



MAINVUE
HOMES

Welcome Home.

Congratulations!

You are now the proud owner of a brand new home built by Henley USA!

In this Homeowner's Manual you will find information that will help you maintain your home. We hope that you will properly maintain your home and all of its parts during the warranty period and after expiration of the various warranties that are now in effect. Normal wear and tear, inherent characteristics of the materials used in your home and normal service required by the mechanical systems mean that periodic maintenance is a necessity!

A minor adjustment or repair done immediately can save a more serious, time-consuming, and sometimes costly repair later. Please be aware that neglect of routine maintenance can void applicable limited warranty coverage on all or part of your home. Removal, modifications, or repairs made to items or areas that are still covered under warranty, that are not in accordance with your builder's warranty, or the manufacturer's warranties, may also void your warranty.

You can ensure the enjoyment of your home for a long time if you take care of your home as described in this manual.

Some items discussed apply to your home and others do not. Please disregard those items that obviously do not apply to your home.

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1 | Suggested Maintenance Schedules

Home maintenance includes regular, seasonal and one-time tasks. The following suggested maintenance schedule identifies some of the more common maintenance tasks that may be performed on a weekly, monthly or on a semi-annual basis. Tailor this to fit your own situation, adding or deleting items as required.

This suggested maintenance tasks and schedule should not replace the manufacturer's recommendations. We suggest the use of licensed contractors for any tasks you may feel unprepared to complete. What seems like a simple plumbing or electrical repair can cost you many times what you think you might save if you don't do it correctly!

■ Continuous Maintenance

- ❑ Visually survey your yard and existing drainage patterns. Verify that the ground slopes away from the foundation.
- ❑ Stabilize any bare areas with grass, ground cover or landscaping materials to discourage erosion. Dig out areas where sand has accumulated and fill in any low spots where necessary to re-establish drainage flow.
- ❑ Adjust sprinkler systems to avoid over-spraying the house or causing puddles near the foundation.

■ Monthly Maintenance

- ❑ Check operation of smoke detectors by pushing the test button. Check and replace the battery if necessary.
- ❑ Test Ground Fault Circuit Interrupters (GFCI) to insure proper protection.
- ❑ Clean garbage disposal blades by grinding ice cubes and citrus fruit rinds.
- ❑ Clean or replace dirty filter in range hood.
- ❑ Check for evidence of leaks around toilets, under sinks and around dishwasher.
- ❑ Clean and freshen sink drains by flushing with hot water and baking soda.
- ❑ Inspect furnace and air-conditioning filters, humidifier and electronic air cleaners. Replace as required.
- ❑ Clean aerators on faucets. Depending upon water hardness, you may need to use a rust or scale remover to return them to normal condition, or have them replaced. Check water filters and softeners regularly. The life of the filters is dependent upon water usage and water characteristics.

- ❑ Monitor and maintain floor coverings on a required basis. Regular vacuuming will reduce wear of carpets and other floor coverings. Repair tears and remove stains as soon as possible.

■ Twice-a-Year Maintenance

- ❑ Inspect roof shingles, identifying anything that might cause leaks or problems.

Roof – Visually inspect all surfaces from the ground if possible. Look for torn, broken, missing or cracked shingles, accumulated debris, gaps in flashing, exposed joints, and obstructed vent pipes. Look in attic for water stains on underside of roof or wet insulation (see “Roof, Gutters and Downspouts”).

- ❑ Inspect and clean gutters and down spouts.

Hire a gutter cleaning service to ensure debris are removed from gutters and downspouts.

- ❑ Inspect outside of home and condition of siding, paint, masonry, stucco and wood trim.

Perform a walk-around inspection of the perimeter walls. Look for cracks in brick, stone, and stucco. Identify any areas where mortar has fallen out. Check for warped siding, gaps in wood trim, and peeling or blistering paint. Sand, scrape, wire-brush, caulk, stain, repaint and apply wood preservatives where necessary.

- ❑ Inspect doors and windows to verify proper operation, security and weather-resistance. Clean tracks of windows and sliding glass doors before applying silicone lubricant.

Check overall door and window integrity and operation. Check weather-stripping at all windows and entrance doors. Make sure a tight air seal is formed when closed. Replace any weather stripping that has become loose or damaged.

Check door and window hardware (hinges, knobs, pins, latches, locks, etc.). Make sure door latch bolts and dead bolts engage properly.

Adjust, tighten and lubricate where necessary.

Look for binding or rubbing in the frames, cracked panes, difficult operation, locking problems, cracking or peeling paint or varnish.

- ❑ Inspect the plumbing system (see “Plumbing”).

Turn on the water at all sinks, bathtubs and showers; operate dishwasher and washing machine, flush all toilets. Check on all drains first to make sure nothing overflows. Then, look for any leaks in the water and sewer pipes.

Look in cabinets, closets, on the floor, under lower level ceilings and in the basement or crawl spaces (if applicable). If any water line leaks are found, locate the shut-off valve nearest to the leak and turn the valve to the right (clockwise) until tight. If any sewer line leaks are found, trace the piping back to the area it serves and discontinue use of those fixtures until repairs are made.

- ❑ Inspect plumbing fixtures and appliances.

- ❑ Maintain wall finishes following suggestions in this manual (see “Walls and Ceilings”).

- ❑ Drywall – Check for drywall cracks at windows, doors, corners, and ceilings. Repair as needed. Look for any nail pops or protrusions.

Paint or Stain – Look for peeling, cracking, blistering, fading, or scuff marks.

Brick or Stone Veneer – Check for cracks in the mortar.

- ❑ Monitor and maintain cabinets and countertops following suggestions in this manual (see “Millwork and Cabinets” and “Countertops”).

Check out the hardware. Adjust, tighten or lubricate knobs, hinges, latches, rollers, and drawer guides. Refresh varnished wood cabinets with a good quality furniture polish once a month.

- ❑ Inspect the foundation, basement or crawl space following instructions in this manual (see “Crawl Space”).

Gain access to crawl space through the trap door. Inspect concrete. Look for water stains or cracks. Seal cracks that may allow water to enter with a compatible waterproof caulk. Check group surface for any standing water.

- ❑ Inspect main service panel, circuit breakers, all GFI outlets and breakers following instructions in this manual (see “Electrical/GFI breaker”).

Check the main service panel. Look for rust, water stains, soot stains, or melted wires. Check the circuit breakers. Be sure they are properly labelled. Do a quick check to verify that the labelled circuit is actually the correct circuit by switching off the breaker and trying some of the devices connected to that circuit.

Check all GFI outlets and breakers. Push the TEST button at least once a month to trip the circuit. If the RESET button doesn't pop outward during this test, you may need an electrician to replace the GFI switch. If it does pop out, push it back in and repeat next month.

- ❑ Complete seasonal maintenance on heating and air conditioning by licensed HVAC contractor (see “Heating and Air Conditioning”).
- ❑ Check general condition of compressor; remove debris as necessary.
- ❑ Inspect the attic. Prior to entering the attic, purchase a paper filter mask from your local hardware store to avoid lung irritation from possible airborne insulation fibers. Make sure there are no animals nesting in the insulation, and that the baffles are secured in place.
- ❑ Inspect and replace as needed caulking and grout around tubs, showers and sinks (see “Plumbing/Caulking”).

■ Yearly Maintenance

- ❑ Have carpets professionally cleaned at least once a year.
- ❑ Examine caulking around windows, doors and other areas following instructions in this manual.
- ❑ Inspect condition of concrete slabs and patios following suggestions in this manual (see “Concrete and Asphalt”).
- ❑ Visually survey wood trim following suggestions in this manual. Clean all woodwork and wax.
- ❑ Complete annual furnace and air conditioning maintenance by a

licensed HVAC contractor.

- ❑ Schedule professional inspection of major appliances especially if gas fueled.
- ❑ Clean and seal wood decks



2 | Appliances

If you suspect a gas leak, turn off the main valve near the meter and call the gas company immediately

Read the instruction books and other papers that came with each appliance to ensure their long life and to make maximum use of all features. All are covered by detailed factory warranties. Mail warranty registration cards directly to the manufacturer. If you have a problem with an appliance, call the customer service number listed in the manufacturer's warranty.

If an appliance fails to operate, check first to see if it is properly plugged in, and the gas is turned on. Then check the fuse box or circuit breaker. Follow the trouble shooting steps provided in the instruction book before calling the manufacturer's repair service. If you do not have the instruction book you can download and print one from the manufacturer's website.

If a gas appliance fails to work, first see if the pilot light is lit. If you suspect a gas leak, turn off the main gas valve near the meter and call the gas company.

■ Dishwashers

Your owner's manual from the manufacturer will give you instructions on the proper loading of your dishwasher. Do not allow plastic, glass,

utensils or other objects to remain on the bottom of the dishwasher, as pump damage may occur. A small amount of water will remain in the bottom of the dishwasher at all times. This is normal and helps to prime the motor for the next usage.

■ Ranges, Ovens, Broilers and Hoods

Clean the outside surfaces of your appliances with a non-abrasive cleaner, such as baking soda sprinkled on a damp cloth. Clean your oven or broiler frequently to prevent heavy build up of baked on spills. If your oven does not have a self cleaning cycle, use full strength household ammonia in a bowl and leave it in the oven overnight. Cover the oven vent with a cloth and leave the oven turned off. In the morning, wipe off the softened soot and food drippings with a damp cloth.

Use extreme caution with ammonia, since it is poisonous in full strength; it is best used when children are not in the house. You can also dilute ammonia as directed on the bottle and use it to wash the oven. Wear rubber gloves and avoid inhaling the vapors.

Clean or change the filter on your range hood regularly. This will reduce the fire hazard, keep the pulling power of your fan at its maximum, and also help keep area walls, floors and ceilings clean. Mesh filters can be

cleaned by swishing them up and down in hot sudsy water. Rinse with hot water and drip dry. Also wash the underside of the hood with a damp, sudsy cloth regularly to remove deposits before they harden. Wipe fan blades with a damp, sudsy cloth, taking care not to bend the blades. Oil the fan motor as directed in your manual.

Clogged burners

Gas stoves, ovens or broilers may fail to light if the burners are clogged. Soak removable burners in a solution of hot soapy water and baking soda to clean. Clean clogged holes with a wire brush or thin stiff wire, being careful not to push the material further into the holes.

Disposals

Your instruction booklet and instructions for the disposal will give you precise directions for its operation. Many plumbing clogs are caused by improper garbage disposal use. Do not dispose of bones, pasta products, rice, or potato or onion skins via the disposal.

Many people mistakenly conclude that because their waste disposal is capable of grinding up most of their garbage that it is also capable of eliminating grease and other substances that they would not otherwise put down the drain. Always use plenty of cold water when operating the disposal to keep the sink drain open and to cool the disposal motor. This is especially true when grinding greasy substances.

Allow the water to run 10-15 seconds before and after shutting the disposal off. Should the drain stop up, do not put chemicals down the disposal. Avoid putting large amount of fibrous material (such as corn husks, celery, flowers, artichoke leaves, banana peels, etc.) down your disposal. Always run plenty of cold water when grinding food.

Using the reset button

Most units have a RESET button (see your manual) which will turn the disposal off if it becomes overloaded with a substance it cannot grind. If this happens, first turn the unit off at the switch, and then follow the directions on unjamming the unit. Wait about three minutes

before pushing the RESET button, and turn the switch back on. If it does not restart, turn it off again and check the circuit breaker panel to see if the breaker has been tripped.

Unjamming

Be sure that the switch is at OFF and the unit is unplugged before attempting to unjam or remove anything from it.

If the disposal jams, move the switch to OFF position, and unplug the disposal. Make sure to note which outlet you pull it out of as it **MUST** go back into the same one. If possible, remove the substance obstructing the disposal's operation. If needed, you can use the disposal wrench to

free the blades. Place one end of the wrench in the hole at the center bottom of the disposal under the sink. With the water running, rotate the wrench in either direction until it turns easily. You may have to rock it back and forth a bit to get it going. Once it rotates easily in the one direction, rotate it in the other direction until it moves freely. Once you have the wrench moving freely, remove it completely and set it a safe distance away. This is an important safety requirement. Depress the reset button if needed, plug the unit back into the exact same receptacle from which you unplugged it. With the water still running and your hands completely away from the unit, turn the switch to the ON position. Depending upon how much you put down it, you may need to repeat these steps 2-3 times.

Gas Shut-off Valves

There is a shut off on the gas line at or near its connection to each appliance that operates on gas. In addition, there is a main shut off at the meter. If you suspect a gas leak, you should shut off the gas, leave the home and call the gas company immediately for emergency service.

3 | Attic Access and Insulation

■ Attic Access

The attic space is not intended for storage. Attic framing is engineered and should not be modified without obtaining the necessary permits and inspections from the applicable governing agencies. Access is provided for purposes of maintaining mechanical equipment that may be in the attic space. When performing any tasks in the attic, be careful not to step off wood beams onto the drywall. This can result in injury and/or damage to the ceiling below. Vents along the perimeter and roof of your home allow air into and through the attic. Because these vents provide ventilation to the unheated areas, they need to remain open and unblocked.

■ Insulation

Blown insulation is most effective if it is evenly spread. For any work done in your attic (installing a TV antenna, etc.), be sure that the insulation lays smooth and even before leaving the attic.

Living Smart



4 | Condensation

Condensation takes place wherever warm, moist air inside the house comes in contact with a colder surface such as windows, toilet tank, water heater, etc. It is at its maximum in new homes. When your home was built, many gallons of water went into materials such as concrete, drywall mud, tile work, and even some types of paint. This creates air of higher moisture content than normal.

Condensation within the home may also be the result of excessive moisture from a larger number of indoor plants. Steam cooking without proper ventilation may also result in condensation.

Reducing Condensation

1. Use vents and exhaust fans or open windows to draw moisture laden air in kitchen, bathrooms and utility rooms to the outside.
2. Remove excessive humidity with a dehumidifier.
3. If thermal pane windows sweat, check for a broken seal.
4. Wrap the cold surface of pipes with pipe insulation or use foam type tubes that slip on.

■ Prevention

Because ventilation helps eliminate condensation, be careful not to obstruct openings such as attic louvers and other venting. Proper

ventilation helps speed drying, but it still takes about a year for full curing. Whenever possible, you should aid the normal drying out process by providing steady, even ventilation. It does not help to increase heat as unnaturally high heat can cause warping and other damage.

Condensation is also known as sweating. It does not occur when warm, moist air rests on a cold, moist surface.

■ Humidity

Condensation is the visible sign of the presence of humidity — also known as water vapor, moisture, steam. It is the invisible part of water in the form of gas. Moisture in wet air seeks out drier air to mix with and can do it very forcefully. This force is described by scientists as “vapor pressure.” This vapor pressure is what allows moisture in indoor air to penetrate through wood, plaster, brick, cement — the materials we build our homes with — to escape to the drier air outside.

The University of Minnesota Engineering Laboratories has determined maximum safe humidity for your home as shown in the table below. These results reflect safe levels for your windows as well as the paint, insulation and structural members and are generally considered to be comfortable.

Inside relative humidity

Outside Air Temperature	70° F. Indoor Air Temperature
-20° F. or below	not over 15%
-20° F. to 10°	not over 20%
-10° F. to 0°	not over 25%
0° F. to 10°	not over 30%
10° F. to 20°	not over 35%
20° F. to 40°	not over 40%

Reducing humidity

1. Control the source of humidity (as in venting all gas burners, clothes dryers, etc. to the outdoors, and use of kitchen or bathroom exhaust fans.)
2. Heating your home with dry heat will reduce the relative humidity and counterbalance most or all of the moisture produced by modern living.
3. Winter ventilation (allowing for air exchange) lets the drier outside air dilute the more humid inside air.

5 | Countertops

■ Porcelain Tile

Porcelain tile is subject to shade variations which is a normal condition. Porcelain tile is durable and, with reasonable care, will give you years of good service.

What damages tile?

Porcelain tile can be damaged by sudden impacts such as a dropped pan and by knife cuts. Avoid using rough and jagged utensils on tile. Never scour tile with steel wool or cleaning abrasives such as scouring powder.

Where is caulking needed?

You may notice separation develop at the 90° angles where horizontal and vertical surfaces meet, at the joint where the sink meets the countertop surface and at 90° angles where the countertop surface meets the back, side and end splash.

This separation is a natural occurrence caused by the difference in the amount of expansion and contraction between of the various materials used. It is extremely important that you re caulk these areas when separation occurs to prevent water damage to the surrounding areas and to walls and cabinets below.

Care of tile

Porcelain tile is one product in your home that requires very little care and is one of the easiest surfaces to keep clean. Porcelain tile walls and countertops normally need only to be cleaned with a damp cloth or sponge. For a stubborn soil use a mild soap in water solution, or a neutral PH non-abrasive cleaner. Never scour countertops with steel wool or cleaning abrasives such as scouring powder.

Apply grout sealant as soon as you move in.

Care of grout

Tile grouting is subject to cracking with settling and the shrinkage of lumber, and it is inevitable that this will occur during the first year.

Although the tile is difficult to stain, the grout located in the joint will accept stains from food, water and cleaning solutions. Therefore, the maintenance of your tile counter will require that you occasionally re-grout.

Grout that becomes yellowed or stained can be cleaned with a fiber brush, cleanser and water. As a preventative measure you may apply a sealer to the grout to reduce the chance of discoloration. This sealant product is available at most hardware stores and should

be applied soon after you move in and then regularly according to the frequency suggested in the product directions. Use an inconspicuous test area before applying, as sealant may alter the color of the grout.

Care of caulking

There are a couple types of caulking compounds. Silicone caulk contains silicone and will not accept paint. It works best where water is present (ex., where a sink meets a countertop). Latex caulk is used for areas that require painting (cracks, corners, etc.).

Check caulking every six months. Remove excess build up and completely redo from time to time as necessary. There are a variety of caulking compounds available, including caulking specially designed to match your grout, each having specific uses and directions for applications.

■ Laminated Countertops

Protect the surface of your countertops by never cutting directly on them. Also, never place hot irons, pots, pans or baking dishes directly from the oven, broiler or burner on laminate countertops.

What damages laminates?

Laminate counters are tough and mar resistant but can never be used as a cutting or chopping surface. Nicks, dents, scratches and scrapes will occur if your laminate tops are not protected against impact. Don't pound laminated plastic countertops. The softer core materials can shatter, endangering the surface.

Similarly, be careful to protect the countertop against extreme heat such as hot irons and pots, pans or baking dishes taken directly from an oven, broiler or burner.

Never use scouring powders or harsh abrasives which dull the surface and inhibit stain resistance. Prolonged contact with bleaches, acetone (fingernail polish remover), mineral acids, lye, copper cleaners, bluing, iodine or dye can stain the surface.

It is important to keep moisture from reaching the wood under the



laminates to prevent warping and the growth of unwanted mold and mildew.

Rubber drain mats can trap moisture beneath countertops causing the laminated plastic to warp and blister. Dry the surface as needed.

Care of laminates

High pressure laminates can be kept shiny and new looking with a mild detergent or soap, followed by a water rinse and drying. If you find a small stain, rub it lightly with a foaming cleanser which can also be used for stubborn spots or lacquer thinner for removing paint and glue spots.

Use a cutting board with rubber feet when using sharp knives. Laminates,

like glass, can be cut by sharp blades. Never clean the surfaces with a sharp object such as a razor blade or knife.

Indelible ink, which comes from some food packages, is a common countertop stain that sometimes comes off with an all purpose spray cleaner. Take care in handling packages and clean up any stain immediately.

Wipe up strong solutions immediately. Tea, beet juice, vinegar and washable ink can be removed with an all purpose spray cleaner (such as *Fantastik* or *Formula 409*) or a mild abrasive.

As a part of routine maintenance, it may be necessary to re caulk the joint located between the sink and the countertop. Siliconized caulking is typically installed in these areas to prevent water intrusion.

■ Natural Stone (marble, granite, slate)

Natural stone is not man-made and comes from the earth. That is why we have no control over extreme color changes and veining from one piece to the next. Variations in thickness and patterns are also characteristics of natural stone — two pieces will never be identical. Slate is a stone that normally includes a rough, uneven finish. Avoid acidic foods or chemical cleaners coming in contact with granite — these can discolor the granite. Make sure to clean with mild soap and water or specific stone cleaner. Never place hot irons, pans or baking dishes directly from the oven, or broiler or burner onto the countertop.

■ Marble Counter Tops

Quartz counter tops are easily maintained with a few simple precautions. Steel wool and abrasive cleansers scratch and dull the finish and should never be used. Routine home maintenance may include re-caulking the joint between the vanity top and wall surface. Never place hot irons, pans or baking dishes directly from the oven, or broiler or burner onto the countertop.



6 | Concrete and Asphalt

■ Concrete

By maintaining good drainage away from your home, you protect your home's foundation and the concrete flatwork (basement floor, porch, patio, driveway, garage floor, steps and sidewalks). Maintenance of drainage away from all concrete slabs will minimize cracking and other forms of movement.

"Efflorescence" is a white flaky, or dusty, material that may appear on your concrete. It is a natural occurrence where calcium carbonate comes through a porous material. No maintenance is required nor does it impact concrete life.

Normal settlement and periodic seismic activity will cause your concrete walks, patios and driveways to crack. This is normal and to be expected. Monitor the cracks in your concrete and fill with concrete caulking or other concrete repair material if the cracks become wider than 1/4" inch.

Concrete walks and patios may rise and fall due to freezing and thawing of the soils in which they are constructed. This is a normal condition and does not require correction.

Since concrete is a porous material, it freely transmits water vapor. It is not uncommon to experience moisture on the slab as concrete dries. Do not store untreated organic material on a garage floor because this can

promote growth of mold and mildew — always elevate these products from the garage floor.

Protect concrete from abuse by chemical agents such as pet urine, fertilizers, radiator overflow, repeated hosing, or de-icing agents.

■ Asphalt

Some communities have asphalt rather than concrete driveways. Asphalt is a product that combines sand, gravel and petroleum based products to form a driving surface. It has many of the characteristics of concrete such as expansion and contraction during temperature changes. Asphalt is a low maintenance surface and, with proper care, will last many years.

What damages asphalt?

Like any other surface in your home, asphalt requires protection from things that can damage it. Over time, the effects of weather and earth movement will cause minor settling and cracking of asphalt or

Never burn leaves or rubbish on a blacktop surface.

defective material. Standing water can seep into cracks and cause premature deterioration.

The grade along the side of the driveway should be maintained properly to prevent settlement cracks from forming. Settling next to your garage floor of up to 1½ inches across the width of the driveway is normal. Settling or depressions elsewhere in the driveway of up to one inch in any eight foot radius are considered normal. Cracks should be sealed periodically with an asphalt sealant compound. This is considered to be a normal homeowner maintenance responsibility.

Care of asphalt

Gasoline, oil, turpentine, and other solvent or petroleum products can dissolve or damage the blacktop surface driveways and walkways. Hose off or wash immediately with sudsy water (ex. dish washing soap), followed by rinsing thoroughly with plain water. Use biodegradable products, when possible — soap and/or detergent may be a violation in some cities.

Avoid any concentrated or prolonged loads on your asphalt, particularly in hot weather. High heeled shoes, motorcycle or bicycle kickstands, trailers, outdoor furniture legs, or even cars left in the

Do not allow heavy trucks such as moving vans or concrete trucks on your driveway

same spot for long periods can create depressions or punctures in asphalt. Your driveway was designed for residential use only — avoid nonresidential traffic such as heavy trucks.

Exposure to sunlight and other weather conditions will fade your driveway, allowing the surface gravel material to be more visible. This is a normal condition and not a material or structural problem.

You do not need to treat the surface of your asphalt driveway. However, if you choose to treat it, wait a minimum of 12 months and use a dilute asphalt emulsion, rather than the more common coal tar sealant.

Cracks

In anticipation of normal stress, we have provided for contraction and expansion joints to minimize cracking, where needed. Cracks may also develop as a result of seasonal movement.

Caulking the cracks and sealing the concrete surface are suggested corrections and are considered normal homeowner maintenance. Some minor regrading of the areas adjacent to your concrete walkways may also be required. Since non- structural concrete (concrete without a foundation, i.e. walks, driveways and steps) is a rigid material placed over soil (a nonrigid material) some cracking is inevitable.

Minor cracks with no significant vertical or horizontal displacement are a common occurrence and do not signify the loss of structural integrity or require repair or replacement. Small cracks and minor surface variations are inevitable, but they do not reduce the concrete's serviceability. You should expect it to last indefinitely, with a few precautions.

Repairing minor cracks

1. Roughen edges of the crack if they are smooth.
2. Clean out loose material and dirt.
3. Soak the old concrete thoroughly. The crack should be sopping wet but not have water standing in it.
4. Make a heavy paste by mixing dry patching cement with a little water (or use a mixture of one part cement, two parts sand capable of passing through a 100-mesh screen, and enough water to make a heavy paste).
5. Fill the crack with mixture using a stiff bristle brush or putty knife.
6. If you are patching a smooth wall, do your final levelling with a wet trowel (use burlap or a similar material for a textured surface).
7. Cover for several days, keeping the patch damp. The longer the drying time, the stronger the patch will be.
8. Use a wire brush to remove excess cement once it has partially set (the surface will appear sandy).

■ Ice, Snow and Chemicals

Remove snow and ice promptly, taking care not to dig into the concrete or asphalt surface. A thin layer of ice can be topped with sand or kitty litter for traction. Provide a doormat outside to wipe sand off shoes before entering the home; a mat just inside the door will give added protection.

Your driveway, sidewalk and garage floor may be damaged by de-icing agents (salt) applied to the street and highways

Never use de-icing salts or chemicals on any concrete surface.

during the winter months. The salt residue may be picked up on the undercarriage of your car and may drip onto the concrete surfaces when you park your car on the driveway or in the garage. Uncared for, the salt residue may eventually cause scaling and pitting of

exposed concrete surfaces (this cratering or chipping away of the surface of concrete is known as “spalling”.) Salt can eventually kill grass, shrubs and trees as it runs off.

Minimizing spalling

1. Check the drainage to make sure water or salt is not trapped on the concrete surfaces by grass, landscaping or other obstructions along the driveway edges.
2. Hose down exposed concrete surfaces as soon as possible after ice and snow have been removed from the streets and any salt residue is cleaned from your car.
3. Apply a sealer to exposed concrete surfaces twice each year; once just before cold weather and again in April after a thorough cleaning of the surfaces.
4. Use clean sand for traction, not chemical salts.

■ Cleaning

Since repeated cleaning of the garage floor by hosing can increase soil movement by allowing water to penetrate the porous material of concrete and any existing cracks, sweeping is the recommended method of

keeping exterior concrete clean.

If washing is necessary, do this when temperatures are moderate. Avoid washing with cold water from an outside faucet when 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.

Unpainted concrete floors can be washed with a solution of 4-6 tablespoons of washing soda in 1 gallon hot water. First, wet the floor with clear water. Using a stiff brush can help loosen dirt; scouring powder can be used, if necessary, on stubborn spots. Rinse with clear water. You can apply special concrete sealer or paints for easier maintenance.

Periodic removal of grease and oil will extend the life of the concrete. If you spill oil on the concrete surface of your driveway you may try using dish washing detergent on the spot, brush gently and then wash the spot using low water pressure from a garden hose with a nozzle.

“Rusty” discoloration in concrete driveways, patios and sidewalks is caused by the iron in fertilizer. Be careful when applying fertilizer to the lawn — remember not to run your fertilizer spreader over the driveway, walk or patio. Try using muratic acid, which in some cases can reduce these stains by 90%.

Delight in the Details



7 | Crawl Space

The crawl space is the open area between the foundation walls, floor joists of the first floor, and the ground of a home that does not have a basement. In the rim joists are vents. These vents are provided to help evaporate moisture and to prevent mildew. Covering the dirt of the crawl space is a moisture barrier (usually 4 or 6 mil. visqueen) which retains any moisture below the visqueen.

The crawl space is not intended as a storage area. Items placed in this area will hold moisture above the moisture barrier and can cause future damage.

■ Standing Water

Standing water under the vapor barrier is not uncommon, especially during rainy months or if you are watering your lawn excessively. However, the crawl space is graded to allow any ground water or seepage to exit the crawl space through a positive drain system.

Keep the vapor barrier and the crawl vents unobstructed to prevent mildew.

If standing water exists below the barrier, peel back the visqueen and trench from the water to the positive drain. Landscaping that is correctly installed and grading that is correctly maintained also helps prevent

excessive amounts of water from entering crawl spaces.

Do not damage or displace the visqueen vapor barrier while under your home.

8 | Doors and Locks

The doors in your home are wood, fiberglass, composite wood products or metal and are subject to shrinkage and warping. Humidity changes and the use of forced air furnaces may make minor door adjustments necessary. Also, wood trim or casing around door openings is made of wood and may shrink. Use putty, filler, or latex caulk to fill any minor separations that develop at mitered joints in door trim, and then apply touch-up paint (see “Painted and Stained Surfaces” for surface care tips).

■ Exterior Doors

Door operation is affected most by humidity extremes. While the interior surface may be exposed to 20% to 30% humidity, the exterior humidity may be as high as 95% to 100%. If an exterior door is exposed to such humidity extremes frequently enough, the door will warp. Exterior doors may swell and shrink due to the temperature and moisture content of the air.

To a certain extent the entry door and all exterior doors made of wood will dry out. The door frames may be subject to a small amount of movement resulting in the need for adjustments to the door.

Swelling in damp weather can cause sticking. Never force a door to open or close, as you may cause the wood surfaces to pull apart.

Care of glass insert entry doors

All finishes will last longer when protected from direct sun and rain by an overhang or porch. If the door is exposed to the elements, a fine bead of silicone caulk should be used between glass and sticking or panel and sticking on the door’s exterior.

All finishes should be checked yearly to see if they need refinishing. The variation in vertical grain and color are natural. After all, the door is real wood and everyone is an original. If you treat your door like a piece of wood furniture, it can last forever.

Care of raised panel garage man doors

The panels of raised panel entry doors may dry at different rates causing slight shrinkage. It may appear as though the panel is pulling away from the balance of the door. This can be easily repaired by recaulking and refinishing the newly exposed wood with a fine paint brush to match the rest of the door.

The structural strength of the door is not impaired by this shrinkage, but this maintenance should be performed by the homeowner for long term protection.

Care of exterior door hardware

To maintain the polished metal and prevent corrosion, regularly wipe all metal parts with a soft cloth to remove dirt and grime. Then apply a car wax to the metal surface in accordance to the wax manufacturer instructions. Be careful not to get wax in the key hole.

Occasionally you will need to re tighten the screw which holds the door locks and handle sets to the door. This is easily accomplished with the use of a screwdriver. If the door will not close due to misalignment of the door lock, first tighten the screw located on the strike plate one way or the other to compensate for the minor settling which occurs in every home.

A “squirt” of lubricant available at grocery stores, hardware stores and auto parts dealers will keep the inner part of door locks working smoothly. Graphite should be used to lubricate “keyed” locks.

Restaining wood doors

1. Remove varnish and stain by lightly brushing on varnish/stain remover (wood stripper).
2. Lightly sand area to smooth finish.
3. Reapply stain, going with grain for even color and appearance. Let dry thoroughly.
4. Reapply exterior polyurethane varnish in even, equal strokes. Let dry thoroughly.
5. For stain color please refer to your color selection sheet.

Fixing sticking doors

1. Fold sandpaper around a wooden block and sand the edge that binds. Never force a door to open or close, as forcing may cause the wood surfaces to pull apart.
2. If sticking is the result of uneven alignment, check to see that the hinge screws are set tightly in the hinge.
3. Always seal any area that has been sanded or planed with paint or varnish to protect the wood from absorbing moisture and causing future problems.

Weather-resistance

Exterior doors may occasionally require adjusting to maintain a good seal. This can easily be done by prying up the plug covers on the adjustable threshold and turning the screws to adjust the plate up or down. A well sealed door should be somewhat hard to open and close. A slight air crack around a door, however, is normal. Flexible weather-stripping may need to be replaced periodically.

Care should be taken when painting exterior doors with compression painting equipment, not to paint the weather-stripping.

■ Interior Doors

The “reveal” (the space between the bottom of the door and the floor covering) was sized for the floor covering installed. Rubber door stops were installed in your home to minimize damage to gypsum wallboard resulting from the door knob striking this surface. However, this door stop is not intended to stop a door that is slammed open and may cause damage to the door.

Keys for interior doors

If someone gets locked in a bathroom, the lock can be opened from the outside by using the bathroom key (usually above the door casing) or by inserting a thick, round wire, such as a paperclip into the hole in the knob and pushing.

Keep a duplicate “privacy lock” key where children cannot reach it in the event a youngster locks themselves in a room. The top edge of the door casing is often used as a place to keep the key. Some types of privacy locks can be opened with a small screwdriver or similarly shaped device.

Care of bi-fold doors

Use silicone spray or a similar type of dry lubricant to maintain bi-fold closet door tracks. Do not use oil, which collects dust and gets sticky.

For extra strength, bi-fold doors are hung at both the top and the bottom on tracks with nylon guides. Forcing the doors shut will cause the guide mechanism to fall out of alignment. Doors can

be readjusted with the use of a Phillips screwdriver and a small adjustable wrench.

Expansion or contraction of the framing members surrounding the opening, or normal settling of the home, may cause a slight change in the size or shape of the opening, permitting the nylon guide to slip from the track, usually at the top.

Fixing bi-fold doors

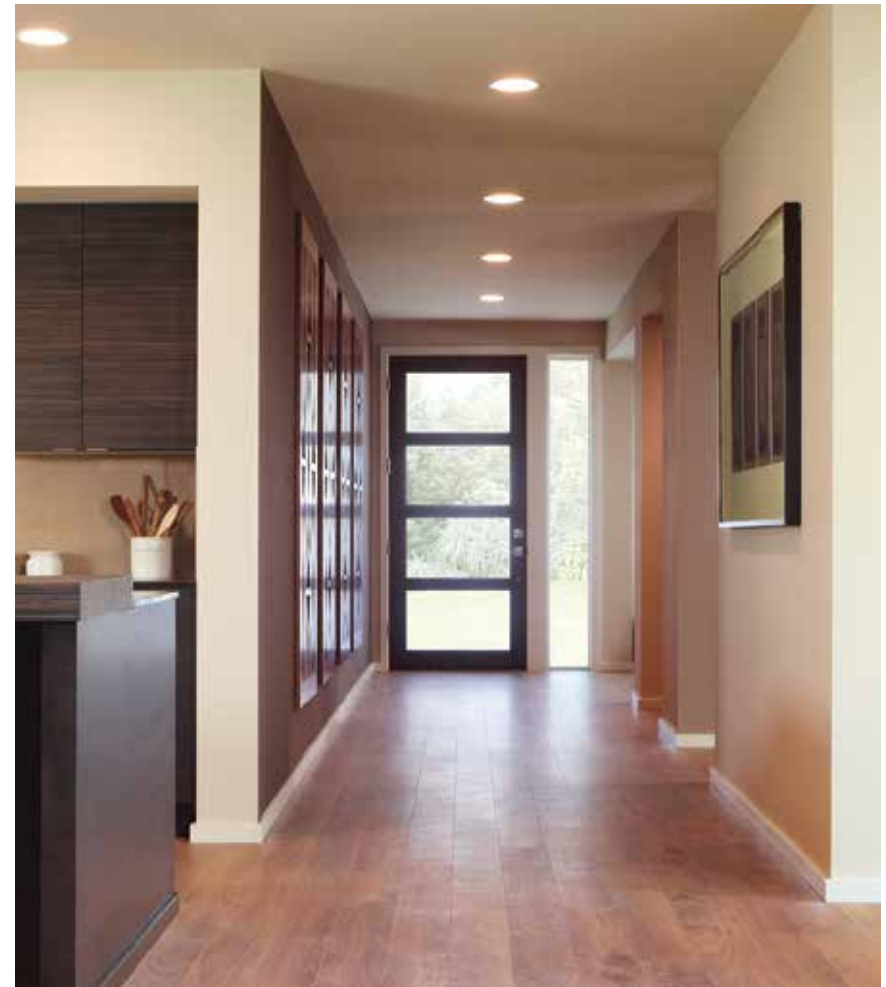
1. Get into the closet and shut the door.
2. There is an opening providing access to the guide mechanism on the edge of the door containing the guide mechanism.
3. Slide the mechanism up or down as necessary until the guide sits in the track as far as it will go without force.
4. Tighten the lock screw which holds the guide in place in the track. When making this adjustment, check the other lock screws for tightness and the guides for proper projection into the track.
5. Spray the aluminum track with a silicone solution to lubricate the nylon guide and provide easy operation.

Care of sliding glass doors

The door unit is suspended in a vinyl and aluminium frame and slides on nylon rollers. Occasionally spray the tracks with a silicone solution after cleaning the bottom track to assure smooth operation. Remove rocks and dirt promptly from the track to avoid damage to both nylon guide wheels and the track. If a door is hard to open or close, check the track to determine if an object may be restricting its operation. Never force a door, because you may force it out of square.

The moveable vent of the door has adjustment screws on the jamb edges which, when tightened or loosened, provide the required tensions for smooth operation.

Small drain holes are located in the tracks and permit water to escape from the track channel. Be sure these holes are kept open; otherwise, water may back up under the moveable vent and leak inside the house. Although this door is equipped with weather stripping to provide a tight seal, some rain may seep around the edges in a hard, driving rain if wind blows the water directly against the door surfaces. No sliding door will provide an absolutely water tight seal against all the elements.



9 | Electrical

Your new home has been wired to meet the applicable local code requirements and safety standards for normal use of electrical appliances. Only a licensed electrical contractor should be allowed to make any repair or modification to your electrical system. Never attempt to make a repair yourself. There are, however, simple steps which you should follow in diagnosing an electrical problem.

■ Power Failures

In the event of complete power failure, first check to see if your neighbor has power. If not, notify the power company. If the power failure has occurred only in your house, check the main circuit breaker (see below) located in the panel box to determine if it has been “tripped.” If this fails to correct the problem, flip the main circuit breaker (see below) to the OFF position and call the power company.

Call your local power company to locate the utility feeds before doing any digging.

■ Electrical Service Entrance

The electrical service entrance, which provides power to the service panel, has

been designed for the electrical needs of the house. Do not tamper with the cable feeding this service.

If the power feed to your home is installed underground (vs. overhead), call your local power company to flag the location of this feed before doing any digging or trenching. This service is offered free of charge by the utility company.

■ Main Circuit Breaker

The main circuit breaker is located in the electrical service panel box.

Your home is equipped with a main circuit breaker which completely controls the electrical current to your home. On the inside of the breaker box door you will find a description of which circuit breakers control the various rooms and appliances in your home.

■ Circuit Breakers

Your electrical wiring and appliances are protected by circuit breakers located in the main panel box. They have three positions: ON, OFF and

TRIPPED. A circuit breaker which has tripped must first be turned OFF before it can be turned back ON (i.e. reset).

There will be an audible click. Simply switching the breaker directly from “tripped” to the ON position will not restore service.

Causes of tripped circuit breakers

1. Large appliances or too many small appliances on one circuit
2. Worn out cords or defective plug connections
3. Defects within an appliance
4. Starting an electrical motor (motors require more current to start than they require when operating)
5. Outlet exposed to a high level of moisture
6. If after re setting the circuit breaker, it trips again, you should immediately attempt to locate the cause and correct
7. Arc fault circuit interrupters (AFCI) - All the bedroom outlets and lights are protected by AFCI breakers. This is a special breaker in your electrical panel with a small test button located on the face of the breaker. They are designed to help keep you safe from damage and sparking electrical equipment and cords, but they are also very sensitive to some consumer devices and electronics. Some jurisdictions require AFCI protection throughout most of the house. If you are unable to reset a breaker, or experience frequent “nuisance” tripping, try unplugging items from the circuit to help identify what is causing it to trip. If a particular device is not damaged or sparking, but still causing an AFCI break to trip frequently, you can also try plugging into a bathroom or kitchen outlet.

■ GFI Breaker

The ground fault interrupter (GFI) is a low voltage breaker required by building code as a safety feature to control the electrical current to “wet” areas of your home. The GFI breaker controls the plugs in the baths, garage, outside and the convenience outlet near the kitchen sink. Its purpose is to sense any extra load on this circuit and to cut power to the

electrical circuit to prevent electrical shock. The TEST/RESET button is located on one of the GFI plugs. Push the button “in” to reconnect power to the plug.

Causes of GFI breaks

1. Heavy appliances such as freezers or power tools will trip a GFI breaker
2. Do not plug a refrigerator or food freezer into a GFI outlet
3. Do not plug your food freezer into the outlet in your garage unless it is specified as a freezer outlet
4. Check your appliance for a possible short or other malfunction if the breaker continues to cut off. (Remember, one GFI breaker can control up to three or four outlets.)

■ Outlets

Electrical boxes located on exterior walls of the home may allow cold air to flow through the outlet. Flickering lights can occur when 110v interior outlets are overloaded. Dedicated circuits are required for such items as irons, microwaves, etc.

If an outlet is not working

1. Check first to see if it is controlled by a wall switch (see next section)
2. Next check the circuit breaker
3. Finally, check for a tripped GFI breaker (see above)

A wall switch only controls the upper receptacle in the appropriate duplex receptacle.

■ Switched Outlets

When you first move into your home, you may find an outlet that does not operate. First, determine if the outlet is one that operates from a wall switch in that room. If so, only the upper receptacle in the appropriate duplex receptacle will be controlled by the wall switch. If the outlet is not controlled by a switch in the room, check to make sure the appliance/light fixture is operable in another location. (The

appliance or light fixture may be in need of repair, or the light fixture may need the light bulb replaced.)

■ Phone, Cable Jacks, Networking

Your home is equipped with telephone jacks and cable jacks and may also be equipped with a home network system. We are responsible for original installation only. Care of the wiring from the service box outward is the responsibility of the local telephone or cable service company.

■ Lights, Fixtures and Bulbs

Recessed light fixtures are located throughout your new home. These fixtures have thermal overload devices that will automatically turn off a light when the temperature is too high inside the fixture. A higher wattage bulb may activate the thermal overload device and automatically shut down the light fixture.

Power surges are the result of local conditions within the utility providing electrical service and may cause bulbs to burn out.

Fluorescent fixtures use transformer action to operate them. This action sometimes causes a buzzing.

■ Smoke Detectors

Smoke detectors are proven life saving devices. One or more smoke detector(s) is installed in your new home per the building code requirements. They provide early warning of a fire in its early stages, before the smoke reaches dangerous concentrations. This warning is especially crucial during sleeping hours.

The detector should be functionally tested every six months to assure that it is in operating condition. A good time to test is when you change your clocks for daylight savings time. Batteries should be changed yearly. Refer to the operating manual for specific maintenance recommendations.

Your electrical system is warranted (parts and labor) against defects of material or workmanship for one full year, except light fixtures.

■ Power Surges

Power surges can result in burned out bulbs or damage to sensitive electronic equipment such as TV's, alarm system, computers, etc. They are the result of local conditions beyond the builder's control.

■ Underground Cables

There are underground utilities in most communities, check the location of buried service leads before digging or moving large amount of soil — call 811, or go online to www.callbeforeyoudig.org. In most cases wires run in a straight line from the service panel to the nearest public utility pad.

Electrical safety tips

1. Do not overload any one circuit by using too many appliances at the same time.
2. If your portable power tools are equipped with three wire cords, the third wire should be grounded.
3. Always remove appliance plugs before touching a water faucet while holding an appliance (i.e., water is a conductor of electricity).
4. Never touch a fan, radio or any other appliance while in a bathtub or shower.
5. Never touch an electrical device at the same time you touch part of the plumbing system.
6. Always consult a licensed electrician and obtain any necessary permits prior to attempting any electrical work.
7. Always turn off any electrical circuit if there is the possibility of touching exposed connections or wiring.
8. Periodically inspect the cords and plugs on your consumer devices and repair or discard if they are damaged.
9. Never run electrical cords across walkways, under rugs or under furniture as they can become damaged.

10 | Fencing, Gates and Decks

■ Block Wall or Slump Stone Fences and Partitions

These walls, fences and partitions have been professionally engineered and have been built according to all required building specifications at the time of construction. The footings which have been constructed to support these walls are designed to carry the weight that has been placed upon them. Any modification could jeopardize the integrity of the wall and could cause eventual failure.

If you choose to make modifications, it is your responsibility to meet all municipality requirements for safety compliance.

■ Iron Fencing, Gates and Latches

It is natural for iron to rust, even though your iron fencing and iron gates have been primed with a rust retardant and then painted again for additional coverage. Due to moisture in the air and from irrigation, it is impossible to eliminate rusting; therefore, it will be the homeowner's

responsibility to touch up the rust spots as they occur. Eventually, you will need to wire brush or sand the rusting areas to remove the paint and corrosion and then repaint these areas. You can expect to begin touch up painting within six (6) months of installation.

■ Wood Fencing and Gates

Because of the nature of wood fencing and wood gates, they will absorb water (swell) and then dry (shrink). This normal process will cause nails and other attachments to loosen over time and will require occasional re-tightening to maintain firm attachment to supporting members. Some "curling" and "cupping" of wood is to be expected.

In areas where wooden gates and fences are painted or sealed with a stain, you must maintain these finishes to prevent deterioration.

Do not swing on gates or jump or climb over gates, as this will cause them to fall out of alignment.

■ Cedar Decks

Cedar is a hardwood that is frequently used outdoors. It is naturally rot-resistant and with proper maintenance your new deck will be a beautiful and enjoyable addition to your home. Annual cleaning and regular sealing are the basics to proper maintenance of a cedar or wood deck.

To clean your deck first remove all objects, such as planters or furniture. Sweep the deck free of debris, making sure to sweep out the grooves between the wood planks, the wall, and around the support beams. Then simply scrub the surface of the wood with a wood wash especially for exterior decks, according to the product directions, use the wood wash to removed any built-up dirt and grime from the visible surface and as far into any cracks and crevices as you can reach. Rinse gently with a water hose. Allow the deck to fully dry.

Because cedar wood will absorb water (swell) and then dry (shrink) with changes in the weather and from tracked moisture on wet days, it is normal for nails and other fasteners to occasionally loosen over time. Additionally, some minor board movement is also normal. Make sure to go over your deck and re-secure any loosened fasteners annually.

To seal your deck, first clean it and allow to dry. Check the fasteners and tighten them don as needed. Fill any holes, if desired, with wood filler. A scraper allows you to press the filler into the hole with the scraper held at an angle. Scrape the surface smooth with the flat edge of the tool to remove the excess. Then seal your deck with a high-quality sealant according to the directions on the product label. If you elect to seal your deck, remember to maintain and reapply the sealant regularly, as recommended by the manufacturer.

Periodically sweep the deck and remove grit and debris. Stationary debris, such as leaves and dirt, increase the moisture content of the wood and can cause premature aging. It is also a good idea to regularly rearrange the stationary items that you place on your deck to allow the wood under them to breath and retain less moisture.



11 | Fireplaces

Fireplaces are not intended to be the sole heat source in the home. Discoloration of the firebox or brick is the normal result of use and requires no corrective action.

■ Indoor Gas Fireplaces

Indoor Gas fireplaces are a direct vent typical fireplace. With this system, no damper is needed and the fireplace vents directly outside, without the need of a chimney.

There is a delay between turning the switch on and flame ignition. The flames should ignite gently and silently. If you notice any deviation in this and any gas smell, shut the wall switch off immediately, close the gas valve at the fireplace and report it to the gas company. Periodic maintenance by a certified fireplace company is recommended for optimum use.

■ Cleaning

Use ammonia-free cleaner to clean glass. Ammonia will cause a white cloudy build-up on the glass which over time will become

worse. It is recommended to clean the glass approximately every 6 months to avoid excessive build up which may be difficult to remove.

■ Outdoor Gas Fireplaces

The outdoor gas fireplace has no chimney and the spark is battery-operated. If your outdoor fireplace stops sparking, simply remove the switch cover, and install fresh “D” cell batteries in the holder behind it.

12 | Flooring

■ Protect Your Floor While Moving Furniture and Appliances

Be extremely careful when moving in heavy furniture, refrigerators, and washers and dryers as these objects are the most common causes of scratches, indentations and tears in new homes. When moving heavy furniture or appliances, place plywood or hardboard panels on the new floor and “walk” the objects across the panels (carpet samples or remnants can also be used). Never slide furniture on a vinyl floor — no vinyl will withstand this abuse and may tear or wrinkle. Maximum recommended stationary load is 75 lbs. per square inch for sheet vinyl. Please remember to always use furniture pads and floor protection when moving any heavy piece of furniture or appliance.

■ Floor Squeaks

Some floor squeaks are unavoidable. Lumber shrinkage as well as temperature and humidity changes may cause squeaks. Unfortunately, a squeak-proof floor cannot be guaranteed. Please refer to the warranty section for details.

■ Carpet

The carpeting installed in your home was laid by a professional installer as prescribed by the manufacturer. Cleaning, normal foot traffic, moving furniture over the carpet, etc. will cause the carpet to stretch. Stretching cannot be prevented by the manufacturer, installer or builder. Such factors as the number of children, activity of pets and other use given a carpet will determine the frequency of cleaning needed and how the carpet “wears.”

Prevent soil accumulation by using mats at all entrances to keep outside soil from being tracked in. Relocate furniture periodically to allow for even distribution of traffic and carpet wear. Use mats and runners in heavy traffic areas to reduce wear. Rotate non wall-to-wall carpet occasionally to reduce wear.

Seams

The carpet in your home has been installed firmly in place against the base molding and along the stairs. Seams are a necessity since most carpeting is manufactured in 12’ roll widths. With certain types and styles of carpeting (particularly Berber), the joint at the seams may appear to have dissimilar material colors and the seams are most visible (especially on stairways). Some appearance change may

occur in high traffic areas due to pile crush.

Generally speaking, as time goes by, the carpet fibers will begin to relax a bit and seams which might be slightly noticeable when new will begin to become less noticeable.

Vacuuming

Soil and dust left in carpets are gritty, sharp edged particles that erode the pile as effectively as sand paper. Regular, thorough vacuuming removes them. Vacuum often — a clean carpet is a longer wearing carpet. The vacuum cleaner should be equipped with a brush or beater bar which is properly adjusted for the height and type of carpet being cleaned — the brush or beater bar is more effective than using suction only.

Busy traffic lanes should be vacuumed at least twice weekly, if not daily. This will help to maintain the upright position of the nap. The entire area should be vacuumed once or twice weekly. Up to 3 passes with the vacuum is considered light cleaning; 5 to 7 may be needed for heavy cleaning.

Stains

It is very important that you know the name of the manufacturer and type of carpet you have in your home. Before attempting stain removal, check with the manufacturer to get the proper stain cleaning instructions. An improper procedure may permanently damage carpet fibers.

Soiling from “air filtration” occurs as a result of air movement between various areas of the home and adjoining dead air spaces. As the air moves through tiny cracks, the surrounding carpet pile acts as a filter, filtering out the dust and soot in the air. It is the buildup of this dust and soot which can create a dark discoloration. This can also happen to stair edges, and dark discoloration can occur directly under the drapes where air moves back and forth.

Household chemicals can cause mysterious spots when they come in contact with carpet and other dyed fabrics. It may take several hours or days before discoloration appears, depending on humidity and temperature during and after exposure to the chemical. Take precautions to prevent possible permanent damage because even

stain resistant carpets can be affected by chemical reactions.

Below are common chemicals that you may encounter:

- Acne medicines
Benzyl peroxide in most skin care products is a powerful oxidizing agent in the presence of humidity. If residue is left on the hands or face then brushed off accidentally on the carpet, it could cause a reaction. Use a strong soap to clean off any acne medicine residue.
- Bleaches
Chlorine and oxygen bleaches, mildew killers and swimming pool chemicals which can be tracked into the home unknowingly by swimmers will cause yellow spots.
- DMSO
Used for muscular ache medication, commonly contains the chemical dimethylsulfoxide which can cause rapid loss of color on carpet due to its solvent action.
- Household cleaners
Toilet bowl, drain and oven cleaners contain strong acids or alkalis which can weaken the carpet fiber and cause “bleeding.” Exercise caution when using these cleaners around carpeted areas.
- Insecticides and pesticide
Products such as malathion, diazinon and vapona, if used indoors, should be applied only to baseboards and sprayed in a fan shaped mist. Never spray directly onto carpet.
- Plant foods
Liquid plant food spills or seepage from flower pots can cause oxidation spots. These typically stain near the carpet backing and progress to the carpet surface, sometimes not becoming apparent for months.

Once a chemical reaction is visible on your carpet, the damage is done and the carpet will need restoration or replacement. If you know that one of these chemicals has come in contact with your carpet, consult a professional carpet cleaner to extract it as soon as possible. Do not attempt to remove the chemical yourself, as you could do further damage.

Keep the materials listed below readily available as a first aid kit for your

carpet so you are prepared to take care of spills immediately. For an applicator, you can use medicine droppers or plastic squeeze bottles such as those used for mustard or ketchup, or other plastic bottles with a dispenser cap. Spray on dispensers are also effective. If you use the bottles for storage, be sure to label the contents clearly and keep out of the reach of children!

First-aid for your carpet

1. Ammonia — Undiluted household ammonia (with detergent)
2. Blotting material — White cloth or white paper towels
3. Detergent — Diluted solution of mild hand-dishwashing detergent without oily skin conditioners
4. Dry powder — i.e. Capture, Dyson Zorb, Lost
5. Enzyme presoak — Liquid cleaner such as Bix or Axion
6. Solvent — Dry cleaning solvent (spot remover)
7. Vinegar — Undiluted white vinegar

Carpet cleaning steps

1. Select a suitable shampoo. Mixed as directed, the shampoo should have an alkalinity of pH 9.5 or lower. You can obtain pH test paper at swimming pool, aquarium or janitorial supply stores. A shampoo with too much alkalinity can cause colorfastness problems either immediately or in the future.
2. Sticky residue left in the carpet equals fast resoiling. Check your solution for residue as follows:
 1. Dip a clean glass part way into the mixed shampoo.
 2. Let glass dry.
 3. Dust talcum over the glass, and then tap lightly.
 4. If talc sticks more where the glass was dipped, you will have a problem with sticky residue.
3. Test your solution for colorfastness or bleeding on a hidden area of carpet. Put a small amount on a spot, allow to stand

for 10 minutes, and then check for color change or bleeding. If there is any, you may need to select a different shampoo or get professional advice.

Professional cleaning

Select your professional carpet cleaner carefully. A professional cleaner will give you client references — check them out. You should expect the cleaner to inspect your premises before quoting a price and also warn of any problems before cleaning.

■ Carpet Terms

Burns

Cut charred tips by cutting with curved fingernail scissors. A deeply burned spot may need major replacement; see your carpet dealer.

Dents

To avoid dents caused by furniture or heavy objects, move furniture occasionally. Brush the dented area or use a grooming tool to loosen and stand the mashed tufts up. With a steam iron, steam the dented area lightly and brush up the tufts with your fingertips. Do not let the iron touch the carpet.

Fading

All carpets will slowly lose some color due to natural and artificial forces in the environment. Reduce fading by frequently vacuuming, regular cleaning of furnace filters and keeping humidity from getting too high.

Fuzzing

Pile of loose fibers still bound at one end. Seen mostly in older loop pile carpets caused by fiber breakage, surface wear and the cutting of filaments by embedded grit. Vacuum frequently to get rid of grit. Carefully clip protruding fibers.

Pile Crushing

Pile becomes crushed or compacted with use. Vacuum with “beater bar” or use a carpet rake to restore and lift the crushed pile.

Pilling

Small balls of entangled fibers and lint. “Pills” can be safely clipped off with scissors.

Shading

Carpet appears variously dark and light. This is characteristic of dense, cut pile carpets such as saxonies and plushes which reflect light differently from the tips and sides of tufts. This adds rich, luxurious shading to the beauty of the carpet but can be minimized by making your final vacuum strokes in the same direction.

Shedding

Shedding is normal in new cut pile carpets, and the amount will vary, but may be significant. Vacuum regularly to remove loose fibers.

Snags

Snags are tufts that are pulled out of the carpet. Clip off with scissors; never pull them. If a long “run” occurs, see your carpet dealer to retuft the yarn or glue it back in place (occurs most often in loop pile construction).

Sprouts

Sprouts are yarn tufts that stick up higher than the carpet. Clip off excess length with scissors or fingernail clipper. Do not use a knife.

Static

Shocks occur easily after walking across carpet. Carpets of ANSO IV and ANSOX have protection against annoying but not harmful static shock. Adding humidity to dry air will reduce static build up; anti-static treatments are available but their effect is temporary so your carpet will need repeated applications.

■ Hardwood Floors

Wood is a natural product and is therefore subject to a number of natural characteristics. Some of these include variations in grain and color. Wood is further subject to seasonal expansion and contraction due to temperature and humidity. Minor surface scratching will occur during normal installation and preparation of hardwood floors.

When new, small splinters of wood may appear. Dimples or scratches can be caused by moving furniture, dropping heavy or sharp objects, etc. Some shrinkage or warping can be expected, especially around heat vents or any heat producing appliances.

What damages hardwood floors?

Warping will occur if the floor becomes wet repeatedly or is thoroughly soaked even one time. Heavy traffic areas are likely to exhibit dulling of the finish. A white, filmy appearance is caused by moisture (often from wet shoes or boots). Use protective mats at the exterior doors to help prevent sand grit and moisture from getting on the floor.

The rubber backing on area rugs or mats can cause yellowing and warping of the surface. Exposure to ultra-violet light (sunlight) may cause a floor finish to change in color resulting in variation in the color of the hardwood under furniture, area rugs, inside pantries, etc.

Waxing or using furniture polish is not recommended.

Care of hardwood floors

Sweep on a daily basis or as needed. Never wet mop or steam clean a hardwood floor.

Clean up food spills immediately using a dry

cloth. If a spill requires a damp cloth, the area should be cloth dried immediately. The use of Murphy’s Oil Soap is NEVER recommended for any hardwood floor.

■ Tile Floors

For tile floors, vacuum when needed and occasionally use a wet mop with warm water (mild solution, no detergent) to clean. Floors can be cleaned by mopping on a mild solution of soapless detergent in water and rinsing

thoroughly. For floors in wet areas use a soft cloth or sponge with an all purpose cleaner or medium strength solution of soapless detergent. Use bleach if danger of fungal growth (athlete's foot). Rinse well.

■ Vinyl Floors

Vinyl floor coverings are manufactured in either 6' or 12' goods, so seams are a necessity.

Caution!

Do not disturb welded seams, and avoid walking or placing furniture on new vinyl flooring for at least 24 hours after installation. Do not use cleaning or finishing agents on the new floor until the adhesive has set thoroughly. This takes about two (2) weeks.

What damages vinyl floors?

Tears, cuts and indentations may result from high heels, rocks embedded in shoes, dropping sharp objects, unprotected chair or table legs, or children's toys. Deep burns and cuts should be repaired by a qualified flooring installer.

Never allow water to stand on your vinyl flooring. Edges can lift or curl if excessive moisture is allowed on the floor. Use a caulking designed for this task to seal edges. Bath mats can hold moisture against your vinyl floor and should be removed from the floor promptly after bathing to prevent discoloration and damage to the vinyl floor.

Although vinyl flooring wear layers are designed to withstand routine household wear, they will lose their brilliant shine if they are repeatedly subjected to sand and dirt, especially in heavily travelled areas. Frequent sweeping will prevent abrasive action and help prolong your floor's built in shine.

Certain spills and smears can be especially harmful — solvent type shoe polish, hair waving and dyeing solutions, lipstick, wax crayons, furniture oils and polishes, animal excretions, and others. Wipe up all spills quickly before they set.

Some rubber backed mats can cause the floor to discolor in time. A mat or rug that does not have a rubber to latex backing is recommended.

Asphalt and tar deposits on shoes may discolor a vinyl floor, especially in hot weather. A nonstaining fiber mat placed near entrances will help remove deposits on shoes. Also, a vinyl coating floor finish may help protect the flooring. If it does become discolored, the finish can be removed and the flooring recoated.

Care of vinyl floors

Remove loose dirt daily with a broom, dust mop or vacuum cleaner. When spills occur, wipe them up immediately with a damp sponge, cloth or mop. When thorough cleaning is required, use diluted detergent or a cleaner recommended for your flooring. Use just enough mechanical action with a mop, cloth or floor scrubber to loosen dirt. Wipe up the cleaning solution, then rinse and allow to thoroughly dry. Do not flood the floor with water.

Vinyl floor surfaces need no waxing but may require a coat of floor polish for best wear. If luster diminishes in heavy traffic areas, wash floor as recommended, and buff with lamb's wool pad. To really bring up the shine, apply a liberal coat of vinyl floor finish. Refer to the manufacturer for maintenance items recommended.

To fully protect your floor, full length window coverings (drapes and blinds) are recommended at such large openings as sliding glass doors. Close the window coverings during peak sunlight hours.

■ Laminate Floors

Laminate flooring is beautiful, naturally durable and an environmentally responsible choice. With a little care, your laminate flooring will look great for years to come.

What damages laminate floors?

Surface dust and grime can scratch the floor or dull the finish

- Entry mats will help collect the dirt, sand, grit, and other substances such as oil, asphalt, or driveway sealer that might otherwise be tracked onto your floor.
- To prevent slippage of area rugs, use an approved vinyl rug underlayment.

Furniture, and foot traffic can also cause damage

- Use floor protectors and wide-load bearing leg bases/rollers to minimize the chance of indentations and scratches from heavy objects. As a rule, the heavier the object, the wider the floor protector.
- Keep your pets nails trimmed to prevent them from scratching your floor.
- Never try to slide heavy objects across the floor
- A protective mat should be used for furniture or chairs with castors.

Excessive moisture or humidity can damage the floors and cause unusual settling or warping.

- Maintain a normal indoor relative humidity level between 35% and 65% throughout the year to minimize the natural expansion and contraction of the wood.
- Heating season (Dry): A humidifier is recommended to prevent

excess shrinkage due to low humidity levels. Wood stove and electric heat tend to create very dry conditions.

- Non-Heating Season (Wet): An air conditioner, dehumidifier, or periodically turning on your heating will help to maintain humidity levels during summer months.
- Avoid excessive exposure to water during periods of inclement weather.
- Place protective covering below house plants and be careful not to over-water.
- Ensure Aquariums are well-sealed and do not splash.
- Wipe up spills immediately; liquids and steam will cause the floor to warp and buckle.

Cleaning laminate floors

- Sweep, dust, or vacuum the floor regularly (no beater bar) to prevent accumulation of dirt and grit that can scratch the floor or dull the finish.
- Use a damp cloth to blot up any spills as soon as they happen. Never allow liquids to stand on your floor.
- Periodically clean the floor with cleaning products made specifically for laminate floor care. Shaw recommends and sells R2X Hard Surfaces Flooring Cleaner.
- Do not wash or wet mop the floor with soap, water, oil-soap detergent, or any other liquid cleaning method. This could cause swelling, warping, delamination, and joint-line separation, and void the warranty. Specifically, Murphy's Oil Soap is NEVER recommended for use in your home.
- Do not use steel wool, abrasive cleaners, or strong ammoniated or chlorinated type cleaners.
- Do not use any type of buffing or polishing machine.
- Do not use any type of steam cleaning machine.
- For difficult spills, such as oil, paint, markers, lipstick, ink, or tar, use acetone/nail polish remover on a clean white cloth, then wipe the area with a damp cloth to remove any remaining residue.
- For spots such as candle wax or chewing gum, harden the spot with ice and then gently scrape with a plastic scraper, such as a credit card. Be careful not to scratch the flooring surface. Wipe clean with a damp cloth.

Inside and Out



13 | Foundation, Grounds and Grading

The walls of the foundation of your home are poured concrete with steel reinforcing rods and was mixed to industry standards and applied by professionals. Even though the foundation has been designed by an engineer and constructed in accordance with engineering requirements, cracks can still develop in the wall. Unless there is water seepage coming through such a crack, it is most likely a surface crack and will not be detrimental to the structural integrity of your home.

Foundation vents allow for ventilation of the crawl space. Growth of unwanted mold and mildew may occur if these vents are blocked.

Proper care of the grounds around your house will add to the beauty of your home while it protects the structure of the house. Your home site has been graded to assure drainage of surface water to an approved point of disposal. It is essential that you maintain the slopes around your home to permit the water to drain away from the home as rapidly as possible. If you do not do this, your home may suffer major structural damage due to the water.

During construction, it is necessary to excavate an area larger than the foundation of your home. In addition, some trenching is necessary for installation of utility lines. Although the soil is replaced and re-compacted, it does not return to its original density. Some soil consolidation will occur, especially after prolonged rainfall. This can continue to occur for

the first few years you are in your home, depending on the amount of precipitation that occurs and other factors.

■ Settling

Normal settling may occur around the house and in utility ditches; fill any resulting depressions with dirt. Keep the fill below the top of the foundation, at least 6 inches from the siding, to prevent water from entering the joint and possibly causing wood decay or water leakage.

■ Swales

Do not change the grade or block the free flow of water through swales.

Swales (drainage ditches) have been provided as required in drainage areas along property lines or in the same approximate location that natural drainage crossed your property before construction. In most cases, drainage swales do NOT follow property boundaries.

Typically, a lot will receive water from and/or pass water onto other lots. For this reason, homeowner changes in grade often affect those adjacent

to or near their home — do not change the grade or block the free flow of water through these swales. In many instances, your Covenants, Conditions and Restrictions document may specifically prohibit changes to the established swales.

Do not inadvertently fill in a swale or impede surface flow of water when maintaining or altering your landscaping, or during construction of patios, construction of decorative walls, or any other additional construction at the home site. Keep these swales properly seeded so that they do not erode.

You are cautioned that rototilling the site will often significantly change drainage swales. If rototilling is done, it should be done parallel to the swales, rather than across them. The drainage swales can also be changed by erosion resulting from the site remaining not landscaped for a long period.

Deep saturation and/or long-term ponding of waters in landscaped areas, particularly in the vicinity of the house, should be avoided. Sprinklers should not be allowed to spray onto the walls of the house.

■ Catch Basins

Catch basin inlet grates should be kept free of debris. The sediments under water in the bottom of the catch basin and any oil floating on the water should be removed. Plugged inlets cause flooding and erosion. Missing, loose or broken catch basin inlet grates need to be reset or replaced.

■ What can Negatively Affect Drainage?

Extra watering for new sod and topsoil

The extra watering that is necessary for new sod may cause temporary drainage problems, as may severe weather conditions. Topsoil has organic matter in it and is designed to hold water. We recommend that you purchase “winter mix topsoil” produced with a higher percentage of sand to aid drainage for projects that require additional topsoil.

Heavy planting

Some homeowners plant heavily around patios with little or no planting on the side yards. As a consequence, the soil around the patio may become heavily watered while other parts of the yard receive little or no water. This can create unequal soil expansion.

Planting next to the house should be at least 2 or 3 feet from the foundation. To reduce erosion on hills or banks, plant ground cover and/or shrubbery suitable to the area.

Leaks

If your home is in an area where conditions warrant it, the underground portions of the foundation have been damp proofed to prevent the entrance of groundwater. Should excessive leakage occur, especially during the rainy season, examine your drainage system carefully. You may need to repair gutters or downspouts. If the ground level slopes downward toward the foundation, add and pack soil to bank upwards so water flow will be directed away from foundation walls. Never water toward the foundation.

Changes in soil moisture

Any change in grading may affect the proper drainage pattern and allow surface water to puddle or saturate the ground at or near the foundation which could cause damage to the structure. Some soils are highly expansive and may swell and shrink from a moist condition to a dry condition. It is important to maintain uniform moisture conditions in the soil around your home. If this is not done, one portion of your foundation will move more than other portions.

Homeowners sometimes create unequal soil moisture conditions around their foundation by creating water traps. Often times this is done by installing additional concrete walks, patios, borders, landscape planting areas or flower bed edging. You should take into consideration how water will drain from your home before making any modifications or additions.

14 | Garage Doors

Your garage doors and hardware have been selected to provide years of service. The garage door is intended for privacy and security only. It is not intended to be weather tight, dust proof, daylight proof, rodent or insect proof.

■ What Damages Garage Doors?

If an overhead door is left up for long periods of time, it may warp inward. Also, if the door is left open during wet weather water may collect that will warp and crack materials. Consult a licensed, professional for correction of these conditions.

■ Care of Garage Doors

Even though quality doors and frames have been installed, these doors are subject to the extremes of temperatures on both sides and to severe of weather. Don't make hasty adjustments on new doors since the condensation and humidity of a new home may affect them only temporarily.

Occasional slight sticking is normal and even desirable for a weather tight fit. If the lock becomes stiff, use a graphite lubricant to make it work more easily. Do not use oil on a lock because it will stiffen in winter and make the lock difficult to operate.

The moving parts of the garage door should be lubricated with asilicone or teflon-based spray lubricant about once every three - six months. Check to see if screws that fasten hardware to the doors need tightening.

The door springs are under a considerable amount of tension and require special tools and knowledge for accurate and safe servicing. Consider calling a professional garage door technician for repairs to door springs.

■ Garage Door Opener

You must maintain the alignment of the "electric eye" feature that determines if an object is in the path of the door.

15 | Heating and Air Conditioning

Your heating system was designed by engineers to establish a temperature of 70°, as measured in the center of the room, five feet above the floor. All rooms may vary in temperature by as much as 4°.

To get maximum efficiency from your heating system, read and follow all warranty and operating information provided with your furnace. If you have additional questions, or if an emergency arises, contact the contractor or Customer Service. You should have your heating system serviced once a year by a professional serviceman.

The heating system was planned with a furnished home in mind. If you move in during the cooler part of the year and have not yet acquired all of your draperies and furnishings, the home may seem cooler to you than you would expect.

■ Heat Vents

Generally, heat can be diminished in seldom used or interior rooms. Experiment with the adjustable registers in your home to set up the best heat flow for your family. Do not allow furniture or draperies to block or obstruct return air vents.

■ Noise and Odor

As ductwork heats and cools in response to airflow as your heating system operates, you may hear popping, pinging, ticking or cracking sounds. This is normal.

It is normal for the heating system to emit an odor for a few moments when it is first turned on after an extended period of not being used. The odor is caused by dust that has settled in the ducts and should dissipate very quickly.

■ Filters

Check the filter regularly on any heating or cooling system. Dirty filters result in reduced efficiency and higher operating cost. If your system has a disposable filter, you should replace it every 3 months for the first 2 years, and every 3-6 months thereafter. Periods of heavy use, high traffic in and out of the home, or other environmental conditions may necessitate more frequent replacement. Verify that the filter arrow points in the direction of air flow. Permanent filters may be vacuumed or tapped to loosen dirt, then washed with warm water or mild detergent. It

is also recommended that you have your ducts professionally cleaned approximately every 2 years for maximum efficiency.

■ Temperature/Thermostat

Normal temperature variations from floor to floor can be as much as 10° or more on extremely cold days. Severe cold weather may cause the furnace blower to cycle on and off more frequently and for shorter periods of time.

The furnace will automatically come on when the temperature at the thermostat registers below the setting you have selected. Setting the thermostat to a higher temperature will not heat the home faster. Thermostats are calibrated to within plus or minus 5°.

Thermostat settings are usually set between 65° - 70°. To save energy, set your thermostat no higher than 68° when the house is occupied. At night, set your thermostat 5° to 10° lower (or use a time controlled thermostat).

Do not overheat your home because excessive shrinkage in framing lumber may result and damage the home.

■ Ventilation

Ventilation (exchanging of inside air) is important to maintain indoor air quality. Your home has a whole home exhaust fan with a timer. Run the fan between 6 and 8 hours every day to exhaust stale air. Fresh air is drawn in through vents in your windows and/or a fresh air intake at your furnace. Properly functioning, your ventilation system will limit levels of excess humidity.

■ Troubleshooting

If your heater is not working

1. Check the thermostat
2. Check the circuit breakers

3. Check the blower switch
4. Check the lower fan panel
5. Check the furnace pilot

Check the thermostat

Check that thermostat is set to HEAT setting.

Check the circuit breaker

Before calling a serviceman, check the circuit breaker to be certain it is in the full ON position. A tripped breaker must be turned all the way off then back on to reset. On models with air conditioning, the system switch must be on HEAT and the fan switch should be on AUTO.

Check the blower switch

One of the primary reasons that a furnace might not work is that the blower switch has been turned off. It looks like a regular light switch and is typically located within six feet of the furnace. This switch overrides all furnace commands and manually shuts down the blower and, therefore, the furnace. This switch is usually only used when maintenance service is being performed. If you have young children, check to see that they have not used this switch!

Check the lower fan panel

The lower fan panel must be positioned correctly for the furnace blower to operate. This panel compresses a button that tells the blower it is safe to operate. If this panel is not on tightly, the fan will not come on and the furnace will not operate.

Check the furnace pilot

The ignition system is often the second primary reason why your furnace might not function. Your gas furnace uses a hot point ignition system or an electronic spark and does not have a pilot light. It will not operate if the cover to the furnace is off or has been jarred or if the blower switch has been turned off.

Turn on your air conditioning system only when outside air

temperature is greater than 60°. Set thermostat to desired temperature or to a temperature slightly higher than normal if away from home during the day. This will allow for quicker cooling to your desired temperature at night rather than trying to cool a hot house.

If the system is operating properly, ensure that the condensation drain tube is draining water and is unobstructed. (It is usually a clear plastic tube located next to the heat pump which drains into a floor drain or to the outside.) Verify that the outside compressor unit operates free and clear of any debris. Remember to remove any protective cover left on the unit during winter.

Radiation from the sun will heat your walls, floor and furniture so it's best to shield the inside of your home from direct sunlight and outside air. Outside air contains heat and humidity. Both will significantly slow the cooling process.

Make sure all cooling and return air vents are clean, clear and unobstructed. Set air vent vanes upward on lower floors and slightly downward on upper floors.

If your air conditioner does not work

1. Check thermostat is set to COOL setting.
2. If that doesn't work, check the circuit breakers (there are two: one which controls the compressor and one which controls the fan). Verify that both are in the ON position.
3. If either is tripped, switch it to the OFF position then to the ON position.
4. If that doesn't work, call a qualified HVAC contractor for assistance as necessary.

16 | Landscaping

To avoid interrupting gas, electrical, telephone or cable TV service to your home, do not trench or excavate until underground services have been located and flagged. Your utility companies will provide this service to you free of charge. You must obtain the proper building permits and comply with any and all municipality requirements.

Washouts caused by constant or heavy rainfall are common with a new lawn. They are the result of the drainage “swales” doing their job by diverting the water to the desired location. Such conditions will occur in a new lawn until the root system of newly planted grass, trees, shrubs, etc. are matured.

■ Care of Trees and Shrubs

The first year is a crucial time for newly transplanted plant material. Be sure to water and keep soil moist daily during the warm, dry months. Once plants are established, water thoroughly and infrequently.

Roots develop and grow in the presence of water, air and nutrients. Except for naturally shallow rooted plants (rhododendrons and azaleas, for example), plants will root throughout the depth at which these essentials are found. If only the top foot of soil is kept well watered, roots will develop in the top foot. Shallow watering keeps the roots near the surface and plants will be open to severe damage in hot weather if they are not watered properly, as they have no water reserve from which to draw.

Keep your plant bed free of weeds at all times. Plants may require insect spray which should be applied in accordance with the specific needs of each plant variety. Consult a local garden center for advice.

Feed plants twice a year with appropriate fertilizer in March and November. Air and water will penetrate planting beds more easily with weekly weeding and raking of beds. The fertilization needs of a landscape plant will vary according to soil type, species of plants, amount of rain, PH of soil, etc. Usually a fertilization of high nitrogen content is all that is needed. Read directions thoroughly and determine plant needs.

If a tree is healthy and vigorous, the need to fertilize may be every other year. A 3-1-1 ratio fertilizer is recommended. The most efficient time to fertilize is early spring, yet fertilizer may be applied in late fall and winter.

■ Care of New Seeded Lawn

During the initial germination and growth of your new lawn, the seedbed should be kept moist until a good stand of grass appears. An oscillation type lawn sprinkler should be used to water your lawn at all times. Direct application of water from a hose nozzle is ineffective and may damage the lawn by causing erosion.

The better job you do watering, the better your lawn will germinate and fill in. Frequent light watering for the first 2 to 3 weeks after seeding are necessary. During hot summer months, it may be necessary to water as

often as 3 or 4 times per day. On average, 10 to 15 minutes at a time per area should be enough to soak the top surface without saturating the soil to the point of puddling.

Too much water can be just as detrimental as not enough. It can wash away seeds as well as the nutrients needed for their proper development.

Newly seeded lawn should be grown to an average of 2 1/2 - 3 1/2 inches before the first mowing.

■ Care of Sod

Care for your new sod is extremely important. It is common for sod to turn brown shortly after being laid due to transplant shock. If watered routinely, this sod will revive itself.

Newly laid sod must be watered daily to aid rooting. A new sod lawn should be kept moist at all times during the initial two week period. On a hot summer day, it may be necessary to water 3 or 4 times a day for 15 to 30 minutes each time; on a cool dry day, 1 or 2 times for 15 to 30 minutes each time. If it rains, no watering may be needed. After this period, the lawn should be watered every 1 or 2 days during warm, dry months.

New sod should not be mowed until rooted well into the soil. If you grab the lawn and pull up on it easily, it should not give way and pull up from the soil. The lawn may take up to two weeks before rooted sufficiently for mowing.

New sod is particularly susceptible to pests such as Crane Fly, which can destroy a lawn in days, if the lawn has not been treated. Regular pest control measures by a licensed, certified professional are strongly recommended.

Sod lawns require yearly aeration and thatching as a part of routine maintenance, to allow water to penetrate to the roots, and stimulate lawn growth. Yearly over-seeding is also recommended, to maintain the dominant grass strains in your lawn.

■ Fertilizing Lawns

The three major elements of a complete fertilizer are nitrogen, phosphorus and potassium.

- Nitrogen — The element needed most by your lawn. It promotes root and blade growth and makes the grass a healthy green color; lawn will grow slowly and become yellowish without enough nitrogen.
- Phosphorus — It helps the early formation and growth of roots; new lawns require more phosphorus. Established lawns need very little, as it does not flush from soil as readily as nitrogen.
- Potassium — It is the second most important element. It strengthens the grass and helps it withstand stress associated with foot traffic and periods of drought.

The series of numbers on a fertilizer bag represents the percentage, by weight, of nitrogen, phosphorus and potassium contained in the bag. A ratio of 16-4- 8 represents 16% nitrogen, 4% phosphorus, 8% potassium and is recommended for established lawns. Fertilizer with a ratio of 3-1-2 in its formula, such as 21-7-14 or 15-5-10 is also suitable for Northwest lawns.

Lawns should be fertilized every 6 to 8 weeks from February through November. An application of lime each year in November is helpful in balancing the acidity level prevalent in Northwest soils. Do not use wood or moss killers on your new lawn for a period of one year.

■ Suggested Fertilizing Schedule

February 15th

Spring feed (with iron for control of moss)

April 7th

Spring feed and lime lawn (pelleted lime)

June 1st

Summer feed (Nulife Lawn Green Supreme or Golden Pellets)

August 1st

Summer feed (Nulife Lawn Green Supreme or Golden Pellets)

October 1st

Fall/winterizer (with iron for control of moss) and lime lawn (Dolomite)

November 15th

Fall/winterizer (at half recommended rate or setting on spreader)

■ Mowing

A lawn that is mowed correctly resists weeds, insects and disease and appears lush and healthy. Conversely, a lawn mowed infrequently will remove too many of the grass blades at one time and will produce a lawn that looks thin and uneven.

After a lawn is established, now mow at a height of approximately 1 1/2" - 2 1/2" inches. Do not cut wet grass. The grass blades may not be standing up straight and this can cause an uneven cut. Mowing a wet lawn can also lead to soil compaction.

Remove clippings, as this will give grass a better chance to spread and fill in. Alternate mowing patterns. Mowing the same direction all the time can cause wear patterns and also lead to soil compaction.

■ Watering

Water during daylight hours. Morning is the best time because of the cool morning air having more moisture and will help prevent water from evaporating. Avoid late evening watering, as wet or damp lawns at night are more susceptible to fungus and disease problems.

Sandy soils dry out faster and need water more frequently, while soils with high clay content tend to dry slower but need more water to penetrate to the desired depth. With clay soils, it may be necessary to water in intervals to avoid wasteful runoff until the desired amount of water has been applied.

Once a lawn becomes established, it needs approximately 1" of water once a week to maintain a healthy appearance. To find out how long it takes your sprinkler to produce 1 inch of moisture, place a number of shallow containers at regular intervals in a line running out from the sprinkler. Turn on the water and note the time it takes to fill the

containers to 1". When you know how long it takes your sprinkler to discharge 1" of water, multiply that time interval by the number of inches you want. The result equals the length of time to leave the sprinklers on.

■ Suggested Watering Times

New sod

Minimum of 20 minutes every day (10 minutes twice daily).

Existing grass (over 3 months)

Water 4-5 days in a row for a minimum of 20 minutes. Skip a few days and start again.

Shrubs and trees

Deep-water for 10-15 minutes every other day.

■ Weed Control

We recommend that for obtaining information on insect, weed, or other controls for maintaining healthy landscaping, you should rely on a maintenance firm for service or the County Agricultural Extension Agent.

■ Utility Lines

Settlement will not disturb your utility lines. However, you may see a slight depression develop in the front lawn along the line of the utility trench. To correct this, roll back the sod and spread top soil underneath to level the area, then relay the sod.

Living Well



17 | Masonry, Brick, and Stone

Masonry is an extremely low maintenance material; however, periodic inspection is necessary to check for cracks resulting from normal settling. Small weep holes were created at regular intervals at the bottom of masonry walls to allow moisture which accumulates between the interior surface of the masonry and the sheathing material behind the masonry to escape. These holes must be kept open.

Caulking has been used to seal the joint where two materials come together and prevents leakage. Caulking will in time dry out, revealing cracks which should be repaired promptly to prevent unseen damage.

You should occasionally inspect stone or brick joints for signs of cracking or water intrusion. White flaky material on the brick or stone is called “efflorescence” and is a natural occurrence where calcium carbonate comes through porous material — no maintenance is required.

Repairing masonry

1. Thoroughly remove all loose particles of mortar with a wire brush or a thin blade
2. Moisten the crack
3. For large cracks, cut back to form a V shaped groove to a depth

about equal to the width of the V at the surface and not less than 1/2 inch

4. Use cement based mortar mix, or you can mix your own mortar (one part cement, two parts sand –the sand should pass through a 100 mesh screen -- mixed with sufficient water to form a heavy paste)
5. Force mortar into the crack with a short stiff brush or putty knife
6. Brush lightly with an old paint brush to match surrounding mortar’s texture

18 | Mildew

Mildew is encouraged by moisture, warmth, and a source of nutrient materials.

Mildew is a fungus that spreads as microscopic spores carried by the wind. When the spores land on the appropriate surface, they feed either on the surface itself, or organic dirt that has accumulated on the surface.

Mildew can lay dormant until the appropriate environment evolves. During rainy periods,

mildew can appear on previously unaffected areas. To the unaided eye, mildew frequently resembles dirt. Mildew may be black, green, red, purple or gray.

Mildew thrives in warm, shady locations, such as under the eaves, near or behind bushes, shrubbery and trees, on soffits and siding that is frequently obscured from the sun. However, during humid and/or rainy periods, mildew can obtain a foothold on virtually any exterior area, painted or unpainted.

Mildew is not limited to the exterior of the home. The interior of the home will even show mildew growth, such as bathrooms, kitchens, laundry rooms, closets, bedrooms and basements. All these areas provide a hospitable environment for mildew growth.

To the unknowing homeowner, mildew is frequently covered with a fresh coating of paint. The mildew can and will feed on the new coating of paint and grow through it, spreading out over the coating to new areas.

Unfortunately, there are no known methods of permanently eliminating the growth of mildew.

It is usually easier to eliminate from a painted surface. There are limits, however, to the degree of mildew resistance of any paint. Many paint companies incorporate as much mildewcide as is allowed under the legal and technical limits. If the conditions are favorable to its growth, mildew will reappear even though the best preventative procedures are used.

What you can do however is keep the surface of your house clean and free of dirt or other contaminants which may provide a food source for mildew. Cut back trees and shrubbery from the house. Additional mildewcide can be added to the paint before application; if you so wish, consult your paint company.

Bleaches should never be mixed with any detergents or cleaners containing ammonia.

To identify if mildew exists, clean the surface by scrubbing the affected areas with bleach and cleaning solution. A quick method of identifying mildew is to place a drop of household chlorine bleach on the discolored area. If the discoloration remains unaffected, it's dirt.

Before adding a detergent to any household bleach solution, read the labels to see if they contain ammonia or ammonium compounds. These mixtures can cause the formation of harmful vapors.

Killing mildew

1. Mix the following ingredients together:
 - 1 quart household bleach
 - 6-8 oz of non phosphate detergent (such as Shur Stick All Purpose Cleaner)
 - 3/4 gallon warm water
2. Scrub the affected areas with solution and let set for 15-20 minutes (use this solution with adequate ventilation)
3. Do not let dry on surface
4. Rinse thoroughly with fresh water
5. Wait until the surface is completely dry before applying a new coating of paint or primer.

19 | Millwork and Cabinets

Wood, the most versatile and widely used of all framing materials, was used in building the framework for your home. The size and grade of individual framing members provide a safety factor beyond that necessary to withstand the stresses to which they will be subjected. Wood is susceptible to natural predators such as carpenter ants, termites and mold.

All wood will shrink and all houses will settle. To minimize the adverse effects of shrinkage and settling, a break in period is required of a new home. During this period the temperature and humidity level of the home should be maintained as constant as possible. Do not over or under heat your new home. In winter, a hot dry house will cause the wood to dry too rapidly, resulting in rapid contraction and joint separation. To avoid this, an interior temperature of between 68° and 75° is recommended.

Separation of wood trim and backsplashes from the adjacent material is a normal result of shrinkage which can require caulking and/or touch up painting. Shrinkage may cause a piece of trim to pull away from the wall. Fix this by driving another nail in adjacent to the existing nail hole (but not in it). Fill both nail hole with putty and touch up with paint as needed.

■ Cabinets

Wood is a natural material and variations from display samples are to be expected, such as dark (or light) contrasting grains and knots. This

includes cabinets, hardwood flooring options, and millwork packages.

Whitewashed and lighter colored woods tend to yellow over a period of time. Horizontal surfaces, such as flooring, will yellow faster than vertical surfaces, such as cabinetry. This yellowing is primarily due to the angle and duration of light exposure. It is recommended that window treatments be installed where necessary to prevent premature discoloration.

Care of cabinets

Wood cabinets should be cleaned as you would any other wood furniture unless they are plastic coated — use such products as lemon oil, Liquid Gold, Old English Furniture Polish or Scratch Cover. Do not use harsh abrasives to clean kitchen and bathroom cabinets and countertops. Protect wood cabinets from water and wipe up all spills promptly to prevent damage and peeling.

Plastic coated wood and metal can be cleaned with a mild, non-ammonia based detergent solution. If hinges catch, or drawer glides become sluggish, use a small amount of silicon lubricant to improve action.

20 | Painted and Stained Surfaces

The overall beauty of your home as well as its value can be best protected by regularly repainting exterior surfaces. All exterior wood materials require repainting periodically.

■ Exterior Paint

You should plan on caulking and repainting your home 3 years after closing.

Exterior paint is particularly subject to fading or chalking caused by the sun and weather. Wood trim boards may pull away from one another and from other materials and will require caulking with a good exterior type caulk before repainting to help possible leaks, and to also

improve the appearance of your home. Wood trim will also develop raised grain as it ages and dries. Much of this aging will occur during the first year. Raised grain can result in peeling paint; however, this is not due to a defect in materials or workmanship.

Paint maintenance of wood trim and gutters is another part of homeowner maintenance. Before painting, make sure the area to be painted or caulked is clean of dirt, grease and debris.

Do not allow sprinklers to spray water on the exterior walls of your home — this will cause blistering, peeling, splintering, and other damage to your

home. White or light color painted trim will show grain and cracks more readily than darker colors and will require additional maintenance.

Severe weather, such as hail and wind storms, can cause a great deal of damage. Inspect your home after such weather and promptly report any damage to your homeowner's insurance company.

You should plan on caulking and repainting the exterior surface of your home approximately three years after closing and thereafter as often as your paint manufacturer suggests for your area and climate.

■ Interior Paint

You will receive a sample of each interior paint to use for touch-ups. Paint touch-ups are sometimes visible under certain lighting conditions. Wait a minimum of thirty days prior to washing any painted surface. Do not use abrasive cleaners, scouring pads or brushes.

The interior woodwork, if painted, has been painted with semi-gloss paint and may be wiped down with a soft sponge and soapy water.

Most of the walls and ceilings in your home have been painted with latex

Wait a minimum of thirty days prior to washing any painted surface.

paint. Do not wipe or scrub the walls in your home, as this could remove both the texture and the paint. Use matching touch up paint to paint over soiled spots, nicks and scrapes. Use spackle to cover any small defects prior to paint touch up.

In kitchen and bath areas the walls and ceiling are painted with satin or eggshell finish latex paint. These surfaces may be wiped clean using a wet sponges or cloth. Painted interior doors and their frames are semi-gloss as well for durability and easy care.

Before re painting is the best time to patch any small cracks, chips, gouges, etc. Before applying any patching materials (latex caulking, spackling compound, etc.) or paint, make sure that the surface of the area to be worked on is free of dirt, grease and debris.

Interior paint, although more protected than exterior painted surfaces, is exposed to light and other elements which cause fading and discoloration. When doing paint touch up with semi-gloss or satin/eggshell, use a small brush, applying paint only to the damaged spot. Touch up will be shinier than the surrounding area. Paint touch up is frequently visible under certain lighting conditions.

■ Stained Surfaces

Certain wood finishes are intentionally stained rather than painted. Stain provides a protective finish that penetrates and protects the material, yet allows a natural grain and weathering process that in no way shortens the life of the material. The change in appearance brings out the beauty of the wood and lends a mellow patina as time goes by.

Stained surfaces will not last for unlimited periods of time and will eventually need to be restained and sealed. Because natural finish wood entry doors are subject to the rays of the sun, they will require more frequent recoating than a painted door.

If there are surfaces on your home which are stained rather than painted, a natural process of aging and weathering will occur. If you don't like the weathered look, you may want to restain the material every two or three years. It is relatively simple to apply with either a brush or spray -- restaining does not require the skill of repainting. Due to wood characteristics, color variation will result when stain is applied. Light

colored stains will more readily show the grain and cracks and will, therefore, require additional maintenance.

For stain touch ups, Old English Furniture Polish and Scratch Cover are inexpensive, easy to use, and blend in with the wood grains.

Varnish applied over the stain protects a stained finish but may crack or peel as a result of weather conditions, especially on a door exposed to the sun for long periods of time. Varnish may need sanding and resealing several times a year and is part of homeowner's maintenance.



21 | Plumbing

Your plumbing system has been professionally installed and inspected and should provide you with years of trouble free service, with minimum maintenance. If any problem should arise, take care of it promptly to prevent a bigger problem, requiring more costly repairs.

You will find special plumbing precautions taken during freezing weather detailed in “Winterizing Your Home.”

■ Main Water Shut Off Valves

The main supply valve, usually located near where the water enters the house, controls the flow of your entire system. It will be specifically pointed out during the homeowner orientation. Make sure everyone in your household knows where it is located and how to turn it off in an emergency.

■ Interior Water Shut Off Valves

Intake valves for fixtures are located near each, usually behind the toilet, under the sink, etc. Turn off the water supply at this point when making repairs.

■ Bathtubs, Sinks and Showers

The tubs, sinks, showers and toilets in your new home are composed of one or more of the following materials: porcelain, fiberglass, ceramic tile or stainless steel. All of these materials are vulnerable to scraping and dulling and will scratch or chip.

All glass used in bathtub and shower enclosures is tempered safety glass. Certain slight imperfections can be found in rough rolled glass, such as bubbles, streaks, tear drops, runs and similar markings. They are part of the nature of this glass and are not considered defects.

What can damage fixtures?

Vitreous china and porcelain enamel surfaces are smooth and glossy. They have a mirror appearance and are as hard as steel but can be damaged with careless use. The surface will chip if hit by a heavy or sharp object and can be scratched or dulled by repeated scraping or banging of metal utensils, such as in a sink. Once a surface is scratched or nicked, the finish is more likely to stain, and it becomes increasingly harder to restore the luster.

Care of vitreous china and porcelain enamel

Avoid gritty or abrasive cleansers and any powders with a lye base

— they can dull or stain the finish if used improperly or excessively. The safest cleansers are non abrasive powders, such as baking soda or Bon Ami Powder (not Bon Ami Cleanser). They will remove the most common stains caused by dirt, food, grease, rust or water minerals. The new aerosol bathroom cleaners generally are non abrasive. Soft scrub is also a good choice. Showers and tubs are typically made from fiberglass. Use a non-abrasive cleaner such as Soft Scrub or a liquid detergent.

Care of glass shower enclosures/stalls

To clean glass shower enclosures/stalls, use ordinary dishwashing detergent (not soap) to keep the glass clean. If hard water mineral deposits are a problem, use a commercial glass cleaner with ammonia. If you make your own mixture of 1 tablespoon household ammonia in a quart of warm water, follow the warnings on the ammonia label. If soap scum does not respond, you can mix a solution of 1 tablespoon sodium hexametaphosphate (Calgon) in a gallon of warm water. Or wearing rubber gloves, sprinkle TSP on a lukewarm, damp cloth and scrub the scum (TSP in hot water is caustic). A mild solution of 1 tablespoon of TSP in a gallon of warm water can be safely used on fixtures, tile floors and painted surfaces.

Care of stainless steel fixtures

Stainless steel fixtures require a non abrasive cleanser or a commercial stainless steel cleanser to retain their luster. These fixtures generally resist staining and need only occasional scrubbing. An occasional cleaning with a good stainless steel cleaner will enhance the finish. Do not leave produce on a stainless steel surface — prolong contact with produce can stain the finish.

Eliminating food stains

Use a mild bleach solution (about 3 tablespoons chlorine bleach to a quart of water) for most food stains; rinse well. Leave on stubborn stains for about 5 minutes before rinsing. (Do not use this on stainless steel.)

Another effective cleanser can be made with equal parts cream of tartar mixed with 6% hydrogen peroxide (as used in bleaching hair) and a household cleanser mixed into a paste. Leave this on for 10 15 minutes before rinsing.

Eliminating paint stains

The best solution is to prevent paint from splattering or spilling on fixtures by covering them during the painting process. Water based paint can be wiped with a cloth dampened with liquid household cleanser. Oil based paint is harder to deal with. If it is not yet dried, it will come off easily with turpentine. Small spots may be removed by carefully scraping with a razor blade. To prevent gouging the surface, slant the blade against the fixture, and only scrape in one direction.

Hard, dry paint may need a caustic solution of trisodium phosphate (TSP) mixed at 1/4 pound TSP to 1 quart hot water. For your safety, wear old clothes, rubber gloves and safety glasses or goggles. Keep the solution off chrome plated fittings. Rinse thoroughly afterwards.

Eliminating rust stains

Wet, metal utensils can cause rust stains if left in the sink. Wet steel wool pads can also leave rust stains and should be stored in an appropriate container.

Remove rust stains using a commercial rust remover powder. Follow directions carefully — most contain oxalic acid which is caustic. Wear rubber gloves, old clothing and goggles. Use only on acid resisting fixtures, which all modern kitchen sinks, vitreous china and colored fixtures are; but keep the remover away from chrome plated fittings. Alternately make a paste from lemon juice and baking soda and allow to sit for 10-15 minutes before rinsing.

Caulking

The normal high moisture content common in bathrooms, the weight of the tub when filled with water, settling of the home over time, and the normal expansion and contraction of materials will cause separation between the tub and shower stall and adjacent tile wall surfaces in your home. Tubs and showers may develop separation at the 90° angle where tile meets tile, the 90° angle where vertical and horizontal surfaces meet and where tile meets plastic, fiberglass or other material.

When this occurs, use a brand name tub and tile caulk to re-caulk and repair the cracks.

After several years, the caulking around a bathtub or sink may appear dried out or cracked. Remove it and reapply new caulking with a

caulking gun or from an applicator tube, available in hardware stores. (Caulking that contains silicone will not accept paint, but works best where water is present. Latex caulking is appropriate for an area that requires painting.)

■ Drains

Each plumbing fixture in your home has a drain trap called a “P” trap, which is a J shaped piece of pipe designed to provide a water barrier between your home and the potential of sewer gas. The traps hold water, which prevents the air borne bacteria and sewer gas odor entering the house. Infrequently used fixtures should be turned on at regular intervals to replace evaporating water and to ensure that the barrier remains intact. Traps, because of their shape, are also a point at which drains are most likely to become clogged.

Cleaning a plunger drain stopper

1. Loosen the nut under the sink at the back.
2. Pull out the rod attached to the plunger and lift the stopper out.
3. Clean and return the mechanism to its original position.

■ Unclogging a Drain

Using a Plunger

1. Cover any overflow outlet, using an old rag.
2. Close up the other drain if it is a double sink.
3. Place the rubber cup of a plunger so that it covers the drain opening (with water above the level of the cup).
4. Rhythmically work the plunger up and down 10 to 20 times to build up pressure in the pipe (this is more effective than sporadic, separated plunges).

Using a Plumber’s Snake

1. Insert a plumber’s snake into the clogged drain (available at hardware or plumbing stores or through a rental agency). The

snake may loosen the debris enough to pass on through the pipes.

2. If the debris attaches itself to the end of the snake, turn the handle of the snake in the same direction, pulling out as you did inserting to keep any material from dropping loose on the way up.

■ Still Clogged?

If either of these methods partially opens the drain, try pouring boiling water down the drain (or 140° for plastic pipe) to see if it can finish the job. If it is still plugged, you need to find the trap under the fixture, probably accessible through a small panel in an adjoining closet wall or floor. Use a bucket or pan to catch the water as you open it. A wire may dislodge the debris at this point.

Caustic soda, as used in commercial drain cleaners, should not be used for a completely stopped up drain. It will combine with grease from soap or food wastes to form an insoluble compound. If you use a caustic drain cleaner and then have to use a plunger to open up the drain, the chemicals will be a hazard.

If the drain is still plugged, locate the nearest clean out plug beyond the trap. These plugs are located along the drain lines throughout the house.

Preventing clogs

You can help prevent drains from clogging by keeping hair and other debris out. Once a month put in 3 tablespoons of washing soda with a little hot water and let it stand 15 minutes before flushing it generously with hot water.

■ Faucets

Because faucets have moving parts, they are likely to need repairs sooner than non moving fixtures. You can extend the life of your faucets by treating them gently.

Avoid force when turning water on and off; use normal hand pressure only. New houses often have dirt or metal in the water lines, which can damage faucet washers. Keep a supply of various size washers on hand to be prepared to change washers when needed.

Some outside faucets are “frost proof,” but for this feature to be effective, hoses must be removed after each use. Outside faucets also contain washers, which may need replacement. They will need special precautions if the temperature drops below freezing for any length of time (see “Winterizing Your Home”).

Aerators

Aerators are attached to faucets in kitchens and bathrooms to reduce splashing and cut back on water use. They collect bits of debris from the water supply and will need periodic cleaning. Unscrew the aerator from the end of the faucet, remove any debris, remove and rinse the washers and screens, replace them in their original order and screw the aerator back on the faucet.

Leaks

If you should discover a leak in your yard or garage, you will need to turn off the water at the meter. Minimize damage by mopping water or extracting it with a shop vacuum, putting a bucket down to catch the water, pulling up carpets to dry, etc. If you cannot determine and remedy the cause of the leak, call the plumbing contractor or contact Customer Service.

Leaky faucets waste water and cost you money. Most can be fixed by replacing the washers, but single control faucets may need a cartridge replaced. You can find washers at hardware stores, but you may have to go to a plumbing supply store for a replacement cartridge.

■ Laundry Tub

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

■ Toilets

The new “water saver” toilets do require special care. The use of some products that may be labelled as “flushable” by the manufacturer is not recommended. Only toilet paper in small quantities should be flushed.

Never flush hair, grease, lint, diapers, rubbish, sanitary napkins, etc. down toilet drains.

These toilets have a maximum of 1.6 gallons of water. Therefore, for some solids, you may need to flush more than once - part way through, not in a row.

It is wise to only use single, or double, ply toilet tissue with these toilets - never triple ply - and refrain from using them to dispose of **any**

other type of items, even if the items are identified as “flushable” by their manufacturer.

Clean your toilets regularly to prevent discoloration. Use commercial cleaners made especially for toilets according to directions. Never mix cleaners with household bleach, and do not use toilet cleaners on any other fixtures.

Toilet is clogged

The main causes of toilet clogs are substances that are not meant to be disposed of in a toilet. These items include hair, disposable diapers, excessive amounts of toilet paper, wrong type of paper, sanitary supplies, Q-tips, dental floss, children’s toys, etc.

Keeping the lid closed when not in use will help prevent foreign objects from accidentally falling in and causing a stopped up drain.

Unclogging a toilet

1. The steps for unclogging a toilet are similar to other drains (see “Drains”) except the trap is built in and less accessible.
2. Instead of using a plumber’s snake, use a coil spring-steel auger which you can buy or rent from a hardware or plumbing store.
3. Have one person hold the auger and the other turn the handle.
4. Insert the point into the trap, turning the handle as it goes down. It will either break up the blockage or catch it so you can remove it.

Toilet is running

A toilet that doesn’t flush properly or runs too much may need a simple water level adjustment. You will probably find that the float

has lifted too high in the tank, preventing the valve from shutting off completely.

Repairing a running toilet

1. Remove the tank top lid.
2. Adjust the set screw until the water remains at the correct level.
3. Be sure the float does not bind and carefully bend the rod up or down until the proper water level and shut-off are achieved.
4. You may need to replace the ball or clean the ball seat of rust or dirt.
5. If this does not solve the problem, 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.
6. Make sure the flapper is dropping down and covering the opening in the bottom of the tank all the way.

■ Washing Machine Hookup

Before hooking up your washing machine hoses, flush the water system to clear it of any soiled or other material that may remain in the pipes (hook up a garden hose to each faucet and turn it on full force). Also flush other lines by opening faucets at all sinks, tubs and showers to remove any remaining fragments prior to personal use.

After you have hooked up the washing machine, tighten down the packing nuts on the valves to prevent water leakage. Each time the valve is turned on or off, the packing nuts must be tightened. Check them periodically.

■ Water Heater

Your home has been supplied with a quality water heater that is fueled by natural gas.

Cautions

The area around a gas-fired water heater should be vacuumed as needed to prevent dust from interfering with proper flame combustion.

Avoid storing anything near your hot water heater because it will obstruct the flow of air and create a fire hazard — do not use the top of a gas-fired or electric water heater as a storage shelf. Do not store flammable or combustible materials near your hot water heater.

Controlling temperature

The control mechanism has sensitive thermostatic controls to govern water temperature and is set — as required by code — to prevent accidental scalding burns and to conserve energy. The temperature is preset to 120° F, as regulated by code.

You will extend the life of the heating unit if you keep the temperature at the preset of 120° F. Once set at the desired temperature, further adjustments should be kept to a minimum. It should be noted that recovery time for hot water takes longer in winter months since the water entering your water heater is much colder during the winter.

Pilot fails to light

If the pilot fails to light, follow the instructions printed on the water heater, call the supplier or Customer Service. Always turn off the gas or electric power at least 15 minutes before shutting off the cold water supply.

If you have no hot water

1. Before calling for service, check the pilot light (refer to the manufacturer's literature for the specific location of this item and others below and other troubleshooting information).
2. Check the temperature setting.
3. Check the water supply valve.

■ Water Lines

The supply lines which carry water into your home are highly resistant

to rust and corrosion and should last the lifetime of your home. If a leak in the system should occur around a loose or damaged joint during the warranty period, contact Customer Service. We recommend you do not try to repair the leak yourself. (Any damage or leakage from items or appliances installed by the homeowner is the homeowner's responsibility.)

In areas where pressure is abnormally high, regulators are installed to reduce the pressure. These regulators protect the plumbing system and appliances such as dishwashers, automatic clothes washers, etc.

Changing water pressure

The amount of water flow to any plumbing location may increase or decrease as other plumbing fixtures within your home are operated. Your home is equipped with a water pressure reducing valve to help maintain a constant pressure. These valves should only be adjusted by a licensed plumber and are typically set at 40 psi by the manufacturer. All plumbing devices in your home have water restricting devices built into them as required by local codes to assist in water conservation.

Noisy pipes

In normal operation, some of the plumbing system may knock slightly when certain fixtures operate, particularly appliances such as the dishwasher and clothes washing machine, which have very rapid, mechanical shut off valves which send a pressure shock back through the pipes of the water system. Most people will have no difficulty in distinguishing between normal water shut off noise in the plumbing system and any loud knocking, which might indicate that something may need repair.

If the water pressure is very high, you may occasionally get a pounding or knocking sound when closing a faucet abruptly. Noisy pipes may also be caused by very hot water. In addition, worn or loose washers, loose faucet parts or air in the pipes may be responsible for the problem.

■ Water Conservation

Water conservation saves both water and energy, since energy is needed to heat water and to run appliances.

Water conservation tips

1. Every time a toilet is flushed about 1.6 gallons of water goes into the sewer (the toilet should not be used for things which ought to go into the wastebasket).
2. A partially full bathtub uses far less water than a long shower, while a short shower uses less than a full tub.
3. Turn off the water while brushing your teeth or shaving to avoid wasting more water.
4. Always load your dishwasher to capacity before turning it on (most models use between 15 to 25 gallons per run).
5. A typical washing machine will use 40 or more gallons to wash each load (load to the maximum to best utilize the water).
6. Repair all faucet leaks promptly to avoid letting valuable water run down the drain (a slow drip can add up to 15 to 20 gallons a day, while a 1/16 inch faucet leak wastes over 100 gallons in 24 hours).
7. Water vegetation in the cool of the day to avoid excess evaporation.
8. Avoid over watering (see section 18 "Landscaping").
9. Do not let the hose run while washing the car (use a bucket to save water).
10. Sweep down sidewalks and driveways rather than hosing them off.
11. Immediately repair any leaky hose bibs or sprinkler valves.

Enjoying the Experience



22 | Roof, Gutters and Downspouts

The roof on your home will give you years of good service if it is maintained properly. Flashings redirect water in places where the roof abuts walls, chimneys or valleys and where two roof slopes meet. Leaks are most likely to occur here, at roof jacks (square, capped attic vents at various locations on the roof) or the flashing around vent pipes. These areas are protected by metal flashing designed to prevent water from leaking into the house. Flashing should be inspected for signs of rust at least once a year.

Plumbing roof vents are made of plastic pipes, which expand and contract with temperature changes. In doing so, the seal may be broken. To prevent leaking you should re seal these locations periodically.

Keep roof and valleys free of debris. Debris left for extended period of time can result in discoloration and deterioration, which is not covered by the warranty.

■ Shakes

Shakes are meant to shed water down their overlapping courses into gutters or off the roof overhang. Erratic weather conditions can cause a build up of water that could cause ice dams to form on the roof or in the

gutters and downspouts. Standing water may back up under the shakes or eventually seep through the shakes, causing leaks.

■ Caution

Serious injury can result from climbing onto the roof and slipping off, falling to the ground. Please only allow an experienced roofer on your roof. If you have to walk on your roof for any reason, be careful not to damage the surface or the flashings. Your weight and movement will have a tendency to loosen and break the roofing material which can in turn result in leakage. Do not attempt to walk on the roof of your home when shakes are wet because they can be extremely slippery.

If rust appears on the metal flashing, remove it with a wire brush, and then paint with a metal primer coat and suitable top coat. If inspection shows the flashing to be cracked at the edges, repair the crack with flashing cement or similar compound from your local hardware store. Repairs should be completed as soon as the roofing material has dried.

Gutters and downspouts are designed to draw rainwater from the roof through downspouts to the ground away from the house and into the tight line which then carries the flow underground away from the foundation to the storm system. Keep downspout extensions connected to the

storm drain system so that roof run-off is channelled well away from the foundation area of the home.

Gutters and downspouts need to be cleaned at least yearly of leaves and debris and kept in good repair. Caulk the inside joint/corner using a commercial gutter caulking compound if a joint/corner between sections of gutter drips.

If an overflow occurs, inspect for clogs or foreign matter in the gutters. Plugged drain lines can cause the yard to become saturated and a damp crawl space/or basement. It is expected that small amounts of water (up to 1") will stand in gutters.

Buried drain pipes should be checked (i.e. flushed with water to verify free flow to outlet at curb face) and if obstructed, cleared.

23 | Siding

The siding for your home was chosen to give you years of reliable service. Shrinkage of the material or settling may crack caulking and create open points in the siding, exposing unpainted surfaces and open points around joints of door and window openings on your home. You can prevent paint from peeling by filling the openings with caulking compound.

The joints where two pieces of siding come together does not require caulking. Instead flashing has been installed behind each joint to minimize the amount of maintenance required, and improve weather barriers.



24 | Walls and Ceilings

The interior walls of your new home are constructed of gypsum wall board (“drywall”). This material was used for its stability, even painting surface and resistance to fire.

The best time to repair hairline cracks is approximately 1 year after occupancy.

You may want — at some future time — to make alterations and wish to avoid causing structural damage. Therefore, you will need to know which walls are bearing and which are non bearing. All exterior walls are bearing walls; some interior walls may be. It

is important not to reduce their bearing capacity.

General maintenance includes periodic repainting of walls and ceilings. Minor repairs, like filling cracks and nail holes, can be done in conjunction with redecorating. Use spackling compound and fine sandpaper. Larger indentations or scuffs can be filled with two or three applications of joint cement used for drywall taping. Fine grade sandpaper can be used to remove spots and smudges from interior stucco walls.

■ Settling

Although drywall possesses many desirable qualities, like all building materials it has limitations. Normal house settling and shifting may cause small cracks to occur at door and window openings and at some wall and ceiling joints. Such cracks are not serious and do not reflect any weakness in the structure. Your home is engineered to make this settling as even as possible. During the first year or two in your new home, additional drying of framing materials (studs, beams, etc.) and general settlement will occur and may cause some cracks and nail pops. Nail pops are nails coming loose from studding or joists, pushing dried joint compound ahead of them. The result is a bump or blister in the drywall surface.

Repairing a crack in the drywall joint

1. Cut a small “V” joint along the length of the crack about 1/8” deep and 1/8” wide.
2. Fill it heavily with spackle or joint compound.
3. Let it dry thoroughly and sand it smooth.
4. Re-paint the surface.

These cracks and nail pops may appear on the interior wall or ceiling surfaces in your new home. These blemishes are to be expected and do not affect the structural integrity of the building. Changes in the weather (temperature and moisture content) will cause these small cracks to widen on occasion and almost disappear on others. You may also notice minor separation of molding at the joints or small interior wall cracks around doorways, archways, and at wallboard joints.

Immediate repair of these cracks should be delayed, as further shrinkage may reopen them. The best time for repair of hairline cracks is approximately one year after occupancy, when most shrinkage and settling should have occurred. There is no feasible method to prevent the cause of the hairline cracks caused by settling and shifting of the home, however, maintaining an even temperature throughout your home the first year to assist the drying out process may reduce shrinkage cracks.

Repairing cracks

1. Fill cracks with wood filler or spackle.
2. Reset loosened nails with a hammer and nail set.
3. Fill the holes with wood filler or spackle.
4. Texture.
5. Fill and sand small wall cracks when you repaint the walls.

Repairing nail pops

1. Drive the protruding nail all the way through the gypsum board or remove it entirely.
2. Drive another drywall nail/screw an inch or two above or below the nail pop, sinking it below the paper surface.
3. Cover the area heavily with spackling compound.
4. Let it dry and sand it smooth.
5. Repaint the surface.

■ Truss Uplift / Partition Separation

Trusses are prefabricated structural assemblies which hold up the roof

Truss uplift is not cause for panic and is not a defect in your home.

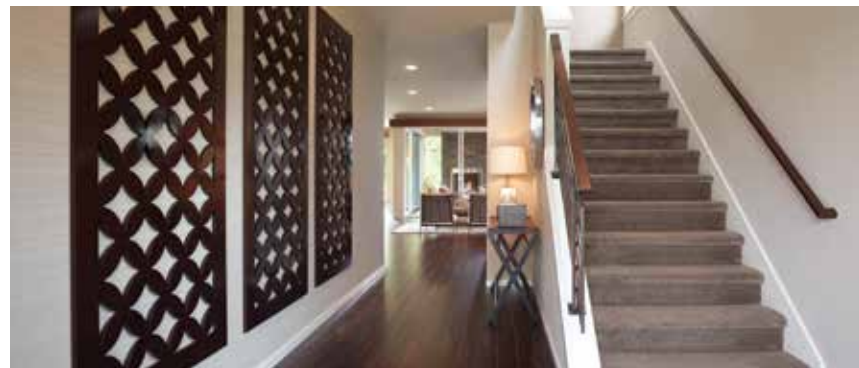
and the top floor ceilings. Trusses tend to be a stronger and lighter approach to roof framing. Trusses are strong because they make use of the most efficient geometric shape we know of — the triangle. Trusses are a series of triangles fastened together with gusset plates.

Attics of newer houses have lots of insulation and ventilation. They also have roof trusses instead of rafters and ceiling joists. The bottom chord of a truss is buried below a deep blanket of insulation. Even on the coldest days the bottom chord is warm. The top chords, however, are above the insulation and are subject to temperature extremes.

While the bottom chord is warm and is drying out, the top chords are doing just the opposite. The cold winter air has very high relative humidity and the top chords absorb moisture from the air causing them to elongate. With the top chords growing and the bottom chord shrinking, the truss arches up in the middle causing the ceilings to lift off the walls. The top floor ceilings literally lift off the interior walls in the winter. They drop back down in the summer. This is not cause for panic and is not a defect in your home. This phenomenon is known as “truss uplift,” or is sometimes called “partition separation.”

Currently there is no practical way to prevent truss uplift.

If a house exhibits symptoms of truss uplift, this may be disconcerting to the homeowner! You might even assume that the floors have settled. Actually the ceiling has gone up — sometimes creating a gap of as much as two inches where interior walls meet the ceilings. The cracks may be repaired when the trusses have settled back down onto the interior walls. The symptoms of truss uplift often lessen over time.



25 | Windows

You can always use commercial glass cleaner containing ammonia to clean your windows. Lightly soiled windows can also be washed with a solution of 1 cup vinegar to 1 gallon warm water. Apply with a lintless cloth or sponge. Use a squeegee for quick drying, or dry the glass with a chamois, lintless cloth or paper towels. If windows are extremely dirty, mix a solution of 1 tablespoon household ammonia to a quart of warm water. Apply to window with crumpled newspaper.

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.

Once a month, clean vinyl surfaces with warm, clear water. Do not use any abrasive cleaners. In the event of breakage, remove broken glass with gloved hands, remove inner frame and bring it to a hardware store or glazier for replacement.

■ Window screens

Fiberglass screening needs no preservative but should be cleaned annually using a mild detergent.

■ Sticking windows

Most sliding windows (both vertical and horizontal) are designed for an average pull. Apply a silicone lubricant if sticking occurs or excessive pressure is required to open or close. Do not use a petroleum-based product such as WD-40.

■ Condensation

Condensation on interior surfaces of the windows and frames is the result of high humidity within the home and low outside temperatures and/or inadequate ventilation. If your home includes a humidifier, follow the manufacturer's direction, especially during periods of cooler temperatures.

Excess condensation may result in the unwanted growth of mold and/or mildew (for a more complete discussion on this topic, see "Mildew").

If troublesome condensation persists, see your heating contractor about proper use of ventilating fans, or potential additional or upgraded fans.

Preventing condensation on windows

1. Put on storm windows or double glazing.
2. Shut off furnace humidifier and any other humidifying devices in your home.
3. Be sure that louvers in attic or basement crawl spaces are open and are of adequate size.
4. Run kitchen or other ventilating fans longer and more often than has been your custom.
5. Open fireplace damper to allow easier escape of moisture.
6. Air out your house a few minutes each day. Air out kitchen, laundry room and bathrooms during use or just following use.

26 | Winterizing Your Home

As winter approaches, take time to consider all the areas in and around your home that can be affected by the change in weather. Use this checklist to help you.

■ Driveway / Walks

Cold weather can make cracks grow and being crumbling. Sealing them may help minimize this effect.

■ Preventing Frozen Plumbing

During periods of below freezing temperatures, you will want to take preventive measures to keep your plumbing from freezing. Frozen plumbing interrupts your water supply and can damage property.

Locate your main shut off valve

It is important to know and remember the location of the shut off for emergencies such as a water line freeze or break. You can stop

flooding and excessive water loss by turning off the main shut off valve which controls the flow of all water into your pipes.

Indoor precautions

Do not allow indoor temperatures to drop below 55°. Locate the faucet furthest from the main shut off valve and turn it on to just a trickle. This keeps water moving through your system and helps prevent freezing (your water bill may increase).

For maintenance, find the control valve, usually inside the house near where the water supply goes through the outside wall, and turn the water supply off. Drain all the water from the faucet. If you are leaving your home for an extended period of time during the winter months, you should take all the precautions listed and drain all water lines, including the icemaker lines.

Outdoor precautions

Drain water from exterior faucets and pipes where a shut off is provided. This is done by shutting off the hose bib supply line and opening the hose bib system to drain all the water from the pipe.

Disconnect and store all hoses from your outside hose bibbs (faucets), as they are designed to drain out 6" back into the house; but if the hose is left on, such action is not possible, causing the hose bib to freeze and break.

If the outside temperature drops below 20, you should wrap all exterior pipes

If the outside temperature drops below 20°, you should wrap all exterior pipes, hose bibbs and exterior faucets with suitable insulation materials (foam or cloth tape, etc.). Secure the wrapping with string or wire and cover the wrap with plastic to keep out moisture.

Wrap pipes and faucets in unheated areas, such as garages or crawl spaces, in the same manner. Close air vents to crawl spaces to prevent circulation of cold air. Make sure that these temporary covers are removed as soon as the temperature is above freezing.

Turn off sprinkler system pipes and have the system winterized by a licensed professional. Pipes that are up against the house should be left as is to allow them to absorb heat from the house.

Garage doors should be kept closed to protect plumbing lines which may run through this area from freezing temperatures.

If your pipes freeze

If a pipe bursts from the freeze, you can often hear or see the water leaking out. If your pipes should freeze, make sure you are home when they thaw out. It is critical that during and after the thawing period you spend time walking your entire home looking and listening for water.

Burst pipes from a freeze are not warranted.

Methods of thawing pipes that require open flames are extremely dangerous — don't do it! An ordinary hair dryer can be used to thaw pipes that are frozen. Once the pipes are thawed, wrap the pipes with dry insulating material to prevent refreezing.

Furnace

Have your furnace serviced annually by a professional. Keep your circulating air cleaner — and save on your bill — by stocking up and using the correct size filters for regular replacement.

Gutters

Clean out leaves and debris, or install mesh guards to keep debris from collecting in the first place. Clogged gutters can allow water to back up in the house.

Roof

Repair any shingles you find broken or curled. To temporarily fix a missing shingle, slide flashing under the surrounding shingles and seal with roofing cement. Remove moss with commercial zinc based moss remover product.

Windows

Leaks around the windows can be a great source of heat loss. Check the caulking and putty and replace as needed.