

HEATING



FORCED AIR

The job of the furnace is to generate sufficient heat for distribution to every room in the house. This first section discusses those furnaces that use fossil fuels to generate the heat and a blower/ductwork system to “force” it to where it is needed.

The most critical component of the forced air furnace is the *heat exchanger*. It separates the flame and exhaust gases from the air in the house, while facilitating the transfer of heat between them. When combustion occurs, the heat exchanger becomes hot. A blower is activated to circulate indoor air around and through the heat exchanger where it picks up the heat. The newly warmed air is then distributed to the registers in each room of the house. A return system draws air from the home back to the furnace for heating.

The condition of the heat exchanger is critical, because it is the only barrier between the combustion chamber on one side and the conditioned house air on the other side. A heat exchanger is determined to have “failed” when it cracks or is otherwise perforated allowing products of combustion to intermingle with conditioned air.

Combustion Air - Natural Gas

Natural gas can be a very clean burning fuel when complete combustion occurs. To achieve a “clean burn” a certain amount of outside air is required at the point

