

VACUUM SYSTEM - DESCRIPTION AND OPERATION

1. General

- A. This section provides description and operation information on the components used to distribute and indicate vacuum air (suction) for use in the horizon and directional gyros.
- B. For vacuum system schematic, refer to Figure 1.

2. Description and Operation

- A. The vacuum system consists of a vacuum ejector, vacuum relief valve, air filter, suction gage, low- vacuum warning switch and low-vacuum warning annunciator light. The vacuum system furnishes vacuum air (suction) for operation of horizon gyro and directional gyro. A brief description of the system components follows:
 - (1) The bleed air pressure regulator provides regulated bleed air for the vacuum system, (Refer to Chapter 36, Pneumatic System - General).
 - (2) Bleed air flowing through an orifice in the vacuum ejector located on left firewall creates the necessary suction to operate instruments.
 - (3) The vacuum relief valve incorporates an adjustment to obtain correct vacuum for proper system operation and is located on left aft side of firewall.
 - (4) The air filter provides continual filtering for proper operation of vacuum system and is located on left aft side of firewall.
 - (5) The suction gage, located on left side of instrument panel is calibrated in inches of mercury and indicates suction available for operation of horizon and directional gyro indicators.
 - (6) A red vacuum low warning light is installed on the annunciator panel to warn pilot of a possible low vacuum condition existing in the vacuum system. Illumination of light is caused when suction is less than approximately 3.0inches Hg. and activation of the warning switch occurs.
 - (7) The horizon gyro indicator is mounted in the left removable flight panel and provides the pilot with a visual indication of the airplane's pitch and roll attitude with respect to the earth. Optional horizon gyro will also provide the autopilot with electrical roll and pitch signals.
 - (8) The directional gyro indicator is mounted directly below the horizon gyro indicator and displays a stable indication of the airplane heading to the pilot when properly set to agree with the magnetic compass. Optional directional gyros also provide the autopilot with electrical heading information.

Figure 1 : Sheet 1 : Vacuum System Schematic

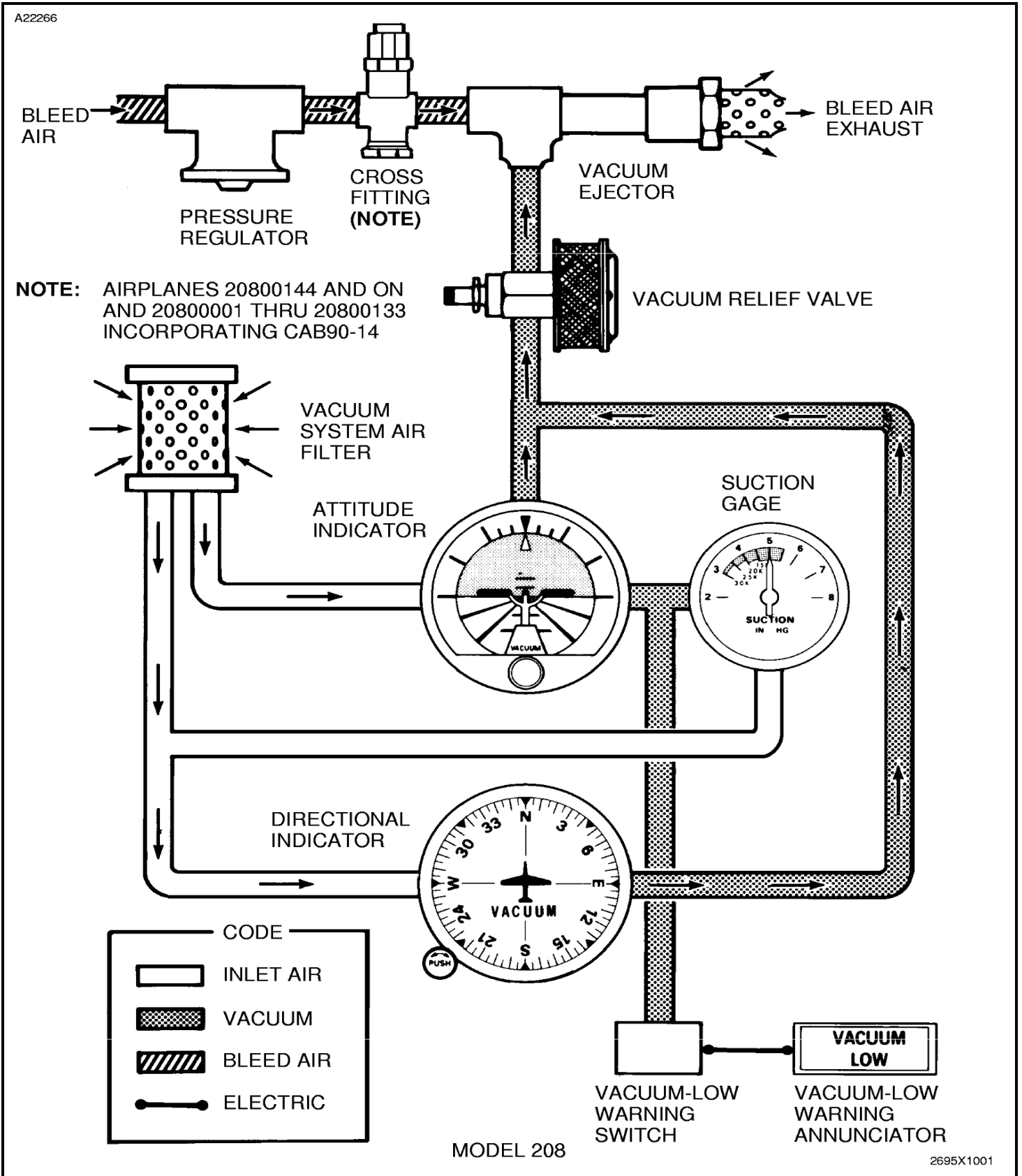


Figure 1 : Sheet 2 : Vacuum System Schematic

