



## AIRCRAFT MAINTENANCE MANUAL

### ALTITUDE SENSING SWITCH - ADJUSTMENT/TEST

EFFECTIVITY: ACFT MODEL(S) EMB-145

#### 1. General

- A. This section gives the procedure to do the functional check of the altitude sensing switch.
- 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
35-20-03-700-801-A	ALTITUDE SENSING SWITCH - FUNCTIONAL CHECK	ACFT MODEL(S) EMB-145



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TASK 35-20-03-700-801-A

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2. ALTITUDE SENSING SWITCH - FUNCTIONAL CHECK

A. General

(1) This task gives the procedure to do the functional check of the altitude sensing switch.

B. References

REFERENCE	DESIGNATION
AMM SDS 34-52-00/1	
AMM TASK 20-13-10-000-801-A/400	CONTROL PANELS - REMOVAL (TYPICAL)
AMM TASK 20-13-10-400-801-A/400	CONTROL PANELS - INSTALLATION (TYPICAL)
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 34-61-02-000-801-A/400	CONTROL DISPLAY UNIT (CDU) - REMOVAL
AMM TASK 34-61-02-400-801-A/400	CONTROL DISPLAY UNIT (CDU) - INSTALLATION
AMM TASK 34-62-02-000-801-A/400	-
AMM TASK 34-62-02-400-801-A/400	-
AMM TASK 35-10-00-910-801-A/200	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 129	Test Set - Pitot/Static System, Bench	To make conditions equivalent to the necessary altitude	
GSE 128	Kit - Air Data	To adapt the Pitot-Static System Test Set to the aircraft	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	A - Does the task	Pitot-static system test set
1	B - Helps technician A	Cockpit and passenger cabin



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I. Preparation

SUBTASK 841-007-B

- (1) Obey the safety precautions (AMM TASK 35-10-00-910-801-A/200).
- (2) Energize the aircraft with the External DC Power Supply ( [AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Set the test knob of the dispensing units to "Test" ([Figure 501](#)).
- (4) Remove the FMS Control Panel:
  - ( [AMM TASK 34-61-02-000-801-A/400](#)) aircraft equipped with single FMS.
  - (AMM TASK 34-62-02-000-801-A/400) aircraft equipped with dual FMS.
- (5) Remove the Pitch and Turn Controller ([AMM TASK 20-13-10-000-801-A/400](#)).
- (6) Make sure that the knob of the passenger oxygen control panel is in the AUTO position.

J. Functional Check of the Altitude Sensing Switch ([Figure 501](#))

SUBTASK 720-009-B

EFFECTIVITY: AIRCRAFT NOT EQUIPPED WITH HIGH ALTITUDE MODE

- (1) Do the functional check of the altitude sensing switch as follows:
  - (a) Close the PASS OXY DEPLOY 1 or PASS OXY DEPLOY 2 circuit breakers.
  - (b) Connect the test hose to the suction port of the anemometric bench and to the altitude sensing switch port.
  - (c) Adjust the barometric scale on the anemometric bench to 1013 millibars.
  - (d) On the anemometric bench, set the altitude (at a maximum climb rate of 500 ft/min) until the display of the anemometric bench shows 15000 ft. Between 13500 and 14500 ft, the result below must occur.

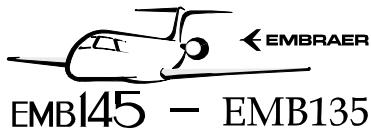
NOTE: This procedure can cause interference with the local air traffic during simulations of altitude with the anemometric bench test. To prevent this, make sure that the transponder is on the STANDBY condition ([AMM SDS 34-52-00/1](#)).

Result:

- 1 The dispensing unit doors must open.
- (e) Stop for 6 seconds after the dispensing unit doors open. Then push the manual reset lever in (to put the latch back in the automatic operation conditions) and close the doors.
- (f) On the anemometric bench, set the altitude back to the ambient pressure at a rate of descent of less than 500 ft/min.
- (g) Set the passenger oxygen control knob to CLOSE and then to AUTO.

Result:

- 1 The "NO SMOKING" light, in the passenger cabin, goes off.
- 2 The "FASTEN SEAT BELTS" light, in the passenger cabin, goes off.



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- 3 The "ON" light, on the passenger oxygen control panel, goes off.
- 4 The "RETURN TO SEAT" light, in the lavatory, goes off.

K. Functional Check of the Altitude Sensing Switch ([Figure 501](#))

SUBTASK 720-010-A

EFFECTIVITY: AIRCRAFT EQUIPPED WITH HIGH ALTITUDE MODE

- (1) Do the functional check of the altitude sensing switch as follows:
  - (a) Close the PASS OXY DEPLOY 1 or PASS OXY DEPLOY 2 circuit breakers.
  - (b) Select the HIGH ALT option from the Vspeed submenu of the MFD display.  
Result:
    - 1 The message "HI ALT LDG-T/O" will only be available for aircraft with EICAS versions 19.0 and on.
    - 2 The CAUTION message "HI ALT LDG-T/O" will come into view on aircraft with EICAS before version 20.5 and the HIGH ALT option will be boxed on the MFD display.
    - 3 The ADVISORY message "HI ALT LDG-T/O" will come into view on the aircraft with EICAS versions 20.5 and above.
  - (c) Connect the test hose to the suction port of the anemometric bench and to the altitude sensing switch port.
  - (d) Adjust the barometric scale on the anemometric bench to 1013 millibars.
  - (e) On the anemometric bench, set the altitude (at a maximum climb rate of 500 ft/min) until the display of the anemometric bench shows 16000 ft. Between 14000 ft and 15000 ft, the result below must occur.  
Result:
    - 1 The dispensing unit doors must open.
  - (f) Stop for 6 seconds after the dispensing unit doors open. Then push the manual reset lever in (to put the system back to the automatic operation condition) and close the doors.
  - (g) On the anemometric bench, set the altitude back to the ambient pressure at a rate of descent of less than 500 ft/min.
  - (h) Set the passenger oxygen control knob to CLOSE and then to AUTO.  
Result:
    - 1 The "NO SMOKING" light, in the passenger cabin, goes off.
    - 2 The "FASTEN SEAT BELTS" light, in the passenger cabin, goes off.
    - 3 The "ON" light, on the passenger oxygen control panel, goes off.
    - 4 The "RETURN TO SEAT" light, in the lavatory, goes off.
  - (i) Select the HIGH ALT option again from the Vspeed submenu of the MFD display.  
Result:
    - 1 The ADVISORY message "HI ALT LDG-T/O" will go out of view from the EICAS versions 20.5 and above.



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- 2 The CAUTION message "HI ALT LDG-T/O" will go out of view on the EICAS before version 20.5 and the HIGH ALT option will not be boxed on the MFD display.

L. Follow-on

SUBTASK 842-007-B

- (1) Close the "PASS OXY DEPLOY 1" and "PASS OXY DEPLOY 2" circuit breakers.
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Move the dispensing-unit test knob back to the normal position ([Figure 501](#)).
- (4) Remove the anemometric bench. Keep the equipment used in a clean place and in the conditions necessary for the oxygen system services.
- (5) Install the FMS Control Panel:
  - ([AMM TASK 34-61-02-400-801-A/400](#)) aircraft equipped with single FMS.
  - ([AMM TASK 34-62-02-400-801-A/400](#)) aircraft equipped with dual FMS.
- (6) Install the Pitch and Turn Controller ([AMM TASK 20-13-10-400-801-A/400](#)).

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Altitude Sensing Switch - Functional Check

Figure 501

