



AIRCRAFT MAINTENANCE MANUAL

EICAS - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do the operational tests of the DAU Channel Reversion and EICAS.
- 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
31-41-00-700-801-A ♦	DAU CHANNEL REVERSION - OPERATIONAL TEST	ALL
31-41-00-700-802-A	EICAS - OPERATIONAL TEST	ALL



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 31-41-00-700-801-A

EFFECTIVITY: ALL

2. DAU CHANNEL REVERSION - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do the operational test of DAU 1 and DAU 2.

B. References

REFERENCE	DESIGNATION
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		Cockpit
224		Cockpit

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

I. Preparation

SUBTASK 841-002-A

- (1) Energize the aircraft with the External DC Power Supply ([AMM TASK 20-40-01-860-801-A/200](#)).

NOTE: If the caution messages and/or the warning messages flash on the EICAS display, push the master caution and/or the master warning lighted pushbutton, on the pilot's or copilot's glareshield panel, to stop them.

J. Operationally Check DAU Channel Reversion Function ([Figure 501](#))

SUBTASK 710-002-A

NOTE: When you open/close a circuit breaker, or push in/out pushbuttons, messages not related with this task can come into view/go out of view on the EICAS display. Ignore them.

- (1) Do the DAU Channel Reversion operational test as follows:

- (a) On the electrical panel, on the overhead panel, make sure that the BATT 1 and BATT 2 switches are in the AUTO position.
- (b) On the reversionary panels, on the main instrument panel, make sure that the MFD rotary knob is in the NORM position.
- (c) On the electrical panel, on the overhead panel, set the BACKUP pushbutton to OFF.

Result:

- 1 On the electrical panel, on the overhead panel, the striped bar on the BACKUP pushbutton comes on.
- 2 On the EICAS display, the BKUP BATT OFF BUS caution message comes into view and flashes.
- 3 The master caution lighted pushbutton, on the pilot's and copilot's sides, comes on and a bell discrete tone will be heard.

- (d) Push one master caution lighted pushbutton.

Result:

- 1 On the EICAS display, the BKUP BATT OFF BUS caution message flashing stops.
- 2 The master caution lighted pushbutton goes off and the bell discrete tone stops.

- (e) On the circuit breaker panel, open the DAU 1A circuit breaker (Location Tip: ESSENTIAL DC BUS 1/EICAS/DAU 1A) and attach a DO-NOT-CLOSE tag to it.

Result:

- 1 The DAU 1A FAIL caution message comes into view and flashes on the EICAS display.
- 2 The engine 1 indications goes out of view and the EICAS display shows only the engine 2 indications.
- 3 The master caution lighted pushbutton, on the copilot's side, comes on and a bell discrete tone will be heard.

- (f) Push the pilot's or copilot's caution lighted pushbutton.

Result:

- 1 The master caution lighted pushbutton goes off and the bell discrete tone stops.

- (g) On the EICAS reversion panel, on the control pedestal, push the DAU 1 pushbutton.

Result:

- 1 On the EICAS reversion panel, the striped bar on the DAU 1 pushbutton comes on.

- 2 The master caution lighted pushbutton, on the copilot's side, comes on and a bell discrete tone will be heard.
- 3 The DAU 1A FAIL caution message stays visible.
- 4 The engine 1 indications come back into view except for the engine 1 OIL PRESS and OIL TEMP, and ROLL TRIM position indications.
- 5 The DAU 1 REVERSION message, in cyan, comes into view on the EICAS display.

NOTE: If caution messages start to flash on the EICAS display and a bell discrete tone is heard, push the master caution lighted pushbutton on the pilot's or copilot's side.

- (h) On the circuit breaker panel, remove the DO-NOT-CLOSE tag from the DAU 1A circuit breaker (Location Tip: ESSENTIAL DC BUS 1/EICAS/DAU 1A) and close it.

Result:

- 1 The engine 1 OIL PRESS and OIL TEMP, and ROLL TRIM position indications come back.
- 2 The DAU 1A FAIL caution message goes out of view.

- (i) On the EICAS reversion panel, push the DAU 1 pushbutton.

Result:

- 1 The striped bar on the DAU 1 pushbutton goes off, on the EICAS reversion panel.
- 2 Make sure that the DAU 1 REVERSION cyan message goes out of view.

- (j) On the circuit breaker panel, open the EICAS DAU 1B circuit breaker (Location Tip: DC BUS 1/EICAS DAU 1B) and attach a DO-NOT-CLOSE tag to it.

Result:

- 1 The DAU 1B FAIL cyan message comes into view on the EICAS display.
- 2 The DAU 1 parameters stay visible (engine 1 indications).

- (k) On the EICAS reversion panel, on the control pedestal, push the DAU 1 pushbutton.

Result:

- 1 On the EICAS reversion panel, the striped bar on the DAU 1 pushbutton comes on.
- 2 On the EICAS display, the DAU 1B FAIL cyan message stays visible.
- 3 The DAU 1 REVERSION cyan message comes into view on the EICAS display.
- 4 On the EICAS display, the engine 1 indications go out of view.

- (l) On the circuit breaker panel, remove the DO-NOT-CLOSE tag from the EICAS DAU 1B circuit breaker (Location Tip: DC BUS 1/EICAS DAU 1B) and close it.

Result:

- 1 On the EICAS display, the engine 1 indications come back.

- 2 The DAU 1B FAIL cyan message goes out of view.

NOTE: If caution messages start to flash on the EICAS display and a bell discrete tone is heard, push the master caution lighted pushbutton on the pilot's or copilot's side.

- (m) Push the DAU 1 pushbutton on the EICAS reversion panel.

Result:

- 1 The striped bar on the DAU 1 pushbutton goes off on the EICAS reversion panel.
- 2 On the EICAS display, make sure that the DAU 1 REVERSION cyan message goes out of view.

- (n) On the circuit breaker panel, open the EICAS DAU 2A circuit breaker (Location Tip: ESSENTIAL DC BUS 2/EICAS DAU 2A) and attach a DO-NOT-CLOSE tag to it.

Result:

- 1 The master caution lighted pushbuttons, on the pilot's and copilot's sides, come on and a bell discrete tone will be heard.
- 2 The DAU 2A FAIL caution message comes into view and flashes on the EICAS display. On the EICAS display, there will be only the engine 1 indications.

- (o) Push one master caution lighted pushbutton.

Result:

- 1 The master caution lighted pushbuttons go off and the bell discrete tone stops.
- 2 The DAU 2A FAIL message flashing stops on the EICAS display.

- (p) On the EICAS reversion panel, on the control pedestal, push the DAU 2 pushbutton.

Result:

- 1 On the EICAS reversion panel, the striped bar on the DAU 2 pushbutton comes on.
- 2 The master caution lighted pushbutton, on the pilot's and copilot's side, comes on and a bell discrete tone will be heard.
- 3 The DAU 2A FAIL caution message stays visible.
- 4 The engine 2 indications come back into view except for the OIL PRESS and OIL TEMP, and YAW TRIM position indications.
- 5 The DAU 2 REVERSION cyan message comes into view on the EICAS display.

NOTE: If caution messages start to flash on the EICAS display and a bell discrete tone is heard, push the master caution lighted pushbutton on the pilot's or copilot's side.

- (q) On the circuit breaker panel, remove the DO-NOT-CLOSE tag from the EICAS DAU 2A circuit breaker (Location Tip: ESSENTIAL DC BUS 2/EICAS DAU 2A) and close it.

Result:

- 1 The engine 2 OIL PRESS and OIL TEMP, and YAW TRIM position indications come back.

- 2 The DAU 2A FAIL caution message goes off.

- (r) On the EICAS reversion panel, push the DAU 2 pushbutton.

Result:

- 1 The striped bar on the DAU 2 pushbutton goes off on the EICAS reversion panel.

- 2 Make sure that the DAU 2 REVERSION cyan message goes out of view.

- (s) On the circuit breaker panel, open the EICAS DAU 2B circuit breaker (Location Tip: DC BUS 2/EICAS DAU 2B) and attach a DO-NOT-CLOSE tag to it.

Result:

- 1 The DAU 2B FAIL cyan message comes into view on the EICAS.

- 2 The DAU 2 parameters stay visible (engine 2 indications).

NOTE: If caution messages start to flash on the EICAS display and a bell discrete tone is heard, push the master caution lighted pushbutton on the pilot's or copilot's side.

- (t) On the EICAS reversion panel, on the control pedestal, push the DAU 2 pushbutton.

Result:

- 1 On the EICAS reversion panel, the striped bar on the DAU 2 pushbutton comes on.

- 2 The DAU 2B FAIL cyan message stays visible.

- 3 The DAU 2 REVERSION cyan message comes into view on the EICAS.

- 4 The engine 2 indications go out of view.

- (u) On the circuit breaker panel, remove the DO-NOT-CLOSE tag from the EICAS DAU 2B circuit breaker (Location Tip: DC BUS 2/EICAS DAU 2B) and close it.

Result:

- 1 The engine 2 indications come back.

- 2 The DAU 2B FAIL cyan message goes out of view.

NOTE: If caution messages start to flash on the EICAS display and a bell discrete tone is heard, push the master caution lighted pushbutton on the pilot's or copilot's side.

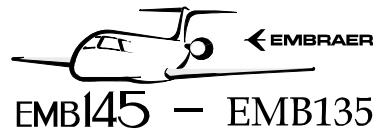
- (v) Push the DAU 2 pushbutton on the EICAS reversion panel.

Result:

- 1 The striped bar on the DAU 2 pushbutton goes off on the EICAS reversion panel.

- 2 Make sure that the DAU 2 REVERSION cyan message goes out of view.

- (w) On the electrical panel, on the overhead panel, set the BACKUP pushbutton to AUTO.



AIRCRAFT MAINTENANCE MANUAL

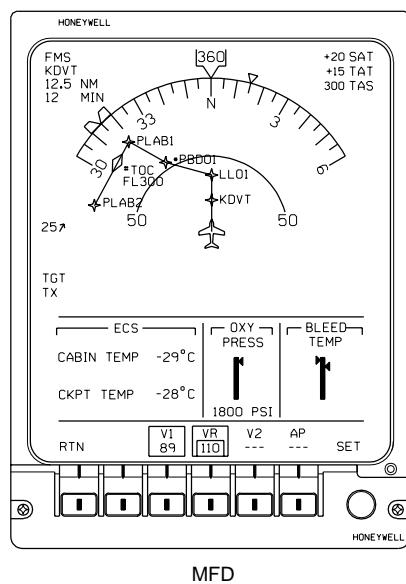
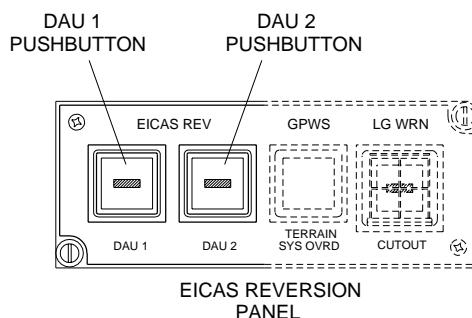
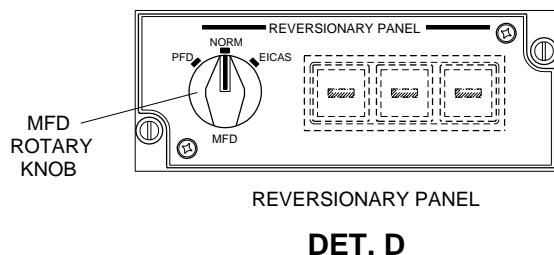
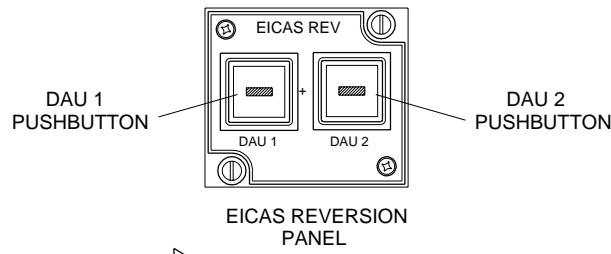
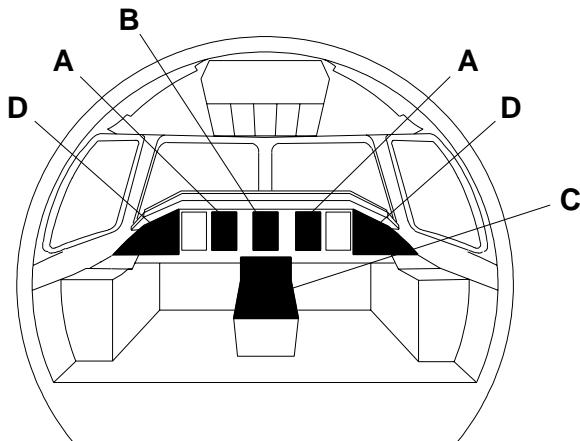
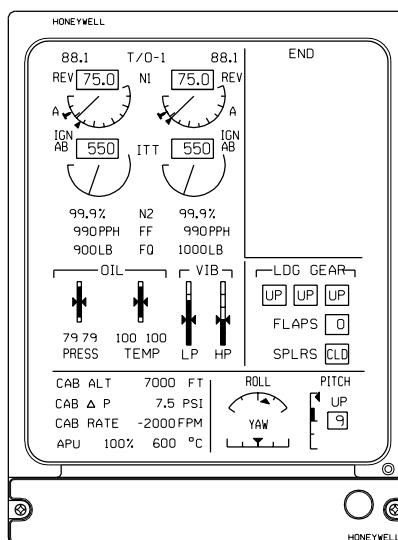
Result:

- 1 On the overhead panel, the striped bar on the BACKUP pushbutton goes off.
- 2 On the EICAS, the BKUP BATT OFF BUS caution message goes out of view.

K. Follow-on

SUBTASK 842-002-A

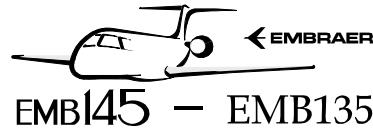
- (1) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

EFFECTIVITY: ALL
DAU Channel Reversion/EICAS - Operational Test
Figure 501

DET. A

DET. B

1 AIRCRAFT WITH RMUS INSTALLED ON THE CONTROL PEDESTAL.

2 AIRCRAFT WITH RMUS INSTALLED ON THE MAIN INSTRUMENT PANEL.

145AMM310083.MCE D



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 31-41-00-700-802-A

EFFECTIVITY: ALL

3. EICAS - OPERATIONAL TEST

A. General

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

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 31-41-00-700-801-A/500	DAU CHANNEL REVERSION - OPERATIONAL TEST

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Cockpit
224		Cockpit

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

I. Preparation

SUBTASK 841-003-A

- (1) Energize the aircraft with the External DC Power Supply ([AMM TASK 20-40-01-860-801-A/200](#)).

NOTE: If the caution messages and/or the warning messages flash on the EICAS display, push the master caution and/or the master warning lighted pushbutton, on the pilot's or copilot's glareshield panels, to stop them.

J. EICAS - Operational Test (Figure 501)

SUBTASK 710-003-A

- (1) Do the EICAS operational test as follows:

- (a) On the electrical panel, on the overhead panel, make sure that the BATT 1 and BATT 2 switches are in the AUTO position.
- (b) On the reversionary panels, on the main instrument panel, keep the MFD rotary knob in the NORM position.
- (c) On the electrical panel, on the overhead panel, set the BACKUP pushbutton to OFF.
Result:
 - 1 On the overhead panel, the striped bar on the BACKUP pushbutton comes on.
 - 2 On the EICAS display, the BKUP BATT OFF BUS caution message comes into view and flashes.
 - 3 The master caution lighted pushbuttons, on the pilot's and copilot's sides, come on and a bell discrete tone will be heard.
- (d) On the pilot's or copilot's glareshield panel, push the master caution pushbutton.
Result:
 - 1 The master caution lighted pushbuttons goes off and the bell discrete tone stops.
 - 2 The BKUP BATT OFF BUS caution message on the EICAS display flashing stops and stays on.
- (e) On the circuit breaker panel, open all the circuit breakers listed below and then close them again:
 - DAU 1A (Location Tip: ESSENTIAL DC BUS 1/EICAS/DAU 1A).
 - EICAS DAU 2A (Location Tip: ESSENTIAL DC BUS 2/EICAS DAU 2A).
 - EICAS DAU 1B (Location Tip: DC BUS 1/EICAS DAU 1B).
 - EICAS DAU 2B (Location Tip: DC BUS 2/EICAS DAU 2B).
 Result:
 - 1 All the amber messages, on the EICAS display, start to flash.
 - 2 The master caution lighted pushbuttons, on the pilot's and copilot's sides, come on and a bell discrete tone will be heard.
- (f) On the pilot's or copilot's glareshield panel, push the master caution lighted pushbutton.
Result:
 - 1 The amber messages on the EICAS display stop their flashing and stay on.
 - 2 The master caution lighted pushbuttons go off and the bell discrete tone stops.
- (g) On the circuit breaker panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them:
 - DAU 1A (Location Tip: ESSENTIAL DC BUS 1/EICAS/DAU 1A).
 - EICAS DAU 2A (Location Tip: ESSENTIAL DC BUS 2/EICAS DAU 2A).
 - EICAS DAU 1B (Location Tip: DC BUS 1/EICAS DAU 1B).

- EICAS DAU 2B (Location Tip: DC BUS 2/EICAS DAU 2B).

Result:

- 1 A bell discrete tone will be heard.
- 2 On the EICAS display, the DAU1-2A FAIL caution message comes into view and flashes.
- 3 On the EICAS display, the DAU1-2B FAIL cyan message comes into view.

- (h) On the pilot's/copilot's glareshield panel, push the master caution pushbutton.

Result:

- 1 The bell discrete tone stops.
- 2 The DAU1-2A FAIL caution message on the EICAS display stops its flashing and stays on.

- (i) On the circuit breaker panel, remove the DO-NOT-CLOSE tags from these circuit breakers and close them:

- DAU 1A (Location Tip: ESSENTIAL DC BUS 1/EICAS/DAU 1A).
- EICAS DAU 2A (Location Tip: ESSENTIAL DC BUS 2/EICAS DAU 2A).
- EICAS DAU 1B (Location Tip: DC BUS 1/EICAS DAU 1B).
- EICAS DAU 2B (Location Tip: DC BUS 2/EICAS DAU 2B).

Result:

- 1 All the amber messages on the EICAS display start to flash.
- 2 The master caution lighted pushbuttons, on the pilot's and copilot's sides, come on and a bell discrete tone will be heard.
- 3 On the EICAS, the DAU1-2A FAIL caution message and the DAU1-2B FAIL cyan message go out of view.

- (j) Push one master caution pushbutton.

Result:

- 1 The amber messages on the EICAS display stop their flashing and stay on.
- 2 The master caution lighted pushbuttons go off and the bell discrete tone stops.

- (k) On the electrical panel, on the overhead panel, set the BACKUP pushbutton to AUTO.

Result:

- 1 On the overhead panel, the striped bar on the BACKUP pushbutton goes off.
- 2 On the EICAS display, the BKUP BATT OFF BUS caution message goes out of view.

- (l) On the EICAS display panel, turn the control button on the right lower corner.

Result:

- 1 Make sure that the Caution (amber), Advisory (cyan) and white messages on the EICAS upper right corner are scrolled up and down. At the end of the list of messages, the END (white) message will come into view.

- (m) On the pilot's reversionary panel, set the MFD switch to the EICAS position.

Result:

- 1 The EICAS display goes off.
- 2 All the EICAS messages and indications go to the MFD.

(n) On the EICAS display panel, turn the control button on the right lower corner.

Result:

- 1 Make sure that the Caution (amber) and Advisory (cyan) messages on the MFD upper right corner are scrolled up and down. At the end of the list of messages, the END (white) message will be shown.

(o) On the pilot's reversionary panel, set the MFD switch to the NORM position.

Result:

- 1 All the messages go back to the EICAS display and the MFD shows the previous indications again.

(p) On the copilot's reversionary panel, set the MFD switch to the EICAS position.

Result:

- 1 The EICAS display goes off.

- 2 All the EICAS messages and indications go to the MFD.

(q) On the EICAS display panel, turn the control button on the right lower corner.

Result:

- 1 Make sure that the Caution (amber) and Advisory (cyan) messages on the MFD upper right corner are scrolled up and down. At the end of the list of messages, the END (white) message will be shown.

(r) On the copilot's reversionary panel, set the MFD switch to the NORM position.

Result:

- 1 All the messages go back to the EICAS display and the MFD goes back to the previous indications.

(s) Do an operational test of the DAU Channel Reversion ([AMM TASK 31-41-00-700-801-A/500](#)).

K. Follow-on

SUBTASK 842-003-A

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