



## ADC SYSTEM - ADJUSTMENT/TEST

EFFECTIVITY: ALL

### 1. General

- A. This section gives the procedures to do the check of the ADC 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
34-15-00-700-801-A ♦	ADC SYSTEM - FUNCTIONAL CHECK	ALL
34-15-00-700-802-A	ADC SYSTEM - OPERATIONAL TEST	ALL



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TASK 34-15-00-700-801-A

EFFECTIVITY: ALL

2. ADC SYSTEM - FUNCTIONAL CHECK

A. General

(1) This task gives the procedures to do the functional check of the ADC system.

B. References

REFERENCE	DESIGNATION
AMM SDS 27-24-00/1	
AMM SDS 27-51-00/1	
AMM SDS 27-63-00/1	
AMM SDS 29-30-00/1	
AMM SDS 31-12-00/1	
AMM SDS 31-41-00/1	
AMM SDS 34-15-00/1	
AMM SDS 34-22-00/1	
AMM SDS 34-52-00/1	
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 34-13-00-000-801-A/400	PITOT/STATIC-SYSTEM TEST SET - DISCONNECTION
AMM TASK 34-13-00-400-801-A/400	PITOT/STATIC-SYSTEM TEST SET - CONNECTION
ITEM GSE 085	THERMOMETER
ITEM GSE 135	BOX - INTERFACE TEST
S.B.145-27-0032	-
S.B.145-34-0032	-
S.B.145-34-0064	-
SB145-27-0042	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Cockpit - Maintenance panel

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 085	Thermometer	To measure the temperature	
GSE 128	Kit - Air Data	To connect GSE 129 to the aircraft	
GSE 129	Pitot/Static-System Test Set	To simulate altitude and airspeed	
GSE 135	Test Box, maintenance panel/PC Interface	Check of data	

- 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	Does the task	Pitot/static-system test set

- I. Preparation  
**SUBTASK 841-006-A**

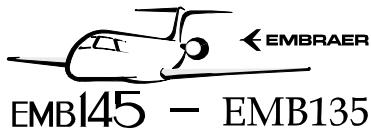
**WARNING: MAKE SURE THAT THE PITOT/STATIC SENSOR AND ANEMOMETRIC STATIC PORT HEATING SYSTEM IS OFF. THIS PREVENTS INJURY TO PERSONS IF TOUCHED AND/OR DAMAGE TO TEST SET ADAPTERS.**

- (1) Remove the protection from the pitot and pitot/static sensors.
- (2) Connect the pitot/static-system test set ([AMM TASK 34-13-00-400-801-A/400](#)).  
**NOTE:** This procedure can cause interference with the local air traffic during simulations of altitude with the anemometric bench test. To prevent this, make sure that the transponder is on the STANDBY condition ([AMM SDS 34-52-00/1](#)).
- (3) Energize the aircraft with the external DC-power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (4) Make sure that the systems below are serviceable and on:
  - EICAS ([AMM SDS 31-41-00/1](#)).
  - EFIS ([AMM SDS 34-22-00/1](#)).
  - ADC System ([AMM SDS 34-15-00/1](#)).
  - Speed Brake System ([AMM SDS 27-63-00/1](#)).
  - Rudder Control System ([AMM SDS 27-24-00/1](#)).
  - Flap System ([AMM SDS 27-51-00/1](#)).
  - Hydraulic System ([AMM SDS 29-30-00/1](#)).

- J. Functional Check of the ADC System ([Figure 501](#)) ([Figure 502](#)) ([Figure 503](#)) ([Figure 504](#)) ([Figure 505](#))

**SUBTASK 720-005-A**

- (1) Make sure that the aircraft is in the ground configuration.



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- (2) (FOR AIRCRAFT WITH EICAS 18.5 VERSION AND ON) Do a check on the ADC strap configuration as follows:

- (a) On the DC-550 1 display controller (left side) ([AMM SDS 34-22-00/1](#)), on the glareshield panel ([AMM SDS 31-12-00/1](#)), use the RA knob (RA-TEST switch) to set 950 RA (DH) on PFD 1.
- (b) On the DC-550 1 display controller (left side) ([AMM SDS 34-22-00/1](#)), on the glareshield panel ([AMM SDS 31-12-00/1](#)), push and hold RA-TEST switch.

Result:

- 1 The test indications of PFD 1 (first level), MFD 1, and EICAS come into view.
- 2 After a few seconds, PFD 1 (left side) shows the Honeywell test (second level).

- (c) At the same time, push the RA-TEST and the ET switches and then release them.

Result:

- 1 MADC Unit Identification Page 1 comes into view on PFD 1.

- (d) (PRE-MOD [S.B.145-34-0032](#) AND PRE-MOD S.B. 145-34-0082) Do a check of the configuration shown on the MADC Unit Identification Page, on PFD 1, against these values:

Table 501

MADC UNIT ID 10F2 UNIT IDENT #1	
UNIT ID # 0 (J1-1):	OPN
UNIT ID # 1 (J1-2):	OPN
UNIT ID # 2 (J1-3):	GND
UNIT ID # 3 (J1-4):	OPN
UNIT ID # 4 (J1-5):	GND
UNIT ID # 5 (J1-6):	OPN
UNIT ID # 6 (J1-7):	OPN

- (e) (POST-MOD [S.B.145-34-0032](#) OR POST-MOD S.B. 145-34-0082) Do a check of the configuration shown on the MADC Unit Identification Page, on PFD 1, against these values:

Table 502

MADC UNIT ID 10F2 UNIT IDENT #1	
UNIT ID # 0 (J1-1):	OPN
UNIT ID # 1 (J1-2):	GND
UNIT ID # 2 (J1-3):	GND
UNIT ID # 3 (J1-4):	OPN
UNIT ID # 4 (J1-5):	OPN
UNIT ID # 5 (J1-6):	OPN
UNIT ID # 6 (J1-7):	OPN

- (f) On the DC-550 1 display controller (left side) ([AMM SDS 34-22-00/1](#)), on the glareshield panel ([AMM SDS 31-12-00/1](#)), push the FULL/WX key.

Result:

- 1 MADC Unit Identification Page 2 comes into view on PFD 1.
- (g) (PRE-MOD S.B.145-34-0032 AND PRE-MOD S.B. 145-34-0082) Do a check of the configuration shown on the MADC Unit Identification Page, on PFD 1, against these values:

Table 503

MADC UNIT ID 10F2 UNIT IDENT #2	
UNIT ID # 0 (J1-1):	OPN
UNIT ID # 1 (J1-2):	OPN
UNIT ID # 2 (J1-3):	GND
UNIT ID # 3 (J1-4):	OPN
UNIT ID # 4 (J1-5):	GND
UNIT ID # 5 (J1-6):	OPN
UNIT ID # 6 (J1-7):	OPN

- (h) (POST-MOD S.B.145-34-0032 OR POST-MOD S.B. 145-34-0082) Do a check of the configuration shown on the MADC Unit Identification Page, on PFD 1, against these values:

Table 504

MADC UNIT ID 10F2 UNIT IDENT #2	
UNIT ID # 0 (J1-1):	OPN
UNIT ID # 1 (J1-2):	GND
UNIT ID # 2 (J1-3):	GND
UNIT ID # 3 (J1-4):	OPN
UNIT ID # 4 (J1-5):	OPN
UNIT ID # 5 (J1-6):	OPN
UNIT ID # 6 (J1-7):	OPN

- (3) Do a check on the ADC transfer as follows:
- (a) Push the ADC pushbutton, on the pilot reversionary panel.  
Result:  
1 PFD 1 shows ADC 2 (amber).
- (b) Push the ADC pushbutton, on the copilot reversionary panel.  
Result:  
1 PFD 2 shows ADC 1 (amber).
- (c) Push the ADC pushbutton again, on the pilot and copilot reversionary panel.  
Result:  
1 The PFDs go back to the normal configuration.
- (4) Do a check on the ADC data as follows:
- (a) Push the IN/HPA pushbutton, on the two PFD bezel controllers.

Result:

- 1 The barometric correction display, on the related PFD, changes from IN (inHg) to HPA (hectopascal) or from HPA to IN.

- (b) Turn the baro knobs, on the two PFD bezel controllers.

Result:

- 1 The barometric correction display changes the value in 0.01 IN per click or 1 HPA per click, as applicable.

- (c) Push the STD pushbutton, on the two PFD bezel controllers.

Result:

- 1 The barometric correction display changes the value to 29.92 IN or 1013 HPA, as applicable.

- (5) Set the baro correction display of the two PFDs to 29.92 IN ([AMM SDS 34-22-00/1](#)).

- (6) Do the altitude test with the pitot/static system test set as follows:

- (a) ([PRE-MOD S.B.145-34-0032](#) AND PRE-MOD S.B. 145-34-0082) Change the values of altitude, on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

NOTE: Keep the airspeed at zero knots.

Table 505

ALTIMETER	DISPLAYED VALUES
0 ft	0 ft ( $\pm$ 20 ft)
5000 ft	5000 ft ( $\pm$ 25 ft)
10000 ft	10000 ft ( $\pm$ 25 ft)
15000 ft	15000 ft ( $\pm$ 25 ft)
20000 ft	20000 ft ( $\pm$ 25 ft)

- (b) ([POST-MOD S.B.145-34-0032](#) AND PRE-MOD S.B. 145-34-0064) Change the values of altitude and airspeed on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

Table 506

Altitude on pitot/static test set (feet)	Airspeed on pitot/static system test set (knots)						
	0	100	150	200	250	300	320
	Altitude indicated on PFD (feet)						
0	0 $\pm$ 20	-21 $\pm$ 20	-30 $\pm$ 20	-83 $\pm$ 20	-153 $\pm$ 20	-	-
5000	5000 $\pm$ 30	4976 $\pm$ 30	4965 $\pm$ 30	4904 $\pm$ 30	4823 $\pm$ 30	-	-
10000	-	9972 $\pm$ 30	9959 $\pm$ 30	9888 $\pm$ 30	9793 $\pm$ 30	9691 $\pm$ 30	9647 $\pm$ 30
20000	-	19961 $\pm$ 40	19943 $\pm$ 40	19845 $\pm$ 40	19714 $\pm$ 40	19573 $\pm$ 40	19513 $\pm$ 40

- (c) ([POST-MOD S.B.145-34-0064](#) OR POST-MOD S.B. 145-34-0082) Change the values of altitude and airspeed on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

Table 507

Altitude on pitot/static test set (feet)	Airspeed on pitot/static system test set (knots)						
	0	100	150	200	250	300	320
Altitude indicated on PFD (feet)							
0	0 ± 20	-21±20	-29±20	-70±20	-116±20	-	-
5000	5000 ± 30	4976±30	4965±30	4910±30	4855±30	-	-
10000	-	9972±30	9959±30	9902±30	9831±30	9731±30	9674±30
20000	-	19961±40	19943±40	19865±40	19766±40	19628±40	19550±40

- (7) Do the test of the altitude trip signal to the air conditioning system as follows:
- Connect the maintenance panel/PC interface test box ([ITEM GSE 135](#)).
  - Set the pack switches, on the overhead panel, to the ON position (Striped Bar must be OFF).
  - Connect an ohmmeter to the ADC-TRIP jack of ([ITEM GSE 135](#)) and airframe ground.
- NOTE: If GSE 135 is not available, directly connect the ohmmeter between pin 50 (J7187 connector) and the ground stud (GS).
- Result:
- The ohmmeter shows the open condition.
- Open ADC2 circuit breaker and close ADC1 circuit breaker to test ADC1 actuation.
  - Change the values of altitude, on the pitot/static system test set, from 23500 ft to 24500 ft and monitor the changes on the ohmmeter.
- Result:
- The ohmmeter changes from open to the ground condition.
- On the pitot/static system test set, simulate an altitude below 23500 ft.
- Result:
- The ohmmeter shows the open condition.
- Open ADC1 circuit breaker and close ADC2 circuit breaker to test ADC2 actuation.
  - Change the values of altitude, on the pitot/static system test set, from 23500 ft to 24500 ft and monitor the changes on the ohmmeter.
- Result:
- The ohmmeter changes from open to the ground condition.
- Close ADC1 circuit breaker.
  - Disconnect the ohmmeter.
  - Disconnect the maintenance panel/PC interface test box ([ITEM GSE 135](#)).
- (8) Do the altitude test with the pitot/static system test set as follows:
- (PRE-MOD [S.B.145-34-0032](#) AND PRE-MOD S.B. 145-34-0082) Change the values of altitude, on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

NOTE: Keep the airspeed at zero knots.

Table 508

ALTIMETER		DISPLAYED VALUES	
25000 ft		25000 ft ( $\pm$ 45 ft)	
30000 ft		30000 ft ( $\pm$ 45 ft)	
35000 ft		35000 ft ( $\pm$ 55 ft)	
37000 ft		37000 ft ( $\pm$ 60 ft)	

- (b) (POST-MOD S.B.145-34-0032 AND PRE-MOD S.B. 145-34-0064) Change the values of altitude and airspeed on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

Table 509

Altitude on pitot/static test set (feet)	Airspeed on pitot/static system test set (knots)					
	100	150	200	250	300	320
	Altitude indicated on PFD (feet)					
25000	24954 $\pm$ 50	24932 $\pm$ 50	24816 $\pm$ 50	24660 $\pm$ 50	24492 $\pm$ 50	24422 $\pm$ 50
29000	28947 $\pm$ 58	28922 $\pm$ 58	28788 $\pm$ 58	28608 $\pm$ 58	28415 $\pm$ 58	-
33000	32938 $\pm$ 66	32909 $\pm$ 66	32754 $\pm$ 66	32546 $\pm$ 66	-	-
37000	36924 $\pm$ 74	36890 $\pm$ 74	36710 $\pm$ 74	36468 $\pm$ 74	-	-

- (c) (POST-MOD S.B.145-34-0064 OR POST-MOD S.B. 145-34-0082) Change the values of altitude and airspeed on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

Table 510

Altitude on pitot/static test set (feet)	Airspeed on pitot/static system test set (knots)					
	100	150	200	250	300	320
	Altitude indicated on PFD (feet)					
25000	24954 $\pm$ 50	24932 $\pm$ 50	24839 $\pm$ 50	24722 $\pm$ 50	24558 $\pm$ 50	24466 $\pm$ 50
29000	28947 $\pm$ 58	28922 $\pm$ 58	28815 $\pm$ 58	28679 $\pm$ 58	28491 $\pm$ 58	-
33000	32938 $\pm$ 66	32909 $\pm$ 66	32785 $\pm$ 66	32628 $\pm$ 66	-	-
37000	36924 $\pm$ 74	36890 $\pm$ 74	36746 $\pm$ 74	36563 $\pm$ 74	-	-

- (d) Put the altitude back to the local altitude at a rate of descent of less than 6000 ft/min.
- (9) Do the airspeed test with the pitot/static system test set as follows:

- (a) (PRE-MOD [S.B.145-34-0032](#) AND PRE-MOD S.B. 145-34-0082) Change the values of airspeed, on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

Table 511

<b>AIRSPEED</b>	<b>DISPLAYED VALUES</b>
100 kts	97.5 kts ( $\pm$ 2 kts)
135 kts	133.0 kts ( $\pm$ 2 kts)
150 kts	148.0 kts ( $\pm$ 2 kts)
200 kts	196.5 kts ( $\pm$ 2 kts)
202 kts	198.5 kts ( $\pm$ 2 kts)
250 kts	245.5 kts ( $\pm$ 2 kts)
300 kts	294.5 kts ( $\pm$ 2 kts)

- (b) (POST-MOD [S.B.145-34-0032](#) AND PRE-MOD S.B. 145-34-0064) Change the values of airspeed, on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

NOTE: Keep altitude at zero feet.

Table 512

<b>AIRSPEED</b>	<b>DISPLAYED VALUES</b>
100 kts	97.5 kts ( $\pm$ 2 kts)
150 kts	148.0 kts ( $\pm$ 2 kts)
200 kts	195.0 kts ( $\pm$ 2 kts)
250 kts	243.5 kts ( $\pm$ 2 kts)
300 kts	292.0 kts ( $\pm$ 2 kts)
320 kts	313.0 kts ( $\pm$ 2 kts)

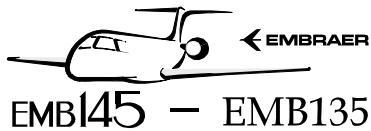
- (c) (POST-MOD [S.B.145-34-0064](#) OR POST-MOD S.B. 145-34-0082) Change the values of airspeed, on the pitot/static system test set, as shown in this table, and do a check of the values shown on the PFD:

NOTE: Keep altitude at zero feet.

Table 513

<b>AIRSPEED</b>	<b>DISPLAYED VALUES</b>
100 kts	97.5 kts ( $\pm$ 2 kts)
150 kts	148.0 kts ( $\pm$ 2 kts)
200 kts	196.0 kts ( $\pm$ 2 kts)
250 kts	244.5 kts ( $\pm$ 2 kts)
300 kts	293.0 kts ( $\pm$ 2 kts)
320 kts	312.0 kts ( $\pm$ 2 kts)

- (d) Put the airspeed back to zero.



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- (10) (This step is applicable only to ACFT POST-MOD [SB145-27-0042](#) OR ACFT EQUIPPED WITH 18-DEGREE FLAP) If a single-engine takeoff occurs, do the test of the ADC correction function as follows:

- (a) On the overhead panel, set the BATT1 and BATT2 switches to the OFF position.
- (b) On the pitot/static system test set, set the airspeed to 100 kts on the PFD.
- (c) On the RH electrical-power control/distribution box, open the PITOT HTG 3 and the HEATING/PITOT 2 circuit breakers and attach a DO-NOT-OPEN tag to it.
- (d) On the LH electrical-power control/distribution box, open the HEATING/PITOT 1 circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (e) On the circuit breaker panel, on the cockpit ceiling, open the N2 SIGNAL 2A (Location tip: ESSENTIAL DC BUS 1/POWERPLANT/2A) and N2 SIGNAL 2B (Location tip: ESSENTIAL DC BUS 2/POWERPLANT/2B) circuit breakers to simulate operation of the right engine only.
- (f) On the circuit breaker panel, on the cockpit ceiling, open the AIR/GND A, B, C, and D circuit breakers to put the aircraft in the flight configuration.

Circuit breaker location tips:

- AIR/GND A: DC BUS 1/LDG GEAR/AIR/GND A.
- AIR/GND B: ESSENTIAL DC BUS 1/LDG GEAR/AIR/GND B.
- AIR/GND C: DC BUS 2/LDG GEAR/AIR/GND C.
- AIR/GND D: ESSENTIAL DC BUS 2/LDG GEAR AIR/GND D.

Result:

- 1 The airspeed on the PFD increases to approximately 105 kts and then, in a 14-second interval, it comes gradually down to 100 kts.

- (g) On the circuit breaker panel, on the cockpit ceiling, close the AIR/GND A, B, C, and D circuit breakers in 10 seconds maximum to put the aircraft in the ground configuration.

Result:

- 1 Make sure that the AIR/GND FAIL caution message is not shown on the EICAS display.

- (h) On the circuit breaker panel, on the cockpit ceiling, close the N2 SIGNAL 2A and N2 SIGNAL 2B circuit breakers.

- (i) On the circuit breaker panel, on the cockpit ceiling, open the N2 SIGNAL 1A (Location tip: ESSENTIAL DC BUS 1/POWERPLANT/1A) and N2 SIGNAL 1B (Location tip: ESSENTIAL DC BUS 2/POWERPLANT/1B) circuit breakers to simulate operation of the left engine only.

- (j) On the circuit breaker panel, on the cockpit ceiling, open the AIR/GND A, B, C, and D circuit breakers to put the aircraft in the flight configuration.

Result:

- 1 The airspeed on the PFD increases to approximately 105 kts and then, in a 14-second interval, it comes gradually down to 100 kts.

- (k) On the circuit breaker panel, on the cockpit ceiling, close the AIR/GND A, B, C, and D circuit breakers in 10 seconds maximum to put the aircraft in the ground configuration.

Result:

- 1 Make sure that the AIR/GND FAIL caution message is not shown on the EICAS display.
  - (l) On the circuit breaker panel, on the cockpit ceiling, close the N2 SIGNAL 1A and N2 SIGNAL 1B circuit breakers.
  - (m) Put the airspeed back to zero.
- (11) Do the test of the ADC airspeed trip signal to the rudder control system as follows:

NOTE: The hydraulic system must be pressurized.

  - (a) On the circuit breaker panel, open the RUDDER 1 circuit breaker.
  - (b) On the circuit breaker panel, open the ADC 2 circuit breaker.
  - (c) Set the airspeed, on the pitot/static system test set, to 140 kts.

Result:

  - 1 The EICAS shows the message (amber) RUDDER SYS 2 INOP.
  - (d) Slowly decrease the airspeed on the pitot/static system test set to 130 kts, and make sure that, between 139 and 131 Kts:

Result:

  - 1 The EICAS message (amber) RUDDER SYS 2 INOP goes out of view.
  - (e) On the circuit breaker panel, close the ADC 2 circuit breaker.
  - (f) On the circuit breaker panel, open the ADC 1 circuit breaker.
  - (g) Set the airspeed, on the pitot/static system test set, to 140 kts again.

Result:

  - 1 The EICAS shows the message (amber) RUDDER SYS 2 INOP.
  - (h) Slowly decrease the airspeed on the pitot/static system test set to 130 kts, and make sure that, between 139 and 131 kts:

Result:

  - 1 The EICAS message (amber) RUDDER SYS 2 INOP goes out of view.
  - (i) On the circuit breaker panel, close the ADC 1 circuit breaker.
  - (j) On the circuit breaker panel, close the RUDDER 1 circuit breaker.
- (12) (PRE-MOD [S.B.145-27-0032](#) OR PRE-MOD S.B. 145-27-0059) Do the test of the ADC airspeed trip signal to the speed brake system as follows:

NOTE: The hydraulic system must be pressurized.

- (a) Set the airspeed, on the pitot/static system test set, to 210 kts.
  - (b) Set the flap selector lever to the 0 position.
  - (c) Set the thrust lever to the IDLE position.
  - (d) Set the speed-brake selector lever to OPEN.
- Result:
- 1 The outboard speed-brake panel opens.
- (e) On the maintenance panel, set the ADC 2 test switch to the up position and hold it in this position.

- (f) Slowly decrease the airspeed on the pitot/static-system test set to 195 kts, and, between 210 and 195 kts, make sure of this result:

Result:

- 1 The outboard speed-brake panel closes.

- (g) Release the ADC 2 test switch.

- (h) On the pitot/static-system test set, set the airspeed to 210 kts again.

- (i) Set the speed-brake selector lever to OPEN.

Result:

- 1 The outboard speed-brake panel opens.

- (j) On the maintenance panel, set and hold the ADC 1 test switch to the up position.

- (k) Slowly decrease the airspeed on the pitot/static-system test set to 195 kts and, between 210 and 195 kts, make sure of this result:

Result:

- 1 The outboard speed-brake panel closes.

- (l) Release the ADC 1 test switch.

- (m) Set the airspeed again to 0 kt.

- (13) Do a check of the TAT indication as follows:

**NOTE:** Do not do this test in areas with wind and sun. The wind and sun can change the test results.

- (a) With the mercury thermometer ([ITEM GSE 085](#)), make the measurement of the TAT temperature.

- (b) Compare the temperature value shown on the mercury thermometer and the SAT indication shown on MFD 1 and MFD 2.

Result:

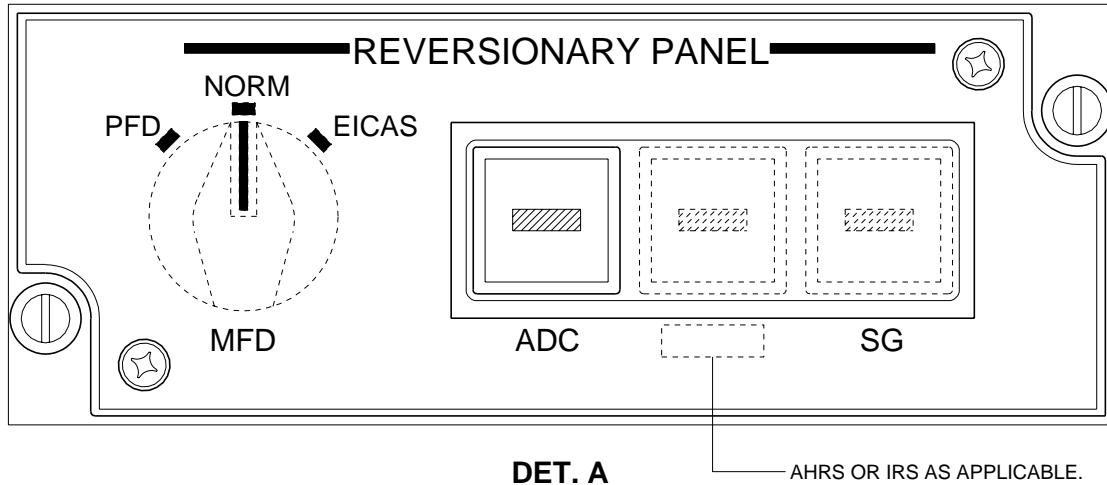
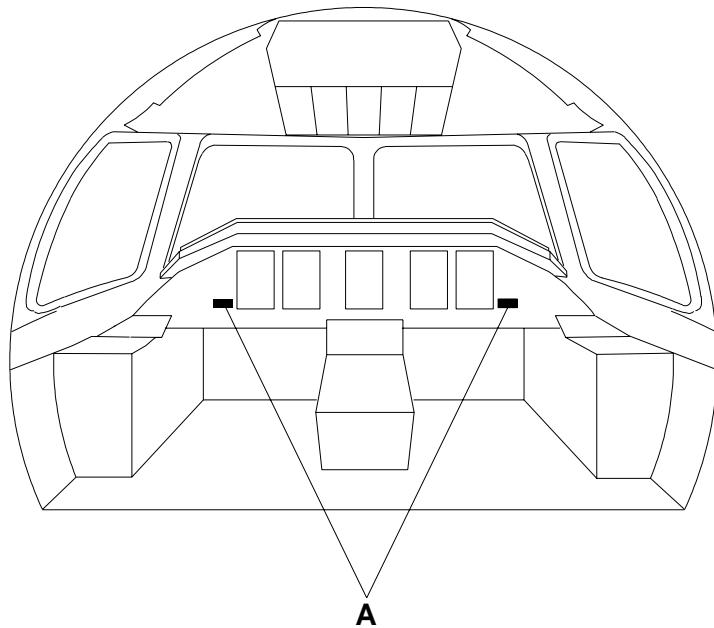
- 1 The maximum difference permitted between the two values is  $\pm$  2 degrees Celsius.

## K. Follow-on

### SUBTASK 842-006-A

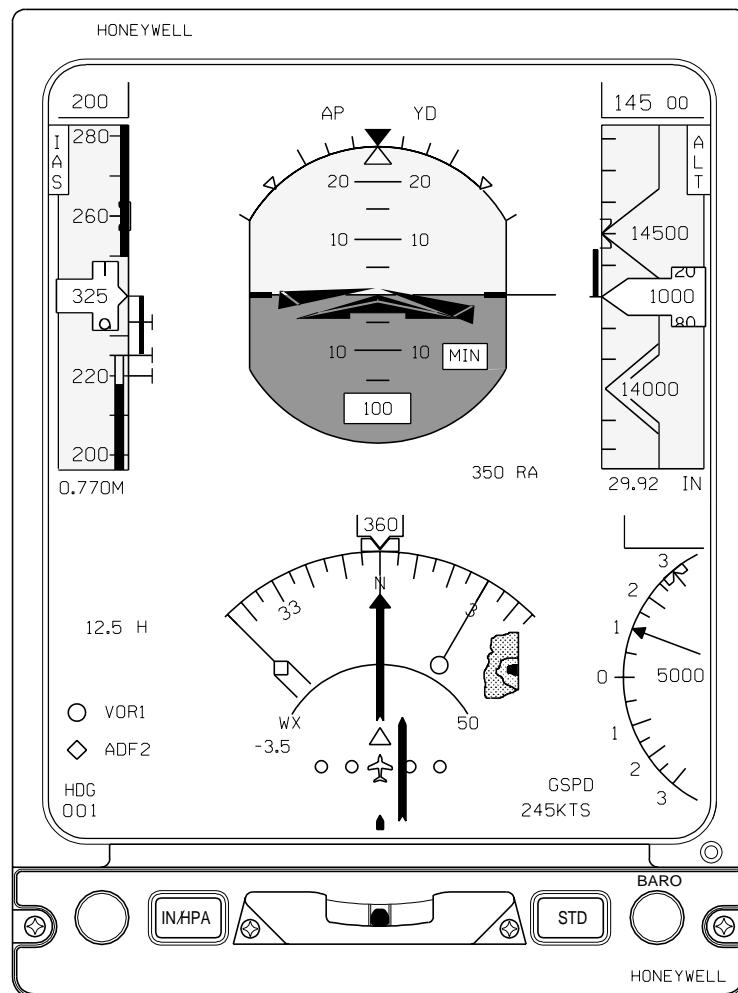
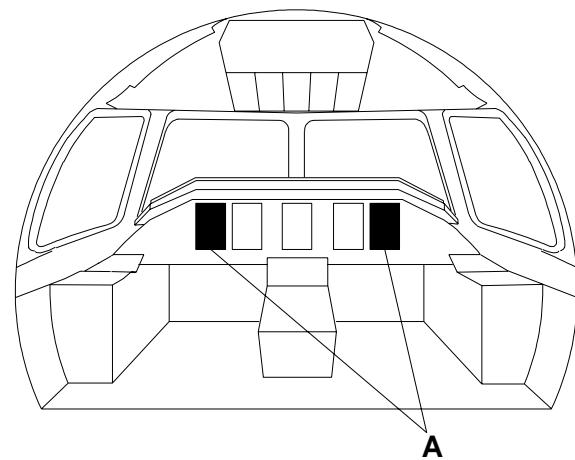
- (1) On the RH electrical-power control/distribution box, close the PITOT HTG 3 and the HEATING/PITOT 2 circuit breakers and remove the DO-NOT-OPEN tag from it.
- (2) On the LH electrical-power control/distribution box, close the HEATING/PITOT 1 circuit breaker and remove the DO-NOT-CLOSE tag from it.
- (3) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (4) Disconnect the pitot/static system test set ([AMM TASK 34-13-00-000-801-A/400](#)).
- (5) Put the protection on the Pitot and Pitot/Static Sensors.

**EFFECTIVITY: ALL**  
 Reversionary Panel - ADC Switch  
 Figure 501



145AMM340141.MCE A

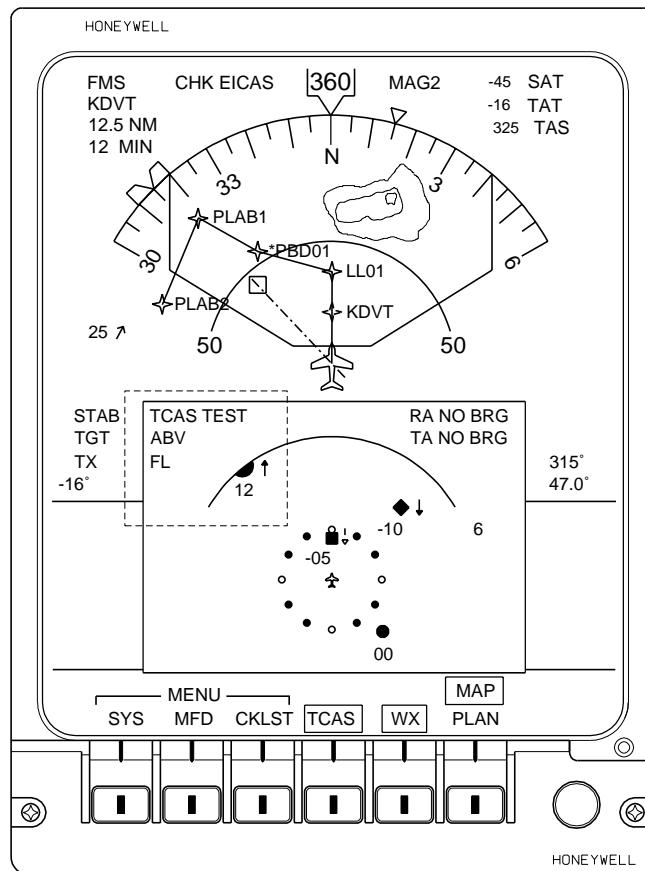
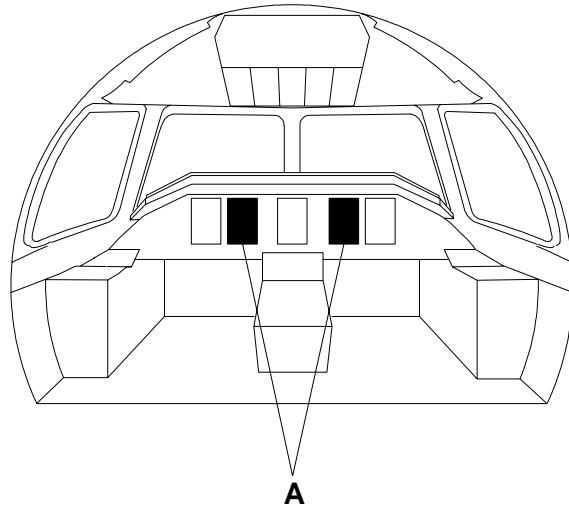
**EFFECTIVITY: ALL**  
**PFD - ADC Indications**  
**Figure 502**



**DET. A**

145AMM340142.MCE A

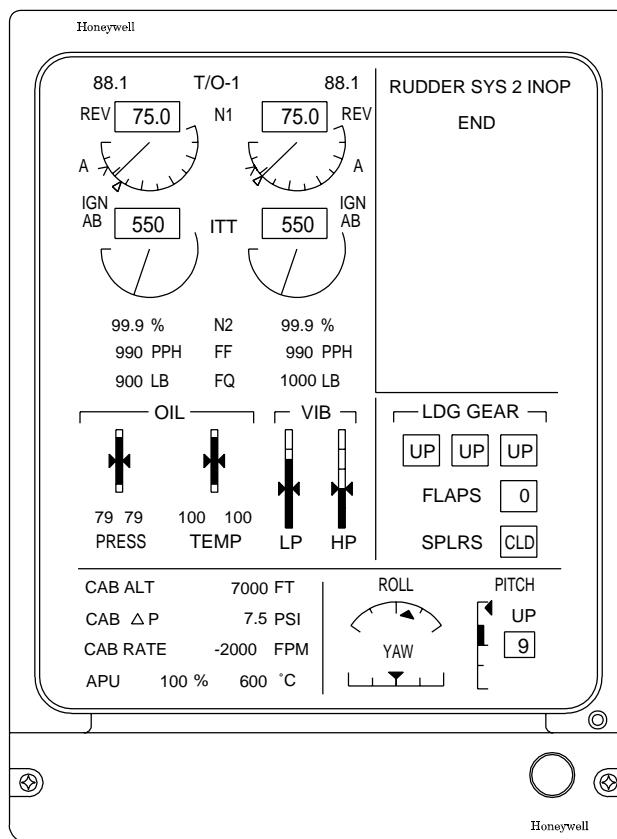
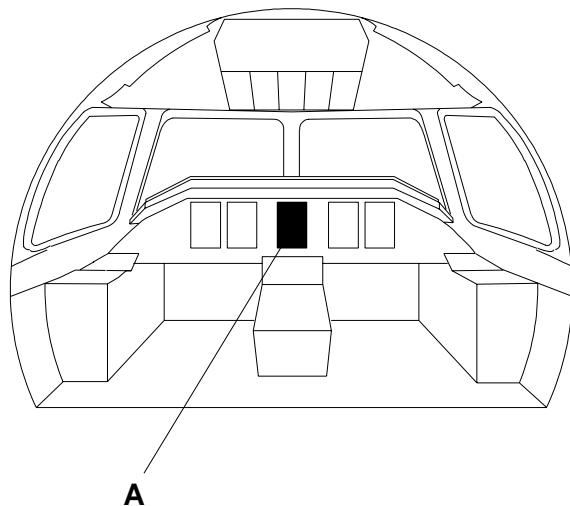
**EFFECTIVITY: ALL**  
**MFD - ADC Indications**  
**Figure 503**



**DET. A**

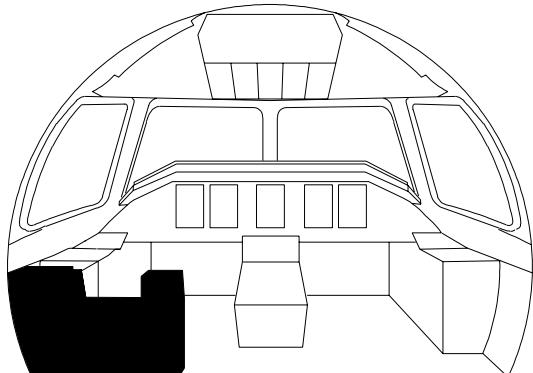
145AMM340143.MCE A

**EFFECTIVITY: ALL**  
**EICAS - Rudder Indication**  
**Figure 504**

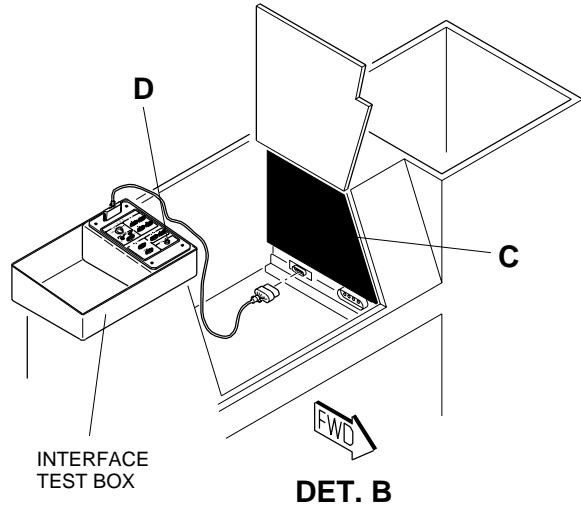


145AMM340145.MCE A

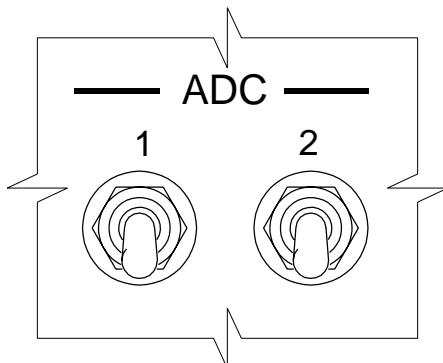
**EFFECTIVITY: ALL**  
 ADC Test Switches  
 Figure 505



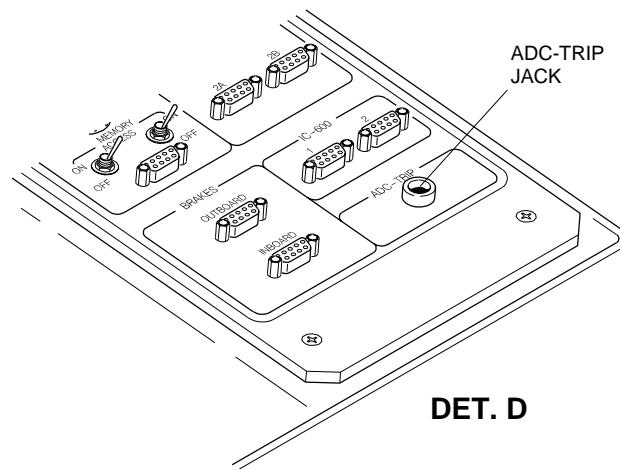
**B**



**DET. B**

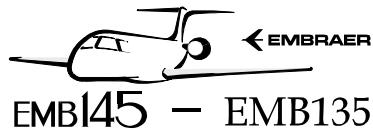


**DET. C**  
 MAINTENANCE PANEL



**DET. D**

145AMM340312.MCE A



EMB145 – EMB135

AIRCRAFT  
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TASK 34-15-00-700-802-A

EFFECTIVITY: ALL

3. ADC SYSTEM - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do an operational check of the ADC system.

B. References

REFERENCE	DESIGNATION
AMM SDS 31-41-00/1	
AMM SDS 34-15-00/1	
AMM SDS 34-22-00/1	
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		Cockpit - Maintenance panel

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](#)).
- (2) Make sure that the systems below are serviceable and on:
  - ADC ([AMM SDS 34-15-00/1](#)).
  - EICAS ([AMM SDS 31-41-00/1](#)).
  - EFIS ([AMM SDS 34-22-00/1](#)).

## J. ADC Operational Test Procedures (Figure 502) (Figure 503) (Figure 505)

**SUBTASK 710-002-A**

- (1) Make sure that the aircraft is in the GROUND configuration.
- (2) Set the IN/HPA button, on PFD 1, to get the IN indication.
- (3) Do the ADC Auto Test as follows:

**NOTE:** If the ADC1 test switch stays in the up position for more than 30 seconds, the E1 CTL A FAIL and E2 CTL A FAIL messages will appear on the EICAS display. On the powerplant panel, turn the FADEC 1 and 2 switches to the RESET position for the messages to go out of view.

- (a) Set the ADC 1 TEST switch, on the maintenance panel, to the up position.

Result:

- 1 PFD 1 displays:

Table 514

PARAMETERS	VALUE	COLOR
ADC TEST	active	Red
Baro Corrected Altitude	1000 ft	Green
Altitude Rate	5000 ft/min	Green
Calibrated Airspeed (CAS)	325 knots	Red
Mach (M)	.77 M	Red
VMO Warning	active	Red
Baro Correction	29.92 inHg	Blue

- 2 The MFD 1 displays:

Table 515

PARAMETERS	VALUE	COLOR
Static Air Temp (SAT)	- 45°C	Green
True Airspeed (TAS)	325 knots	Green
Total Air Temperature (TAT)	- 16°C	Green

- 3 The aural warning gives out HIGH SPEED for two seconds.

- 4 The MASTER WARNING pushbuttons come on and flash.

**NOTE:** If the ADC2 test switch stays in the up position for more than 30 seconds, the E1 CTL B FAIL and E2 CTL B FAIL messages will appear on the EICAS display. On the powerplant panel, turn the FADEC 1 and 2 switches to the RESET position for the messages to go out of view.

- (b) Set the ADC 2 TEST switch, on the maintenance panel, to the up position.

Result:

- 1 The PFD 2 displays:

Table 516

PARAMETERS	VALUE	COLOR
ADC TEST	active	Red
Baro Corrected Altitude	1000 ft	Green
Altitude Rate	5000 ft/min	Green
Calibrated Airspeed (CAS)	325 knots	Red
Mach (M)	.77 M	Red
VMO Warning	active	Red
Baro Correction	29.92 inHg	Blue

- 2 The MFD 2 displays:

Table 517

PARAMETERS	VALUE	COLOR
Static Air Temp (SAT)	- 45°C	Green
True Airspeed (TAS)	325 knots	Green
Total Air Temperature (TAT)	- 16°C	Green

- 3 The Aural Warning gives out HIGH SPEED for two seconds.

- 4 The MASTER WARNING pushbuttons come on and flash.

- (4) Put the aircraft in the FLIGHT configuration (AIR) as follows:

- (a) Aircraft on the ground.

NOTE: When you use the external power source, set, on the electrical control panel, the BATT1 and BATT2 rotary switches to the OFF position.

- (b) On the circuit breaker panel, open the AIR/GND A, B, C, and D circuit breakers.

- 1 Make sure that the AIR/GND FAIL caution message is shown on the EICAS.

- (5) Do the ADC Auto Test as follows:

- (a) Set the ADC 1 TEST switch, on the maintenance panel, to the up position.

Result:

- 1 There are no changes.

- (b) Set the ADC 2 TEST switch, on the maintenance panel, to the up position.

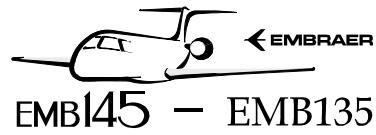
Result:

- 1 There are no changes.

## K. Follow-on

### SUBTASK 842-003-A

- (1) To put the aircraft in the ground configuration again, do as follows:



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- (a) On the circuit breaker panel, close the AIR/GND A, B, C, and D circuit breakers in 10 seconds maximum.
  - 1 Make sure that the AIR/GND FAIL caution message is not shown on the EICAS.
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

