

\$\$ "When the Technician Says: You need to buy a new Heater" \$\$

"You have a hole in the Heat Exchanger" Here's what a homeowner should know!

Heat Exchanger: Moves (transfers) heat from one area or substance to another. In your gas heater there is a controlled explosion (ignition) and then a confined fire in the firebox while the gas burns. The heat produced by that fire transfers to the metal that surrounds and confines the fire to a safe area. The furnace blower then pulls the air through the house filter and blows it over the opposite side of that metal. The heat of the fire is exchanged (transferred) from the firebox through the metal heat exchanger to the house air, which then keeps you warm. The "products of combustion" go up the furnace vent pipe to the outside.

If a "crack" or "hole" develops due to the constant expansion and contraction of the metal there is a danger of some of those products of combustion getting into the house air stream. There is also the danger of the house air pushing (blowing) the fire out of the designed fire box area. The American Gas Appliance Manufacturers Association says "Any hole in a heat exchanger means its defective and should be replaced".

How can an average homeowner tell that there is a hole? A good (certified by NATE) technician would be able to show the crack or hole from one side of the metal heat exchanger to the other by using light and mirrors or a fluorescent dye to visually prove the defect. On a furnace with a large defect (hole) a homeowner may see a movement of the flame when the blower fan comes on or off, this is dangerous and the heater should be turned off. Does a defective heat exchanger produce carbon monoxide (the silent killer)? No!, only incomplete combustion of fossil fuels produce carbon monoxide (co.). However, if the heater had incomplete combustion and a hole in the heat exchanger there could be a possibility the co could mix with the house air. The nationwide average life of a heater is twelve years. Don't get scared or intimidated into buying a new heater. Ask to see the hole or crack. With this information you can be sure the heater is defective or not.

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