

Chapter 37

VACUUM

FBA-2C1, FBA-2C2, FBA-2C3
FBA-2C4, FBA-2C3T, FBA-2C4T

Found Aircraft Canada
Maintenance Program FAC2-M200

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FBA-2C1, FBA-2C2, FBA-2C3
FBA-2C4, FBA-2C3T, FBA-2C4T

Found Aircraft Canada
Maintenance Program FAC2-M200

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FBA-2C1, FBA-2C2, FBA-2C3
FBA-2C4, FBA-2C3T, FBA-2C4T

Found Aircraft Canada
Maintenance Program FAC2-M200

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37 VACUUM

37-00 VACUUM SYSTEM

The Vacuum System provides the suction necessary to operate the attitude indicator and the heading indicator. It consists of an engine-driven vacuum pump, a pressure regulator, a vacuum relief-valve, a suction gauge (2C1 & 2C2), an inlet air filter, and the vacuum-operated instruments (Ref: Figure 37-00-01 Sheet 1).

The Vacuum System's instruments are depicted and described below. They are located on the Flight Instrument Panel. See Figure 34-00-01~34-00-03 for location.

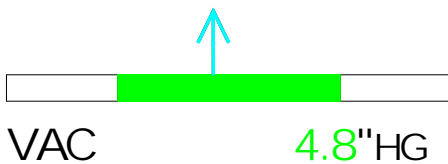
37-00-10 Vacuum System Instruments

Vacuum (Suction) Gauge (2C1 & 2C2)



The suction gauge is calibrated in inches of mercury and indicates suction available for the operation of the attitude indicator and directional gyro. The suction range is presented by a point indicator with a scale indexed at 4, 5, and 6 with the optimum range indicated as the green band on the gauge. The desired suction range is 4.5 to 5.5 inches of mercury. Normally, a suction reading out of this range may indicate a system malfunction or improper adjustment. In such a case, the attitude indicator and directional gyro should not be considered reliable.

Vacuum (Suction) (2C3 & 2C4)



The Vacuum gauge is represented as a horizontal strip with a digital readout on the engine the MVP-50 Engine Monitor. The suction is calibrated in inches of mercury and indicates suction available for the operation of the attitude indicator and directional gyro. The suction range is 4.5 to 5.2 inches of mercury and is represented by the green band shown on the strip gauge. The strip gauge features an arrow indicating its current operating level. Also the arrow allows you to interpret trend information by virtue of its orientation either up or down. A second indication is a digital value shown below and to the right of the strip gauge. Note the digital value will be given in the same colour as the corresponding strip gauge. In the example shown, the digital value is shown in green as the value is within specifications. Normally, a suction reading out of this range may indicate a system malfunction or improper adjustment. In such a case, the attitude indicator and directional gyro should not be considered reliable.

Attitude Indicator (All Models)



The attitude indicator provides an artificial horizon for the pilot. Bank angle is presented by a pointer at the top of the indicator relative to the bank scale indexed at 10°, 20°, 30°, 60°, and 90° either side of the center mark. Pitch and roll attitudes are presented by an airplane superimposed over a symbolic horizon area divided into two sections by a white horizon bar. The upper blue area and the lower brown or black area have arbitrary pitch reference lines useful for pitch attitude control. A knob at the bottom of the instrument is provided for in-flight adjustment of the indicator airplane to the horizon bar for a more accurate pitch attitude indication.

Heading Indicator (All Models)



The heading indicator displays the airplane's heading on a compass card in relation to a fixed simulated airplane image and index. Since the gyro will naturally precess over time. The compass card should be aligned with the magnetic compass just prior to takeoff. The compass card should periodically be readjusted. A knob on the lower left corner of the instrument is used to adjust the compass card.

37-00-20 Vacuum System Installation

Detailed description of Vacuum System Installation is shown on Figure 37-00-01 Sheet 1~3 (2C1 & 2C2) and Figure 37-00-02 (2C3 & 2C4).

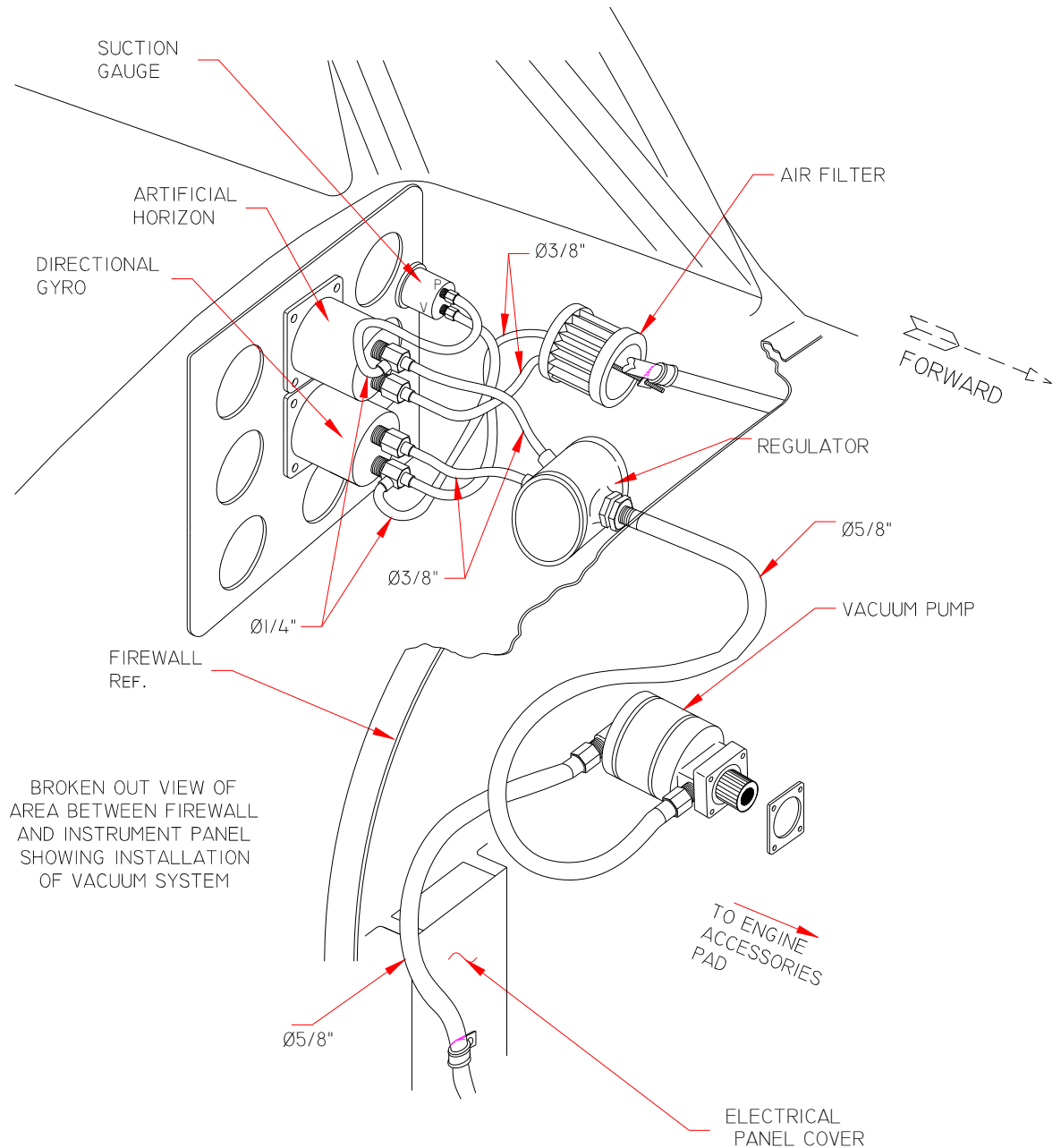


Figure 37-00-01: Vacuum System Description (Sheet 1 of 3)

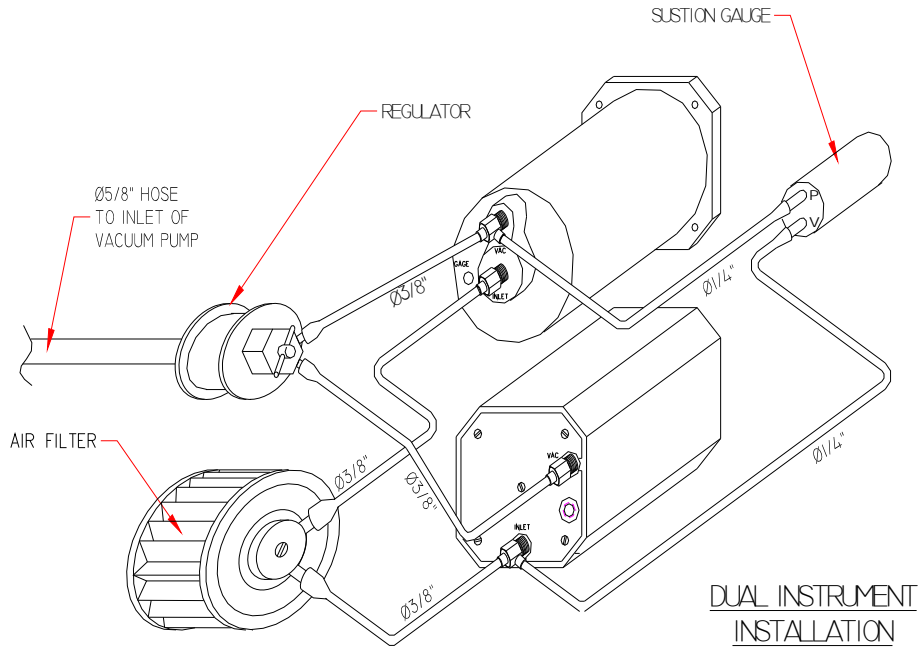


Figure 37-00-01: Vacuum System Dual Instrument Installation (Sheet 2 of 3)

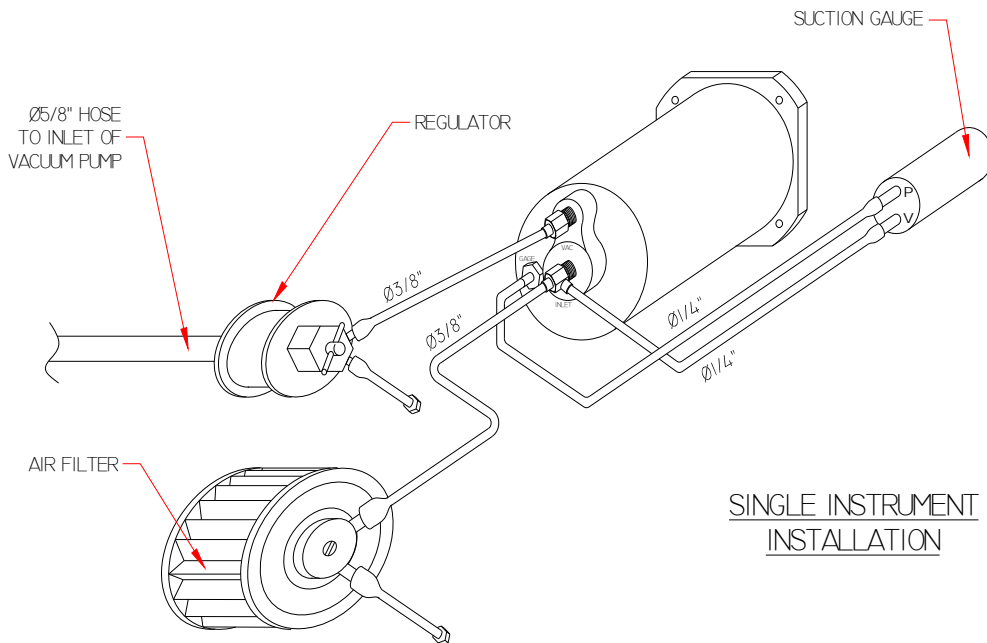


Figure 37-00-01: Vacuum System Single Instrument Installation (Sheet 3 of 3)

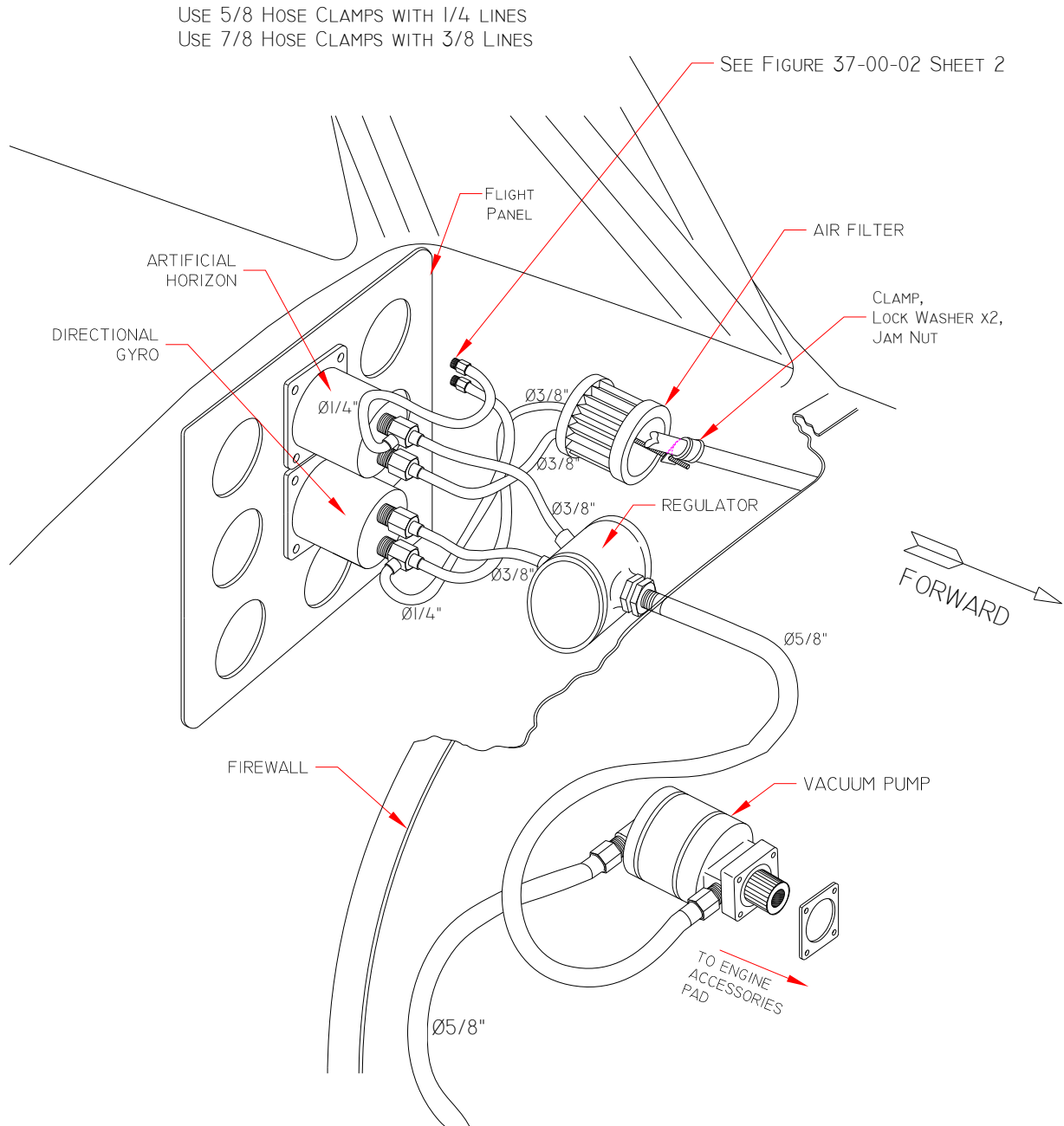


Figure 37-00-02: Vacuum System Description -2C3 &2C4 (Sheet 1 of 2)

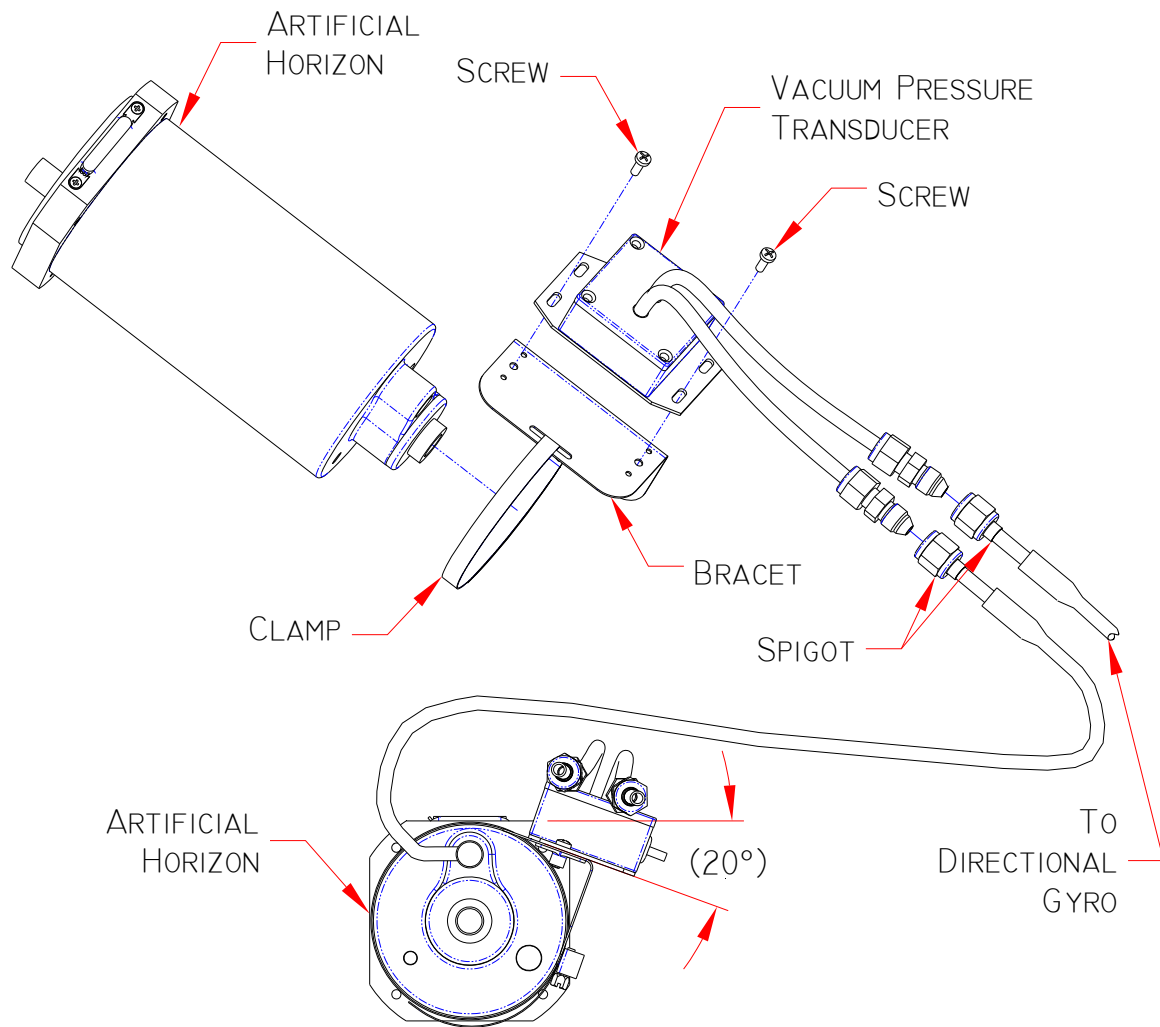


Figure 37-00-02: Vacuum System Description -2C3 &2C4 (Sheet 2 of 2)