ENGINE FIRE EXTINGUISHING SYSTEM - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to check the engine fire extinguishing system.

   B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
26-21-00-700-801-A ♦	ENGINE FIRE EXTINGUISHING SYSTEM - FUNCTIONAL CHECK	ALL

TASK 26-21-00-700-801-A
EFFECTIVITY: ALL

2. ENGINE FIRE EXTINGUISHING SYSTEM - FUNCTIONAL CHECK

A. General

(1) This procedure is a check on the fire handles and the electrical circuit of the engine fire extinguishing system for correct operation.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-41-00/100	-
AMM SDS 24-36-00/1	
AMM SDS 31-41-00/1	
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
S.B.145-26-0007	-

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
312	312AR	Tail cone compartment

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Digital Multimeter	To measure continuity/voltage	
Commercially available	Ladder	To get access to the tail cone	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Tail cone compartment
1	Does the task	Cockpit

I. Preparation

SUBTASK 841-002-A

(1) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them.

- FIRE EXTG BTL A 1/2.
- FIRE EXTG BTL B 1/2.

(2) Open access door 312AR (AMM MPP 06-41-00/100) to get access to the tail cone compartment.

WARNING:
- **WHEN YOU CONNECT OR DISCONNECT THE ELECTRIC CONNECTOR OF THE BOTTLE CARTRIDGE, OR WHEN YOU KEEP IT DISCONNECTED, YOU MUST BE VERY CAREFUL WITH THE PINS OF ITS RECEPTACLE.**
- **THE CARTRIDGE IS AN EXPLOSIVE DEVICE. ACCIDENTAL DETONATION OF A CARTRIDGE BY ELECTROSTATIC DISCHARGE CAN CAUSE INJURY. FOR SAFE HANDLING, DO NOT TOUCH THE CARTRIDGE CONNECTOR PINS AFTER YOU REMOVE THE PROTECTIVE CAP OR ELECTRICAL CONNECTOR.**

(3) Disconnect the electrical connectors (1) from the fire extinguishing bottle cartridges (2). Protect the receptacles with plastic caps.

(4) Energize the aircraft with a DC Power Supply (AMM TASK 20-40-01-860-801-A/200).

(5) Set MFD 1 (or 2) to the ELEC page (AMM SDS 31-41-00/1):

(a) Read the battery 1 voltage and record it as V_1 (AMM SDS 24-36-00/1).

(b) Read the battery 2 voltage and record it as V_2 (AMM SDS 24-36-00/1).

J. Functionally Check Engine Fire Extinguishing System (Figure 501)

SUBTASK 720-002-A

(1) Do the check as follows:

(a) Make sure that there is continuity to ground from pin A of the electrical connectors (1).

(2) On the circuit breaker panel, close the circuit breakers below:

- FIRE EXTG BTL A 1/2.
- FIRE EXTG BTL B 1/2.

(3) Examine the fire handle 1 as follows:

(a) Pull fire handle 1 and turn it left.

Result:

1 The voltage between pins A and B, and pins A and C of connector P0917 must be $V_1 \pm 0.5$ V DC.

(b) Turn fire handle 1 right.

Result:

1 The voltage between pins A and B, and pins A and C of connector P0920 must be $V_2 \pm 0.5$ V DC.

(4) Push fire handle 1 to put it back to the normal condition.

(a) Make sure that there is a voltage of approximately 21.5 V DC between pins A and B, and pins A and C of electrical connectors P0917 and P0920.

(5) Examine fire handle 2 as follows:

(a) Pull fire handle 2 and turn it left.

Result:

1 The voltage between pins A and B, and pins A and C of connector P0918 must be $V_1 \pm 0.5$ V DC.

(b) Turn the fire handle 2 to the right.

Result:

1 The voltage between pins A and B, and pins A and C of connector P0929 must be $V_2 \pm 0.5$ V DC.

(6) Push fire handle 2 to put it back to the normal condition.

(a) Make sure that there is a voltage of approximately 21.5 V DC between pins A and B, and A and C of electrical connectors P0918 and P0929.

(7) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them:

- FIRE EXTG BTL A 1/2.
- FIRE EXTG BTL B 1/2.

(8) Install a jumper between pins A and B of connectors P917, P918, P920, and P929.

(9) On the circuit breaker panel, close the circuit breakers below and remove the DO-NOT-CLOSE tag from them:

- FIRE EXTG BTL A 1/2.
- FIRE EXTG BTL B 1/2.

(10) On the EICAS display, the messages below go out of view:

- E1 EXT BTLA INOP.
- E2 EXT BTLA INOP.
- E1 EXT BTLB INOP.
- E2 EXT BTLB INOP.

(11) Do a check on the EICAS messages as follows:

(a) Open the jumper of connector P917.

Result:

1 The message E1 EXT BTLA INOP comes into view on the EICAS display.

(b) Close the jumper of connector P917.

Result:

1 The message E1 EXT BTLA INOP goes out of view on the EICAS display.

(c) Open the jumper of connector P918.

Result:

1 The message E2 EXT BTLA INOP comes into view on the EICAS display.

(d) Close the jumper of connector P918.

Result:

1 The message E2 EXT BTLA INOP goes out of view on the EICAS display.

(e) Open the jumper of connector P920.

Result:

1 The message E1 EXT BTLB INOP comes into view on the EICAS display.

(f) Close the jumper of connector P920.

Result:

1 The message E1 EXT BTLB INOP goes out of view on the EICAS display.

(g) Open the jumper of connector P929.

Result:

1 The message E2 EXT BTLB INOP comes into view on the EICAS display.

(h) Close the jumper of connector P929.

Result:

1 The message E2 EXT BTLB INOP goes out of view on the EICAS display.

(i) On the circuit breaker panel, open the FIRE EXT BTLA 1 circuit breaker.

Result:

1 The message E1 EXT BTLA INOP comes into view on the EICAS display.

(j) On the circuit breaker panel, close the FIRE EXT BTLA 1 circuit breaker.

Result:

1 The message E1 EXT BTLA INOP goes out of view on the EICAS display.

(k) On the circuit breaker panel, open the FIRE EXT BTLA 2 circuit breaker.

Result:

1 The message E2 EXT BTLA INOP comes into view on the EICAS display.

(l) On the circuit breaker panel, close the FIRE EXT BTLA 2 circuit breaker.

Result:

1 The message E2 EXT BTLA INOP goes out of view on the EICAS display.

(m) On the circuit breaker panel, open the FIRE EXT BTLB 1 circuit breaker.

Result:

1 The message E1 EXT BTLB INOP comes into view on the EICAS display.

(n) On the circuit breaker panel, close the FIRE EXT BTLB 1 circuit breaker.

Result:

1 The message E1 EXT BTLB INOP goes out of view on the EICAS display.

(o) On the circuit breaker panel, open the FIRE EXT BTLB 2 circuit breaker.

Result:

1 The message E2 EXT BTLB INOP comes into view on the EICAS display.

(p) On the circuit breaker panel, close the FIRE EXT BTLB 2 circuit breaker.

Result:

1 The message E2 EXT BTLB INOP goes out of view on the EICAS display.

(12) For aircraft PRE-MOD. S.B.145-26-0007 with EICAS versions up to 17:

(a) Disconnect the P919 and P930 electrical connectors from the bottle pressure gauge and switches (3).

Result:

1 The EICAS display shows the messages below:

- E1 EXTBTLA INOP.
- E2 EXTBTLA INOP.
- E1 EXTBTLB INOP.
- E2 EXTBTLB INOP.

(b) Connect the P919 and P930 connectors to the pressure gauge and switches (3).

NOTE: Make sure that the connector colored identification and inscription match those of the ring sticker applied around the bottle pressure gauge guard.

Result:

1 The EICAS messages go out of view.

(13) For aircraft POST-MOD. S.B.145-26-0007 with EICAS versions up to 17 or with EICAS versions 18 and on:

(a) Disconnect the P919 and P930 electrical connectors from the pressure gauge and switches (3):

(b) Install a jumper between pins A and C of the P919 and P930 electrical connectors.

Result:

1 The EICAS display shows the messages below:

- E1 EXTBTLA INOP.
- E2 EXTBTLA INOP.
- E1 EXTBTLB INOP.
- E2 EXTBTLB INOP.

(c) Remove the jumpers from between pins A and C of the P919 and P930 connectors.

Result:

1 The EICAS messages go out of view.

(d) Connect the P919 and P930 connectors to the bottle pressure gauge and switches (3).

NOTE: Make sure that the connector colored identification and inscription match those of the ring sticker applied around the bottle pressure gauge guard.

K. Follow-on (Figure 501)

SUBTASK 842-002-A

(1) Deenergize the aircraft (AMM TASK 20-40-01-860-801-A/200).

(2) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them:

- FIRE EXTG BTL A 1/2.
- FIRE EXTG BTL B 1/2.

(3) Remove the jumpers from connectors P917, P918, P920, and P929.

WARNING:
- **WHEN YOU CONNECT OR DISCONNECT THE ELECTRIC CONNECTOR OF THE BOTTLE CARTRIDGE, OR WHEN YOU KEEP IT DISCONNECTED, YOU MUST BE VERY CAREFUL WITH THE PINS OF ITS RECEPTACLE.**
- **THE CARTRIDGE IS AN EXPLOSIVE DEVICE. ACCIDENTAL DETONATION OF A CARTRIDGE BY ELECTROSTATIC DISCHARGE CAN CAUSE INJURY. FOR SAFE HANDLING, DO NOT TOUCH THE CARTRIDGE CONNECTOR PINS AFTER YOU REMOVE THE PROTECTIVE CAP OR ELECTRICAL CONNECTOR.**

(4) Remove from the cartridges receptacle the protective plastic caps, and connect the electrical connectors (1) to the related cartridges (2).

NOTE: Make sure that the connector colored identification and inscription match those of the ring sticker applied around the bottle outlets.

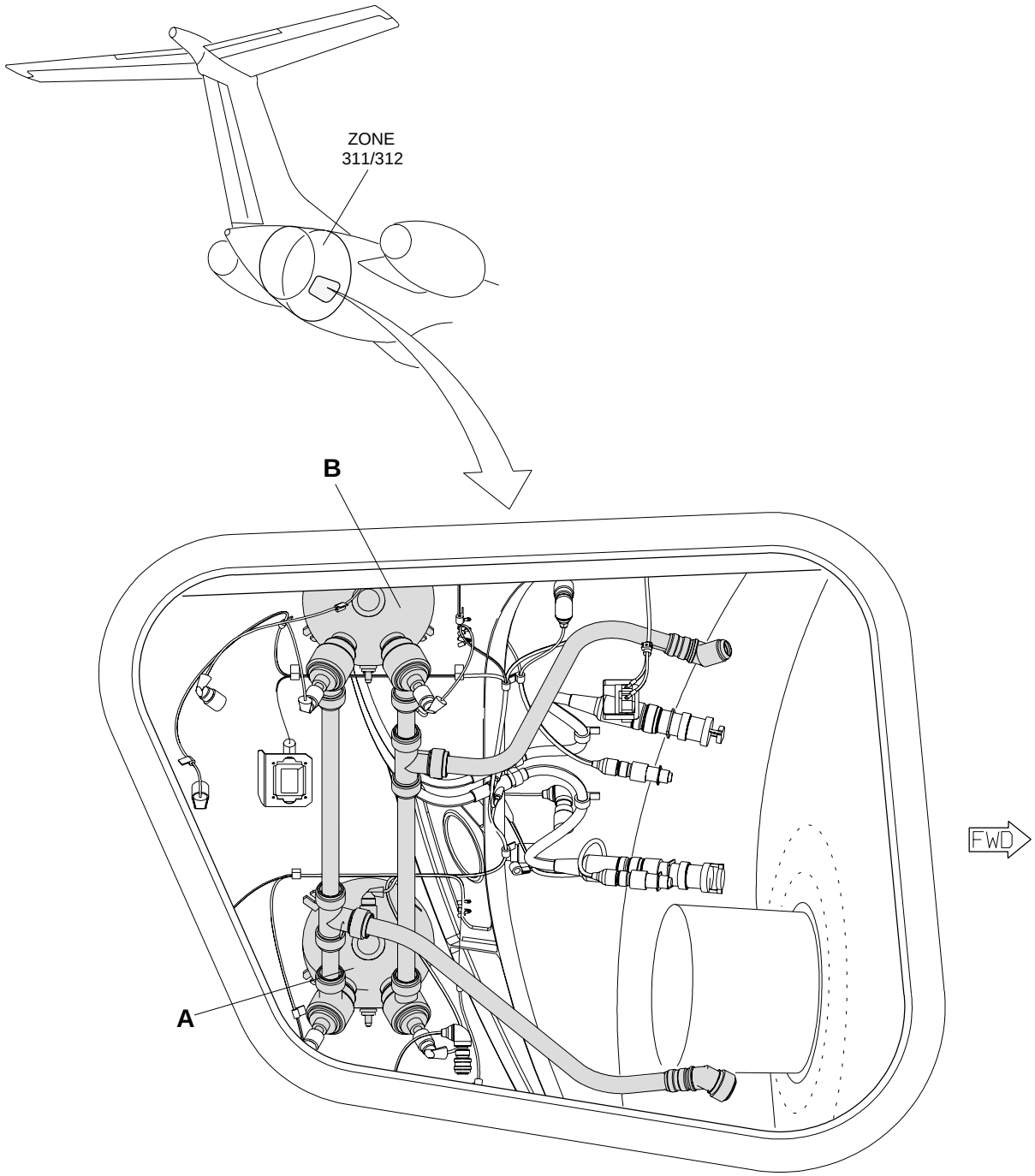
(5) Close access door 312AR (AMM MPP 06-41-00/100).

(6) On the circuit breaker panel, close the circuit breakers below and remove the DO-NOT-CLOSE tag from them:

- FIRE EXTG BTL A 1/2.
- FIRE EXTG BTL B 1/2.

EFFECTIVITY: ALL

Functional Check of the Engine Fire Extinguishing System -Component Locations
Figure 501 - Sheet 1



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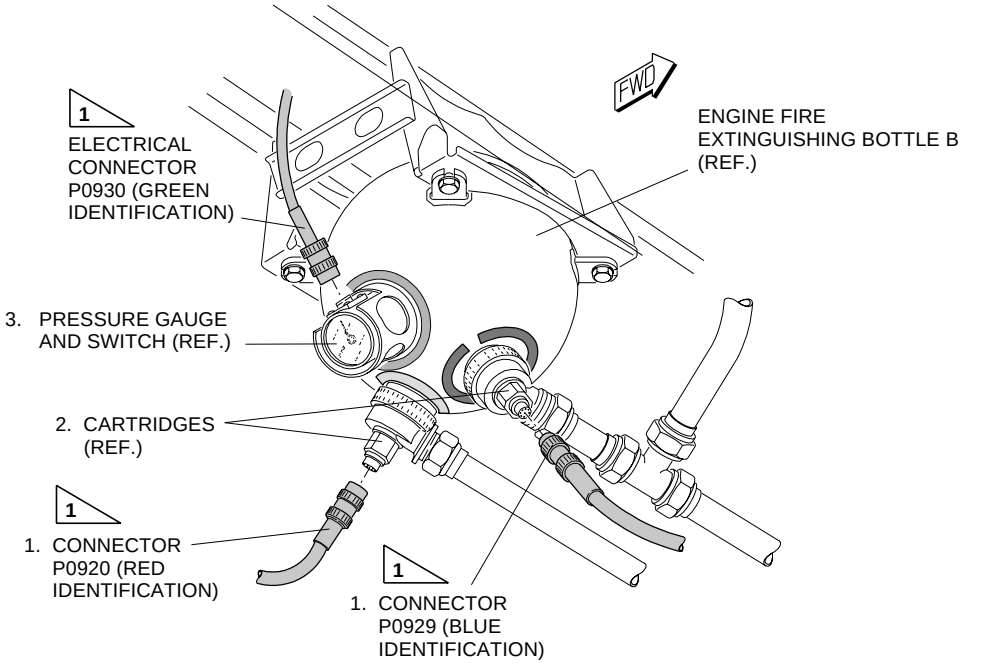
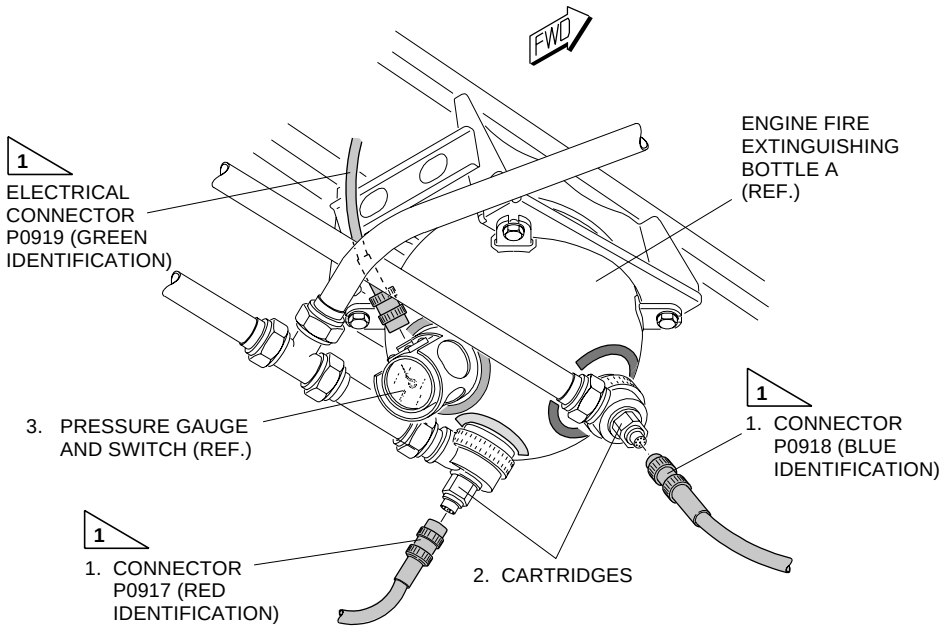
EFFECTIVITY: ALL

Functional Check of the Engine Fire Extinguishing System -Component Locations
Figure 501 - Sheet 2



DET. B



DET. A

1 TORQUE: FINGER TIGHTENING + 45°

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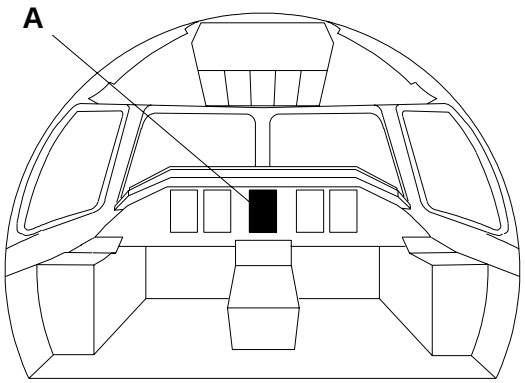
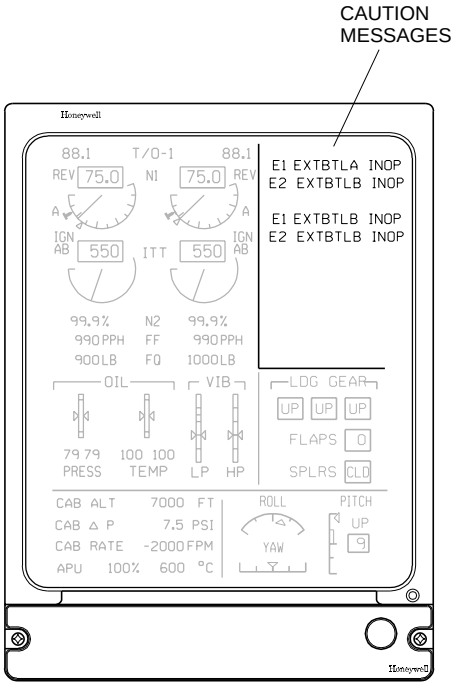
EFFECTIVITY: ALL

Functional Check of the Engine Fire Extinguishing System -Component Locations
Figure 501 - Sheet 3





EICAS DISPLAY

DET. A

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