23, LOGO LTS R

S 712-038
(10) On the pilot's overhead panel, P5,
push the LOGO switch to the ON position.
  (a) Make sure that the logo light comes on.

S 862-001
(11) On the pilot's overhead panel, P5,
push the LOGO switch to the OFF position.

S 342-039
(12) Apply sealant around the outer edge of the lens assembly (AMM 51-31-01/201).

S 942-017
(13) Remove the attach lanyard from the horizontal stabilizer (AMM 20-10-27/201).

S 862-040
(14) Remove the DO-NOT-CLOSE tags and close these circuit breakers:
(a) Overhead Circuit Breaker Panel, P11
1) 11C12, STAB TRIM SHUTOFF - L
2) 11C13, STAB TRIM SHUTOFF - R

S 862-023
(15) On the control stand panel, P10,
set the C and the R STAB TRIM switches to the NORM position.

S 862-033
(16) Remove electrical power if it is not necessary for other tasks
(AMM 24-22-00/201).

TASK 33-45-00-712-040

5. Logo Lights - Operational Test

A. References
(1) AMM 24-22-00/201, Control
(2) SSM 33-45-01, Logo Lights
(3) WDM 33-45-11, Stabilizer (Logo) Floodlights

B. Access
(1) Location Zones
212 Control Cabin, Right

C. Procedure

S 862-048
(1) Supply electrical power (AMM 24-22-00/201).

S 712-015
(2) Do these steps to test the logo lights:
(a) On the overhead panel, P5,
push the LOGO switch to the ON position.
(b) Make sure that all four logo lights come on.

(c) On the overhead panel, P5,
push the LOGO switch to the OFF position.
(d) Make sure that all four logo lights go off.

S 862-005
(3) Remove electrical power if it is not necessary for other tasks (AMM 24-22-00/201).

EMERGENCY LIGHTS - DESCRIPTION AND OPERATION

1. General
   A. For more information about this lighting system, refer to these sources:
      (1) SSM 33-51-01 thru 33-51-99
      (2) WDM 33-51-11 thru 33-51-99
   B. The emergency lights automatically supply lighting and identify each exit, if the airplane has an electrical power failure. In this condition, the emergency lighting replaces the usual lighting.
   C. The flight crew and passenger compartment attendants can also operate the emergency lights and signs manually with switches.
   D. Electrical power is supplied to each emergency light from a 6 volt battery operated power supply, independently from airplane generator and battery buses.
2. Component Details
   A. Pilot's Switch
      (1) Primary control of the emergency lights is with a switch on the pilot's overhead panel, P5. There is an UNARMED indicator light adjacent to this switch.
         (a) In the on position, the emergency lights are on.
            1) The UNARMED indicator light is on.
            2) The EICAS system shows an EMERGENCY LIGHT message (AMM 31-41-00).
         (b) In the armed position, the emergency lights come on automatically if there is an electrical power failure.
            1) The emergency lights can be operated manually with the attendant's switch.
         (c) In the off position, the emergency lights are off.
            1) The UNARMED indicator light is on.
            2) The EICAS system shows an EMERGENCY LIGHT message (AMM 31-41-00).
            3) The emergency lights will come on if the attendant's switch is set to the on position.
   B. Attendant's Switch
      (1) Secondary control of the emergency lights is with a switch on the attendant's panel in the passenger compartment.
         (a) In the on position, all the emergency lights are on.
            1) You cannot make the emergency lights go off with the pilot's switch. You must first set the attendant's switch back to the off position.

(b) In the normal position, the emergency lights come on automatically if there is an electrical power failure.
1) The pilot's switch must be set to the armed position.

C. Test Switches
(1) There are test switches in the passenger compartment to do a test of the interior emergency lights.
(a) Each test switch controls two power supplies and their group of emergency lights.
(b) After a switch is set to the on position, the emergency lights go off automatically after approximately one minute.
(c) Each test switch is above a left door or emergency exit.
(2) There is a test switch on the interphone panel, P62. This panel is on the nose gear strut.
(a) This switch controls all the emergency lights, but it is used primarily to test the exterior emergency lights.
(b) After a switch is set to the on position, the emergency lights go off automatically after approximately one minute.

D. Power Supplies
(1) Each power supply contains a battery pack and a logic circuit. The power supply uses 28 volts dc to slowly charge its batteries. The batteries then supply 6 volts dc to operate the emergency lights.
(2) The 28 volts also sets the logic circuit in the power supply to keep the lights on. If there is an electrical power failure that removes the 28 volts, then the logic circuit sets to make the lights come on.
(3) When a switch or test switch for the emergency lights is set to the on position, a ground is supplied to the logic circuit of the power supply. This condition makes the emergency lights connected to the switch come on.
(4) Each power supply is installed above a ceiling or spacer panel adjacent to a passenger door or emergency exit.
(5) A power supply can operate eight lights.
(6) A battery pack that is fully charged will supply electrical power to its emergency lights for a minimum of 10 minutes.
(7) The battery pack is installed in its power supply with quick release fasteners. The battery pack can be removed without the removal of the power supply.
(8) The battery packs require a minimum of 16 hours charging cycle after discharge.

(9) If all power is removed from the airplane, the pilot's emergency lights switch must be set to the off position. This prevents the emergency lights from coming on and discharging the batteries.

E. Hydraulic Motor-Driven Generator

(1) The hydraulic motor-driven generator system automatically supplies power for the interior emergency light when the airplane is airborne and there is a loss of AC power from all the main generators.

3. Operation

A. Functional Description

(1) Interior Emergency Lights

(a) A dome light in the flight compartment gives general lighting in an emergency.

(b) Aisle lights give general lighting to the aisle of the passenger compartment.

(c) Floor proximity emergency lights identify the aisle and the exits of the passenger compartment.

1) The passengers can continue to see these lights if the top of the passenger compartment fills with smoke.

2) Aisle indicator lights are installed on the outer side of seats along the aisle.

3) A strip of aisle indicator lights is installed on the floor along the aisle.

4) An exit sign is installed near the floor on the wall adjacent to each door and emergency exit.

5) In the Emergency Lights section, the aisle indicator lights are also referred to as emergency escape path lights. The exit signs are also referred to as the exit indicator signs or exit identifier signs.

(d) Exit signs show the passengers and crew where the doors and emergency exits are. Each exit sign has a lens on the bottom surface to give lighting to the area below the sign.

1) There is an exit sign above each passenger door, service door, and overwing escape hatch.

2) There are also exit signs which point to the doors and hatches. These signs are installed above the aisle near the ceiling.

3) AIRPLANES WITH SELF-ILLUMINATED EXIT SIGNS;
The lighting for each self-illuminated exit sign comes from a radioactive material.

a) These signs are always on. You cannot make these signs go off with the emergency lights switch.

b) Each sign is a plastic container that holds capsules filled with radioactive tritium gas.

c) The sign is safe, unless it is broken. If the sign has a hole or a crack in it, the radioactive gas can come out and cause injury to persons. It is dangerous to breathe the gas or to absorb the gas through your skin. There are special procedures to replace and discard these signs (AMM 33-51-02/201).

(2) Exterior Emergency Lights

(a) Exterior emergency lights are flush mounted on the fuselage. Lights are near each door and emergency exit. The lights give lighting to the escape slides.

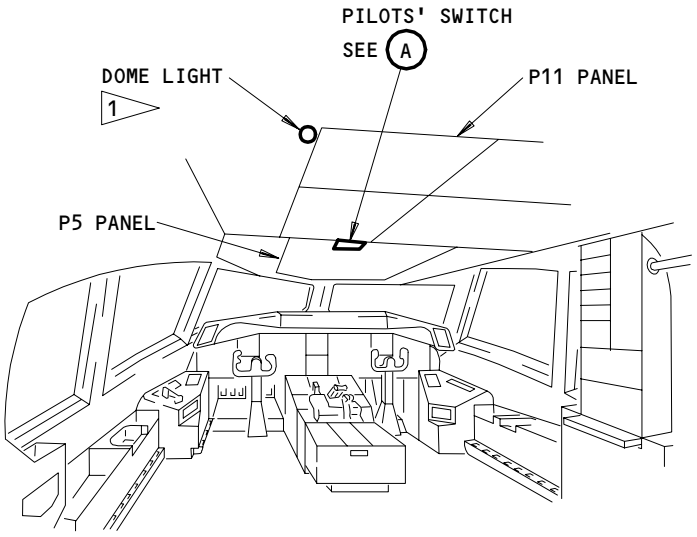
EMERGENCY LIGHTS

COMPONENT*	FIG. 102 SHT	QTY *	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER -			FLT COMPT, P11	*
COMPUTER - EICAS (FIM 31-41-00/101)			MAIN EQUIP CTR	*
LIGHT -				
AISLE	4		PASS. COMPT	33-51-05
DOME	4		FLT COMPT	33-51-09
FLOOR PROXIMITY				
EMERGENCY ESCAPE PATH LIGHT	5		PASS. COMPT	33-51-11
EXIT INDICATOR SIGN	5		PASS. COMPT	33-51-10
INDICATOR	1		FLT COMPT, P5	*
SLIDE	3		FUSELAGE	33-51-06
RELAY -			MAIN EQUIP CTR	*
SIGN - EXIT				
ELECTRICALLY ILLUMINATED	4		PASS. COMPT	33-51-01
SELF-ILLUMINATED 1	4		PASS. COMPT	33-51-02
SUPPLY - POWER	3		PASS. COMPT	33-51-10
SWITCH -				
ATTENDANT'S	2		PASS. COMPT	*
PILOTS'	1		FLT COMPT	*
TEST	2		NOSE LANDING GEAR, P62	*
TEST	2		PASS. COMPT	*

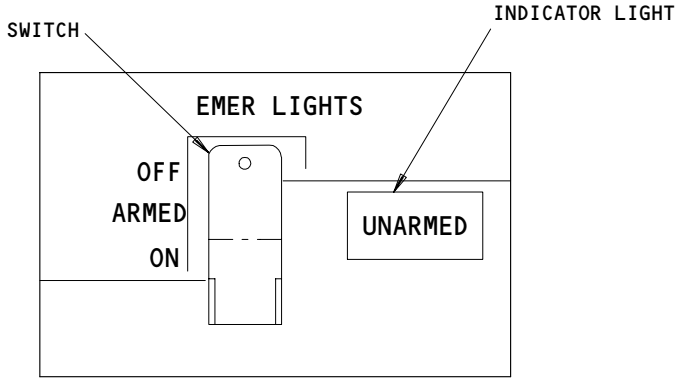
* SEE THE WDM OR SSM FOR THE EQUIPMENT NUMBER, QUANTITY, AND LOCATION OF EACH COMPONENT IN THE LIGHTING CIRCUIT.

1 NOT INSTALLED ON ALL AIRPLANES

Emergency Lights - Component Index
Figure 101



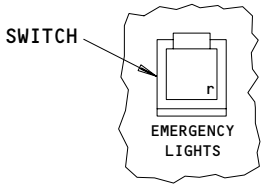
FLIGHT COMPARTMENT



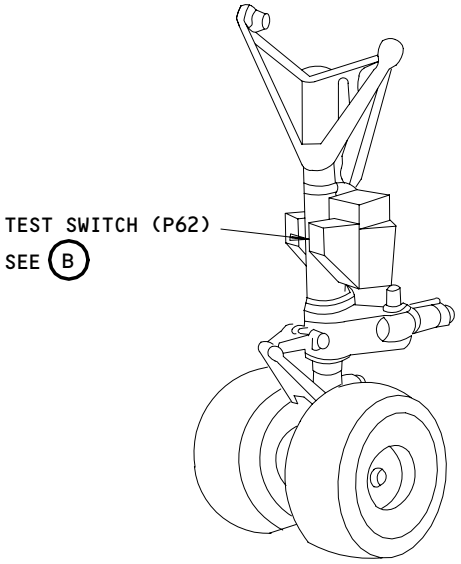
PILOTS' SWITCH
(EXAMPLE)
A

1 PASSENGER AIRPLANES

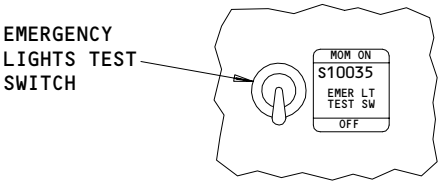
Emergency Lights - Component Location
Figure 102 (Sheet 1)



ATTENDANT'S SWITCH IN THE
PASSENGER COMPARTMENT
(EXAMPLE)



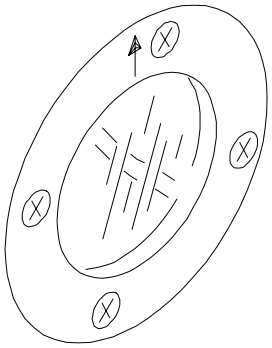
NOSE LANDING GEAR



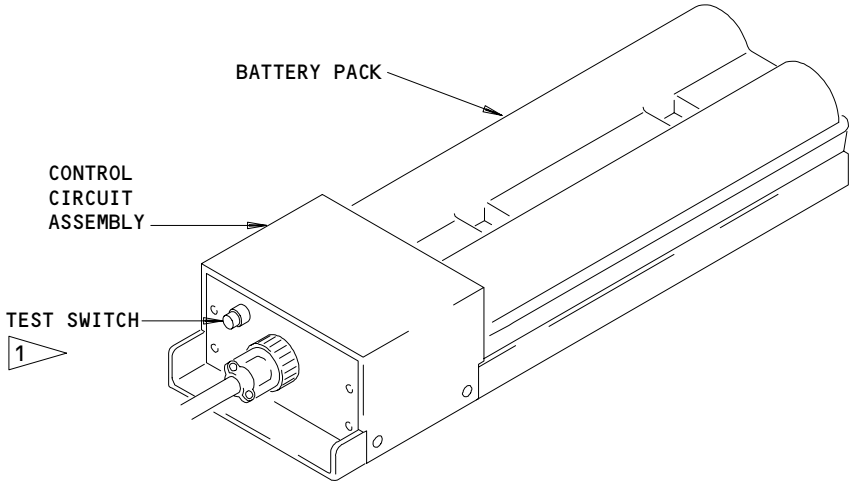
TEST SWITCH
(EXAMPLE)
B

Emergency Lights - Component Location
Figure 102 (Sheet 2)

A47223



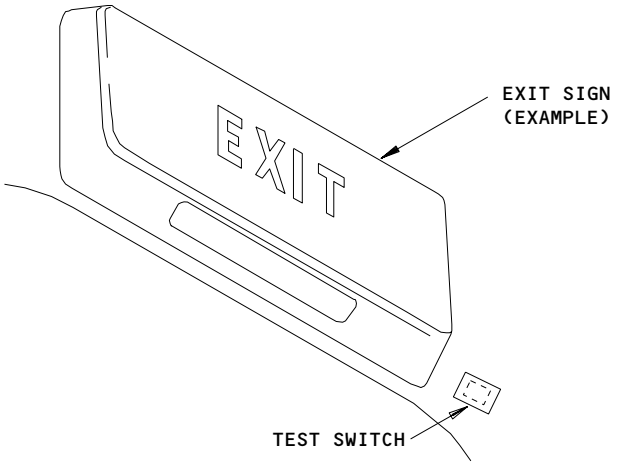
SLIDE LIGHT
(EXAMPLE)



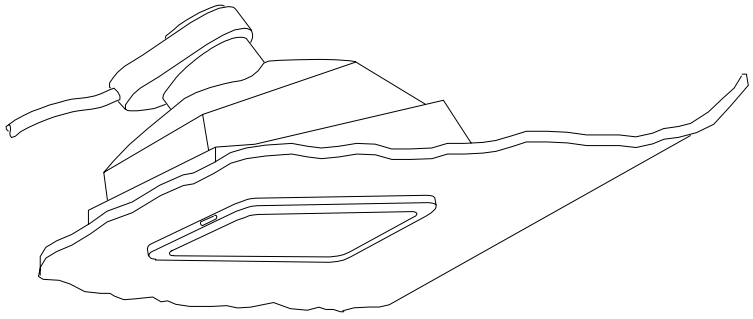
POWER SUPPLY
(EXAMPLE)

1 POWER SUPPLIES WITH A TEST SWITCH

Emergency Light - Component Location
Figure 102 (Sheet 3)



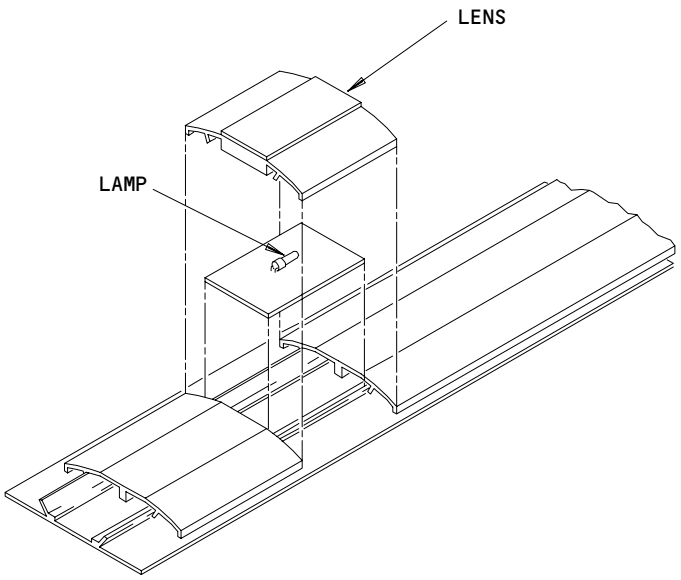
EXIT SIGN
(EXAMPLE)



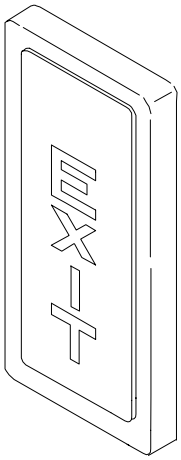
AISLE LIGHT
(EXAMPLE)

EMERGENCY LIGHTS IN THE
PASSENGER COMPARTMENT

Emergency Lights - Component Location
Figure 102 (Sheet 4)



EMERGENCY ESCAPE PATH LIGHT
(EXAMPLE)



EXIT INDICATOR SIGN
(EXAMPLE)

EMERGENCY LIGHTS IN THE
PASSENGER COMPARTMENT

Emergency Lights - Component Location
Figure 102 (Sheet 5)

EMERGENCY LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks:
      (1) Attendant's Panel Removal
      (2) Attendant's Panel Installation

TASK 33-51-00-002-001

2. Attendant's Panel Removal
   A. General
      (1) For the removal of an attendant's panel, refer to AMM 33-22-05/401, AMM 33-22-06/401, or AMM 33-22-07/401.

TASK 33-51-00-402-002

3. Attendant's Panel Installation
   A. General
      (1) For the installation of an attendant's panel, refer to AMM 33-22-05/401, AMM 33-22-06/401, or AMM 33-22-07/401.

EMERGENCY LIGHTS - ADJUSTMENT/TEST

1. General
   A. This procedure contains these tasks:
      (1) Emergency Lights - Daily Operational Test
      (2) Emergency Lights - Operational Test with the Test Switches
      (3) Emergency Lights - Operational Test with the Control Switches
      (4) Emergency Lights - Operational Test of the Lights Connected to the Hydraulic Motor-Driven Generator
      (5) Emergency Lights - Functional Test
   B. The batteries for the emergency lights must be sufficiently charged before and after each test.

TASK 33-51-00-715-075

2. Emergency Lights - Daily Operational Test
   A. References
      (1) SSM 33-51-01
      (2) WDM 33-51-11 thru 33-51-55
   B. Access
      (1) Location Zone
          200 Upper Half of the Fuselage

   C. Procedure

      S 715-036

      CAUTION: DO NOT OPERATE THE EMERGENCY LIGHTS FOR MORE THAN ONE MINUTE. TOO MUCH OPERATION CAN REMOVE THE CHARGE FROM THE BATTERIES.

      (1) At the overhead panel, P5, set the switch for the emergency lights to the on position.
          (a) Quickly make sure the emergency lights come on.
              1) Quickly make sure emergency lights on each side of the airplane come on.

                 NOTE: This test is to make sure the system operates. It is not necessary to examine each emergency light.

S 715-050
(2) Set the switch to the off position.
(a) Make sure the emergency lights go off.

TASK 33-51-00-715-002

3. Emergency Lights - Operational Test with the Test Switches

A. References
(1) SSM 33-50-00 thru 33-51-01
(2) WDM 33-51-11 thru 33-51-51
(3) WDM 91-01-27

B. Access
(1) Location Zone
200 Upper Half of the Fuselage

C. Procedure

S 715-082
(1) Do a test of the interior emergency lights.
(a) In the passenger compartment, set each attendant's test switch for the emergency lights to the on position.

NOTE: Each switch is above a left door or emergency exit. The emergency lights will automatically go off after approximately one minute. Do the test for one switch at a time.

1) Make sure the interior emergency lights come on and go off correctly.

S 715-081
(2) Do a test of the exterior emergency lights.
(a) At the interphone panel, P62, on the nose gear, set the switch for the emergency lights to the on position.
1) Make sure all the exterior emergency lights come on and go off correctly.

NOTE: The interior emergency lights also will come on. All the emergency lights will automatically go off after approximately one minute.

TASK 33-51-00-715-077

4. Emergency Lights - Operational Test with the Control Switches

A. General

(1) The control switches for the emergency lights are in the flight compartment and the passenger compartment. These switches are referred to as the pilot's switch and the attendant's switch.

B. References

(1) AMM 24-22-00/201, Electrical Power - Control
(2) SSM 33-51-00 thru 33-51-01
(3) WDM 33-51-11 thru 33-51-51
(4) WDM 91-01-27

C. Access

(1) Location Zone
200 Upper Half of the Fuselage

D. Procedure

S 865-040

(1) Supply electrical power (AMM 24-22-00/201).

S 715-045

(2) Do a test of the emergency lights.

(a) At the overhead panel, P5, make sure the pilot's switch for the emergency lights is set to the off position.

CAUTION: DO NOT LEAVE THE EMERGENCY LIGHTS ON FOR MORE THAN ONE MINUTE. TOO MUCH OPERATION MAY REMOVE THE CHARGE FROM THE BATTERIES.

(b) At the attendant's panel, set the attendant's switch for the emergency lights to the on position.
1) Quickly make sure each emergency light comes on.

(c) Set the attendant's switch to the off position.
1) Make sure each emergency light goes off.

(d) Set the pilot's switch to the armed position.

CAUTION: DO NOT LEAVE THE EMERGENCY LIGHTS ON FOR MORE THAN 1 MINUTE.
TOO MUCH OPERATION MAY MOVE THE CHARGE FROM THE BATTERIES.

(e) Set the attendant's switch to the on position.
1) Quickly make sure the emergency lights come on.

(f) Set the attendant's switch to the off position.
1) Make sure the emergency lights go off.

CAUTION: DO NOT LEAVE THE EMERGENCY LIGHTS ON FOR MORE THAN 1 MINUTE. TOO MUCH OPERATION MAY REMOVE THE CHARGE FROM THE BATTERIES.

(g) Set the pilot's switch to the on position.
1) Quickly make sure the UNARMED warning light adjacent to the switch comes on.
2) Quickly make sure the EICAS display shows an EMERGENCY LIGHTS message.
3) Quickly make sure the emergency lights are on.

(h) Set the pilot's switch to the armed position.
1) Make sure the UNARMED warning light goes off.
2) Make sure the EICAS display does not show an EMERGENCY LIGHTS message.
3) Make sure the emergency lights go off.

(i) Set the pilot's switch to the off position.
1) Make sure the UNARMED warning light comes on.
2) Make sure the EICAS display shows the EMERGENCY LIGHTS message.
3) Make sure the emergency lights stay off.

S 865-041

(3) Remove electrical power if it is not necessary (AMM 24-22-00/201).

TASK 33-51-00-715-000

5. Emergency Lights - Operational Test of the Lights Connected to the Hydraulic Motor-Driven Generator

A. References
(1) AMM 29-11-00/201, Hydraulic System - Pressurization
(2) SSM 33-21-01 thru 33-21-02
(3) SSM 33-22-01
(4) SSM 33-26-01
(5) WDM 33-21-51
(6) WDM 33-22-11 thru 33-22-14
(7) WDM 33-26-11 thru 33-26-21

B. Access
(1) Location Zone
200 Upper Half of the Fuselage

C. Procedure

S 715-084

(1) Do a test of the night lights and attendant's work lights.
  (a) At the overhead panel, P5, set these switches:
    1) Set the battery switch to the on position.
    2) Set the standby power switch to the automatic position.
    3) Set the external power switch to the on position.
    4) Set the left bus tie switch to the automatic position.
    5) Set the right bus tie switch to the automatic position.
  (b) Open these circuit breakers and attach the DO-NOT-CLOSE tags:
    1) On the main power distribution panel, P6:
      a) 6J17, 115V AC LEFT TRANSFER BUS
      b) 6J23, 115V AC RIGHT TRANSFER BUS
      c) 6M16, CAPTAIN PRIMARY INSTRUMENT BUS - PHASE A
      d) 6M17, CAPTAIN PRIMARY INSTRUMENT BUS - PHASE B
      e) 6M18, CAPTAIN PRIMARY INSTRUMENT BUS - PHASE C
    2) On the overhead circuit breaker panel, P11:
      a) 11Q34, CAPTAIN INSTRUMENT TRANSFER ALTERNATE BUS A
      b) 11Q35, CAPTAIN INSTRUMENT TRANSFER ALTERNATE BUS B
      c) 11Q36, CAPTAIN INSTRUMENT TRANSFER ALTERNATE BUS C
  (c) Pressurize the left hydraulic system. Use the hydraulic service cart (AMM 29-11-00/201).
  (d) Make sure these circuit breakers are closed:
    1) On the P6 panel:
      a) 6C3, HYDRAULIC GENERATOR CONTROL POWER
      b) 6C7, HYDRAULIC GENERATOR 28V DC POWER
    2) On the P11 panel:
      a) 11R6, LEFT AC BUS SENSE
      b) 11R29, RIGHT AC BUS SENSE
  (e) Open these circuit breakers and attach the DO-NOT-CLOSE tags:
    1) On the APU/EXT power panel, P34:
      a) 34G3 - Plate B, FORWARD ENTRY ATTENDANT LIGHTS
      b) 34H1 - Plate B, NIGHT LIGHTS
  (f) Make sure these circuit breakers are closed:
    1) On the P34 panel:
      a) 34A1 - Plate B, EMERGENCY NIGHT LIGHTS

b) 34A3 - Plate B, EMERGENCY ATTENDANT WORK LIGHTS

(g) At the attendant's panel, set the switch for the ceiling lights to the off position.

(h) At the right side panel, P61, set the GROUND PROXIMITY/ HYDRAULIC GENERATOR switch to the HYDRAULIC GENERATOR position.

1) Make sure each night light connected to the hydraulic motor-driven generator come on correctly.

2) Make sure each attendant's work light connected to the hydraulic motor-driven generator come on correctly

(i) Set the GROUND PROXIMITY/HYDRAULIC GENERATOR switch to the off position.

S 715-085

(2) Do a test of the lavatory lights.

(a) Open this circuit breaker and attach the DO-NOT-CLOSE tag:

1) On the P34 panel:

a) 34D1 - Plate B, OCCUPY/DOME LAVATORY LIGHTS

2) Make sure all lavatory lights are off.

(b) Make sure this circuit breaker is closed:

1) On the P34 panel:

a) 34A2 - Plate B, LAVATORY DOME ALTERNATE LIGHTS

(c) Set the GROUND PROXIMITY/HYDRAULIC GENERATOR switch to the HYDRAULIC GENERATOR position.

1) Make sure the emergency light in each lavatory comes on.

(d) Close and latch each lavatory door.

1) Make each lavatory occupied light or sign comes on.

(e) Open each lavatory door.

1) Make sure each lavatory light or sign goes off.

(f) Set the GROUND PROXIMITY/HYDRAULIC GENERATOR switch to the off position.

S 715-033

(3) Do a test of the emergency lights.

(a) At the overhead panel, P5, set the pilot's switch for the emergency lights to the armed position.

(b) Set the GROUND PROXIMITY/HYDRAULIC GENERATOR switch to the HYDRAULIC GENERATOR position.
1) Make sure the emergency lights are off.

CAUTION: DO NOT LEAVE THE EMERGENCY LIGHTS ON FOR MORE THAN 1 MINUTE.
TOO MUCH OPERATION CAN REMOVE THE CHARGE FROM THE BATTERIES.

(c) At the overhead circuit breaker panel, P11, open each circuit breaker for alternate electrical power to the emergency lights.
1) Quickly make sure all the emergency lights come on.
(d) Set the GROUND PROXIMITY/HYDRAULIC GENERATOR switch to the off position.
1) Make sure the emergency lights go off.
(e) Set the pilot's emergency lights switch to the off position.
(f) Close each circuit breaker that was opened.
(g) Remove the power from the hydraulic system (AMM 29-11-00/201).

TASK 33-51-00-725-000

6. Emergency Lights - Functional Test

A. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) AMM 33-51-07/201, Power Supply - Maintenance Practices
(3) SSM 33-50-00 thru 33-51-01
(4) WDM 33-51-11 thru 33-51-51
(5) WDM 91-01-27

B. Procedure

S 715-025
(1) Do a test of the emergency lights with the test switches.
(a) Do this Task: Emergency Lights - Operational Test with the Test Switches.

S 715-000
(2) Do a test of the emergency lights with the pilot's and attendant's emergency lights switches.
(a) Do this Task: Emergency Lights - Operational Test with the Control Switches.

S 725-000
(3) Do a test of the emergency lights connected to batteries with an electrical power failure.
(a) Supply electrical power (AMM 24-22-00/201).

(b) At the overhead panel, P5, set the pilot's switch for the emergency lights to the armed position.

CAUTION: DO NOT LEAVE THE EMERGENCY LIGHTS ON FOR MORE THAN 1 MINUTE.
TOO MUCH OPERATION CAN REMOVE THE CHARGE FROM THE BATTERIES

(c) At the overhead circuit breaker panel, P11, open each circuit breaker for the emergency lights.
1) Quickly make sure the emergency lights come on correctly.
(d) Close each circuit breaker that was opened.
1) Make sure the emergency lights go off.
(e) Set the pilot's switch to the off position.
(f) Remove electrical power if it is not necessary (AMM 24-22-00/201).

S 715-034
(4) Do a test of the emergency lights connected to the hydraulic motor-driven generator.
(a) Do this Task: Emergency Lights - Operational Test of the Lights Connected to the Hydraulic Motor-Driven Generator.

S 725-035
(5) Do a test of the power supplies and their batteries.
(a) Do this Task: Capacity Test the Battery Pack (AMM 33-51-07/201).

EMERGENCY EXIT SIGNS - MAINTENANCE PRACTICES

1. General (Fig. 201)
   A. This procedure has these tasks.
      (1) Emergency Exit Sign Lamp Replacement
      (2) Emergency Exit Sign Removal
      (3) Emergency Exit Sign Installation

   TASK 33-51-01-962-001

2. Emergency Exit Sign Lamp Replacement
   A. Access
      (1) Location Zones
          200 Upper Half of Fuselage

   B. Procedure

      S 862-031
      (1) Identify each lamp to be replaced.
          (a) Set the emergency light test switches to make each exit sign come on.

              NOTE: The switches are on the left side of the passenger compartment above the emergency exits.

          (b) Quickly identify each lamp that does not come on correctly.
          (c) Make sure the exit sign goes off after 1 minute.

      S 032-032
      (2) Remove the lens.
          (a) EXIT SIGNS WITH RELEASE HOLES;
              Push a rod in the release holes.
          (b) EXIT SIGNS WITH RELEASE SWITCHES;
              Push the release switches.
          (c) EXIT SIGNS WITH CLIPS;
              Release the clips.
          (d) Carefully pull off the lens.

      S 962-012
      (3) Replace the lamp.

S 712-015
(4) Do a test of the new lamp.
(a) Set the switch to make the exit sign come on.
1) Quickly make sure the new lamp comes on correctly.
2) Make sure the exit sign goes off after 1 minute.

S 432-016
(5) Install the lens.

TASK 33-51-01-012-002

3. Emergency Exit Sign Removal

A. Access

(1) Location Zones

200 Upper Half of Fuselage

B. Procedure

S 032-033
(1) Remove the lens.
(a) EXIT SIGNS WITH RELEASE HOLES;
Push a rod in the release holes.
(b) EXIT SIGNS WITH RELEASE SWITCHES;
Push the release switches.
(c) EXIT SIGNS WITH CLIPS;
Release the clips.
(d) Carefully pull off the lens.

S 032-018
(2) Remove the fasteners that hold the exit sign in its position.

S 032-019
(3) Disconnect the electrical connectors from the exit sign.

S 022-020
(4) Remove the exit sign.

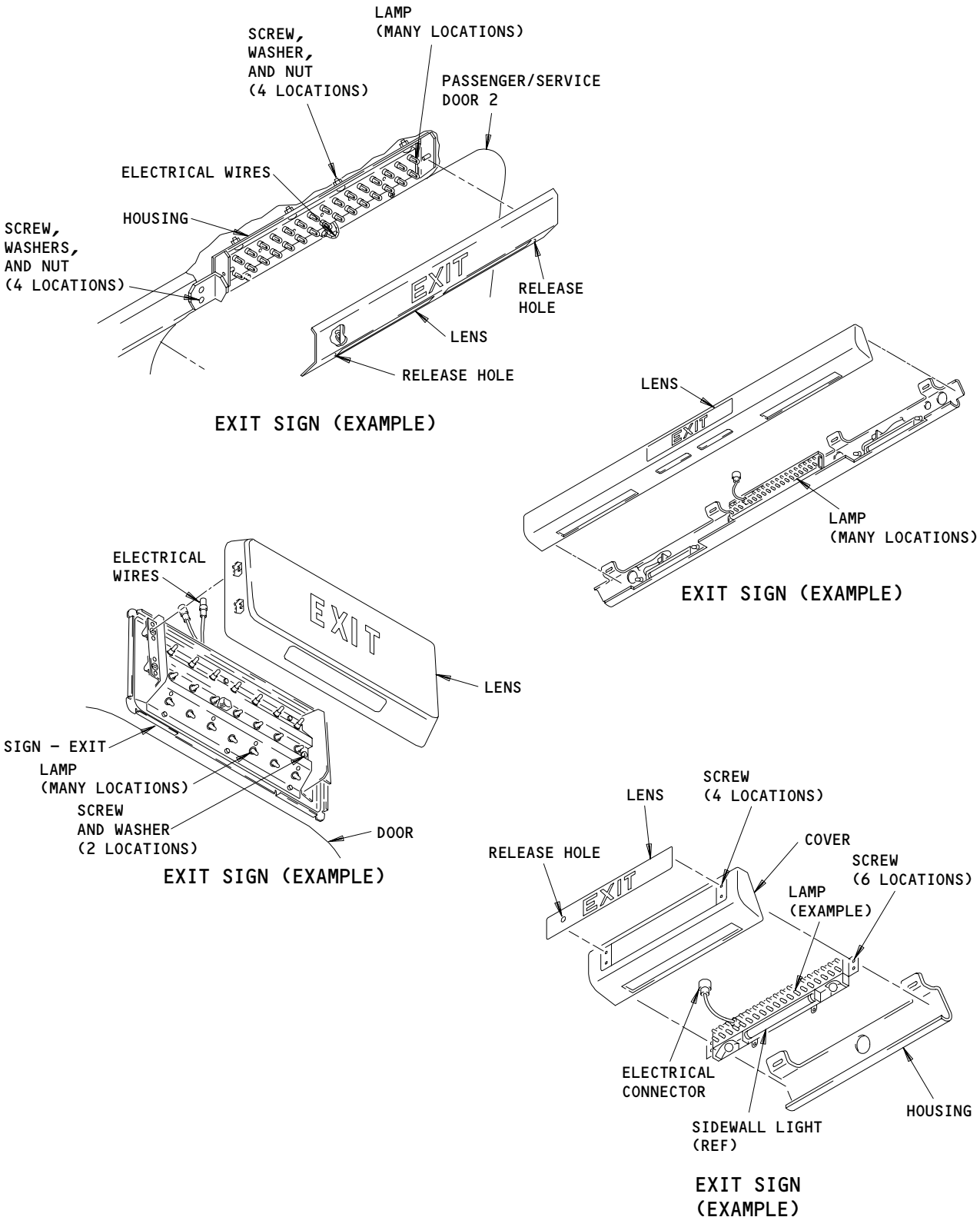
TASK 33-51-01-402-003

4. Emergency Exit Sign Installation

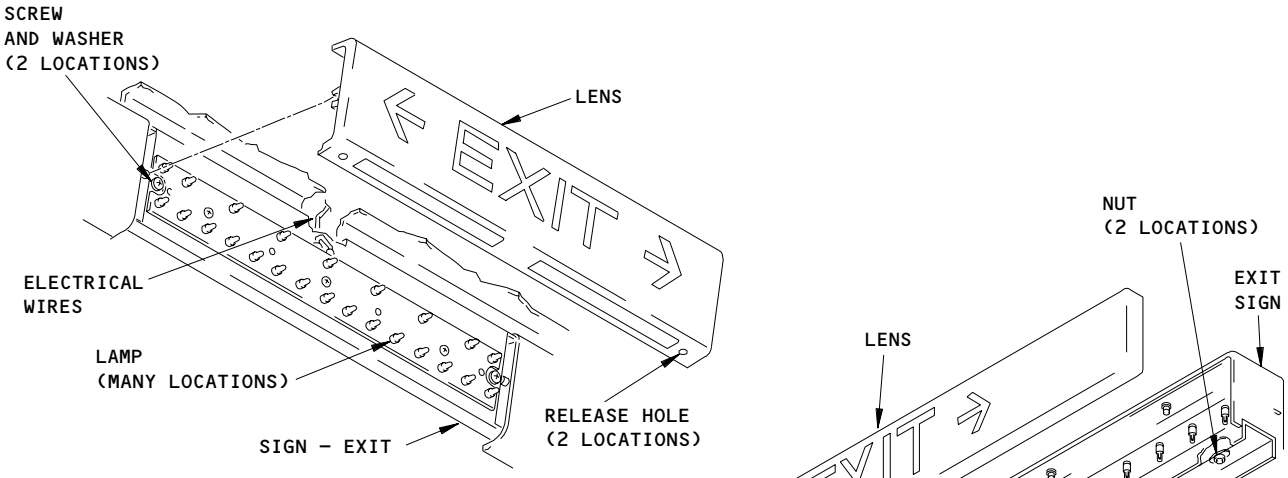
A. Access

(1) Location Zones

200 Upper Half of Fuselage

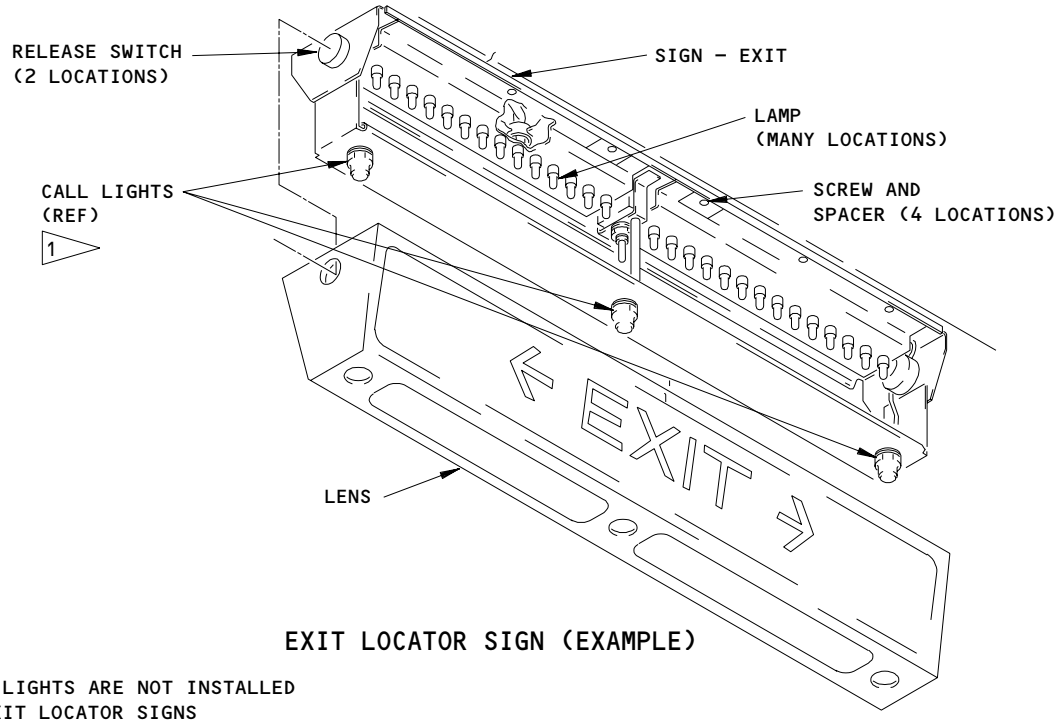


Emergency Exit Signs
Figure 201 (Sheet 1)



EXIT LOCATOR SIGN (EXAMPLE)

EXIT LOCATOR SIGN (EXAMPLE)



EXIT LOCATOR SIGN (EXAMPLE)

1 THE CALL LIGHTS ARE NOT INSTALLED ON ALL EXIT LOCATOR SIGNS

Emergency Exit Signs
Figure 201 (Sheet 2)

B. Procedure

S 432-021
(1) Connect the electrical connectors to the exit sign.

S 422-022
(2) Install the exit sign with the fasteners.

S 712-030
(3) Do a test of the new exit sign.
(a) Set the emergency light test switch to make the new exit sign come on.

NOTE: Test switches are on the left side of the passenger compartment above the emergency exits.

1) Quickly make sure the new exit sign comes on correctly.
2) Make sure the new exit sign goes off after 1 minute.

S 432-026
(4) Install the lens.

SELF-ILLUMINATED EXIT SIGNS - MAINTENANCE PRACTICES

1. General
   A. This procedure contains these tasks for a self-illuminated exit sign (referred to as the sign):
      (1) Exit Sign - Functional Test
      (2) Exit Sign Without Damage - Replacement
      (3) Damaged Exit Sign - Replacement
   B. Each sign is always on. It is a plastic container that holds capsules filled with dangerous radioactive tritium gas. The gas gives the lighting.
   C. The sign is safe, unless it is broken. If the sign gets a hole or a crack, the radioactive gas can come out.
   D. The radioactive gas can cause injury to you. It is dangerous to breathe the gas or to permit the gas to be absorbed by your skin. If you break a sign, go away from the sign. Tell other persons to go away from the sign.
   E. Before you go near the damaged sign again, air must flow around the sign for a sufficient time. To make the air flow, operate the air conditioning system on the airplane or a ground system.
   F. During the servicing of the sign, the air you breathe must be continuously changed. This is to give you protection from the radioactive gas, if the sign breaks. Make sure an air conditioning system is on. The air conditioning system can be the one on the airplane or a ground system.
   G. When you remove a sign, put it in a metal container that has no air leaks. Since the sign is radioactive, you must obey the local government regulations about radioactive materials. There are regulations on how to keep, move, or discard radioactive materials. Keep the container away from persons. Make sure there is a good airflow around the container.
   H. Do not repair a sign. Only the manufacturer of the sign can repair it. You must obey all the applicable government regulations when you send the sign to the manufacturer.
   I. For data on the government regulations about radioactive materials, speak or write to a person in one of these groups:
      (1) The radiation protection group at your airline
      (2) If you are in the United States of America (U.S.A.), the Nuclear Regulatory Commision (NRC)
         (a) If you are in a state with an agreement with the NRC, then obey the regulations of that state. Get the data about the regulations from a person in one of these groups:
            1) The medical group at your airline
            2) The state health department.

(b) If you are in state that does not have an agreement with the NRC, then obey the regulations of the NRC. Get the data about the regulations from a person in one of these groups:
1) The medical group at your airline
2) The NRC Regional Office.
(c) If you are in another country, the local government
(d) If you cannot get the data from your airline group or the government, write or speak to a person in one of these groups:

1) Boeing Commercial Aviation Services - Safety Office:

Telephone: (206) 544-0994

TASK 33-51-02-722-001

2. Exit Sign - Functional Test

A. Equipment

(1) CAN-DB-45-3 - Comparator

Self-Powered Lighting, Inc.
169 Western Highway
West Nyack, New York 10994
U.S.A.

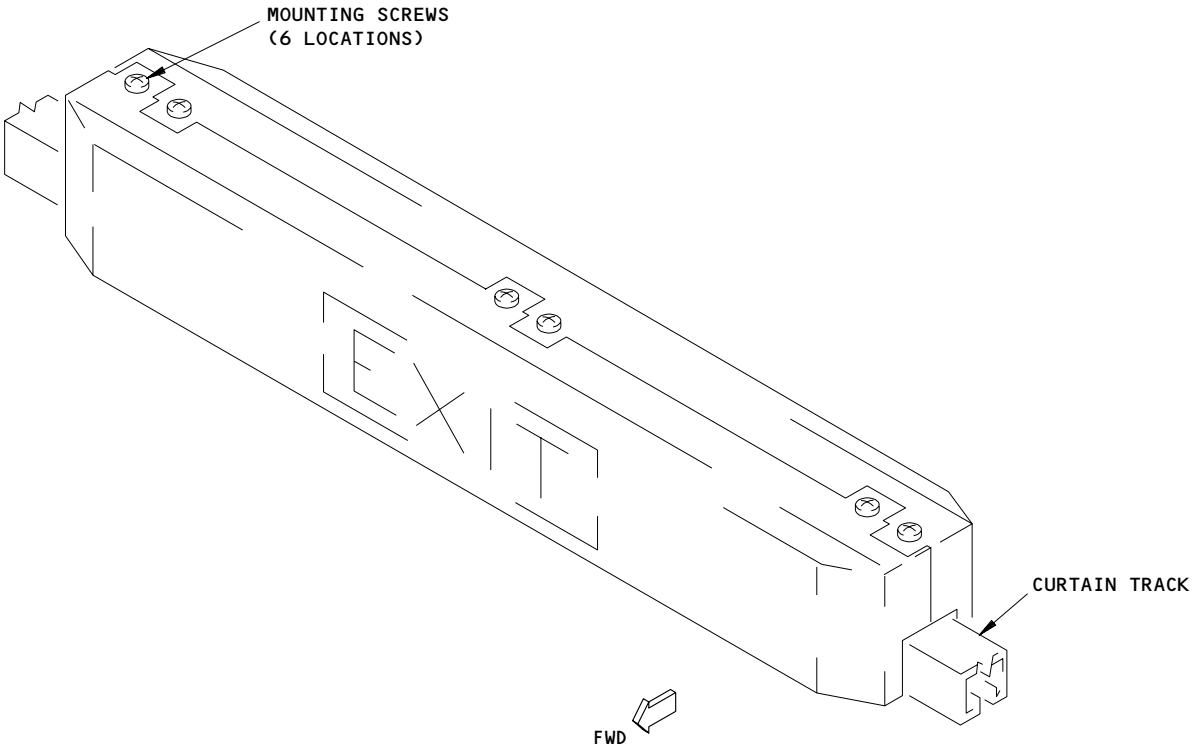
Telephone: (914) 353-0235
FAX: (914) 353-2430

NOTE: For an accurate test of the sign, the light in the comparator must be a minimum of 250 microlamberts. The intensity of the light in the comparator slowly decreases. Replace the light in the comparator when its intensity is not sufficient for an accurate test.

B. Access

(1) Location Zone
200 Upper Half of Fuselage

C. Procedure



SELF-ILLUMINATED EXIT SIGN
(EXAMPLE)

Self-Illuminated Exit Signs
Figure 201

S 022-003

WARNING: SELF-ILLUMINATED EXIT SIGNS CONTAIN A RADIOACTIVE GAS. IF A SIGN BREAKS, THE GAS CAN COME OUT. DO NOT BREATHE THE GAS. DO NOT LET THE GAS TOUCH YOUR SKIN. GO AWAY FROM THE SIGN UNTIL IT IS SAFE TO REPLACE IT. RADIOACTIVE GAS IS DANGEROUS AND CAN CAUSE INJURY.

(1) Examine the sign for cracks and holes.
  (a) If the sign is damaged, replace it.
    1) Do this task to replace the sign: "Damaged Exit Sign - Replacement".

S 722-003

(2) Do a lighting intensity test.
  (a) Use the comparator to compare the intensity of the sign with the intensity of the light in the comparator.
  (b) If the lighting in the comparator is brighter than the lighting from the sign, replace the sign.
    1) Do this task to replace the sign: "Exit Sign Without Damage - Replacement".

TASK 33-51-02-962-005

3. Exit Sign Without Damage - Replacement

A. Consumable Materials
  (1) G00000 Container - Metal, Without Air Leaks, For Dry Radioactive Waste Material
  (2) G00000 Soft Packing Material, Air Bubble Plastic Wrapping

B. References
  (1) AMM 21-00-00/201, Air Conditioning

C. Access
  (1) Location Zone
    200 Passenger Compartment

D. Procedure

S 022-006

(1) Remove the sign.
  (a) Make the air conditioning system come on to make the air flow around the sign (AMM 21-00-00/201).

WARNING: SELF-ILLUMINATED EXIT SIGNS CONTAIN A RADIOACTIVE GAS. THE GAS CAN COME OUT OF A DAMAGED SIGN. DO NOT BREATHE THE GAS. DO NOT LET THE GAS TOUCH YOUR SKIN. STAY AWAY FROM THE SIGN UNTIL IT IS SAFE TO REPLACE IT. RADIOACTIVE GAS IS DANGEROUS AND CAN CAUSE INJURY.

(b) Remove the mounting screws and remove the sign.
(c) Wind a soft packing material around the sign.
(d) Close and seal the container.

NOTE: Until you can discard the container, keep the container where there is a good airflow. Keep persons away from the container.

1) Make sure the container has a label on the outer side to identify its dangerous radioactive contents.

(e) Discard the container.

NOTE: Make sure you obey all local government regulations about radioactive materials.

S 422-007

(2) Install the new sign with the screws.
(a) Make sure the new sign is not damaged.
(b) Make the air conditioning go off (AMM 21-00-00/201).

TASK 33-51-02-962-002

4. AIRPLANES WITH A SELF-ILLUMINATED EXIT SIGN;
Damaged Exit Sign - Replacement

A. Consumable Materials
(1) G00000 Gloves - Rubber
(2) G00624 Bag - Plastic
(3) G00000 Container - Metal, Without Air Leaks, For Dry Radioactive Waste Material

(4) GOOOOO Soft Packing Material, Air Bubble Plastic Wrapping

B. References

(1) AMM 21-00-00/201, Air Conditioning

C. Access

(1) Location Zone

200 Passenger Compartment

D. Procedure

S 022-008

(1) Remove the sign.

(a) Make the air conditioning system come on to make the air flow around the sign (AMM 21-00-00/201).

WARNING: SELF-ILLUMINATED EXIT SIGNS CONTAIN A RADIOACTIVE GAS. THE GAS CAN COME OUT OF A DAMAGED SIGN. DO NOT BREATHE THE GAS. DO NOT LET THE GAS TOUCH YOUR SKIN. STAY AWAY FROM THE SIGN UNTIL IT IS SAFE TO REPLACE IT. RADIOACTIVE GAS IS DANGEROUS AND CAN CAUSE INJURY.

(b) Put the rubber gloves on your hands.

(c) Remove the mounting screws and remove the sign.

(d) Put the damaged sign in a plastic bag.

1) Keep the plastic bag open.

2) Immediately remove plastic bag from the airplane.

(e) Find a location in an open area where there is a good airflow.

1) Make sure the location is away from all persons.

2) Put the open plastic bag there.

3) Remove the rubber gloves and put them in the plastic bag with the sign.

4) Go away from the area for approximately two hours.

(f) After approximately two hours, close and seal the plastic bag.

(g) Put the plastic bag in the metal container.

(h) Close and seal the container.

NOTE: Until you can discard the container, keep the container where there is a good airflow. Keep persons away from the container.

1) Make sure the container has a label on the outer side to identify its dangerous radioactive contents.

(i) Discard the container.

NOTE: Make sure you obey all local government regulations about radioactive materials.

S 422-009

(2) Install the new sign with the screws.
  (a) Make sure the new sign is not damaged.
  (b) Make the air conditioning go off (AMM 21-00-00/201).

AISLE LIGHTS - MAINTENANCE PRACTICES

1. General (Fig. 201)
   A. The aisle lights are found in the bullnose assemblies in the passenger cabin.
   B. This procedure includes these tasks:
      (1) Aisle Light Lamp Replacement
      (2) Aisle Light Removal
      (3) Aisle Light Installation

TASK 33-51-05-002-001

2. Aisle Light Lamp Replacement
   A. Access
      (1) Location Zones
          200 Upper Half of the Fuselage
   B. Procedure

          S 012-012
      (1) Remove the lens.
          (a) Put a drill rod into the hole below the lens.
          (b) Push gently on the drill rod to remove the lens.

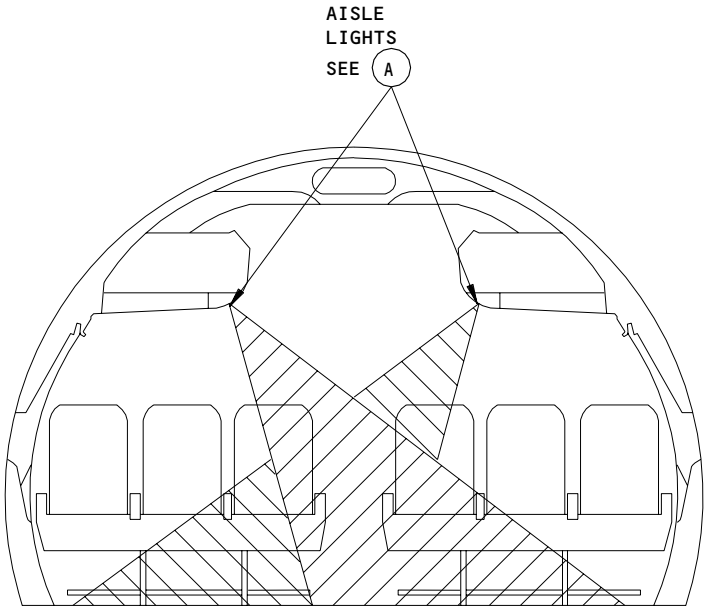
          S 422-013
      (2) Replace the lamp.

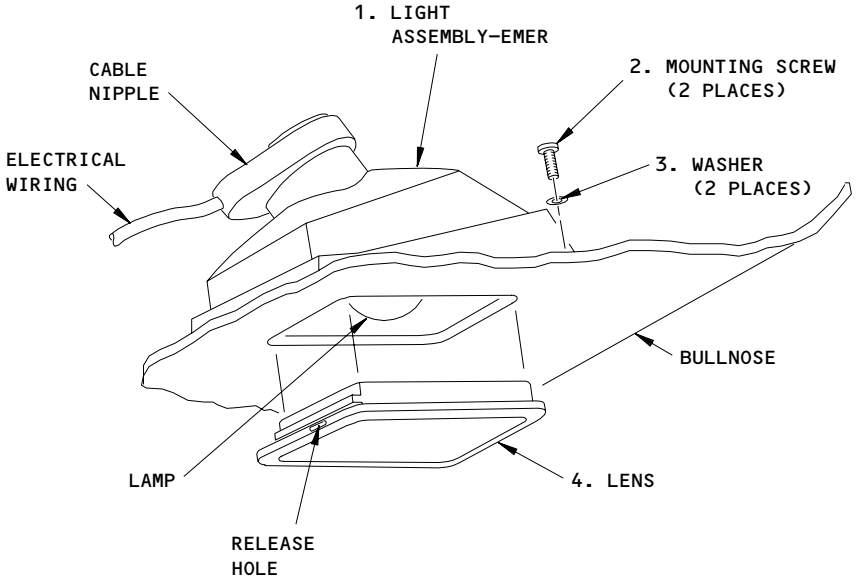
          S 712-048
      (3) Do these steps to do a test of the replaced lamp:
          (a) Push the applicable test switch.
          (b) Make sure the replaced lamp comes on.

          S 862-051
      (4) Install the lens.

TASK 33-51-05-002-018

3. Aisle Light Removal
   A. References
      (1) 25-23-01/401, Passenger Service Unit





AISLE LIGHT

A

Aisle Lights
Figure 201

B. Access
(1) Location Zones
200 Upper Half of the Fuselage
C. Procedure

S 032-049
(1) Remove the lens.
(a) Put a drill rod into the hole below the lens.
(b) Carefully push on the drill rod to remove the lens.

S 012-020
(2) Lower the adjacent passenger service unit (PSU) (Ref 25-23-01) to get access to the light assembly.
(a) Support the PSU oxygen panel, inboard of the light, with your hand.
(b) Put a small screwdriver into the access hole on each side of the panel.
(c) Release the spring clip from the PSU frame and lower the panel to the end of the lanyard.
(d) Remove the mounting screws from the inboard side of the bullnose.
(e) Lower the bullnose assembly.

S 032-026
(3) Slide the cable nipple away from light assembly.

S 032-027
(4) Remove the electrical wires from the light assembly terminals.

S 032-028
(5) Remove the mounting screws and washers.

S 022-029
(6) Remove the light assembly.

TASK 33-51-05-402-030
4. Aisle Light Installation
A. Parts

MM		NOMENCLATURE	IPC		
FIG	ITEM		SUBJECT	FIG	ITEM
201	1	Light Assembly - Emer	33-51-05	01	65
	2	Screw			50
	3	Washer			55
	4	Lens			70

B. References
(1) 25-23-01/401, Passenger Service Unit

C. Access
(1) Location Zones
200 Upper Half of the Fuselage

D. Procedure

S 432-031
(1) Install the electrical wires and cable nipple.

S 422-032
(2) Install the light assembly with the mounting screws and washers.

S 412-033
(3) Close the PSU panel (Ref 25-23-01).
(a) Raise the bullnose assembly into its position and secure it with the mounting screws.
(b) Lift the PSU panel and attach the spring clip to the PSU frame.
(c) Make sure the latches are attached.

E. Do a Test of the Installation

S 712-056

CAUTION: DO NOT KEEP THE EMERGENCY LIGHTS ON FOR MORE THAN 1 MINUTE. THIS CAN DECREASE THE POWER IN THE BATTERIES.

(1) Push the applicable test switch for the emergency lights. (The test switches are above the doors on the left side of the passenger compartment.)
(a) Make sure the replaced light comes on.

F. Put the Airplane Back to Its Initial Condition

S 862-040
(1) Push the lens back into its position.
(a) Make sure the lens is tight.

SLIDE LIGHTS - MAINTENANCE PRACTICES

1. General
   A. This procedure has two tasks. The first task replaces the lamps in the slide lights. The second task replaces the lampholder assembly.

TASK 33-51-06-962-001

2. Replace the Slide Light (Fig. 201)
   A. General
      (1) You must be out of the airplane to replace the slide lights.
   B. Access
      (1) Location Zone
          200 Upper Half of Fuselage

   C. Procedure

S 862-004
      (1) Make sure the EMER LIGHTS switch on the pilots overhead panel, P5, is in the OFF position.

S 202-001
      (2) Make sure the EMERGENCY LIGHTS switch on the forward attendant panel, P21, is off.

S 032-021
      (3) Loosen the screws (two turns maximum each time) that hold the lens until you can remove it.

S 032-002
      (4) Remove the lens.

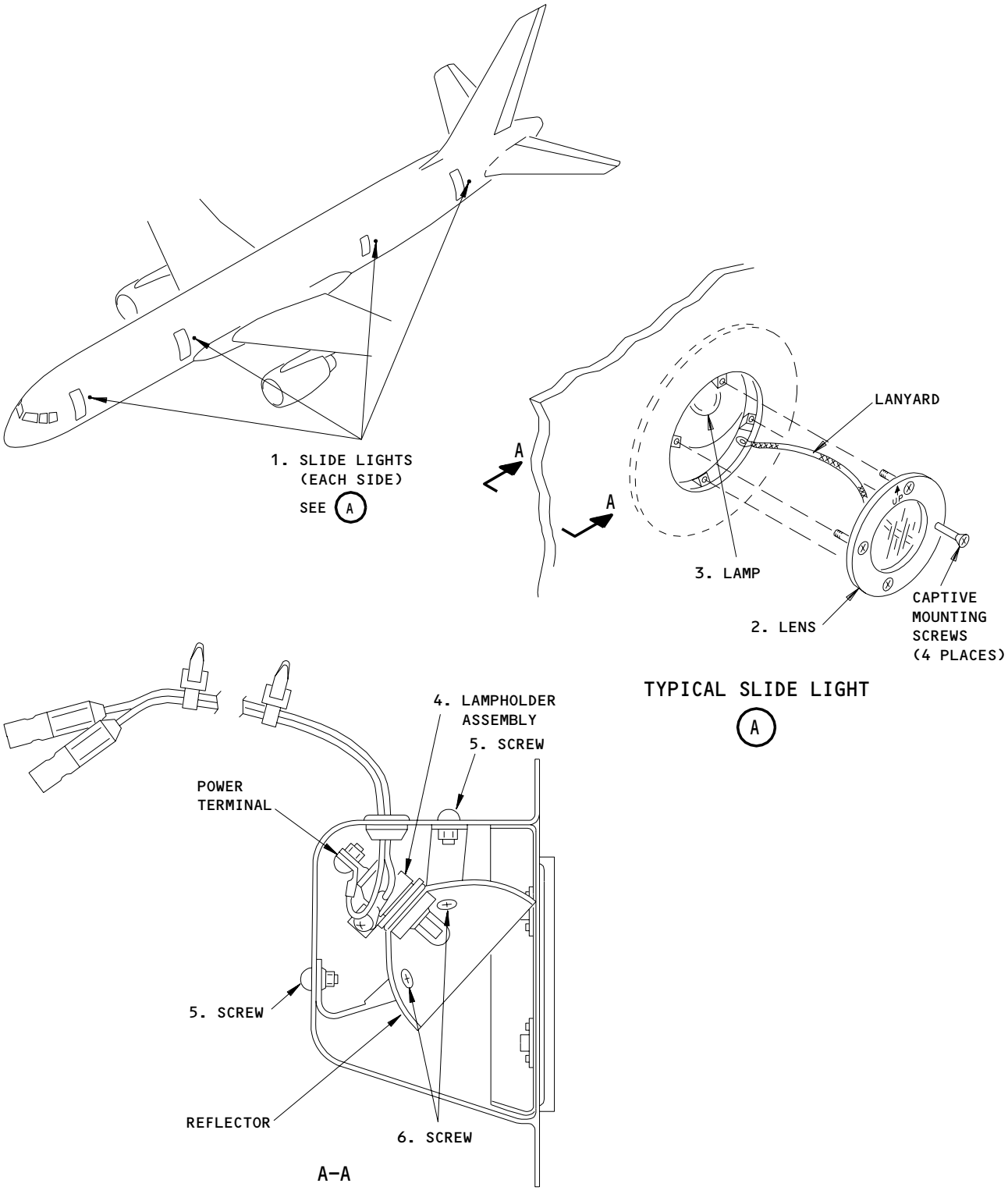
NOTE: Do not disconnect or remove the lanyard.

S 022-005
      (5) Replace the lamp.

S 032-022
      (6) Put the lens on the lamp.

S 862-007
      (7) Make sure the UP arrow on the lens points up.

S 032-008
      (8) Install the lens with the screws.



Slide Lights
Figure 201

S 712-009

(9) Do a test of the slide lights as follows:

CAUTION: DO NOT KEEP THE EMERGENCY LIGHTS ON FOR MORE THAN 1 MINUTE. THIS CAN CAUSE THE POWER TO DECREASE IN THE BATTERIES.

(a) On the nose landing gear, momentarily set the EMER LT TEST SW, on the interphone panel, P62, to the MOM ON position.
(b) Make sure the slide lights.
(c) After 1 minute, make sure the slide lights go off.

TASK 33-51-06-962-010

3. Replace the Lampholder Assembly (Fig. 201)

A. General

(1) The replacement procedure for the lampholder assembly are for the lights adjacent to the passenger doors No. 1, 2, and 4 and emergency door No. 3.

B. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	1	Light Assy - Fwd Door Grd	33-51-06	05	55,65
		Illumination Slide (Left, Right)		51	1,2
		Light Assy - Ctr Door Grd		05	75,85
		Illumination Slide (Left, Right)		51	4,5
		Light Assy - Emer Door Grd		05	95,105
		Illumination Slide (Left, Right)		51	7,8
		Light Assy - Aft Door Grd		05	115,125
		Illumination Slide (Left, Right)		51	10,11
	2	Lens		51	45
	3	Lamp			70

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	4	Lampholder Assy	33-51-06	51	305
	5	Screws			310
	6	Screws			295

C. References

(1) 20-30-01/201, Adhesives, Cements and Sealers

D. Access
(1) Location Zone
200 Upper Half of Fuselage

E. Remove the Lampholder Assembly

S 862-011
(1) Make sure the EMER LIGHTS switch on the pilots overhead panel, P5, is in the OFF position.

S 202-002
(2) Make sure the EMERGENCY LIGHTS switch on the forward attendant panel, P21, is off.

S 032-013
(3) Loosen the screws (two turns maximum each time) that hold the lens until you can remove it.

S 032-012
(4) Remove the lens.

NOTE: Do not disconnect or remove the lanyard.

S 032-023
(5) Remove the lamp from the reflector assembly.

S 032-004
(6) Remove the fasteners from the reflector assembly (4 places).

S 862-005
(7) Write the location and color of the electrical wires on the lampholder terminals.

S 032-024
(8) Remove the wires from the terminals.

S 032-007
(9) Remove the lampholder assembly.

F. Install the Lampholder Assembly

S 432-008
(1) Connect the electrical wires to the lampholder terminals.

S 432-009
(2) Attach the reflector assembly to the bracket with the fasteners (4 places).

S 412-010
(3) Install the lamp in the reflector assembly.

S 202-011

(4) Make sure the the UP arrow on the lens points up.

S 412-012

(5) Install the lens with the mouting screws

G. Slide Lights Test

S 912-013

CAUTION: DO NOT KEEP THE EMERGENCY LIGHTS ON FOR MORE THAN 1 MINUTE. THIS CAN CAUSE THE POWER TO DECREASE IN THE BATTERIES.

(1) On the nose landing gear, momentarily set the EMER LT TEST SW, on the interphone panel, P62, to the MOM ON position.

S 202-017

(2) Make sure the slide lights come on for one minute and then go off.

POWER SUPPLY - MAINTENANCE PRACTICES

1. General (Fig. 201)
   A. This procedure has these tasks:
      (1) Battery Pack - Capacity Test (Deep Cycle)
      (2) Battery Pack - Replacement
      (3) Power Supply - Fuse Replacement
      (4) Power Supply - Removal
      (5) Power Supply - Installation
      (6) Power Supply - Overhaul

   TASK 33-51-07-732-037
2. Battery Pack Capacity Test (Deep Cycle)
   A. References
      (1) AMM 24-22-00/201, Electrical Power-Control
   B. Access
      (1) Location Zone
          200 Upper Half Of The Fuselage
   C. Procedure

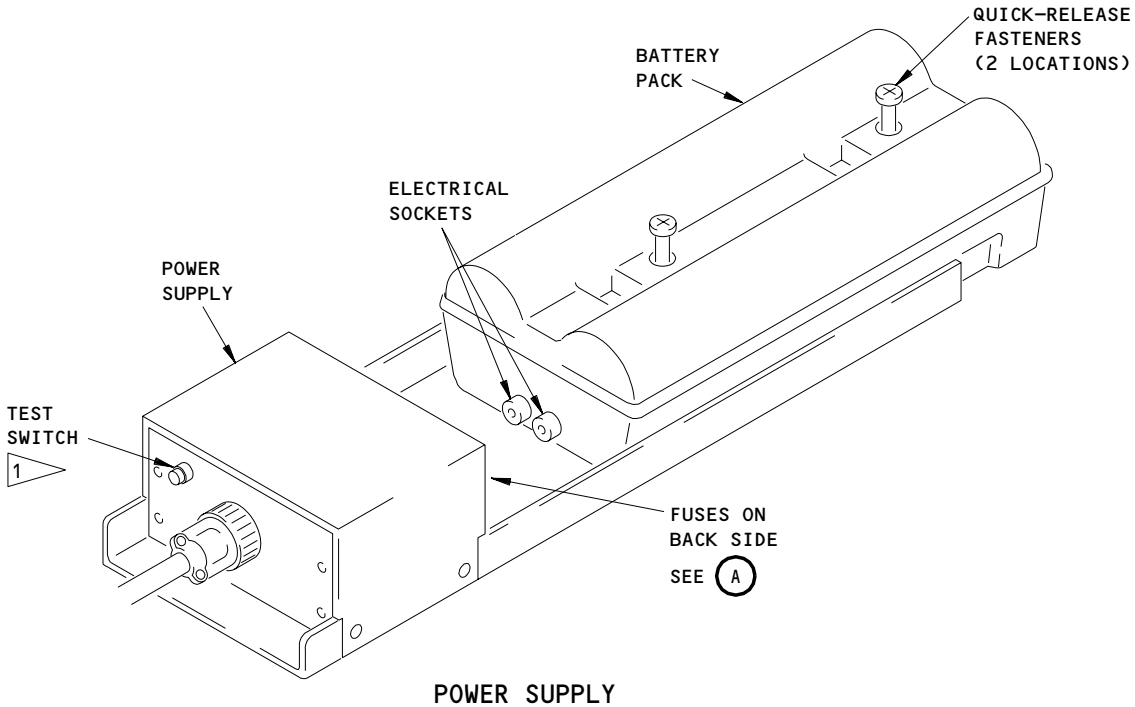
      S 732-038
      (1) Do these steps to do the battery pack capacity test:
          (a) Set the emergency light switch on the pilots' overhead panel, P5, to the ON position.

              NOTE: You will leave the emergency lights switch on until all the emergency lights go off. This can take up to 90 minutes.

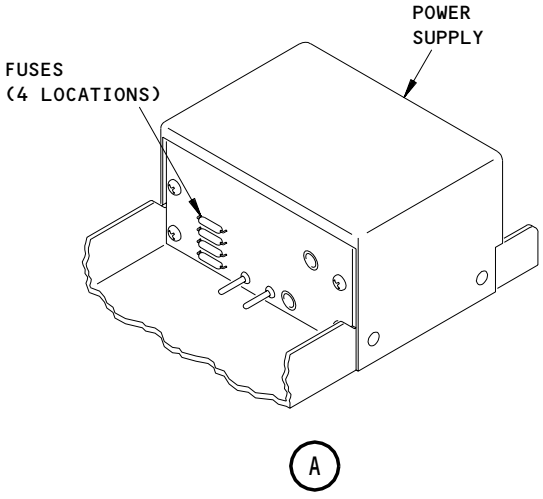
              1) Make sure that each emergency light comes on for 15 minutes or more before it goes off.

                 NOTE: Each power supply causes its group of emergency lights to go off automatically when its battery pack cannot supply sufficient electrical power.

          (b) After all of the emergency lights have gone off, set the switch to the OFF position.
          (c) If there are emergency lights that did not stay on for 15 minutes or more, then either do the task to replace the faulty battery pack or do the following steps:
              1) Supply electrical power for 16 hours to fully charge the batteries (AMM 24-22-00/201).



POWER SUPPLY
(EXAMPLE)



1 NOT INSTALLED ON
ALL POWER SUPPLIES

Power Supply Installation
Figure 201

2) Set the emergency light switch on the pilots' overhead panel, P5, to the ON position.
a) Make sure that each emergency light comes on for 15 minutes or more before it goes off.
3) If there are emergency lights that did not stay on for 15 minutes or more, then do the task to replace the faulty battery pack.
(d) To prepare the airplane for flight, supply electrical power for 16 hours to fully charge the batteries (AMM 24-22-00/201).

TASK 33-51-07-902-001

3. Battery Pack - Replacement

A. References
(1) AMM 25-22-02/401, Lowered Ceiling Panels
(2) AMM 25-23-01/401, Passenger Service Units
(3) SSM 33-51-01 thru 33-51-99
(4) WDM 33-51-11 thru 33-51-99

B. Access
(1) Location Zones
830/840 Upper Half of the Fuselage

C. Battery Pack Replacement

S 862-039
(1) Open these circuit breakers and attach DO-NOT-CLOSE tags:
(a) Overhead Circuit Breaker Panel, P11
1) 11N35, EMER CHARGER L
2) 11N36, EMER CHARGER R

S 012-006
(2) Get access to the power supply.
(a) For a power supply above an overhead stowage bin, get access to the top of the bin.
(b) For a power supply above a door, lower the attendant service unit (ASU) inboard of the door (AMM 25-23-01/401).
(c) For a power supply above a spacer panel, open the panel (AMM 25-23-01/401).
(d) For a power supply above a lowered ceiling panel, open the adjacent access panel (AMM 25-22-02/401).
(e) For a power supply above a light panel, put a small screwdriver or rod in each release hole and open the panel.

S 862-007
(3) Turn the quarter turn fasteners on the battery pack counterclockwise to a stop.

S 862-008

CAUTION: MAKE SURE THE SOCKETS HAVE CLEARED THE ELECTRONIC ASSEMBLY MATING PINS BEFORE YOU RAISE THE BACK END OF THE BATTERY PACK. FAILURE TO DO SO CAN CAUSE DAMAGE TO THE MATING PINS AND/OR THE BATTERY PACK.

(4) Move the battery pack straight away from the electronics assembly until the sockets clear the mating pins.

S 022-009
(5) Remove the battery pack.

S 212-010
(6) Make sure the new battery pack installation date on the instruction tag has not expired.

NOTE: Do not remove the instruction tag from the battery pack.

S 422-011
(7) Put the new battery pack on the power supply chassis.

S 862-012
(8) Slide the battery pack to the electronics assembly until the sockets engage with the pins.

S 862-013
(9) Push forward until the battery pack is firmly seated.

S 862-014
(10) Turn the quarter turn fasteners clockwise until you hear a click.

S 862-040
(11) Remove the DO-NOT-CLOSE tags and close these circuit breakers:
(a) Overhead Circuit Breaker Panel, P11
1) 11N35, EMER CHARGER L
2) 11N36, EMER CHARGER R

D. Battery Pack Test

S 712-031
(1) Set the applicable test switch to the on position.

NOTE: Use the test switch on the power supply or the attendant's test switch.

(a) Make sure each emergency light connected to the power supply come on correctly.
(b) Make sure the emergency lights go off after approximately one minute.

S 432-029
(2) Close each panel that was opened to get access to the power supply.

TASK 33-51-07-962-071

4. Power Supply - Fuse Replacement (Fig. 201)

A. References
(1) AMM 25-22-02/401, Lowered Ceiling Panels
(2) AMM 25-23-01/401, Passenger Service Units
(3) SSM 33-51-01 thru 33-51-99
(4) WDM 33-51-11 thru 33-51-99

B. Access
(1) Location Zones
830/840 Upper Half of Fuselage

C. Procedure

S 862-064
(1) Open these circuit breakers on the P11 panel and attach DO-NOT-CLOSE tags:
(a) 11N35, EMER CHARGER L

(b) 11N36, EMER CHARGER R

S 012-065

(2) Get access to the power supply.
   (a) For a power supply above an overhead stowage bin, get access to the top of the bin.
   (b) For a power supply above a door, lower the attendant service unit (ASU) inboard of the door (AMM 25-23-01/401).
   (c) For a power supply above a spacer panel, open the panel (AMM 25-23-01/401).
   (d) For a power supply above a lowered ceiling panel, open the adjacent access panel (AMM 25-22-02/201).
   (e) For a power supply above a light panel, release each latch and open the panel.

      NOTE: If the panel has access holes, put a small screwdriver or rod in each hole to release each latch.

S 962-066

(3) Do these steps to replace a fuse:
   (a) Loosen the fasteners on the battery pack.

   CAUTION: MAKE SURE THE SOCKETS HAVE CLEARED THE ELECTRONIC ASSEMBLY MATING PINS BEFORE YOU RAISE THE BACK END OF THE BATTERY PACK. FAILURE TO DO SO CAN CAUSE DAMAGE TO THE MATING PINS AND/OR THE BATTERY PACK.

   (b) Move the battery pack straight away from the electronics assembly until the sockets clear the mating pins.
   (c) Remove the battery pack.
   (d) Replace each damaged fuse.
   (e) Put the battery pack on the power supply chassis.
   (f) Slide the battery pack to the electronics assembly until the sockets engage with the pins.
   (g) Push forward until the battery pack is firmly seated.
   (h) Tighten the fasteners.

S 712-067

(4) Do a test of the new fuse.
   (a) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
      1) 11N35, EMER CHARGER L
      2) 11N36, EMER CHARGER R
   (b) Set the applicable test switch to the on position.

      NOTE: Use the test switch on the power supply or the attendant's test switch.

      1) Make sure the lights connected to the power supply come on.

2) After one minute, make sure all emergency lights go off automatically.

S 432-069

(5) Close each panel that was opened to get access to the power supply.

TASK 33-51-07-022-020

5. Power Supply - Removal

A. References

(1) AMM 20-41-01/201, Static Sensitive Devices
(2) AMM 25-22-02/401, Lowered Ceiling Panels
(3) AMM 25-23-01/401, Passenger Service Units
(4) SSM 33-51-01 thru 33-51-99
(5) WDM 33-51-11 thru 33-51-99

B. Access

(1) Location Zones

830/840 Upper Half of the Fuselage

C. Power Supply Removal

S 862-041

(1) Open these circuit breakers and attach DO-NOT-CLOSE tags:
(a) Overhead Circuit Breaker Panel, P11
1) 11N35, EMER CHARGER L
2) 11N36, EMER CHARGER R

S 012-025

(2) Get access to the power supply.
(a) For a power supply above an overhead stowage bin, get access to the top of the bin.
(b) For a power supply above a door, lower the attendant service unit (ASU) inboard of the door (AMM 25-23-01/401).
(c) For a power supply above a spacer panel, open the panel (AMM 25-23-01/401).
(d) For a power supply on a lowered ceiling panel, open the adjacent access panel (AMM 25-22-02/401).

(e) For a power supply above a light panel, release each latch and open the panel.

NOTE: If the panel has access holes, put a small screwdriver or rod in each hole to release each latch.

S 022-028

CAUTION: DO NOT TOUCH THE ELECTRICAL CONNECTOR BEFORE YOU DO THE PROCEDURE FOR ELECTROSTATIC DISCHARGE SENSITIVE DEVICES (AMM 20-41-01/201). ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE POWER SUPPLIES.

(3) Remove the electrical connector.

S 032-039

(4) Remove the mounting screws and washers.

S 022-040

(5) Remove the power supply.

TASK 33-51-07-862-054

6. Power Supply - Installation

A. References

(1) AMM 20-41-01/201, Static Sensitive Devices
(2) SSM 33-51-01 thru 33-51-99
(3) WDM 33-51-11 thru 33-51-99

B. Access

(1) Location Zones

830/840 Upper Half of the Fuselage

C. Power Supply Installation

S 862-042

(1) Make sure that these circuit breakers are open with DO-NOT-CLOSE tags attached:
(a) Overhead Circuit Breaker Panel, P11
1) 11N35, EMER CHARGER L

2) 11N36, EMER CHARGER R

S 422-040

CAUTION: DO NOT TOUCH THE ELECTRICAL CONNECTOR BEFORE YOU DO THE PROCEDURE FOR ELECTROSTATIC DISCHARGE SENSITIVE DEVICES (AMM 20-41-01/201). ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE POWER SUPPLIES.

(2) Install the power supply with mounting screws and washers.

S 492-028

(3) Install the electrical connector.

S 862-043

(4) Remove the DO-NOT-CLOSE tags and close these circuit breakers:
(a) Overhead Circuit Breaker Panel, P11
1) 11N35, EMER CHARGER L
2) 11N36, EMER CHARGER R

D. Power Supply Test

S 862-033

(1) Set the applicable test switch to the on position.

NOTE: Use the test switch on the power supply or the attendant's test switch.

(a) Make sure each emergency light connected to the power supply come on correctly.
(b) Make sure the emergency lights go off after approximately one minute.

S 412-034

(2) Close each panel that was opened to get access to the power supply.

TASK 33-51-07-612-048

7. Battery Pack - Overhaul

A. References
(1) AMM 24-22-00/201, Electrical Power - Control

(2) SSM 33-51-01 thru 33-51-99
(3) WDM 33-51-11 thru 33-51-99

B. Access

(1) Location Zones
830/840 Upper Half of the Fuselage

C. Procedure

S 612-053

(1) Do these steps to overhaul the battery pack:
(a) Set the emergency lights switch on the overhead panel, P5, to the ON position.
1) Make sure each emergency light comes on for 15 minutes or more before it goes off.

NOTE: Each power supply causes its group of emergency lights to go off automatically when its battery pack cannot supply sufficient electrical power.

(b) Set the switch to the OFF position.
(c) Supply electrical power for 16 hours to fully charge the batteries (AMM 24-22-00/201).

NOTE: If all the emergency lights came on for 15 minutes or more, then the test is done. The emergency lights are prepared for a flight of the airplane.

S 612-049

(2) If there are emergency lights that did not come on for 15 minutes or more, then do these steps again.
(a) Set the emergency lights switch on the P5 panel to the ON position.
1) Make sure each emergency light comes on for 15 minutes or more before it goes off.
(b) Set the switch to the OFF position.
(c) To prepare the airplane for flight, supply electrical power for 16 hours to fully charge the batteries (AMM 24-22-00/201).

EMERGENCY LIGHTS/PASSENGER OXYGEN CONTROL PANEL - REMOVAL/INSTALLATION

1. General
   A. The pilots' emergency lights control panel is an integral part of the emergency light system. The control panel must not be removed unless certain precautions are taken to make sure the emergency light batteries will not lose their electrical energy.
   B. The emergency lights power supplies turn the emergency lights on when the electrical connector to the control panel is disconnected. To make sure the lights do not come on, 28V DC must be supplied to the power supplies.
   C. This procedure contains two tasks. The first task removes the emergency light/pass oxy control panel from the P5 panel. The second task installs the emergency light/pass oxy control panel to the P5 panel.

TASK 33-51-08-004-001

2. Remove Emergency Lights/Passenger Oxygen Control Panel
   A. General
      (1) This task gives the instructions to remove the emergency lights/ passenger oxygen control panel from the pilots' overhead panel (P5).
   B. References
      (1) AMM 24-22-00/201, Electrical Power - Control
   C. Access
      (1) Location Zones
          211/212 Flight Compartment
   D. Prepare for Removal

      S 214-006
      (1) Make sure the EMER LIGHTS switch on the pilots' overhead panel P5 is set to OFF.

      S 214-007
      (2) Make sure the EMERGENCY LIGHTS switch on the forward attendant panel P21 is off (switchlight off).

      S 864-008
      (3) Supply electrical power (AMM 24-22-00/201).

S 864-009

(4) Make sure these circuit breakers on the P11 panel are closed:
(a) 11N35, EMERGENCY CHARGER LEFT
(b) 11N36, EMERGENCY CHARGER RIGHT

E. Procedure

S 014-002

(1) Do the step that follows to remove the emergency light/pass oxy control panel from the P5 panel:
(a) Loosen the fasteners and lower the emergency light/pass oxy control panel from the overhead panel P5 to get to the electrical connector.

S 034-003

CAUTION: 28 VOLTS DC ELECTRICAL POWER MUST BE SUPPLIED TO THE EMERGENCY LIGHTS POWER SUPPLIES WHILE THE CONTROL PANEL IS DISCONNECTED TO MAKE SURE THE BATTERIES DO NOT LOSE THEIR ELECTRICAL ENERGY.

(2) Disconnect the electrical connector from the emergency lights control panel.

S 024-005

(3) Remove the control panel.

TASK 33-51-08-404-011

3. Install Emergency Lights/Passenger Oxygen Control Panel

A. General
(1) This task gives the instructions to install the emergency lights/passenger oxygen control panel to the pilots' overhead panel.

B. References
(1) AMM 24-22-00/201, Electrical Power - Control
(2) Location Zones
211/212 Flight Compartment

C. Procedure

S 434-012

(1) Connect the electrical connector to the control panel.

S 424-014

(2) Install the control panel onto the pilots' overhead panel P5 with fasteners.

S 714-015

(3) Do a test of the Emergency Light/Pass Oxy Control Panel as follows:

(a) Set the EMER LIGHTS switch (P5) to OFF.

1) Make sure the emergency lights are off and the UNARMED light on the control panel comes on.

CAUTION: DO NOT LEAVE EMERGENCY LIGHTS ON FOR A PERIOD LONGER THAN ONE MINUTE OR THE BATTERIES WILL LOSE THEIR ELECTRICAL ENERGY.

(b) Set the EMER LIGHTS switch (P5) to ON. Make sure the emergency lights come on and that the UNARMED light stays on.

NOTE: Only one emergency light on each side of the passenger cabin needs a check to make sure the system operates properly.

(c) Set the EMER LIGHTS switch (P5) to ARM.

1) Make sure the emergency lights are off and that the UNARMED light goes off.

CAUTION: DO NOT LEAVE THE EMERGENCY LIGHTS ON FOR MORE THAN ONE MINUTE OR THE BATTERIES WILL LOSE THEIR ELECTRICAL ENERGY

(d) Open these circuit breakers on the overhead panel, P11 and attach DO-NOT-CLOSE tags:

1) 11N35, EMERGENCY CHARGER LEFT
2) 11N36, EMERGENCY CHARGER RIGHT

(e) Make sure the emergency lights come on.

NOTE: It is necessary to do a check of only one light on each side to make sure the system operates properly.

(f) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel, P11:
1) 11N35, EMERGENCY CHARGER LEFT
2) 11N36, EMERGENCY CHARGER RIGHT
(g) Make sure the emergency lights go off.
(h) Set the EMER LIGHTS switch (P5) to OFF.

S 864-016
(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

FLIGHT COMPARTMENT EMERGENCY LIGHT - SERVICING

1. General
   A. This procedure has this task:
      (1) Flight Compartment Emergency Light - Lamp Replacement

TASK 33-51-09-033-001

2. Flight Compartment Emergency Light - Lamp Replacement
   A. References
      (1) AMM 24-22-00/201, Electrical Power Control
   B. Access
      (1) Location Zone
          211/212 Flight Compartment
   C. Lamp Replacement

      S 863-006
      (1) Turn the lens counterclockwise and pull the lens down.

      S 963-007
      (2) Carefully replace the lamp.

      S 433-008
      (3) Install the lens.
   D. Lamp Test

      S 713-011
      (1) Above the door No. 1, set the test switch to the on position.
          (a) Make sure the new lamp comes on correctly.
          (b) Make sure the emergency lights go off automatically after approximately one minute.

EXIT IDENTIFIER SIGNS - MAINTENANCE PRACTICES

1. General
   A. This procedure has these tasks:
      (1) Exit Identifier Sign - Lamp Replacement
      (2) Exit Identifier Sign - Removal
      (3) Exit Identifier Sign - Installation
   B. An exit identifier sign refers to an exit indicator sign.

TASK 33-51-10-962-001

2. Exit Identifier Sign - Lamp Replacement (Fig. 201)
   A. Access
      (1) Location Zone
          200 Upper Half of Fuselage

   B. Lamp Replacement

      S 032-010
      (1) Carefully remove the lens.
          (a) Turn the latching screw counterclockwise to release the lens from the base.
          (b) Remove the lens from the latch at the opposite end.

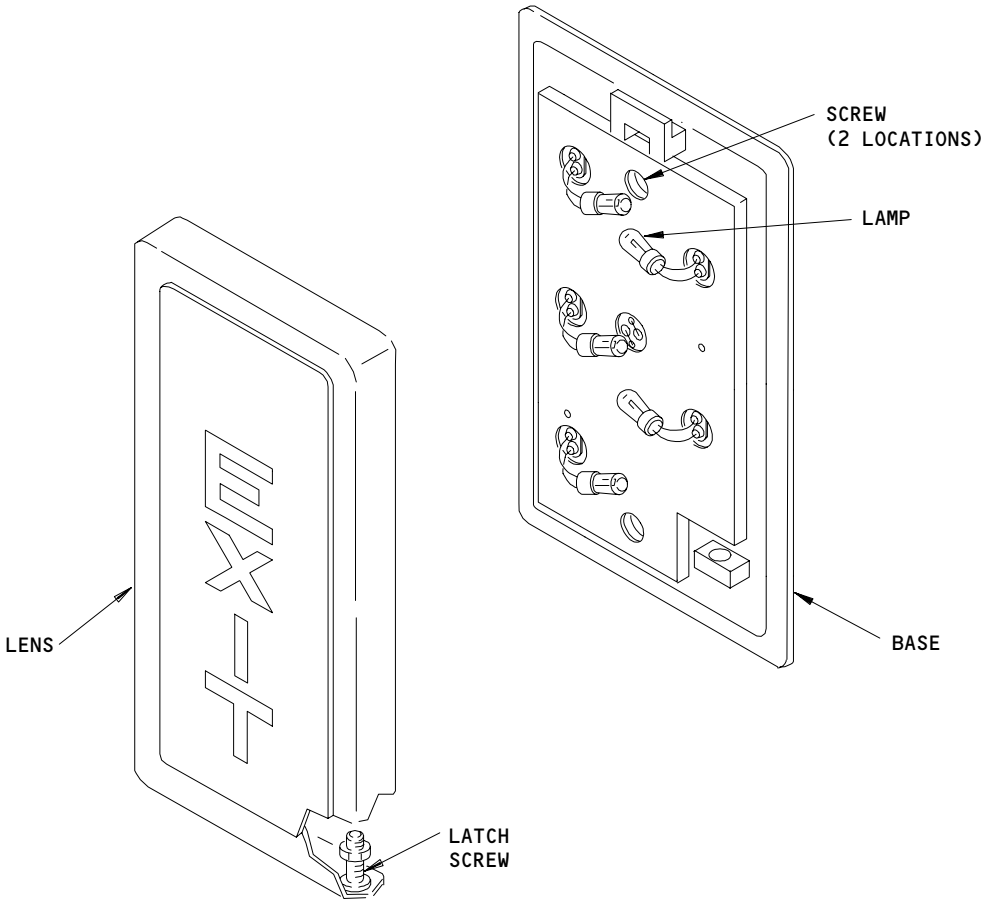
      S 962-011
      (2) Carefully replace the lamp.
          (a) Pull the lamp out.
          (b) Install bi-pin lamps in a vertical position then bend them to a horizontal position.

      S 432-012
      (3) Carefully install the lens
   C. Lamp Test

      S 862-013
      (1) Above the applicable left door or escape hatch, set the attendant's test switch for the emergency lights to the on position.

          NOTE: The emergency lights will come on, and then go off automatically after approximately one minute.

          (a) Make sure the new lamp comes on correctly.



EXIT INDICATOR SIGN (EXAMPLE)

Exit Indicator Sign
Figure 201

TASK 33-51-10-002-016

3. Exit Identifier Sign - Removal (Fig. 201)

A. Access

(1) Location Zone

200 Upper Half of Fuselage

B. Sign Removal

S 032-038

(1) Carefully remove the lens.

(a) Turn the latching screw counterclockwise to release the lens from the base.

(b) Remove the lens from the latch at the opposite end.

S 022-020

(2) Remove the each screw from the base.

S 022-021

(3) Pull the base away from the panel to get access to the electrical connector.

S 032-022

(4) Disconnect the electrical connector.

TASK 33-51-10-402-023

4. Install the Exit Identifier Sign

A. Access

(1) Location Zone

200 Upper Half of Fuselage

B. Sign Installation

S 432-027

(1) Connect the electrical connector.

S 422-028
(2) Install the base with its screws.

S 432-023
(3) Carefully install the lens.

C. Sign Test

S 862-030
(1) Above the applicable left door or escape hatch, set the attendant's test switch for the emergency lights to the on position.

NOTE: The emergency lights will come on, and then go off automatically after approximately one minute.

(a) Make sure the sign comes on correctly.

EMERGENCY ESCAPE PATH LIGHTS - SERVICING

1. General
   A. This procedure contains these tasks for an emergency escape path light (also referred to as an aisle indicator module):
      (1) Emergency Escape Path Light - Lamp Replacement
      (2) Emergency Escape Path Light - Light Assembly Removal
      (3) Emergency Escape Path Light - Light Assembly Installation

TASK 33-51-11-963-043

2. Emergency Escape Path Light - Lamp Replacement (Fig. 301)
   A. Access
      (1) Location Zone
          200 Upper Half of Fuselage
   B. Procedure

S 033-044

(1) Carefully lift up the edge of the lens and remove it from the floor track.

NOTE: Each lens with an arrow must be installed with the arrow pointed in the correct direction. Each colored lens must be installed in the correct location. Before you remove a lens with an arrow, identify the direction of the arrow. Before you remove a colored lens, identify its location.

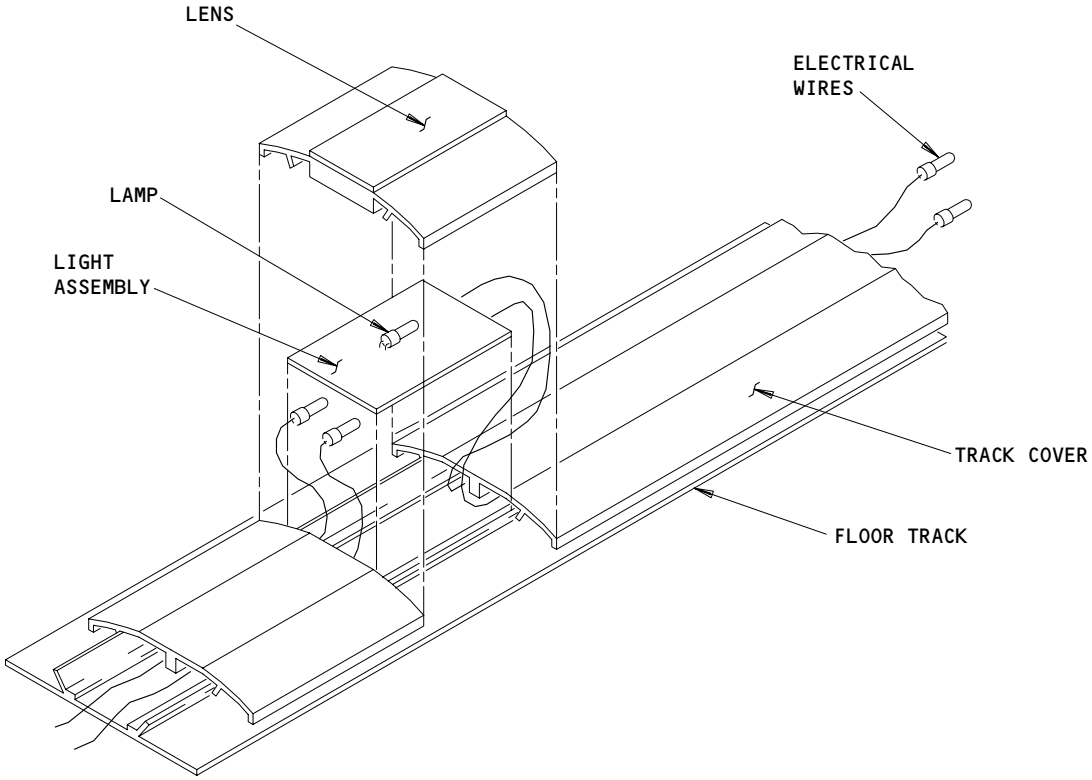
S 963-045

(2) Replace the lamp.

S 433-047

(3) Carefully push down the lens on the floor track.

NOTE: When you install a lens with an arrow, make sure you point the arrow in the correct direction. When you install a colored lens, make sure you install it in the correct location.



AISLE INDICATOR MODULE
(EXAMPLE)

Emergency Escape Path Lights
Figure 301

C. Lamp Test

S 713-041

(1) Set the applicable test switch to the on position.
  (a) Make sure the new lamp comes on correctly.
  (b) Make sure the emergency lights go off automatically after approximately one minute.

TASK 33-51-11-003-048

3. Emergency Escape Path Light - Light Assembly Removal (Fig. 301)

A. Equipment
  (1) Plastic Chisel

B. Consumable Materials
  (1) B00148 Methyl Ethyl Ketone (MEK) (AMM 20-30-02/201)

C. Access
  (1) Location Zone
    200 Upper Half of Fuselage

D. Light Assembly Removal

S 033-049

(1) Carefully lift up the edge of the lens and remove it from the floor track.

NOTE: Each lens with an arrow must be installed with the arrow pointed in the correct direction. Each colored lens must be installed in the correct location. Before you remove a lens with an arrow, identify the direction of the arrow. Before you remove a colored lens, identify its location.

S 033-050

(2) For each cover that is next to the light assembly and not next to an end cap, lift up the edge of the cover and remove it to access the electrical connectors in the raceway.

S 013-118

(3) For each cover that is next to the light assembly and next to an end cap, do these steps to remove the cover:
  (a) If the cover is not glued to the raceway, lift up the edge of the cover and remove it to access the electrical connectors in the raceway.

(b) If the cover is glued to the raceway, do these steps to remove the cover:

WARNING: DO NOT GET METHYL ETHYL KETONE (MEK) IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM MEK. PUT ON A RESPIRATOR, PROTECTIVE SPLASH GOGGLES, AND GLOVES WHEN YOU USE MEK. KEEP MEK AWAY FROM SPARKS, FLAME, AND HEAT. MEK IS A POISONOUS AND FLAMMABLE SOLVENT WHICH CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

1) Apply a small amount of MEK to a cloth and rub the cloth against a flange that is between the raceway and the cover.
2) Position the head of the plastic chisel against the flange that is between the raceway and the cover.
3) Gently tap the plastic chisel to lift the edge of the cover.
4) Repeat the above three steps until you can remove the cover to access the electrical connectors in the raceway.

S 023-051

(4) Disconnect each electrical connector that goes to and from the light.

S 023-052

(5) Pull out the light assembly.

TASK 33-51-11-403-053

4. Emergency Escape Path Light - Light Assembly Installation (Fig. 301)

A. Consumable Materials

(1) A00027 BAC 5010, Type 60, Adhesive (AMM 20-30-01/201)
(2) B00130 Isopropyl Alcohol (AMM 20-30-02/201)

B. Access

(1) Location Zone
200 Upper Half of Fuselage

C. Light Assembly Installation

S 423-054

(1) Carefully install the light assembly in the floor track.

S 423-043

(2) Connect each electrical connector.

NOTE: Make sure each connection is correct. You must feel two clicks when you connect the electrical connector. If you do not feel two clicks, then use pliers. If you do not feel two clicks when you use the pliers, then replace the light assembly.

D. Light Test

S 713-042

(1) Set the applicable test switch to the on position.
    (a) Make sure the emergency escape path lights come on correctly.
    (b) Make sure the emergency lights go off automatically after approximately one minute.

S 423-126

(2) If adjacent aisle indicator modules did not come on, then make sure again that the electrical wires are correctly connected.

S 413-119

(3) If the cover is not next to an end cap, position the cover on the raceway and snap the cover into place.

S 413-120

(4) If the cover is next to an end cap, do these steps to install the cover:
    (a) Position the last light assembly against the end cap.
    (b) If necessary, trim the track cover to make sure that no gaps exist between the track cover and the light assembly.
    (c) Clean outer hooking flanges of the base track and the track cover with isopropyl alcohol per BAC 5750, Table II.
    (d) Apply approximately a 1/8 inch bead of the adhesive BAC 5010, Type 60 to the outer hooking flange of the base track tangs that mate with the track cover. The adhesive bead should start and end approximately 0.5 inches from each end.
    (e) Position the cover on the raceway and snap the cover into place.

S 413-121

(5) Position the lens on the light assembly and snap the lens into place.

NOTE: When you install a lens with an arrow, make sure you point the arrow in the correct direction. When you replace a colored lens, make sure you install it in the correct location. Replace each damaged lens.