AES Technical Bulletin
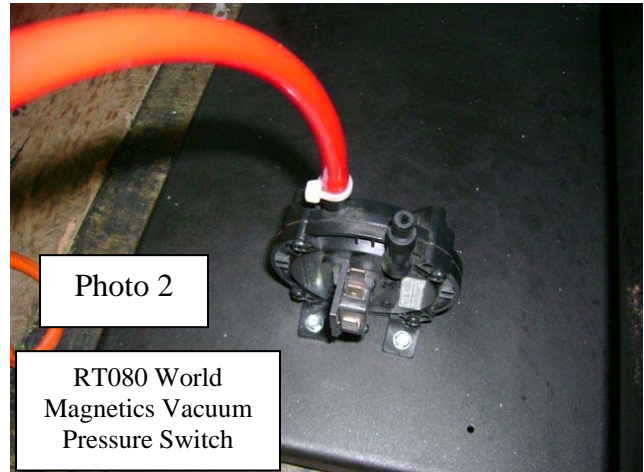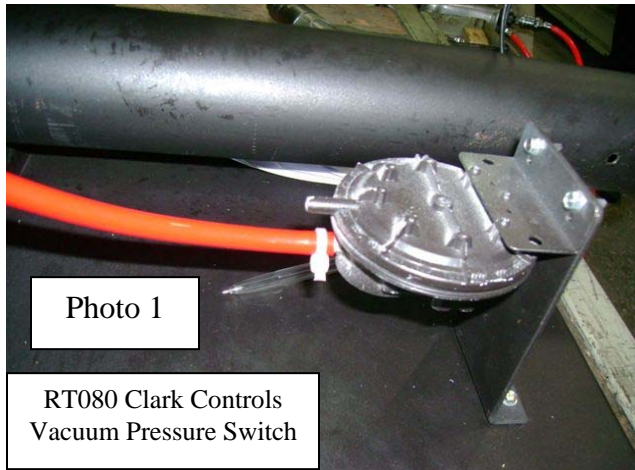
RT080, Vacuum Pressure Switch

**Product models covered:** MagnuM Baby Countryside, Winchester, T-40 & 6500 Furnace

Topic: This technical bulletin will be addressing part number RT080, the vacuum pressure switches the difference between the two vacuum pressure switches used, how to install the vacuum pressure switches, how to bypass the vacuum pressure switches and what causes them to trip and what to do so that normal operation can be resumed.

Vacuum Pressure Switches Used: Both vacuum pressures switch use the same part number, RT080. Photo 1 is the Clark Controls vacuum pressure switch (bracket installed on switch). Photo 2 is the World Magnetics vacuum pressure switch. We recommend that every 2-3 years check the vacuum pressure switch and if it is not operating properly replace it. If the appliance is in a high humidity environment, in the basement, etc. the contacts will rust sitting over the summer and then they might not work properly.

Photo 1

RT080 Clark Controls Vacuum Pressure Switch

Photo 2

RT080 World Magnetics Vacuum Pressure Switch

How to install the Vacuum Pressure Switches:

♦ The RT080 Clark Controls Vacuum Pressure Switch has a bracket attached. It must be installed horizontally to the base of the stove, with 2 screws (#8 x 1/2 tek, ZP 1/4" hex head).

N.O. 3

N.C. 2

COM 1

RT080 Clark Controls Vacuum Pressure Switch
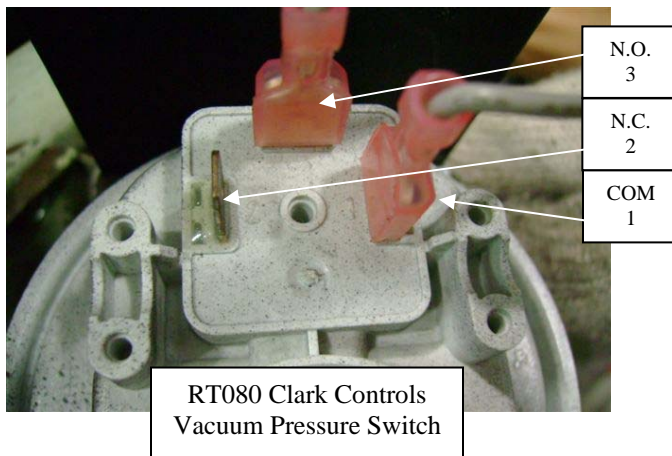
Attach one grey wire to 'Com 1' and one grey wire to 'NO 3'. Attached hose to bottom connection 'H'.

♦ The RT080 World Magnetics Vacuum Pressure Switch is installed vertically to the base of the stove, with 2 screws (#8 x 1/2 tek, ZP 1/4" hex head).

When mounting this vacuum pressure switch verify it has been positioned correctly .03" from the top approximately 1 to 1 ½ exposed threads should be shown above the Allen head screw. Add a small amount of thread loc to the Allen head screw after proper positioning.

N.O. 3

N.C. 2

COM 1

RT080 World Magnetics Vacuum Pressure Switch

Attach one grey wire to 'Com 1' and one grey wire to 'NO 3'. Attached hose to back connection 'H'.
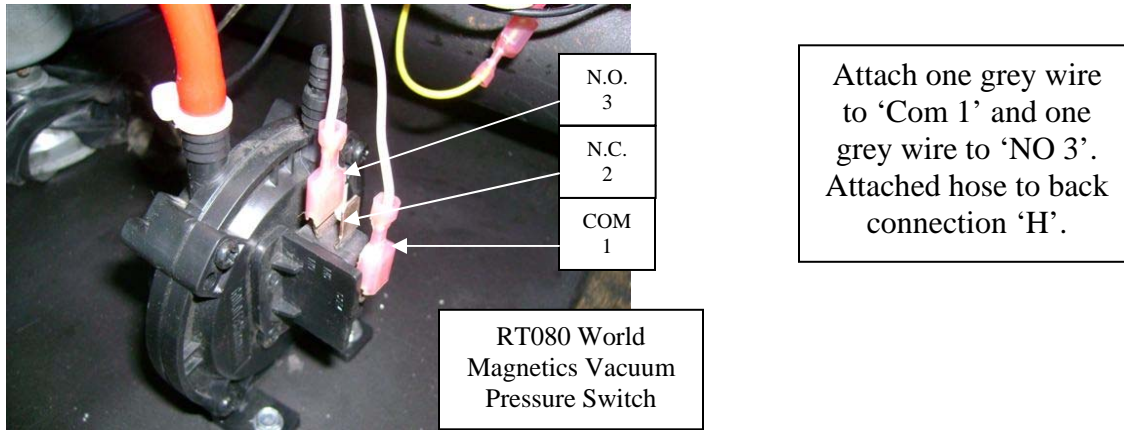
SWITCH BYPASS mode – Gray wires connected to COM and N.C. terminals

Procedure: Make sure that the unit is unplugged from power.
- Unplug the two gray wires going to the vacuum pressure switch.
- Plug the two gray wires into a jumper wire or bypass switch.

The vacuum switch is a critical piece of equipment for the safe operation of the stove. The vacuum switch should <u>NOT</u> be left in the bypassed position. The only time the vacuum switch should be bypassed is when a factory trained technician is testing the stove.

What causes a vacuum pressure switch to trip?
If a vacuum pressure switch trips or shuts the unit down it is an indication of;
- a plugged venting or exhaust system
- improper air adjustment or blocked combustion air inlet
- outside air not hooked up or not balanced with the home
- venting placed on a wind ward side of a home or obstructed
- improper make up air in the home or negative pressure in home

The above listed situations need to be addressed immediately to allow proper efficiency and normal operation of the unit. Follow the guidelines stated in the owner's manual or contact your local dealer or service technician for instructions.

The vacuum safety sensor will continually shut an appliance down if the unit's combustion air or venting system is not balanced. Safety codes require that the fuel feed will shut off if there is any indication that smoke could be drawn into a home. If the switch is tripping it is because of a drop in vacuum pressure, not a faulty switch. Excess tripping of the vacuum sensor can be caused by;
- a poorly designed or plugged intake system
- the venting system plugged or not designed correctly
- improper maintenance causing plugging of the unit
- negative pressure in the home, home not balanced

These are serious issues that need to be resolved as soon as possible to allow proper function of the unit. Always find the reason that the switch is tripping and make sure to check the home for proper balance. Follow the guidelines stated in the owner's manual or contact your local dealer or service technician for instructions. Never leave you stove in bypass mode or you may cause damage to your home. Bypass mode is ONLY for testing purposes.