surface. Loosely layer the firebox with lightly crumpled newspaper and dry, finely split kindling or a firelighter on top. Firmly open the damper and ignite the paper on all sides.

If the fire burns too slowly, draft louvers of the stove should be opened or the door left slightly ajar for the first few moments to get a good blaze. Add more kindling and some pieces of larger wood. A constant rising movement of air signals that good drafting conditions have been achieved. Your chimney is preheated when each larger piece of wood you add burns vigorously, without a loss in intensity of the fire.

During warmer seasons in spring and fall, control the total heat output by limiting the amount of wood you place on the fire, rather than by closing down the air supply. Make shorter, hot fires using more finely split wood. Let the fire burn out rather than smolder at a low air supply setting. When you need more heat, restart the fire again with kindling, but then add smaller fuel loads. This allows your stove to operate at maximum efficiency with minimum emissions and creosote buildup. Avoid the temptation of building a big fire and then starving it for air. Never let a wood fire burn unattended or overnight.

For Pellet stoves, pellets are placed in a hopper where they are automatically fed into the fire pot. A simple electronic igniter lights the fire, and an external dial regulates heat output and controls fuel delivery. Occasional cleaning of an ash pan is necessary, while all other aspects of the heating process occur automatically.

Chimney Maintenance

The Consumer Product Safety Commission estimates that about 45,000 chimney fires occur each year. Improper maintenance and inadequate cleaning are the most common causes. Metal stovepipes are especially susceptible to failure due to heat stress, creosote buildup and even scouring and weakening of the metal from cleaning with abrasive brushes.

Creosote is an oily residue that resembles a tar-like liquid or small black flakes. No matter how efficiently you burn wood, the combustion process is *never* 100 percent complete. Creosote is found almost anywhere in a wood heating system. It is more of a problem in wood stoves than fireplaces since the exhaust gases from stoves are cooler than those from fireplaces.

Creosote builds up on the lining of the chimney flue, and even a small amount is highly combustible. A hot fire can ignite the creosote buildup resulting in chimney fire. A chimney fire can send globs of molten creosote and mortar onto your roof. It can penetrate your chimney and ignite your walls and rafters.

The National Fire Protection Association states in their fire safety code, "Chimneys, fireplaces and vents shall be inspected *at least* once a year." Regardless of how often you use your wood burning appliance, follow this code and have your wood burning system checked annually. More frequent checks are advisable if your stove builds up more creosote and soot than normal.

Unless you are an experienced and competent do-it-yourselfer, think twice before trying to clean your own chimney—you may damage your chimney lining. If your stove pipe is boxed in, you won't readily see any metal failure or damage to the pipe. Spend some money on a professional service to properly examine these "hidden" areas and your entire woodburning system. Otherwise you may be creating a fire hazard that could cost you thousands of dollars, or even the destruction of your home!

Pellet stoves are easy to maintain: empty the ash pan weekly; periodically clean the burn pot, hopper, ash traps and glass; hire professional servicing of the entire unit annually before the cold season, and have the chimney and vent inspected annually (and cleaned as necessary) by a certified chimney sweep.

In Case of a Chimney Fire

The first indication of a serious chimney fire is the noise – a loud roaring. Black smoke and sparks (in severe cases even flames) will exit the top of the chimney.

- Call the fire department immediately
- Get everyone out of the house
- If you have time, close the stove's draft louvers and solid damper in the stove pipe
- If possible, wet down the roof (not the chimney) and other outdoor combustibles to prevent fires ignited by shooting sparks and flames.

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BR-??? (09/06)

Wood Stove Safety

Farmers Union Insurance

A member of the QBE Insurance Group

The rich tradition of wood burning is deeply ingrained in our American lifestyle and history.

Today's wood burning appliances are not merely an economical heat source but also an integral addition to home furnishing. However, every year there are many tragic fires traceable to improper installation or incorrect maintenance of wood burning appliances.

Purchasing

The wood stove industry using modern technology has developed wood burning appliances that produce more heat, use less fuel, are safer and also meet clean air standards. If you're shopping for a wood burning unit remember the starting point is you, your home, your tastes and your lifestyle. From there a trained hearth products retailer can help you choose the ideal product.

Safety

Purchase only an appliance which has been safety tested and bears a label from Underwriters Laboratory (UL), another recognized testing lab or a building code group. Avoid "garage sale specials" or antique stoves. Even a small undetected flaw can result in hazard.

Efficiency

Again, look for a certification label by an accredited testing laboratory. An EPA-sanctioned label includes emission and efficiency ratings for the appliance. The amount of wood you will burn to produce the desired output will depend on the efficiency of the stove that you select.

Heat Output

The right size unit is very important to your enjoyment. Your hearth retailer can help you determine the right size, factoring in your climate, floor plan and lifestyle. The heat output rating information on the certification label can also help match your heating needs with the capacity of the stove.

Pellet Stoves

These are unique and efficient home heaters that generate automated, economical and earth-friendly wood heat using pellet fuel instead of firewood. Pellet stoves may be installed almost anywhere in your home within as little as three inches from a wall. The key is having an electrical outlet near to power the electronic igniter which initially lights the fire.

Retiring Old Stoves

Currently no technology is available to improve an uncertified stove or fireplace insert. The only option is to purchase a new certified unit. This may be simple and surprisingly affordable.

Gas logs or a fireplace insert may be just right for you. Fireplace inserts that burn pellet fuel are also available. Other upgrading costs can include the wood stove or fireplace insert, chimney, delivery, installation, annual fuel costs and maintenance. However, a newer certified unit will be more efficient and burn less wood, so the cost of upgrading pays for itself over time, especially if you switch to a pellet fuel system.

Installation

Installation of your wood heating appliance should be done by a professional. All wood burners must be installed to comply with local fire/building codes and manufacturer's specifications. There are safety requirements for wall clearance, floor protection, venting and insulation of the stovepipe and chimney. Manufacturer's installation requirements must be followed to the letter. So it is recommended you always have a qualified heating contractor experienced with wood burners install your unit.

If you opt for a pellet stove, purchase from a trained pellet stove expert who can arrange installation by a certified professional installer and also provide a resource for where to purchase pellet fuel in your area.

Installation of smoke/carbon monoxide detectors becomes especially important if you have a wood burner. Have them installed in an adjacent room to avoid false alarms from smoke escaping from your wood burning appliance. Make sure the detectors are UL "listed" or Factory Mutual (FM) approved and test them monthly.

You should also install a multipurpose dry chemical extinguisher within easy reach of each stove. A 2-A, 40-BC extinguisher is desirable. Using water on a hot stove in an emergency can result in severe stove damage or even an explosion.

Wood Fuel

Hardwoods and softwoods are chemically similar – the difference is density. Soft woods such as fir and pine are easy to light and burn rapidly with a hot flame. Hard woods, such as ash, beech, birch, maple and oak, provide a longer-lasting fire with a shorter flame. A mixture of softwoods and hardwoods is the best choice for a fire that is easily ignited and long lasting.

Green wood has too high a moisture content for satisfactory use. Condensation of this moisture makes for a "cool" fire which encourages creosote buildup. Burning green wood can cause the formation of so much creosote that it may even run down inside the stove pipe and drip onto the stove or floor.

Wood that is dry and well-seasoned for 9 to 18 months will ignite and burn much more efficiently and cause fewer problems. Split logs dry and ignite even faster.

Pellet Fuel

Pellet fuel is a renewable, recycled energy resource made from sawdust and wood shavings (and sometimes corn). This recycled waste goes to a pellet mill where it is dried, compressed and formed into small pellet-sized bits. Resins and binders (lignin) occurring naturally in the sawdust hold the pellets together, so they contain no additives.

Pellet fuel is unparalleled in heat efficiency, ensures almost complete combustion and produces minimal smoke. This fuel requires specially designed pellet stoves or fireplace inserts which are easily installed and maintained. If you would like more information on this fast growing industry, the Pellet Fuels Institute website is www.pelletheat.org.

Starting a Fire

You want to create the "good drafting conditions" necessary to maintain clean combustion and minimize creosote buildup. Good drafting means your chimney consistently draws air into the firebox at a high enough rate to provide adequate oxygen for complete burning. To create this draft you must "preheat the chimney." This preheating can vary by chimney but typically requires 5-15 minutes of vigorous firing. Some wood stove manufacturers provide specific guidelines for startup and preheating phases. Follow these instructions when they are specified.

At startup, remove from the firebox all but a thin layer of ashes, which will provide a heat reflecting