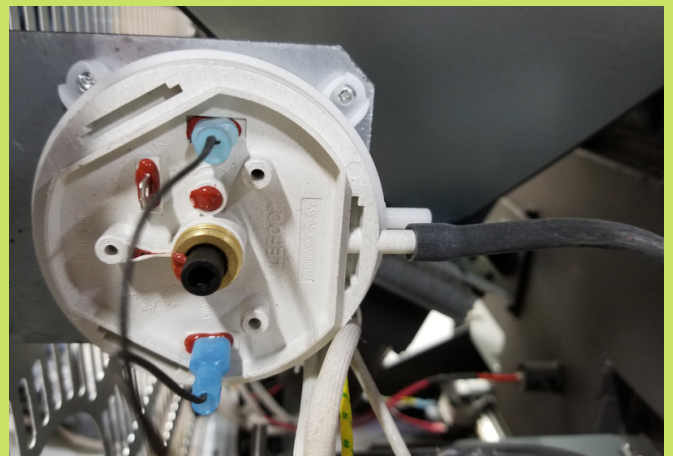


Vacuum Switch



Location:

On all HP22, HP22N, HP61, and HP50 models - the Vacuum switch is located on the left side of the stove (when facing the front) mounted on a plate several inches above the exhaust motor housing. On the HP22i Insert model, the switch is located on the right side (when facing the front). On the HP21, the switch is located on the lower right side and the switch itself faces toward the back of the stove.



Function:

The purpose of the vacuum switch is to detect the negative pressure in the fire chamber caused by the exhaust fan. When the exhaust fan is on, it creates a slight draw through the hose connected to the side of the switch which will tug on an internal diaphragm, thus causing the switch to “close” and report to the motherboard. If the vacuum switch does not detect negative pressure, it will stop the auger from feeding pellets



Troubleshooting:

When the switch is operating correctly, there will be a “V” symbol visible on the bottom of the main screen on the control panel whenever the exhaust fan is running. If the “V” is not present, follow these steps:

- 1. Check Doors:** Ensure that the front door and bottom ash pan are latched tightly, and that the gaskets are present and intact. When the front door, or ash pan are open, this will cause a loss of pressure and the vacuum switch will not report.
- 2. Readjustment:** When the stove is powered, but in the off position (no fans running), turn the black adjustment post/dial in the center of the switch clockwise until it is finger tight. (the dial may recess slightly, this is normal). Turn the stove on so that the exhaust fan comes on, then slowly turn the black dial counter -clockwise until you see the “V” reappear on the screen. When this happens, turn it another ¼ to ½ turn counter-clockwise to allow play at lower levels.
- 3. Sticky Diaphragm:** Sometimes the diaphragm inside vacuum switches will float too far to the back side and suction itself against the inner housing. When this happens, it is usually a simple matter of tapping the housing a few times with a rod or screw-driver handle to vibrate the diaphragm loose from its stuck position. Use this technique along with an adjustment for best results.
- 4. Hose:** If the small rubber vacuum hose or metal elbow has a hole or clog in it, it will not accurately be able to detect the difference in pressure. Ensure that the rubber and metal elbow hoses are intact, have no leaks, and are free of obstruction. (You can disconnect the rubber hose from the switch side and blow into it, back towards the burn area to check for obstructions)
- 5. Airflow:** Many times, the vacuum switch is not the problem. A vacuum switch not engaging could also be the result of limited airflow (usually caused by channels and pathways within the stove getting clogged) A thorough cleaning of the stove may restore perfect functionality to this switch. (See “Cleaning” guide)
- 6. Bypass:** In a worse case scenario, if you are unable to get the vacuum switch to engage, you can temporarily bypass it. *Please note that you do so at your own risk. Simply connect the 2 lead wires together using a small paperclip or metallic tab. While connected together the V should display on the screen.