

# Oil Furnaces

Although rarely used in the city, where natural gas and electricity are the main fuels used for heating, oil is frequently used in more rural areas. Oil is an excellent source of heat, and **oil furnaces are extremely reliable EXCEPT when they are allowed to run out of fuel or when fuel is added to a tank containing very little fuel.** The oil tank is roughly comparable to the fuel tank on your automobile. Letting your automobile run completely out of fuel can lead to carburetor and plugged fuel filter problems, but oil furnaces are more vulnerable to similar problems because the petroleum used in oil furnaces is much less highly refined than is the gasoline used in your car. (Gasoline is far too volatile to use in your furnace, and would result in a nasty explosion.) Most oil furnaces can use either number 2 heating oil or kerosene; kerosene burns more cleanly and with fewer problems, but is not routinely used because it is more expensive.

Over time, even just a year or so, sediment in the oil and even from the tank falls to the bottom of the tank where it remains slightly below the reach of the tube that extracts the oil from the furnace. When a tank is run until no more oil can be extracted, air will be sucked into the line and the furnace will ultimately sputter and die. Usually this air can be removed during the relighting process by bleeding the line at the furnace, but that means taking the line apart at some point with the possible introduction of additional problems (air leaks, oil leaks) due to the mechanical process of disconnecting and then reconnecting a line. The most common problem results when the tank is refilled and the sediment, which can be exceedingly fine but is now suspended throughout the fuel in the tank, is pumped into the furnace before it has had a chance to resettle. We recommend waiting at least 24 hours before restarting the furnace to minimize this problem. Once pumped into the fuel lines, this sediment will repeatedly block the fuel filter *inside* the furnace. Each time the fuel filter is blocked, the furnace will stop working and a service call will be necessary to remove the burner assembly, replace the filter, and restart the furnace. These **time consuming and costly service calls can be completely avoided by not allowing your oil tank to run low on fuel.** Service companies are quite happy to check your tank periodically and refill it as necessary; they prefer to operate in this manner because they can schedule their trucks to systematically service tanks in a given area and do not have to send them out helter-skelter for emergency trips.

A much less common problem in the Charlottesville area can occur when temperatures are extremely low. Below a certain temperature, number 2 heating oil will jell and the furnace will be totally inoperable, but often only after the pump has strained so hard that it is ruined. Most tanks are located in an unheated area and are subject to the direct impact of the outside temperature, which will be worse if the tank is also unprotected from the wind. In the past twenty years, we have seen this problem during only one instance of severe weather. Additives to prevent this jelling are available locally; these additives can be poured into the tank if severe weather is anticipated. If such additives are difficult to find, several five-gallon cans of kerosene poured into the tank will have the same impact and will simply burn as additional fuel. You should discuss this issue with whatever company is filling your tank; they may already be automatically adding additives as a preventive measure.

When you move into a property containing an oil furnace, we recommend that you measure the oil level in your tank and verify that measurement with us. When you leave, likewise measure the level and verify it with us. We will charge you for the difference if it is lower, or reimburse you for the difference if it is higher. Leaving your tank empty when you move will result in an automatic seventy-five dollar service charge due to service work that will then be necessary to restore function for the next Tenant.