



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

**AUXILIARY FLIGHT-DATA ACQUISITION UNIT (AFDAU) / AUXILIARY FLIGHT-DATA ACQUISITION
AND MANAGEMENT UNIT (AFDAMU) - ADJUSTMENT/TEST**

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do the test of the Auxiliary Flight Data Acquisition Unit (AFDAU)/Auxiliary Flight Data Acquisition and Management Unit (AFDAMU).
- 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 |
|--------------------|---------------------------|---------------------------|
| 31-31-07-700-801-A | AFDAU - OPERATIONAL TEST | AIRCRAFT WITH AF- DAU |
| 31-31-07-700-802-A | AFDAMU - OPERATIONAL TEST | AIRCRAFT WITH AF- DAMU |



AIRCRAFT MAINTENANCE MANUAL

TASK 31-31-07-700-801-A

EFFECTIVITY: AIRCRAFT WITH AFDAU

2. AFDAU - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do the operational test of the Auxiliary Flight-Data Acquisition Unit (AFDAU).

B. References

| REFERENCE | DESIGNATION |
|---|--|
| AMM MPP 06-41-01/100 | - |
| AMM MPP 06-41-03/100 | - COMPONENT LOCATION |
| AMM SDS 31-31-00/1 | |
| AMM SDS 31-41-00/1 | |
| AMM SDS 31-42-00/1 | |
| AMM SDS 31-51-00/1 | |
| AMM TASK 20-40-01-860-801-A/200 | ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|---------|------------|--------------------------------------|
| 223/224 | | Cockpit |
| 272 | 272DR | Fuselage rear section I - Right side |

D. Tools and Equipment

| ITEM | DESCRIPTION | PURPOSE | QTY |
|-------------------------|-------------------------------|--|-----|
| GSE 036 | Platform, Hydraulic, Aircraft | To get access to the rear electronic compartment | |
| GSE 044 | Headset - Ramp handling | For communication | |

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 | Observe the fail light on AFDAU | Rear electronic compartment |



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I. Preparation ([Figure 501](#))

SUBTASK 841-004-B

EFFECTIVITY: AIRCRAFT WITH AFDAU

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Energize the aircraft with the external DC power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Make sure that the systems below are operational and on:
 - EICAS ([AMM SDS 31-41-00/1](#)).
 - Integrated Computer System ([AMM SDS 31-42-00/1](#)).
 - FDR System ([AMM SDS 31-31-00/1](#)).
 - Aural Warning System ([AMM SDS 31-51-00/1](#)).
- (4) Open the maintenance panel door 223LZ ([AMM MPP 06-41-03/100](#)).
- (5) Set the DFDR switch, on the maintenance panel, to the TEST position.
- (6) Connect the headset (GSE 044).
- (7) On the electrical panel on the overhead panel, push the BACKUP pushbutton (striped bar on).

J. AFDAU - Test Procedures ([Figure 502](#))

SUBTASK 710-004-B

EFFECTIVITY: AIRCRAFT WITH AFDAU

- (1) Do the test of the AFDAU as follows:
 - (a) Put up the hydraulic platform (GSE 036) at the necessary height.
 - (b) Open access door 272DR ([AMM MPP 06-41-01/100](#)).
 - (c) On the AFDAU front panel, make sure that the AFDAU fail light is off.

NOTE: Ignore the status of the FDRS FAIL light (if available), on the AFDAU front panel, because this function is not activated on the aircraft. FDRS failures are shown on the EICAS display.
 - (d) Make sure that none of the two messages DFDR FAIL and FDAU FAIL come into view on the EICAS display.
 - (e) Open the FDAU circuit breaker on the cockpit circuit breaker panel.

Result:

 - 1 The FDAU FAIL advisory message is shown on the EICAS display.
 - 2 The master caution tone sounds.
 - 3 On the glareshield panel, the master caution lighted pushbuttons stay on and flash.
 - (f) On the glareshield panel, push a master caution lighted pushbutton.

Result:

- 1 The master caution tone ceases.
- 2 The master caution lighted pushbuttons go off.
- 3 The FDAU FAIL messages stay on the EICAS display.

(g) Close the FDAU circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The FDAU FAIL message goes out of view.

(h) Open the FDR circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DFDR FAIL caution message is shown on the EICAS.
- 2 The master caution tone sounds.
- 3 On the glareshield panel, the master caution lighted pushbuttons stay on and flash.

(i) On the glareshield panel, push a master caution lighted pushbutton.

Result:

- 1 The master caution tone ceases.
- 2 The master caution lighted pushbuttons go off.
- 3 The DFDR FAIL message stays on the EICAS display.

(j) Close the FDR circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DFDR FAIL message goes out of view.

(k) Open the DAU1A circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DFDR FAIL caution message is shown on the EICAS.
- 2 The DAU 1A FAIL caution message is shown on the EICAS.
- 3 The master caution tone sounds.
- 4 On the glareshield panel, the right side master caution lighted pushbutton stays on and flashes.

(l) On the glareshield panel, push a master caution lighted pushbutton.

Result:

- 1 The master caution tone ceases.
- 2 The master caution lighted pushbuttons go off.
- 3 The DAU 1A FAIL and DFDR FAIL messages stay on the EICAS display.

(m) Close the DAU 1A circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DAU 1A FAIL and DFDR FAIL messages go out of view.



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K. Follow-on

SUBTASK 842-004-B

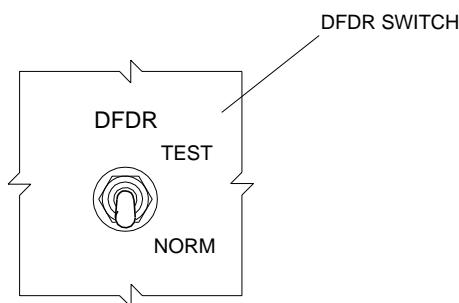
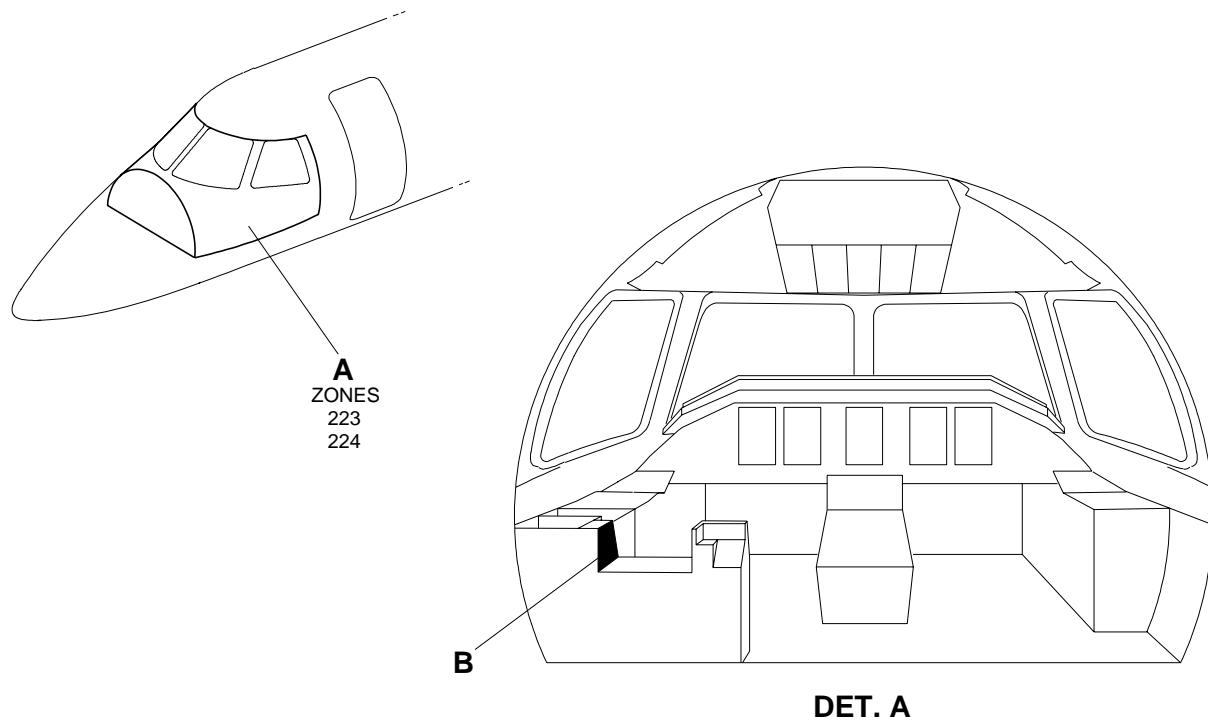
EFFECTIVITY: AIRCRAFT WITH AFDAU

- (1) On the electrical panel, on the overhead panel, push the BACKUP pushbutton.
 - (a) The striped bar goes off.
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Close access door 272DR (AMM MPP 06-41-01/100).
- (4) Remove the headset (GSE 044).
- (5) Remove the hydraulic platform (GSE 036).
- (6) Set the DFDR switch, on the maintenance panel, to the NORM position.
- (7) Close the maintenance panel door 223LZ ([AMM MPP 06-41-03/100](#)).

EFFECTIVITY: AIRCRAFT WITH AFDAU

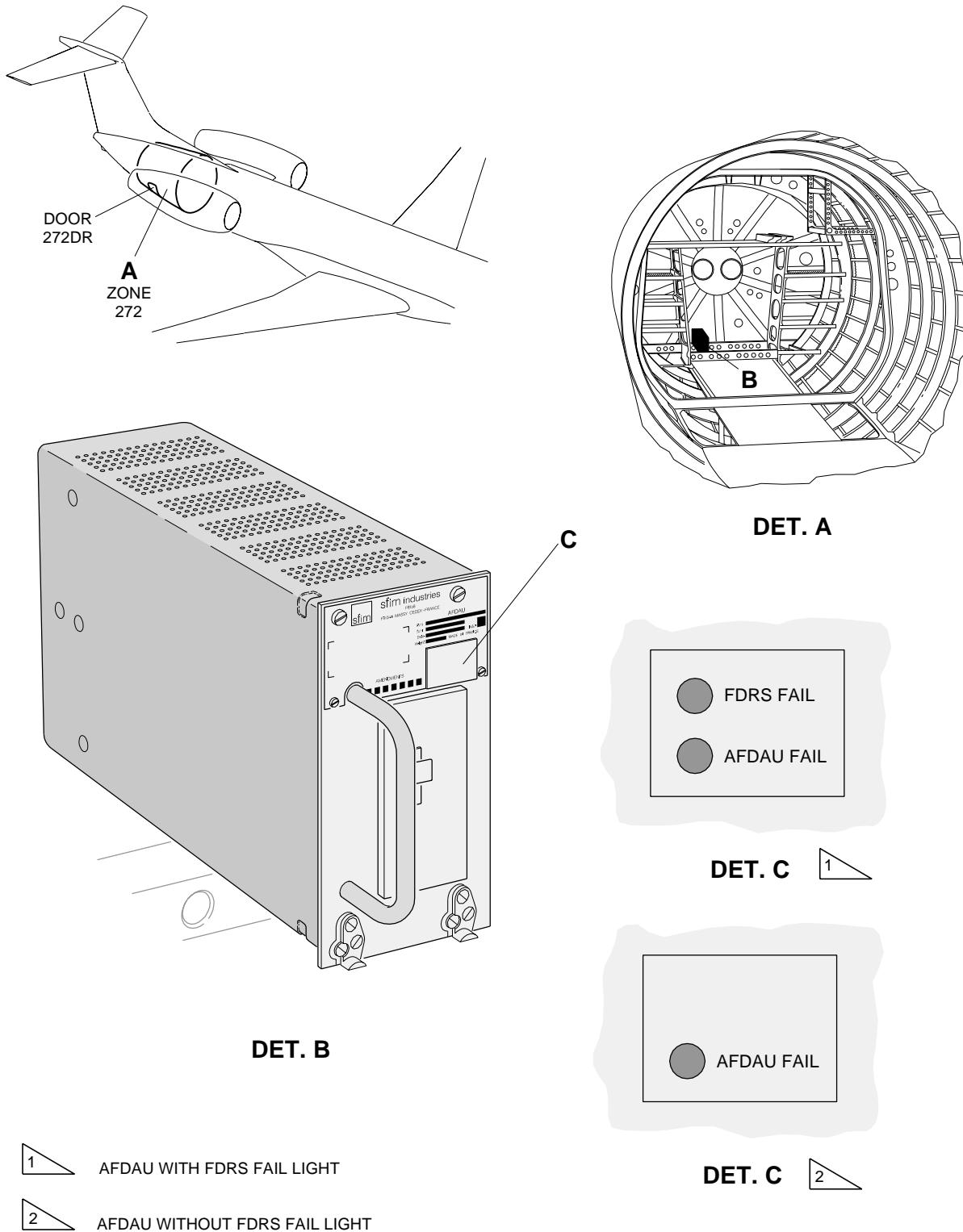
Maintenance Panel - DFDR Switch

Figure 501



DET. B
MAINTENANCE PANEL

145AMM310147.MCE

EFFECTIVITY: AIRCRAFT WITH AFDAU
AFDAU Front Panel
Figure 502


145AMM310214.MCE A



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TASK 31-31-07-700-802-A

EFFECTIVITY: AIRCRAFT WITH AFDAMU

3. AFDAMU - OPERATIONAL TEST

A. General

(1) This task gives the procedures to do the operational test of the AFDAMU.

B. References

| REFERENCE | DESIGNATION |
|---------------------------------|--|
| AMM MPP 06-41-01/100 | - |
| AMM MPP 06-41-03/100 | - COMPONENT LOCATION |
| AMM SDS 31-31-00/1 | |
| AMM SDS 31-41-00/1 | |
| AMM SDS 31-42-00/1 | |
| AMM SDS 31-51-00/1 | |
| AMM TASK 20-40-01-860-801-A/200 | ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|---------|------------|--------------------------------------|
| 223/224 | | Cockpit |
| 272 | 272DR | Fuselage rear section I - Right side |

D. Tools and Equipment

| ITEM | DESCRIPTION | PURPOSE | QTY |
|---------|-------------------------------|--|-----|
| GSE 036 | Platform, Hydraulic, Aircraft | To get access to the rear electronic compartment | |
| GSE 044 | Headset - Ramp handling | For communication | |

E. Auxiliary Items

Not Applicable

F. Consumable Materials

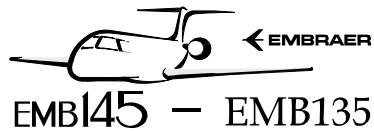
Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

| QTY | FUNCTION | PLACE |
|-----|----------------------------------|-----------------------------|
| 1 | Does the task | Cockpit |
| 1 | Observe the fail light on AFDAMU | Rear electronic compartment |



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I. Preparation (Figure 501)

SUBTASK 841-005-A

EFFECTIVITY: AIRCRAFT WITH AFDAMU

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Energize the aircraft with the external DC power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Make sure that the systems below are operational and on:
 - EICAS ([AMM SDS 31-41-00/1](#)).
 - Integrated Computer System ([AMM SDS 31-42-00/1](#)).
 - FDR System ([AMM SDS 31-31-00/1](#)).
 - Aural Warning System ([AMM SDS 31-51-00/1](#)).
- (4) Open the maintenance panel door 223LZ ([AMM MPP 06-41-03/100](#)).
- (5) Set the DFDR switch, on the maintenance panel, to the TEST position.
- (6) Connect the headset (GSE 044).
- (7) On the electrical panel on the overhead panel, push the BACKUP pushbutton (striped bar on).

J. AFDAMU - Test Procedures (Figure 503)

SUBTASK 710-005-A

EFFECTIVITY: AIRCRAFT WITH AFDAMU

- (1) Do the test of the AFDAMU as follows:

- (a) Put up the hydraulic platform (GSE 036) at the necessary height.
 - (b) Open access door 272DR ([AMM MPP 06-41-01/100](#)).
 - (c) On the AFDAMU front panel, make sure that the AFDAU FAIL and the DMU FAIL lights are off.

NOTE: Ignore the status of the FDRS FAIL light (if available), on the AFDAMU front panel, because this function is not activated on the aircraft. FDRS failures are shown on the EICAS display.

- (d) Make sure that none of the two messages DFDR FAIL and FDAU FAIL come into view on the EICAS display.
 - (e) Open the FDAU circuit breaker on the cockpit circuit breaker panel.
Result:
 - 1 The FDAU FAIL advisory message is shown on the EICAS display.
 - 2 The master caution tone sounds.
 - 3 On the glareshield panel, the master caution lighted pushbuttons stay on and flash.
 - (f) On the glareshield panel, push a master caution lighted pushbutton.

Result:

- 1 The master caution tone ceases.
- 2 The master caution lighted pushbuttons go off.
- 3 The FDAU FAIL messages stay on the EICAS display.

(g) Close the FDAU circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The FDAU FAIL message goes out of view.

(h) Open the FDR circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DFDR FAIL caution message is shown on the EICAS.
- 2 The master caution tone sounds.
- 3 On the glareshield panel, the master caution lighted pushbuttons stay on and flash.

(i) On the glareshield panel, push a master caution lighted pushbutton.

Result:

- 1 The master caution tone ceases.
- 2 The master caution lighted pushbuttons go off.
- 3 The DFDR FAIL message stays on the EICAS display.

(j) Close the FDR circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DFDR FAIL message goes out of view.

(k) Open the DAU1A circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DFDR FAIL caution message is shown on the EICAS.
- 2 The DAU 1A FAIL caution message is shown on the EICAS.
- 3 The master caution tone sounds.
- 4 On the glareshield panel, the right side master caution lighted pushbutton stays on and flashes.

(l) On the glareshield panel, push a master caution lighted pushbutton.

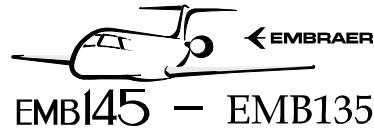
Result:

- 1 The master caution tone ceases.
- 2 The master caution lighted pushbuttons go off.
- 3 The DAU 1A FAIL and DFDR FAIL messages stay on the EICAS display.

(m) Close the DAU 1A circuit breaker on the cockpit circuit breaker panel.

Result:

- 1 The DAU 1A FAIL and DFDR FAIL messages go out of view.



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K. Follow-on

SUBTASK 842-005-A

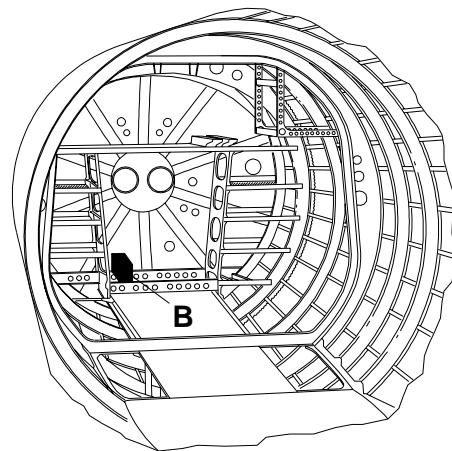
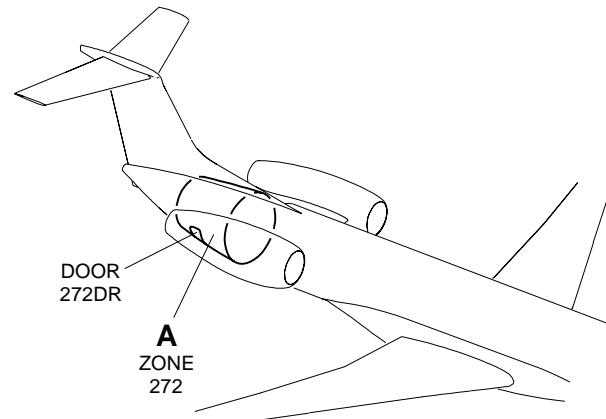
EFFECTIVITY: AIRCRAFT WITH AFDAMU

- (1) On the electrical panel, on the overhead panel, push the BACKUP pushbutton.
 - (a) The striped bar goes off.
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Close access door 272DR (AMM MPP 06-41-01/100).
- (4) Remove the headset (GSE 044).
- (5) Remove the hydraulic platform (GSE 036).
- (6) Set the DFDR switch, on the maintenance panel, to the NORM position.
- (7) Close the maintenance panel door 223LZ ([AMM MPP 06-41-03/100](#)).

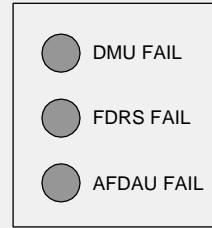
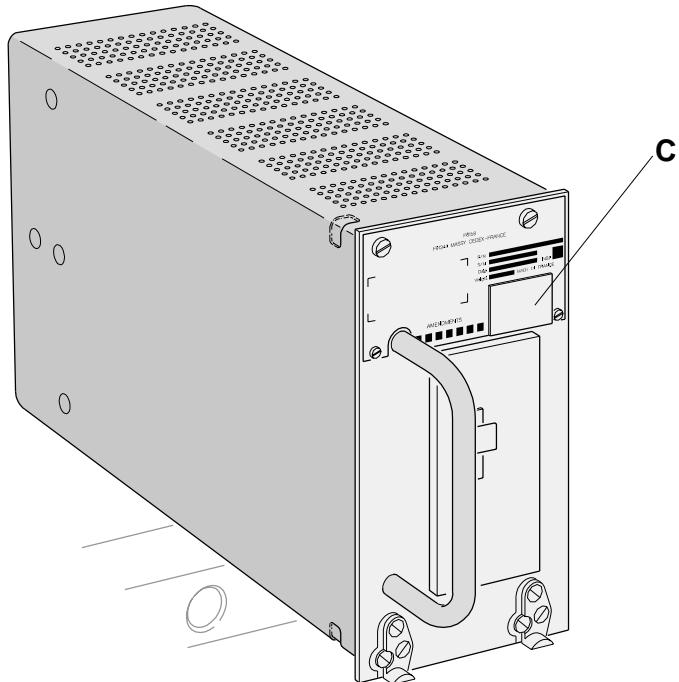
EFFECTIVITY: Aircraft with AFDAMU

AFDAMU Front Panel

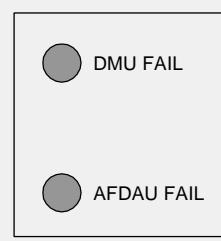
Figure 503



DET. A



DET. C 1



DET. C 2

- 1 AFDAMU WITH FDRS FAIL LIGHT
2 AFDAMU WITHOUT FDRS FAIL LIGHT

145AMM310481.MCE