

## **Maintenance Guidelines**

Root Homes has constructed your home with quality materials and the labor of experienced craftsmen. All work is done under our supervision to attain the best possible results for your investment.

A home is one of the last hand-built products left in the world. Once we have assembled the natural and manufactured materials, the components interact with each other and the environment. Although quality materials and workmanship have been used in your home, this does not mean that it will require no care or maintenance. A home, like an automobile, requires care and attention from day one. General homeowner maintenance is essential to providing a quality home for a lifetime. Please refer to the following maintenance and warranty sections for specific guidelines on specific components included in your new home.

We are proud of the homes we build and the neighborhoods in which we build. We strive to create long-lasting value. This cannot be achieved unless you, as the homeowner, properly maintain your home and all of its components. Periodic maintenance is necessary because of normal wear and tear, the inherent characteristics of the materials used in your home, and normal service required by the mechanical systems. Natural fluctuations in temperature and humidity also affect your home.

Many times a minor adjustment or repair done immediately saves a more serious, time-consuming, and sometimes costly repair later. Note also that neglect of routine maintenance can void applicable limited warranty coverage on all or part of your home. By caring for your new home attentively, you ensure your enjoyment of it for years. The attention provided by each homeowner contributes significantly to the overall desirability of the community.

We recognize that it is impossible to anticipate and describe every attention needed for good home care, but we have covered many important details. The subjects covered include components of homes we build, listed in alphabetical order and each subject includes suggestions for use and maintenance. This manual may discuss some components that are not present in your home.

Please take time to read the literature provided by the manufacturers of consumer products and other items in your home. The information contained in that material is not repeated here. Although much of the information may be familiar to you, some points may differ significantly from homes you have had in the past.

We make every effort to keep our information current and accurate. However, if any detail in our discussion conflicts with the manufacturer's recommendations, you should follow the

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manufacturer's recommendations. Activate specific manufacturer's warranties by completing and mailing any registration cards included with their materials. In some cases, manufacturer's warranties may extend beyond the first year and it is in your best interests to be apprised of such coverages.

## Air Conditioning

Air conditioning can greatly enhance the comfort of your home, but if it is used improperly or inefficiently, wasted energy and frustration will result. These hints and suggestions are provided to help you maximize your air conditioning system.

Your air conditioning system is a whole-house system. The air conditioner unit is the mechanism that produces cooler air. The air conditioning system involves everything inside your home including, for example, drapes, blinds, and windows.

Your home air conditioning is a closed system, which means that the interior air is continually recycled and cooled until the desired air temperature is reached. Warm outside air disrupts the system and makes cooling impossible. Therefore, you should keep all windows closed. The heat from the sun shining through windows with open drapes is intense enough to overcome the cooling effect of the air conditioning unit. For best results, close the drapes on these windows.

Time is very important in your expectations of an air conditioning system. Unlike a light bulb, which reacts instantly when you turn on a switch, the air conditioning unit only begins a process when you set the thermostat.

For example, if you come home at 6 p.m. when the temperature has reached 90 degrees F and set your thermostat to 75 degrees, the air conditioning unit will begin cooling, but will take much longer to reach the desired temperature. During the whole day, the sun has been heating not only the air in the house, but the walls, the carpet, and the furniture. At 6 p.m. the air conditioning unit starts cooling the air, but the walls, carpet, and furniture release heat and nullify this cooling. By the time the air conditioning unit has cooled the walls, carpet, and furniture, you may well have lost patience.

If evening cooling is your primary goal, set the thermostat at a moderate temperature in the morning while the house is cooler, allowing the system to maintain the cooler temperature. The temperature setting may then be lowered slightly when you arrive home, with better results. Once the system is operating, setting the thermostat at 60 degrees will *not* cool the home any faster and can result in the unit freezing up and not performing at all. Extended use under these conditions can damage the unit.

***Adjust Vents*** -Maximize air flow to occupied parts of your home by adjusting the vents. Likewise, when the seasons change, readjust them for comfortable heating.

***Compressor Level*** -Maintain the air conditioning compressor in a level position to prevent inefficient operation and damage to the equipment.

*See also Grading and Drainage.*

**Humidifier** -If a humidifier is installed on the furnace system, turn it off when you use the air conditioning; otherwise, the additional moisture can cause a freeze-up of the cooling system.

**Manufacturer's Instructions** -Since the air conditioning system is combined with the heating system, follow the maintenance instructions for your furnace. The manufacturer's manual specifies maintenance for the condenser. Review and follow these points carefully.

**Temperature Variations** -Temperatures may vary from room to room by several degrees F. This is due to such variables as floor plan, orientation of the home on the lot, type and use of window coverings, and traffic through the home.

*See also Heat Pump, Heating System, Humidifier, and Ventilation.*

## Alarm System

If your home selections included pre-wire for an alarm system, you will arrange for the final connection after your move-in. The alarm company will demonstrate the system and instruct you in its use. We recommend that you test the system each month.

## Appliances

Read and follow all manufacturers' instructions for the use and maintenance of each appliance in your home and keep them available for reference.

**Manufacturer's Service** -If a problem arises with an appliance, call the customer service number listed in the manufacturer's warranty. When reporting warranty items to the appliance manufacturer, be prepared to supply the following details:

- < Date of purchase (your closing date)
- < Serial and model numbers, found on a metal plate or sticker on the side or bottom of each appliance
- < Description of the problem

**Registration** -Mail warranty registration cards directly to the manufacturer.

## Attic Access

The attic space is neither designed nor intended for storage. We provide access to this area for maintenance of mechanical equipment that may traverse the attic space. When you perform needed tasks in the attic, use caution and avoid stepping off wood members onto the drywall. This can result in personal injury or damage to the ceiling below. Your limited warranty does not cover such injury or damage.

## Brick

Brick is one of the most durable and lowest maintenance finishes for a home's exterior. A record of your brick color is included in your selection sheets.

**Efflorescence** -The white, powdery substance that sometimes accumulates on brick surfaces is called efflorescence. This is a natural phenomenon and cannot be prevented. In some cases, you can remove it by scrubbing with a stiff brush and vinegar. Consult your home center or hardware store for commercial products to remove efflorescence.

**Tuck-Pointing** -After several years, face brick may require tuck-pointing (repairing the mortar between the bricks). Otherwise, no regular maintenance is required.

**Weep Holes** -You may notice small holes in the mortar along the lower row of bricks. These holes allow moisture that has accumulated behind the brick to escape. Do not fill these weep holes or permit landscaping materials to cover them.

## Cabinets

If you selected wood or wood veneer cabinets, expect differences in grain and color between and within the cabinet components due to natural variations in wood and the way it takes stain.

**Cleaning** -Products such as lemon oil or polishes that include scratch cover are suggested for wood cabinet care. Follow container directions. Use such products a maximum of once every 3 to 6 months to avoid excessive build-up. Avoid paraffin-based spray waxes and washing cabinets with water, as both will damage the luster of the finish.

**Hinges** -If hinges catch or drawer glides become sluggish, a small amount of silicone lubricant will improve their performance.

**Moisture** -Damage to cabinet surfaces and warping can result from operating appliances that

generate large amounts of moisture (such as a crock pot) too near the cabinet. When operating such appliances, place them in a location that is not directly under a cabinet.

### Carpet

Your selection sheets provide a record of the manufacturer, style, and color of floor coverings in your home. Please retain this information for future reference. Refer to the various manufacturers' recommendations for additional information on the care of your floor coverings.

**Cleaning** - You can add years to the life of your carpet with regular care. Carpet wears out because of foot traffic and dirt particles that get trampled deep into the pile beyond the suction of the vacuum.

The dirt particles wear down the fibers like sandpaper and dull the carpet. The most important thing you can do to protect your carpet is to vacuum it frequently.

Vacuum twice each week lightly and once a week thoroughly. Heavy traffic areas may require more frequent cleaning. A light vacuuming is three passes; a thorough job may need seven passes. A vacuum cleaner with a beater-bar agitates the pile and is more effective in bringing dirt to the surface for easy removal.

Vacuuming high-traffic areas daily helps keep them clean and maintains the upright position of the nap. Wipe spills and clean stains immediately. For best results, blot or dab any spill or stain; avoid rubbing. Test stain removers on an out-of-the-way area of the carpet, such as in a closet, to check for any undesirable effects. Have your carpet professionally cleaned regularly, usually once a year.

Some problem conditions that may occur with your new carpet and our suggested remedies are presented below.

**Burns** - Take care of any kind of burn immediately. First snip off the darkened fibers. Then use a soapless cleaner and sponge with water. If the burn is extensive, talk with a professional about replacing the damaged area.

**Crushing** - Furniture and traffic may crush a carpet's pile fibers. Frequent vacuuming in high-traffic areas and glides or cups under heavy pieces of furniture can help prevent this. Rotating your furniture to change the traffic pattern in a room promotes more even wear. Some carpets resist matting and crushing because of their level of fiber, but this does not imply or guarantee that no matting or crushing will occur. Heavy traffic areas such as halls and stairways are more susceptible to wear and crushing. This is considered normal

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wear.

**Fading** -Science has yet to develop a color that will not fade with time. All carpets will slowly lose some color due to natural and artificial forces in the environment. You can delay this process by frequently removing soil with vacuuming, regularly changing air filters in heating and air conditioning systems, keeping humidity and room temperature from getting too high, and reducing sunlight exposure with window coverings.

**Filtration** -If interior doors are kept closed while the air conditioning is operating, air circulation from the closed room flows through the small space at the bottom of the door. This forces the air over the carpet fibers, which in turn act as a filter, catching particulate pollution. Over time, a noticeable stain develops at the threshold.

**Fuzzing** -In loop carpets, fibers may break. Simply clip the excess fibers. If it continues, call a professional.

**Pilling** -Pilling or small balls of fiber can appear on your carpet, depending on the type of carpet fiber and the type of traffic. If this occurs, clip off the pills. If they cover a large area, seek professional advice.

**Rippling** -With wall-to-wall carpeting, high humidity may cause rippling. If the carpet remains rippled after the humidity has left, have a professional re-stretch the carpeting using a power stretcher, not a knee-kicker.

**Seams** -Carpet usually comes in 12-foot widths, making seams necessary in most rooms. Visible seams are not a defect unless they have been improperly made or unless the material has a defect, making the seam appear more pronounced than normal. The more dense and uniform the carpet texture, the more visible the seams will be. Carpet styles with low, tight naps result in the most visible seams. Seams are never more visible than when the carpet is first installed. Usually with time, use, and vacuuming the seams become less visible

**Shading** -Shading is an inherent quality of fine-cut pile carpets. Household traffic causes pile fibers to assume different angles; as a result, the carpet appears darker and lighter in these areas. A good vacuuming, which makes the pile all go in the same direction, provides a temporary remedy.

**Shedding** -New carpeting, especially pile, sheds bits of fiber for a period of time. Eventually these loose fibers are removed by vacuuming. Shedding usually occurs more with wool carpeting than with nylon or other synthetics.

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**Snags** -Sharp-edged objects can grab or snag the carpet fiber. When this occurs, cut off the snag. If the snag is especially large, call a professional.

**Sprouting** -Occasionally you may find small tufts of fiber sprouting above carpet surface. Simply use scissors to cut off the sprout. Do not attempt to pull it, because other fibers will come out in the process.

**Stains** -No carpet is stain-proof. Although your carpet manufacturer designates your carpet as stain-resistant, some substances may still cause permanent staining. These include hair dyes, shoe polish, paints, and India ink. Some substances destroy or change the color of carpets, including bleaches, acne medications, drain cleaners, plant food, insecticides, and food or beverages with strongly colored natural dyes as found in some brands of mustard and herbal tea.

Refer to your care and maintenance brochures for recommended cleaning procedures for your particular fiber. Pretest any spot-removal solution in an inconspicuous area before using it in a large area. Apply several drops of the solution, hold a white tissue on the area, and count to ten. Examine both tissue and carpet for dye transfer and check for carpet damage.

**Static** -Cooler temperatures outside often contribute to static electricity inside. To avoid the problem, look for carpets made with anti-static. You can also install a humidifier to help control static build-up.

## Caulking

Time and weather will shrink and dry caulking so that it no longer provides a good seal. As routine maintenance, check the caulking and make needed repairs. Caulking compounds and dispenser guns are available at hardware stores. Read the manufacturer's instructions carefully to be certain that you select an appropriate caulk for the intended purpose.

**Colored Caulk** -Colored caulking is available where larger selections are provided. As with any colored material, dye lots can vary.

**Latex Caulk** -Latex caulking is appropriate for an area that requires painting, such as along the stair stringer or where wood trim meets the wall.

**Silicone Caulk** -Caulking that contains silicone will not accept paint; it works best where water is present, for example, where tub meets tile or a sink meets a countertop.

*See also Paint.*

## Ceramic Tile

Your selection sheets include the manufacturer and color of your ceramic tile.

**Cleaning** -Ceramic tile is one of the easiest floor coverings to maintain. Simply vacuum when needed. Occasionally, a wet mopping with warm water may be appropriate. Avoid adding detergent to the water. If you feel a cleaning agent is required, use a mild solution of warm water and dishwasher crystals (they will not result in a heavy, difficult-to-remove lather on the grout). Rinse thoroughly.

The ceramic tile installed on walls or countertops in your home may be washed with any nonabrasive soap, detergent, or tile cleaner. Abrasive cleaners will dull the finish.

**Grout Discoloration** -Clean grout that becomes yellowed or stained with a fiber brush, cleanser, and water. Grout cleansers and whiteners are available at most hardware stores.

**Sealing Grout** -Sealing grout is your decision and responsibility.

**Separations** -Expect slight separations to occur in the grout between tiles. This grout is for decorative purposes only; it does not hold the tile in place. Cracks in the grout can be filled using premixed grout purchased from flooring or hardware stores. Follow package directions.

Tile around bathtubs or countertops may appear to be pulling up after a time. This is caused by normal shrinkage of grout or caulk and shrinkage of wood members as they dry out. If this occurs, the best remedy is to purchase tub caulk or premixed grout from a hardware store. Follow directions on the container. This maintenance is important to protect the underlying surface from water damage.

## Concrete Flatwork

By maintaining good drainage, you protect your home's foundation and the concrete flatwork: porch, patio, driveway, and sidewalks. Concrete flatwork is a floating slab—they are not attached to the home's foundation. These are not a structural (load-bearing) element of the home and are not covered by the structural warranty.

**Cleaning** -Avoid washing exterior concrete slabs with cold water from an outside faucet when

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temperatures are high and the sun has been shining on the concrete. The abrupt change in temperature can damage the surface bond of the concrete. We recommend sweeping for keeping exterior concrete clean. If washing is necessary, do this when temperatures are moderate.

Repeated cleaning of the garage floor by hosing can increase soil movement by allowing water to penetrate any existing cracks. We recommend sweeping to clean the garage floor.

**Cracks** -A concrete slab shrinks as it cures and some of this shrinkage shows up as cracks. Cracking of concrete flatwork also results from temperature changes that cause expansion and contraction.

During the summer, moisture finds its way under the concrete along the edges or through cracks in the surface. In winter, this moisture forms frost that can lift the concrete, increasing the cracking. Maintaining drainage away from all concrete slabs will minimize cracking from this cause. As cracks occur, seal them with a waterproof concrete caulk (available at hardware or home improvement stores) to prevent moisture from penetrating to the soil beneath.

**Expansion Joints** -We install expansion joints to help control expansion. However, as the concrete shrinks during the curing process, moisture can penetrate under the concrete and lift the expansion joint. When this occurs, fill the resulting gap with a gray silicone sealant, which you can purchase at most hardware stores.

**Heavy Vehicles** -Do not permit heavy vehicles such as moving vans or concrete trucks to drive on your concrete work. We design and install this concrete for residential use only.

**Ice, Snow, and Chemicals** -Driving or parking on snow creates ice on the drive, which magnifies the effects of snow on the concrete surface. Remove ice and snow from concrete slabs as promptly as possible after snow storms. Protect concrete from abuse by chemical agents such as pet urine, fertilizers, radiator overflow, repeated hosing, or de-icing agents, such as road salt that can drip from vehicles. All of these items can cause spalling (chipping of the surface) of concrete.

**Sealer** -A concrete sealer, available at paint stores, will help you keep an unpainted concrete floor clean. Do not use soap on unpainted concrete. Instead, use plain water and washing soda or, if necessary, a scouring powder.

## Countertops

Use a cutting board to protect your counters when you cut or chop. Protect the counter from heat and from extremely hot pans. If you cannot put your hand on it, do not put it on the counter. Do not use countertops as ironing boards and do not set lighted cigarettes on the edge of the counter.

**Caulking** -The caulking between the countertop and the wall, along the joint at the backsplash, and around the sink may shrink, leaving a slight gap. Maintaining a good seal in these locations is important to keep moisture from reaching the wood under the laminates and to prevent warping.

**Cleaning** -Avoid abrasive cleaners that will damage the luster of the surface.

**Mats** -Rubber drain mats can trap moisture beneath them, causing the laminated plastic to warp and blister. Dry the surface as needed.

**Wax** -Wax is not necessary, but it can be used to make counters gleam.

*See also Ceramic Tile.*

## Crawl Space

The crawl space is not intended as a storage area for items that could be damaged by moisture. Wood stored in a crawl space can attract termites.

You may notice slight dampness in the crawl space. Landscaping that is correctly installed helps prevent excessive amounts of water from entering crawl spaces. Report standing water to Root Homes for inspection.

*See also Ventilation.*

## Doors and Locks

The doors installed in your home are wood products subject to such natural characteristics of wood as shrinkage and warpage. Due to natural fluctuations of humidity and the use of forced air furnaces, showers, and dishwashers, interior doors may occasionally require minor adjustments.

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**Bi-fold Doors** -Interior bi-folds sometimes stick or warp due to weather conditions. Apply a silicone lubricant to the tracks to minimize this inconvenience.

**Exterior Finish** -To ensure longer life for your exterior wood doors, plan to refinish them every few years. Stained exterior doors with clear finishes tend to weather faster than painted doors. Reseal stained exterior doors whenever the finish begins cracking or crazing.

**Failure to Latch** -If a door will not latch because of minor settling, you can correct this by making a new opening in the jamb for the latch plate (remortising) and raising or lowering the plate accordingly.

**Hinges** -You can remedy a squeaky door hinge by removing the hinge pin and applying a silicone lubricant to it. Avoid using oil, as it can gum up or attract dirt. Graphite works well as a lubricant but can create a gray smudge on the door or floor covering beneath the hinge if too much is applied.

**Keys** -Keep a duplicate privacy lock key where children cannot reach it in the event a youngster locks him- or herself in a room. The top edge of the door casing is often used as a place to keep the key. A small screwdriver or similarly shaped device can open some types of privacy locks.

**Locks** -Lubricate door locks with graphite or other waterproof lubricant. Avoid oil, as it will gum up.

**Slamming** -Slamming doors can damage both doors and jambs and can even cause cracking in walls. Teach children not to hang on the doorknob and swing back and forth; this works loose the hardware and causes the door to sag.

**Shrinkage** -Use putty, filler, or latex caulk to fill any minor separations that develop at mitered joints in door trim. Follow with painting. Panels of wood doors shrink and expand in response to changes in temperature and humidity. Touching up the paint or stain on unfinished exposed areas is your home maintenance responsibility.

**Sticking** -The most common cause of a sticking door is the natural expansion of lumber due to changes in humidity. When sticking is due to swelling during a damp season, do not plane the door unless it continues to stick after the weather changes.

Before planing a door because of sticking, try two other steps: first, apply either a paste wax, light coat of paraffin, or candle wax to the sticking surface; or second, tighten the screws that hold the door jamb or door frame. If planing is necessary even after these measures, use sandpaper to smooth the door and paint the sanded area to seal against

moisture.

**Warping** -If a door warps slightly, keeping it closed as much as possible often returns it to normal.

**Weather Stripping** -Weather stripping and exterior door thresholds occasionally require adjustment or replacement.

## Drywall

Slight cracking, nail pops, or seams may become visible in walls and ceilings. These are caused by the shrinkage of the wood and normal deflection of rafters to which the drywall is attached.

**Repairs** -With the exception of the one-time repair service provided by Root Homes, care of drywall is your maintenance responsibility. Most drywall repairs can be easily made. This work is best done when you redecorate the room.

Repair hairline cracks with a coat of paint. You can repair slightly larger cracks with spackle or caulk. To correct a nail pop, reset the nail with a hammer and punch. Cover it with spackle, which is available at paint and hardware stores. Apply two or three thin coats. When dry, sand the surface with fine-grain sandpaper, and then paint. You can fill indentations caused by sharp objects in the same manner.

## Electrical Systems

Know the location of the breaker panel; it includes a main shut-off that controls all the electrical power to the home. Individual breakers control the separate circuits. Each breaker is marked to help you identify which breaker is connected to which major appliances, outlets, or other service. Should a failure occur in any part of your home, always check the breakers in the main panel box.

**Breakers** -Circuit breakers have three positions: on, off, and tripped. When a circuit breaker trips, it must first be turned off before it can be turned on. Switching the breaker directly from tripped to on will not restore service.

**Breaker Tripping** -Breakers trip due to overloads caused by plugging too many appliances into the circuit, a worn cord or defective appliance, or operating an appliance with too high a voltage requirement for the circuit. The starting of an electric motor can also trip a breaker.

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If any circuit trips repeatedly, unplug all items connected to it and reset. If it trips when nothing is connected to it, you need an electrician. If the circuit remains on, one of the items you unplugged is defective and will require repair or replacement.

**Buzzing** -Fluorescent fixtures use transformer action to operate. This action sometimes causes a buzzing.

**Fixture Location** -We install light fixtures in the locations indicated on the plans. Moving fixtures to accommodate specific furniture arrangements or room use is your responsibility.

**GFCI (Ground-Fault Circuit-Interrupters)** -GFCI receptacles have a built-in element that senses fluctuations in current. Quite simply, the GFCI is a sophisticated circuit breaker. Building codes require installation of these receptacles in bathrooms, the kitchen, outside, and the garage (areas where an individual can come into contact with water while holding an electric appliance or tool). Heavy appliances such as freezers or power tools will trip the GFCI breaker.

*Do not plug a refrigerator or food freezer into a GFCI-controlled outlet. The likelihood of the contents being ruined is high and the limited warranty does not cover such damage.*

Each GFCI receptacle has a test and reset button. Once each month, press the test button. This will trip the circuit. To return service, press the reset button. If a GFCI breaker trips during normal use, it may indicate a faulty appliance and you will need to investigate the problem. One GFCI breaker can control up to three or four outlets.

**Grounded System** -Your electrical system is a three-wire grounded system. Never remove the bare wire that connects to the box or device.

**Light Bulbs** -You are responsible for replacing burned-out bulbs other than those noted during your orientation.

**Modifications** -If you wish to make any modifications, contact the electrician listed on the Emergency Phone Numbers you receive at the orientation. Having another electrician modify your electrical system during the warranty period can void that portion of your limited warranty.

**Outlets** -If an outlet is not working, check first to see if it is controlled by a wall switch or GFCI. Next, check the breaker.

If there are small children in the home, install safety plugs to cover unused outlets. This also minimizes the air infiltration that sometimes occurs with these outlets. Teach children to never touch electrical outlets, sockets, or fixtures.

**Underground Cables** -Before digging, check the location of buried service leads by calling the local utility locating service. In most cases, wires run in a straight line from the service panel to the nearest public utility pad. Maintain positive drainage around the foundation to protect this service.

## Expansion and Contraction

Changes in temperature and humidity cause all building materials to expand and contract. Dissimilar materials expand or contract at different rates. This movement results in separation between materials, particularly dissimilar ones. You will see the effects in small cracks in drywall and in paint, especially where moldings meet drywall, at mitered corners, and where tile grout meets tub or sink. While this can alarm an uninformed homeowner, it is normal.

Shrinkage of the wood members of your home is inevitable and occurs in every new home. Although this is most noticeable during the first year, it may continue beyond that time. In most cases, caulk and paint are all that you need to conceal this minor evidence of a natural phenomenon. Even though properly installed, caulking shrinks and cracks. Maintenance of caulking is your responsibility.

## Fireplace

Most of us feel a fireplace is an excellent way to create a warm, cozy atmosphere. However, without sufficient information, your use of the fireplace can result in heat (and dollars) being wasted. To help prevent that, consider the following points.

Look upon burning a fire as a luxury that adds much to the atmosphere but just a little to the heat in a home. About 10 percent of the heat produced by a fire is radiated into the house. In many older homes, the air used by the fireplace for combustion is replaced with cold outside air drawn in through cracks around doors and windows. However, your home is constructed so tightly that this does not happen. We install a fresh air vent to supply the fireplace with combustion air and reduce the amount of heated air the fire draws from your house. Open this vent before starting the fire as you do the damper.

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Close the damper and cold air vent when not in use. Leaving these open is equivalent to having an open window in the house. If the fire is still burning, but you are finished enjoying it, use glass doors to prevent heated air from being drawn up the chimney until your damper can be closed.

One caution on the use of glass doors: do not close them over a roaring fire, especially if you are burning hard woods (such as oak or hickory) because this could break the glass. Also, when closing the doors over a burning fire, open the mesh screens first. This prevents excessive heat build-up on the mesh, which might result in warping or discoloration.

Your objective in building a fire should be a clean, steady, slow-burning fire. Begin with a small fire to allow the components of the fireplace to heat up slowly. Failure to do so may damage the fireplace and can void the warranty. Start the fire by burning kindling and newspaper under the grate; two to three layers of logs stacked with air space between, largest logs to the rear, works best. One sheet of paper burned on top of the stack will help the chimney start to draw. Any logs 6 inches in diameter or larger should be split.

*Do not burn trash in the fireplace and never use any type of liquid fire starter.*

Remove old ashes and coals from under the grate when completely cool. A light layer is desirable as an insulator and will help to reflect heat.

**Chimney Cleaning** -Creosote and other wood-burning by-products accumulate inside the flue over a period of time. This build-up can be a fire hazard. The way you use your fireplace and the type of wood you burn determine the frequency of your chimney cleanings. For instance, burning soft woods or improperly seasoned woods necessitates more frequent cleaning. Hire a qualified chimney sweep for this cleaning.

**Spark Arrester** -If the spark arrester becomes clogged, the diminished air flow will affect the performance of the fireplace and may be a fire hazard. Have the arrester cleaned professionally when needed.

**Gas Fireplace** -Root Homes offers direct-vent gas fireplaces. If you ordered this type of fireplace, it is demonstrated during the orientation. Read and follow all manufacturer's directions.

A slight delay between turning the switch on and flame ignition is normal. The flames

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should ignite gently and silently. If you notice any deviation from this and any gas smell, immediately shut off the switch and report it to the gas company.

Excessive winds can cause a downdraft, which can blow out the pilot, requiring you to relight it before using the fireplace.

*The exterior vent cover for a direct-vent gas fireplace becomes extremely hot when the fireplace is operating.*

## Foundation

We install the foundation of your home according to the recommendations of our consulting engineer. To protect your home's foundation, follow guidelines for installation and maintenance of landscaping and drainage in this manual.

**Cracks** -Even though an engineer designed the foundation and we constructed it according to engineering requirements, surface cracks can still develop. Surface cracks are not detrimental to the structural integrity of your home.

**Dampness** -Due to the amount of water in concrete, basements may be damp. Condensation can form on water lines and drip onto the floor.

*See also Waterproofing.*

## Garage Overhead Door

Since the garage door is a large, moving object, periodic maintenance is necessary.

**30-Weight Oil** -Every six months, apply a 30-weight automobile oil or similar lubricant to all moving parts: track, rollers, hinges, pulleys, and springs. At the same time, check to see that all hardware is tight and operating as intended without binding or scraping. Avoid over-lubricating to prevent drips on vehicles or the concrete floor.

**Lock** -If the lock becomes stiff, apply a silicone or graphite lubricant. Do not use oil on a lock, as it will stiffen in winter and make the lock difficult to operate.

**Opener** -To prevent damage to a garage door opener, be sure the door is completely unlocked and the rope-pull has been removed before using the operator. If you have an opener

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installed after closing on your home, we suggest that you order it from the company that provided and installed the garage door to assure uninterrupted warranty coverage. Be familiar with the steps for manual operation of the door in the event of a power failure.

If Root Homes installed a door opener as one of your selections, during orientation we demonstrate the electric eye that provides a safety stop in the event someone crosses through the opening while the overhead door is in motion. Use care not to place tools or other stored items where they interfere with the function of the electric eye.

**Painting** -Repaint the garage door when you repaint your home, or more often if needed to maintain a satisfactory appearance.

**Safety** -Follow the manufacturer's instructions for safe and reliable operation. Do not allow anyone except the operator near the door when it is in motion. Keep hands and fingers away from all parts of the door except the handle. Do not allow children to play with or around the door.

For your safety, after the expiration of the one-year warranty, have any needed adjustments made by a qualified specialist. The door springs are under a considerable amount of tension and require special tools and knowledge for accurate and safe servicing. Have the door inspected by a professional garage door technician after any significant impact to the door.

**Sag** -The garage door may sag slightly due to its weight and span. This will stabilize after the panels have dried.

## Grading and Drainage

The final grades around your home have been inspected and approved for proper drainage of your lot.

**Drainage** -Typically, the grade around your home should slope 1 foot in the first 10 feet, tapering to a 2 percent slope. In most cases, drainage swales do not follow property boundaries. Maintain the slopes around your home to permit the water to drain away from the home as rapidly as possible. This is essential to protect your foundation. Failure to do so can result in major structural damage and will void your warranty.

**Roof Water** -Do not remove the splash blocks or downspout extensions from under the downspouts. Keep these in place at all times, sloped so the water drains away from your home quickly.

**Settling** -The area we excavated for your home's foundation was larger than the home to allow room to work. In addition, some trenching is necessary for installation of utility lines. Although we replaced and compacted the soil, it does not return to its original density. Some settling will occur, especially after prolonged or heavy rainfall or melting of large amounts of snow. Settling can continue for several years. Inspect the perimeter of your home regularly for signs of settling and fill settled areas as needed to maintain positive drainage.

## Gutters and Downspouts

Check gutters periodically and remove leaves or other debris. Materials that accumulate in gutters can slow water drainage from the roof, cause overflows, and clog the downspouts.

**Extensions or Splash blocks** -Extensions should discharge outside of rock or bark beds so that water is not dammed behind the edging materials that might be used.

**Ladders** -Use caution when leaning ladders against gutters, as this may cause dents.

**Leaks** -If a joint of gutter drips, caulk the inside joint using a commercial gutter caulking compound available at hardware stores.

**Paint** -Gutters and downspouts are painted to match your home. You should repaint them when you repaint your home.

**Snow and Ice** -Clear excess snow from downspouts as soon as possible to allow the gutter to drain and to prevent damage. Severe ice or snow build-up can damage gutters, and such damage is not covered by the limited warranty.

## Hardware

Doorknobs and locks should operate correctly with little attention. Over time, they may need slight adjustments due to normal shrinkage of the framing. Occasionally, you may need to tighten screws.

## Hardwood Floors

In daily care of hardwood floor, preventive maintenance is the primary goal.

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**Cleaning** -Sweep on a daily basis or as needed. Never wet mop a hardwood floor. Excessive water causes wood to expand and can possibly damage the floor. When polyurethane finishes become soiled, damp-mop with a mixture of one cup vinegar to one gallon of warm water. When damp-mopping, remove all excess water from the mop. Check with the hardwood company if your floor has a water-based finish.

**Dimples** -Placing heavy furniture or dropping heavy or sharp objects on hardwood floors can result in dimples.

**Filmy Appearance** -A white, filmy appearance can result from moisture, often from wet shoes or boots.

**Furniture Legs** -Install proper floor protectors on furniture placed on hardwood floors. Protectors will allow chairs to move easily over the floor without scuffing. Regularly clean the protectors to remove any grit that may have accumulated.

**Humidity** -Wood floors respond noticeably to changes in humidity in your home. Especially during winter months the individual planks or pieces expand and contract as water content changes. A humidifier helps but does not eliminate this reaction.

**Mats and Area Rugs** -Use protective mats at the exterior doors to help prevent sand and grit from getting on the floor. Gritty sand is wood flooring's worst enemy. However, be aware that rubber backing on area rugs or mats can cause yellowing and warping of the floor surface.

**Recoat** -If your floors have a polyurethane finish, you may want to have an extra coat of polyurethane applied by a qualified contractor within six months to one year. The exact timing will depend on your particular lifestyle. If another finish was used, refer to the manufacturer's recommendations.

**Separation** -Expect some shrinkage around heat vents or any heat-producing appliances, or during seasonal weather changes.

**Shoes** -Keep high heels in good repair. Heels that have lost their protective cap (thus exposing the fastening nail) will exert over 8,000 pounds of pressure per square inch on the floor. That's enough to damage hardened concrete; it will mark your wood floor.

**Spills** -Clean up food spills immediately with a dry cloth. Use a vinegar-and-warm-water solution for tough food spills.

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**Splinters** -When floors are new, small splinters of wood can appear.

**Sun Exposure** -Exposure to direct sunlight can cause irreparable damage to hardwood floors. To preserve the beauty of your hardwood floors, install and use window coverings in these areas.

**Traffic Paths** -A dulling of the finish in heavy traffic areas is likely.

**Warping** -Warping will occur if the floor repeatedly becomes wet or is thoroughly soaked even once. Slight warping in the area of heat vents or heat-producing appliances is also typical.

**Wax** -Waxing and the use of products like oil soap are neither necessary nor recommended. Once you wax a polyurethane finish floor, recoating is difficult because the new finish will not bond to the wax. The preferred maintenance is preventive cleaning and recoating annually or as needed to maintain the desired luster.

## Heating System

Good maintenance of the furnace can save energy dollars and prolong the life of the furnace. Carefully read and follow the manufacturer's literature on use and maintenance. The guidelines here include general information only.

**Adjust Vents** -Experiment with the adjustable registers in your home to establish the best heat flow for your lifestyle. Generally, you can reduce the heat in seldom-used or interior rooms. This is an individual matter and you will need to balance the system for your own family's needs.

**Avoid Overheating** -Do not overheat your new home. Overheating can cause excessive shrinkage of framing lumber and may materially damage the home. In the beginning, use as little heat as possible and increase it gradually.

**Combustion Air** -Furnaces we install in basements or in closets over crawl spaces include combustion air vents.

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*Never cover or block the combustion air vent in any way. Outside air is needed to supply the furnace with sufficient oxygen. Blocking the combustion air vent will cause the furnace to draw air down the vent pipe and pull poisonous gases back into your home.*

**Ductwork Noise** -Some popping or pinging sounds are the natural result of ductwork heating and cooling in response to air flow as the system operates.

**Filter** -Remember to change or clean the filter monthly year-round. A clogged filter can slow air flow and cause cold spots in your home. Although it takes less than one minute to change the filter, this is one of the most frequently overlooked details of normal furnace care. Buy filters in large quantity for the sake of convenience.

If you have a permanent, washable, removable filter, you need to clean this monthly. Use water only to clean the filter, tap to dry or air dry, and leave unit off for a brief period. Do not use soaps or detergents on the filter..

**Gas Odor** -If you smell gas, call the gas company immediately.

**Odor** -A new heating system may emit an odor for a few moments when you first turn it on. An established system may emit an odor after being unused for an extended time (such as after the summer months if you do not use air conditioning). This is caused by dust that has settled in the ducts and should pass quickly.

**Registers** -Heat register covers are removable and adjustable. You are responsible for adjusting the dampers in these covers to regulate the heat flow within the home. Registers in the rooms farther away from the furnace will usually need to be opened wider.

**Return Air Vents** -For maximum comfort and efficient energy use, arrange furniture and draperies to allow unobstructed air flow from registers and to cold air returns.

**Thermostat** -The furnace will come on automatically when the temperature at the thermostat registers below the setting you have selected. Once the furnace is on, setting the thermostat to a higher temperature will not heat the home faster. Thermostats are calibrated to within plus or minus 5 degrees.

**Trial Run** -Have a trial run early in the fall to test the furnace. (The same applies to air

conditioning in the spring.) If service is needed, it is much better to discover that before the heating season.

*See also Air Conditioner, Heating Pump, Ventilation.*

### Heat Pump

If your home contains a heat pump system, you should be aware of the performance characteristics unique to these systems. As with any system, read the manufacturer's literature and follow all instructions for efficient operation and maintenance of your system. Clean or replace filters once a month. Provide professional service for your system at least once every two years.

***Air Circulation Across Coils*** -Keep the outside unit clear of any materials that would interfere with air circulation. Snow, ice, landscaping materials, trash, leaves, and other accumulating items can cause inefficiency or damage the unit.

***Air Conditioning and Heating*** - A heat pump system operates differently from a gas forced-air furnace. The same system provides both heat and air conditioning. This is possible because a refrigerant flows back and forth in the coils of the heat pump, controlled by a reversing valve. In the heating mode, the heat pump removes heat from the outside air and transfers it to the inside air. In the cooling mode, it does just the opposite, removing heat from the inside air and discharging it outside of the home. The thermostat inside your home controls this heating or cooling activity.

***Air Temperature at Vents*** -Do not expect dramatic temperature differences in the air coming from the vents as is common with other kinds of systems. The coils used in a heat pump system operate at lower temperatures than those common in a gas forced-air system. As a result, for example, in the heat mode, air from the supply vents will typically range from 85 to 90 degrees F. The vents will not feel hot, though the air discharged is warmer than the air in the room by as much as 20 degrees.

***Auxiliary Heat System*** -At lower outside temperatures, less heat is available for the heat pump to draw from the exterior air. Therefore, from time to time the auxiliary heat system will come on to maintain the temperature you set at the thermostat. The auxiliary system will also come on whenever the temperature at the thermostat is moved 1.5 degrees or more at one time. If the light stays on when the outside temperature is more than 30 degrees F, contact a service person.

***Defrost Cycle*** -When the heat pump is operating in the heat mode, the coils outside may reach

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below freezing temperatures. Moisture in the air will condense into frost and accumulate on the coils under these circumstances. From time to time, the system will go into defrost mode to clear accumulated frost from the coils. This is a normal part of the operation of the system and will occur automatically. During the defrost cycle, the outside fan will stop temporarily. The temperature of air flow into the home will be a bit lower during the defrost cycle. The defrost cycle can only occur once every 90 minutes and lasts no longer than 10 minutes.

**Night Setback** -Unless you have a night setback thermostat designed to work with a heat pump system, do not turn the thermostat down in the evenings. Adjust the temperature a fraction of a degree at a time until a comfortable, permanent setting is found.

**Register Adjustment** -Registers will require adjustment from time to time to maximize your family's comfort. Do not completely close off more than one supply register at a time. This can restrict the air flow too much and reduce the efficiency of the system. A good technique is to completely open all the vents, then gradually move the temperature setting up until the coolest room is comfortable. Once the coolest room is comfortable, gradually close the vents in the warmer rooms until all rooms are comfortable as well. Reverse the process for air conditioning.

**Return Air Vents** -As with any heating system, return air vents must be clear so the air flows through the ducts unimpeded. Avoid placing furniture where it blocks the return air vents.

*See also Air Conditioner, Heating system, Humidifier, Ventilation.*

## Humidifier

Operate a humidifier only with the furnace, not with the air conditioner. If you notice condensation on windows, the humidifier should be adjusted to a lower setting. Clean the moisture pad according to the manufacturer's instructions and suggested timetable.

## Insulation

The effectiveness of blown insulation is diminished if it is uneven. As the last step in any work done in your attic (for example, the installation of a TV antenna), you should confirm that the insulation lays smooth and even. Do not step on drywall ceilings, because this can result in personal injury or damage to the drywall.

Electrical outlets normally emit noticeable amounts of cold air when outside temperatures are low.

### Landscaping

Plan to install the basic components of your landscaping as soon after closing as weather permits. In addition to meeting your homeowners' association requirements to landscape in a timely manner, well-designed landscaping prevents erosion and protects the foundation of your home.

**Additions** -Before installing patio additions or other permanent improvements, consider soil conditions in the design and engineering of your addition.

**Backfill** -We construct the foundation of your home beginning with an excavation into the earth. When the foundation walls are complete, the area surrounding them is backfilled. Soil in this area is not as compact as undisturbed ground. Water can penetrate through the backfill area to the lower areas of your foundation. This can cause potentially severe problems such as wet basements, cracks in foundation walls, and floor slab movement. Avoid this through proper installation of landscaping and good maintenance of drainage.

Backfill areas will settle and require prompt attention to avoid damage to your home and voiding of the structural warranty.

Keep downspout extensions in the down position to channel roof runoff away from the foundation area of your home. Routine inspection of downspouts, backfill areas, and other drainage components is an excellent maintenance habit.

*See also Grading and Drainage.*

**Bark or Rock Beds** -Do not allow edgings around decorative rock or bark beds to dam the free flow of water away from the home. You can use a nonwoven landscape fabric between the soil and rock or bark to restrict weed growth while still permitting normal evaporation of ground moisture.

**Contractors** -You are responsible for changes to the drainage pattern made by any landscape, concrete, deck, or pool contractor. Discuss drainage with any company you hire to do an installation in your yard. Do not permit them to tie into existing drainage pipes without approval from Root Homes.

**Irrigation** -Make provisions for efficient irrigation. Conduct weekly operational checks to

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ensure proper performance of the system. Direct sprinkler heads away from the home. Trickler or bubbler type irrigation systems are not recommended for use adjacent to the structure. Regularly drain and service sprinkler systems.

**Planning** -Locate plants and irrigation heads out of the way of pedestrian or bicycle traffic and car bumpers. Space groves of trees or single trees to allow for efficient mowing and growth. Group plants with similar water, sun, and space requirements together.

**Plant Selection** -Plant with regard to your local climate. Favor native over exotic species. Consider ultimate size, shape, and growth of the species.

**Requirements** -Check with your local building department and homeowners association before designing, installing, or changing landscaping for any regulations that they require you to follow.

**Soil Mix** -Provide good soil mixes with sufficient organic material. Use mulch at least 3 inches deep to hold soil moisture and to help prevent weeds and soil compaction.

In areas with high clay content, prepare the soil before installing your grass. First cover the soil with 2 inches of sand and 1 inch of manure that is treated and odorless. Rototill this into the soil to a depth of 6 inches (rototill parallel to the swales). Whether you use seed or sod, this preparation helps your lawn to retain moisture and require less water. Installing a lawn over hard soil permits water to run off with little or no penetration and your lawn will derive minimal benefit from watering or rain.

Apply appropriate fertilizer and weed and pest controls as needed for optimal growth. Investigate organic compounds for additional protection of the environment.

**Utility Lines** -A slight depression may develop along the line of the utility trench. To correct this, roll back the sod, spread top soil underneath to level the area, compact and then relay the sod.

**Waiting to Landscape** -If you leave ground un-landscaped, it erodes. Correcting erosion that occurs after closing is your responsibility.

## Mildew

Mildew is a fungus that spreads through the air in microscopic spores. They love moisture and feed on surfaces or dirt. On siding, they look like a layer of dirt. Solutions that remove mildew are available from local paint or home improvement stores. Wear protective eyewear and rubber

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gloves for this task; the chemicals that remove mildew are unfriendly to humans.

## Mirrors

To clean your mirrors use any reliable liquid glass cleaner or polisher available at most hardware or grocery stores. Avoid acidic cleaners and splashing water under the mirror; either can cause the silvering to deteriorate. Avoid getting glass cleaners on plumbing fixtures as some formulas can deteriorate the finish.

## Paint and Stain

Due to changes in the formula for paint (such as the elimination of lead to make paints safer), painted surfaces must be washed gently using mild soap and as little water as possible. Avoid abrasive cleaners, scouring pads, or scrub brushes. Flat paints show washing marks more easily than gloss paints do. Often, homeowners prefer the results obtained by touching up rather than washing.

**Colors** -Your selection sheets are your record of the paint and stain color names, numbers, and manufacturers used in your home.

**Exterior** -Regular attention will preserve the beauty and value of your home. Check the painted and stained surfaces of your home's exterior annually. Repaint before much chipping or wearing away of the original finish occurs; this will save the cost of extensive surface preparation. Plan on refinishing the exterior surface of your home approximately every two to three years or as often as your paint manufacturer suggests for your area and climate. Climatic conditions control the chemical structure of the paint used on the exterior. Over time, this finish will fade and dull a bit.

When you repaint the exterior of your home, begin by resetting popped nails and removing blistered or peeling portions of paint with a wire brush or putty knife. Sand, spot with primer, and then paint the entire area. Use a quality exterior paint formulated for local climate conditions.

Avoid having sprinklers spray water on the exterior walls of your home. This will cause blistering, peeling, splintering, and other damage to the home.

**Severe Weather** -Hail and wind can cause a great deal of damage in a severe storm, so inspect the house after such weather. Promptly report damage caused by severe weather to your

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insurance company.

**Stain** -For minor interior stain touch-ups, a furniture-polish-and-stain treatment is inexpensive, easy to use, and will blend in with the wood grain. Follow directions on the bottle.

**Touch-Up** -When doing paint touch-ups, use a small brush, applying paint only to the damaged spot. Touch-up may not match the surrounding area exactly, even if the same paint mix is used. When it is time to repaint a room, prepare the wall surfaces first by cleaning with a mild soap and water mixture or a reliable cleaning product.

We provide left over cans of each paint used on your home. Store these with the lids tightly in place and in a location where they are not subjected to extreme temperatures.

**Wall Cracks** -We suggest that you wait until after the first heating season to repair drywall cracks or other separations due to shrinkage.

*See also Drywall.*

## Plumbing Fixtures

The manufacturer treats brass fixtures with a clear protective coating, electrostatically applied, to provide beauty and durability. This coating is not impervious to wear and tear. Atmospheric conditions, sunlight, caustic agents such as paints, and scratches from sharp objects can cause the protective coating to crack or peel, exposing the brass and resulting in spotting and discoloration.

**Cleaning** -Initial care of these products requires only periodic cleaning with a mild, nonabrasive soap and buffing with a soft cloth.

**Corrosion** -Unless you have ordered solid brass fixtures, the brass on your fixtures is a coating on top of a base metal. Water having a high mineral content is corrosive to any brass– coated or solid.

**Polish** -When peeling, spotting, or discoloration occurs, you can sometimes restore the beauty of the metal by completely removing the remaining coating and hand-polishing the item with a suitable brass polish. Applying a light coat of wax and buffing with a soft cloth helps maintain the gloss.

**Tarnish** -Like sterling silver, brass will gradually tarnish and eventually take on an antique appearance.

*See also Plumbing System, Water Heater.*

## Plumbing System

We want to draw your attention to a water-saving regulation that went into effect in 1993, which prohibits the manufacture of toilets that use more than 1.6 gallons of water per flush. In the search for a balance among comfort, convenience, and sensible use of natural resources, the government conducted several studies. The 1.6-gallon toilet turned out to be the size that overall consistently saves water.

As a result of implementing this standard, flushing twice is occasionally necessary to completely empty the toilet bowl. Similarly, flow restrictors are manufactured into most faucets and all shower heads and cannot be removed. We apologize for any inconvenience this may cause.

**Aerators** -Even though your plumbing lines have been flushed to remove dirt and foreign matter, small amounts of minerals may enter the line. Aerators on the faucets strain much of this from your water. Minerals caught in these aerators may cause the faucets to drip because washers wear more rapidly when they come in contact with foreign matter.

**Cleaning** -Follow manufacturer's directions for cleaning fixtures. Avoid abrasive cleansers. They remove the shiny finish and leave behind a porous surface that is difficult to keep clean. Clean plumbing fixtures with a soft sponge and soapy water (a nonabrasive cleaner or a liquid detergent is usually recommended by manufacturers). Then polish the fixtures with a dry cloth to prevent water spots. Care for brass fixtures with a good-quality brass cleaner, available at most hardware stores.

**Clogs** -The main causes of toilet clogs are domestic items such as disposable diapers, excessive amounts of toilet paper, sanitary supplies, Q-tips, dental floss, and children's toys. Improper garbage disposal use also causes many plumbing clogs. Always use plenty of cold water when running the disposal. This recommendation also applies to grease; supplied with a steady flow of cold water, the grease congeals and is cut up by the blades. If you use hot water, the grease remains a liquid, then cools and solidifies in the sewer line. Allow the water to run 10 to 15 seconds after shutting off the disposal.

You can usually clear clogged traps with a plumber's helper (plunger). If you use chemical agents, follow directions carefully to avoid personal injury or damage to the fixtures.

Clean a plunger drain stopper—usually found in bathroom sinks—by loosening the nut under the sink at the back, pulling out the rod attached to the plunger, and lifting the

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stopper. Clean and return the mechanism to its original position.

***Dripping Faucet*** -You can repair a dripping faucet by shutting off the water at the valve directly under the sink, then removing the faucet stem, changing the washer, and reinstalling the faucet stem. The shower head is repaired the same way. Replace the washer with another of the same type and size. You can minimize the frequency of this repair by remembering not to turn faucets off with excessive force. (Please note that some manufacturers do not use rubber washers.)

***Extended Absence*** -If you plan to be away for an extended period, you should drain your water supply lines. To do this, shut off the main supply line and open the faucets to relieve pressure in the lines. You may also wish to shut off the water heater. Do this by turning off the cold water supply valve on top and the gas control at the bottom. Drain the tank by running a hose from the spigot on the bottom to the basement floor drain. If you leave the tank full, keep the pilot on and set the temperature to its lowest or "vacation" setting. Check manufacturer's directions for additional hints and instructions.

***Freezing Pipes*** -Provided the home is heated at a normal level, pipes should not freeze at temperatures above 0 degrees F. Set the heat at 65 degrees F if you are away during winter months. Keep garage doors closed to protect plumbing lines running through this area from freezing temperatures.

In unusually frigid weather or if you will be gone more than a day or two, open cabinet doors to allow warm air to circulate around pipes. Use an ordinary hair dryer to thaw pipes that are frozen. Never use an open flame.

***Gold or Brass Finish*** - Avoid using any abrasive cleaners on gold or antique brass fixtures. Use only mild detergent and water or a cleaning product recommended by the manufacturer.

***Laundry Tub*** -If you have a laundry room tub, the faucet does not have an aerator. This is to allow the tub faucet to accept a hose connection.

***Leaks*** -If a major plumbing leak occurs, the first step is to turn off the supply of water to the area involved. This may mean shutting off the water to the entire home. Then contact the appropriate contractor.

***Low Pressure*** -Occasional cleaning of the aerators on your faucets (normally every three to four months) will allow proper flow of water. The water department controls the overall water pressure.

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**Marble or Manufactured Marble** - Marble and manufactured marble will not chip as readily as porcelain enamel but can be damaged by a sharp blow. Avoid abrasive cleansers or razor blades on manufactured marble; both damage the surface. Always mix hot and cold water at manufactured marble sinks; running only hot water can damage the sink.

**Outside Faucets** If a hose is left attached, the water that remains in the hose can freeze and expand back into the pipe, causing a break in the line. Repair of a broken line that feeds an exterior faucet is a maintenance item. Note that Root Homes does not warrant sillcocks against freezing.

**Porcelain** -You can damage porcelain enamel with a sharp blow from a heavy object or by scratching. Do not stand in the bathtub wearing shoes unless you have placed a protective layer of newspaper over the bottom of the tub. If you splatter paint onto the porcelain enamel surfaces during redecorating, wipe it up immediately. If a spot dries before you notice it, use a recommended solvent.

**Running Toilet** -To stop running water, check the shut-off float in the tank. You will most likely find it has lifted too high in the tank, preventing the valve from shutting off completely. In this case, gently bend the float rod down until it stops the water at the correct level. The float should be free and not rub the side of the tank or any other parts. Also check the chain on the flush handle. If it is too tight, it will prevent the rubber stopper at the bottom of the tank from sealing, resulting in running water.

**Shut-Offs** - Your main water shut-off is located near your meter. You use this shut-off for major water emergencies such as a water line break or when you install a sprinkler system or build an addition to your home. Each toilet has a shut-off on the water line under the tank. Hot and cold shut-offs for each sink are on the water lines under the sink.

**Sprinklers** -You should routinely inspect sprinkler heads and provide seasonal service to maintain proper functioning.

**Stainless Steel** -Clean stainless steel sinks with soap and water to preserve their luster. Avoid abrasive cleaners; these will damage the finish. An occasional cleaning with a good stainless steel cleaner will enhance the finish. Avoid leaving produce on a stainless steel surface, since prolonged contact with produce can stain the finish.

**Tank Care** -Avoid exposing the toilet to blows from sharp or heavy objects, which can cause chipping or cracking. Avoid abnormal pressures against the sides of the tank. It is possible to crack the tank at the points where it is attached to the bowl.

*See also Plumbing Fixtures, Water Heater.*

## **Resilient Flooring**

Although resilient floors are designed for minimum care, they do have maintenance needs. Follow any manufacturer's specific recommendations for care and cleaning. Some resilient floors require regular application of a good floor finish. This assures you of retaining a high gloss. However, avoid using cleaning or finishing agents on the new floor until the adhesive has thoroughly set. This will take about two weeks.

***Color and Pattern*** -Your color selection sheets provide a record of the brand, style, and color of floor coverings in your home. Please retain this information for future reference.

***Limit Water*** -Wipe up spills and vacuum crumbs instead of washing resilient floors frequently with water. Limit mopping or washing with water; excessive amounts of water on resilient floors can penetrate seams and get under edges, causing the material to lift and curl.

***Moving Furniture*** -Moving appliances across resilient floor covering can result in tears and wrinkles. Install coasters on furniture legs to prevent permanent damage. If you damage the resilient floor, you can have it successfully patched by professionals. We leave any remnants of floor covering materials for this reason.

***No Wax*** -The resilient flooring installed in your home is the no-wax type. No-wax means a clear, tough coating that provides both a shiny appearance and a durable surface. However, even this surface will scuff or mark. Follow the manufacturer's recommendations for maintaining the finish.

***Raised Nail Heads*** -Raised nail heads are the result of movements of the floor joist caused by natural shrinkage and deflection. We have used special nails and glued the underlayment to help minimize this movement. If a nail head becomes visible through resilient flooring, place a block of wood over it and hit the block with a hammer to reset the nail.

***Scrubbing and Buffing*** -Frequent scrubbing or electric buffing is harder on floors than regular foot traffic. Use acrylic finishes if you scrub or buff.

***Seams*** -Any brand or type of resilient flooring may separate slightly due to shrinkage. Seams can lift or curl if excessive moisture is allowed to penetrate them. You can use a special caulking at tub or floor joints to seal seams at those locations. Avoid getting large amounts of water on the floor from baths and showers.

## Roof

The shingles on your roof do not require any treatment or sealer.

**Clean Gutters** -Maintain the gutters and downspouts so that they are free of debris and able to quickly drain precipitation from the roof.

**Leaks** -If a leak occurs, try to detect the exact location. This will greatly simplify finding the area that requires repair when the roof is dry.

**Limit Walking** -Limit walking on your roof. Your weight and movement can loosen the roofing material and in turn result in leaks. Never walk on the roof of your home when the shingles are wet—they are slippery.

**Severe Weather** -After severe storms, do a visual inspection of the roof for damages. Notify your insurance company if you find pieces of shingle in the yard or shingle edges lifted on the roof.

## Siding

Siding expands and contracts in response to changes in humidity and temperature. Slight waves are visible in siding under certain weather conditions; this cannot be entirely eliminated.

Wood or wood-product siding will require routine refinishing. The timing will vary with climatic conditions.

*See also Paint and Wood Trim.*

## Smoke Detectors

Read the manufacturer's manual for detailed information on the care of your smoke detectors.

**Cleaning** -For your safety, clean each smoke detector monthly to prevent a false alarm or lack of response in a fire. After cleaning, push the test button to confirm the alarm is working.

## Stucco

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Stucco is a brittle cement product that is subject to expansion and contraction. Minor hairline cracks will develop in the outer layer of stucco. This is normal and does not reduce the function of the stucco in any way.

**Drainage** -To ensure proper drainage, keep dirt and concrete flatwork a minimum of 6 inches below the stucco screed (mesh underneath final coat of stucco). Do not pour concrete or masonry over the stucco screed or right up to the foundation.

**Efflorescence** -The white, powdery substance that sometimes accumulates on stucco surfaces is called efflorescence. This is a natural phenomenon and cannot be prevented. In some cases, you can remove it by scrubbing with a stiff brush and vinegar. Consult your home center or hardware store for commercial products to remove efflorescence.

**Sprinklers** -Since stucco is not a water barrier, avoid spraying water from irrigation or watering systems on stucco surfaces to avoid possible leaks. Check the spray from the lawn and plant irrigation system frequently to make certain that water is not spraying or accumulating on stucco surfaces.

## Termites

We treat the foundation for termites and provide you with a certificate confirming that treatment. Plan to renew this treatment annually or as directed by the literature that accompanies the certificate. Treatment for other types of insects or animal infestations is your responsibility.

## Ventilation

Homes today are built more tightly than ever. This saves energy dollars but creates a potential concern. Condensation, cooking odors, indoor pollutants, radon, and carbon monoxide may all accumulate. Your attention to ventilation is important to health and safety.

Building codes require attic and crawl space vents to minimize accumulation of moisture. Attic ventilation occurs through vents in the soffit (the underside of the overhangs) or on gable ends. Driving rain or snow sometimes enters the attic through these vents. Do not cover them to prevent this. Instead, cover the insulation in front of the vent. When you do this, precipitation that blows in safely evaporates and ventilation can still occur.

Homes with crawl spaces usually include two or more vents. Open crawl space vents for summer months and close them for winter months, pulling insulation over them. Failure to close these

vents and replace insulation may result in plumbing lines freezing in the crawl space. This occurrence is not covered by your warranty.

Your daily habits can help keep your home well ventilated:

- Do not cover or interfere in any way with the fresh air supply to your furnace.
- Develop the habit of running the hood fan when you are cooking.
- Ditto the bath fans when bathrooms are in use.
- Air your house by opening windows for a time when weather permits.

Proper ventilation will prevent excessive moisture from forming on the inside of the windows.

## Water Heater

**Electric Water Heater** -Carefully read the manufacturer's literature and warranty for your specific model of water heater.

**Drain Tank** -Review and follow the manufacturer's timetable and instructions for draining several gallons of water from the bottom of the water heater. This reduces build-up of chemical deposits from the water, thereby prolonging the life of the tank as well as saving energy dollars. Also drain the tank if it is being shut down during periods of freezing temperatures. Carefully follow the instructions in the manufacturer's literature.

**Element Cleaning or Replacement** -The heating elements in the water heater will require periodic cleaning. The frequency is determined in part by the quality of the water in your area. Again, refer to the manufacturer's literature for step-by-step instructions and drawings, or contact an authorized service company.

**No Hot Water** -If you discover you have no hot water, check the breaker, the temperature setting, and the water- supply valve before calling for service. Refer to the manufacturer's literature for locations of these items and other troubleshooting information.

**Pressure Relief Valve** -At least once each year, manually operate the pressure relief valve. Stay clear of the discharge line to avoid injury. See manufacturer's literature for diagrams and detailed instructions.

**Safety** -Keep the area around a water heater clear of stored household items. Never use the top of the water heater as a storage shelf.

**Gas Water Heater** -Carefully read and follow the manufacturer's literature for your specific model of water heater.

**Condensation** -Condensation inside your new water heater may drip onto the burner flame. This causes no harm and in most cases will disappear in a short period of time.

**Drain Tank** -Review and follow manufacturer's timetable and instructions for draining several gallons of water from the bottom of the water heater. This reduces the build-up of chemical deposits from the water, prolonging the life of the tank and saving energy dollars.

**Pilot** -Never light a gas pilot when the water heater tank is empty. Always turn off the gas before shutting off the cold water supply to the tank.

To light the water heater pilot, first remove the cover panel on the tank to expose the pilot. Then rotate the on-off pilot knob to the pilot position. When the knob is in this position, the red button can be depressed.

While depressing the red button, hold a match at the pilot. Once the pilot lights, continue to hold the red button down for 30 to 60 seconds. When you release the red button, the pilot should stay lit. If it does not, wait several minutes to allow the gas to dissipate from the tank and repeat the entire process. If it stays lit, rotate the on-off pilot knob to the on position.

Reinstall the cover panel and then adjust the temperature setting with the regulating knob on the front of the tank.

Water heaters sometimes collect small quantities of dirty water and scale in the main gas lines, which may put out the pilot light.

While away from home for an extended period of time, set the temperature to its lowest point and leave the pilot lit.

**Safety** -Vacuum the area around a gas-fired water heater to prevent dust from interfering with proper flame combustion. Avoid using the top of a heater as a storage shelf.

**Temperature** -The recommended thermostat setting for normal everyday use is —normal.“ Higher settings can result in wasted energy dollars and increase the danger of injury from

scalding. Hot water will take longer to arrive at sinks, tubs, and showers that are farther from the water heater.

**No Hot Water** -If you discover that you have no hot water, check the pilot, temperature setting, and water supply valve before calling for service. Refer to the manufacturer's literature for specific locations of these items and other troubleshooting information.

## Waterproofing

We spray your foundation walls with an asphalt waterproofing material. Although we make every effort to assure a dry basement, during times of excessive moisture, you may notice some dampness. Over time, natural compaction of soils in the backfill areas will usually eliminate this condition. Careful maintenance of positive drainage will also protect your basement from this condition.

*See also Foundation.*

## Windows, Screens, and Patio Doors

Contact a glass company for reglazing of any windows that break. Glass is difficult to install without special tools.

**Cleaning** -Clean aluminum metal surfaces with warm, clear water. Do not use powdered cleaner. After each cleaning, apply a silicone lubricant. Clean glass as needed with vinegar and water, a commercial glass cleaner, or the product recommended by the window manufacturer.

**Condensation** -Condensation on interior surfaces of the window and frame is the result of high humidity within the home and low outside temperatures. Your family's lifestyle controls the humidity level within your home. If your home includes a humidifier, closely observe the manufacturer's directions for its use.

**Door Locks** -Acquaint yourself with the operation of patio door hardware for maximum security.

**Door Tracks** -Keep patio door tracks clean for smooth operation and to prevent damage to the door frame. Silicone lubricants work well for these tracks.

**Invisible Glass** -Under certain lighting conditions, door glass may be hard to see. If you keep the screen fully closed when the glass door is open, your family will be accustomed to opening something before going through.

**Sticking Windows** -Most sliding windows (both vertical and horizontal) are designed for a 10-pound pull. If sticking occurs or excessive pressure is required to open or close a window, apply a silicone lubricant. This is available at hardware stores. Avoid petroleum-based products.

**Storing Screens** -Many homeowners remove and store screens for the winter to allow more light into the home. To make re-installation more convenient, label each screen as you remove it. Use caution: screens perforate easily and the frames bend if they are not handled with care.

**Weep Holes** -In heavy rains, water may collect in the bottom channel of window frames. Weep holes are provided to allow excess water to escape to the outside. Keep the bottom window channels and weep holes free of dirt and debris for proper operation.

## Wood Trim

Shrinkage of wood trim occurs during the first two years or longer, depending on temperature and humidity. All lumber is more vulnerable to shrinkage during the heating season. Maintaining a moderate and stable temperature helps to minimize the effects of shrinkage. Wood will shrink less lengthwise than across the grain. Wood shrinkage can result in separation at joints of trim pieces. You can usually correct this with caulking and touch-up painting.

Shrinkage may also cause a piece of trim to pull away from the wall. If this occurs, drive in another nail close to, but not exactly in, the existing nail hole. Fill the old nail hole with putty and touch up with paint as needed. If the base shoe (small trim between base molding and the floor) appears to be lifting from the floor, this is probably due to slight shrinkage of the floor joists below. Again, you can correct this condition by removing the old nails and nailing. You may prefer to wait until after the first heating season to make any needed repairs at one time when redecorating.

*See also Expansion and Contraction.*