

It's Just That Easy



A Homeowner's Guide to Furnace Maintenance

SPRING/SUMMER:

Time to get your furnace in SHAPE

Special COUPON Offer

Save MONEY and Energy

ENERGY EFFICIENCY Tips

and CALENDAR



No one likes to see home heating costs increase. Including BC Gas. That's why we want to help you find ways to save energy and money at home. It starts with little things that can make a big difference. Like furnace maintenance. If you tune-up your forced air natural gas furnace between now and September 15, 2001 BC Gas will give you a \$25 rebate on your gas bill. See the coupon on the back cover for more details.

Why tune-up?

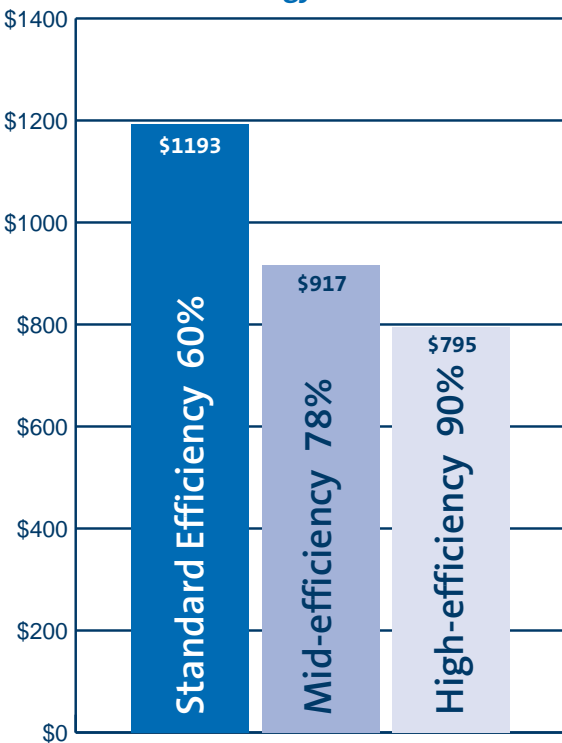
Keeping your furnace in shape is one of the first steps to improving efficiency and saving money. A properly maintained and serviced furnace will work safely and efficiently – the way the manufacturer intended. Most manufacturers recommend a tune-up once a year, preferably in spring or summer.

Furnaces have different efficiency levels. Without a tune-up, your furnace may not be operating at its maximum efficiency level. It's worth the check-up to find out.

All furnaces are not created equal. Your furnace was designed to operate at a certain efficiency level.



The Effect of Furnace Efficiency on Energy Costs



The costs given in this chart assume an average residential use of 90 GJ. Costs include actual fuel costs based on current rates.

Why now?

Spring or summer is the best time to get your furnace tuned up. It is typically the slow season for most heating contractors, which means they can spend more time getting your furnace ready for the heating season. If your contractor finds a problem that warrants replacing or upgrading your furnace, you won't feel the same pressure to make a decision right away because you probably don't use your furnace during the summer. Use this time to shop around and consider different furnace options.

Have your furnace tuned up now and you won't be left out in the cold!

Spring into energy efficiency!

Right now, BC Gas is offering a \$25 rebate off the cost of a furnace tune-up. See the coupon on the back cover for more details.

Getting started

Choosing a contractor

While you can do many things yourself, have a qualified gas contractor inspect and service your furnace as recommended by your furnace manufacturer. Choose a contractor who is registered with the Provincial Gas Safety Program. Registered contractors are required to maintain a performance bond and employ licensed gas fitters. Only licensed gas fitters are qualified to work on your furnace. You may want to ask the service technician to show you their license. When choosing a contractor, remember: least expensive isn't always the best – take the time to check references.

The tune-up (here's what the pros will do):

A typical furnace tune-up and inspection takes about an hour and a half to two hours. Here's what you can expect your contractor to do:

- Check and clean fan assembly
- Check air filter and replace if necessary
- Confirm gas input to appliance
- Inspect and clean heat exchanger
- Inspect, adjust and clean pilot light (as applicable)
- Check for carbon monoxide
- Check air supply and venting systems
- Test all safety limits and electrical components
- Adjust thermostat heat anticipator (as applicable)

Did you know?

You will pay less in labour costs if a technician can easily access your system instead of having to crawl on hands and knees to reach it! If you are building a new home, your options are fairly flexible. If you are replacing an existing system, try to plan a good layout within your existing space.



While your contractor is there, ask about:

- Your temperature setback options – should you continue to do it manually or should you install a programmable thermostat?
- What type of air filter is best for you and your furnace? How often should you replace it?
- The benefits of a high-efficiency furnace when it comes time to replace your current appliance.

What you need to know about carbon monoxide (CO)

Carbon monoxide (CO) is produced when fuels are not burned completely. You can't see or smell CO, but when inhaled, it interferes with the blood's ability to absorb and transport oxygen. Exposure to high concentrations of CO can lead to unconsciousness, brain damage and death.

Care for your appliances

The risk of carbon monoxide poisoning from properly maintained and functioning natural gas appliances is extremely low.

Danger signs of high CO:

- physical symptoms such as chronic headaches, nausea, drowsiness, impaired judgement and loss of coordination
- an unidentified chronic odour inside the building
- an abnormal odour from a furnace or other fuel burning appliance
- excessive condensation on cool, indoor surfaces
- stale or stuffy air

Here's what you can do

Whether old or new, furnaces share similar attributes. Knowing "what is what" and "what does what" will help you feel more comfortable doing some maintenance yourself.

Many manufacturers have a condensed maintenance sheet for you to follow – check the owner's manual. Remember: maintenance is a little thing that can make a big difference. If you want to take away the guesswork, ask your heating contractor for a service contract to make sure your appliances get the regular servicing they deserve.



Shell answers your questions:

Should I replace or clean my filters?

Electrostatic filters can be cleaned, but paper filters should be replaced periodically. Check the condition of the filter every 60-90 days once the heating season begins.

Which is better: fibreglass mesh or pleated filters?

Fiberglass mesh filters work if dust isn't a problem in your home. A pleated filter offers better filtration and keeps dust and pollens down, but it requires more regular checking.

Your Do-it-yourself Checklist

- Keep the area around the furnace clear. Do not store items against or near the furnace. Keep combustible items well away from gas appliances.
- Set back the temperature manually or talk to your contractor about a programmable thermostat. Programmable thermostats offer a convenient way to control temperature based on time of day. Simply lowering the temperature from 21C (70F) to 20C (68F) during the day and to 17C (63F) at night can save as much as 15% of your natural gas bill.
- Change or clean furnace filters every 60-90 days during the heating season to ensure they don't restrict the flow of air. The more efficient the filter (measured by how small a particle the filter can trap), the more often the filter will need to be replaced or cleaned. A high-efficiency filter can reduce the amount of particles that are circulated throughout your home. Speak with your heating contractor to find the filter that's right for you.
- Make sure there is an adequate supply of air to the furnace room – do not block off the duct bringing in outside air.
- Keep heating and air return registers clear of obstructions such as furniture, lint, dust or pet hair.
Did you know? The most common cause of heat duct obstruction is clothing tossed on the floor.
- Check the chimney and appliance vent system at least once a year to ensure that the vent is connected securely, that there are no signs of corrosion or damage, and that nothing is blocking your chimney, vent or combustion air supply.
- Check heating ducts for loose connections or cracks between joints. Mastic and foil tapes can be used to seal around the seams of heating ductwork to reduce air leakage, especially where ducting passes through unheated areas of the house. Seal both the cold air return and the hot air supply.
- Keep all warranties and maintenance instructions near your furnace for easy reference.

Anatomy of a Standard Furnace

Heat Exchanger

Extracts most of the heat from the burned gas.

Warm Air Plenum

Sends out warm air for distribution.

Fan Assembly

Moves heated air throughout the home.

Filter

Cleans return air before it enters the furnace.

Cold Air Return Duct

Returns cool air for heating.

Exhaust Vent

Vents combustion by-products outdoors.

Burner With Pilot

Creates heat through combustion.

Fan Motor

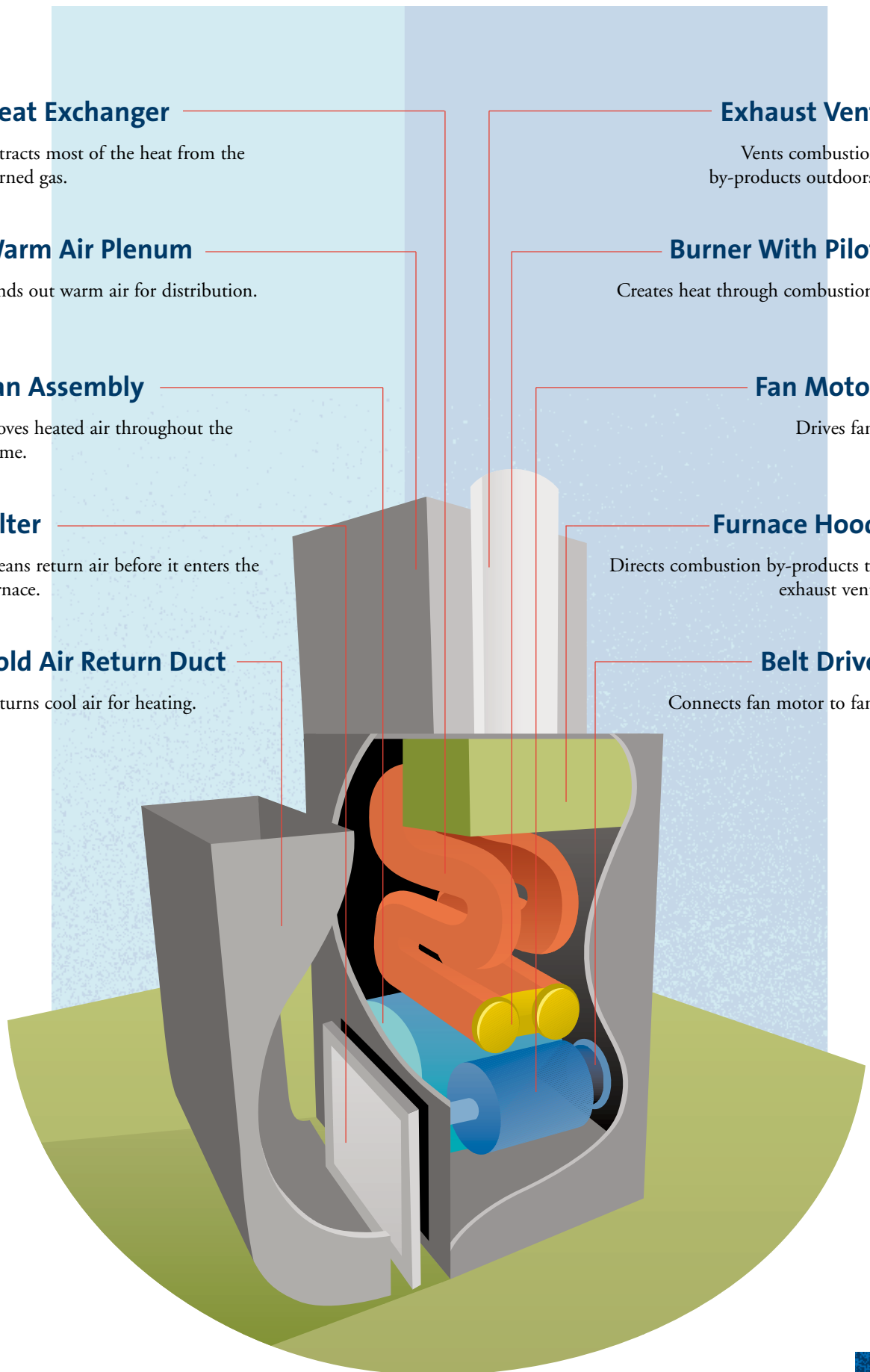
Drives fan.

Furnace Hood

Directs combustion by-products to exhaust vent.

Belt Drive

Connects fan motor to fan.



What if it's time for a new furnace?

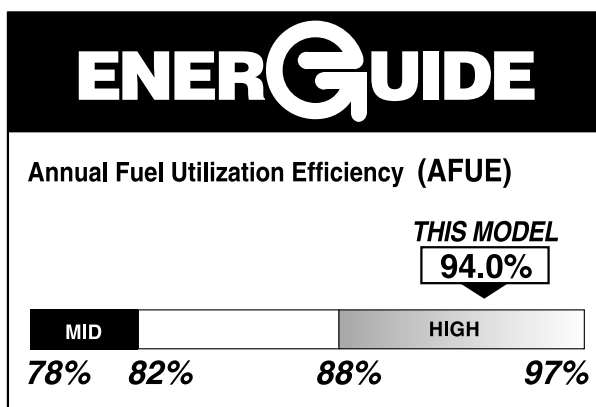
All new furnaces have an Annual Fuel Utilization Efficiency (AFUE) rating of at least 78%. The old standard furnace (60% AFUE) is no longer available. There are two choices when it comes to new furnaces: non-condensing furnaces (AFUE ratings between 78%-82%) and condensing furnaces (AFUE ratings between 90%-97%). New furnace technology has eliminated the standing pilot light, saving you energy and money!

Did you know?

AFUE (Annual Fuel Utilization Efficiency) is a measure of how well an appliance such as a furnace converts fuel into heat. For example, if a furnace has an AFUE rating of 90%, that means that 90 cents out of every energy dollar spent is being used for heat.

What is a condensing furnace?

A high-efficiency furnace is called a condensing furnace because it has an additional heat exchanger. This extra heat exchanger recovers more heat from the fuel by condensing water vapour (condensate) from the combustion products (what's left over after the fuel burns – also known as exhaust). A drain disposes of the condensate. Condensing furnaces often use higher quality materials and components, which can translate into longer furnace life.



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Look for the EnerGuide label in the manufacturer's literature.

Remember your home is a system

Planning your upgrade.

Because your heating system is something you'll have to live with for a long time, you'll want to make sure you've done your homework so you get it right the first time. It helps to start by thinking of your house as a system: changes you make to one part of your home - like draftproofing - have an effect on the other parts. Otherwise, you may compromise comfort and air quality with improper ventilation and insulation. Or, you may pay more for equipment, operating and energy costs as a result of improper equipment sizing, design or installation. However, with proper selection and maintenance, the right heating system will provide a blend of high performance, comfort, efficiency and energy cost savings for years to come.

Options to think about

Ventilation Ventilators remove stale air that becomes contaminated by cooking and living in the home and bring fresh outdoor air in to replace it. A heat recovery ventilator (HRV) system warms the fresh air with heat from the stale air before the stale air is exhausted outdoors.

Humidifiers Air in your home can become very dry, particularly during winter. Some people are affected by very dry air and experience frequent nosebleeds as a result. Dry air can also affect wood furniture and floors. Humidifiers are easily added to your heating system to maintain correct humidity levels in your home.

For further information to help you plan your new home heating system, read our *Heart of Your Home* booklet. Visit our website or call us at 1-800-561-4427 for a free copy.

Tips to help you keep the heat out this summer

Insulating your home for summer is as good an idea as it is for winter. A well-insulated house will keep hot humid air out and cooler air in.

- Add awnings or reflective coatings to sunlit windows.
- If you choose to air condition your home, be sure to select an energy-efficient model or system. The higher the Seasonal Energy Efficient Ratio (SEER) the more efficient the unit and the bigger your savings.
- Install low-speed ceiling fans. Surprisingly, these are more efficient than higher-speed fans and much more pleasant to the ear.
- Consider an attic ventilation fan to keep the temperature below 38C (100F).

"Things to Do"

Energy Efficiency Calendar (June-September 2001)

June	Arrange annual furnace tune-up. Install a programmable thermostat. Ask your contractor what type is best for you.
July	Set spas and hot tubs to a maximum of 39C (102F) and pools to 26C (79F). Heat them for six to eight hours when in use instead of all day! Use timers and thermal pool blankets to reduce your energy use. Cut down on your cooking requirements inside – hook up a natural gas barbecue outside!
August	Follow the three R's of water use: reduce, repair and retrofit. Remember to send in furnace tune-up coupon and invoice. Mail your coupon before September 15th, 2001.
September	Check your furnace filter and fan belt (if your furnace has one) before the heating season starts. Conduct a seasonal house check. Fall is a good time to inspect windows and doors for caulking and weatherstripping damage.

Resources

For more energy efficiency info:

Visit Natural Resources Canada and the Office of Energy Efficiency: oee.nrcan.gc.ca

For more information on other natural gas topics:

Visit www.bcgas.com, or call the BC Gas Info Line toll free at 1-800-561-4427.



Corporate Head Office
1111 West Georgia Street,
Vancouver, B.C.,
Canada V6E 4M4
Web Address: www.bcgas.com

Mail Completed Coupon to:
Summer Tune-up Offer
P.O. BOX 48449
595 Burrard Street
Vancouver, B.C. V7X 1A2

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NATURALLY RESOURCEFUL

Summer Furnace Tune-up Coupon Offer

\$25.00 Off



Tune up your furnace before September 15 and get a \$25.00 rebate on your BC Gas bill. Regular tune-ups can help improve furnace efficiency and help save you money, too. Hurry! This offer is limited in quantity*.

- YES! My furnace tune-up is complete and my Contractor has explained:**
- Temperature setback savings (including the use of a programmable thermostat)
 - Air filter cleaning/replacement schedule
 - Benefits of high efficiency furnaces
- YES! My invoice or work order is attached to this coupon. Please process my rebate.**

Customer Name: _____
(Please print)

Address: _____
(Please print)

Phone: (____) _____ Date: _____

BC Gas Utility Ltd., Customer Account Number:

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REQUIRED

Return to: Summer Tune-up Offer, P.O. BOX 48449, 595 Burrard Street, Vancouver, B.C. V7X 1A2

*** Program Conditions:**

1. Work must be completed and the rebate request mailed by September 15, 2001.
2. Please allow up to 90 days after mailing completed coupon for processing. \$25 rebate will appear as a credit on your BC Gas bill.
3. Offer is limited to current residential customers of BC Gas Utility Ltd. One coupon per account. Coupon is applicable to one forced air natural gas furnace tune-up.
4. This offer is limited to the first 20,000 BC Gas Utility Ltd. Customers.

Note: The information contained herein is intended as a general reference guide only. BC Gas Utility Ltd. assumes no liability or responsibility. All work must be completed by a Province of British Columbia Licensed Gas Fitter acting on behalf of a Province of British Columbia Registered Gas Contractor. All work must be done in accordance with all applicable codes and standards.

