



smile knowing you can easily
keep up with home maintenance.

*Everything you need to know right at your fingertips
... just turn the page.*



Highland Homes
The value leaders.



*Your builder has partnered with 2-10 Home Buyers Warranty to
bring you this maintenance manual.*

LONG LIVE HAPPY HOMES®



sigh with relief knowing you can maintain your happy home.

Congratulations. You've got your own piece of the American Dream. A new home means a lot of things. It's a place to come home and relax. It's a roof over your family's head. It's an expression of the things that are most important to you. And it's freedom to live life on your own terms.

Of course, like any freedom, it also comes with responsibility. And that's where this manual comes in. Here, you'll be able to easily find, record and stay on top of what you need to do to keep your new home in great condition. Whether it's plumbing, electrical, structural or anything else, your questions can be answered here.

It's a great feeling to take care of your house. That's how it truly becomes a home you can be proud of.

moving in is both exciting and stressful.

There's so much promise ahead, and so much unpacking to do.

Before the move...

Walk through the home before closing and make sure you're satisfied with its condition. As it's a new home, there should be no outstanding repair issues. If there are, note them on the walkthrough list provided in the back of this manual and let your builder know.

After the move...

Make sure you have the 2-10 Home Buyers Warranty® Service Request forms handy. It's the paper trail you can reference when something needs to be repaired.



before the move... it's important to take care of utilities.

Utilities and services should be cancelled. All other companies you normally do business with should be notified that your address is changing. Collect all of your mail for a few months prior to the move so you can see who sends you mail regularly.

Make sure you have plenty of boxes and start with the most complex rooms in the house (like the kitchen).

Utility checklist:

- Power
- Water
- Gas
- Telephone
- Security
- Cable/Satellite
- Trash
- Internet
- Garage Door



Businesses to notify:

- Employment
- Post Office
- Insurance
- Credit Card
- Social Security
- Health and Benefits
- Investments
- Magazines
- Professional Organizations



after the move... you're on the home stretch to a happy home.



Now is the perfect time to do a few things:

- Store your instruction manuals, warranties, insurance documents and this manual in a safe, easy-to-find place.
- For important documents, such as birth certificates, social security papers or car titles, consider a safe deposit box.
- Mail in all manufacturer warranties on new systems and appliances.
- Purchase a fire extinguisher for each floor of the home, as well as the kitchen and garage.
- Locate the main water and gas shut-off valves.
- Locate the electrical service panel and shut-off switch.
- Get to know your appliances and how they work.
- Install contact paper in cabinets and drawers.
- Install protector pads on furniture legs.
- Apply grout sealer to ceramic tile.
- Get a first-aid kit and place in an easy-to-access location.

Connect to the community

Many happy homes together make a happy community. Get to know yours.

- Change the address on your driver's license.
- Register to vote if you're in a new jurisdiction.
- Identify your HOA and their requirements.
- Register your kids for school. Apply for a homestead exemption with your local county tax office if applicable.
- Meet the new neighbors.
- Offer your old boxes to someone who's moving.
- Start thinking about a house warming party.

Home Maintenance Catalog

A happy home has proper check-ups.

Keeping your home in tip-top condition can sometimes challenge your best organizational skills.

With this worksheet, you can track maintenance when it's done and keep tabs on your home's health.



SYSTEMS	MANUFACTURER	MODEL	SERIAL NUMBER
Air Conditioning*			
Heating*			
Intercom*			
Security*			
Septic*			
Water Well Mechanical			

**Where applicable*

APPLIANCES	MANUFACTURER	MODEL	SERIAL NUMBER
Microwave			
Clothes Dryer			
Clothes Washer			
Cooktop			
Dishwasher			
Doorbell			
Fans (Attic/Ceiling/Exhaust)			
Fire/Smoke Alarm			
Garage Door Opener			
Oven			
Plumbing Fixtures			
Range			
Refrigerator			
Trash Compactor			
Water Heater			

Your Service Contractor Catalog

Consider this your happy home support team.

Looking for a service contractor doesn't have to be a guessing game. When you find a good one, list them here:

Systems	: Company Name Phone
Air Conditioning	:
Electrical	:
Heating	:
Intercom	:
Plumbing	:
Security	:
Septic	:
Water Well Mechanical	:
Appliances	
Built-in Microwave	:
Clothes Washer and Dryer	:
Dishwasher	:
Doorbell System	:
Fans - Attic, Ceiling, Exhaust	:
Fire / Smoke Alarm	:
Garage Door Opener	:
Garbage Disposal	:
Range / Oven / Cooktop	:
Refrigerator	:
Trash Compactor	:
Water Heater	:

Inside	: Company Name Phone
Cabinetry	:
Doors, Windows and Trim	:
Carpet	:
Ceramic / Marble Tile	:
Wood Floors	:
Insulation	:
Painting	:
Plumbing Fixtures	:
Outdoor	
Brick	:
Driveway	:
Gutters and Down Spouts	:
Landscaping	:
Painting	:
Roof	:
Siding	:
Woodwork	:

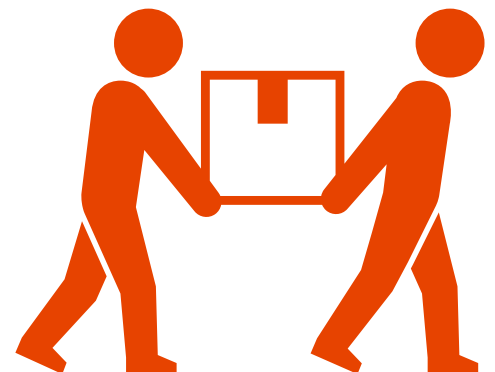


tips for a successful housewarming.

Give a tour to your guests. After all, the party is all about viewing your new home.

Food. It's best to serve non-messy finger foods as your guests will be wanting to tour your house and stand around and mingle.

Don't worry about decorating. Your new house is the main event and you don't want to distract from it.





it feels good to maintain your home...

Monthly Maintenance

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 semi-annual basis. Tailor it to fit your own situation, adding or subtracting items as required.

As a homeowner, you have normal maintenance responsibilities for your new home. Establishing a maintenance schedule is the best way to manage your maintenance budget.

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

The following is suggested monthly maintenance:

- Smoke detectors - Check operation by pushing test button. Check and replace battery if necessary.
- Check fire extinguishers for proper charge. Never buy units without a pressure gauge. Be sure that you have an adequate number, located in kitchen, garage and basement. Test Ground Fault Circuit Interrupters (GFCI) to insure proper protection.
- 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 regularly, 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 filter is dependent upon water usage and water characteristics.

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

- Check the Temperature Pressure Release (TPR) valve on the water heater. In areas with hard water, drain at least five gallons of water from the drain valve every six months to prevent sediment build up.

Biannual Maintenance

- Inspect roof and chimney for broken or missing tiles or shingles, identifying anything that might cause leaks or problems. Inspect and clean gutters and downspouts. Follow instructions in this manual for roof, chimney, gutters and downspouts. Do not walk on the roof as it is dangerous and may cause damage.

- Inspect the outside of the home and the condition of siding, paint, masonry, stucco or Exterior Insulated Finish System (EIFS) and wood trim, following instructions in this manual.

- Inspect doors and windows to verify proper operation, security and weather resistance. Clean tracks of windows and sliding glass doors before applying silicone lubricant. See suggestions in this manual.

- Maintain wall finishes following suggestions in this manual.

- Monitor and maintain cabinets and countertops following suggestions in this manual.

- Inspect the foundation, basement or crawl space following instructions in this manual.

- Inspect main service panel, circuit breakers, all GFI outlets and breakers following instructions in this manual.

- Complete seasonal maintenance on heating and air conditioning by licensed HVAC contractor.
 - Check general condition of compressor; remove debris as necessary.

- Inspect and replace caulking and grout around tubs, showers and sinks as needed.

Annual Maintenance

- 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.
- Check condition of septic tank and leech field. Consult with septic tank pumping service.
- Visually survey wood trim following suggestions in this manual. Clean all woodwork and wax.
- Have carpets professionally cleaned at least once a year.
- Complete annual furnace and air conditioning maintenance by a licensed HVAC contractor. Schedule a professional inspection of major appliances especially if they are gas fueled.

Outside Maintenance

EXAMINE ROOF AND CHIMNEYS

Why? To identify anything that might cause leaks or problems.

When? Twice a year.

How? For roofs, visually inspect all surfaces from the ground if possible. Look for torn, broken, missing or cracked shingles or tiles, accumulated debris, gaps in flashing, exposed joints, and obstructed vent pipes. Avoid walking on roof tiles - they will crack. Shingle granule deposits found in gutters are normal and common to new roofs. Check that sealed joints around skylight frames are not cracked and in good condition. Look in attic for water stains on underside of roof or wet insulation. Consult with a qualified roofing contractor, as necessary, for correction of any roofing problems. After any snow, ice, high winds or heavy rains, check for water stains under overhang and in attic. Always call your homeowners insurance company first for any storm-related damage. Many attics do not have floors and if you step on the insulation or ceiling, you may be seriously injured.

For chimneys, look for open gaps between the house and chimney, cracks in mortar or stucco and minor settlement. Seal gaps with an appropriate caulk and repaint to match as required. Consult with a mason to repoint or repair mortar and stucco. Never burn pressure-treated wood, Christmas trees, plastic or flammable liquids in the fireplace. Keep flue closed when not in use to reduce cooling and heating losses. Clean

chimney flue once a year by removing ashes as necessary and storing in a metal container to reduce fire risk.

With the return of cold weather, before building the first fire, there are three steps that you should follow.

1. Check to see if any of the “fire clay” (mortar) has fallen out and replace if necessary;
2. Ensure damper works properly and closes tightly; and
3. Check the flue with a flashlight for soot build-up. For heavy soot deposits, a professional chimney cleaner should be called.

See warranty book section: Roofing/Fireplaces

INSPECT GUTTERS AND DOWNSPOUTS

Why? To make sure they operate as intended.

When? Twice a year.

How? Hire a gutter cleaning service or use a ladder to inspect yourself. Leaves and debris will accumulate in the gutters as the seasons change. If you inspect it yourself, carefully climb up to the gutter and scoop out leaves and debris with a small hand shovel. Also, remove debris from the downspouts. You can sometimes clear these with a hose, but you may have to disassemble the downspout. After cleaning, consider installing a downspout filter device to keep out debris. Make sure gutters are sloped to drain toward downspouts and that water drains a minimum of five (5) feet away from the foundation as it discharges from downspouts. When on the ground, inspect gutters from underneath and look for leaks, rust spots or holes—caulk as necessary.

See warranty book section: Sheet Metal

CHECK CONDITION OF SIDING, PAINT, MASONRY, STUCCO, OR EIFS (EXTERIOR INSULATION FINISHING SYSTEM) AND WOOD TRIM

Why? To maintain the appearance and confirm adequate weather protection.

When? Twice a year.

How? Perform a walk-around inspection of the perimeter walls. Over time normal weathering and minor settlement can cause cracking, peeling, warping and crumbling in some or all of these materials. Look for cracks in brick, stone and stucco. Identify any areas where mortar has fallen out. A white powdery substance known as efflorescence

may appear from time to time and is considered normal. 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. Consult with a mason, as necessary, to repair cracked brick or mortar and traditional stucco problems. Contact a qualified contractor familiar with the manufacturer's specifications of repair for homes clad with an Exterior Insulated Finish System (EFIS). Consult with a siding contractor, as necessary, to repair warped siding.

See warranty book section(s): Unit Masonry; Stucco and Cement Plaster Finish; Carpentry and Exterior Siding

EXAMINE CAULKING AROUND WINDOWS, DOORS AND OTHER AREAS

Why? To keep out water, air, dust and insects.

When? Once a year

How? Walk around the house and inspect each caulking joint at the window and door frames, between two different siding materials (like brick or stucco), or around piping which enters the home. Original caulking will shrink and crack over time due to normal weathering. Confirm that caulked joints are still properly sealed and haven't cracked, pulled apart or fallen out. If necessary, clean the old joint out with warm soapy water and a toothbrush and reapply the same caulking material to achieve a proper seal. Consult with your local hardware store to select the right type of caulk.

See warranty book section(s): Sealants

INSPECT CONDITION OF CONCRETE SLABS AND PATIOS

Why? To maintain their appearance and intended usage.

When? Once a year.

How? Examine all concrete sidewalks, patios, porches, stoops and garage slabs for cracks, chipping, stains, scaling or settlement. Consult with your local hardware store for products that can fill and repair cracks or chipping, or remove scaling residue (Automotive brake cleaning fluid works well to remove most concrete stains). Seal and caulk any large gaps created by minor settlement.

See warranty book section(s): Cast In-Place Concrete; Construction and Control Joints

MAINTAIN ORIGINAL GRADING, DRAINAGE AND LANDSCAPING

Why? To reduce the possibility of water or foundation damage.

When? At all times.

How? 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 reestablish drainage flow. Avoid over watering plants and shrubs which are next to the foundation. Adjust sprinkler systems to avoid over spraying the house or causing puddles near the foundation. Plant trees and shrubs an adequate distance away from foundation to allow for mature spread and root systems. Water, fertilize, mow and aerate your grass as necessary. In areas of the country with active (expansive) soils, maintenance and irrigation guidelines specific to your soils and foundation type should be followed. Conventional landscape practices may be inappropriate in these areas, for example; if your home has a pier and grade beam foundation and you live in a semi-arid climate, you may not be able to plant flowers or shrubs closer than five feet from the foundation, unless they have very low water requirements and can be hand or drip-line watered. Sprinkler systems may not spray closer than five feet from the foundation, and trees should not be planted closer than fifteen feet from the foundation. Conversely, if your home has a post-tensioned slab foundation in a moist climate, you may need to take steps to ensure that soils around foundation do not dry out excessively. Again, trees should not be planted closer than 15 feet from the foundation. Consult with your builder, nursery or landscape professional, as necessary, to correct or learn more about your local soil and growing conditions.

See warranty book section(s): Grading; Drainage

CHECK CONDITION OF SEPTIC TANK AND LEACH FIELD

Why? To keep your wastewater system working as intended.

When? Once a year.

How? Know the location of your septic tank and drain field. Have your septic tank inspected annually by a licensed contractor or health department official. Inspection will reveal problems before they become serious, and tell you when the tank needs to be pumped. Periodically check the drain field for a foul odor, excessive wetness or overly lush grass growth, which may be warning signs of a failing system. Never drive or park over any part of the system. Do not plant anything but grass over or near drain field, as tree and shrub roots may cause clogging.

See warranty book section(s): Septic Tank Systems

Inside Maintenance

INSPECT THE ATTIC

Why? To look for any changes since construction.

When? Twice a year.

How? Prior to entering the attic, purchase a paper filter mask from your local hardware store to avoid lung irritation from possible airborne insulation fibers. Check that all air vents are unobstructed and intact. Make sure there are no animals nesting in the insulation. If you walk around, be careful not to step on the drywall ceiling below, and watch out for nails sticking through the roof. Never store anything in the attic unless it was designed for that purpose. Check with your builder for more information regarding storage capacity.

See warranty book section(s): Insulation; Louvers and Vents

MONITOR AND MAINTAIN FLOOR COVERINGS

Why? To maintain their appearance and preserve their longevity.

When? As required.

How? For carpet, vacuum often and use very short, slow movements, about 2 or 3 strokes on each spot for maximum soil removal. Traffic lanes may require more frequent cleaning to maintain the upright position of the nap. Spills should be wiped up and stains spot cleaned promptly. Always dab at the stain, never rub it. Use a manufacturer-approved carpet cleaning product as needed and test spray for color fastness in an inconspicuous location (like a closet). Use mats or rugs near outside doors to reduce soil tracking. Always lift furniture when moving it around - never drag it. Have carpets professionally cleaned annually.

For ceramic or marble tile, sweep or vacuum often. To clean, use a dishwasher soap and water solution applied to a damp sponge. Check for cracks in the grout and apply matching grout as necessary to fill cracks. Check caulking near bathtubs and baseboards. Caulk should be well-adhered to both surfaces - clean surface and re-caulk as necessary. Make sure all furniture legs have floor protectors installed (Always lift furniture when moving - never slide it across tiles). Use mats or rugs near outside doors to collect dirt.

For hardwood floors, sweep or vacuum often. Use non-rubber backed mats or throw rugs to minimize exposure to sand and grit. When the floor becomes excessively soiled, floors having a polyurethane finish may be damp mopped with a mixture of one cup vinegar to one gallon of water — never wet-mop

or wax. If occasional squeaks occur, apply some powdered graphite to the area. The appearance of small splinters is common for new hardwood floors. Avoid exposure to prolonged sunlight and high-heeled shoes (without their rubber heel protectors in place). Make sure all furniture legs have floor protectors installed. Always lift furniture when moving - never slide it across the wood. Never allow water to sit on the surface for an extended period of time. Over time, with normal use, polyurethane finished floors may need to be recoated. A qualified contractor should do this. Waxing a polyurethane finish is not recommended, as new coatings will not bond to old wax. Other oil or water-based finishes may have different care and maintenance requirements, and you may need to contact the flooring company for the manufacturer's recommendations.

For vinyl or other resilient-type flooring, sweep, vacuum or damp mop often. To "wax" your no-wax floor, use acrylic finishes recommended by the manufacturer. Excessive water near seams can cause separation, lifting or curling. High heels will damage these floor types. Install floor protectors on furniture legs and lift furniture when moving.

For slate and clay tile, seal to protect and prevent staining. Use diluted detergent or tile cleaner to clean.

See warranty book section(s): Hard Surface Flooring; Resilient Flooring; Finished Wood Flooring ; Carpeting

MAINTAIN WALL FINISHES

Why? To preserve appearance and longevity.

When? Twice a year.

How? For drywall, check for cracks at windows, doors, corners and ceilings. Repair with two to three coats of joint compound, sand and repaint when convenient. Minor cracks can be filled with a heavy coat of matching paint. Look for any nail pops or protrusions. Reset offending nails deeper into drywall, then repeat drywall repair. Most drywall cracks will occur after a heating or cooling season with the change in humidity. Air conditioners provide very dry air as they cool. Consult with a drywall contractor to retexture, as necessary.

For paint or stain, look for peeling, cracking, blistering, fading or scuff marks. Scrape off paint from any damaged areas. Flat paint can be touched-up with a small brush and matching paint. Semi-gloss and glossy paint can be touched-up or wiped off with a damp sponge to clean. Exterior paints can usually be used for inside areas, however the opposite is not always true. Do not use an acrylic or latex paint over enamel or varnish, as it will not adhere. Use washable paint in the bathroom, kitchen and utility area Stain can often be

rejuvenated with a good quality furniture polish.

For wallpaper, look for loose or curling seams. Changes in humidity can cause seams to separate—reattach with a compatible wallpaper seam adhesive. Keep water and condensation away from all seams. Clean surface as necessary with a damp sponge.

For brick or stone veneer, periodically check for cracks in the mortar. Changes in humidity can cause mortar to shrink. Consult with a qualified mason, as necessary, to re-point cracks and match existing mortar.

Cleaning walls

1. Some painted surfaces may be cleaned with a mild solution of detergent and water. If you are not sure of the wash ability of the paint, try washing in an inconspicuous place.
2. Glazed brick or tile should be washed with soap and water. Use a non-abrasive household cleaner to remove stains.
3. Wood paneling should be cleaned with a wood cleaning product and then treated with paneling wax or with linseed oil.

See warranty book section: Lath and Plaster; Gypsum Wallboard, Painting and Wall Covering

MONITOR AND MAINTAIN CABINETS AND COUNTERTOPS

Why? To maintain appearance, durability and intended usage.

When? Twice a year.

How? For cabinets, check out the hardware. Adjust, tighten or lubricate knobs, hinges, latches, rollers and drawer glides. Refresh varnished wood cabinets with a good quality furniture polish once a month. Never use a paraffin-based spray wax. Painted cabinets may be cleaned with a mild, non-abrasive detergent on a damp sponge. Scratches can be filled with a matching touch-up crayon available at most hardware stores. Wood cabinets should be cleaned and waxed just like fine furniture. Plastic-coated cabinets may be cleaned with a detergent solution.

For laminate countertops, verify that any caulking joints are in good condition and well-adhered to both sides of the joint. Water can cause underlying wood material to swell when wetted. Clean joint and re-caulk with matching material as necessary. Avoid placing hot items such as pots, pans and irons on countertop laminate - heat can liquefy the underlying glue. Never cut on your new countertops-always use a cutting board. Clean with a mild, non-abrasive detergent on a damp sponge or wash rag - don't use scrubby pads. Avoid prolonged exposure of dishwasher steam to underside of countertop. High humidity and condensation may cause wood warping under laminate.

For ceramic tile countertops, inspect grout and tile for cracks. Replace cracked tiles and re-grout as necessary. White grout can be refreshed by applying a diluted bleach solution with a stiff narrow brush.

See warranty book section: Kitchen Cabinets and Vanities

VISUALLY SURVEY WOOD TRIM

Why? To preserve appearance.

When? Once a year.

How? Examine all baseboards, chair rails, crown molding, door frames and window frames. Changing humidity levels can cause wood to shrink, crack and warp. Look for dust accumulation, cracks, corner separations or warping. Wipe off dust with a damp sponge. For stained trim, treat with a good quality furniture polish. For cracks or corner separations, fill in gaps with a matching wood putty. Treat with furniture polish for stained wood or repaint with a matching color for painted wood. Warped trim boards can be resecured with finish nails. Set the finished nail heads slightly into the wood with a nail set tool, then cover nail heads with matching wood putty for stained wood or touch-up paint for painted wood.

See warranty book section: Finish Carpentry

MONITOR AND MAINTAIN DOORS AND WINDOWS

Why? To ensure proper operation, security, weather resistance and intended usage.

When? Twice a year.

How? Check overall door and window integrity and operation. Windows and doors can be affected by a number of elements including minor settlement, wear and tear, expansion and contraction and general weathering. Check weather stripping at all windows and entrance doors. Make sure a tight air seal is formed when closed. Replace any weather stripping that becomes 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. Spray graphite into keyholes and onto hinges when lubricating - never use oil. Look for binding or rubbing in the frames, cracked panes, difficult operation, locking problems, cracking or peeling paint or varnish. Adjust, lubricate, clean and reseal as necessary. Door thresholds can often be adjusted by loosening or tightening the threshold screws. Also, don't forget to lubricate the tracks for sliding and pocket doors. Paint or seal the top and bottom of doors to reduce moisture

penetration and wood shrinking or swelling. Don't sand or plane a door until it has been exposed to the various moisture changes of every season.



tips for cleaning: To clean lightly soiled windows, use a solution of: 1 cup of vinegar to 1 gallon of warm water. For heavily soiled windows, use a solution of: 1 tablespoon of household ammonia, 3 tablespoons of denatured alcohol or vinegar to 1 quart of warm water.

See warranty book section(s): Doors: Interior and Exterior Garage Doors; Wood, Plastic and Metal Windows; Hardware; Storm Doors; Windows and Screens; Weather Stripping and Seals; Glass and Glazing

TEST APPLIANCES

Why? To ensure proper operation.

When? As required.

How? Take the time to read each owner's manual. These documents contain maintenance and normal operating procedures along with warranty information. If appliance is not working and there is no helpful information in the owner's manual, check the circuit breaker in the main electrical panel. If the breaker is tripped, switch it to "Off" then back to "On". If this still doesn't help, call the customer service phone number listed in the owner's manual for assistance. Be prepared to supply the date of purchase (closing date), the serial and model numbers and a brief description of the problem.

See warranty book section: Provided by manufacturer. Check the owner's manual for each appliance.

INSPECT THE FOUNDATION, BASEMENT OR CRAWL SPACE

Why? To identify any leaks or problems.

When? Twice a year.

How? For slab-on-grade foundations, walk the entire ground floor and look for water stains or cracks in the concrete. Remove stains with an appropriate concrete cleaning agent. Seal cracks that may allow water to enter with a compatible waterproof caulk. Both can be found at your local hardware store.

For basement foundations, walk the entire floor and perimeter walls. Look for water stains or cracks in the concrete or cinder blocks. Remove stains with an

appropriate concrete cleaning agent. Seal non-structural cracks with a compatible waterproof caulk. Both can be found at your local hardware or building supply store. Inspect sump pit if there is one. If there is standing water in the pit, you may verify that sump is operational by pouring additional water into the pit to trigger pump, or install a pump if absent.

For crawl space foundations, gain access to crawl space through the trap door. Inspect concrete or cinder block walls. Look for water stains or cracks. Seal cracks that may allow water to enter with a compatible waterproof caulk. Check ground surface for any standing water. Inspect sump pit if applicable.

If there is water in the pit, verify that the sump pump is operational by pouring additional water into the pit to trigger pump, or install a pump if absent. Locate all air vents. Verify that they're open and unobstructed by insulation or other debris.

See warranty book section(s): Cast-in Place Concrete; Construction and Control Joints; Unit Masonry; Waterproofing Insulation; Louvers and Vents; Sealants

INSPECT THE PLUMBING SYSTEM

Why? To verify proper operation and intended usage.

When? Twice a year.

How? Simultaneously turn on the water at all sinks, bathtubs and showers; operate dishwasher and washing machine; and 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). Water pipes will be copper (metal) or a gray plastic. Sewer pipes will be white or black plastic. If freezing temperatures occur, make sure to disconnect the outside garden hoses to keep inner water pipes from freezing and bursting at the spigot. 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, try to trace the piping back to the area it serves and discontinue use of those fixtures until repairs are made. Consult with a qualified plumber as necessary.

See warranty book section: Plumbing Water Supply

MAINTAIN PLUMBING FIXTURES AND APPLIANCES

Why? To ensure proper operation.

When? Twice a year.

How? For sinks, turn on the hot and cold water and observe for adequate water pressure and drainage. If water pressure is low, unscrew the piece (aerator) at the end of the spigot and inspect the filter screen. Wash out any trapped pieces of debris, then reinstall. If sink is slow to drain, you can try some drain cleaner to see if that helps, but use a funnel when pouring to avoid splashing acid on the basin surface. Drain cleaners should not be used if your home is on a septic system. Another alternative to clear a drain would be to disassemble the trap ("U"-shaped pipe) under the sink to try and clear any obstruction. Put a bucket under the trap first as it usually contains a small amount of water. This also works well for fishing out small valuables that go down the drain. To clean sink surfaces, use a non-abrasive cleanser and warm water on a damp sponge.

For bathtubs and showers, operate the cold and hot water and check for adequate water pressure and drainage. If you notice low water pressure in the shower, unscrew the shower head and flush it out, against the direction of normal flow, to clear any debris. A rubber plunger can usually unclog any drain obstructions. If that doesn't work, you can try some drain cleaner to see if that helps, but again, use a funnel when pouring to avoid splashing acid on the tub or shower surface. Drain cleaners should not be used if your home is on a septic system. Clean surfaces with a non-abrasive cleanser and warm water on a damp sponge. Use brass cleaner on solid brass fixtures - not coated brass.

For toilets, clean often using a non-abrasive cleanser. Avoid scrubbing bowl too hard with a toilet brush - bristle rod may scratch porcelain. Avoid using drop-in type cleaners. Never mix cleaners, especially those containing bleach. If toilet clogs and begins to overflow, turn off water supply at shut-off valve near the floor. Use a rubber plunger or a "coil spring auger" to clear any clogs. If toilet runs constantly, try adjusting the float mechanism in the tank to shut off fill-water sooner. Never flush baby wipes, sanitary napkins, dental floss, hair, grease, motor oil, paper towels or cups, diapers, etc. Condensation on the outside of the tank is not a leak - try purchasing a tank cover if desired.

For spas or jetted tubs, see "bathtubs" above for cleaning suggestions. To avoid motor damage, never operate jets unless outlet ports are covered by at least three inches of water. If jets don't work, check to see if GFI outlet switch is tripped in the tub equipment housing area.

For garbage disposals, always use cold water when

operating. Hot water causes food to be cut less efficiently by the blades and causes grease to liquefy which may solidify in your trap and cause a clog. Avoid putting fruit peels or vegetable peels down the disposer which may also clog the trap. If disposer won't operate, unplug unit and manually try to rotate the inner chamber from the bottom with the included Allen wrench. If you can't find the wrench, a broom stick used as a lever arm from the top side may also work. After you've given the chamber a few turns, plug it back in and press the reset switch on the bottom of the unit and try again. Consult with a qualified repairman, as necessary.

For hot water heaters, take the time to read the manufacturer's operation manual which explains how to periodically drain and refill the tank for optimal performance. Check that temperature setting is set on letter "B", "Normal" or 140 degrees.

For natural gas units, there is a pilot light and a main burner which heats the water. If the pilot light goes out, read the relighting instructions found on the side of the tank. Never turn on electricity to the unit or light the pilot if it has an empty tank. Always shut off the electric or gas supply before turning off the water supply. When away from your home for an extended period of time, turn the temperature down to its lowest setting. Never store combustible materials near a natural gas unit. Fumes are often heavier than air and can make their way to the pilot light. Vacuum often near the base of the unit to keep dust from interfering with the flame. Avoid using the top of the water heater as a storage shelf. Test the pressure relief valve at least once a year by briefly pulling up on the lever and confirming water discharge. Stay away from end of discharge pipe when performing this test, due to scalding danger. Condensation at bottom of inner tank and above flame is not a leak. Water dripping from the bottom of the outer tank may be a leak. Consult with a qualified plumber as necessary.



tips for cleaning fixtures: Regular cleaning of fixtures prevents a soap scum build-up. Never use a harsh cleaner, but rather;

1. Use a glass cleaner for chrome or brass;
2. Use a "soft-scrub" cleaner for marble or cultured marble;
3. Use a stiff brush to clean grout. For heavy stain, use a commercial grout cleaner. RegROUT if necessary to prevent water from seeping behind the tile and into the walls.

See warranty book section(s): Plumbing Water Supply

CHECK YOUR HEATING AND COOLING SYSTEM

Why? To verify proper operation.

When? Air conditioner - just before the cooling season;
Heat pump or furnace - just before the heating season.

How? For air conditioners, turn on system only when outside air temperature is greater than 60 degrees Fahrenheit. 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 air conditioner does not operate, check thermostat is set to "COOL" setting. If that doesn't help, 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. If either is tripped, switch it to the "OFF" position then to the "ON" position. If that doesn't work, call a qualified HVAC contractor for assistance as necessary.

If the system is operating properly, ensure that the condensation drain tube is draining water and is unobstructed. This 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 and don't forget to remove any protective cover left on the unit over the winter. In general, shield the inside of your home from direct sunlight and outside air. Radiation from the sun will heat your walls, floors and furniture. Outside air contains heat and humidity. Both will significantly slow the cooling process. Consider installing ceiling fans where desirable. They help with air circulation and enable the system to operate more efficiently. 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. Air blowing from the vents should be noticeably cool. If not, there may be a refrigerant leak somewhere. Again, consult with a qualified HVAC contractor as necessary.

For a heat pump or a natural gas furnace, turn on the system. Heat pumps should not be operated unless outside air temperature is below 65 degrees Fahrenheit. Set thermostat at desired temperature. If the system does not operate, check to see that thermostat is set to "HEAT" setting. Also check that fan panel on furnace unit is secure. There is a switch behind the panel which will keep the furnace from operating if the panel is loose. If that doesn't work, check the circuit breakers. Verify that breakers are in the "ON" position. If any breakers relating to the fan or compressor are tripped, switch them to the

"OFF" position then to the "ON" position. Otherwise, consult with a qualified HVAC contractor for assistance as necessary.

If the system is operating properly, confirm that noticeably warm air is blowing out of the air vents. A mild odor is common the first time you turn on the heat and should dissipate shortly. Also check that any auxiliary heaters are operational (heat pump). If you have natural gas heat and smell a strong odor of gas, leave the home immediately and call the gas company from a neighbor's house. Do not turn on lights or use the telephone. If your furnace has a pilot light, there will be relighting instructions on one of the inside panels for reference in the event it ever goes out.

Make sure the fresh air duct near a natural gas unit is open and unobstructed. Occasionally, heat pumps will activate a defrost cycle which will melt ice buildup on the internal coils of the outside unit. When this occurs, steam will be seen rising from the unit. This is normal and not cause for concern.

Allow direct sunlight inside whenever possible. Radiation from the sun will heat your walls, floors and furniture, as well as aid the heating system. Consider installing ceiling fans where desirable. They help with air circulation and enable the system to operate more efficiently. Make sure all heating and return air vents are clean, clear and unobstructed. Set air vent vanes slightly downward on lower floors and upward on upper floors.

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 at least every other month during the heating season (all year if you have air conditioning). 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. Buy filters in large quantity for the sake of convenience. Permanent filters may be vacuumed or tapped to loosen dirt, then washed with warm water or mild detergent. Have unit serviced once a year.

See warranty book section: Heating and Air Conditioning

EXAMINE THE ELECTRICAL SYSTEM

Why? To confirm the system performs as intended.

When? Twice a year.

How? Check the main service panel. Look for rust,

water stains, soot stains, or melted wires. Check the circuit breakers and see that they are properly labeled. Do a quick check to verify that the labeled circuit is actually the correct circuit by switching off the breaker and trying some of the devices connected to that circuit. If it's not correctly labeled, re-label it and investigate the remaining circuits. Circuit breakers have three positions: "ON", "OFF" and "tripped". They are designed to allow only a certain amount of electrical current to pass through the wires — usually 15 to 20 Amps. Circuit breakers will trip, or shut down, if that amount of current is exceeded. If any breakers are tripped, switch them to "OFF" then back to "ON". If the breaker trips again, unplug all devices on that circuit. If this corrects the problem, then there are too many devices plugged in to this circuit or one of the devices or cords is faulty, unsafe and leaking electrical current. If the breaker continues to trip, consult with a qualified electrician as necessary.

Check all GFI outlets and breakers. These outlets and switches have those "TEST" and "RESET" buttons on them and are ultra current sensitive to protect you from accidental electrocution if you're exposed to water and an electrical device. They can be found in kitchens, bathrooms, garages, basements and in the main service panel. Push the "TEST" button at least once a month to trip the circuit. If the "RESET" button doesn't pop outward during this test, consult with a qualified electrician, as necessary, to replace the GFI switch. If it does pop out, push it back in and repeat next month. Do not plug refrigerators or freezers into a GFI circuit. These appliances experience sudden large power draws, which can trip the GFI switch and spoil the food!

In general, keep tree limbs away from any overhead power lines. Always call your electrical utility service to locate underground power lines before digging any trenches or holes. If an electrical outlet doesn't work, see if it's controlled by a switch, GFI switch, or if the breaker has tripped, before calling an electrician. Don't use light bulbs with a higher wattage than the fixture allows. Avoid changing exterior light bulbs in the rain. Never overload extension cords or use too many when bringing power to a remote device or fixture - check the label for restrictions. Plug sensitive electronic devices such as televisions, computers, printers, VCRs, etc. into appropriate surge protector strips. Unplug them during lightning storms. If there are small children in the home, install outlet protector guards to keep out little fingers and paper clips.

See warranty book section(s): Electrical Conductors; Switches and Receptacles; Service and Distribution



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