

7.11 - AIR DATA SYSTEM AND INSTRUMENTS (Figure 7.11.1)

Airplane air data system consists of :

- two separate static pressure systems supplying the altimeters, airspeed and vertical speed indicators. They also provide a static pressure reference to the ΔP cabin and to the Autopilot system Air Data Computer (ADC).

System 1 is backed up by an alternate system which operation is controlled by a switching valve (normal / alternate) attached to instrument panel under R.H. control wheel. In case of obstruction or icing of ports, this selector isolates airplane normal static system. When selector is on alternate position (pulled rearwards), static pressure is picked from a port located in airplane rear fuselage.

- two separate dynamic pressure systems supplying the airspeed indicators systems, V_{MO} audio warning detector and the Autopilot system Air Data Computer (ADC).

STATIC PRESSURE SYSTEMS**Primary systems**

Two dual static ports (one on either side of the fuselage tail part) supply a dual system routed towards the cockpit.

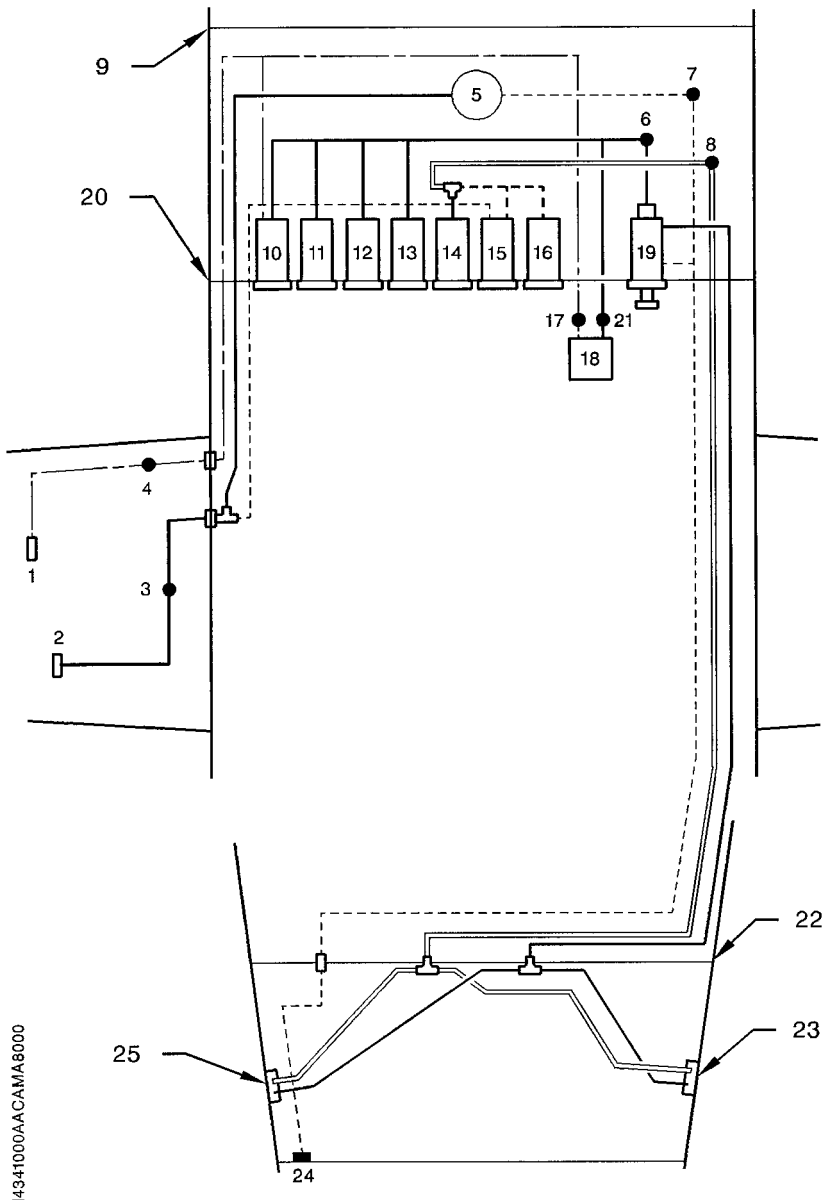
System 1 is connected to the switching valve (normal / alternate) which supplies the encoding altimeter, the ΔP cabin, vertical speed 1 and airspeed 1 indicators and the Autopilot system Air Data Computer (ADC).

System 2 is directly connected to the second altimeter and optional equipment.

Both systems feature a drain valve located under the instrument panel on R.H. side. On static system 1, an additional drain is installed on ADC system. It is attached under floor and attainable through emergency landing gear door.

- 1) Pitot 1
- 2) Pitot 2
- 3) Pitot 2 dynamic drain
- 4) Pitot 1 dynamic drain
- 5) V_{MO} detector
- 6) Static drain
- 7) Emergency static drain
- 8) Static drain
- 9) FWD pressure bulkhead
- 10) Airspeed indicator 1
- 11) Encoding altimeter 1
- 12) Vertical speed indicator 1
- 13) ΔP cabin
- 14) Altimeter 2
- 15) Airspeed indicator 2
- 16) Vertical speed indicator 2
- 17) ADC dynamic drain
- 18) Autopilot system Air Data Computer (ADC)
- 19) Static source (Normal / Alternate)
- 20) Instrument panel
- 21) ADC static drain
- 22) Rear pressure bulkhead
- 23) R.H. static ports
- 24) Emergency bleed on frame C19
- 25) L.H. static ports

Figure 7.11.1 (1/2) - AIR DATA SYSTEM



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Figure 7.11.1 (2/2) - AIR DATA SYSTEM

Alternate static source

The alternate static port located in the rear fuselage supplies a system routed to the switching valve (normal / alternate) in order to replace static system 1 and also supplies the V_{MO} warning.

The alternate line incorporates a drain plug located under the instrument panel on R.H. side.

DYNAMIC PRESSURE SYSTEM

Two heated pitot probes are installed under the L.H. wing. The first one supplies the airspeed indicator 1 and the Autopilot system Air Data Computer (ADC).

The second one supplies the V_{MO} audio warning and optional equipment.

Both lines incorporate a drain plug located in the L.H. wing root. On dynamic system 1, an additional drain is installed on ADC system. It is located under the floor and is accessible from emergency landing gear door.

Pitot heating

Pitot heating is controlled by "PITOT 1 HTR" and "PITOT 2 & STALL HTR" switches, installed on "DE-ICE SYSTEM" panel.

"PITOT 1", "PITOT 2" and / or "STALL HTR" warning lights, located on the advisory panel are illuminated when corresponding switch is set to "OFF" or if heating system does not operate when the switch is set to "ON".

NOTE :

Do not use heating during prolonged periods on ground to avoid pitot overheat.