



Aircraft And Medical Instruments

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Mechanical Manifold Pressure Indicator

7-100,7-200,7-300

Description:

A manifold pressure gauge indicates the pressure in the intake manifold of the aircraft. For non turbo engines it will always be less than atmospheric pressure when the engine is running.

UMA manufactures two types of mechanical manifold pressure gauges, one type has a single sensing diaphragm and the other uses a dual diaphragm system.

Manifold pressure is used with engine RPM to provide the pilot with an indication of the power his engine is producing.

Connections: Install line to intake manifold or to a port on a cylinder used for this connection.

Some Lycoming engines have a port in each cylinder which may be used for either a primer or a manifold pressure connection.

Connect: **Port "V" to line, use 1/8" NPT fitting.**

To dampen needle fluctuations, use restricted type fittings to reduce pressure impulses, and to reduce possibility of fuel flowing into gauge. Also install a loop in the line with a drain valve at the bottom and drain fluids occasionally.

Inaccurate Readings?

Many people do not understand what a manifold gauge should read. Here is how it works. A Manifold Pressure Indicator reads **Absolute Pressure**, simply, the weight of air on the gauge, uncorrected for anything. That pressure, when corrected for altitude to sea level, for temperature, and for gravity, is the pressure used to set the altimeter called "Altimeter Setting", "Sea Level Pressure", or "Barometric Pressure". This is the pressure reported in aviation and weather reports. The only time the Manifold Pressure and the barometric window on the altimeter will agree is on the ramp at **sea level** with the engine off.

NOAA's National Weather Forecast Office in El Paso has an Altimeter Setting calculator on their website:

<http://www.srh.noaa.gov/elp/wxcalc/altimetersetting.shtml>

To check your gauge, you will need to use the Station Pressure as measured by a mercury barometer rather than the number from the TV or weather office.

On a standard day in Denver, (alt. setting 29.92), your manifold gauge should read about 25"!