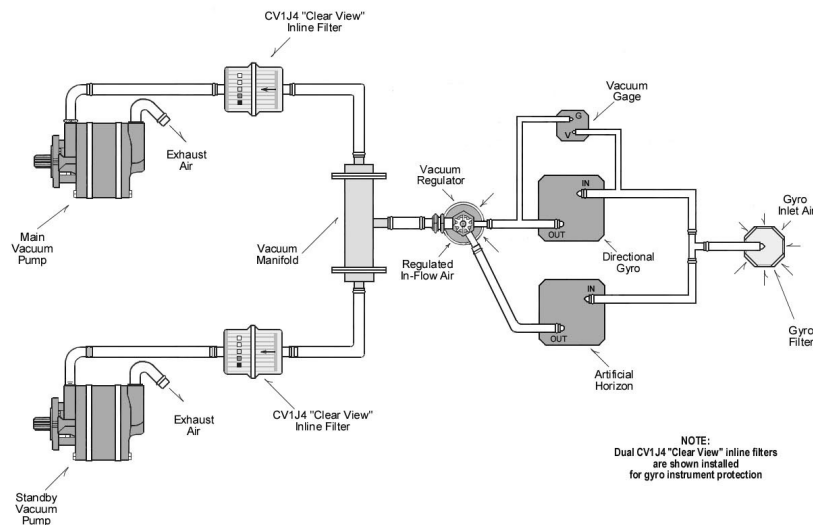


"A Clear View"

Into Vacuum Systems - Construction & Operation

Dual Pump - Vacuum Gyro Instruments



Description

With the importance of system redundancy for flight during IFR conditions, the above illustration depicts a single engine aircraft with standby pump installed.

Dual CV1J4 "Clear View" inline filters are shown installed for gyro instrument protection from carbon contamination in the event of air pump failure

Operation

Vacuum created by the pump is regulated by the 2H3-[] valve. Vacuum in excess of the desired 4.7" to 5.2" Hg. is diluted by the flow of ambient air into the system through the regulator. Air flows from the aircraft cabin, through the inlet filter and gyro instruments, to the system vacuum regulator. Here, any additional air needed by the constantly rotating air pump rotor is added to the system. A sponge filter is provided around the regulator inlet ports to prevent foreign material (liquid vapor or solid debris) from entering the system

The internal check valves of the vacuum manifold prevent air from entering the system from the "non-operating" pump side of the system.

Increasing spring tension on the vacuum regulator will result in higher system vacuum at the regulator and higher differential pressure on the air pump. This condition will result in shorter pump life.

NOTE:

The gyro instrument vacuum gage does not record air pump vacuum !

Short Pump Life?

Pump inlet vacuum should not exceed 1.5" Hg. (approx. 3/4 psi) more than value indicated on the gyro instrument vacuum gage. If the vacuum gage is indicating a low value, this may be due to dirty filters, plugged or kinked hoses, loose hose connections, deteriorated hose, or even a bad vacuum gage.

Remember !

**If the regulator needs adjustment...
Your system needs maintenance**