

**CHAPTER**

**26**

**FIRE PROTECTION**



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Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Installation TASK 26-18-02-400-801			420	HAP ALL
<u>WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - ADJUSTMENT/TEST</u>	26-18-02		501	HAP ALL
Wing, Wheel Well and Lower Aft Body Overheat Sensing Element Test TASK 26-18-02-720-803			501	HAP ALL
<u>FIRE EXTINGUISHING BOTTLE PRESSURE GAUGE - INSPECTION/CHECK</u>	26-20-00		601	HAP ALL
Engine Fire Extinguishing Bottle Check TASK 26-20-00-210-802			601	HAP ALL
APU Fire Extinguishing Bottle Check TASK 26-20-00-210-801			603	HAP ALL
<u>ENGINE FIRE EXTINGUISHING - ADJUSTMENT/TEST</u>	26-21-00		501	HAP ALL
Engine Fire Extinguishing Bottle Squib Circuit Test TASK 26-21-00-730-801			501	HAP ALL
Engine Fire Extinguishing Bottle Pressure Switch Circuit Test TASK 26-21-00-730-802			508	HAP ALL
Engine Fire Extinguishing Discharge Line Flow Test TASK 26-21-00-720-801			508	HAP ALL
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<u>ENGINE FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION</u>	26-21-01		401	HAP ALL
Engine Fire Extinguishing Bottle Removal TASK 26-21-01-000-801			401	HAP ALL
Engine Fire Extinguishing Bottle Installation TASK 26-21-01-400-801			406	HAP ALL
<u>ENGINE FIRE EXTINGUISHING SYSTEM - INSPECTION/CHECK</u>	26-21-01		601	HAP ALL
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<u>ENGINE FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION</u>	26-21-02		401	HAP ALL
Engine Fire Extinguisher Bottle Squib Removal TASK 26-21-02-000-801			401	HAP ALL
Engine Fire Extinguisher Bottle Squib Installation TASK 26-21-02-400-801			404	HAP ALL
<u>APU FIRE EXTINGUISHING - ADJUSTMENT/ TEST</u>	26-22-00		501	HAP ALL
APU Fire Extinguishing Bottle Squib Circuit Test TASK 26-22-00-730-801			501	HAP ALL
APU Fire Extinguishing Bottle Pressure Switch Circuit Test TASK 26-22-00-730-802			508	HAP ALL
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APU Fire Extinguishing Bottle Installation TASK 26-22-01-400-801			405	HAP ALL
<u>APU FIRE BOTTLE - INSPECTION/CHECK</u>	26-22-01		601	HAP ALL
APU Fire Bottle Inspection TASK 26-22-01-210-801			601	HAP ALL
<u>APU FIRE EXTINGUISHING BOTTLE SQUIB - REMOVAL/INSTALLATION</u>	26-22-02		401	HAP ALL
APU Fire Extinguishing Bottle Squib Removal TASK 26-22-02-000-801			401	HAP ALL
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<u>CARGO FIRE EXTINGUISHING - ADJUSTMENT/TEST</u>	26-23-00		501	HAP ALL
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<u>CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE - REMOVAL/ INSTALLATION</u>	26-23-01		401	HAP ALL
Cargo Fire Extinguisher Bottle Removal TASK 26-23-01-000-801-001			401	HAP ALL
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Cargo Fire Extinguishing System Cleaning TASK 26-23-01-100-801			701	HAP ALL
<u>CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION</u>	26-23-02		401	HAP ALL
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Cargo Fire Extinguishing Filter/Dryer Removal TASK 26-23-04-000-801			401	HAP 048, 050, 053, 054
Cargo Fire Extinguishing Filter/Dryer Installation TASK 26-23-04-400-801			404	HAP 048, 050, 053, 054
<u>LAVATORY WASTE COMPARTMENT FIRE EXTINGUISHING - MAINTENANCE PRACTICES</u>	26-24-01		201	HAP ALL
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Remove the Extinguisher TASK 26-26-02-020-801			401	HAP ALL
Install the Extinguisher TASK 26-26-02-430-801			403	HAP ALL
<u>WATER FIRE EXTINGUISHERS - INSPECTION/CHECK</u>	26-26-02		601	HAP ALL
Water Fire Extinguishers - Inspection/ Check TASK 26-26-02-200-801			601	HAP ALL

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## FIRE PROTECTION - DDG MAINTENANCE PROCEDURES

### 1. General

- A. This procedure has maintenance tasks for the Master Minimum Equipment List (MMEL) maintenance requirements as shown in the Dispatch Deviations Procedures Guide (DDPG). These tasks are used to prepare the airplane for flight with certain systems/components inoperative.
- B. This procedure also has the tasks that put the airplane back to its usual condition.
- C. These are the tasks for the components in the fire protection system:
  - (1) MMEL 26-4 (DDPG) Preparation - Wheel Well Fire Detection System Inoperative.
  - (2) MMEL 26-4 (DDPG) Restoration - Wheel Well Fire Detection System Inoperative.
  - (3) MMEL 26-9 (DDPG) Preparation - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative.
  - (4) MMEL 26-9 (DDPG) Restoration - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative.
  - (5) MMEL 26-15 (DDPG) Preparation - Lavatory Fire Extinguisher System Inoperative.
  - (6) MMEL 26-15 (DDPG) Restoration - Lavatory Fire Extinguisher System Inoperative.
  - (7) MMEL 26-16 (DDPG) Preparation - Lavatory Smoke Detection System Inoperative.
  - (8) MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detection System Inoperative.
  - (9) MMEL 26-18 (DDPG) Preparation - Wing-Body Overheat Test System Inoperative.
  - (10) MMEL 26-18 (DDPG) Restoration - Wing-Body Overheat Test System Inoperative.

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- (11) MMEL 26-19a (DDPG) Preparation - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.
- (12) MMEL 26-19a (DDPG) Restoration - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.

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- (13) MMEL 26-19b (DDPG) Preparation - Lower Cargo Compartment DISCH or EXT Light Inoperative.
- (14) MMEL 26-19c (DDPG) Preparation - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.
- (15) MMEL 26-19c (DDPG) Restoration - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.

### TASK 26-00-00-040-802

### 2. MMEL 26-4 (DDPG) Preparation - Wheel Well Fire Detection System Inoperative

- A. General
  - (1) This task gives the maintenance steps which prepare the airplane for flight with the Wheel Well Fire Detection System Inoperative.
- B. References

Reference	Title
22-11-33-000-801	Flight Control Computer Removal (P/B 401)
22-11-33-400-801	Flight Control Computer Installation (P/B 401)

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#### C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

#### D. Wheel Well Fire Detection System Deactivation

SUBTASK 26-00-00-040-003

(1) Remove the two light bulbs from the WHEEL WELL light on the P8-1 panel.

(a) Install an INOP - FIRE BELL DISCONNECTED placard on the switch.

SUBTASK 26-00-00-010-009

(2) Remove Flight Control Computer - B to get access to the wiring for the fire bell (Flight Control Computer Removal, TASK 22-11-33-000-801).

SUBTASK 26-00-00-930-003

(3) Disconnect the wire from D742, pin 16 on the E1-4 shelf.

(a) Cap and stow the wire.

(b) Install a WHEEL WELL WARNING LIGHT AND BELL INOP placard on the captain's and first officer's FIRE WARN lights.

SUBTASK 26-00-00-410-008

(4) Install Flight Control Computer - B (Flight Control Computer Installation, TASK 22-11-33-400-801).

SUBTASK 26-00-00-280-001

(5) Make sure the brakes are cool to the touch before the engines are started.

**END OF TASK**

#### TASK 26-00-00-440-802

### 3. M MEL 26-4 (DDPG) Restoration - Wheel Well Fire Detection System Inoperative

#### A. General

(1) This task puts the airplane back to its usual condition after operation with the Wheel Well Fire Detection Systems Inoperative.

#### B. References

Reference	Title
22-11-33-000-801	Flight Control Computer Removal (P/B 401)
22-11-33-400-801	Flight Control Computer Installation (P/B 401)

#### C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

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#### D. Wheel Well Fire Detection Systems Activation

SUBTASK 26-00-00-810-002

- (1) Correct the fault.
  - (a) Find the fault code or description of the fault that occurred.
  - (b) Go to the applicable index or list in the FIM and find the FIM task number.
  - (c) Go to the task in the FIM and do the steps in the task.

SUBTASK 26-00-00-040-004

- (2) Install the two light bulbs in the WHEEL WELL light on the P8-1 panel.
  - (a) Remove an INOP - FIRE BELL DISCONNECTED placard from the switch.

SUBTASK 26-00-00-010-008

- (3) Remove Flight Control Computer - B to get access to the wiring for the fire bell (Flight Control Computer Removal, TASK 22-11-33-000-801).

SUBTASK 26-00-00-930-004

- (4) Install the wire on D742, pin 16 on the E1-4 shelf.
  - (a) Remove the WHEEL WELL WARNING LIGHT AND BELL INOP placard from the captain's and first officer's FIRE WARN lights.

SUBTASK 26-00-00-410-007

- (5) Install Flight Control Computer - B (Flight Control Computer Installation, TASK 22-11-33-400-801).

————— END OF TASK —————

#### TASK 26-00-00-040-803

#### 4. M MEL 26-9 (DDPG) Preparation - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative

##### A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the Engine/APU Squib Test (EXT TEST switch) Inoperative.

##### B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

##### C. Engine/APU Extinguisher System (EXT TEST) (Squib Test) Deactivation

SUBTASK 26-00-00-760-001

**WARNING:** USE THE CORRECT LAMP WHEN YOU MAKE THE SQUIB TESTER. IF YOU USE AN INCORRECT LAMP, THE HIGH ELECTRICAL CURRENT CAN CAUSE THE SQUIB TO FIRE. THIS WILL RELEASE THE EXTINGUISHING AGENT. INJURIES TO PERSONNEL CAN OCCUR.

- (1) Prepare to do a Test of the Squib Circuits
  - (a) Make a squib test lamp with pigtail leads that end in pin contacts. Use only a 28 volt, 40 milliamp lamp in a applicable holder.

SUBTASK 26-00-00-040-005

- (2) Make sure that the squib circuit operates.

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(a) Open these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

(b) Pull the engine 1, engine 2, and APU fire handles on the P8-1 panel.

**WARNING:** THE P6-2 CIRCUIT BREAKER PANEL CONTAINS HIGH VOLTAGES AND CURRENTS THAT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT. BE CAREFUL WHEN ACCESSING THE P6-2 CIRCUIT BREAKER PANEL.

(c) Loosen the screws to lower the P6-2 circuit breaker panel.

**WARNING:** MAKE SURE EVERYONE IS CLEAR OF THE ENGINES AND APU. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS.

(d) Connect the test lamp across the circuit breaker shown in the table below.

(e) Turn the applicable fire handle in the direction that is shown in the table.

1) Make sure that the lamp comes on for each position.

**NOTE:** If the lamp comes on, the squib is satisfactory.

Table 901/26-00-00-993-801

CIRCUIT BREAKER	FIRE HANDLE	DIRECTION
C296 FIRE PROTECTION EXTINGUISHERS LEFT	ENG 1 ENG 2	LEFT LEFT
C297 FIRE PROTECTION EXTINGUISHERS RIGHT	ENG 1 ENG 2	RIGHT RIGHT
C452 FIRE PROTECTION EXTINGUISHERS APU	APU APU	LEFT RIGHT
C1021 FIRE PROTECTION EXTINGUISHERS ALTN LEFT	ENG 1 ENG 2	LEFT LEFT
C1022 FIRE PROTECTION EXTINGUISHERS ALTN RIGHT	ENG 1 ENG 2	RIGHT RIGHT

(f) Remove the test lamp after you do the check for all of the circuit breakers.

(g) Push the engine 1, engine 2, and APU fire handles on the P8-1 panel to the normal position.

(h) Close the P6-2 panel, and install the screws.

(i) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

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Row	Col	Number	Name
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-00-00-930-005

(3) Install a TEST INOP placard on the EXT TEST switch, on the P8-1 panel.

END OF TASK

TASK 26-00-00-040-804

5. MMEL 26-9 (DDPG) Restoration - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Engine/APU Squib Test (EXT TEST switch) Inoperative.

B. References

Reference	Title
26-10-00-710-801	Fire and Overheat Detection System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Engine/APU Extinguisher System (EXT TEST) (Squib Test) Activation

SUBTASK 26-00-00-810-003

(1) Correct the fault.

- (a) Find the fault code or description of the fault that occurred.
- (b) Go to the applicable index or list in the FIM and find the FIM task number.
- (c) Go to the task in the FIM and do the steps in the task.

SUBTASK 26-00-00-710-002

(2) Do this task: Fire and Overheat Detection System - Operational Test, TASK 26-10-00-710-801.

SUBTASK 26-00-00-930-006

(3) Remove the TEST INOP placard from the EXT TEST switch, on the P8-1 panel.

END OF TASK

TASK 26-00-00-040-805

6. MMEL 26-15 (DDPG) Preparation - Lavatory Fire Extinguisher System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Lavatory Fire Extinguisher System inoperative.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

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#### C. Lavatory Deactivation

SUBTASK 26-00-00-040-006

- (1) If the Lavatory Smoke Detector operates, do this step.
  - (a) Install INOP placard on the fire extinguisher bottle.

SUBTASK 26-00-00-040-007

- (2) If the Lavatory Smoke Detector does not operate, do these steps.
  - (a) Empty the lavatory waste receptacle.
  - (b) Close and lock the lavatory door.
  - (c) Install an INOPERATIVE - DO NOT ENTER placard on the lavatory door.

————— END OF TASK —————

#### TASK 26-00-00-440-803

### 7. M MEL 26-15 (DDPG) Restoration - Lavatory Fire Extinguisher System Inoperative

#### A. General

- (1) This task puts the airplane back to its usual condition after operation with the Lavatory Fire Extinguisher System Inoperative.

#### B. Location Zones

Zone	Area
200	Upper Half of Fuselage

#### C. Lavatory Fire Extinguisher System Activation

SUBTASK 26-00-00-810-004

- (1) Replace the Fire Extinguisher bottle.

SUBTASK 26-00-00-040-008

- (2) Remove the INOP placards from the Fire Bottle, and lavatory door.

————— END OF TASK —————

#### TASK 26-00-00-040-806

### 8. M MEL 26-16 (DDPG) Preparation - Lavatory Smoke Detector System Inoperative

#### A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the Lavatory Smoke Detector System inoperative.

#### B. Location Zones

Zone	Area
200	Upper Half of Fuselage

#### C. Lavatory Deactivation

SUBTASK 26-00-00-040-010

- (1) Do the following steps:
  - (a) Empty the lavatory waste receptacle.
  - (b) Close and lock the lavatory door.
  - (c) Install an INOPERATIVE - DO NOT ENTER placard on the lavatory door.

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(d) Install an INOPERATIVE placard on the fire extinguisher bottle.

END OF TASK

TASK 26-00-00-440-804

9. MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detector System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Lavatory Smoke Detector System Inoperative.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Lavatory Smoke Detector System Activation

SUBTASK 26-00-00-810-005

(1) Correct the fault.

- (a) Find the fault code or description of the fault that occurred.
- (b) Go to the applicable index or list in the FIM and find the FIM task number.
- (c) Go to the task in the FIM and do the steps in the task.

SUBTASK 26-00-00-040-011

(2) Remove the INOP placards from the Fire Bottle, and lavatory door.

END OF TASK

TASK 26-00-00-040-807

10. MMEL 26-18 (DDPG) Preparation - Wing Body Overheat Test System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Wing Body Overheat Test System inoperative.

B. Location Zones

Zone	Area
131	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Left
132	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Wing Body Overheat Test System Deactivation

SUBTASK 26-00-00-040-012

(1) Make sure the Wing Body Overheat System operates.

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WARNING: MAKE SURE THE HEAT SOURCE DOES NOT PRODUCE HEAT GREATER THAN 450°F (232°C). THIS TEMPERATURE LIMIT SHOULD BE OBSERVED TO PREVENT IGNITING ANY FUEL VAPORS IN THE AREA.

- (a) Apply heat to an operable detector in each loop.

NOTE: If the WING BODY OVERHEAT lights on the Air Conditioning Panel, P5-10, come on, the system operates.

- 1) Install TEST SWITCH INOP placard on the OVHT TEST switch on the Air Conditioning Panel, P5-10.

END OF TASK

TASK 26-00-00-440-805

11. MMEL 26-18 (DDPG) Restoration - Wing/Body Overheat Test System Inoperative

A. General

- (1) This task puts the airplane back to its usual condition after operation with the Wing/Body Overheat Test Systems Inoperative.

B. Location Zones

Table with 2 columns: Zone, Area. Rows include zones 133, 134, 211, 212 and their corresponding areas like Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left, etc.

C. Wing/Body Overheat Test Systems Activation

SUBTASK 26-00-00-810-006

- (1) Correct the fault. (a) Find the fault code or description of the fault that occurred. (b) Go to the applicable index or list in the FIM and find the FIM task number. (c) Go to the task in the FIM and do the steps in the task.

SUBTASK 26-00-00-040-013

- (2) Remove the TEST SWITCH INOP placard from the OVHT TEST switch on the Air Conditioning Panel, P5-10.

END OF TASK

HAP 048, 050, 053, 054

TASK 26-00-00-040-808

12. MMEL 26-19a (DDPG) Preparation - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.

B. References

Table with 2 columns: Reference, Title. Rows include references 20-40-12-000-802 and 20-40-12-400-802 with titles like ESDS Handling for Metal Encased Unit Removal (P/B 201).

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HAP 048, 050, 053, 054 (Continued)

## C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

## D. Access Panels

Number	Name/Location
821	Forward Cargo Door

## E. Lower Cargo Compartment Extinguisher Bottle No. 2 Deactivation

SUBTASK 26-00-00-860-001

- (1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

SUBTASK 26-00-00-010-002

- (2) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

- (3) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-00-00-040-024

- (4) Do the steps that follow to deactivate Extinguisher Bottle No. 2 and prevent anomalies in the indication of the DISCH light during operation and the EXT FWD light during the system test:

**NOTE:** The steps that follow are only applicable to the Boeing System. For systems installed by STC, see the STC holder.

SUBTASK 26-00-00-020-001

**WARNING:** DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (5) Disconnect the electrical connectors from the bottle.
  - (a) Before you touch the squibs, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:
    - ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
    - ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802
  - (b) Disconnect, cap, and stow electrical connector D12816 on the Extinguisher Bottle No. 2 pressure switch.

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HAP 048, 050, 053, 054 (Continued)

- (c) Disconnect electrical connectors D12820 and D12818 from the Extinguisher Bottle No. 2 squibs.

**WARNING:** PUT A PROTECTIVE COVER ON THE BOTTLE SQUIB. IF YOU DO NOT PUT A PROTECTIVE COVER ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (d) Install a jumper across pins 1 and 2 on the electrical connectors D12820 and D12818..
- (e) Cap and stow the connectors.

SUBTASK 26-00-00-410-002

- (6) Install the liner at the aft end of the forward cargo compartment to the air conditioning distribution bay.

Close this access panel:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-00-00-930-013

- (7) Do the step that follow to INOP the Fire Extinguisher Bottle No. 2:
  - (a) Install the Fire Bottle No. 2 INOP Placard on the Cargo Fire Panel (P8).

SUBTASK 26-00-00-860-002

- (8) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

END OF TASK

TASK 26-00-00-440-806

13. MMEL 26-19a (DDPG) Restoration - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative

A. General

- (1) This task puts the airplane back to its usual condition after operation with the Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.

B. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
821	Forward Cargo Door

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HAP 048, 050, 053, 054 (Continued)

D. Lower Cargo Compartment Extinguisher Bottle No. 2 Activation

SUBTASK 26-00-00-860-003

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	16	C01528	CARGO FIRE EXT 2

SUBTASK 26-00-00-010-003

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

- (3) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-00-00-800-001

- (4) Do the steps that follow to Activate the Extinguisher Bottle No. 2 System:

- (a) Remove the cap, and stowed electrical connector D12816, D12820 and D12818.
- (b) Remove the jumper across pins 1 and 2 on the connectors D12820 and D12818.
- (c) Remove the protective cap installed on the Bottle Squib.

SUBTASK 26-00-00-420-004

**WARNING:** DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

**WARNING:** MAKE SURE THAT THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN RELEASE THE CONTENTS OF THE BOTTLE SUDDENLY. THIS CAN CAUSE INJURIES TO PERSONNEL.

- (5) Connect the electrical connectors to the Extinguisher Bottle.

- (a) Connect the electrical connector D12816 on the Extinguisher Bottle No. 2 pressure switch.
- (b) Connect electrical connectors D12820 and D12818 on the Extinguisher Bottle No. 2 squibs

SUBTASK 26-00-00-410-003

- (6) Install the liner at the aft end of the forward cargo compartment to the air conditioning distribution bay.

Close this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

SUBTASK 26-00-00-930-018

- (7) Do the step that follow to Activate the Fire Extinguisher No. 2 :

- (a) Remove the Fire Extinguisher Bottle No. 2 INOP Placard on the Cargo Fire Panel.

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HAP 048, 050, 053, 054 (Continued)

SUBTASK 26-00-00-860-004

(8) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

HAP ALL

END OF TASK

TASK 26-00-00-040-809

14. MMEL 26-19b (DDPG) Preparation - Lower Cargo Compartment DISCH or EXT Light Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Lower Cargo Compartment DISCH or EXT Light Inoperative.

B. References

Reference	Title
26-00-02-000-801	Cargo Fire Control Panel Removal (P/B 401)
26-00-02-400-801	Cargo Fire Control Panel Installation (P/B 401)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Lower Cargo Compartment DISCH or EXT Light Deactivation

SUBTASK 26-00-00-010-007

(1) Do this task Cargo Fire Control Panel Removal, TASK 26-00-02-000-801

SUBTASK 26-00-00-020-005

(2) Do the steps that follow for an inoperative DISCH light circuit to make sure that the fire extinguisher bottles have an adequate charge:

NOTE: The steps that follow are only applicable to the Boeing System. For systems installed by STC, see the STC holder. You will need a 28VDC circuit test lamp, with pigtail leads that terminate in pin contacts in an applicable holder. To make the lamp, lamp P/N 116-565-1042-001 (28 volt, 40 milliamps) or the equivalent is suggested, but you can use an applicable lamp or a digital multimeter.

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- (a) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row B, Col 17, Number C01526, Name CARGO FIRE EXT 1

- (b) Connect the test lamp or digital multimeter between the airplane side of connector D12760, pin 48 (the +28 volt source for Bottle No. 1) and pin 28 (pressure switch ground).

- (c) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row B, Col 17, Number C01526, Name CARGO FIRE EXT 1

- (d) If the test lamp stays OFF or the digital multimeter shows an OPEN circuit, the fire extinguisher bottle has an adequate charge.

- (e) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row B, Col 17, Number C01526, Name CARGO FIRE EXT 1

- (f) Remove the test lamp.

HAP 048, 050, 053, 054

- (g) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row B, Col 16, Number C01528, Name CARGO FIRE EXT 2

- (h) Connect the test lamp or digital multimeter between the airplane side of connector D12760, pin 45 (the +28 volt source for Bottle No. 2) and pin 28 (pressure switch ground).

- (i) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row B, Col 16, Number C01528, Name CARGO FIRE EXT 2

- (j) If the test lamp stays OFF or the digital multimeter shows an OPEN circuit, the fire extinguisher bottle has an adequate charge.

- (k) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row B, Col 16, Number C01528, Name CARGO FIRE EXT 2

- (l) Remove the test lamp.

- (m) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row B, Col 16, Number C01528, Name CARGO FIRE EXT 2

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SUBTASK 26-00-00-750-008

**WARNING:** KEEP PERSONNEL AWAY FROM THE EXTINGUISHER BOTTLE AREA DURING THE SQUIB CIRCUIT TEST. USE A MAXIMUM CURRENT OF 40 MILLIAMPS DURING THE TEST. USE ONLY TEST LAMP P/N 116-565-1042-001 (28 VOLT, 40 MILLIAMPS) OR ITS EQUIVALENT. DO NOT USE A MULTIMETER. IF THE EXTINGUISHER BOTTLE RELEASES THE EXTINGUISHING MATERIAL, IT CAN CAUSE INJURIES TO PERSONNEL.

(3) Do the steps that follow to make sure that the EXT light SQUIB circuit operates correctly:

NOTE: If the test lamp comes ON, the squib circuit is good.

- (a) Connect the test lamp between D12760 pin 48 (the +28 volt source for Bottle No. 1) and pin 26 (EXT 1 FWD squib).
  - 1) Make sure the test lamp comes on.
- (b) Connect the test lamp between D12760 pin 48 (the +28 volt source for Bottle No. 1) and pin 24 (EXT 1 AFT squib).
  - 1) Make sure the test lamp comes on.

#### HAP 048, 050, 053, 054

- (c) Connect the test lamp between D12760 pin 45 (the +28 volt source for Bottle No. 2) and pin 12 (EXT 2 FWD squib).
  - 1) Make sure the test lamp comes on.
- (d) Connect the test lamp between D12760 pin 45 (the +28 volt source for Bottle No. 2) and pin 23 (EXT 2 AFT squib).
  - 1) Make sure the test lamp comes on.

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- (e) Remove the test lamp.

SUBTASK 26-00-00-410-004

(4) Do this task Cargo Fire Control Panel Installation, TASK 26-00-02-400-801

————— END OF TASK —————

#### TASK 26-00-00-040-810

### 15. M MEL 26-19c (DDGP) Preparation - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative

#### A. General

- (1) This task gives maintenance steps which prepare the airplane for flight with the Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.

#### B. References

Reference	Title
26-23-01	CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE
26-23-01-000-801-001	Cargo Fire Extinguisher Bottle Removal (P/B 401)
26-23-01-000-802-001	Cargo Fire Extinguisher Bottle Installation (P/B 401)

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## C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

## D. Lower Cargo Compartment Extinguisher Bottle Pressure Switch Deactivation

SUBTASK 26-00-00-020-003

**WARNING:** DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (1) Do the steps that follow to deactivate the applicable Extinguisher Bottle pressure switch:
  - (a) Do this task: Cargo Fire Extinguisher Bottle Removal, TASK 26-23-01-000-801-001
  - (b) Disconnect the electrical connectors from the Bottle.
  - (c) Cap and stow the bottle pressure switch, electrical connector.

SUBTASK 26-00-00-280-002

- (2) Weigh the applicable Extinguisher Bottle on a scale that is accurate to within +/-0.1 lb (0.0 kg).
  - (a) Make sure that the bottle weight is within 0.25 lb (0.11 kg) of the service weight marked on the bottle name plate, refer to CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE, SUBJECT 26-23-01.

SUBTASK 26-00-00-420-005

- (3) Do this task: Cargo Fire Extinguisher Bottle Installation, TASK 26-23-01-000-802-001.

SUBTASK 26-00-00-930-017

- (4) Install the applicable Extinguisher Bottle pressure switch INOP Placard on the Cargo Fire Panel (P8).

————— END OF TASK —————

## TASK 26-00-00-440-808

### 16. M MEL 26-19c (DDGP) Restoration - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative

#### A. General

- (1) This task puts the airplane back to its usual condition after operation with the Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.

#### B. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

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C. Access Panels

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

D. Lower Cargo Compartment Extinguisher Bottle Pressure Switch Activation

SUBTASK 26-00-00-860-019

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-00-00-010-006

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

- (3) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-00-00-440-001

- (4) Do the steps that follow to Activate the applicable Extinguisher Bottle, pressure switch:
- (a) Remove the cap from the pressure switch, electrical connector.
  - (b) Connect the applicable Extinguisher Bottle, pressure switch electrical connector to the pressure switch.

SUBTASK 26-00-00-410-006

- (5) Install the liner at the aft end of the forward cargo compartment to the air conditioning distribution bay.

Close this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

SUBTASK 26-00-00-930-012

- (6) Remove the applicable Extinguisher Bottle pressure switch INOP Placard on the Cargo Fire Panel (P8).

SUBTASK 26-00-00-860-011

- (7) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1

————— **END OF TASK** —————

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## ENGINE AND APU FIRE CONTROL PANEL - REMOVAL/INSTALLATION

### 1. General

A. This procedure has these tasks:

- (1) A removal of the Engine and APU Fire Control Panel, referred to as the fire control panel.
- (2) An installation of the Engine and APU Fire Control panel.
- (3) A removal of the Engine and APU Fire Shutoff Switch Assembly.
- (4) An installation of the Engine and APU FireShutoff Switch Assembly.

B. The Engine and APU Fire Control Panel is installed on the P8 aisle control stand in the flight compartment.

### **TASK 26-00-01-000-801**

### 2. Engine and APU Fire Control Panel Removal

(Figure 401)

A. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

B. Engine and APU Fire Control Panel Removal

SUBTASK 26-00-01-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1

SUBTASK 26-00-01-860-004

(2) If it is necessary, set the engine fuel levers to IDLE to get access to remove the Engine and APU Fire Control Panel.

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SUBTASK 26-00-01-020-001

- (3) Loosen the four quarter turn fasteners securing the Engine and APU Fire Control Panel [1] to the frame.

SUBTASK 26-00-01-020-002

- (4) Slide the Engine and APU Fire Control Panel [1] from the frame.

SUBTASK 26-00-01-020-003

- (5) Tag and remove the five electrical connectors.

SUBTASK 26-00-01-860-005

- (6) Make sure the engine fuel levers switch to CUTOFF.

————— **END OF TASK** —————

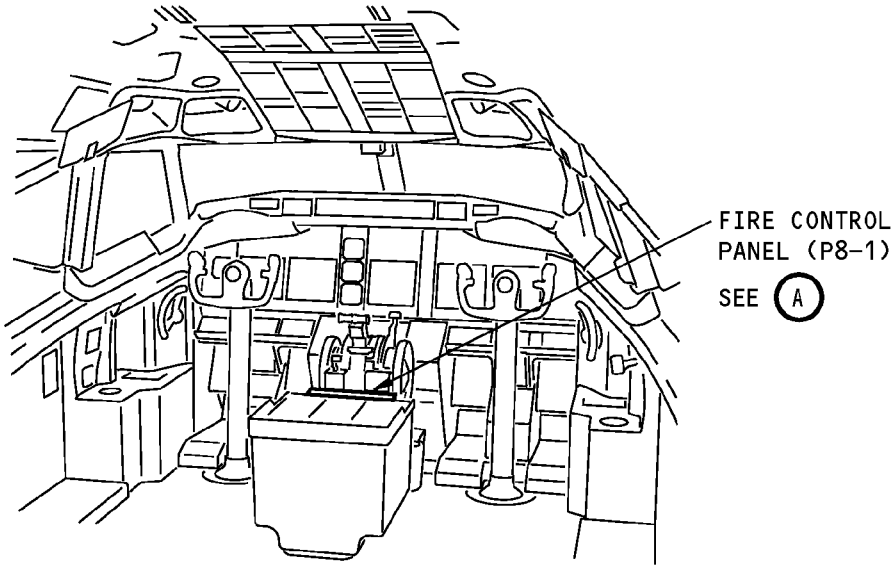
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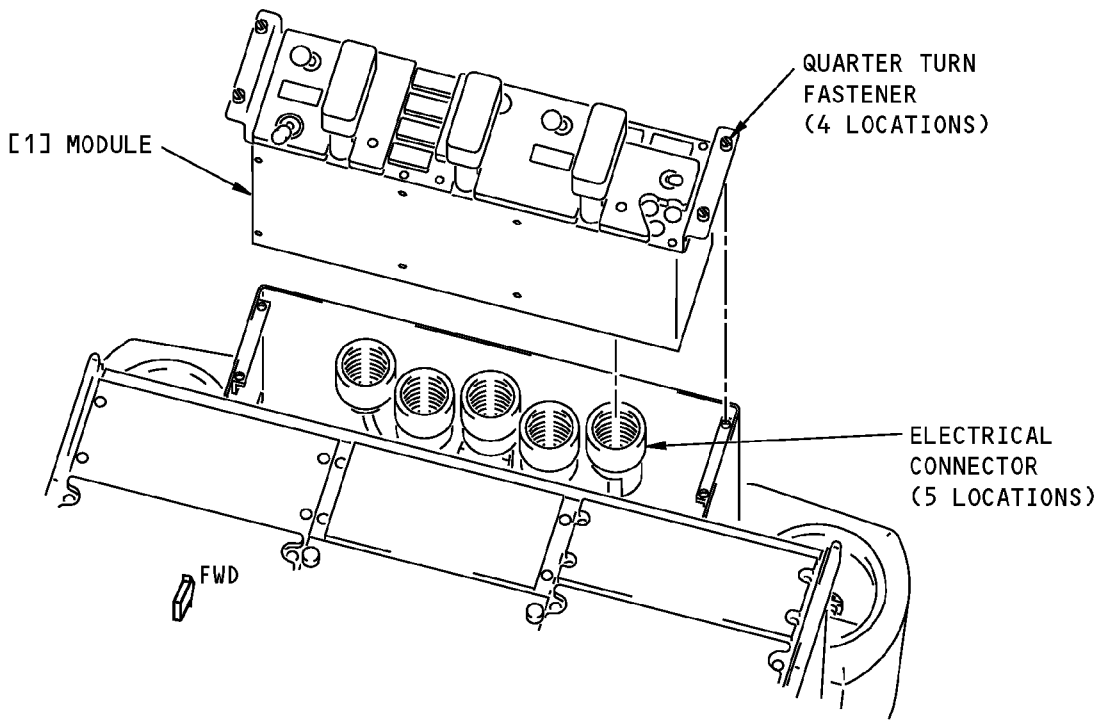
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**FLIGHT COMPARTMENT**



**FIRE CONTROL PANEL (P8-1)**

(A)

**Fire Control Panel Installation  
Figure 401/26-00-01-990-801**

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TASK 26-00-01-400-801

#### 3. Engine and APU Fire Control Panel Installation

(Figure 401)

##### A. References

Reference	Title
26-10-00-710-801	Fire and Overheat Detection System - Operational Test (P/B 501)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)
26-21-00-720-802	Engine Fire Switch System Shutdown Test (P/B 501)
26-21-00-730-801	Engine Fire Extinguishing Bottle Squib Circuit Test (P/B 501)
26-21-00-730-802	Engine Fire Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)
26-22-00-720-801	APU Fire Switch System Shutdown Test. (P/B 501)
26-22-00-730-801	APU Fire Extinguishing Bottle Squib Circuit Test (P/B 501)
26-22-00-730-802	APU Fire Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)

##### B. Consumable Materials

Reference	Description	Specification
A00436	Sealant - Fuel Tank	BMS5-45 (Supersedes BMS 5-26)

##### C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

##### D. Engine and APU Fire Control Panel Installation

SUBTASK 26-00-01-860-002

(1) Make sure that these circuit breakers are open:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C00359	FUEL SPAR VALVE ENG 1

SUBTASK 26-00-01-860-006

- (2) If it is necessary, set the engine fuel levers to IDLE to get access to install the Engine and APU Fire Control Panel.

SUBTASK 26-00-01-390-001

- (3) Put a thin layer sealant, A00436 around the edge of the Engine and APU Fire Control Panel.

SUBTASK 26-00-01-200-001

- (4) Make sure that the pins are not bent or damaged and the connector is not damaged.

SUBTASK 26-00-01-420-001

- (5) Install the five connectors in accordance with tag information and remove the tags.

SUBTASK 26-00-01-020-004

- (6) Slide the Engine and APU Fire Control Panel [1] into the frame and secure with the four quarter turn fasteners.

SUBTASK 26-00-01-860-007

- (7) Make sure the engine fuel levers switch to CUTOFF.

SUBTASK 26-00-01-860-003

- (8) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1

E. Engine and APU Fire Detection Control Unit Installation Test

SUBTASK 26-00-01-720-001

- (1) Do this task: Fire and Overheat Detection System - Operational Test, TASK 26-10-00-710-801.

SUBTASK 26-00-01-720-002

- (2) Do this task: Engine Fire Switch System Shutdown Test, TASK 26-21-00-720-802.

SUBTASK 26-00-01-710-001

- (3) Do this task: Engine Fire Extinguishing Bottle Squib Circuit Test, TASK 26-21-00-730-801.

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SUBTASK 26-00-01-720-003

- (4) Do this task: Engine Fire Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-21-00-730-802.

SUBTASK 26-00-01-720-004

- (5) Do this task: APU Fire Switch System Shutdown Test., TASK 26-22-00-720-801.

SUBTASK 26-00-01-720-005

- (6) Do this task: APU Fire Extinguishing Bottle Squib Circuit Test, TASK 26-22-00-730-801.

SUBTASK 26-00-01-720-006

- (7) Do this task: APU Fire Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-22-00-730-802.

SUBTASK 26-00-01-710-002

- (8) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

————— END OF TASK —————

## TASK 26-00-01-000-802

### 4. Engine and APU Fire Shutoff Switch Assembly Removal

#### A. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

#### B. Engine and APU Fire Shutoff Switch Removal

SUBTASK 26-00-01-865-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-00-01-030-001

- (2) Loosen the four quarter turn fasteners securing the Engine and APU Fire Control Panel [1] to the frame (Figure 402).

SUBTASK 26-00-01-030-002

- (3) Slide the Engine and APU Fire Control Panel [1] carefully from the frame enough to gain access to the fire shutoff switch connector.

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SUBTASK 26-00-01-030-003

(4) Disconnect the applicable electrical connector from the fire shutoff switch [2].

SUBTASK 26-00-01-030-004

(5) Put a protective cover on the switch connector.

SUBTASK 26-00-01-030-005

(6) Remove the three screws holding the fire shutoff switch [2] to the Engine and APU Fire Control Panel.

SUBTASK 26-00-01-030-006

(7) Remove the fire shutoff switch [2].

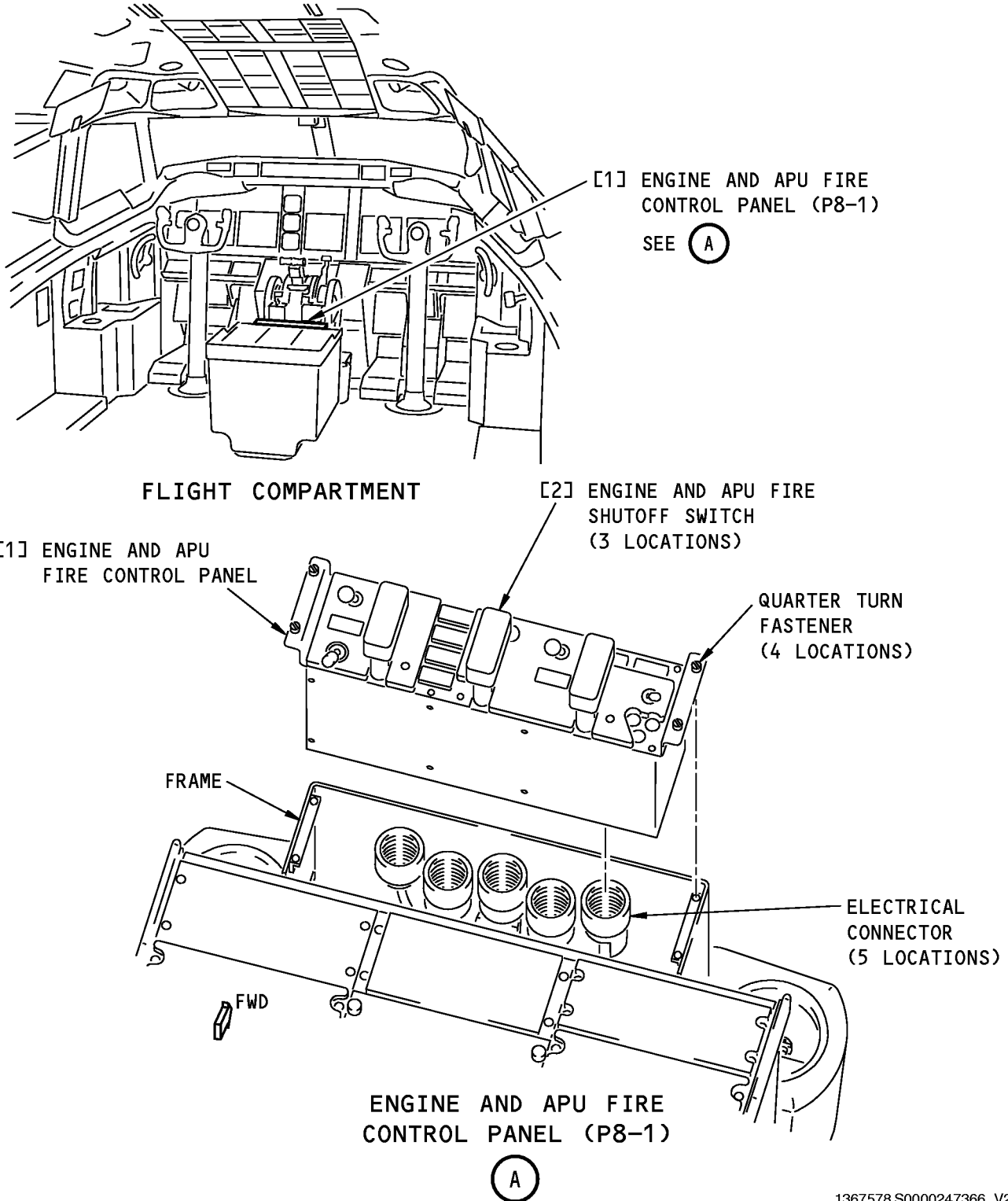
————— **END OF TASK** —————

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**Engine and APU Fire Shutoff Switch Assembly Installation**  
**Figure 402/26-00-01-990-802**

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## TASK 26-00-01-400-802

### 5. Engine and APU Fire Shutoff Switch Assembly Installation

#### A. References

Reference	Title
26-21-00-720-802	Engine Fire Switch System Shutdown Test (P/B 501)
26-22-00-720-801	APU Fire Switch System Shutdown Test. (P/B 501)

#### B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

#### C. Engine and APU Fire Shutoff Switch Installation

SUBTASK 26-00-01-865-002

- (1) Make sure that these circuit breakers are open:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-00-01-420-002

- (2) Make sure that the fire shutoff switch electrical connector is accessible for installation to the switch (Figure 402)..
  - (a) If the electrical connector is not accessible, carefully slide the Engine and APU Fire Control Panel out.

SUBTASK 26-00-01-420-003

- (3) Put the fire shutoff switch in its position in the Engine and APU Fire Control Panel [1].

**NOTE:** There are indexing pins on the switch.

SUBTASK 26-00-01-420-004

- (4) Install the three screws that hold the fire shutoff switch to the Engine and APU Fire Control Panel.

SUBTASK 26-00-01-420-005

- (5) Remove the protective cover from the switch electrical connector.

SUBTASK 26-00-01-420-006

- (6) Examine the electrical connector for bent or broken pins, dirt or damage.
  - (a) Clean or repair the electrical connector if necessary.

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SUBTASK 26-00-01-430-001

(7) Connect the electrical connector to the fire shutoff switch [2].

SUBTASK 26-00-01-420-007

(8) Slide the Engine and APU Fire Control Panel [1] into the frame and secure with the four quarter-turn fasteners.

SUBTASK 26-00-01-865-003

(9) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

D. Electrical System Installation Test

SUBTASK 26-00-01-700-001

(1) Do this task, as applicable: Engine Fire Switch System Shutdown Test, TASK 26-21-00-720-802 Engine Fire Switch System Shutdown Test, TASK 26-21-00-720-802 or APU Fire Switch System Shutdown Test., TASK 26-22-00-720-801

————— END OF TASK —————

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## CARGO FIRE CONTROL PANEL - REMOVAL/INSTALLATION

### 1. General

A. This procedure has these tasks:

- (1) Removal of the Cargo Fire Control Panel.
- (2) Installation of the Cargo Fire Control panel.

B. The Cargo Fire Control Panel is installed on the P8 aisle control stand in the flight compartment.

#### **TASK 26-00-02-000-801**

### 2. Cargo Fire Control Panel Removal

(Figure 401)

A. Location Zones

<u>Zone</u>	<u>Area</u>
211	Flight Compartment - Left
212	Flight Compartment - Right

B. Cargo Fire Control Panel Removal

SUBTASK 26-00-02-860-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

Circuit Breaker Panel 5, P8

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
---	---	C01097	ELEX PANEL LIGHTS AFT F/O

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C00701	EMER PANEL LTG
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 26-00-02-020-001

(2) Loosen the four quarter turn fasteners securing the fire control panel [1] to the frame.

SUBTASK 26-00-02-020-002

(3) Slide the fire control panel [1] from the frame.

SUBTASK 26-00-02-020-003

(4) Remove the electrical connector.

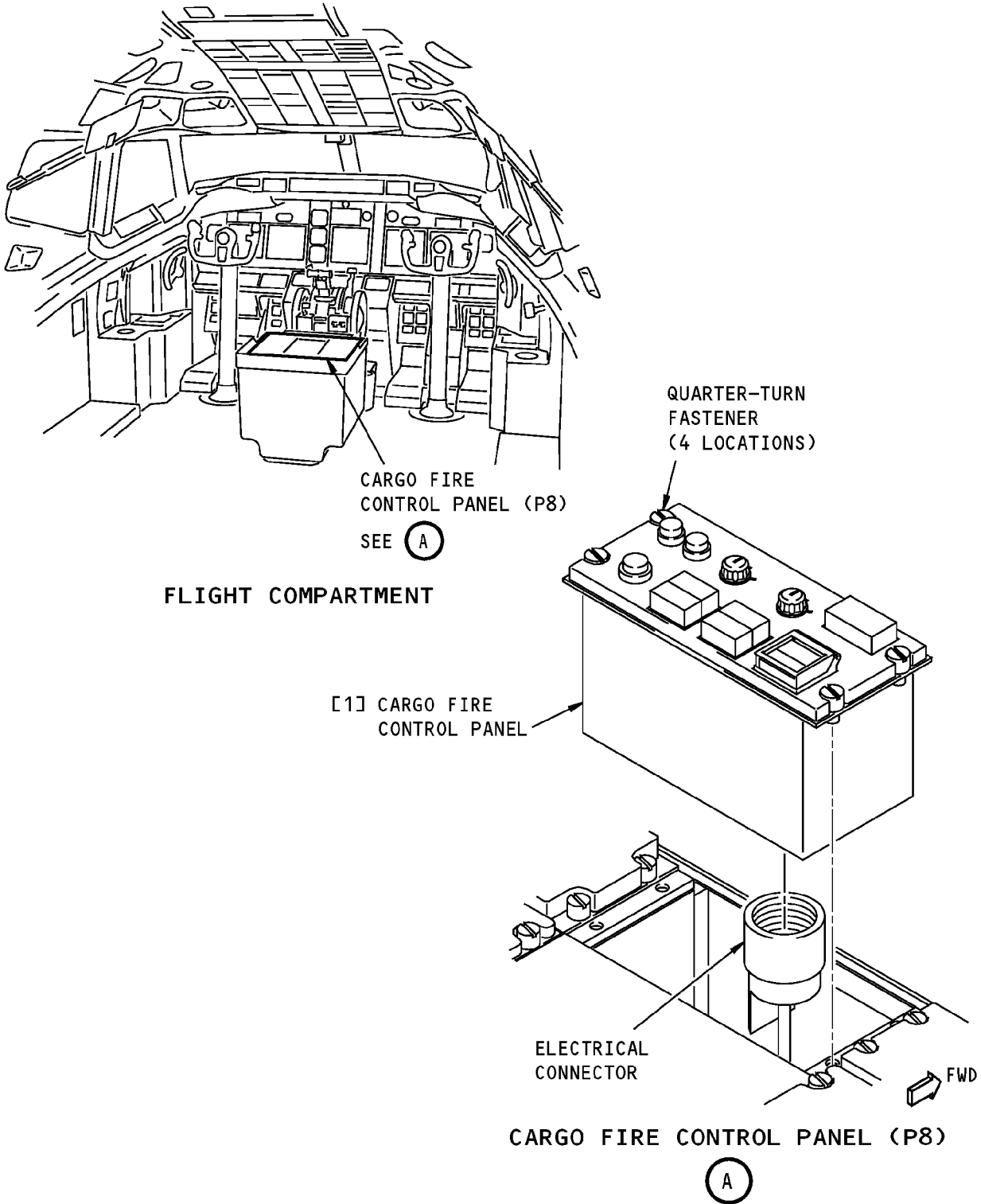
**END OF TASK**

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**Cargo Fire Control Panel Installation  
Figure 401/26-00-02-990-801**

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TASK 26-00-02-400-801

#### 3. Cargo Fire Control Panel Installation

(Figure 401)

##### A. References

Reference	Title
26-23-00-730-802	Cargo Fire Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)

##### B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

##### C. Cargo Fire Control Panel Installation

SUBTASK 26-00-02-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

Circuit Breaker Panel 5, P8

Row	Col	Number	Name
---	---	C01097	ELEX PANEL LIGHTS AFT F/O

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	8	C00701	EMER PANEL LTG
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
F	13	C01179	INDICATOR MASTER DIM SECT 7

SUBTASK 26-00-02-420-001

- (2) Install the connector on the fire control panel.

SUBTASK 26-00-02-020-004

- (3) Slide the fire control panel [1] into the frame and secure with the four quarter turn fasteners.

SUBTASK 26-00-02-860-003

- (4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2

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HAP 001-007, 048, 050, 053, 054 (Continued)

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

Circuit Breaker Panel 5, P8

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
—	—	C01097	ELEX PANEL LIGHTS AFT F/O

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C00701	EMER PANEL LTG
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
F	13	C01179	INDICATOR MASTER DIM SECT 7

D. Cargo Fire Control Panel Installation Test

SUBTASK 26-00-02-720-001

- (1) Push the TEST switch on the Cargo Fire Control Panel.
  - (a) Make sure the DETECTOR FAULT light stays off.
  - (b) Make sure the red FWD and AFT ARM lights come on.
  - (c) Make sure the FWD and AFT EXT lights come on.
  - (d) Make sure the DISCHARGE light comes on.

SUBTASK 26-00-02-720-003

- (2) Do this task: Cargo Fire Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-23-00-730-802.

————— END OF TASK —————

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## DETECTION - ADJUSTMENT/TEST

### 1. General

- A. This procedure consists of an operational test of the fire and overheat detection systems. The operational test uses the test switches on the Engine and APU Fire Control Panel, P8-1, in the flight compartment. It also uses the test switch on the Fire Detection Control Unit, M279, in the Electrical and Electronics Compartment.
- B. The Fire and Overheat Detection System consists of the following systems:
  - (1) The Engine Fire Detection System.
  - (2) The APU Fire Detection System.
  - (3) The Wheel Well, Wing, and Aft Lower Body (Compartment) Overheat Detection System.

### **TASK 26-10-00-710-801**

### 2. Fire and Overheat Detection System - Operational Test

(Figure 501 or Figure 502)

#### A. General

- (1) The operational test makes sure that the engine, APU, and compartment fire/overheat detection systems operate correctly. The operational test uses only equipment that is installed on the airplane and it does not disturb the airplane systems. The operational test consists of these tests:
  - (a) The FIRE/OVHT test for loops A and B.
  - (b) The FIRE/OVHT test for loop A.
  - (c) The FIRE/OVHT test for loop B.
  - (d) The FAULT/INOP test for loops A and B.
  - (e) The test for an Engine 1 Detection Fault.
  - (f) The test for an Engine 2 Detection Fault.
  - (g) The test for an APU Detection Fault.
  - (h) The Air Mode Test for the APU Remote Control Panel, P28.
- (2) This test will do a check of all the systems affected by the detection test switches on the Engine and APU Fire Control Panel. In other words, when you do the detection tests, you will look for every indication that is affected by the test.
- (3) A brief system description is included at the end of the procedure, refer to Table 501, Table 502, Table 503.

#### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

#### C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

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Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Operational Test

SUBTASK 26-10-00-860-001

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-10-00-860-002

(2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 26-10-00-860-003

(3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

SUBTASK 26-10-00-860-004

(4) Make sure the MASTER CAUTION lights and the OVHT/FIRE lights on the Pilots Glareshield, P7, are not on.

E. Do the FIRE/OVHT Test for Loops A and B

SUBTASK 26-10-00-710-001

(1) Make sure the two OVHT DET switches on the Engine and APU Fire Control Panel, P8-1, are in the NORMAL positions.

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SUBTASK 26-10-00-710-002

- (2) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the OVHT/FIRE position.
- (a) On the Engine and APU Fire Control Panel, make sure these lights come on:
    - 1) Engine 1 Fire Handle light (Red).
    - 2) Engine 2 Fire Handle light (Red).
    - 3) APU Fire Handle light (Red).
    - 4) ENG 1 OVERHEAT light (Amber).
    - 5) ENG 2 OVERHEAT light (Amber).
  - (b) On the Pilot's Glareshield, P7, make sure these lights come on:
    - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
    - 2) The Captain's and First Officer's FIRE WARN lights (Red).
    - 3) The OVHT/DET light (Amber).
  - (c) Make sure you hear the bell in the Aural Warning Module, M315, in the flight compartment.
  - (d) Make sure the APU fire warning horn in the right main wheel well comes on.
  - (e) Make sure the red light, on the APU remote control panel, P28, in the right main wheel well flashes on and off at approximately one cycle per second.
  - (f) Push the BELL CUTOUT switch on the Engine and APU Fire Control Panel, P8-1.

**NOTE:** If you push the HORN CUTOUT switch on the P28 panel, or either of the FIRE WARN lights on the P7 panel, the same conditions will occur. The BELL CUTOUT switch, the HORN CUTOUT switch, and the FIRE WARN switch cause the same resets but from different locations.

- 1) Make sure you do not hear the bell in the Aural Warning Module, M315, in the flight compartment.
- 2) Make sure the two FIRE WARN lights on the Pilot's Glareshield, P7, go off.
- 3) Make sure the APU fire warning horn in the right main wheel well stops.
- 4) Make sure the red light on the P28 panel in the right main wheel well comes on and does not flash.

SUBTASK 26-10-00-710-003

- (3) Release the TEST switch on the Engine and APU Fire Control Panel.
- (a) On the Engine and APU Fire Control Panel, make sure these lights go off:
    - 1) Engine 1 Fire Handle light (Red).
    - 2) Engine 2 Fire Handle light (Red).
    - 3) APU Fire Handle light (Red).
    - 4) ENG 1 OVERHEAT light (Amber).
    - 5) ENG 2 OVERHEAT light (Amber).
  - (b) On the Pilot's Glareshield, P7, make sure these lights go off:
    - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
    - 2) The Captain's and First Officer's FIRE WARN lights (Red).
    - 3) The OVHT/DET light (Amber).

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### F. Do the FIRE/OVHT Test for Loop A

SUBTASK 26-10-00-710-004

- (1) Move the two OVHT DET switches on the Engine and APU Fire Control Panel, P8-1, to the A positions.

SUBTASK 26-10-00-710-005

- (2) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the OVHT/FIRE position.
  - (a) On the Engine and APU Fire Control Panel, make sure these lights come on:
    - 1) Engine 1 Fire Handle light (Red).
    - 2) Engine 2 Fire Handle light (Red).
    - 3) APU Fire Handle light (Red).
    - 4) ENG 1 OVERHEAT light (Amber).
    - 5) ENG 2 OVERHEAT light (Amber).
  - (b) On the Pilot's Glareshield, P7, make sure these lights come on:
    - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
    - 2) The Captain's and First Officer's FIRE WARN lights (Red).
    - 3) The OVHT/DET light (Amber).
  - (c) Make sure the bell in the Aural Warning Module, M315, comes on.
  - (d) Make sure the APU fire warning horn in the right main wheel well comes on.
  - (e) Make sure the red light on the APU remote control panel, P28, in the right main wheel well flashes on and off at approximately one cycle per second.

SUBTASK 26-10-00-710-006

- (3) Release the TEST switch on the Engine and APU Fire Control Panel.

### G. Do the FIRE/OVHT Test for Loop B

SUBTASK 26-10-00-710-007

- (1) Move the two OVHT DET switches on the Engine and APU Fire Control Panel, P8-1, to the B positions.

SUBTASK 26-10-00-710-008

- (2) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the OVHT/FIRE position.
  - (a) On the Engine and APU Fire Control Panel, make sure these lights come on:
    - 1) Engine 1 Fire Handle light (Red).
    - 2) Engine 2 Fire Handle light (Red).
    - 3) APU Fire Handle light (Red).
    - 4) ENG 1 OVERHEAT light (Amber).
    - 5) ENG 2 OVERHEAT light (Amber).
  - (b) On the Pilot's Glareshield, P7, make sure these lights come on:
    - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
    - 2) The Captain's and First Officer's FIRE WARN lights (Red).
    - 3) The OVHT/DET light (Amber).
  - (c) Make sure the bell in the Aural Warning Module, M315, comes on.

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- (d) Make sure the APU fire warning horn in the right main wheel well comes on.
- (e) Make sure the red light on the APU remote control panel, P28, in the right main wheel well flashes on and off at approximately one cycle per second.

SUBTASK 26-10-00-710-009

- (3) Release the TEST switch on the Engine and APU Fire Control Panel.

### H. Do the FAULT/INOP Test for Loops A and B

SUBTASK 26-10-00-710-010

- (1) Move the two OVHT DET switches on the Engine and APU Fire Control Panel, P8-1, to the NORMAL positions.

SUBTASK 26-10-00-710-011

- (2) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the FAULT/INOP position.
  - (a) On the Engine and APU Fire Control Panel, make sure these lights come on:
    - 1) FAULT light (Amber).
    - 2) APU DET INOP light (Amber).
  - (b) On the Pilot's Glareshield, P7, make sure these lights come on:
    - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
    - 2) The OVHT/DET light (Amber).
  - (c) On the Engine and APU Fire Detection Control Unit, M279, on the E2-2 shelf in the Electrical and Electronics Compartment, make sure these lights come on:
    - 1) ENGINE 1 LOOP A (Amber).
    - 2) ENGINE 1 LOOP B (Amber).
    - 3) ENGINE 2 LOOP A (Amber).
    - 4) ENGINE 2 LOOP B (Amber).
    - 5) APU (Amber).
    - 6) The three FAULT CODE lights are ON-ON-ON.

SUBTASK 26-10-00-710-012

- (3) Release the TEST switch on the Engine and APU Fire Control Panel.
  - (a) On the Engine and APU Fire Control Panel, make sure these lights are off:
    - 1) FAULT light (Amber).
    - 2) APU DET INOP light (Amber).
  - (b) On the Pilot's Glareshield, P7, make sure these lights are off:
    - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
    - 2) The OVHT/DET light (Amber).
  - (c) On the Engine and APU Fire Detection Control Unit, M279, in the Electrical and Electronics Compartment, make sure these lights are off :
    - 1) ENGINE 1 LOOP A (Amber).
    - 2) ENGINE 1 LOOP B (Amber).
    - 3) ENGINE 2 LOOP A (Amber).
    - 4) ENGINE 2 LOOP B (Amber).
    - 5) APU (Amber).

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6) The three FAULT CODE lights are "OFF-OFF-OFF".

I. Do the Test for an Engine 1 Detection Fault

SUBTASK 26-10-00-860-005

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

- (a) On the Engine and APU Fire Control Panel, P8-1, make sure the FAULT light (Amber) is on.
- (b) On the Fire Detection Control Module, M279, in the Electrical and Electronics Compartment, make sure these lights come on:
  - 1) ENGINE 1 LOOP A (Amber).
  - 2) ENGINE 1 LOOP B (Amber).
- 3) The three FAULT CODE lights are OFF-OFF-ON.

SUBTASK 26-10-00-860-006

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

- (a) On the Engine and APU Fire Control Module, make sure the FAULT light (Amber) is off.
- (b) On the Fire Detection Control Module, in the Electrical and Electronics Compartment, make sure these lights go off:
  - 1) ENGINE 1 LOOP A (Amber).
  - 2) ENGINE 1 LOOP B (Amber).
- 3) The three FAULT CODE lights are OFF-OFF-OFF.

J. Do the Test for an Engine 2 Detection Fault

SUBTASK 26-10-00-860-007

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2

- (a) On the Engine and APU Fire Control Panel, P8-1, make sure the FAULT light (Amber) is on.
- (b) On the Fire Detection Control Module, M279, in the Electrical and Electronics Compartment, make sure these lights come on:
  - 1) ENGINE 2 LOOP A (Amber).
  - 2) ENGINE 2 LOOP B (Amber).
- 3) The three FAULT CODE lights are OFF-OFF-ON.

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SUBTASK 26-10-00-860-008

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2

- (a) On the Engine and APU Fire Control Panel, make sure the FAULT light (Amber) is off.
- (b) On the Fire Detection Control Module, in the Electrical and Electronics Compartment, make sure these lights go off(Figure 501 or Figure 502).
  - 1) ENGINE 2 LOOP A (Amber).
  - 2) ENGINE 2 LOOP B (Amber).
  - 3) The three FAULT CODE lights are OFF-OFF-OFF.

## K. Do the Test for an APU Detection Fault

SUBTASK 26-10-00-860-009

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU

- (a) On the Pilot's Glareshield, P7, make sure the Captain's and First Officer's MASTER CAUTION lights (Amber) are on.
- (b) On the Pilot's Glareshield, make sure the OVHT/DET light (Amber) is on.
- (c) On the Engine and APU Fire Control Panel, P8-1, make sure the APU DET INOP light (Amber) is on.
- (d) On the Fire Detection Control Module, M279, in the Electrical and Electronics Compartment, make sure the APU light (Amber) comes on.
- (e) On the Fire Detection Control Module, make sure the three FAULT CODE lights are OFF-OFF-ON.

SUBTASK 26-10-00-860-010

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU

- (a) On the Pilot's Glareshield, make sure the Captain's and First Officer's MASTER CAUTION lights (Amber) are off.
- (b) On the Pilot's Glareshield, make sure the OVHT/DET light (Amber) is off.
- (c) On the Engine and APU Fire Control Panel, make sure the APU DET INOP light (Amber) is off.
- (d) On the Fire Detection Control Module, in the Electrical and Electronics Compartment, make sure the APU light (Amber) is off.
- (e) On the Fire Detection Control Module, make sure the three FAULT CODE lights are OFF-OFF-OFF.

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L. Do the Air Mode Test for the APU Remote Control Panel, P28

SUBTASK 26-10-00-860-011

(1) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

SUBTASK 26-10-00-710-013

(2) Move and hold the TEST switch on the Engine and APU Fire Control Panel, P8-1, to the OVHT/FIRE position.

NOTE: Other indications will occur. Ignore all the indications that are not listed in the steps that follow.

- (a) Make sure the APU fire warning horn in the right main wheel well does not come on.
(b) Make sure the red light on the APU remote control panel, P28, in the right main wheel well flashes on and off at approximately one cycle per second.
(c) Push the HORN CUTOFF switch on the APU remote control panel.
(d) Make sure the red light on the APU remote control panel stays on and does not flash.

SUBTASK 26-10-00-710-014

(3) Release the TEST switch on the Engine and APU Fire Control Panel.

SUBTASK 26-10-00-860-012

(4) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

M. Put the Airplane Back to its Usual Condition

SUBTASK 26-10-00-860-013

(1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Table with 4 columns: Row, Col, Number, Name. Row A, Col 19, Number C00388, Name FIRE PROTECTION DETECTION OVHT WW WING BODY

N. System Description

SUBTASK 26-10-00-800-001

(1) The Engine and APU Fire Detection Systems are monitored and controlled by the Fire Detection Control Module, M279, in the Electrical and Electronics Compartment. The Compartment Overheat System is monitored and controlled by the Compartment Overheat Detection Controller, M237, in the Electrical and Electronics Compartment. The Module and the Controller send fire, overheat, and fault signals to the Engine and APU Fire Control Panel, P8-1, and the Pilot's Glareshield, P7, in the flight compartment. The module also sends an APU fire signal to the APU Remote Control Panel, P28, in the right main wheel well.

(a) The Engine and APU Fire, Overheat, and Fault Warning Indications are as follows:

Table 501/26-10-00-993-802

Table with 4 columns: System, Condition, Indication, Location. Rows include ENGINE 1 FIRE, MASTER CAUTION Lights (amber), FIRE WARN Lights (red), Flight Compartment Fire Bell.

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<b>System</b>	<b>Condition</b>	<b>Indication</b>	<b>Location</b>
ENGINE 2	FIRE	Engine 2 Fire Handle Light (red)	P8-1
		MASTER CAUTION Lights (amber)	P7
		FIRE WARN Lights (red)	P7
		Flight Compartment Fire Bell	M315
ENGINE 1	OVER-HEAT	ENG 1 OVERHEAT Light (amber)	P8-1
		MASTER CAUTION Lights (amber)	P7
		OVHT/DET Light (amber)	P7
ENGINE 2	OVER-HEAT	ENG 2 OVERHEAT Light (amber)	P8-1
		MASTER CAUTION Lights (amber)	P7
		OVHT/DET Light (amber)	P7
ENGINE 1	FAULT	FAULT Light (amber)	P8-1
		ENGINE NO. 1 LOOP A Light (amber)	M279
		ENGINE NO. 1 LOOP B Light (amber)	M279
ENGINE 2	FAULT	FAULT Light (amber)	P8-1
		ENGINE NO. 2 LOOP A Light (amber)	M279
		ENGINE NO. 2 LOOP B Light (amber)	M279
APU	FIRE	APU Fire Handle Light (red)	P8-1
		MASTER CAUTION Lights (amber)	P7
		FIRE WARN Lights (red)	P7
		Flight Compartment Fire Bell	M315
		Right Wheel Well APU Fire Warning Horn	M277
		APU Remote Fire Light (red)	P28
APU	OVER-HEAT	MASTER CAUTION Light (amber)	P7
		OVHT/DET Light (amber)	P7
APU	FAULT	APU DET INOP Light (amber)	P8-1

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System	Condition	Indication	Location
		APU Light (amber)	M279

- (b) The Engine Fire Detection system has dual sensors in each loop and operates in "AND" logic. Therefore, both loops must sense a fire or a fault before the fire or fault indication is shown. The following table is a summary of the indications that will be given for the various conditions of the sensing loops:

Table 502/26-10-00-993-803

LOOP 1	LOOP 2	INDICATIONS
NORMAL	NORMAL	NONE
NORMAL	INOP	NONE
NORMAL	FAULT	NONE
NORMAL	FIRE	NONE
INOP	NORMAL	NONE
INOP	INOP	NONE
INOP	FAULT	FAULT
INOP	FIRE	FIRE
FAULT	NORMAL	NONE
FAULT	INOP	FAULT
FAULT	FAULT	FAULT
FAULT	FIRE	FIRE
FIRE	NORMAL	NONE
FIRE	INOP	FIRE
FIRE	FAULT	FIRE
FIRE	FIRE	FIRE

- (c) The following table shows all the fire, overheat, and fault indications in the flight compartment. These are the indications that will occur when the OVHT DET switches are in the normal position and you set the TEST switch to the FIRE/OVHT position, then to the NORMAL position, then to the FAULT INOP position, and then to the NORMAL position:

Table 503/26-10-00-993-804

INDICATOR	LOC	FIRE/ OVHT	NORMAL	FAULT/ INOP	NORMAL
Engine "1" Light	P8-1	ON	OFF	OFF	OFF
Engine "2" Light	P8-1	ON	OFF	OFF	OFF
"APU" Light	P8-1	ON	OFF	OFF	OFF
"ENG 1 OVHT" Light	P8-1	ON	OFF	OFF	OFF
"ENG 2 OVHT" Light	P8-1	ON	OFF	OFF	OFF

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INDICATOR	LOC	FIRE/ OVHT	NORMAL	FAULT/ INOP	NORMAL
"WHEEL WELL" Light	P8-1	ON	OFF	OFF	OFF
"APU DET INOP" Light	P8-1	OFF	OFF	ON	OFF
"FAULT" Light	P8-1	OFF	OFF	ON	OFF
"FIRE WARN" Light <sup>*[1]</sup>	P7	ON	OFF	OFF	OFF
"MASTER CAUTION" Light	P7	ON	<sup>*[2]</sup>	ON	<sup>*[2]</sup>
"OVHT/DET" Light	P7	ON	<sup>*[2]</sup>	ON	<sup>*[2]</sup>
Flight Compt Bell <sup>*[1]</sup>	M315	ON	OFF	OFF	OFF
Wheel Well Bell <sup>*[1]</sup>	M277	ON	OFF	OFF	OFF
Remote Fire Light <sup>*[1]</sup>	P28	ON	OFF	OFF	OFF

\*[1] Reset by pulling the "BELL CUTOUT" switch or by pushing the "FIRE/WARN" light, or by pushing the "HORN CUTOUT" switch on the P28 panel.

\*[2] Reset by pushing the "MASTER/CAUTION" light.

————— END OF TASK —————

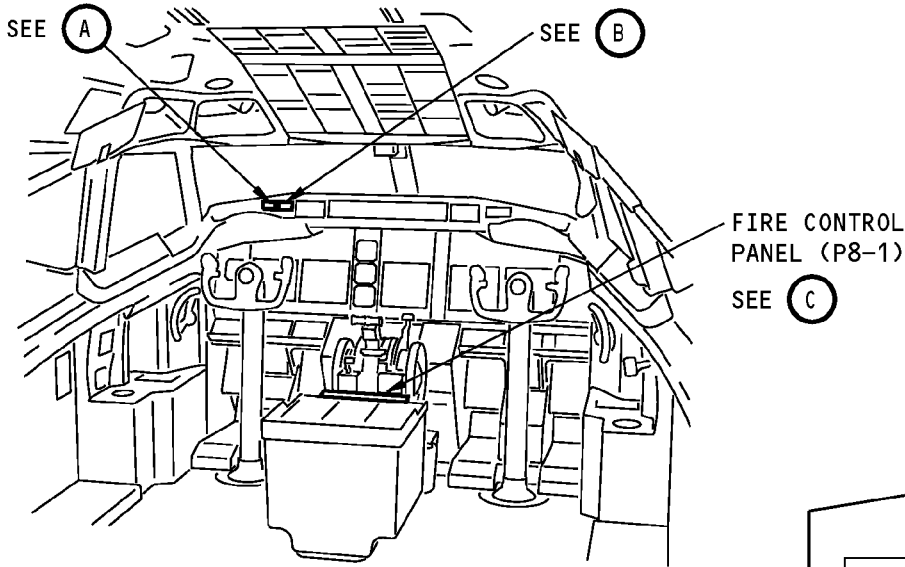
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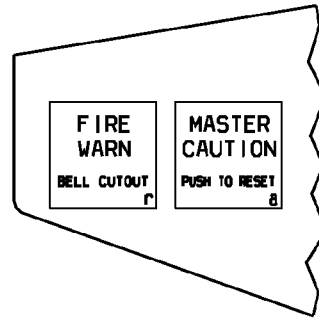
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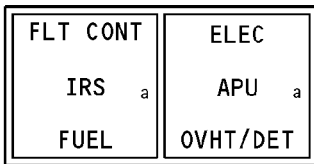
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**FLIGHT COMPARTMENT**



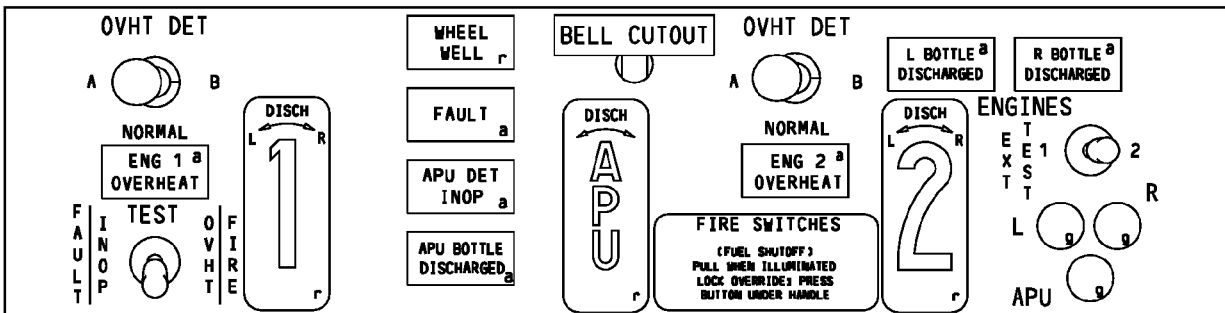
**CAPTAIN'S FIRE WARNING SWITCH (P7)  
(FIRST OFFICER'S IS OPPOSITE)**



**CAPTAIN'S WARNING LIGHTS (P7)**

(B)

(A)



**FIRE CONTROL PANEL (P8-1)**

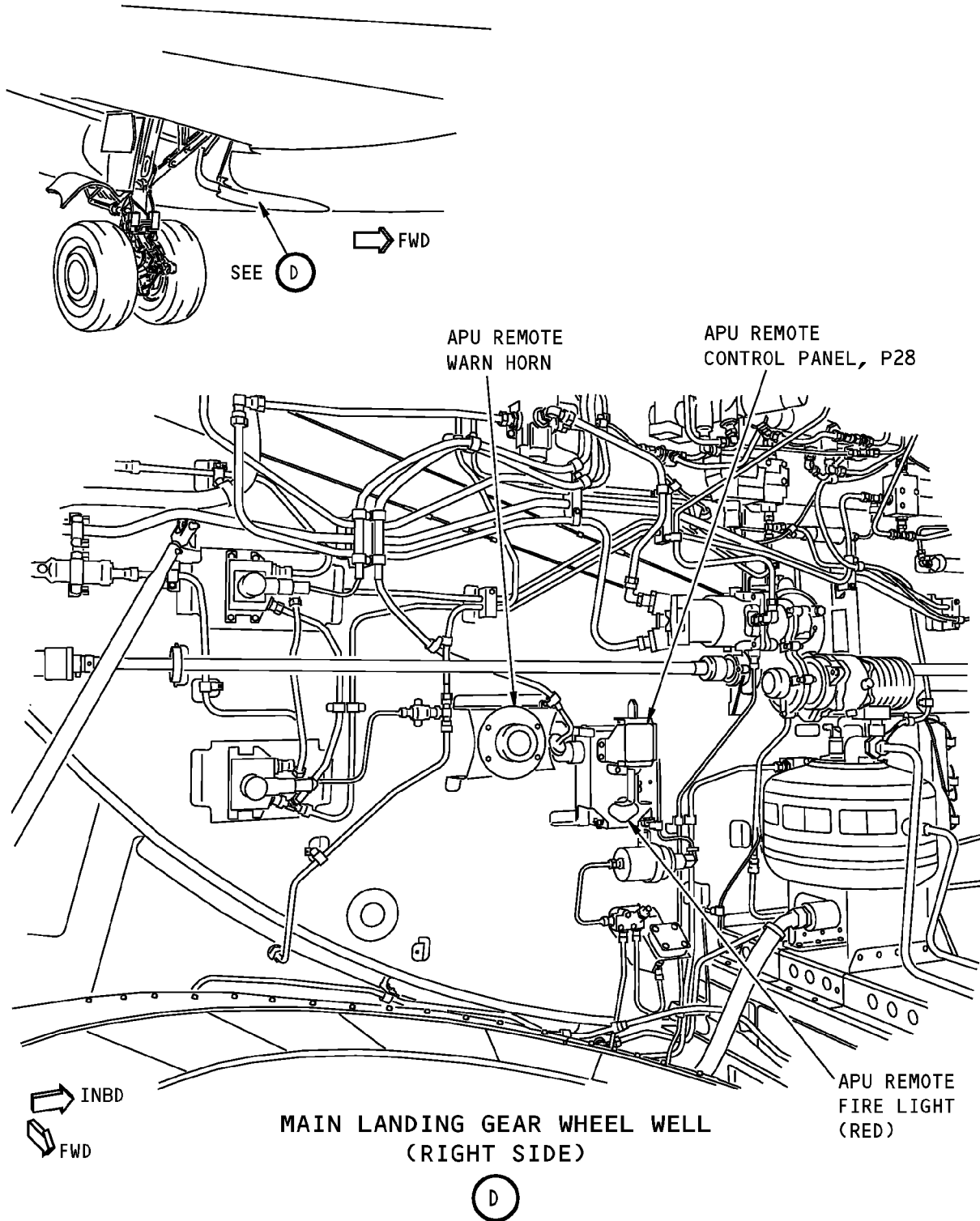
(C)

**Auxiliary Power Unit (APU) Fire Detection Test  
Figure 501 (Sheet 1 of 2)/26-10-00-990-801**

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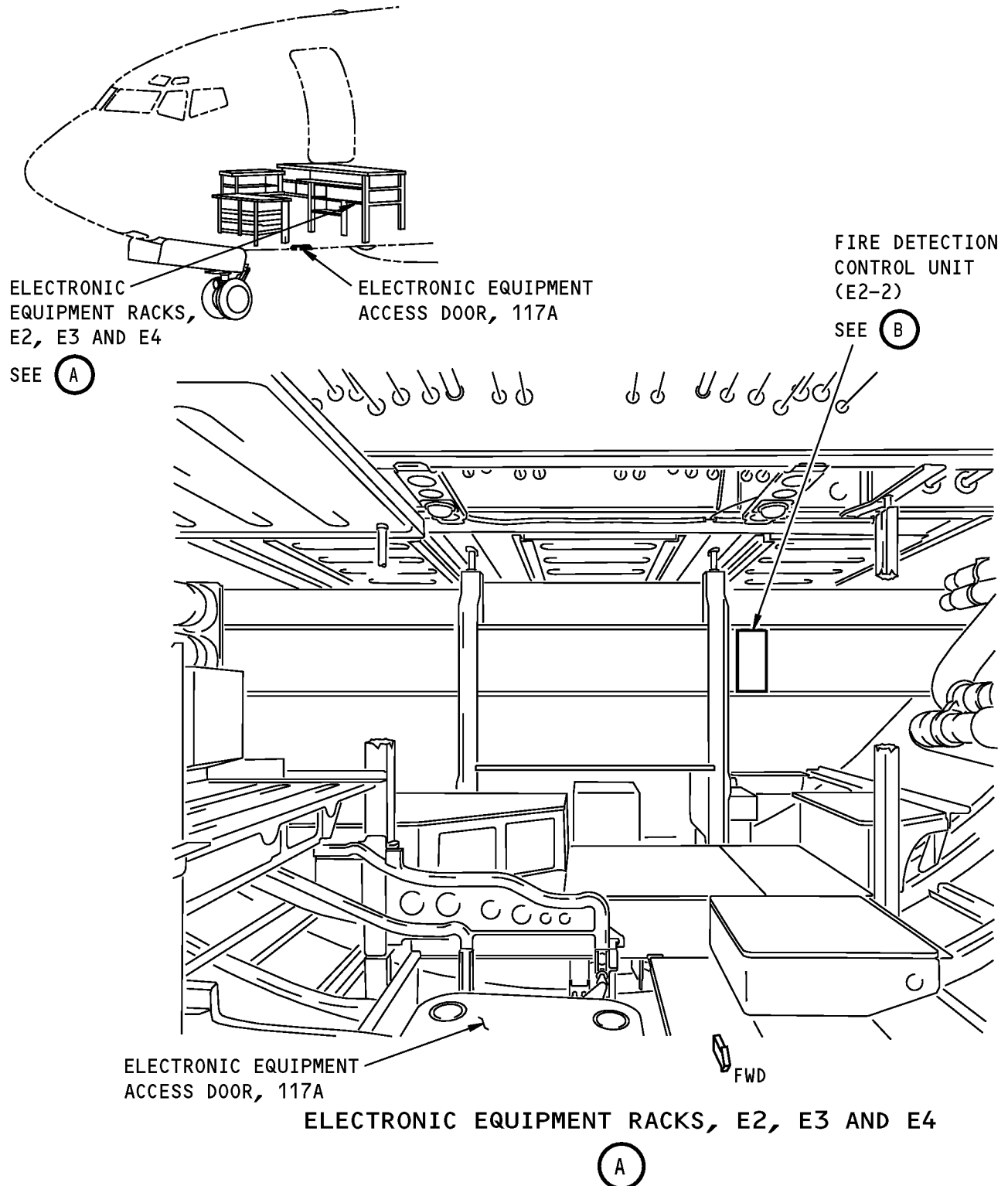
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**Auxiliary Power Unit (APU) Fire Detection Test  
Figure 501 (Sheet 2 of 2)/26-10-00-990-801**

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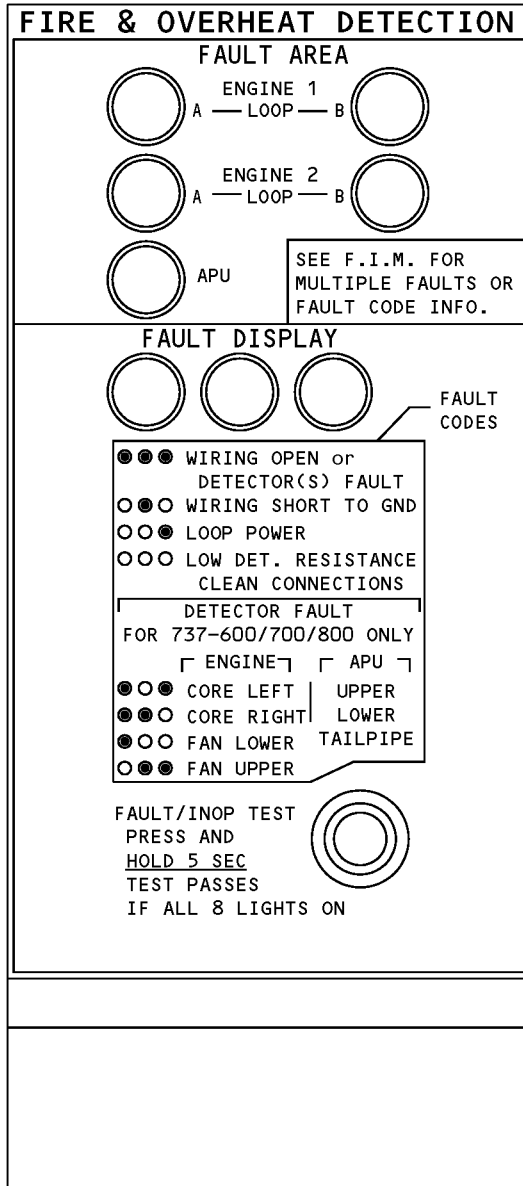


**Engine and APU Fire Detection Control Unit Installation  
Figure 502 (Sheet 1 of 2)/26-10-00-990-802**

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**[1] FIRE DETECTION CONTROL UNIT**



**Engine and APU Fire Detection Control Unit Installation  
Figure 502 (Sheet 2 of 2)/26-10-00-990-802**

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## ENGINE AND APU FIRE DETECTION CONTROL MODULE, M279 - REMOVAL/INSTALLATION

### 1. General

A. This procedure has these tasks:

- (1) A removal of the Engine and APU Fire Detection Control Module (M279), referred to as the module.
- (2) An installation of the Engine and APU Fire Detection Control Module.

B. The Engine and APU Fire Detection Control Module is installed on the E2-2 shelf in the electronic equipment compartment.

### **TASK 26-10-01-000-801**

### 2. Engine and APU Fire Detection Module Removal

(Figure 401)

A. References

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 201)

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

D. Engine and APU Fire Detection Control Module Removal

SUBTASK 26-10-01-860-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	1	C01316	ENGINE 1 START LEVER CHAN A
B	2	C01317	ENGINE 1 START LEVER CHAN B

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	6	C01318	ENGINE 2 START LEVER CHAN A
B	7	C01319	ENGINE 2 START LEVER CHAN B

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1
E	3	C01321	ENGINE FUEL ENGINE 2 HPSOV CONT
E	4	C01396	ENGINE FUEL ENGINE 2 HPSOV IND

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01320	ENGINE FUEL ENGINE 1 HPSOV CONT
E	6	C01395	ENGINE FUEL ENGINE 1 HPSOV IND

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	11	C01336	APU START CONV

SUBTASK 26-10-01-010-001

(2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 26-10-01-020-001

(3) Remove the module [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

SUBTASK 26-10-01-860-005

(4) If it is necessary, set the engine start levers to IDLE to get access to remove the module [1].

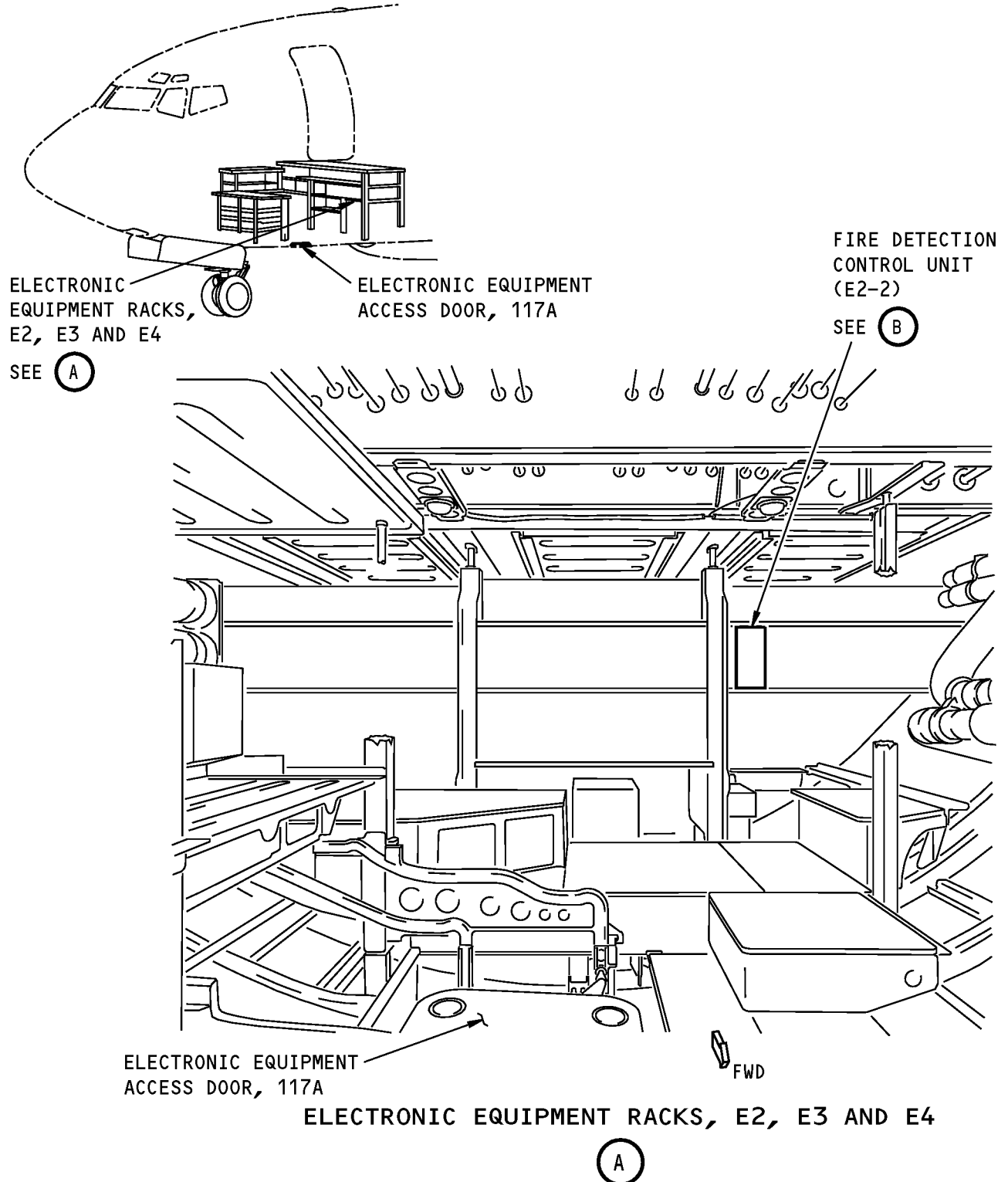
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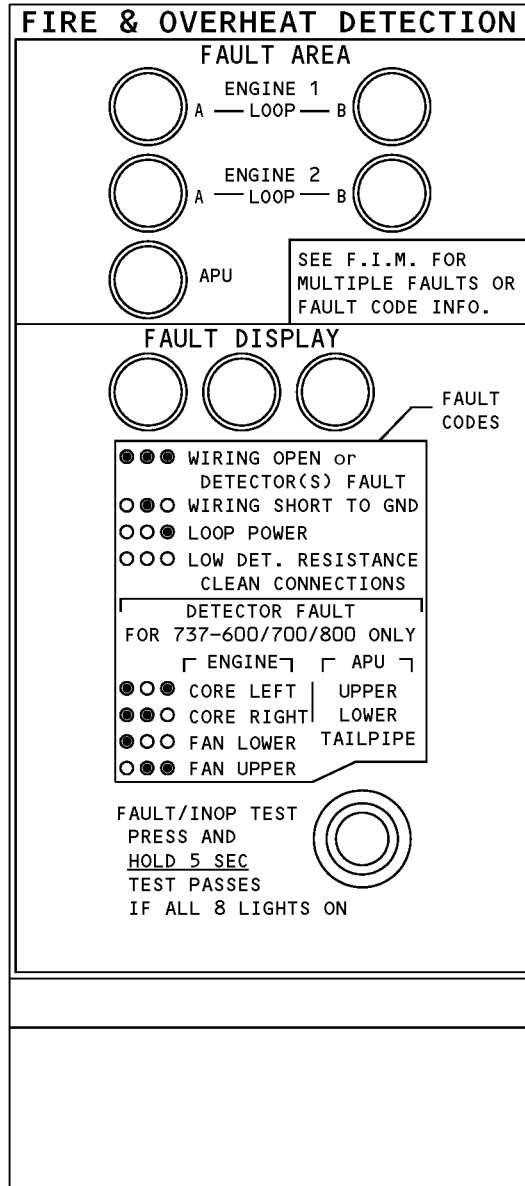
**Engine and APU Fire Detection Control Unit Installation**  
**Figure 401 (Sheet 1 of 2)/26-10-01-990-801**

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[1] FIRE DETECTION CONTROL UNIT



Engine and APU Fire Detection Control Unit Installation  
Figure 401 (Sheet 2 of 2)/26-10-01-990-801

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TASK 26-10-01-400-801

#### 3. Engine and APU Fire Detection Module Installation

(Figure 401)

##### A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 201)
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
26-15-00-710-801	APU Fire Detection - Operational Test (P/B 501)

##### B. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

##### C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

##### D. Engine and APU Fire Detection Control Module Installation

SUBTASK 26-10-01-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	1	C01316	ENGINE 1 START LEVER CHAN A
B	2	C01317	ENGINE 1 START LEVER CHAN B

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	6	C01318	ENGINE 2 START LEVER CHAN A
B	7	C01319	ENGINE 2 START LEVER CHAN B

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1
E	3	C01321	ENGINE FUEL ENGINE 2 HPSOV CONT
E	4	C01396	ENGINE FUEL ENGINE 2 HPSOV IND
E	5	C01320	ENGINE FUEL ENGINE 1 HPSOV CONT
E	6	C01395	ENGINE FUEL ENGINE 1 HPSOV IND

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	11	C01336	APU START CONV

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SUBTASK 26-10-01-010-002

(2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 26-10-01-420-001

(3) Install the module, do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 26-10-01-860-004

(4) Make sure the engine start levers are in the CUTOFF position.

NOTE: It is possible that it was necessary to move the engine start levers to IDLE to get access to the control unit.

E. Engine and APU Fire Detection Control Unit Installation Test

SUBTASK 26-10-01-860-003

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	1	C01316	ENGINE 1 START LEVER CHAN A
B	2	C01317	ENGINE 1 START LEVER CHAN B

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	6	C01318	ENGINE 2 START LEVER CHAN A
B	7	C01319	ENGINE 2 START LEVER CHAN B

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1
E	3	C01321	ENGINE FUEL ENGINE 2 HPSOV CONT
E	4	C01396	ENGINE FUEL ENGINE 2 HPSOV IND
E	5	C01320	ENGINE FUEL ENGINE 1 HPSOV CONT
E	6	C01395	ENGINE FUEL ENGINE 1 HPSOV IND

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	11	C01336	APU START CONV

SUBTASK 26-10-01-710-001

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

SUBTASK 26-10-01-710-002

(3) Do this task: APU Fire Detection - Operational Test, TASK 26-15-00-710-801.

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F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-10-01-010-003

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## ENGINE FIRE DETECTION - ADJUSTMENT/TEST

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure consists of these tasks:
  - (1) Engine Fire Detection - Operational Test.
  - (2) Engine Fire Detection Loop Resistance - System Test.
  - (3) Engine Fire Detection Circuit - System Test.

### **TASK 26-11-00-710-801**

### 2. Engine Fire Detection - Operational Test

(Figure 501)

#### A. General

- (1) The Operational Test does a check of the Engine Fire Detection System without disturbing the detection system and it only uses the equipment that is on the airplane. This test will verify the circuit from the Engine and APU Fire Control Panel, P8-1, to the Engine and APU Fire Detection Control Module, M279. The test will verify that the Engine and APU Fire Detection Control Module, which continuously monitors the detection loops, operates correctly.

#### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)

#### C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

#### D. Prepare for the Operational Test

SUBTASK 26-11-00-860-001

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-11-00-860-002

- (2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-00-860-003

- (3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

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SUBTASK 26-11-00-710-001

- (4) Make sure the two OVHT DET switches on the Engine and APU Fire Control Panel, P8-1, in the flight compartment are in the NORMAL positions.

### E. Do the FIRE/OVHT Test

SUBTASK 26-11-00-710-002

- (1) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the OVHT/FIRE position.

**NOTE:** Ignore the indication lights for the APU detection system and the indications on the Engine and APU Fire Detection Control Module, M279, in the Electronic Equipment Bay.

- (a) On the Engine and APU Fire Control Panel, make sure these lights come on:
  - 1) Engine 1 Fire Handle light (Red).
  - 2) Engine 2 Fire Handle light (Red).
  - 3) ENG 1 OVERHEAT light (Amber).
  - 4) ENG 2 OVERHEAT light (Amber).
- (b) On the Pilot's Glareshield, P7, make sure these lights come on:
  - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
  - 2) The Captain's and First Officer's FIRE WARN lights (Red).
  - 3) The OVHT/DET light (Amber).
- (c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, comes on.

SUBTASK 26-11-00-710-003

- (2) Release the TEST switch on the Engine and APU Fire Control Panel.
  - (a) On the Engine and APU Fire Control Panel, make sure these lights go off:
    - 1) Engine 1 Fire Handle light (Red).
    - 2) Engine 2 Fire Handle light (Red).
    - 3) ENG 1 OVERHEAT light (Amber).
    - 4) ENG 2 OVERHEAT light (Amber).
  - (b) On the Pilot's Glareshield, make sure these lights go off:
    - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
    - 2) The Captain's and First Officer's FIRE WARN lights (Red).
    - 3) The OVHT/DET light (Amber).
  - (c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, stops.

### F. Do the FAULT/INOP Test

SUBTASK 26-11-00-710-004

- (1) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the FAULT/INOP position.

**NOTE:** Ignore the indication lights for the APU detection system and the indications on the Engine and APU Fire Detection Control Module, M279, in the Electronic Equipment Bay.

- (a) On the Engine and APU Fire Control Panel, make sure these lights come on:
  - 1) FAULT light (Amber).
- (b) On the Pilot's Glareshield, P7, make sure these lights come on:
  - 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).

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### AIRCRAFT MAINTENANCE MANUAL

2) The OVHT/DET light (Amber).

SUBTASK 26-11-00-710-005

(2) Release the TEST switch on the Engine and APU Fire Control Panel.

(a) On the Engine and APU Fire Control Panel, make sure these lights are off:

1) FAULT light (Amber).

(b) On the Pilot's Glareshield, P7, make sure these lights are off:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).

2) The OVHT/DET light (Amber).

G. Do the FAULT/INOP Test from the Engine and APU Fire Detection Control Module, M279

SUBTASK 26-11-00-710-006

(1) Push and hold the FAULT/INOP TEST switch on the Engine and APU Fire Detection Control Module, in the Electrical and Electronics Compartment.

**NOTE:** Ignore the indications for the APU detection system and the indications that will occur in the flight compartment on the Engine and APU Fire Control Panel, P8-1, and the Pilot's Glareshield, P7.

(a) On the Engine and APU Fire Detection Control Module, make sure these lights come on:

1) ENGINE 1 LOOP A (Amber).

2) ENGINE 1 LOOP B (Amber).

3) ENGINE 2 LOOP A (Amber).

4) ENGINE 2 LOOP B (Amber).

5) The three FAULT CODE lights are ON-ON-ON.

SUBTASK 26-11-00-710-007

(2) Release the FAULT/INOP TEST switch on the Engine and APU Fire Detection Control Module.

(a) On the Engine and APU Fire Detection Control Module, make sure these lights are off:

1) ENGINE 1 LOOP A (Amber).

2) ENGINE 1 LOOP B (Amber).

3) ENGINE 2 LOOP A (Amber).

4) ENGINE 2 LOOP B (Amber).

5) The three FAULT CODE lights are OFF-OFF-OFF.

H. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-00-860-004

(1) Close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

————— END OF TASK —————

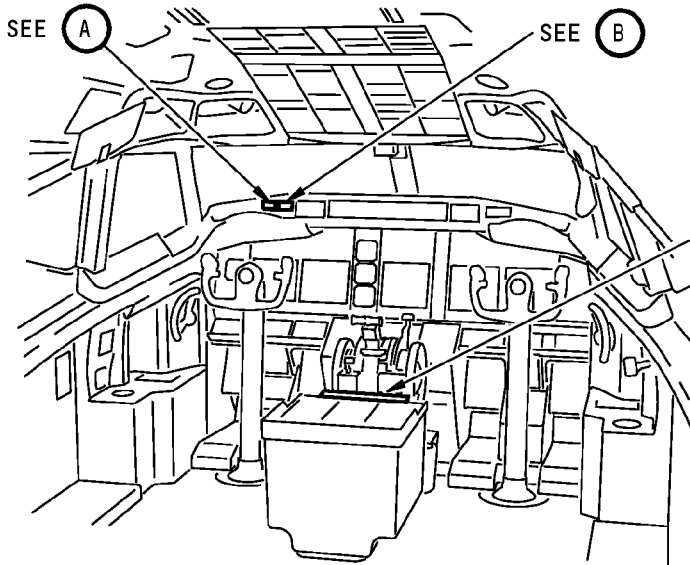
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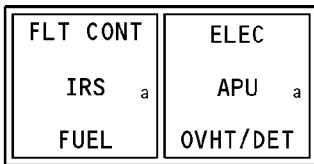
**AIRCRAFT MAINTENANCE MANUAL**



**FLIGHT COMPARTMENT**

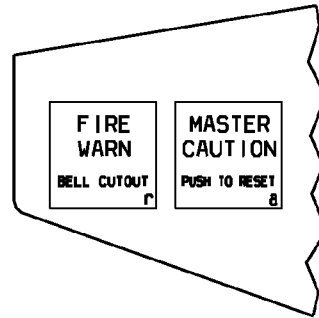
FIRE CONTROL PANEL (P8-1)

SEE (C)



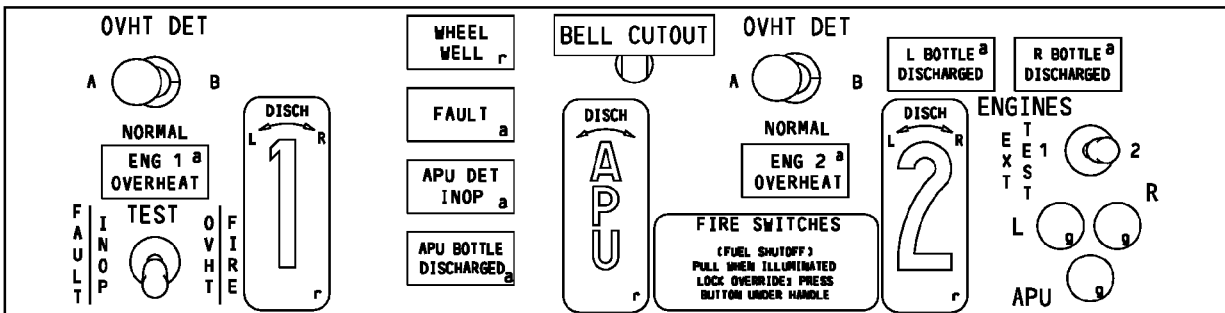
**CAPTAIN'S WARNING LIGHTS (P7)**

(B)



**CAPTAIN'S FIRE WARNING SWITCH (P7)  
(FIRST OFFICER'S IS OPPOSITE)**

(A)



**FIRE CONTROL PANEL (P8-1)**

(C)

**Engine Fire Detection Operational Test  
Figure 501/26-11-00-990-801**

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TASK 26-11-00-730-801

#### 3. Engine Fire Detection Loop Resistance - System Test

(Figure 502)

##### A. General

- (1) The Loop Resistance Test does a check of the Engine Fire Detection Loop Circuit. It disturbs the engine fire detection system by removing the Engine and APU Fire Detection Control Module, M279 and it requires some additional test equipment.

##### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
26-10-01-000-801	Engine and APU Fire Detection Module Removal (P/B 401)
26-10-01-400-801	Engine and APU Fire Detection Module Installation (P/B 401)

##### C. Tools/Equipment

Reference	Description
STD-1231	Multimeter - Standard

##### D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

##### E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

##### F. Prepare for the Loop Resistance Test

SUBTASK 26-11-00-860-005

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-11-00-860-006

- (2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-00-010-001

- (3) Get access to the Electronic Equipment Bay, do this task:

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

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G. Engine Fire Detection Loop Resistance Test

SUBTASK 26-11-00-020-001

(1) Do this task: Engine and APU Fire Detection Module Removal, TASK 26-10-01-000-801.

SUBTASK 26-11-00-730-001

(2) Use a multimeter, STD-1231 to measure the resistance across pin 25 of connector D1002 and airplane ground.

(a) Make sure the resistance is 862 ± 40 ohms.

SUBTASK 26-11-00-730-002

(3) Use a multimeter, STD-1231 to measure the resistance across pin 12 of connector D1002 and airplane ground.

(a) Make sure the resistance is 862 ± 40 ohms.

SUBTASK 26-11-00-730-003

(4) Use a multimeter, STD-1231 to measure the resistance across pin 25 of connector D998 and airplane ground.

(a) Make sure the resistance is 862 ± 40 ohms.

SUBTASK 26-11-00-730-004

(5) Use a multimeter, STD-1231 to measure the resistance across pin 12 of connector D998 and airplane ground.

(a) Make sure the resistance is 862 ± 40 ohms.

SUBTASK 26-11-00-420-001

(6) Do this task: Engine and APU Fire Detection Module Installation, TASK 26-10-01-400-801.

H. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-00-410-001

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 26-11-00-860-007

(2) Close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

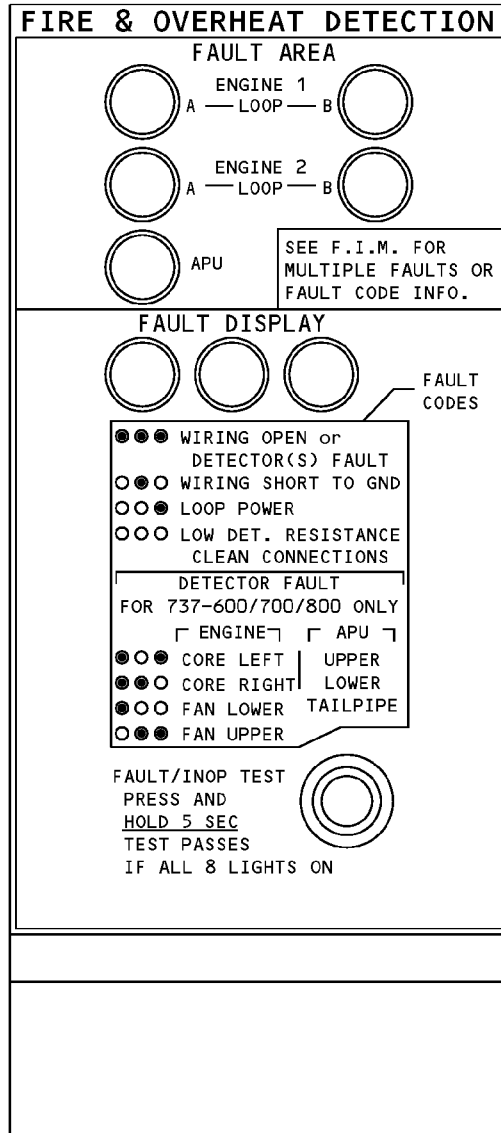
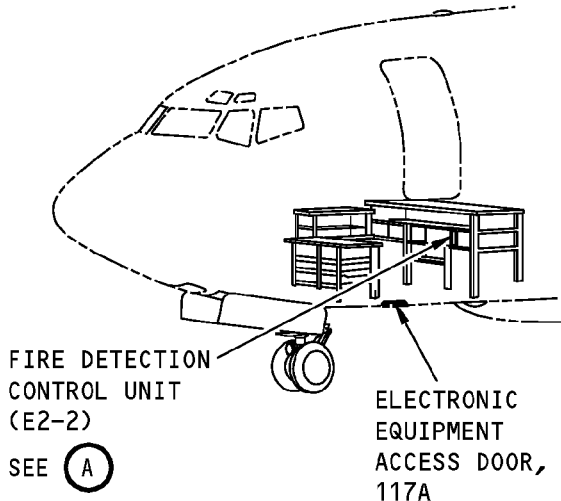
END OF TASK

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**FIRE DETECTION CONTROL UNIT**



**Engine Fire Detection Resistance Test**  
Figure 502/26-11-00-990-802

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**TASK 26-11-00-730-802**

## 4. Engine Fire Detection Circuit - System Test

(Figure 501, Figure 503)

### A. General

- (1) The Circuit Test does a check of the entire Engine Fire Detection System. It does not disturb the engine fire detection system but it does require additional test equipment.

### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
71-11-02-410-801-F00	Close the Fan Cowl Panels (P/B 201)

### C. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1655	Equipment - Test, APU/Engine Fire Detection System (Part #: C26005-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

### D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
411	Engine 1 - Engine
421	Engine 2 - Engine

### E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

### F. Prepare for the Circuit Test

SUBTASK 26-11-00-860-008

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-11-00-860-009

- (2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

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F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 26-11-00-860-010

(3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

SUBTASK 26-11-00-010-002

(4) Get access to the Electronic Equipment Bay, do this task:

Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 26-11-00-010-004

(5) Do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

SUBTASK 26-11-00-730-005

(6) Make sure the two OVHT DET switches, on the Engine and APU Fire Control Panel, P8-1, are in the NORMAL positions.

SUBTASK 26-11-00-480-001

(7) On Engine 1 (2), connect the test box equipment, SPL-1655 to the two terminal lugs (A/1 and B/2) of the FAN LOWER Fire Detector, M1758, and airplane ground.

**NOTE:** This test is written for engine 1. The test is the same for engine 2, except as noted by the data in parenthesis. Use the data in parenthesis to do the test for engine 2.

- (a) Make sure all the toggle switches on the test box are in the NORMAL positions.
- (b) Connect one pair of alligator clips to each loop:
  - 1) Connect one alligator clip to the responder bracket or to a grounding lug.
  - 2) Connect the other alligator clip to the responder lug.

G. Do a test of the fault indication circuit

SUBTASK 26-11-00-730-006

(1) On the test box, move the ENGINE LOOP A/1 GND FAULT switch to the GND FAULT position.

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- (a) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:
  - 1) The ENGINE 1 (2) LOOP A FAULT AREA light comes on.
  - 2) The three FAULT CODE lights are OFF-ON-OFF.

SUBTASK 26-11-00-730-007

- (2) On the test box, move the ENGINE LOOP B/2 GND FAULT switch to the GND FAULT position.
  - (a) Make sure the FAULT light on the Engine and APU Fire Control Panel, P8-1, comes on.
  - (b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:
    - 1) The ENGINE 1 (2) LOOP A FAULT AREA light comes on.
    - 2) The ENGINE 1 (2) LOOP B FAULT AREA light comes on.
    - 3) The three FAULT CODE lights are OFF-ON-OFF.

SUBTASK 26-11-00-730-008

- (3) On the test box, move the ENGINE LOOP A/1 AND B/2 GND FAULT switches to the NORMAL position.
  - (a) Make sure the FAULT light on the Engine and APU Fire Control Panel, P8-1, goes off.
  - (b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:
    - 1) The ENGINE 1 (2) LOOP A FAULT AREA light goes off.
    - 2) The ENGINE 1 (2) LOOP B FAULT AREA light goes off.
    - 3) The three FAULT CODE lights are OFF-OFF-OFF.

### H. Do a test of the overheat indication circuit

SUBTASK 26-11-00-730-009

- (1) On the test box, move the ENGINE LOOP A/1 AND B/2 OVHT switches to the OVHT position.
  - (a) Make sure the ENG 1 (2) OVERHEAT light on the Engine and APU Fire Control Panel, P8-1, comes on.
  - (b) On the Pilot's Glareshield, P7, make sure these conditions occur:
    - 1) The Captain and First Officer's MASTER CAUTION lights come on.
    - 2) The OVHT DET light comes on.

SUBTASK 26-11-00-730-010

- (2) On the test box, move the ENGINE LOOP A/1 AND B/2 OVHT switches to the NORMAL position.
  - (a) Make sure the ENG 1 (2) OVERHEAT light on the Engine and APU Fire Control Panel, P8-1, goes off.
  - (b) On the Pilot's Glareshield, P7, make sure these conditions occur:
    - 1) The Captain and First Officer's MASTER CAUTION lights goes off.
    - 2) The OVHT DET light goes off.

### I. Do a test of the fire indication circuit

SUBTASK 26-11-00-730-011

- (1) On the test box, move the ENGINE LOOP A/1 AND B/2 FIRE switches to the FIRE position.
  - (a) Make sure the engine 1 (2) Fire Handle light, on the Engine and APU Fire Control Panel, P8-1, comes on.
  - (b) On the Pilot's Glareshield, P7, make sure these conditions occur:

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- 1) The Captain and First Officer's MASTER CAUTION lights come on.
- 2) The Captain and First Officer's FIRE WARN lights comes on.
- (c) Make sure the flight compartment fire bell, on the Warning Module, M315, comes on.

SUBTASK 26-11-00-730-012

- (2) On the test box, move the ENGINE LOOP A/1 AND B/2 FIRE switches to the NORMAL position.
  - (a) Make sure the engine 1 (2) Fire Handle light, on the Engine and APU Fire Control Panel, P8-1, goes off.
  - (b) On the Pilot's Glareshield, P7, make sure these conditions occur:
    - 1) The Captain and First Officer's MASTER CAUTION lights goes off.
    - 2) The Captain and First Officer's FIRE WARN lights goes off.
  - (c) Make sure the flight compartment fire bell, on the Warning Module, M315, stops.

SUBTASK 26-11-00-480-002

- (3) On Engine 1 (2), disconnect the test box equipment, SPL-1655 from the two terminal lugs (A/1 and B/2) of the FAN LOWER Fire Detector, M1758, and airplane ground.

SUBTASK 26-11-00-730-013

- (4) Make sure you do the circuit test for engine 1 and engine 2.

J. Put the airplane back to its usual condition.

SUBTASK 26-11-00-410-003

- (1) Do this task: Close the Fan Cowl Panels, TASK 71-11-02-410-801-F00.

SUBTASK 26-11-00-410-002

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 26-11-00-860-011

- (3) Close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

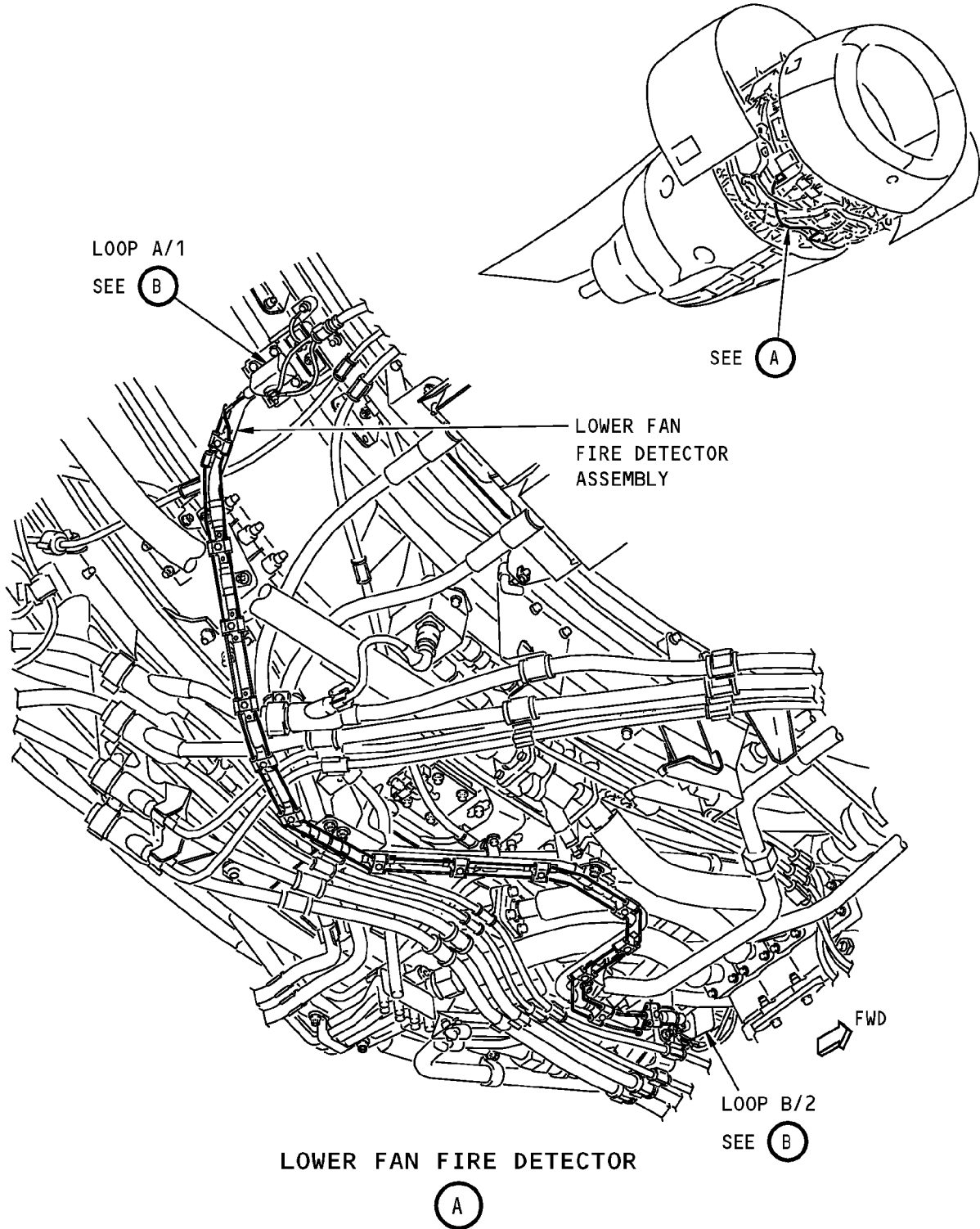
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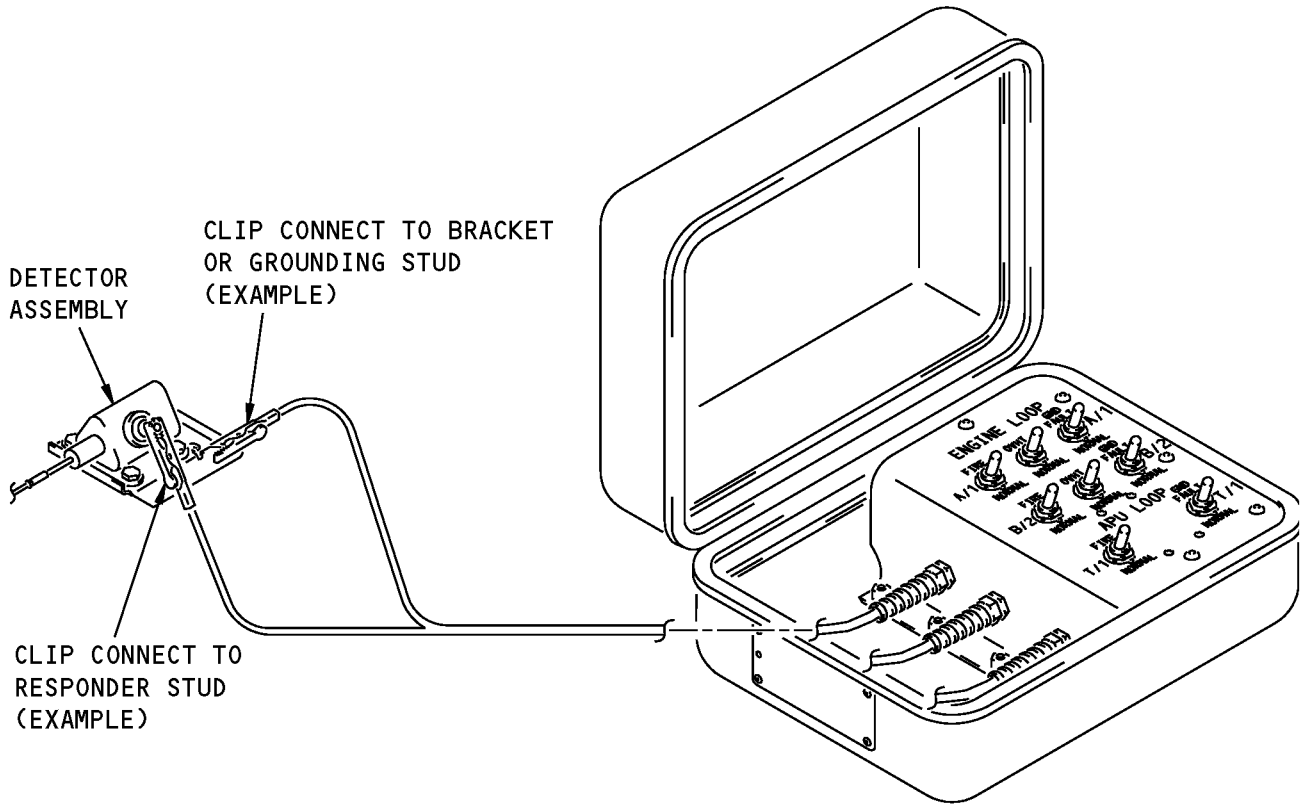
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**Engine Fire Detection Circuit Test  
Figure 503 (Sheet 1 of 2)/26-11-00-990-803**

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(EXAMPLE)

(B)

**Engine Fire Detection Circuit Test  
Figure 503 (Sheet 2 of 2)/26-11-00-990-803**

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## ENGINE FIRE DETECTORS - REMOVAL/INSTALLATION

### 1. General

A. This procedure has these tasks:

- (1) A removal of the engine fire detector elements.
- (2) An installation of the engine fire detector elements.
- (3) A removal of the engine fire detector assemblies.
- (4) An installation of the engine fire detector assemblies.

B. There are four different fire detectors on each engine. One is installed in the upper fan area. One is installed in the lower fan area. One is installed in the left engine core. One is installed in the right engine core. All of the engine fire detectors are dual loop detectors. Each fire detector assembly has two elements which you can remove separately. The removal and installation procedures are similar for each fire detector assembly or element.

### **TASK 26-11-01-000-801**

### 2. Engine Fire Detector Element Removal

(Figure 401)

A. References

Reference	Title
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

B. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

C. To access the fan fire detector assemblies, do this procedure.

SUBTASK 26-11-01-010-001

- (1) Do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

D. To access the core fire detection procedure, do this procedure.

SUBTASK 26-11-01-010-002

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

E. Fire detector removal.

SUBTASK 26-11-01-860-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-01-020-001

- (2) Do these steps to remove a fire detector element [4]:
- (a) Loosen the bolt [9] on each applicable clamp [8].
  - (b) Remove the nut [2] from the terminal.
  - (c) Disconnect the lead [3] from the terminal.
  - (d) Remove the four screws [6] from the fire detector housing [5].
  - (e) Remove the element [4] from the clamp [8].
  - (f) Remove the grommets [10] from the element [4] to use on the new element.
  - (g) Remove the element [4].

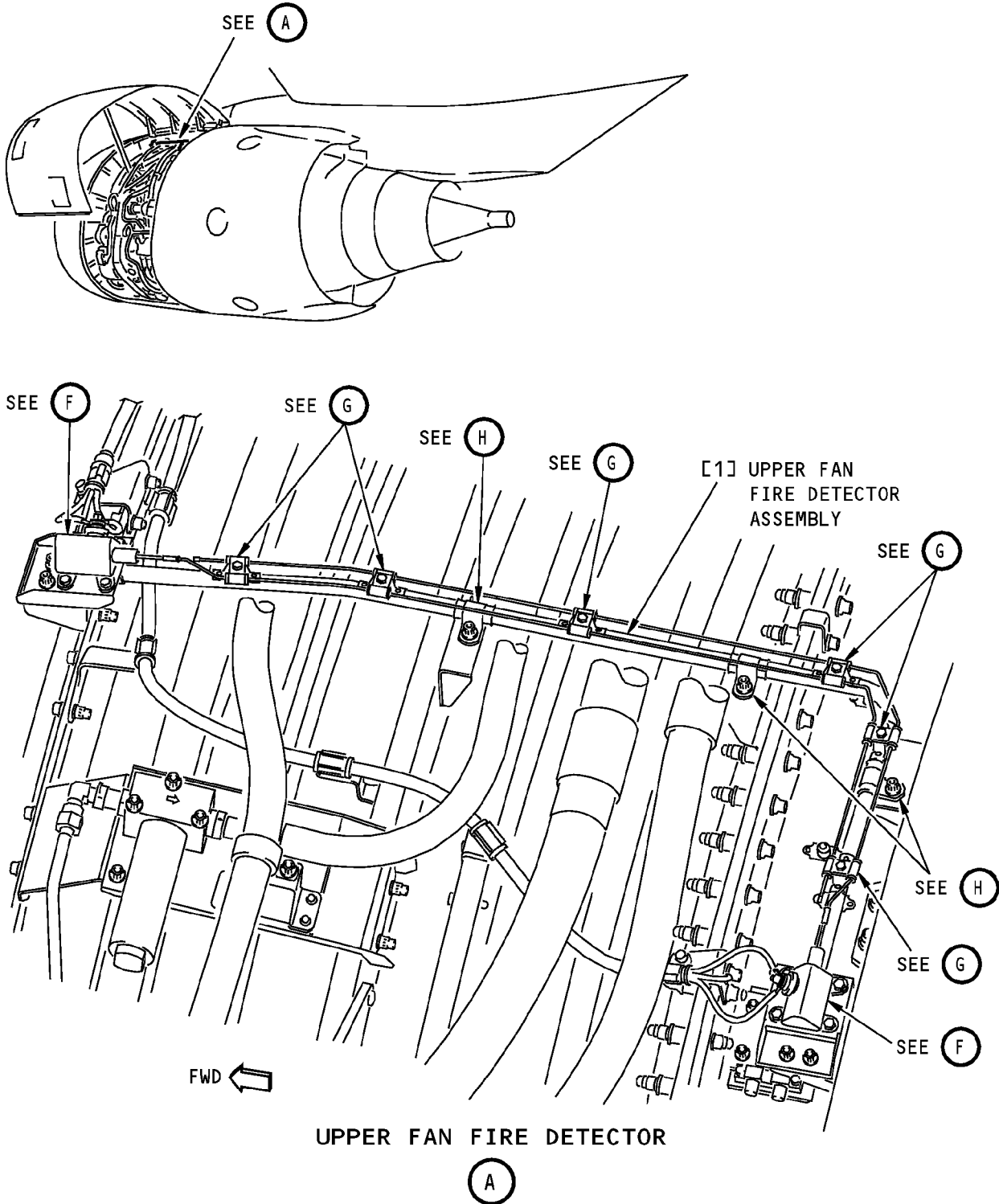
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EFFECTIVITY  
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# 26-11-01

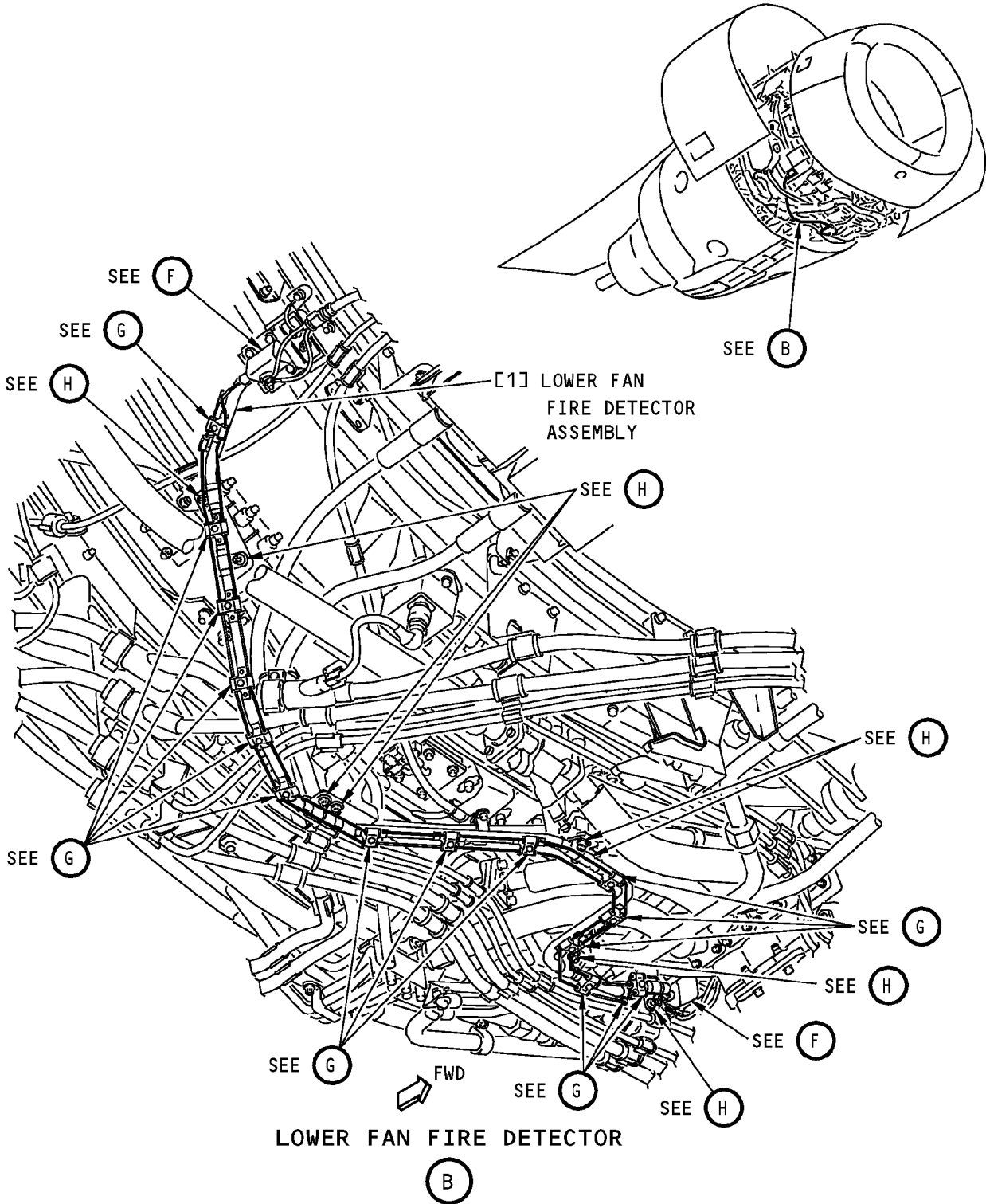
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**Engine Fire Detectors Installation  
Figure 401 (Sheet 1 of 6)/26-11-01-990-801**

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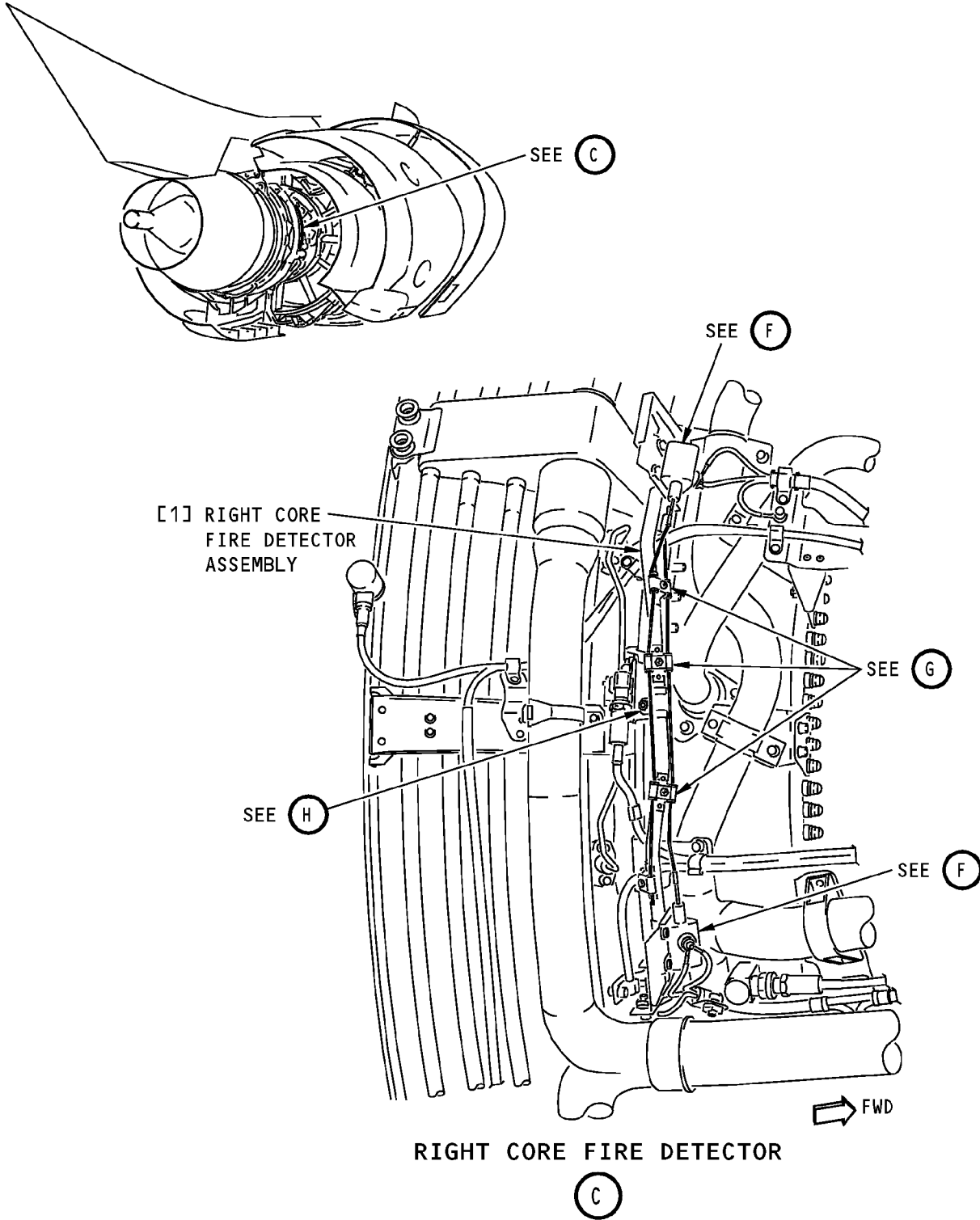
**26-11-01**



**Engine Fire Detectors Installation  
Figure 401 (Sheet 2 of 6)/26-11-01-990-801**

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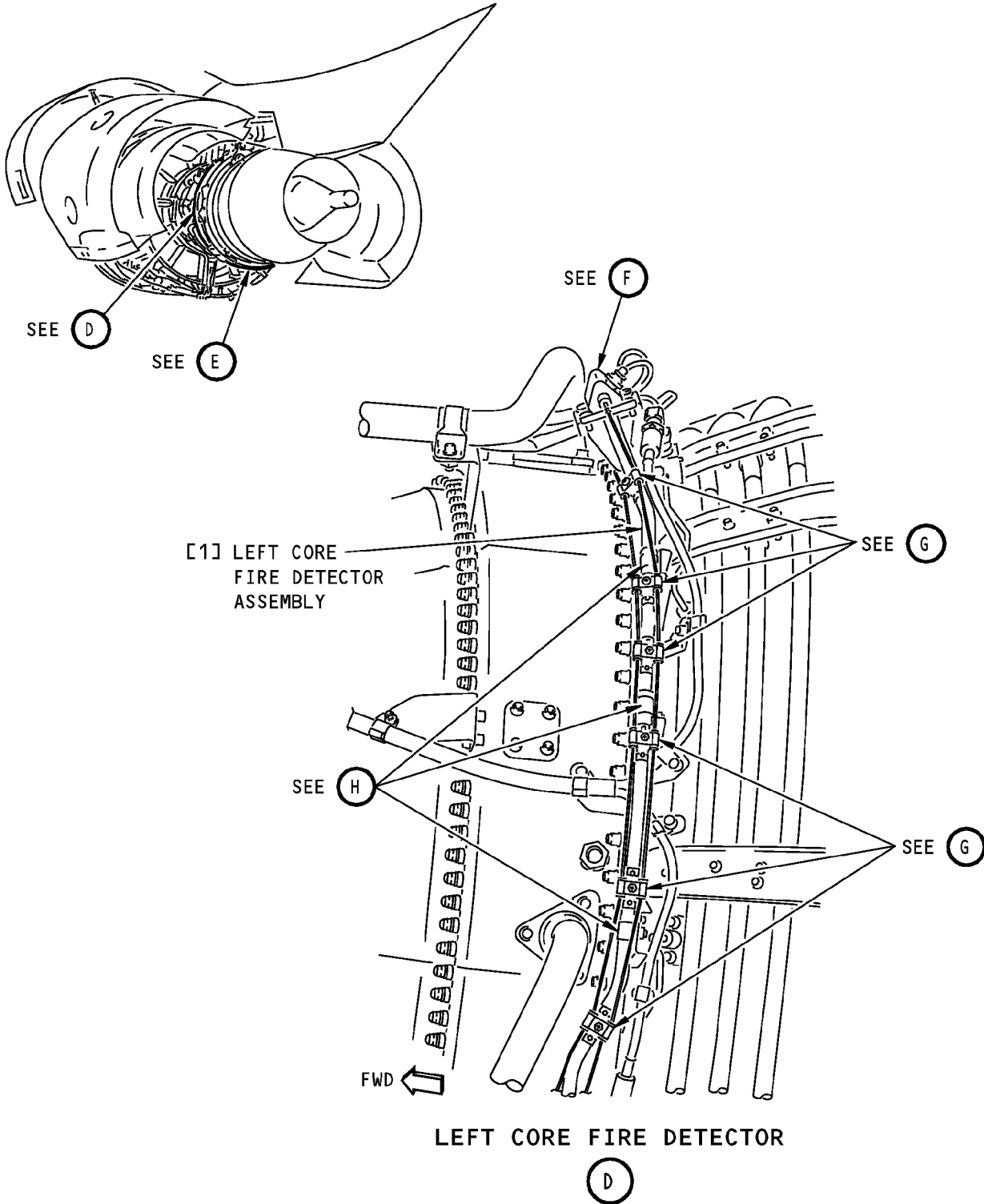


**Engine Fire Detectors Installation  
Figure 401 (Sheet 3 of 6)/26-11-01-990-801**

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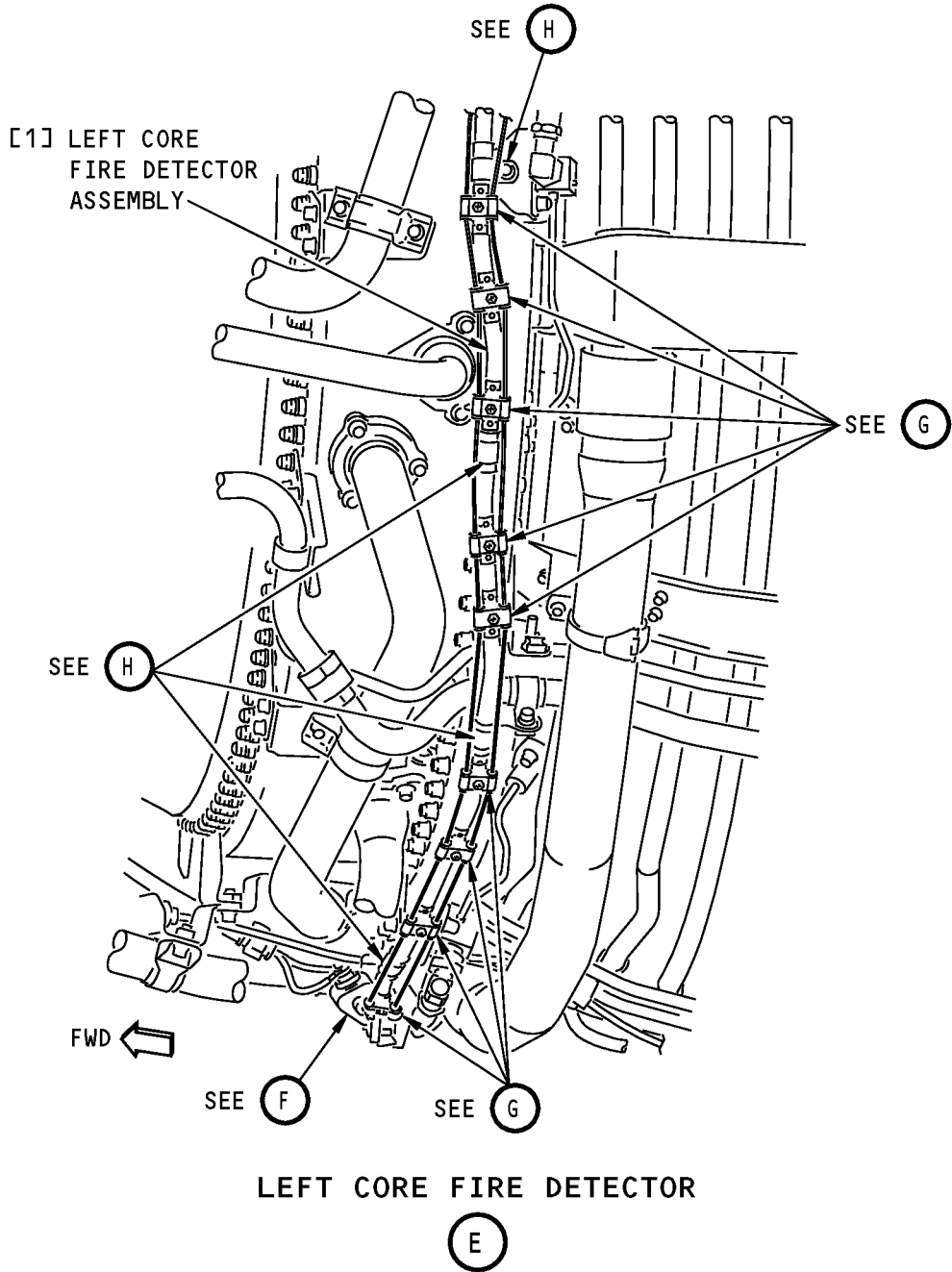
**Engine Fire Detectors Installation  
Figure 401 (Sheet 4 of 6)/26-11-01-990-801**

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**Engine Fire Detectors Installation  
Figure 401 (Sheet 5 of 6)/26-11-01-990-801**

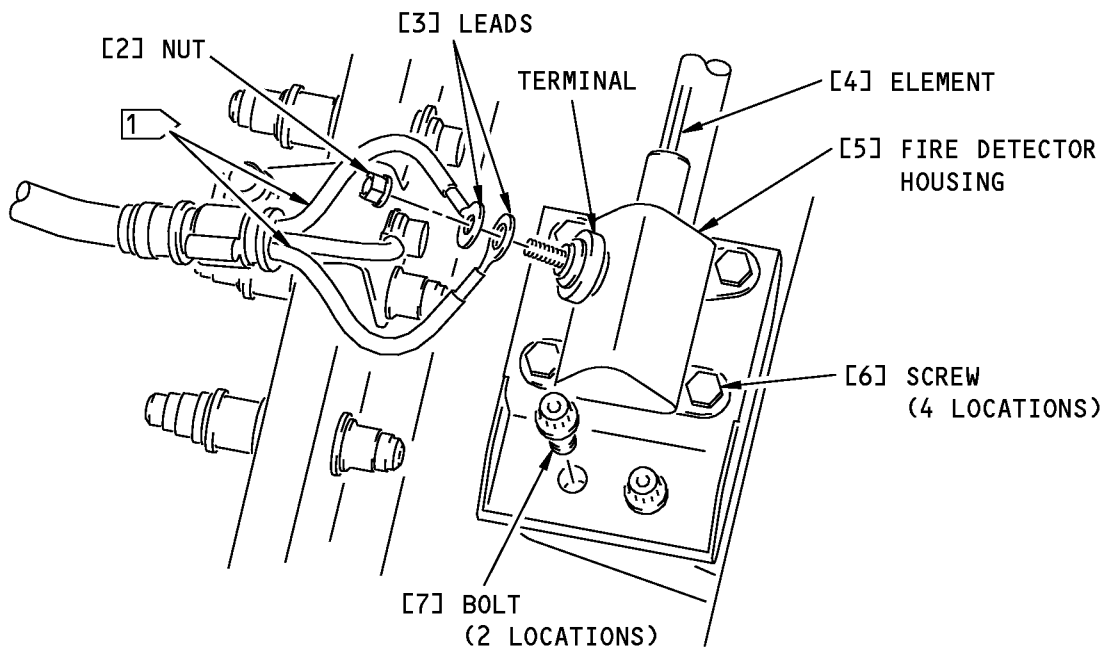
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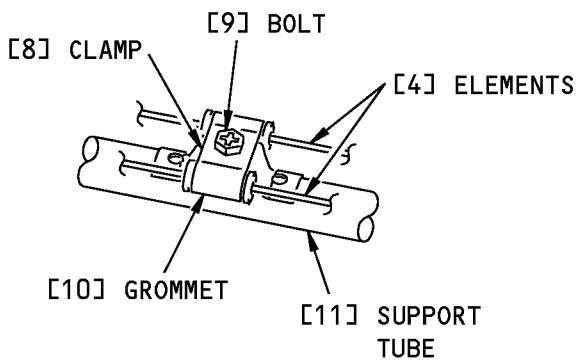
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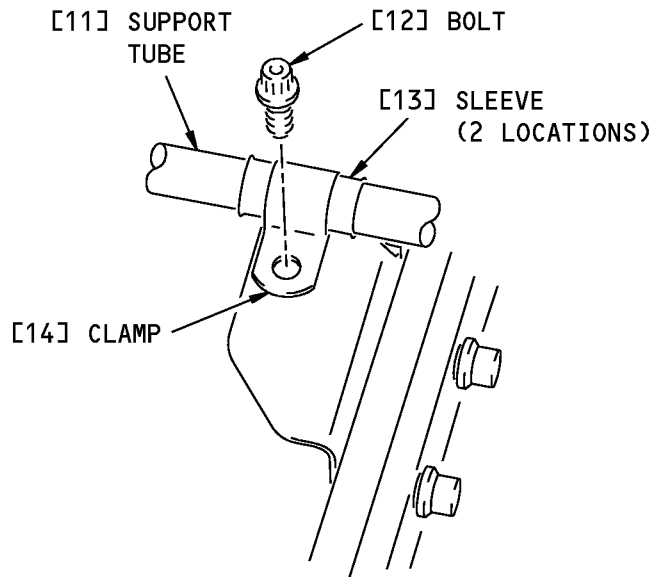
(EXAMPLE)

F



(EXAMPLE)

G



(EXAMPLE)

H

1 SEPARATE WIRES AS MUCH AS POSSIBLE. BEND DOWN AND AWAY FROM CONTACT WITH STRUT BLANKET.

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**Engine Fire Detectors Installation  
Figure 401 (Sheet 6 of 6)/26-11-01-990-801**

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TASK 26-11-01-400-801

#### 3. Engine Fire Detector Element Installation

(Figure 401)

##### A. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

##### B. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

##### C. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III

##### D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

##### E. To access the fan fire detector assemblies, do this procedure.

SUBTASK 26-11-01-010-003

- (1) Do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

##### F. To access the core fire detection procedure, do this procedure.

SUBTASK 26-11-01-010-004

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

##### G. Fire Detector Element Installation

SUBTASK 26-11-01-420-001

- (1) Do these steps to install one of the fire detector element [4]:
  - (a) Position the fire detector element [4] along the support tube [11].

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- (b) Put the fire detector housing [5] in the correct position on the mounting bracket.
- (c) Install the four screws [6] that hold the fire detector housing [5] to the mounting bracket.
  - 1) Tighten the screws [6].
- (d) Put the grommets [10] on the element [4] at each clamp [8] location.
- (e) Put the element [4] into each clamp [8].
- (f) Make sure the end of the detector element extends less than 1 inch past the last grommet [10].
  - 1) If the detector element [4] extends more than 1 inch, adjust the length of the element [4] between each clamp [8] so that any slack is evenly distributed.
- (g) Make sure there is at least 0.12 inch (3 mm) between the fire detector element [4] and the support tube [11].
- (h) Tighten the bolt [9] on each applicable clamp [8] until 1-1/2 to 3 threads extend through the nut.
  - 1) Make sure the grommets [10] and clamps [8] are tight.
  - 2) Make sure the ends of the bolts [9] do not touch the support tube [11].
- (i) Install the leads [3] to the terminal.
 

**NOTE:** If the leads are different sizes, install the lead with the small hole under the lead with the large hole.
- (j) Install the nut [2] to the terminal.
  - 1) Tighten the nut [2] to 20-25 pound-inches (2.26-2.82 Newton-meters).

SUBTASK 26-11-01-280-001

- (2) Using the bonding meter, COM-1550, do a check of the resistance between the fire detector housing [5] and the airplane structure.
  - (a) Make sure the resistance is less than 0.010 ohm.
  - (b) If the resistance is more than 0.010 ohm, clean the bonding surfaces with the solvent, B00083 and do the check again.

SUBTASK 26-11-01-860-002

- (3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

H. Engine Fire Detector Element Installation Test

SUBTASK 26-11-01-710-001

- (1) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

END OF TASK

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## TASK 26-11-01-000-802

### 4. Engine Fire Detector Assembly Removal

(Figure 401)

#### A. References

Reference	Title
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

#### B. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### C. To access the fan fire detector assemblies, do this procedure.

SUBTASK 26-11-01-010-005

(1) Do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

#### D. To access the core fire detection procedure, do this procedure.

SUBTASK 26-11-01-010-006

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

#### E. Fire Detector Assembly Removal

SUBTASK 26-11-01-860-003

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-01-020-002

(2) Do these steps to remove one of the fire detector assemblies [1]:

**NOTE:** The fire detector assembly [1] includes the support tube [11] with the detector elements [4] installed and the mounting hardware.

- (a) Remove the bolts [12] from the clamps [14] that hold the support tube [11] in its position.
- (b) Remove the nuts [2], and leads [3] from the terminal lugs on the fire detector housing [5].
- (c) Remove the bolts [7] which hold the detector in its position.

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(d) Remove the fire detector assembly [1].

END OF TASK

TASK 26-11-01-400-802

5. Engine Fire Detector Assembly Installation

(Figure 401)

A. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

C. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III

D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

E. To access the fan fire detector assemblies, do this procedure.

SUBTASK 26-11-01-010-007

(1) Do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

F. To access the core fire detection procedure, do this procedure.

SUBTASK 26-11-01-010-008

WARNING: DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

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#### G. Fire Detector Assembly Installation

SUBTASK 26-11-01-420-002

- (1) Do these steps to install one of the fire detector assemblies [1]:
  - (a) Make sure the ends of the fire detector assembly [1] and the brackets are clean.
  - (b) Position the fire detector assembly [1] on the engine.
  - (c) Make sure the preload between the fire detector assembly [1] and the attach points is not more than 10 pound-feet (44 Newton-meters).
  - (d) Install the bolts [7] that hold the fire detector assembly [1] to the engine.
    - 1) Tighten the bolts [7] to 72-88 pound-inches (8.13-9.94 Newton-meters).
  - (e) Install the bolts [12] at each applicable clamp [14] location along the support tube [11].
    - 1) Tighten the bolts [12] to 72-88 pound-inches (8.13-9.94 Newton-meters).
  - (f) Make sure there is at least 0.12 inch (3 mm) between the fire detector elements [4] and the support tube [11].
  - (g) Install the leads [3] to the terminal.
 

**NOTE:** If the leads are different sizes, install the lead with the small hole under the lead with the large hole.
  - (h) Install the nuts [2] to the terminal.
    - 1) Tighten the nuts [2] to 20-25 pound-inches (2.26-2.82 Newton-meters).

SUBTASK 26-11-01-280-002

- (2) Using a bonding meter, COM-1550, do a check of the resistance between the fire detector housing [5] and the airplane structure.
  - (a) Make sure the resistance is less than 0.010 ohm.
  - (b) If the resistance is more than 0.010 ohm, clean the bonding surfaces with the solvent, B00083 and do the check again.

#### H. Engine Fire Detector Element Installation Test

SUBTASK 26-11-01-710-002

- (1) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

#### I. Put the Airplane Back to Its Usual Condition

SUBTASK 26-11-01-860-004

- (1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## ENGINE FIRE DETECTORS - INSPECTION/CHECK

### 1. General

A. This procedure has this task:

- (1) An inspection of the wires to the forward transponder of the upper fan case engine fire overheat detector for contact with the strut insulation blanket.

### **TASK 26-11-01-211-801**

### 2. Engine Fire Detector Inspection

A. References

Reference	Title
26-11-01-990-801	Figure: Engine Fire Detectors Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
G50541	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-5/8-X)	AMS-DT~ L-23053/12
G50544	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-1/2-X)	AMS-DT~ L-23053/12

C. Engine Fire Detector Inspection

SUBTASK 26-11-01-212-001

- (1) Make sure that there is no contact between the forward transponder of the upper fan case engine fire/overheat detector and the strut insulation blanket (detail F of Figure 26-11-01-990-801).

SUBTASK 26-11-01-300-001

- (2) If there is contact and the wire insulation is damaged, repair the wire as described below and change the routing of the wire as shown on detail F of Figure 26-11-01-990-801.
  - (a) If no contact is found and the wires are routed as shown on detail F of Figure 26-11-01-990-801, no further action is required.

SUBTASK 26-11-01-030-001

- (3) Disconnect the lug from the fire/overheat transponder.

SUBTASK 26-11-01-300-002

- (4) Cut a sufficient length of TFE-R 5/8-X tubing, G50541 or TFE-R-1/2-X tubing, G50544 to cover the worn area. The sleeve must be long enough to exceed the length of the damage by approximately 0.4 inch (10 mm).

SUBTASK 26-11-01-300-003

- (5) Heat the sleeve at 700° F. (400° C.) maximum until shrinking operation is completed.

SUBTASK 26-11-01-430-001

- (6) Reconnect the lug on the fire detection transponder.

————— **END OF TASK** —————

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## AIRCRAFT MAINTENANCE MANUAL

### ENGINE FIRE DETECTOR HARNESS - REMOVAL/INSTALLATION

#### 1. General

- A. The fan fire detection harnesses are MW0315 and MW0316. The core fire detection harnesses are the MW0325 and MW0326. Both of the fan harnesses connect to one loop of the two fan fire detectors. Similarly, each core harness connects to one loop of the two core detectors.
- B. This procedure has these tasks:
- (1) The removal of the fan fire detection harnesses (MW0315 and MW0316).
  - (2) The installation of the fan fire detection harnesses (MW0315 and MW0316).
  - (3) The removal of the core fire detection harnesses (MW0325 and MW0326 harnesses).
  - (4) The installation of the core fire detection harnesses (MW0325 and MW0326 harnesses).

#### **TASK 26-11-02-000-801**

#### 2. Fan Fire Detection Harness Removal

(Figure 401)

##### A. General

- (1) The removal procedure for harness MW0315 and MW0316 is the same.
- (2) MW0315 is a component of loop A of the engine fan fire detection circuit SSM 26-11-11SSM 26-11-21.
- (3) MW0316 is a component of loop B of the engine fan fire detection circuit SSM 26-11-11SSM 26-11-21

##### B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
SSM 26-11-11	System Schematics Manual
SSM 26-11-21	System Schematics Manual

##### C. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

##### D. Prepare for Removal

SUBTASK 26-11-02-040-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

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SUBTASK 26-11-02-010-001

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DEACTIVATE THE LEADING EDGE, DEACTIVATE THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

SUBTASK 26-11-02-010-002

(3) Get access to the harness in the 3:00 o'clock strut as follows:

- (a) Remove the 14 screws [10] which attach the 3:00 o'clock strut fairing [11] to the 3:00 o'clock strut.
- (b) Remove the 3:00 o'clock strut fairing [11].
- (c) Remove the 2 bolts [4] which attach the upper-half fire wall [3] to the lower half-fire wall [9].
- (d) Remove the upper-half fire wall [3].
- (e) Remove the 2 bolts [8] which attach the lower-half fire wall [9] to the strut.
- (f) Remove the lower-half fire wall [9].
- (g) Remove the 2 bolts [6] and washers [7] which attach the 3:00 o'clock strut seal [5].
- (h) Remove the 3:00 o'clock strut seal [5].

### E. Fan Fire Detection Harness Removal

SUBTASK 26-11-02-020-001

(1) Fan fire detection harness removal:

- (a) Disconnect the harness connector from the core fire detection harness receptacle.
- (b) Disconnect the harness connector from the pylon receptacle.
- (c) Remove the nut [14] and washer [15] which attach the two terminal lugs of each harness to the fan fire detectors.
- (d) Remove the bolt [12] and washer [13] which attach each ground lug of the harness to the engine bracket.
- (e) Loosen the quarter turn bolt and open the hinged clamp [16] which attach each harness to the engine brackets.
- (f) Disengage the harness from the omega clamps.
- (g) Pull the flexible clamp with harness out of the 3:00 o'clock strut and disengage the harness.
- (h) Pull the harness through the 3:00 o'clock strut.
- (i) Remove the harness from the engine.

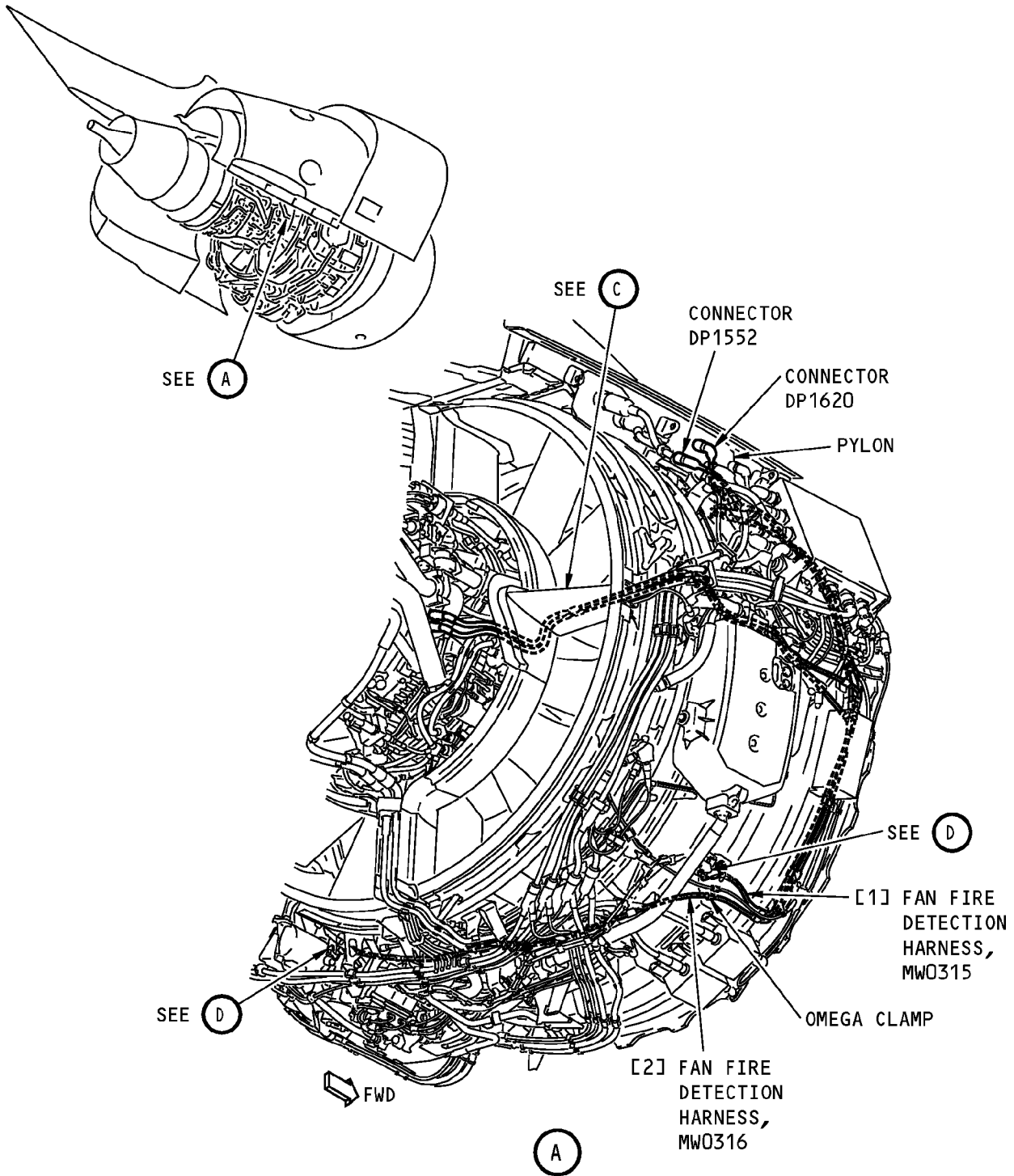
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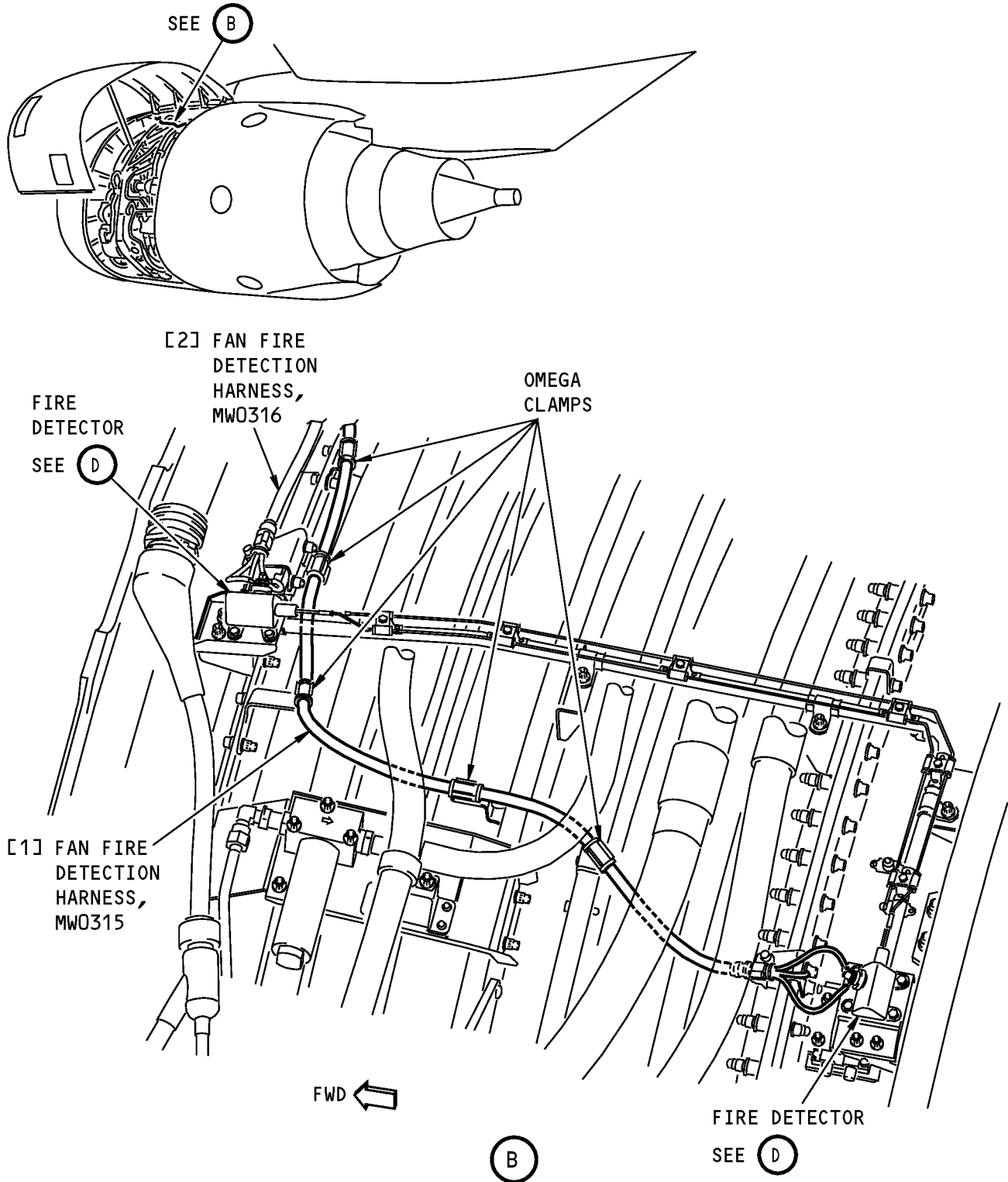
**Fan Fire Detection Harnesses Installation  
Figure 401 (Sheet 1 of 4)/26-11-02-990-801**

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**Fan Fire Detection Harnesses Installation  
Figure 401 (Sheet 2 of 4)/26-11-02-990-801**

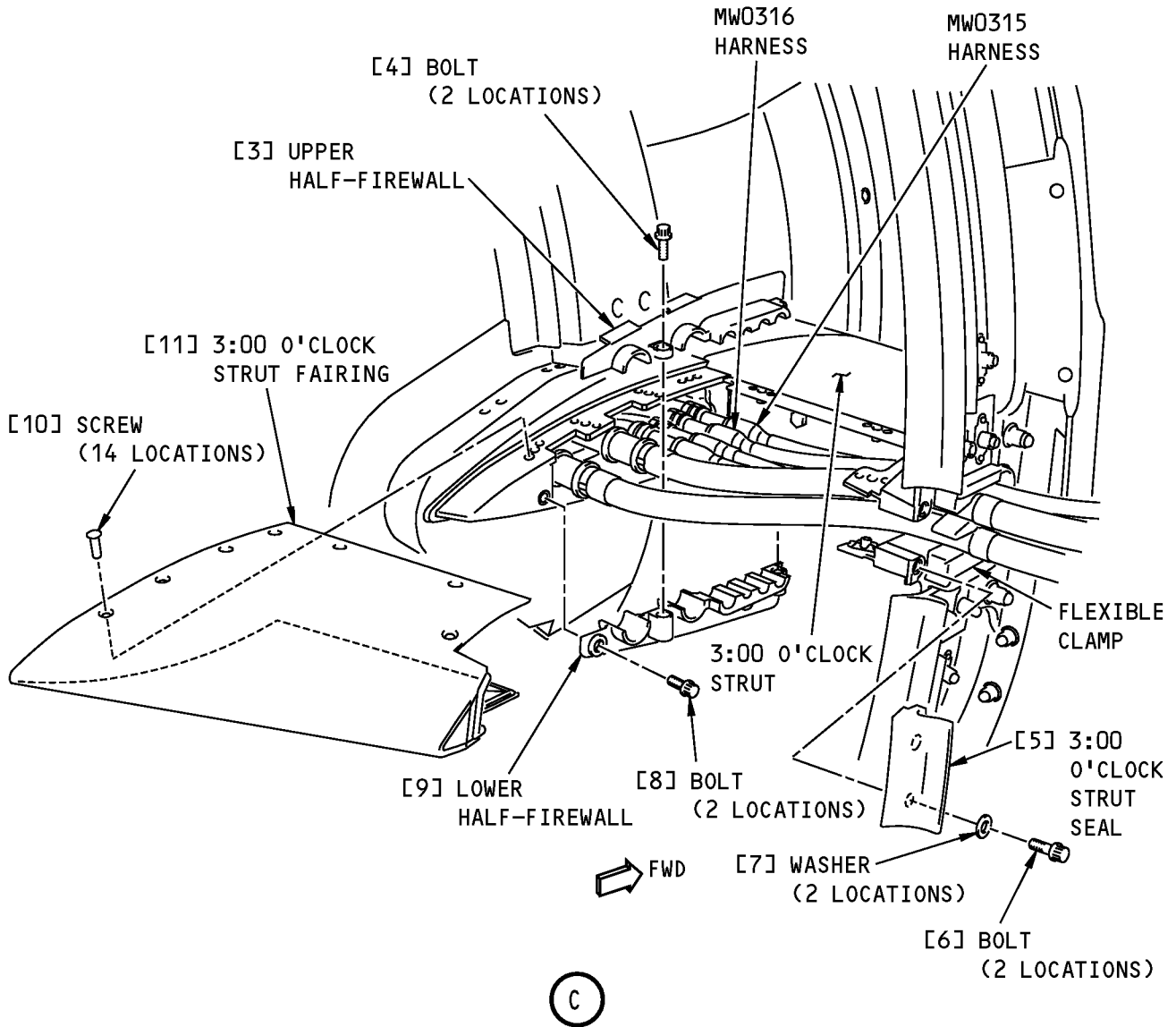
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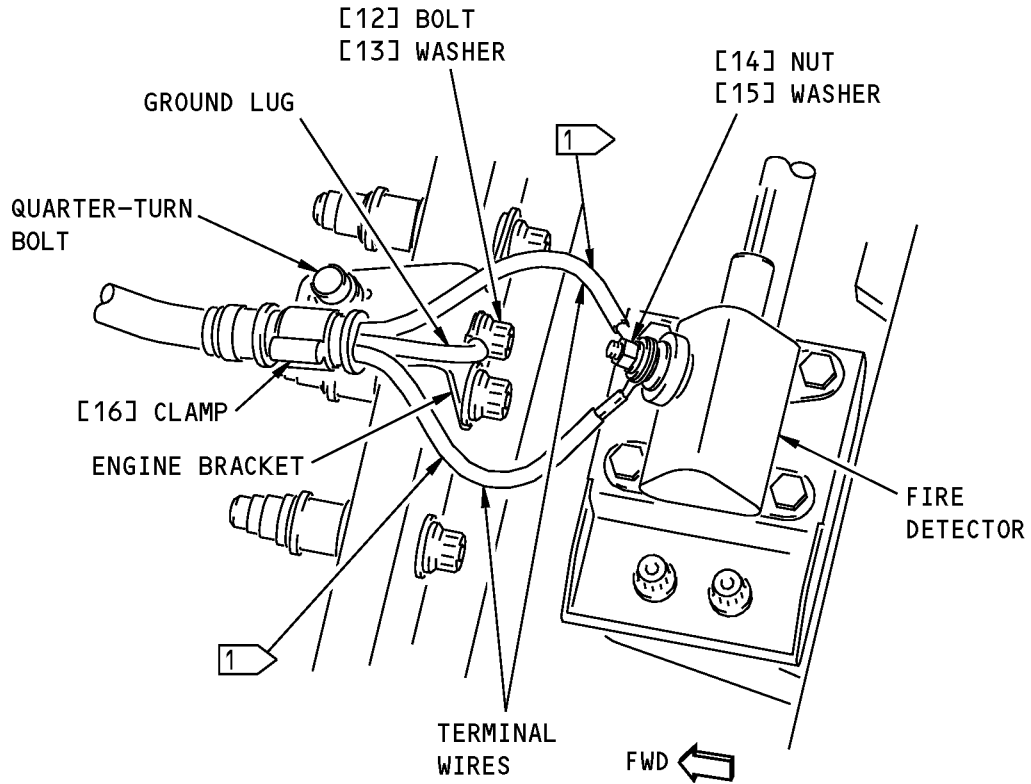
**Fan Fire Detection Harnesses Installation  
Figure 401 (Sheet 3 of 4)/26-11-02-990-801**

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(EXAMPLE)

D

**1** FOR DETECTOR MW0315, BEND WIRES DOWN AND AWAY FROM CONTACT WITH STRUT BLANKET. SEPARATE WIRES AS MUCH AS POSSIBLE.

**Fan Fire Detection Harnesses Installation  
Figure 401 (Sheet 4 of 4)/26-11-02-990-801**

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## TASK 26-11-02-400-801

### 3. Fan Fire Detection Harness Installation

(Figure 401)

#### A. General

- (1) The installation procedure for MW0315 and MW0316 are the same.
- (2) MW0315 is a component of loop A of the engine fan fire detection circuit SSM 26-11-11SSM 26-11-21.
- (3) MW0316 is a component of loop B of the engine fan fire detection circuit SSM 26-11-11SSM 26-11-21

#### B. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
SSM 26-11-11	System Schematics Manual
SSM 26-11-21	System Schematics Manual

#### C. Consumable Materials

Reference	Description	Specification
D00601 [CP2101]	Grease - Graphite, High Temperature	SAE AMS 2518

#### D. Prepare for Installation

SUBTASK 26-11-02-640-001

- (1) Lubricate the threads of bolts with grease, D00601 [CP2101] before their installation.

SUBTASK 26-11-02-210-001

- (2) Make sure that the connectors and receptacles are clean and clear of unwanted materials.

SUBTASK 26-11-02-210-002

- (3) During the installation, make sure that the harnesses are not stressed or torn.

#### E. Fan Fire Detection Harness Installation

SUBTASK 26-11-02-420-001

##### (1) Fan fire detection harness installation

- (a) Put the harness in position on the fan frame.
- (b) Install the harness through the 3:00 o'clock strut to the inside of the engine.
- (c) Distribute the slack all along the attachment points on the fan frame and in the 3:00 o'clock strut.
- (d) Connect the harness connector to the core fire detection harness receptacle. Tighten by hand.
- (e) Connect the harness connector to the pylon receptacle. Tighten by hand.
- (f) Attach the two terminal lugs of the harness to each fan fire detector, with the washer [15] and nut [14].

**NOTE:** If the leads are different sizes, install the lead with the small hole under the lead with the large hole.

- 1) Tighten the nut to 25-35 pound-inches (2.82-3.95 Newton-meters).

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- (g) Attach the ground lug of the harness to each engine bracket, with the washer [13] and bolt [12].
1) Tighten the bolts to 98-110 pound-inches (11-12.5 Newton-meters).
(h) Attach the harness to each engine bracket with the hinged clamp [16] and tighten the bolt.
(i) Install the harness in the flexible clamp at the 3:00 o'clock strut location.
(j) Engage the harness in the omega clamps.

SUBTASK 26-11-02-410-001

(2) Close the access to the 3:00 o'clock position strut as follows:

- (a) Attach the 3 o'clock strut seal [5] with two washers [7] and bolts [6].
1) Tighten the two bolts [6] to 72-88 pound-inches (8.1-9.9 Newton-meters).

CAUTION: MAKE SURE THAT THE HARNESS ARE IN THE CORRECT POSITION IN THE FIRE WALL PASSAGE HOLES.

- (b) Install the lower-half fire wall [9] and attach it to the strut with the two bolts [8].
1) Tighten the two bolts [8] to 72-88 pound-inches (8.1-9.9 Newton-meters).
(c) Install the upper-half fire wall [3] and attach it to the lower half fire wall with the two bolts [4].
1) Tighten the two bolts [4] to 72-88 pound-inches (8.1-9.9 Newton-meters).
(d) Install the 3:00 o'clock strut fairing [11] and attach it with the 14 screws [10] to the 3:00 o'clock strut.

F. Fan Fire Detection harness Installation Test

SUBTASK 26-11-02-440-001

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Table with 4 columns: Row, Col, Number, Name. Contains two rows of circuit breaker information.

SUBTASK 26-11-02-710-001

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

G. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-02-010-003

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

Effectivity table with columns for Row, Col, Number, Name and a large empty box.

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## TASK 26-11-02-000-802

### 4. Core Fire Detection Harnesses Removal

(Figure 402 or Figure 403)

#### A. General

- (1) The removal procedure for Core Fire Detection Harness, MW0325 [33] and Core Fire Detection Harness, MW0326 [31] is the same.
- (2) Core Fire Detection Harness, MW0325 [33] is a component of loop A of the engine core fire detection circuit SSM 26-11-11SSM 26-11-21.
- (3) Core Fire Detection Harness, MW0326 [31] is a component of loop B of the engine core fire detection circuit SSM 26-11-11SSM 26-11-21.

#### B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
SSM 26-11-11	System Schematics Manual
SSM 26-11-21	System Schematics Manual

#### C. Prepare for Removal

SUBTASK 26-11-02-040-002

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-010-004

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DEACTIVATE THE LEADING EDGE, DEACTIVATE THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

### HAP ALL PRE SB 737-26-1123

#### D. Core Fire Detection Harness Removal

SUBTASK 26-11-02-020-002

- (1) Core fire detection harness removal:
  - (a) Disconnect the fan fire detection harness connector from the core fire detection harness receptacle.
  - (b) Remove the two Bolts [35] which attach each harness receptacle to the Engine Bracket [34].
  - (c) Remove the Washer [15] and Nut [14] which attach the terminal lugs to each core fire detector.
  - (d) Loosen the Quarter turn Bolt [36] and release the Hinged Clamp [16] which attach each harness to the Engine Bracket [34].

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### HAP ALL PRE SB 737-26-1123 (Continued)

- (e) Loosen the Quarter turn Bolts [36] and release the Hinged Clamps [32] which attach the harness to the Engine Brackets [34].
- (f) Remove the Quarter turn Bolts [36] which attach the harness to the Engine Bracket [34].
- (g) Remove the harness from the engine.

### HAP ALL POST SB 737-26-1123

#### E. Core Fire Detection Harness Removal

SUBTASK 26-11-02-020-003

##### (1) Core fire detection harness removal:

- (a) Disconnect the fan fire detection harness connectors from the core fire detection harness connectors at the cable mounting bracket[1].
- (b) Remove the Bolt [2] and Self -Locking Nut [3] which attach the Loop Clamp [4] to the L Bracket [5] at two locations.
- (c) Disconnect the core fire detection harness at each detector.
  - 1) Remove the Terminal Nut [6] from the Detector Bracket [7].
  - 2) Remove the Screw [8] and Nut [9] from the Detector Bracket [7].
  - 3) Remove the Ground Strap [11] from the core fire detection cable.
- (d) Disconnect the Bolts [2] and Self -Locking Nuts [3] on the Loop Clamps [4] at all other places along the length of the harness.
- (e) Remove all the Loop Clamps [4], Cable Bushings [10] and Teflon Inserts [12] along the length of the harness.
- (f) Remove the harness from the engine.

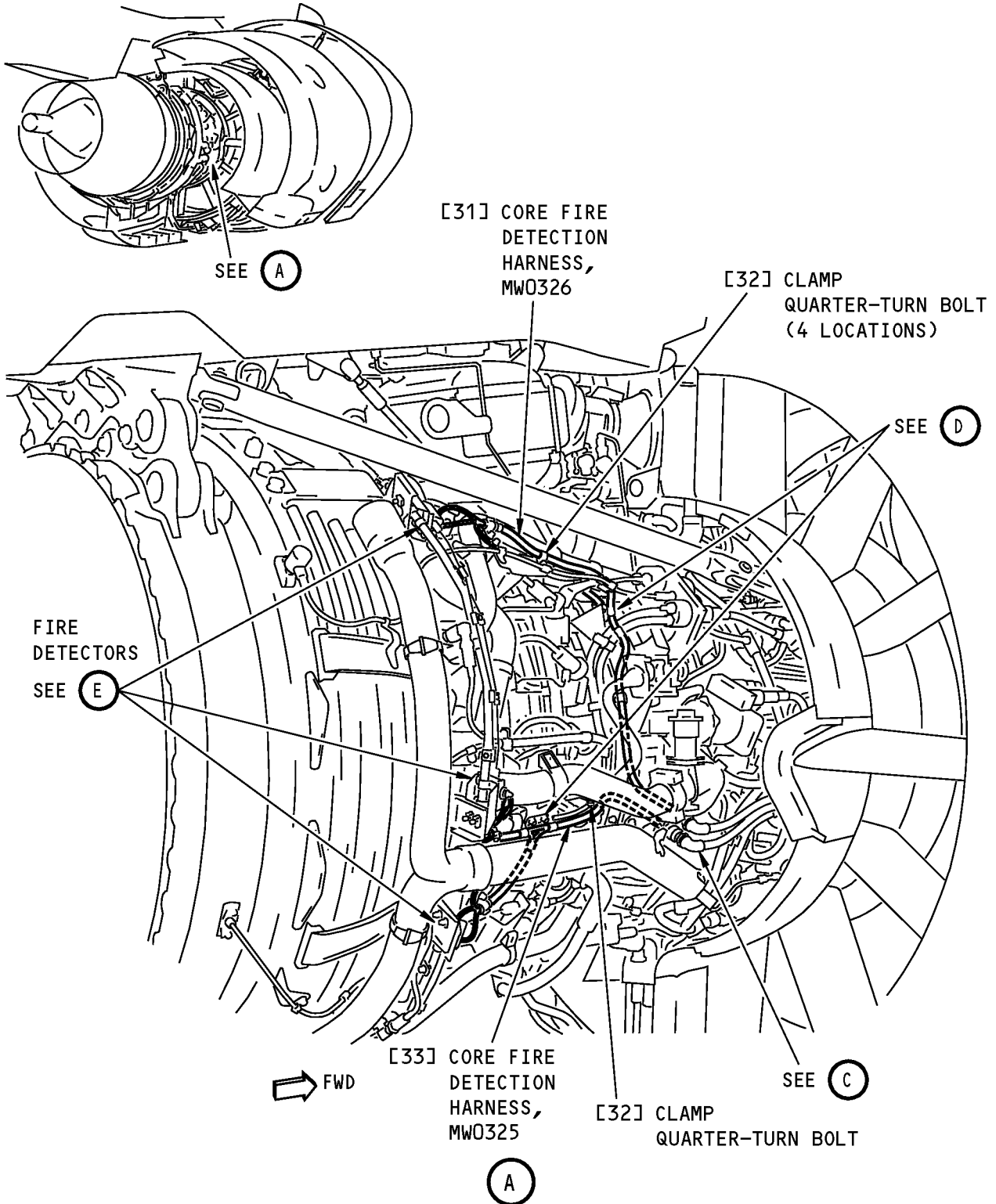
————— **END OF TASK** —————

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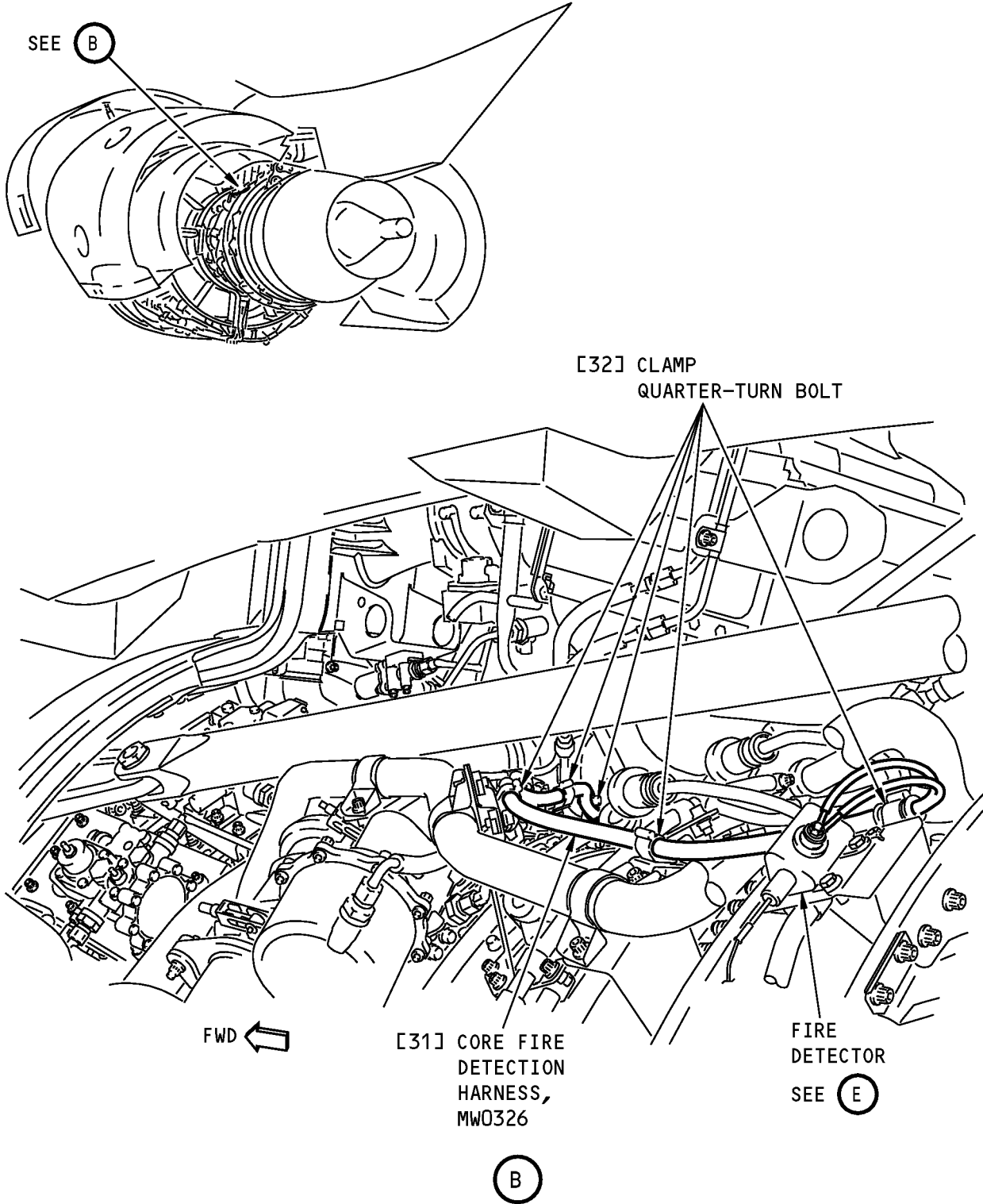
**Core Fire Detection Harnesses Installation  
Figure 402 (Sheet 1 of 3)/26-11-02-990-802**

EFFECTIVITY  
HAP ALL PRE SB 737-26-1123

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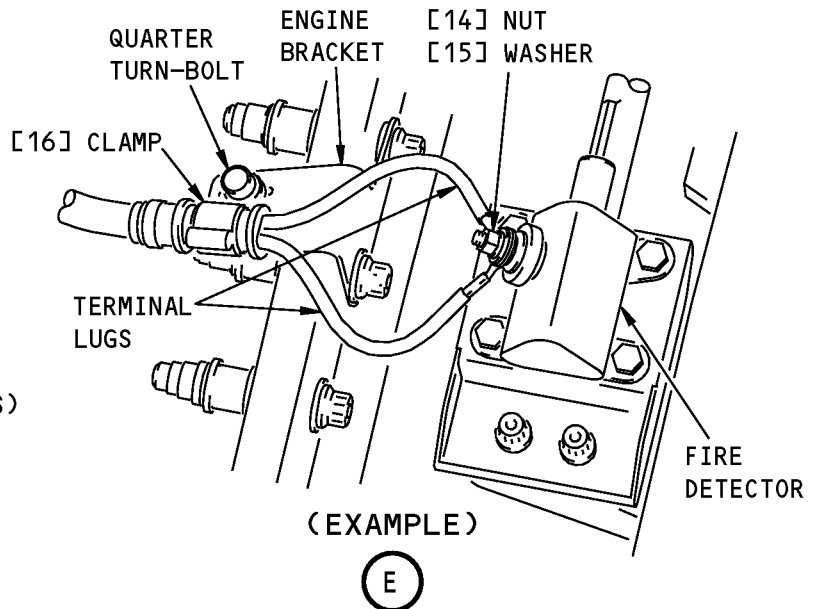
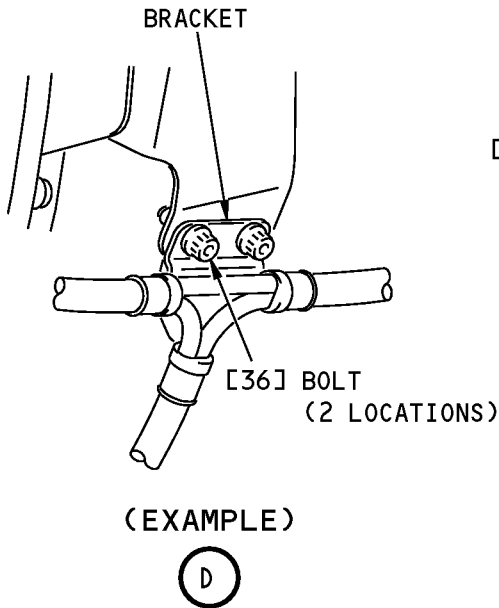
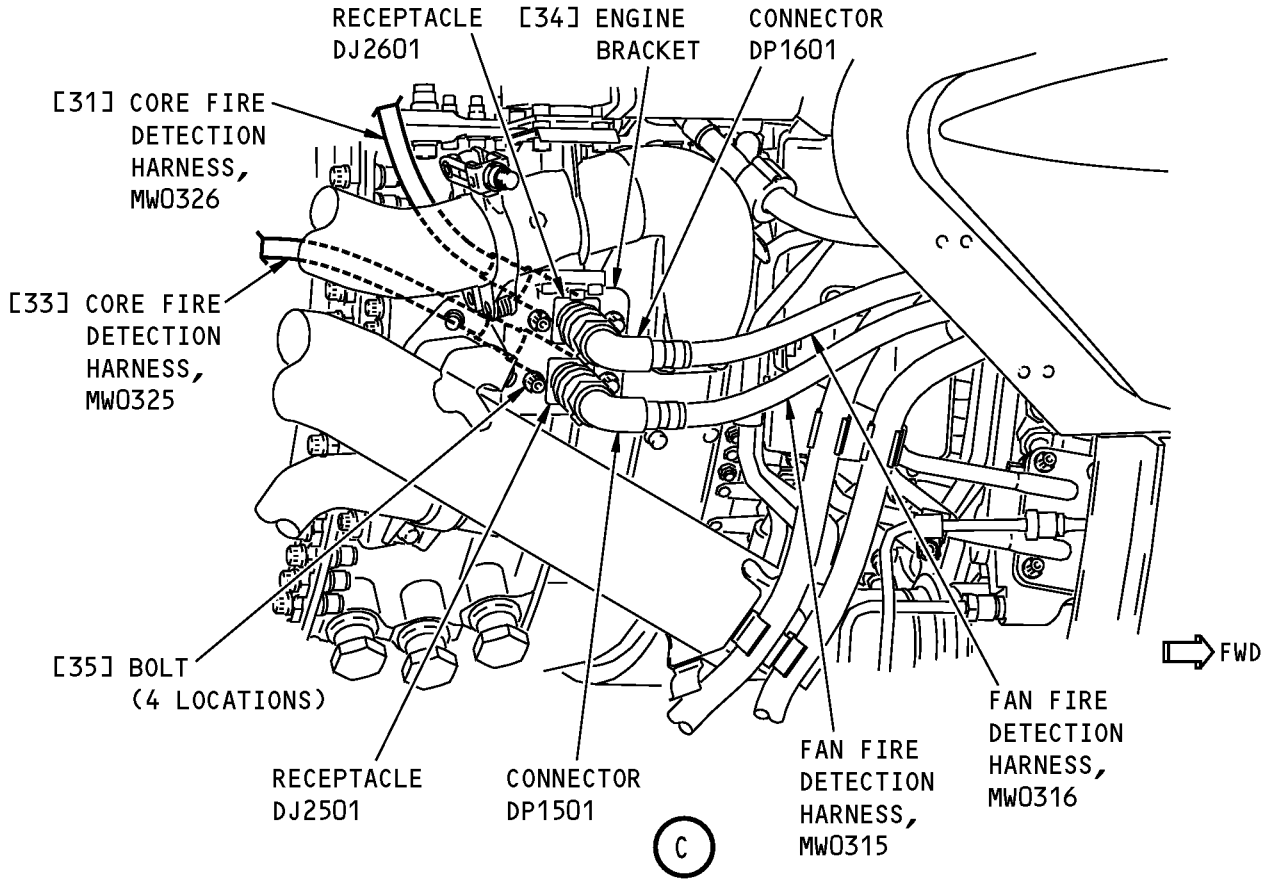


**Core Fire Detection Harnesses Installation  
Figure 402 (Sheet 2 of 3)/26-11-02-990-802**

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HAP ALL PRE SB 737-26-1123

**26-11-02**

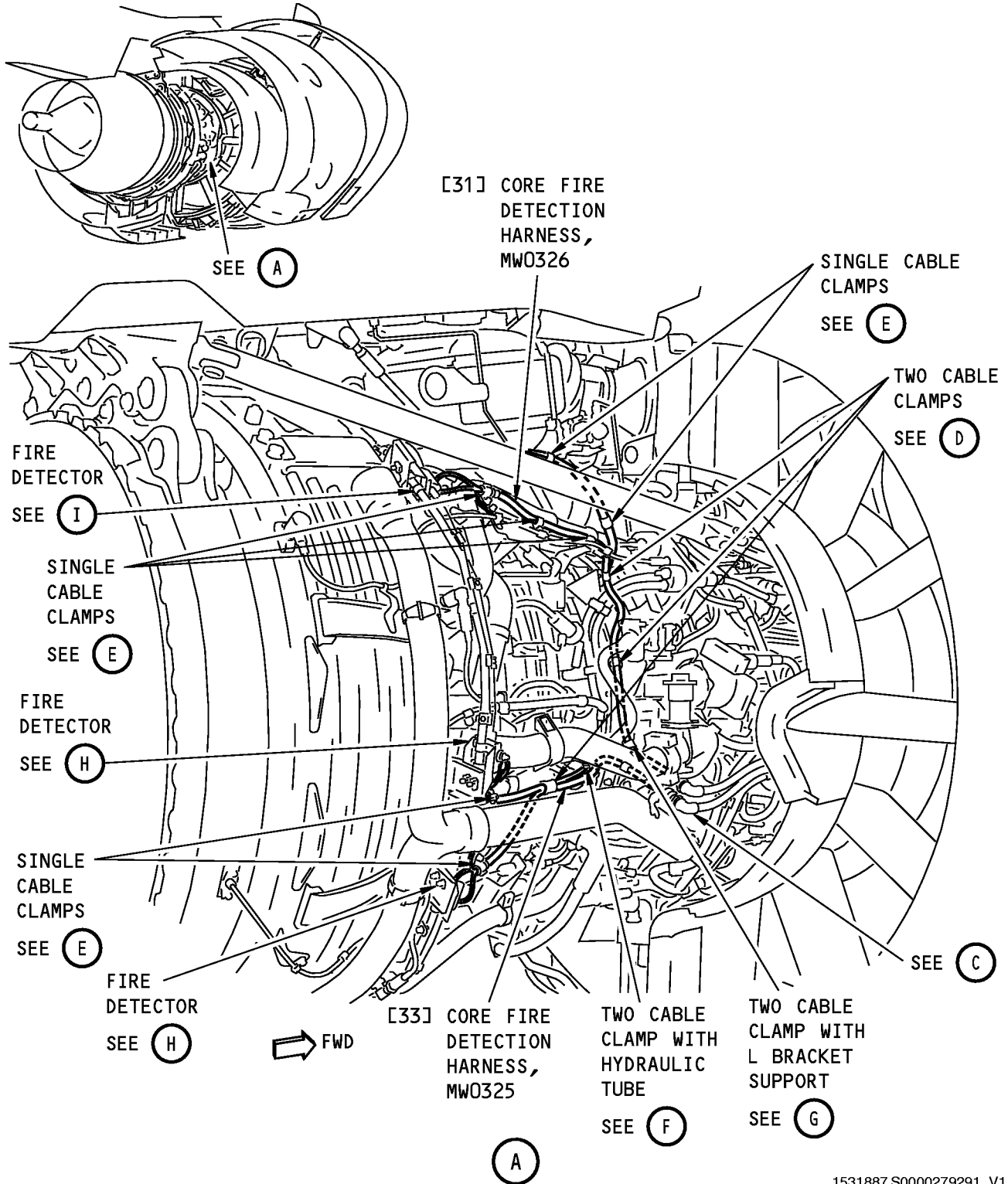
**AIRCRAFT MAINTENANCE MANUAL**



**Core Fire Detection Harnesses Installation**  
**Figure 402 (Sheet 3 of 3)/26-11-02-990-802**

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 HAP ALL PRE SB 737-26-1123

**26-11-02**



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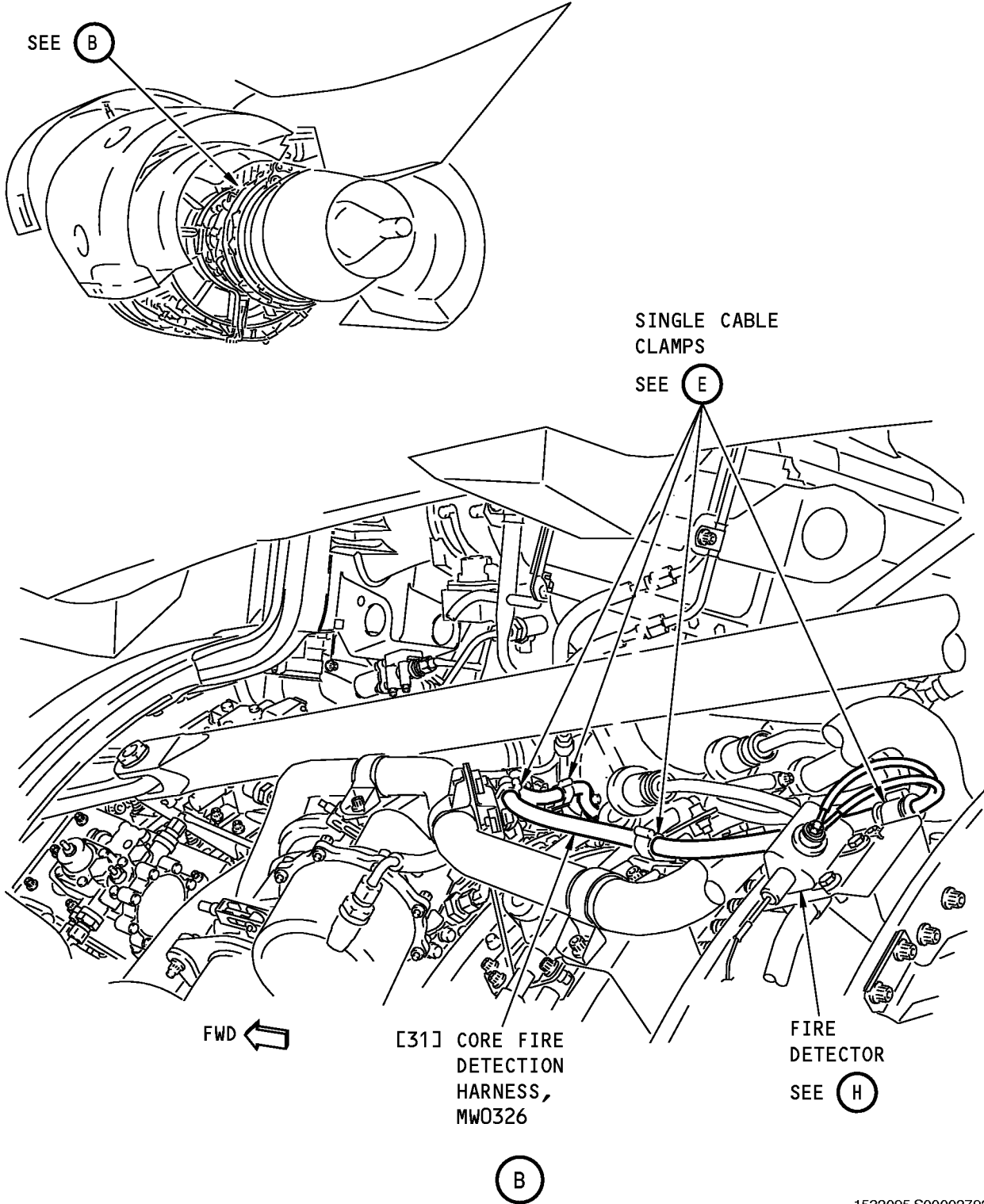
**Core Fire Detection Harnesses Installation**  
**Figure 403 (Sheet 1 of 4)/26-11-02-990-814**

**EFFECTIVITY**  
**HAP ALL POST SB 737-26-1123**

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1532095 S0000279292\_V1

**Core Fire Detection Harnesses Installation  
Figure 403 (Sheet 2 of 4)/26-11-02-990-814**

EFFECTIVITY  
HAP ALL POST SB 737-26-1123

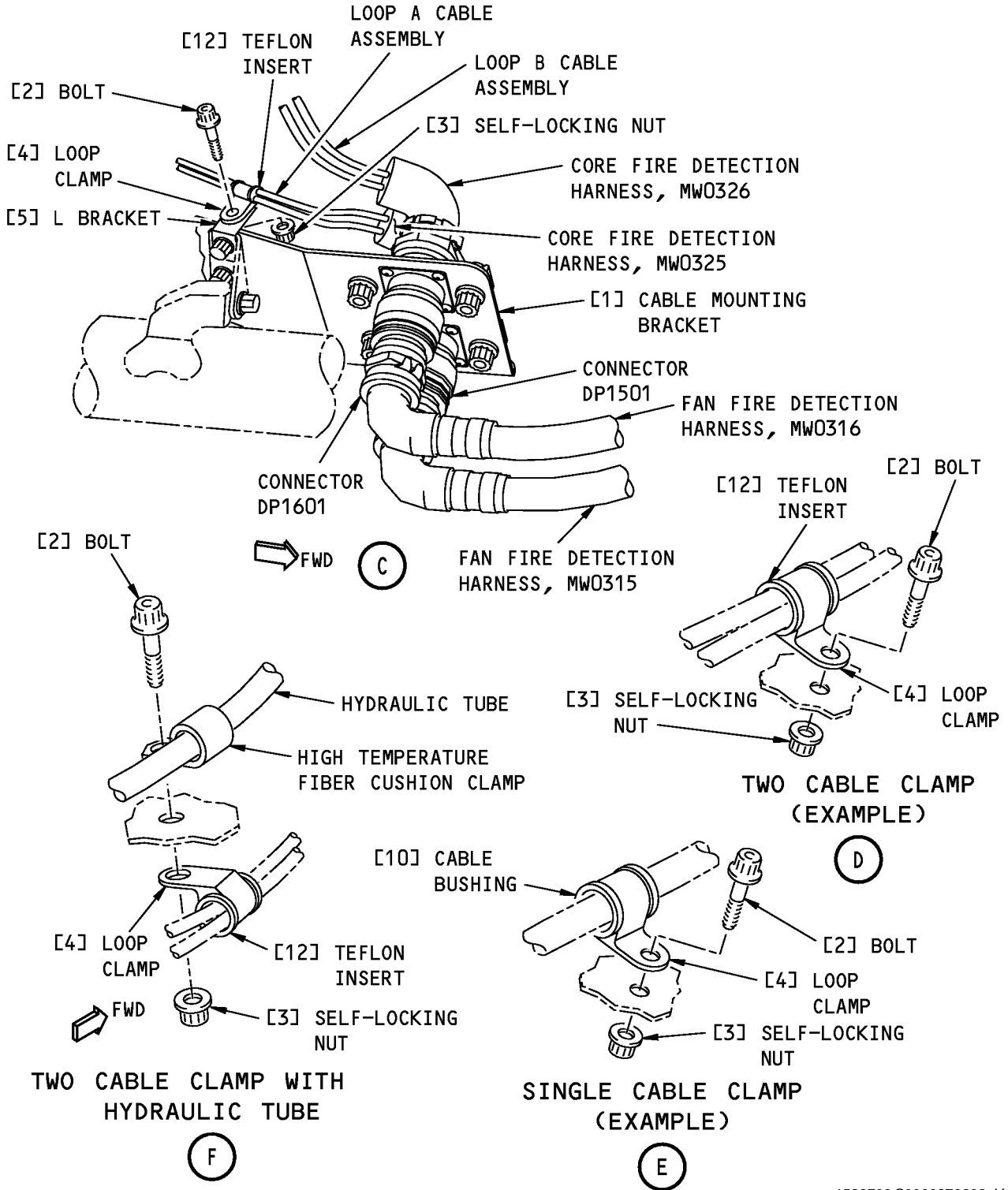
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**Core Fire Detection Harnesses Installation**  
**Figure 403 (Sheet 3 of 4)/26-11-02-990-814**

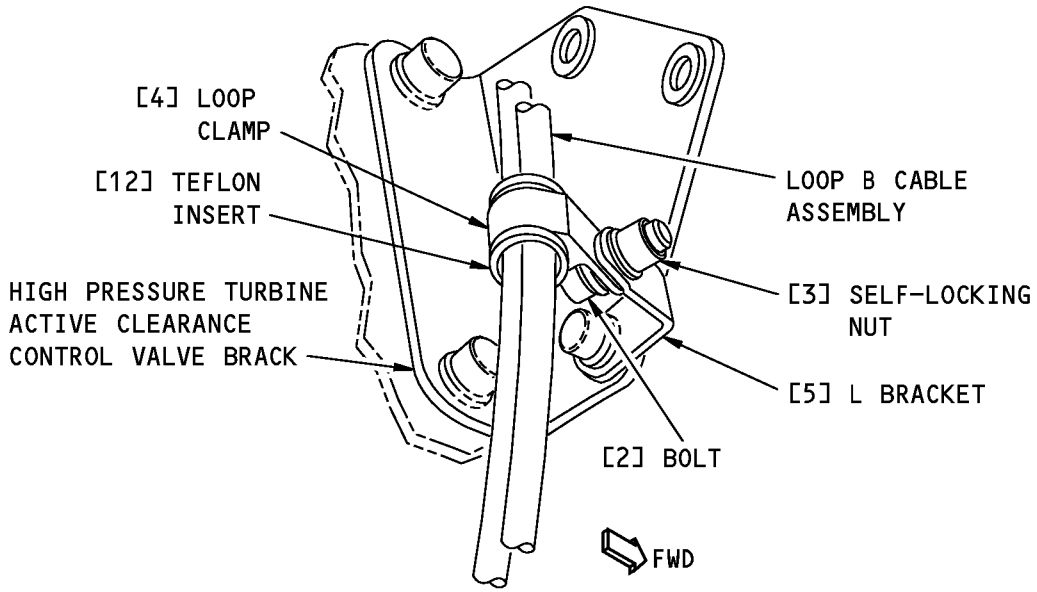
EFFECTIVITY  
 HAP ALL POST SB 737-26-1123

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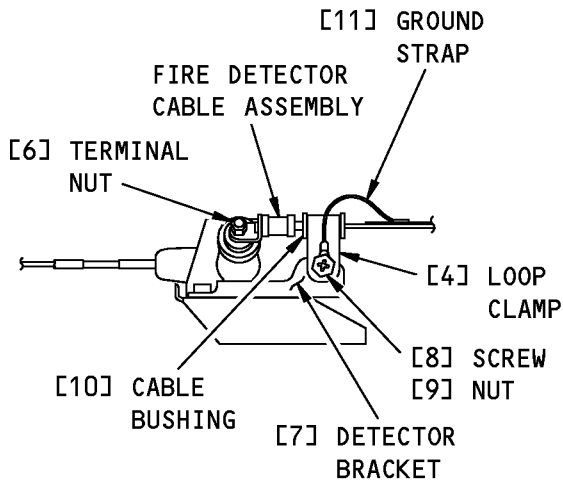
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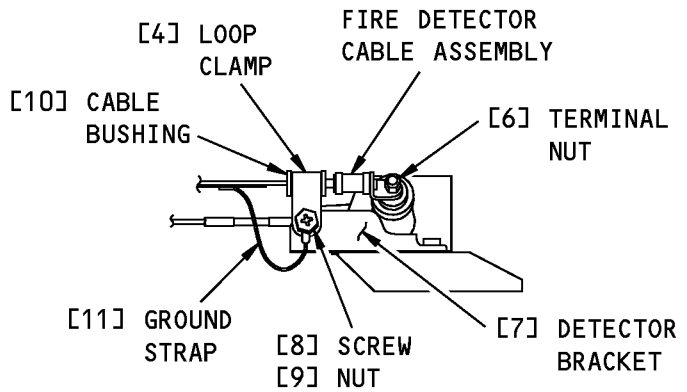
**TWO CABLE CLAMP WITH  
L BRACKET SUPPORT**

**G**



**FIRE DETECTOR  
(EXAMPLE)**

**H**



**FIRE DETECTOR  
(EXAMPLE)**

**I**

1539510 S0000279294\_V1

**Core Fire Detection Harnesses Installation  
Figure 403 (Sheet 4 of 4)/26-11-02-990-814**

**EFFECTIVITY**  
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## TASK 26-11-02-400-802

### 5. Core Fire Detection Harness Installation

(Figure 402 or Figure 403)

#### A. General

- (1) The installation procedure for Core Fire Detection Harness, MW0325 [33] and Core Fire Detection Harness, MW0326 [31] is the same.
- (2) Core Fire Detection Harness, MW0325 [33] is a component of loop A of the engine core fire detection circuit SSM 26-11-11SSM 26-11-21.
- (3) Core Fire Detection Harness, MW0326 [31] is a component of loop B of the engine core fire detection circuit SSM 26-11-11SSM 26-11-21.

#### B. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
SSM 26-11-11	System Schematics Manual
SSM 26-11-21	System Schematics Manual

#### C. Consumable Materials

Reference	Description	Specification
D00601 [CP2101]	Grease - Graphite, High Temperature	SAE AMS 2518

#### D. Prepare for Installation

SUBTASK 26-11-02-640-002

- (1) Lubricate the threads of the bolts with grease, D00601 [CP2101] before their installation.

SUBTASK 26-11-02-210-003

- (2) Make sure that the connectors and receptacles are clean and clear of unwanted materials.

SUBTASK 26-11-02-210-004

- (3) During installation, make sure that the harness are not stressed or torn.

### HAP ALL PRE SB 737-26-1123

#### E. Core Fire Detection Harness Installation

SUBTASK 26-11-02-420-002

- (1) Core fire detection harness installation.
  - (a) Put the harness in position on the engine.
  - (b) Attach the harness receptacle to the Engine Bracket [34] with two Bolts [35] on each receptacle.
    - 1) Tighten the Bolts [35] to 98-110 pound-inches (11-12.5 Newton-meters).
  - (c) Connect fan fire detection harness connector to the core fire detection harness receptacle. Tighten by hand.
  - (d) Attach the two harness terminal lugs to each core fire detector with the Washer [15] and Nut [14].

**NOTE:** If the leads are different sizes, install the lead with the small hole under the lead with the large hole.

- 1) Tighten the Nuts [14] to 25-35 pound-inches (2.82-3.95 Newton-meters).

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#### HAP ALL PRE SB 737-26-1123 (Continued)

- (e) Install the harness in the Hinged Clamp [16] and tighten the Quarter turn Bolt [36].
- (f) Attach the harness to the bracket with two Quarter turn Bolts [36].
  - 1) Tighten two Quarter turn Bolts [36] to 98-110 pound-inches (11-12.5 Newton-meters).
- (g) Install the harness in the Hinged Clamps [32] along the length of the harness and tighten the Quarter turn Bolts [36].

#### HAP ALL POST SB 737-26-1123

##### F. Core Fire Detection Harness Installation

SUBTASK 26-11-02-420-003

- (1) Core fire detection harness installation:
  - (a) Put the harness in the position on engine.
  - (b) Install the Loop Clamp [4] and Teflon Insert [12] on the fire detection harness at the L Bracket [5] at two locations.
    - 1) Tighten the Bolt [2] and Self -Locking Nut [3] on the L Bracket [5] to 98-110 pound-inches (11-12.5 newton-meters).
  - (c) Connect the fan harness connectors to the core detector harness connectors and tighten by hand.
  - (d) Connect the core fire detection harness at each detector.
    - 1) Install the Loop Clamp [4], Cable Bushing [10] and Teflon Insert [12] at each detector terminal.
    - 2) Tighten the Loop Clamp [4] to the Detector Bracket [7] with the Terminal Nut [6] to 25-35 pound-inches (2.8-3.9 newton-meters).
    - 3) Install the Ground Strap [11] on the core fire detection cable.
    - 4) Attach the Ground Strap [11] to the Detector Bracket [7] with Screw [8] and Nut [9].
      - a) Tighten the Screw [8] and Nut [9] to 25-30 pound-inches (2.8-3.4 newton-meters).
  - (e) Install the Teflon Inserts [12], Cable Bushings [10], and Loop Clamps [4] along the length of the harness.
    - 1) Tighten the Bolts [2] and Self -Locking Nuts [3] to 98-110 pound-inches (11-12.5 newton-meters).

#### HAP ALL

##### G. Core Fire Detection Harness Installation Test

SUBTASK 26-11-02-040-003

- (1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-710-002

- (2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

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H. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-02-010-005

**WARNING:** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

————— **END OF TASK** —————

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## AIRCRAFT MAINTENANCE MANUAL

### ENGINE FIRE DETECTOR HARNESS - REPAIRS

#### 1. General

A. This procedure has two tasks:

**CAUTION:** DO NOT MIX HARNESS TERMINAL LUGS BETWEEN CIRCULAR DESIGN AND OVALIZATION DESIGN. DAMAGE TO EQUIPMENT MAY RESULT.

- (1) Replacement of the fan fire detector wire harness terminal lugs and ground lugs and replacement of the core fire detector wire harness terminal lugs and ground lugs for airplanes with engines PRE and POST CFM SB 72-0136 (first repair).
- (2) Replacement of the core fire detector wire harness terminal lugs and ground lugs for airplanes with engines POST CFM SB 72-0269 (second or third repairs).

**NOTE:** You must do this repair procedure on harnesses which have the new configuration POST CFM SB 72-0258, because the terminal lugs are the same.

#### **TASK 26-11-02-960-801**

#### 2. Fan and Core Fire Detection Wire Harness Terminal Lugs and Ground Lug Replacement (Engines PRE CFM SB 72-0258 for core harnesses)

A. General

- (1) Do this procedure if one of the fire detector wire harness terminal lugs or ground lug is broken or almost broken.
- (2) This procedure provides instructions to replace the fire detector wire harness ground lug or the fire detector wire harness terminal lugs for fan fire detector wire harnesses.
- (3) This procedure provides instructions to replace the fire detector wire harness ground lug or the fire detector wire harness terminal lugs for core fire detector wire harnesses.

**NOTE:** This procedure is applicable for repair of core harnesses PRE and POST CFM SB 72-0136 (first repair). Do not use this procedure for repair of harnesses with new configuration POST CFM SB 72-0258.

B. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
SWPM 20-10-14	Installation of Shrinkable Sleeves

C. Tools/Equipment

Reference	Description
STD-441	Gun - Heat, 500 to 800° F (260 to 427° C)

D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
G50541	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-5/8-X)	AMS-DT~ L-23053/12
G50544	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-1/2-X)	AMS-DT~ L-23053/12

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## E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

## F. Equipment

SUBTASK 26-11-02-480-002

- (1) AMP Lug crimping tool 46988 - AMP Matrix Aerospace

11 Avenue Jean d'Alembert  
78190 Trappes FRANCE

or

AMP Incorporated  
P.O. Box 3608  
Harrisburg, PA 17105  
USA

**NOTE:** For terminal lug and for ground lug only.

## G. Prepare for the Replacement of the Fire Detector Lug

SUBTASK 26-11-02-040-006

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-010-008

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DEACTIVATE THE LEADING EDGE, DEACTIVATE THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

## H. Fire Detector Harness Terminal or Ground Lug Removal

SUBTASK 26-11-02-800-002

**CAUTION:** THE LUG AT THE END OF EACH WIRE CAN BE REPLACED TWO TIMES ONLY. IF A THIRD LUG REPLACEMENT IS NECESSARY, REPLACE THE ENTIRE FIRE DETECTOR HARNESS.

- (1) It is not necessary to remove completely the fire detection harness when you replace a lug. Remove only enough length of the wire harness to provide sufficient access to the lug.

SUBTASK 26-11-02-350-019

- (2) Removal of the terminal or ground wire (Figure 801).
  - (a) To disconnect a ground lug, remove the bolt [1] and washer [2] which secure the ground wire to the engine bracket.

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- (b) To disconnect a terminal wire, remove the nut [3], the washer [4] which secure the terminal lugs to the fire detector.
- (c) Remove the lug insulator.
- (d) Cut the cable at the lug barrel. Make sure that the cut at the wire and insulation of the cable is clean and clear.
- (e) Discard the damaged lug.

### I. Fire Detector Terminal Lug Replacement

(Figure 802).

SUBTASK 26-11-02-350-020

**CAUTION:** DO NOT DAMAGE THE HEAT-SHRINKABLE SLEEVE OR INSULATION SHEATH WHEN YOU REMOVE THE TFER SLEEVE.

- (1) For harnesses already repaired by CFM SB 72-0136 (first repair), cut and remove the TFE-R 5/8-X tubing, G50541.

SUBTASK 26-11-02-350-021

- (2) Remove enough of the heat-shrinkable sleeve so that it will line up flush with the end of the barrel of the replacement lug after installation.

SUBTASK 26-11-02-350-022

- (3) Remove 0.216 inch (5.5 mm) of the insulation sheath from the end of the wire.

SUBTASK 26-11-02-350-023

- (4) Make sure the cutting of the heat-shrinkable sleeve and insulation sheath is clear and clean.

SUBTASK 26-11-02-350-024

**WARNING:** DO NOT USE ISOPROPYL ALCOHOL NEAR FLAMES OR HEAT, BECAUSE THE ALCOHOL IS FLAMMABLE. DO NOT BREATHE THE FUMES RELEASED FROM THE ALCOHOL. WEAR PERSONAL PROTECTIVE EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- (5) Clean the braid wire and insulation with alcohol, B00130 (CP1041).

### I HAP ALL POST SB CFM56-7B-72-136

SUBTASK 26-11-02-350-025

- (6) Prepare the installation of the TFE-R-1/2-X tubing, G50544 on the wire.

**NOTE:** You must not do this step for fan fire detector wire harnesses.

- (a) Cut a 1.38-inch (35 mm) long TFE-R 5/8-X tubing, G50541.
- (b) Install the TFE-R 5/8-X tubing, G50541 on the insulation sheath.

**NOTE:** Allow sufficient room for the installation of the lug.

### I HAP ALL

SUBTASK 26-11-02-350-026

- (7) Install the terminal lug [6] freely on the wire to check for correct position on the fire detector stud.
  - (a) Position the terminal lug [6] on the fire detector and mark the lug and wire.
  - (b) Remove the terminal lug [6] from the stud.

SUBTASK 26-11-02-350-027

- (8) Line up the mark on the wire and terminal lug [6], and crimp the terminal lug [6] on the wire with the AMP crimping tool (Figure 803, Figure 804, Figure 805).

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- (a) Insert insulation adjustment pin of the crimping tool as shown in Figure 803 to adjust the wire insulation grip.
- (b) Push the locator and position the lug [6] in the crimping jaws. Make sure the lug rests against the locator.
- (c) Close the tool handles just enough to hold the lug [6] within the crimping jaws.
- (d) Insert the stripped wire into the lug barrel.

**NOTE:** Line up the marks on the lug and wire. Lug orientation must be respected. Lug angular tolerances are 10 percent.

- (e) Crimp the lug [6] in the following two places with the AMP lug crimping tool, part number 46988.

**NOTE:** Close the tool handles fully to crimp the lug [6]. The tool handles will open automatically after the ratchet is released.

- 1) On the braid wire over 0.216 inch (5.5 mm).
- 2) On the insulation sheath only.

**NOTE:** For terminal lugs, the heat-shrinkable sleeve is located at the end of the lug barrel.

- (f) Remove the crimped lug from the crimping jaws.

SUBTASK 26-11-02-350-028

- (9) Install the TFE-R 5/8-X tubing, G50541 on the terminal lug using heat gun, 500 to 800° F, STD-441 (SWPM 20-10-14).

- (a) Install and position the sleeve over the lug [6] (Figure 802).

**WARNING:** MAKE SURE YOU WEAR GLOVES WHEN YOU HEAT THE TERMINAL LUG TFER SLEEVE. IF YOU DO NOT WEAR GLOVES WHEN YOU HEAT THE TFER TERMINAL LUG SLEEVE, YOU CAN INJURE YOUR HANDS.

- (b) Heat the TFER sleeve to a maximum of 700 degrees F (400 degrees C) to shrink the sleeve.

### J. Replacement of the Ground Lug

(Figure 806).

**NOTE:** This procedure is not applicable on harnesses with the new configuration CFM SB 72-0258, since the terminal lug is changed by a metallic bobbin ground lug.

SUBTASK 26-11-02-350-029

**CAUTION:** DO NOT DAMAGE THE HEAT-SHRINKABLE SLEEVE OR INSULATION SHEATH WHEN YOU REMOVE THE TFER SLEEVE.

- (1) For harnesses already repaired by CFMI SB 72-0136 (first repair); cut and remove the TFER 1/2-inch sleeve.

SUBTASK 26-11-02-350-030

- (2) Remove 0.216 inch (5.5 mm) of the heat-shrinkable sleeve from the end of the wire.

SUBTASK 26-11-02-350-031

- (3) Remove 0.216 inch (5.5 mm) of the insulation sheath from the end of the wire.

SUBTASK 26-11-02-350-032

- (4) Make sure the cutting of the heat-shrinkable sleeve and insulation sheath is clear and clean.

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SUBTASK 26-11-02-350-033

**WARNING:** DO NOT USE ISOPROPYL ALCOHOL NEAR FLAMES OR HEAT, BECAUSE THE ALCOHOL IS FLAMMABLE. DO NOT BREATHE THE FUMES RELEASED FROM THE ALCOHOL. WEAR PERSONAL PROTECTIVE EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- (5) Clean the braid wire and insulation with alcohol, B00130 (CP1041).

SUBTASK 26-11-02-350-034

- (6) Prepare the installation of the TFE-R-1/2-X tubing, G50544.
- (a) Cut a 1.38-inch (35 mm) long TFE-R-1/2-X tubing, G50544.
  - (b) Install the TFE-R-1/2-X tubing, G50544 on the insulation sheath.

**NOTE:** Allow sufficient room for the installation of the lug.

SUBTASK 26-11-02-350-035

- (7) Install the ground lug freely on the wire to check for correct position on the engine bracket.
- (a) Position the terminal lug [5] on the engine bracket and mark the lug and wire.
  - (b) Remove the lug [5] from the bracket.

SUBTASK 26-11-02-350-036

- (8) Line up the mark on the wire and lug [5], and crimp the lug [5] on the wire with the AMP lug-crimping tool (Figure 807).
- (a) Insert insulation adjustment pin of the crimping tool as shown in Figure 807 to adjust the wire insulation grip.
  - (b) Push the locator and position the lug [5] in the crimping jaws. Make sure the lug rests against the locator.
  - (c) Close the tool handles just enough to hold the lug [5] within the crimping jaws.
  - (d) Insert the stripped wire into the lug barrel.

**NOTE:** Line up the marks on the lug and wire. Lug orientation must be respected. Lug angular tolerances are 10 percent.

- (e) Crimp the lug [5] in two places with the AMP lug-crimping tool, part number 46988.

**NOTE:** Close the tool handles fully to crimp the lug [5]. The tool handles will open automatically after the ratchet is released.

- 1) On the braid wire over 0.216 inch (5.5 mm).
- 2) On the heat-shrinkable sleeve and insulation sheath only.

- (f) Remove the crimped lug from the crimping jaws.

SUBTASK 26-11-02-350-037

- (9) Install TFE-R-1/2-X tubing, G50544 on the ground lug using heat gun, 500 to 800° F, STD-441 (SWPM 20-10-14).

- (a) Install and position the sleeve over the lug [5] (Figure 806).

**WARNING:** MAKE SURE YOU WEAR GLOVES WHEN YOU HEAT THE TERMINAL LUG TFER SLEEVE. IF YOU DO NOT WEAR GLOVES WHEN YOU HEAT THE TFER TERMINAL LUG SLEEVE, YOU CAN INJURE YOUR HANDS.

- (b) Heat the TFER sleeve to a maximum of 700 degrees F (400 degrees C) to shrink the sleeve.

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#### K. Fire Detector Harness Terminal or Ground Lug Installation

SUBTASK 26-11-02-350-038

(1) Installation of the terminal or ground lug (Figure 801).

- (a) To install a terminal lug, position the lug on the fire detector, and install the washer [4] and nut [3].
  - 1) Tighten the nut to 25-35 pound-inches (3.0-4.0 Newton-meters).
- (b) To install a ground lug, position the lug on the engine bracket, and install the washer [2] and bolt [1].
  - 1) Tighten the bolts to 95-110 pound-inches (11-12.5 Newton-meters).
- (c) Remove the old identification plate from the harness, noting the serial number.
- (d) Holding the new identification plate, mark the serial number from the old plate on it.
- (e) Install the new identification plate on the harness.

#### L. Terminal Lug Replacement Test

SUBTASK 26-11-02-440-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-710-004

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

#### M. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-02-010-009

**WARNING:** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

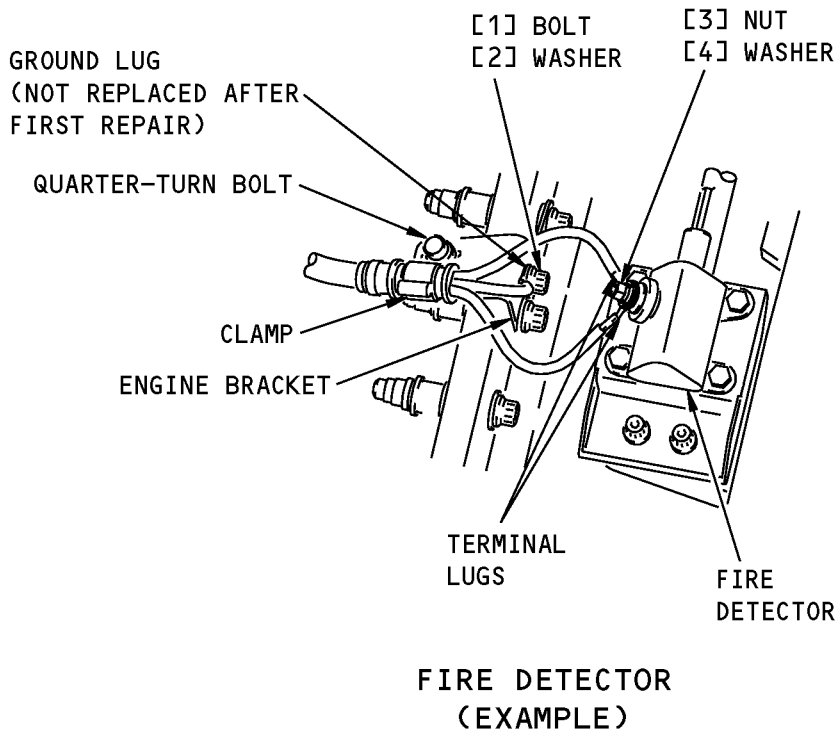
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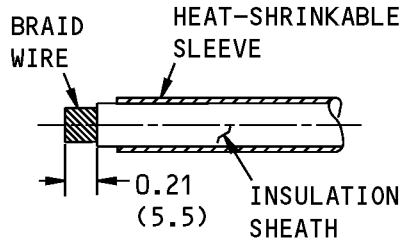
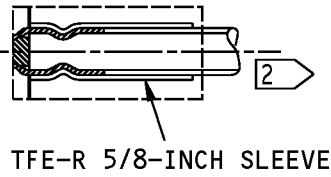
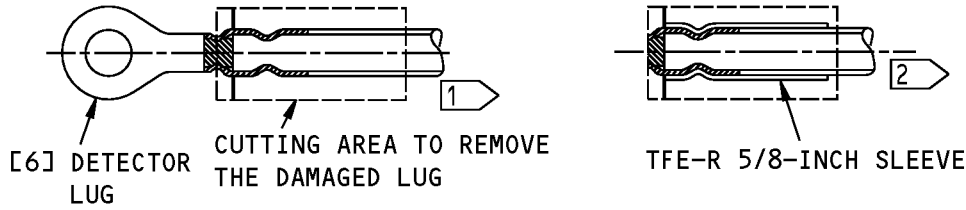
**Engine Fire Detection Harness Installation  
Figure 801/26-11-02-990-803**

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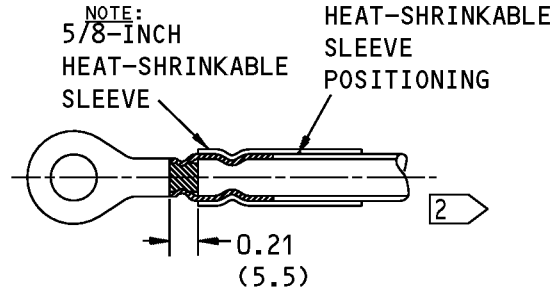
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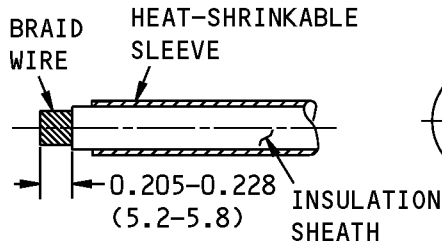
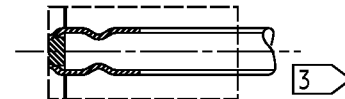
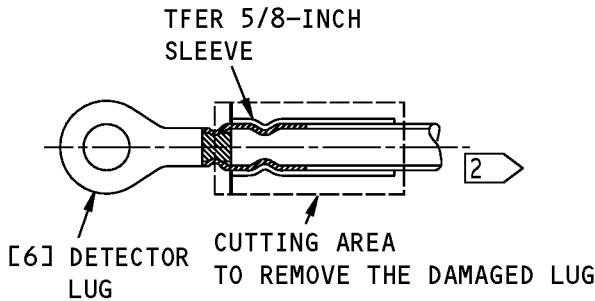


**PREPARE THE WIRE**

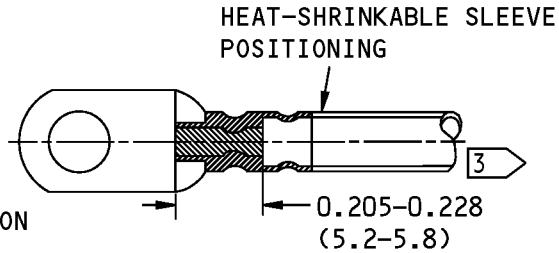


**INSTALL LUG**

**FIRST REPAIR  
TERMINAL LUG**



**PREPARE THE WIRE**



**INSTALL LUG**

**SECOND REPAIR  
TERMINAL LUG**

**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

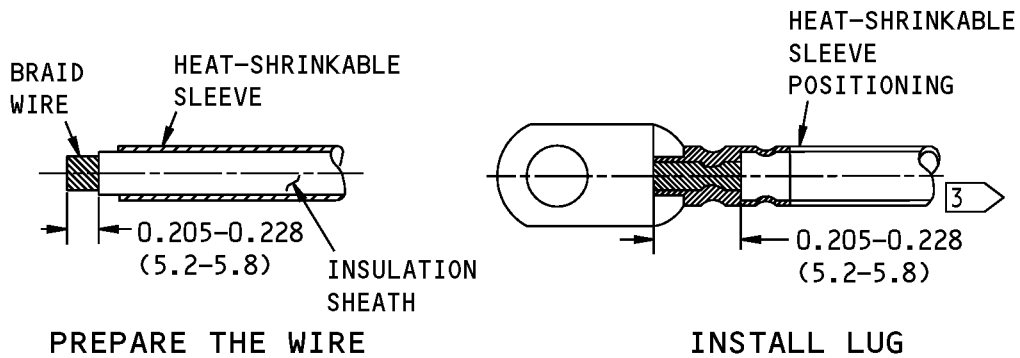
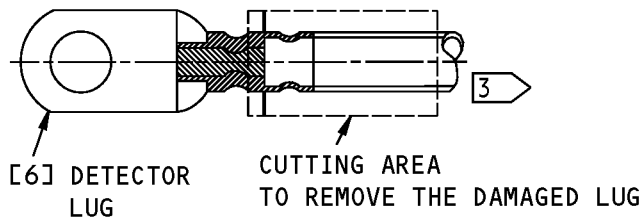
- 1 FIRE DETECTOR LUG (PRE-CFM-SB 72-0136)
- 2 FIRE DETECTOR LUG (POST-CFM-SB 72-0136)
- 3 TERMINAL FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00196-01-B

**Engine Fire Detector Terminal Lug Replacement (Pre-CFM-SB 72-0258)  
Figure 802 (Sheet 1 of 2)/26-11-02-990-804**

EFFECTIVITY  
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**THIRD REPAIR  
TERMINAL LUG**

**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

[3] FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00228-00-B

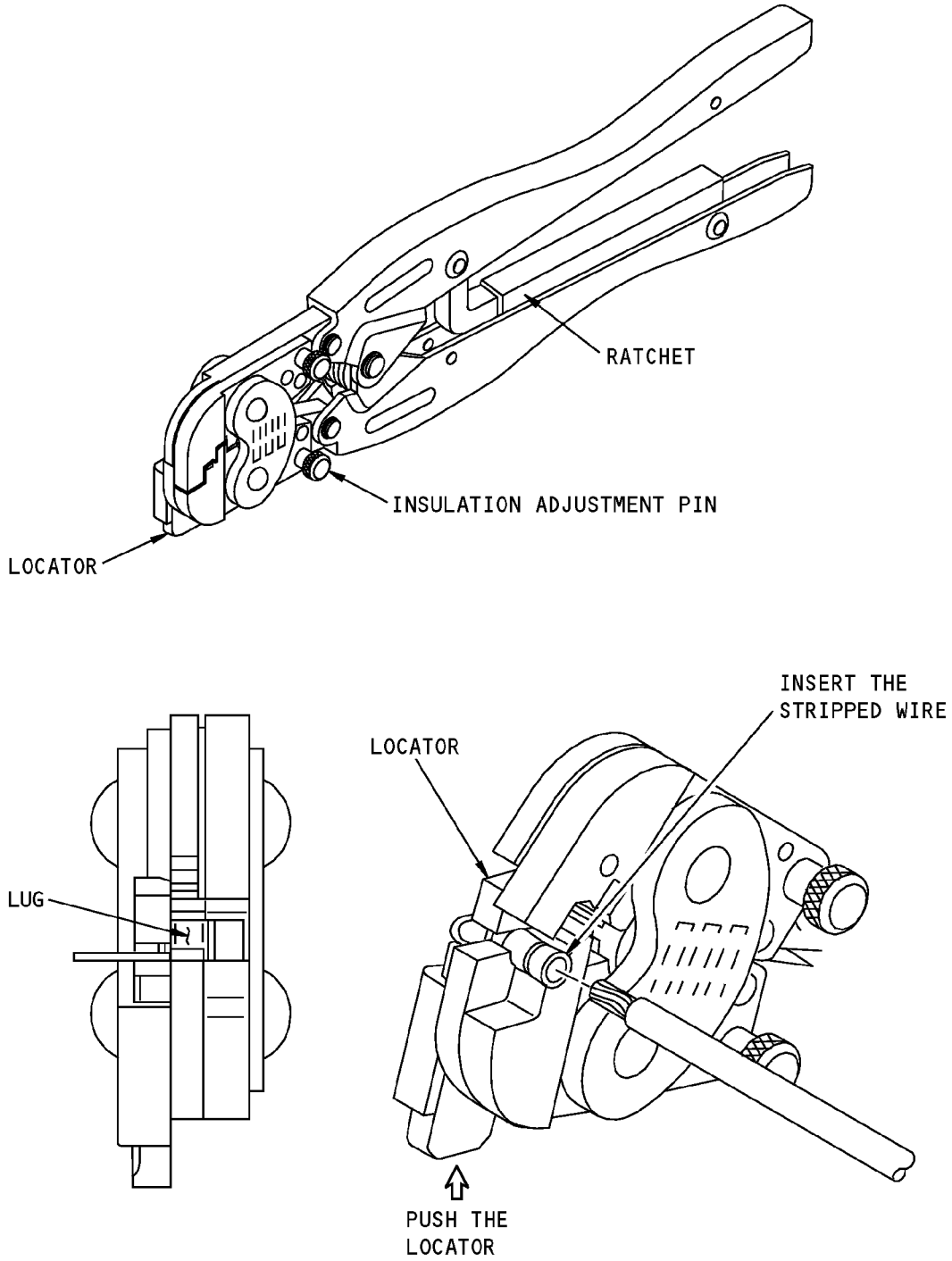
**Engine Fire Detector Terminal Lug Replacement (Pre-CFM-SB 72-0258)  
Figure 802 (Sheet 2 of 2)/26-11-02-990-804**

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MM-00200-01-B

**Lug Crimping (Pre-CFM-SB 72-0258 and Post-CFM-SB 72-0136)  
Figure 803/26-11-02-990-805**

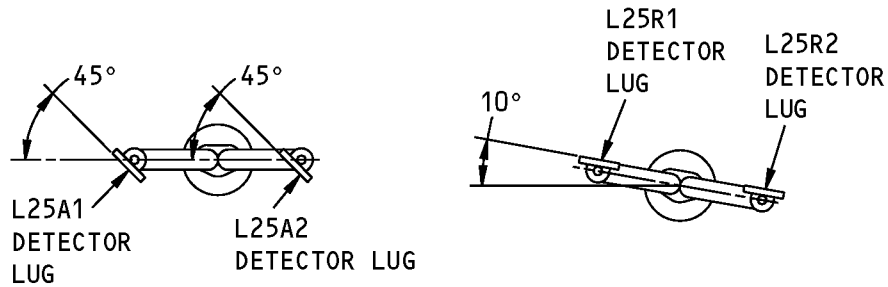
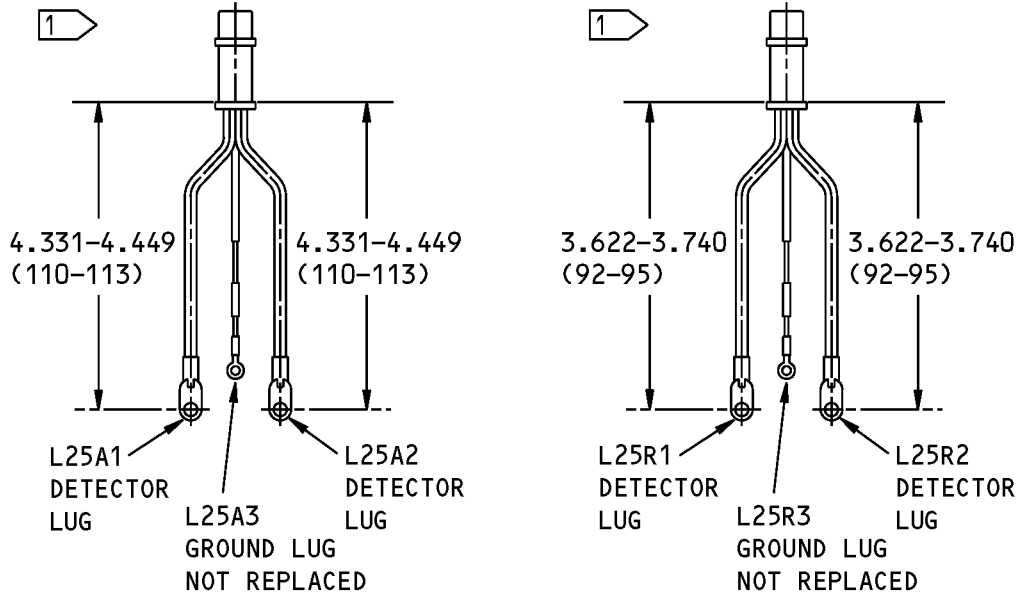
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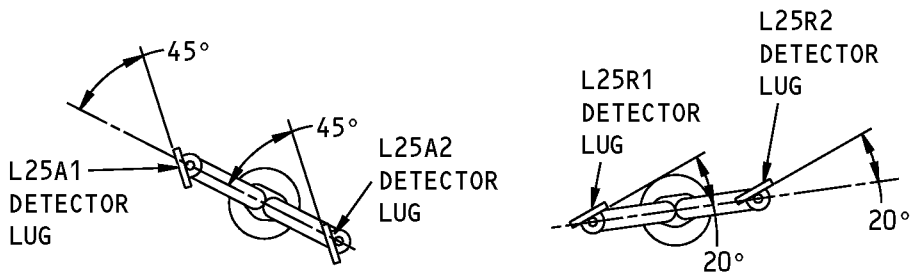
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**SAC CONFIGURATION**



**DAC CONFIGURATION**

**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 FIRE DETECTOR LUG (POST-CFM-SB 72-0269)

MM-00197-01-B

**Position of the Lug on the Harnesses (MW0325)  
Figure 804/26-11-02-990-806**

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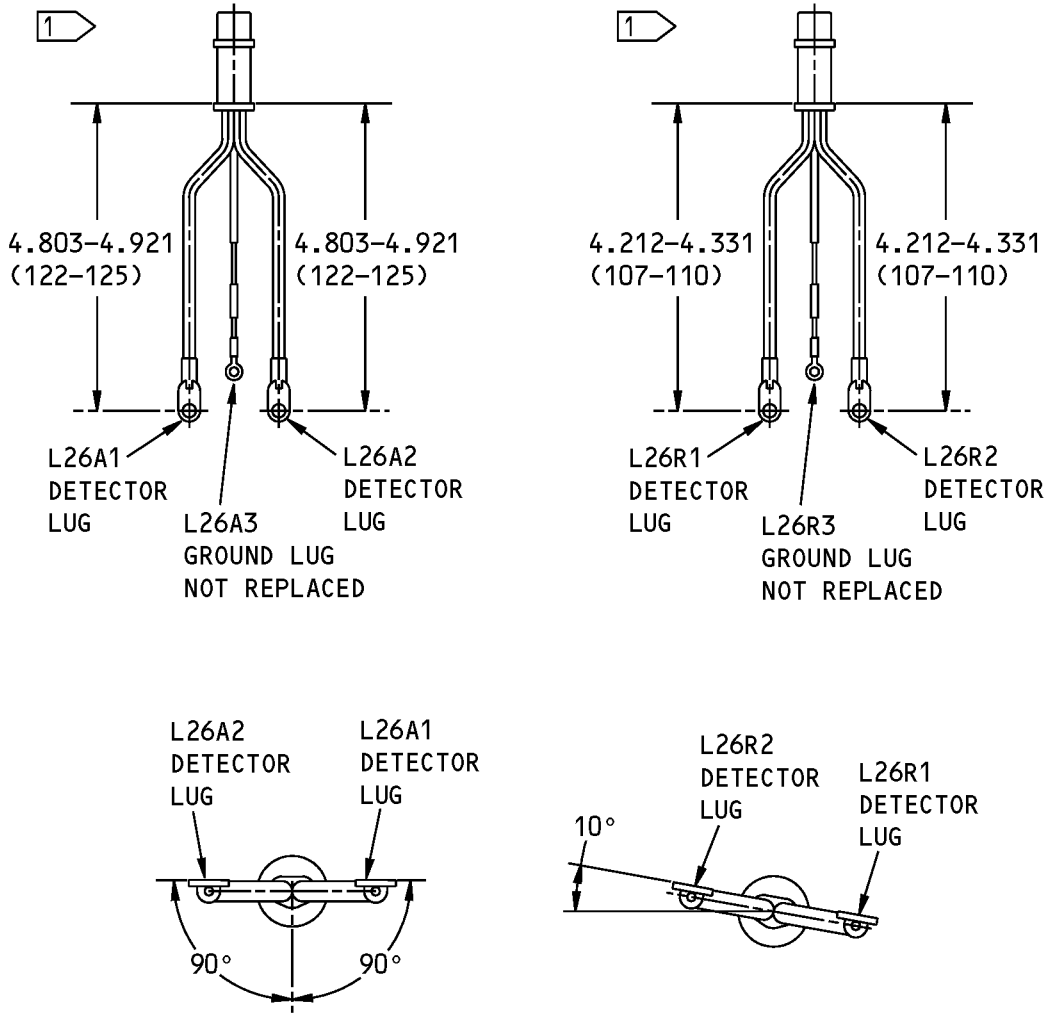
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**SAC AND DAC CONFIGURATIONS**

**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

**1** FIRE DETECTOR LUG (POST-CFM-SB 72-0269)

MM-00198-01-B

**Position of the Lug on the Harnesses (MW0326)  
Figure 805/26-11-02-990-807**

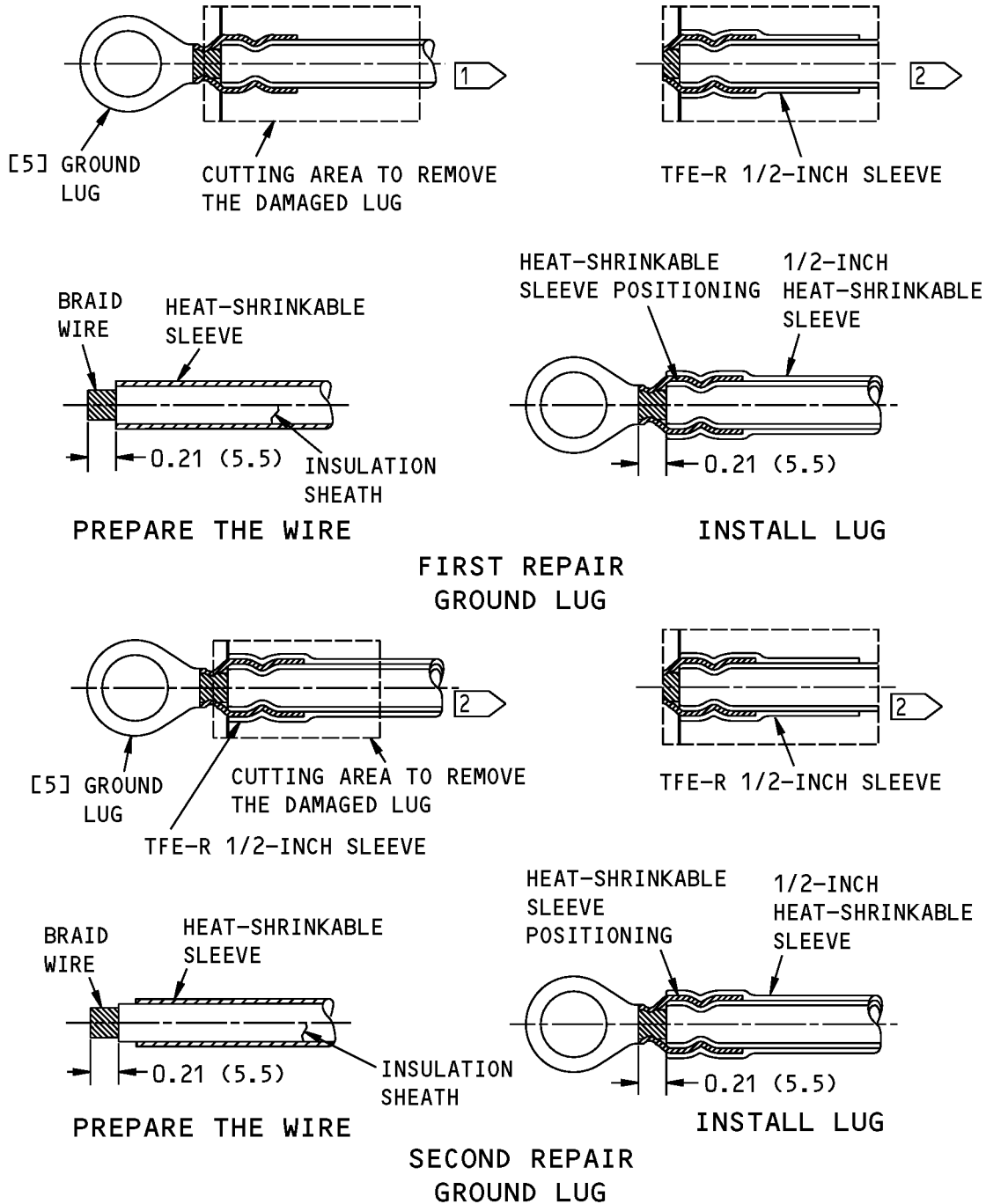
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**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

① FIRE DETECTOR LUG (PRE-CFM-SB 72-0136)

② FIRE DETECTOR LUG (POST-CFM-SB 72-0136)

MM-00195-01-B

**Replacement of Ground Fire Detector Lug  
Figure 806/26-11-02-990-808**

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TASK 26-11-02-960-802

#### 3. Core Fire Detection Wire Harness Terminal Lugs Replacement (Engines POST CFM SB 72-0258 or SB 72-0269)

##### A. General

- (1) Do this procedure if one of the fire detector wire harness terminal lugs or ground lug is broken or almost broken.

NOTE: This procedure is applicable to harnesses configuration CFM SB 72-0269 (second or third repairs) and especially to harnesses configuration CFM SB 72-0258.

- (2) This procedure provides instructions to replace the fire detector wire harness terminal lugs.

NOTE: The harnesses with the new configuration (POST CFM SB 72-0258) have a metallic bobbin ground lug.

##### B. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

##### C. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735

##### D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

##### E. Equipment

SUBTASK 26-11-02-480-001

- (1) BURNDY Lug crimping tool M8ND - FCI (Framatome Connector International)  
145, Rue YVES LE COZ  
78035 Versailles Cedex  
France  
or  
FCI ELECTRICAL  
47, East Industrial Park Drive  
P.O. Box 9507  
Manchester, NH 03108-9507  
USA

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#### F. Prepare for the Replacement of the Fire Detector Terminal Lug

SUBTASK 26-11-02-040-004

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-010-006

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DEACTIVATE THE LEADING EDGE, DEACTIVATE THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

#### G. Fire Detector Harness Terminal Lug Removal

SUBTASK 26-11-02-800-001

**CAUTION:** THE LUG AT THE END OF EACH WIRE CAN BE REPLACED TWO TIMES ONLY. IF A THIRD LUG REPLACEMENT IS NECESSARY, REPLACE ENTIRE THE FIRE DETECTOR HARNESS.

- (1) It is not necessary to remove completely the fire detection harness when you replace a lug. Remove only enough length of the wire harness to provide sufficient access to the lug.

SUBTASK 26-11-02-350-001

- (2) Removal of the terminal or ground lug (Figure 801).
  - (a) To disconnect a ground lug, remove the bolt [1] and the washer [2] which secure the ground lug to the engine bracket.
 

**NOTE:** This step is required only for the old configuration harnesses (PRE SB CFM SB 72-0258).
  - (b) To disconnect a terminal lug, remove the nut [3], the washer [4] which secure the terminal lugs to the fire detector.
  - (c) Remove the lug insulator.
  - (d) Cut the cable at the lug barrel. Make sure that the cut at the wire and insulation of the cable is clean and clear.
  - (e) Discard the damaged lug.

#### H. Fire Detector Terminal Lug Replacement

(Figure 807, Figure 808, Figure 809).

**CAUTION:** MAKE SURE THE LENGTH OF THE WIRE IS SUFFICIENT FOR CRIMPING THE NEW LUG. IF THE WIRE IS CUT TOO SHORT, REPLACE THE HARNESS.

SUBTASK 26-11-02-350-015

**CAUTION:** DO NOT DAMAGE THE HEAT-SHRINKABLE SLEEVE OR INSULATION SHEATH WHEN YOU REMOVE THE TFER SLEEVE.

- (1) For harnesses already repaired by CFM SB 72-0136 (first repair), cut and remove the TFER 5/8-inch sleeve.

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SUBTASK 26-11-02-350-002

- (2) Remove enough of the heat-shrinkable sleeve so that it will line up flush with the end of the barrel of the replacement lug after installation.

SUBTASK 26-11-02-350-003

- (3) Remove 0.205-0.228 inch (5.2-5.8 mm) of the insulation sheath from the end of the wire.

SUBTASK 26-11-02-350-004

- (4) Make sure the cutting of the heat-shrinkable sleeve and insulation sheath is clear and clean.

SUBTASK 26-11-02-350-005

**WARNING:** DO NOT USE ISOPROPYL ALCOHOL NEAR FLAMES OR HEAT, BECAUSE THE ALCOHOL IS FLAMMABLE. DO NOT BREATHE THE FUMES RELEASED FROM THE ALCOHOL. WEAR PERSONAL PROTECTIVE EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- (5) Clean the braid wire and insulation with alcohol, B00130 (CP1041).

SUBTASK 26-11-02-350-006

- (6) Install the terminal lug freely on the wire to check for correct position on the fire detector stud.

**NOTE:** You must use the BURNDY terminal lug (7).

- (a) Position the terminal lug (7) on the fire detector stud and mark the lug and wire.
- (b) Remove the lug (7) from the stud.

SUBTASK 26-11-02-350-007

- (7) Line up the mark on the wire and BURNDY terminal lug (7), and crimp the lug (7) on the wire with the BURNDY lug-crimping tool (Figure 807, Figure 808, Figure 809, Figure 810).

**WARNING:** BE CAREFUL. DO NOT USE THE AMP CRIMPING TOOL TO CRIMP THE FIRE DETECTOR WIRE HARNESS BURNDY TERMINAL LUGS.

BE CAREFUL TO ADJUST THE TOOL AND JAWS BEFORE USING THE BURNDY CRIMPING TOOL. REFER TO BURNDY RECOMMENDATIONS.

- (a) Take a BURNDY lug-crimping tool, M8Nd, with the jaws, N14HT-5.
- (b) Make sure that the BURNDY lug-crimping tool is correctly adjusted.
- (c) Position the BURNDY lug [7] in the crimping jaw hole No. 14.
- (d) Make sure that the BURNDY lug [7] is located in the right position (Figure 811).
- (e) Close the tool handles just enough to hold the BURNDY lug [7] within the crimping jaws.
- (f) Insert the stripped wire into the lug barrel.

**NOTE:** Line up the marks on the lug and wire. Lug orientation must be respected. Lug angular tolerances are 10 percent.

- (g) Crimp the BURNDY lug ([7] in the following two places with the BURNDY lug crimping tool, part number M8ND.

**NOTE:** Close the tool handles fully to crimp the BURNDY lug [7]. The tool handles will open automatically after the ratchet is released.

- 1) On the braid wire over 0.205-0.228 inch (5.2-5.8 mm).
- 2) On the insulation sheath only.

**NOTE:** For terminal lugs, the heat-shrinkable sleeve is located at the end of the lug barrel.

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(h) Remove the crimped lug from the crimping jaws.

I. Fire Detector Harness Terminal Lug Installation

SUBTASK 26-11-02-350-014

(1) Installation of the terminal or ground lug (Figure 801).

(a) To install a ground lug, position the lug on the engine bracket, and install the washer [2] and bolt [1].

NOTE: This step is necessary only for the old configuration harnesses (PRE CFM SB 72-0258).

1) Tighten the nut to 95-110 pound-inches (11-12.5 Newton-meters).

(b) To install a terminal lug, position the lug on the fire detector, and install the washer [4] and nut [3].

1) Tighten the bolts to 25-35 pound-inches (3.0-4.0 Newton-meters).

J. Terminal Lug Replacement Test

SUBTASK 26-11-02-440-002

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-710-003

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

K. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-02-010-007

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

EFFECTIVITY

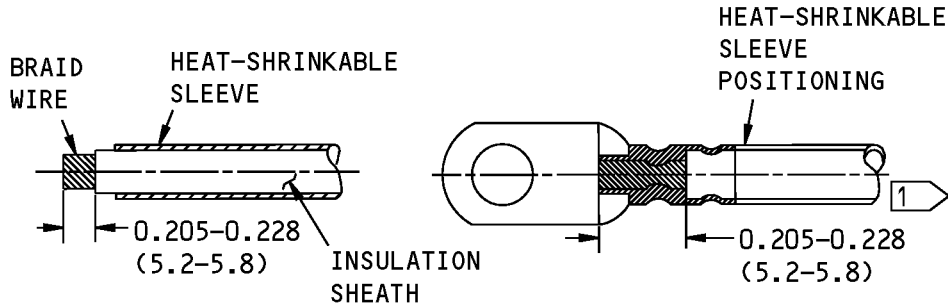
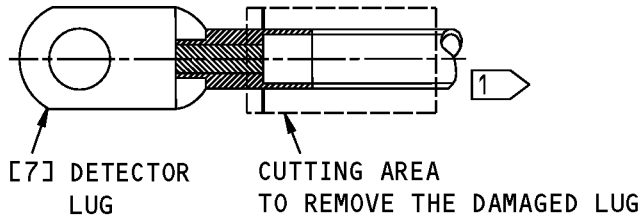
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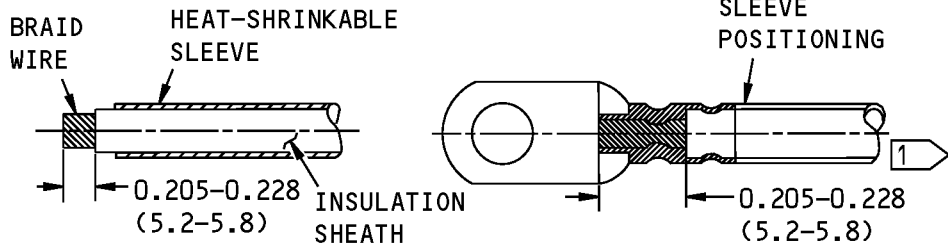
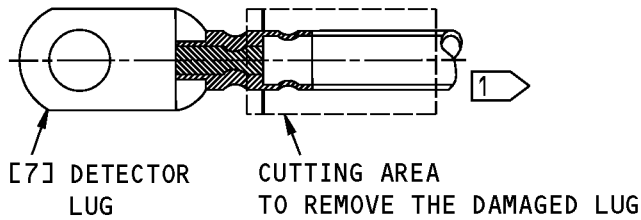
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PREPARE THE WIRE

INSTALL LUG

**TERMINAL LUGS**



PREPARE THE WIRE

INSTALL LUG

**TERMINAL LUGS**

**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

**1** TERMINAL FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00230-00-B

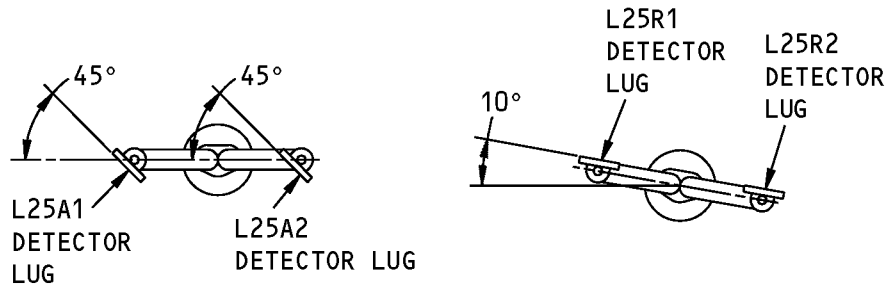
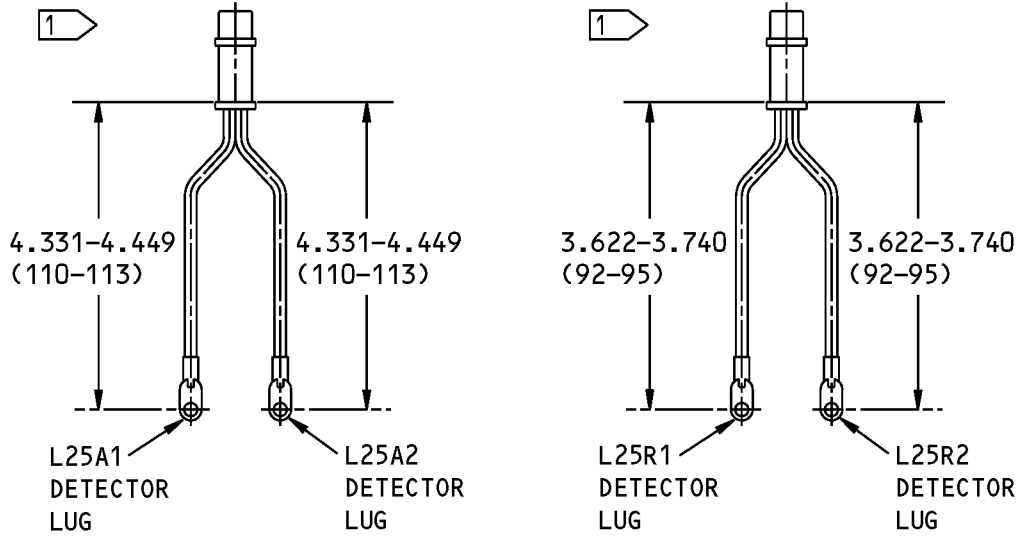
**Engine Fire Detector Terminal Lug Replacement  
Figure 807/26-11-02-990-809**

EFFECTIVITY  
HAP ALL

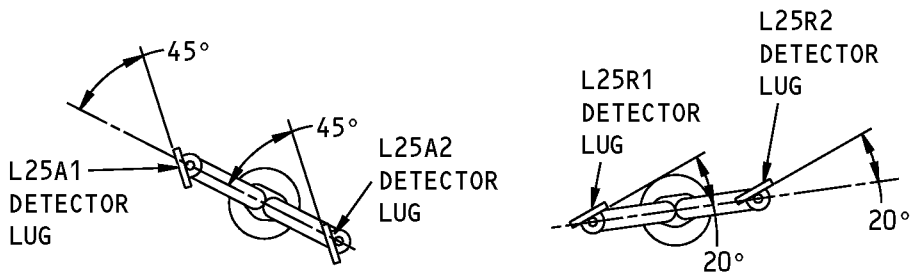
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**26-11-02**

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**SAC CONFIGURATION**



**DAC CONFIGURATION**

**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

**1** FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

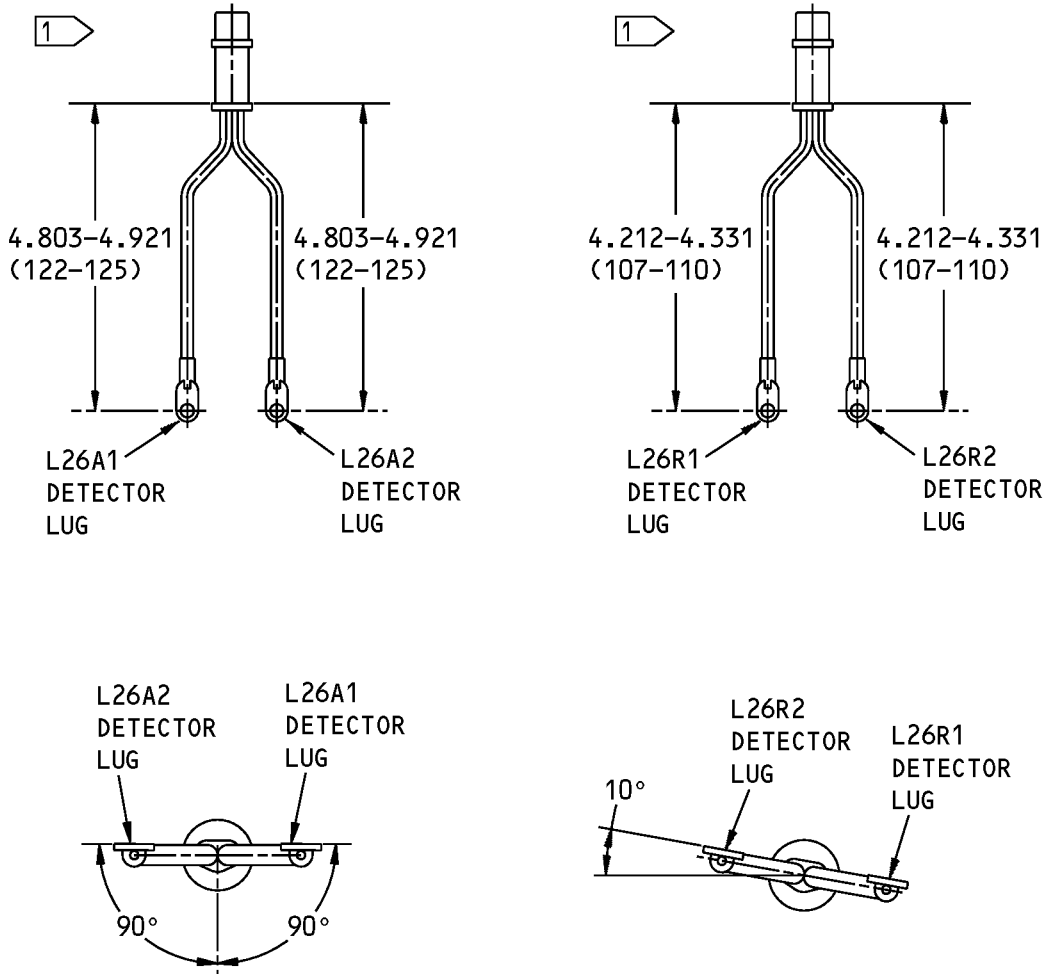
MM-00231-00-B

**Position of the Lug On the Harnesses (MW0325)  
Figure 808/26-11-02-990-810**

EFFECTIVITY  
HAP ALL

**26-11-02**





**SAC AND DAC CONFIGURATIONS**

**NOTE:** DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

**1** FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

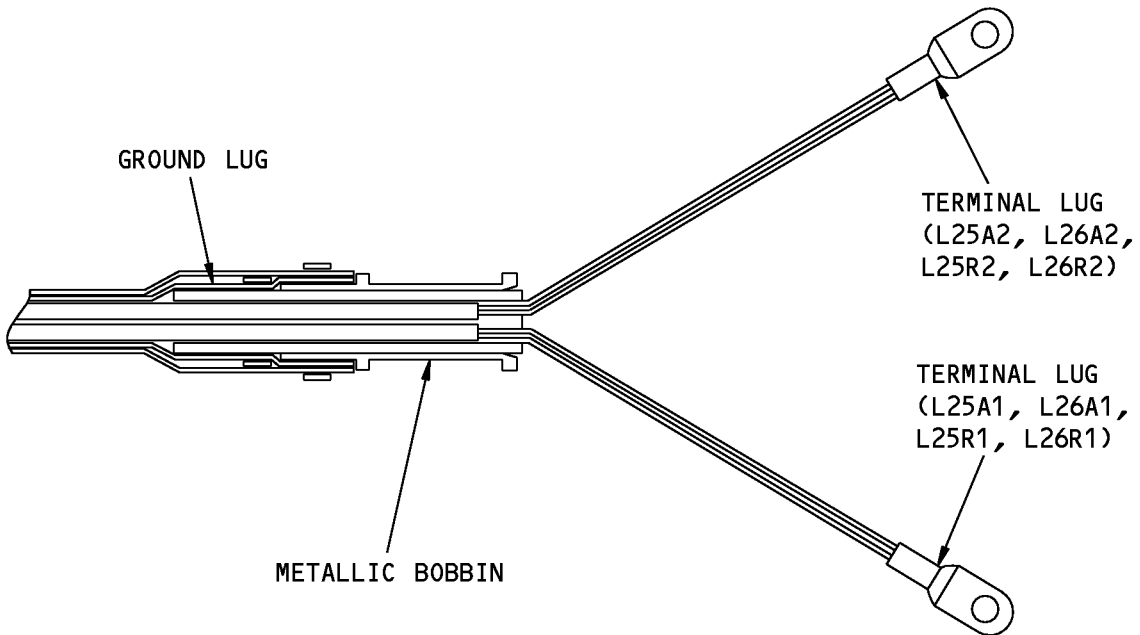
MM-00232-00-B

**Position of the Lug on the Harnesses (MW0326)  
Figure 809/26-11-02-990-811**

EFFECTIVITY  
HAP ALL

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MM-00199-01-B

**Position of the Lug on the Harnesses (MW0325 and MW0326)  
Figure 810/26-11-02-990-812**

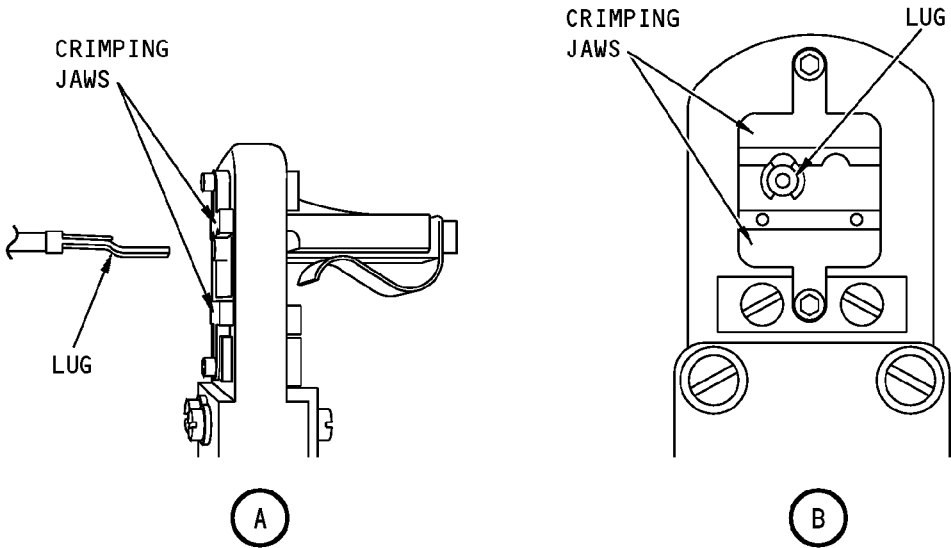
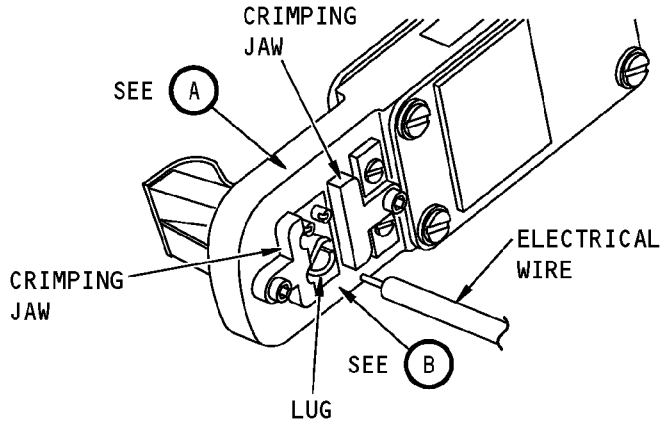
EFFECTIVITY  
HAP ALL

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MM-00201-01-B

**Lug Crimping (Post-CFM-SB 72-0258)  
Figure 811/26-11-02-990-813**

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HAP ALL

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LAVATORY SMOKE DETECTION - ADJUSTMENT/TEST

1. General

- A. This procedure contains scheduled maintenance task data.
B. This procedure does a test of the lavatory smoke detectors.
C. Each lavatory has a smoke detector installed in the ceiling. When the concentration of smoke at the sensor gets to a preset threshold, the smoke detector alarm occurs.
D. You cannot adjust the sensitivity of the smoke detector. If the smoke detector does not work correctly, replace the smoke detector.

TASK 26-14-00-710-801

2. Lavatory Smoke Detection - Self Test

(Figure 501)

NOTE: Also see Figure 502.

A. References

Table with 2 columns: Reference, Title. Row 1: 24-22-00-860-813, Supply External Power (P/B 201)

B. Self Test using cabin attendants' panel

SUBTASK 26-14-00-860-009

- (1) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 26-14-00-860-010

- (2) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Row 1: E, 12, C01125, LAVATORY SMOKE

SUBTASK 26-14-00-710-002

- (3) Push the TEST switch on the SMOKE DETECTOR panel on the forward cabin attendants' panel.

SUBTASK 26-14-00-710-003

- (4) Make sure these alarm indications occur:

(a) Lavatories:

- 1) The red alarm light on the lavatory smoke detector comes on.

(b) SMOKE DETECTOR panel on the forward cabin attendants' panel:

- 1) You can hear the alarm horn.
2) The SMOKE DETECT light flashes.
3) The location light flashes.

(c) Passenger compartment:

- 1) The lavatory call switch on the outside of the lavatory flashes.
2) You can hear the attendant call tone in the passenger compartment.
3) The applicable exit locator light comes on.

EFFECTIVITY HAP ALL

26-14-00



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SUBTASK 26-14-00-710-004

- (5) Release the SELF TEST switch.
  - (a) Make sure all external alarm indications stop.

————— **END OF TASK** —————

**TASK 26-14-00-730-801**

**3. Lavatory Smoke Detection - Smoke Test**

(Figure 501)

NOTE: Also see Figure 502.

A. General

- (1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
24-22-00-860-813	Supply External Power (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-5260	Smoke Generator - Ionization Type Smoke Detector (Lav/Crew Rest) (Part #: 25S, Supplier: 61908, A/P Effectivity: 737-ALL) (Part #: 458481, Supplier: 8F723, A/P Effectivity: 737-ALL)

D. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left

E. Prepare for the Test

SUBTASK 26-14-00-860-001

- (1) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 26-14-00-860-002

- (2) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

F. Smoke Test

**HAP 031-036, 050, 054**

SUBTASK 26-14-00-860-003

- (1) Make sure the green power indicator light on the lavatory smoke detector is on.

**HAP ALL**

EFFECTIVITY
HAP ALL

**26-14-00**

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SUBTASK 26-14-00-730-001

(2) Use the smoke generator, COM-5260 to make smoke adjacent to the lavatory smoke detector.

SUBTASK 26-14-00-750-003

(3) Make sure these alarm indications occur:

(a) Lavatories:

1) The red alarm light on the smoke detector comes on.

**HAP 031-036, 050, 054**

2) You can hear the smoke detector horn in the lavatory.

**HAP ALL**

(b) SMOKE DETECTOR panel on the forward cabin attendants' panel:

1) You can hear the alarm horn.

2) The SMOKE DETECT light flashes.

3) The applicable location light flashes.

(c) Passenger compartment:

1) The lavatory call switch on the outside of the lavatory flashes.

2) You can hear the attendant call tone in the passenger compartment.

3) The applicable exit locator light comes on.

SUBTASK 26-14-00-730-006

(4) Push the HORN INTERRUPT and RESET switch on the control panel.

(a) Make sure all of the external alarm indications stop.

**HAP 031-036, 050, 054**

SUBTASK 26-14-00-730-003

(5) Push the alarm interrupt switch on the smoke detector with an applicable tool.

(a) Make sure all of the alarm indications stop.

**HAP ALL**

SUBTASK 26-14-00-860-004

(6) Clear the smoke from the lavatory.

**NOTE:** If the smoke is not cleared from the lavatory within 60 seconds, the smoke indications will occur again.

SUBTASK 26-14-00-730-005

(7) Do the Smoke Test again for each of the other lavatory smoke detectors.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-14-00-860-005

(1) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

————— **END OF TASK** —————

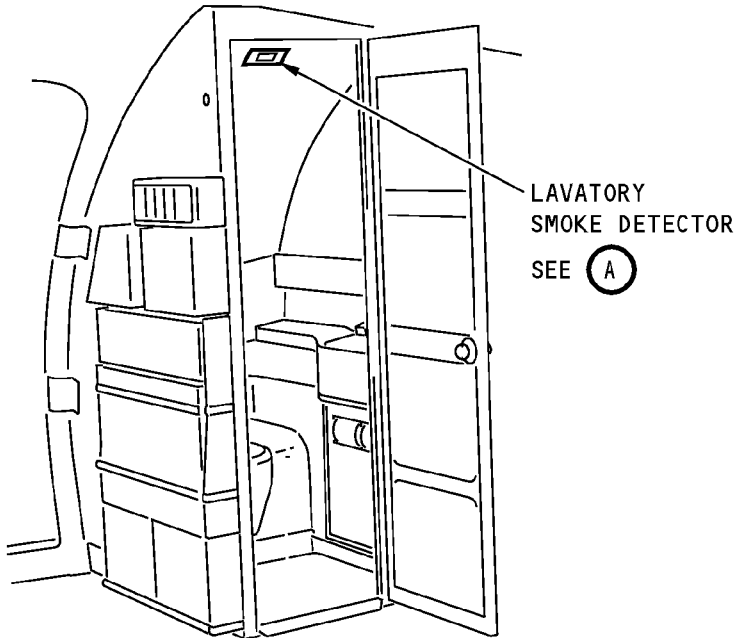
EFFECTIVITY  
HAP ALL

D633A101-HAP

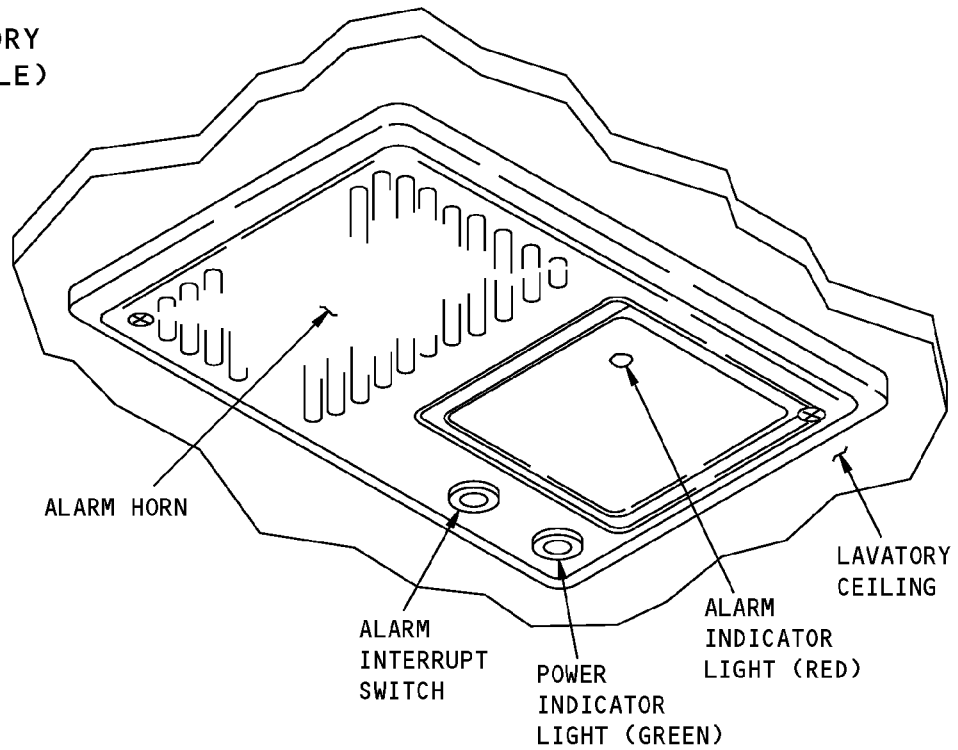
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LAVATORY  
(EXAMPLE)



LAVATORY SMOKE DETECTOR



**Lavatory Smoke Detection Adjustment  
Figure 501 (Sheet 1 of 2)/26-14-00-990-801**

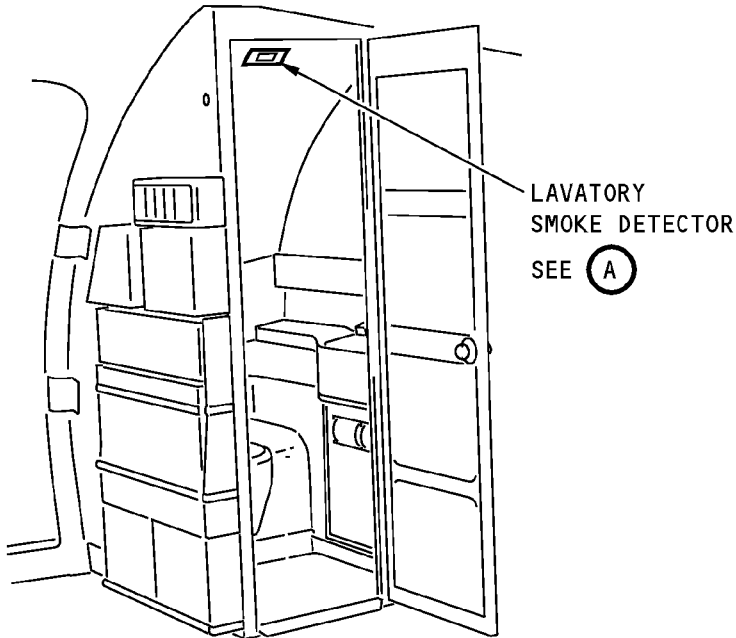
EFFECTIVITY  
HAP 031-036, 050, 054

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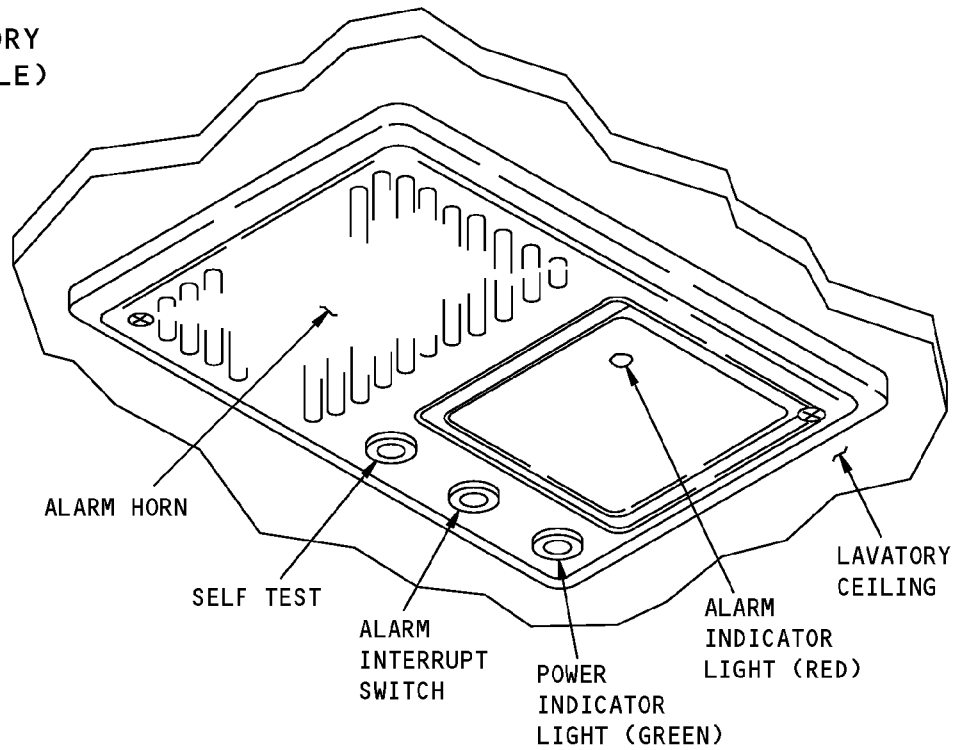
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**LAVATORY  
(EXAMPLE)**



**LAVATORY SMOKE DETECTOR**

(A)

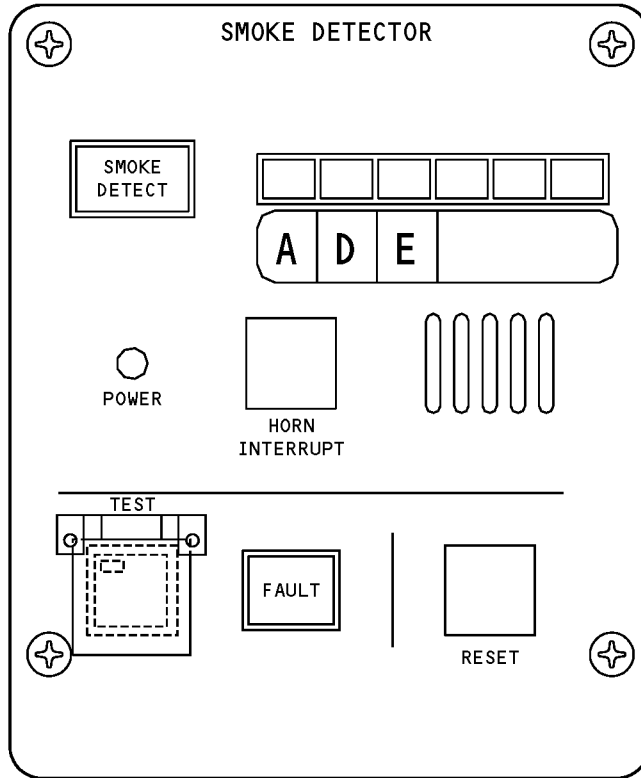
**Lavatory Smoke Detection Adjustment  
Figure 501 (Sheet 2 of 2)/26-14-00-990-801**

EFFECTIVITY
HAP ALL

**26-14-00**



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**FORWARD CABIN ATTENDANTS' PANEL**

**Cabin Attendants Panel  
Figure 502/26-14-00-990-802**

EFFECTIVITY  
HAP ALL

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## AIRCRAFT MAINTENANCE MANUAL

### LAVATORY SMOKE DETECTOR - REMOVAL/INSTALLATION

#### 1. General

A. This procedure has these tasks:

- (1) A removal of the lavatory smoke detector.
- (2) An installation of the lavatory smoke detector.

#### **TASK 26-14-01-000-801**

#### 2. Lavatory Smoke Detector Removal

(Figure 401)

A. References

Reference	Title
26-14-01-100-801	Clean the Lavatory Smoke Detector (P/B 701)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 26-14-01-860-003

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

D. Remove the Smoke Detector

SUBTASK 26-14-01-020-002

- (1) Loosen the screws [3] on the face plate [4] of the smoke detector.

SUBTASK 26-14-01-020-003

- (2) Remove the face plate [4] from the smoke detector case [7].

SUBTASK 26-14-01-020-004

- (3) Remove the mounting screws [5] that hold the smoke detector to the ceiling bracket [1].

SUBTASK 26-14-01-020-005

- (4) Disconnect the electrical connector [6] on the smoke detector from the airplane electrical connector.

SUBTASK 26-14-01-020-006

- (5) Remove the smoke detector and the ceiling bracket [1] from the ceiling.

**NOTE:** You do not have to remove the ceiling bracket from the smoke detector. The new smoke detector will usually have a ceiling bracket attached to it.

SUBTASK 26-14-01-160-003

- (6) If it is necessary, do this task: Clean the Lavatory Smoke Detector, TASK 26-14-01-100-801.

————— **END OF TASK** —————

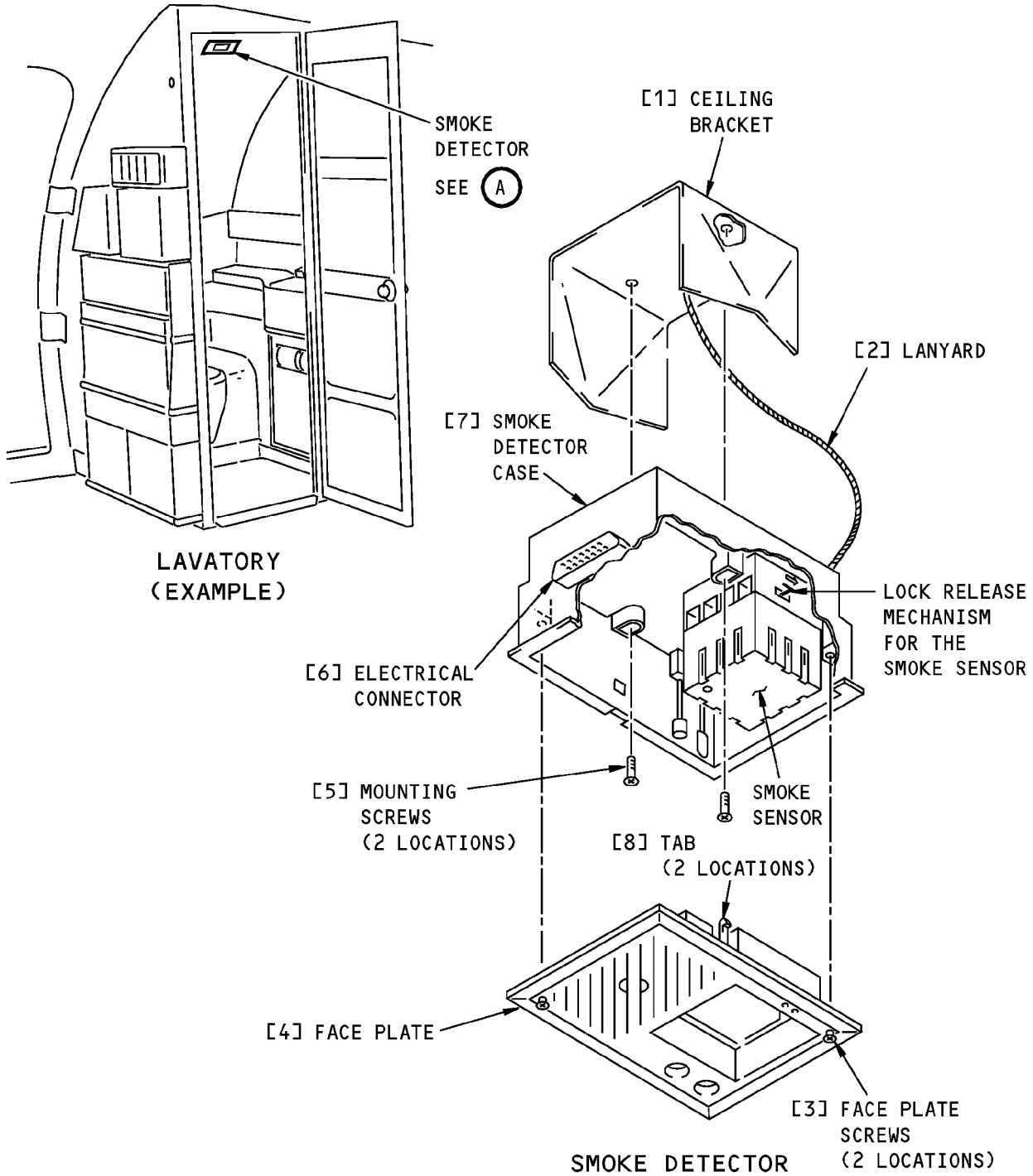
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HAP ALL

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**NOTE:** THE SCREWS ATTACHED TO THE FACE PLATE CANNOT BE REMOVED.

**Lavatory Smoke Detector Installation  
Figure 401 (Sheet 1 of 2)/26-14-01-990-802**

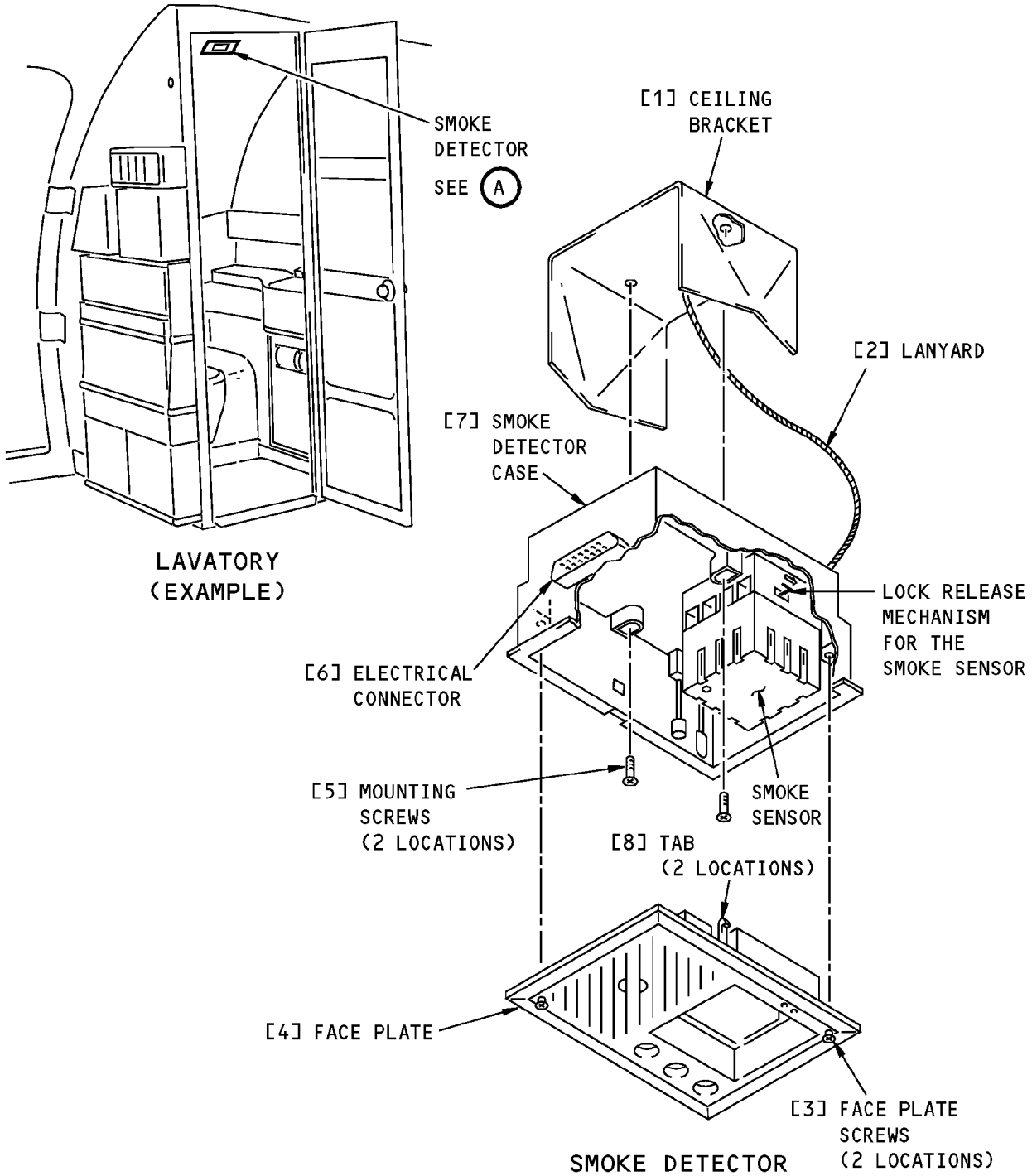
EFFECTIVITY  
HAP 031-036, 050, 054

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**NOTE:** THE SCREWS ATTACHED TO THE FACE PLATE CANNOT BE REMOVED.

**Lavatory Smoke Detector Installation  
Figure 401 (Sheet 2 of 2)/26-14-01-990-802**

EFFECTIVITY  
HAP ALL

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### AIRCRAFT MAINTENANCE MANUAL

#### TASK 26-14-01-400-801

### 3. Lavatory Smoke Detector Installation

(Figure 401)

#### A. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
26-14-00-730-801	Lavatory Smoke Detection - Smoke Test (P/B 501)

#### B. Location Zones

Zone	Area
200	Upper Half of Fuselage

#### C. Prepare for the Installation

SUBTASK 26-14-01-860-004

- (1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

#### D. Install the Lavatory Smoke Detector

SUBTASK 26-14-01-420-002

- (1) Do these steps before you put the smoke detector in its position in the lavatory ceiling:
  - (a) If the lanyard [2] is not connected to the smoke detector, attach the lanyard [2] from the ceiling bracket [1] to the smoke detector.
  - (b) If the ceiling bracket [1] is not connected to the smoke detector, install the ceiling bracket [1] to the smoke detector with the mounting screws.

**NOTE:** Do not tighten the mounting screws at this time. The ceiling bracket should only be attached loosely to the smoke detector.

- (c) Connect the airplane electrical connector to the electrical connector [6] on the smoke detector.

SUBTASK 26-14-01-420-003

- (2) Put the smoke detector and ceiling bracket [1] in the correct position in the lavatory ceiling.

SUBTASK 26-14-01-420-004

- (3) Push the mounting screws [5] until the ceiling bracket [1] is in the correct position.

SUBTASK 26-14-01-420-005

- (4) Tighten the screws [5] which hold the bracket [1] in position.

SUBTASK 26-14-01-420-006

- (5) Put the faceplate [4] on the smoke detector.

SUBTASK 26-14-01-420-007

- (6) Tighten the faceplate screws [3].

EFFECTIVITY HAP ALL
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SUBTASK 26-14-01-860-005

- (7) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01125	LAVATORY SMOKE

**E. Lavatory Smoke Detector Installation Test**

SUBTASK 26-14-01-710-002

- (1) Do this task: Lavatory Smoke Detection - Smoke Test, TASK 26-14-00-730-801.

**F. Put the Airplane Back to Its Usual Condition**

SUBTASK 26-14-01-840-001

- (1) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

————— **END OF TASK** —————

EFFECTIVITY  
HAP ALL

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# AIRCRAFT MAINTENANCE MANUAL

## LAVATORY SMOKE DETECTOR - CLEANING/PAINTING

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has a task which cleans the lavatory smoke detector.
- C. Each lavatory has a smoke detector installed in the ceiling. The cleaning procedure is the same for each smoke detector.

#### **TASK 26-14-01-100-801**

### 2. Clean the Lavatory Smoke Detector

(Figure 701)

#### A. General

- (1) This procedure is a scheduled maintenance task.

#### B. References

Reference	Title
26-14-00-730-801	Lavatory Smoke Detection - Smoke Test (P/B 501)

#### C. Tools/Equipment

Reference	Description
STD-1086	Gloves - Rubber
STD-3939	Air Source - Regulated, Dry Filtered, 0 to 10 psig (0 to 69 kPa)

#### D. Consumable Materials

Reference	Description	Specification
B00065	Alcohol - Denatured, Ethyl (Ethanol)	27CFR21.35
B00541	Cleaner - General Purpose Household Detergent	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5

#### E. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

#### F. Clean the Smoke Detector

SUBTASK 26-14-01-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

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HAP ALL	

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SUBTASK 26-14-01-160-001

**WARNING:** WHEN YOU CLEAN THE SMOKE DETECTOR AND SENSOR, MAKE SURE THE AREA HAS SUFFICIENT AIRFLOW. KEEP THE ALCOHOL AWAY FROM HEAT, SPARKS OR FLAMES. DO NOT BREATHE THE FUMES FROM THE ALCOHOL. PUT ON RUBBER GLOVES. ALCOHOL IS A FLAMMABLE AND POISONOUS SOLVENT WHICH CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (2) Put on the rubber gloves, STD-1086.

SUBTASK 26-14-01-160-002

- (3) Remove the dirt from the exterior of the smoke detector [1] with the cotton wiper, G00034 soaked with alcohol, B00065.

SUBTASK 26-14-01-020-001

- (4) Do these steps to remove and disassemble the smoke sensor [4]:
  - (a) Insert the pocket scale [3] between the smoke sensor [4] and the smoke detector [1].
  - (b) Push the lock release lever [2] with the pocket scale [3] and then pull out the smoke sensor [4].
  - (c) Slide the screwdriver [5] between each side of the sensor assembly [6] and the sensor cover [7] and twist the screwdriver to release the lockpins.
  - (d) Remove the sensor cover [7] from the sensor cell assembly [6].

**WARNING:** DO NOT DISASSEMBLE THE SENSOR CELL ASSEMBLY, DUE TO THE RADIOACTIVE MATERIAL CONTAINED WITHIN.

**CAUTION:** DO NOT TOUCH THE ELECTRODE IN THE SENSOR ASSEMBLY OR DAMAGE TO THE SMOKE SENSOR CAN OCCUR.

- (e) Pull the mesh [8] from the sensor assembly [6].

SUBTASK 26-14-01-210-001

- (5) Do these steps to clean the mesh [8] and the sensor cell assembly [6].
  - (a) Examine the mesh [8] for dirt or other contamination.
  - (b) If the mesh [8] is dirty, wash the mesh [8] with general purpose household detergent cleaner, B00541 and luke-warm water.
  - (c) If the mesh [8] is very dirty, replace it with a new mesh [8].
  - (d) With the 0 to 10 psig (0 to 69 kPa) dry filtered regulated air source, STD-3939, dry the mesh [8] completely.

**CAUTION:** BLOW THE AIR LIGHTLY INTO THE SENSOR ASSEMBLY. IF YOU BLOW THE AIR WITH TOO MUCH FORCE, IT CAN CAUSE A STATIC CHARGE ON THE ELECTRODES WHICH CAN CAUSE DAMAGE TO THE SMOKE SENSOR.

- (e) With the 0 to 10 psig (0 to 69 kPa) dry filtered regulated air source, STD-3939, lightly blow any dirt or particles out of the sensor assembly [6].

SUBTASK 26-14-01-420-001

- (6) Do these steps to install the smoke sensor [4]:
  - (a) Install the mesh [8] on the sensor cell assembly [6].
  - (b) Align the sensor cover [7] with the applicable hole in the sensor assembly [6].
  - (c) Install the sensor cover [7], sensor assembly [6], and smoke sensor [4] in the smoke detector [1].

EFFECTIVITY  
HAP ALL

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SUBTASK 26-14-01-860-002

(7) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01125	LAVATORY SMOKE

SUBTASK 26-14-01-710-001

(8) Do this task: Lavatory Smoke Detection - Smoke Test, TASK 26-14-00-730-801.

**END OF TASK**

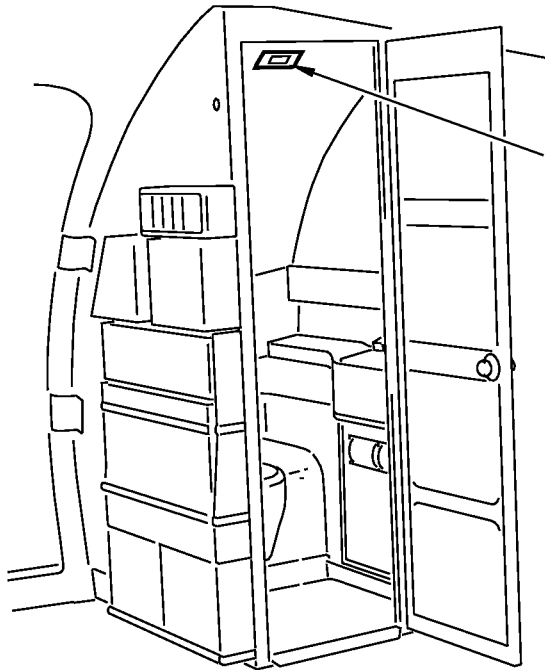
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HAP ALL

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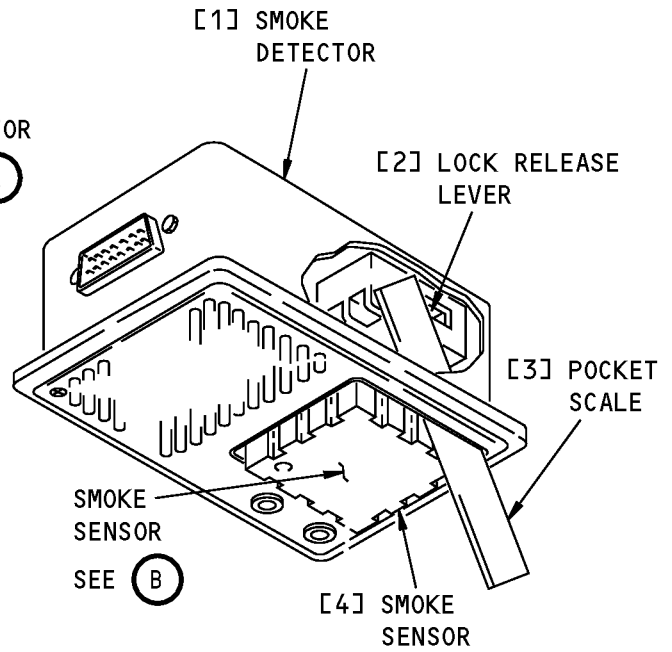
**26-14-01**

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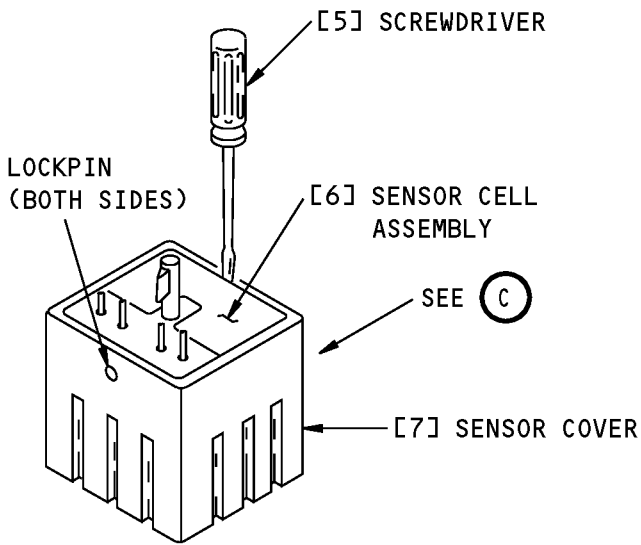


**LAVATORY  
(EXAMPLE)**



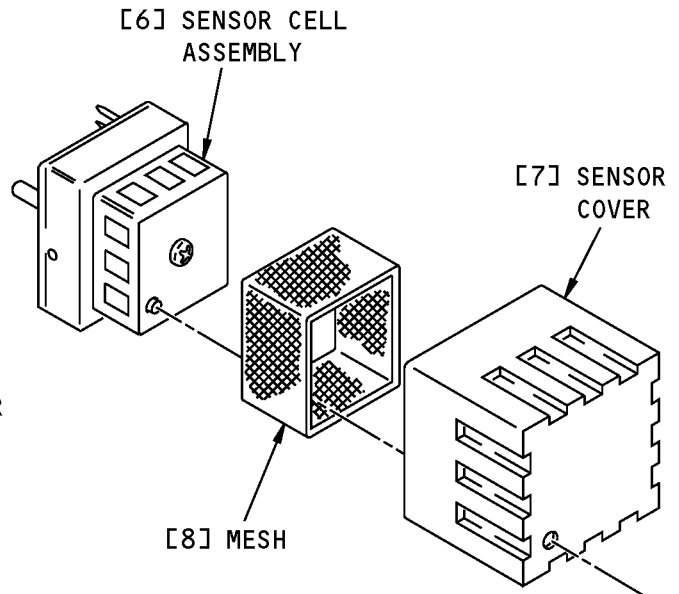
**SMOKE DETECTOR**

(A)



**SMOKE SENSOR**

(B)



(C)

**Lavatory Smoke Detector Cleaning  
Figure 701 (Sheet 1 of 2)/26-14-01-990-803**

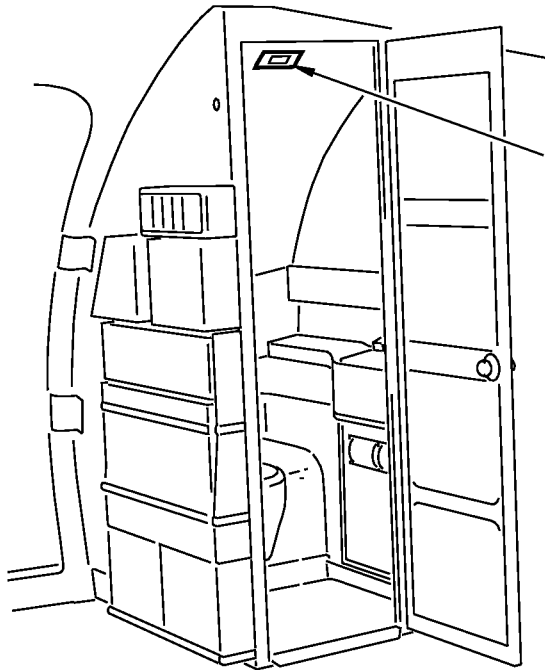
EFFECTIVITY  
HAP 031-036, 050, 054

**26-14-01**

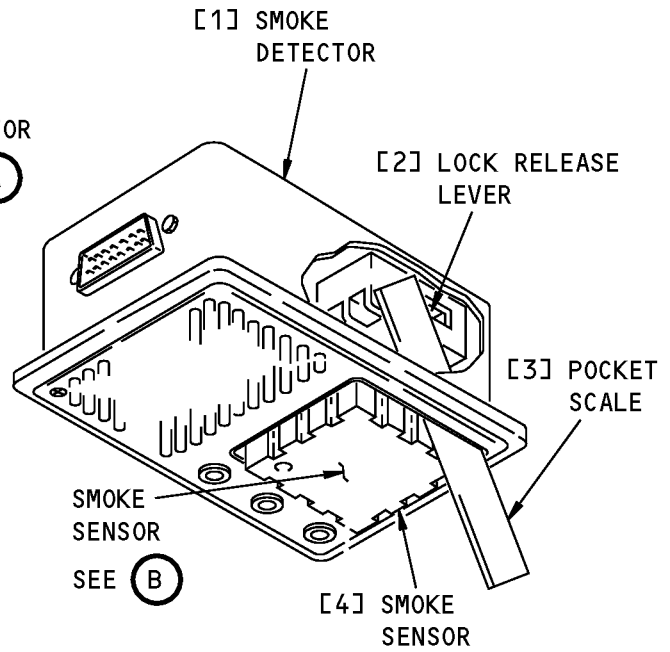
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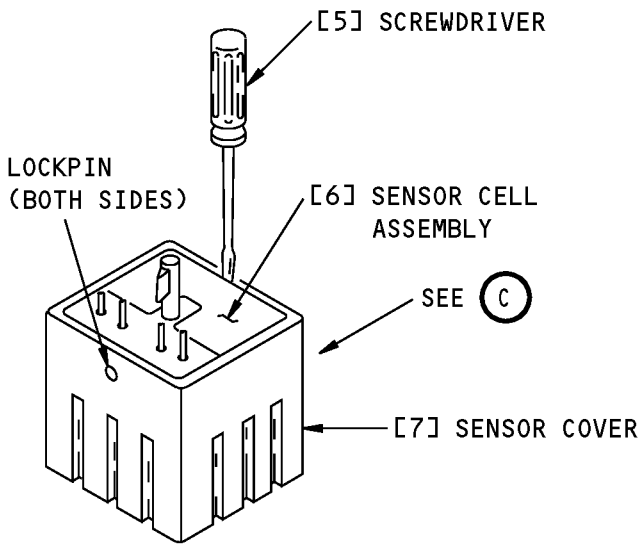


**LAVATORY  
(EXAMPLE)**



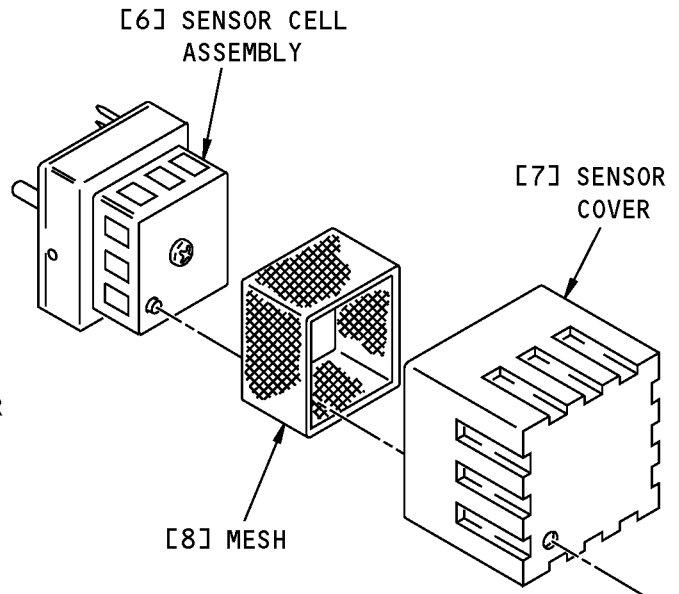
**SMOKE DETECTOR**

(A)



**SMOKE SENSOR**

(B)



(C)

**Lavatory Smoke Detector Cleaning  
Figure 701 (Sheet 2 of 2)/26-14-01-990-803**

EFFECTIVITY  
HAP ALL

**26-14-01**



737-600/700/800/900

# AIRCRAFT MAINTENANCE MANUAL

## CABIN ATTENDANT PANEL SMOKE DETECTOR MODULE - REMOVAL/INSTALLATION

### 1. General

A. This procedure has these tasks:

- (1) A removal of the Cabin Attendant Panel Smoke Detector Module, referred to as the smoke detector module.
- (2) An installation of the Cabin Attendant Panel Smoke Detector Module.

B. The smoke detector module is installed on the forward cabin attendant panel.

### **TASK 26-14-02-000-801**

### 2. Cabin Attendant Panel Smoke Detector Module Removal

(Figure 401)

A. Location Zones

<u>Zone</u>	<u>Area</u>
220	Subzone - Passenger Compartment - Body Station 259.50 to 360.00

B. Cabin Attendant Panel Smoke Detector Module Removal

SUBTASK 26-14-02-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01125	LAVATORY SMOKE

SUBTASK 26-14-02-020-001

- (2) Remove the screws [2] and washers [1] securing the cabin attendants panel cover [10] to the bracket [3].

SUBTASK 26-14-02-020-002

- (3) Remove the screws [9] securing the face plate [8] and control panel [6] to the cover.

SUBTASK 26-14-02-020-003

- (4) Slide the cabin attendant panel from the wall and remove the smoke detector module.

SUBTASK 26-14-02-020-004

- (5) Remove the electrical connector.

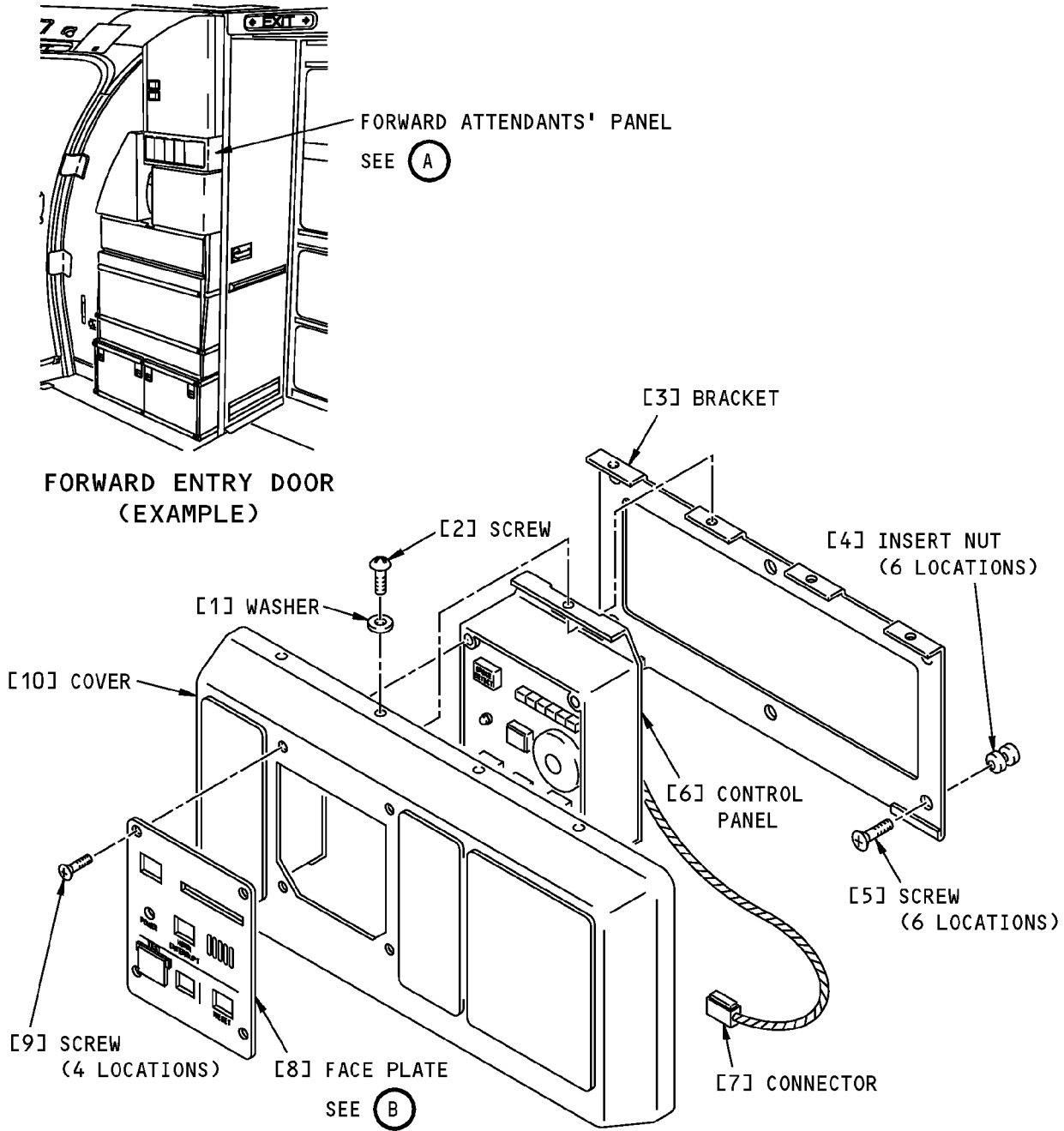
————— **END OF TASK** —————

<b>EFFECTIVITY</b> <b>HAP ALL</b>	
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# 26-14-02

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**FORWARD ATTENDANTS' PANEL  
(EXAMPLE)**

(A)

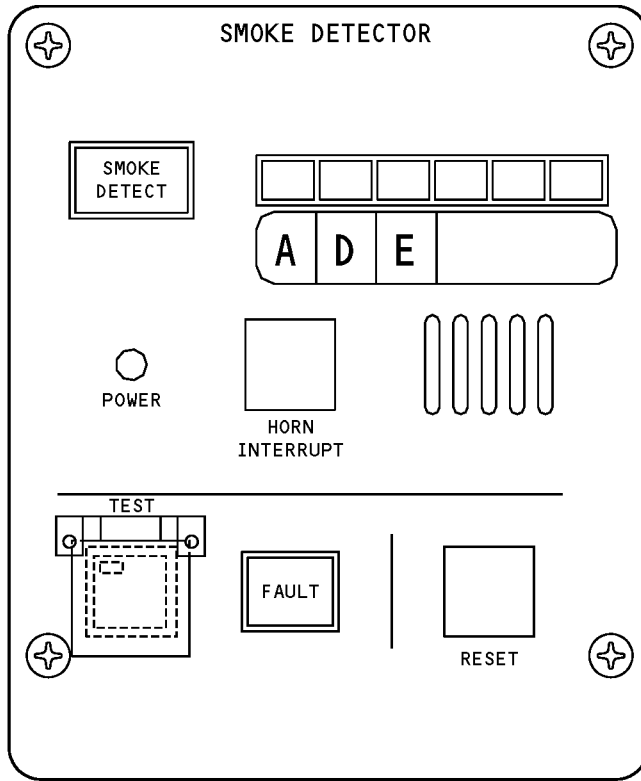
**Forward Attendants' Panel Installation  
Figure 401 (Sheet 1 of 2)/26-14-02-990-801**

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**FORWARD CABIN ATTENDANTS' PANEL  
(EXAMPLE)**

**B**

**Forward Attendants' Panel Installation  
Figure 401 (Sheet 2 of 2)/26-14-02-990-801**

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# AIRCRAFT MAINTENANCE MANUAL

## TASK 26-14-02-400-801

### 3. Cabin Attendant Panel Smoke Detector Module Installation

(Figure 401)

#### A. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

#### B. Cabin Attendant Panel Smoke Detector Module Installation

SUBTASK 26-14-02-860-002

- (1) Make sure that this circuit breaker is open:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

SUBTASK 26-14-02-470-001

- (2) There are six detector preset switches located on the back of the module that can be set to SELECT (up) or DESELECT (down). Starting from the left, set one switch to SELECT (up) for each lavatory on the airplane. Set the rest of the switches to DESELECT (down).

SUBTASK 26-14-02-420-001

- (3) Connect the electrical connector.

SUBTASK 26-14-02-020-005

- (4) Slide the control panel [6] into the cover [10].

SUBTASK 26-14-02-420-002

- (5) Position the face plate [8] on the cabin attendant panel and secure it to the control panel [6] with the screws [9].

SUBTASK 26-14-02-420-003

- (6) Install the cabin attendant panel cover [10] on the bracket [3] and secure it with the screws [2] and washers [1].

SUBTASK 26-14-02-860-003

- (7) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

#### C. Cabin Attendant Panel Smoke Detector Module Installation Test

SUBTASK 26-14-02-710-001

- (1) Push the Smoke Detector TEST switch on the cabin attendant panel.

SUBTASK 26-14-02-710-002

- (2) Make sure these alarm indications occur on the smoke detector module:
  - (a) You can hear the alarm horn.
  - (b) The SMOKE DETECT light flashes.
  - (c) The location lights flash.

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**AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 26-14-02-710-003

(3) Release the TEST switch.

SUBTASK 26-14-02-710-004

(4) Make sure all the alarm indications stop.

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## APU FIRE DETECTION - ADJUSTMENT/TEST

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure consists of these tasks:
  - (1) APU Fire Detection - Operational Test.
  - (2) APU Fire Detection Loop Resistance - System Test.
  - (3) APU Fire Detection Circuit - System Test.

### **TASK 26-15-00-710-801**

### 2. APU Fire Detection - Operational Test

(Figure 501)

#### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) The Operational Test does a check of the APU Fire Detection System without disturbing the detection system and it only uses the equipment that is on the airplane. This test will verify the circuit from the Engine and APU Fire Detection Control Module, M279 to the Fire Control Panel, P8-1, and to the APU Remote Panel, P28. The test will verify that the Engine and APU Fire Detection Control Module, which continuously monitors the detection loops, operates correctly.

NOTE: The FIRE WARN lights and the ALARM BELL are not activated if the APU fire detection system is inoperative. Only if the engines and APU are functioning properly will the FIRE WARN lights and ALARM BELL be activated. The circuit design precludes latent failure modes due to the parallel path of the test circuit and the actuation circuit.

NOTE: If AC power is removed (no power on main buses) and there is a faulty APU LOOP, the FIRE BELL, the FIRE WARNING light, the MASTER CAUTION and the OVHT/DET lights are not activated.

#### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)

#### C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

#### D. Prepare for the Operational Test

SUBTASK 26-15-00-860-001

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-15-00-860-002

- (2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU

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## AIRCRAFT MAINTENANCE MANUAL

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-15-00-860-003

- (3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

### E. Do the FIRE/OVHT Test

SUBTASK 26-15-00-710-001

- (1) Move and hold the TEST switch on the Fire Control Panel, P8-1, to the OVHT/FIRE position.

**NOTE:** When performing the Fire/OVHT Test with a faulted APU fire detector loop, the MASTER CAUTION lights are off, the FIRE WARN and OVHT/DET lights are off, the Fire Bell does not sound and the APU DET INOP light will be on.

- (a) On the Fire Control Panel, make sure these lights come on:
- 1) APU Fire Switch light (Red).
- (b) On the Pilot's Glareshield, P7, make sure these lights come on:
- 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
  - 2) The Captain's and First Officer's FIRE WARN lights (Red).
  - 3) The OVHT/DET light (Amber).
- (c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, comes on.
- (d) In the right main wheel well, make sure these conditions occur:
- 1) The APU remote fire light (red), on the P28 panel, flashes on and off continuously.
  - 2) The APU fire warning horn comes on.

SUBTASK 26-15-00-710-002

- (2) Release the TEST switch on the Engine and APU Fire Control Panel.

- (a) On the Engine and APU Fire Control Panel, make sure these lights go off:
- 1) APU Fire Switch light (Red).
- (b) On the Pilot's Glareshield, make sure these lights go off:
- 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
  - 2) The Captain's and First Officer's FIRE WARN lights (Red).
  - 3) The OVHT/DET light (Amber).
- (c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, stops.
- (d) In the right main wheel well, make sure these conditions occur:
- 1) The APU remote fire light (red), on the P28 panel, goes off.
  - 2) The APU fire warning horn stops.

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## AIRCRAFT MAINTENANCE MANUAL

### F. Do the FAULT/INOP Test from the Engine and APU Fire Control Panel, P8-1

SUBTASK 26-15-00-710-003

- (1) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the FAULT/INOP position.

**NOTE:** Ignore the indication lights for the engine detection system and the indications on the Engine and APU Fire Detection Control Module, M279, in the Electronic Equipment Bay.

- (a) On the Engine and APU Fire Control Panel, make sure these lights come on:

- 1) APU DET INOP light (Amber).

**NOTE:** When performing the FAULT/INOP Test with a faulted APU detector loop, the APU DET INOP light will stay on, the MASTER CAUTION lights are off and the FAULT light will come on during the test.

- 2) FAULT light (Amber)

- (b) On the Pilot's Glareshield, P7, make sure these lights come on:

- 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
- 2) The OVHT/DET light (Amber).

SUBTASK 26-15-00-710-004

- (2) Release the TEST switch on the Engine and APU Fire Control Panel.

- (a) On the Engine and APU Fire Control Panel, make sure these lights are off:

- 1) APU DET INOP light (Amber).
- 2) FAULT light (Amber)

- (b) On the Pilot's Glareshield, P7, make sure these lights are off:

- 1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
- 2) The OVHT/DET light (Amber).

### G. Do the FAULT/INOP Test from the Engine and APU Fire Detection Control Module, M279.

SUBTASK 26-15-00-710-005

- (1) Push and hold the FAULT/INOP TEST switch on the Engine and APU Fire Detection Control Module, in the Electrical and Electronics Compartment.

**NOTE:** Ignore the indications for the engine detection system and the indications that will occur in the flight compartment on the Engine and APU Fire Control Panel, P8-1, and the Pilot's Glareshield, P7.

- (a) On the Engine and APU Fire Detection Control Module, make sure these lights come on:

- 1) APU (Amber).
- 2) The three FAULT CODE lights are ON-ON-ON.

SUBTASK 26-15-00-710-006

- (2) Release the FAULT/INOP TEST switch on the Engine and APU Fire Detection Control Module.

- (a) On the Engine and APU Fire Detection Control Module, make sure these lights are off:

- 1) APU (Amber).
- 2) The three FAULT CODE lights are OFF-OFF-OFF.

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**AIRCRAFT MAINTENANCE MANUAL**

H. Put the Airplane Back to its Usual Condition

SUBTASK 26-15-00-860-004

(1) Close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

————— **END OF TASK** —————

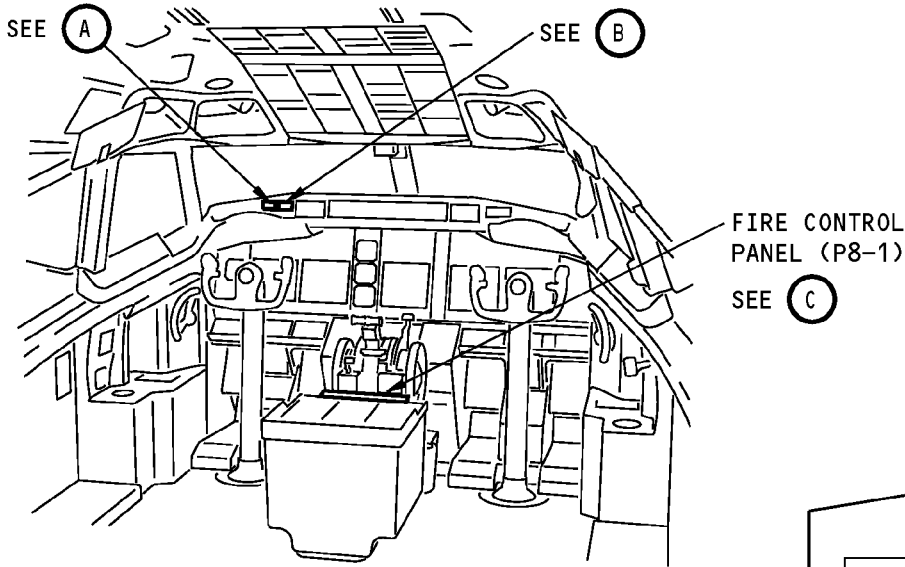
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HAP ALL

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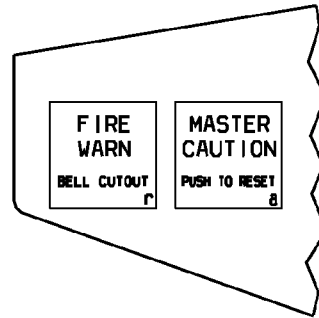
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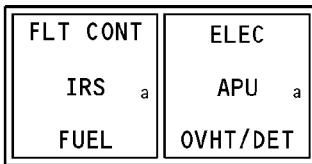
**AIRCRAFT MAINTENANCE MANUAL**



**FLIGHT COMPARTMENT**



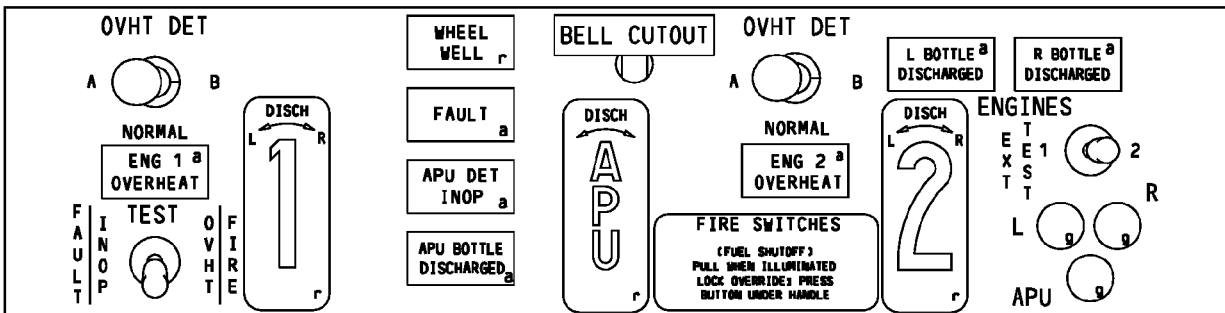
**CAPTAIN'S FIRE WARNING SWITCH (P7)  
(FIRST OFFICER'S IS OPPOSITE)**



**CAPTAIN'S WARNING LIGHTS (P7)**

**(B)**

**(A)**



**FIRE CONTROL PANEL (P8-1)**

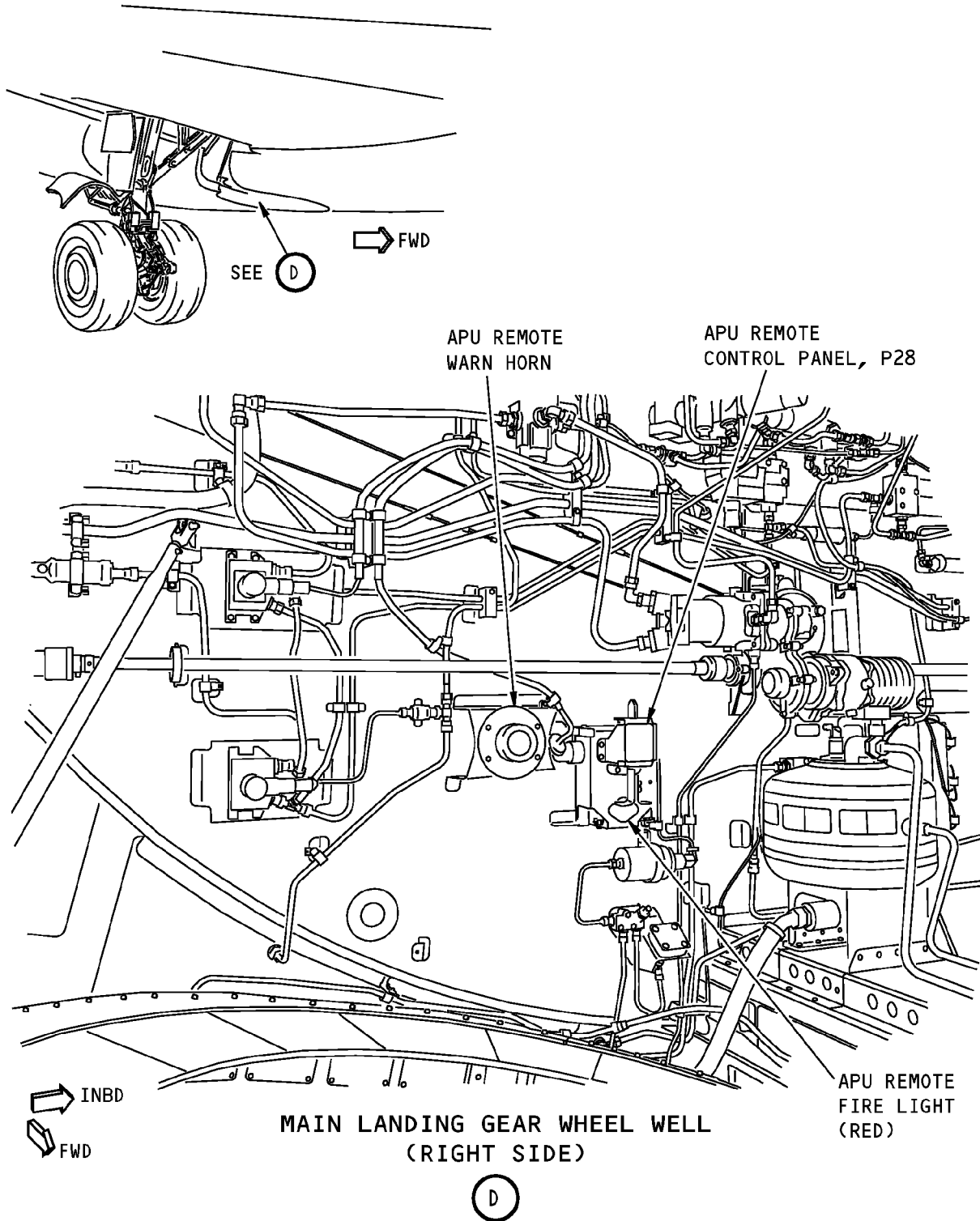
**(C)**

**Auxiliary Power Unit (APU) Fire Detection Operational Test  
Figure 501 (Sheet 1 of 2)/26-15-00-990-801**

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**Auxiliary Power Unit (APU) Fire Detection Operational Test  
Figure 501 (Sheet 2 of 2)/26-15-00-990-801**

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### AIRCRAFT MAINTENANCE MANUAL

TASK 26-15-00-730-801

#### 3. APU Fire Detection Loop Resistance - System Test

(Figure 502)

##### A. General

- (1) The Loop Resistance Test does a check of the APU Fire Detection Loop Circuit. It disturbs the engine fire detection system by removing the Engine and APU Fire Detection Control Module, M279 and it requires some additional test equipment.

##### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
26-10-01-000-801	Engine and APU Fire Detection Module Removal (P/B 401)
26-10-01-400-801	Engine and APU Fire Detection Module Installation (P/B 401)

##### C. Tools/Equipment

Reference	Description
STD-1231	Multimeter - Standard

##### D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

##### E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

##### F. Prepare for the Loop Resistance Test

SUBTASK 26-15-00-860-005

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-15-00-860-006

- (2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-15-00-010-001

- (3) Get access to the Electronic Equipment Bay, do this task.

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

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G. APU Fire Detection Loop Resistance Test

SUBTASK 26-15-00-020-001

(1) Do this task: Engine and APU Fire Detection Module Removal, TASK 26-10-01-000-801.

SUBTASK 26-15-00-730-001

(2) Use a multimeter, STD-1231 to measure the resistance across pin 25 of connector D1000 and airplane ground.

(a) Make sure the resistance is 1009 ± 45 ohms.

SUBTASK 26-15-00-420-001

(3) Do this task: Engine and APU Fire Detection Module Installation, TASK 26-10-01-400-801.

SUBTASK 26-15-00-860-007

(4) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-15-00-710-007

(5) Make sure the APU FAULT AREA light on the Engine and APU Fire Detection Control Module, P279, is not on.

SUBTASK 26-15-00-710-008

(6) Make sure the APU DET INOP light on the Engine and APU Fire Control Panel, P8-1, is not on.

SUBTASK 26-15-00-710-009

(7) Push the Captain's or First Officer's MASTER CAUTION light, on the Pilot's Glareshield, P7.

SUBTASK 26-15-00-710-010

(8) Make sure the Captain's and First Officer's MASTER CAUTION light, on the Pilot's Glareshield is not on.

SUBTASK 26-15-00-710-011

(9) Make sure the OVHT/DET light, on the Pilot's Glareshield is not on.

H. Put the Airplane Back to its Usual Condition

SUBTASK 26-15-00-410-001

(1) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

END OF TASK

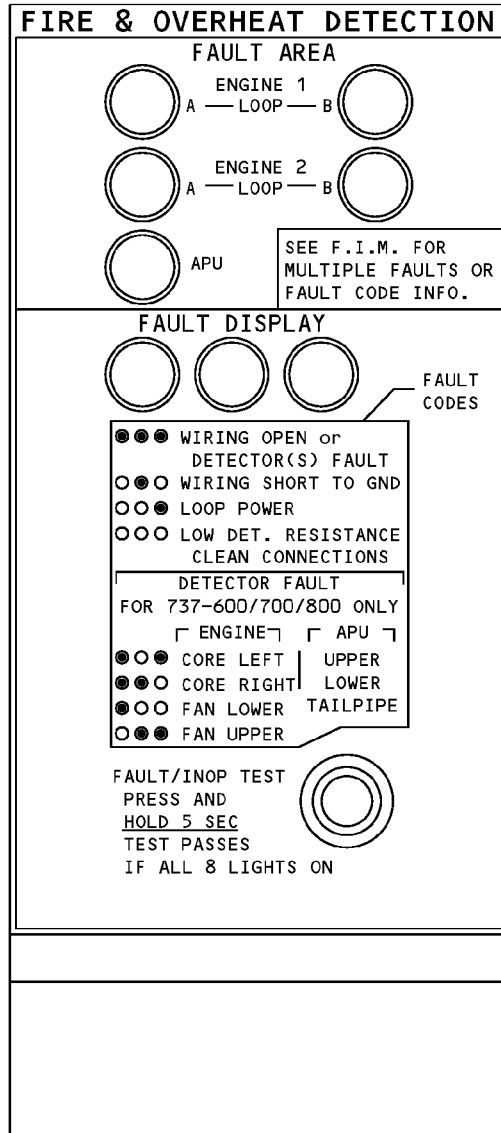
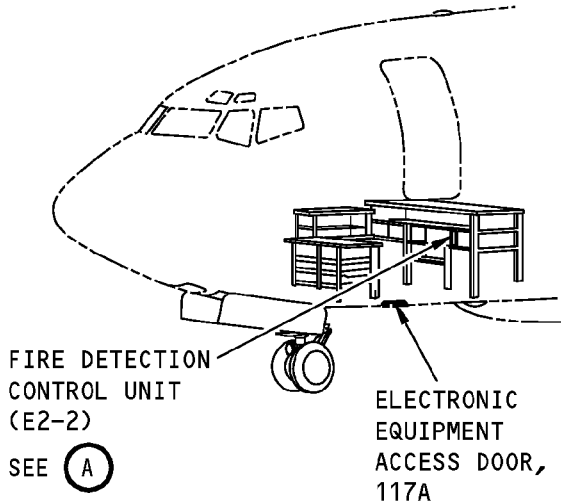
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**FIRE DETECTION CONTROL UNIT**



**Auxiliary Power Unit (APU) Fire Detection Resistance Test**  
Figure 502/26-15-00-990-802

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### AIRCRAFT MAINTENANCE MANUAL

#### TASK 26-15-00-730-802

#### 4. APU Fire Detection Circuit - System Test

(Figure 501, Figure 503)

##### A. General

- (1) The Circuit Test does a check of the entire APU Fire Detection System. It does not disturb the APU fire detection system but it does require additional test equipment.

##### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
49-11-00-860-802	APU Usual Shutdown (P/B 201)
49-61-12-000-801	Electronic Control Unit Removal (P/B 401)
49-61-12-400-801	Electronic Control Unit Installation (P/B 401)

##### C. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1655	Equipment - Test, APU/Engine Fire Detection System (Part #: C26005-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1231	Multimeter - Standard

##### D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right

##### E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door
315A	APU Cowl Door

##### F. Prepare for the Circuit Test

SUBTASK 26-15-00-860-008

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-15-00-860-009

- (2) Make sure the APU is not running, do this task: APU Usual Shutdown, TASK 49-11-00-860-802.

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SUBTASK 26-15-00-860-010

(3) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 26-15-00-010-002

(4) Get access to the Electronic Equipment Bay, do this task:

Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 26-15-00-010-003

(5) Get access to the APU Compartment, do this task:

Open this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

SUBTASK 26-15-00-480-001

(6) Connect the test box equipment, SPL-1655 to the terminal lug of the APU LOWER Fire Detector, M1756, and airplane ground.

- (a) Make sure all the toggle switches on the test box are in the NORMAL positions.
- (b) Connect one alligator clip to the responder bracket or to a grounding lug.
- (c) Connect the other alligator clip to the responder lug.

G. Do a Test of the Fault Indication Circuit

SUBTASK 26-15-00-730-002

(1) On the test box, move the APU LOOP GND FAULT switch to the GND FAULT position.

- (a) Make sure the APU DET INOP light on the Fire Control Panel, P8-1, comes on.

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- (b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:
  - 1) The APU LOOP FAULT AREA light comes on.
  - 2) The three FAULT CODE lights are OFF-ON-OFF.

SUBTASK 26-15-00-730-003

- (2) On the test box, move the APU LOOP GND FAULT switches to the NORMAL position.
  - (a) Make sure the APU DET INOP light on the Fire Control Panel, P8-1, goes off.
  - (b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:
    - 1) The APU LOOP FAULT AREA light goes off.
    - 2) The three FAULT CODE lights are OFF-OFF-OFF.

#### H. Do a Test of the Fire Indication Circuit

SUBTASK 26-15-00-860-011

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-00-020-002

- (2) Do this task: Electronic Control Unit Removal, TASK 49-61-12-000-801 (Figure 504).

SUBTASK 26-15-00-730-004

- (3) On the test box, move the APU LOOP FIRE switches to the FIRE position.
  - (a) Make sure the "APU" Fire Switch light, on the Fire Control Panel, P8-1, comes on.
  - (b) On the Pilot's Glareshield, P7, make sure these conditions occur:
    - 1) The Captain and First Officer's MASTER CAUTION lights come on.
    - 2) The Captain and First Officer's FIRE WARN lights comes on.
  - (c) Make sure the flight compartment fire bell, on the Warning Module, M315, comes on.
  - (d) In the right main wheel well, make sure these conditions occur:
    - 1) The APU remote fire light (red), on the P28 panel, flashes on and off continuously.
    - 2) The APU fire warning horn comes on.
  - (e) Use a multimeter, STD-1231 to measure the voltage across pin B2 of connector D3599B and airplane ground.

**NOTE:** Connector D3599B is where the APU Electronic Control Unit M1709 was installed.

- 1) Make sure the voltage is at least 22 VDC.

SUBTASK 26-15-00-730-005

- (4) On the test box, move the APU LOOP FIRE switches to the NORMAL position.
  - (a) Make sure the "APU" Fire Switch light, on the Engine and APU Fire Control Panel, P8-1, goes off.
  - (b) On the Pilot's Glareshield, P7, make sure these conditions occur:
    - 1) The Captain and First Officer's MASTER CAUTION lights goes off.
    - 2) The Captain and First Officer's FIRE WARN lights goes off.

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- (c) Make sure the flight compartment fire bell, on the Warning Module, M315, stops.
(d) Make sure the APU remote fire light (red), on the P28 panel in the right main wheel well, goes off.
(e) In the right main wheel well, make sure these conditions occur:
1) The APU remote fire light (red), on the P28 panel, goes off.
2) The APU fire warning horn stops.
(f) Use a multimeter, STD-1231 to measure the voltage across pin B2 of connector D3599B and airplane ground.

NOTE: Connector D3599B is where the APU Electronic Control Unit M1709 was installed.

- 1) Make sure the voltage is 0 ± 2 VDC.

SUBTASK 26-15-00-480-002

- (5) Disconnect the test box C26005-1 from the terminal lug of the APU LOWER Fire Detector, M1756, and airplane ground.

I. Put the Airplane Back to its Usual Condition

SUBTASK 26-15-00-420-002

- (1) Do this task: Electronic Control Unit Installation, TASK 49-61-12-400-801.

SUBTASK 26-15-00-860-012

- (2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-4

Table with 4 columns: Row, Col, Number, Name. Row A, Col 14, Number C00033, Name AUX POWER UNIT CONT

SUBTASK 26-15-00-410-002

- (3) Close this access panel:

Table with 2 columns: Number, Name/Location. Row 315A, Name/Location APU Cowl Door

SUBTASK 26-15-00-410-003

- (4) Close this access panel:

Table with 2 columns: Number, Name/Location. Row 117A, Name/Location Electronic Equipment Access Door

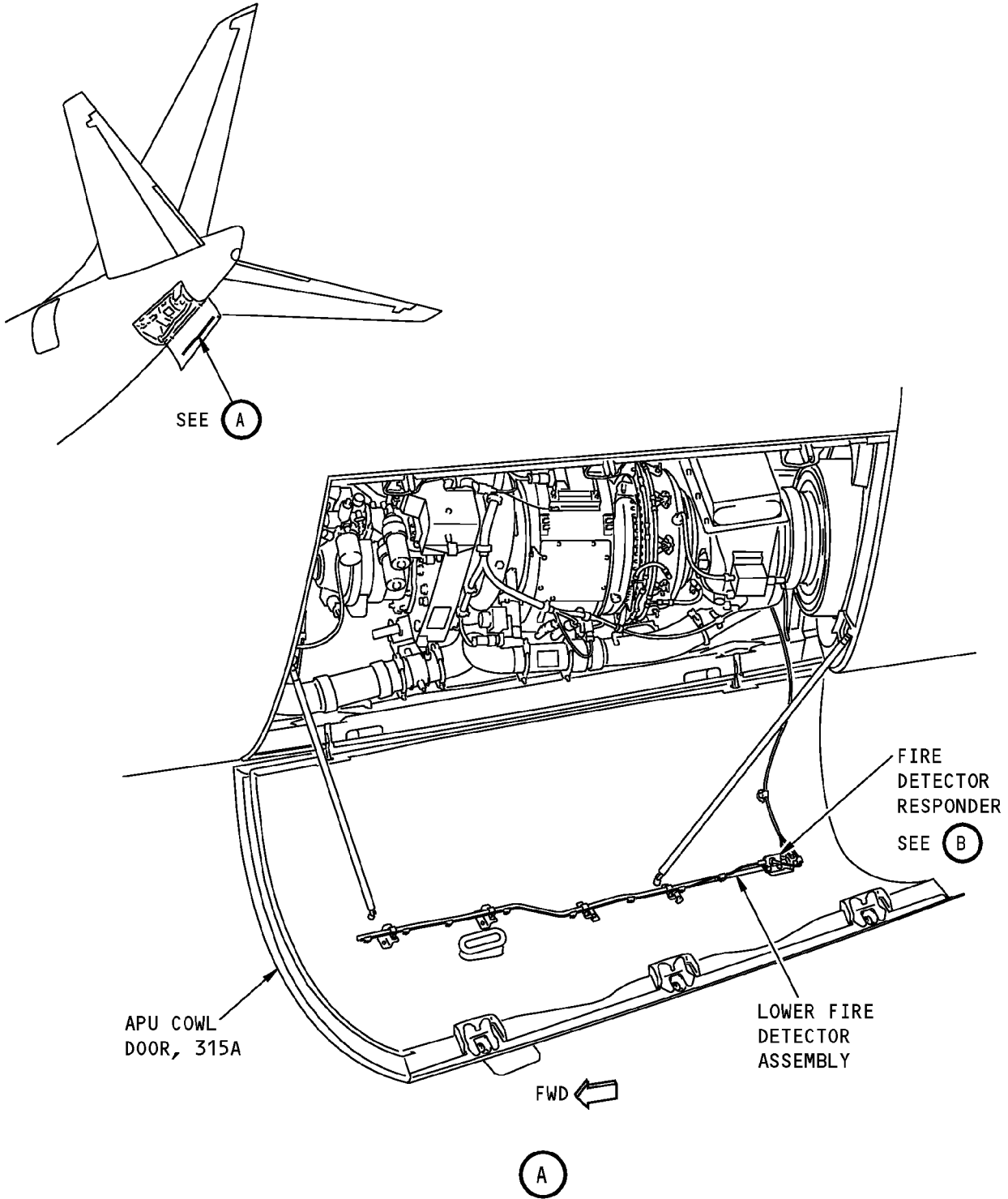
END OF TASK

EFFECTIVITY HAP ALL

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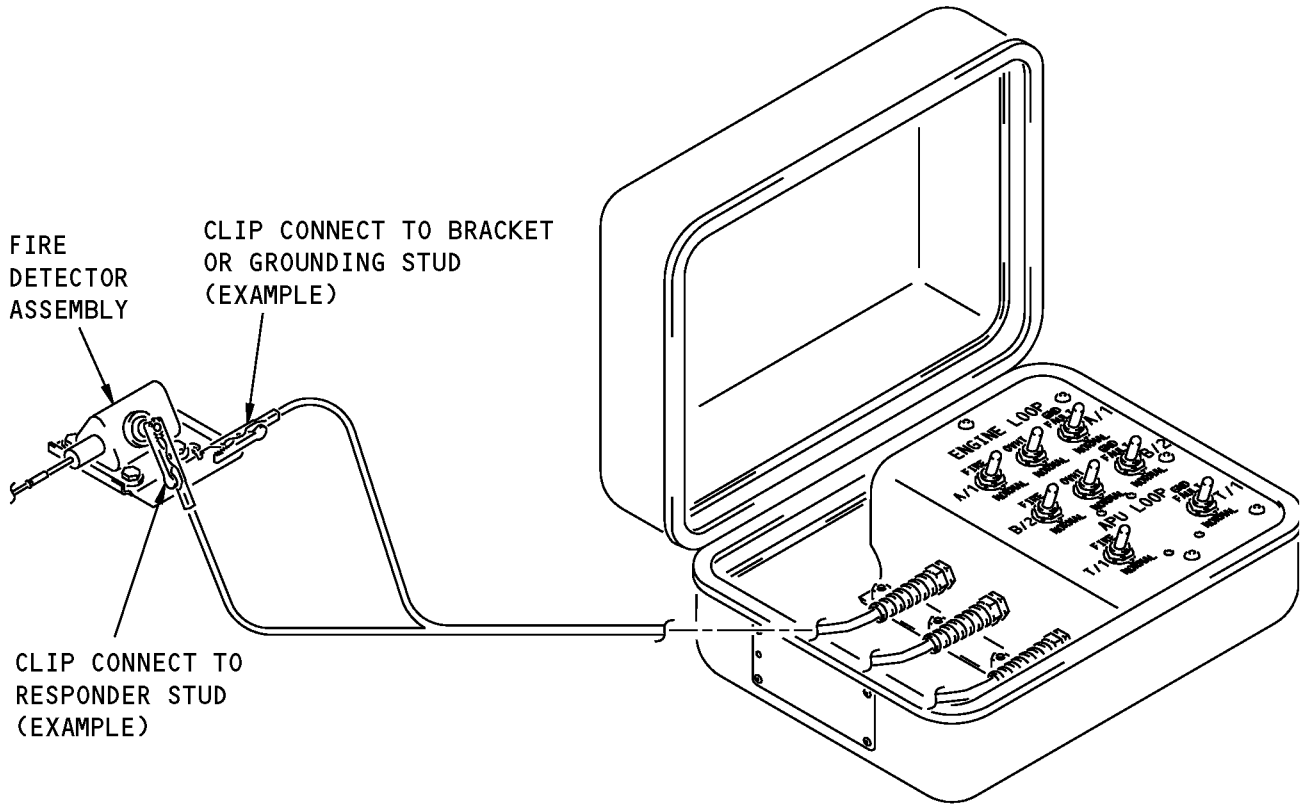
**Auxiliary Power Unit (APU) Fire Detection Circuit Test  
Figure 503 (Sheet 1 of 2)/26-15-00-990-803**

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**B**

**Auxiliary Power Unit (APU) Fire Detection Circuit Test  
Figure 503 (Sheet 2 of 2)/26-15-00-990-803**

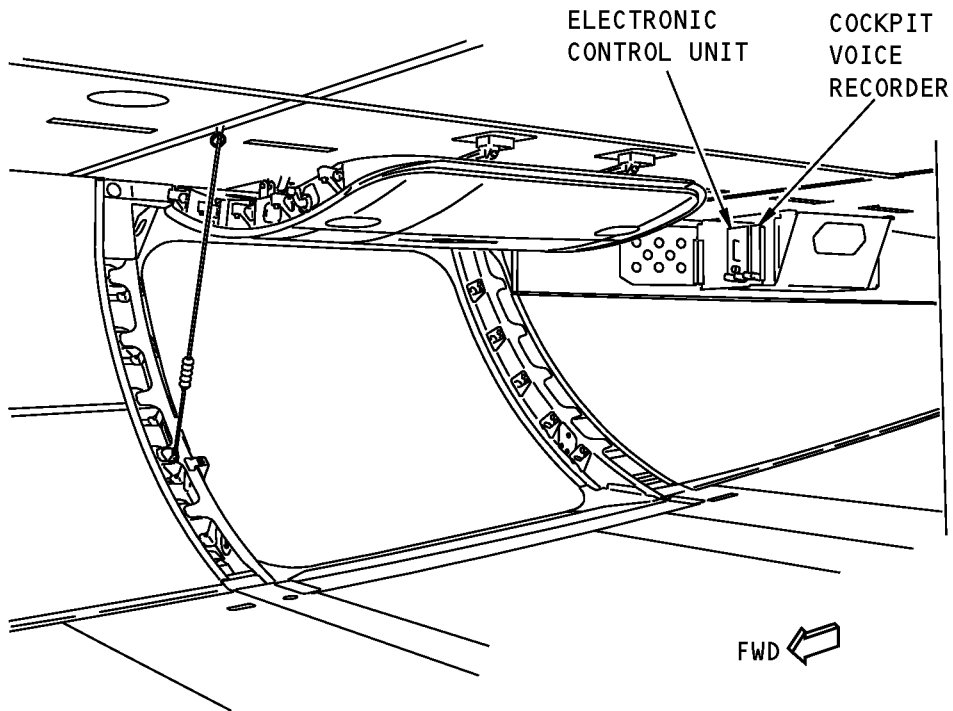
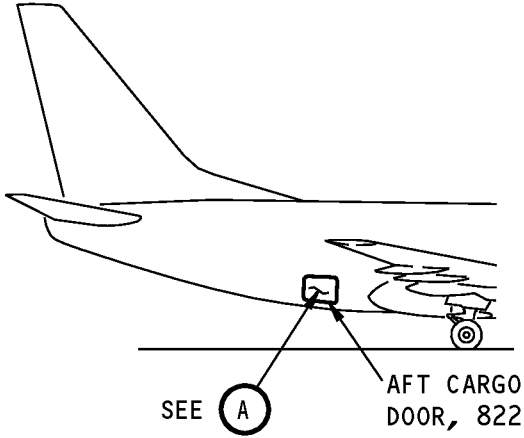
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**AFT CARGO COMPARTMENT**

**A**

**Electronic Control Unit Test  
Figure 504/26-15-00-990-804**

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## AIRCRAFT MAINTENANCE MANUAL

### APU OVERHEAT DETECTORS - REMOVAL/INSTALLATION

#### 1. General

A. This procedure has these tasks:

- (1) Removal of the APU overheat detector elements.
- (2) Installation of the APU overheat detector elements.
- (3) Removal of the APU overheat detector assemblies.
- (4) Installation of the APU overheat detector assemblies.

B. There are three overheat detectors in the APU compartment. One overheat detector is installed on the APU door. The second is installed on the upper firewall panel in the APU compartment. The third detector is installed above the APU exhaust duct. The overheat detectors are single loop detectors.

#### **TASK 26-15-01-000-801**

#### 2. APU Overheat Detector Element Removal

(Figure 401)

A. Location Zones

Zone	Area
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

B. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

C. Prepare for the Removal

SUBTASK 26-15-01-840-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-010-001

(2) To access the upper or lower APU detector, open this access panel:

Number	Name/Location
315A	APU Cowl Door



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SUBTASK 26-15-01-010-003

(3) To access the APU tailpipe overheat detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

**D. APU Overheat Detector Element Removal**

SUBTASK 26-15-01-000-001

- (1) Do these steps to remove the detector element [7] from the detector housing.
- (a) Loosen the bolt [10] on each clamp [9].
  - (b) Remove the nut [5] and washer [4] from the terminal lug.
  - (c) Disconnect the lead from the terminal lug.
  - (d) Remove the four bolts [2] from the overheat detector housing.
  - (e) Remove the element [7] from the clamp [9].
  - (f) Remove the grommets [8] from the element [7] to use on the new element.
  - (g) Remove the element [7].

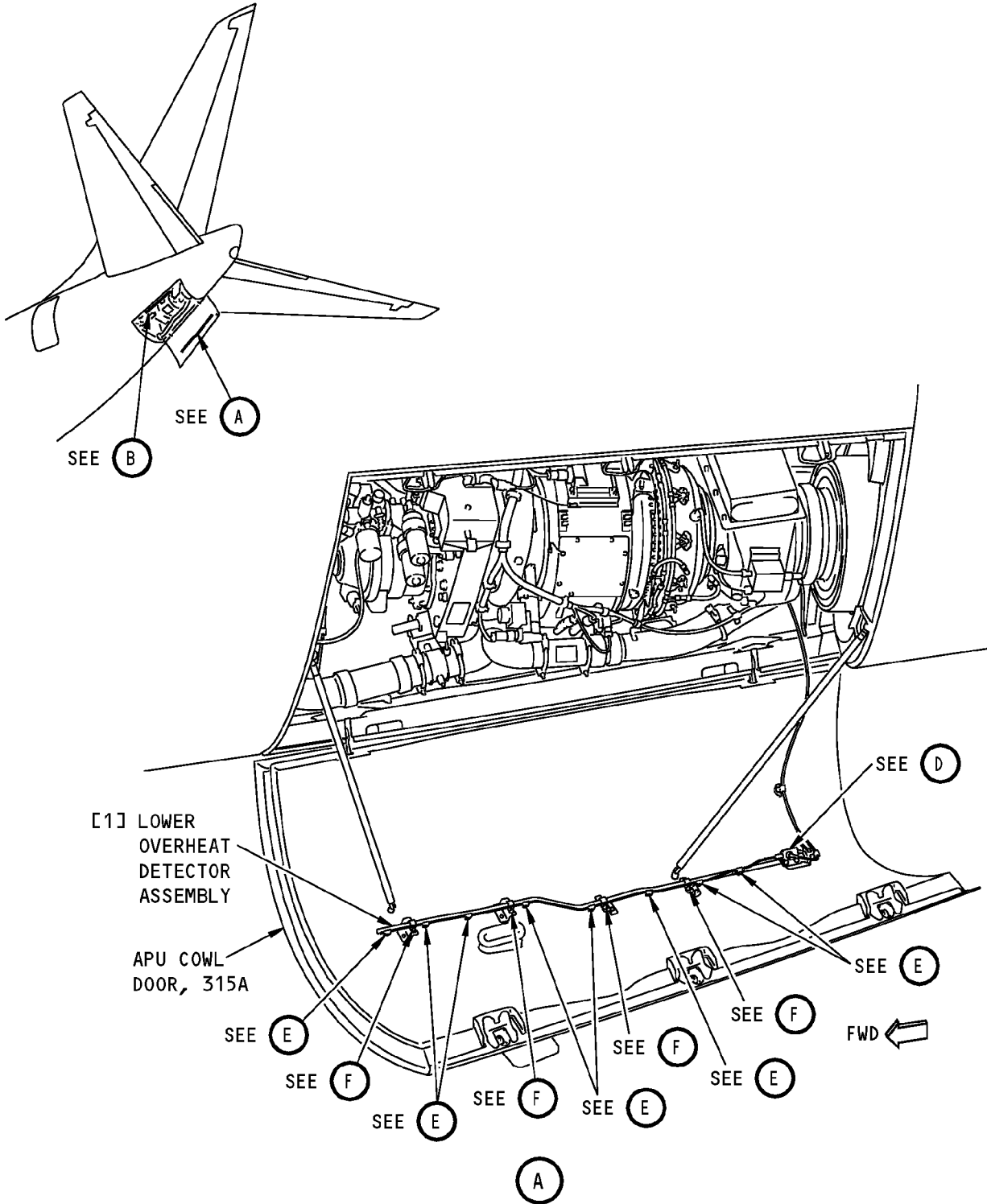
————— **END OF TASK** —————

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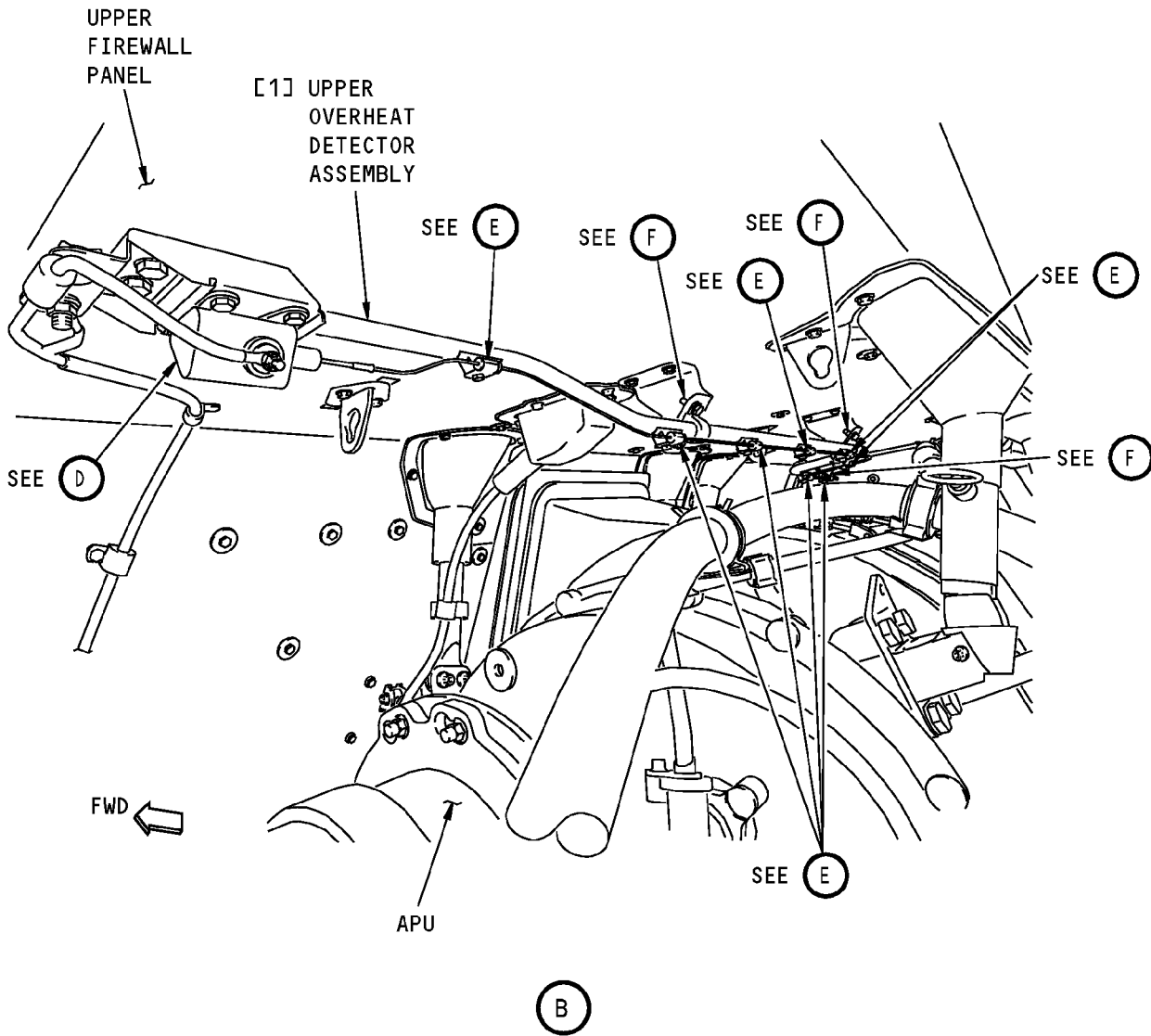
**Auxiliary Power Unit (APU) Overheat Detector Installation  
Figure 401 (Sheet 1 of 4)/26-15-01-990-801**

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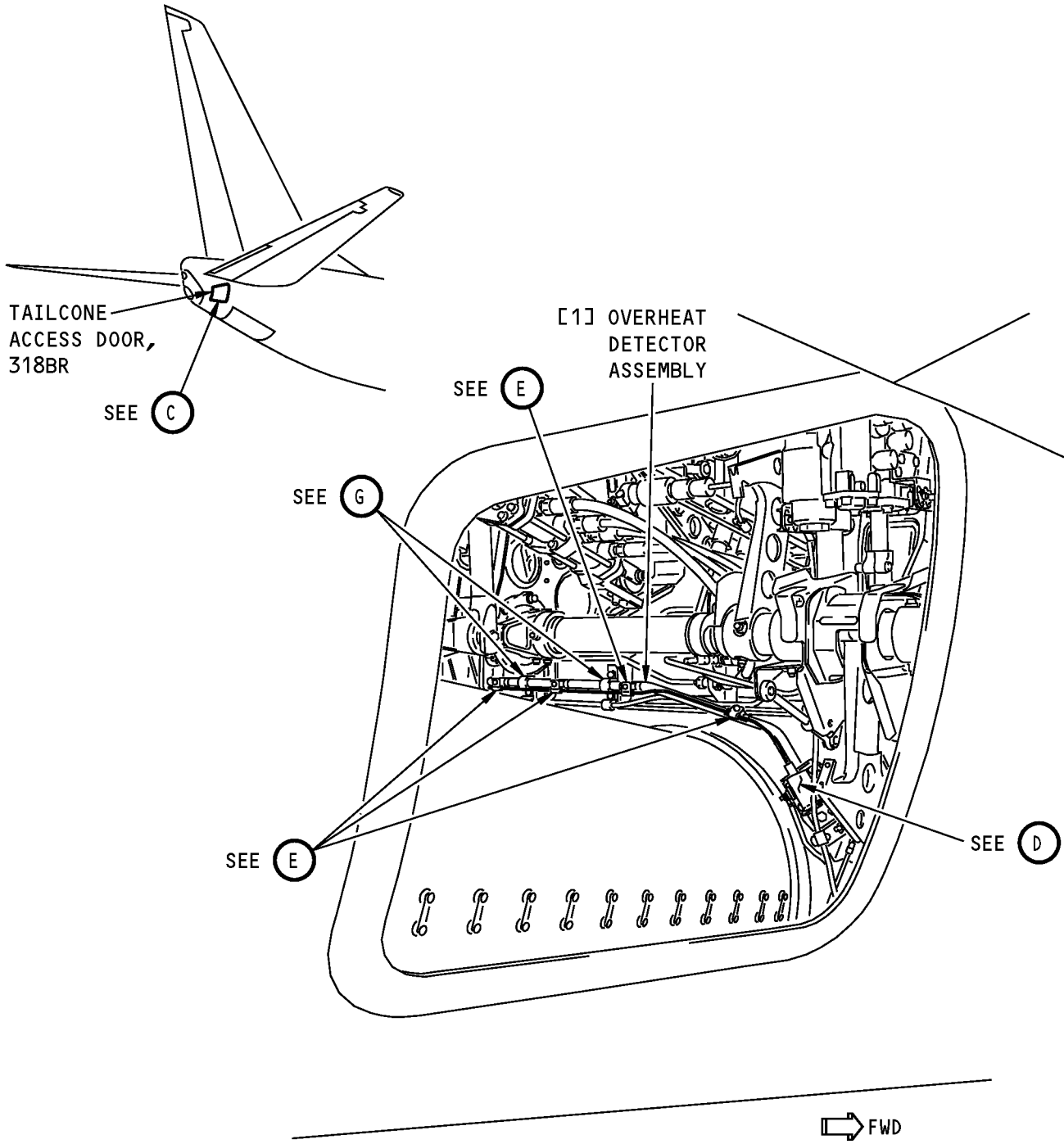
**Auxiliary Power Unit (APU) Overheat Detector Installation  
Figure 401 (Sheet 2 of 4)/26-15-01-990-801**

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**VIEW THROUGH THE TAILCONE ACCESS DOOR, 318BR**

**C**

**Auxiliary Power Unit (APU) Overheat Detector Installation  
Figure 401 (Sheet 3 of 4)/26-15-01-990-801**

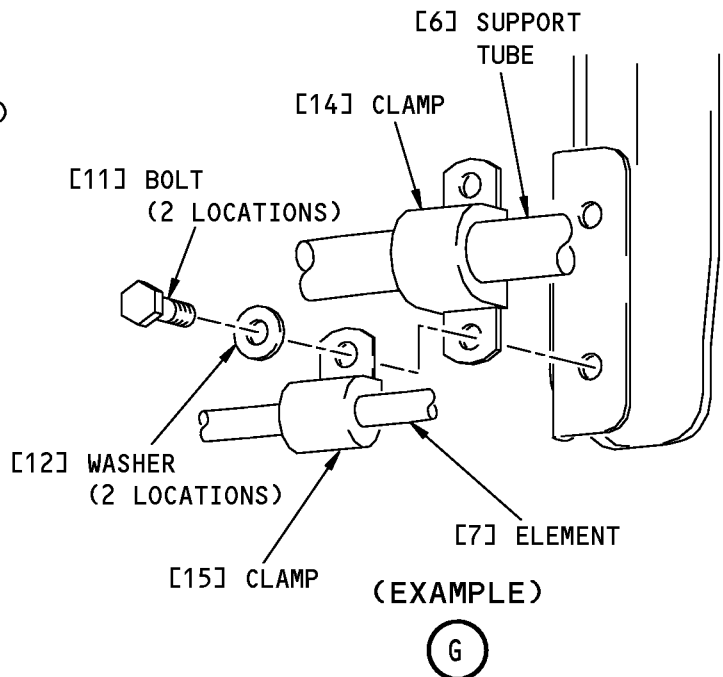
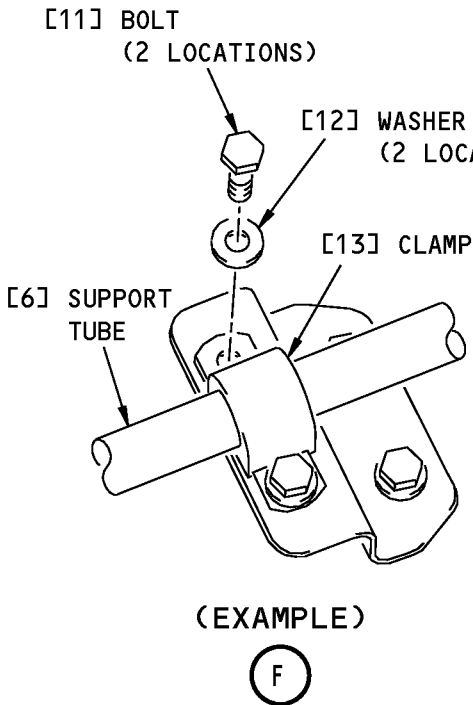
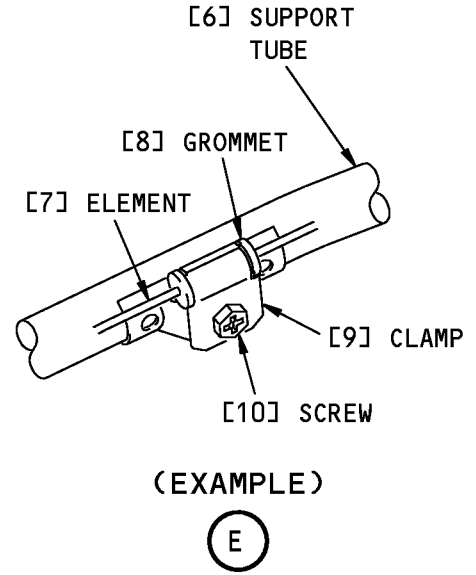
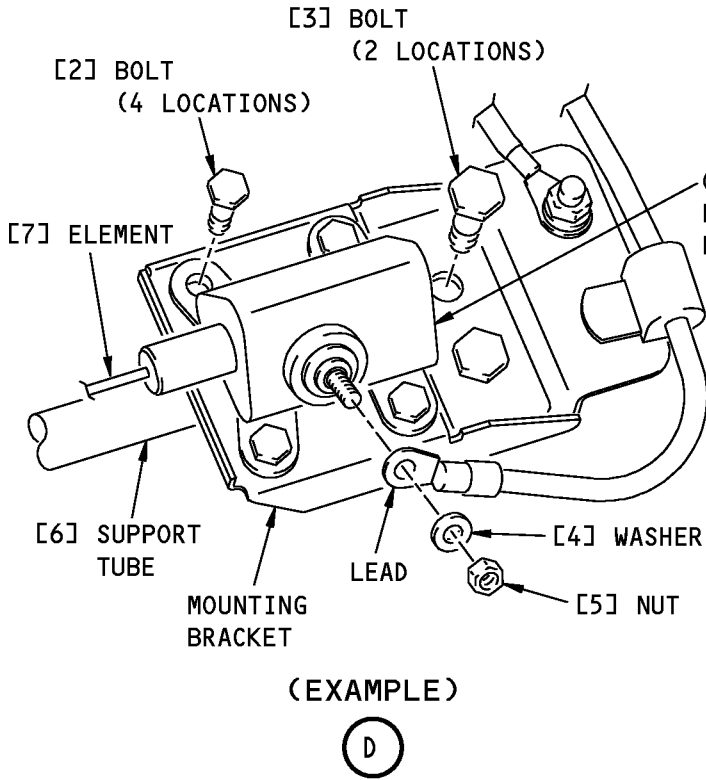
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**Auxiliary Power Unit (APU) Overheat Detector Installation**  
Figure 401 (Sheet 4 of 4)/26-15-01-990-801

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### AIRCRAFT MAINTENANCE MANUAL

#### TASK 26-15-01-400-801

#### 3. APU Overheat Detector Element Installation

(Figure 401)

##### A. References

Reference	Title
26-15-00-710-801	APU Fire Detection - Operational Test (P/B 501)

##### B. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

##### C. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III

##### D. Location Zones

Zone	Area
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

##### E. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

##### F. Prepare for Installation

SUBTASK 26-15-01-840-002

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

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SUBTASK 26-15-01-010-004

(2) To access the upper or lower APU detector, make sure this access panel is open.

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

SUBTASK 26-15-01-010-006

(3) To access the APU tailpipe overheat detector, make sure this access panel is open:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

G. APU Overheat Detector Element Installation

SUBTASK 26-15-01-420-001

- (1) Do these steps to install an overheat detector element [7]:
  - (a) Make sure the detector housing and mounting bracket are clean.
  - (b) Position the overheat detector element [7] along the support tube [6].
  - (c) Put the overheat detector housing in the correct position on the mounting bracket.
  - (d) Install the four bolts [2] that secure the overheat detector housing to the mounting bracket.
    - 1) Tighten the bolts to 40 - 50 pound-inches (4.5 -5.6 Newton-meters).
  - (e) Install the grommets [8] on the detector element [7] at each clamp [9] location.
  - (f) Install the element [7] in the clamps [9].
  - (g) Make sure the end of the detector element [7] ends less than 1 inch past the last grommet [8].
    - 1) If the detector element [7] extends more than 1 inch, adjust the length of the element between each clamp [9] so that any slack is evenly distributed.
  - (h) Make sure there is at least 0.12 inch (3 mm) between the overheat detector element [7] and the support tube.
  - (i) Tighten the bolt [10] on each clamp [9] until 1-1/2 to 3 threads extend through the nut.
    - 1) Make sure the grommets [8] and clamps [9] are tight.
    - 2) Make sure the ends of the bolts [10] do not touch the support tube [6].
  - (j) Position the lead on the terminal lug, and secure with washer [4] and nut [5].
  - (k) Tighten the nut to 32-38 pound-inches (3.6-4.3 Newton-meters).

SUBTASK 26-15-01-280-001

- (2) Do a check of the resistance between the element stud and the airplane structure. Use an bonding meter, COM-1550 or equivalent which can measure 0.0001 ohm.
  - (a) Make sure the resistance is less than 0.0025 ohm.
  - (b) If the resistance is more than 0.0025 ohm, clean the bonding surfaces with the solvent, B00083 and do the check again.

H. APU Overheat Detector Assembly Installation Test

SUBTASK 26-15-01-840-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-710-001

(2) Do this task: APU Fire Detection - Operational Test, TASK 26-15-00-710-801.

#### I. Put the Airplane Back to Its Usual Condition

SUBTASK 26-15-01-010-007

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

SUBTASK 26-15-01-010-009

(2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

————— END OF TASK —————

#### TASK 26-15-01-000-802

#### 4. APU Overheat Detector Assembly Removal

(Figure 401)

##### A. Location Zones

<u>Zone</u>	<u>Area</u>
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

##### B. Access Panels

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door
318BR	Tailcone Access Door

##### C. Prepare for the Removal

SUBTASK 26-15-01-840-004

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

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F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-010-010

(2) To access the upper or lower APU detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

SUBTASK 26-15-01-010-012

(3) To access the APU tailpipe overheat detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

**D. APU Overheat Detector Assembly Removal**

SUBTASK 26-15-01-000-002

(1) Do these steps to remove the detector assembly [1] from the APU compartment.

- (a) Remove the nut [5] and washer [4] from the terminal lug.
- (b) Disconnect the lead from the terminal lug.
- (c) Remove the two bolts [3] from the overheat detector housing.

**HAP ALL; AIRPLANES WITH UPPER AND LOWER OVERHEAT DETECTORS**

- (d) Remove the two bolts [11] and washers [12] securing each clamp [13] to the APU compartment.
  - 1) Remove the clamp [13] from the support tube [6].

**HAP ALL; AIRPLANES WITH TAILPIPE OVERHEAT DETECTOR**

- (e) Remove the two bolts [11] and washers [12] securing each clamp [15] and [14] to the APU compartment.

**HAP ALL**

- (f) Remove the assembly [1] from the APU compartment.

————— **END OF TASK** —————

**TASK 26-15-01-400-802**

**5. APU Overheat Detector Assembly Installation**

(Figure 401)

**A. References**

<u>Reference</u>	<u>Title</u>
26-15-00-710-801	APU Fire Detection - Operational Test (P/B 501)

**B. Tools/Equipment**

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

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Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

#### C. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III

#### D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

#### E. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

#### F. Prepare for Installation

SUBTASK 26-15-01-840-005

- (1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-010-013

- (2) To access the upper or lower APU detector, make sure this access panel is open.

Number	Name/Location
315A	APU Cowl Door

SUBTASK 26-15-01-010-015

- (3) To access the APU tailpipe overheat detector, make sure this access panel is open:

Number	Name/Location
318BR	Tailcone Access Door

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## G. APU Overheat Detector Assembly Installation

SUBTASK 26-15-01-420-002

(1) Do these steps to install a overheat detector assembly [1]:

### HAP ALL; AIRPLANES WITH UPPER AND LOWER OVERHEAT DETECTORS

(a) Position the detector assembly in the APU compartment, and install the clamps [13].

- 1) Secure each clamp [13] with two bolts [11] and washers [12].
- 2) Tighten the bolts to 32 - 38 pound-inches (3.6 - 4.3 Newton-meters).

### HAP ALL; AIRPLANES WITH TAILPIPE OVERHEAT DETECTOR

(b) Position the detector assembly in the APU compartment.

- 1) Position the clamps [14] and [15] and secure with bolts [11] and washers [12].
- 2) Tighten the bolts to 32 - 38 pound-inches (3.6 - 4.3 Newton-meters).

### HAP ALL

- (c) Install the two bolts [3] that secure the overheat detector housing to the APU compartment.
- (d) Tighten the bolts to 72-88 pound-inches (8-10 Newton-meters).
- (e) Position the lead on the terminal lug, and secure with washer [4] and nut [5].
- (f) Tighten the nut to 32 - 38 pound-inches (3.6 - 4.3 Newton-meters).

SUBTASK 26-15-01-280-002

(2) Do a check of the resistance between the stud and the airplane structure. Use an bonding meter, COM-1550 or equivalent which can measure 0.0001 ohm.

- (a) Make sure the resistance is less than 0.0025 ohm.
- (b) If the resistance is more than 0.0025 ohm, clean the bonding surfaces with the solvent, B00083 and do the check again.

## H. APU Overheat Detector Assembly Installation Test

SUBTASK 26-15-01-840-006

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-710-002

(2) Do this task: APU Fire Detection - Operational Test, TASK 26-15-00-710-801.

## I. Put the Airplane Back to Its Usual Condition

SUBTASK 26-15-01-010-016

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

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SUBTASK 26-15-01-010-018

(2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

————— **END OF TASK** —————

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**AIRCRAFT MAINTENANCE MANUAL**

**APU FIRE DETECTORS - INSPECTION/CHECK**

**1. General**

A. This procedure has this inspection task:

- (1) APU Fire Detectors.

**TASK 26-15-01-210-801**

**2. APU Fire Detectors Inspection**

A. Location Zones

<u>Zone</u>	<u>Area</u>
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

B. Access Panels

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door
318BR	Tailcone Access Door

C. Procedure

SUBTASK 26-15-01-010-019

- (1) To access the upper or lower APU detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

SUBTASK 26-15-01-010-021

- (2) To access the APU tailpipe overheat detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

SUBTASK 26-15-01-210-001

- (3) Do a general visual inspection of the APU fire detectors.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 26-15-01-010-022

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

SUBTASK 26-15-01-010-024

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

**END OF TASK**

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO BAY SMOKE DETECTION - ADJUSTMENT/TEST

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. Both cargo bays have smoke detectors installed in the ceiling. When the concentration of smoke at the sensor gets to a preset threshold, the smoke detector alarm occurs.
- C. This procedure consists of these tasks:
  - (1) Cargo Bay Smoke Detection - Operational Test.
  - (2) Cargo Bay Smoke Detection - Smoke Test.

### **TASK 26-16-00-710-801**

### 2. Cargo Bay Smoke Detection - Operational Test

(Figure 501)

#### A. References

Reference	Title
24-22-00-860-813	Supply External Power (P/B 201)

#### B. Prepare for the Operational Test

SUBTASK 26-16-00-860-001

- (1) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 26-16-00-860-002

- (2) Close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-00-710-001

- (3) Push and hold the TEST switch on the Cargo Fire Control Panel.
  - (a) On the Cargo Fire Control panel, look for these indications:
    - 1) The FWD and AFT CARGO SMOKE light comes on.
    - 2) The DETECTOR FAULT light is off.
  - (b) On the Pilot's Glareshield, P7, make sure these lights come on:
    - 1) The Captain's and First Officer's FIRE WARN lights (Red).
  - (c) Make sure you can hear the flight compartment fire bell.

SUBTASK 26-16-00-730-001

- (4) Push the Captain's or First Officer's FIRE WARN switch.

**NOTE:** If you push the either of the FIRE WARN lights on the P7 panel, or the BELL CUTOUT switch on the Engine and APU Fire Control panel, the same conditions will occur. The FIRE WARN and BELL CUTOUT switches cause the same resets but from different locations.

- (a) On the Pilot's Glareshield, P7, make sure these lights go off:
  - 1) The Captain's and First Officer's FIRE WARN lights (Red).

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(b) Make sure you can not hear the fire bell.

SUBTASK 26-16-00-860-003

(5) Release the TEST switch.

(a) On the Cargo Bay Fire Control panel, look for this indication:

1) The FWD and AFT CARGO SMOKE light goes off.

————— **END OF TASK** —————

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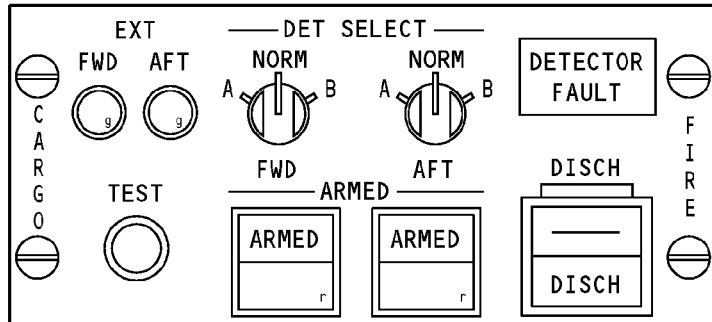
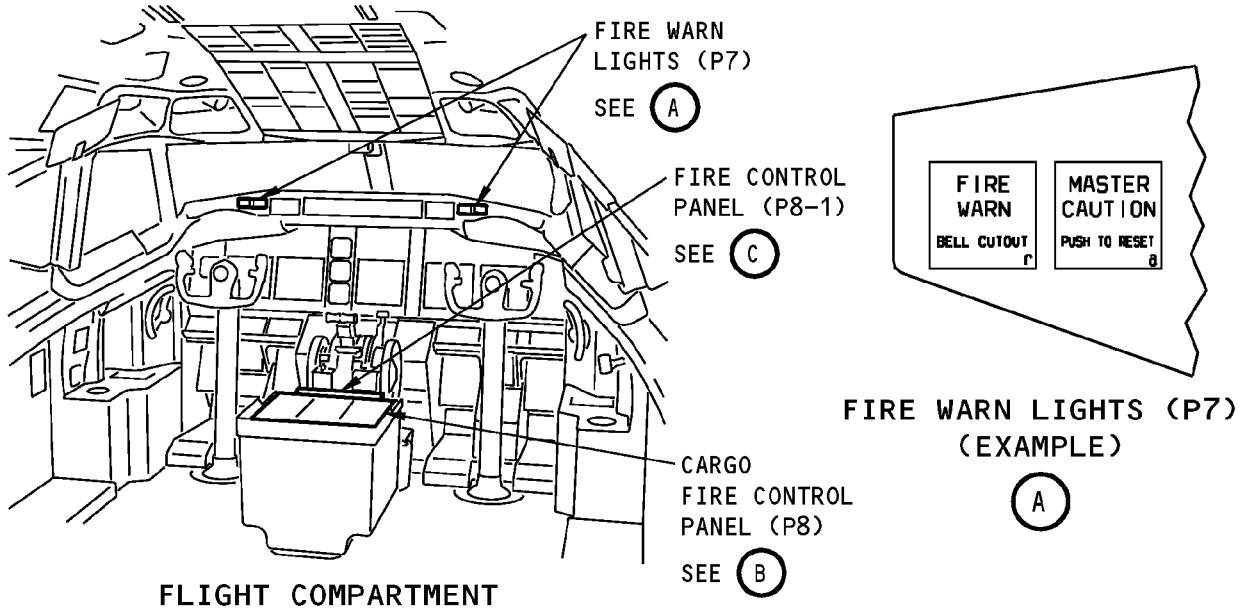
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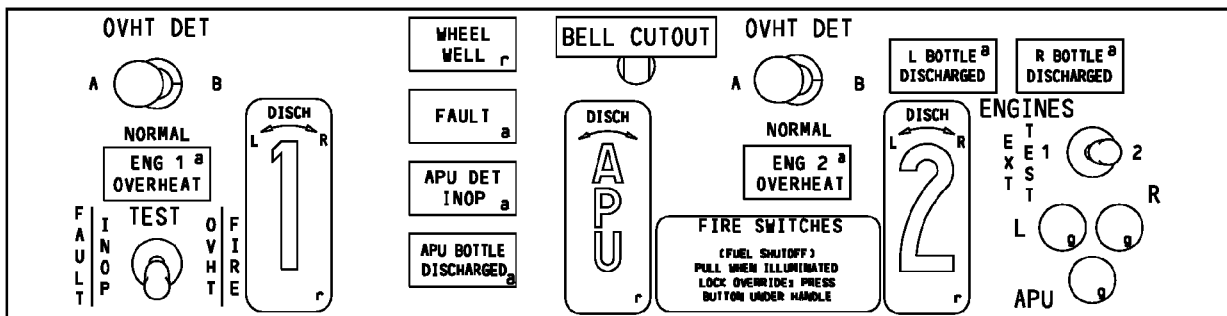


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CARGO FIRE CONTROL PANEL (P8)

(B)



FIRE CONTROL PANEL (P8-1)

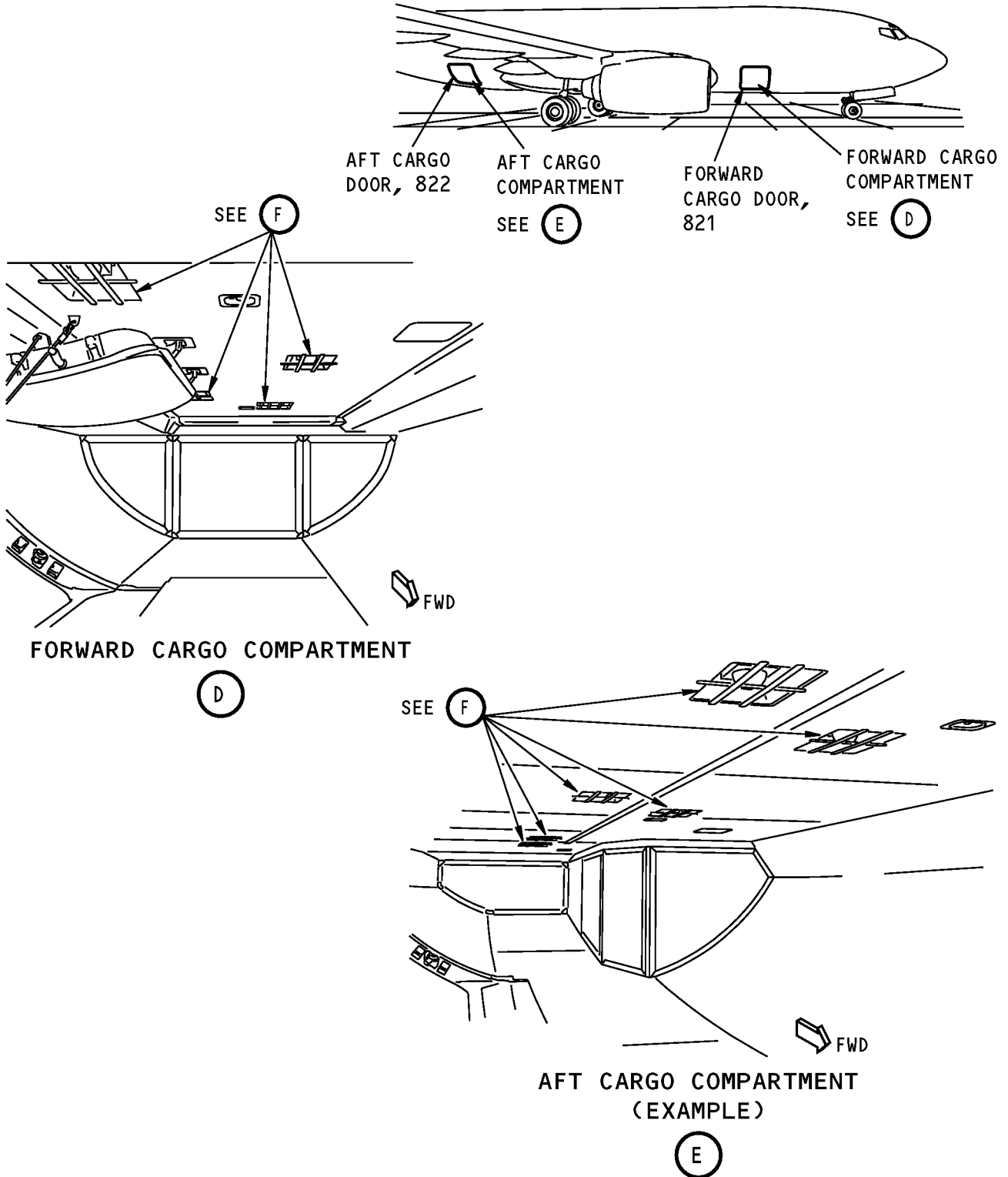
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**Cargo Bay Smoke Detection Test**  
Figure 501 (Sheet 1 of 3)/26-16-00-990-801

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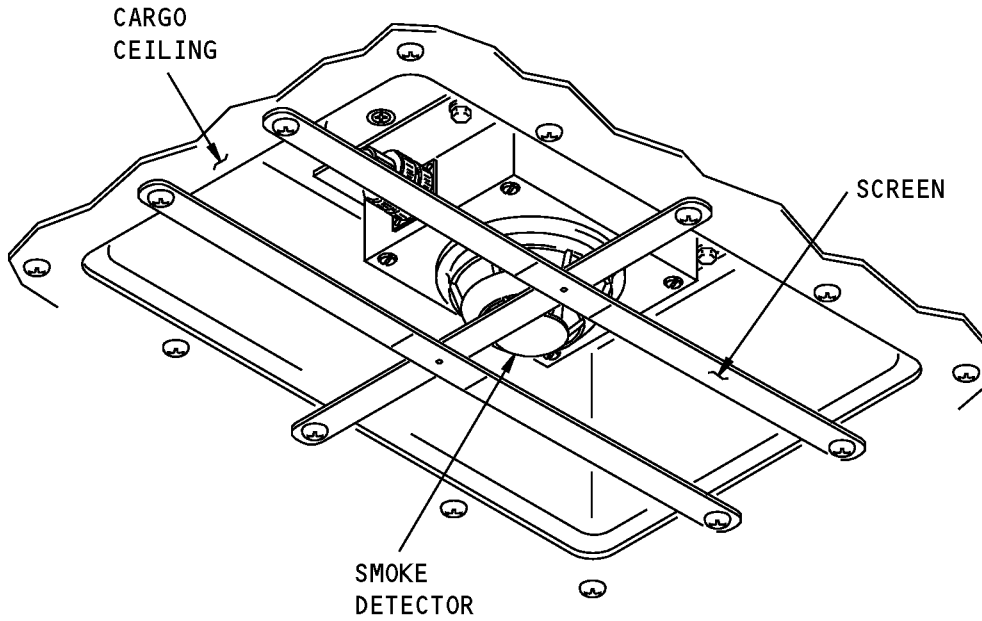
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**Cargo Bay Smoke Detection Test**  
**Figure 501 (Sheet 2 of 3)/26-16-00-990-801**

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(EXAMPLE)

F

**Cargo Bay Smoke Detection Test  
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TASK 26-16-00-730-801

#### 3. Cargo Bay Smoke Detection - Smoke Test

(Figure 501)

##### A. General

- (1) When the DET SEL switch is set to A, and any detector in loop A detects smoke, an alarm will occur. Similarly, when the DET SEL switch is set to B, and the B loop detects smoke, the alarm will occur. When the DET SEL switch is set to NORM, smoke must be detected by a detector in loop A and loop B (any detector in both loops, they do not have to be a pair) before the alarm will occur.

NOTE: If you apply too much smoke to a detector, the excess smoke could affect adjacent detectors. Try to limit the amount of smoke applied to each detector.

NOTE: Corona smoke generators require the supply kit and smoke fluid identified below. These items must be ordered separately from Corona.

- Refill Kit - COLT SUPPLY KIT - Corona Integrated Technologies, Inc.
- Smoke fluid - CFC100AUSP - Corona Integrated Technologies, Inc.

##### B. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
24-22-00-860-813	Supply External Power (P/B 201)

##### C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1645	Smoke Generator - Draw-Thru/Photoelectric Type Smoke Detector (Part #: 458481, Supplier: 8F723, A/P Effectivity: 737-ALL) (Part #: COLT4B110VD, Supplier: L0106, A/P Effectivity: 737-ALL) (Part #: COLT4B110VD8.5, Supplier: L0106, A/P Effectivity: 737-ALL) (Part #: COLT4TB110VD, Supplier: L0106, A/P Effectivity: 737-ALL) (Part #: MODEL 1600, Supplier: 86807, A/P Effectivity: 737-ALL)

##### D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

##### E. Prepare for the Test

SUBTASK 26-16-00-860-004

- (1) Do this task: Supply External Power, TASK 24-22-00-860-813.

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SUBTASK 26-16-00-860-005

(2) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

## F. Smoke Test

SUBTASK 26-16-00-860-006

(1) On the Cargo Fire Control panel, set the DET SELECT FWD switch to A.

SUBTASK 26-16-00-860-007

(2) On the Cargo Fire Control panel, set the DET SELECT AFT switch to NORM.

SUBTASK 26-16-00-730-002

(3) Use the smoke generator, COM-1645 to make smoke adjacent to the forward left detector in the forward cargo bay.

(a) On the Cargo Bay Fire Control panel, look for these indications:

1) The FWD CARGO SMOKE light comes on.

(b) On the Pilot's Glareshield, P7, make sure these lights come on:

1) The Captain's and First Officer's FIRE WARN lights (Red).

(c) Make sure you can hear the flight compartment fire bell.

SUBTASK 26-16-00-730-003

(4) On the Cargo Fire Control panel, set the FWD DET and AFT DET switch to NORM.

(a) Make sure all the alarm indications stop.

SUBTASK 26-16-00-860-008

(5) Clear the smoke from the cargo bay.

**NOTE:** If the smoke is not cleared from the cargo bay within 60 seconds, the smoke indications will occur again.

SUBTASK 26-16-00-730-004

(6) Do the Smoke Test again for each of the other cargo bay smoke detectors.

Table 501/26-16-00-993-801

FWD DET SWITCH POSITION	AFT DET SWITCH POSITION	CARGO BAY	LOCATION	EQUIPMENT NUMBER
A	NORM	FWD	FWD LEFT	M2238
A	NORM	FWD	AFT LEFT	M2239
B	NORM	FWD	FWD RIGHT	M2240
B	NORM	FWD	AFT RIGHT	M2241
NORM	A	AFT	FWD LEFT	M2242
NORM	A	AFT	MID LEFT	M2243

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(Continued)

FWD DET SWITCH POSITION	AFT DET SWITCH POSITION	CARGO BAY	LOCATION	EQUIPMENT NUMBER
NORM	A	AFT	AFT RIGHT (ADJACENT TO M2247)	M2244
NORM	B	AFT	FWD RIGHT	M2245
NORM	B	AFT	MID RIGHT	M2246
NORM	B	AFT	AFT RIGHT (ADJACENT TO M2244)	M2247

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-16-00-860-009

(1) On the Cargo Fire Control panel, set the FWD DET and AFT DET switches to NORM.

SUBTASK 26-16-00-860-010

(2) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO BAY SMOKE DETECTOR - REMOVAL/INSTALLATION

### 1. General

A. This procedure has these tasks:

- (1) Removal of the cargo bay smoke detector.
- (2) Installation of the cargo bay smoke detector.

#### **TASK 26-16-01-000-801**

### 2. Cargo Bay Detector Removal

(Figure 401)

A. References

Reference	Title
26-16-01-100-801	Clean the Cargo Bay Smoke Detectors (P/B 701)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 26-16-01-860-003

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

D. Remove the Cargo Bay Smoke Detector

SUBTASK 26-16-01-020-002

- (1) Remove the screws [3] that hold the screen [1] to the cargo ceiling.

SUBTASK 26-16-01-020-003

- (2) Remove the screws [5] and washers [4] that hold the smoke detector [2] to the detector pan.

SUBTASK 26-16-01-020-004

- (3) Disconnect the electrical connector from the smoke detector [2].

SUBTASK 26-16-01-160-003

- (4) If it is necessary, do this task: Clean the Cargo Bay Smoke Detectors, TASK 26-16-01-100-801.

**END OF TASK**

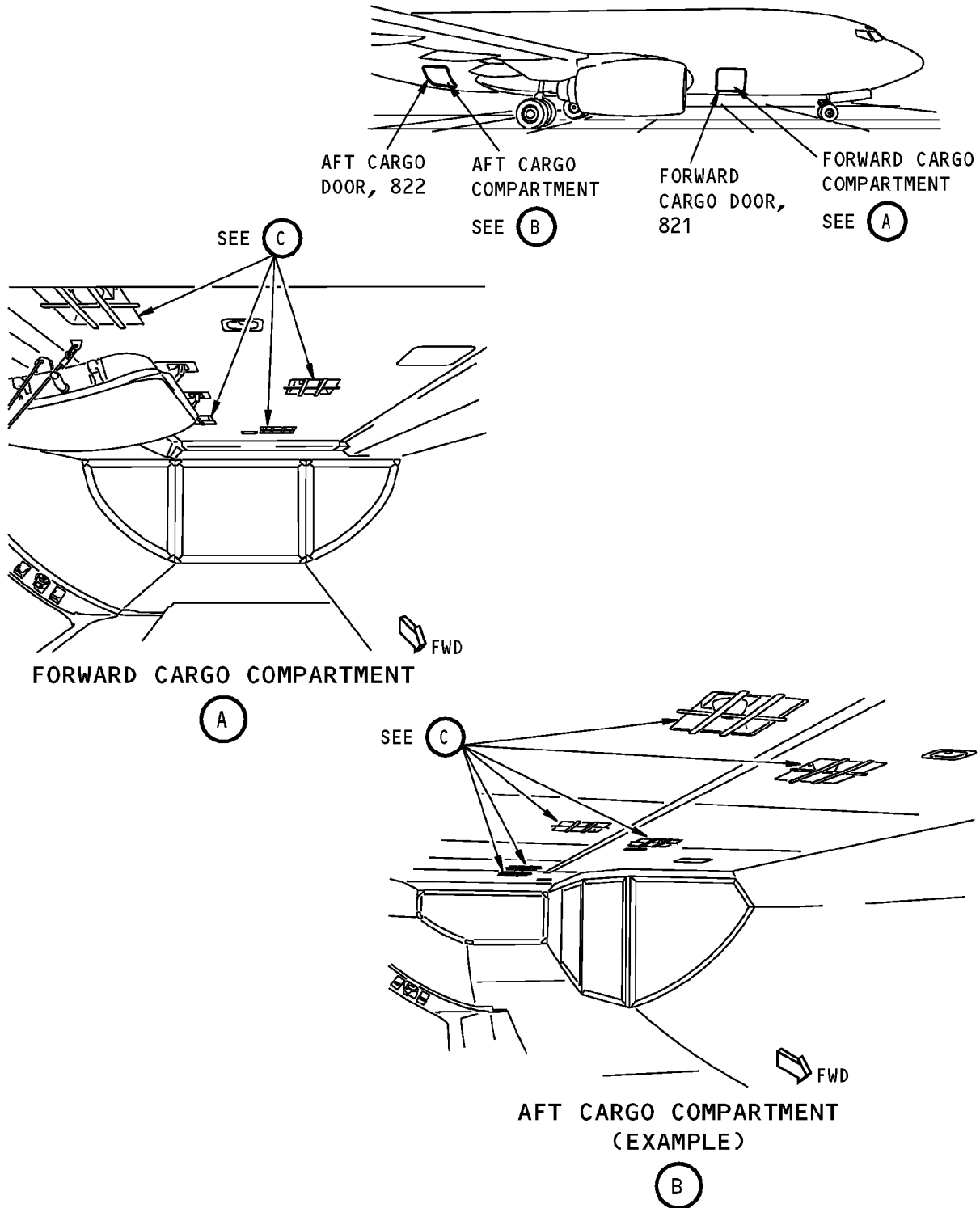
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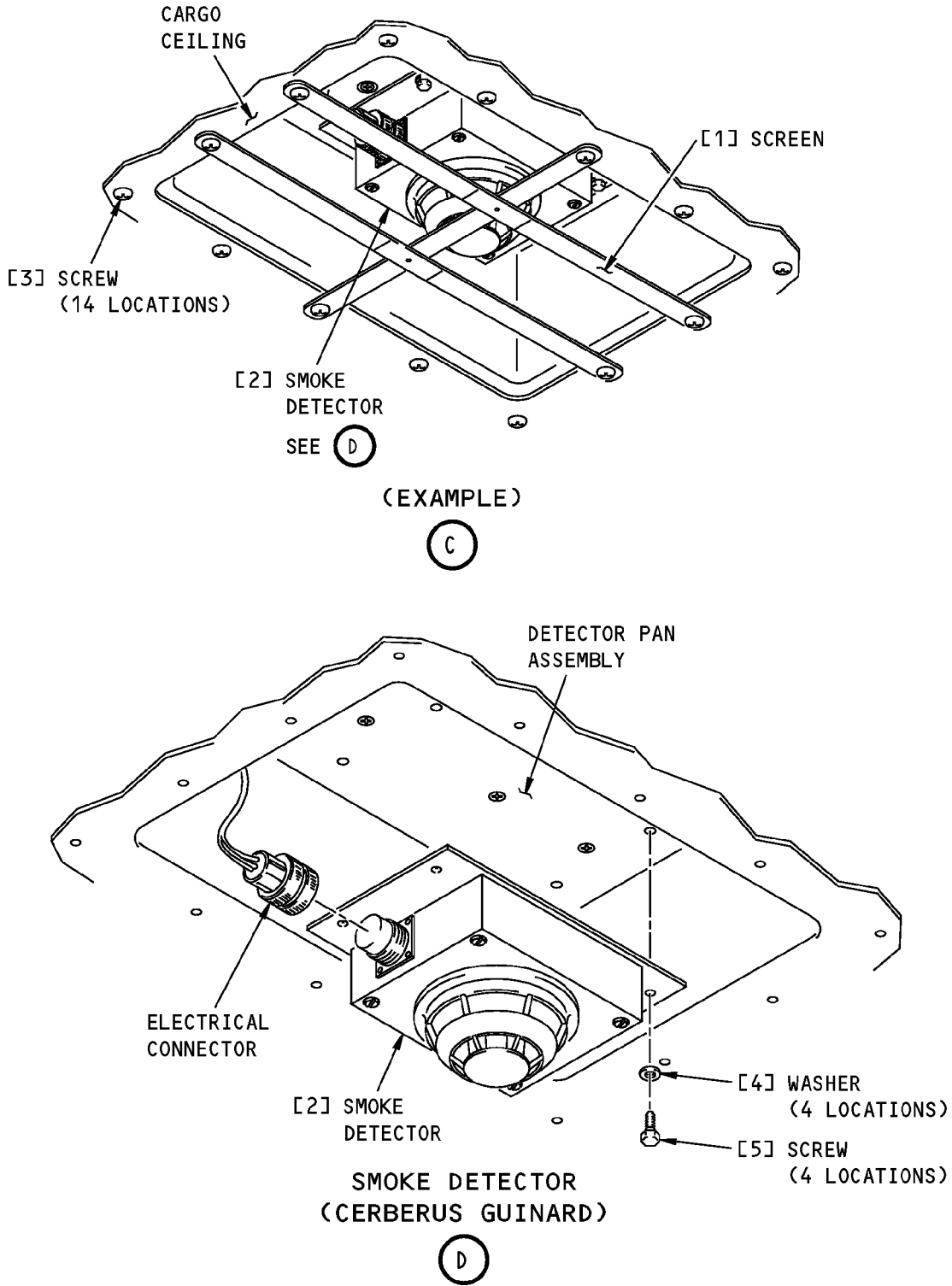
**Cargo Bay Smoke Detector Installation  
Figure 401 (Sheet 1 of 3)/26-16-01-990-801**

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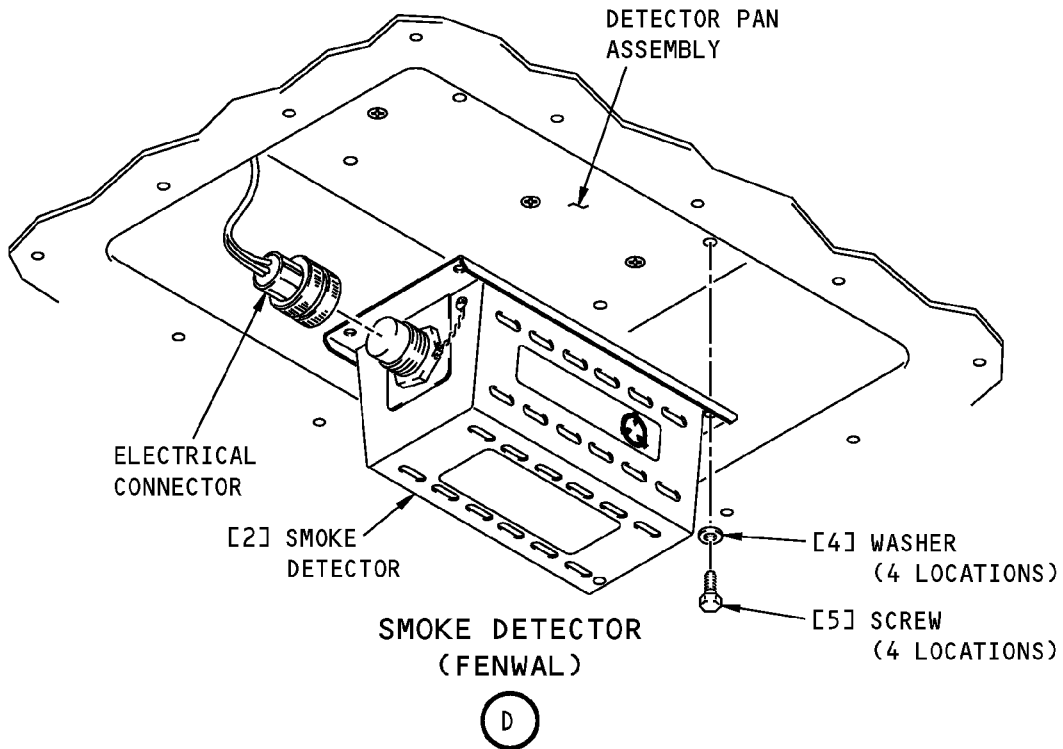
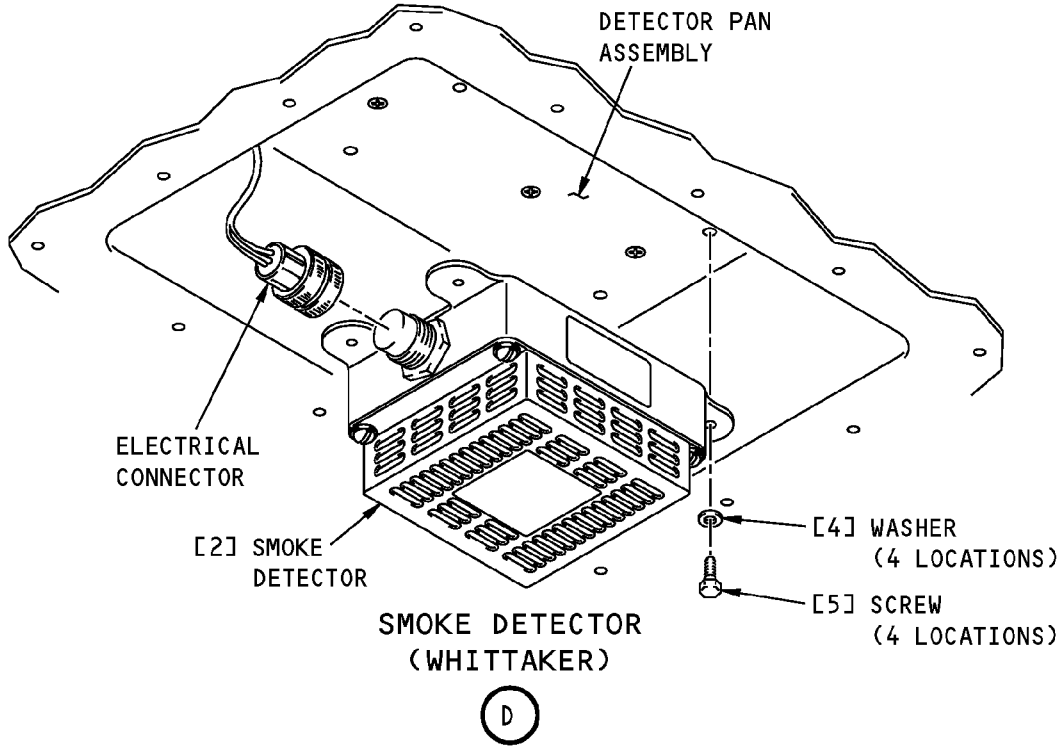


**Cargo Bay Smoke Detector Installation  
Figure 401 (Sheet 2 of 3)/26-16-01-990-801**

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**Cargo Bay Smoke Detector Installation  
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## TASK 26-16-01-400-801

### 3. Cargo Bay Smoke Detector Installation

(Figure 401)

#### A. References

Reference	Title
26-16-00-710-801	Cargo Bay Smoke Detection - Operational Test (P/B 501)

#### B. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

#### C. Prepare for the Installation

SUBTASK 26-16-01-860-004

- (1) Make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

#### D. Install the Cargo Bay Smoke Detector

SUBTASK 26-16-01-420-002

- (1) Connect the airplane electrical connector to the electrical connector on the smoke detector [2].

SUBTASK 26-16-01-420-003

- (2) Position the smoke detector [2] on the detector pan and secure it with washers [4] and screws [5].

SUBTASK 26-16-01-420-004

- (3) Position the screen [1] on the cargo ceiling and secure it with screws [3].

SUBTASK 26-16-01-860-005

- (4) Close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

#### E. Cargo Bay Smoke Detector Installation Test

SUBTASK 26-16-01-710-002

- (1) Do this task: Cargo Bay Smoke Detection - Operational Test, TASK 26-16-00-710-801.

**END OF TASK**

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO BAY SMOKE DETECTOR - CLEANING/PAINTING

### 1. General

- A. This procedure has a task which cleans the cargo bay smoke detectors.
- B. Each cargo bay has smoke detectors installed in the ceiling. The cleaning procedure is the same for each smoke detector.

### TASK 26-16-01-100-801

### 2. Clean the Cargo Bay Smoke Detectors

#### A. Tools/Equipment

Reference	Description
STD-1086	Gloves - Rubber
STD-3939	Air Source - Regulated, Dry Filtered, 0 to 10 psig (0 to 69 kPa)

#### B. Consumable Materials

Reference	Description	Specification
B00065	Alcohol - Denatured, Ethyl (Ethanol)	27CFR21.35
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5

#### C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

#### D. Clean the Smoke Detector

SUBTASK 26-16-01-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-01-160-001

**WARNING:** WHEN YOU CLEAN THE SMOKE DETECTOR AND SENSOR, MAKE SURE THE AREA HAS SUFFICIENT AIRFLOW. KEEP THE ALCOHOL AWAY FROM HEAT, SPARKS OR FLAMES. DO NOT BREATHE THE FUMES FROM THE ALCOHOL. PUT ON RUBBER GLOVES. ALCOHOL IS A FLAMMABLE AND POISONOUS SOLVENT WHICH CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (2) Put on rubber gloves, STD-1086.

SUBTASK 26-16-01-160-002

- (3) Remove the dirt from the exterior of the smoke detector [2] with the cotton wiper, G00034 soaked with alcohol, B00065.

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SUBTASK 26-16-01-210-001

**CAUTION:** BLOW THE AIR LIGHTLY INTO THE SENSOR ASSEMBLY. IF YOU BLOW THE AIR WITH TOO MUCH FORCE, IT CAN CAUSE A STATIC CHARGE ON THE ELECTRODES WHICH CAN CAUSE DAMAGE TO THE SMOKE SENSOR.

- (4) With the 0 to 10 psig (0 to 69 kPa) dry filtered regulated air source, STD-3939, lightly blow any dirt or particles out of the sensor assembly.

SUBTASK 26-16-01-860-002

- (5) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO ELECTRONIC UNIT - REMOVAL/INSTALLATION

### 1. General

A. This procedure has these tasks:

- (1) Removal of the Cargo Electrical Unit, referred to as the CEU.
- (2) Installation of the CEU.

B. The CEU is installed in the the ceiling of each cargo bay.

#### **TASK 26-16-02-000-801**

### 2. Cargo Electronic Unit Removal

(Figure 401)

A. Location Zones

<u>Zone</u>	<u>Area</u>
121	Forward Cargo Compartment - Left
141	Aft Cargo Compartment - Left

B. Prepare for Removal

SUBTASK 26-16-02-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-02-020-004

- (2) To get access to the CEUs, remove the screws [4] securing the cover [3] to the cargo bay ceiling.

C. Remove the CEU

SUBTASK 26-16-02-860-002

- (1) Remove the screws [2] securing the CEU [1] to the airplane.

SUBTASK 26-16-02-020-002

- (2) Disconnect the electrical connectors from the CEU.

**END OF TASK**

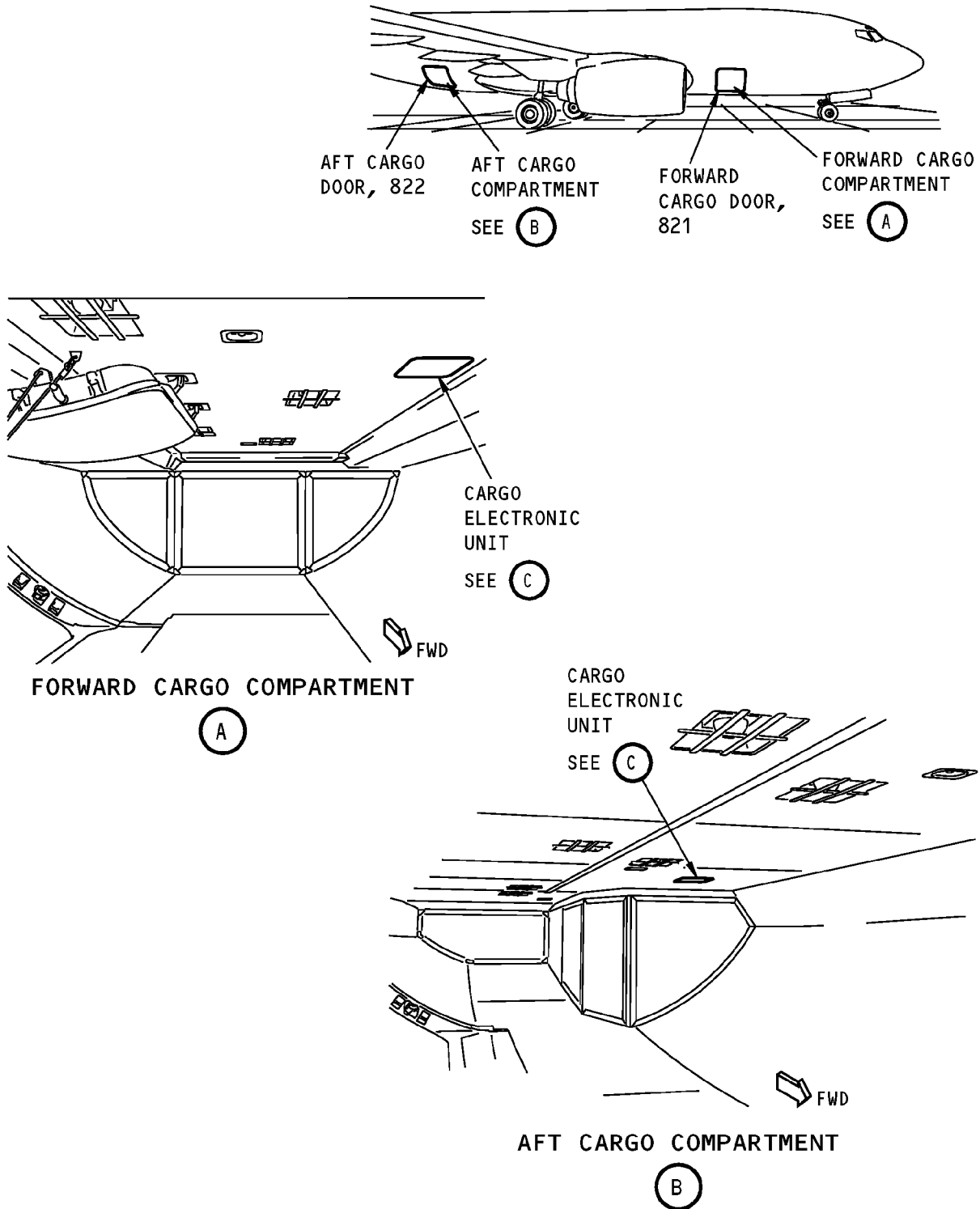
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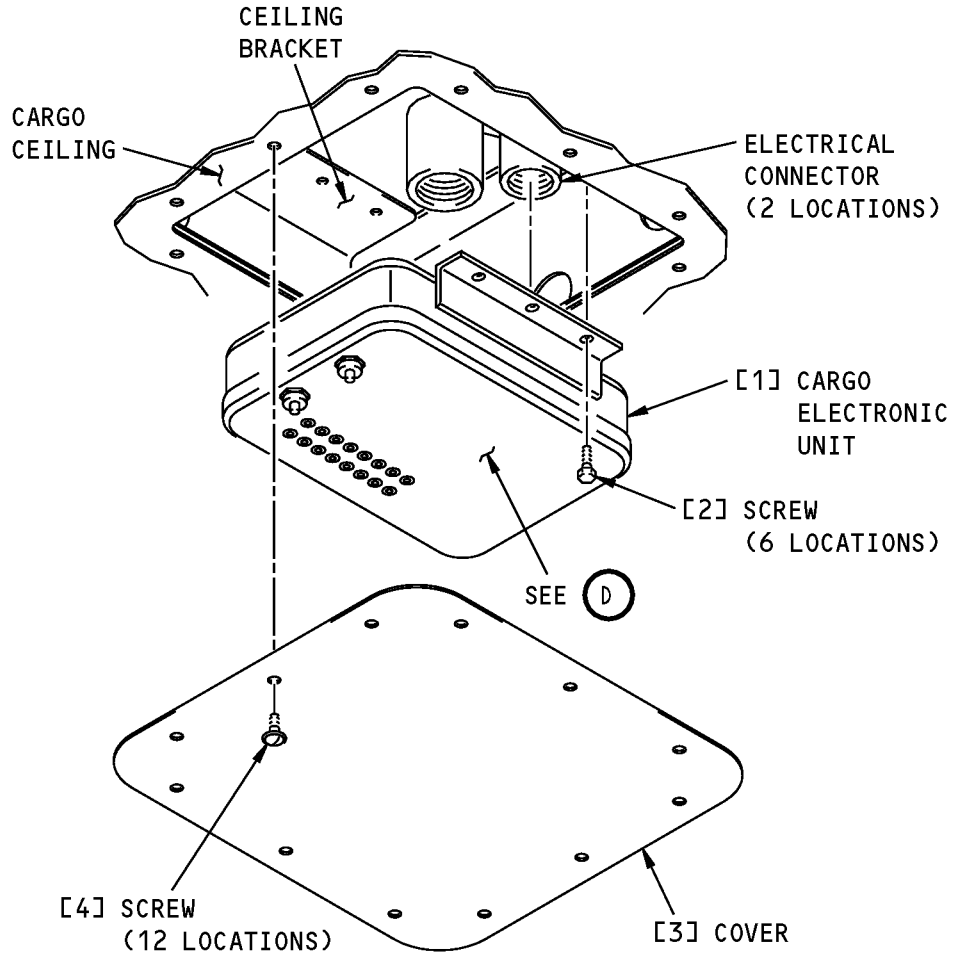
**Cargo Electronic Unit Installation  
Figure 401 (Sheet 1 of 3)/26-16-02-990-801**

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**CARGO ELECTRONIC UNIT  
(EXAMPLE)**

(C)

**Cargo Electronic Unit Installation  
Figure 401 (Sheet 2 of 3)/26-16-02-990-801**

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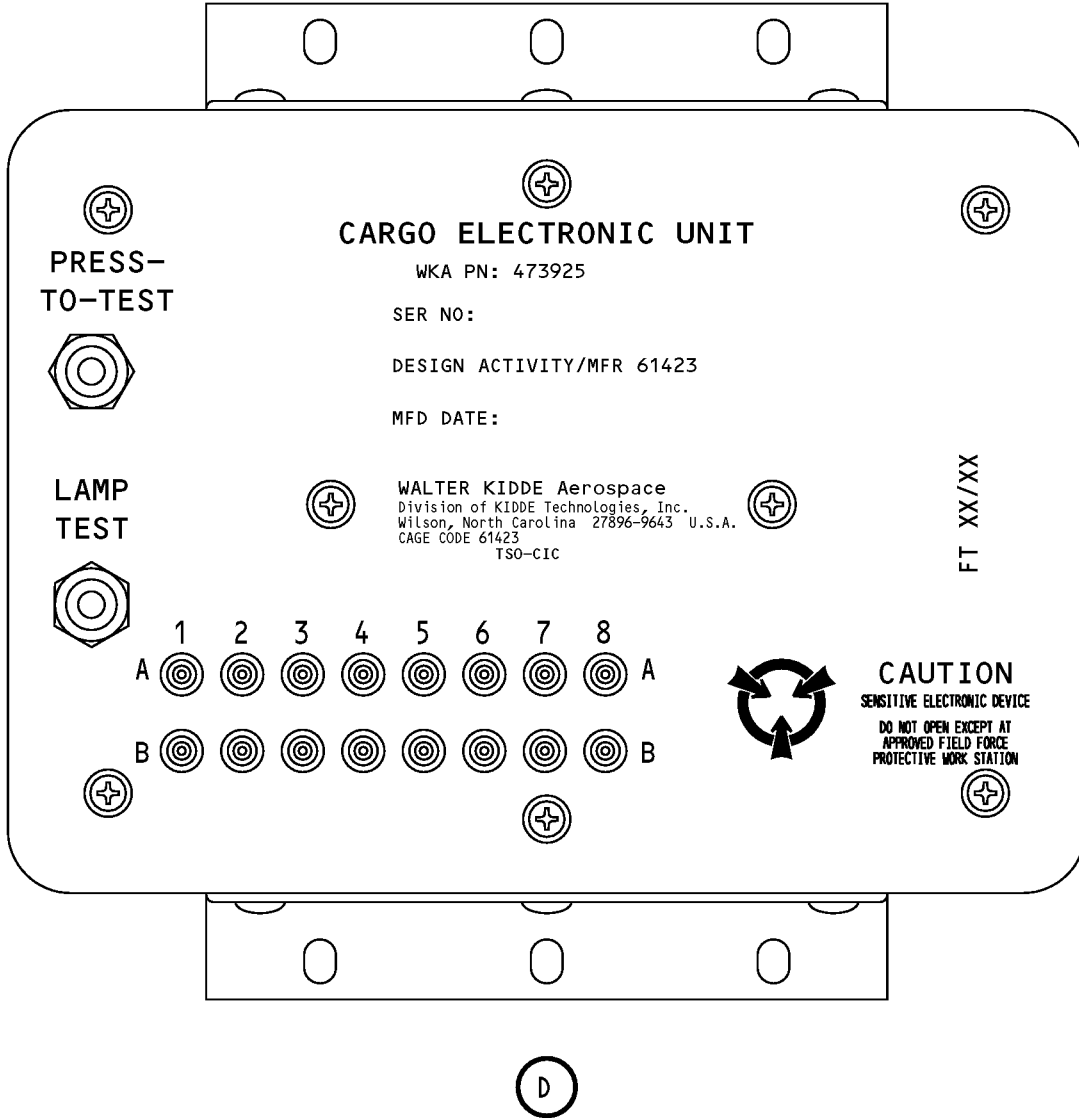
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#### TASK 26-16-02-400-801

#### 3. Cargo Electronic Unit Installation

(Figure 401)

##### A. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
141	Aft Cargo Compartment - Left

##### B. Prepare for Installation

SUBTASK 26-16-02-860-003

- (1) Make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

##### C. Install the CEU

SUBTASK 26-16-02-420-001

- (1) Connect the airplane electrical connectors to the electrical connectors on the CEU [1].

SUBTASK 26-16-02-420-002

- (2) Position the CEU [1] on the airplane bracket and secure it with screws [2].

##### D. Do the Cargo Electronics Unit Installation Test

————— END OF TASK —————

#### TASK 26-16-02-710-801

#### 4. Cargo Electronic Unit Installation Test

(Figure 401)

##### A. Prepare for the test

SUBTASK 26-16-02-860-004

- (1) Close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-02-020-003

- (2) If they are installed, remove the screws [4] securing the cover [3] to the cargo bay ceiling.

##### B. Do the test

SUBTASK 26-16-02-710-001

- (1) Push and hold the LAMP TEST switch on the CEU.
  - (a) Make sure all A and B loop smoke detector indicators, on the CEU, come on.

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SUBTASK 26-16-02-710-002

(2) Release the LAMP TEST switch.

SUBTASK 26-16-02-710-003

(3) Push and hold the PRESS TO TEST switch on the CEU for a minimum of five seconds.

(a) Make sure all A and B loop smoke detector indicators, on the CEU, come on.

SUBTASK 26-16-02-710-004

(4) Release the PRESS TO TEST switch.

C. Return the airplane to its usual condition

SUBTASK 26-16-02-420-003

(1) Position the cover [3] on the cargo ceiling and secure it with screws [4].

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## WHEEL WELL, WING AND LOWER AFT BODY OVERHEAT DETECTION SYSTEM - ADJUSTMENT/TEST

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. The procedures that follow contain the tests for the wheel well, wing and lower aft body overheat detection system, which will be referred to as the overheat detection system throughout the procedures.
- C. This procedure consists of this task:
  - (1) An operational test of the overheat detection system.

### **TASK 26-18-00-710-801**

### 2. Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test

(Figure 501)

#### A. General

- (1) The Operational Test does a check of the Overheat Fire Detection System without disturbing the detection system and it only uses the equipment that is on the airplane.
- (2) The operational test can be performed on the flight deck, or in the E/E bay.

#### B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)

#### C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

#### D. Prepare for the Operational Test

SUBTASK 26-18-00-860-001

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-18-00-860-002

- (2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1

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Row	Col	Number	Name
D	14	C00312	INDICATOR MASTER DIM BUS 2
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6
F	13	C01179	INDICATOR MASTER DIM SECT 7
F	14	C01180	INDICATOR MASTER DIM SECT 8

SUBTASK 26-18-00-860-003

(3) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

E. Overheat Detection System Operational Test - Flight Compartment

SUBTASK 26-18-00-710-001

- (1) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the OVHT/FIRE position.
  - (a) Make sure the WHEEL WELL light on the Engine and APU Fire Control Panel comes on.
  - (b) Make sure the Captain's and First Officer's FIRE WARN lights on the Pilot's Glareshield, P7, come on.
  - (c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, comes on.

SUBTASK 26-18-00-710-002

- (2) Release the TEST switch on the Engine and APU Fire Control Panel.
  - (a) Make sure the WHEEL WELL light on the Engine and APU Fire Control Panel goes off.
  - (b) Make sure the Captain's and First Officer's FIRE WARN lights on the Pilot's Glareshield go off.
  - (c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, stops.

SUBTASK 26-18-00-710-003

- (3) Push and hold the OVHT TEST switch on the air conditioning panel, P5-10, for at least 5 seconds.
  - (a) On the air conditioning panel, P5-10, make sure these lights come on:
    - 1) The left WING-BODY OVERHEAT light.
    - 2) The right WING-BODY OVERHEAT light.
  - (b) On the Pilot's Glareshield, P7, make sure these lights come on:
    - 1) The AIR COND light.
    - 2) The Captain's and First Officer's MASTER CAUTION lights.

SUBTASK 26-18-00-710-004

- (4) Release the OVHT TEST switch on the air conditioning panel, P5-10.
  - (a) On the air conditioning panel, P5-10, make sure these lights go off:
    - 1) The left WING-BODY OVERHEAT light.

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- 2) The right WING-BODY OVERHEAT light.
- (b) On the Pilot's Glareshield, P7, make sure these lights go off:
  - 1) The AIR COND light.
  - 2) The Captain's and First Officer's MASTER CAUTION lights.

#### F. Overheat Detection System Operational Test - E/E Bay

SUBTASK 26-18-00-710-005

- (1) Push and release the DISP TEST switch on the compartment overheat detection module.
  - (a) Make sure the code 88 comes on, then goes off.

SUBTASK 26-18-00-710-006

- (2) Push and release the LOC TEST switch on the compartment overheat detection module.
  - (a) Make sure the code 90 comes on while the test is in progress, then the code 99 comes on to show there are no faults.

SUBTASK 26-18-00-710-007

- (3) Push and release the MEM READ switch on the compartment overheat detection module.
  - (a) Make sure the code 97 comes on to show the test is complete.

SUBTASK 26-18-00-710-008

- (4) Push and release the MEM CLEAR switch on the compartment overheat detection module.
  - (a) Make sure the code 97 goes off.
  - (b) Make sure the MAINT ADV light stays off.

#### G. Put the Airplane Back to its Usual Condition.

SUBTASK 26-18-00-860-004

- (1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

————— END OF TASK —————

EFFECTIVITY

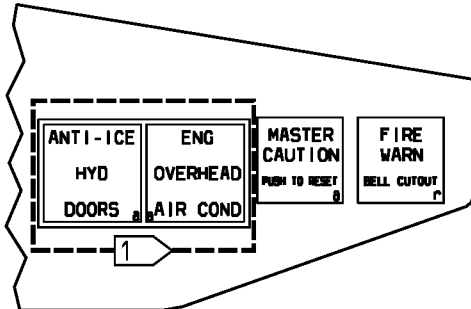
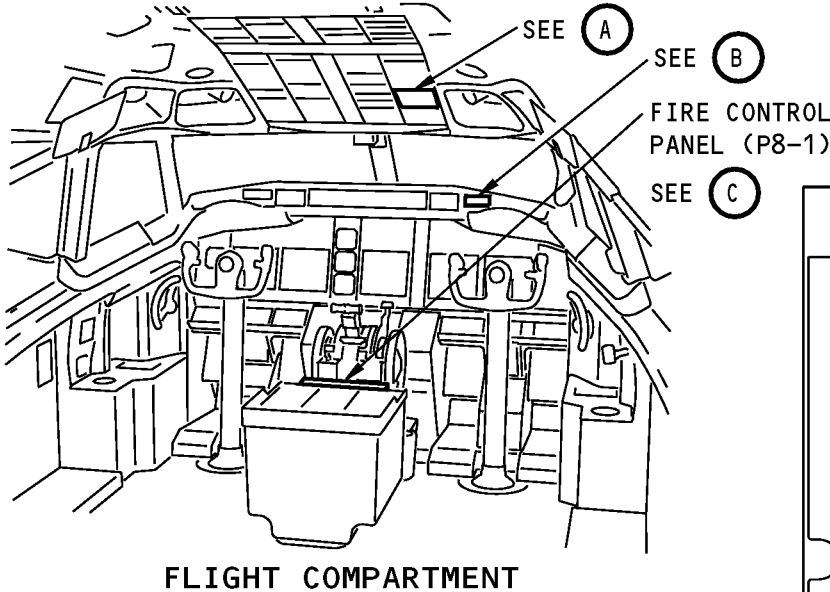
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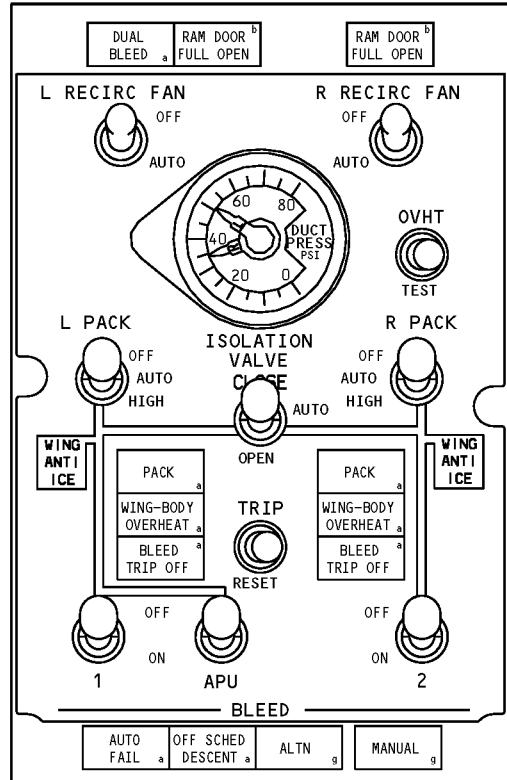
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**AIRCRAFT MAINTENANCE MANUAL**



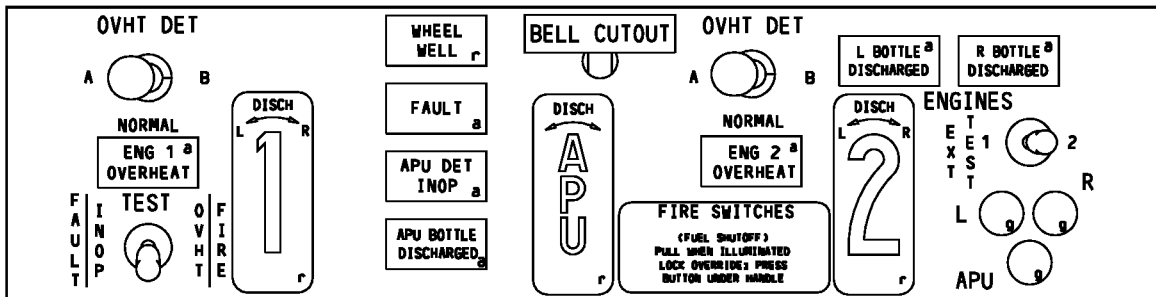
**FIRST OFFICER'S WARNING LIGHTS (P7)  
(CAPTAIN'S FIRE WARN AND MASTER CAUTION LIGHTS ARE OPPOSITE)**

(B)



**BLEED AIR CONTROL MODULE (P5)**

(A)



**FIRE CONTROL PANEL (P8-1)**

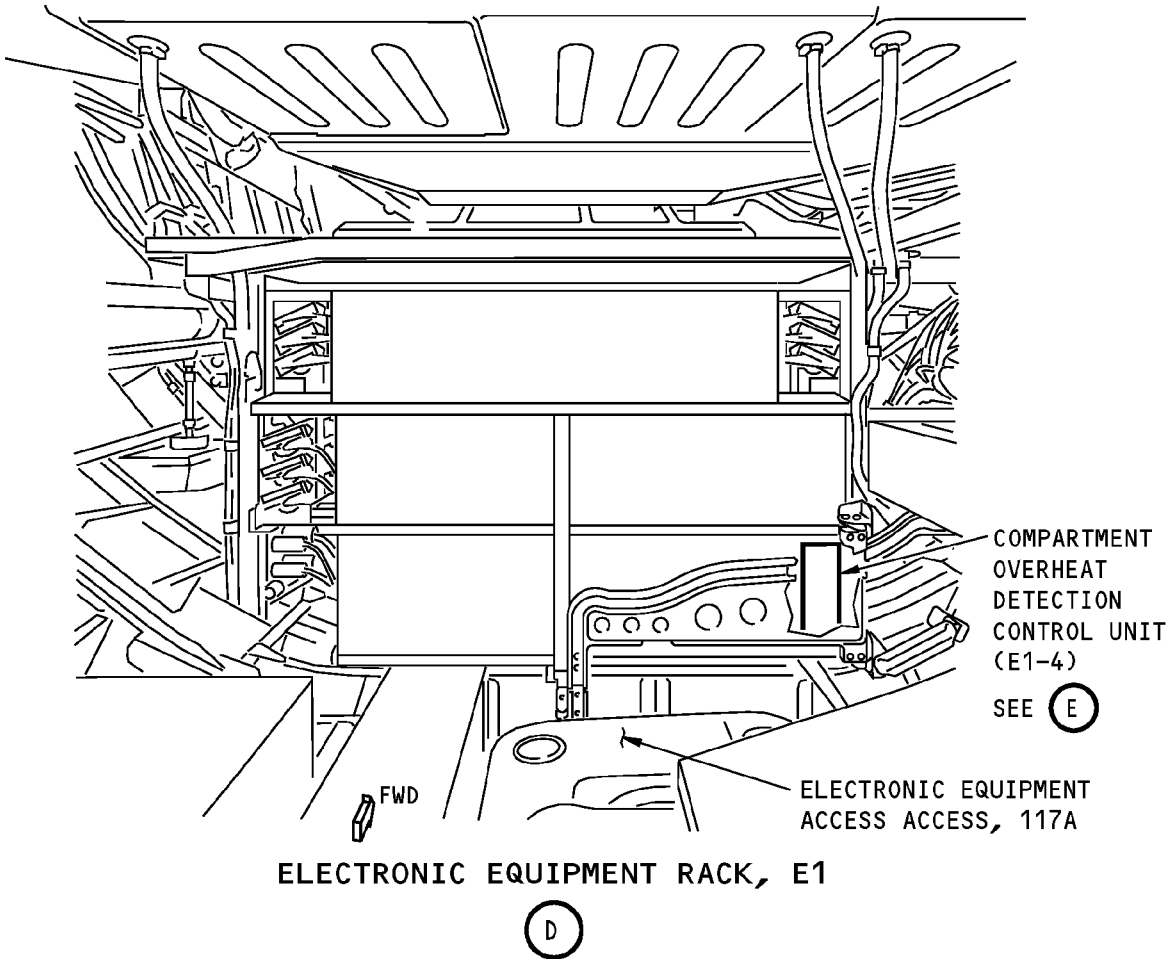
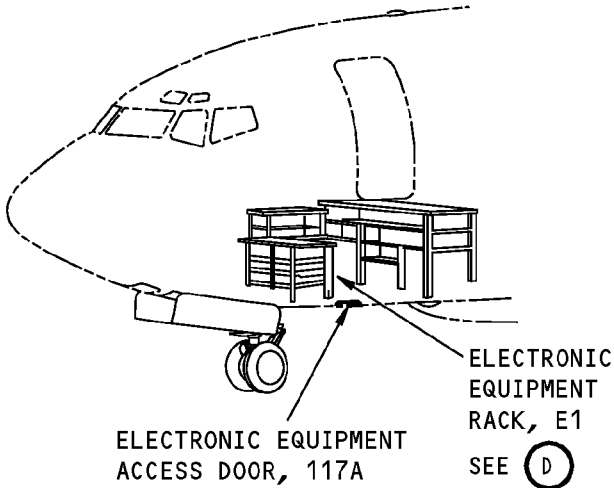
(C)

1 FIRST OFFICER'S

**Wheel Well, Wing and Lower Aft Body Overheat Detection System Operational Test  
Figure 501 (Sheet 1 of 3)/26-18-00-990-801**

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**Wheel Well, Wing and Lower Aft Body Overheat Detection System Operational Test  
Figure 501 (Sheet 2 of 3)/26-18-00-990-801**

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AIRCRAFT MAINTENANCE MANUAL**

WHEEL WELL FIRE, WING & BODY  
OVERHEAT DETECTION

REFER TO MAINT. MANUAL FOR COMPLETE  
EXPLANATION OF SYSTEM CHARACTERISTICS

**FAULT & ALARM CODE**  
 MAINT. ADV. LIGHT WILL BE  
 ON DURING FAULTS AND  
 ALARMS-OFF AFTER  
 ERASURE  
 00 FAILURE IN CONTROL OR  
 POWER SUPPLY CARDS  
 01.02 115VAC FAILURE OR  
 CONTROL CARD FAILURE  
 03.04.05 FAILED CONTROL CARD

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK
2	READ ALARM FAULT MEMORY	MOMENTARILY DEPRESS "MEM READ"*	FAULTS & ALARMS ARE DISPLAYED THEN 97 (MEM READ COMPLETE) & THEN BLANK
3	SYSTEM TEST	MOMENTARILY DEPRESS "LOC TEST"*	CODE 90 EXISTING FAULT CODES & THEN 99
4	ERASE (1) ALARM FAULT MEMORY	DEPRESS "MEM READ"* UNTIL CODE TO BE ERASED IS DISPLAYED THEN PRESS "MEM CLR"*	ERASE CODE GOES BLANK DEPRESS "MEM CLR" AGAIN WHEN 97 IS DISPLAYED AND DISPLAY WILL BLANK
5	ABORT	MOMENTARILY DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK

NOTE:\*MOMENTARILY DEPRESS AGAIN TO CONTINUE READ  
\*\*EXISTING FAULTS & ALARMS CANNOT BE ERASED UNTIL CORRECTED

ZONE/ SITUATION	ALARM (2)	OPEN LOOP	SHORT LOOP
LEFT WING LE	14	12	10
LEFT AC PACK BAY	24	22	20
KEEL BEAM	34	32	30
AFT CARGO SECT.	44	42	40
RIGHT WING LE AND AC PACK BAY	64	62	60
WHEEL WELL FIRE	84	-	-

LOCAL TEST	IN PROGRESS	NOT COMPLETE	COMPLETE
90	98	96	99

**MEM READ**

**MEM CLEAR**

**LOC TEST**

**DISP TEST**

**FENWAL**  
 ASHLAND, MA 01721  
 CAT. NO. 20-035008-300  
 SER. NO.  
 DATE CODE  
 BOEING PART NO. 10-62187-1

(1) ALARMS BECOME ALARM HISTORY AFTER ERASURE  
 TO DISPLAY ALARM HISTORY DEPRESS "DISP TEST" AND "MEM READ"  
 TO CLEAR ALARM HISTORY SEE MAINT. MANUAL

(2) SHORT LOOP CODE DISPLAYED AFTER LOCAL TEST IS COMPLETED

E

**Wheel Well, Wing and Lower Aft Body Overheat Detection System Operational Test  
Figure 501 (Sheet 3 of 3)/26-18-00-990-801**

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AIRCRAFT MAINTENANCE MANUAL

COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237 - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the Compartment Overheat Detection Control Unit (M237), referred to as the control unit.
(2) An installation of the Compartment Overheat Detection Control Unit.

B. The Compartment Overheat Detection Control Unit is installed on the E1-4 shelf in the electronic equipment compartment.

TASK 26-18-01-000-801

2. Compartment Overheat Detection Control Unit Removal

(Figure 401)

A. References

Table with 2 columns: Reference, Title. Row: 20-10-07-000-801, E/E Box Removal (P/B 201)

B. Location Zones

Table with 2 columns: Zone, Area. Row: 118, Electrical and Electronics Compartment - Right

C. Access Panels

Table with 2 columns: Number, Name/Location. Row: 117A, Electronic Equipment Access Door

D. Compartment Overheat Detection Control Unit Removal

SUBTASK 26-18-01-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Table with 4 columns: Row, Col, Number, Name. Rows: A, 19, C00388, FIRE PROTECTION DETECTION OVHT WW WING BODY; A, 21, C00396, FIRE PROTECTION DETECTION MASTER WARN & CONT

SUBTASK 26-18-01-010-001

(2) Open this access panel:

Table with 2 columns: Number, Name/Location. Row: 117A, Electronic Equipment Access Door

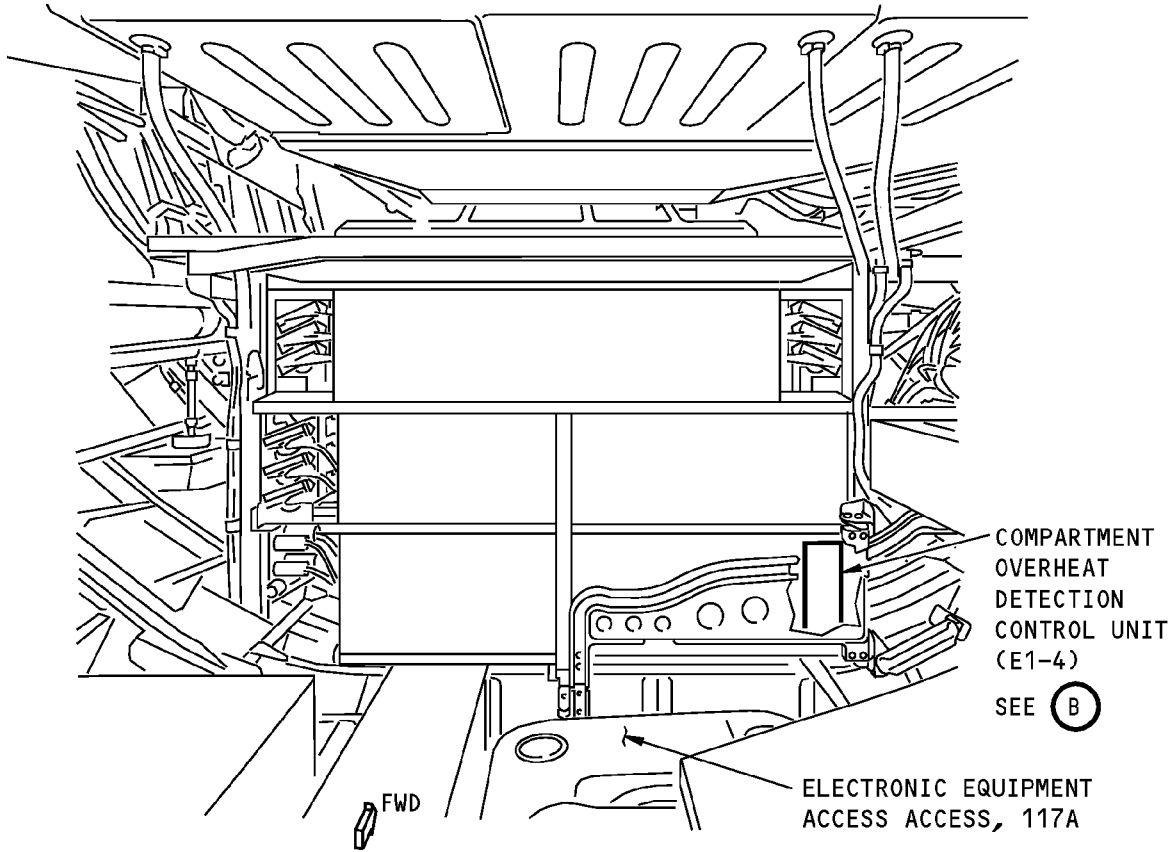
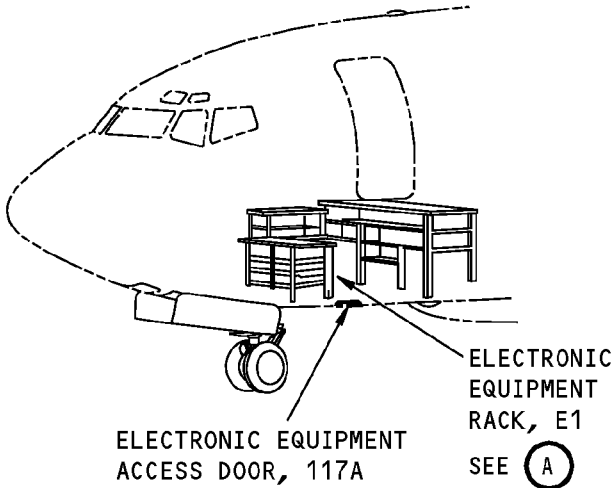
SUBTASK 26-18-01-020-001

(3) Remove the module, do this task: E/E Box Removal, TASK 20-10-07-000-801.

END OF TASK

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**ELECTRONIC EQUIPMENT RACK, E1**

(A)

**Compartment Overheat Detection Control Unit Installation  
Figure 401 (Sheet 1 of 2)/26-18-01-990-801**

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WHEEL WELL FIRE, WING & BODY  
OVERHEAT DETECTION

REFER TO MAINT. MANUAL FOR COMPLETE  
EXPLANATION OF SYSTEM CHARACTERISTICS

88

MAINT. ADV. LIGHT WILL BE ON DURING FAULTS AND ALARMS-OFF AFTER ERASURE

00 FAILURE IN CONTROL OR POWER SUPPLY CARDS

01,02 115VAC FAILURE OR CONTROL CARD FAILURE

03,04,05 FAILED CONTROL CARD

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK
2	READ ALARM FAULT MEMORY	MOMENTARILY DEPRESS "MEM READ"*	FAULTS & ALARMS ARE DISPLAYED THEN 97 (MEM READ COMPLETE) & THEN BLANK
3	SYSTEM TEST	MOMENTARILY DEPRESS "LOC TEST"*	CODE 90 EXISTING FAULT CODES & THEN 99
4	ERASE (1) ALARM FAULT MEMORY	DEPRESS "MEM READ"*	ERASE CODE GOES BLANK
		UNTIL CODE TO BE ERASED IS DISPLAYED THEN PRESS "MEM CLR"*	DEPRESS "MEM CLR" AGAIN WHEN 97 IS DISPLAYED AND DISPLAY WILL BLANK
5	ABORT	MOMENTARILY DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK

NOTE: \*MOMENTARILY DEPRESS AGAIN TO CONTINUE READ

\*\*EXISTING FAULTS & ALARMS CANNOT BE ERASED UNTIL CORRECTED

ZONE/ SITUATION	ALARM (2)	OPEN LOOP	SHORT LOOP
LEFT WING LE	14	12	10
LEFT AC PACK BAY	24	22	20
KEEL BEAM	34	32	30
AFT CARGO SECT.	44	42	40
RIGHT WING LE AND AC PACK BAY	64	62	60
WHEEL WELL FIRE	84	-	-

LOCAL TEST	IN PROGRESS	HOT COMPLETE	COMPLETE
	90	98	99

**MEM READ**

**MEM CLEAR**

**LOC TEST**

**DISP TEST**

(1) ALARMS BECOME ALARM HISTORY AFTER ERASURE

TO DISPLAY ALARM HISTORY DEPRESS "DISP TEST" AND "MEM READ"

TO CLEAR ALARM HISTORY SEE MAINT. MANUAL

(2) SHORT LOOP CODE DISPLAYED AFTER LOCAL TEST IS COMPLETED

ASHLAND, MA 01721

CAT. NO.  
20-035008-300

SER. NO.

DATE CODE

BOEING PART NO.  
10-62187-1

**[1] COMPARTMENT OVERHEAT DETECTION CONTROL UNIT**

**Compartment Overheat Detection Control Unit Installation  
Figure 401 (Sheet 2 of 2)/26-18-01-990-801**

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TASK 26-18-01-400-801

#### 3. Compartment Overheat Detection Control Unit Installation

(Figure 401)

##### A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 201)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)

##### B. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

##### C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

##### D. Compartment Overheat Detection Control Unit Installation

SUBTASK 26-18-01-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT

SUBTASK 26-18-01-010-002

- (2) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 26-18-01-020-002

- (3) Install the module, do this task: E/E Box Installation, TASK 20-10-07-400-801.

##### E. Compartment Overheat Detection Control Unit Installation Test

SUBTASK 26-18-01-860-003

- (1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT

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SUBTASK 26-18-01-710-001

- (2) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

NOTE: Do the portion of the test for the E/E bay.

- F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-18-01-010-003

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION

### 1. General

- A. This section contains procedures to remove and install the long sensor elements, and the looped sensor elements.
  - (1) The long sensor elements are located in the wing area, the forward A/C Pack Bay, the Wheel Well, and the Aft Body Area.
  - (2) The looped sensor elements are located in the mid and aft A/C pack, and along the strut.
- B. The minimum element bend radius is 1 in. (25.4 mm). The best bend radius is three inches.
- C. The sensor element must be straight and away from the connector for one inch before bending.
- D. A list of all the compartment overheat detection sensing elements is shown in Table 401. The sensing elements are shown in SSM 26-12-11. Each loop is made up of one or more sensing elements that make a complete circuit with the Compartment Overheat Detection Module, M237. The loop is defined by the two pins in the electrical connector D742 that complete the circuit. The pins that define each loop are shown in the column "D742 PINS". The overheat detection loops included in the Table 401 are:
  - (1) Right Side Overheat Loop.
  - (2) Left Aft Overheat Loop.
  - (3) Left Keelbeam Overheat Loop.
  - (4) Left A/C Pack Overheat Loop.
  - (5) Left Wing Overheat Loop.
  - (6) Wheel Well Overheat Loop.

### **TASK 26-18-02-000-801**

### 2. Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Removal

(Figure 401, Figure 402, Figure 403, Figure 404, Figure 405, Figure 406, Figure 407)

#### A. References

Reference	Title
20-10-44-000-801	Lockwires Removal (P/B 401)
27-81-00-860-803	Leading Edge Flaps and Slats Extension (P/B 201)
27-81-00-860-804	Leading Edge Flaps and Slats Retraction (P/B 201)

#### B. Consumable Materials

Reference	Description	Specification
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20

#### C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
413	Engine 1 - Fan Cowl, Left
423	Engine 2 - Fan Cowl, Left

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**AIRCRAFT MAINTENANCE MANUAL**

D. Prepare for the Removal

SUBTASK 26-18-02-860-001

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

SUBTASK 26-18-02-010-001

(2) Open the applicable access doors and panels Table 401.

Table 401/26-18-02-993-805

LOOP	D742 PINS	EQPT NO.	DETECTOR	OPEN/REMOVE FOR ACCESS
1	11, 10	M1912	R AFT A/C PACK	ECS ACCESS DOOR, 192CR
		M1910	R MID A/C PACK	ECS ACCESS DOOR, 192CR
		M356	R FWD A/C PACK	ECS ACCESS DOOR, 192CR A/C PNEUMATIC TUBES
		M371	R WING INBOARD	LE SLATS - EXTEND FULLY Leading Edge Flaps and Slats Extension, TASK 27-81-00-860-803 - RETRACT Leading Edge Flaps and Slats Retraction, TASK 27-81-00-860-804 ECS ACCESS DOOR, 192CR RAM AIR INLET LIP PANEL, 191HR FORWARD WING TO BODY FAIRING PANEL, 191FR INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 611AB
		M269	R WING OUTBOARD	LE SLATS - EXTEND FULLY Leading Edge Flaps and Slats Extension, TASK 27-81-00-860-803 - RETRACT Leading Edge Flaps and Slats Retraction, TASK 27-81-00-860-804 ECS ACCESS DOOR, 192CR RAM AIR INLET LIP PANEL, 191HR FORWARD WING TO BODY FAIRING PANEL, 191FR INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 611AB
		M1763	R FWD STRUT	FORWARD STRUT FAIRING, 441BT
		M1764	R AFT STRUT	OUTBOARD LEADING EDGE BLOWOUT ACCESS DOOR, 621AB
2	13, 27	M276	AFT, SECTION 48	STAB TRIM ACCESS

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(Continued)

LOOP	D742 PINS	EQPT NO.	DETECTOR	OPEN/REMOVE FOR ACCESS
		M275	AFT, SECTION 47	AFT CARGO LINING
		M347	AFT, SECTION 46	AFT CARGO LINING
		M1147	AFT, SECTION 46	AFT CARGO LINING
		M348	AFT, SECTION 46	AFT CARGO LINING
3	9, 29	M273	AFT KEEL BEAM	PANELS BELOW BEAM LANDING GEAR TRANSFER VALVE HYDRAULIC LINES COVERS TO FORWARD BULKHEAD COVERS TO AFT BULKHEAD
		M272	FWD KEELBEAM	
4	8, 2	M1911	L AFT A/C PACK	ECS ACCESS DOOR, 192CL
		M1909	L MID A/C PACK	ECS ACCESS DOOR, 192CL
		M355	L FWD A/C PACK	ECS ACCESS DOOR, 192CL A/C PNEUMATIC TUBES
5	4, 12	M370	L WING INBOARD	LE SLATS - EXTEND FULLY Leading Edge Flaps and Slats Extension, TASK 27-81-00-860-803 - RETRACT Leading Edge Flaps and Slats Retraction, TASK 27-81-00-860-804 ECS ACCESS DOOR, 192CL RAM AIR INLET LIP PANEL, 191HL FORWARD WING TO BODY FAIRING PANEL, 191FL INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 511AB
		M268	L WING OUTBOARD	LE SLATS - EXTEND FULLY Leading Edge Flaps and Slats Extension, TASK 27-81-00-860-803 - RETRACT Leading Edge Flaps and Slats Retraction, TASK 27-81-00-860-804 ECS ACCESS DOOR, 192CL RAM AIR INLET LIP PANEL, 191HL FORWARD WING TO BODY FAIRING PANEL, 191FL INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 511AB
		M1761	L STRUT FWD	FORWARD STRUT FAIRING, 431BT
		M1762	L STRUT AFT	OUTBOARD LEADING EDGE BLOWOUT ACCESS DOOR, 521AB

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(Continued)

LOOP	D742 PINS	EQPT NO.	DETECTOR	OPEN/REMOVE FOR ACCESS
6	21, 24	M270	WHEEL WELL	LANDING GEAR DOWN

SUBTASK 26-18-02-010-002

(3) Remove any airplane parts that are in the way Table 401.

E. Long Sensor Element Removal

**NOTE:** This procedure only applies to the following sensors:

- M268, L WING OUTBOARD
- M269, R WING OUTBOARD
- M270, WHEEL WELL
- M272, FWD KEELBEAM
- M273, AFT KEELBEAM
- M275, AFT - SECTION 47
- M276, AFT - SECTION 48
- M370, L WING INBOARD
- M371, R WING INBOARD
- M347, AFT - SECTION 46
- M348, AFT - SECTION 46
- M355, L FWD A/C PACK
- M356, R FWD A/C PACK
- M1147, AFT - SECTION 46

SUBTASK 26-18-02-020-001

**CAUTION:** WHEN YOU INSTALL THE ELEMENT, DO NOT BEND THE ELEMENT UNTIL THE BEND RADIUS IS LESS THAN ONE INCH. IF THE BEND RADIUS IS LESS THAN ONE INCH, DAMAGE TO THE ELEMENT CAN OCCUR.

(1) Loosen all the mounting clips that hold the element in its position.

SUBTASK 26-18-02-020-002

(2) Remove the element from all the mounting clips.

**HAP 001-013, 015-026, 028-030**

SUBTASK 26-18-02-020-003

(3) Disconnect the connector at the one end of the element.

- (a) Remove the lockwire, G02479 from the connector.
- (b) Disconnect the connector.
- (c) Put covers on the open end of the electrical connectors with tape or caps to prevent damage.

**HAP 031-054, 101-999**

SUBTASK 26-18-02-030-001

(4) FOR WING AND LOWER AFT BODY SENSOR ELEMENTS;  
do these steps to disconnect the connector at one end of the element:

<p>EFFECTIVITY HAP ALL</p>	
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## AIRCRAFT MAINTENANCE MANUAL

### HAP 031-054, 101-999 (Continued)

- (a) Remove the lockwire, G02479 from the connector.
  - (b) Disconnect the connector.
  - (c) Put covers on the open end of the electrical connectors with tape or caps to prevent damage.
- (5) FOR THE MAIN WHEEL WELL SENSOR ELEMENTS;  
do these steps to disconnect the connector at one end of the element:
- (a) Remove the nut [99], washers [100, 102], and screw [103] from the terminal lug.
  - (b) Remove the lockwire, G02479 from the nut [95].
  - (c) Loosen the nut [95].
  - (d) Put covers on the open end of the electrical connectors with tape or caps to prevent damage.

#### HAP ALL

SUBTASK 26-18-02-020-004

- (6) Hold the element carefully to keep it in its position and to prevent bends.

#### HAP 001-013, 015-026, 028-030

SUBTASK 26-18-02-020-005

- (7) Disconnect the connector at the other end of the element.
  - (a) Remove the lockwire, G02479 from the connector.
  - (b) Disconnect the connector.
  - (c) Put covers on the open end of the electrical connectors with tape or caps to prevent damage.
- (8) For wing and aft lower body sensor elements, do these steps to disconnect the Connectors

#### HAP 031-054, 101-999

SUBTASK 26-18-02-030-002

- (9) FOR WING AND LOWER AFT BODY SENSOR ELEMENTS;  
Disconnect the connector at the other end of the element.
  - (a) Remove the lockwire, G02479 from the connector.
  - (b) Disconnect the connector.
  - (c) Put covers on the open end of the electrical connectors with tape or caps to prevent damage.
- (10) FOR THE MAIN WHEEL WELL SENSOR ELEMENTS;  
do these steps to disconnect the connector at one end of the element:
  - (a) Remove the nut [99], washers [100, 102], and screw [103] from the terminal lug.
  - (b) Remove the lockwire, G02479 from the nut [95].
  - (c) Loosen the nut [95].
  - (d) Put covers on the open end of the electrical connectors with tape or caps to prevent damage.

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SUBTASK 26-18-02-020-006

(11) Carefully remove the element.

(a) FOR THE AFT KEEL BEAM ELEMENT;

Do these steps:

- 1) Tie a cord to the forward end of the element. Make sure the cord is longer than the element.
- 2) Slowly pull the element aft through the keel beam. Use the access holes below the keel beam to help guide the element through the holes in the structure.
- 3) Remove the element from the cord and leave the cord in its position inside the keel beam.

SUBTASK 26-18-02-550-001

(12) Carefully roll the element into a 6 in. (15.2 cm) diameter coil. Use tape if it is necessary.

### F. Looped Sensor Removal

**NOTE:** This procedure only applies to the following sensors:

M1910, R MID A/C PACK

M1912, R AFT A/C PACK

M1763, R FWD STRUT

M1761, L STRUT FWD

M1762, L STRUT AFT

M1764, R AFT STRUT

M1909, L MID A/C PACK

M1911, L AFT A/C PACK

SUBTASK 26-18-02-020-007

(1) Remove the nut, washers and bolt securing each lead to the terminals.

SUBTASK 26-18-02-020-008

(2) Remove the sensor element from the clamp.

- (a) Loosen the screw securing the clamp, and release the sensor element.
- (b) Remove the grommet from the sensor element.

**NOTE:** Keep the grommet to reuse during installation procedure.

SUBTASK 26-18-02-020-009

(3) Disconnect the sensor terminals.

- (a) Remove the lockwire, G02479 from the nuts, do this task: Lockwires Removal, TASK 20-10-44-000-801.
- (b) Remove the nut securing each terminal to the bracket.

SUBTASK 26-18-02-020-010

(4) Remove the sensor from the bracket.

————— END OF TASK —————

EFFECTIVITY  
HAP ALL

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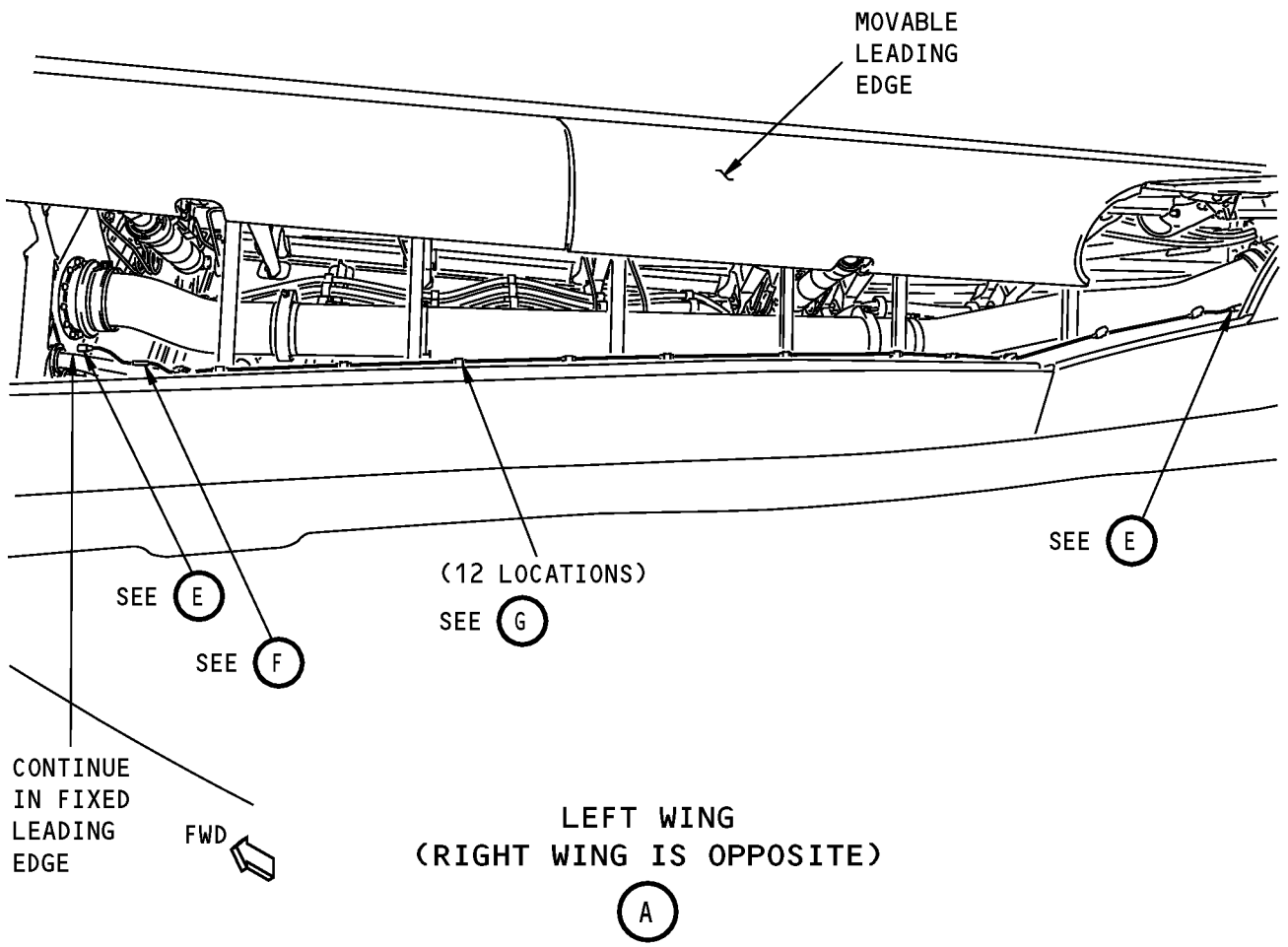
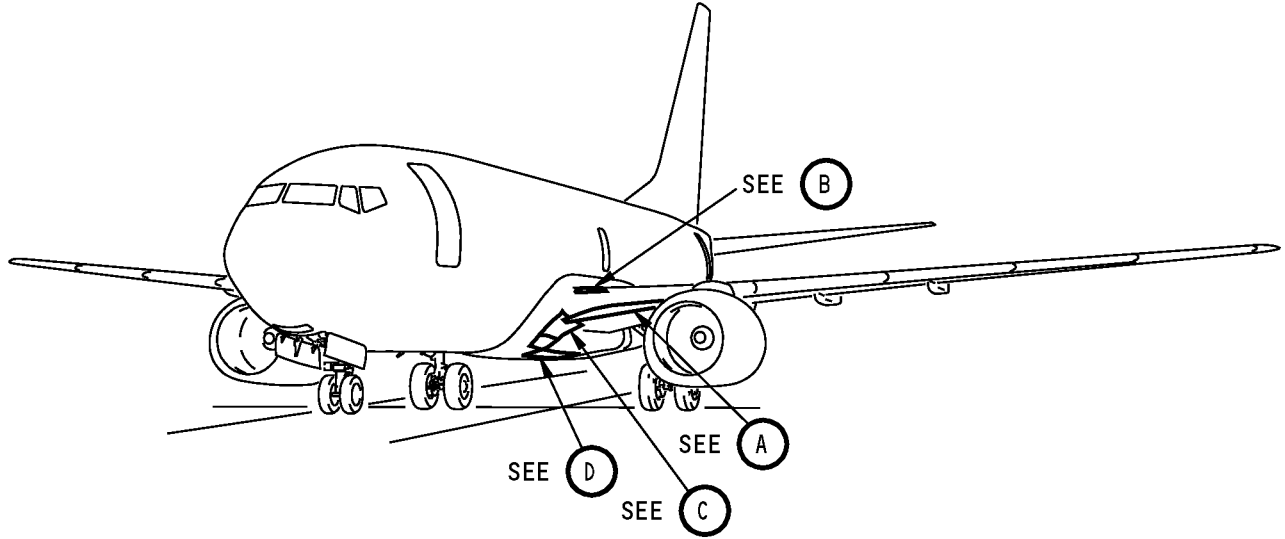
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AIRCRAFT MAINTENANCE MANUAL



Wing and Lower Aft Body Overheat Detectors Installation  
Figure 401 (Sheet 1 of 4)/26-18-02-990-801

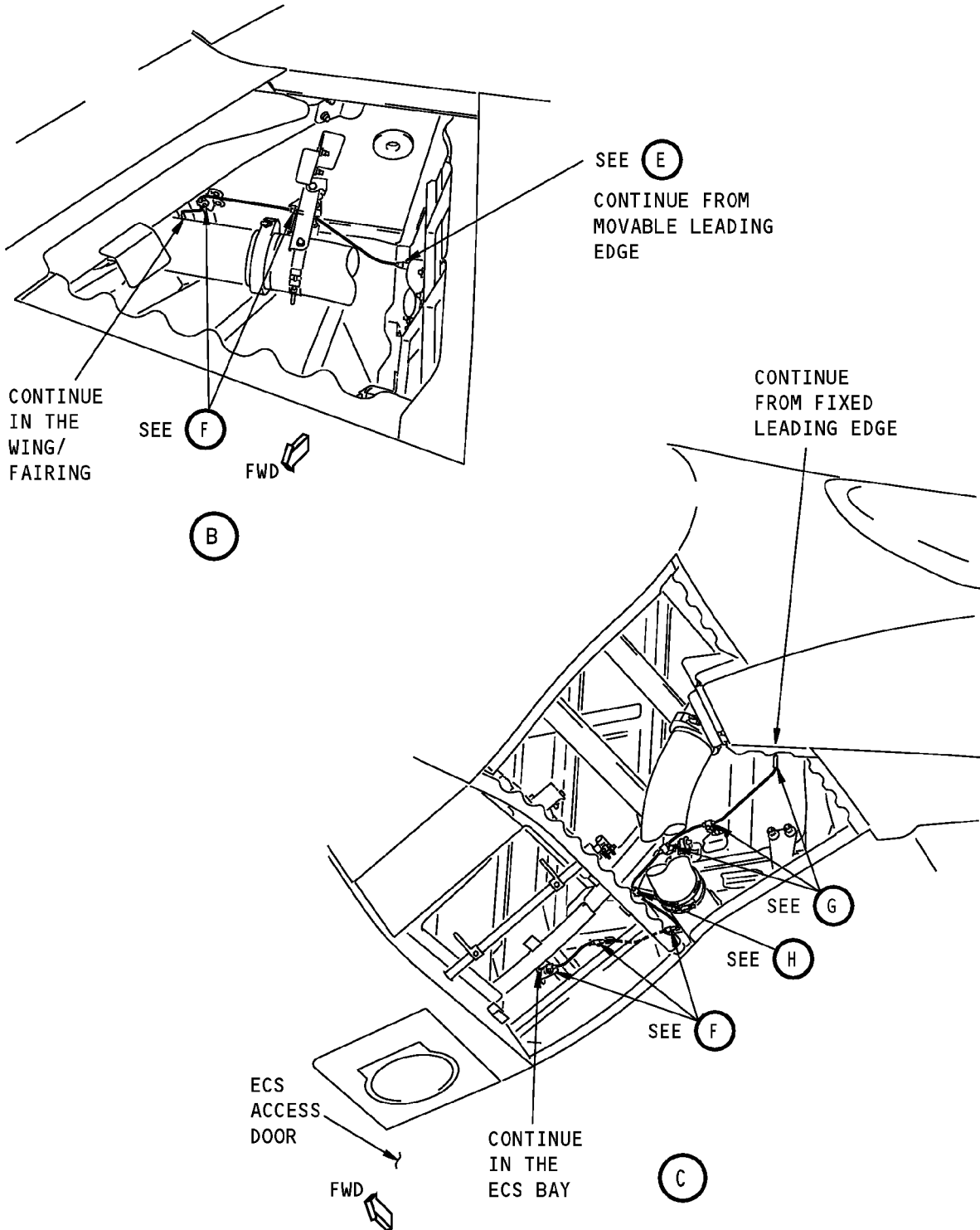
EFFECTIVITY  
HAP ALL

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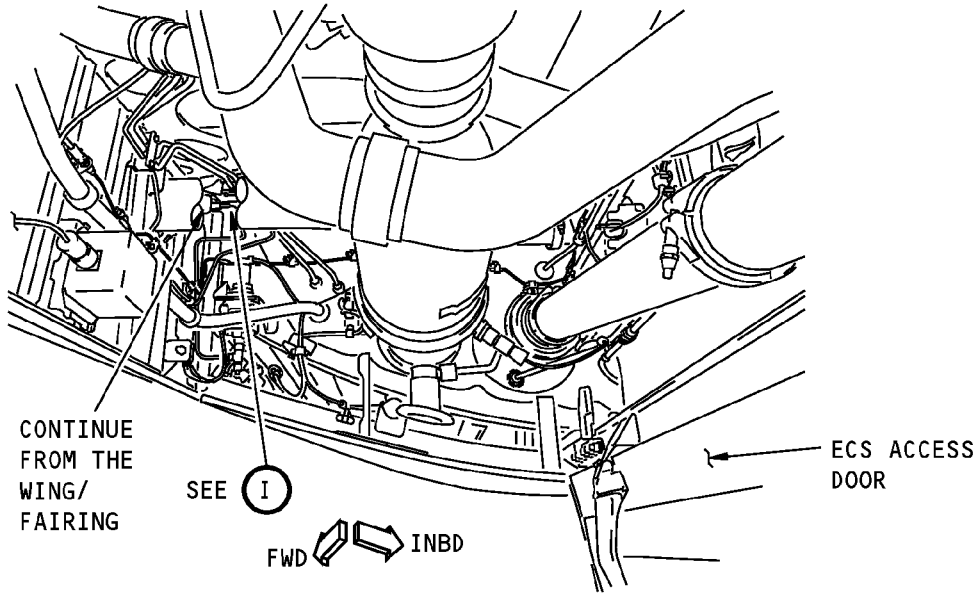
**737-600/700/800/900  
AIRCRAFT MAINTENANCE MANUAL**



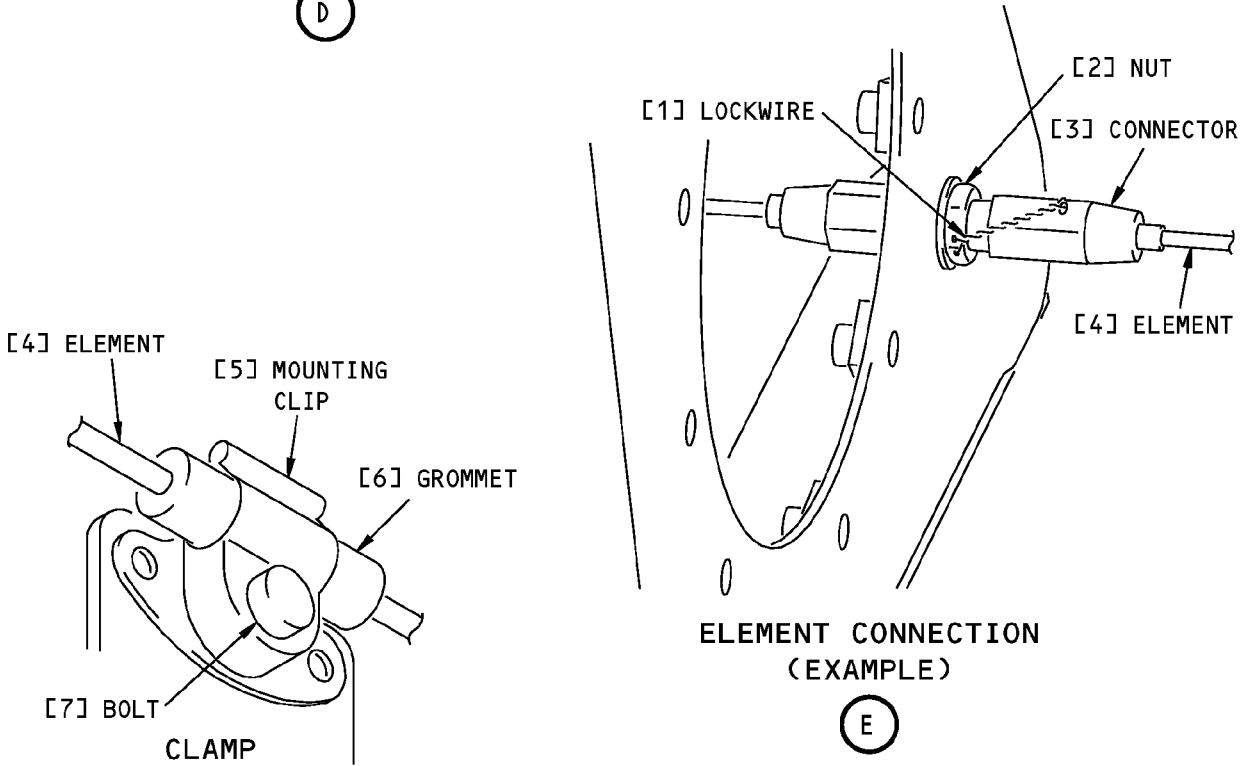
**Wing and Lower Aft Body Overheat Detectors Installation  
Figure 401 (Sheet 2 of 4)/26-18-02-990-801**

EFFECTIVITY
HAP ALL

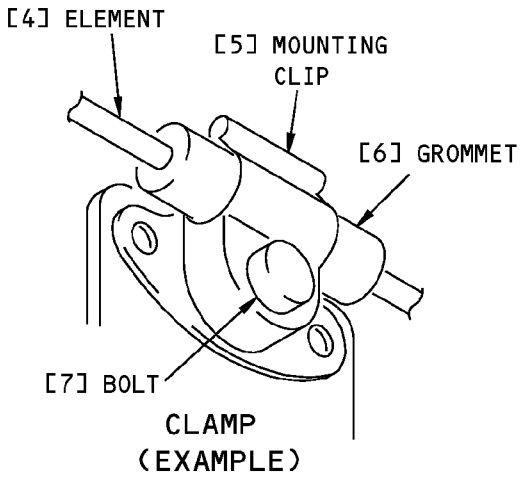
**26-18-02**



D



E

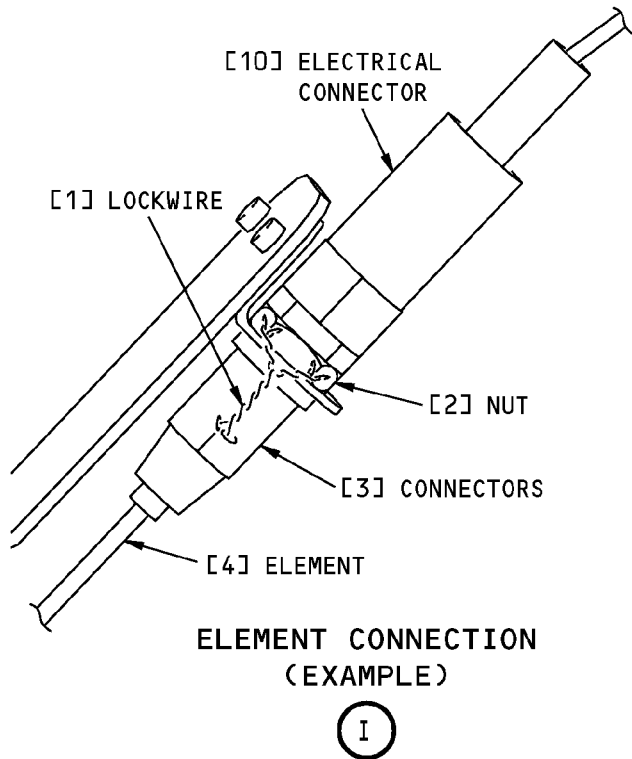
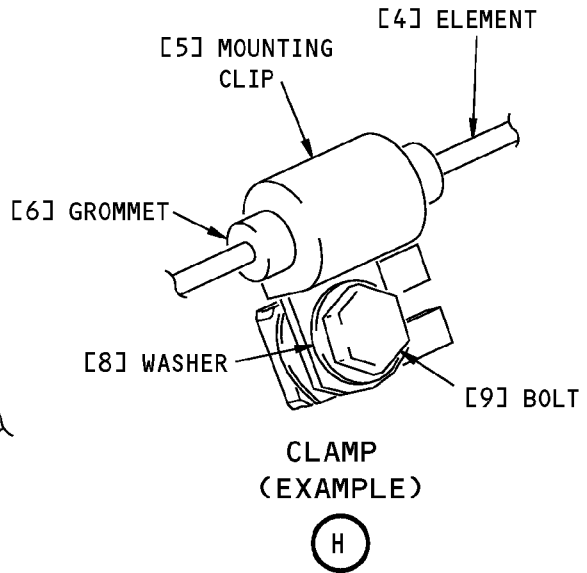
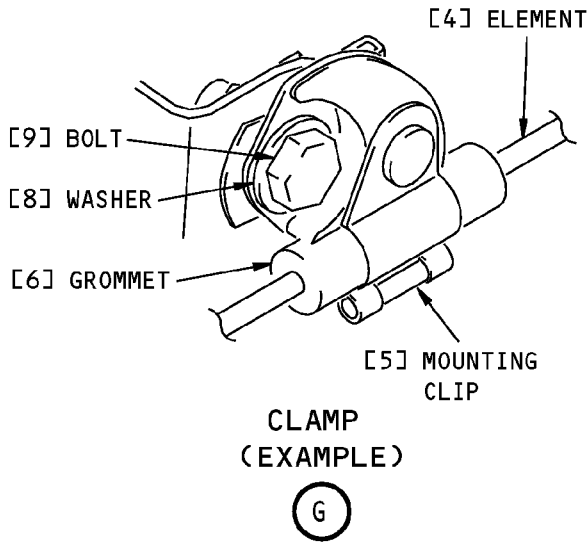


F

**Wing and Lower Aft Body Overheat Detectors Installation**  
Figure 401 (Sheet 3 of 4)/26-18-02-990-801

EFFECTIVITY
HAP ALL

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**Wing and Lower Aft Body Overheat Detectors Installation**  
**Figure 401 (Sheet 4 of 4)/26-18-02-990-801**

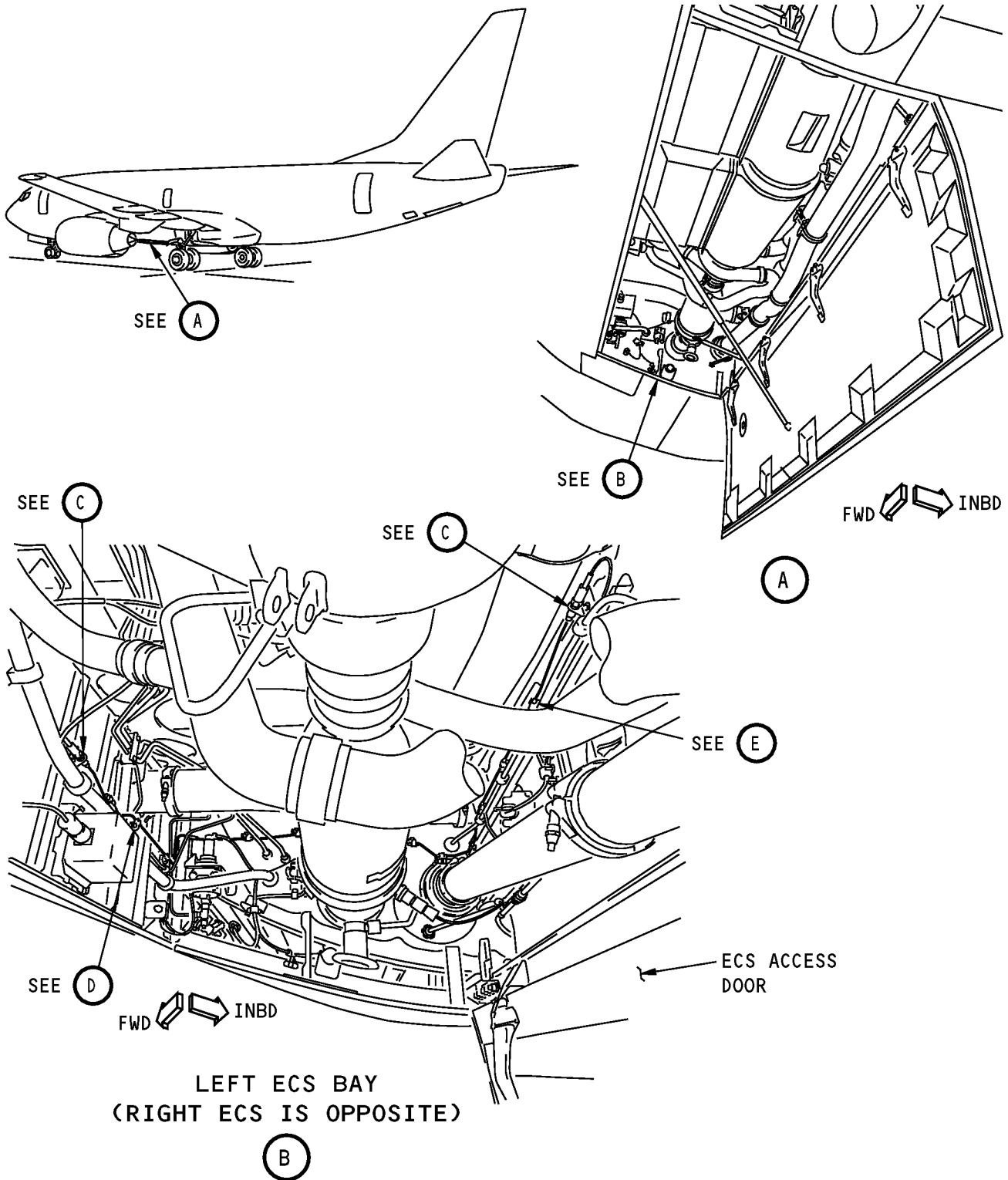
EFFECTIVITY  
HAP ALL

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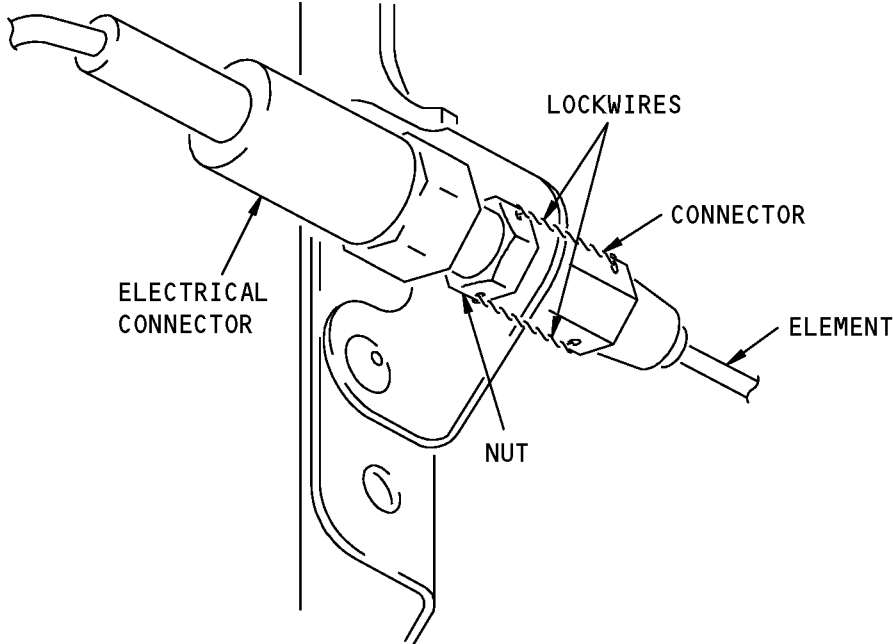
**LEFT ECS BAY  
(RIGHT ECS IS OPPOSITE)**

**B**

**A/C Pack Overheat Detectors Installation  
Figure 402 (Sheet 1 of 2)/26-18-02-990-802**

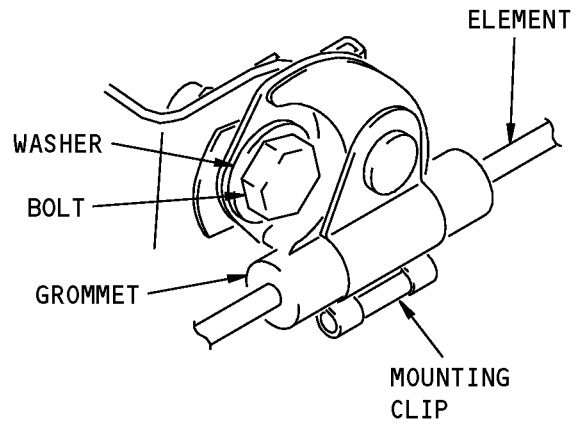
EFFECTIVITY
HAP ALL

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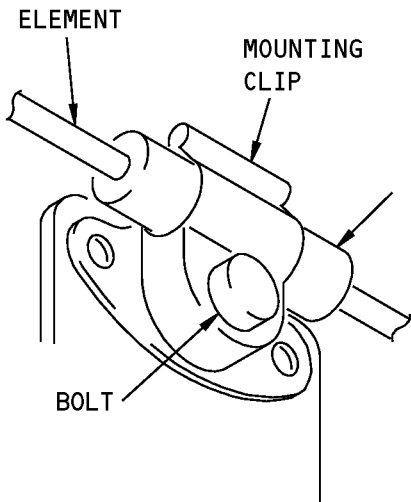
**ELEMENT CONNECTION  
(EXAMPLE)**

**C**



**CLAMP  
(EXAMPLE, 7 LOCATIONS)**

**D**



**CLAMP  
(EXAMPLE, 5 LOCATIONS)**

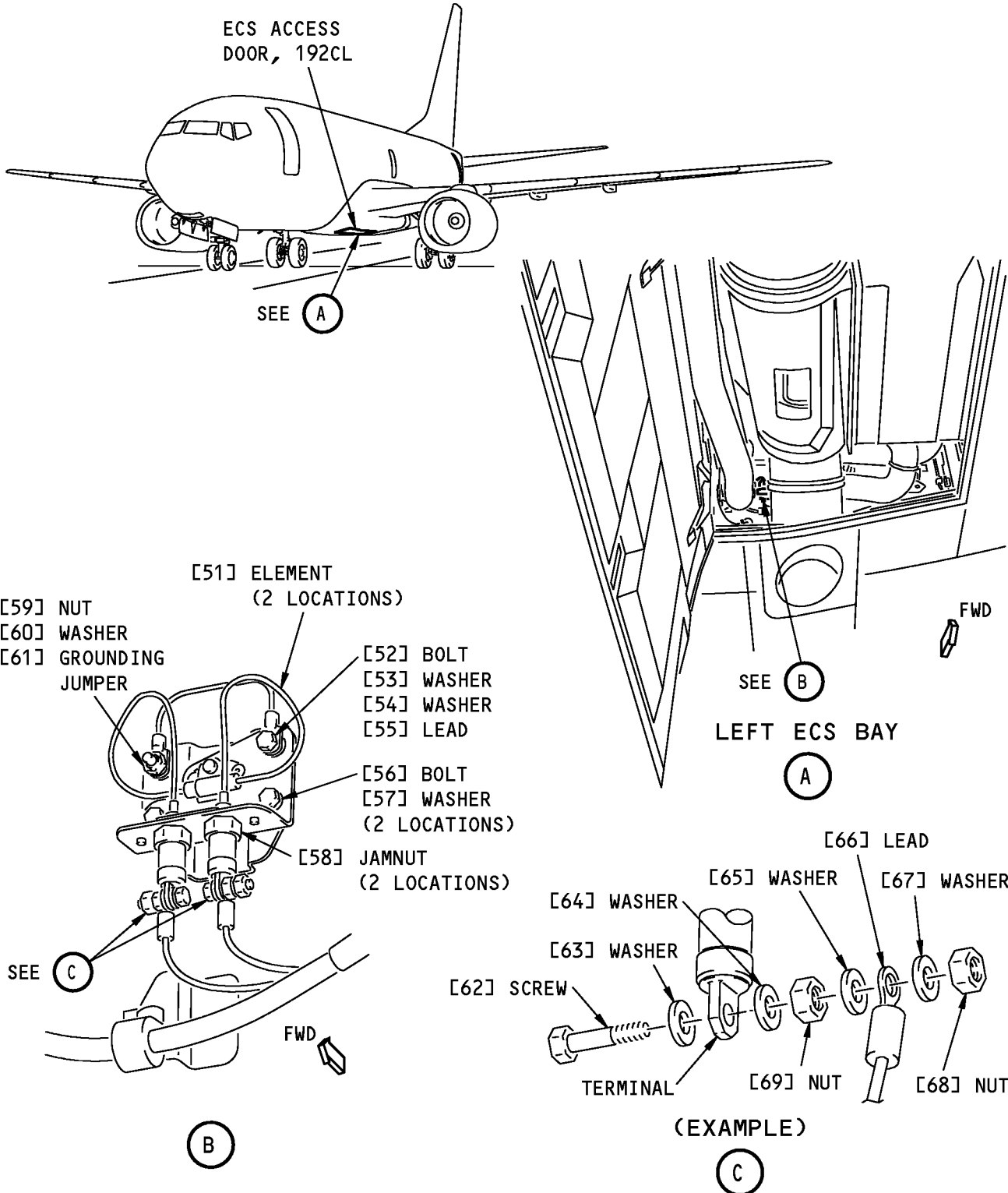
**E**

**A/C Pack Overheat Detectors Installation  
Figure 402 (Sheet 2 of 2)/26-18-02-990-802**

EFFECTIVITY
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**AIRCRAFT MAINTENANCE MANUAL**

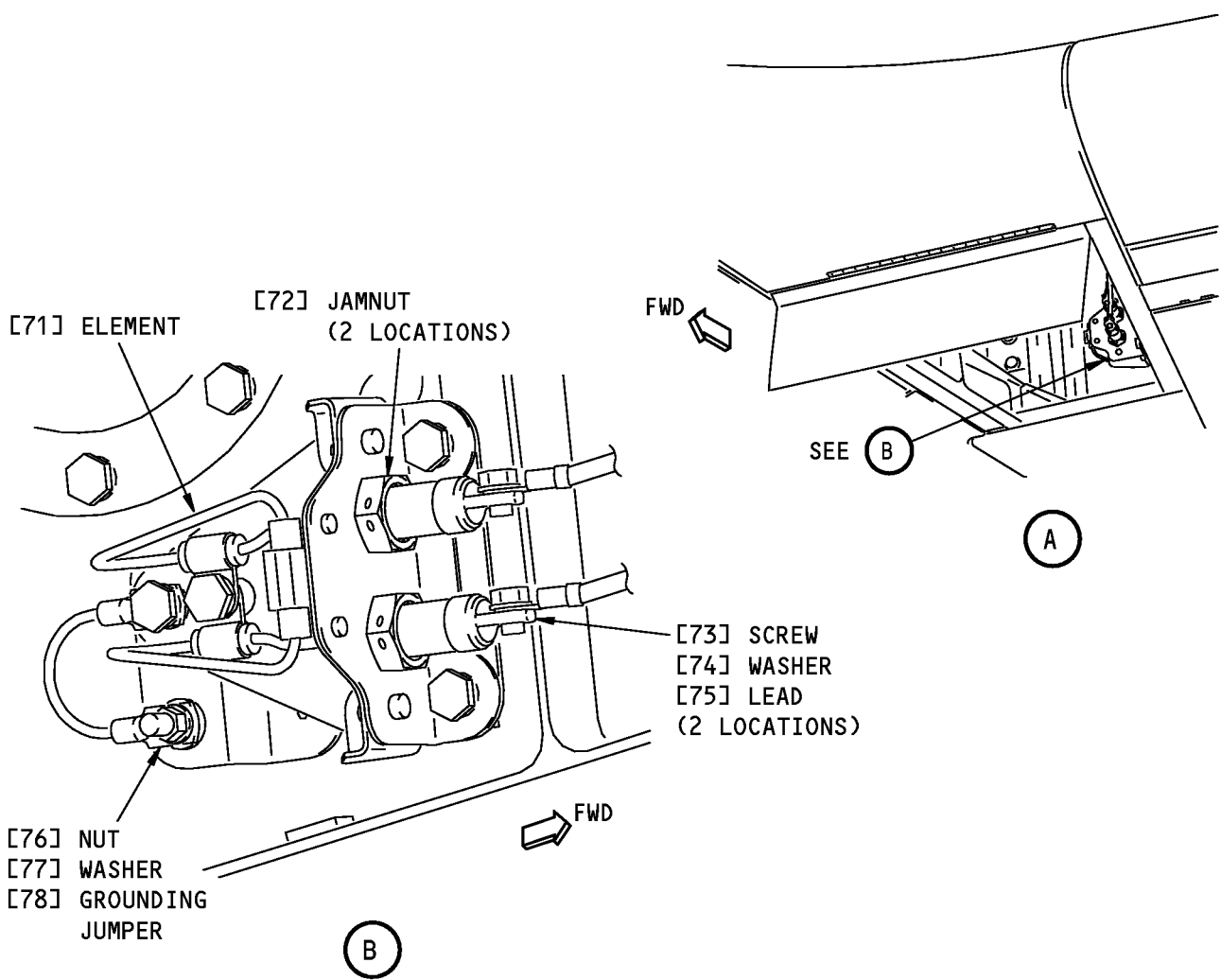
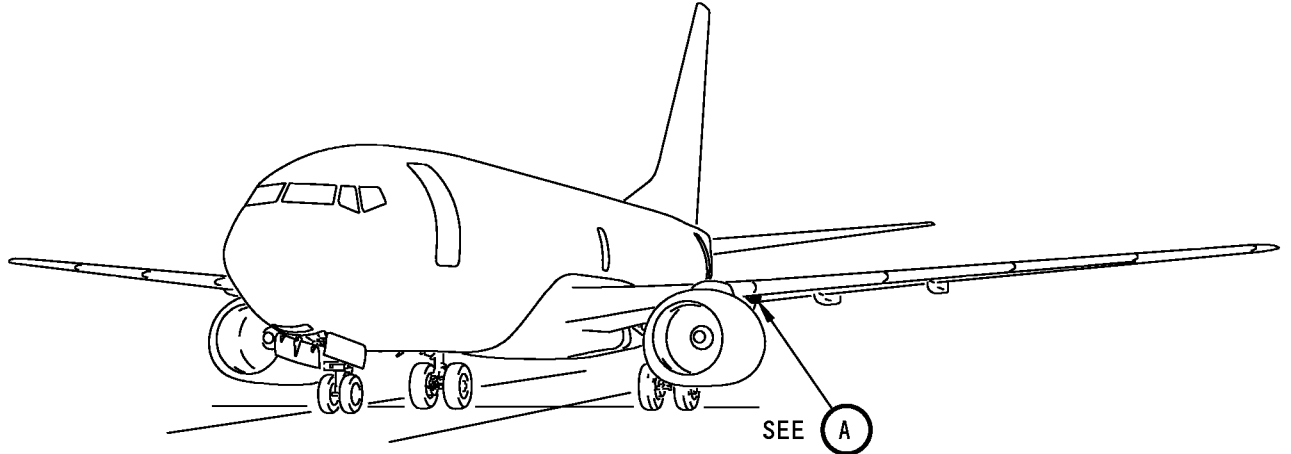


**Mid and Aft A/C Pack Overheat Detectors Installation**  
**Figure 403/26-18-02-990-803**

EFFECTIVITY
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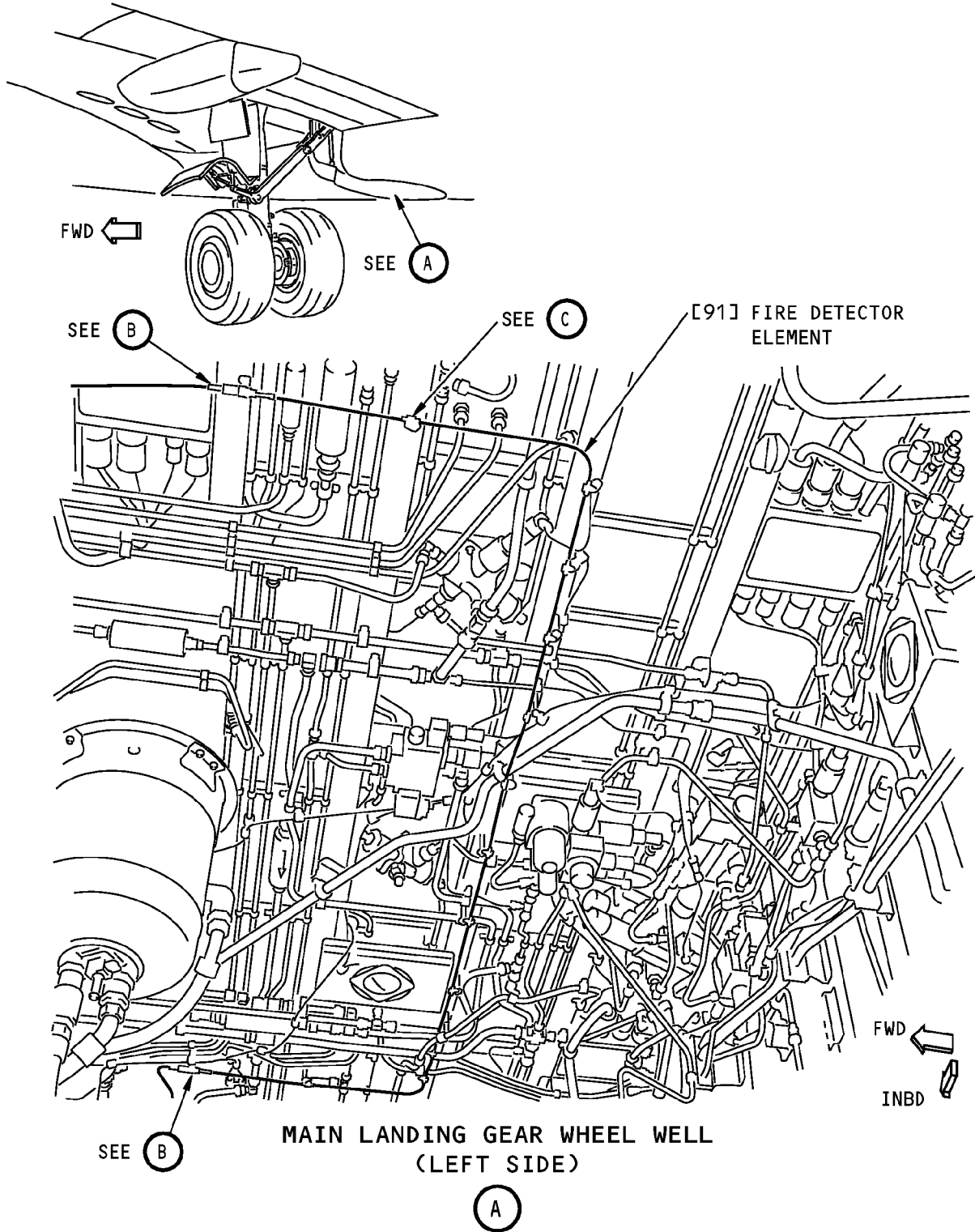
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**Strut Overheat Detectors Installation  
Figure 404/26-18-02-990-804**

EFFECTIVITY
HAP ALL

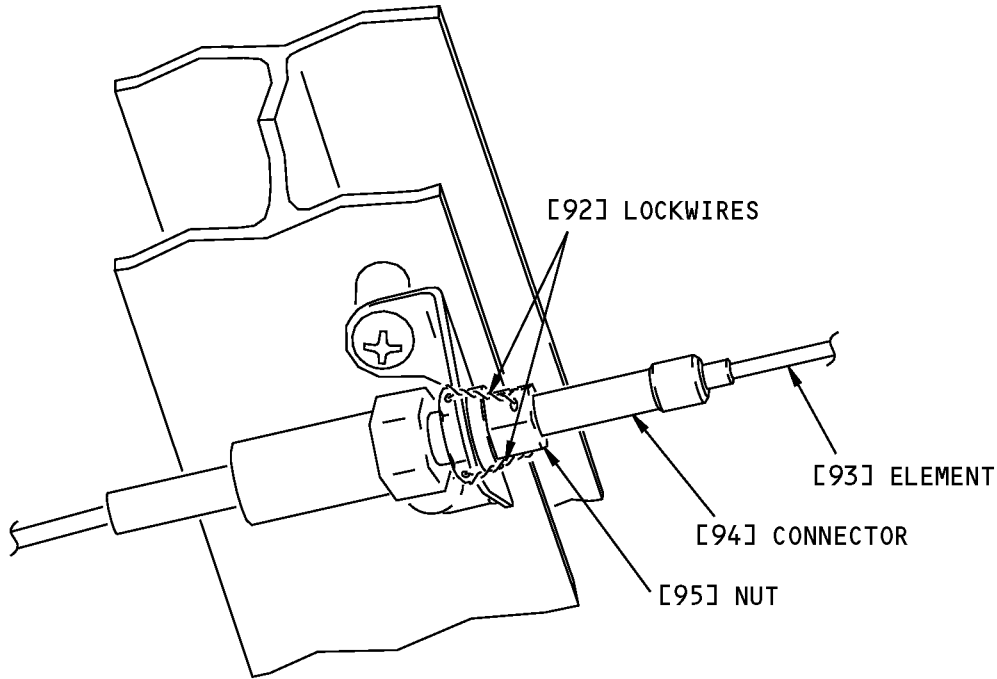
**26-18-02**



**Wheel Well Overheat Detection Sensing Element Installation  
Figure 405 (Sheet 1 of 3)/26-18-02-990-806**

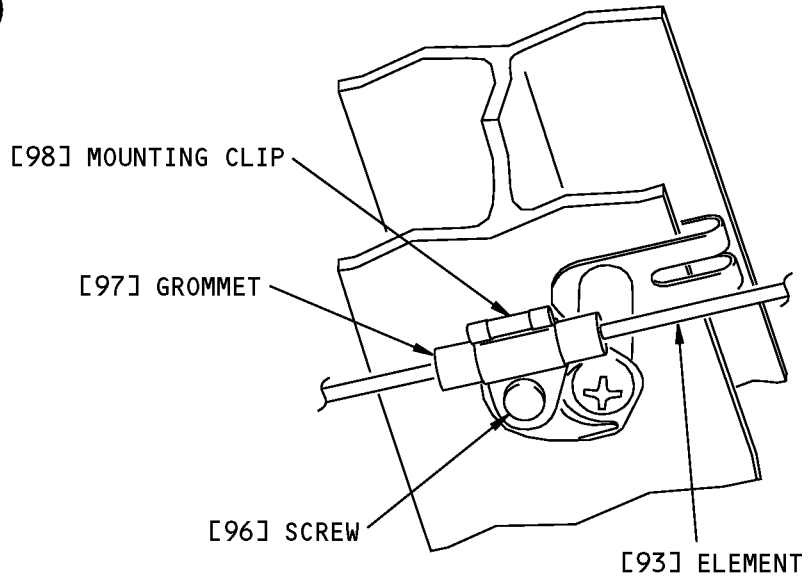
EFFECTIVITY  
HAP ALL

**26-18-02**



(EXAMPLE)

**B**



(EXAMPLE)

**C**

**Wheel Well Overheat Detection Sensing Element Installation  
Figure 405 (Sheet 2 of 3)/26-18-02-990-806**

**EFFECTIVITY**  
HAP 001-013, 015-026, 028-030; AIRPLANES WITHOUT  
MAIN WHEEL WELL CORROSION PROTECTION

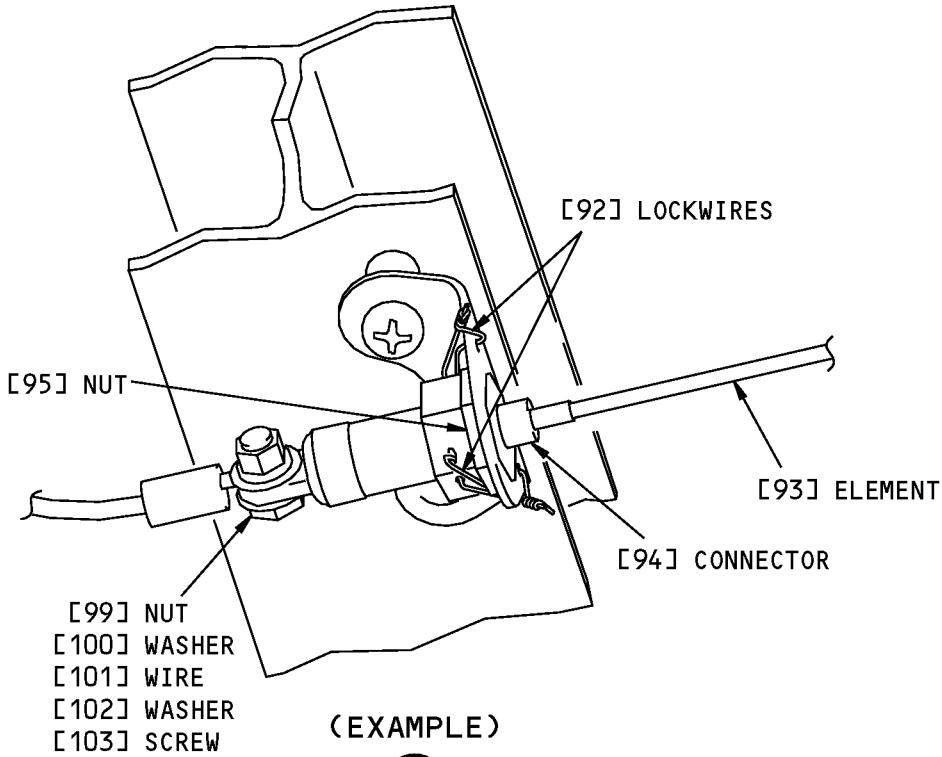
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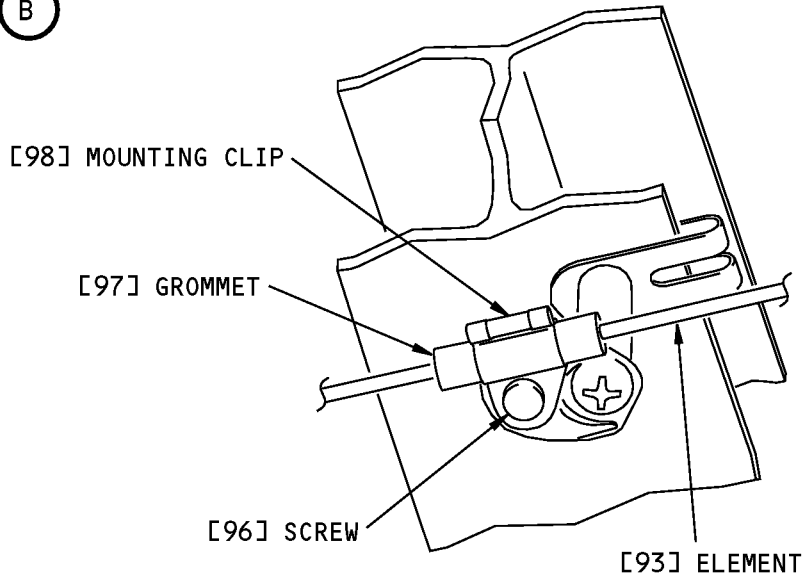
**26-18-02**

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B



(EXAMPLE)

C

**Wheel Well Overheat Detection Sensing Element Installation  
Figure 405 (Sheet 3 of 3)/26-18-02-990-806**

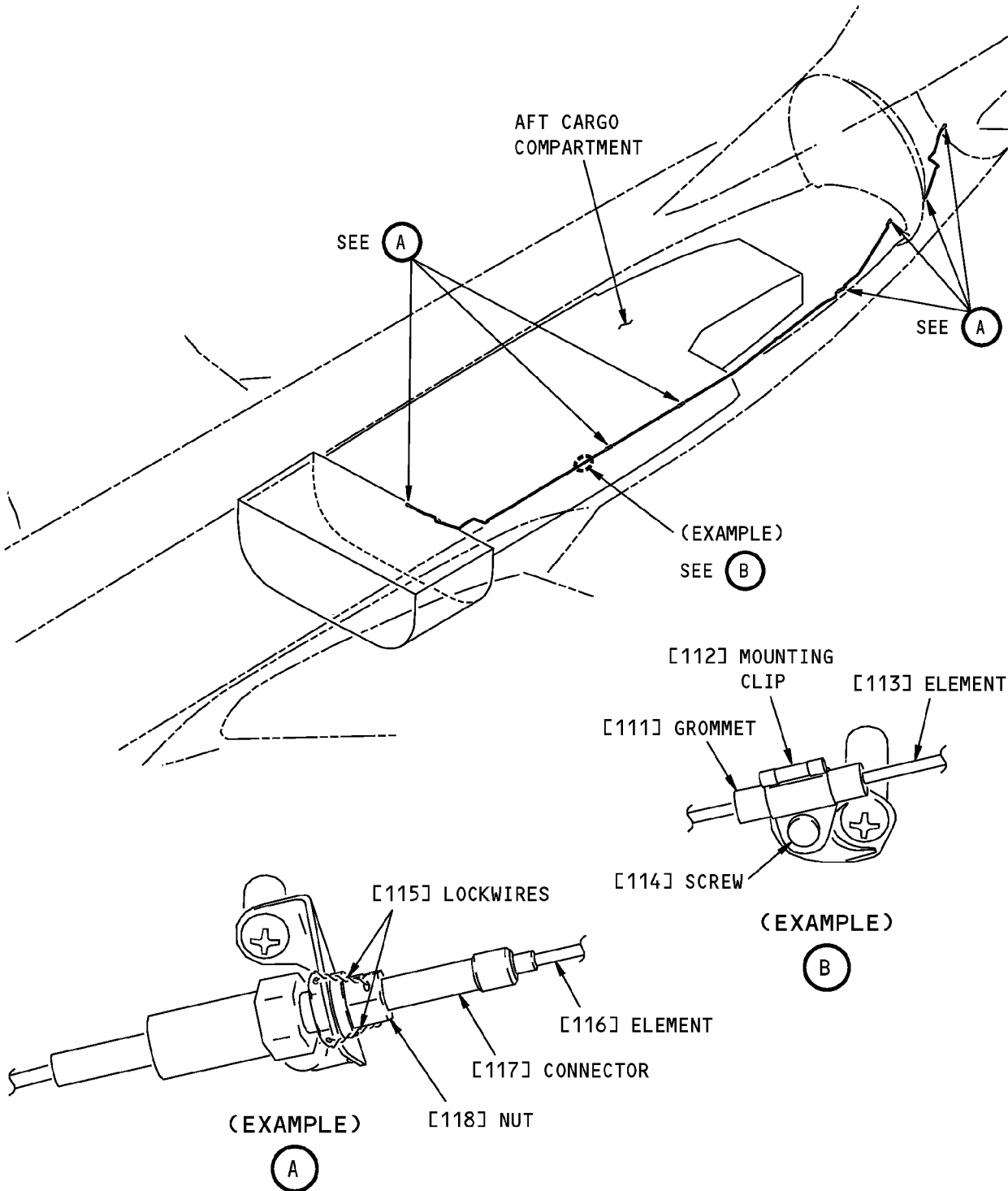
**EFFECTIVITY**  
HAP 031-054, 101-999; AIRPLANES WITH MAIN WHEEL  
WELL CORROSION PROTECTION

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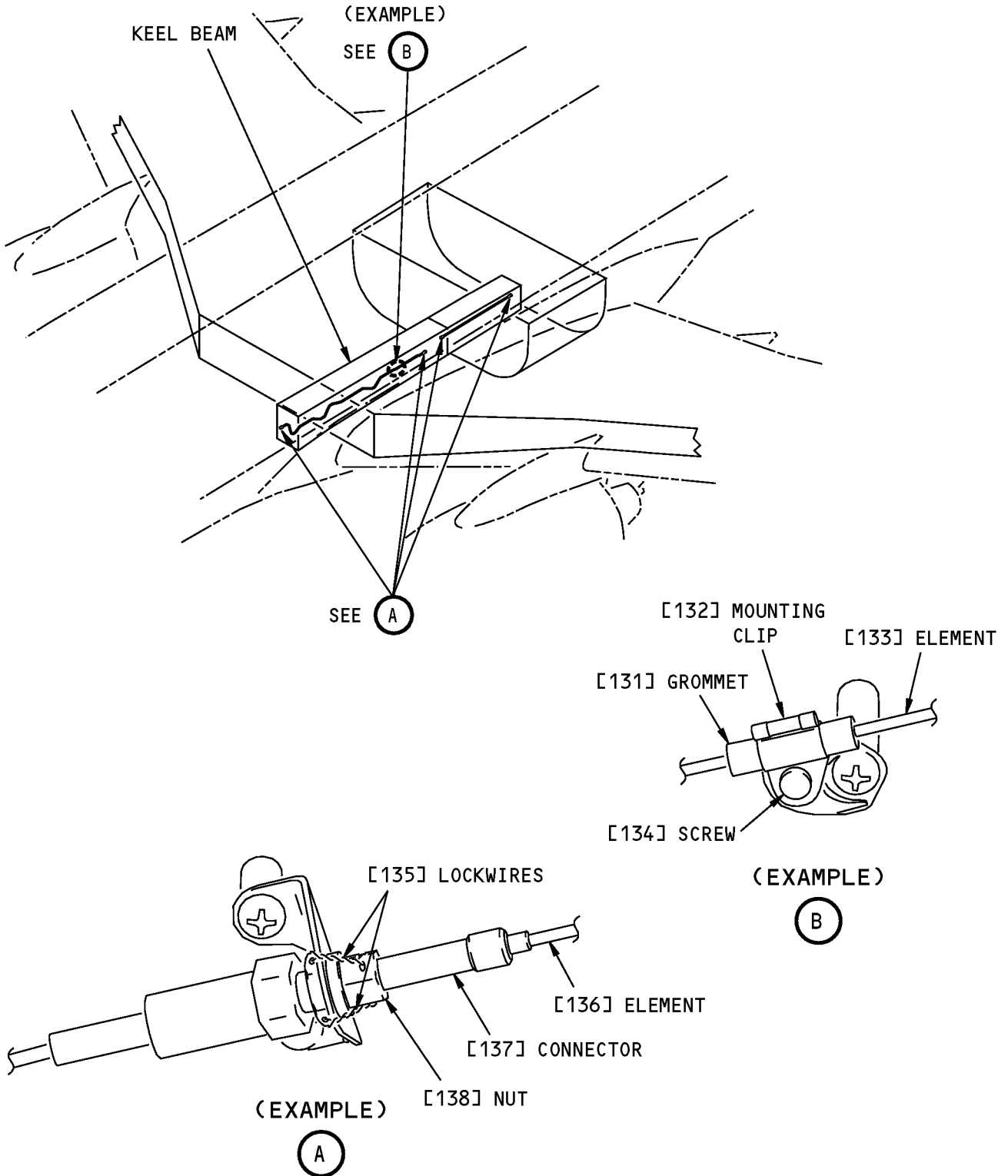
**Aft Cargo Overheat Detectors Installation  
Figure 406/26-18-02-990-807**

EFFECTIVITY
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**Keel Beam Overheat Detectors Installation**  
**Figure 407/26-18-02-990-808**

EFFECTIVITY  
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#### TASK 26-18-02-400-801

#### 3. Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Installation

(Figure 401, Figure 402, Figure 403, Figure 404, Figure 405, Figure 406, Figure 407)

##### A. References

Reference	Title
20-10-44-400-801	Lockwires Installation (P/B 401)
20-40-11-760-801	Electrical Bonding (P/B 201)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)
SWPM 20-60-03	Special Protection of Electrical Connectors

##### B. Consumable Materials

Reference	Description	Specification
A00230	Compound - Electrical Insulating Coating	BMS 5-37
B00130	Alcohol - Isopropyl	TT-I-735

##### C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
413	Engine 1 - Fan Cowl, Left
423	Engine 2 - Fan Cowl, Left

##### D. Prepare for the Installation

SUBTASK 26-18-02-860-002

- (1) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

SUBTASK 26-18-02-010-003

- (2) Make sure the applicable access doors and panels are open as shown in Table 401, Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Removal, TASK 26-18-02-000-801.

SUBTASK 26-18-02-010-004

- (3) Make sure you remove the airplane parts that are in the way as shown in Table 401, Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Removal, TASK 26-18-02-000-801.

##### E. Long Sensor Element Installation

**NOTE:** This procedure only applies to the following sensors:

- M268, L WING OUTBOARD
- M269, R WING OUTBOARD
- M270, WHEEL WELL
- M272, FWD KEELBEAM

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M273, AFT KEELBEAM  
M275, AFT - SECTION 47  
M276, AFT - SECTION 48  
M370, L WING INBOARD  
M371, R WING INBOARD  
M347, AFT - SECTION 46  
M348, AFT - SECTION 46  
M355, L FWD A/C PACK  
M356, R FWD A/C PACK  
M1147, AFT - SECTION 46

SUBTASK 26-18-02-420-001

**CAUTION:** DO NOT TURN, PULL, OR ATTACH THE SENSOR ELEMENT WITH A CLAMP. DO NOT MAKE SERVICEABLE KINKS, BENDS, OR DENTS STRAIGHT. IF YOU MAKE SERVICEABLE KINKS, BENDS, OR DENTS STRAIGHT, DAMAGE CAN OCCUR.

(1) Carefully put the element in its position.

**NOTE:** This step will require two people.

- (a) Carefully unwind the element and make sure there are no kinks.
- (b) Carefully bend the element to fit into its approximate position.
- (c) Carefully put and hold the element in its position.
- (d) FOR THE AFT KEEL BEAM ELEMENT;

Do these steps:

- 1) Tie the existing cord to the aft end of the new element.
- 2) Slowly pull the forward through the keel beam. Use the access holes below the keel beam to help guide the element through the holes in the structure.
- 3) Remove the cord from the element.

SUBTASK 26-18-02-420-011

(2) Put the element into each of the mounting clips.

- (a) Install the grommet on the sensor element so each is in the center of the mounting clip and the slit of each grommet is on the faces outside of the nearest bend.
- (b) Install the grommets in each mounting clip.
- (c) Mounting clips and grommets must attach to the element tightly.

**NOTE:** If the used sensor element is in its position as a reference, remove it.

- (d) Bend the element equally between each mounting clip to take up any excess length of the element.
- (e) Make sure the minimum clearance between the element and structure is 0.50 inch except at mounting clips.

SUBTASK 26-18-02-420-002

(3) Connect the electrical connectors.

- (a) Remove the caps from the end fittings.

SUBTASK 26-18-02-420-012

(4) Examine the connector at each end of the heat detector for corrosion.

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- (a) If corrosion is present, replace the connector.
- (b) Apply corrosion compound per SWPM 20-60-03.
- (c) Remove any excess corrosion compound.

SUBTASK 26-18-02-100-002

- (5) Clean the mating surfaces of the electrical connector and the element with alcohol, B00130 or equivalent.

SUBTASK 26-18-02-390-001

- (6) Apply DC4 sealant to the internal components of the connectors and the ends of the detector elements.

SUBTASK 26-18-02-420-003

- (7) Connect the electrical connector.
  - (a) Tighten the jamnuts on the end fittings from 50 in-lb (5.6 N·m) – 60 in-lb (6.8 N·m).
  - (b) Install a the lockwire on the electrical connector, per BAC5018, double twist method.

### HAP 031-054, 101-999

- (c) FOR THE MAIN WHEEL WELL SENSOR ELEMENTS;  
Attach the terminal lugs with the nut [99], washers [100, 102], and screw [103].

### HAP ALL

SUBTASK 26-18-02-860-004

- (8) Repeat for the other connector and element.

#### F. Looped Sensor Installation

**NOTE:** This procedure only applies to the following sensors:

M1910, R MID A/C PACK  
M1912, R AFT A/C PACK  
M1763, R FWD STRUT  
M1761, L STRUT FWD  
M1762, L STRUT AFT  
M1764, R AFT STRUT  
M1909, L MID A/C PACK  
M1911, L AFT A/C PACK

SUBTASK 26-18-02-100-001

- (1) Clean the mounting surfaces of the bracket and sensor element.

SUBTASK 26-18-02-420-005

- (2) Position the detector in the bracket and clamp.

SUBTASK 26-18-02-420-006

- (3) Secure each sensor terminal with nut.
  - (a) Tighten each nut 80 in-lb (9.0 N·m) — 100 in-lb (11.3 N·m).
  - (b) Make sure the resistance between the detector element connector and the bracket is less than 10 milliohms, do this task: Electrical Bonding, TASK 20-40-11-760-801.
  - (c) Install lockwire on the nuts, do this task: Lockwires Installation, TASK 20-10-44-400-801.

SUBTASK 26-18-02-420-007

- (4) Install the sensor element in the clamp.

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- (a) Install the grommet on the sensor element.
- (b) Position the grommet in the clamp.
- (c) Tighten the screw to secure the clamp.

SUBTASK 26-18-02-420-008

- (5) Attach each lead to the terminal with a bolt, washers, and nut.
  - (a) Tighten each nut.

SUBTASK 26-18-02-914-001

- (6) Apply compound, A00230 to the terminal of the overheat loop sensor.

**G. Installation Test**

SUBTASK 26-18-02-860-003

- (1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY

SUBTASK 26-18-02-750-001

- (2) Make sure the electrical bond between the element connector shell and the primary structure is less than 0.005 ohm, do this task: Electrical Bonding, TASK 20-40-11-760-801.

SUBTASK 26-18-02-420-010

- (3) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

**H. Put the Airplane Back to Its Usual Condition**

SUBTASK 26-18-02-410-001

- (1) Install any airplane parts that were removed, Table 401, Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Removal, TASK 26-18-02-000-801.

SUBTASK 26-18-02-410-002

- (2) Close the applicable access doors and panels, Table 401, Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Removal, TASK 26-18-02-000-801.

————— **END OF TASK** —————

<p><b>EFFECTIVITY</b></p> <p><b>HAP ALL</b></p>
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737-600/700/800/900

AIRCRAFT MAINTENANCE MANUAL

WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - ADJUSTMENT/TEST

1. General

- A. This procedure contains the test of the sensing elements for the wing, wheel well and lower aft body overheat detection system.
B. Use a wire and fitting between the element and fitting and the test equipment. Attach the test leads to the center contacts or the center contact and the outer shell of the wire end fittings, as applicable.

TASK 26-18-02-720-803

2. Wing, Wheel Well and Lower Aft Body Overheat Sensing Element Test

A. General

- (1) Do a test of each sensing loop only when all of the units in the system are stable at ambient temperature. If you cannot complete the tests that follow on an element, replace the element.

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Table with 2 columns: Reference, Description. Row 1: COM-1741, Meter - LCR (Inductance, Capacitance, Resistance) (Part #: 875B, Supplier: 08098, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -ALL, -BBJ) (Part #: 878A, Supplier: 08098, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -ALL, -BBJ) (Part #: MODEL 878, Supplier: 08098, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Table with 2 columns: Zone, Area. Row 1: 117, Electrical and Electronics Compartment - Left. Row 2: 118, Electrical and Electronics Compartment - Right. Row 3: 413, Engine 1 - Fan Cowl, Left. Row 4: 423, Engine 2 - Fan Cowl, Left.

D. Sensing Element Continuity Test

SUBTASK 26-18-02-865-005

- (1) Disconnect the connectors from the loop.

SUBTASK 26-18-02-865-006

- (2) Connect the LCR meter (Inductance, Capacitance, Resistance), COM-1741 to the center of the conductor at each end of the loop. This procedure does a test of center conductor continuity.

NOTE: A standard digital voltmeter can be used for the center conductor resistance.

- (a) Measure the center conductor resistance. Ref Table 501

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Table 501/26-18-02-993-806 Sensing Loop Test Data

FENWAL ALARM/FAULT CODES	LOOP CONNECTOR/PINS		LOOP CENTER CONDUCTOR RESISTANCE ( < 130 ° F)	SENSORS
14, 12, 10 (zone 1, loop 1)	D742, pin 4	D742, pin 12	12 ohms max	M370, M268, M1761, M1762
24, 22, 20 (zone 2, loop 2)	D742, pin 2	D742, pin 8	6 ohms max	M1911, M1909, M355
34, 32, 30 (zone 3, loop 3)	D742, pin 9	D742, pin 29	6 ohms max	M272, M273
44, 42, 40 (zone 4, loop 4)	D742, pin 13	D742, pin 27	12 ohms max	M276, M275, M347, M1147, M348
64, 62, 60 (zone 6, loop 6)	D742, pin 10	D742, pin 11	12 ohms max	M1763, M1764, M269, M371, M356, M1910, M1912
84, 84 (wheel well, loop 8)	D742, pin 21	D742, pin 24	6 ohms max	M270

E. Sensing Element Pin to Case Test

SUBTASK 26-18-02-720-002

- (1) Disconnect the connectors from both ends of the sensors.

SUBTASK 26-18-02-720-001

- (2) Connect the LCR meter (Inductance, Capacitance, Resistance), COM-1741 to the center of the conductor and to the sheath of the sensor tube.

**CAUTION:** DO NOT USE A DC OHMMETER OR A MULTIMETER FOR RESISTANCE CHECKS ON THE SENSOR LOOPS IN THE OVERHEAT DETECTION SYSTEM. THE SENSOR LEVEL SETTINGS CAN MOVE TO A HIGHER VALUE. THIS CAN CAUSE AN OVERHEAT CONDITION THAT WILL NOT BE DETECTED.

- (a) Measure the resistance from the center of the conductor to the case ground ( outer side of the element). Set the LCR meter to either 120Hz (preferable) or 1KHz frequency setting. Reference Table 502

Table 502/26-18-02-993-807 Sensing Element Conductance and Resistance Center Conductor to Case Test Data

SENSOR	SENSOR PART NO.	MAXIMUM CONDUCTANCE, MICRO-SIEMENS	MINIMUM RESISTANCE TO GROUND (MEGOHMS)	MAXIMUM CONTINUITY, (MILLIOHMS)
M371	35574-4-255	0.74	1.35	563.00
M370	35574-4-255	0.74	1.35	563.00
M356	35594-4-255	0.94	1.06	703.00
M355	35594-4-255	0.94	1.06	703.00
M348	35658-4-255	1.58	0.63	1151.00
M347	35646-2-255	1.46	0.68	1067.00
M276	35555-4-255	0.55	1.82	423.00

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<b>SENSOR</b>	<b>SENSOR PART NO.</b>	<b>MAXIMUM CONDUCTANCE, MICRO-SIEMENS</b>	<b>MINIMUM RESISTANCE TO GROUND (MEGOHMS)</b>	<b>MAXIMUM CONTINUITY, (MILLIOHMS)</b>
M275	35575-2-255	0.75	1.33	570.00
	35599-2-255	0.99	1.01	738.00
M273	35555-4-255	0.55	1.82	423.00
M272	35626-4-255	1.26	0.79	927.00
M270	04-90010-110D	1.10	0.91	660.00
	35610-4-400	1.10	0.909	815.00
	35614-4-400	1.14	0.877	843.00
M269	35599-2-255	0.99	1.01	738.00
M268	35599.-2-255	0.99	1.01	738.00
M1912	35712-80 (255)	0.12	0.833	885.00
M1911	35712-80 (255)	0.12	0.833	885.00
M1910	35712-80 (255)	0.12	0.833	885.00
M1909	35712-80 (255)	0.12	0.833	885.00
M1764	35712-75 (310)	0.60	0.417	820.00
M1763	35712-79 (310)	0.60	1.67	820.00
M1762	35712-75 (310)	0.60	0.417	820.00
M1761	35712-79 (310)	0.60	1.67	820.00
M1147	35675-2-255	0.60	1.67	465.00

SUBTASK 26-18-02-720-003

(3) Connect the connectors to the sensor elements.

SUBTASK 26-18-02-720-004

(4) Tighten the jamnuts from 50 to 60 pound-inches.

SUBTASK 26-18-02-720-005

(5) Attach the lockwires to the sensor element connectors.

SUBTASK 26-18-02-720-006

(6) Repeat the sensing element continuity and sensing element pin to case test for each remaining loop.

F. Put the Airplane to its Normal Condition.

SUBTASK 26-18-02-720-007

(1) Remove the wire and fittings from the loop connectors.

SUBTASK 26-18-02-720-009

(2) Tighten the jamnuts 50 to 60 pound-inches.

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SUBTASK 26-18-02-720-010

(3) Attach the lockwire to the element connectors.

————— **END OF TASK** —————

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FIRE EXTINGUISHING BOTTLE PRESSURE GAUGE - INSPECTION/CHECK

1. General

- A. This procedure contains scheduled maintenance task data.
B. This procedure has these tasks:
(1) A check of the pressure gauge on the engine fire bottles.
(2) A check of the pressure gauge on the APU fire bottles.

TASK 26-20-00-210-802

2. Engine Fire Extinguishing Bottle Check

- A. General
(1) This procedure is a scheduled maintenance task.

B. Tools/Equipment

Table with 2 columns: Reference, Description. Row 1: STD-1122, Thermometer - Alcohol, Ambient Temperature

C. Location Zones

Table with 2 columns: Zone, Area. Row 1: 133, Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left. Row 2: 311, Area Aft of Pressure Bulkhead - Left

D. Fire Extinguishing Bottle Check

NOTE: This procedure is for fire extinguishing bottles with pressure gages. No action is required if a pressure gage is not installed.

SUBTASK 26-20-00-860-002

- (1) Allow the fire bottle to reach ambient temperature.

NOTE: It may take several hours with the airplanes on the ground for the halon in the bottles to reach ambient temperature.

SUBTASK 26-20-00-010-003

- (2) The engine fire bottles are located on the aft bulkhead in the left main landing gear wheel well.

SUBTASK 26-20-00-970-002

CAUTION: KEEP MERCURY THERMOMETERS AWAY FROM THE AIRPLANE. IF THE THERMOMETER BREAKS, MERCURY CAN CAUSE DAMAGE TO THE AIRPLANE COMPONENTS.

- (3) Use a thermometer, STD-1122 to get the ambient air temperature by the fire bottle.

SUBTASK 26-20-00-210-003

- (4) Find the acceptable pressure range for the current temperature in the temperature curve Figure 601

SUBTASK 26-20-00-210-004

- (5) Read the pressure gauge on the fire bottles.

- (a) Make sure the pressure on the gage falls within the pressure limits.

- 1) If the pressure on the gauge is not within the limits shown, replace the fire bottle with a serviceable fire bottle.

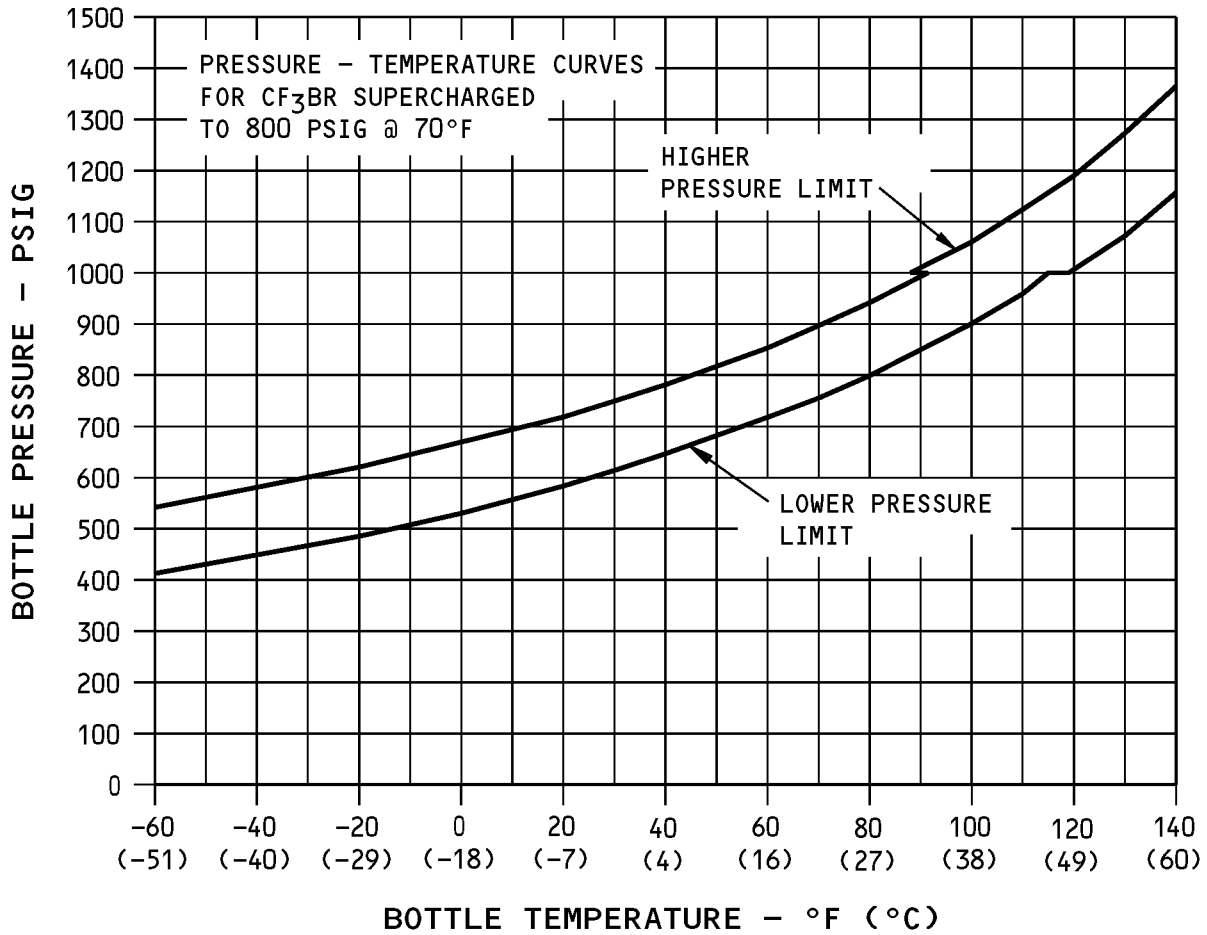
END OF TASK

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Fire Extinguisher Bottle Pressure - Temperature Curve  
Figure 601/26-20-00-990-802

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## TASK 26-20-00-210-801

### 3. APU Fire Extinguishing Bottle Check

#### A. General

(1) This procedure is a scheduled maintenance task.

#### B. Tools/Equipment

Reference	Description
STD-1122	Thermometer - Alcohol, Ambient Temperature

#### C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
311	Area Aft of Pressure Bulkhead - Left

#### D. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

#### E. Fire Extinguishing Bottle Check

**NOTE:** This procedure is for fire extinguishing bottles with pressure gages. No action is required if a pressure gage is not installed.

SUBTASK 26-20-00-860-001

(1) Allow the fire bottle to reach ambient temperature.

**NOTE:** It will take several hours with the airplane on the ground for the halon in the bottles to reach ambient temperature.

SUBTASK 26-20-00-010-001

(2) To access the APU fire bottle, do this step:

Open this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

SUBTASK 26-20-00-970-001

**CAUTION:** DO NOT USE THE TOTAL TEMPERATURE INDICATION FROM THE AIRPLANE FOR THE AMBIENT AIR TEMPERATURE.

**CAUTION:** DO NOT PUT A MERCURY THERMOMETER ON THE AIRPLANE. MERCURY (FROM A BROKEN THERMOMETER) CAN CAUSE DAMAGE TO THE AIRPLANE COMPONENTS.

(3) Use a thermometer, STD-1122 to get the ambient air temperature by the fire bottle.

#### HAP 031-054, 101-999

SUBTASK 26-20-00-210-001

(4) Find the acceptable pressure range for the current temperature in the temperature curve Figure 602.

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HAP 031-054, 101-999 (Continued)

HAP 001-013, 015-026, 028-030

SUBTASK 26-20-00-200-001

(5) Find the acceptable pressure range for the current temperature in Table 601.

Table 601/26-20-00-993-801 Pressure Versus Temperature

Temperature °F (°C)	Decreasing Pressure Maximum psig (kPag)	Decreasing Pressure Minimum psig (kPag)
60 (16)	477 (3289)	427 (2944)
62 (17)	513 (3537)	453 (3123)
64 (18)	520 (3584)	460 (3172)
66 (19)	527 (3682)	467 (3220)
68 (20)	534 (3682)	474 (3268)
70 (21)	540 (3723)	480 (3310)
72 (22)	547 (3772)	487 (3358)
74 (23)	553 (3813)	493 (3399)
76 (24)	560 (3861)	500 (3448)
78 (26)	567 (3909)	507 (3496)
80 (27)	575 (3965)	515 (3551)
82 (28)	582 (4013)	522 (3599)
84 (29)	589 (4061)	529 (3647)
86 (30)	596 (4109)	536 (3696)
88 (31)	603 (4158)	543 (3774)
90 (32)	610 (4206)	550 (3792)

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SUBTASK 26-20-00-210-007

(6) For bottles without a pressure gage, no action is required.

SUBTASK 26-20-00-210-002

(7) For bottles with a pressure gage, do these steps:

- (a) Read the pressure gauge on the fire bottle.
- (b) Make sure the pressure on the gage falls within the pressure limits.

- 1) If the pressure on the gage is not within the limits shown, replace the fire bottle with a serviceable fire bottle.

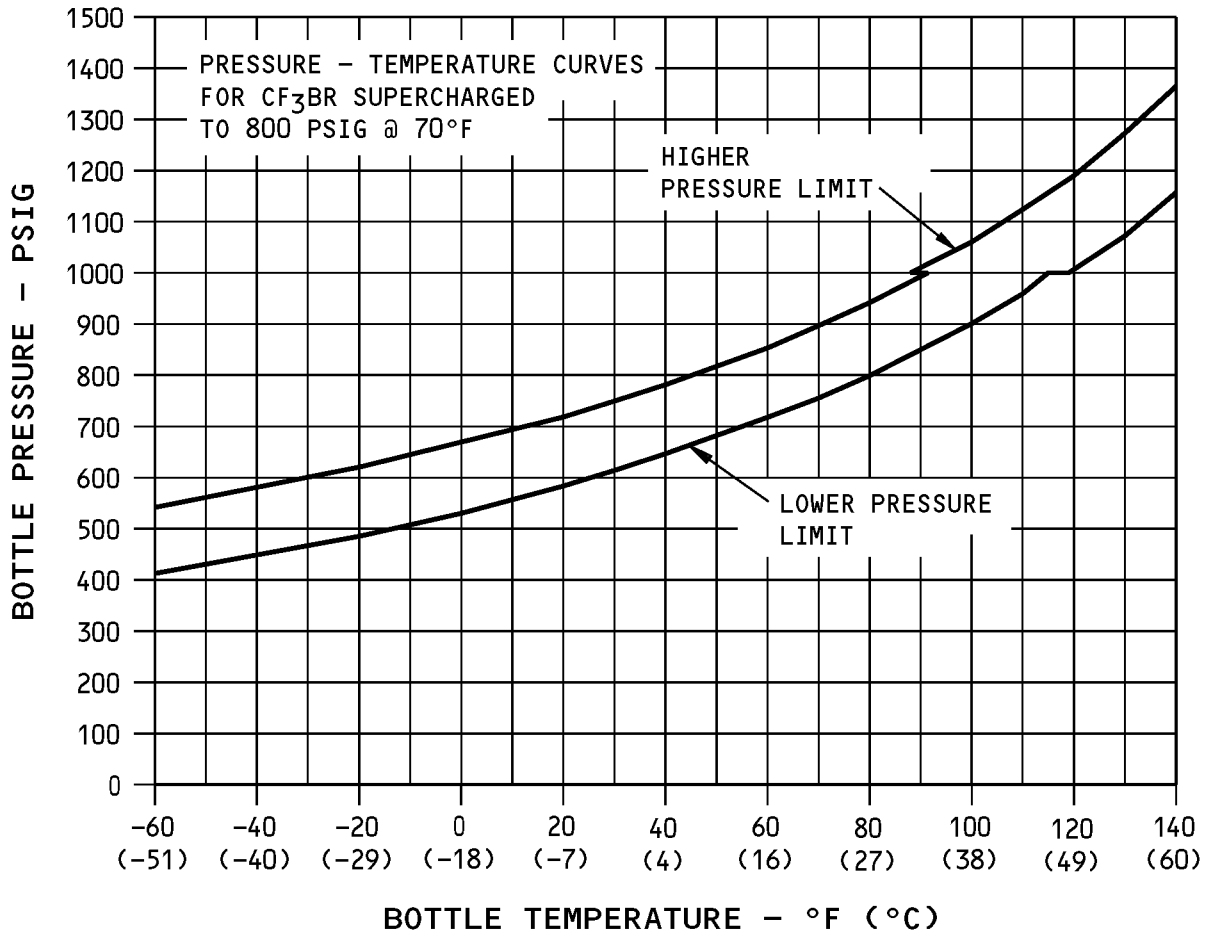
————— END OF TASK —————

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Fire Extinguisher Bottle Pressure - Temperature Curve  
Figure 602/26-20-00-990-801

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# AIRCRAFT MAINTENANCE MANUAL

## ENGINE FIRE EXTINGUISHING - ADJUSTMENT/TEST

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) A test of the engine fire bottle squib circuit.
  - (2) A test of the engine fire bottle pressure switch circuit.
  - (3) An airflow test through the discharge tubes.
  - (4) A pressure test of the engine fire bottle discharge tubes.
  - (5) A shutdown test of the engine systems.

#### **TASK 26-21-00-730-801**

### 2. Engine Fire Extinguishing Bottle Squib Circuit Test

(Figure 501)

#### A. General

- (1) This procedure is a scheduled maintenance task.

#### B. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1663	Test Equipment - Fire Extinguishing System (Part #: F80229-69, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F80229-15, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1231	Multimeter - Standard

#### C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

#### D. Prepare for the Test

SUBTASK 26-21-00-860-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

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SUBTASK 26-21-00-020-001

- (2) Disconnect the electrical connectors from the squibs.
  - (a) Disconnect D582 and D584 to test the engine 1 circuits.
  - (b) Disconnect D1322 and D1324 to test the engine 2 circuits.

SUBTASK 26-21-00-020-002

**WARNING:** PUT A PROTECTIVE CAP ON THE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (3) Install a protective cap on each squib.

SUBTASK 26-21-00-860-002

- (4) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-00-480-009

- (5) Set the toggle switch on Fire System Test Equipment, SPL-1663 to ON.

SUBTASK 26-21-00-760-001

- (6) Measure the resistance (RL) of the test box with a multimeter, STD-1231 connected to the voltmeter jacks.

- (a) Write down the value of RL in the Table 502or, in the Table 503 as applicable for the adapter cable.

SUBTASK 26-21-00-480-010

- (7) Set the toggle switch on the test box to OFF.

SUBTASK 26-21-00-480-011

- (8) Set the multimeter to read DC volts.

SUBTASK 26-21-00-480-012

- (9) Connect the applicable adapter cable for the primay circuit (A) to the connector on the test box. The primary circuit (A) is between pins 4 and 3 of each squib connector.

**NOTE:** Look at the placard on the test box to determine the applicable adapter.

**NOTE:** Each squib has two circuits. The primary circuit (A) is between pins 4 and 3; the alternate circuit (B) is between pins 6 and 7. Either circuit can fire the squib. There are different adapter cables in the test set to test each circuit.

#### E. Do the Engine Fire Extinguishing Bottle Squib Circuit Test

SUBTASK 26-21-00-860-035

- (1) Push the manual override button and pull the ENGINE 1 and ENGINE 2 fire handles on the P8-1 panel.

SUBTASK 26-21-00-480-013

- (2) Connect the adapter cable for the primay circuit (A) to one of the squib connectors. These connectors are listed in the Fire Bottle Squib Circuit Test Data table.

Engine Fire Bottle Squib Circuit Test Data

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Table 501/26-21-00-993-804

CONNECTOR	SQUIB LOCATION	ENGINE	DIRECTION
D582	L (forward) bottle, squib 1A squib 1B	1	CCW
D1322	L (forward) bottle, squib 2A squib 2B	2	CCW
D584	R (aft) bottle, squib 1A squib 1B	1	CW
D1324	R (aft) bottle, squib 2A squib 2B	2	CW

SUBTASK 26-21-00-860-036

- (3) Turn the applicable fire handle in the direction listed in the Fire Bottle Squib Circuit Test Data table.
- (a) Make sure the BOTTLE DISCHARGE light on the test box comes on.
  - (b) Write down the voltage shown on the multimeter as (V1) in the Table 502 or, in the Table 503 as applicable for the adapter cable.
  - (c) Set the switch on the test box to ON.
  - (d) Write down the voltage shown on the multimeter as (V2) in the Table 502 or, in the Table 503 as applicable for the adapter cable.

SUBTASK 26-21-00-730-001

- (4) Release the fire handle.
- (a) Make sure the handle moves toward the center 10 degrees.
  - (b) Make sure the multimeter shows 0 (± 2) volts.

SUBTASK 26-21-00-760-002

- (5) Calculate the resistance Rc of the squib discharge circuit using this formula:

$$R_c = R_L (V_1/V_2) - R_L$$

- (a) Make sure Rc is less than or equal to 3 ohms.

**NOTE:** If Rc is more than 3 ohms, the circuit can not supply enough current to fire the squib cartridge.

Table 502/26-21-00-993-805

CONNECTOR	RL	V1	V2	Rc
D582				
D1322				
D584				
D1324				

Table 503/26-21-00-993-806

CONNECTOR	RL	V1	V2	Rc
D582				
D1322				
D584				
D1324				

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SUBTASK 26-21-00-480-014

- (6) Disconnect the adapter cable from the squib connector, and repeat the procedure until all the connectors listed in the Fire Bottle Squib Circuit Test Data table are tested.
- (7) Disconnect the adapter cable for the primary circuit (A) from the squib connector.
- (8) Do the procedure again with the adapter cable for the Alternate circuit (B). Until all the connectors listed in the Fire Bottle Squib Circuit Test Data table are tested.

**NOTE:** Each squib has two circuits. The primary circuit (A) is between pins 4 and 3; the alternate circuit (B) is between pins 6 and 7. Either circuit can fire the squib. There are different adapter cables in the test set to test each circuit.

- (9) When you completed the procedure with both adapter cables. Disconnect the adapter cable from the squib connector.

SUBTASK 26-21-00-860-038

- (10) Push the fire handles to their usual position.

SUBTASK 26-21-00-860-003

- (11) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-00-080-001

- (12) Remove the protective cap from the squibs.

SUBTASK 26-21-00-420-001

- (13) Connect the electrical connectors to the squibs.
  - (a) Connect D582 and D584 to test the engine 1 circuits.
  - (b) Connect D1322 and D1324 to test the engine 2 circuits.

SUBTASK 26-21-00-860-004

- (14) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-00-710-001

- (15) Set the EXT TEST switch to 1.
  - (a) Make sure the L and R lights come on.

**NOTE:** The APU light should also come on.

SUBTASK 26-21-00-710-002

- (16) Set the EXT TEST switch to 2.

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- (a) Make sure the L and R lights come on.

NOTE: The APU light should also come on.

SUBTASK 26-21-00-710-003

- I (17) Release the EXT TEST switch.

————— END OF TASK —————

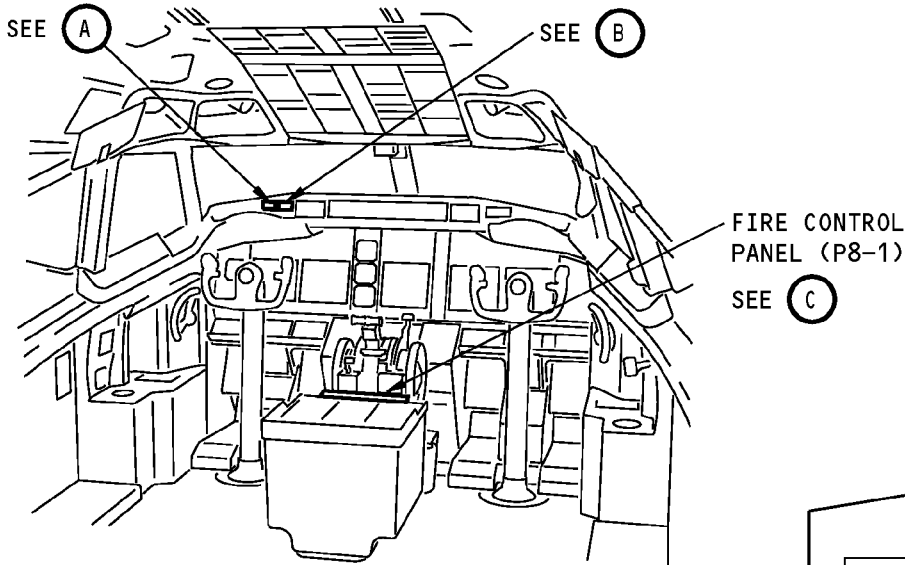
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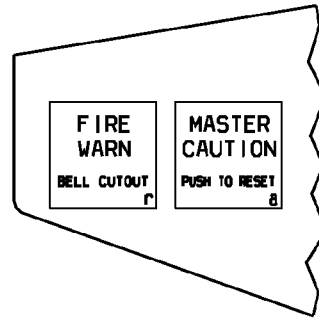
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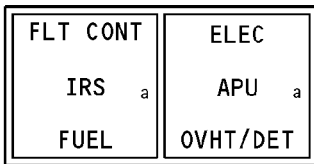
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**FLIGHT COMPARTMENT**



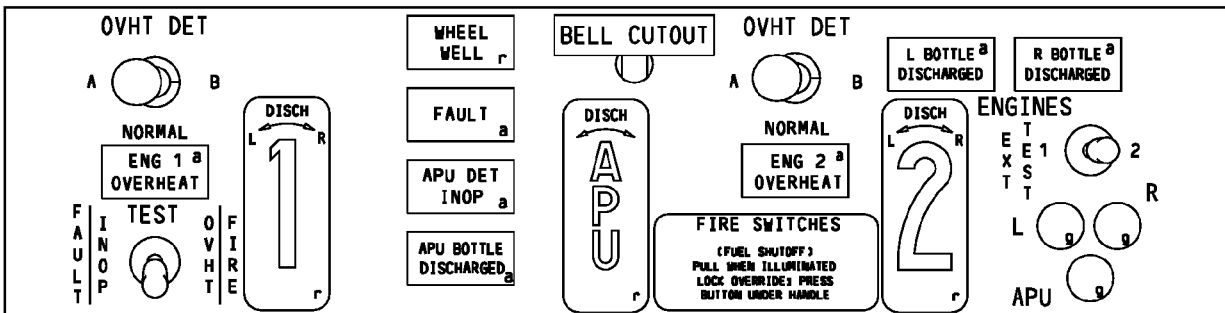
**CAPTAIN'S FIRE WARNING SWITCH (P7)  
(FIRST OFFICER'S IS OPPOSITE)**



**CAPTAIN'S WARNING LIGHTS (P7)**

(B)

(A)



**FIRE CONTROL PANEL (P8-1)**

(C)

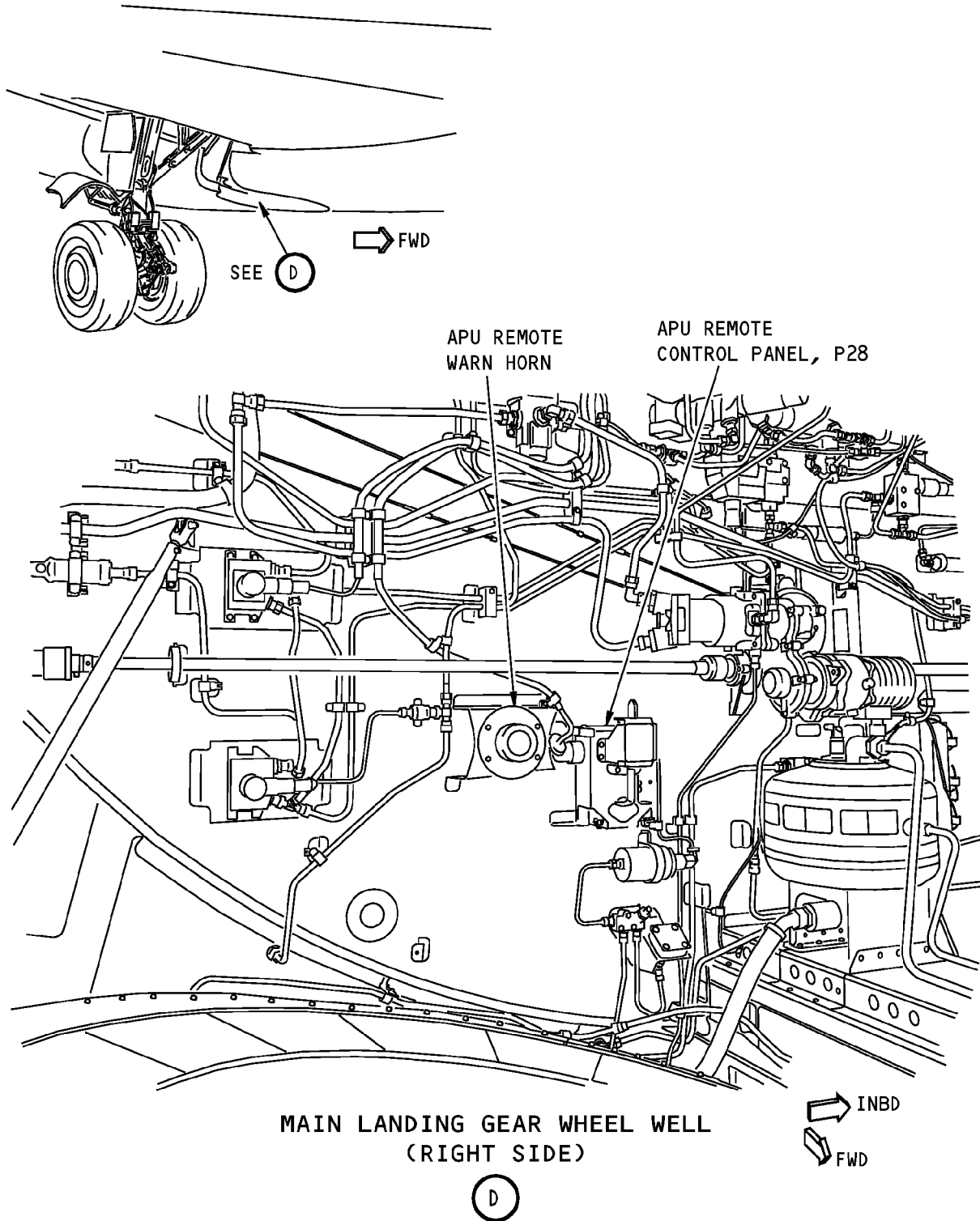
**Engine Fire Detection Test  
Figure 501 (Sheet 1 of 2)/26-21-00-990-801**

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**Engine Fire Detection Test  
Figure 501 (Sheet 2 of 2)/26-21-00-990-801**

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TASK 26-21-00-730-802

3. Engine Fire Extinguishing Bottle Pressure Switch Circuit Test

(Figure 501)

A. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

B. Engine Fire Extinguishing Bottle Pressure Switch Test

SUBTASK 26-21-00-020-003

(1) Disconnect D586 from the pressure switch on the left (forward) fire bottle.

SUBTASK 26-21-00-020-004

(2) Disconnect D588 from the pressure switch on the right (aft) fire bottle.

SUBTASK 26-21-00-730-002

(3) Do a test of the engine fire bottle pressure switch circuit.

(a) Connect a jumper wire between pins 1 and 2 on D586.

1) Make sure the L BOTTLE DISCHARGED light on the Engine and APU Fire Control Module comes on.

(b) Remove the jumper from connector D586.

(c) Connect a jumper wire between pins 1 and 2 on D588.

1) Make sure the R BOTTLE DISCHARGED light on the Engine and APU Fire Control Module comes on.

(d) Remove the jumper from connector D588.

SUBTASK 26-21-00-420-002

(4) Connect D586 to the pressure switch on the left (forward) fire bottle.

SUBTASK 26-21-00-420-003

(5) Connect D588 to the pressure switch on the right (aft) fire bottle.

END OF TASK

TASK 26-21-00-720-801

4. Engine Fire Extinguishing Discharge Line Flow Test

(Figure 502, Figure 503)

A. General

(1) The Engine Fire Extinguishing Discharge Line Flow Test checks the operation of the check valve, and makes sure there is nothing blocking the discharge lines.

B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

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#### C. Tools/Equipment

Reference	Description
STD-1325	Source - Pressure, Capable of Supplying 35 +/- 5 PSIG

#### D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D50004	Compound - Antiseize	BMS3-28
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

#### E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
411	Engine 1 - Engine
421	Engine 2 - Engine

#### F. Engine Fire Extinguishing Discharge Line Flow Test

SUBTASK 26-21-00-010-001

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

SUBTASK 26-21-00-020-005

(2) Remove the discharge tube from the discharge outlets on both engine fire bottles.

SUBTASK 26-21-00-480-001

(3) Connect a pressure source, STD-1325 to the right engine forward bottle discharge line.

(a) Make sure air is flowing through all the nozzles on the right engine.

(b) Make sure little or no air is flowing through the right engine aft bottle discharge line.

SUBTASK 26-21-00-080-002

(4) Remove the pressure source from the right engine forward bottle discharge line.

SUBTASK 26-21-00-480-002

(5) Connect a pressure source, STD-1325 to the right engine aft bottle discharge line.

(a) Make sure air is flowing through all the nozzles on the right engine.

(b) Make sure little or no air is flowing through the right engine forward bottle discharge line.

SUBTASK 26-21-00-080-003

(6) Remove the pressure source from the right engine aft bottle discharge line.

SUBTASK 26-21-00-480-003

(7) Connect a pressure source, STD-1325 to the left engine forward bottle discharge line.

(a) Make sure air is flowing through all the nozzles on the left engine.

(b) Make sure little or no air is flowing through the left engine aft bottle discharge line.

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# AIRCRAFT MAINTENANCE MANUAL

SUBTASK 26-21-00-080-004

(8) Remove the pressure source from the left engine forward bottle discharge line.

SUBTASK 26-21-00-480-004

(9) Connect a pressure source, STD-1325 to the left engine aft bottle discharge line.

(a) Make sure air is flowing through all the nozzles on the left engine.

(b) Make sure little or no air is flowing through the left engine forward bottle discharge line.

SUBTASK 26-21-00-080-005

(10) Remove the pressure source from the left engine aft bottle discharge line.

SUBTASK 26-21-00-420-004

(11) Connect the discharge tubes to the discharge outlets on both bottles.

(a) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds for this location.

(b) Connect the tube assembly to the discharge head.

**NOTE:** Yellow is used to show the plumbing which supplies extinguishant to engine number 1. Blue is used to show the plumbing which supplies extinguishant to engine number 2.

(c) Remove any unwanted compound.

(d) Tighten the nut to 342 in-lb (38.6 Nm) - 378 in-lb (42.7 Nm) on the tube assembly.

SUBTASK 26-21-00-010-002

**WARNING:** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(12) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

**END OF TASK**

## TASK 26-21-00-730-803

### 5. Engine Fire Extinguishing Discharge Line Pressure Test

(Figure 502, Figure 503)

#### A. General

(1) This procedure is a scheduled maintenance task.

(2) The pressure test is the same for both engines.

#### B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

#### C. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

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### AIRCRAFT MAINTENANCE MANUAL

Reference	Description
SPL-1647	Test Equipment - Engine Fire Extinguishing System (Part #: C26004-32, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Part #: C26004-33, Supplier: 81205, A/P Effectivity: 737-300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1325	Source - Pressure, Capable of Supplying 35 +/- 5 PSIG

#### D. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D50004	Compound - Antiseize	BMS3-28
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

#### E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

#### F. Engine Fire Extinguishing Discharge Line Pressure Test

SUBTASK 26-21-00-010-003

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

SUBTASK 26-21-00-020-006

(2) Disconnect the tee fitting from the discharge outlet on the engine forward fire bottle 1 at position 1.

SUBTASK 26-21-00-480-005

(3) Connect a pressure source, STD-1325 to the bottle 1 discharge line at position 1.

SUBTASK 26-21-00-480-006

(4) Install plugs on the fire extinguishing nozzles at the left engine (engine 1).

**NOTE:** equipment, SPL-1647 or other suitable plug may be used.

SUBTASK 26-21-00-780-001

(5) Pressurize the discharge tubing that goes from bottle 1 to engine 1 to a pressure of 35 ± 5 psi (241 ± 35 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-21-00-780-002

(6) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 2 minutes, then check the pressure.

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- 1) Make sure the pressure loss during the 2 minute waiting period is not more than 1 psi.

**NOTE:** If the pressure loss is more than 1 psi, do a check of the pressure source connections and the plugs used to seal the fire extinguishing nozzles. If they do not show any indication of leakage, then do a check of all fittings, seal surfaces, valves, and tubing in the discharge line. Repair the problems that you find.

SUBTASK 26-21-00-780-003

- (7) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source at position 1.

SUBTASK 26-21-00-020-008

- (8) Disconnect the tee fitting from the discharge outlet on the engine forward fire bottle 2 at position 4.

SUBTASK 26-21-00-480-007

- (9) Connect a pressure source, STD-1325 to the bottle 2 discharge line at position 4.

SUBTASK 26-21-00-480-008

- (10) Install plugs on the fire extinguishing nozzles at the right engine (engine 2).

**NOTE:** equipment, SPL-1647 or other suitable plug may be used.

SUBTASK 26-21-00-780-004

- (11) Pressurize the discharge tubing that goes from bottle 2 to engine 2 to a pressure of  $35 \pm 5$  psi ( $241 \pm 35$  kPa).

- (a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-21-00-780-005

- (12) Turn off the pressure source.

- (a) Record the stabilized air pressure.
- (b) Wait 2 minutes, then check the pressure.

- 1) Make sure the pressure loss during the 2 minute waiting period is not more than 1 psi.

**NOTE:** If the pressure loss is more than 1 psi, do a check of the pressure source connections and the plugs used to seal the fire extinguishing nozzles. If they do not show any indication of leakage, then do a check of all fittings, seal surfaces, valves, and tubing in the discharge line. Repair the problems that you find.

SUBTASK 26-21-00-780-006

- (13) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source at position 4.

SUBTASK 26-21-00-080-007

- (14) Remove the test equipment.

SUBTASK 26-21-00-420-005

- (15) Reconnect the discharge tubes to the discharge outlets at positions 1 and 4.

- (a) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

- 1) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.

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- (b) Connect the tube assembly to the discharge head.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to engine number 1. Blue is used to show the plumbing which supplies extinguishant to engine number 2.

- (c) Remove any unwanted compound.  
(d) Tighten the nut on the tube assembly.

SUBTASK 26-21-00-010-004

**WARNING:** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (16) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

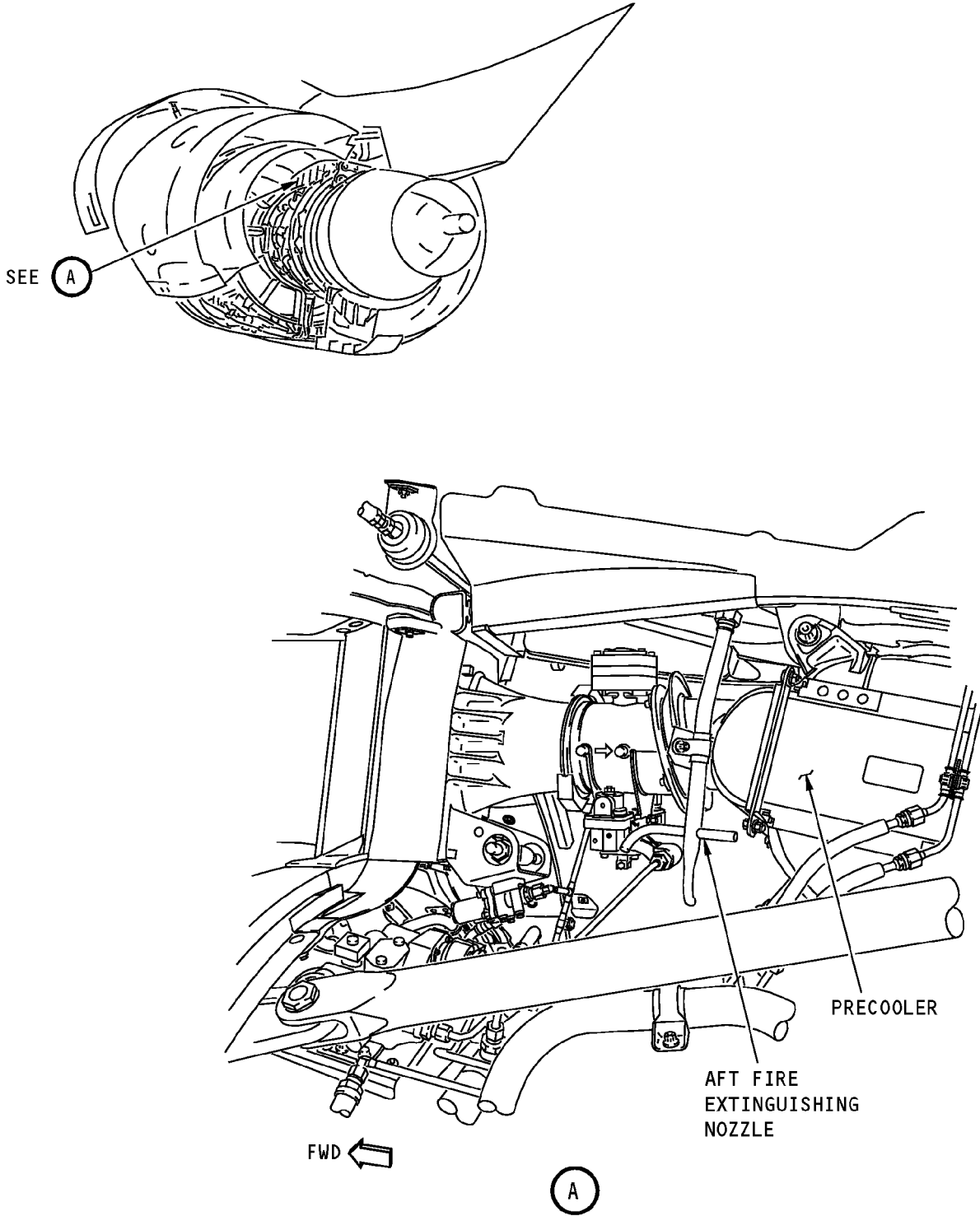
————— **END OF TASK** —————

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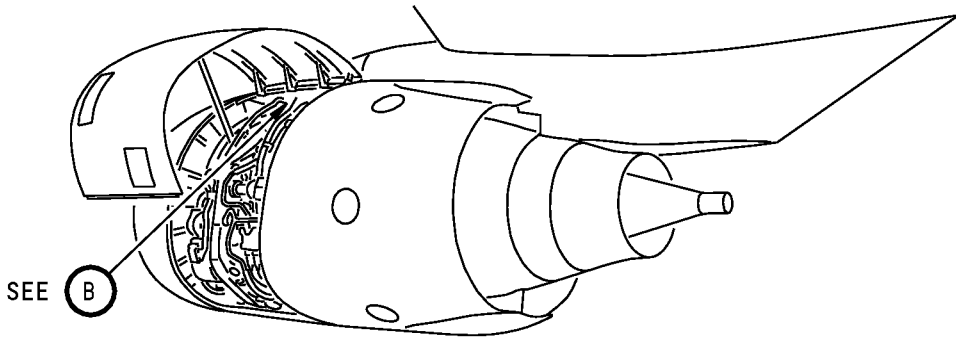
**Engine Fire Extinguishing Test  
Figure 502 (Sheet 1 of 2)/26-21-00-990-802**

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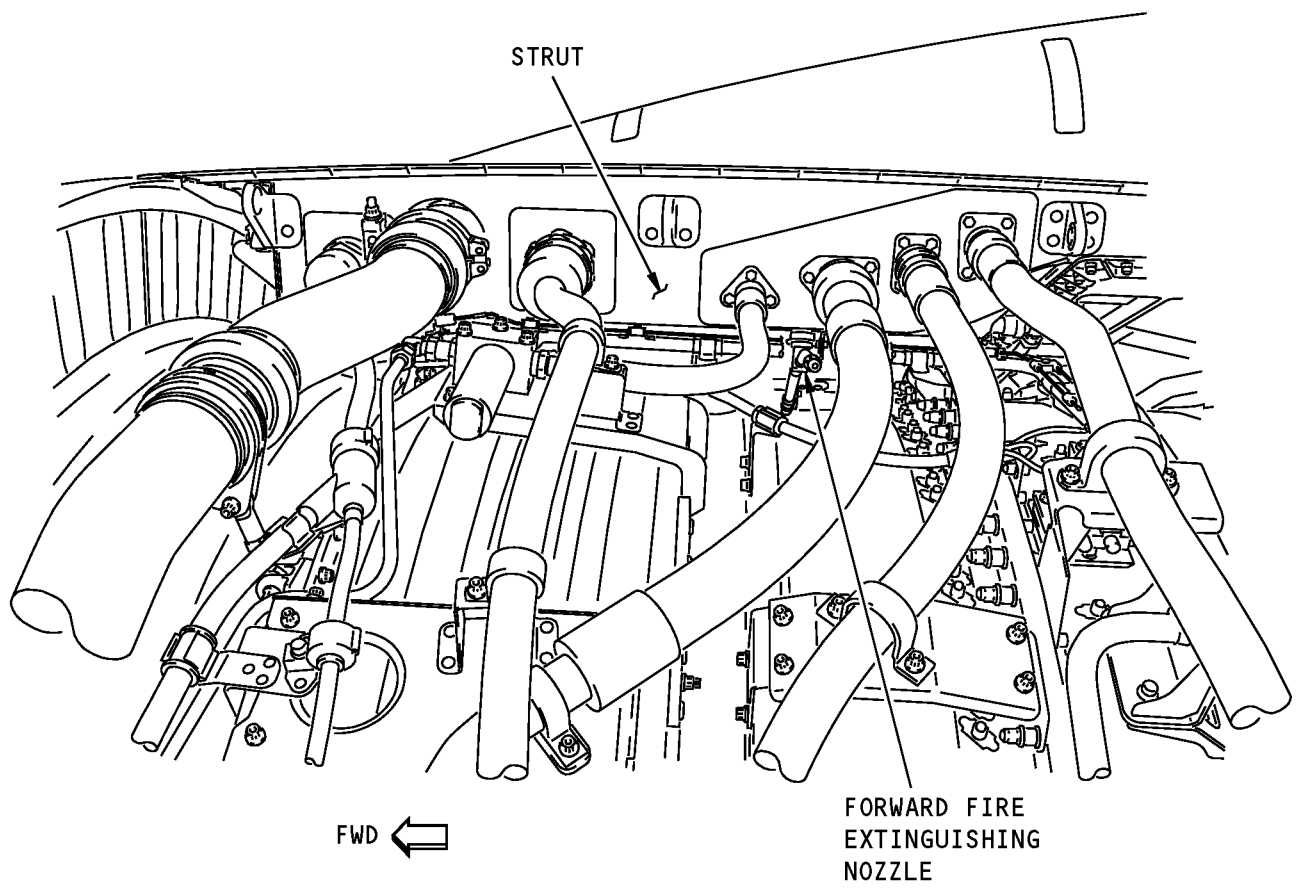
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SEE **B**

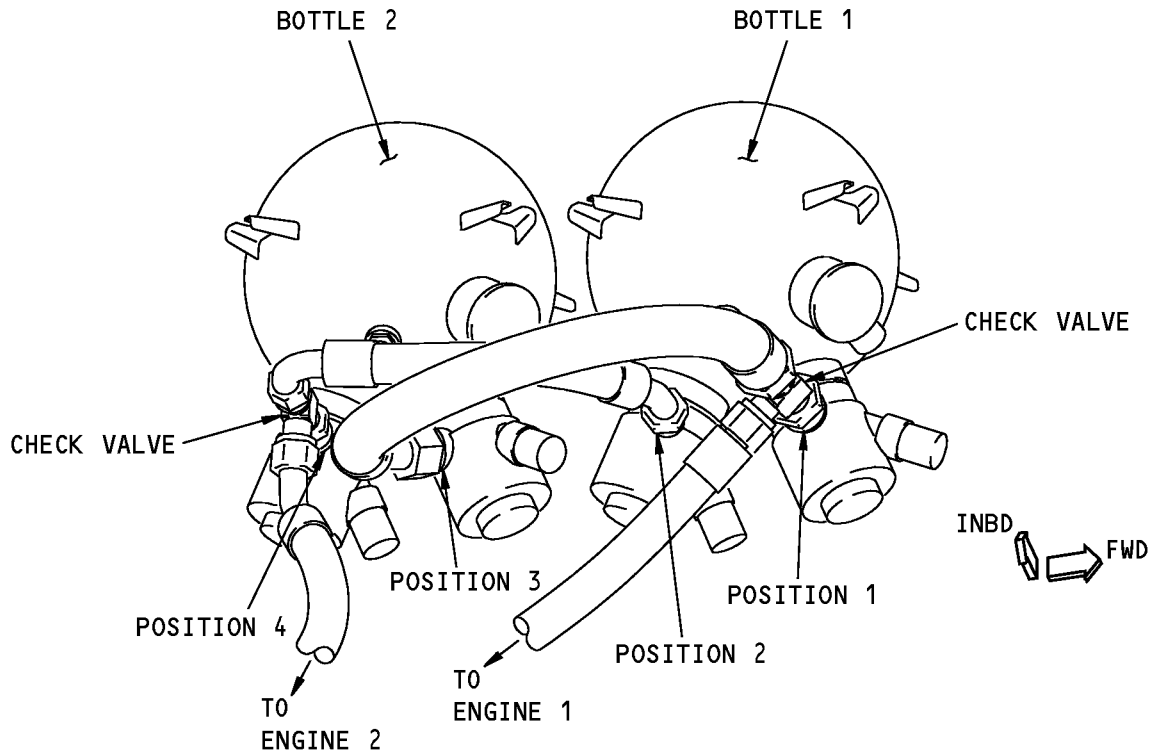


**B**

**Engine Fire Extinguishing Test  
Figure 502 (Sheet 2 of 2)/26-21-00-990-802**

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**ENGINE FIRE EXTINGUISHING BOTTLES  
(MAIN LANDING GEAR WHEEL WELL, LEFT SIDE)**

K03546 S0006568245\_V3

**Test Setup  
Figure 503 (Sheet 1 of 2)/26-21-00-990-805**

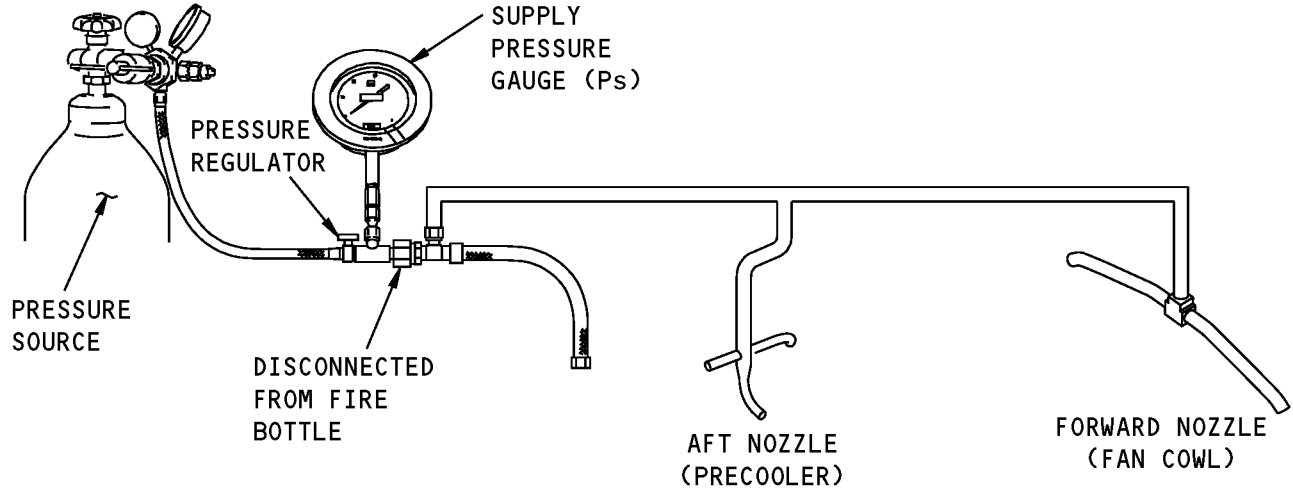
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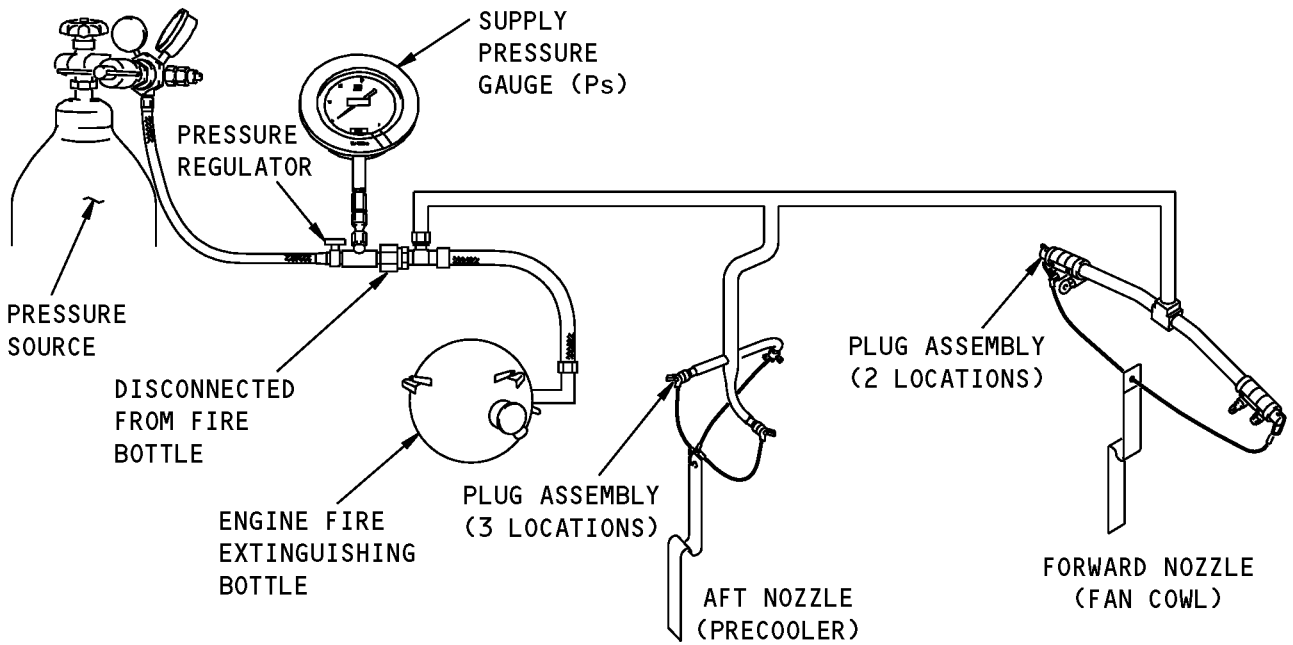
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**AIRCRAFT MAINTENANCE MANUAL**



**FLOW TEST**



**PRESSURE TEST**

**Test Setup**  
**Figure 503 (Sheet 2 of 2)/26-21-00-990-805**

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### AIRCRAFT MAINTENANCE MANUAL

TASK 26-21-00-720-802

#### 6. Engine Fire Switch System Shutdown Test

(Figure 501, Figure 504, Figure 505)

##### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) This procedure checks that the engine is isolated from the fuel, hydraulic, pneumatic and electrical systems, and that the thrust reverser is disabled when the fire handle is pulled. It should be performed when the Engine and APU Fire Control Panel is replaced.
- (3) This test is written for engine 1. The test is the same for engine 2, except as noted by the data in parentheses. Use the data in parentheses to do the test for engine 2.

##### B. References

Reference	Title
24-22-00-860-813	Supply External Power (P/B 201)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

##### C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
410	Subzone - Engine 1
420	Subzone - Engine 2

##### D. Prepare for the test

SUBTASK 26-21-00-860-005

- (1) Do this task: Supply External Power, TASK 24-22-00-860-813.

SUBTASK 26-21-00-010-005

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) For the left thrust reverser, do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

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SUBTASK 26-21-00-860-006

(3) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-00-860-007

(4) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

E. Make sure the engine fuel is stopped

SUBTASK 26-21-00-860-008

(1) Make sure the START SWITCH for each engine is in the OFF position.

SUBTASK 26-21-00-860-009

(2) Set the engine 1 (2) fuel switch to IDLE.

(a) Make sure the engine 1 (2) SPAR VALVE CLOSED light on the P5 panel comes on bright, then goes out.

(b) Make sure the engine 1 (2) ENG VALVE CLOSED light on the P5 panel comes on bright.

SUBTASK 26-21-00-860-029

(3) Pull the engine 1 (2) fire handle on the P8 panel.

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- (a) Make sure the fire handle does not extend.

SUBTASK 26-21-00-860-010

- (4) Push the manual override button and pull the engine 1 (2) fire handle on the P8 panel.

- (a) Make sure the engine 1 (2) SPAR VALVE CLOSED light on the P5 panel comes on bright while the valve is in transition, then goes dim.

- (b) Make sure the engine 1 (2) ENG VALVE CLOSED light on the P5 panel goes dim.

SUBTASK 26-21-00-860-011

- (5) Push in the engine 1 (2) fire handle on the P8 panel to the normal position.

SUBTASK 26-21-00-860-012

- (6) Set the engine 1 (2) fuel switch to CUTOFF.

### F. Make sure the hydraulic power shuts off

SUBTASK 26-21-00-860-013

- (1) Push the manual override button and pull the engine 1 (2) fire handle on the P8 panel.

- (a) Make sure the engine 1 (2) hydraulic system A (B) fluid shutoff valve, V33 (V34) moves to the closed position.(Figure 504)

SUBTASK 26-21-00-860-014

- (2) Push in the engine 1 (2) fire handle on the P8 panel to the normal position.

### G. Make sure the Bleed Air shuts off

SUBTASK 26-21-00-860-039

- (1) Set the BLEED air switch for the applicable engine ON.

SUBTASK 26-21-00-860-015

- (2) Push the manual override button and pull the engine 1 (2) fire handle on the P8 panel.

- (a) Make sure the engine 1 (2) bleed air regulator solenoid closes by listening or feeling it click.(Figure 505)

SUBTASK 26-21-00-860-016

- (3) Push in the engine 1 (2) fire handle on the P8 panel to the normal position.

SUBTASK 26-21-00-860-040

- (4) Set the BLEED air switch for the applicable engine OFF.

### H. Make sure the electrical power shuts down

SUBTASK 26-21-00-020-007

- (1) Disconnect the electrical connector DP1206 from the engine 1 (2) Integrated Drive Generator.

SUBTASK 26-21-00-860-030

- (2) Set the GEN CONT switch on the P5-4 panel OFF.

- (a) Make sure the resistance between pins 3 (LO) and 2 (HI) on DP1206 is less than 10 ohms.

SUBTASK 26-21-00-860-031

- (3) Set the GEN CONT switch on the P5-4 panel ON.

- (a) Make sure the resistance between pins 2 and 3 on DP1206 is at least 230 kohms.

SUBTASK 26-21-00-860-018

- (4) Push the manual override button and pull the engine 1 (2) fire handle on the P8 panel.

- (a) Make sure the resistance between pins 3 (LO) and 2 (HI) on DP1206 is less than 10 ohms after 5 seconds.

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AIRCRAFT MAINTENANCE MANUAL

SUBTASK 26-21-00-860-019

(5) Push in the engine 1 (2) fire handle on the P8 panel to the normal position.

SUBTASK 26-21-00-420-006

(6) Connect the electrical connector DP1206 to the engine 1 (2) Integrated Drive Generator.

I. Make sure the thrust reversers deactivate

SUBTASK 26-21-00-010-006

**WARNING:** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

SUBTASK 26-21-00-860-020

(2) Do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 26-21-00-860-021

(3) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00276	ENGINE 1 THRUST REVERSER CONT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C00277	ENGINE 2 THRUST REVERSER CONT

SUBTASK 26-21-00-860-032

(4) Set the ENG START switch to CONT.

**NOTE:** Setting the ENG START switch to CONT applies power to the EEC. It is not necessary to apply power to the EEC to extend and retract the thrust reverser. However, if the EEC is not powered, the reverse thrust lever will be blocked by the interlock and will not move to the full reverse thrust position. Thus, the REV light will not indicate the sleeve position.

SUBTASK 26-21-00-860-022

(5) Push the manual override button and pull the engine 1 (2) fire handle on the P8 panel.

SUBTASK 26-21-00-860-023

**WARNING:** MAKE SURE THERE ARE NO PERSONS OR EQUIPMENT IN THE AREA AROUND THE THRUST REVERSER SLEEVES. THIS WILL PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(6) Move the engine 1 (2) reverse thrust lever up and aft to the extend position.

(a) Make sure the thrust reverser does not extend.

SUBTASK 26-21-00-860-024

(7) Move the engine 1 (2) reverse thrust lever down and forward to the retract position.

SUBTASK 26-21-00-860-025

(8) Push in the engine 1 (2) fire handle on the P8 panel to the normal position.

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SUBTASK 26-21-00-860-026

**WARNING:** MAKE SURE THERE ARE NO PERSONS OR EQUIPMENT IN THE AREA AROUND THE THRUST REVERSER SLEEVES. THIS WILL PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (9) Move the engine 1 (2) reverse thrust lever up and aft to the extend position.
  - (a) Make sure the thrust reverser extends.

SUBTASK 26-21-00-860-027

- (10) Move the engine 1 (2) reverse thrust lever down and forward to the retract position.
  - (a) Make sure the thrust reverser retracts.

SUBTASK 26-21-00-860-033

- (11) Set the ENG START switch to OFF.

SUBTASK 26-21-00-860-028

- (12) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 26-21-00-860-034

- (13) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DETECTION OVHT WW WING BODY
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

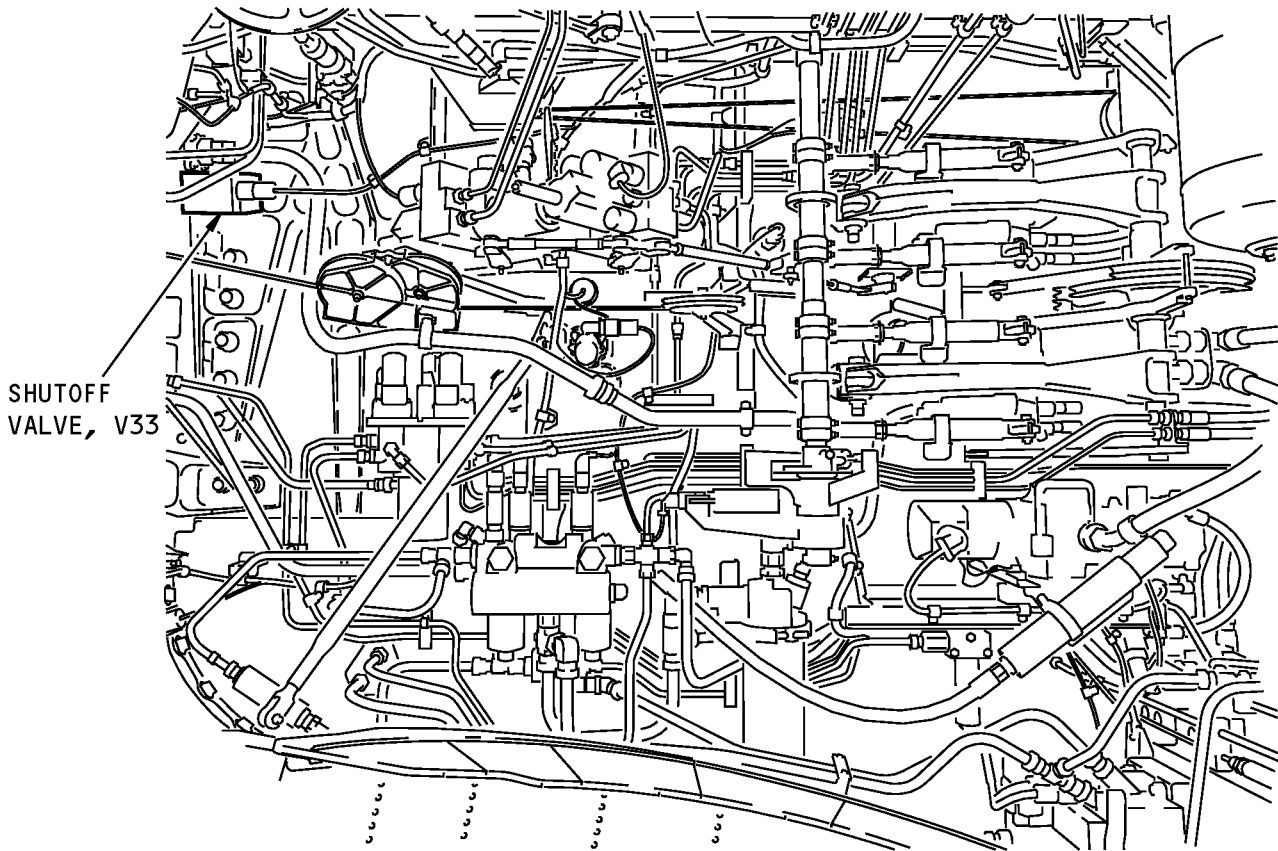
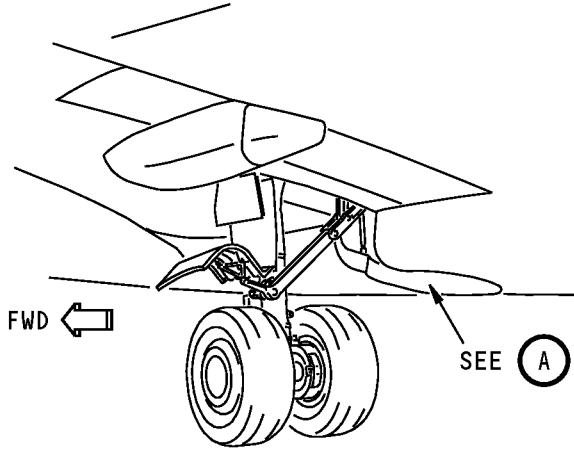
————— END OF TASK —————

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**MAIN LANDING GEAR WHEEL WELL  
(LEFT SIDE)**

(A)

FWD  
INBD →

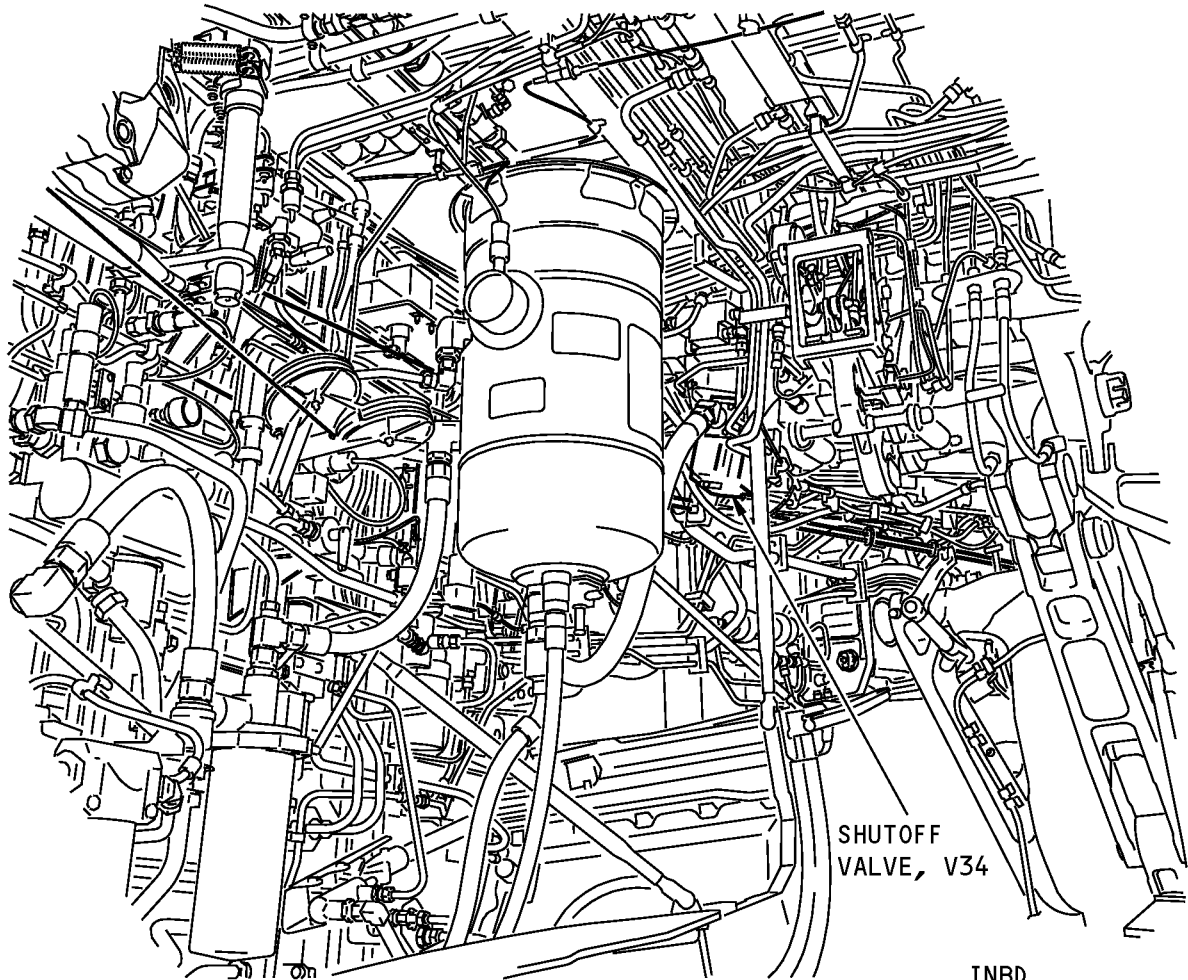
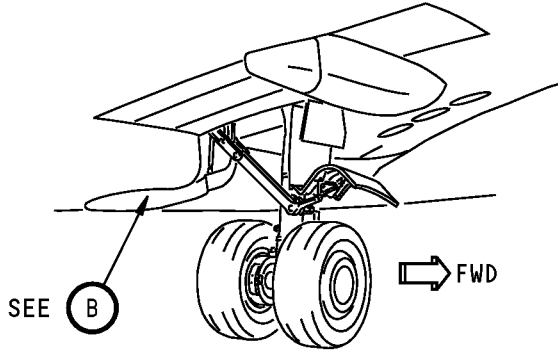
**Engine EDP Shutoff Valve Test  
Figure 504 (Sheet 1 of 2)/26-21-00-990-803**

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HAP ALL

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**MAIN LANDING GEAR WHEEL WELL  
(RIGHT SIDE)**

**B**

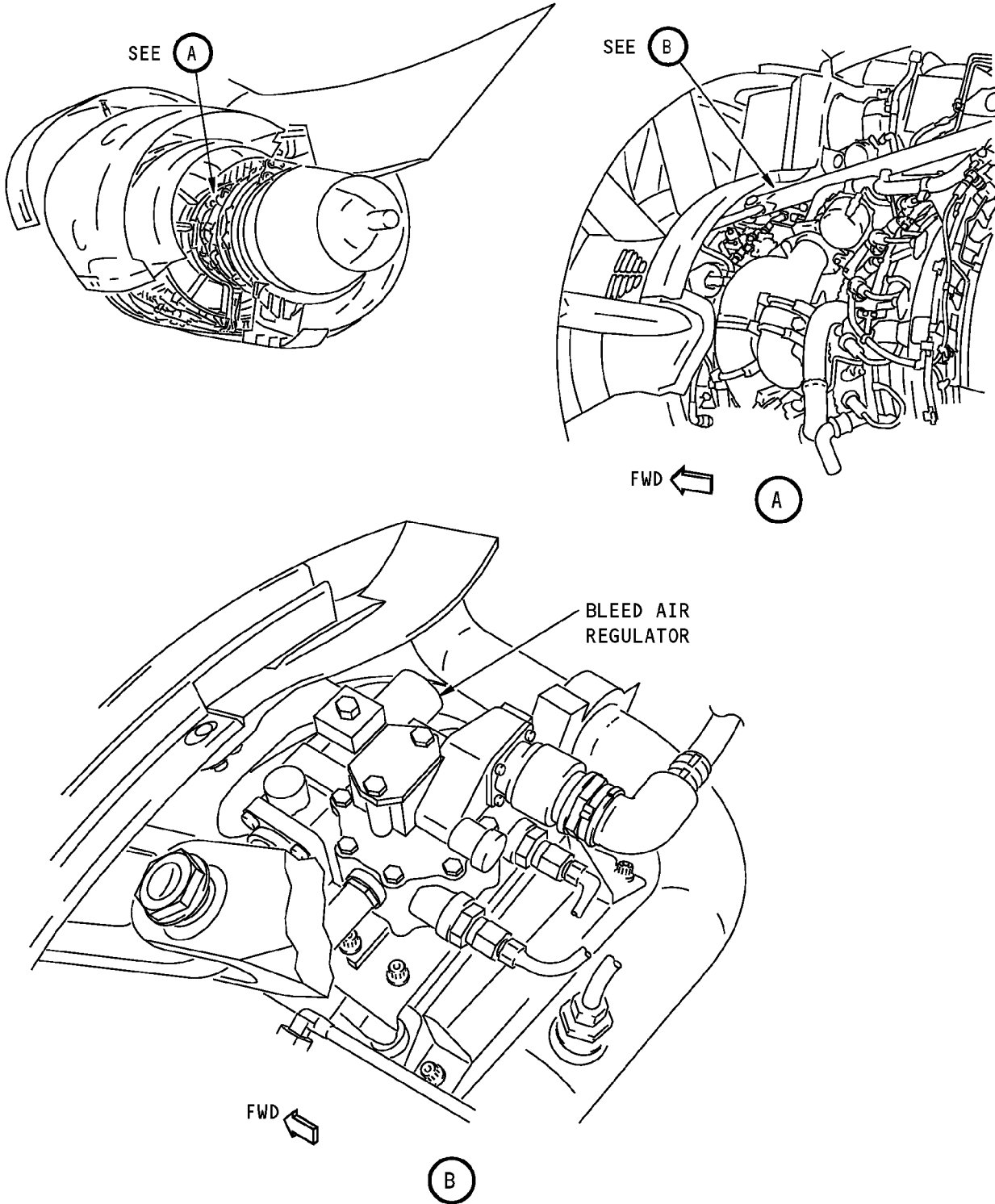
**Engine EDP Shutoff Valve Test  
Figure 504 (Sheet 2 of 2)/26-21-00-990-803**

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**Engine Bleed Air Regulator Test  
Figure 505/26-21-00-990-804**

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ENGINE FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION

1. General

- A. This procedure contains scheduled maintenance task data.
B. This procedure has these tasks:
(1) A removal of an engine fire extinguishing bottle.
(2) An installation of an engine fire extinguishing bottle.

TASK 26-21-01-000-801

2. Engine Fire Extinguishing Bottle Removal

(Figure 401)

A. General

- (1) This procedure is a scheduled maintenance task.
(2) The engine fire extinguishing bottles are installed in the main landing gear wheel well. The removal procedure is the same for each bottle.

B. Location Zones

Table with 2 columns: Zone, Area. Rows include 133 (Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left), 211 (Flight Compartment - Left), 212 (Flight Compartment - Right).

C. Engine Fire Extinguishing Bottle Removal

SUBTASK 26-21-01-860-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Table with 4 columns: Row, Col, Number, Name. Lists circuit breakers B 20, B 22, B 23, B 24 and their corresponding fire protection extinguishers.

SUBTASK 26-21-01-020-001

- (2) Disconnect the electrical connectors [6] from the squibs [7].

SUBTASK 26-21-01-020-002

WARNING: PUT A PROTECTIVE CAP ON THE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (3) Install a protective cap on each squib [7].

SUBTASK 26-21-01-020-003

- (4) Disconnect the electrical connector [5] from the pressure switch.

SUBTASK 26-21-01-020-004

- (5) Remove the discharge line from both fire bottle discharge outlets.

NOTE: Loosen other fittings as necessary to move the discharge lines out of the way.

Effectivity table with columns for HAP ALL and a large empty box for details.

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SUBTASK 26-21-01-020-005

(6) Remove the four mounting bolts [2] and washers [3].

SUBTASK 26-21-01-020-006

**WARNING:** BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE CARTRIDGE AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(7) Remove the applicable fire extinguishing bottle [1].

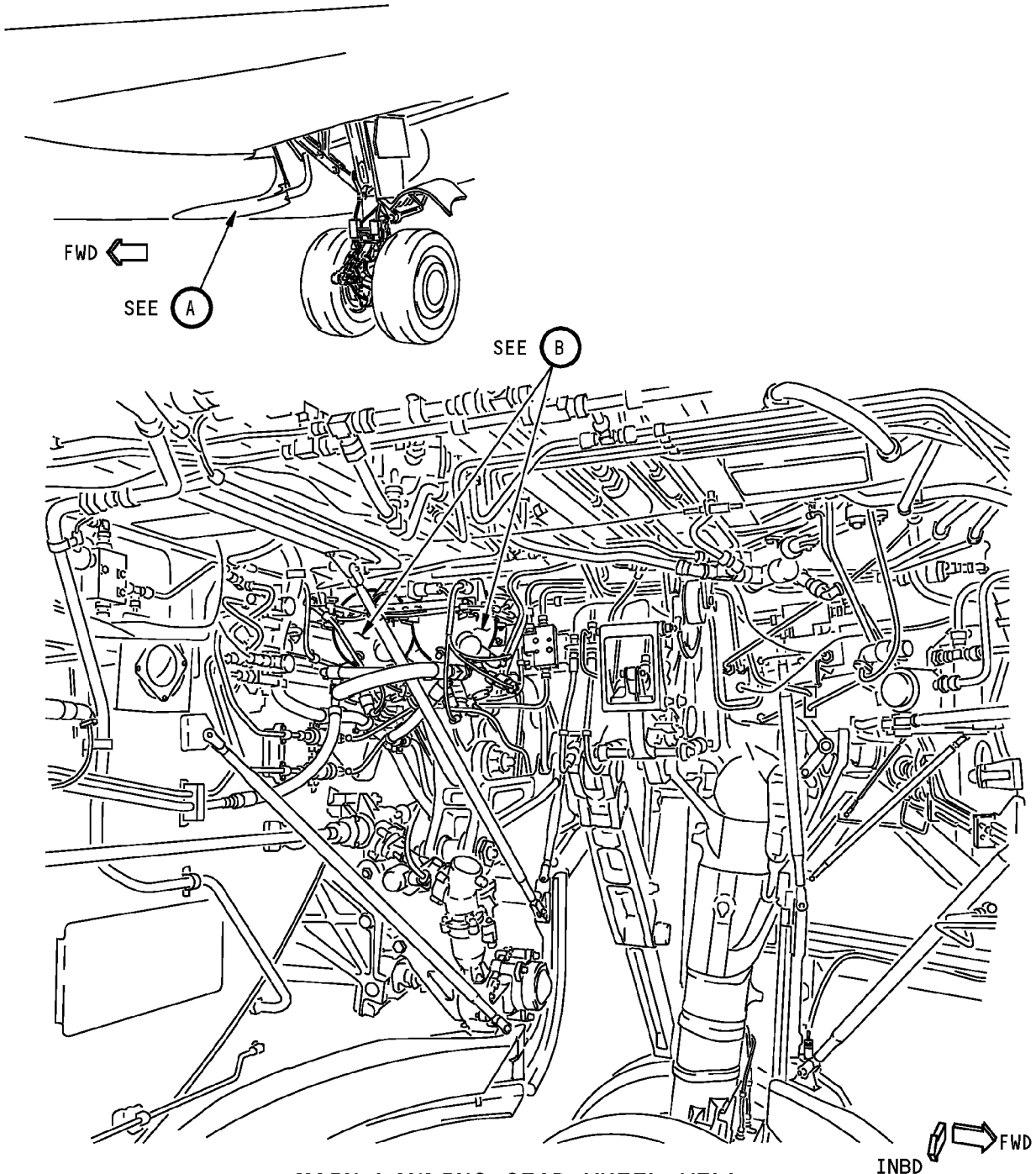
————— **END OF TASK** —————

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**MAIN LANDING GEAR WHEEL WELL  
(LEFT SIDE)**

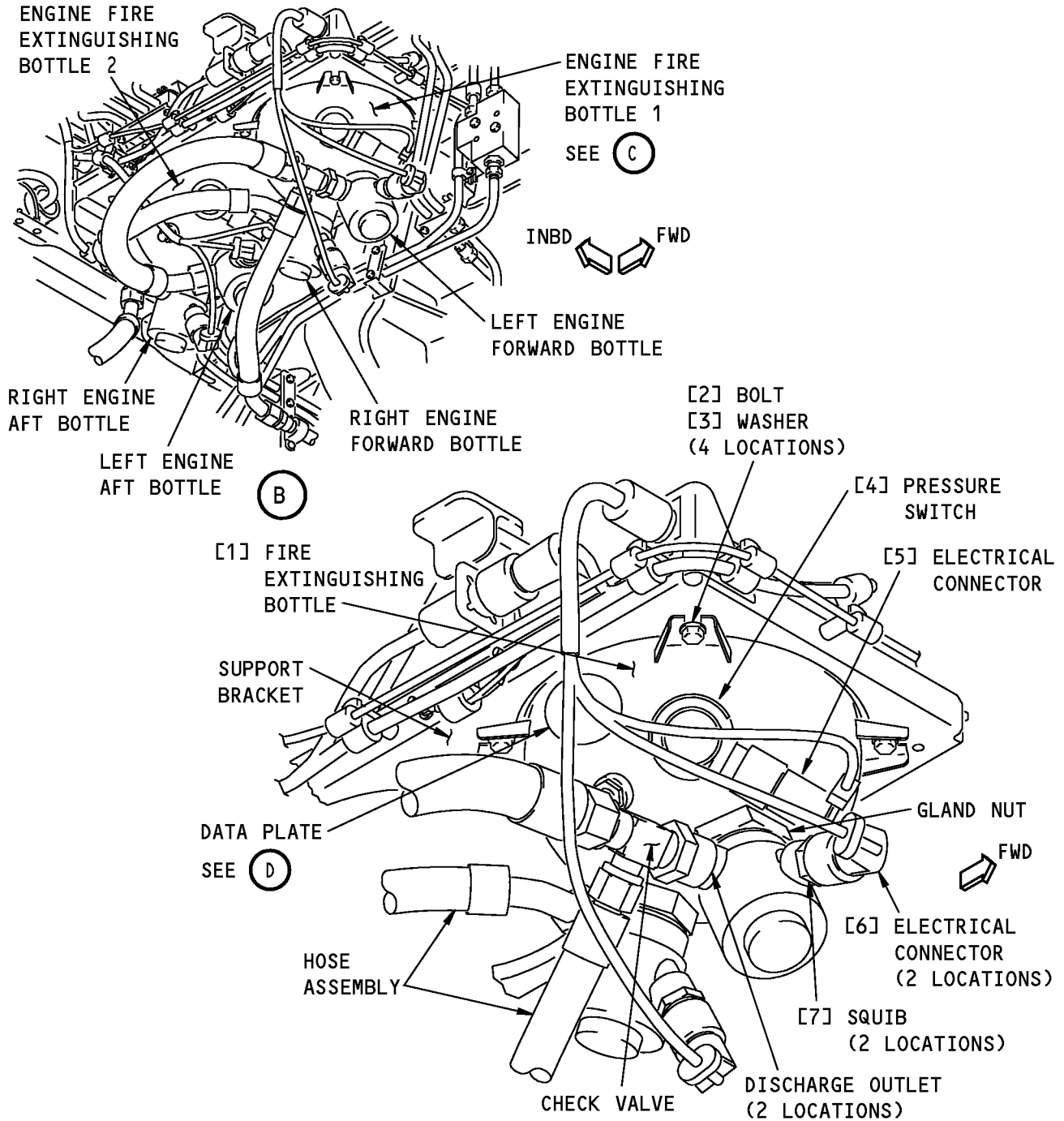
**A**

**Engine Fire Extinguishing Bottle Installation  
Figure 401 (Sheet 1 of 3)/26-21-01-990-801**

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**ENGINE FIRE EXTINGUISHING BOTTLE 1  
(ENGINE FIRE EXTINGUISHING BOTTLE 2 IS EQUIVALENT)**

(C)

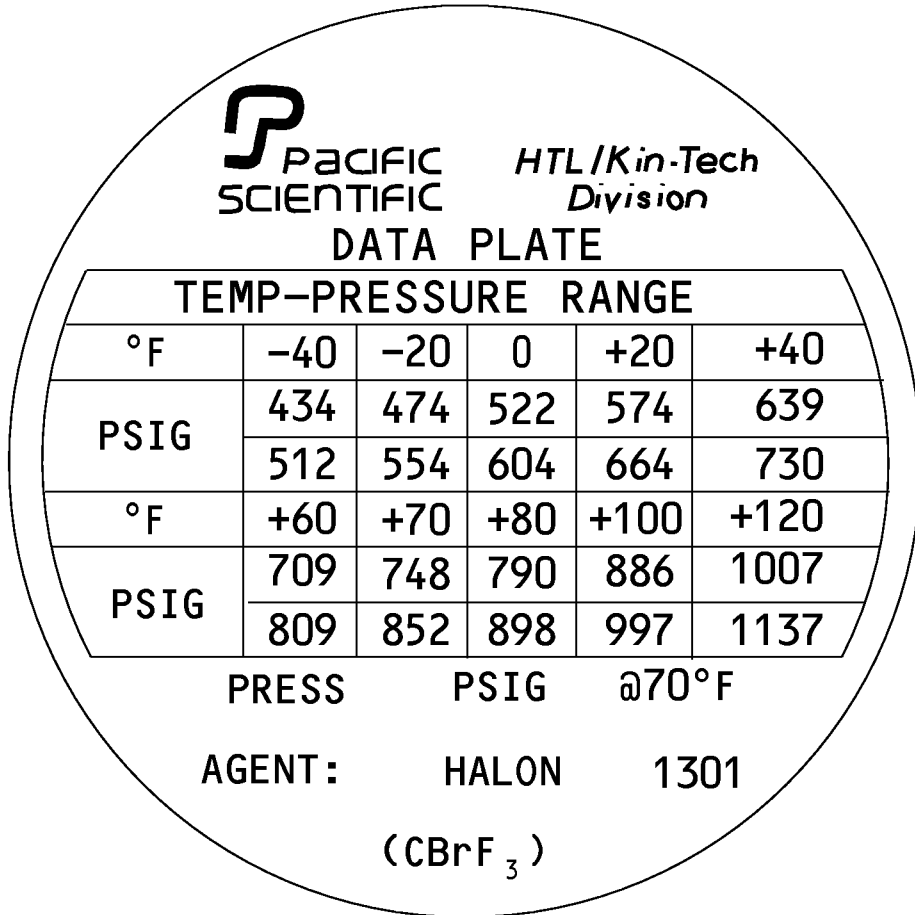
**Engine Fire Extinguishing Bottle Installation  
Figure 401 (Sheet 2 of 3)/26-21-01-990-801**

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DATA PLATE



Engine Fire Extinguishing Bottle Installation  
 Figure 401 (Sheet 3 of 3)/26-21-01-990-801

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TASK 26-21-01-400-801

#### 3. Engine Fire Extinguishing Bottle Installation

(Figure 401)

##### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) The engine fire extinguishing bottle is installed in the left main wheel well. The installation procedure is the same for each bottle.

##### B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)
26-21-00-720-801	Engine Fire Extinguishing Discharge Line Flow Test (P/B 501)

##### C. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-754	Scale - Spring, 0-150 Pounds, With Hook and Pad Adapter Kit (Part #: DG-200, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: DPPH-150, Supplier: 92456, A/P Effectivity: 737-ALL)
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)
STD-1079	Resistor - 10K Ohm or Greater
STD-1231	Multimeter - Standard

##### D. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D50004	Compound - Antiseize	BMS3-28
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

##### E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

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#### F. Engine Fire Extinguishing Bottle Installation

SUBTASK 26-21-01-280-001

- (1) Using spring scale (0-150 Pounds, With Hook and Pad Adapter Kit, COM-754, weigh the bottle. Make sure its weight is not more than 0.1 pounds from the weight shown on the fire extinguishing bottle.

**NOTE:** The bottle assembly includes the charged bottle, discharge heads, cartridge and electrical bonding tab with stud wire locked in place. Remove all protective caps before weighing. The explosive cartridge must be capped when handling the bottle assembly, except at weighing.

SUBTASK 26-21-01-200-001

- (2) If the previous bottle was discharged, do this step:

- (a) Check the discharge tube for any debris.

**NOTE:** Pay particular attention to the discharge outlets at the engine.

SUBTASK 26-21-01-200-002

- (3) Examine the check valve to make sure the ball moves freely.

**NOTE:** It may be necessary to further disconnect the discharge tubes to get access to the check valve.

SUBTASK 26-21-01-860-002

- (4) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-01-420-001

**WARNING:** REMOVE THE METAL CAP FROM THE FILL FITTING ASSEMBLY ON THE ENGINE FIRE EXTINGUISHER BOTTLES. THE SAFETY RELEASE ON THE BOTTLE WILL NOT OPERATE IF METAL CAPS ARE INSTALLED.

- (5) Do these steps to install the bottle:

- (a) Make sure the fire extinguisher bottle and support fixture mounting surfaces are clean.

**WARNING:** BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE CARTRIDGE AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (b) Put the fire extinguishing bottle [1] in its correct position on the support bracket.

- (c) Install the bolts [2] and washers [3].

- (d) Do a check of the resistance between the fire extinguishing bottle [1] and the support bracket with a bonding meter, COM-1550.

- 1) Make sure the resistance is not more than 0.0025 ohm.

- 2) If the resistance is more than 0.0025 ohm, clean the bonding surfaces between the fire extinguishing bottle [1] and the support bracket with solvent, B00083 and retest.

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- (e) Do this task: Engine Fire Extinguishing Discharge Line Flow Test, TASK 26-21-00-720-801.
- (f) If the discharge head does not align with the hose assembly, do these steps:
  - 1) Loosen the discharge outlet gland nut and rotate the discharge port so it aligns with the tube assembly.
  - 2) Tighten the gland nut to 540 in-lb (61 N·m) – 660 in-lb (75 N·m).
  - 3) Install lockwire, G02479 on the gland nut.
- (g) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.
  - 1) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.
- (h) Connect the tube assembly to the discharge head.

**NOTE:** Yellow is used to show the plumbing which supplies extinguishant to engine number 1. Blue is used to show the plumbing which supplies extinguishant to engine number 2.
- (i) Remove any unwanted compound.
- (j) Tighten the nut to 342 in-lb (38.6 N·m) – 378 in-lb (42.7 N·m) on the tube assembly.

SUBTASK 26-21-01-710-001

- (6) Do these steps to connect the electrical connector [6] to the squib [7].

**WARNING:** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Before you touch the squib, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:
  - ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
  - ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.
- (b) Remove the protective cap from the squib [7].

**WARNING:** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN ACCIDENTALLY FIRE AND CAUSE THE FIRE EXTINGUISHING BOTTLE TO RELEASE ITS CONTENTS. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (c) Use the multimeter, STD-1231 and make sure there is no voltage between pins 3 and 4 of the electrical connector [6].
- (d) If there is voltage between pins 3 and 4 of electrical connector [6], do these steps:
  - 1) Connect a multimeter, STD-1231 across pins 3 and 4.
  - 2) Connect a resistor (> 10K ohm), STD-1079 across the multimeter, STD-1231 pins [probes] to remove any stray voltage from the electrical connector [6].
  - 3) Disconnect the multimeter, STD-1231.
- (e) Use the multimeter, STD-1231 and make sure there is no voltage between pins 6 and 7 of the electrical connector [6].

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- (f) If there is voltage between pins 6 and 7 of electrical connector [6], do these steps:
  - 1) Connect a multimeter, STD-1231 across pins 6 and 7.
  - 2) Connect a resistor (> 10K ohm), STD-1079 across the multimeter, STD-1231 pins [probes] to remove any stray voltage from the electrical connector [6].
  - 3) Disconnect the multimeter, STD-1231.
- (g) Connect the electrical connector [6] to the squib [7].

NOTE: The squib pins can cause damage to the electrical connector if the pins do not correctly engage the connector.

SUBTASK 26-21-01-420-002

- (7) Connect the electrical connector [5] to the pressure switch.

G. Engine Fire Extinguishing Bottle Installation Test

SUBTASK 26-21-01-860-003

- (1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-01-741-001

- (2) Set the EXT TEST switch on the P8-1 panel to 1.
  - (a) Make sure the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-21-01-741-002

- (3) Set the EXT TEST switch on the P8-1 panel to 2.
  - (a) Make sure the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-21-01-741-003

- (4) Release the EXT TEST switch.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-21-01-040-001

- (1) Do this task: Remove External Power, TASK 24-22-00-860-814.

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## ENGINE FIRE EXTINGUISHING SYSTEM - INSPECTION/CHECK

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has an inspection of these items:
  - (1) Engine Fire Bottle.
  - (2) Engine fire extinguisher discharge tubes.

#### **TASK 26-21-01-210-801**

### 2. Engine Fire Extinguishing System Inspection

(Figure 601)

#### A. General

- (1) This procedure is a scheduled maintenance task.

#### B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

#### C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
413	Engine 1 - Fan Cowl, Left
414	Engine 1 - Fan Cowl, Right
415	Engine 1 - Thrust Reverser, Left
416	Engine 1 - Thrust Reverser, Right
423	Engine 2 - Fan Cowl, Left
424	Engine 2 - Fan Cowl, Right
425	Engine 2 - Thrust Reverser, Left
426	Engine 2 - Thrust Reverser, Right

#### D. Prepare for Inspection

SUBTASK 26-21-01-010-001

**WARNING:** DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

#### E. Procedure

SUBTASK 26-21-01-210-001

- (1) Make sure the fire bottles are not damaged.

SUBTASK 26-21-01-210-002

- (2) Make sure the extinguisher tubes are not damaged.

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SUBTASK 26-21-01-210-003

(3) Make sure the tubing outlets are free of obstructions.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-21-01-010-002

**WARNING:** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

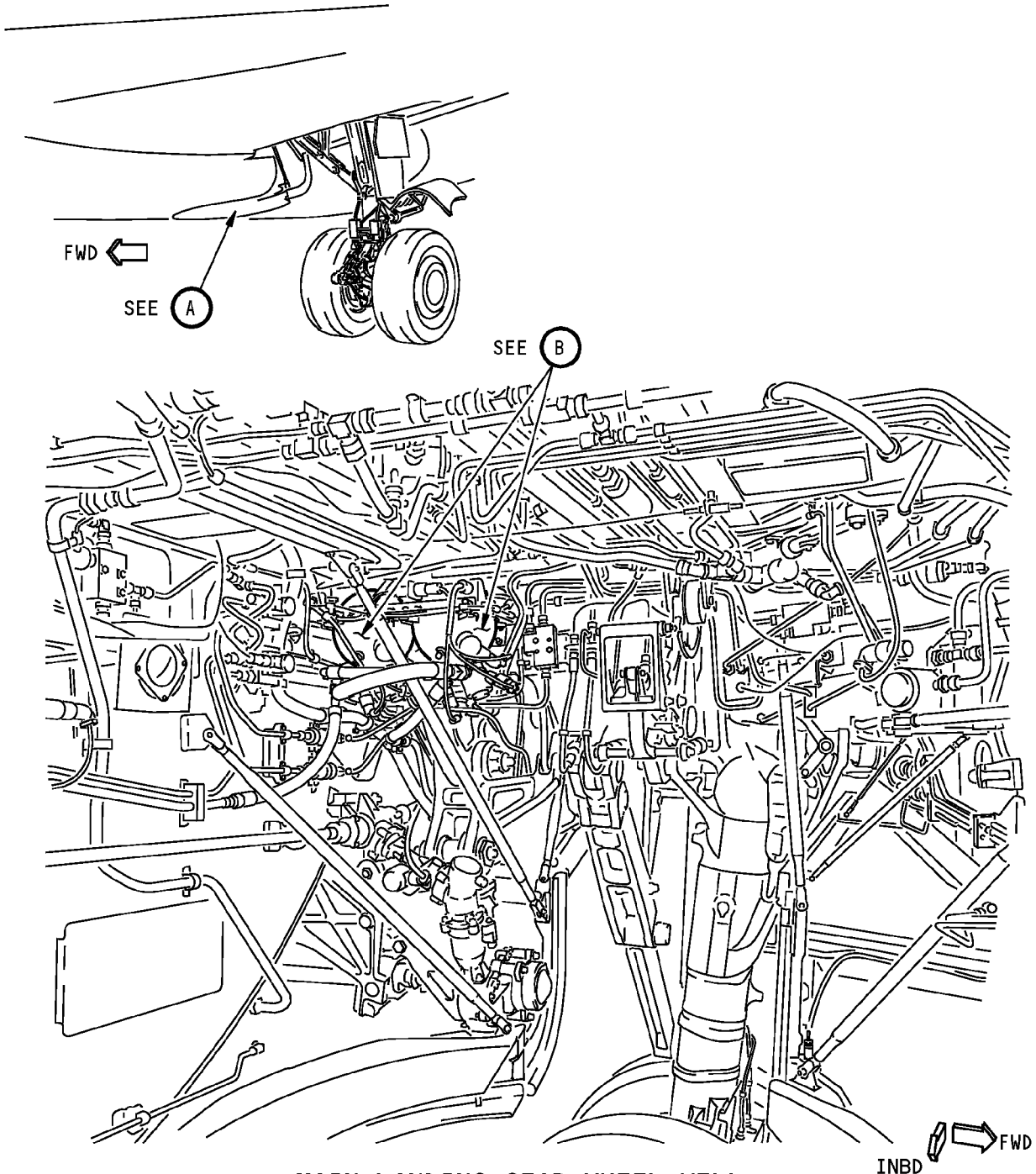
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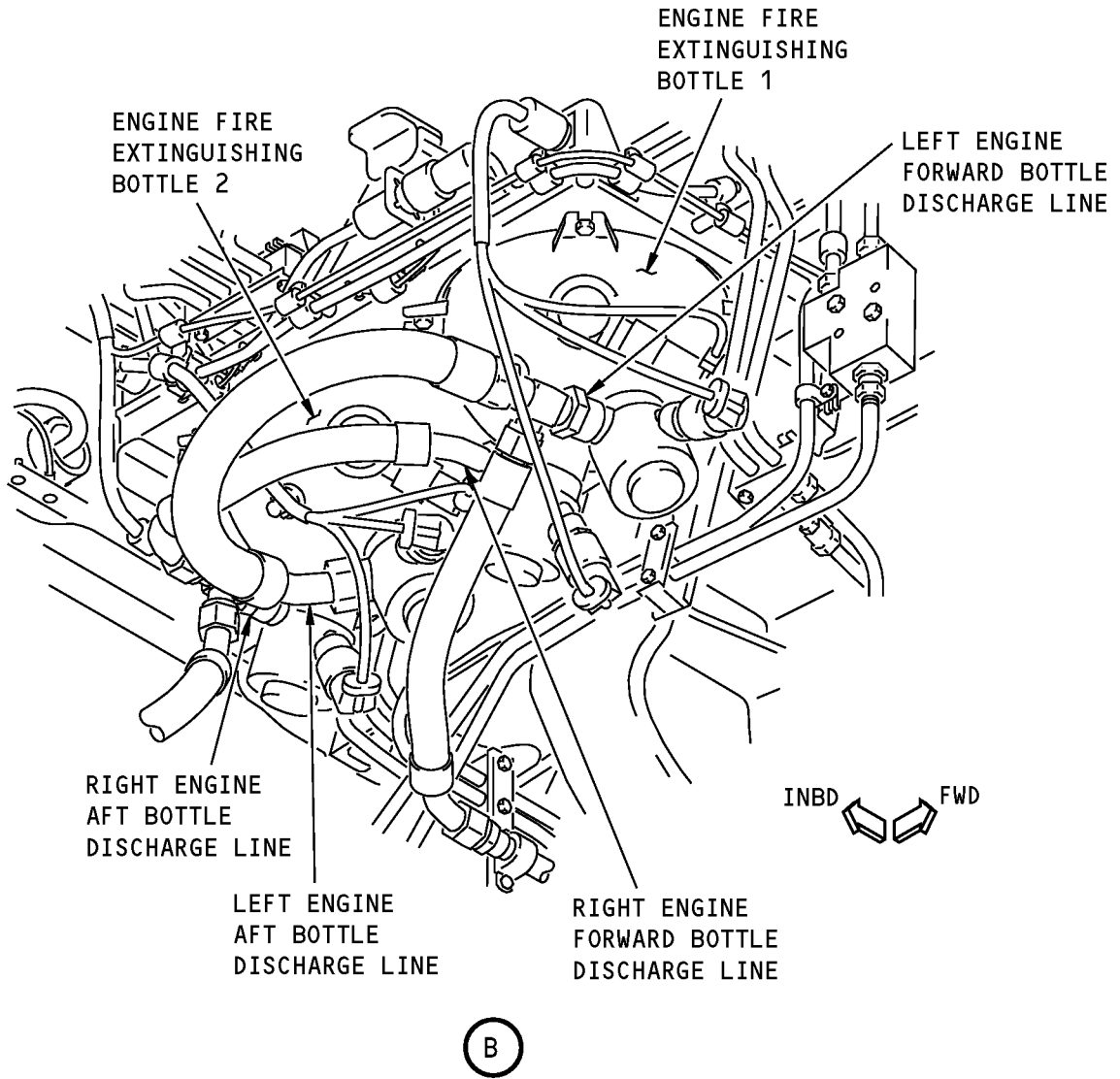
**MAIN LANDING GEAR WHEEL WELL  
(LEFT SIDE)**

**A**

**Engine Fire Extinguishing Bottle Inspection  
Figure 601 (Sheet 1 of 2)/26-21-01-990-803**

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**Engine Fire Extinguishing Bottle Inspection  
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# AIRCRAFT MAINTENANCE MANUAL

## ENGINE FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) Removal of the engine fire extinguisher squib.
  - (2) Installation of the engine fire extinguisher squib.

#### **TASK 26-21-02-000-801**

### 2. Engine Fire Extinguisher Bottle Squib Removal

(Figure 401)

#### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) The squibs are installed on the engine fire extinguishing bottles, located in the main landing gear wheel well. The removal procedure is the same for each squib.

#### B. Location Zones

<u>Zone</u>	<u>Area</u>
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

#### C. Engine Fire Extinguisher Bottle Squib Removal

SUBTASK 26-21-02-860-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-02-020-001

- (2) Disconnect the electrical connector [1] from the squib [2].

SUBTASK 26-21-02-480-001

**WARNING:** PUT A PROTECTIVE CAP ON THE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AN CAUSE INJURY TO PERSONS.

- (3) Put a protective cap on the squib [2].

SUBTASK 26-21-02-020-003

- (4) Remove the squib [2] from the discharge head.

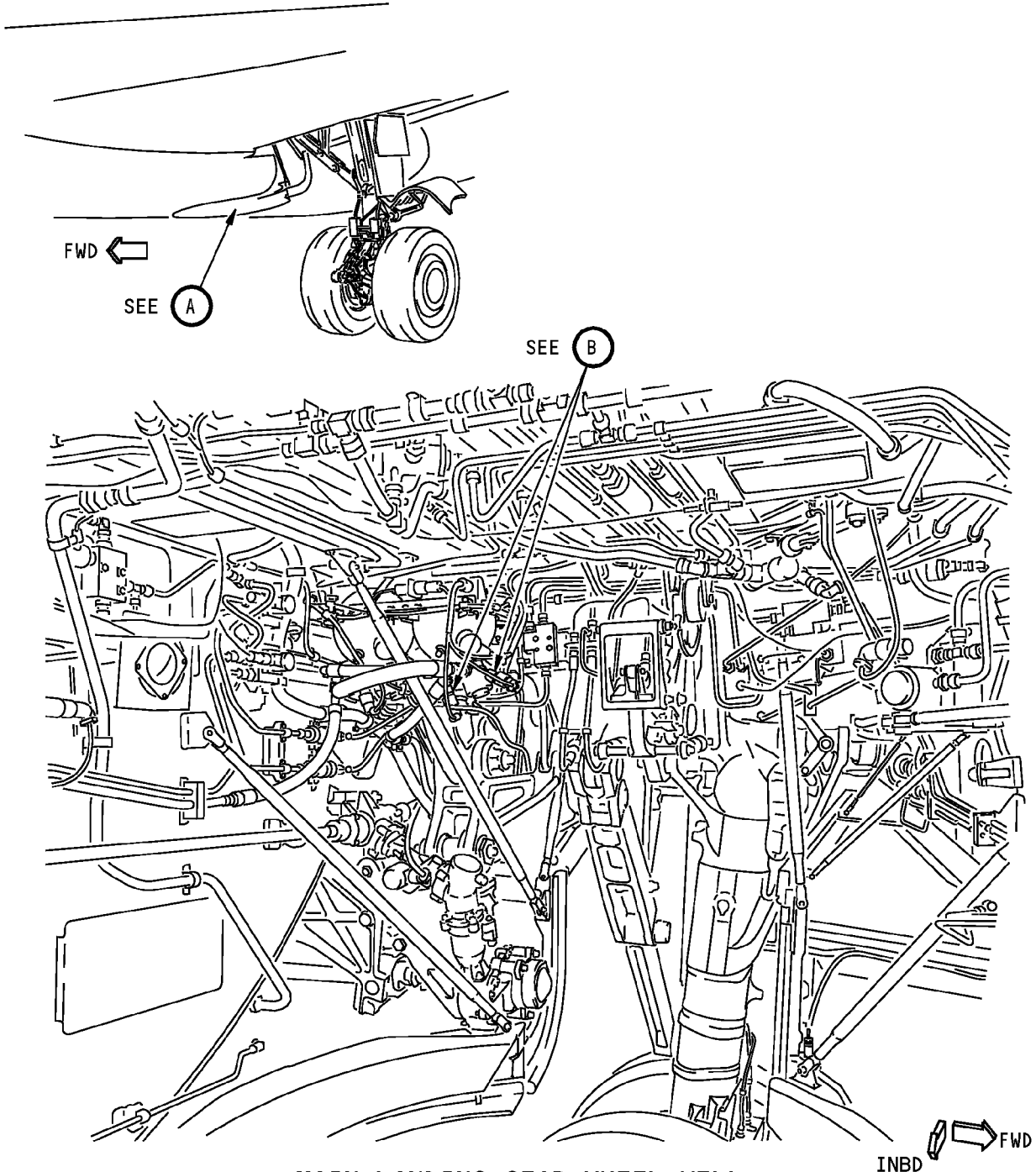
————— **END OF TASK** —————

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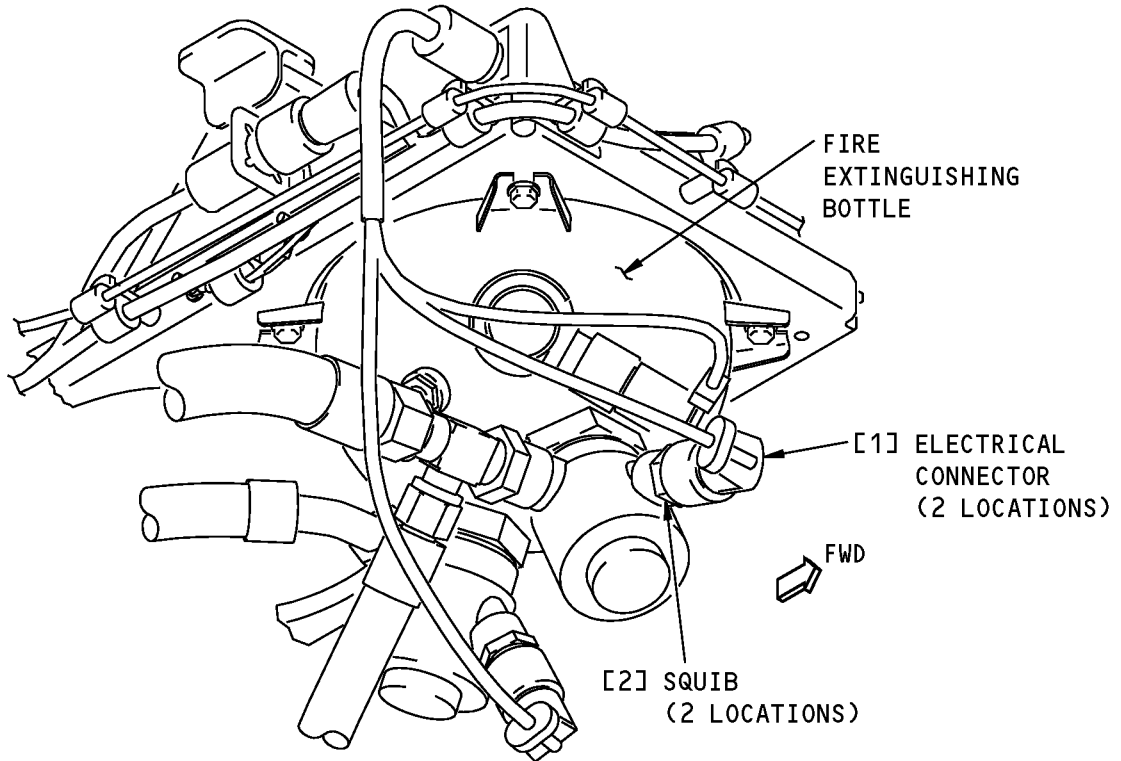
**MAIN LANDING GEAR WHEEL WELL  
(LEFT SIDE)**

**A**

**Engine Fire Extinguishing Bottle Squib Installation  
Figure 401 (Sheet 1 of 2)/26-21-02-990-801**

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**ENGINE FIRE EXTINGUISHING BOTTLE  
(EXAMPLE)**

**B**

**Engine Fire Extinguishing Bottle Squib Installation  
Figure 401 (Sheet 2 of 2)/26-21-02-990-801**

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TASK 26-21-02-400-801

#### 3. Engine Fire Extinguisher Bottle Squib Installation

(Figure 401)

##### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) The squibs are installed on the engine fire extinguishing bottles, located in the left main wheel well. The installation procedure is the same for each squib.

##### B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)
26-21-00-730-801	Engine Fire Extinguishing Bottle Squib Circuit Test (P/B 501)

##### C. Tools/Equipment

Reference	Description
STD-1079	Resistor - 10K Ohm or Greater
STD-1231	Multimeter - Standard

##### D. Consumable Materials

Reference	Description	Specification
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20

##### E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

##### F. Engine Fire Extinguisher Bottle Squib Installation

SUBTASK 26-21-02-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

SUBTASK 26-21-02-420-001

- (2) Do these steps to install the squib [2] in the fire extinguishing bottle:

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**WARNING:** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Before you touch the squib, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:
  - ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
  - ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.
- (b) Install the squib [2] in the fire bottle.
  - 1) Torque the squib to 90 in-lb (10.2 N·m) – 100 in-lb (11.3 N·m).
  - 2) Install lockwire, G02479 between the squib and discharge outlet.
- (c) Remove the protective cap from the squib [2].

**WARNING:** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN ACCIDENTALLY FIRE AND CAUSE THE FIRE EXTINGUISHING BOTTLE TO RELEASE ITS CONTENTS. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (d) Use the multimeter, STD-1231 and make sure there is no voltage between pins 3 and 4 of the electrical connector [1].
- (e) If there is voltage between pins 3 and 4 of electrical connector [1], do these steps:
  - 1) Connect a multimeter, STD-1231 across pins 3 and 4.
  - 2) Connect a resistor (> 10K ohm), STD-1079 across the multimeter, STD-1231 pins [probes] to remove any stray voltage from the electrical connector [1].
  - 3) Disconnect the multimeter, STD-1231.
- (f) Use the multimeter, STD-1231 and make sure there is no voltage between pins 6 and 7 of the electrical connector [1].
- (g) If there is voltage between pins 6 and 7 of electrical connector [1], do these steps:
  - 1) Connect a multimeter, STD-1231 across pins 6 and 7.
  - 2) Connect a resistor (> 10K ohm), STD-1079 across the multimeter, STD-1231 pins [probes] to remove any stray voltage from the electrical connector [1].
  - 3) Disconnect the multimeter, STD-1231.
- (h) Connect the electrical connector [1] to the squib [2].

**NOTE:** The squib pins can cause damage to the electrical connector if the pins do not correctly engage the electrical connector.

SUBTASK 26-21-02-860-003

- (3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN RIGHT
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN LEFT

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**G. Engine Fire Extinguisher Squib Installation Test**

SUBTASK 26-21-02-710-001

(1) Do this task: Engine Fire Extinguishing Bottle Squib Circuit Test, TASK 26-21-00-730-801.

**H. Put the Airplane Back to Its Usual Condition**

SUBTASK 26-21-02-860-004

(1) Do this task: Remove External Power, TASK 24-22-00-860-814.

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## APU FIRE EXTINGUISHING - ADJUSTMENT/TEST

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) A test of the APU fire bottle squib circuit.
  - (2) A test of the APU fire bottle pressure switch circuit.
  - (3) An APU fire handle system shutdown test.

### **TASK 26-22-00-730-801**

### 2. APU Fire Extinguishing Bottle Squib Circuit Test

(Figure 501)

#### A. General

- (1) This procedure is a scheduled maintenance task.

#### B. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1663	Test Equipment - Fire Extinguishing System (Part #: F80229-69, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: F80229-15, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
STD-1231	Multimeter - Standard

#### C. Consumable Materials

Reference	Description	Specification
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20

#### D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

#### E. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

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#### F. Prepare for the Test

SUBTASK 26-22-00-860-001

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-860-027

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

SUBTASK 26-22-00-020-001

- (3) Disconnect electrical connector D594 from the squib.

SUBTASK 26-22-00-020-002

**WARNING:** PUT A PROTECTIVE CAP ON THE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (4) Install a protective cap on the squib.

SUBTASK 26-22-00-860-002

- (5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-480-001

- (6) Set the toggle switch on Fire System Test Equipment, SPL-1663 to ON.

SUBTASK 26-22-00-760-001

- (7) Measure the resistance (RL) of the test box with a multimeter, STD-1231 connected to the voltmeter jacks.

- (a) Write down the value of RL.

SUBTASK 26-22-00-480-002

- (8) Set the toggle switch on the test box to OFF.

SUBTASK 26-22-00-480-003

- (9) Set the multimeter to read DC volts.

SUBTASK 26-22-00-480-004

- (10) Connect the applicable adapter cable to the connector on the test box.

**NOTE:** Look at the placard on the test box to determine the applicable adapter.

#### G. APU Fire Extinguishing Bottle Squib Circuit Test

SUBTASK 26-22-00-730-001

- (1) Push the manual override button and pull the APU fire handle on the P8-1 panel.

SUBTASK 26-22-00-480-005

- (2) Connect the adapter cable to the squib connector.

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SUBTASK 26-22-00-860-020

- (3) Turn the APU fire handle in the CW (Clockwise) direction.
  - (a) Make sure the BOTTLE DISCHARGE light on the test box comes on.
  - (b) Write down the voltage shown on the multimeter as ( $V_1$ ).
  - (c) Set the switch on the test box to ON.
  - (d) Write down the voltage shown on the multimeter as ( $V_2$ ).

SUBTASK 26-22-00-860-021

- (4) Release the fire handle.
  - (a) Make sure the handle moves toward the center  $10^\circ$  arc (0.2 rad).
  - (b) Make sure the multimeter shows  $0 (\pm 2)$  V (volts).

SUBTASK 26-22-00-760-002

- (5) Calculate the resistance  $R_C$  of the squib discharge circuit using this formula:

$$R_C = RL (V_1/V_2) - RL$$

- (a) Make sure  $R_C$  is less than or equal to 5 ohms.

NOTE: If  $R_C$  is more than 5 ohms, the circuit can not supply enough current to fire the squib cartridge.

SUBTASK 26-22-00-860-022

- (6) Turn the APU fire handle in the CCW (Counterclockwise) direction.
  - (a) Make sure the BOTTLE DISCHARGE light on the test box comes on.
  - (b) Write down the voltage shown on the multimeter as ( $V_1$ ).
  - (c) Set the switch on the test box to ON.
  - (d) Write down the voltage shown on the multimeter as ( $V_2$ ).

SUBTASK 26-22-00-860-023

- (7) Release the fire handle.
  - (a) Make sure the handle moves toward the center  $10^\circ$  arc (0.2 rad).
  - (b) Make sure the multimeter shows  $0 (\pm 2)$  V.

SUBTASK 26-22-00-760-003

- (8) Calculate the resistance  $R_C$  of the squib discharge circuit using this formula:

$$R_C = RL (V_1/V_2) - RL$$

- (a) Make sure  $R_C$  is less than or equal to 5 ohms.

NOTE: If  $R_C$  is more than 5 ohms, the circuit can not supply enough current to fire the squib cartridge.

- (9) Return the APU fire handle to its usual (stowed) position.

### H. Do a check of the APU fire bottle squib circuit using the remote APU control panel

SUBTASK 26-22-00-730-002

- (1) Pull the handle on the P28 remote APU control panel, in the right main gear wheel well.

SUBTASK 26-22-00-860-024

- (2) Push and hold the BOTTLE DISCHARGE toggle switch.
  - (a) Make sure the BOTTLE DISCHARGE light on the test box comes on.
  - (b) Write down the voltage shown on the multimeter as ( $V_1$ ).

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- (c) Set the switch on the test box to ON.
- (d) Write down the voltage shown on the multimeter as (V<sub>2</sub>).

SUBTASK 26-22-00-860-025

- (3) Release the BOTTLE DISCHARGE toggle switch.
  - (a) Make sure the multimeter shows 0 (±2) V.

SUBTASK 26-22-00-760-004

- (4) Calculate the resistance R<sub>C</sub> of the squib discharge circuit using this formula:  

$$R_C = R_L (V_1/V_2) - R_L$$
  - (a) Make sure R<sub>C</sub> is less than or equal to 5 ohms.

NOTE: If R<sub>C</sub> is more than 5 ohms, the circuit can not supply enough current to fire the squib cartridge.

SUBTASK 26-22-00-720-001

- (5) Put the handle on the P28 remote APU control panel in the usual position.

I. Return the Airplane to its Usual Condition.

SUBTASK 26-22-00-080-003

- (1) Disconnect the Fire System Test Equipment, SPL-1663 test box from the squib connector.

SUBTASK 26-22-00-430-001

- (2) Install lockwire, G02479 on the bottle discharge switch on the APU remote fire panel.

SUBTASK 26-22-00-865-001

- (3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-090-001

- (4) Remove the protective cap from the squibs.

SUBTASK 26-22-00-430-002

- (5) Connect the D594 to the squib.

SUBTASK 26-22-00-410-004

- (6) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

SUBTASK 26-22-00-865-002

- (7) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-710-004

- (8) Set the EXT TEST switch to 1.

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- (a) Make sure the APU light comes on.

NOTE: The L and R lights should also come on.

SUBTASK 26-22-00-710-005

- (9) Set the EXT TEST switch to 2.

- (a) Make sure the APU light comes on.

NOTE: The L and R lights should also come on.

SUBTASK 26-22-00-710-006

- (10) Release the EXT TEST switch.

————— **END OF TASK** —————

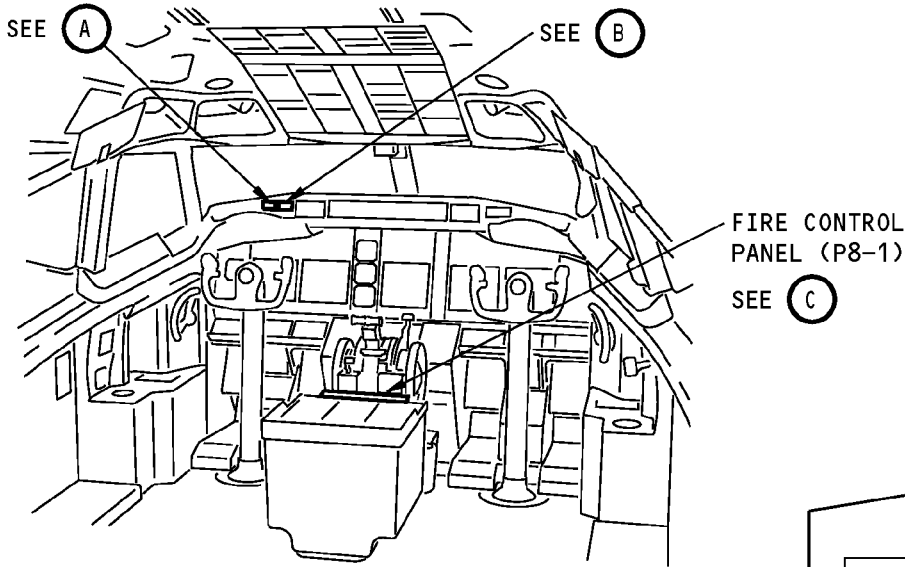
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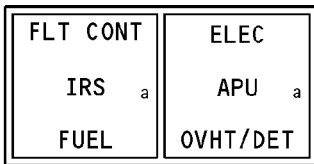
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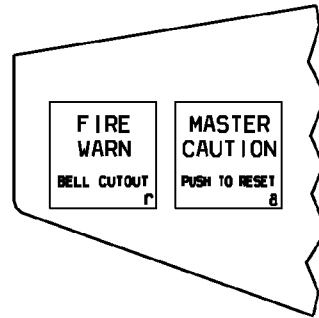


**FLIGHT COMPARTMENT**



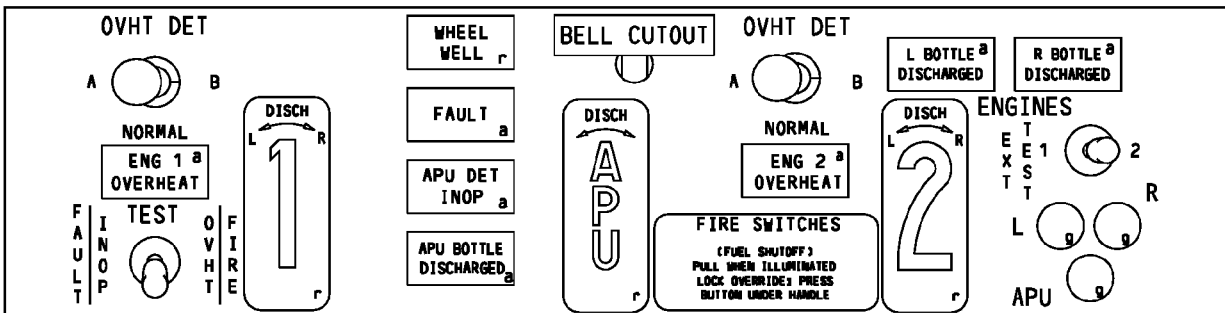
**CAPTAIN'S WARNING LIGHTS (P7)**

(B)



**CAPTAIN'S FIRE WARNING SWITCH (P7)  
(FIRST OFFICER'S IS OPPOSITE)**

(A)



**FIRE CONTROL PANEL (P8-1)**

(C)

**APU Fire Detection Test  
Figure 501 (Sheet 1 of 2)/26-22-00-990-801**

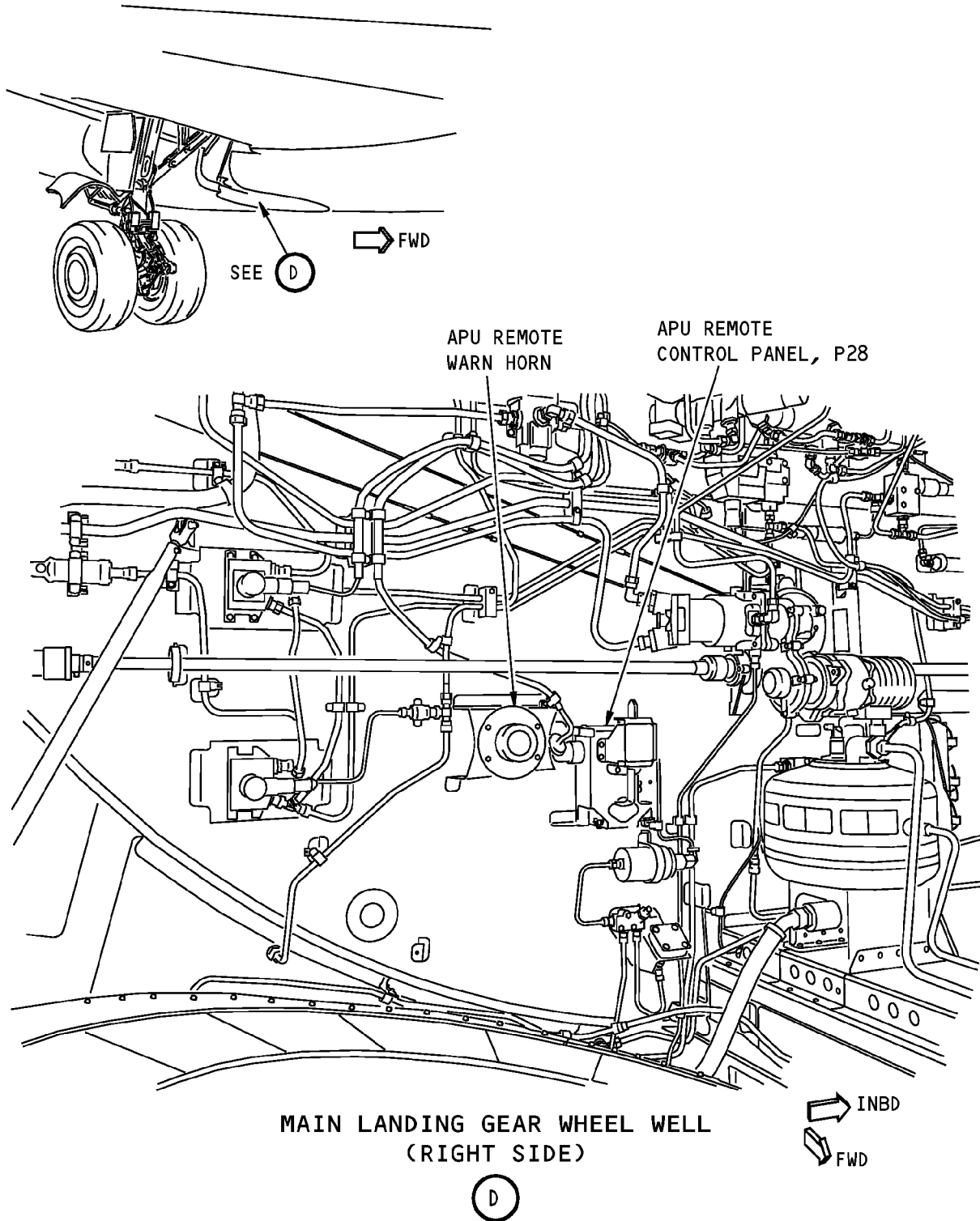
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**APU Fire Detection Test  
Figure 501 (Sheet 2 of 2)/26-22-00-990-801**

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#### TASK 26-22-00-730-802

#### 3. APU Fire Extinguishing Bottle Pressure Switch Circuit Test

(Figure 501)

##### A. General

- (1) The pressure switch test should be performed every time the fire control module, or pressure switch is disconnected from the airplane wiring.

##### B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

##### C. APU Fire Extinguishing Bottle Pressure Switch Test

SUBTASK 26-22-00-020-003

- (1) Disconnect electrical connector D1176 from the pressure switch on the APU fire bottle.

SUBTASK 26-22-00-730-003

- (2) Do a test of the APU fire bottle pressure switch circuit.
  - (a) Connect a jumper wire between pins 1 and 2 on D1176.
    - 1) Make sure the APU BOTTLE DISCHARGED light on the fire control module comes on.
  - (b) Remove the jumper from connector D1176.

SUBTASK 26-22-00-420-002

- (3) Connect D1176 to the pressure switch on the APU fire bottle.

————— END OF TASK —————

#### TASK 26-22-00-720-801

#### 4. APU Fire Switch System Shutdown Test.

(Figure 502)

##### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) This procedure checks that fuel to the APU is shut off and the APU generator is disconnected from the airplane power when the fire handle is pulled. It should be performed when the Engine and APU Fire Control Panel, or Remote APU Control Panel is removed from the airplane.

##### B. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
24-22-00-860-815	Supply APU Generator Power (P/B 201)

##### C. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
315	APU Compartment - Left

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Zone	Area
316	APU Compartment - Right

D. APU Fire Handle Fuel System Shutdown Test

SUBTASK 26-22-00-860-005

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-860-006

- (2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 26-22-00-860-013

- (3) Pull the APU fire handle on the P8 panel.  
 (a) Make sure the fire handle does not extend.

SUBTASK 26-22-00-860-008

- (4) Do a test of the APU fire handle fuel shutdown circuit in the flight compartment.  
 (a) Set the APU master switch on the P5 panel to ON.

**NOTE:** The igniter plugs will fire three times. Do not start the APU.

- 1) Make sure the APU fuel supply valve in the left main gear wheel well opens (Figure 502).  
 (b) Push the manual override button and pull the APU fire handle on the P8 panel.  
 1) Make sure the APU fuel supply valve in the left main gear wheel well closes.

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- (c) Push in the APU fire handle on the P8 panel to the usual position.
- (d) Set the APU master switch on the P5 panel to OFF.

SUBTASK 26-22-00-860-009

- (5) Do a check of the APU fire handle fuel shutoff circuit using the remote APU control panel.
  - (a) Set the APU master switch on the P5 panel to ON.
    - 1) Make sure the APU fuel supply valve in the left main gear wheel well opens.
  - (b) Pull the handle on the P28 remote APU control panel, in the right main gear wheel well.
    - 1) Make sure the APU fuel supply valve in the left main gear wheel well closes.
  - (c) Push the handle on the remote APU control panel to the usual position.
  - (d) Set the APU master switch on the P5 panel to OFF.

#### E. APU Fire Handle Generator Shutdown Test

SUBTASK 26-22-00-860-014

- (1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-860-015

- (2) Do this task: Supply APU Generator Power, TASK 24-22-00-860-815.

SUBTASK 26-22-00-860-016

- (3) Set the AC meter select switch on the P5-13 panel to APU GEN.
  - (a) Make sure the voltage reads 110-120 vac.
  - (b) Make sure the frequency reads 390-410.

SUBTASK 26-22-00-860-017

**CAUTION:** DO NOT TURN THE FIRE HANDLE WHEN IT IS EXTENDED. IF YOU DO THE FIRE BOTTLE WILL DISCHARGE.

- (4) Push the manual override button and pull the APU fire handle on the P8 panel.

**NOTE:** The APU will do an emergency shutdown. When the APU does an emergency shutdown, it will not do the cool-down cycle.

- (a) Make sure the voltage and frequency read 0 after 7 seconds.

SUBTASK 26-22-00-860-018

- (5) Set the APU and fire protection circuits to the usual positions.
  - (a) Set the APU master switch to the OFF position.
  - (b) Push the APU fire handle to its usual position.
  - (c) Set the APU master switch to the ON position.
  - (d) After 30 seconds, make sure the APU FAULT light goes off.
  - (e) Make sure the APU annunciator light goes off.
  - (f) Push and release the APU annunciator light.
  - (g) Make sure the L and R MASTER CAUTION lights go off.

**NOTE:** The L and R MASTER CAUTION lights stay on if the airplane finds other system faults.

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(h) Set the APU master switch to the OFF position.

F. Return the Airplane to its Usual Condition

SUBTASK 26-22-00-860-012

(1) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

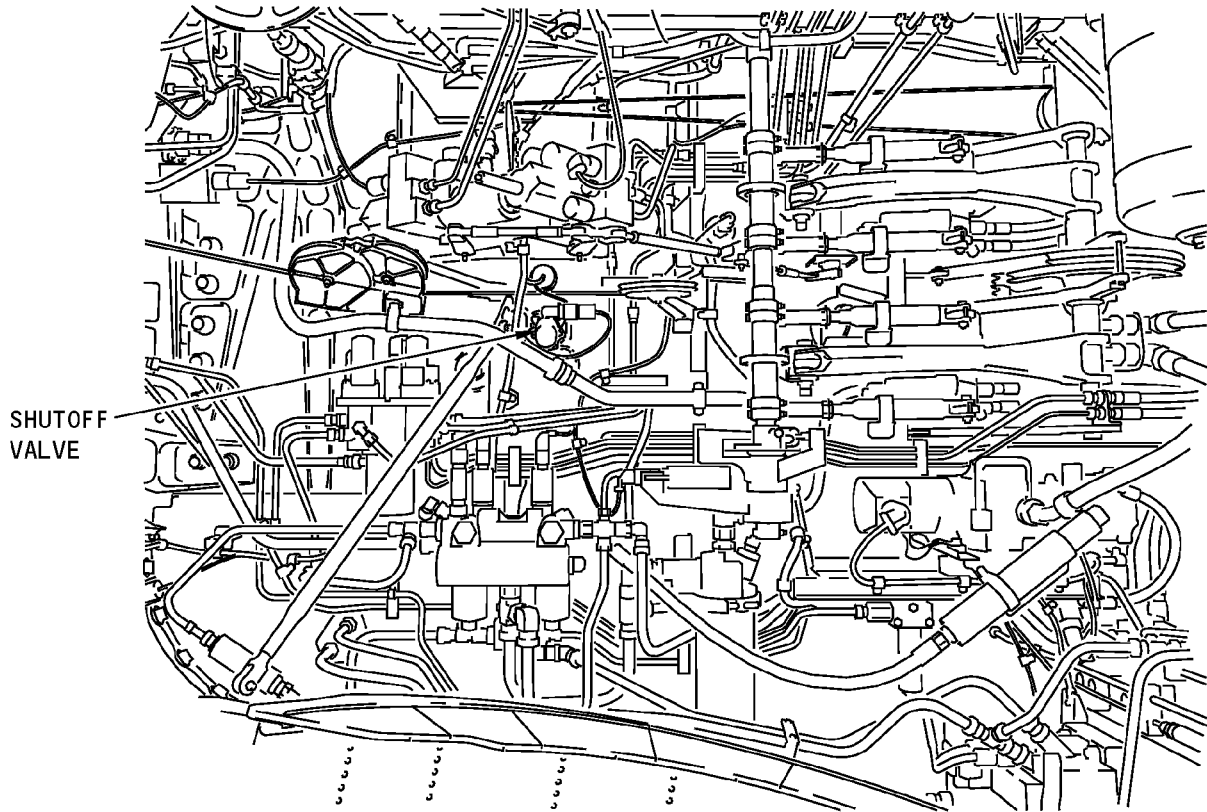
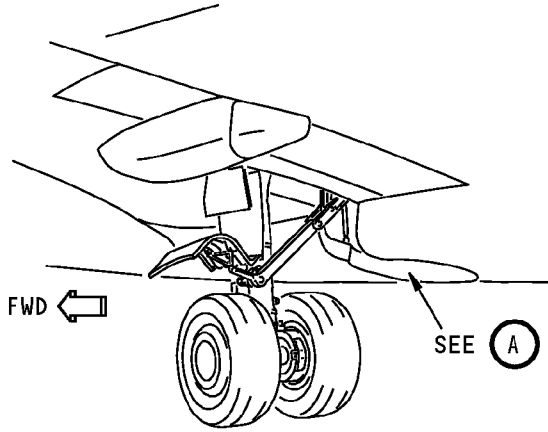
————— **END OF TASK** —————

EFFECTIVITY  
HAP ALL

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**MAIN LANDING GEAR WHEEL WELL  
(LEFT SIDE)**

**(A)**

**APU Fuel Shutoff Valve Actuator Test  
Figure 502/26-22-00-990-802**

EFFECTIVITY  
HAP ALL

**26-22-00**



737-600/700/800/900

# AIRCRAFT MAINTENANCE MANUAL

## APU FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) Removal of the APU fire extinguishing bottle.
  - (2) Installation of the APU fire extinguishing bottle.
- C. The APU fire extinguishing bottle is installed forward of the APU fire wall. You can get access to the bottle through the Aft Unpressurized Compartment Access Door, 311BL.

### **TASK 26-22-01-000-801**

### 2. APU Fire Extinguishing Bottle Removal

(Figure 401)

#### A. General

- (1) This procedure is a scheduled maintenance task.

#### B. Location Zones

<u>Zone</u>	<u>Area</u>
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

#### C. Access Panels

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

#### D. Prepare for the Removal

SUBTASK 26-22-01-860-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-22-01-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

#### E. APU Fire Extinguishing Bottle Removal

SUBTASK 26-22-01-020-001

- (1) Do these steps to remove the bottle:
  - (a) Disconnect the electrical connector [1] from the squib [7].

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## AIRCRAFT MAINTENANCE MANUAL

**WARNING:** PUT A PROTECTIVE CAP ON THE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (b) Put a protective cap [6] on the squib [7].
- (c) Disconnect the electrical connector [2] from the pressure switch.
- (d) Loosen the nut on the hose or tube assembly.
- (e) Disconnect the hose or tube assembly from the discharge head.
- (f) Install caps on the bottle discharge ports.
- (g) Install caps on the discharge tubes.
- (h) Remove the bolts [4] and washers [5] from the mounting lugs.

**WARNING:** BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE CARTRIDGE AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (i) Remove the fire extinguishing bottle [3].

————— **END OF TASK** —————

EFFECTIVITY  
HAP ALL

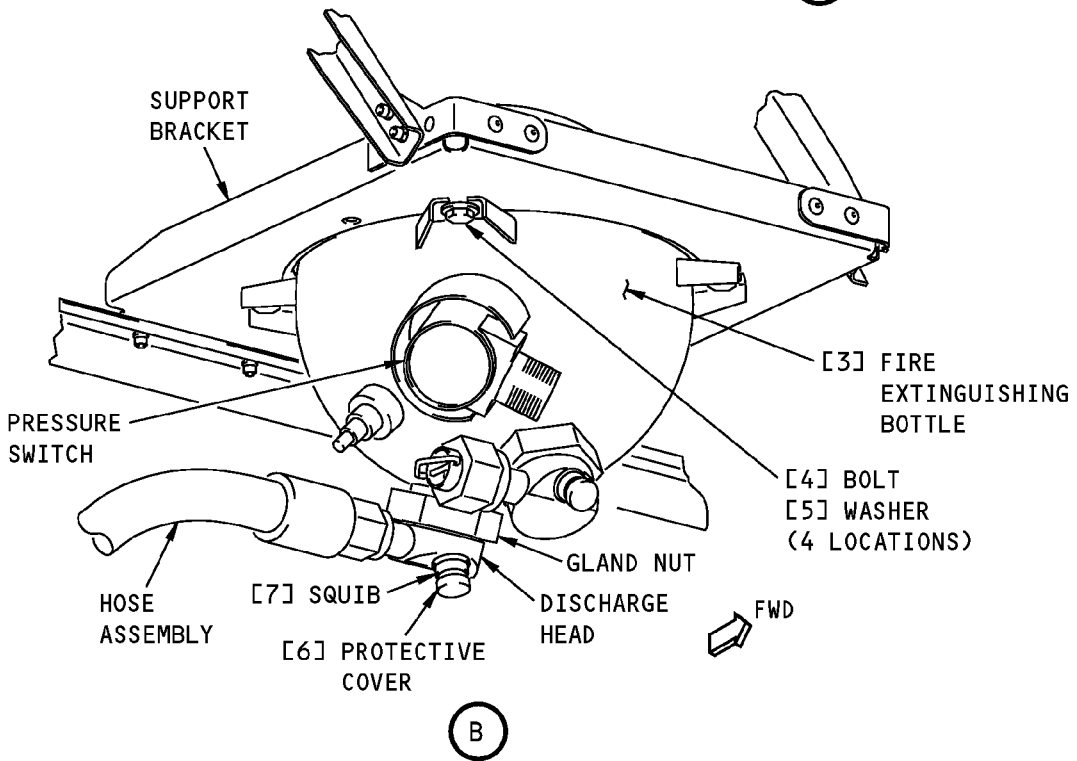
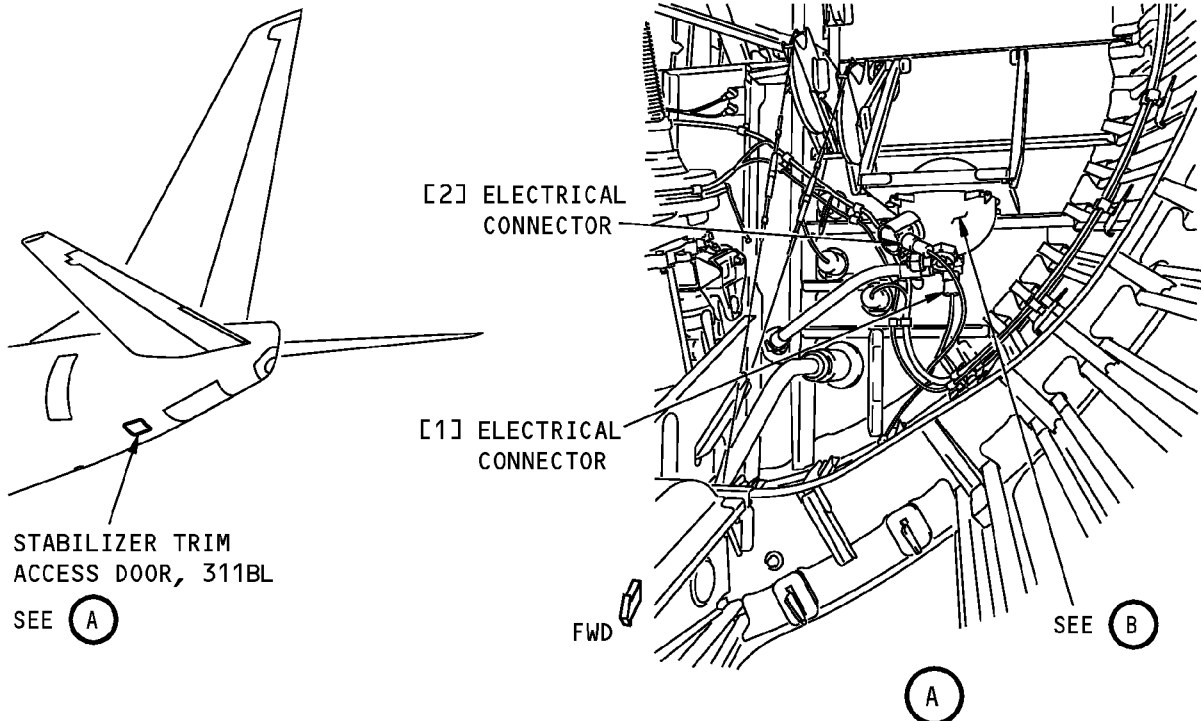
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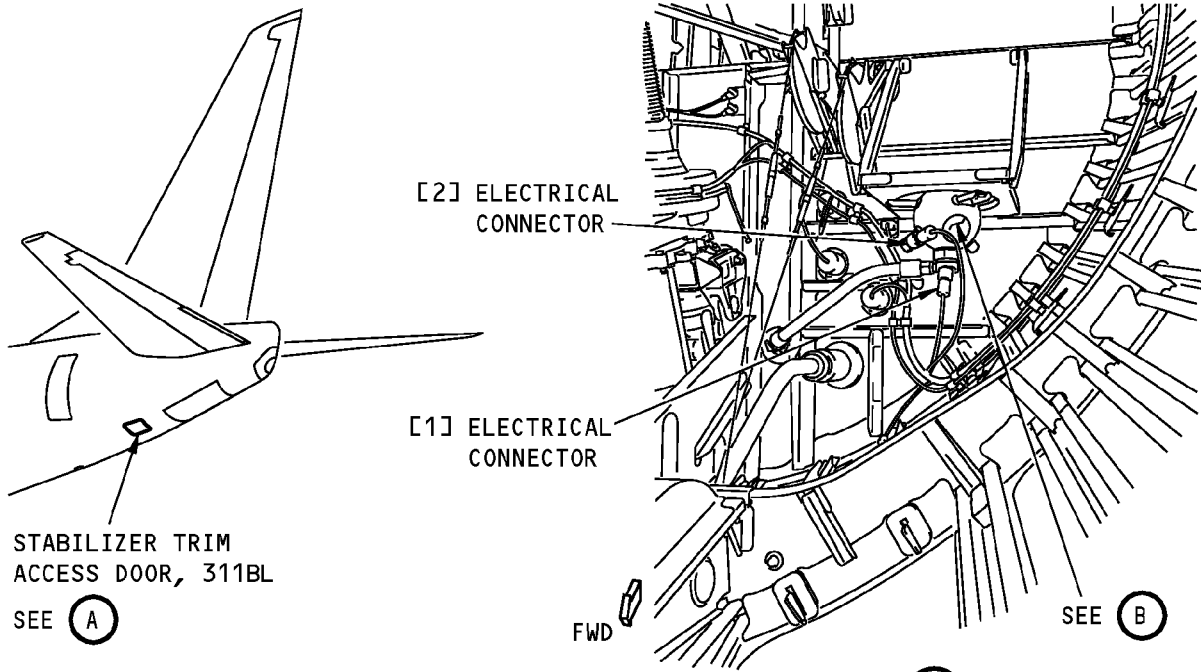


**Auxiliary Power Unit (APU) Fire Extinguishing Bottle Installation  
Figure 401 (Sheet 1 of 2)/26-22-01-990-801**

EFFECTIVITY  
HAP 031-054, 101-999

**26-22-01**

**737-600/700/800/900  
AIRCRAFT MAINTENANCE MANUAL**



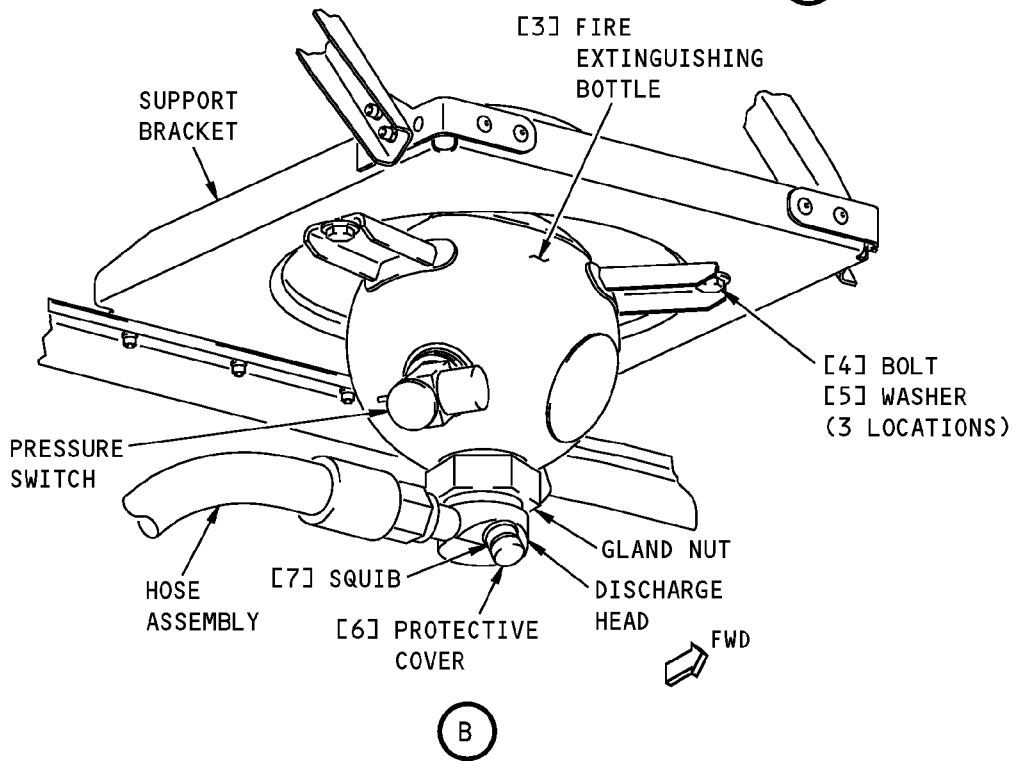
STABILIZER TRIM  
ACCESS DOOR, 311BL

SEE **(A)**

FWD

SEE **(B)**

**(A)**



**(B)**

**Auxiliary Power Unit (APU) Fire Extinguishing Bottle Installation  
Figure 401 (Sheet 2 of 2)/26-22-01-990-801**

EFFECTIVITY  
HAP 001-013, 015-026, 028-030

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### AIRCRAFT MAINTENANCE MANUAL

TASK 26-22-01-400-801

#### 3. APU Fire Extinguishing Bottle Installation

(Figure 401)

##### A. General

(1) This procedure is a scheduled maintenance task.

##### B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)

##### C. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-754	Scale - Spring, 0-150 Pounds, With Hook and Pad Adapter Kit (Part #: DG-200, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: DPPH-150, Supplier: 92456, A/P Effectivity: 737-ALL)
STD-1079	Resistor - 10K Ohm or Greater
STD-1231	Multimeter - Standard

##### D. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D50004	Compound - Antiseize	BMS3-28
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

##### E. Location Zones

Zone	Area
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

##### F. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

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### AIRCRAFT MAINTENANCE MANUAL

#### G. Prepare for the Installation

SUBTASK 26-22-01-700-001

- (1) Using spring scale (0-150 Pounds, With Hook and Pad Adapter Kit, COM-754 weigh the bottle. Make sure its weight is not more than 0.1 pounds from the weight shown on the fire extinguishing bottle.

#### HAP 031-054, 101-999

**NOTE:** The bottle assembly includes the charged bottle, discharge heads, cartridge and electrical bonding tab with stud wire locked in place. Remove all protective caps before weighing. The explosive cartridge must be capped when handling the bottle assembly, except at weighing.

#### HAP 001-013, 015-026, 028-030

**NOTE:** The bottle assembly consists of the charged bottle, anti-thrust cap (if installed on the safety/fill port), discharge head, cartridge and all protective caps.

#### HAP ALL

SUBTASK 26-22-01-860-002

- (2) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-22-01-200-001

- (3) If the previous bottle was discharged, check the discharge tube for any debris.

#### H. APU Fire Extinguishing Bottle Installation

SUBTASK 26-22-01-420-001

**WARNING:** REMOVE THE METAL CAPS FROM THE FILL FITTING ASSEMBLY ON THE APU FIRE EXTINGUISHER BOTTLES. THE SAFETY RELEASE ON THE BOTTLE WILL NOT OPERATE IF METAL CAPS ARE INSTALLED.

- (1) Do these steps to install the bottle:
  - (a) Make sure the fire extinguisher bottle and support fixture mounting surfaces are clean.

**WARNING:** BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE CARTRIDGE AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (b) Put the fire extinguishing bottle [3] in its correct position on the support bracket.
- (c) Install the bolts [4] and washers [5].
- (d) Do a check of the resistance between the fire extinguishing bottle [3] and the support bracket.
  - 1) Make sure the resistance is not more than 0.0025 ohm.

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## AIRCRAFT MAINTENANCE MANUAL

- 2) If the resistance is more than 0.0025 ohm, clean the bonding surfaces between the fire extinguishing bottle and the support bracket with solvent, B00083 and retest.
- (e) If the discharge head does not align with the hose or tube assembly, do these steps:
  - 1) Loosen the discharge outlet gland nut and rotate the discharge port so it aligns with the tube assembly.
  - 2) Torque the gland nut to 540 in-lb (61 N·m) – 660 in-lb (75 N·m).
  - 3) Install lockwire, G02479 on the gland nut.
- (f) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.
  - 1) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.
- (g) Connect the tube assembly to the discharge head.
- (h) Remove any unwanted compound.
- (i) Tighten the nut to 342 in-lb (38.6 N·m) – 378 in-lb (42.7 N·m).

SUBTASK 26-22-01-710-001

- (2) Do these steps to connect the electrical connector [1] to the squib [7] on the fire extinguishing bottle:

**WARNING:** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Before you touch the squib, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:
  - ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
  - ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.
- (b) Remove the protective cap [6] from the squib [7].

**WARNING:** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN ACCIDENTALLY FIRE AND CAUSE THE FIRE EXTINGUISHING BOTTLE TO RELEASE ITS CONTENTS. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (c) Use the multimeter, STD-1231 and make sure there is no voltage between pins 3 and 4 of the electrical connector [1].
- (d) If there is voltage between pins 3 and 4 of electrical connector [1], do these steps:
  - 1) Connect a multimeter, STD-1231 across pins 3 and 4.
  - 2) Connect a resistor (> 10K ohm), STD-1079 across the multimeter, STD-1231 pins [probes] to remove any stray voltage from the electrical connector [1].
  - 3) Disconnect the multimeter, STD-1231.
- (e) Connect the electrical connector [1] to the squib [7].

**NOTE:** The squib pins can cause damage to the electrical connector if the pins do not correctly engage the electrical connector.

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SUBTASK 26-22-01-420-002

(3) Connect the electrical connector [2] to the pressure switch.

I. APU Fire Extinguishing Bottle Installation Test

SUBTASK 26-22-01-860-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-22-01-741-001

(2) Set the EXT TEST switch on the P8-1 panel to 1.

(a) Make sure the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-22-01-741-002

(3) Set the EXT TEST switch on the P8-1 panel to 2.

(a) Make sure the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-22-01-741-003

(4) Release the EXT TEST switch.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-22-01-010-002

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

————— END OF TASK —————

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# AIRCRAFT MAINTENANCE MANUAL

## APU FIRE BOTTLE - INSPECTION/CHECK

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has this inspection task:
  - (1) APU Fire Bottle.

### **TASK 26-22-01-210-801**

### 2. APU Fire Bottle Inspection

- A. General
  - (1) This procedure is a scheduled maintenance task.
- B. Location Zones

<u>Zone</u>	<u>Area</u>
313	Stabilizer Torsion Box Compartment - Left
314	Stabilizer Torsion Box Compartment - Right
315	APU Compartment - Left

### C. Access Panels

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

### D. Prepare for inspection

SUBTASK 26-22-01-010-003

- (1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

### E. Procedure

SUBTASK 26-22-01-210-001

- (1) Make sure the fire bottle is not damaged.

SUBTASK 26-22-01-210-003

- (2) Make sure the extinguisher tube is not damaged.

SUBTASK 26-22-01-210-004

- (3) Make sure the tubing outlet is free of obstructions.

### F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-22-01-010-004

- (1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

————— **END OF TASK** —————

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## AIRCRAFT MAINTENANCE MANUAL

### APU FIRE EXTINGUISHING BOTTLE SQUIB - REMOVAL/INSTALLATION

#### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) A removal of the APU fire extinguishing bottle squib.
  - (2) An installation of the APU fire extinguishing bottle squib.

#### **TASK 26-22-02-000-801**

#### 2. APU Fire Extinguishing Bottle Squib Removal

(Figure 401)

##### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) The APU fire extinguishing squibs are installed on the fire extinguishing bottle. The APU fire extinguishing bottle is installed forward of the APU fire wall.

##### B. Location Zones

<u>Zone</u>	<u>Area</u>
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

##### C. Access Panels

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

##### D. Prepare For the Removal

SUBTASK 26-22-02-860-001

- (1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-22-02-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

##### E. APU Fire Extinguishing Bottle Squib Removal

SUBTASK 26-22-02-020-001

- (1) Do these steps to remove the squib:
  - (a) Disconnect the electrical connector [1] from the squib [3].

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**WARNING:** PUT A PROTECTIVE CAP ON THE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (b) Put a protective cap [2] on the squib [3].
- (c) Remove the squib [3] from the discharge head.

————— **END OF TASK** —————

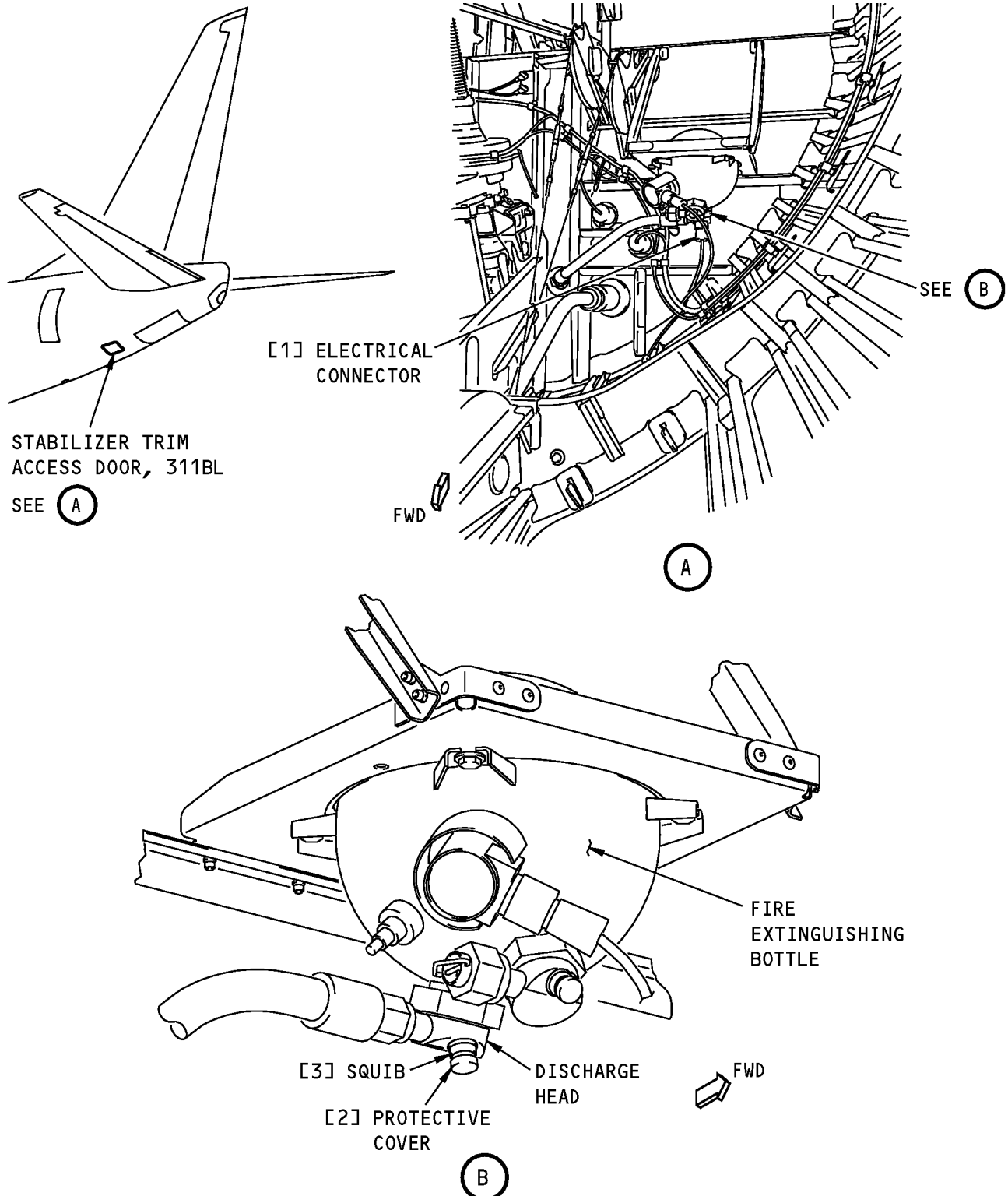
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**Auxiliary Power Unit (APU) Fire Extinguishing Bottle Squib Installation  
Figure 401 (Sheet 1 of 2)/26-22-02-990-801**

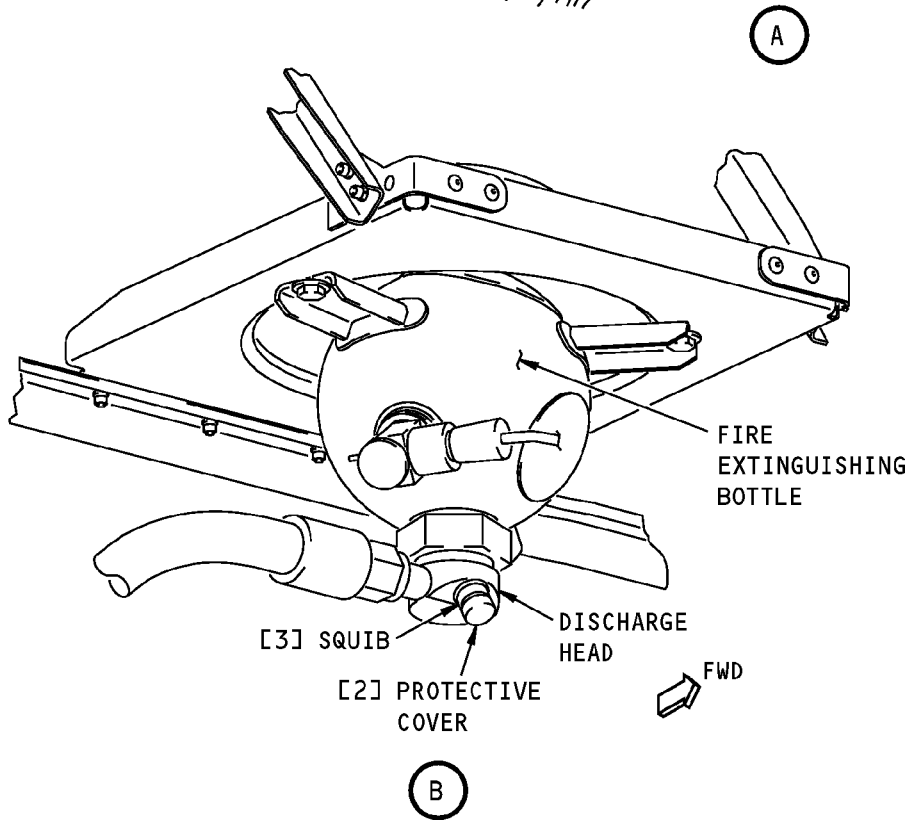
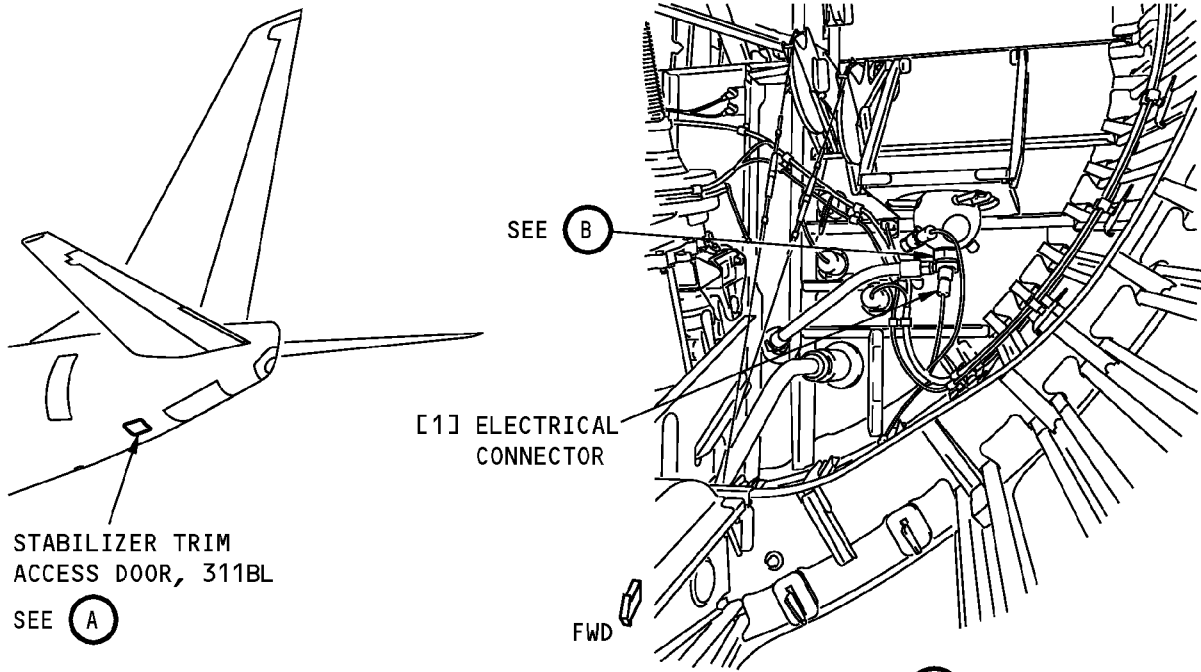
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**Auxiliary Power Unit (APU) Fire Extinguishing Bottle Squib Installation  
Figure 401 (Sheet 2 of 2)/26-22-02-990-801**

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# AIRCRAFT MAINTENANCE MANUAL

## TASK 26-22-02-400-801

### 3. APU Fire Extinguishing Bottle Squib Installation

(Figure 401)

#### A. General

(1) This procedure is a scheduled maintenance task.

#### B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-22-00-730-801	APU Fire Extinguishing Bottle Squib Circuit Test (P/B 501)

#### C. Tools/Equipment

Reference	Description
STD-1079	Resistor - 10K Ohm or Greater
STD-1231	Multimeter - Standard

#### D. Consumable Materials

Reference	Description	Specification
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20

#### E. Location Zones

Zone	Area
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

#### F. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

#### G. Prepare for the Installation

SUBTASK 26-22-02-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

#### H. APU Fire Extinguishing Bottle Squib Installation

SUBTASK 26-22-02-420-001

(1) Do these steps to install the squib [3] in the fire extinguishing bottle:

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### AIRCRAFT MAINTENANCE MANUAL

**WARNING:** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Before you touch the squib, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:
  - ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
  - ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.
- (b) Install the squib [3] in the fire bottle.
  - 1) Torque the squib to 90 in-lb (10.2 N·m) – 100 in-lb (11.3 N·m).
  - 2) Install lockwire, G02479 between the squib and discharge outlet.
- (c) Remove the protective cap [2] from the squib [3].

**WARNING:** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN ACCIDENTALLY FIRE AND CAUSE THE FIRE EXTINGUISHING BOTTLE TO RELEASE ITS CONTENTS. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (d) Use the multimeter, STD-1231 and make sure there is no voltage between pins 3 and 4 of the electrical connector [1].
- (e) If there is voltage between pins 3 and 4 of electrical connector [1], do these steps:
  - 1) Connect a multimeter, STD-1231 across pins 3 and 4.
  - 2) Connect a resistor (> 10K ohm), STD-1079 across the multimeter, STD-1231 pins [probes] to remove any stray voltage from the electrical connector [1].
  - 3) Disconnect the multimeter, STD-1231.
- (f) Connect the electrical connector [1] to the squib [3].

**NOTE:** The squib pins can cause damage to the electrical connector if the pins do not correctly engage the electrical connector.

SUBTASK 26-22-02-860-003

- (2) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

#### I. APU Fire Extinguishing Bottle Squib Installation Test

SUBTASK 26-22-02-710-001

- (1) Do this task: APU Fire Extinguishing Bottle Squib Circuit Test, TASK 26-22-00-730-801.

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## AIRCRAFT MAINTENANCE MANUAL

### J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-22-02-010-002

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

————— END OF TASK —————

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AIRCRAFT MAINTENANCE MANUAL

REMOTE APU CONTROL PANEL - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the Remote APU Control Panel (P28).
(2) An installation of the Remote APU Control Panel.

B. The Remote APU Control Panel is located on the aft bulkhead of the right main wheel well.

TASK 26-22-03-000-801

2. Remote APU Control Panel Removal

(Figure 401)

A. Location Zones

Table with 2 columns: Zone, Area. Row 1: 134, Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

B. Remote APU Control Panel Removal

SUBTASK 26-22-03-860-001

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Table with 4 columns: Row, Col, Number, Name. Row 1: B, 21, C00452, FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-03-020-001

(2) Disconnect the electrical connector from the remote APU control panel [1].

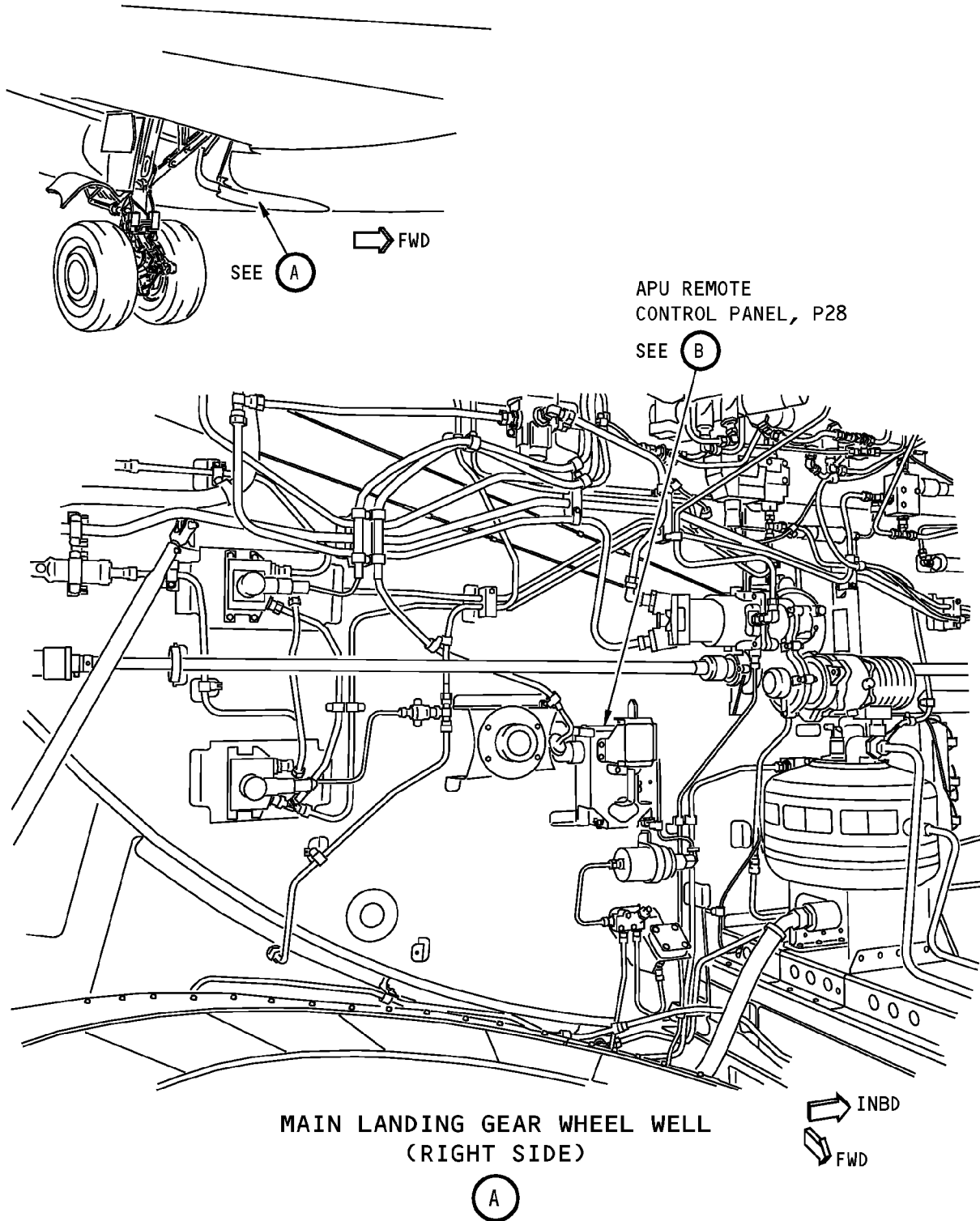
SUBTASK 26-22-03-020-002

(3) Remove the six bolts [2] and washers [3] securing the remote APU control panel [1] to the bulkhead.

END OF TASK

Effectivity table with header 'EFFECTIVITY' and row 'HAP ALL'.

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**APU Remote Control Panel Installation  
Figure 401 (Sheet 1 of 2)/26-22-03-990-801**

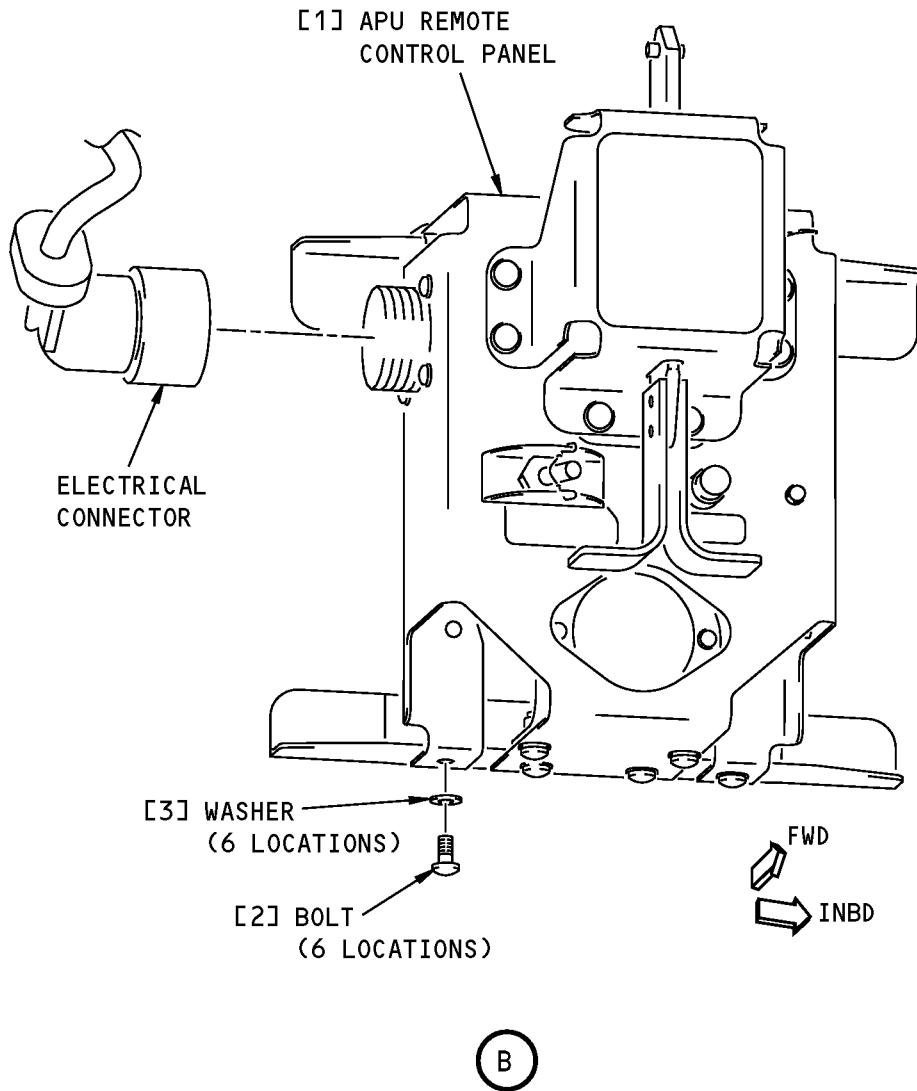
EFFECTIVITY  
HAP ALL

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**APU Remote Control Panel Installation  
Figure 401 (Sheet 2 of 2)/26-22-03-990-801**

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TASK 26-22-03-400-801

3. Remote APU Control Panel Installation

(Figure 401)

A. References

Reference	Title
26-22-00-720-801	APU Fire Switch System Shutdown Test. (P/B 501)
26-22-00-730-801	APU Fire Extinguishing Bottle Squib Circuit Test (P/B 501)

B. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

C. Remote APU Control Panel Installation

SUBTASK 26-22-03-860-002

- (1) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-03-010-001

- (2) Attach the remote APU control panel [1] to the bulkhead with six bolts [2] and washers [3].

SUBTASK 26-22-03-020-003

- (3) Connect the electrical connector to the remote APU control panel [1].

SUBTASK 26-22-03-860-003

- (4) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

D. Remote APU Control Panel Installation Test

SUBTASK 26-22-03-710-002

- (1) Do this task: APU Fire Extinguishing Bottle Squib Circuit Test, TASK 26-22-00-730-801.

SUBTASK 26-22-03-710-001

- (2) Do this task: APU Fire Switch System Shutdown Test., TASK 26-22-00-720-801.

————— END OF TASK —————

EFFECTIVITY

HAP ALL

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# AIRCRAFT MAINTENANCE MANUAL

## REMOTE APU CONTROL PANEL - INSPECTION/CHECK

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has this inspection task:
  - (1) Remote APU Control Panel.

#### **TASK 26-22-03-210-801**

### 2. Remote APU Control Panel

- A. General
  - (1) This procedure is a scheduled maintenance task.
- B. Consumable Materials

Reference	Description	Specification
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20

### C. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

### D. Procedure

SUBTASK 26-22-03-210-001

- (1) Make sure the remote APU control panel is not damaged.

SUBTASK 26-22-03-210-002

- (2) Make sure the remote APU control panel is securely attached.

SUBTASK 26-22-03-210-003

- (3) Make sure copper lockwire, G02479 is installed on the bottle discharge switch on the APU remote fire panel.

————— **END OF TASK** —————

<b>EFFECTIVITY</b>  <b>HAP ALL</b>	
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# AIRCRAFT MAINTENANCE MANUAL

## CARGO FIRE EXTINGUISHING - ADJUSTMENT/TEST

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) A test of the cargo fire bottle squib circuit
  - (2) A test of the cargo fire bottle pressure switch circuit
  - (3) An airflow test through the discharge tubes
  - (4) A pressure test of the cargo fire bottle discharge tubes

#### **TASK 26-23-00-730-801**

### 2. Cargo Fire Extinguishing Bottle Squib Circuit Test

(Figure 501)

#### A. General

- (1) This procedure is a scheduled maintenance task.

#### B. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

#### C. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1664	Test Box - Cargo Fire Extinguishing System (Part #: C26006-1, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER)

#### D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

#### E. Cargo Fire Extinguishing Bottle Squib Circuit Test

SUBTASK 26-23-00-860-005

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FORWARD DET B

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Row	Col	Number	Name
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

HAP 048, 050, 053, 054

SUBTASK 26-23-00-860-006

(2) Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

HAP ALL

SUBTASK 26-23-00-020-001

(3) Disconnect the electrical connectors from the squibs.

(a) Disconnect D12794 from bottle 1 to test the forward cargo compartment.

HAP 048, 050, 053, 054

(b) Disconnect D12818 from bottle 2 to test the forward cargo compartment.

HAP ALL

(c) Disconnect D12796 from bottle 1 to test the aft cargo compartment.

HAP 048, 050, 053, 054

(d) Disconnect D12820 from bottle 2 to test the aft cargo compartment.

HAP ALL

SUBTASK 26-23-00-020-002

WARNING: PUT A PROTECTIVE CAP ON THE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

(4) Install a protective cap on each squib.

SUBTASK 26-23-00-480-018

(5) Connect the squib connectors to the applicable connectors on test box, SPL-1664.

SUBTASK 26-23-00-730-010

(6) Set all the switches on the test box to NO DISCHARGE.

SUBTASK 26-23-00-730-011

(7) Make sure all the circuit breakers on the test box are closed.

SUBTASK 26-23-00-860-008

(8) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

EFFECTIVITY

HAP ALL

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SUBTASK 26-23-00-730-012

(9) Make sure none of the circuit breakers on the test box open.

SUBTASK 26-23-00-730-001

- (10) Do a test of the forward cargo fire bottle squib circuit.
- (a) Set the EXT 1 FWD switch on the test box to DISCHARGE.
  - (b) Push the FWD ARMED switch on the Cargo Fire Control panel.
  - (c) Push and hold the DISCH switch on the Cargo Fire Control panel for approximately 15 seconds.
  - (d) Make sure the EXT 1 FWD circuit breaker opens.
  - (e) Make sure the other circuit breakers stay closed.
  - (f) Close the EXT 1 FORWARD circuit breaker.
  - (g) Set the EXT 1 FORWARD switch to NO DISCHARGE.

### HAP 048, 050, 053, 054

- (h) Set the EXT 2 FORWARD switch S1 on the test box to DISCHARGE.
- (i) Wait 65 minutes, then make sure the EXT 2 FORWARD circuit breaker opens.
- (j) Make sure the other circuit breakers stay closed.
- (k) Close the EXT 2 FORWARD circuit breaker.
- (l) Set the EXT 2 FORWARD switch S1 to NO DISCHARGE.

### HAP ALL

(m) Push the FWD ARM switch, on the Cargo Fire Control Panel, to the usual position.

SUBTASK 26-23-00-730-002

- (11) Do a test of the aft cargo fire bottle squib circuit.
- (a) Set the EXT 1 AFT switch on the test box to DISCHARGE.
  - (b) Push the AFT ARMED switch on the Cargo Fire Control panel.
  - (c) Push and hold the DISCH switch on the Cargo Fire Control panel for approximately 15 seconds.
  - (d) Make sure the EXT 1 AFT circuit breaker opens.
  - (e) Make sure the other circuit breakers stay closed.
  - (f) Close the EXT 1 AFT circuit breaker.
  - (g) Set the EXT 1 AFT switch to NO DISCHARGE.

### HAP 048, 050, 053, 054

- (h) Set the EXT 2 AFT switch S2 on the test box to DISCHARGE.
- (i) Wait 65 minutes, then make sure the EXT 2 AFT circuit breaker opens.
- (j) Make sure the other circuit breakers stay closed.
- (k) Close the EXT 2 AFT circuit breaker.
- (l) Set the EXT 2 AFT switch S2 to NO DISCHARGE.

### HAP ALL

(m) Push the AFT ARM switch, on the Cargo Fire Control panel, to the usual position.

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HAP ALL

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**HAP 048, 050, 053, 054**

SUBTASK 26-23-00-860-009

(12) Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

**HAP ALL**

SUBTASK 26-23-00-860-010

(13) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-420-001

(14) Remove the test equipment, protective caps, and install the connectors.

- (a) Connect D12794 to the forward squib, M2249 on bottle 1.
- (b) Connect D12796 to the aft squib, M2250 on bottle 1.

**HAP 048, 050, 053, 054**

- (c) Connect D12818 to the forward squib, M2264 on bottle 2.
- (d) Connect D12820 to the aft squib, M2265 on bottle 2.

**HAP ALL**

SUBTASK 26-23-00-860-031

(15) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FORWARD DET B
C	17	C01522	CARGO FIRE FORWARD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-710-001

(16) Push and hold the TEST switch on the Cargo Fire Control panel.

- (a) Make sure the EXT FWD and AFT lights come on.

<p>EFFECTIVITY</p> <p><b>HAP ALL</b></p>	
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SUBTASK 26-23-00-710-002

(17) Release the TEST switch.

————— **END OF TASK** —————

EFFECTIVITY  
HAP ALL

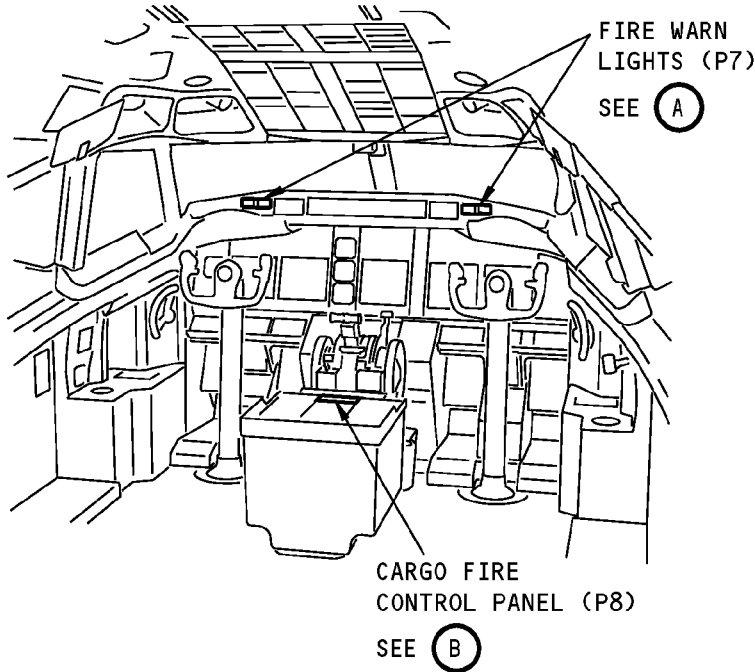
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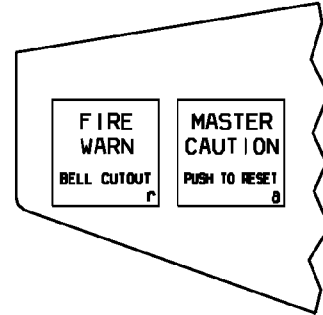
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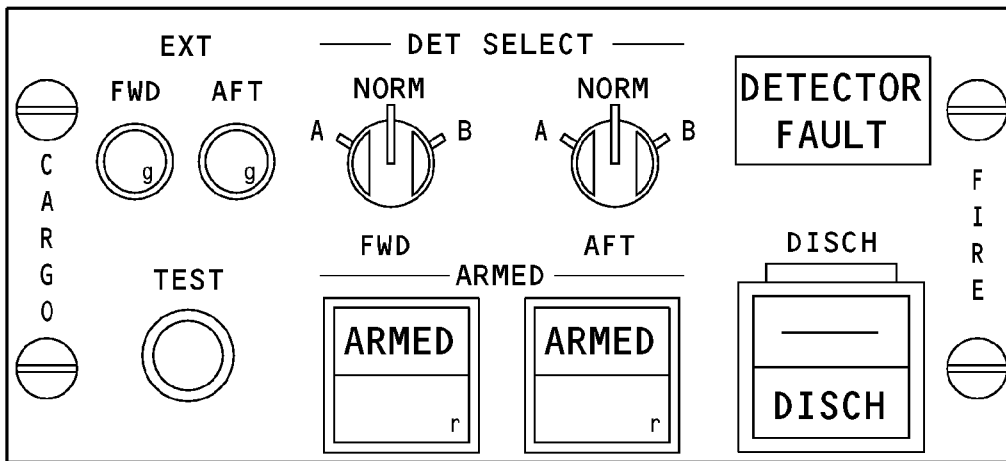


FLIGHT COMPARTMENT



FIRE WARN LIGHTS (P7)  
(EXAMPLE)

(A)



CARGO FIRE CONTROL PANEL (P8)

(B)

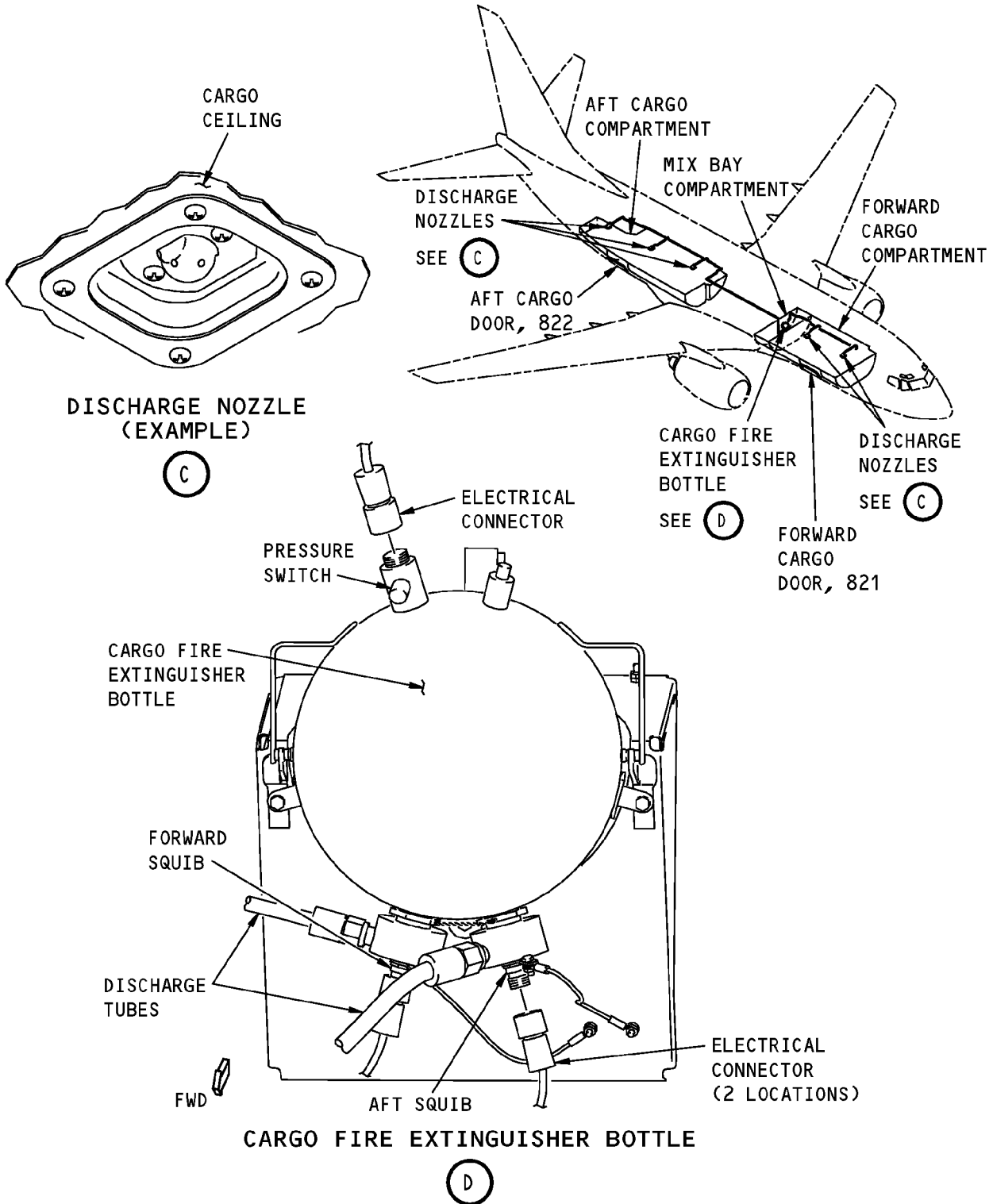
**Cargo Bay Fire Extinguishing Test**  
Figure 501 (Sheet 1 of 3)/26-23-00-990-801

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HAP ALL

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**Cargo Bay Fire Extinguishing Test  
Figure 501 (Sheet 2 of 3)/26-23-00-990-801**

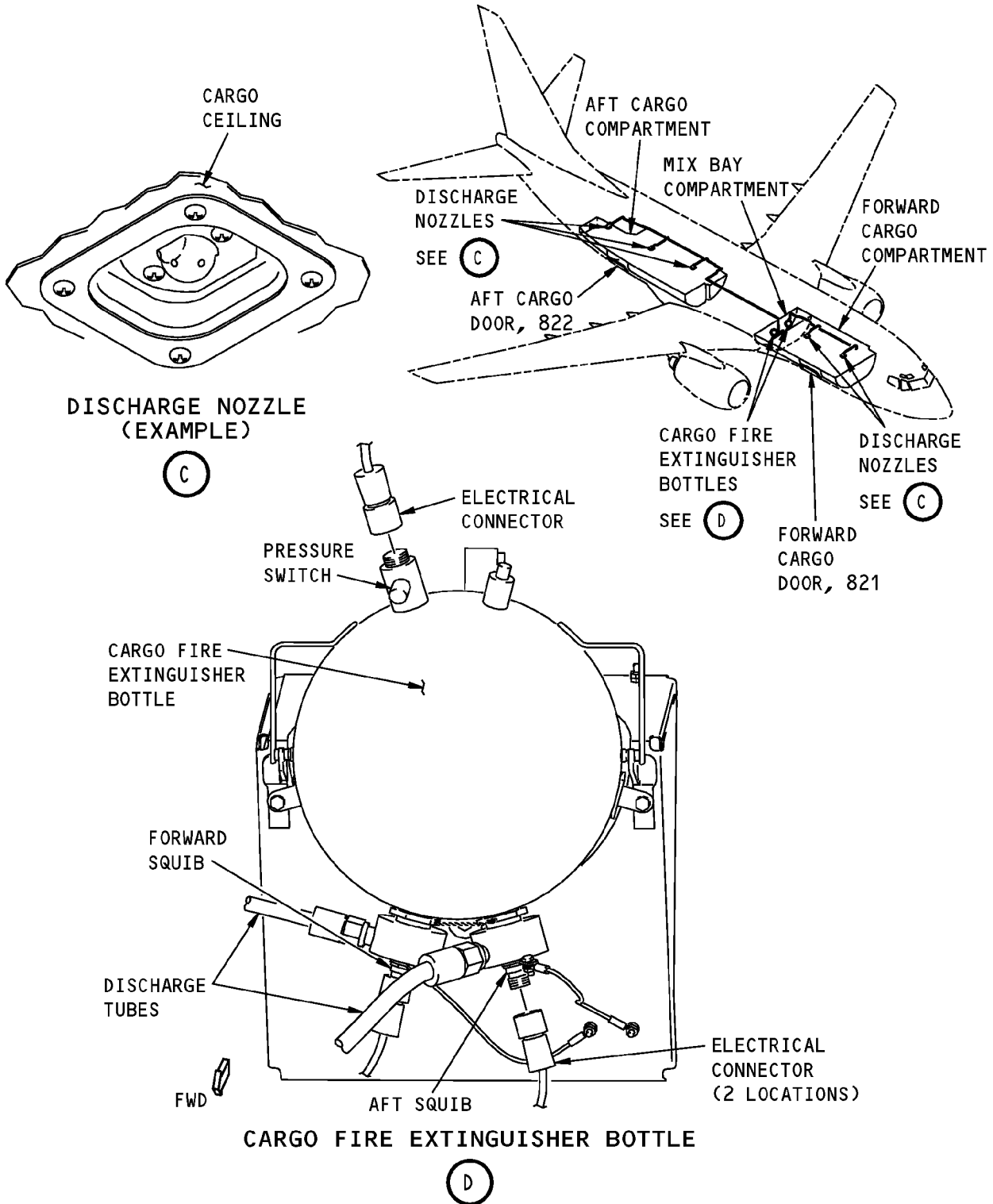
**EFFECTIVITY**  
HAP 001-013, 015-026, 028-047, 049, 051, 052, 101-999

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**Cargo Bay Fire Extinguishing Test  
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**EFFECTIVITY**  
HAP 048, 050, 053, 054

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TASK 26-23-00-730-802

#### 3. Cargo Fire Extinguishing Bottle Pressure Switch Circuit Test

(Figure 501)

##### A. General

- (1) The pressure switch test should be performed every time the cargo Fire Control Panel, or a pressure switch is disconnected from the airplane wiring.

##### B. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

##### C. Cargo Fire Extinguishing Bottle Pressure Switch Test

#### **HAP ALL; AIRPLANES WITH FIRE BOTTLES WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH**

SUBTASK 26-23-00-710-007

- (1) Do a test of the fire extinguisher pressure switch.
  - (a) Push and hold the pressure switch manual-override button on the fire extinguisher bottle.
  - (b) Make sure the yellow DISCH light on the cargo fire control panel, P8, comes on.
  - (c) Release the pressure switch manual-override button on the fire extinguisher bottle.
  - (d) Make sure the DISCH light on the cargo fire control panel, P8, goes off.

#### **HAP ALL; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH**

SUBTASK 26-23-00-020-003

- (2) Do a test of the fire extinguisher pressure switch.
  - (a) Disconnect connector D12792 from the pressure switch on cargo fire bottle 1.

#### **HAP 048, 050, 053, 054**

- (b) Disconnect connector D12816 from the pressure switch on cargo fire bottle 2.

#### **HAP ALL; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH**

- (c) Do a test of the cargo fire bottle pressure switch circuit.
  - 1) Connect a jumper wire between pins 2 and 3 on D12792.

#### **HAP 048, 050, 053, 054**

- 2) Connect a jumper wire between pins 2 and 3 on D12816.

#### **HAP ALL; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH**

- 3) Make sure the DISCH light on the Cargo Fire Control panel comes on.
- 4) Remove the jumper from D12792.

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HAP ALL; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH (Continued)

HAP 048, 050, 053, 054

- 5) The jumper from D12816.

HAP ALL; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

- (d) Connect D12792 to the pressure switch on cargo fire bottle 1.

HAP 048, 050, 053, 054

- (e) Connect D12792 to the pressure switch on cargo fire bottle 2.

HAP ALL

————— END OF TASK —————

TASK 26-23-00-720-801

4. Cargo Fire Extinguishing Discharge Line Flow Test

(Figure 501)

A. General

- (1) This procedure is a scheduled maintenance task.
(2) The cargo fire extinguishing discharge line flow test makes sure there is nothing blocking the discharge lines.

HAP 048, 050, 053, 054

- (3) There are two bottles on the airplane. The contents of bottle 1 is released when the discharge switch is pushed. Bottle 2 is discharged 60 minutes later through a flow filter/dryer. In this test, the discharge lines will be removed from bottle 1, and from the output of the filter/dryers. The flow will be checked from the output of bottle 1 through the discharge nozzles and the filter/dryer output line.

HAP ALL

B. Tools/Equipment

Table with 2 columns: Reference, Description. Row 1: STD-1115, Source - Nitrogen, 0-100 PSIG

C. Consumable Materials

Table with 3 columns: Reference, Description, Specification. Row 1: D50004, Compound - Antiseize, BMS3-28

D. Location Zones

Table with 2 columns: Zone, Area. Rows: 121 Forward Cargo Compartment - Left, 122 Forward Cargo Compartment - Right, 141 Aft Cargo Compartment - Left, 142 Aft Cargo Compartment - Right

EFFECTIVITY HAP ALL [Empty box]

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### E. Cargo Fire Extinguishing Discharge Line Flow Test

SUBTASK 26-23-00-030-002

- (1) Remove the discharge tubes from the discharge outlets on cargo fire bottle 1.

**HAP 048, 050, 053, 054**

SUBTASK 26-23-00-020-017

- (2) Remove the discharge tubes from the outputs of the two pressure filter/dryers connected to bottle 2.

**HAP ALL**

SUBTASK 26-23-00-480-001

**HAP 048, 050, 053, 054**

**CAUTION:** DO NOT APPLY AIR PRESSURE TO THE OUTPUT OF THE PRESSURE FILTER/DRYER OR YOU COULD DAMAGE THE FILTER/DRYER.

**HAP ALL**

- (3) Connect a 0-100 PSIG nitrogen source, STD-1115 to the forward (yellow) cargo bottle discharge line at bottle 1.
  - (a) Make sure air is flowing through all the nozzles in the forward cargo compartment.

**HAP 048, 050, 053, 054**

- (b) Make sure air is flowing through the output line that was removed from the forward filter/dryer.

**HAP ALL**

SUBTASK 26-23-00-080-032

- (4) Remove the pressure source from the discharge line.

SUBTASK 26-23-00-480-002

**HAP 048, 050, 053, 054**

**CAUTION:** DO NOT APPLY AIR PRESSURE TO THE OUTPUT OF THE PRESSURE FILTER/DRYER OR YOU COULD DAMAGE THE FILTER/DRYER.

**HAP ALL**

- (5) Connect a 0-100 PSIG nitrogen source, STD-1115 to the aft (blue) cargo bottle discharge line at bottle 1.
  - (a) Make sure air is flowing through all the nozzles in the aft cargo compartment.

**HAP 048, 050, 053, 054**

- (b) Make sure air is flowing through the output line that was removed from the aft filter/dryer connected to fire bottle 2.

**HAP ALL**

SUBTASK 26-23-00-080-003

- (6) Remove the pressure source from the discharge line.

SUBTASK 26-23-00-420-003

- (7) Connect the discharge tubes to the discharge outlets on bottle 1.

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- (a) Apply a layer of compound, D50004 to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.
- (b) Connect the tube assemblies to the discharge heads.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to the forward cargo compartment. Blue is used to show the plumbing which supplies extinguishant to the aft cargo compartment.

- (c) Remove any unwanted compound.
- (d) Tighten the nuts on the tube assemblies 266 in-lb (30 N·m) to 294 in-lb (33 N·m) for the FWD (1/2 inch) nut and 342 in-lb (39 N·m) to 378 in-lb (43 N·m) for the AFT (5/8 inch) nut.

#### HAP 048, 050, 053, 054

SUBTASK 26-23-00-420-016

- (8) Connect the discharge tubes to the discharge outlets on the filter/dryers connected to fire bottle 2.

- (a) Apply a layer of compound, D50004 to the outlet threads, outlet end, and outlet inner diameter where the tube assemblies attach to the filter/dryers.
- (b) Connect the tube assemblies to the filter/dryers.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to the forward cargo compartment. Blue is used to show the plumbing which supplies extinguishant to the aft cargo compartment.

- (c) Remove any unwanted compound.
- (d) Tighten the nuts on the tube assemblies 266 in-lb (30 N·m) to 294 in-lb (33 N·m) for the FWD (1/2 inch) nut and 342 in-lb (39 N·m) to 378 in-lb (43 N·m) for the AFT (5/8 inch) nut.

#### HAP ALL

————— END OF TASK —————

#### TASK 26-23-00-730-803

#### 5. Cargo Fire Extinguishing Discharge Line Pressure Test

(Figure 501)

##### A. General

- (1) This procedure is a scheduled maintenance task.
- (2) The pressure test is the same for all cargo compartments.

##### B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1648	Discharge Lines - Cargo Fire Extinguisher Nozzle Caps (Part #: B26002-1, Supplier: 81205, A/P Effectivity: 737-ALL)
STD-1115	Source - Nitrogen, 0-100 PSIG

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#### C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D50004	Compound - Antiseize	BMS3-28
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

#### D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

#### E. Cargo Fire Extinguishing Discharge Line Pressure Test

SUBTASK 26-23-00-020-005

- (1) Remove the discharge tubes from the discharge outlets on cargo fire bottle 1.

##### HAP 048, 050, 053, 054

SUBTASK 26-23-00-020-018

- (2) Remove the discharge tubes from the filter/dryer outputs on cargo fire bottle 2.
  - (a) Plug the discharge tubes.

##### HAP ALL

SUBTASK 26-23-00-480-003

- (3) Connect a 0-100 PSIG nitrogen source, STD-1115 to the forward (yellow) cargo bottle 1 discharge line.

SUBTASK 26-23-00-480-004

- (4) Install nozzle cap, SPL-1648 on the fire extinguishing nozzles in the forward cargo compartment.

SUBTASK 26-23-00-780-001

- (5) Pressurize the fire extinguishing plumbing to 50-55 psig (344.7-379.2 kPa).
  - (a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-23-00-780-002

- (6) Turn off the pressure source.
  - (a) Record the stabilized air pressure.
  - (b) Wait 10 minutes, then check the pressure.
    - 1) Make sure the pressure loss during the 10 minute waiting period is not more than 5.0 psi (3.4 kPa).

SUBTASK 26-23-00-780-003

- (7) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source.

SUBTASK 26-23-00-080-004

- (8) Remove the nozzle cap, SPL-1648 from the discharge nozzles in the forward cargo compartment.

SUBTASK 26-23-00-480-005

- (9) Connect a 0-100 PSIG nitrogen source, STD-1115 to the aft (blue) cargo bottle 1 discharge line.

<p>EFFECTIVITY</p> <p>HAP ALL</p>
-----------------------------------

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SUBTASK 26-23-00-480-006

(10) Install nozzle cap, SPL-1648 on the fire extinguishing nozzles in the aft cargo compartment.

SUBTASK 26-23-00-780-004

(11) Pressurize the fire extinguishing plumbing to 50-55 psig (344.7-379.2 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-23-00-780-005

(12) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 10 minutes, then check the pressure.

1) Make sure the pressure loss during the 10 minute waiting period is not more than 5.0 psi (3.4 kPa).

SUBTASK 26-23-00-780-006

(13) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source.

SUBTASK 26-23-00-080-005

(14) Remove the nozzle cap, SPL-1648 from the discharge nozzles in the aft cargo compartment.

### HAP 048, 050, 053, 054

SUBTASK 26-23-00-080-018

(15) Remove the plugs from the filter/dryer output lines on cargo fire bottle 2.

### HAP ALL

SUBTASK 26-23-00-420-004

(16) Connect the discharge tubes to the discharge outlets on bottle 1.

(a) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.

(b) Connect the tube assemblies to the discharge heads.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to the forward cargo compartment. Blue is used to show the plumbing which supplies extinguishant to the aft cargo compartment.

(c) Remove any unwanted compound.

(d) Tighten the nuts on the tube assemblies 266 in-lb (30 N·m) to 294 in-lb (33 N·m) for the FWD (1/2 inch) nut and 342 in-lb (39 N·m) to 378 in-lb (43 N·m) for the AFT (5/8 inch) nut.

### HAP 048, 050, 053, 054

SUBTASK 26-23-00-020-019

(17) Connect the discharge tubes to the filter/dryer outputs on cargo fire bottle 2.

(a) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.

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HAP ALL

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**HAP 048, 050, 053, 054 (Continued)**

- (b) Connect the tube assemblies to the discharge heads.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to the forward cargo compartment. Blue is used to show the plumbing which supplies extinguishant to the aft cargo compartment.

- (c) Remove any unwanted compound.
- (d) Tighten the nuts on the tube assemblies 266 in-lb (30 N·m) to 294 in-lb (33 N·m) for the FWD (1/2 inch) nut and 342 in-lb (39 N·m) to 378 in-lb (43 N·m) for the AFT (5/8 inch) nut.

————— **END OF TASK** —————

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE - REMOVAL/INSTALLATION

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. A cargo fire extinguisher bottle is installed in the mix manifold bay, in the aft end of the lower fwd cargo compartment.

### HAP 048, 050, 053, 054

- C. A second cargo fire extinguisher bottle is also installed in the mix manifold bay.

### HAP ALL

- D. This procedure has tasks to remove and install the cargo fire extinguisher bottle.

### TASK 26-23-01-000-801-001

### 2. Cargo Fire Extinguisher Bottle Removal

(Figure 401)

#### A. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
24-22-00-860-811	Supply Electrical Power (P/B 201)

#### B. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

#### C. Access Panels

Number	Name/Location
821	Forward Cargo Door

#### D. Prepare for the Removal

SUBTASK 26-23-01-860-001-001

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-23-01-860-016-001

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2

### HAP ALL

B	17	C01526	CARGO FIRE EXT 1
---	----	--------	------------------

SUBTASK 26-23-01-010-001-001

- (3) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

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SUBTASK 26-23-01-860-003-001

- (4) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-01-860-004-001

- (5) If it is necessary, remove the air conditioning duct that is in front of the fire extinguishing bottle.

**E. Remove the Bottle**

SUBTASK 26-23-01-020-001-001

- (1) Disconnect the electrical connectors from the bottle [1].

**WARNING:** DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Before you touch the squibs, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:
- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
  - ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.
- (b) Disconnect the pressure switch connector, D12792 from bottle 1.

**HAP 048, 050, 053, 054**

- (c) Disconnect the pressure switch connector, D12816 from bottle 2.

**HAP ALL**

- (d) Disconnect the FWD squib (M2249) connector, D12794 from bottle 1.

**HAP 048, 050, 053, 054**

- (e) Disconnect the FWD squib (M2264) connector, D12818 from bottle 2.

**HAP ALL**

- (f) Disconnect the AFT squib (M2250) connector, D12796 from bottle 1.

**HAP 048, 050, 053, 054**

- (g) Disconnect the AFT squib (M2265) connector, D12820 from bottle 2.

**HAP ALL**

SUBTASK 26-23-01-480-001-001

**WARNING:** PUT A PROTECTIVE CAP ON THE SQUIBS. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIBS, THE FIRE BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (2) Put a protective cap on the bottle squibs.

SUBTASK 26-23-01-020-002-001

- (3) Remove the nut [4] securing the ground strap to the bottle ground lug.

SUBTASK 26-23-01-860-005-001

- (4) Disconnect the discharge tubes from the bottle discharge ports.
- (a) Install caps on the bottle discharge ports.
- (b) Install caps on the discharge tubes.

SUBTASK 26-23-01-020-003-001

- (5) Remove the bolts [2] and the washers [3] securing the bottle to the support bracket.

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SUBTASK 26-23-01-020-004-001

(6) Use the service handles to remove the bottle.

————— **END OF TASK** —————

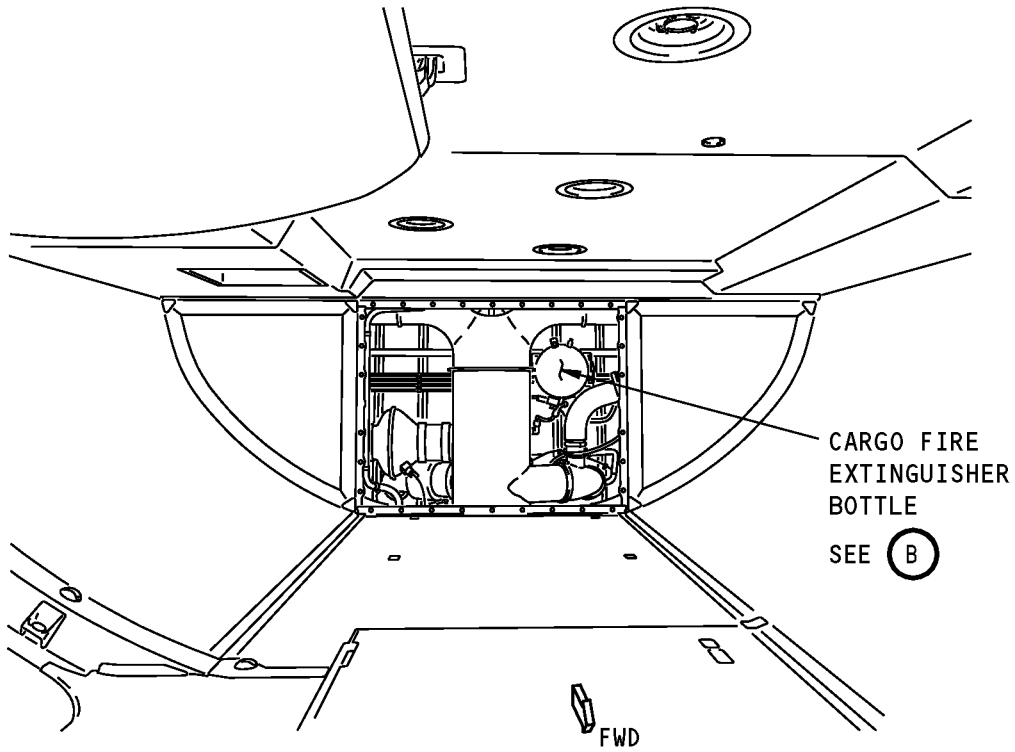
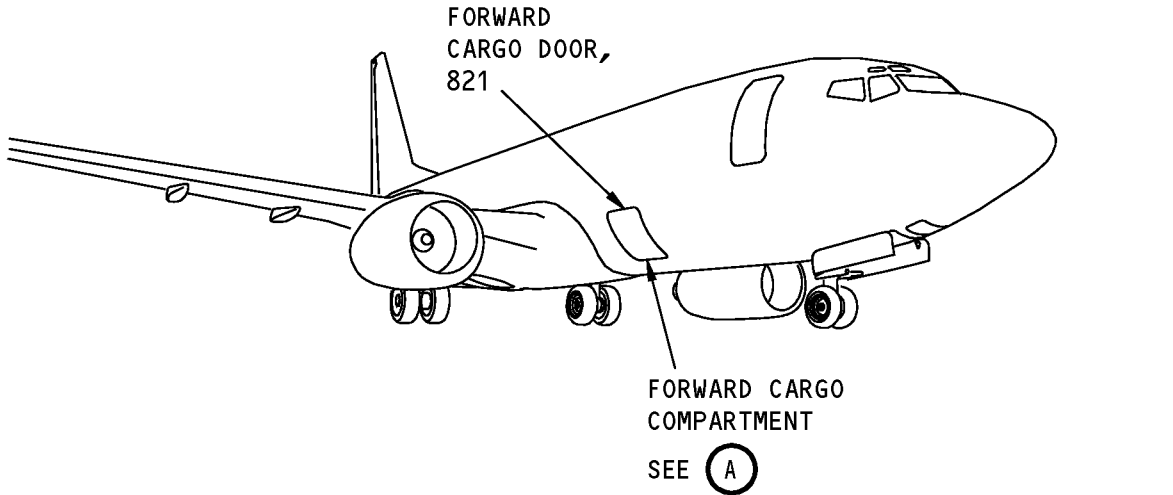
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**FORWARD CARGO COMPARTMENT**

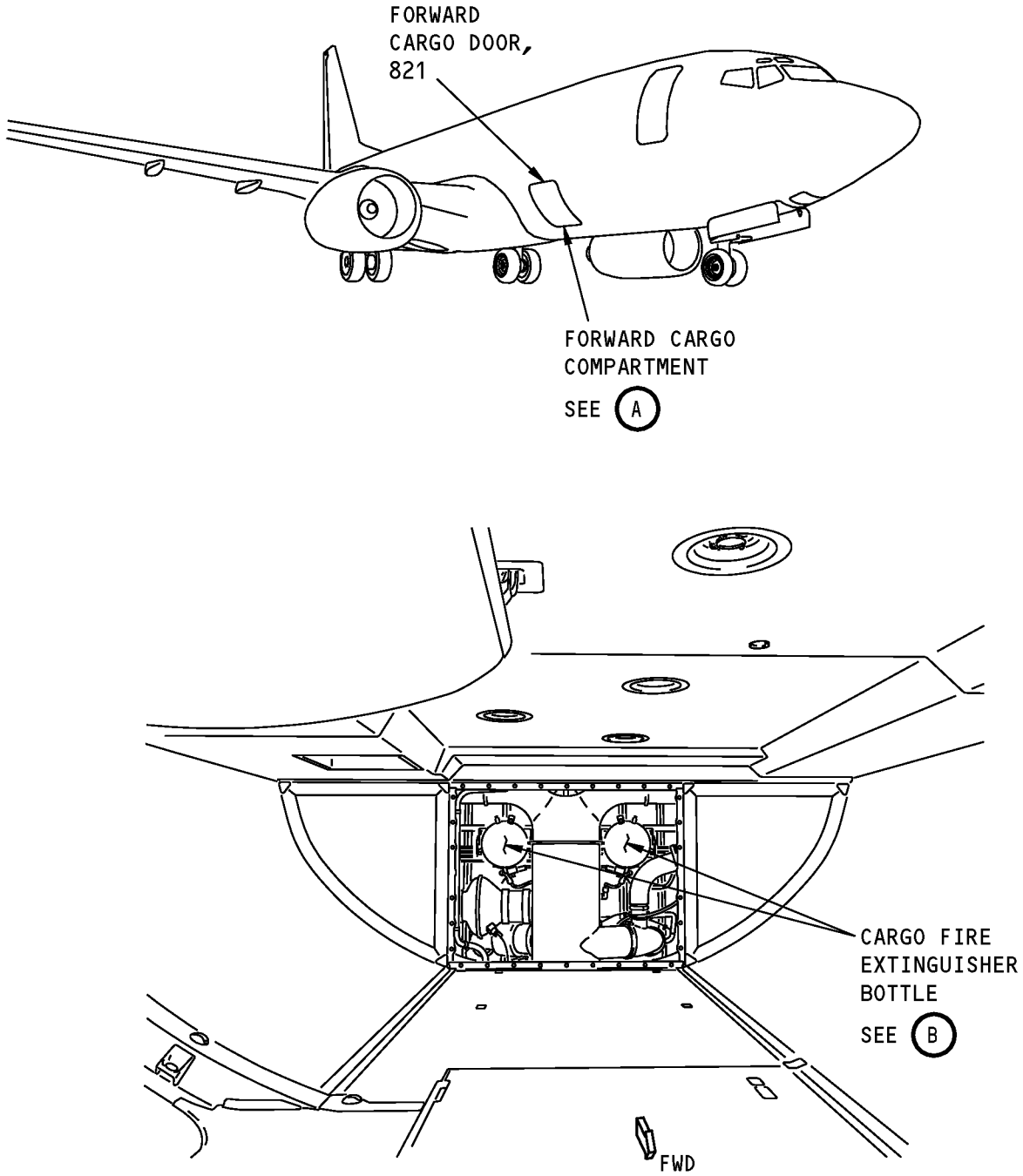
(A)

**Cargo Compartment Fire Extinguisher Bottle Installation**  
**Figure 401 (Sheet 1 of 5)/26-23-01-990-801**

EFFECTIVITY  
HAP 001-013, 015-026, 028-047, 049, 051, 052, 101-999

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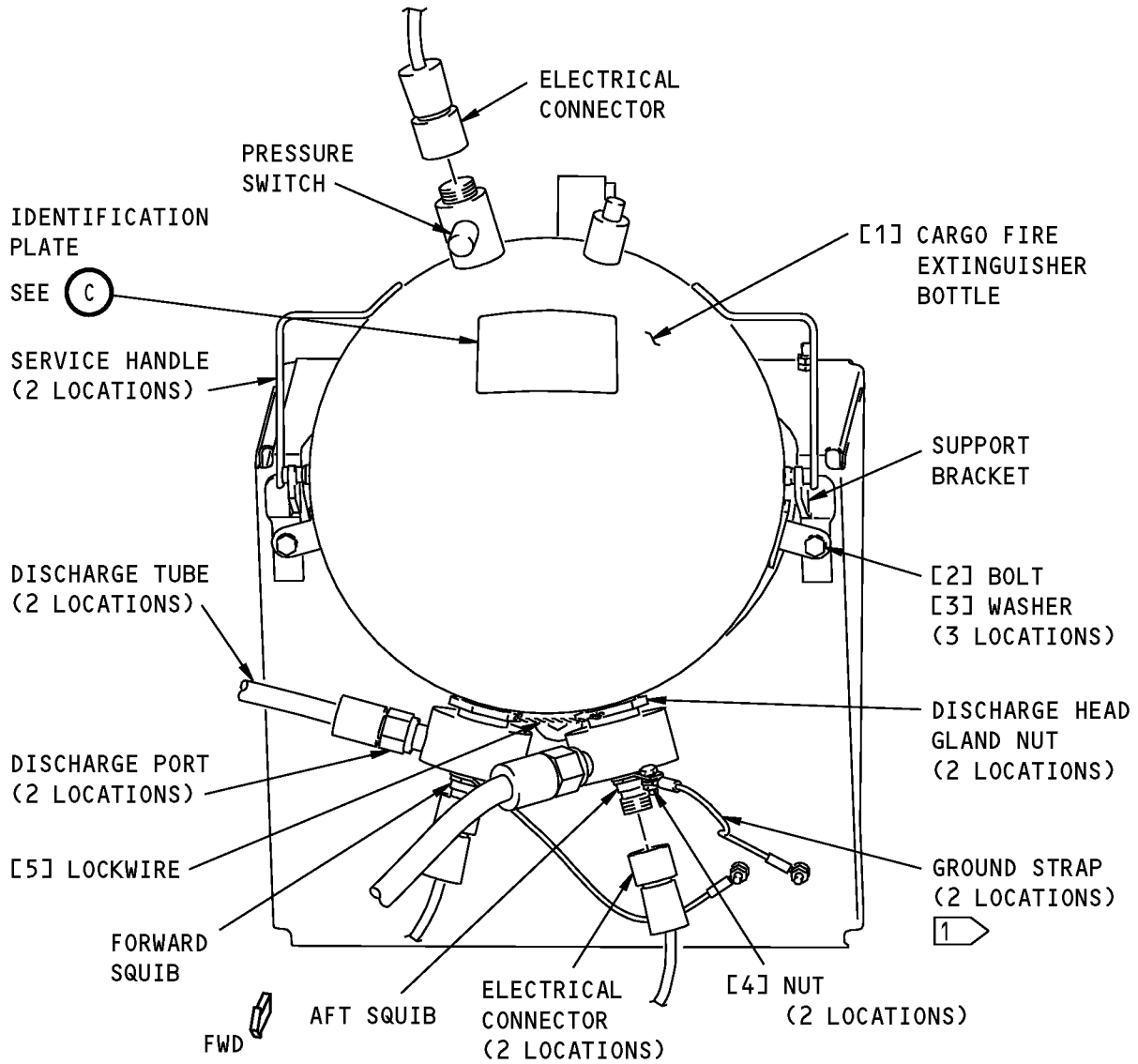
**FORWARD CARGO COMPARTMENT**

(A)

**Cargo Compartment Fire Extinguisher Bottle Installation**  
**Figure 401 (Sheet 2 of 5)/26-23-01-990-801**

EFFECTIVITY
HAP 048, 050, 053, 054

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**CARGO FIRE EXTINGUISHER BOTTLE**

(B)

1 BOTTLES WITHOUT SEPARATE GROUND STRAP FITTING

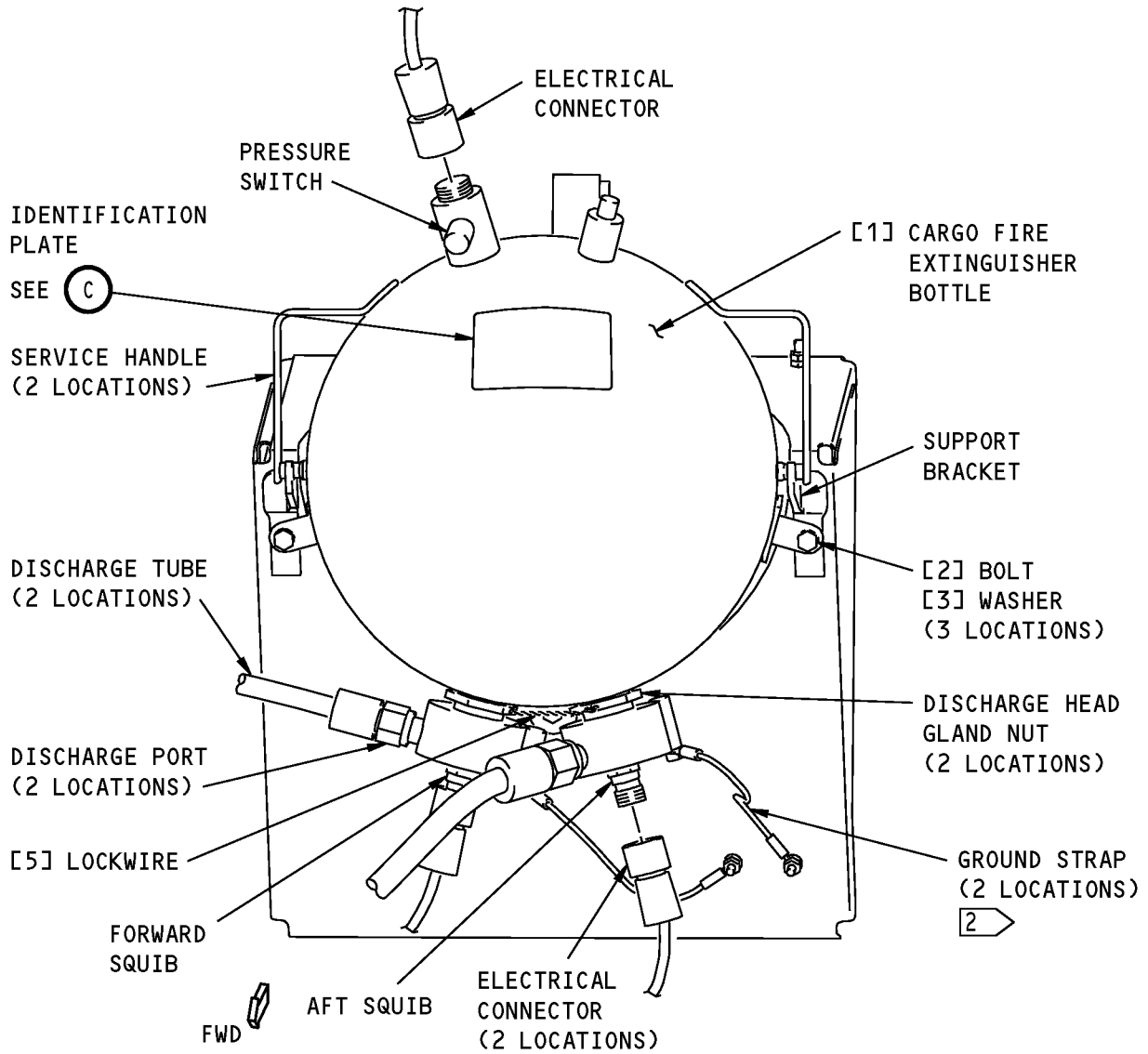
**Cargo Compartment Fire Extinguisher Bottle Installation  
Figure 401 (Sheet 3 of 5)/26-23-01-990-801**

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**CARGO FIRE EXTINGUISHER BOTTLE**

(B)

2 BOTTLES WITH SEPARATE GROUND STRAP FITTING

**Cargo Compartment Fire Extinguisher Bottle Installation  
Figure 401 (Sheet 4 of 5)/26-23-01-990-801**

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<b>CONTAINER: FIRE EXTINGUISHING</b>			
KA NO	<input type="text"/>	KA SERNO	<input type="text"/>
SPEC CONTROL NO.	<input type="text"/>		
WT (LESS DISCH HD/CART)			
EMPTY WT (ACTL)	<input type="text"/> LB	WT EA DISCH HD (NOW)	<input type="text"/> LB
CBrF <sub>3</sub> WT (NOW)	<input type="text"/> LB	WT EA CART (NOW)	<input type="text"/> LB
N <sub>2</sub> WT (NOW)	<input type="text"/> LB	MFG DATE	<input type="text"/>
TOTAL WT (ACTL)	<input type="text"/> LB	LAST WT INSP DATE	<input type="text"/>

IDENTIFICATION PLATE 324269

(C)

<b>CONTAINER: FIRE EXTINGUISHING</b>			
AGENT: CBrF <sub>3</sub>			
LAST HYDRO TEST DATE	<input type="text"/>	WK NO	<input type="text"/>
DATE OF MFG	<input type="text"/>	WK SERIAL NO	<input type="text"/>
GROSS WT	EMPTY	TOTAL WT	ACTUAL
<input type="text"/> LB	<input type="text"/>	<input type="text"/>	<input type="text"/>
WEIGHT OF CHARGE (NOMINAL)			
AGENT	<input type="text"/> LB	NITROGEN	<input type="text"/> LB

IDENTIFICATION PLATE 324483

(C)

Cargo Compartment Fire Extinguisher Bottle Installation  
Figure 401 (Sheet 5 of 5)/26-23-01-990-801

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TASK 26-23-01-000-802-001

#### 3. Cargo Fire Extinguisher Bottle Installation

(Figure 401)

##### A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)
26-23-01-100-801	Cargo Fire Extinguishing System Cleaning (P/B 701)
26-23-02-400-801	Cargo Fire Extinguisher Bottle Squib Installation (P/B 401)
26-23-04-000-801	Cargo Fire Extinguishing Filter/Dryer Removal (P/B 401)
26-23-04-400-801	Cargo Fire Extinguishing Filter/Dryer Installation (P/B 401)

##### B. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-754	Scale - Spring, 0-150 Pounds, With Hook and Pad Adapter Kit (Part #: DG-200, Supplier: 92456, A/P Effectivity: 737-ALL) (Part #: DPPH-150, Supplier: 92456, A/P Effectivity: 737-ALL)
COM-4907	Force Gauge With Resolution of 0.10 lb, +/-0.3% or better (Part #: FDIX 100, Supplier: 0BFD9, A/P Effectivity: 737-ALL) (Part #: FDIX 50, Supplier: 0BFD9, A/P Effectivity: 737-ALL) (Opt Part #: FDI 100, Supplier: 0BFD9, A/P Effectivity: 737-ALL)

##### C. Consumable Materials

Reference	Description	Specification
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D50004	Compound - Antiseize	BMS3-28
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

##### D. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

##### E. Access Panels

Number	Name/Location
821	Forward Cargo Door

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### AIRCRAFT MAINTENANCE MANUAL

#### F. Prepare for the Installation

SUBTASK 26-23-01-860-006-001

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-23-01-860-017-001

(2) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-01-010-002-001

(3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

SUBTASK 26-23-01-860-007-001

(4) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-01-860-036-001

(5) If it is necessary, remove the air conditioning duct that is in front of the fire extinguisher bottle.

#### G. Install the Bottle

SUBTASK 26-23-01-200-001-001

(1) If the previous bottle was discharged, do this task: Cargo Fire Extinguishing System Cleaning, TASK 26-23-01-100-801.

#### HAP 048, 050, 053, 054

SUBTASK 26-23-01-420-027-001

(2) If either fire bottle 1 or 2 was discharged, remove the filter/dryer in that discharge line and replace it with a new filter/dryer.

**NOTE:** For example, if either fire bottle 1 or 2 was discharged into the aft cargo compartment, the filter/dryer on the aft discharge line would have to be replaced. The filter/dryer on the forward discharge line would not have to be replaced.

These are the tasks:

- Cargo Fire Extinguishing Filter/Dryer Removal, TASK 26-23-04-000-801
- Cargo Fire Extinguishing Filter/Dryer Installation, TASK 26-23-04-400-801.

#### HAP ALL

SUBTASK 26-23-01-420-001-001

(3) Position the bottle in the airplane.

**WARNING:** DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

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(WARNING PRECEDES)

**WARNING:** DO NOT MOVE THE BOTTLE WITHOUT A CAP ON THE PORTS. DO NOT LET THE BOTTLE HIT THE AIRPLANE. BE CAREFUL NOT TO DAMAGE THE BOTTLE. IF THE BOTTLE IS ACCIDENTLY DISCHARGED, IT CAN CAUSE INJURY TO PERSONS.

- (a) Before you install the fire extinguishing bottle, weigh the bottle in accordance with the manufacturers instructions and make sure its weight is not more than 0.1 pounds from the weight shown on the fire extinguisher bottle Figure 401 (Sheet 5).

**NOTE:** Depending on the bottle manufacturer and/or bottle part number, the measured weight marked on the bottle may or may not include some of the protective caps.

**NOTE:** DO NOT remove the fill/safety protective cap when weighing the bottle.

- 1) spring scale (0-150 Pounds, With Hook and Pad Adapter Kit, COM-754 or force gauge, COM-4907 can be used to weigh the bottle.

- (b) Lift the bottle [1] by the service handles and install the bottle mounting lugs on the support bracket.

SUBTASK 26-23-01-420-002-001

- (4) Install the washers [3] and bolts [2] securing the bottle in the airplane.

SUBTASK 26-23-01-420-038

- (5) Do a check of the resistance between the fire extinguishing bottle [1] and the support bracket.

- (a) Make sure the resistance is not more than 0.0025 ohm.  
(b) If the resistance is more than 0.0025 ohm, clean the bonding surfaces between the fire extinguishing bottle and the support bracket with solvent, B00083 and retest.

SUBTASK 26-23-01-020-005-001

- (6) If the discharge heads are not aligned with the discharge tubes, do this step:

- (a) Loosen the discharge head gland nuts and adjust the discharge heads to give the best possible access to the tube connections.

SUBTASK 26-23-01-080-001-001

- (7) Remove the discharge port caps and the discharge tube caps.

SUBTASK 26-23-01-620-002

- (8) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

- (a) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.

SUBTASK 26-23-01-420-003-001

- (9) Connect the FWD (Yellow) and AFT (Blue) discharge tubes to the discharge ports.

- (a) Refer to the outlet identification above each discharge outlet to make sure the tubes are connected to the correct ports.

SUBTASK 26-23-01-420-004-001

- (10) If the gland nut was adjusted, do these steps:

- (a) Tighten the gland nuts to 660-780 inch-pounds (74-88 N-m).  
(b) Attach a lockwire, G02479 from between the gland nuts.

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SUBTASK 26-23-01-420-005-001

- (11) Tighten the discharge tubes 266 in-lb (30 N·m) to 294 in-lb (33 N·m) for the FWD (1/2 inch) connector and 342 in-lb (39 N·m) to 378 in-lb (43 N·m) for the AFT (5/8 inch) connector.

SUBTASK 26-23-01-420-006-001

- (12) Install the ground straps to the ground lugs.

SUBTASK 26-23-01-420-007-001

- (13) Install the electrical connector to the pressure switch.

- (a) Connect a jumper wire between pins 2 and 3 on D12792.
- 1) Make sure the DISCH light on the cargo fire control panel, P8, comes on.
  - 2) Remove the jumper wire.

### HAP 048, 050, 053, 054

- (b) Connect a jumper wire between pins 2 and 3 on D12816.
- 1) Make sure the DISCH light on the Cargo Fire Control Panel comes on.
  - 2) Remove the jumper wire.

### HAP ALL

- (c) Install the electrical connector to the pressure switch, D12792 on bottle 1.

### HAP 048, 050, 053, 054

- (d) Install the electrical connector to the pressure switch, D12816 on bottle 2.

### HAP ALL; AIRPLANES WITH FIRE BOTTLES WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-01-710-001-001

- (14) Do a test of the fire extinguisher pressure switch.
- (a) Push and hold the pressure switch manual-override button on the fire extinguisher bottle.
  - (b) Make sure the yellow DISCH light on the cargo fire control panel, P8, comes on.
  - (c) Release the pressure switch manual-override button on the fire extinguisher bottle.
  - (d) Make sure the DISCH light on the cargo fire control panel, P8, goes off.

### HAP ALL

#### H. Connect the Bottle Squib Connectors

SUBTASK 26-23-01-420-008-001

- (1) If the squib is not installed on the fire extinguisher bottle, do this task: Cargo Fire Extinguisher Bottle Squib Installation, TASK 26-23-02-400-801.

SUBTASK 26-23-01-420-009-001

- (2) Connect and do a test of the FWD squib to the fire extinguishing bottle.
- (a) Remove the protective cap from the forward squib.
  - (b) Attach the protective cap to the side of the fire extinguisher for later use.

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### AIRCRAFT MAINTENANCE MANUAL

**WARNING:** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (c) Make sure there is no voltage between pins 1 and 2 of electrical connector D12794.

**NOTE:** Connect a 10K ohm resistor across the meter leads to remove any stray voltage from the electrical connector.

#### HAP 048, 050, 053, 054

- (d) Make sure there is no voltage between pins 1 and 2 of electrical connector D12818 on.

**NOTE:** Connect a 10K ohm resistor across the meter leads to remove any stray voltage from the electrical connector.

#### HAP ALL

- (e) Make sure the squib pins are not bent or damaged.
- (f) Make sure the electrical connector is not damaged.

**NOTE:** The squib pins can cause damage to the connector if the pins do not enter the electrical connector receptacles.

- (g) Connect electrical connector D12794 to the forward fire bottle squib on bottle 1.

#### HAP 048, 050, 053, 054

- (h) Connect electrical connector D12818 to the forward fire bottle squib on bottle 2.

#### HAP ALL

- (i) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2

#### HAP ALL

B	17	C01526	CARGO FIRE EXT 1
---	----	--------	------------------

- (j) Push and hold the TEST switch on the cargo fire control panel.
1) Make sure the green FWD EXT light on the cargo fire control panel comes on.
2) Make sure the green AFT EXT light stays off.
(k) Release the TEST switch.
1) Make sure the green FWD EXT light goes off.

SUBTASK 26-23-01-860-018-001

- (3) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2

#### HAP ALL

B	17	C01526	CARGO FIRE EXT 1
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EFFECTIVITY
HAP ALL

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### AIRCRAFT MAINTENANCE MANUAL

SUBTASK 26-23-01-420-010-001

- (4) Connect and do a test of the AFT squib to the fire extinguishing bottle.
  - (a) Remove the protective cap from the aft squib.
  - (b) Attach the protective cap to the side of the fire extinguisher for later use.

**WARNING:** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (c) Make sure there is no voltage between pins 1 and 2 of electrical connector D12796.

NOTE: Connect a 10K ohm resistor across the meter leads to remove any stray voltage from the electrical connector.

#### HAP 048, 050, 053, 054

- (d) Make sure there is no voltage between pins 1 and 2 of electrical connector D12820.

NOTE: Connect a 10K ohm resistor across the meter leads to remove any stray voltage from the electrical connector.

#### HAP ALL

- (e) Make sure the squib pins are not bent or damaged.
- (f) Make sure the electrical connector is not damaged.

NOTE: The squib pins can cause damage to the connector if the pins do not enter the electrical connector receptacles.

- (g) Connect electrical connector D12796 to the aft fire bottle squib on bottle 1.

#### HAP 048, 050, 053, 054

- (h) Connect electrical connector D12820 to the aft fire bottle squib on bottle 2.

#### HAP ALL

- (i) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1

- (j) Push and hold the TEST switch on the cargo fire control panel.
  - 1) Make sure the green FWD and AFT EXT lights on the cargo fire control panel come on.
- (k) Release the TEST switch.
  - 1) Make sure the green FWD and AFT EXT lights go off.

#### I. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-01-410-001-001

- (1) If it was removed, install the air conditioning duct in front of the fire extinguishing bottle.

SUBTASK 26-23-01-410-002-001

- (2) Install the liner at the aft end of the forward cargo compartment.

EFFECTIVITY HAP ALL	
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AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 26-23-01-410-003-001

(3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

SUBTASK 26-23-01-860-010-001

(4) Do this task: Remove External Power, TASK 24-22-00-860-814.

————— **END OF TASK** —————

EFFECTIVITY  
HAP ALL

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO COMPARTMENT FIRE EXTINGUISHING SYTSTEM - CLEANING/PAINTING

### 1. General

- A. The cargo fire extinguishing system should be cleaned whenever the cargo compartment fire bottle is discharged.
- B. Only the compartment in which the bottle was discharged requires cleaning.
- C. This procedure has tasks clean the cargo fire extinguishing system.

### **TASK 26-23-01-100-801**

### 2. Cargo Fire Extinguishing System Cleaning

#### A. References

Reference	Title
21-21-02-000-801	Mix Chamber Removal (P/B 401)
21-21-02-400-801	Mix Chamber Installation (P/B 401)

#### B. Tools/Equipment

Reference	Description
STD-1325	Source - Pressure, Capable of Supplying 35 +/- 5 PSIG

#### C. Consumable Materials

Reference	Description	Specification
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D50004	Compound - Antiseize	BMS3-28
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20
G50136	Paste - Corrosion Inhibiting, Non-drying	BMS 3-38

#### D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

#### E. Access Panels

Number	Name/Location
821	Forward Cargo Door
822	Aft Cargo Door

EFFECTIVITY HAP ALL
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### AIRCRAFT MAINTENANCE MANUAL

#### F. Prepare for Cleaning

SUBTASK 26-23-01-860-011

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-01-010-003

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

SUBTASK 26-23-01-010-004

- (3) To access the discharge nozzles in the aft cargo bay, open this access panel:

<u>Number</u>	<u>Name/Location</u>
822	Aft Cargo Door

SUBTASK 26-23-01-860-012

- (4) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-01-860-013

- (5) If it is necessary, remove the air conditioning duct that is in front of the fire extinguishing bottle.

#### HAP 101-999

NOTE: Do this task: Mix Chamber Removal, TASK 21-21-02-000-801.

#### HAP ALL

SUBTASK 26-23-01-020-006

- (6) Disconnect the applicable discharge tube from the fire extinguisher bottle discharge head.

SUBTASK 26-23-01-020-007

- (7) Remove the discharge nozzles from the discharge tubes in the applicable cargo bay.
- (a) Remove the four screws (6) securing the retainer (5) to the bracket.
  - (b) Remove the cargo ceiling as required to gain access to the nut (8).
  - (c) Remove the two screws (4) securing the discharge nozzle (3) to the pan cover assembly (7).
  - (d) Remove the discharge nozzle (3).

#### G. Procedure

SUBTASK 26-23-01-100-001

- (1) Make sure the nozzle is clear of unwanted materials.

SUBTASK 26-23-01-480-002

- (2) Connect a pressure source, STD-1325 to the applicable cargo bottle discharge tube.
- (a) Make sure air is flowing through all the discharge tubes in the cargo compartment.

EFFECTIVITY HAP ALL
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# AIRCRAFT MAINTENANCE MANUAL

SUBTASK 26-23-01-080-002

(3) Remove the pressure source from the discharge tube.

H. Put the airplane back to its usual condition.

SUBTASK 26-23-01-420-011

(1) Connect the discharge tube to the discharge outlet on the bottle.

(a) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) compound, C00913 or corrosion inhibiting non-drying paste, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.

(b) Connect the tube assembly to the discharge head.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to cargo compartment number 1. Blue is used to show the plumbing which supplies extinguishant to cargo compartment number 2.

(c) Remove any unwanted compound..

(d) Tighten the nut on the applicable tube assembly 266 in-lb (30 N·m) to 294 in-lb (33 N·m) for the FWD (1/2 inch) nut or 342 in-lb (39 N·m) to 378 in-lb (43 N·m) for the AFT (5/8 inch) nut.

SUBTASK 26-23-01-860-014

(2) Install the air conditioning duct that is in front of the fire extinguishing bottle if it was previously removed.

## HAP 101-999

NOTE: Do this task: Mix Chamber Installation, TASK 21-21-02-400-801.

## HAP ALL

SUBTASK 26-23-01-860-015

(3) Install the lining at the aft end of the forward cargo compartment.

SUBTASK 26-23-01-420-012

(4) Install the discharge nozzles on the discharge tubes.

(a) Install the discharge nozzle (3), spacer (2) and pan cover assembly (7) on the discharge tube and hand tighten.

NOTE: Make sure the pan cover line up with those in the bracket. Make sure the holes in the discharge nozzle (3) and spacer (2) line up with those in the pan cover assembly.

(b) Tighten the nut 45-55 foot-pounds (61-75 Newton meters), and install lockwire, G02479.

(c) Secure the discharge nozzle (3) with screws (4).

(d) Install the cargo ceiling.

(e) Position the spacer (1) and retainer (5), and secure with screws (6).

SUBTASK 26-23-01-860-041

(5) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2

EFFECTIVITY	
HAP ALL	

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**AIRCRAFT MAINTENANCE MANUAL**

HAP 001-007, 048, 050, 053, 054 (Continued)

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1
————— <b>END OF TASK</b> —————			

EFFECTIVITY  
HAP ALL

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION

### 1. General

A. This procedure contains scheduled maintenance task data.

#### **HAP 001-013, 015-026, 028-047, 049, 051, 052, 101-999**

B. A cargo fire extinguisher bottle is installed in the mix manifold bay, in the aft end of the lower fwd cargo compartment. The fire extinguisher bottle has two discharge cartridges (squibs).

#### **HAP 048, 050, 053, 054**

C. The cargo fire extinguisher bottles are installed in the mix manifold bay, in the aft end of the lower fwd cargo compartment. Each fire extinguisher bottle has two discharge cartridges (squibs).

#### **HAP ALL**

D. This procedure has tasks to remove and install the cargo fire extinguisher bottle squibs.

#### **TASK 26-23-02-000-801**

### 2. Cargo Fire Extinguisher Bottle Squib Removal

(Figure 401)

#### A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)

#### B. Consumable Materials

Reference	Description	Specification
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20

#### C. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

#### D. Access Panels

Number	Name/Location
821	Forward Cargo Door

#### E. Prepare for the Removal

SUBTASK 26-23-02-860-001

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-23-02-860-002

(2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2

#### **HAP ALL**

B	17	C01526	CARGO FIRE EXT 1
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EFFECTIVITY
<b>HAP ALL</b>

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### AIRCRAFT MAINTENANCE MANUAL

SUBTASK 26-23-02-010-001

(3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

SUBTASK 26-23-02-010-002

(4) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-02-860-003

(5) If it is necessary, remove the air conditioning duct that is in front of the fire extinguishing bottle.

#### F. Remove the squib

SUBTASK 26-23-02-020-001

**WARNING:** DO NOT TOUCH THE PINS ON THE SQUIBS. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Disconnect the electrical connectors from the applicable squib.

(a) FWD Squib (M2249) connector, D12794.

#### **HAP 048, 050, 053, 054**

(b) FWD Squib (M2264) connector, D12818.

#### **HAP ALL**

(c) AFT Squib (M2250) connector, D12796.

#### **HAP 048, 050, 053, 054**

(d) AFT Squib (M2265) connector, D12820.

#### **HAP ALL**

SUBTASK 26-23-02-480-001

**WARNING:** PUT A PROTECTIVE CAP ON THE FIRE BOTTLE SQUIB. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE FIRE BOTTLE SQUIB, THE FIRE BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

(2) Put a protective cap on the squib.

SUBTASK 26-23-02-020-002

(3) Remove the lockwire, G02479 from the squib if present.

SUBTASK 26-23-02-020-003

(4) Remove the squib from the discharge head.

————— **END OF TASK** —————

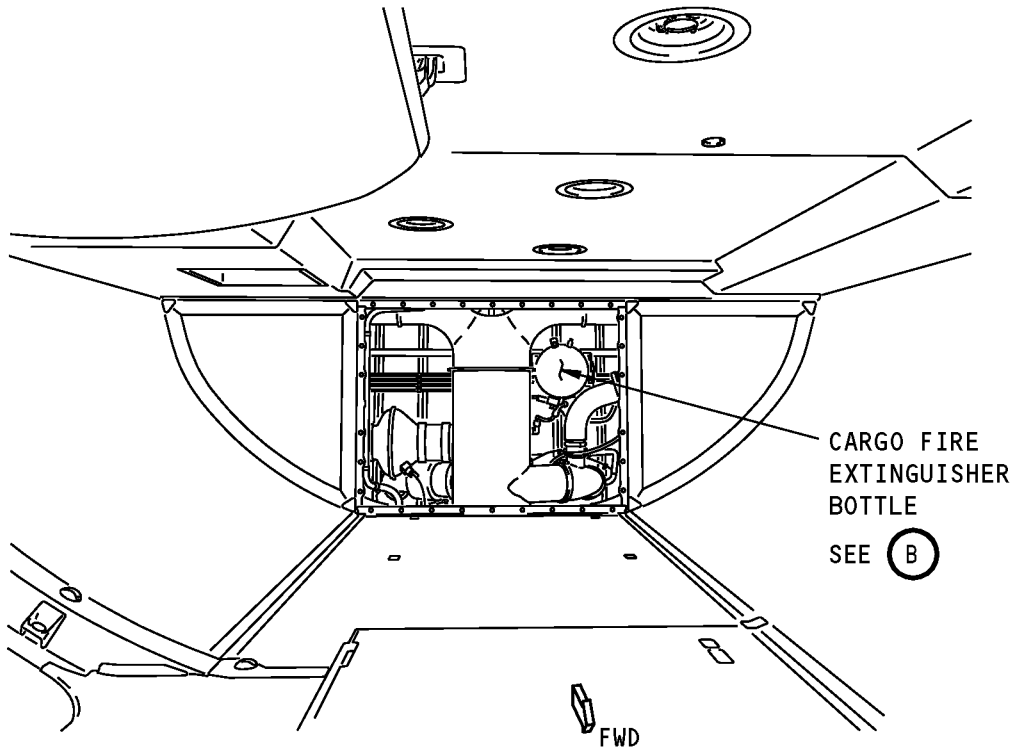
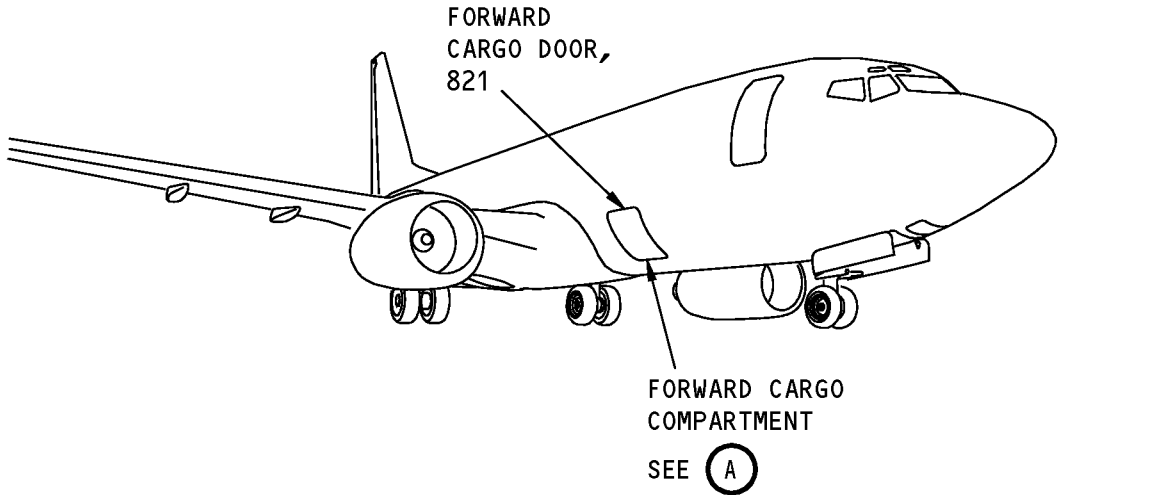
<b>EFFECTIVITY</b> <b>HAP ALL</b>	
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**FORWARD CARGO COMPARTMENT**

(A)

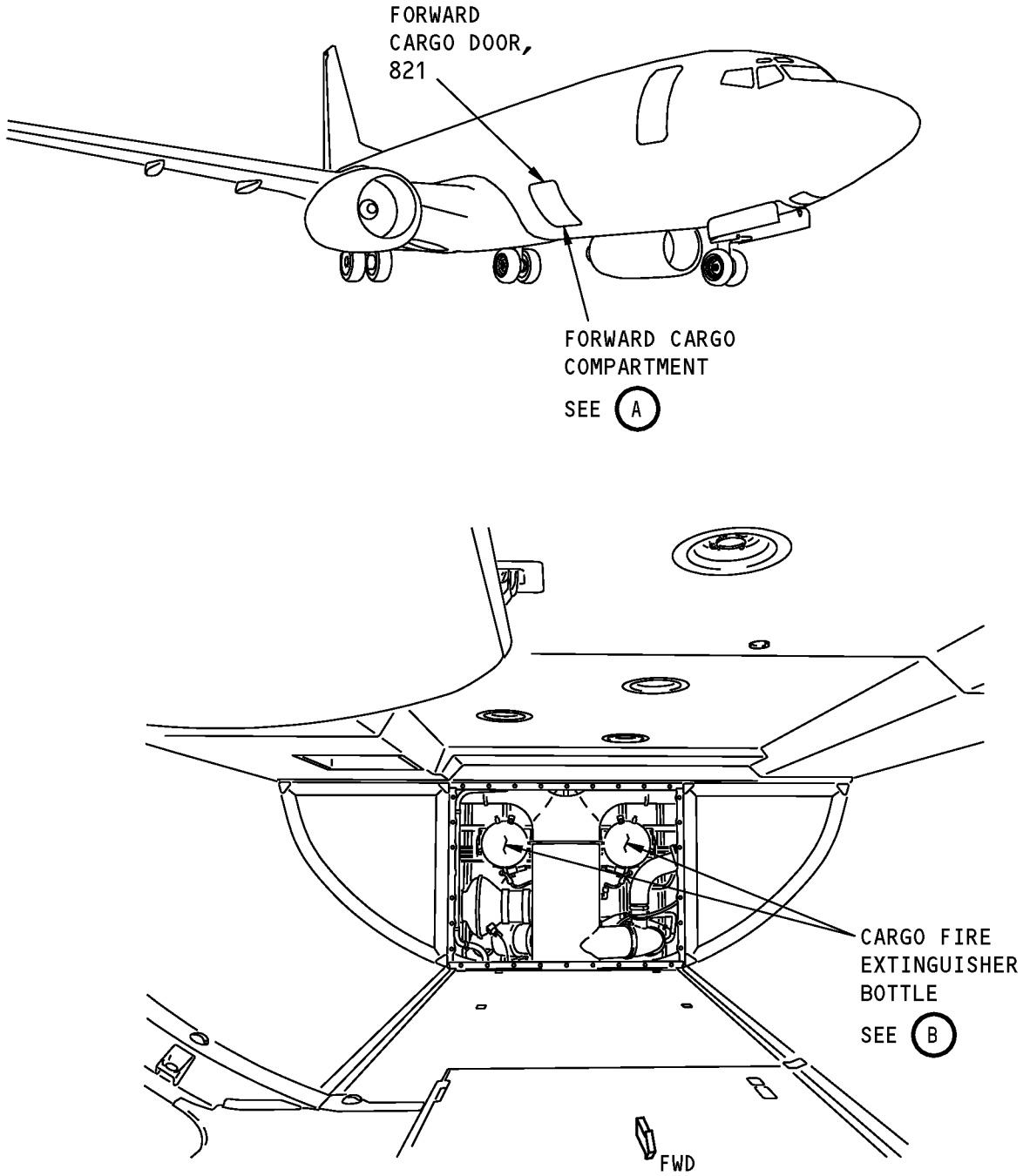
**Cargo Compartment Fire Extinguisher Bottle Squib Installation**  
**Figure 401 (Sheet 1 of 4)/26-23-02-990-801**

EFFECTIVITY
HAP 001-013, 015-026, 028-047, 049, 051, 052, 101-999

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**AIRCRAFT MAINTENANCE MANUAL**



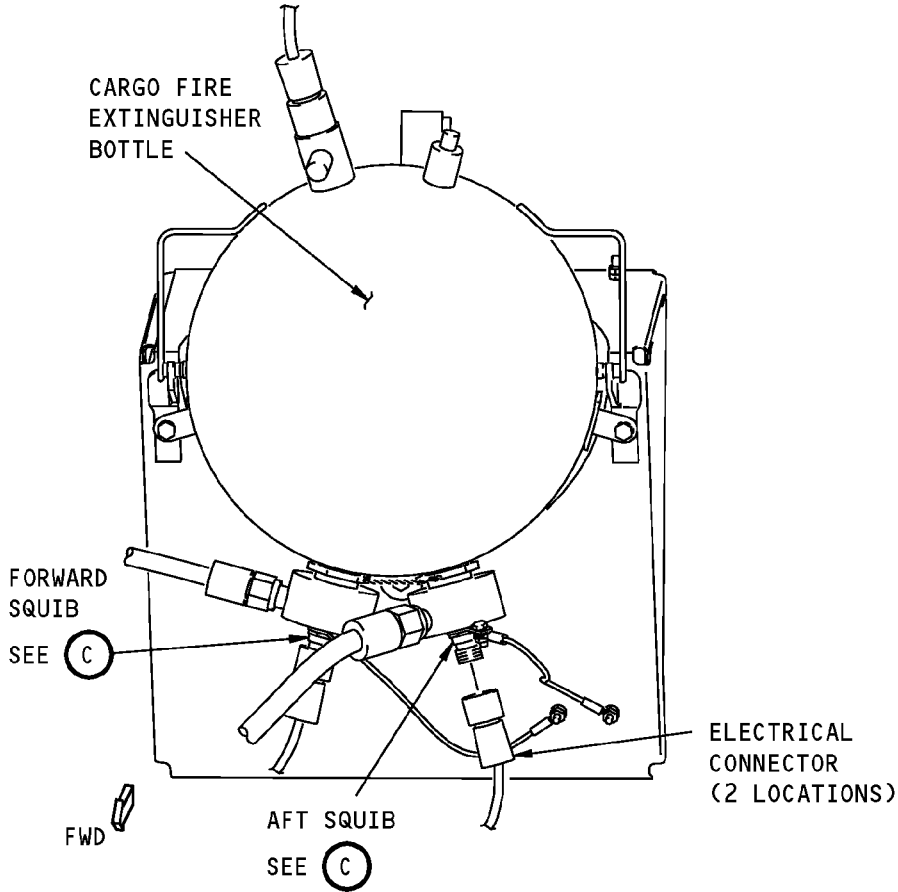
**FORWARD CARGO COMPARTMENT**

(A)

**Cargo Compartment Fire Extinguisher Bottle Squib Installation**  
**Figure 401 (Sheet 2 of 4)/26-23-02-990-801**

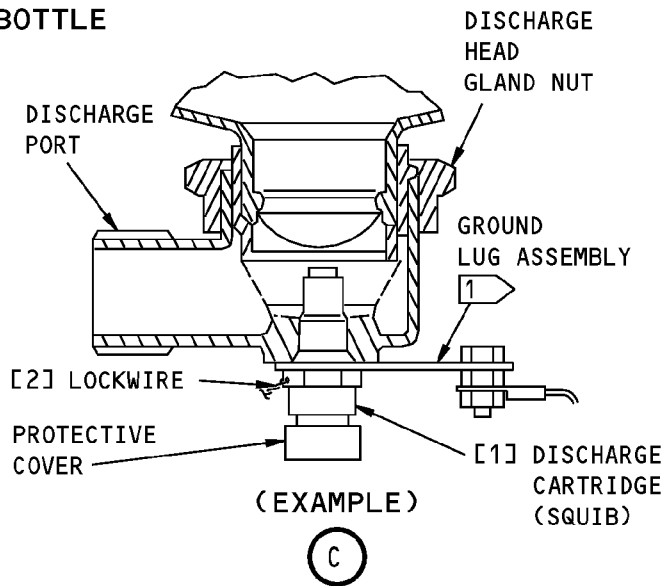
EFFECTIVITY
HAP 048, 050, 053, 054

D633A101-HAP



**CARGO FIRE EXTINGUISHER BOTTLE**

(B)



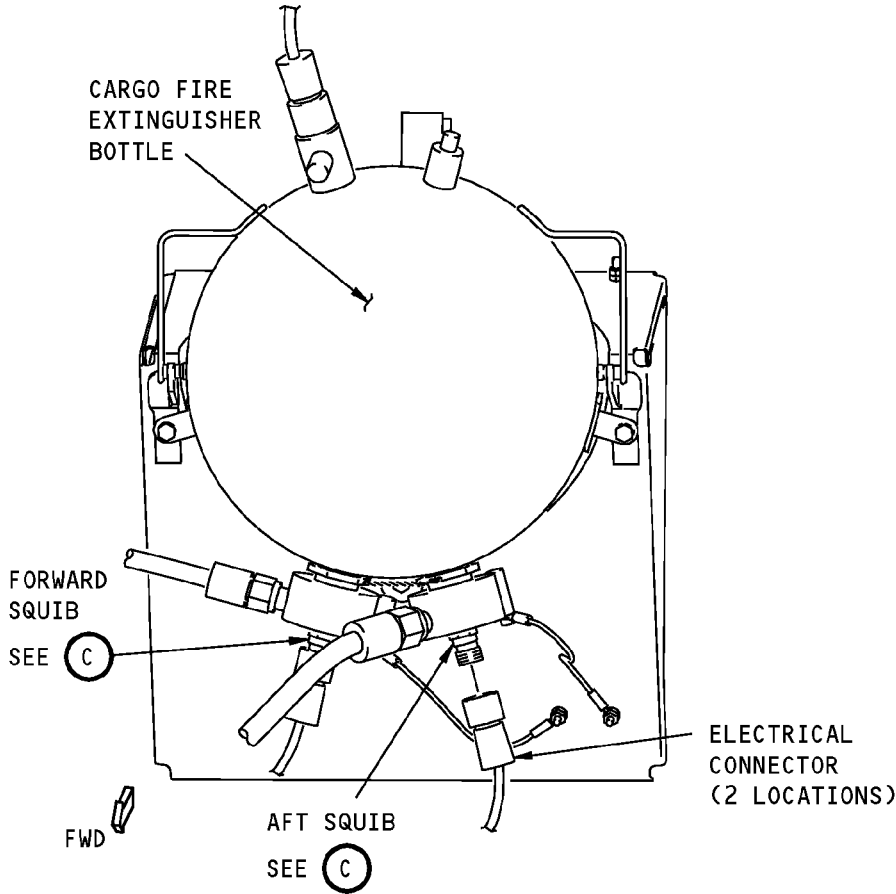
[1] BOTTLES WITHOUT SEPARATE GROUND LUG FITTING

**Cargo Compartment Fire Extinguisher Bottle Squib Installation  
Figure 401 (Sheet 3 of 4)/26-23-02-990-801**

EFFECTIVITY
HAP ALL

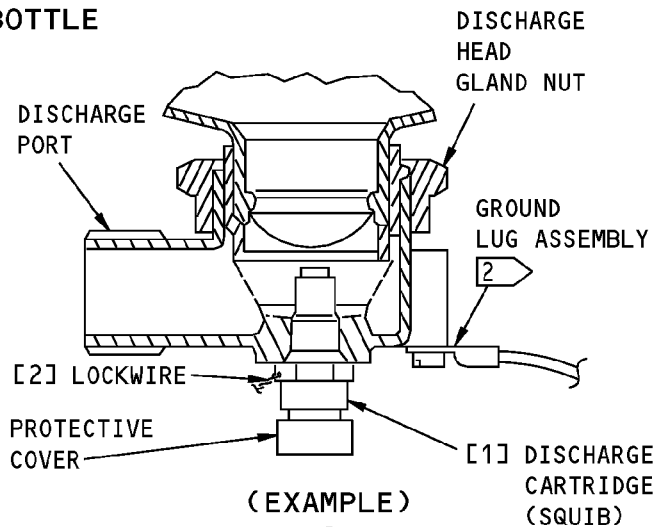
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**CARGO FIRE EXTINGUISHER BOTTLE**

(B)



[2] BOTTLES WITH SEPARATE GROUND LUG FITTING

(C)

**Cargo Compartment Fire Extinguisher Bottle Squib Installation  
Figure 401 (Sheet 4 of 4)/26-23-02-990-801**

EFFECTIVITY
HAP ALL

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### AIRCRAFT MAINTENANCE MANUAL

#### TASK 26-23-02-400-801

#### 3. Cargo Fire Extinguisher Bottle Squib Installation

(Figure 401)

##### A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-814	Remove External Power (P/B 201)

##### B. Tools/Equipment

Reference	Description
STD-1079	Resistor - 10K Ohm or Greater
STD-1231	Multimeter - Standard

##### C. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

##### D. Access Panels

Number	Name/Location
821	Forward Cargo Door

##### E. Prepare for the Installation

SUBTASK 26-23-02-860-004

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-23-02-860-005

(2) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
<b>HAP 001-007, 048, 050, 053, 054</b>			
B	16	C01528	CARGO FIRE EXT 2
<b>HAP ALL</b>			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-02-010-003

(3) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-02-010-004

(4) Remove the lining at the aft end of the forward cargo compartment to get access to the mix manifold bay.

##### F. Install the Squib

SUBTASK 26-23-02-420-001

(1) Do these steps to install the squib.

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WARNING: DO NOT TOUCH THE PINS ON THE SQUIBS. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Install the squib in the discharge head.
(b) Tighten the squib to 90-100 pound-inches (10-11 N-m).

SUBTASK 26-23-02-420-003

- (2) Connect aircraft wiring to the squib.
(a) Remove the protective cap from the squib.
(b) Attach the protective cap to the side of the fire extinguisher for later use.

WARNING: MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (c) Use the multimeter, STD-1231 and make sure there is no voltage between pins 1 and 2 of the electrical connector [1].
(d) If there is voltage between pins 1 and 2 of electrical connector [1], do these steps:
1) Connect a multimeter, STD-1231 across pins 1 and 2.
2) Connect a resistor (> 10K ohm), STD-1079 across the multimeter, STD-1231 pins [probes] to remove any stray voltage from the electrical connector [1].
3) Disconnect the multimeter, STD-1231.
(e) Make sure the squib pins are not bent or damaged.
(f) Make sure the electrical connector is not damaged.

NOTE: The squib pins can cause damage to the connector if the pins do not enter the electrical connector receptacles.

- (g) Connect the electrical connector to the fire bottle squib.

G. Do an Installation Test of the Squib

SUBTASK 26-23-02-860-007

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Table with 4 columns: Row, Col, Number, Name. Contains entries for HAP 001-007, 048, 050, 053, 054 and HAP ALL.

SUBTASK 26-23-02-710-001

- (2) On the cargo fire control panel, push and hold the TEST switch.
(a) Make sure the green FWD and AFT squib test lights on the cargo fire control panel come on.

SUBTASK 26-23-02-710-002

- (3) Release the TEST switch.
(a) Make sure the green FWD and AFT squib test lights go off.

EFFECTIVITY HAP ALL

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### H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-02-410-001

(1) If it was removed, install the air conditioning duct in front of the fire extinguishing bottle.

SUBTASK 26-23-02-410-002

(2) Install the lining at the aft end of the forward cargo compartment.

SUBTASK 26-23-02-410-003

(3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
821	Forward Cargo Door

SUBTASK 26-23-02-860-008

(4) Do this task: Remove External Power, TASK 24-22-00-860-814.

————— **END OF TASK** —————

EFFECTIVITY  
HAP ALL

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# AIRCRAFT MAINTENANCE MANUAL

## CARGO FIRE EXTINGUISHING FILTER/DRYER - REMOVAL/INSTALLATION

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) Removal of the filter/dryer for the cargo fire extinguishing system
  - (2) Installation of the filter/dryer for the cargo fire extinguishing system
- C. The metering assemblies are used to meter and dry the extinguishant. They are installed in the mix bay. The metering assemblies control the rate of flow of extinguishant to the selected cargo compartment and keeps the concentration of extinguishant constant for 195 minutes.
- D. After the cargo fire extinguishing bottles are discharged, you must replace the fire extinguishing bottles, the squibs, the applicable metering assemblies.

### **TASK 26-23-04-000-801**

### 2. Cargo Fire Extinguishing Filter/Dryer Removal

(Figure 401)

- A. General
  - (1) This procedure is a scheduled maintenance task.
- B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner Removal (P/B 401)

### C. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

### D. Access Panels

Number	Name/Location
821	Forward Cargo Door

### E. Prepare for the Removal

SUBTASK 26-23-04-010-001

- (1) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

to get access to the forward cargo compartment.

SUBTASK 26-23-04-010-003

- (2) Do this task: Forward Cargo Compartment Aft Bulkhead Liner Removal, TASK 25-52-17-000-801.

### F. Cargo Fire Extinguishing Filter/dryer Removal

SUBTASK 26-23-04-020-001

- (1) Do these steps to remove the filter/dryer:

EFFECTIVITY
HAP 048, 050, 053, 054

# 26-23-04



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## AIRCRAFT MAINTENANCE MANUAL

**WARNING:** BE CAREFUL WHEN YOU DISCONNECT THE TUBES FROM THE FILTER/DRYER. IF THE FIRE EXTINGUISHING BOTTLE DISCHARGED, THE TUBING MAY BE PRESSURIZED. WHEN YOU RELEASE THE PRESSURE IN THE TUBING YOU CAN CAUSE INJURY TO PERSONS.

- (a) Disconnect the outlet tube from the filter/dryer.

**NOTE:** Disconnect the outlet tube before you disconnect the inlet tube. If the tubing is pressurized, it is safer to disconnect the outlet tube first.

- (b) Disconnect the inlet tube from the filter/dryer.  
(c) Remove the screw, washer, spacer and nut securing the filter/dryer to the bracket.

————— **END OF TASK** —————

EFFECTIVITY  
HAP 048, 050, 053, 054

D633A101-HAP

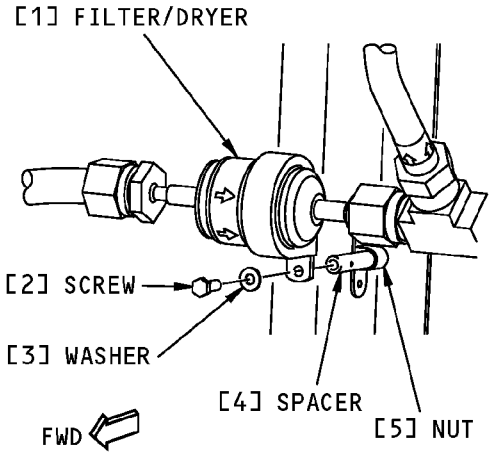
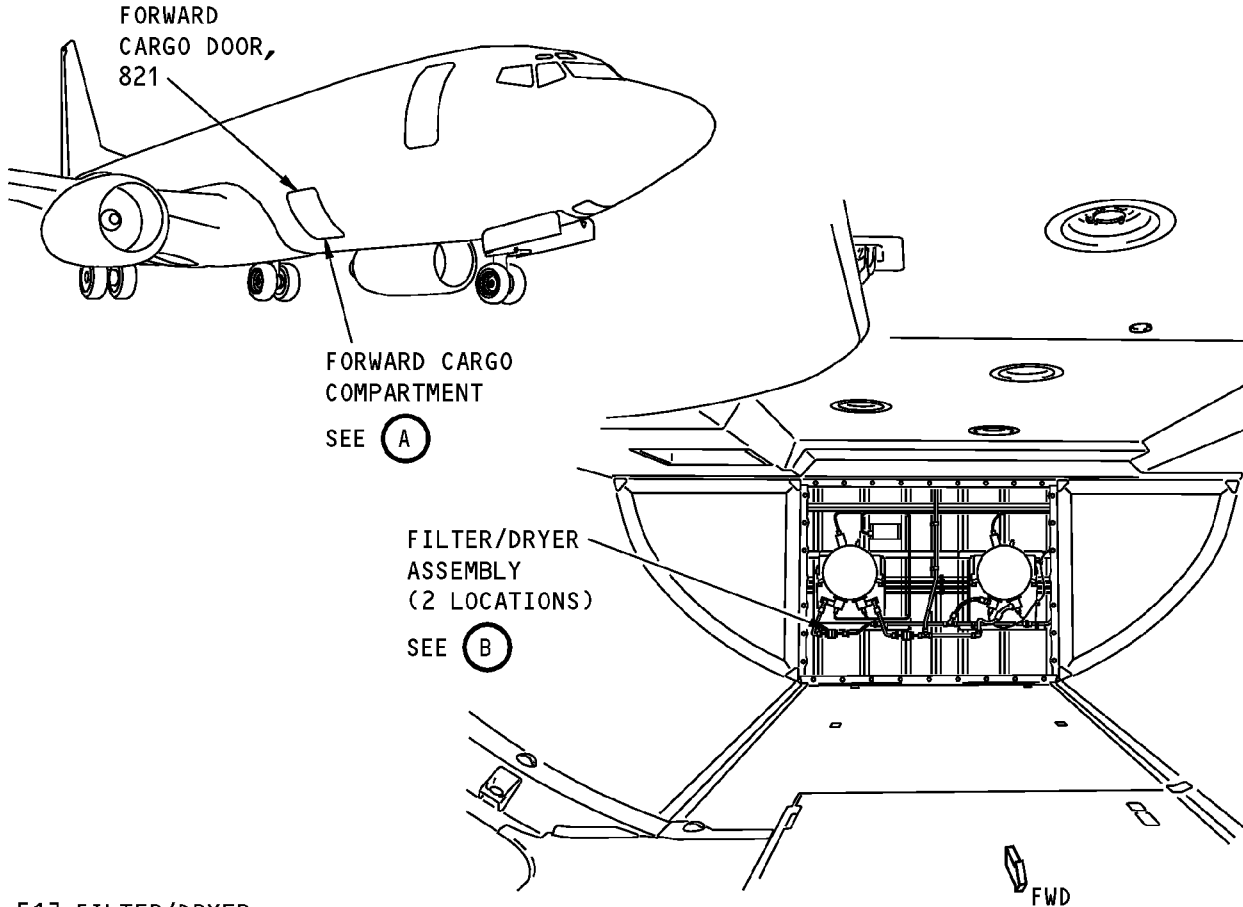
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**AIRCRAFT MAINTENANCE MANUAL**



**FILTER/DRYER ASSEMBLY (EXAMPLE)**

(B)

**Filter/Dryer Assembly Installation**  
**Figure 401/26-23-04-990-801**

EFFECTIVITY  
HAP 048, 050, 053, 054

**26-23-04**



737-600/700/800/900

### AIRCRAFT MAINTENANCE MANUAL

#### TASK 26-23-04-400-801

#### 3. Cargo Fire Extinguishing Filter/Dryer Installation

(Figure 401)

##### A. General

(1) This procedure is a scheduled maintenance task.

##### B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner Installation (P/B 401)

##### C. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

##### D. Access Panels

Number	Name/Location
821	Forward Cargo Door

##### E. Cargo Fire Extinguishing Filter/dryer Installation

SUBTASK 26-23-04-010-005

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner Removal, TASK 25-52-17-000-801.

SUBTASK 26-23-04-420-001

(2) Do these steps to install the filter/dryer [1]:

**NOTE:** Yellow is used to show the plumbing which supplies extinguishant to the forward cargo compartment. Blue is used to show the plumbing which supplies extinguishant to the aft cargo compartment.

- (a) Put the filter/dryer in its position and secure it with the screw, washer, spacer and nut.
- (b) Connect the inlet tube to the filter/dryer.
  - 1) Tighten the inlet tube to 265-290 pound-inches (30-33 N·m).
- (c) Connect the outlet tube to the filter/dryer.
  - 1) Tighten the outlet tube to 345-375 pound-inches (39-42 N·m).

##### F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-04-410-001

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, TASK 25-52-17-400-801.

SUBTASK 26-23-04-840-001

(2) Close this access panel:

Number	Name/Location
821	Forward Cargo Door

————— END OF TASK —————

EFFECTIVITY
HAP 048, 050, 053, 054

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# AIRCRAFT MAINTENANCE MANUAL

## LAVATORY WASTE COMPARTMENT FIRE EXTINGUISHING - MAINTENANCE PRACTICES

### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
  - (1) A removal/installation of the fire extinguishing bottle in the lavatory waste compartment.
  - (2) An inspection/check of the fire extinguishing system in the lavatory waste compartment.
- C. The fire extinguishing system for the lavatory waste compartment operates automatically when heat is detected in the lavatory waste compartment. When the temperature is hot enough, heat fusible tips on the fire extinguisher bottle melt. The extinguisher fills the waste compartment with an inert gas. A separate temperature indicator inside the waste compartment shows when the temperature has gotten hot.

### **TASK 26-24-01-900-801**

### 2. Lavatory Waste Compartment Fire Extinguishing Bottle Removal/Installation

(Figure 201)

#### A. General

- (1) This procedure is a scheduled maintenance task.

#### B. Tools/Equipment

**NOTE:** When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-6250	Gauge - Force (Part #: LG-1KG, Supplier: 92456, A/P Effectivity: 737-ALL)
STD-1064	Scraper - Phenolic, Hard Resin

#### C. Consumable Materials

Reference	Description	Specification
A00027	Adhesive - Silicone Rubber, 1 Part, RTV	BAC5010, Type 60

#### D. Location Zones

Zone	Area
200	Upper Half of Fuselage

#### E. Remove the Fire Extinguishing Bottle

SUBTASK 26-24-01-010-001

- (1) Open the waste compartment door.

SUBTASK 26-24-01-010-004

- (2) Open the waste container door to get access to the fire extinguishing bottle [1].

SUBTASK 26-24-01-020-001

- (3) Remove the waste container.

SUBTASK 26-24-01-020-002

- (4) Remove the mounting screws [3] that hold the fire extinguishing bottle [1] in its position.

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## AIRCRAFT MAINTENANCE MANUAL

SUBTASK 26-24-01-020-003

**CAUTION:** BE CAREFUL WHEN YOU REMOVE THE SEALANT. DO NOT SCRATCH THE PAINT AROUND THE NOZZLES. THIS CAN CAUSE DAMAGE TO THE AREA AROUND THE NOZZLES.

- (5) Use a hard resin phenolic scraper, STD-1064 and remove the sealant at the bottom of the nozzles.

SUBTASK 26-24-01-020-004

- (6) Hold the fire extinguishing bottle [1] and carefully remove the nozzles through the holes in the seal.

SUBTASK 26-24-01-020-005

- (7) Remove the fire extinguishing bottle [1].

### F. Install the Fire Extinguishing Bottle

SUBTASK 26-24-01-280-001

- (1) Use the force gauge, COM-6250 and weigh the fire extinguishing bottle.

**NOTE:** The total weight of the halon and the bottle is shown on the label of the fire extinguishing bottle.

- (a) Replace the fire extinguishing bottle if the weight is not within 10 grams (0.022 pounds) of the weight shown on the fire extinguishing bottle.

SUBTASK 26-24-01-420-001

- (2) Put the fire extinguishing bottle [1] in its position and install the nozzles through the holes in the seal.

- (a) Make sure the nozzles point into the waste container area.

SUBTASK 26-24-01-420-002

- (3) Install the mounting screws [3] that hold the fire extinguishing bottle [1] in its position.

SUBTASK 26-24-01-420-003

- (4) Apply the adhesive, A00027 around the nozzles where they penetrate the waste compartment.

SUBTASK 26-24-01-420-004

- (5) Install the waste container in the sink cabinet.

SUBTASK 26-24-01-410-002

- (6) Close the waste container door.

SUBTASK 26-24-01-410-001

- (7) Close the waste compartment door.

————— **END OF TASK** —————

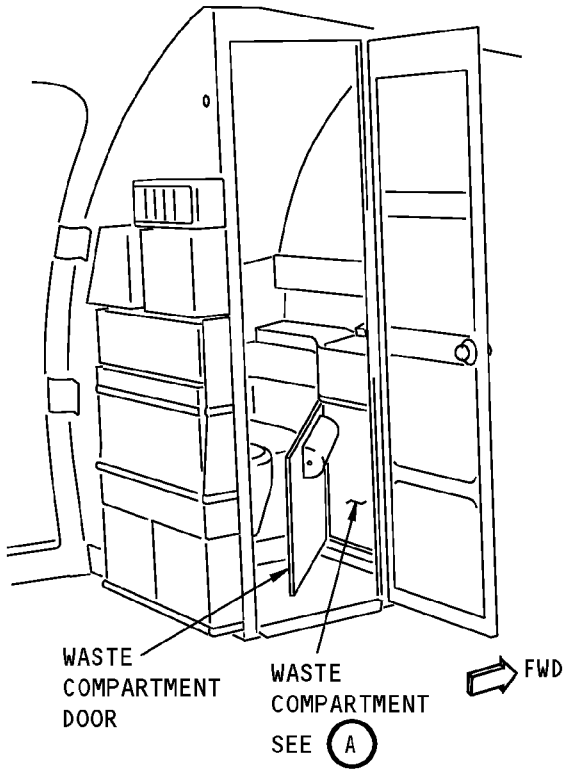
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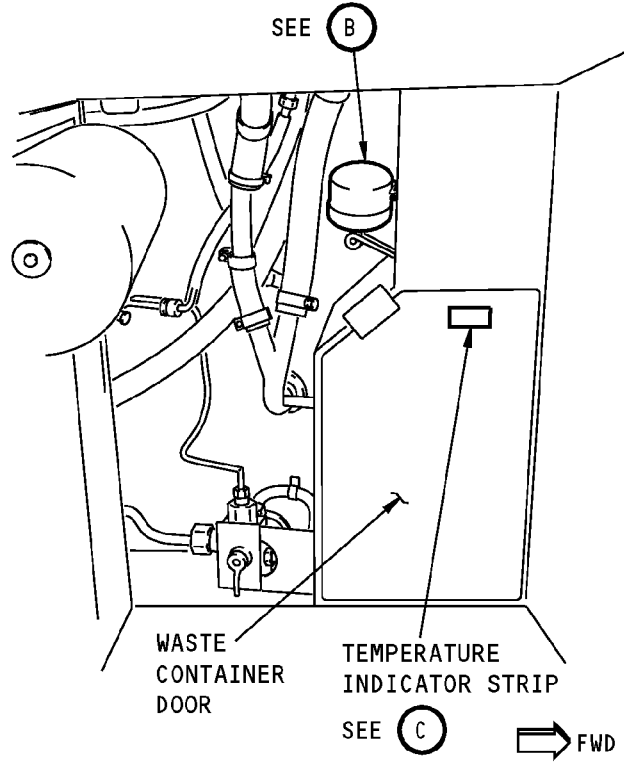
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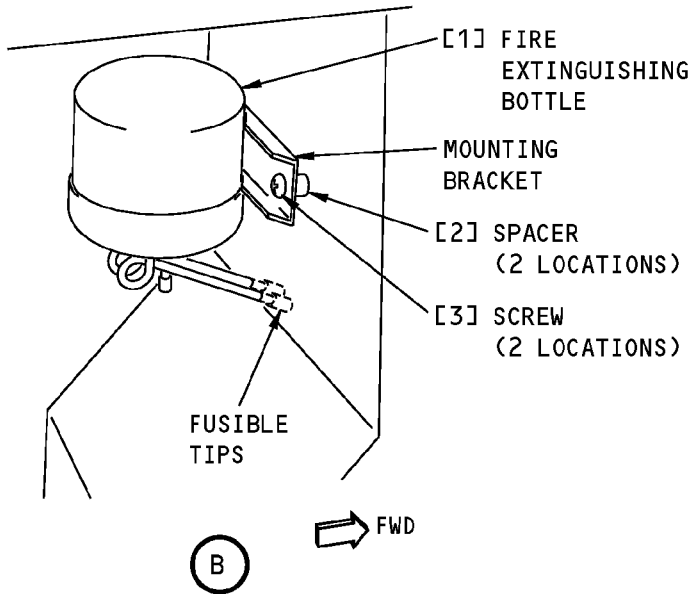


**LAVATORY  
(EXAMPLE)**



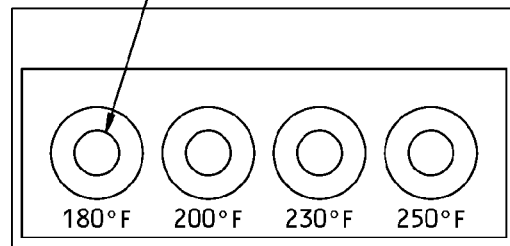
**WASTE COMPARTMENT  
(WASTE CONTAINER NOT SHOWN)**

(A)



(B)

TEMPERATURE INDICATOR  
(BLACK WHEN EXPOSED  
TO TEMPERATURE  
GREATER THAN 180°F)



**TEMPERATURE INDICATOR STRIP**

(C)

**Lavatory Waste Compartment Fire Extinguishing - Maintenance Practices**  
Figure 201/26-24-01-990-801

EFFECTIVITY
HAP ALL

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### AIRCRAFT MAINTENANCE MANUAL

#### TASK 26-24-01-200-801

#### 3. Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check

(Figure 201)

##### A. General

- (1) This procedure is a scheduled maintenance task.

##### B. Location Zones

Zone	Area
200	Upper Half of Fuselage

##### C. Procedure

SUBTASK 26-24-01-280-002

- (1) Open the waste compartment door.

SUBTASK 26-24-01-280-006

- (2) Open the waste container door to get access to the fire extinguishing bottle on the inside of the waste compartment.

SUBTASK 26-24-01-020-006

- (3) Remove the waste container.

SUBTASK 26-24-01-960-001

- (4) Examine the fusible tips on the discharge tubes.
  - (a) Replace the fire extinguishing bottle and the temperature indicator strip if the fusible tips are melted.

SUBTASK 26-24-01-960-002

- (5) Examine the temperature indicator strip to see if one or more of the temperature indicators changed from white to black.

- (a) If one or more of the temperature indicators changed from white to black, replace the temperature indicator strip.

SUBTASK 26-24-01-280-004

- (6) Examine the fire extinguishing bottle for corrosion, scratches, or dents.

- (a) Replace the fire extinguishing bottle if any dents are deeper than 1/16 in. (2 mm) per 1 in. (25 mm) of average dent diameter or if any scratches are deeper than 0.004 in. (0.102 mm).

SUBTASK 26-24-01-020-008

- (7) Install the waste container in the waste compartment.

SUBTASK 26-24-01-280-007

- (8) Close the waste container door.

SUBTASK 26-24-01-280-005

- (9) Close the waste compartment door.

————— END OF TASK —————

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LAVATORY WASTE COMPARTMENT - INSPECTION/CHECK

1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has this inspection task:
  - (1) Lavatory waste compartment.

**TASK 26-24-01-210-801**

2. Lavatory Waste Compartment Temperature Indicator Strip Inspection

(Figure 601)

- A. General
  - (1) This procedure is a scheduled maintenance task.
- B. References

Reference	Title
26-24-01-200-801	Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check (P/B 201)

C. Procedure

SUBTASK 26-24-01-010-002

- (1) Open the waste compartment door to get access to the temperature indicator strip.

SUBTASK 26-24-01-210-001

- (2) Examine the temperature indicator strip to see if one or more of the temperature indicators changed from white to black.
  - (a) If one or more of the temperature indicators changed from white to black, do this task: Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check, TASK 26-24-01-200-801.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 26-24-01-010-003

- (1) Close the waste compartment door.

————— **END OF TASK** —————

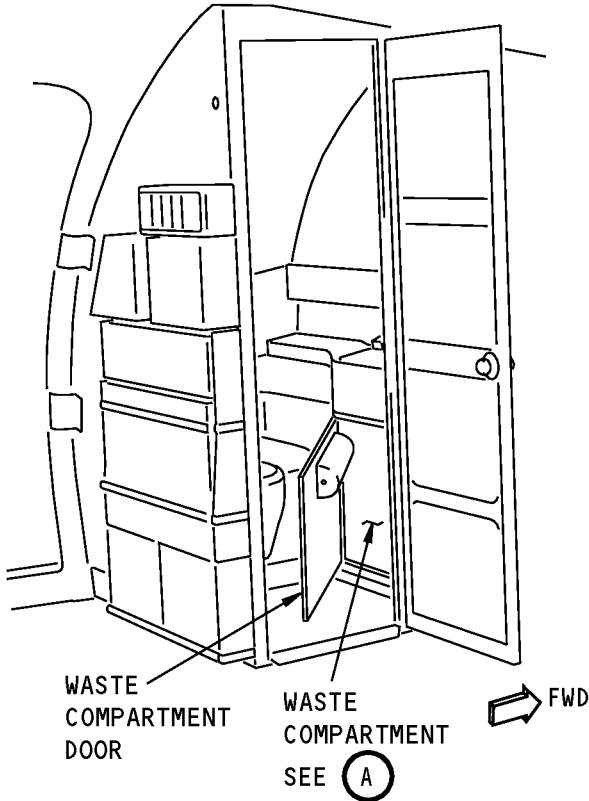
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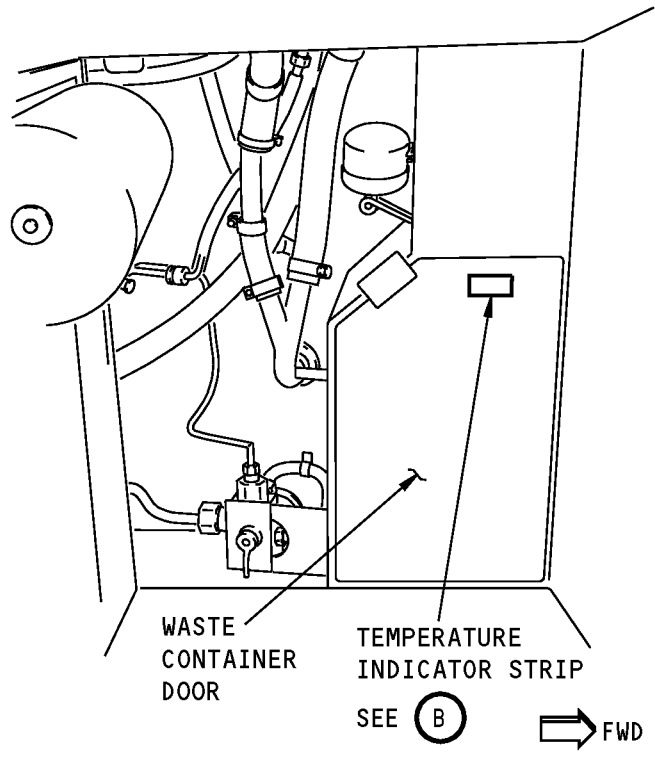
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**AIRCRAFT MAINTENANCE MANUAL**



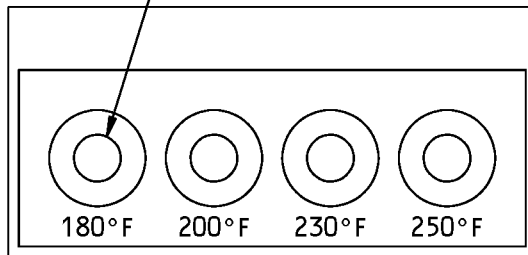
**LAVATORY (EXAMPLE)**



**WASTE COMPARTMENT (WASTE CONTAINER NOT SHOWN)**

(A)

TEMPERATURE INDICATOR (BLACK WHEN EXPOSED TO TEMPERATURE GREATER THAN 180°F)



**TEMPERATURE INDICATOR STRIP**

(B)

**Lavatory Waste Compartment Temperature Indicator Strip Inspection**  
**Figure 601/26-24-01-990-802**

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## AIRCRAFT MAINTENANCE MANUAL

### HALON FIRE EXTINGUISHERS - REMOVAL/INSTALLATION

#### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. The extinguisher is mounted on a bracket which has a quick-release strap.

#### **TASK 26-26-01-020-801**

#### 2. Remove the Extinguisher

##### A. General

- (1) This procedure is a scheduled maintenance task.

##### B. Procedure

SUBTASK 26-26-01-030-002

- (1) Unfasten the quick-release strap.

SUBTASK 26-26-01-030-003

- (2) Remove the extinguisher from the bracket.

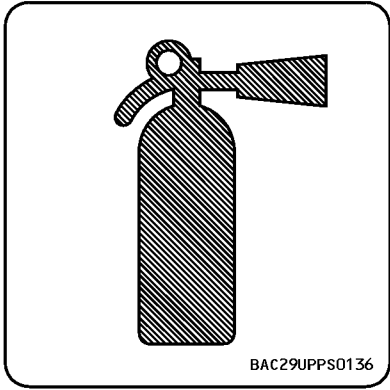
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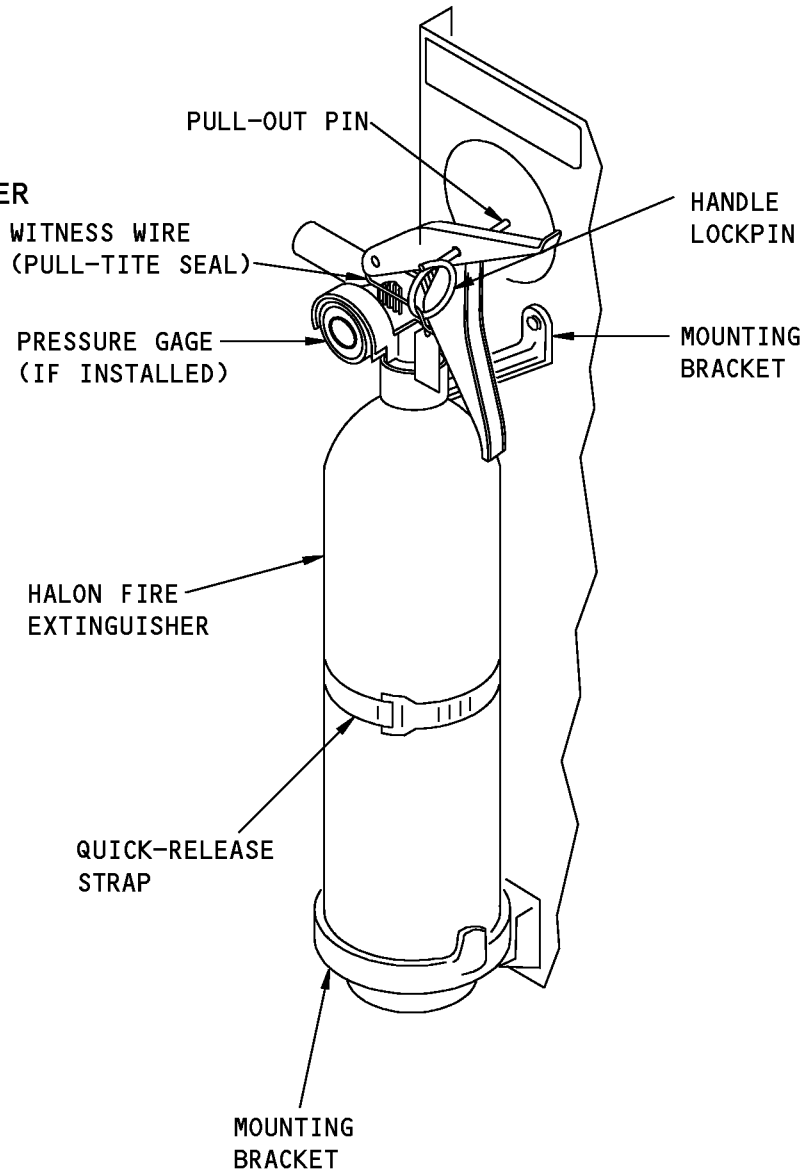
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**PORTABLE FIRE EXTINGUISHER  
PLACARD**



**HALON FIRE EXTINGUISHER  
(EXAMPLE)**

**Halon Fire Extinguishers Installation  
Figure 401/26-26-01-990-802**

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AIRCRAFT MAINTENANCE MANUAL

TASK 26-26-01-430-801

3. Install the Extinguisher

Figure 401

A. General

- (1) This procedure is a scheduled maintenance task.

B. Tools/Equipment

Reference	Description
STD-753	Scale - Push/Pull, 0-25 pound (0-11 kilogram) Capacity, 1/4 pound (113 gram) Accuracy

C. Procedure

SUBTASK 26-26-01-221-001

- (1) Use a push/pull scale 0-25 pound (0-11 kilogram), STD-753 and make sure the weight of the extinguisher is not less than the weight shown on the extinguisher nameplate.

SUBTASK 26-26-01-430-001

- (2) Make sure that the extinguisher is correctly installed in its mounting bracket.

SUBTASK 26-26-01-430-002

- (3) Fasten the quick-release strap.

————— END OF TASK —————

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## AIRCRAFT MAINTENANCE MANUAL

### HALON FIRE EXTINGUISHERS - INSPECTION/CHECK

#### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has a task to inspect the portable halon fire extinguishers.
- C. The portable fire extinguishers are installed in several general locations in the passenger compartment and flight compartment. If the extinguisher is not easy to see, the location will be identified with a placard. The extinguishers are usually installed in one or more of these areas: galley or lavatory stowage areas, closets, doghouses, near attendant seats. There is one halon extinguisher installed in the flight compartment.
- D. To service or recharge the fire extinguisher, refer to the applicable vendor manuals.

#### **TASK 26-26-01-200-801**

#### 2. Halon Fire Extinguishers - Inspection/Check

(Figure 601)

##### A. General

- (1) This procedure is a scheduled maintenance task.

##### B. Tools/Equipment

Reference	Description
STD-753	Scale - Push/Pull, 0-25 pound (0-11 kilogram) Capacity, 1/4 pound (113 gram) Accuracy

##### C. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left

##### D. Procedure

SUBTASK 26-26-01-210-001

- (1) Make sure the instruction decal and the nameplate are in good condition.

SUBTASK 26-26-01-210-002

- (2) Make sure the mounting bracket is attached correctly to the airplane.

SUBTASK 26-26-01-210-003

- (3) Make sure the extinguisher is installed tightly to the mounting bracket.

SUBTASK 26-26-01-210-004

- (4) Make sure that the lock-pin and witness wire (pull-tite seal) are correctly installed on the handle.

SUBTASK 26-26-01-210-005

- (5) Examine the pressure gage (if installed) and make sure the extinguisher has the correct pressure.

SUBTASK 26-26-01-210-006

- (6) Make sure there is no physical damage to the extinguisher.

SUBTASK 26-26-01-210-007

- (7) Use a push/pull scale 0-25 pound (0-11 kilogram), STD-753 and make sure the weight of the extinguisher is not less than the weight shown on the extinguisher nameplate.

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SUBTASK 26-26-01-210-008

- (8) If there are other manufacturer inspection or maintenance procedures that show on the extinguisher, do those procedures.

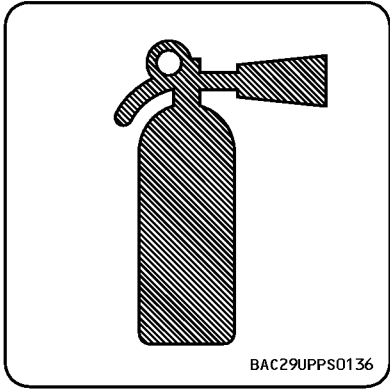
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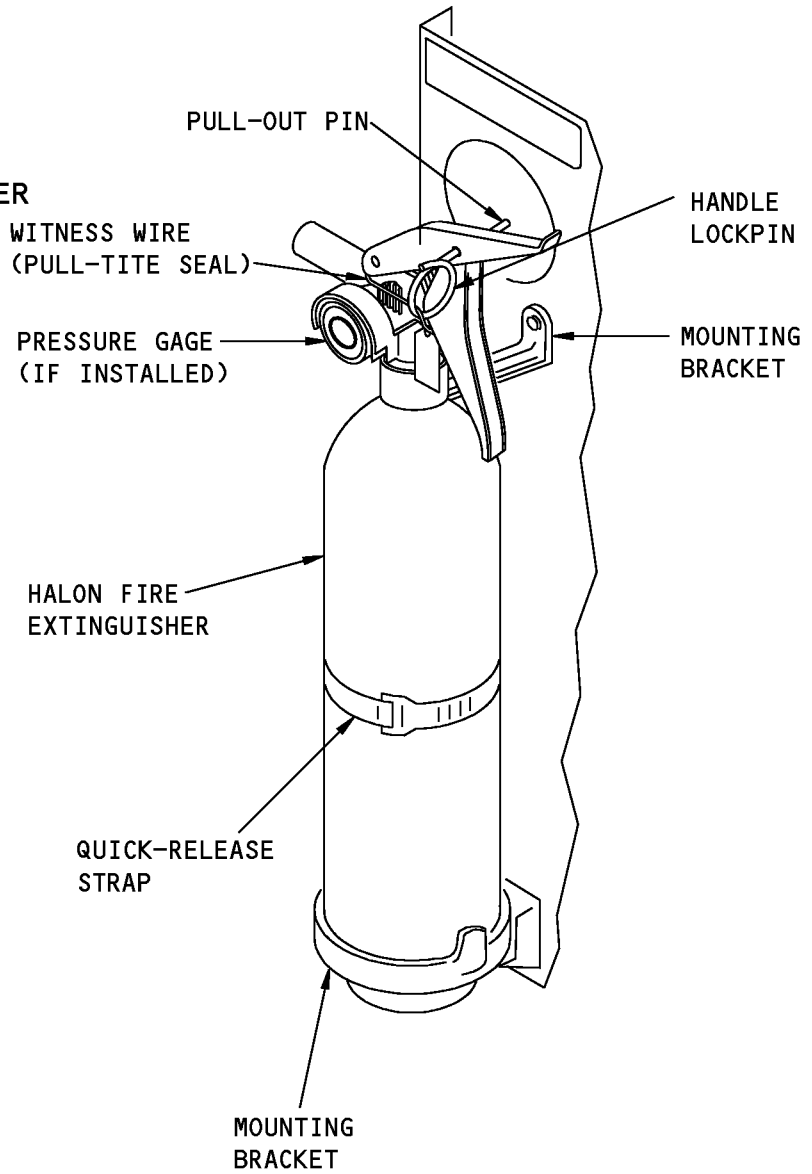
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**PORTABLE FIRE EXTINGUISHER  
PLACARD**



**HALON FIRE EXTINGUISHER  
(EXAMPLE)**

**Halon Fire Extinguishers Inspection  
Figure 601/26-26-01-990-803**

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## AIRCRAFT MAINTENANCE MANUAL

### WATER FIRE EXTINGUISHERS- REMOVAL/INSTALLATION

#### 1. General

- A. This procedure contains scheduled maintenance task data.
- B. The extinguisher is mounted on a bracket which has a quick-release strap.

#### **TASK 26-26-02-020-801**

#### 2. Remove the Extinguisher

- A. General
  - (1) This procedure is a scheduled maintenance task.

- B. Procedure

SUBTASK 26-26-02-030-001

- (1) Unfasten the quick-release strap.

SUBTASK 26-26-02-020-001

- (2) Remove the extinguisher from the bracket.

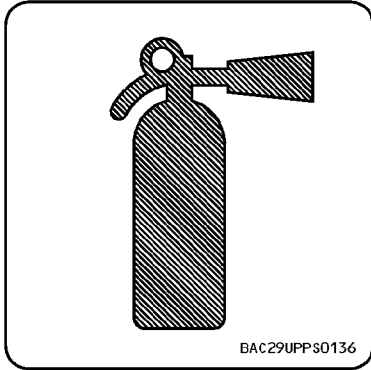
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HAP ALL

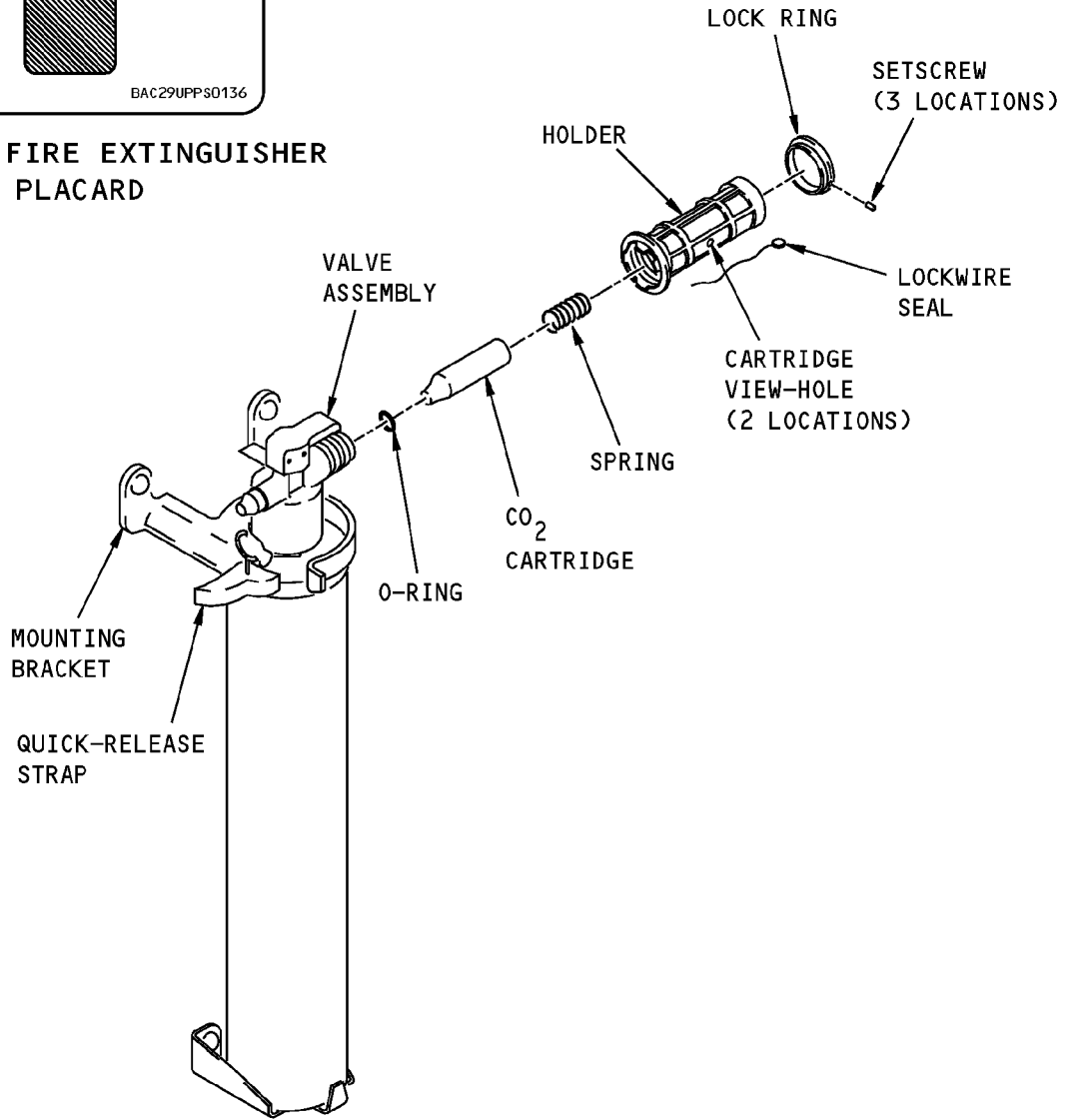
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**PORTABLE FIRE EXTINGUISHER  
PLACARD**



**WATER FIRE EXTINGUISHER  
(EXAMPLE)**

**Water-Type Fire Extinguishers Installation  
Figure 401/26-26-02-990-802**

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# AIRCRAFT MAINTENANCE MANUAL

**TASK 26-26-02-430-801**

## 3. Install the Extinguisher

Figure 401

### A. General

- (1) This procedure is a scheduled maintenance task.

### B. Tools/Equipment

Reference	Description
STD-753	Scale - Push/Pull, 0-25 pound (0-11 kilogram) Capacity, 1/4 pound (113 gram) Accuracy

### C. Procedure

SUBTASK 26-26-02-221-001

- (1) Use a push/pull scale 0-25 pound (0-11 kilogram), STD-753 and make sure the weight of the extinguisher is not less than the weight shown on the extinguisher nameplate.

SUBTASK 26-26-02-430-001

- (2) Make sure that the extinguisher is correctly installed in its mounting bracket.

SUBTASK 26-26-02-430-002

- (3) Fasten the quick-release strap.

**END OF TASK**

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**AIRCRAFT MAINTENANCE MANUAL**

**WATER FIRE EXTINGUISHERS - INSPECTION/CHECK**

**1. General**

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has a task to inspect the portable water fire extinguishers.
- C. The portable fire extinguishers are installed in several general locations in the passenger compartment. If the extinguisher is not easy to see, the location will be identified with a placard. The extinguishers are usually installed in one or more of these areas: galley or lavatory stowage areas, closets, doghouses, near attendant seats.
- D. To service or recharge the fire extinguisher, refer to the applicable vendor manuals.

**TASK 26-26-02-200-801**

**2. Water Fire Extinguishers - Inspection/Check**

(Figure 601)

**A. General**

- (1) This procedure is a scheduled maintenance task.

**B. Consumable Materials**

Reference	Description	Specification
G02479	Lockwire - Copper (0.020 inch Diameter)	NASM20995~ CY20

**C. Location Zones**

Zone	Area
200	Upper Half of Fuselage

**D. Procedure**

SUBTASK 26-26-02-210-001

- (1) Make sure the instruction decal and the nameplate are in good condition.

SUBTASK 26-26-02-210-002

- (2) Make sure the mounting bracket is attached correctly to the airplane.

SUBTASK 26-26-02-210-003

- (3) Make sure the extinguisher is installed tightly to the mounting bracket.

SUBTASK 26-26-02-210-004

- (4) Make sure the lock-pin or lockwire, G02479 is correctly installed on the handle.

- (a) If the lock-pin or lockwire, G02479 is not correctly installed, replace the bottle.

SUBTASK 26-26-02-210-006

- (5) Make sure there is no physical damage to the extinguisher.

SUBTASK 26-26-02-210-008

- (6) Make sure there are no leaks in the extinguisher.

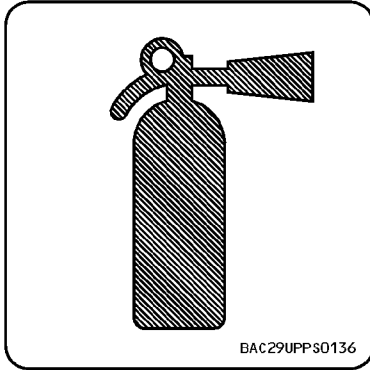
SUBTASK 26-26-02-210-009

- (7) If there are other manufacturer inspection or maintenance procedures that show on the extinguisher, do those procedures.

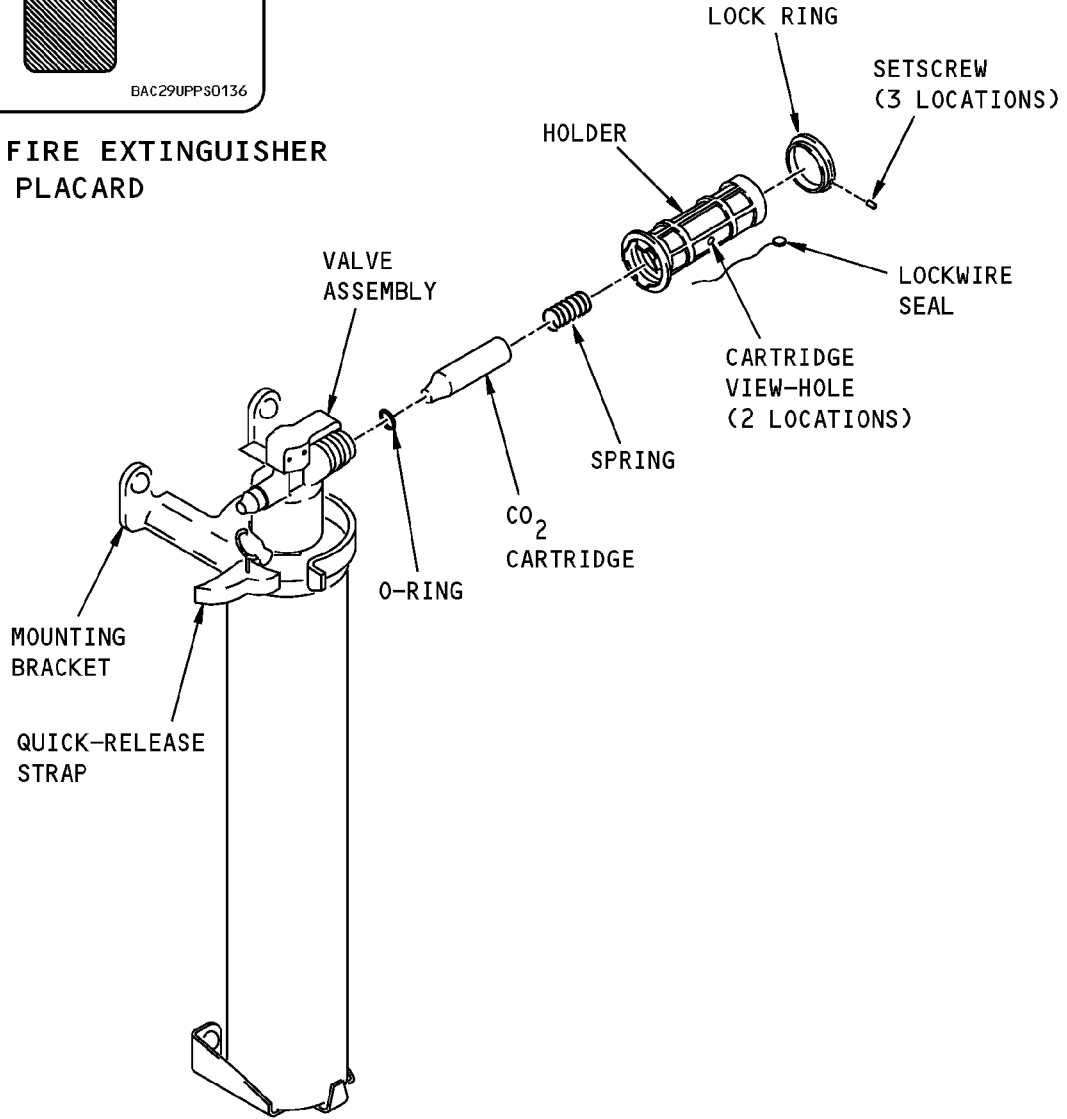
————— **END OF TASK** —————

EFFECTIVITY HAP ALL	
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**26-26-02**



**PORTABLE FIRE EXTINGUISHER  
PLACARD**



**WATER FIRE EXTINGUISHER  
(EXAMPLE)**

**Water-Type Fire Extinguishers Inspection  
Figure 601/26-26-02-990-801**

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