

Project No: **BDHRN002**Job Card No **0147**

Notif.No.: 10049225

Activity: **1030**

Rev No: 20000622

Model.: F900EX

Sheet 1 of 1

A/C Regn: **D-AHRN**

Serial No.: 096

Type: F900EX

Starting Phase: Functions

Starting Work Centre: MTX AVIO DEPT

Job Description: Leak Test DADC 2 Air Pressure Sys

ETOPS A/C: No

RVSM A/C: No

Warranty: -

ATA: 34

Work Center	
MTX AVIO DEPT	

Zone: 100,200

Corrective Action

0001	Task carried out in accordance with the attached Customer Card that quotes the Operator code detailed below.					 Order: 80069357 Operation: 0010 Phase: Functions - scheduling activity Work Center: MTX AVIO DEPT
	Accomplished		Inspected			
	Pers. No.	Date	Pers. No.	Date		
	Stamp		Stamp			

Completed & Confirmed on SAP IAW MOE 2.13.

Defect Card Raised

Components Removed/Installed

	Part Number	Part Name	S/N	Location	Comm. Off/On
OFF					
ON					
OFF					
ON					
OFF					
ON					
OFF					
ON					

Occurance Report Raised? YES ☐

Operations Above & Notifications Completed IAW MOE 2.13.



OEM Code: 34-16-00-720-801-06

Operator Code: 34-16-00-720-801-06

Form No: JA-SAP-MTX-002

Printed by: ADAMOVIC G



Printed: 03.09.2012

13:34:17

Print No: 1

Operator: **HERON AVIATION**

Work Card No.: **34.060**

Serial No.: **096**

Model: **FALCON 900EX**

Reg No.: **D-AHRN**

Workorder No.: _____

	Date	A/C HRS	AFL	APH			
Due At	24-JAN-2013						
Accomplished							

TECHNICIAN SIGNATURE: _____ KIND OF CERTIFICATE & NO.: _____

INSPECTED BY: _____ KIND OF CERTIFICATE & NO.: _____

TECH	INSP	LABOR-HRS HRS.MINS
------	------	-----------------------

**>34-16-00-720-801- LEAK TEST COPILOT DIGITAL AIR DATA COMPUTER AIR
06 PRESSURE SYSTEM
RVSM**

REMARKS : _____

AMM 34-16-00-720-801

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TASK 34-16-00-720-801 FUNCTIONAL TEST OF THE AIR DATA INDICATORS

WARNING: BEFORE PERFORMING THE FUNCTIONAL TEST OF THE AIR DATA INSTRUMENTS, MAKE SURE THAT THE PRESSURE PROBE HEATING SYSTEMS ARE NOT ENERGIZED. THIS WILL HELP PREVENT INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT.

1. OVERVIEW OF THE JOB

Operation codes:

- 34-16-00-720-801-01 ADC 1 (**L2FX**)
- 34-16-00-720-801-02 ADC 2 (**R2FX**)
- 34-16-00-720-801-03 stand-by altimeter (**1FK**)
- 34-16-00-720-801-04 stand-by Mach airspeed indicator (**26FL**)

NOTE 1: These tests are to be performed with all air data system equipment installed, including air data computers.

NOTE 2: The operator may either choose to perform the functional test per this procedure or to send the equipment to an approved repair agent.

If the operator chooses to perform this procedure and the results of some of the tests are out of tolerance, the affected equipment items must be removed and sent to an approved repair agent for calibration (Refer to **TASK 34-14-01-900-801**).

NOTE 3: Depending on Local Authorities operational regulations, additional tasks may be required to substantiate a periodic test of the Air Data System.

For example, it may be necessary to perform the following procedures:

- the draining of the total/static pressure system (Refer to **TASK 34-11-00-680-801**) to ensure freedom from entrapped moisture,
- the operational test of the air data probe anti-icing system (Refer to **TASK 30-30-00-710-801**) to determine that the static port heater is operative.

2. LOGISTICS

A. References

Reference

- **24-00-00-860-801**
- **30-30-00-710-801**
- **32-60-00-910-802**
- **34-10-00-860-801**
- **34-11-00-200-801**
- **34-11-00-680-801**
- **34-11-00-790-801**
- **34-14-01-900-801**

Designation

ENERGIZATION / DE-ENERGIZATION OF THE AIRCRAFT
OPERATIONAL TEST OF THE AIR DATA PROBE ANTI-ICING
SYSTEM
USE OF THE TARGETS FOR FLIGHT SIMULATION
PREPARATION AND USE OF THE AIR DATA BENCH
CHECK OF THE TOTAL / STATIC PRESSURE SYSTEM FOR
CLOGGING
DRAINING OF THE TOTAL / STATIC PRESSURE SYSTEM
LEAK TEST OF THE TOTAL / STATIC PRESSURE SYSTEM
REMOVAL / INSTALLATION OF THE AIR DATA COMPUTERS (ADC)

B. Energy

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- ELECTRICAL

C. Access

Reference

- **PAX**

Designation

PASSENGER DOOR

3. PRELIMINARY STEPS

Refer to **fig. 1**

- A. Connect the electrical Ground Power Unit (GPU) (Refer to **TASK 24-00-00-860-801**).
- B. Check the air data systems for leaks (Refer to **TASK 34-11-00-790-801**).
- C. Check that all the circuit breakers are engaged, except:
 - "LH AOA HEAT" (**L31FL**),
 - "RH AOA HEAT" (**R31FL**),
 - "LH PITOT HEAT" (**L1FL**),
 - "RH PITOT HEAT" (**R1FL**),
 - "LH STATIC HEAT" (**L11FL**),
 - "RH STATIC HEAT" (**R11FL**),
 - "ST BY PITOT" (**21FL**).
- D. Energize the aircraft systems with the electrical GPU (Refer to **TASK 24-00-00-860-801**).
- E. Check that the "LH AV MASTER" switch/light (**L2PP**), "RH AV MASTER" switch/light (**R2PP**) and "MINI LOAD MASTER" switch/light (**8PP**) are extinguished (avionics equipment power supply not load-shedded) (Refer to **SDS 24-60-00**, Figures: Circuit Breaker panels (10PP)).

4. FUNCTIONAL TEST OF ADC'S

Refer to **fig. 2** and **fig. 5**

- A. Install the in-flight simulation tools on the LH and RH main landing gear legs to set the aircraft in flight configuration (Refer to **TASK 32-60-00-910-802**, paragraph "Use").
- B. Connect the digital air data bench to the pilot and copilot pitot and static normal pressure probes (Refer to **TASK 34-10-00-860-801**).
- C. Set up the digital air data bench (Refer to **TASK 34-10-00-860-801**, paragraph "Use").
- D. On the pilot and copilot Reversion Selection Panels (RSPs) (**L33FV**)/(**R33FV**), make sure that the "ADC" pushbuttons are extinguished (no ADC reversion).
 - If an "ADC" pushbutton is lit on (ADC1 reversion or/and ADC2 reversion), push on the "ADC" pushbutton to deselect the ADC reversion.
- E. Check of altitude indications on the pilot PFD and copilot PFD

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NOTE: The pilot and copilot altitude data must be checked at a speed of 0 kt.

- (1) Select a reference pressure of 29.92 in.Hg on the Primary Flight Display 1 (PFD 1) (**L12FV**) and PFD 2 (**R12FV**) by pressing the "STD" key on the bottom strip of each PFD.

NOTE: Check that the "in.Hg" unit has been previously selected on the PFD 1 and PFD 2 . If not, press the "IN/HPA" key on the bottom strip of each PFD.

- (2) On the digital air data bench, select each one of the values given in Table 3 (see **fig. 2**).

NOTE: The values followed by an asterisk are only to be taken into account for aircraft operated in Reduced Vertical Separation Minimum (RVSM) conditions (A/C with SB F900EX-4).

- (3) Record the altitude values read on PFD 1 (**L12FV**) and PFD 2 (**R12FV**).
- (4) Check that these values are within the minimum and maximum values given in Table 3 (see **fig. 2**).

(5) Adjust the digital air data bench to display an altitude of 8,230 ft on the pilot PFD.

- (6) Select on PFD 1 (**L12FV**) the reference pressure values given in the table below.

SELECTED REFERENCE PRESSURE (in.Hg)	ALTITUDE READING ON PFD 1 (ft)	ALTITUDE READING ON PFD 2 (ft)	MIN. ALTITUDE (ft)	MAX. ALTITUDE (ft)
28.10			6478	6528
28.50			6865	6915
29.00			7342	7392
29.50			7813	7863
29.92			8230	
30.50			8736	8786
30.90			9098	9148
30.99			9179	9229

- (7) Record the altitude values read on PFD 1 (**L12FV**).
- (8) Check that these values are within the minimum and maximum values given in the table above.
- (9) Repeat steps 4.E.(5), 4.E.(6), 4.E.(7) and 4.E.(8) on PFD 2 (**R12FV**).

F. Check of pilot and copilot airspeed indications

- (1) On PFD 1 and PFD 2, select a reference pressure of 29.92 in.Hg by pressing the "STD" key on the bottom strip of each PFD.
- (2) Select an altitude of 5,000 ft on the digital air data bench.
- (3) On the digital air data bench, select each one of the Indicated AirSpeed (IAS) values given in the table below.

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SELECTED IAS (kt)	IAS READING ON PFD 1 (kt)	IAS READING ON PFD 2 (kt)	MIN. IAS (kt)	MAX. IAS (kt)
100			98	102
150			148	152
200			198	202
250			248	252
300			297	303
350			347	353
400			396	404

(4) Record the IAS values read on the pilot PFD and copilot PFD.

(5) Check that these values are within the minimum and maximum values given in the table above.

(6) Slowly return the digital air data bench to ambient atmospheric pressure.

G. Check of pilot and copilot altitude indications using the RH static pressure probe (**R13FL**)

NOTE: The purpose of this check is to make sure that the static pressure system is not blocked between the RH static pressure probe (**R13FL**) and the ADCs (**L2FX**)/(**R2FX**).

(1) Cross-connect the static pressure probes as follows:

Refer to **fig. 4**

(a) Remove the static test adapter from the LH static pressure probe (**L13FL**).

(b) Remove the static blanking adapter from the RH static pressure probe.

(c) Install the static test adapter on the RH static pressure probe.

(d) Install the static blanking adapter on the LH static pressure probe.

(2) Select a reference pressure of 29.92 in.Hg on the PFD 1 and on the PFD 2 by pressing the "STD" key on the bottom strip of each PFD.

(3) On the digital air data bench, select an altitude of 40,000 ft.

NOTE: On the digital air data bench, the selected speed must be 0 kt.

(4) Check that the altitude values read on the PFD 1 and PFD 2 are identical to the values recorded at step 4.E.(3) for a selected altitude of 40,000 ft.

(5) Slowly return the digital air data bench to ambient atmospheric pressure.

H. Disconnect the digital air data bench from the normal pressure probes (Refer to **TASK 34-10-00-860-801**).

I. Remove the in-flight simulation tools from the LH and RH main landing gear legs (Refer to **TASK 32-60-00-910-802**).

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5. **FUNCTIONAL TEST OF STAND-BY ALTIMETER (1FK)**

Refer to **fig. 1**, **fig. 2**, **fig. 3** and **fig. 5**



- A. Connect the digital air data bench to the stand-by pressure probes (Refer to **TASK 34-10-00-860-801**).
- B. Make sure that the in-flight simulation tools are not installed.
- C. Check that the "ST-BY INSTR BAT" circuit breaker (**1FG**) is engaged (see **fig. 1**).
- D. On the stand-by altimeter, select a reference pressure of 29.92 in.Hg (or 1013 mbar for A/C with modification M2608), using the knob located on the bottom left side of the stand-by altimeter.
- E. Set up the digital air data bench (Refer to **TASK 34-10-00-860-801**, paragraph "Use").
- F. Test in climb
 - (1) On the digital air data bench, select in succession each one of the altitude values in climb given in Table 3 (except specific RVSM values: 29,000 ft and 41,000 ft) (see **fig. 2**).
 - (2) Record the altitude values read in climb (Zm) on the stand-by altimeter.
 - (3) Check that these values are within the minimum and maximum values given in Table 3 (see **fig. 2**).
- G. Wait 10 to 15 minutes at 51,000 ft.
- H. Test in descent
 - (1) Select 25,000 ft on the digital air data bench.
 - (2) Wait 5 minutes at 25,000 ft.
 - (3) Record the altitude value read in descent (Zd) on the stand-by altimeter.
 - (4) Select 20,000 ft on the digital air data bench.
 - (5) Wait 5 minutes at 20,000 ft.
 - (6) Record the altitude value read in descent (Zd) on the stand-by altimeter.
 - (7) Select 0 ft on the digital air data bench.
 - (8) Wait 1 minute at 0 ft.
 - (9) Record the altitude value read in descent (Zd) on the stand-by altimeter.
- I. For each one of the three altitude values (25,000 ft, 20,000 ft and 0 ft), calculate the difference between the altitude value read in descent (Zd) and the value read in climb (Zm).
- J. Check that the three calculated values (Zd-Zm) are within the tolerances given in Table 3 (see **fig. 2**).
- K. Select an altitude of 0 ft on the digital air data bench.

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- L. On the stand-by altimeter, select each one of the reference pressure values given in the table below (Table 1 or Table 2 according to the type of stand-by altimeter).

Table 1: stand-by altimeter with reference pressure in in.Hg

SELECTED REFERENCE PRESSURE (in.Hg)	ALTITUDE READING ON STAND-BY ALTIMETER (ft)	MIN. ALTITUDE (ft)	MAX. ALTITUDE (ft)
26.00		- 3866	- 3806
27.20		- 2640	- 2590
28.40		- 1462	- 1412
29.50		- 417	- 367
29.92		- 10	10
30.40		415	465
30.90		868	918

Table 2: stand-by altimeter with reference pressure in mbar

SELECTED REFERENCE PRESSURE (m bar)	ALTITUDE READING ON STAND-BY ALTIMETER (ft)	MIN. ALTITUDE (ft)	MAX. ALTITUDE (ft)
880		- 3880	- 3820
920		- 2672	- 2622
960		- 1511	- 1461
1000		- 389	- 339
1013		- 10	10
1020		159	209
1040		698	748

- M. Record the altitude values read on the stand-by altimeter.
- N. Check that these values are within the minimum and maximum values given in the table above (Table 1 or Table 2).
- O. Test of stand-by altimeter with buzzer on or off
- (1) On the stand-by altimeter, select a reference pressure of 29.92 in.Hg (or 1013 mbar).
 - (2) On the digital air data bench, select each one of the values given in Table 4 (see **fig. 3**).
 - (3) Record the altitude values read on the stand-by altimeter with the buzzer on.

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- (4) Slowly return the digital air data bench to ambient atmospheric pressure.
- (5) On the circuit breaker panel (**10PP**), disengage the "ST-BY INSTR BAT" circuit breaker (**1FG**) to switch off the buzzer of the stand-by altimeter (see **fig. 1**).
- (6) On the digital air data bench, select each one of the values given in Table 4 (see **fig. 3**).
- (7) Record the altitude values read on the stand-by altimeter with the buzzer off.
- (8) Calculate the difference between the values read on the stand-by altimeter with the buzzer on and the values read on the stand-by altimeter with the buzzer off.
- (9) Check that the calculated differences are within the indicated tolerances.
- (10) On the circuit breaker panel, engage the "ST-BY INSTR BAT" circuit breaker (see **fig. 1**).

P. Check of stand-by altimeter using the stand-by static pressure probe (**R501FL**)

NOTE: The purpose of this check is to make sure that the stand-by pressure system is not blocked between the stand-by static pressure probe (**R501FL**) and the stand-by altimeter .

- (1) Cross-connect the stand-by static pressure probes as follows:
Refer to **fig. 4**
 - (a) Remove the stand-by static test adapter from the LH stand-by static pressure probe (**L501FL**).
 - (b) Remove the stand-by static blanking adapter from the RH stand-by static pressure probe (**R501FL**).
 - (c) Install the stand-by static test adapter on the RH stand-by static pressure probe.
 - (d) Install the stand-by static blanking adapter on the LH stand-by static pressure probe.
- (2) On the stand-by altimeter, make sure that a reference pressure of 29.92 in.Hg (or 1013 mbar for A/C with M2608) is selected. Otherwise, select a reference pressure of 29.92 in.Hg or 1013 mbar.
- (3) On the digital air data bench, select an altitude of 40,000 ft.
- (4) Check that the altitude values read on the stand-by altimeter are identical to the values recorded at step **5.F.(2)** for a selected altitude of 40,000 ft.
- (5) Slowly return the digital air data bench to ambient atmospheric pressure.

Q. If the following test is not to be performed, disconnect the digital air data bench from the stand-by pressure probes (Refer to **TASK 34-10-00-860-801**).

6. **FUNCTIONAL TEST OF STAND-BY MACH AIRSPEED INDICATOR (26FL)**

Refer to **fig. 5**

- A. As applicable, connect the digital air data bench to the stand-by pressure probes (Refer to **TASK 34-10-00-860-801**).
- B. Check of Indicated AirSpeed (IAS) indications
 - (1) On the digital air data bench, select an altitude of 5,000 ft.
 - (2) On the digital air data bench, select each one of the IAS values given in the table below.

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SELECTED IAS (kt)	IAS READING ON STAND-BY MACH AIRSPEED INDICATOR (kt)	MIN. IAS (kt)	MAX. IAS (kt)
100		95	105
150		145	155
200		194	206
250		242.5	257.5
300		291	309
350		339.5	360.5
400		388	412

(3) Record the IAS values read on the stand-by Mach airspeed indicator (**26FL**).

(4) Check that these IAS values are within the minimum and maximum values given in the table above.

C. Check of Mach indications

(1) On the digital air data bench, select each one of the pairs of values (altitude/static pressure and Mach) from the table below.

NOTE: Wait until the pointer of the instrument settles before recording the value.
The ambient temperature must be 20°C ± 5°C (68°F ± 9°F).

SELECTED ALTITUDE/STATIC PRESSURE (mbar)	SELECTED MACH	MACH READING	MIN. MACH	MAX. MACH
1013.25	0.34		0.332	0.348
724.05	0.40		0.393	0.407
453.19	0.50		0.493	0.507
285.15	0.62		0.613	0.627
192.36	0.74		0.728	0.752
115.81	0.92		0.902	0.938

(2) Record the Mach values read on the stand-by Mach airspeed indicator.

(3) Check that these Mach values are within the minimum and maximum values given in the table above.

D. Slowly return the digital air data bench to ambient atmospheric pressure.

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- E. Disconnect the digital air data bench from the stand-by pressure probes (Refer to **TASK 34-10-00-860-801**).

7. FINAL STEPS

Refer to **fig. 1**

- A. De-energize the aircraft systems (Refer to **TASK 24-00-00-860-801**).
- B. Disconnect the electrical GPU (Refer to **TASK 24-00-00-860-801**).
- C. Install the protective covers on the total and static pressure probes.



- D. Engage the following circuit breakers:

- "LH AOA HEAT" (**L31FL**),
- "RH AOA HEAT" (**R31FL**),
- "LH PITOT HEAT" (**L1FL**),
- "RH PITOT HEAT" (**R1FL**),
- "LH STATIC HEAT" (**L11FL**),
- "RH STATIC HEAT" (**R11FL**),
- "ST BY PITOT" (**21FL**).

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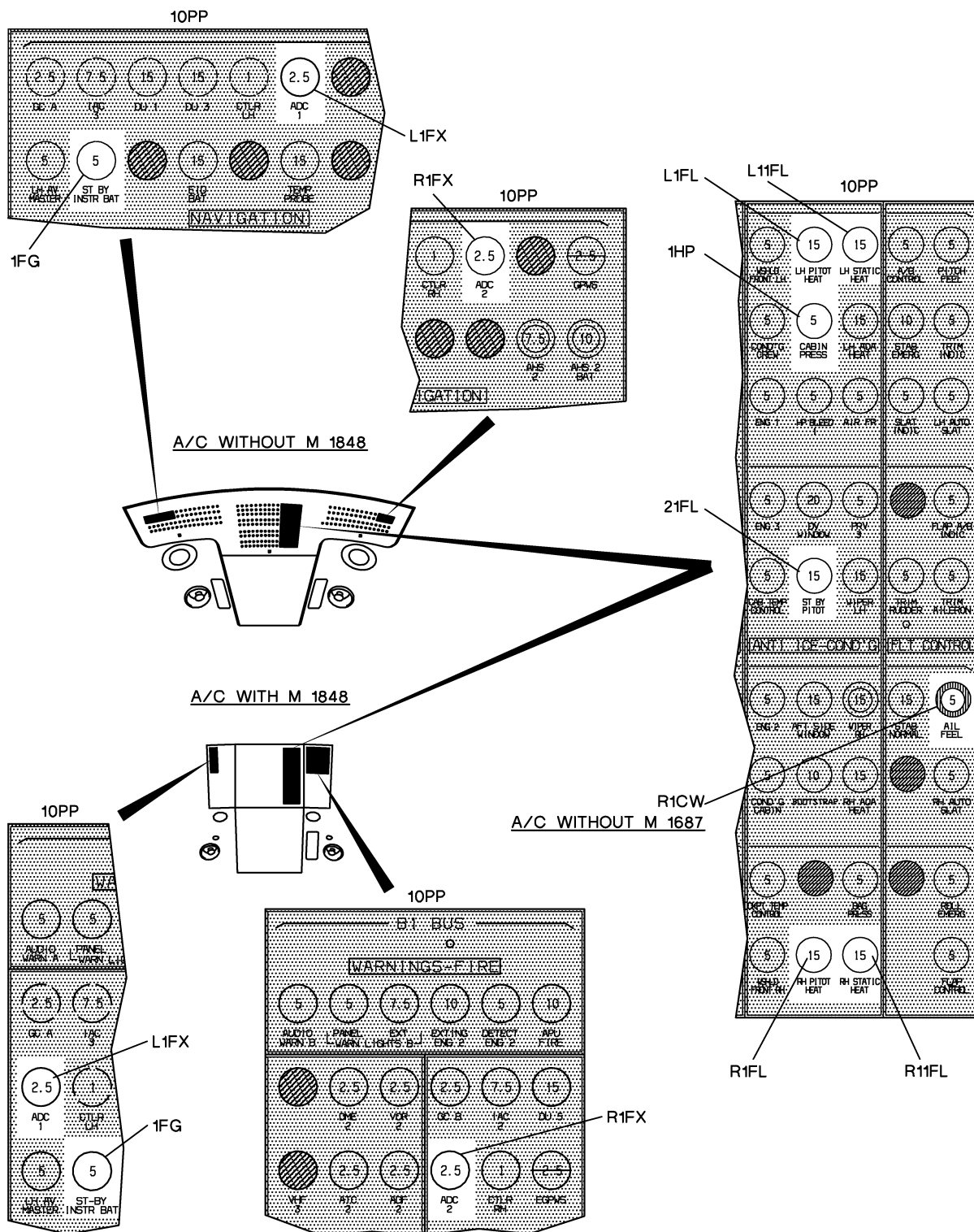


Figure 1: LOCATION OF CIRCUIT BREAKERS

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ALTITUDE SELECTED (ft)	PFD 1		PFD 2		STAND-BY ALTIMETER		MIN. ALTITUDE (ft)	MAX. ALTITUDE (ft)	Zd-Zm (ft)
	ALTITUDE READING IN CLIMB (ft)	ALTITUDE READING IN DESCENT (ft)	ALTITUDE READING IN CLIMB (ft)	ALTITUDE READING IN DESCENT (ft)	ALTITUDE READING IN CLIMB (Zm) (ft)	ALTITUDE READING IN DESCENT (Zd) (ft)			
-1000						/	-1020	-980	/
0						/	-20	20	/
							/	/	±30
500						/	480	520	/
1000						/	980	1020	/
1500						/	1475	1525	/
2000						/	1970	2030	/
3000						/	2970	3030	/
4000						/	3965	4035	/
6000						/	5960	6040	/
8000						/	7940	8060	/
10,000						/	9920	10,080	/
12,000						/	11,910	12,090	/
14,000						/	13,900	14,100	/
16,000						/	15,890	16,110	/
18,000						/	17,880	18,120	/
20,000						/	19,870	20,130	/
							/	/	±75
22,000						/	21,860	22,140	/
25,000						/	24,845	25,155	/
							/	/	±75
29,000 (*)					/	/	28,975 (*)	29,025 (*)	/
30,000						/	29,820	30,180	/
30,000 (*)					/	/	29,975 (*)	30,025 (*)	/
35,000						/	34,795	35,205	/
35,000 (*)					/	/	34,971 (*)	35,029 (*)	/
40,000						/	39,770	40,230	/
40,000 (*)					/	/	39,966 (*)	40,034 (*)	/
41,000 (*)					/	/	40,965 (*)	41,035 (*)	/
45,000						/	44,745	45,255	/
50,000						/	49,720	50,280	/
51,000						/	50715	51285	/

NOTE : THE VALUES FOLLOWED WITH AN ASTERISK ARE ONLY TO BE ACCOUNTED FOR IF AIRCRAFT ARE OPERATED IN RVSM CONDITIONS (A/C WITH SB F900EX-4)

Figure 2: TABLE 3 - ALTITUDE READINGS

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ALTITUDE SELECTED (ft)	ALTITUDE READING WITH BUZZER "ON" (ft)	ALTITUDE READING WITH BUZZER "OFF" (ft)	DIFFERENCE BETWEEN ALTITUDE READINGS WITH AND WITHOUT BUZZER (ft)	TOLERANCE (ft)
1000				± 70
2000				± 70
3000				± 70
6000				± 70
10,000				± 80
16,000				± 90
20,000				± 100
25,000				± 120
30,000				± 140
35,000				± 160
40,000				± 180
50,000				± 250
51,000				± 285

Figure 3: TABLE 4 - ALTITUDE READINGS FROM STAND-BY ALTIMETER

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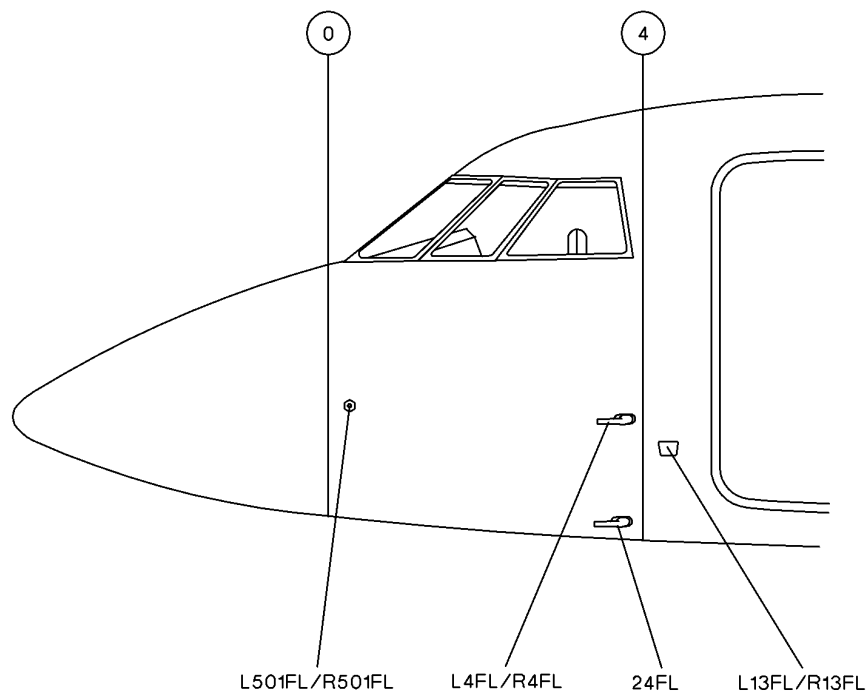


Figure 4: LOCATION OF AIR DATA PROBES

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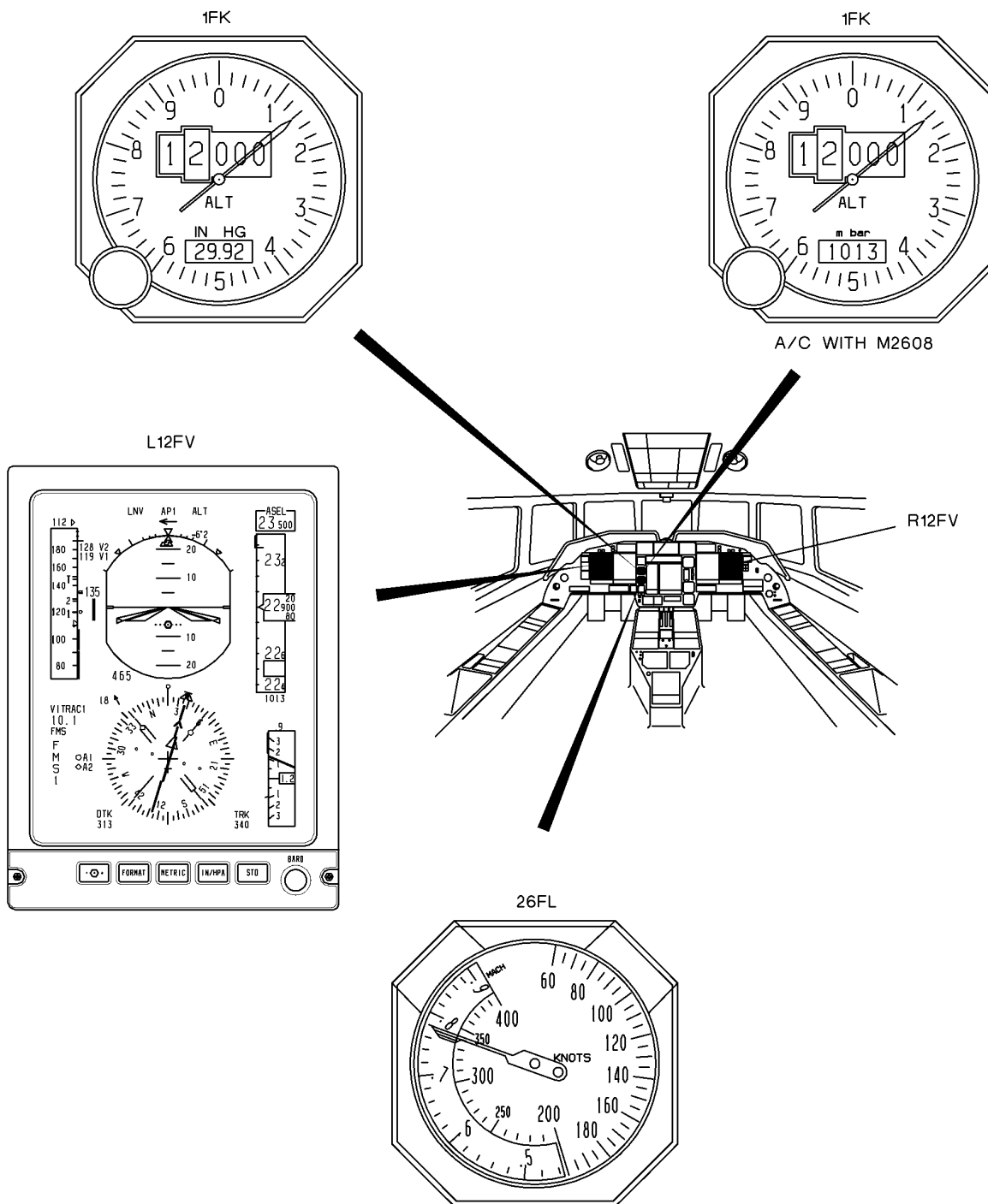


Figure 5: LOCATION OF COCKPIT CONTROLS