

## Energy Saving & Repair Tips

by Michael Birov

### Heating and Air Conditioning General Tips

- A "freon" (refrigerant) undercharge of only 10% can increase operating costs by almost 20%.
- A dirty evaporator, condenser and blower could increase air conditioning electrical usage by 50% or more.
- According to studies, you can save up to \$30 a month on your utility bill by making sure that your air conditioning and heating systems are cleaned and serviced regularly.
- Clean or replace filters on furnaces once a month or as needed.
- Set your thermostat as low as is comfortable in the winter and as high as is comfortable in the summer.
- Clean warm-air registers, baseboard heaters, and radiators as needed; make sure they are not blocked by furniture, carpeting, or drapes.
- Turn off kitchen, bath, and other exhaust fans within 20 minutes after you are done cooking or bathing; when replacing exhaust fans, consider installing high-efficiency, low-noise models.
- During the winter months, keep the draperies and shades on your south-facing windows open during the day to allow the sunlight to enter your home and closed at night to reduce the chill you may feel from cold windows.
- Up to 80% of all air conditioning and heat pump compressor failures could be eliminated with proper maintenance.
- During the summer months, keep the window coverings closed during the day to prevent solar gain.
- **\$ Long-Term Savings Tip:** Select energy-efficient products when you buy new heating and cooling equipment. Your contractor should be able to give you energy fact sheets for different types, models, and designs to help you compare energy usage. For furnaces, look for high Annual Fuel Utilization Efficiency (AFUE) ratings. The national minimum is 78% AFUE, but there are ENERGY STAR models on the market that exceed 90% AFUE.
- **\$ Long-Term Savings Tip:** For air conditioners, look for a high Seasonal Energy Efficiency Ratio (SEER). The current minimum is 10 SEER, increasing to 13 SEER in January 2006 for central air conditioners. ENERGY STAR models are 12 SEER or more.

### Ducts Tips

- Check your ducts for air leaks. First, look for sections that should be joined, but have separated and then look for obvious holes.
- If you use tape to seal your ducts, avoid cloth-backed, rubber adhesive duct tape, which tends to fail quickly. We recommend other products to seal ducts: mastic, butyl tape, foil tape, or other heat-approved tapes.
- Remember that insulating ducts in the basement will make the basement colder. If both the ducts and the basement walls are not insulated, consider insulating both.
- Be sure a well-sealed vapor barrier exists on the outside of the insulation on cooling ducts to prevent moisture buildup.
- When doing ductwork, be sure to get professional help. Changes and repairs to a duct system should always be performed by a qualified professional.
- Ducts that don't work properly can create serious, life-threatening carbon monoxide (CO) problems in the home. Install a CO monitor to alert you to harmful CO levels if you have a fuel-burning furnace, stove or other appliance, or an attached garage.
- **\$ Long-Term Savings Tip:** You can lose up to 60% of your heated air before it reaches the register if your ducts aren't insulated and the air travels through unheated

spaces such as the attic or crawlspace. Get a qualified professional to help you insulate and repair ducts.

### **Heat Pump Tips**

- Do not set back the heat pump's thermostat manually if it causes the electric resistance heating to come on. This type of heating, which is often used as a backup to the heat pump, is more expensive.
- Clean or change filters once a month or as needed, and maintain the system according to manufacturer's instructions.
- **\$ Long-Term Savings Tip:** If you use electricity to heat your home and live in a moderate climate, consider installing an energy-efficient heat pump system.

### **Cooling Tips**

- Whole-house fans help cool your home by pulling cool air through the house and exhausting warm air through the attic. They are effective when operated at night and when the outside air is cooler than the inside.
- Set your thermostat as high as comfortably possible in the summer. The smaller the difference between the indoor and outdoor temperatures, the lower your overall cooling bill will be.
- Don't set your thermostat at a colder setting than the desired temperature when you turn on your air conditioner. It will not cool your home any faster and could result in excessive cooling and, therefore, unnecessary expense.
- Consider using an interior fan in conjunction with your window air conditioner to spread the cool air more effectively throughout your home without greatly increasing your power use.
- Don't place lamps or TV sets near your air-conditioning thermostat. The thermostat senses heat from these appliances, which can cause the air conditioner to run longer than necessary.
- Plant trees or shrubs to shade air conditioning units but not to block the airflow. Place your room air conditioner on the north side of the house. A unit operating in the shade uses as much as 10% less electricity than the same one operating in the sun.
- Insulating and sealing air leaks will enhance your home's energy performance.
- **\$ Long-Term Savings Tip:** If your air conditioner is old, consider purchasing a new, energy-efficient model. You could save up to 50% on your utility bill for cooling. Look for the ENERGY STAR and EnergyGuide labels.
- **\$ Long-Term Savings Tip:** Consider installing a whole house fan or evaporative cooler if appropriate for your climate. Check out the US Department of Energy's [Consumer's Guide to Energy Efficiency and Renewable Energy](#) for more information on efficient cooling.

*The above article was written by Michael Birov of West Coast Chief Repair. For professional heating & air conditioning services feel free to call them anytime at 800-810-7813 or visit them on the web at [www.chiefappliance.com](http://www.chiefappliance.com).*