



BE A TECHNICIAN NOT A PARTS CHANGER

Begin your diagnosis of the system by verifying the presence of proper voltage. Make sure all service switches and breakers are in the on position, the furnace/air handler and condenser should each have a dedicated breaker. Next check the transformer for proper control voltage. Some thermostats receive power from the HVAC equipment, others use batteries as their only source of power. Remove and replace batteries for battery-powered thermostats if there is no display on a battery-powered thermostat.

Condenser Set the thermostat to "cool" mode adjust the temperature 3 to 5 degrees below the room temperature, make sure to wait for time delay if necessary. If the air handler is running, but not producing cold air, check the air handler secondary drain pad/condensate pump for water. If there is water, check drain line for blockage. If frost or ice is seen check the filter and coil for cleanliness, lack of airflow can cause coils to freeze over. Turn the air conditioner off at the thermostat and circuit breaker, let the unit sit until all ice has melted then clean the coils and restart the unit.

Furnace Switch the thermostat to "heat" mode and set the thermostat 3 to 5 degrees above the room temperature. Make sure the furnace is receiving the call from the thermostat and that all safeties are closed. Confirm that the panel door on the furnace is closed. If inducer operates and the furnace still doesn't come on check that the pressure switches are closing. If the switches are not closing use your manometer to determine if it is a bad switch, bad inducer or blocked vent.

I could go on and on and on and on and I still wouldn't be able to cover all possible causes of a unit from working correctly. The bottom line is never stop learning. I say the day I stop learning is the day I stop coming to work. Just remember to be a technician not a parts changer.

- 82.1% of residential parts returned have no fault found.
- 67.9% of light commercial parts returned have no fault found.
- 30% of compressors returned have no fault found.
- 40% to 50% of motors returned have no fault found.

Works Cited

Petit, Randy. "Addressing the Skills Gap in HVACR Education." *LinkedIn*, Randy Petit Sr., 22 May 2018, www.linkedin.com/pulse/addressing-skills-gap-randy-petit-sr/?published=t.