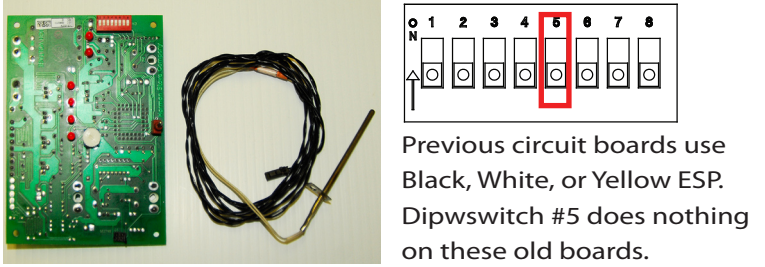


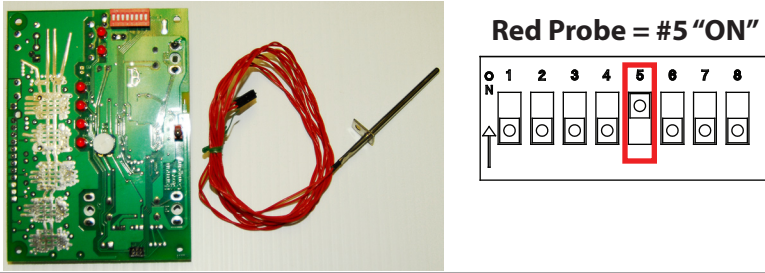
## New ESP Control System- (Circuit Board & Probe)

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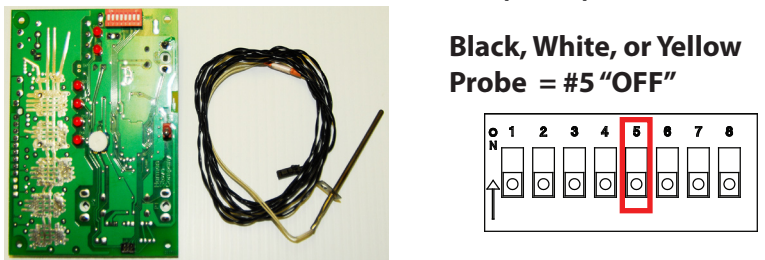
**Old Circuit Board - (FIG 1)**



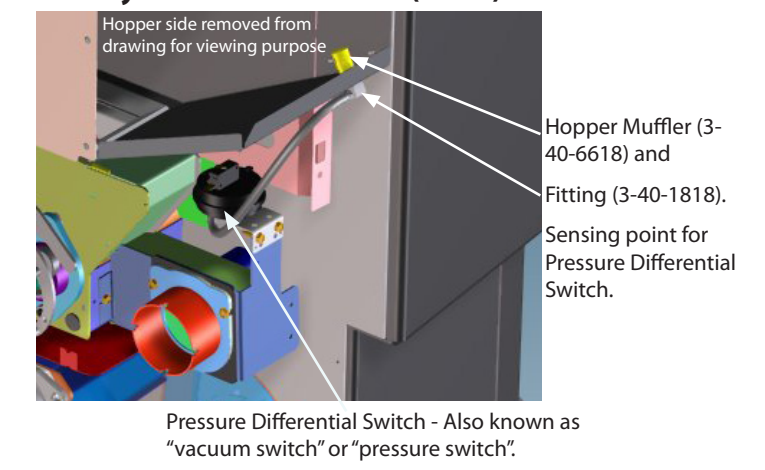
**New Circuit Board With Red Probe- (FIG 2)**



**New Circuit Board With Old Probe - (FIG 3)**



**Cut-away view of P68 Stove -(FIG 4)**



**Model(s) Affected:**

DVC500 Coal Stoker, and All Pellet Burning Stoves and Central Heat Models (excludes P38).

<b>New Circuit Board #</b>	<b>Affected Units</b>
3-20-05886	Accentra, Accentra Insert, Advance, P43, P61A, P68, and XXV
3-20-05887	PC45 Multi-fuel
3-20-05888	PF100 Pellet Furnace
3-20-05890	P61
3-20-06143	PB105 & HydroFlex 60
3-20-05889	DVC500

\* All boards are labeled with part number.

**Changes Made :**

New temperature sensing technology is being utilized. The new Probe will have red wires, as opposed to the previous probes which could have had black, yellow, or white wires. New Circuit boards are now sensing the condition of the differential pressure switch. (FIG 4)

**Reason for Change:**

Improved temperature sensing while adhering to safety standards within the industry.

**KEY POINTS :**

The Red Wire probes can only be used on the new circuit boards. (FIG 2)

The Red Wire probe requires Dipswitch #5 "ON". (FIG 2)

The Red Wire probe will fit all stove models. If you have difficulty, clear the hole with a 11/64" drill.

The older probe can be used on the new circuit boards, with Dipswitch #5 "OFF". (FIG 3)

### ENHANCEMENTS :

1. If there is insufficient draft, the circuit board will not send power to the feed motor or igniter, and the indicator lights will not be illuminated. However, it will increase the voltage to the combustion blower, in an attempt to improve the draft.
2. If there is insufficient draft, the Combustion blower will not shut off during shut down, regardless of ESP temperature. This is especially noticed if a door or hopper lid is left open during shut down.
3. On the PC45, the five hour shut down timer has been eliminated.

### TROUBLESHOOTING SCENARIOS :

If a **Red** probe is mistakenly used on an old board, the board will read it as an exhaust temperature of around 470° F at room temperature. Therefore, The Combustion and Distribution Blowers will be running immediately.

If a **Red** probe is used on a new board **without** dipswitch #5 "ON", the board will read it as an exhaust temperature of around 470° F at room temperature. Therefore, The Combustion and Distribution Blowers will be running immediately.

If an old probe is used on new board with dipswitch #5 "ON", the board will read it as an exhaust temperature of 572°F, and will show a "3 blink" status within 30 seconds. The Combustion and Distribution blowers will run as if in an over temperature condition.

**IMPORTANT:** Make sure the feed motor is properly connected, including the terminal crimps. If not, the software may react as though there is insufficient draft, because the sensing device on the board is receiving a small amount of voltage through the feed motor circuit.

### NOTES FOR ORDERING REPLACEMENT PARTS :

If you need a new probe: Order to match your existing probe. Red= #3-20-00844,  
Black, white, or yellow = #3-20-00744.

If you need a new board: Order using the part numbers included here. If installing on a unit with an old probe = Dipswitch #5 "OFF". With new probe= Dipswitch #5 "ON".

The DVC500 uses two probes, for ESP and TCP(temperature control probe). They must be of the same technology. (TCP is tagged w/yellow in production).