

# Service Bulletin

**SF-042**

DATE: February 10, 2011  
 TO: All Service and Parts Managers  
 SUBJECT: Gas Valve Diagnostics

In the event of a non-functioning 2 stage gas valve on a Goodman® or Amana® brand furnace, please use the following information to properly diagnose and determine if the gas valve is faulty or if there is another problem such as an open front-cover pressure switch. Two stage gas valves are used on modified two stage (hybrid) furnaces and on communicating model furnaces. For a two stage gas valve to open it must at least be powered between the Low (Main) and Common terminals. Our communicating model furnaces will light in low fire. Hybrid models are designed to light in high fire and therefore will be powered on the low and high terminals simultaneously. A proper volt meter reading to the gas valve on a hybrid furnace would show:

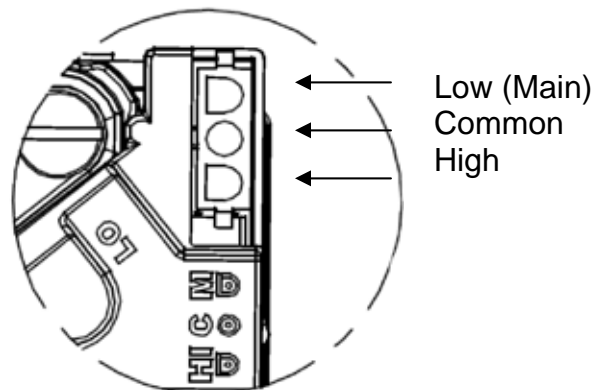
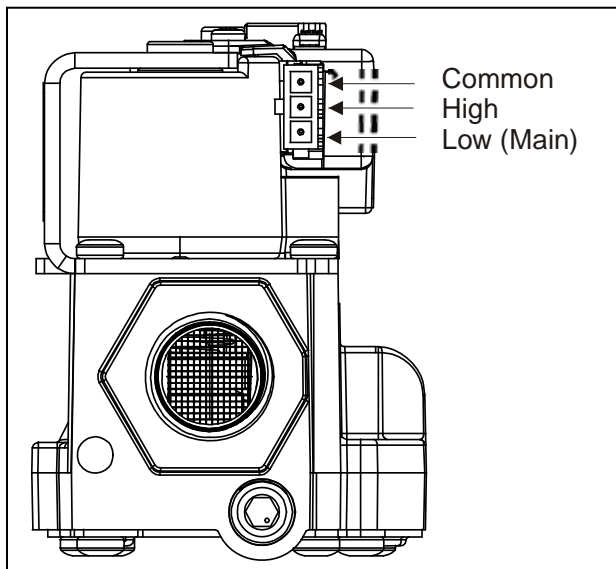
- 24 volts between low and common terminals of the gas valve and 24 volts between high and common terminals of the gas valve.

It is important to note that 24 volt power to the high fire solenoid alone will not open a gas valve even though there may be an audible clicking sound.

Gas pressure must be verified on the inlet pressure side (houseline) and outlet pressure side (manifold) of the gas valve by using a manometer. Please see the charts on page 2 for proper gas pressures.

## Honeywell 2 Stage

## White-Rodgers 2 Stage



| Inlet Gas Supply Pressure |                     |                    |
|---------------------------|---------------------|--------------------|
| Natural Gas               | Minimum: 5.0" w.c.  | Maximum:10.0" w.c. |
| Propane Gas               | Minimum: 11.0" w.c. | Maximum:13.0" w.c. |

| Manifold Gas Pressure |            |                  |            |
|-----------------------|------------|------------------|------------|
| Gas                   |            | Range            | Nominal    |
| Natural               | Low Stage  | 1.6 - 2.2" w.c.  | 1.9" w.c.  |
|                       | High Stage | 3.2 - 3.8" w.c.  | 3.5" w.c.  |
| Propane               | Low Stage  | 5.7 - 6.3" w.c.  | 6.0" w.c.  |
|                       | High Stage | 9.7 - 10.3" w.c. | 10.0" w.c. |

Before any gas valve is determined to be faulty, the harness connections to the valve and adaptor harness must be checked for proper seating. Honeywell gas valves are currently a required return warranty item though Service Bench.

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