

Combustion Air Pressure Switch Check – Measurement

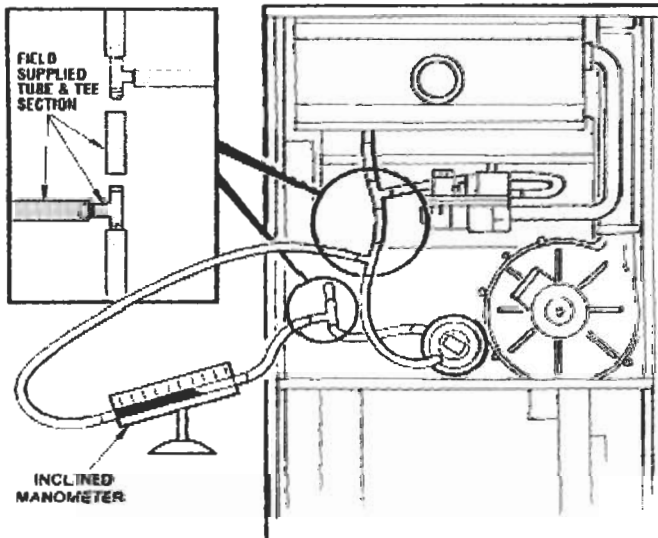
The combustion air pressure switch proves operation of the induced draft motor and that adequate air is provided to ensure complete combustion of the fuel being supplied to the burner.

The induced draft motor and vent system performance can be checked by connecting an inclined manometer to the pressure switch hose and measuring the operating static pressure.

The direct vent furnaces have differential pressure switches and require two connections to the manometer. See figure below.

The measured static pressure reading should be compared to the pressure switch specifications. If the measured static pressure meets or exceeds the specifications and the switch contacts will not transfer the following items should be checked:

1. Switch out of calibration
2. Defective pressure switch
3. Moisture in pressure switch tubing
4. Condensate trap or drain restricted (90% furnaces)
5. Incorrect switch installed



If the measured static pressure reading does not meet the switch specifications, the following items should be checked:

1. Pressure switch hose/tubing for cracks or loose connections.
2. Inducer wheel for corrosion or loose blades.
3. Inducer for tight bearings or loose inducer wheel.
4. Vent system design (oversized/undersized/long lateral runs)
5. High altitude switches required at 4,000 ft. or more above sea level.
6. Crack in heat exchanger.
7. Flue box gaskets leaking.

Note:

The switch setting and the last three digits of the factory drawing number are stamped on the switch.

Example: "PO1 , - .50" WC.

The "PO1 and "PO2 must not be interpreted as "PS1 and "PS2 on two stage models.

SYSTEM VACUUM

OPEN COMBUSTION MODELS:

COLD START PRESSURE _____ " W.C.
 RUNNING PRESSURE (WARM) _____
 LO HEAT _____ " W.C.
 HI HEAT _____ " W.C.

DIRECT VENT MODELS ONLY:

COLD START PRESSURE _____ " W.C.
 RUNNING PRESSURE (WARM) _____ " W.C.

*Pressures can be measured separately for diagnosis

BURNER BOX PRESSURE
 LO HEAT - COLD _____ " W.C.
 LO HEAT - WARM _____ " W.C.
 HI HEAT - WARM _____ " W.C.

COLD HEADER PRESSURE
 LO HEAT - COLD _____ " W.C.
 LO HEAT - WARM _____ " W.C.
 HI HEAT - WARM _____ " W.C.

VENT CONFIGURATION - Describe the longest run (either the vent or the combustion air)

PIPE DIAMETER _____ inch
 OVERALL LENGTH _____ feet
 90° ells Long radius _____ Short radius _____
 45° ells Long radius _____ Short radius _____
 TERMINAL: BAYVENT100 BAYVENT200
 OTHER: BAYVENT800