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**CARING**

FOR YOUR

*Home*

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### **AIR CONDITIONING**

Since the air conditioning system is combined with the heating system, the maintenance suggested for your furnace should be followed. In addition, the manufacturer's owner's manual specifies maintenance for the "condenser" unit. This should be reviewed and followed.

Air conditioning can add to the comfort of your home. If it is used improperly or inefficiently, the results will be wasted energy and frustration. We will make suggestions to help you maximize your air conditioning system.

### **WHOLE-HOUSE SYSTEM**

To fully and efficiently utilize your air conditioning system, you must understand that it is a total, whole-house system. The air conditioner unit is the mechanism in your home that produces cooler air. The air conditioning system involves everything inside your home, including, for example, drapes, blinds, shutters and windows. It is recommended that you do not turn off your HVAC system for extended periods of time (e.g. vacation).

### **CLOSED SYSTEM**

Your home air conditioning is a closed system, which means that the interior air is continually recycled and cooled until the desired air temperature is reached. Warm outside air disrupts the system and makes cooling difficult. Therefore, all windows need to be closed. The heat from the sun shining through windows with open window coverings is intense enough to overcome the cooling effect of the air conditioning unit. Window coverings should be closed on these windows.

### **ADJUST VENTS**

You will find it advantageous to adjust the cooling vents to maximize airflow to occupied parts of the home. (Likewise, when the seasons change, it will probably be necessary to readjust them for comfortable heating.)

The air conditioning system should be capable of maintaining a differential of 20 degrees from the outside temperature, measured in the center of each room at a height of five feet above the floor. Lower temperature settings are often possible but are not promised by the manufacturer or Highland Homes.

### **COMPRESSOR**

It is important to maintain the A/C compressor in a level position. If it "settles" during the first year, Highland Homes will correct this. After the first year, the homeowner must maintain it.



### **EVENING COOLING**

If evening cooling is the primary goal, you should set the air conditioning thermostat at a moderate temperature in the morning while the house is cooler, allowing the unit to maintain the cooler temperature throughout the day.

The temperature setting may then be lowered slightly when you arrive home, with better results. Setting the thermostat at 60 degrees will NOT cool the home any faster and can result in the unit “freezing up” and not performing at all. Extended use under these conditions can damage the unit. Use of the programmable thermostat is advised to help adjust the temperature of your home throughout the day. Allowing the temperature of your home to increase or decrease (depending on the time of the year) by more than 5 degrees from your ideal temperature setting will cause your HVAC system to work harder than needed and is not recommended.

### **TIME**

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

For example, if you come home at 5:30 p.m. on a day when the temperature has reached 90 degrees and then set your thermostat to 75 degrees, the air conditioning unit will begin cooling but will take much longer to reach the desired temperature. During the whole day, the sun has been heating not only the air in the house, but the walls, the carpet and the furniture. At 5:30 p.m., the air conditioning unit starts cooling the air. Walls, carpet and furniture release heat and nullify this cooling.

### **FREON**

The outside temperature must be 70 degrees or higher for freon to be added to the system.

### **ROUTINE MAINTENANCE**

We recommend that air filters be checked every thirty (30) days and changed as needed. During times of higher use more frequent changes may be needed. Maintaining clean air filters can significantly reduce operating costs and will prolong the life of your system. Some thermostats provide the option to set a reminder, based on system usage, that will prompt you when it is time to change your filter. Check your thermostat’s user guide for more information.

While using your air conditioning system it is recommended to pour one cup of bleach down the primary condensate line every 6 months. This keeps the condensate line free from obstruction and minimizes the chances of it backing up into your home.

Highland recommends an inspection by a licensed HVAC technician bi-annually to check the operation of your system well in advance of peak operating seasons and notify the appropriate subcontractor of problems before seasonal service demands are the greatest.



**APPLIANCES**

All appliances are warranted by their manufacturer in accordance with the terms and conditions of the written warranties supplied by the manufacturer.

Appliances come with instruction manuals and warranty cards. Read the manuals and keep them available for reference.

**MANUFACTURER**

If a problem arises with an appliance, report it to Highland Homes Warranty Service. When reporting warranty items, be prepared to supply the following:

- The date of purchase (closing)
- The serial and model numbers (found on the side or bottom of each appliance)
- A description of the problem

For your convenience a chart is provided below for recording the appliance serial and model numbers as well as manufacturer customer service phone numbers. It is very important that you record these numbers and keep them for future reference.

**REGISTRATION**

Mail warranty registration cards directly to the manufacturer.

Additional information about appliance operation can also be found under the “electrical” and “plumbing” categories in this section of the manual.

**APPLIANCE RECORDING FORM**

Appliance	Manufacturer	Model	Serial#
Range	_____	_____	_____
Range Hood	_____	_____	_____
Cooktop	_____	_____	_____
Oven	_____	_____	_____
Microwave	_____	_____	_____
Dishwasher	_____	_____	_____
Disposal	_____	_____	_____
Other	_____	_____	_____
Other	_____	_____	_____
Other	_____	_____	_____

Appliance Manufacturer Customer Service Phone Numbers

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



### **ATTIC ACCESS**

The attic space is not intended for storage. Access is provided for purposes of maintaining mechanical equipment that may traverse the attic space. When performing any needed tasks in the attic, caution should be used not to step off wood beams and onto the drywall. This can result in personal injury and/or damage to the ceiling below.



### **BRICK**

The brick on your home is considered a veneer and is not considered a structural component of your home. Over time face brick may require “tuck-pointing” (repairing the mortar between the bricks). Otherwise, no regular maintenance is required.

### **REPAIRS**

Normal shrinkage of mortar may result in hairline cracks in masonry. Settlement cracks are common and should be expected within certain tolerances in bricks and mortar joints. Pointing or patching, when required, will be done matching the color as closely as possible. If any repairs are made to your brick or mortar, variations in the color of the brick and/or mortar are to be expected. If there is remaining brick from the construction of your home, a small amount will be left for you and typically stored in your garage. Please keep this for future potential repairs as brick may become discontinued or the color may change.

Exterior masonry may have chips, irregular surfaces, color variations etc., which occur during manufacturing and/or handling. Unless such conditions affect the structural integrity of the home, they will not be repaired.

### **WEEP HOLES**

Weep holes are small holes in the mortar along the lower row of bricks near the foundation and above windows and doors. They are designed to allow moisture to escape if any has accumulated behind the brick. Do not fill these weep holes or allow landscape materials to cover them.



### **CABINETS**

Products such as lemon oil, Murphy Oil Soap, Old English® Furniture Polish and Old English® Scratch Cover are recommended for caring for cabinets. Follow container directions; using more than once a month may cause excessive build-up. Avoid paraffin-based spray waxes or washing cabinets with water, as both will damage the luster of the finish.

### **HINGE**

If hinges catch or drawer glides become sluggish, a small amount of silicone based lubricant will improve their action.

### **OPERATION**

Cabinets should operate properly under normal use. Doors and drawer fronts should be level and even.

### **WARPING**

Warped doors or drawer fronts will be corrected if warping is in excess of 1/4" from the face to the furthest point of the drawer or door when closed.

### **SEPARATIONS**

Gaps between cabinets and ceiling or cabinets and walls will be corrected by caulking or other means if they are in excess of 1/4" (locations behind appliances excepted).

### **WOOD GRAIN**

Readily noticeable variations in wood grain and color are expected in all style selections. Replacements will not be made due to such variations.

### **SURFACE DAMAGE**

Only those chips, scratches and other flaws in surfaces that are noted on the pre-closing orientation list will be repaired by Highland Homes.

### **FINISH**

No special emphasis is made to select drawers/door fronts to match perfectly with one another. Cabinet finishes will mellow with age, exposure to sunlight, and the elements, affecting their actual color. Exposure to extreme temperature, humidity changes, or moisture may cause warping of cabinet doors and drawer fronts. Also be mindful when using the kitchen sink to wipe down any excess moisture on the cabinets.

### **MOISTURE**

Damage to cabinet surfaces and warping can be caused by operating appliances that generate large amounts of moisture. When operating such appliances, place them in a location that is not directly under a cabinet. While cooking food on your stove, be sure to turn on the vent hood.



### **CAULKING**

All caulking is considered homeowner maintenance and is non-warrantable. As a matter of routine maintenance, it is wise to periodically check the caulking and make repairs as needed. Time and weather will shrink caulking and dry it out so that it no longer provides a good seal against moisture and air infiltration. Caulking compounds and dispenser guns are available at hardware stores.

### **LATEX CAULK**

Latex caulking is appropriate for an area that requires painting (for example, along the stair “stringer” or where a countertop backsplash meets the wall).

### **SILICONE CAULK**

Caulking that contains silicone will not accept paint but works best where water is present (for example, where tub meets tile or a sink meets a countertop).

### **WET AREAS**

Homeowner maintenance of caulking around tubs and showers (especially at joints with protective wall coverings such as tile or marble) is absolutely necessary to prevent damage to wood and other materials behind and below these wet areas.



### **CERAMIC TILE**

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

### **SEPARATIONS**

Tile around bathtubs or countertops may appear to be pulling up after a time. These slight separations that occur in the grout lines between tiles are commonly due to normal shrinkage of grout or caulk. If this occurs, the best remedy is to purchase “tub caulk” or premixed grout from a hardware store. Follow directions on the container. This maintenance is important to protect the underlying surface from water damage.

### **GROUT DISCOLORATION**

Grout that becomes yellowed or stained can be cleaned with a brush, cleanser and water. Grout cleansers and whiteners are available at most hardware stores. Also, be careful what you use to clean the flooring; it may have a tendency to stain the grout since it is not sealed. If new grout is needed for a repair or tile replacement, the new grout will not match the existing grout.

### **SEALING GROUT**

Sealing grout is a homeowner’s decision. Once sealed, ongoing homeowner maintenance of that seal is necessary.



### **CONCRETE**

All concrete in your home has been installed in accordance with the recommendations of the engineer.

### **CRACKS**

Although we use accepted construction procedures for the installation of concrete flatwork, this does not guarantee there will be no cracking. Some cracking in concrete occurs in almost all homes. Small cracks sometimes found on garage floors and other areas where the foundation is exposed are typical of shrinkage cracks that can and will occur during the early life of the foundation. They are not serious and will not affect the structural integrity of the foundation. The warranty does not cover most concrete cracks. Where cracking is covered by the warranty, the repair provided is sealing with concrete caulk. Concrete is not replaced due to cracking.

By maintaining good drainage away from your home, you are protecting your home's foundation. Maintenance of drainage away from all concrete slabs will minimize cracking and other forms of movement.

Cracking in the concrete flatwork is often caused by extreme cold. During the summer, moisture finds its way under the concrete along the edges or through cracks in the surface. In winter, this moisture forms ice that can lift the concrete, causing more cracking.

### **EXPANSION JOINTS**

Expansion joints have been used to help control expansion; however, concrete is also susceptible to shrinking. If the concrete shrinks, moisture can penetrate under the concrete and lift the expansion joint. If this occurs, you can fill the gap created with a gray silicone sealant that can be purchased at most hardware stores.

### **FLATWORK**

Flatwork includes porch, patio, driveway and sidewalk. These are not "structural" elements of the home and are not covered by the 10-year structural warranty.

To properly care for your exterior concrete, always be aware of areas where water is collecting and fill these in. Do not allow downspouts to drain in such a way that the water will get under the concrete. Seal any cracks in control joints or surface areas immediately with a flexible gray-colored sealant.

### **GRADE CHANGES**

If the homeowner changes the grading, drainage, landscape design or fails to perform needed maintenance causing damage, corrective measures will be suggested, but the homeowner will be responsible for their implementation.

### **HEAVY VEHICLES**

Do not permit heavy vehicles such as moving vans or concrete trucks to drive on your new concrete work. This concrete is not intended to bear the weight of this type of vehicle.



### **ICE, SNOW AND CHEMICALS**

Remove ice and snow from concrete flatwork as promptly as possible after snow storms. Protect concrete from abuse by chemical agents such as pet urine, fertilizers, radiator overflow and repeated hosing and de-icing agents, such as road salt, that can drip from vehicles.

### **SETTLING OR HEAVING**

Excessive settling, heaving (over 1") and/or cracking should be reported in writing so that an inspection can be made. Settling, heaving or cracking is deemed excessive if it results in negative (toward the house) drainage or hazardous vertical displacement.

### **SWEEPING AND CLEANING**

Do not wash patios, porches, drives, etc., with cold water from an outside faucet when temperatures are extremely high and the hot sun has been shining on the concrete. The abrupt change in temperature can damage the surface bond of the concrete. Sweeping is the preferred method of keeping exterior concrete clean. If washing is necessary, do this when temperatures are moderate.

Cleaning of the garage floor by hosing can cause settling and increase soil movement by allowing water to penetrate existing cracks. Highland Homes will not be responsible for repairs needed due to such action. Sweeping is the recommended method for keeping the garage clean.



### 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. These conditions are significantly influenced by family lifestyle. If your home includes a humidifier, closely observe manufacturer's directions, especially during periods of cooler temperatures. Running exhaust fans in the bathrooms and utility room will help reduce humidity.



### **COUNTERTOPS**

Always use a cutting board when cutting, chopping, etc. Protect the countertop from extremely hot pans. If you cannot put your hand on it, do not put it on the counter. Use caution with pots and pans around the sink to avoid chipping the edges of countertop surface material.

### **CAULKING**

Due to our dry climate, the caulking around the edge of your countertops and between the countertops and the sink may shrink, leaving a slight gap. Homeowner should recaulk with silicone caulk.

### **CERAMIC TILE**

Cracked, badly chipped or loose tiles noted on orientation will be repaired or replaced as needed. Highland Homes is not responsible for variations in color or discontinued patterns. New grout color may vary from the original.

Cracks appearing in grouting of ceramic tiles at joints or junctions with other materials are commonly due to normal shrinkage conditions and will not be repaired or replaced by Highland Homes if not noted at orientation.

### **CLEANERS**

Avoid abrasive cleaners that will damage the luster of the surface. Always read manufacturer's directions before applying.

### **COSMETIC DAMAGE**

Any major surface imperfections – chips, cracks, scratches, etc. – reported on the orientation list will be repaired by Highland Homes. Repair of any damages not on the orientation list will be the homeowner's responsibility.

### **LAMINATED**

Laminated countertops typically will have one or more discernible seams. There should be no gap at the seams. Gaps at seams or a differential at other joints in excess of 1/16" will be repaired.

### **MATS**

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

### **SEPARATION**

Separations of countertops at walls and the backsplash are the result of normal shrinkage of materials. It is important to keep moisture from reaching the wood under the laminate to prevent warping.

### **SEALER**

New natural stone (i.e. granite, marble) should be sealed initially by homeowner and maintained per sealant manufacturer's recommendations.



### **DOORS/LOCKS**

The doors installed in your home are of the highest quality, but they are wood products and subject to the natural characteristics of wood such as shrinkage and warping. Due to humidity changes and the use of forced air furnaces, showers, dishwashers, etc., interior doors may require minor adjustments.

### **EXTERIOR FINISH**

To ensure longer life for your exterior doors, it is recommended that you refinish them annually. Stained exterior doors with lacquer finishes tend to weather faster than a painted door. It is necessary to oil the finish with a wood preserver monthly to preserve the varnish finish and prevent the door from drying and cracking. It is also necessary to reseal the stained exterior doors every 6-12 months to protect the finish from the elements.

### **FAILURE TO LATCH**

If a door will not latch due to minor settling, you can correct this by making a new opening in the door for the latch (remortising) and raising or lowering the plate accordingly.

### **HINGES**

A squeaky door hinge can be remedied by removing the hinge pin and rubbing a lead pencil or silicone lubricant on it. Do not use oil as it can gum up.

### **KEYS**

Keep a duplicate "privacy lock" key where children cannot reach it in the event a youngster locks himself/herself in a room. Some types of privacy locks can be opened with a small screwdriver or similarly shaped device. All key locks have the Kwikset® Smart Key™ technology.

### **LOCKS**

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

### **SETTLING**

Due to normal settling of the home, doors may require adjustment for proper fit. Highland Homes will make such adjustments for the first year. Chips or other damage in the finish, noted on the orientation list, will be repaired.

### **SLAMMING**

Slamming doors can damage both doors and jambs, and can even cause cracking in walls. Teach children not to hang on the doorknob and swing back and forth. This can work hardware loose and cause the door to sag.

Putty or filler can be used to fill any minor separations that may develop at mitered joints in door trim. Follow with painting.



### **STICKING**

The most common cause of a sticking door is the natural expansion of lumber due to changes in humidity. When sticking is due to swelling during a damp season, do not plane the door unless it continues to stick after the weather changes. Use sandpaper to smooth the door. Be certain to repaint the area of the door where it was sanded to seal against moisture.

Before planing a door due to sticking, there are two other methods to try first. First apply either a paste wax, light coat of paraffin or candle wax to the sticking surface. Then, try tightening the screws that hold the doorjamb or door frame.

### **WARPING**

In the event a door warps slightly, keep it latched as much as possible and it often will return to normal. Doors that warp in excess of 1/2" or panels that split and allow light to be visible will be repaired within the limited warranty period.

### **WEATHER STRIPPING**

Weather stripping and/or any threshold supplied with exterior doors will occasionally require adjustment. It is also important to maintain caulking around the threshold.



### **DRAINAGE SYSTEMS**

All drainage systems are to be maintained by the homeowner.

Sod may grow over grow collection boxes. Silt may accumulate in swales and drainage pipes. All these items must be maintained by the homeowner to ensure proper drainage.



### **DRYWALL**

Slight cracking, nail pops and/or seams may become visible in walls and ceilings. Shrinkage of the wood and normal deflection of the rafters to which the drywall is attached cause these developments.

### **LIGHTING CONDITIONS**

Repairs will not be made on flaws that are only visible under particular lighting conditions.

### **REPAINTING**

If the drywall repair is required as a result of poor workmanship (such as blisters in tape) or other warranty-based repair (such as a plumbing leak), Highland Homes will complete the repair of the area damaged with original paint as selected. The homeowner will be responsible for custom paint colors or wallpaper that has been applied subsequent to closing. Paint touch-up may not match surrounding area.

### **REPAIRS**

Most drywall repairs can be easily made. This work is best done when the room is to be redecorated. To correct a nail pop, reset the nail with a hammer and punch. Cover it with spackle (available at paint and hardware stores). Apply two or three thin coats. When dry, sand the surface with fine grain sandpaper before painting. Indentations caused by sharp objects can be filled with spackle in the same manner.

Hairline cracks can be repaired with a coat of paint; slightly larger cracks can be repaired with spackle or caulk.



**ELECTRICAL**

The master control panel that contains the electrical breakers for your home includes a “main” shut off that controls all the electrical power to the home. In addition, individual breakers control the separate circuits. Be certain you are familiar with the location of the electrical control panel.

Each breaker is marked to help you identify which breaker is connected to which major appliances, outlets or other service. Should a failure occur in any part of your home, always check the breakers in the main panel box.

**BREAKER TRIPPING**

Breakers will often trip because of overloading the circuit by plugging too many appliances into it, a worn cord or defective item, or operating an appliance with too high a voltage requirement. The starting of an electric motor can also trip a breaker.

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

**BREAKERS**

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

**BUZZING**

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

**GFI**

GFI (Ground Fault Interrupter) receptacles have a built-in element that senses fluctuations in power. Quite simply, the GFI is an indoor circuit breaker. Installation of these receptacles is required by building codes in bathrooms, kitchen, outside and garage (areas where an individual can come into contact with water while holding an electric appliance or tool). It is a sensitive system that trips easily to prevent electrical shock in these locations. Heavy appliances such as freezers or power tools will trip the GFI breaker. Do not plug a refrigerator or food freezer into a GFI controlled outlet; the likelihood of the contents being ruined is very high, and such damage is NOT covered by the limited warranty.

Each GFI circuit has a receptacle with a test and reset button. Once each month the test button should be pressed. This will trip the circuit. To return service, press the reset button. If a GFI breaker trips during normal use it may be an indication of a faulty appliance and some investigation is in order. An important point to remember is that one GFI breaker can control up to three or four outlets. The test/reset buttons (located on only one of the outlets of the system) control the entire system.



### **MODIFICATIONS**

Do not tamper with or add to your electrical system. For any modification that is needed, contact the electrician listed on the emergency phone number list you received during homeowner orientation, or call another licensed electrician.

### **OUTLETS**

If an outlet is not working, check first to see if it is one that is controlled by a wall switch. Next check the GFCI and reset. Then check the breaker at the electrical control panel.

### **POWER SURGE**

Power surges are the result of local conditions beyond the control of Highland Homes. These can result in burned out bulbs.

### **UNUSED OUTLETS**

If there are small children in the home, install safety plugs to cover unused baseboard outlets. This also minimizes air infiltration that can sometimes occur with these outlets. Teach children never to touch electrical outlets, sockets or fixtures. Tamper resistant plugs can be difficult to plug into initially.

### **UNDERGROUND CABLES**

In areas with underground utilities, before digging or moving large amounts of soil, call your applicable utility company to locate underground utilities. In most cases, wires run in a straight line from the service panel to the nearest public utility pad. Care should be taken to keep soil around the foundation from settling to protect this service.

### **WARRANTY STANDARDS**

Any electrical wiring that fails to carry its designed load will be repaired to meet specifications.

If electrical outlets, switches or fixtures do not function as intended, Highland Homes will repair or replace them for the warrantable period.

Light fixtures are installed in the locations indicated on the house plans and will not be moved by Highland Homes. All fixtures are installed with 60 watt bulbs or specified decorator bulbs. The homeowner is responsible for replacing any burned out bulbs other than those listed on the orientation.

Fixtures that are noted as damaged on the orientation list will be repaired or replaced.



### EXPANSION AND CONTRACTION

All building materials are subject to expansion and contraction caused by changes in temperature and humidity. Dissimilar materials expand or contract at different rates. This results in separation between materials, particularly dissimilar ones. The effects can be seen in small cracks in drywall and in paint, especially where mouldings meet drywall, at mitered corners, where tile grout meets tub or sink, etc.

This can be alarming to an uninformed homeowner, but, in fact, it is very normal. Shrinkage of the wood members of your home is inevitable. It will be most noticeable during the first year but may continue beyond that time. In most cases, paint and caulking are all that is needed to conceal this minor evidence of a very natural phenomenon. Properly installed caulking will shrink and must be maintained by the homeowner.

Wood floors will expand and contract depending on the temperature and humidity level in your home. Please monitor the humidity levels, especially during the winter months, to try and keep the home between 35-55%.



### **FIREPLACE**

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

Fireplaces are not intended to be the sole heat source in the home. The fireplace should function properly when Highland Homes' and the manufacturer's directions are followed.

Although extremely high winds can result in a downdraft, this condition should be temporary and occasional. The cause of continuous malfunction will be determined and corrected. Discoloration of the firebox or brick is the normal result of use and requires no corrective action. Mortar style fireplaces may develop cracks due to temperature changes and other factors.

Burning a fire should be looked upon as a luxury, adding to the atmosphere and just a little to the heat in a home. Only about 10 percent of the heat produced by a fire is radiated into the house. Normally as it burns, the fire draws warm air from the house for combustion. This means you pay to heat the air in your home and the fireplace then uses it to burn wood, sending 90 percent of the resulting heat up the chimney.

Ordinarily the air used by the fireplace for combustion is replaced with cold outside air, which is drawn in through cracks around doors and windows. However, your home is constructed so tightly that this may not happen. In this case, slightly opening a window or door in the room will encourage the fireplace to draw, after which the window or door can be closed.

When not in use, the damper vent should be closed. Leaving this open is equivalent to having an open window in the house. If the fire is still burning, but you are finished enjoying it, use glass doors to prevent heated air from being drawn up the chimney until your damper can be closed. (Glass doors are not standard equipment.)

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

Damage to glass doors, when included with the home, will be corrected if noted during the homeowner orientation.

Homeowner should follow manufacturer's instructions for using glass doors.



Your objective in building a fire should be a clean, steady, slow-burning fire. Always begin with a small fire first to allow the components of the fireplace to heat up slowly. Failure to do so may damage the fireplace and can void the warranty. Make sure the grate is secured in place with clips. Start the fire by burning kindling and newspaper under the grate; two to three layers of logs stacked with air space between, largest logs to the rear, works best. One sheet of paper burned on top of the stack will help the chimney start to draw. Any logs 6" in diameter or larger should be split. Do not burn trash in the fireplace and never use any type of liquid fire starter.

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

The timing on having your chimney cleaned will be determined by the way you use your fireplace and the type of wood you burn. Heavy use with softwoods or improperly seasoned woods will result in the need for more frequent cleaning, probably once each year. Creosote and other wood-burning by-products accumulate inside the flues over a period of time. This build-up can be a fire hazard. A qualified chimney sweep should be hired for this cleaning.

If the spark arrester, the cap at the top of the chimney, becomes clogged the diminished airflow will affect the performance of the fireplace and may be a fire hazard. Have the arrester cleaned professionally when needed.

If your fireplace is provided with a gas log starter to assist in starting the fire, before opening the gas valve, have a fireplace match or lighting device ready. Open the valve slightly to initially ignite the gas and keep the valve open only for the time required to ignite the logs. Take care to store the key to the valve out of the reach of children.



### **FLOOR COVERING**

Selection sheets provide a record of the brand, style and color of floor coverings in your home. Please retain this information for future reference. Refer to manufacturer's recommendations for additional information on the care of all floor covering products.

### **CARPET**

Vacuuming high traffic areas daily will not only keep them clean but will help to maintain the upright position of the nap. Spills should be wiped up and stains spot cleaned immediately. Always dab at the stain; never rub it. Stain removers should be tested first on an out of the way area of the carpet, such as in a closet, to check for any undesirable effects. Professional cleaning should be performed regularly, usually bi-annually. Manufacturer recommends cleaning without soap – using the hot water extraction method.

Carpet seams will be visible. No gap or fraying is acceptable, however. Edges of carpet along mouldings and edges of stairs should be held firmly in place.

In some areas, metal or other edging material may be used where carpet meets another floor covering.

Stains or spots noted on the orientation list will be corrected by cleaning, patching or replacement. Highland Homes will not be responsible for dye lot variations if replacements are made.

### **FILTRATION/CANDLE BURNING**

Due to updated energy codes for new home construction, homes have become more airtight. The HVAC system is continually re-circulating air throughout the home using carpet as a filter, which can sometimes cause darkness along baseboards, under doors and around furniture. This condition is usually more evident on lighter shades of carpet and is no fault of the carpet itself. This condition can be attributed to the airflow of the home's HVAC system and outside agents introduced to the system through normal activities such as wood-burning fireplaces, candles and cooking. Proper maintenance of the HVAC filters help keep this condition to a minimum.

When candles are burned they may produce soot due to improper combustion and oils mixed into the candle wax. The resulting soot dissipates into the air as the candle burns and coats walls, baseboards and carpet. Burning candles is highly discouraged as it may result in costly damage to interior finishes.

### **CERAMIC TILE**

This is one of the easiest floor coverings to care for. Simply vacuum when needed.

### **CLEANING**

Occasionally, a wet mopping with warm water may be appropriate. Do not add detergent to the water. If you feel a cleaning agent is required, use a mild solution of warm water and dishwasher crystals (they will not result in a heavy, difficult-to-remove lather on the grout). Rinse thoroughly.

### **GROUT DISCOLORATION**

Grout that becomes yellowed or stained can be cleaned with a fiber brush, cleanser and water. Grout cleansers and whiteners are available at most hardware stores.



### **LIMITED WARRANTY**

Cracked, badly chipped or loose tiles noted on orientation will be repaired or replaced as needed. Highland Homes is not responsible for variations in color or discontinued patterns. New grout may vary in color from the original.

Cracks appearing in grout of ceramic tiles at joints or junctions with other materials are commonly due to normal shrinkage conditions. Highland Homes will repair grouting, if necessary, one time during the first year. Any grouting or caulking that is needed after that time is considered homeowner maintenance.

### **SEPARATIONS**

Grout is for decorative purposes only; it does not hold the tile in place. Cracks in the grout can be filled using premixed grout, which can be purchased from flooring or hardware stores. Follow package directions.

### **HARDWOOD FLOORS**

Readily noticeable cosmetic defects noted on the Homeowner Orientation list will be corrected by Highland Homes. Homeowner is responsible for routine maintenance of hardwood floors. It is important to identify the type of wood flooring installed in the home. There are specific maintenance procedures for each floor type and finish. The manufacturer's recommendations should always be followed when cleaning wood flooring.

### **HUMIDITY**

Wood floors will respond noticeably to changes in the humidity level in the home, especially in the winter. It is recommended that you keep the humidity level between 35-55%. This may require the use of a humidifier.

### **NEW WOOD FLOORS**

Wood floors will exhibit the following traits:

- When new, small splinters of wood will appear.
- Dimples or scratches can be caused by moving furniture, dropping heavy or sharp objects, etc.
- Some shrinkage or warping can be expected, especially during the winter months when your home heater or fireplace are drying the air.
- Warping will occur if the floor becomes wet repeatedly or is thoroughly soaked even one time.
- A dulling of the finish in heavy traffic areas is likely; a white, filmy appearance is caused by moisture (often from wet shoes or boots).

### **SPILLS**

Food spills should be cleaned up in a timely manner using a very dry cloth. Use vinegar and warm water solution for tough food spills.

### **SHOES**

Avoid walking on your hardwood floors with spiked or damaged heeled shoes.



### **MATS / RUGS**

Use protective mats at the exterior doors to help prevent sand and grit from getting on the floor. Gritty sand is wood flooring's worst enemy. Do not use rubber, foam backed, COCO fiber or plastic mats as they may discolor or scratch the floor. To prevent slippage of mats or area rugs use an approved rubber rug underlay.

### **PETS**

Pet's nails will scratch wood floors. Keep their nails trimmed and paws clean. Pets can track in substances that can cause scratching and stains.

### **FURNITURE LEGS**

Install proper floor protectors or furniture protectors on hardwood floors.

### **CLEANING**

Vacuum or sweep on a daily basis or as needed with a soft bristled attachment or broom. Don't use a vacuum with a beater bar or rotary brush.

Never wet mop a hardwood floor. Excessive water causes wood to expand, possibly damaging the floor. When the floor becomes soiled, check with your wood floor manufacturer for recommended cleaning products.

Use ice to harden tough substances like gum. Gently scrape with plastic scraper or credit card being careful not to scratch the floor.

Waxing or the use of products like Murphy Oil Soap are not necessary or recommended.



### **CORNER POPS**

Vertical cracks usually appear on outside corners of your foundation. These are normal and not a sign of structural issues. When they appear you should seal them with a concrete caulk to prevent moisture from freezing inside the crack and causing the corner to “pop off”. If the corner does pop off you can epoxy and concrete float the section back.

### **WATERING MAINTENANCE**

Texas soils vary drastically across the state. However, it is common to find expansive clay soils in most locations. Expansive soils absorb water and swell in the winter and dry up and shrink in the summer. While it is virtually impossible to eliminate all foundation movements, controlling the moisture content of the soil and keeping it relatively constant throughout the year can minimize them.

As a homeowner you should implement a program of proper foundation watering. This can be done by either using typical lawn and landscape irrigation or by a separate foundation watering system using a soaker hose or drip tube irrigation. Drip irrigation or soaker hoses should not be placed against the foundation, but approximately 12 to 20 inches away. The soil around your foundation should receive the equivalent of one inch of rainfall per week throughout the year, either by natural rainfall or manual watering (landscape irrigation or soaker hose). You should visually inspect the soils periodically around your foundation to ensure there is no erosion of the soils and that the soils are not separating from the foundation.



### **GARAGE OVERHEAD DOOR**

Since the garage door is a large, moving object, periodic maintenance along with following the manufacturer's instructions will ensure safe and reliable operation.

### **MAINTENANCE**

Every six months a silicone spray lubricant should be applied to all moving parts: track, rollers, hinges, pulleys and springs. At this same interval, check to see that all hardware is tight and operating as intended without binding or scraping. To prevent drips on cars or the concrete floor, do not over lubricate.

### **LIGHT VISIBLE**

Garage overhead doors cannot be air tight, and typically some light will be visible around the edges and across the top of the door. Severe weather conditions may result in some precipitation entering around the door.

### **LOCK**

If the lock becomes stiff, a graphite lubricant will make it work more easily. Do not use oil on a lock as it will stiffen in winter and make the lock difficult to operate. Locks will usually be disabled with the installation of a garage door opener.

### **OPENER**

If an electric door opener is installed, be sure the door is completely unlocked. You may want to remove the emergency release rope if your vehicle interferes with it.

### **PAINTING**

The garage door should be repainted when the home is repainted or more often if needed to maintain a satisfactory appearance.

### **CEDAR CLAD DOORS**

You will need to restain your cedar doors every 1-2 years to maintain the proper stain color and to protect the door from exterior weather elements.

### **SAFETY**

The garage door should operate smoothly and with reasonable ease. The door can become misaligned and require adjustment, which Highland Homes will provide for the first year of the limited warranty.

Do not allow anyone except the operator near the door when it is in motion. Keep hands and fingers away from all parts of the door except the handle. Do not allow children to play with, or around, the door.

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



### **GAS SHUT OFFS**

There is a shut off on the gas line at or near its connection to each item that operates on gas. In addition, there is a main shut off at the meter. These are pointed out during the homeowner orientation. If you suspect a gas leak, leave the home and call the gas company immediately for emergency service. Valves in line with the pipe are open. When the valve is turned perpendicular to the pipe it is off.



### **ALTERATIONS**

It is the homeowner's responsibility to maintain the drainage as established. If the drainage pattern is altered either by action taken directly or instigated by the homeowner or his agent, or as a result of neglect of maintenance, the warranty is void.

### **GRADING AND DRAINAGE**

The final grades around your home have been inspected and approved for proper drainage of your lot. The local building authorities as well as Highland Homes make inspections.

### **POSITIVE DRAINAGE**

Maintenance of positive drainage away from the foundation as well as all concrete slabs and walks is the responsibility of the homeowner. Failure to maintain these areas can result in damage to the foundation and void the limited warranty.

*It is essential that you maintain the slopes around your home in order to meet the engineered design criteria called for on the subdivision grading plat. This grade allows the water to drain away from the home as rapidly as possible. Failure to do so by installation of any barriers after closing (i.e., landscaping, patios, decks, pools, retaining walls, etc.) will alter the established drainage patterns and can result in structural damage.*

### **NEW SOD**

New sod installation and the extra watering that accompanies it can cause temporary drainage problems, as can unusually severe weather conditions.

### **ROOF WATER**

Do not remove splash blocks and/or downspout extensions from under the downspouts. These keep water draining away from your home.

### **BACKFILL SETTLEMENT**

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 settling will occur, especially after prolonged heavy 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. Inspect the perimeter of your home regularly for signs of settling. If these areas settle, Highland Homes will correct it one time and will subsequently provide the homeowner with fill dirt during the first year warranty. Homeowner should expect some settling of backfill soils.

### **RECOMMENDATIONS**

Highland Homes will inspect problems reported in writing during the one-year warranty period and advise the homeowner as to corrective actions that he/she might take.

### **SWALES**

In most cases, drainage swales do not follow property boundaries. Highland Homes will not alter drainage patterns to suit individual landscape plans. 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 or nearby. Highland Homes advises homeowners against making such changes. Swales will have higher moisture content than adjacent soils.



### **GUTTERS AND DOWNSPOUTS**

Gutters must be checked periodically and cleared of leaves and other wind-deposited debris, along with clearing any collection boxes installed for drainage. Materials that accumulate in gutters can slow the process of draining water from the roof, cause overflows, and/or clog the downspouts. Do not lean ladders against gutters. Since gutters are painted to match your home, repaint them when you repaint your home.

### **LEAKS**

If a joint between sections of gutter drips, caulk the inside joint using a commercial gutter caulking compound available at hardware stores.

### **OVERFLOW**

Gutters may overflow during periods of excessively heavy rain. It is expected that small amounts of water (up to 1") will stand for short periods of time in gutters immediately after rain. No correction is required for these conditions.

### **MAINTENANCE**

Periodically check the elbow or connection to drainage system at the bottom of the downspouts to make sure they are secure and not eroding the ground adjacent to the foundation.



### **HARDWARE**

Doorknobs and locks should operate correctly. Some slight adjustments may be needed due to normal shrinkage of the framing. Highland Homes will do these adjustments during the 1-year limited warranty period. Dents, chips, scratches, etc., in door hardware, towel bars, shower doors, etc., which are noted on the orientation list will be repaired.

Doorknobs will loosen over time and can easily be tightened by simply adjusting the fastening screws.



## **HEATING SYSTEM**

The heating system installed in your home will provide you with many years of comfort if given proper care and maintenance. Heating systems will be installed in accordance with local building codes, as well as engineering designs of the particular model home.

## **MAINTENANCE**

It is recommended that you obtain a maintenance contract with the installation company for bi-annual HVAC maintenance checkups.

## **ADJUST HEAT VENTS**

Experiment with the adjustable registers in your home to establish the best heat flow for your lifestyle. Generally, heat can be diminished in seldom used or interior rooms. This is a very individual matter and you will need to balance the system for your family. In particular, attention is drawn to the fact that rooms further away from the furnace will need to have vents opened more.

## **COMBUSTION AIR**

In some cases, an outside combustion air duct is included to supply fresh air for the furnace and water heater. The supply of fresh air is vital to the safe and efficient operation of both items and should not be limited in any way.

## **DO NOT OVERHEAT**

Your new home should not be overheated. Overheating can cause excessive shrinkage in framing lumber and may materially damage the home. In the beginning, use as little heat as possible and increase it gradually.

## **DUCT NOISE**

Some popping or pinging sounds are the natural result of ductwork heating and cooling in response to airflow as the system operates.

## **DUCT PLACEMENT**

The exact placement of heat ducts may vary slightly from those positions shown in similar floor plans.

## **DUCTWORK**

Although the heating system is not a “sealed system,” the ductwork should remain attached and securely fastened. If it becomes unattached, Highland Homes will repair as needed within the limited warranty period.

## **FILTER**

Remember to change the filter monthly (1" filters) or every 3-6 months (4" filters). A clogged filter can slow airflow and cause cold spots in your home. Although it takes less than one minute to change the filter, this is one of the most frequently overlooked details of normal furnace care. Buy filters in large quantity for the sake of convenience.

## **FURNISHED HOME**

The heating system design 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.



### **GAS ODOR**

If you smell gas, vacate the home immediately and call the gas company immediately. Also notify the plumber listed on your emergency list and Highland Homes Warranty Department.

### **MANUFACTURER**

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

### **ODOR**

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.

### **RETURN AIR VENTS**

For maximum comfort and efficient energy use, place furniture and draperies to allow unobstructed airflow from registers and cold air returns.

### **TEMPERATURE VARIATIONS**

Normal temperature variations from floor to floor (depending on the style of home) can be as much as 10 degrees or more on extremely cold days. The furnace blower will typically cycle on and off more frequently and for shorter periods of time during severe cold spells.

### **THERMOSTAT**

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

### **TRIAL RUN**

Have a trial run early in the fall to test the furnace. (The same applies to A/C in the spring.) If service is needed, it is much less inconvenient to discover it prior to the heating season.

### **TROUBLESHOOTING**

The furnace has an on/off blower power switch. It is located outside the furnace and looks like a regular light switch. This switch simply overrides all furnace commands and manually shuts down the blower. This is usually only done when maintenance service is being performed. The thermostat will be blank when this switch is off.

The furnace/blower panels must be positioned correctly for the furnace blower to operate. These panels compress a button that tells the blower it is safe to operate. If these panels are not on tightly, the fan will not come on.



### **INSULATION**

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

Insulation will be installed to meet or exceed the building codes applicable at the time of construction.



### **BARK/ROCK BEDS**

Do not allow edgings around decorative rock or bark beds to dam the free flow of water away from the home. A non-woven membrane, such as Typar or Mirafi, can be used between the soil and rock or bark to restrict weed growth while still permitting normal evaporation of ground moisture.

### **HOA**

Be sure to check the homeowner association guidelines and/or requirements prior to landscaping or making changes in an established design.

### **IRRIGATION**

Make provisions for efficient irrigation; drain and service sprinkler systems on a regular basis. Conduct operational checks on a weekly basis to ensure proper performance of the system. Adjust as needed for proper coverage.

Sprinkler heads should be directed away from the home.

### **NEW TREES**

Provide simple staking of trees for a minimum of two years.

### **PLANNING**

Locate new plants and irrigation heads out of the way of pedestrian/bicycle traffic and car bumpers.

Space additional groves of trees or single trees to allow for efficient mowing and growth. Prune woody plants as needed.

Group plants with similar water, sun and space requirements together.

### **PLANT SELECTION**

Plant with regard to your local climate. Consider ultimate size, shape and growth of the species.

### **SOIL MIX**

Provide good soil mixes with sufficient organic material.

Use mulch at least three inches deep to hold soil moisture and to help prevent weeds and soil compaction. Make sure not to cover weep holes around the foundation.

Always maintain a proper slope away from your home to maintain efficient drainage.

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

### **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, spread top soil to level the area.



### **WAITING TO LANDSCAPE**

Ground left unlandscaped too long will erode. In the event of soil erosion due to the homeowner's untimeliness in landscaping, Highland Homes will not be responsible for bringing back the correct grade.

### **WATERING PROCEDURES FOR NEW SOD / SHRUBS / TREES**

Newly established lawns and landscapes require frequent watering. For routine watering of established sod and trees, consult your local watering guide.

Even with proper watering, any tree that has been transplanted may lose its leaves. However, it should start to show new growth within 2 months in the spring and summer growing season. This is a natural process.

Since each yard is different, you will need to water whenever it is dry. Different types of soil hold moisture longer than others. If trees, sod, or shrubs get too dry, even one time, they may lose their leaves or turn brown, eventually coming back with proper care. And remember, it is necessary to water all year long, at least weekly during winter and fall, as long as temperatures are above freezing.

Over watering of side yards can create standing water. Please coordinate watering with your neighbor to avoid this situation.

Check with a local nursery about suggestions for fertilizing new sod, shrubs and trees.

In drought conditions, be sure to follow watering procedures and times issued by the city that provides your water service to avoid any unnecessary fines.



### **MIRRORS**

To clean your mirrors use any reliable liquid glass cleaner or polisher available at most hardware or grocery stores. Avoid splashing water under the mirror. The moisture will cause the silvering to deteriorate.



**MOLD DISCLOSURE**

Mold is everywhere, both in indoor and outdoor environments. Therefore, everyone is exposed to some form of mold on a daily basis without evident harm. However, according to the Consumer Product Safety Commission and the American Lung Association, some diseases or illnesses have been linked with biological pollutants in the indoor environment, including some forms of mold. Since many of these medical conditions have causes unrelated to the indoor environment, it is unknown if potential health problems relate exclusively to poor indoor air. Regardless, you should monitor your home for mold growth or potential mold growth.

Mold growth is the result of the interaction of several factors, including moisture, nutrients, fungal spores, temperature and time. Of these factors, the only component that can reasonably be controlled is moisture. If excessive moisture or water accumulates in your home, mold growth can and will occur, particularly if the moisture problem remains unaddressed. There is no practical way to eliminate all molds or mold spores in an indoor environment. The key to controlling mold growth is to control moisture.

Proper maintenance and cleaning of the home is the responsibility of each homeowner and will lessen the potential for water intrusion and help control potential mold growth. It is the responsibility of each homeowner to monitor their home on a continual basis for excessive moisture, water and mold accumulation.

There are many ways to help control moisture in your home. For example, you should always fix leaky plumbing and any other source of unwanted water immediately. You should also maintain proper indoor humidity to prevent condensation, and raise the temperature in areas where moisture condenses on surfaces. It is advisable to open doors between rooms to increase air circulation in the home, including doors to closets. You should have major appliances, such as furnaces, heat pumps, central air conditioners, window air conditioning units and furnace-attached humidifiers inspected, cleaned and serviced regularly by a qualified professional. In addition, you should clean and dry refrigerator, air conditioner and dehumidifier drip pans and filters regularly to make sure that your refrigerator and freezer doors seal properly. You should always keep water away from your foundation by maintaining proper drainage and keeping irrigation systems the proper distance from your home. Also, you should always be on the lookout for discoloration of walls, ceilings, anything made of wood or paper and any musty or moldy odors.

It is imperative that you respond promptly when you see signs of moisture or mold. Do not allow moisture to stand or make contact with cellulose-based materials, such as wood, drywall or other non-tile, non-plastic or non-metal materials. Dry all water-damaged areas and items immediately to prevent mold growth. If mold develops, clean up the mold by washing off hard surfaces with detergent and water and completely dry the surface.

Absorbent materials (such as carpet and most furniture) that become moldy should be replaced, along with any material that has mold residue, such as rags, paper, leaves or debris. Depending upon the nature and extent of the mold infestation, trained professionals may be needed to assist in the remediation effort. Mold that is not properly removed may reappear.



If you discover accumulation of water or moisture in or around your home, immediately seek to control the source of the water or moisture. Failing to control the source could result in additional damage and the growth of mold. Plumbing leaks or problems related to the construction of your home that are covered by your warranty must be reported to Highland Homes immediately. If your warranty has expired or the limited warranty (if any) does not cover the specific problem, you should not delay in having professionals address the problem.

Should a problem result from construction deficiencies during the applicable warranty period, Highland Homes will repair and/or replace both the deficiency and any property damaged by the deficiency. However, because Highland Homes does not monitor your home after completion, it will not be responsible for damages caused by the failure to properly maintain your home or a homeowner's failure to promptly discover or respond to water problems. Highland Homes also will not be liable if you have an adverse medical reaction to the presence of allergens or mold.



### **PAINT AND STAIN**

Highland Homes will touch-up paint as indicated on the orientation list. Homeowner will be responsible for all subsequent touch-ups unless provided as part of another warranty repair.

The interior woodwork has been painted with a semi-gloss enamel paint. These areas may be wiped down with a soft sponge and soapy water. The walls are painted with flat latex wall paint and should be touched up with matching paint rather than wiped with a wet sponge. Spackle may be used to cover any small defects prior to paint touch-up. It is recommended that you wait a minimum of 30 days prior to washing any painted surface. Do not use abrasive cleaners, scouring pads or brushes.

### **EXTERIOR**

Regular painting and repair will preserve the beauty of and add value to your home. Fading of exterior paint or stain can be expected due to the effects of sun and weather. No repair is provided for this occurrence.

Check the painted/stained surfaces of your home's exterior annually. If you repaint before there is much chipping or wearing away of the original finish, you will save the cost of extensive surface preparation. It is a wise maintenance policy to plan on refinishing the exterior surface of your home approximately every three years or as often as your paint manufacturer suggests for your area and climate. The chemical structure of the paint used on the exterior is governed by the climactic conditions. Over a period of time, this finish will fade and dull a bit.

### **MAINTENANCE**

Wood trim will develop some minor cracks and raised grain as it ages and dries. Much of this 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 the homeowner's responsibility.

Wood trim painted white or light colors will more readily show grain and cracks and will therefore require additional maintenance by homeowner.

Color names, numbers and paint brands are noted on the color selection sheets.

When you repaint exterior wood on your home, nails should be reset; the blistered or peeling areas should be wire-brushed or scraped with a putty knife, sanded and spotted with primer. Then the entire areas can be painted. Be certain to apply a top quality exterior paint that has been formulated for local climate conditions.

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

### **SEVERE WEATHER**

Hail and wind can cause a great deal of damage in a severe storm. The house should be inspected after such weather. Damage caused by severe weather should be reported to your insurance company promptly.



### **STAIN**

For interior stain touch-ups, Old English Furniture Polish and Scratch Cover is inexpensive, easy to use and blends in with the wood grain. Follow directions on bottle when using.

### **TOUCH-UPS**

When doing paint touch-up use a small brush, applying paint only to the damaged spot. Touch-up may not match the surrounding area exactly, even if the same paint mix is used. Homeowners will receive a sample of each interior paint used for subsequent touch-ups. This paint should be stored in a temperature controlled environment. Paint touch-ups are sometimes visible under certain lighting conditions. For additional details on touch-ups needed as a result of repairs, see individual categories of “Drywall,” “Plumbing,” etc.

### **WALL CRACKS**

Fix drywall cracks or other separations due to shrinkage as they occur. See “Drywall” for additional information concerning repairs.



### **PHONE JACKS**

Each home is equipped with telephone jacks. Initiating phone service is the homeowner's responsibility. Moving outlets for decorating purposes or convenience is an owner's expense.



### **PLUMBING**

All drains and sewer lines should operate freely. Highland Homes will correct obstruction resulting from construction debris. Highland Homes will correct clogged drains that occur during the first 90 days after closing.

Obstructions removed during this time period that are shown to be the result of homeowner action will be corrected at the homeowner's expense.

Your main water shut off is typically located in your front flowerbed. During the walk-through, your builder will show you the exact location of the main water shut off. It is important to know and remember the location of the shut off for emergencies such as a water line freeze or break.

### **AERATORS**

Even though your plumbing lines have been flushed out to remove dirt and foreign matter, there are usually small amounts of minerals that enter the line. Aerators on the faucets strain much of this from your water. However, minerals, etc., caught in these aerators may cause the faucets to drip because washers wear more rapidly when they come in contact with foreign matter. (See "Dripping Faucet and Low Pressure" for additional information.)

### **CARE AND CLEANING**

Follow manufacturer's directions for cleaning fixtures. Abrasive cleansers will remove the shiny finish, leaving behind a porous surface that is difficult to maintain.

### **CLOGS**

Many plumbing clogs are caused by improper garbage disposal use. Always use plenty of cold water when running the disposal. This applies to grease also. Supplied with a steady flow of cold water, the grease congeals and is cut up by the blades. If you use hot water, the grease remains a liquid, then cools and solidifies in the sewer line. Allow the water to run a minimum of 15 seconds after shutting off the disposal.

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

Clean a plunger drain stopper, usually found in bathroom sinks, by loosening the nut under the sink at the back, pull out the rod attached to the plunger and lift the stopper out. Clean and return the mechanism to its original position.

The main causes of toilet clogs are various domestic items such as paper diapers, excessive amounts of toilet paper or the wrong type of paper, sanitary supplies, Q-tips, dental floss, children's toys, etc. Your home has low water consumption toilets that will easily clog.

### **WATER SUPPLY LINES**

Water supply lines should be maintained by running water through each faucet for approximately one minute each week to minimize stagnation.



### **COSMETIC DAMAGE**

Any fixture damage noted on the orientation list will be repaired. Chips, scratches, etc., reported subsequent to the orientation list, will not be repaired. Homeowner is responsible for following manufacturer's directions for caring for fiberglass products.

### **DRIPPING FAUCET**

A dripping faucet may be repaired by shutting off the water at the valve directly under the sink, then remove the faucet stem and replace. The showerhead is repaired the same way. The frequency of this repair can be minimized by remembering not to turn faucets off with excessive force.

### **ACRYLIC TUB**

Use only recommended cleaners. Never use abrasive cleaners, steel wool, scrapers, sandpaper or anything else that could scratch or dull the surface. Use warm water and liquid detergents, especially those bathroom cleaners recommended for cleaning fiberglass. To keep the tub sparkling clean, apply a coat of good quality automotive paste wax and buff to a high shine with a soft cloth or bath towel. Repeat every six months for easier cleaning and long-lasting protection. Do not wax textured standing/walking surfaces.

### **FIXTURES**

Clean plumbing fixtures with a soft sponge and soapy water, then polish with a dry cloth. Drying with a soft cloth or towel will prevent water spots.

### **FREEZING PIPES**

During freezing weather be sure to drip faucets and remove hoses from hose bibs. Running water will not freeze. Heat should be set at 65 degrees if you are away during winter months. If you will be away for an extended period of time, it is best to drain your water supply lines. Shutting off the main supply line and opening the faucets to relieve the pressure in the lines does this.

Garage doors should be kept closed to protect plumbing lines that may run through this area.

In unusually frigid weather or if you will be gone more than a day or two, open cabinet doors to allow warm air to circulate around pipes.

An ordinary hair dryer can be used to thaw pipes that are frozen. Never use an open flame.

### **LEAKS**

If a plumbing leak occurs, the first step is to turn off the supply of water to the area involved. This may mean shutting off the water to the entire home. Contact the appropriate contractor.

Highland Homes will repair warranted leaks in the plumbing system. If a plumbing leak caused by a warranted item results in drywall or floor covering damage, Highland Homes will repair this. No adjustments will be made for secondary damages (wallpaper, drapes, personal belongings, etc.). Homeowner insurance should cover these items.



### **LOW PRESSURE**

It will occasionally be necessary to remove and clean the aerators on faucets to allow proper flow of water; normally every three to four months is sufficient.

### **MARBLE**

Man-made “marble” possesses a natural resilience and will not chip as readily as will porcelain enamel. Equal care should be given, however. You should not use abrasive cleansers or razor blades on man-made marble since both will cause damage to the surface.

### **NOISE**

Changes in temperature or the flow of the water itself will cause some noise in the pipes. This is normal and requires no repair. Consistent “water hammer” will be repaired. Temperature variations can be expected if water is being used in more than one location in the home.

### **OUTSIDE FAUCETS**

Outside faucets are “freeze proof,” but in order for this feature to be effective, hoses must be removed after each use. If a hose is left attached, the water that remains in the hose can freeze and expand back into the pipe causing a break in the line. Repair of a broken line to an exterior faucet is a maintenance item. Highland Homes does not warrant outside faucets against freezing.

Highland Homes will repair any problems with these faucets noted on the orientation list. Subsequent to orientation, repairs of broken lines to exterior faucets will be the homeowner’s responsibility.

### **RUNNING TOILET**

To stop running water, check the shut-off float in the tank. You will most likely find it has lifted too high in the tank, preventing the valve from shutting off completely. In this case, adjust it with the screw at the end of the float. The float should be free and not rub the side of the tank or any other parts.

Also check the chain on the flush handle; if it is too tight it will prevent the rubber stopper at the bottom of the tank from sealing, thus resulting in running water.

### **STAINLESS STEEL**

Stainless steel sinks should be cleaned with soap and water to preserve their luster. Do not use abrasive cleaners; these will damage the finish.

An occasional cleaning with a good stainless steel cleaner will enhance the finish. Care should be taken to avoid leaving produce on a stainless steel surface since prolonged contact with produce can stain the finish.

### **TANK CARE**

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



### **ROOF**

The composition shingles on your roof do not require any treatment. Roof and flashing should not leak. During the first year, Highland Homes will repair roof leaks other than those caused by severe weather, such as hail damage, or some action by homeowner. Roof repairs are only made when the roof is dry. When a leak is noticed try to detect the exact location; this will greatly simplify locating the area that requires repair when the roof is dry. Try to contain the water in order to limit the potential damage. Yearly roof inspections will help reduce the potential for leaks.

### **CLEAN GUTTERS**

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

### **ICE BUILD-UP**

Ice build-up may develop in the eaves during extended periods of cold and snow. Damage that results from this is normally covered by homeowner insurance and is not a warranty item.

### **INCLEMENT WEATHER**

It is the homeowner's responsibility to inspect the roof and replace cracked or otherwise damaged tiles or shingles. The roof should be checked after extreme weather that might have caused damage. Homeowner's insurance should be notified if storm damage is discovered.

### **LIMIT WALKING**

Limit walking on your roof. The weight and movement will have a tendency to loosen and break the integrity of the roofing material, which can in turn result in leakage. Never attempt to walk on the roof of your home when shingles are wet – they are extremely slippery.



### **ROUGH CARPENTRY**

Some floor squeaks are unavoidable. Although Highland Homes does not warrant against floor squeaks, a reasonable effort will be made to correct them. Your home is primarily constructed of wood. Wood is susceptible to expansion and contraction due to temperature and humidity changes. These changes will cause wood to pop or creak. Maintaining even humidity and temperature levels will help limit the amount of movement in your home.

### **DEFLECTION**

Floors will deflect when walked on. This will be more noticeable next to hutches, bookcases, chairs, etc. This is not a structural deficiency and Highland Homes will take no action for this occurrence.



### **SMOKE DETECTORS**

Read the manual from the manufacturer for information on the care of smoke detectors.

Highland Homes does not represent that the smoke detection device will provide the protection for which it is installed or intended. Insurance, if any, must be obtained by the homeowner.

### **CLEANING**

Once a year they should be blown out to prevent a false alarm. After cleaning, push the test button; the alarm should sound. For your safety, it is important that these devices be kept clean and in good operating condition.



**SPRINKLER SYSTEM**

There are three main components that are involved with all sprinkler systems. They are the controller, control valves, and the sprinkler heads. The controller makes the whole system operate efficiently. It is the brain of the entire system, instructing the valves when to supply water to the sprinkler heads, and for how long. The sprinkler heads will in turn direct the water towards the surrounding plants and lawn.

The control valves operate a group of sprinkler heads called a watering station. These stations are laid out in a fashion according to the type of plant life that exists there, the location of the plants, and the maximum amount of water that can be pumped to the location. Each control valve is connected by wire to the controller. Inside the controller, the wire is connected to a number that corresponds to the valve's watering station number.

The controller will operate the control valves in order, only one at a time. When a valve has completed its watering, it will switch to the next watering station that has been programmed. This process is called watering cycle.

The information pertaining to the watering times of the individual stations and how often watering occurs is called a program. For the controller and its selected program to operate automatically, there are three components that must exist: When to water or When Start Time, how long to water or Station Run Times and what day(s) or Days to Water.

When determining when and how much water the following factors should be considered:

- 1) The part of the landscape that is being watered (plants, flowers, grass or trees).
- 2) Type of sprinkler head. There are three types of heads used – spray, rotor and drip. Rotor and drip heads require longer run times because they are designed to cover larger areas.
- 3) Your side yard watering schedule must be coordinated with your neighbor to eliminate over watering.
- 4) Depending on the season and weather conditions, watering requirements are different and watering programs must be adjusted for optimum water usage. For example: in the spring when it rains frequently it is not necessary to run the system or in the heat of the summer it may be necessary to run the system twice a day. Be aware of freezing conditions in the winter months as watering during this time may cause hazardous conditions.

It is usually good to water one or two hours before sunrise. This allows the water to soak into the roots of the plants and grass and evaporation is minimal. For most plants, watering during midday or in the evening may cause plant damage. Less watering may be sufficient for a healthy landscape. Care should be taken to observe local watering restrictions.

**MAINTENANCE AND WARRANTY**

Conduct operational checks on the system monthly. Draining the system is recommended if a hard freeze is predicted. The sprinkler has a one year operational warranty.



### STAIRS

There is no known method of installation that will prevent vibration in a staircase when used by adults. Often there will be a slight shrinkage where the stairs meet the wall. When this occurs, a thin bead of latex caulk can be applied, and when dry, painted to match the wall.

Due to the amount of movement in stairs, squeaks and pops are common.



### **STRUCTURED WIRING SYSTEM**

The structured wiring system in your home is determined by and installed to the neighborhood specifications. The system provides the infrastructure to create a local area network throughout the entire home, bringing multiple telephone jacks, cable hookups, computer networking and satellite signals to any desired room. When expanding the system, use a contractor that is certified to install the brand of equipment that is in your home. This will ensure the one year operational warranty stays in affect.



### **VENTS**

Attic ventilation is required by the building codes and therefore cannot be omitted. Occasionally, depending on the force and direction of the wind, rain or snow will infiltrate through these vents causing spotting on the ceiling.

Highland Homes is not responsible for such weather damage and will not make repairs in these instances.



#### **TANKLESS WATER HEATER**

Carefully read manufacturer's literature for your specific type of water heater.

#### **ENDLESS, NOT INSTANT HOT WATER**

Tankless water heaters provide the comfort and convenience of having a continuous supply of hot water. They do not provide hot water on demand or instantly.

#### **LOSS OF PRESSURE**

Tankless water heaters are designed to always achieve the temperature set at maximum gallon per minute rate. When using your master bath tub and/or washing machine, the high volume of these fixtures can cause a loss of pressure to other fixtures being used at the same time.

#### **MAINTENANCE**

Descaling is a necessary maintenance item. The control panel will notify you when your water heater needs to be descaled. Refer to the manual for instructions on how to perform this. You may instead hire a plumber to perform this for you.



### **WATER HEATER**

Carefully read manufacturer's literature for your specific type of water heater.

### **CONDENSATION**

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

### **DRAIN TANK**

Review and follow manufacturer's timetable and instructions for draining several gallons of water from the bottom of the water heater. This helps to prevent build up of chemical deposits from the water and prolongs the life of the tank as well as saving energy dollars.

### **No HOT WATER**

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

### **PILOT**

Never light a gas pilot or turn on electricity when the heater tank is empty. Always turn off the gas or electric power before shutting off the cold water supply (located at the top of the tank). Reference manufacturer's instructions on the water heater.

To light the hot water heater pilot, first remove the cover panel on the tank to expose the pilot. Then rotate the on/off/pilot knob to "pilot." When the knob is in this position, the red button can be depressed. While depressing the red button, hold a match at the pilot. Once the pilot lights, continue to hold the red button down for 30 to 60 seconds. When you release the red button the pilot should stay lit. If it does not, wait several minutes to allow the gas to dissipate from the tank and repeat the entire process again. If it stays lit, rotate the on/off/pilot knob to the "on" position. Reinstall the cover panel and then adjust the temperature setting with the regulating knob on the front of the tank.

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

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

### **SAFETY**

The area around a gas-fired water heater should be vacuumed as needed to prevent dust from interfering with proper flame combustion. The top of a gas-fired water heater should never be used as a storage shelf.

Gas fired water heaters are designed so they cannot ignite flammable vapors caused by spilled gasoline outside the unit. If flammable vapors are present, the water heater will shut off the gas supply and the air supply preventing a sustained vapor burn in the combustion chamber. If protection is required, the water heater will shut down completely, will no longer operate, and will have to be replaced by the homeowner.



### **TEMPERATURE**

Set the water heater thermostat at the recommended setting; higher settings waste energy. Recommended thermostat setting for normal everyday use are "normal" on gas models and "140 degrees" on electric models.

**WINDOWS, SCREENS AND PATIO DOORS**

During 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.

**BROKEN GLASS**

If any panes of glass become broken, you should contact a glass company for reglazing. Glass is very difficult to install without special tools. Highland Homes is not responsible for broken windows or screens after occupancy unless they were noted on the orientation list.

**CLEANING**

The LoE<sup>3</sup>-366 (or equivalent) energy efficient window glass used in your home can scratch easily. Care should be taken not to damage the glass while cleaning. After each cleaning, apply a silicone lubricant to the window track.

**CONDENSATION**

Condensation on interior surfaces for the window and frame is the result of high humidity within the home and low outside temperatures. The humidity level within the home is largely influenced and controlled by your family's lifestyle and requires no corrective action by Highland Homes.

(Homeowners with humidifiers should closely observe manufacturer's directions, especially during extremely cold periods.)

**INFILTRATION**

Some air and dust will infiltrate around windows (especially prior to the installation of landscaping in the general area).

**STICKING WINDOWS**

Windows should operate with reasonable ease, and locks should perform as designed. If sticking occurs or excessive pressure is required to open or close, a silicone lubricant should be applied. This is available at hardware stores. Do not use a petroleum-based material.

**VENTILATION**

Ventilation will prevent excessive moisture from forming on the inside of the windows. This helps reduce cleaning chores considerably.



### **WOOD TRIM**

Minor imperfections may be visible. Highland Homes will correct only those defects, (i.e., chips, gouges, etc.) noted on the orientation list. Separation of wood trim from the adjacent material is a normal result of shrinkage that can require caulking and/or touch-up painting as a repair. This is a homeowner maintenance responsibility.

Separation of wood trim from the adjacent material is a normal result of shrinkage, which can require caulking and/or touch-up painting as a repair.

Wood will shrink less lengthwise than across the grain. All lumber is more vulnerable to shrinkage during the heating season.

Shrinkage may cause a piece of trim to pull away from the wall. Drive another nail in close to the existing nail hole (but not in it). Fill the old nail hole with putty and touch-up with paint as needed. Shrinkage of trim boards will be corrected if noted on the orientation list.

Shrinkage may occur during the first two years or longer, depending on weather and the temperature that you maintain in your home.

During a damp period, some swelling may occur. In most cases, this will not be noticeable except where a door may fit more tightly than usual (see “Doors”).

Damaged trim boards and/or shutters noted on the orientation list will be corrected.

### **RAISED GRAIN**

Because of the effects of weather on natural wood, you should expect raised grain to develop. This is normal and not a defect in the wood or paint. White or light colors will more readily show grain and cracks and require more maintenance.



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