SCHAEFER NEWS

800-345-2776 www.mhschaefer.com

Heating Systems Repair or Replace?

The most obvious time to replace a heating system is when it breaks down and is no longer worth repairing. You should receive recommendations from your repairman if this is the case. You may want a second opinion if you don't know your repairman well; he may be trying to sell you a new system when a repair may be enough.

Under certain conditions, replacing a heating system before it has failed or broken down is more economical. This is because a new system may run more efficiently, and lower your annual heating bill. A new heating system can cost from $3000 to $6000 or more, so you need to know how long it will take for your fuel savings to pay for this cost. First have an efficiency rating conducted on your heating system by a qualified heat service organization. An older unit with a very poor efficiency rating of 52% means 48% of the heat released when the fuel is burned went up the chimney or was otherwise wasted. A new oil or gas furnace would typically provide at least an 80% efficiency rating. Some new hi tech furnaces may offer over 90% efficiency or better. If you were to compare an older unit with 52% efficiency with a new unit with 80% efficiency burning oil at one dollar per gallon, and you used 1500 gallons per year, you would save $469 each year in fuel costs. You can see this result by doing the following calculations:

1. 1500 gal. x $1 = $1500
2. Divide the different efficiency ratings of the units. 55 divided by 80 = .6875
3. Multiply the difference of the efficiency by the annual fuel cost. .6875x$1500 = $1031. This is the new fuel cost.
4. Subtract the new cost from the old cost: $1500 - $1031 = $469

In this example a new unit would pay for itself in 6 plus years. You can use this formula and insert the correct numbers.

If you are considering converting from oil to gas you will need to know the following factors. Gas is sold by the therm, oil by the gallon. Multiply whatever the current price is for gas per therm by 1.4 and you will get the price of a heating equivalent of a gallon of fuel oil. If, for example, a therm costs $.6 and you multiply that by 1.4, you will arrive at the fuel equivalent of $.84 per gallon of fuel oil. If the cost of fuel oil is anything higher than $.84 per gallon, gas will be less expensive. You can use this formula by inserting the corresponding figures of the costs of gas and oil in your area.

Before replacing an entire heating system, talk it over with a reputable professional. You may be able to keep an older unit running economically by a good maintenance program or upgrades to certain components on the system.

RETENTION HEAD BURNERS:
If your oil heating unit is in generally good condition, you may be able to improve the efficiency of the unit by upgrading the burner to a new one with a retention head. The retention head burner provides better mixing of the oil and air prior to combustion. This will achieve energy savings in three ways:
1. Hotter burning flame.
2. Reduction in required combustion air.
3. Reduction in off cycle heat loss.

In order to determine if a retention head burner would be of benefit, your existing unit should first be serviced by a qualified heat service organization. After this servicing, if the steady state efficiency is below 75% with your conventional burner, then replacement with a retention head burner is recommended. These burners typically have about a five year payback, and if the furnace or boiler must be replaced at a later date, this burner can be reinstalled in the new unit, reducing the cost of total replacement.

LIFE EXPECTANCIES OF HEATING SYSTEMS:
1. Hot Water Boilers 15-30 Yrs.
2. Steam Boilers 20-30 Yrs.
3. Forced Warm Air 15-25 Yrs.

(The above life expectancies are manufacturers representations for most modern heating systems. Many of the older heating systems we have inspected are 40-50 years old and older when they have been properly maintained.)
4. Heat Pump 10-15 Yrs. (For exterior components)
5. Condenser units for Air conditioners 10-15 Yrs.