## APU EMERGENCY SHUTDOWN - ADJUSTMENT/TEST

*EFFECTIVITY: ALL*

1. General

    A.  This section gives the procedures to do the check of the APU (Airborne Power Unit) emergency-shutdown 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 |
|---|---|---|
| 49-62-00-700-801-A ♦ | APU EMERGENCY SHUTDOWN - OPERA- TIONAL CHECK | ALL |

TASK 49-62-00-700-801-A
*EFFECTIVITY: ALL*

2.  APU EMERGENCY SHUTDOWN - OPERATIONAL CHECK

   A.  General

      (1)  This check is divided into two parts as follows:

         (a)  APU emergency shutdown with the APU fuel-shutoff switch.

         (b)  APU emergency shutdown with the fire test switch.

   B.  References

   | REFERENCE | DESIGNATION |
   | --- | --- |
   | AMM MPP 06-41-01/100 | - |
   | AMM TASK 20-40-01-860-801-A/200 | ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE |
   | AMM TASK 32-00-01-910-801-A/200 | LG SAFETY PIN - INSTALLATION AND REMOVAL |

   C.  Zones and Accesses

   | ZONE | PANEL/DOOR | LOCATION |
   | --- | --- | --- |
   | 192 | 192BR | Wing stub (For EMB-145MR, MP, MK, ER, EP, EU, and EMB-135ER models) |
   | 156 | 156EZ | Landing gear bay (For EMB-145LR, LU, and EMB-135LR models) |

   D.  Tools and Equipment

   Not Applicable

   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 | Cockpit |
   | 1 | Monitors the APU-fuel shutoff valve | Wing stub or Landing gear bay |

   I.  Preparation

   *SUBTASK 841-002-A*

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

- APU FIRE EXTG.

(2) For EMB-145MR, MP, MK, ER, EP, EU, and EMB-135ER models:

    (a) Remove access panel 192BR (AMM MPP 06-41-01/100) to get access to the APU fuel-shutoff valve.

(3) For EMB-145LR, LU, and EMB-135LR MODELS:

> **WARNING: MAKE SURE THAT THE LANDING GEAR SAFETY PINS ARE INSTALLED TO PREVENT INJURIES TO PERSONS AND DAMAGE TO MATERIAL ( AMM TASK 32-00-01-910-801-A/200).**

    (a) Remove access panel 156EZ (AMM MPP 06-41-01/100) to get access to the APU fuel-shutoff valve.

(4) Energize the aircraft with the GPU ( AMM TASK 20-40-01-860-801-A/200).

J. Operationally Check Emergency Shutdown by Using APU Fuel Shutoff Switch and Fire Test Switch (Figure 501) (Figure 502) (Figure 503)

*SUBTASK 710-002-A*

(1) APU Emergency Shutdown with the APU Fuel Shutoff Switch.

    (a) Set the APU master switch to ON.
Result:

      1 The CAUTION message APU FUEL LO PRESS comes into view on the EICAS display.

      2 The CAUTION lights blink.

      3 The aural caution alarm (bell) operates.

> NOTE: Push one of the caution light switches to cancel the blinking of the lights.

      4 The position indicator, at the APU fuel-shutoff valve, shows open position.

    (b) Lift the guard and push the APU fuel-shutoff switch to ON.
Result:

      1 The switch striped bars come on and the ADVISORY message "APU FUEL SOV CLSD" comes into view on the EICAS display.

      2 The position indicator, at the APU fuel-shutoff valve, shows closed position.

    (c) Reset the APU fuel-shutoff switch to OFF.
Result:

      1 The switch striped bars go off and the ADVISORY message "APU FUEL SOV CLSD" goes out of view on the EICAS display.

      2 The position indicator, at the APU fuel-shutoff valve, shows open position.

    (d) Set the APU master switch to the OFF position.
Result:

      1 The ADVISORY message "APU FUEL SOV CLSD" blinks for 10 seconds and then goes out of view on the EICAS display.

(2)    APU Emergency Shutdown with the Fire Test Switch.

   (a)    Set the APU master switch to ON.

   Result:

   1    The CAUTION message APU FUEL LO PRESS comes into view on the EICAS display.

   2    The CAUTION lights blink.

   3    The aural caution alarm (bell) operates.

      NOTE:  Push one of the caution light switches to cancel the blinking of the lights.

   4    The position indicator, at the APU shutoff valve, shows open position.

   (b)    Push the fire test switch for more than 10 seconds:

   Result:

   1    On the EICAS, the messages below are shown:

      •    ENG 1-2 FIRE (WARNING)

      •    APU FIRE (WARNING)

      •    E1-2 FIRE DET FAIL (CAUTION)

      •    APU FIRE DET FAIL (CAUTION)

      •    APU FUEL SOV CLSD (ADVISORY)

   2    The fire handles come on.

   3    The warning/caution lights flash.

   4    The aural warning alarm (bell) operates.

      NOTE:  Push one of the caution/warning lights to cancel the blinking of the lights.

   5    The position indicator, at the APU fuel-shutoff valve, shows CLOSED position.

   (c)    Release the fire test switch.

   Result:

   1    Of the indications above, only the ADVISORY message APU FUEL SOV CLSD stays on the EICAS. All the others come back to the normal condition.

   2    The position indicator, at the APU fuel-shutoff valve, stays in the CLOSED position.

(3)    Set the APU master switch to OFF.

K.    Follow-on

   *SUBTASK 842-002-A*

   CAUTION: BEFORE YOU REMOVE THE EXTERNAL DC POWER SUPPLY, MAKE SURE THAT THE GPU PUSHBUTTON IS SET TO THE OFF (RELEASED) POSITION.

   (1)    Deenergize the aircraft ( AMM TASK 20-40-01-860-801-A/200) as applicable.
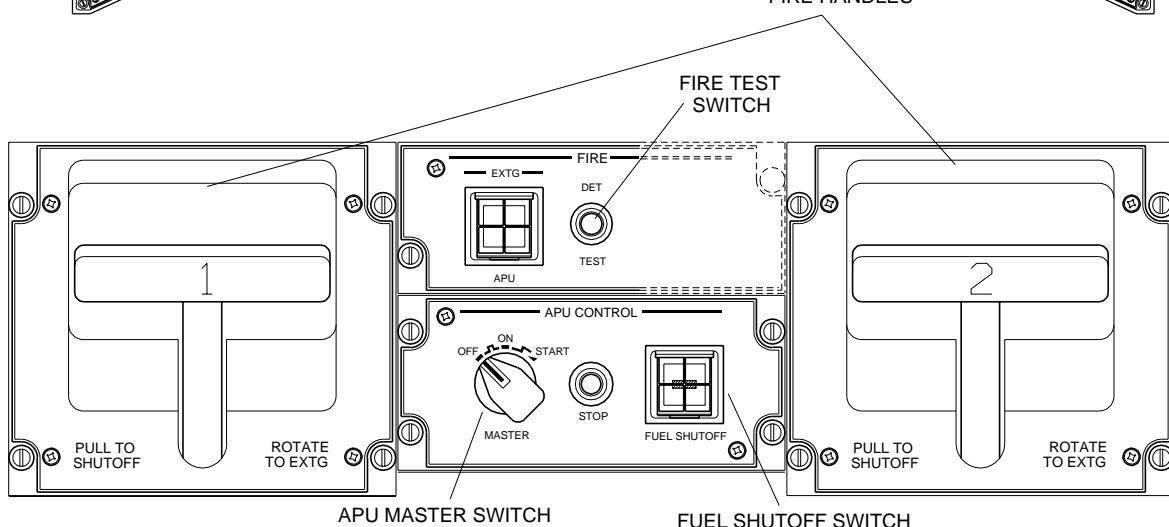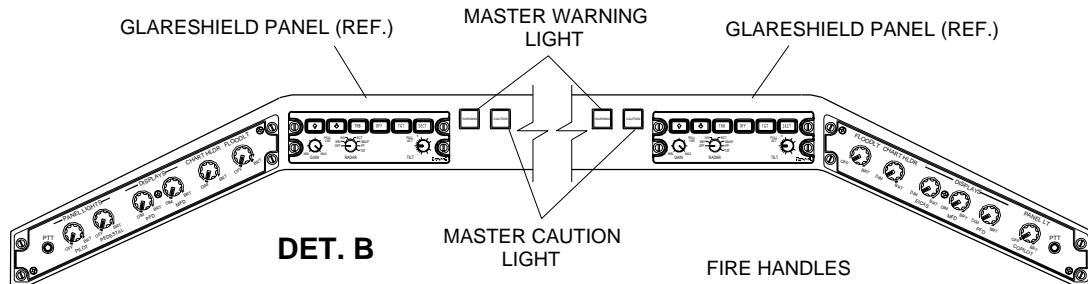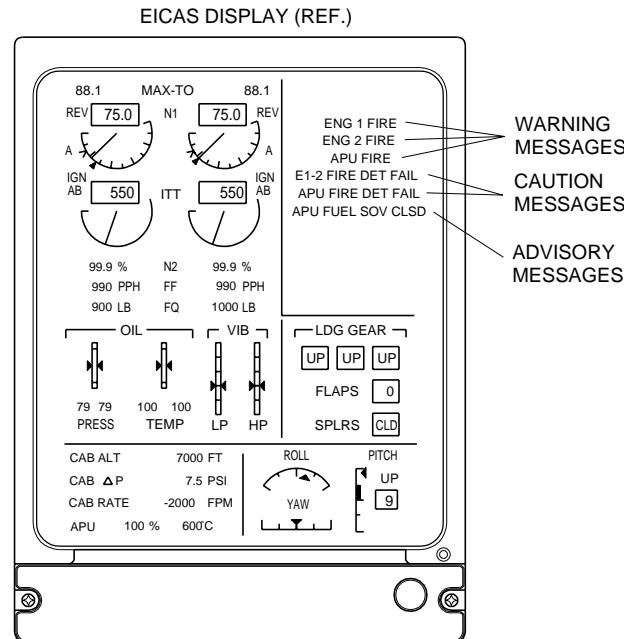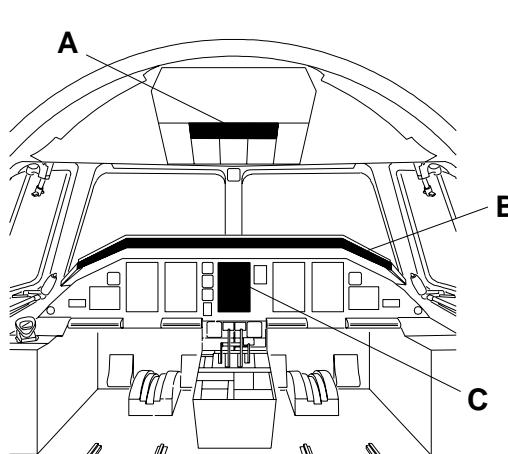
(2)   For EMB-145MR, MP, MK, ER, EP, EU, and EMB-135ER models:

(a)   Install access panel 192BR (AMM MPP 06-41-01/100).

(3)   For EMB-145LR, LU, and EMB-135LR models:

> WARNING: MAKE SURE THAT THE LANDING GEAR SAFETY PINS ARE INSTALLED TO PREVENT INJURIES TO PERSONS AND DAMAGE TO MATERIAL ( AMM TASK 32-00-01-910-801-A/200).

(a)   Install access panel 156EZ (AMM MPP 06-41-01/100).

(4)   On the circuit breaker panel, close the circuit breaker below and remove the DO-NOT-CLOSE tag from it:

- APU FIRE EXTG.
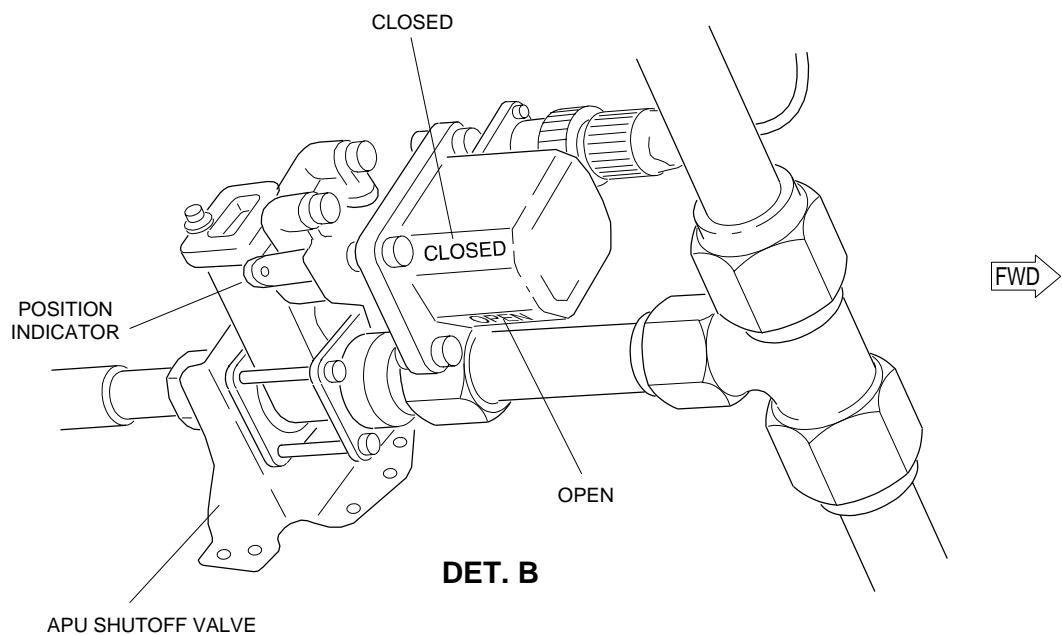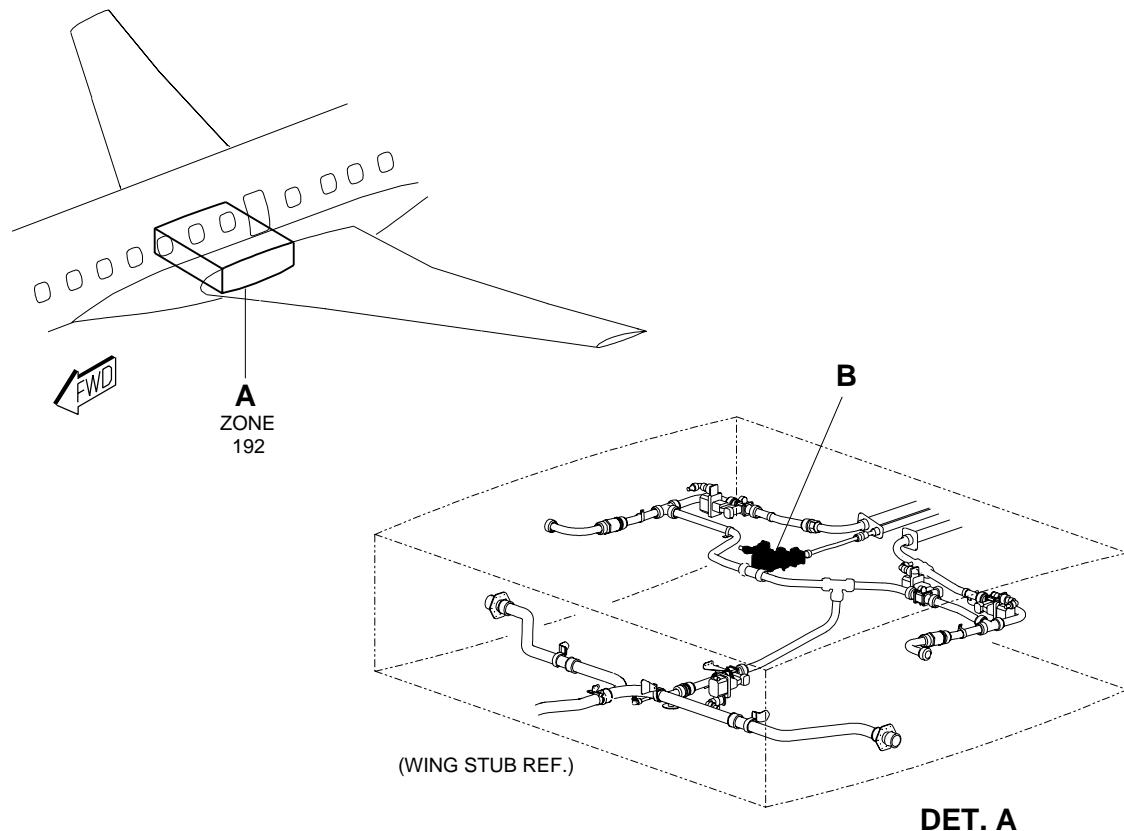
*EFFECTIVITY: ALL*
APU Emergency Shutdown - Control/Indication
Figure 501

EICAS DISPLAY (REF.)

WARNING MESSAGES
CAUTION MESSAGES
ADVISORY MESSAGES

ENG 1 FIRE
ENG 2 FIRE
APU FIRE
E1-2 FIRE DET FAIL
APU FIRE DET FAIL
APU FUEL SOV CLSD

**DET. C**

GLARESHIELD PANEL (REF.)
MASTER WARNING LIGHT
GLARESHIELD PANEL (REF.)

**DET. B**

MASTER CAUTION LIGHT

FIRE HANDLES

FIRE TEST SWITCH

FIRE
EXTG
DET
TEST
APU

APU CONTROL
OFF ON START
STOP
FUEL SHUTOFF

PULL TO SHUTOFF
ROTATE TO EXTG

PULL TO SHUTOFF
ROTATE TO EXTG

APU MASTER SWITCH
FUEL SHUTOFF SWITCH

**DET. A**

145AMM260095.MCE

*EFFECTIVITY: EMB-145MR/MP/ER/EP/EU AND EMB-135ER/KE MODELS*
APU Fuel-Shutoff Valve - Location
Figure 502

A
ZONE
192

B

(WING STUB REF.)

**DET. A**

CLOSED

CLOSED

POSITION
INDICATOR

OPEN

FWD

OPEN

**DET. B**

APU SHUTOFF VALVE
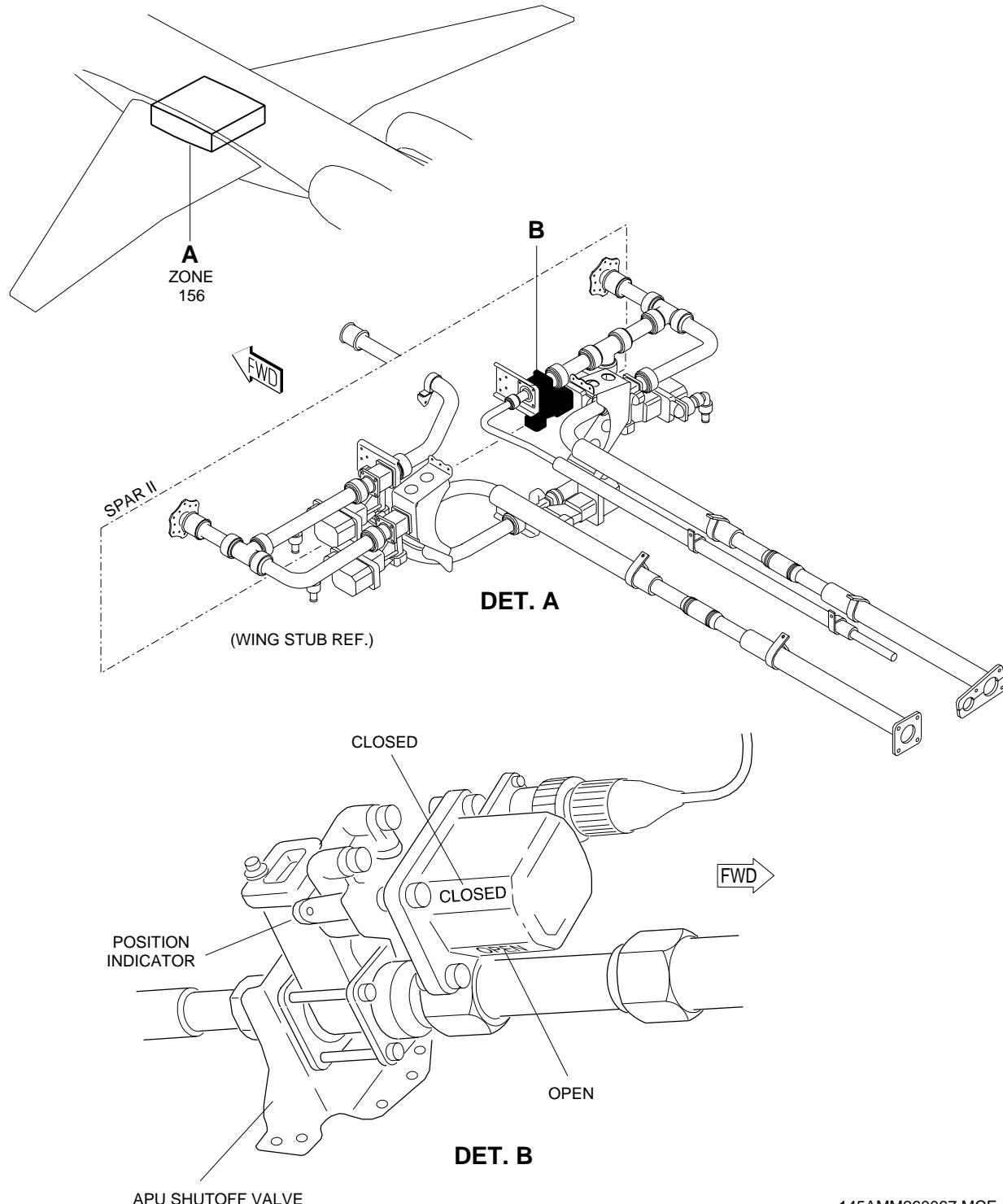
145AMM260010.MCE A

*EFFECTIVITY: EMB-145LR/LU AND EMB-135LR/KL MODELS*
APU Emergency Shutdown Check - Control/Indication Locations
Figure 503

A
ZONE
156

B

FWD

SPAR II

**DET. A**

(WING STUB REF.)

CLOSED

CLOSED

FWD

POSITION
INDICATOR

OPEN

**DET. B**

APU SHUTOFF VALVE

145AMM260067.MCE A