HEAT

How to Diagnose a NEGATIVE PRESSURE SWITCH.

Just because the control is blinking a “Pressure Switch” error doesn’t mean the pressure switch is bad. As a matter of fact it may be working perfectly. What this code is telling you is that the pressure switch is not closing when it should or was closed when it wasn’t supposed to be. Let’s look at possible causes. The micro-switch on the vacuum pod should be open when nothing is acting on it, i.e. normally open (n.o.). If the switch is closed for some reason like its rusty and stuck closed then the control will give a “pressure switch” fault and in this case it is safe to assume that the switch is bad and needs to be replaced. If however the switch starts out open then after a few seconds of inducer operation the switch doesn’t close then the control will set a “pressure switch” fault. We will need to do some further analysis of what’s happening. Put a “tee” in the line to the pressure switch, hook up your manometer, and let’s see what the inducer is producing. For example if the switch is rated for negative 1.25” w.c. and it’s reading negative 3 on the manometer then again we have a bad pressure switch. However if we are reading .9 on the manometer we won’t pull in the switch and so it is doing what it’s supposed to. We have a problem somewhere else. Perhaps the inducer isn’t revving up to full speed because of bad bearings or if so equipped, a bad capacitor. Maybe the port that the vacuum hose is hooked to is partially plugged or the vacuum tube itself. Is the inducer wheel okay? How about the inducer gasket, is it cracked or not sealed properly? Next check on the flue stack and cap. Maybe a squirrel decided to make the flue stack his final resting place, or a bird made it all the way to the inducer wheel, or during the summer a dirt

dobber nest was built in there. Finally make sure that the heat exchanger isn't severely cracked or a big hole opened up in it. You can fake out the control momentarily by jumping the pressure switch terminals after the inducer starts but this is just for diagnostic purposes only, because the next time the inducer needs to start the switch is already seeing a closed set of contacts and so will fault out. A little diagnostic tip here, when you put your leads from your volt meter on the two terminals of the pressure switch and read 24 volts then the switch is open. If 24 volts is not seen between the two but is measured from either one of the terminals to ground then the switch is closed.