

WHAT TO EXPECT OF YOUR HEAT PUMP DURING THE HEATING SEASON, AND HOW TO ASSURE PROPER OPERATION



1. Air temperature delivered out of the register will range from 90°F to 105°F, depending on the outdoor temperature.
2. Periodically, frost accumulates on the outdoor unit at outdoor temperatures from about 25°F to 40°F. This is normal and the unit will automatically go into a “defrost.” A constant frost, or ice build-up, on the outdoor unit is an indication the system is not defrosting properly and your heating contractor should be called.
3. The furnace air filter should be changed monthly. This is recommended because air flow across the indoor refrigerant coil is critical.
4. The heat pump will cycle on and off while providing the home’s heating requirements during mild periods of outdoor temperatures down to about 30°F. Below this temperature, the operation depends on the type of auxiliary furnace – electric or natural gas.

Electric auxiliary furnace: Your heat pump will operate continuously and your auxiliary electric furnace will cycle on and off as needed below 30°F.

Natural gas auxiliary furnace: Your heat pump will be controlled to completely shut off at a preset outdoor temperature (normally at approximately either 30°F or 10°F, depending on the manufacturer). If your heat pump cut-off temperature is 30°F, the gas furnace will operate alone to provide all heating below this temperature. If your heat pump cut-off temperature is 10°F, the heat pump may be assisted by the gas furnace from 30°F down to 10°F; the gas alone will provide all the heating.

It is possible to have a loss of refrigerant in your heat pump similar to a central air conditioner. If this happens to a heat pump, its heating output decreases and causes the unit to run continuously at temperatures above 30°F, where it would normally cycle on and off. At the same time, the auxiliary furnace, either electric or natural gas, will automatically come on at a higher outdoor temperature than 30°F to help provide the necessary heat. This additional operation of the auxiliary furnace will increase your heating bills.

There are methods of recognizing a loss of refrigerant in your heat pump by observing its operation at outdoor temperatures of 35°F or higher during periods of little or no wind. They are:

- a) The house thermostat controlling many of the heat pumps has an indicator light which comes on only during auxiliary furnace use. If this light is on during mild temperatures of 35°F or higher, showing the furnace is operating when the heat pump alone should provide adequate heating, it could be an indication of a loss of refrigerant in the heat pump or a control problem. Your heating contractor should be called.

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- b) If your house thermostat does *not* have an indicator light, check for continuous operation of the heat pump outdoor unit several times during the heating season at temperatures of 35°F or higher, where it should be cycling on and off. If it does run continuously at higher temperatures, and with little or no outside wind, it could be an indication of a loss of refrigerant or a control problem and your heating contractor should be called.
- 5. The thermostat should not be set back at night. This will actually increase operating costs because the auxiliary furnace will be required for warm-up periods in the morning. If setback is desired, there is a setback thermostat designed for heat pumps available through your heating contractor.
- 6. The heating contractor will balance the air distribution in your house at the time of installation. To preserve this balance, individual room registers should not be closed.