

New

# Information Manual HOMEOWNER'S







# The Reid's Heritage Group of Companies

The roots of homebuilding for the Reid's Heritage Group can be traced back to 1947 when George Reid and his partner started out as "Reid and Laing". Orin Reid, founder of the Reid's Group worked with his father George from the time he was old enough to hold a broom, and in 1978 Orin and his wife Jane incorporated Reid's Heritage Homes Ltd.

From these humble origins, the Reid's Heritage Group has evolved to include a number of home building companies catering to a variety of housing types and markets. The Reid's Heritage Group of companies include; Reid's Heritage Homes Ltd., Sherwood Homes Ltd., Norrich West, and Reid's Heritage divisions in London and Huntsville. The Reid's Heritage Group is recognized as one of the largest home building operations in Ontario with over 12,000 homes constructed since 1978.

The Group has projects actively underway at various sites in Guelph, Cambridge, Kitchener, Waterloo, London, Collingwood and Huntsville. The Reid's Heritage Group offers a complete range of housing types including; townhomes, bungalows, and two storey homes. From the first time buyer to executive homes on 90 foot lots, and an adult lifestyle community recognized as one of the best in Canada, the Reid's Heritage Group offers something for everyone.

*"Over the years, the Reid family name has helped us establish caring, long-term relationships with people. It has taken years to foster and nurture these relationships along the way, but today the investment is paying dividends. Thanks to some really great people working for me, I've been able to achieve success in the company.*

*When we chose the name, Reid's Heritage Homes Ltd., we wanted the name to have a connotation of a quality product that would withstand the test of time - a product that was put together with thought and care - not just slapped together. Our name stands for superior workmanship, landscaping that sets itself apart from the rest, and for people who understand and care.*

*It takes many years to build a good name, and I've been grateful to have had that opportunity. Today, people who my dad built new homes for are buying retirement homes from us, and their children are buying their first Reid's Heritage Group home".*

*Orin Reid  
1952-2000*

The Group's commitment to its homebuyers continues long after the sale, and as a result all of the Reid's Heritage Group of companies have earned the highest ratings with the Ontario New Home Warranty Program. As well, Reid's Heritage Homes received the coveted year 2000 "Ontario Builder of The Year" award.

# Welcome to Reid's Heritage Group!

Dear New Homeowner,

Thank you for purchasing your home from a Reid's Heritage Group Company. We have prepared this booklet to answer some of the questions you may have as an owner of a new home.

When you purchase anything from a wristwatch to an airplane, you normally receive a set of instructions or an owner's manual to go with it. You should view this publication in the same way - as a list of recommendations from the manufacturer on how to properly care for and maintain your investment.

AS WITH ANY PURCHASE, PROPER CARE AND MAINTENANCE IS ESSENTIAL; SO PLEASE TAKE THE TIME TO READ THIS BOOKLET AND KEEP IT AVAILABLE FOR FUTURE REFERENCE.

In the construction of a new home, dozens of trades and sub-trades must be supervised and co-ordinated. Although we strive for the best results, it is possible that some minor items may have been overlooked. The service procedures outlined in this booklet will ensure that those items will be corrected quickly, and with minimum inconvenience to you.

We have put a lot of effort into ensuring that your new home meets or exceeds the current Ontario Building Code standards, however, a new home should not be thought of as a single item. Literally thousands of component parts have been fitted and assembled together to give you the final product. As such, you should anticipate an initial "break-in" period as the house continues to settle, and as these components begin to interact.

In the pages that follow you will find explanations of many of these items, along with suggestions as to their proper care and maintenance, and just as you likely still have the owner's manual for the vehicle you are driving, you should keep this booklet in a safe place for future reference. As with your vehicle, there is a limited warranty that comes with the house, and this is fully transferable to any subsequent purchasers. This booklet has been designed to keep on helping you, even after the warranty has expired.

Consider this manual to be a guide showing you what things to be aware of in maintaining your investment. As with any of your other purchases, a little preventative maintenance goes a long way toward preserving both the item in question and your peace of mind.

Should you have any problems with the house that are of warranty nature, please feel free to call our **HOME SERVICE** Department at (519) 658-6656, fax us at (519) 654-9746 or you can reach us by email; [home-service@reidsheritagegroup.com](mailto:home-service@reidsheritagegroup.com). Please note that service requests must be in writing, and we urge you to read this booklet thoroughly before you contact us.

We look forward to being of service and wish you many years of satisfaction with your new home.

Sincerely,

REID'S HERITAGE HOMES



Tim Blevins,  
President

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This manual is provided as an informative booklet only. The advice in this booklet is general in nature and is not meant to replace the advice of skilled trades people in addressing and remedying specific problems that may arise with respect to your home. After the expiry of the warranty period, with respect to your home you may have a problem with some aspect of your home, or a concern that there may be a problem. In such event, you should retain the services of a properly qualified professional tradesperson to assist you. A professional tradesperson can also assist you in establishing a program of preventative maintenance based on the specific aspects of your home. As this manual is being provided on a no cost basis, none of the Reid's Heritage Group of Companies is to be subjected to any legal or other liability or claim on account of the contents of this manual.

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## Reid's Heritage Group *HOME SERVICE*

Providing excellence in after sales service and a commitment to customer satisfaction. Servicing:

- **Kitchener/Waterloo/Cambridge/Guelph** - Your contact number: (519) 688-6656 Fax: (519) 654-9746

After Hours Emergency contact:

**Plumbing** - Paton Plumbing (519) 885-2140

**Heating/Cooling** - Hy-Mark Mech. 1-800-727-0750

**Electrical** - Spartan Electric (519) 836-6710

**Basement Leaks** - Inside/Outside Waterproofers (519) 588-3078

**Water Penetration or any other emergencies** - Service Masters (519) 837-2381

- **London** - Your contact number: (519) 689-1326 Fax: 652-0482

**Heating/Cooling** - (Oakridge & Talbot Village) Builder Choice Air Systems (519) 642-7000

(Fieldgate, Kilally & Forest Hill) Hy-Mark Mechanical (519) 521-7752

**Plumbing** - (Oakridge, Fieldgate, Kilally & Forest Hill) Paton Plumbing (519) 455-4910

Atchison Plumbing (519) 652-2968

**Electrical** - (Talbot Village) (519) 451-8740 (Oakridge Crossing) W.P. Osborne Electric (519) 471-2130

For all other Emergencies (except Union Gas, Union Energy, London Hydro, Waterworks) (519) 430-4098

- **Collingwood** - Your contact number: (705) 444-2587 Fax: (705) 445-7699.

After hours service for Sherwood Homes, Kevin Deverill (705) 444-7489

**Plumbing** - Canbarr Mechanical (705) 720-4574

**Heating** - Hy-Mark Mechanical (519) 822-6656

- **Owen Sound/Kincardine/Port Elgin** - (519) 832-6656

## Contacts

### Cities and Municipalities - BUILDING AND ZONING DEPARTMENTS

City of Guelph, 1 Carden St. Guelph ON N1H 3A1	(519) 837-5605
City of Cambridge, 73 Water St. N., PO Box 669, Cambridge ON N1R 3B4	(519) 623-1340
City of Kitchener, 200 King St W, PO Box 1118, Kitchener ON N2G 4G7	(519) 741-2848
City of Waterloo, PO Box 337 Waterloo ON N2J 4A8	(519) 747-8712
City of London, 300 Dufferin Ave, PO Box 5035, London ON N6A 4K9	(519) 661-2500
City of Huntsville, 37 Main Street East, Huntsville ON P1H 1A1	(705) 789-1751
City of Collingwood, 97 Hurontario Street, PO Box 157, Collingwood ON L9Y 3Z5	(705) 445-1290

### UTILITY COMPANIES

BELL CANADA	(519) 310-2355
KITCHENER WILMOT HYDRO, 301 Victoria St S Kitchener ON N2G 4L2	(519) 743-3600
WATERLOO NORTH HYDRO, PO Box 640 Waterloo ON N2J 4A3	(519) 884-2507
CAMBRIDGE HYDRO, 1500 Bishop St PO Box 1060 Cambridge ON N1R 5X6	(519) 621-3733
GUELPH HYDRO, PO Box 1210 Guelph ON N1H 6N6	(519) 822-3010
LONDON HYDRO, PO Box 3060, London ON N6A 4J8	(519) 661-5800
UNION ENERGY	(888) 774-3111
ROGERS CABLE	(519) 748-3200
HUNTSVILLE HYDRO, Hydro One	(888)-664-9376
COLLINGWOOD HYDRO, 43 Stewart Rd.,Box 189 Collingwood, ON L9Y 3Z5	(705) 445-1800
UNION GAS	(888)-774-3111

## Before You Take Possession

HERE IS A FRIENDLY REMINDER OF SOME ITEMS THAT SHOULD BE COMPLETED PRIOR TO TAKING POSSESSION OF YOUR NEW HOME:

HAVE YOU....

- CALLED YOUR PHONE SERVICE PROVIDER FOR SERVICE TO CONNECT YOUR TELEPHONE?
- ADVISED HYDRO THAT YOU ARE TAKING POSSESSION?
- CONTACTED THE GAS COMPANY TO INSURE THAT YOUR FURNACE, HOT WATER TANK AND GAS FIREPLACE (IF APPLICABLE) HAVE BEEN INSPECTED AND ARE OPERATIONAL AS YOU ARE NOW TAKING POSSESSION?
- ARRANGED FOR FIRE AND LIABILITY INSURANCE ON YOUR NEW HOME?
- ADVISED ALL CONCERNED OF YOUR CHANGE OF ADDRESS?



# Warranty Information

## Reid's Heritage Group Warranty

One-Year Coverage: We guarantee your HOME to be free of defects in material and workmanship for a one-year period from the date of possession. \*New homes, no matter how carefully constructed, go through a period of normal settlement and shrinkage. During this period cracks, wood shrinkage and warping and other minor matters may occur, much of which is unavoidable. The builder will not be responsible for these minor defects except where tolerances, as specifically described further in this manual, are exceeded.

Landscape material such as sod and shrubs are covered by this warranty as well, however the homeowner is required to maintain them through watering etc.

Two-Year Coverage: The following items in your home are guaranteed for two years from the date of possession.

- Water actually seeping through foundation walls
- Water penetration through windows, doors, caulking, and roof (water penetration through the house envelope)
- Defective plumbing, electrical and heating/cooling systems
- Defective siding or brick that detaches from the home
- Major structural defects

Can the warranty transfer from the original owner? YES! The warranty is on the home, from the date of possession, not the homeowner. If a client takes possession and then sells the home nine months later, the new homeowner is entitled to the remaining three months on the one year coverage plus the remaining coverage on the two and seven year warranties.

One-Year Checkup: There is nothing in the Tarion Warranty Corp. that obliges a builder to go back at the end of the first year of possession to do a checkup. We do one-year checkups only if the customer submits the 12 Month Inspection Form. These are normally not considered emergency service and may be booked out up to four or five weeks in advance depending on workload, to allow us time each week for emergency service.

The one-year list of deficiencies gives us the opportunity to address all minor issues at one time, which is more convenient for everyone. Please refer to Tarion Warranty Corp. Homeowner Information Package. This was received upon the pre-delivery inspection.

**PLEASE NOTE:** All problems are to be presented to our Home Service Staff, and must be in writing via regular mail, e-mail or fax.

### **A General Note on Maintenance**

A large number of complaints received from new homeowners are directly related to high humidity levels found in new homes. These problems may manifest themselves in many ways; wet basements walls, condensation on exposed pipes and windows, sticking doors and windows, and rolls in the carpet are some of the most common complaints. In most cases, these problems can be solved by simply using a good dehumidifier to remove the excess moisture from the home. Depending on the time of year, this moisture can be quite substantial. During the "drying out" period in a new home, shrinkage and minor settlement occur. This is natural and is to be expected. However, this gives rise to another common group of purchaser complaints relating to drywall and finishing. We will repair all nail pops, cracked corners and other similar decorating problems one time only, during the first year of occupancy, and only after we have received the Twelve Month Inspection Form. **Sanding and repainting are not included.** You are therefore advised to wait until the latter part of your one year warranty period as you may wish to redecorate after these repairs are completed. We wish to stress that these problems are a NATURAL OCCURRENCE in a new home and are not due to faulty materials or workmanship. The plasterwork is done as a courtesy for those purchasers that request it.

Suggested Purchases (or things to have on hand)

- Plungers for plugged sinks and toilets
- Fire extinguisher for kitchen (rated ABC)
- First Aid Kit
- Extra light bulbs
- Flash light (and fresh batteries)
- Portable radio (and fresh batteries)
- List of emergency phone numbers
- Dehumidifier

## Maintenance

Anyone who owns a vehicle has been conditioned to perform certain routine inspections and maintenance functions on a semi-regular basis. These include oil changes, grease jobs and replacing mufflers. They also include checking tire pressures, fluid levels and wiper blades. Your new home is no different, and with time these checks will become automatic.

Spring is traditionally a busy time for people, whether they live in a house or an apartment. The good weather brings them outside as well as prompting what some call the "nesting instinct", or "spring cleaning." Another is the autumn, where we try to get outside "one more time" before the weather changes. You should take time during both of these times to "fine tune" your home for the coming season.

Proper maintenance of a new home not only protects one of your most substantial investments, but also ensures that your warranty coverage under the Tarion Warranty Corp. will remain intact. Remember that improper home maintenance could nullify certain warranty coverage. Problems caused by homeowner neglect, such as allowing caulking to wear down which leads to moisture damage, will not be covered by the warranty.

Before the cold winter weather sets in, pick a dry, sunny day to air out the basement. This will help prevent mold and mildew from accumulating.

Exhaust ventilation fans should be inspected and oiled as necessary (as per the manufacturer's recommendations) to guarantee efficient operation. Vent covers, such as the dryer and range hood, should be checked for cracks, missing vanes and blockages. In the kitchen, your range hood filter should be removed and scrubbed with mild soapy water to prevent grease buildup.

Windows and doors should be checked for gaps in the weather stripping and breaks in the caulking. Weather stripping can usually be lubricated with petroleum jelly, which will help keep it pliable.

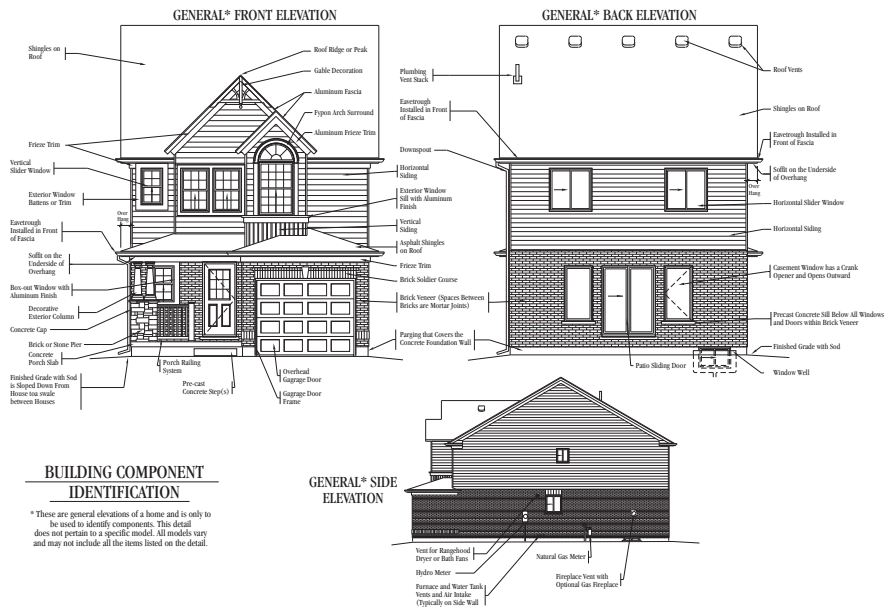
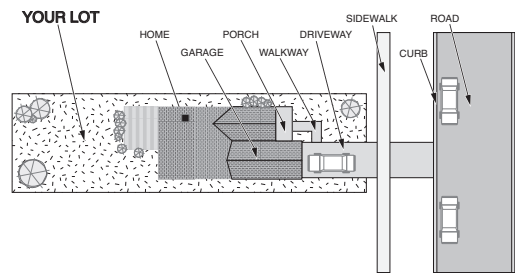
The garden hose connection will have a shutoff valve inside the house. This needs to be turned off and drained from the inside to prevent freezing and bursting (see 'Hose Bibs & Faucet' page 24).

Check any exterior painted surfaces for signs of moisture penetration. Blistering and peeling paint, if not corrected, can lead to water penetration.

Eavestroughs and downspouts should be cleared of all debris. If the water cannot flow properly, it may cause ice and snow to backup under the shingles, causing leakage through the roof.

Keep window wells free of leaves and garbage. Lot drainage is designed to keep water away from the foundation. If you restrict this natural ground movement, you may be setting yourself up for a water problem in the springtime.

While you are walking around the property, check for cracks in the driveway (if paved) and walkways.



These should be fixed before the cold weather arrives. Water that gets inside these cracks will freeze and expand, making the cracks larger.

Autumn is also the last time you can do any lawn maintenance before winter sets in. This would be an ideal time to plant a new lawn and to fertilize the existing lawn. Winterize your shrubs and bushes against the cold by wrapping them with burlap.

Keep in mind that the warranty is not all inclusive. You may wish to review what is covered, as well as what is not covered. Remember also that even if a problem is covered by warranty (for a short time period) it is still a problem, and is up to the homeowner to try to prevent it from occurring. We don't say this to minimize any service work on our part, but to help you protect your investment. Remember what grandma used to say, "An ounce of prevention is worth a pound of cure."

### **Survey Pins**

The surveyor installs pins at all lot corners, when a lot is surveyed during the development of the land and before construction of the house. After the foundation has been poured, the surveyor carefully records the position of the house and a lot plan is prepared. You will receive a copy of this legal survey plan as part of your legal documents when you close.

Often homeowners assume certain physical features on the property are boundaries. However, scales (depressions in the terrain) are a function of the drainage system and hydro or telephone junction boxes are placed only within an easement reserved for this purpose. These items cannot be accepted as boundary lines.

Survey pins may become dislodged or buried during construction. It is advisable to hire a qualified surveyor to relocate the lot lines if you wish to build a fence, hedge or any other boundary. Encroaching on others' property can mean costly realignment of the boundaries.

### **Easements**

Your lot may have easements in favour of various public utilities. For underground services, it is advisable that the utility involved be contacted before any digging for

fencing, tree planting, flower beds, etc. The utilities, in most communities, will stake the location of their services at no expense to you.

### **Grading & Drainage**

General drainage patterns are established in principle with municipal and other authorities, early in the land development stage. During construction, the drainage system is examined and careful consideration is taken in the location of the house on the lot. Plans rarely anticipate every detail and often these grading plans are changed, not in principle, but in detail. Some variations between grading proposals and the actual work carried out may exist. Modifications are not made without good reason. For example, basement window wells are sometimes installed to accommodate variations in grading around the house. A model house may have been built with or without window wells, and they may or may not be required depending on the grading conditions.

The grading on your lot is designed to provide surface drainage away from the building and into the storm sewer system. The homeowner cannot change the grading as this may cause a drainage problem for adjacent homes in your area. If your neighbor changes their grading or makes landscape changes that affect the free flow of water from your lot, it is your responsibility to arrange, through your Solicitor, that any such alteration is adjusted to permit the water to flow properly again. A hedge or fence, when installed, may also affect the drainage pattern.

Occasionally heavy rains will cause minor puddling in the swales or other areas. 24 hours should be given for these areas to clear of standing water.

We will repair drainage problems on the lots due to faulty or incomplete grading. However, if altered drainage is found to be the problem we will not be responsible unless the grade is returned to its original state. The grade is checked by consulting engineers both before and after the sod is placed. We will not be responsible for lot grading after this final inspection by the engineer.

You should not install a swimming pool until after the development is assumed by the municipality.

If window wells are required they must be kept free of leaves and other debris which may interfere with the water flow to the footing drainage system. In some cases, window wells are installed around some or all basement windows on a particular house to facilitate proper grading. As each lot is different, your house may differ from a neighbor's house in this regard.

It is not uncommon for water to collect inside a window well, especially during heavy or blowing rain. This is temporary, and the water will soon dissipate. The removal of sod around window wells for the planting of flower beds, shrubs, etc. can cause the earth to wash down into the window well and plug the drainpipe (which is positioned below the stone in the well). Should the drainpipe become plugged as a result of the homeowner's landscaping, it will be the homeowner's responsibility to have it corrected. It is imperative that you keep window wells free of leaves, dirt, garbage, grass clippings and ice which may interfere with the proper flow of water down the drains. Failure to follow these guidelines may cause water leakage at the window. Such leakage would not be a warranty item in these cases.

Lot drainage systems such as swales (depressions in the terrain) and catch basins are designed to direct the flow of water away from the house. It is up to the homeowner to maintain them. Leaves and other debris should be removed each spring and fall, while snow and ice should be cleared in the early spring to assure that drainage is not restricted.

Your lot has been graded to drain properly during a normal rainfall. Heavy or prolonged rains may result in some standing water (ponding in depressions) for a limited time if the soil is saturated. Homeowners should not change lot grading. This may cause a drainage problem on neighboring lots. If your neighbor changes his grading or makes landscaping plans which restrict the free flow of water from your lot, then a dispute of this nature is best handled through a solicitor, unless of course you can resolve the matter amicably.

Adjacent to foundation walls you may notice slight depressions resulting from soil compaction. You should fill these depressions to direct rainwater away from your home.

## **Lawns & Landscaping**

A well landscaped home can enhance the value of your property. In planning and installing planting beds, be careful not to interfere with the drainage system, particularly around the house. Be sure that any planting beds are laid to fall away from the foundation wall and keep all shrubs and trees clear of the walls. Do not build up topsoil above the top of concrete wall. Damage to brick and siding will occur as a result and will not be warranted. There must always remain 6" of foundation parging exposed to aid drainage around the home.

Landscaping your new home can be done in two ways. One is by guesswork, which may result in a horticultural disaster. The other is to plan according to how you want your grounds to look in 10 years. The long-range planning takes more time, but it pays off.

## **Sod**

Your new lawn may have been installed quite recently or will be in the near future and requires immediate maintenance. Although the lawn is delivered and laid in as fresh of a condition as possible it will not stay that way unless the following main steps are followed by you:

1. Water the lawn frequently. Do not water in hot sun, it is better to wait until evening or early morning, Watering of new sod must take place immediately within the first few hours of placement.
2. Do not walk on freshly laid sod. The topsoil underneath is soft from watering and footprints and other damage could result. We will not be responsible for such damages.
3. Fertilize the lawn, preferably in the spring and fall of the year. Do not fertilize fresh sod which is already fertilized at the sod farms. It is best to wait until the following season.

In the early spring when the snow begins to melt, care should be taken not to let any snow or ice remain in one area as this will cause a "Winter-Killing of Sod". If you notice this condition forming, spread the snow or ice to allow it to melt. It should be noted that having a skating rink on your lawn may kill the grass. Carbon dioxide produced by the grass cannot escape through the ice, and thus trapped, it can

suffocate the grass. We will not accept responsibility for lawns damaged by skating rinks, or other ice build-ups.

**NOTE:** IT MAY TAKE UP TO TWO YEARS FOR YOUR SOD TO KNIT INTO THE SUB-BASE. During this time puddles may form in your lawn after a rainstorm or watering. This is not due to the topsoil used or to the drainage pattern. It is a result of the sub-base in your area and will correct itself in the first or second growing season.

### **Trees**

In general, we find that though the trees we plant are very hardy, they do require some maintenance and protection. In your own best interest, you should observe due care in tending to your trees, including regular watering and fertilizing especially during the first year of growth. Failure to do so will result in the warranty being withdrawn. Wire guides should remain in place for at least one season, until the tree is well rooted.

### **Lawn Care & Maintenance**

It is not uncommon to start at one end of a street and work our way down when laying sod. For this reason, it is possible for a house that just closed to have sod while someone down the street may have moved in earlier and still be without. This is not meant as a slight against those that closed earlier, and is not a common problem. Rather it is an attempt to try to minimize the need for future remedial work due to tying in the different grades - and to reduce your future drainage problems. This does not mean that we will not sod one lot at a time, but it is not the norm.

Although the sod that was laid was healthy and of good quality, it will require immediate care and attention. New sod requires plenty of water until the root system penetrates the soil. Be sure to water new sod immediately after it is laid. Especially during hot summer months, it should be watered daily for the first two weeks. Too much water at this point will not hurt it. After the first couple of weeks, a good weekly watering (about 1" or 2.5 cm) will usually be sufficient to keep your lawn healthy. It is also better to water for a long period of time. Shallow watering will result in shallow roots, and will make the lawn more susceptible to burning. Excessive fertilizing and cutting the grass too short will also cause burning. Grass

should normally be cut to about 2" (5 cm.).

Keep in mind that many municipalities have some form of watering restrictions in place, and these may vary from month to month and year to year. These may include which days you may water, and during which hours. They may also make allowances for fresh sod. Contact your municipality for further details.

Freshly laid sod should not be cut until it reaches about 3-4" (7.5 to 10 cm) in height, and more frequently thereafter.

Many gardening experts recommend that you fertilize in the spring with a high nitrogen content (eg. 20:10:5 or 10:6:4) and in the fall a more balanced formula (7:7:7 or 10:10:10). In addition, weed control is important. You should consult your garden centre for suitable products. There are also professional lawn care companies that will be willing to take care of the lawn maintenance for you.

In the early spring, when thawing begins, the snow and ice do not always melt evenly. Spread the remaining snow or ice over the rest of the lawn to aid the melting process. Your warranty does not cover damage to the lawn caused by such "winter kill".

Lawns, like any natural growth, will do better in one area than another. Some of the factors affecting this will be sun exposure, wind, rain water flow, soil conditions, traffic patterns, and of course personal care and attention. The builder cannot be held liable for any damage caused by animal excrement.

The sod is rolled after being laid, not to give it a smooth appearance, but rather to force the roots into contact with soil. This helps remove air pockets, and aids in the "taking" of the sod. If you wish to have a smoother lawn surface, you may wish to do a certain amount of additional rolling, tamping, top-dressing or filling yourself. Be sure you do not adversely affect the grading when doing this.

Until the roots of freshly laid sod take hold and provide a channel for water to penetrate the soil, water tends to flow on top of the soil. Once the grass is fully established, most standing water problems are eliminated. The laying of sod is a

seasonal job and normally can only be performed between June and November - during some years it is even shorter. Therefore, please be patient if your lawn is not sodded when you move into your new home. We will do our best to complete this as soon as possible.

## **Precast Steps & Porches**

### **Walks & Driveways**

Cracks in walks and driveways may occur due to seasonal temperature and precipitation variations. Frost penetration may also raise sections or change the direction of surface drainage. Affected areas may return to their original positions in warm weather. In most instances these results of climatic and other natural causes are beyond the Builder's control.

Your driveway was made for use by passenger cars or light delivery vehicles, not for heavy trucks. Damage caused by excessive loads cannot be the responsibility of the Builder.

The poured concrete driveway is subject to more freezing and thawing changes from salt being applied to the roads. Slush should be removed to prevent surface damage, and concrete sealers are available to resist salt damage. This extra care should be taken on concrete porch tops, precast steps and patio stones and on Garage floors and aprons.

During winter months, care should be taken not to apply salt or calcium to precast concrete slabs or walks as it damages the concrete and mars the finished surface. Slab walkways are susceptible to minor settlement and upheaval, and are the responsibility of the Homeowner.

On stone or gravel driveways it is necessary to occasionally rake these materials into wheel ruts to maintain an even surface. The earth around the house is usually disturbed during the building process. Because of this it is likely to settle, especially when your car drives repeatedly over it. Allow settlements before paving. This will result in a much better product. It may be necessary for the developer or road contractor to repair cracked or settled sidewalk and road curb sections in the

path of the driveway in new developments, prior to final acceptance by the municipality.

It is best to wait for at least one full year prior to paving to prevent costly repairs due to soil settlement. If your water service box is located in the driveway area, and you decide to pave, the paving must be done in such a manner as to leave the water service box visible and operable. The builder will not repair damage to your driveway if the driveway must be dug up to locate and/or repair these water service boxes. The city or municipality will often hold the developer or builder responsible for final repairs from road and sidewalk settlement. Should your paved driveway be damaged as a result of such repair work, it will be your responsibility to have your own driveway repaired.

For the above reasons, if your contract called for a paved driveway, it will be delayed until this normal settling has occurred.

You should expect indentations, uneven areas or settlements in asphalt surfaces. This is normal and will not be repaired. Other typical characteristics include the flaking of surface chips, checking or cracking at the edges caused by expansion and contraction and tire markings. Asphalt will last for many years given normal use and care, but it is not indestructible. Periodic resealing is advisable. Two of the more common problems are petroleum products dripping or leaking and bicycle or motorcycle kick stands. Gasoline will dissolve asphalt rapidly. Spills or drips should be washed away immediately.

Pointed objects, of any kind, can easily sink into asphalt, especially in warm weather.

Unless your Agreement of Purchase and Sale specifies a paved driveway, you will have a layer of gravel on it. Minor settlement of a gravel driveway is normal.

## **Fences**

Should you wish to install a fence, hedge or any boundary features, (if permitted), it is advisable to obtain the services of a qualified surveyor to locate the lot lines to ensure that you do not put your boundary marker on your neighbor's property. (You

may wish to look into the idea of sharing the cost of a boundary marker with your neighbor).

Prior to having your fence built, ensure that you know where the property lines are, and if your neighbor is not "going in with you" on the project, be sure the fence is clearly on your side of the property line. As well check with the City to ensure that the fence you are contemplating is acceptable. Be aware of any bylaws pertaining to developer's restrictions by checking the restrictive covenants within your offer to purchase agreement.

Please note that we will neither stake out your property for you, nor provide any boundary markers.

## **Decks**

Decks have become a popular option on new homes. They create useful exterior space and enhance the landscaping of the average yard.

Recently, Reids Heritage contractors have begun using Aluminum Copper Quatrenate (ACQ) treated lumber. ACQ is a healthier alternative to typical lumber preservatives. ACQ is a fungicide typically used in pools and shampoos.

Even though the grade of lumber is rated for exposure to the elements, regular maintenance is required. Painting or staining the deck with a weather preservative will enhance the look of the deck and extend the life of the wood members. We highly recommend treating the deck with a weather resistant product every 2 years.

If you decide to build a deck, check with the local Building Department as to the current requirements. Depending on the situation, you may or may not require a permit (see the section on Permits). The worst that could happen is they can tell you your plan contravenes the building code or local ordinance. But they may be able to suggest some alternatives that might work and still meet your needs.

Because the soil around the house has been disturbed, be sure you sink your footing down to solid soil, which should help minimize shifting and lifting problems. Decks are a common outdoor extension of the main dwelling. As such, decks must

be designed and constructed to safely support imposed loads. All general requirements for wood frame construction also apply to wooden decks.

Some suggested guidelines for wooden decks are presented above showing commonly acceptable practices. It is recommended to include construction details of decks in drawings submitted for building permits, especially where they are attached to the main dwelling.

With decks, fences, trees and bushes, it is a good idea to "Call Before You Dig." The utility companies provide this free service (so you do not dig up telephone, cable and gas lines) but they may require 24-48 hours advance notice. Please call early.

## Concrete

### Foundation Walls

Foundation and basement walls are subject to many stresses and strains. The base of the wall, being in the ground, maintains a fairly constant temperature, whereas the top portion extending out of the ground, is subject to extreme temperature changes from summer heat to winter cold. These temperature extremes cause concrete and other masonry to expand and contract. The curing process of the concrete may last for several months. The soil on which the foundation is placed may settle slightly which can create additional stresses. These stresses may cause some minor cracks to appear. These cracks do not affect the strength of the wall in any way and it is not necessary to repair them unless they leak. If the cracks should leak during the warranty period, then they will be repaired.

According to the Ontario Building Code, the foundation must be designed and constructed to be able to transfer the structural loads of the building to the surrounding soil, resist soil and water pressures, and to control the flow of heat and air from the interior of the dwelling.

Downspout extensions are provided for you, the homeowner, to attach to the spout once the grading is complete. These ensure the roof water is discharged beyond this region of disturbed soil. This helps prevent water from penetrating the foundation wall. It is imperative that the homeowner ensure the downspout and extensions are

kept in good repair. In sandy soil, this area of repose could extend up to eight feet (2 1/2 meters) from the foundation - less in clay soils. Consider this when planning a deck so that your footings extend beyond the area of previously disturbed soil, and below the frost level.

To inhibit ground water from entering the basement foundation wall below grade level, the surface of the foundation may have been specially coated with a damp-proofing material. Since concrete will tend to shrink as it cures, and the foundation may shift as the house settles, the builder cannot guarantee that foundation cracks will not occur. However, Ontario builders do guarantee that the foundation will be free of water penetration for a period of two years after the sale to the original purchaser, or they will repair such leaks. The builder cannot be held liable for any damage caused to the homeowner's contents or the basement finishes beyond the original installation. For example, if a water leak develops and damages some furniture in the basement during the warranty period, the builder will fix the leak, but it is up to the purchasers and their insurance companies to take care of the furniture.

New foundations will need 1.5 to 2 years for initial drying. A typical foundation can release upwards of 600 gallons of construction water during these first few years.

Foundation moisture control can be broken down into four basic categories:

<b>SOURCE OF PROBLEM</b>	<b>SOLUTION</b>
Surface water - from snow and rain	Install troughs and downspouts
Soil moisture (capillary water or water vapour)	Damproofing
Ground water	Water proofing sump pump
Construction moisture	Allow proper curing time

### **Cracks & Leaks**

Concrete will shrink about 1" (2.54 cm) for every 50' (15.2 meters) of poured wall. As such, foundation cracks are sometimes unavoidable, especially in long walls. Please keep in mind that these cracks are superficial, and do not affect the strength of the wall. The warranty does not require the builder to repair a foundation crack that does not leak.

Concrete is a man-made rock-like material, and like rock it is quite brittle. Foundation cracks can basically be divided into two classes - shrinkage cracks and structural cracks.

Concrete is generally a mixture of sand, crushed stone or gravel and cement paste. Sand and stone make up 60% to 70% of the total volume. The paste that is used usually contains between 14% and 21% water. The bulk of this water is available for evaporation. As the water evaporates, the concrete loses some of its initial (wet) volume. It is this loss in volume that causes the concrete to shrink, and the resulting stress can cause it to crack. That is how the most common cracks, "shrinkage cracks", occur. Shrinkage cracks in the walls and floors are not considered a major structural defect, and are not considered to be a problem.

Cracks under 6mm thickness should not be cause for concern, and you can safely assume it is a shrinkage crack. More than 80% of all foundation cracks fit this category.

If a crack leaks, first check the grading and drainage around the house. The ground near the house should slope noticeably away from the foundation so the water can drain away from the house. Most leaks stop right away when the proper grading is restored. Cracks larger than a quarter's thickness are considered to be wide. Sometimes they are caused by foundation settlement. Although some settlement is normal in new homes, it should not continue past the first year.

Be sure the grade is kept a minimum of six inches (15cm) below the top of the foundation wall, and that any depressions are filled. Also ensure that any downspouts that do not discharge directly into a sewer or sump system are discharged onto splash pads or are extended at least one meter (three feet) away from the basement wall.

### **Snap Tie Rods**

When a poured foundation is built, wall forms are positioned on top of a footing, and held together with "snap ties." The concrete is then poured inside these forms. When the forms are removed, these snap ties are broken off, and tarred to prevent water from seeping through the wall. On occasion, these tie rod holes may still leak.

Although an aggravation for the homeowner, it is not a serious problem, and can easily be corrected from inside the house. The majority of foundation leaks occur through these ties.

### **Basement & Garage Floors**

Because of the nature of concrete, it is impossible for us to prevent basement and garage floors from cracking due to shrinkage and minor settlement.

To keep down the dust level in the basement, it is recommended that the floor be sealed with a paint. The simplest type of paint to use is a latex floor paint, which has no lingering odour from the fumes.

Occasionally basement floors will collect water from the condensation of moisture in the air on cold basement walls. A concrete sealer will make an unpainted concrete floor easier to clean. Follow the manufacturer's directions for cleaning after the sealer has been applied.

Unpainted concrete floors should not be cleaned with soap. Instead, use a solution of 4 to 6 tablespoons of washing soda to a gallon of hot water. First, wet the floor with clear water. If necessary, scouring powder may be used in conjunction with the washing soda solution. A stiff brush will help to loosen dirt. Rinse with clear water. Painted concrete floors can be cleaned with plain water or a mild soap or detergent solution.

If a white powder appears on some areas of the walls and floor, do not be alarmed. In the curing process, salts in the concrete are brought to the surface when moisture evaporates. This deposit can readily be brushed off and should cease after the concrete has cured.

It is difficult to prevent concrete garage floors from cracking due to shrinkage. This is common in all instances. It is not a sign of faulty materials or workmanship. Once the garage floor has cured, you may wish to treat it with a special concrete sealer. A reliable paint dealer or hardware store can recommend the right product.

**Please Note:** that your warranty does not cover deterioration caused by salt, chemicals, mechanical implements or other factors beyond our control. Repaired areas may differ in colour from the original.

### **Moisture Protection**

Dampness of the walls or floors may occur in new construction and is not considered a deficiency. Leaks caused by improper landscaping installed by a Homeowner or failure of Homeowner to maintain proper grades are not covered by the Warranty. Please note that we are not responsible for damage to possessions left in basement. It is advisable during the first year that no items be stored against walls or directly on the floor of the basement.

Each home has an air gap drainage membrane applied to the exterior foundation walls. This drainage layer resembles a “dimpled” plastic covering and provides significant protection against bulk/liquid water intrusion.

Review your homeowners insurance policy carefully, as many policies do not cover water damage unless you obtain a rider to cover ice, water & sewage backup damage.

## **Exterior**

### **Cladding - Bricks**

Mortar joints in brickwork are not waterproof. Therefore, you should not build up landscaping and gardens against the foundation wall. The same applies to gardens built up against that portion of the foundation wall above grade level. Water penetration in these cases would be the responsibility of the homeowner.

Small hairline cracks due to shrinkage are common in mortar joints in construction. Cracks greater than 3/8 inches in width are considered excessive.

Should repairs to brickwork be required under the Warranty, we will do our best to match colours. However, since brick is a natural material, and manufactured by dye lots, we cannot guarantee a perfect match. Similarly, the mortar mix will not necessarily match the existing material.

There is about a 1" (2.54 cm) air space between the bricks and the wood frame of the house. This is to permit air movement to help prevent condensation, as well as to allow any moisture in this area to escape. On the lower course of bricks you will notice "weepers" spaced about every 32" (81 cm). Be careful that these are not covered over or filled in. These holes are required by the Ontario Building Code to aid in proper ventilation and drainage.

### **Cladding - Siding**

The siding on your home may be of aluminum or vinyl material, and the maintenance is the same for both types.

Please be aware that vinyl siding becomes very brittle in extremely cold temperatures, and extra care should be taken in high traffic areas. Also, the heat generated by gas barbecues placed too close to vinyl siding may cause distortion.

The siding is not nailed in tight to the framework of the house, since it will need to expand/contract with daily and seasonal temperature changes.

On occasion, the corners and joints may become dislodged. These can be reinstalled quite easily by pressing them back into position underneath the lip of the siding. Failure to maintain these corner/joints could result in the siding being ripped off during high winds. Should this occur, it is not a warranty item. Your home insurance policy may cover this - you might wish to check with your insurance agent before it happens to see if your coverage includes this.

### **Paint**

Many houses these days have been designed to be totally "maintenance free". However, with steel entry doors and wooden garage doors, there is still some painting required.

The success or failure of a paint job rests largely on the preparations you do - sanding, scraping, washing, priming, and caulking. Be sure you start with clean, dry surfaces and you should use a high quality paint.

Be sure to prime bare wood first, and follow the directions of both the primer and paint manufacturers. Sealing (or priming) the surface provides a non-porous base so the top coat of paint will not penetrate to create uneven areas of gloss. It also provides a bond between the top coat and base, provides resistance to moisture, fills in cracks and crevices, and smoothes the surface.

Not all paints are created equal. A good latex will perform better than a poor quality alkyd and vice versa. Most do-it-yourselfers prefer latex because it dries in a few hours, cleans up with soap and water, and can be applied outside early in the day, and even in damp conditions.

There appears to be a general agreement that a good acrylic latex outdoor paint will outlast a good oil-based paint, though it does not provide as high a gloss as oil alkyd will.

The primary cause of exterior paint failure is moisture. The moisture can come from a number of sources:

- from water vapour in household air that migrates through the siding and from dryers or bathrooms that are not vented to the outdoors
- from rain that hits cracks and bare spots, working its way under the paint from there
- from rain that penetrates failed flashing and cracked caulking

When the moisture tries to push its way through the paint film, particularly with alkyd paints, it causes the paint to blister and peel in a way that exposes the bare wood underneath. This is usually most pronounced on south-facing walls when the moisture is heated by the sun. If your house suffers from excessive peeling, the problem is moisture, not paint. Before you repaint the exterior, you should first correct the moisture problem.

Since latex paint is slightly more porous than alkyd, it allows more moisture to migrate through it. Therefore, latex is usually a better choice of exterior finish coat. Be sure to scrape off as much old paint prior to repainting as possible. A heavy buildup, no matter what kind of paint, can result in crazing (cracks forming in the surface). When paint builds up to a thickness of 1/64" (1/2 mm) or greater, moisture

in the wall cannot pass through it. The paint also becomes non-flexible, in contrast to the seasonal expansion/contraction of the wood beneath. It has been said that the optimal thickness of the exterior paint is about the thickness of a sheet of newspaper.

## **Caulking**

Caulking around windows and doors should be checked annually and re-caulked as necessary. This will help maintain a watertight barrier against the elements where voids have become visible due to normal shrinkage. The caulking that was used may be good for 25 years, but if the wood shrinks and pulls away, the new gap must be filled.

If you're using caulking indoors to fill a gap, all you need is a paintable latex. If you are filling a crack outside, you need a caulk that is flexible, water-resistant and has a long life (like Mono, Rubber or Silicone). Remember also that not all caulking products can be painted.

Be sure the surfaces are clean prior to caulking, and don't try to fill a gap more than 1/2" wide or deep. Although new homes were totally caulked when they were built, it should be checked annually to ensure it has not broken down. Prior to using caulking, check the label for recommended uses of each type, and the applicable safety consideration. Surfaces should be clean. Cut the nozzle at a 45 degree angle, and push the cartridge along the gap you are sealing, as opposed to pulling it. This will force the caulking to fill the gap instead of just sitting on top.

Vertical intersections between different cladding materials (such as brick and siding) must be caulked and/or overlapped to ensure that rain and snow cannot penetrate the wall assembly. Since vinyl siding will expand and contract with temperature changes, most of these manufacturers recommend only lapping since caulking may restrict this natural movement. Where caulking is used, caulking material must be non-hardening, weather resistant and compatible with the siding material to ensure proper adhesion.

## **Weather-Stripping**

When you examine the caulking, make a mental note of the weather stripping as well. A wide variety of weather stripping has been used, so specific instructions cannot be given. However, it is important to ensure that the seal is snug, adjusting the weather stripping if possible. Be sure to keep the weather stripping free from paint.

## **Hose Bibs & Faucet**

The garden hose connection should have a shutoff valve inside the house, not far from the foundation wall or perhaps in the mechanical room if the basement is finished. These valves must be shut off and drained before the freezing weather comes. Failure to do so may result in the water inside the pipes freezing and expanding. This expansion can be severe enough to rupture the pipe, and flood the basement. As can be expected, this would not be a warranty item. For the same reason, a garden hose should never be left connected during freezing weather.

To properly drain the exterior water taps, first locate the ‘blue’ valves in the interior of the home. Close the valves by turning to the right. Next, open the valves located on the exterior (or in the garage) of the home. Finally, return to the interior ‘blue’ valves and slowly open the 1/4 inch weeping cap located on the valve fixture.

## **Roofing**

The roof of your home should last for many years. Check for loose, broken or missing shingles following heavy windstorms. Repairs should be made as soon as possible to prevent leakage and resultant interior damage. Please be advised roof shingles are to be installed according to the Ontario Building Code and the manufacturer’s specifications, and carry a one year warranty from the date of possession. Damage resulting from acts of God are not covered by the statutory warranty. If the roof shingles do not meet the conditions of the OBC or the manufacturer’s specifications they shall be repaired. In some cases severe weather and wind gusts can sometimes exceed the design limitations of the shingles. Different shingle types and materials have varying abilities to resist these forces.

Asphalt shingles are soft on warm days, the top surface contains a protective mineral surface and can easily be damaged by walking on them. Frequent damage occurs during the installation of such equipment as TV and CB aerials. Care must be taken during this installation not only to avoid damaging the shingles but to assure that fastening devices are properly sealed to prevent leaks.

Under the Ontario Building Code minor variations in colour shade should not be considered abnormal or a deficiency.

It is impossible for manufacturers to avoid slight differences in colour even within one factory run of a single colour of shingle. Colour shading is usually minor and is further reduced by weathering. Shading of asphalt roofing does not affect the durability.

Slight variations may be noticed in the roof's level. These can be caused by a raising of shingles between nails as they expand or by puckering of the plywood.

If you end up walking on the roof, be careful to observe standard safety practices. Use shoes that permit a good grip, and use of a safety line would be advisable. Avoid walking on the roof on very hot days, as soft shingles are easily damaged.

### **Ice Dams**

Consider road signs that warn "Caution: Bridge Freezes Before Pavement." Because the bridge is exposed to the air below, it cools quicker than the rest of the road. As such, it will freeze first. The same thing applies to roof overhangs. Because they extend beyond the rest of the house, they cool quicker allowing for ice to form. This ice buildup can create a small dam, allowing ice and snow to build up behind it. This can then back up under the shingles allowing water to leak through from under the shingles. We have taken steps during construction to minimize this possibility, however, the use of heating coils can also be used to help prevent ice and snow buildups on and under the shingles. Have snow and ice removed with great care as it is easy to damage the shingles. The ventilation of the attic space should be checked to ensure proper airflow from the eaves to the roof should the damming persist.

Your home has been provided with vents to control attic moisture and temperature levels. However, during certain snowstorms, snow may be blown into the attic creating extensive damage. Check your attic after unusually severe snowstorms. Remove any snow before melting occurs. At no time should attic vents be obstructed or reduced in size.

### **Gutters, Eavestroughs & Downspouts**

Eavestroughs (or gutters) are installed to facilitate the removal of roof water in an orderly fashion. Downspouts and extensions are designed to direct this water away from the foundation. If the gutters become clogged (eg. by leaves, twigs, children's toys that were thrown up, etc.) the water cannot flow properly. The gutters are not designed to store this water, so if the water cannot flow properly, the weight may be enough to rip these units off the house. Surface particles from asphalt shingles, washed off by rain, often settle in the gutters. These should also be removed.

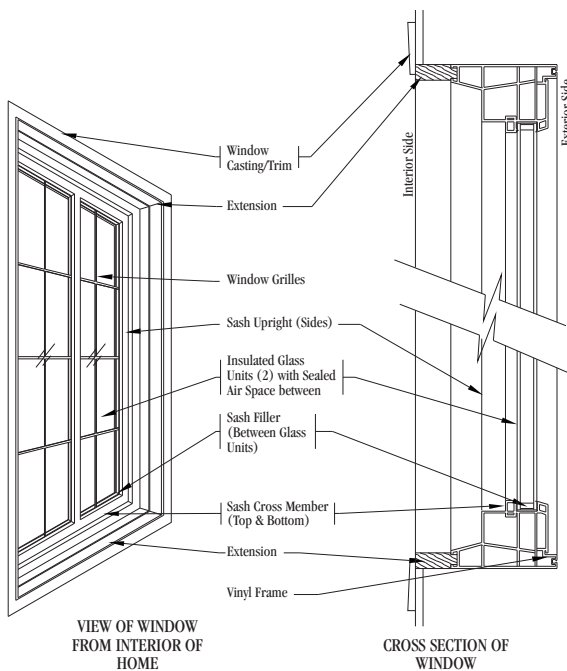
### **Storm Doors**

While storm doors are not necessary with an exterior steel door (unlike a wooden door), they can be a nice extra for both aesthetics and ventilation. The most common complaint after a storm door is installed is that the door bell no longer works. Be sure you do not puncture the doorbell wire with screws while fastening the door.

One of the more common complaints in the winter about exterior doors (if a storm door is not installed), is not with the door itself, but with the lock. If your key does not want to go in (or turn) it is most likely frozen moisture causing the problem and not a broken lock. If you try to force the key, it may break in the lock. Try some lock deicer (as you would with your car or truck). Another method is to use a lighter or match to heat the key before inserting it in the lock. If that doesn't work, cup your hand around the keyhole and blow into the lock. While this will add moisture from your breath, it may also raise the temperature enough to get the key to work. Be careful you do not get your skin in direct contact with cold metal, or it may stick. Once you are inside you can try some longer lasting remedies at your leisure.

### **Windows**

Ripped screen on patio doors or windows can be easily repaired. The screening



WINDOW COMPONENT  
IDENTIFICATION

material is available at most hardware and building supply stores. This screen material is held into a track around the window frame by a thin material called spline.

Since spline comes in different thickness', be sure you use the proper size. There are also special tools made to assist in the installation of the spline. Whatever tool you use, be careful that it does not slip and rip the new screen during installation.

## Garage

As was mentioned in the section on driveways and sidewalks, the builder cannot be held responsible for damage to the garage floor caused

by salt and calcium products dripping from automobiles during the winter months. It is recommended that in the winter months you remove the ice buildups from behind the tires prior to parking in the garage. You should also remove slush and excess water from the garage floor regularly during the winter. When practicable, hose off the floor thoroughly to remove the winter salt deposited by your vehicles.

Do not expect the garage door to be fully weather-stripped. Some air circulation is needed to help minimize condensation as well as carbon monoxide buildup from exhaust. Since this carbon monoxide is a potential safety hazard, never leave your car engine running with the car parked in the garage. If for some reason the car was left running, be sure to leave the overhead door open long enough for the fumes to disperse before closing it.

A safety concern in attached garages continues to be the prevention of carbon monoxide from automobile exhaust entering the house. Ensure that the walls and ceilings separating the dwelling from the garage are suitably sealed to prevent

leakage. This work is ensured during initial construction, and should be checked periodically to ensure the drywall tape has not peeled off (due to high moisture), the caulking is still sound and the weather stripping around the door between the house and garage are still in good repair.

The automatic door closure on a door from the house to the garage can be cleaned by wiping with a clean cloth, and lubricated by spraying the rod with a petroleum-based lubricant. Adjust the closer to the desired closing speed by turning the screw at the end of it - normally turn the screw clockwise to slow down the speed of the closing door, counter-clockwise to speed it up. Be sure to tighten any loose bracket and/or screws.

### **Hardware**

It is normal for the protective finish on the exterior hardware to break down after extensive use and exposure to the elements. We will not be responsible for the replacement of the hardware if this happens. When this occurs, remove the remainder of the finish with a mild kitchen scouring powder. After cleaning, simply let the finish age for a rich weathered appearance. If you wish to preserve a "like new" appearance, occasionally polish with a brassware cleaning compound. This also applies to brass numbers, mailboxes, kickplates and light fixtures.

It is advisable to lubricate both exterior and interior locks every six months. For keyed exterior locks, a little powdered graphite dry lubricant blown into the key-way and in the latch bolt will ensure smooth operation.

If the security of your home is a concern, consider these items before installing additional locks to your doors.

- Locks that require a key on the inside are potentially dangerous if an emergency occurs.
- Installation of any locks or chains will be most secure if the screws and bolts used for attachment go all the way through the door or frame and cannot be removed from the outside.
- A metal insulated door may require the services of an expert to properly install new locks.

## Interior

### Condensation & Humidity

You may be surprised at how much of this manual is devoted to the topic of condensation. However, this is perhaps the number one complaint of all new homeowners. It is usually not a construction problem and it is important that you understand the sources of condensation and humidity, and the actions that you can take to reduce these conditions.

In its mildest form, condensation appears only as a harmless surface fogging of windows (you have likely seen examples of this on the bathroom mirror after a hot shower). In severe cases, it can cause decay that might affect the entire structure. In between these two extremes, it can manifest itself in the growth of mildew, ceiling stains, ceiling leaks and the peeling of paint off finished surfaces.

Most homeowners automatically assume that window condensation is a result of faulty construction or poor window manufacture/installation. They will often cite examples of their parent's places never having this much of a problem.

Consider first of all that in the last 15 years or so, new houses have been built to much higher standards, and are much more airtight. As a result, the moisture that would escape from your parent's house (along with the heat) is now staying inside the dwelling. In our attempt to conserve heat, we have added to the problem of too much moisture.

Remember that water never disappears, it just changes state. Place a cup of water in the freezer and the water goes from a liquid to a solid. The same water on a hot stove will change from a liquid to a vapour. As such, anything that dries inside the house, including laundry, floors (after being washed), dishes in the drying rack, etc. adds more moisture to the air.

It is a fact of nature that air can hold only a limited amount of water vapour at a set temperature and pressure. When air at a certain temperature contains all the water vapour it can hold it is said to have a relative humidity of 100%. By either adding

more moisture or reducing the temperature, the air can no longer keep the moisture suspended, and it will condense on any cold surface. The colder surfaces will be affected first - normally windows since they usually have the lowest temperature of any interior surfaces.

A dehumidifier for a new home is an absolute must if you plan to protect your investment.

At above freezing temperatures, this condensation is in the form of water. At colder temperatures, it will be frost. Household humidities must be kept below the condensation level. The following chart shows the desirable maximum humidities for a given outside air temperature (OAT) with an inside temperature of 70 F (21C):

OAT		Max. Humidity
C	(F)	
-20	(-4)	20%
-10	(14)	25%
0	(32)	30%
10	(50)	35%
20	(68)	40%

The simplest method of determining if the humidity is too high is to check the windows. As soon as objectionable condensation first occurs on the inside surface, steps should be taken to reduce the relative humidity by controlling the sources and/or by increasing ventilation or temperature.

**Sources of Moisture**

The principal sources of household moisture in the average house can be attributed to personal activities. For the average family of four, 15 to 20 pounds (7-9 kg) of moisture are added to the air daily - and this can easily reach 40 to 50 pounds (18-22 kg) on washdays. When you consider water weighs 10 pounds per gallon, you can see how this can quickly add up. Check the following chart to see how much moisture your family unit adds:

<b>Activity (LB)</b>	<b>Moisture produced</b>
Cooking (3 meals a day)	2.0
Dishwashing (3 meals a day)	1.0
Bathing	- shower 0.5
- tub	0.1
Clothes washing (per week)	4.0
Clothes drying indoors (or not venting the dryer)	26.0
Floor mopping	3.0
Occupants	12.0

(The above information was taken from the National Research Council of Canada, Division of Building Research, Housing Note Number 11 "The Condensation Problem - Here are the Causes and Cures" prepared by H. B. Dickens and reprinted from Canadian Builder, Volume XIII, No. 7, July 1963, page 34).

We strongly suggest purchasing a hygrometer for your new home. This device enables you to see what the relative humidity is inside your home. Local hardware stores commonly carry these devices. Information on hygrometers and proper usage is available on the CMHC website [www.cmhc.com](http://www.cmhc.com)

It is possible to purchase "heat saving devices" for your clothes dryer that permit the heat to be ducted back into the house. Keep in mind that this will also duct the moisture back into the house, adding to the condensation problem. For this reason, these devices are not recommended by the builder.

Water vapour is one of the products of combustion with natural gas, so gas appliances will also add moisture to the air - as will pets, aquariums and self-defrosting refrigerators.

Since new concrete and drywall require large amounts of water during their construction, condensation will likely be more severe in the first year as these materials and others dry out. This is one of the reasons why, during the first winter, proper ventilation is of prime importance.

## **Air Circulation**

You will notice that heat registers are normally placed under windows (if possible) or as close to a window as possible. The movement of warm air over the windows helps keep the condensation from forming by keeping the glass warmer. If the register is shut off, or blocked by drapes (or even sheers), condensation is more likely. Heavy, insulating window coverings can further add to the problem, since the insulating properties of these devices cause the temperature of the glass surface to be lower than normal and for the trapped air to condense into visible moisture.

Casement windows (operated with window cranks) have the screens mounted on the interior/warm-side of window. As a result, the screens often need to be removed during winter months to allow proper warming of glass and drying of any condensation

When we breathe, we exhale carbon dioxide and moisture - consider when you "see your breath" on a cold day. Now assume your bedroom, which was probably unoccupied most of the day, has a relative humidity of almost 50% when you go to bed on a cold winter night. The addition of moisture from normal respiration could easily raise the humidity level to the point where condensation will occur on the windows. Many people go one step further and turn the thermostat down a few degrees at night. Either of these actions by themselves could produce condensation, but together it is almost a certainty. We are not suggesting you not turn the heat down at night (or other times when it is not needed) but if this causes a problem, you may need to increase the household ventilation.

MILDEW ON WINDOW SILLS is easily cleaned by owner. Our recommendations are based on TARION and CMHC standards and procedures. Cleaning directions can be found at: [www.cmhc.ca](http://www.cmhc.ca) search: "Fighting Mold The Homeowners Guide" and "Measuring Humidity in Your Home"

## **Ventilation**

It is advisable to reduce the level of the relative humidity in basements by the use of a dehumidifier. However, this is not a practical solution in the winter. These units are normally designed for peak efficiency at 27C (80F) air temperature and a relative

humidity of 60%. At normal room temperatures and relative humidity levels below 50%, their efficiency is markedly reduced.

The greatest proportion of moisture is removed from houses by the replacement of moist, warm inside air with cool, dry outside air. When this cool dry air is brought into the house and heated, the relative humidity drops, allowing more moisture to be absorbed. As an example, outside air that has a relative humidity of 100% at -30C (-22F) can be brought into the house and heated to 20C, thus reducing the relative humidity to 10%. It is this constant air exchange that permits the excess moisture to be carried away.

If inside moisture is generated faster than it can be removed, condensation will occur. Therefore, if you are engaging in a high moisture production activity, you should increase the ventilation at the same time. For example:

#### Activity and Action to take

- If having a shower, leave the window open or turn a bathroom exhaust fan on. Consider leaving the window open and the door closed after your shower or bath.
- When cooking or washing dishes, open a window or turn on a vented range hood fan.
- When washing the floors or clothes, turn on the ventilation switch (normally located near the thermostat in houses so equipped)

The ventilation system requires frequent maintenance to ensure its safe operation. You should establish a regular maintenance and cleaning schedule. Start by checking to see if the hoods over intake and exhaust openings outside the house are broken or blocked. Clean all grills and filters. Replace or clean all in-duct filters. If your ventilation includes a heat recovery ventilator (HRV), remember to clean and replace the filters. Regularly scrub kitchen grease filters with hot, soapy water. Some exhaust fans need to be oiled and cleaned according to manufacturer's instructions. Always disconnect the power before cleaning fans.

## **Ventilation / Circulation Switches**

The Ontario Building Code currently requires builders to install a ventilation system to protect the house from moisture damage and to replace stale inside air. To be protected by the Tarion Warranty Corp., homeowners are required to properly maintain their homes - problems that arise from homeowner negligence are not covered.

Newer homes will have a switch near the thermostat marked "ventilation". As mentioned earlier, the ventilation fan is designed to remove moist air from the dwelling. These systems do not operate automatically.

When you detect moisture building up on the windows, ensure the ventilation fan is on. If your nose and throat are constantly dry, you have too little humidity in the house and should turn the unit off. It will take some time to determine the best use of the system for your own lifestyle.

Some houses will also have a circulation fan which is designed to keep the inside air circulating, thus keeping the total house temperature a little more consistent (as opposed to having some rooms colder than others). If your thermostat has settings of ON-FAN-AUTO, set it to "ON" for constant air circulation and "Auto" if you wish it to come on only when the furnace or air conditioner is working.

## **Storage**

One thing most people complain about in houses (regardless of how large or small they are) is the lack of storage space. Many people will store boxes and other belongings in the basement, which is fine. However, if the basement foundation wall leaks, those items in storage could be damaged. It would be a good idea to build a small platform off the actual floor and put your boxes there. It is better to make provisions now, and never have a leaky basement than to wait until water is coming in at 2:00 in the morning and try to shift boxes around as well as mop up the water. For years, attics have been the 'catch-all' for Christmas decorations, hand-me-down furniture, etc. In today's homes, storing items in the attic can seriously interfere with the insulating system and the structural load design of the ceilings. Compressing the fiberglass insulation with boxes or boards will drastically deteriorate the R-value of the insulating system. (see 'Insulation', page 36)

## **Decorating**

After the house has finished shifting, you may wish to repaint or wallpaper the walls. Nail pops and drywall cracks may have formed as the lumber dried out. These will be fixed after the first year. Please note, however, that these repairs will not be re-primed, repainted or repaired by the builder as stipulated by the Tarion Warranty Corp.

Do not use sealants that form a film or vapour barrier on basement walls; moisture backup may cause the paint to peel off in sheets. Instead, use latex, masonry paint or an alkali-resistant primer.

Never apply wallpaper to drywall that has not been properly sealed or sized. Otherwise you will have a terrible time when you try to remove it in the future - if it will come off at all. Use sizing under wallpaper, but never under paint. Sizing is inexpensive, but will detach from the wall if the slightest moisture is present.

## **Floor Drains**

The floor drain is designed to carry off any water that accidentally gets onto the floor - either from a foundation leak or an overflowing laundry tub or washing machine. There is a trap in the pipe, the same as under the sinks, which is designed to hold water and thus prevent sewer gas from entering the house. At least once a month you should check this drain to ensure the water has not evaporated, allowing gas to enter the house. Simply pouring some water down the drain to raise the water level will prevent the problem.

## **Settlement & Frame Adjustment**

The lumber that went into building your house contains quite a bit of natural moisture. As this lumber dries, especially during the first heating season, the lumber will tend to dry out, causing it to shrink and settle.

Your house was designed so that this natural settlement will be as even as possible. Some of the more obvious indications of this drying process are:

- Gaps appearing between cabinets or vanities and the walls
- Gaps appearing between stairs and molding or walls
- Joints open in door and window trim

- Drywall cracks and nail pops
- Squeaks develop under flooring and on stairs

These are not major structural problems, even though they may be annoying.

## **Insulation**

Your home has been insulated to at least the minimum Ontario Building Code standards. However, on strong windy days, the pressure differential between the inside air and outside air may force air in through even the smallest of openings, causing a draft. This again is not a defect. You may wish to install draft protectors behind electrical outlets and switches to help minimize these drafts.

The substantial amount of insulation in the attic has a tendency to create another condition called "truss uplift". This means the bottom cord or 2 x 4 of a roof truss will lift in winter months because of the different temperatures of various parts of the truss. In simple terms, the bottom part of a truss which sits in the ceiling insulation stays warm while the upper part that holds the roof sheathing stays cold.

The attic insulation was blown in during construction. Periodically check the attic to ensure the insulation has not been blown into piles leaving exposed ceiling beneath. There will be visible light at the vents around the house - do not confuse this with missing or inadequate insulation. These vents **MUST** be left open for proper attic ventilation and air circulation.

## **Drywall**

"Drywall" (gypsum wallboard) is used on the interior walls and ceilings in your house. Cracks may appear over doors, windows and archways due to the shrinkage of the larger sized wood members behind the drywall. It is usually minor and rarely serious. Small defects, known as "nail pops" may appear near or at the joints of adjacent sheets and at other nail or screw locations. They are due to the shrinking of the supporting wood frame.

Cracks and nail pops will be repaired once within your first year of occupancy. No sanding or repainting of these repairs will be done and no wall coverings will be replaced. Until the drying out process is almost complete, repairs should not be undertaken.

## **Windows**

During cold weather, it is possible to feel cold air around the windows. Since the windows are cold and the room is warm, the temperature differential may have set up a cold air convection current. The windows may not be totally windproof, but in most cases the draft you feel is due to the internal air currents or convection air movement rather than air from the outside.

The thermopanes are guaranteed against defects by the manufacturer. Any glass breakage for reasons other than seal failures becomes your responsibility. These steps should be followed in caring for your new windows:

1. Lubricate all moving parts with a silicone lubricant as required.
2. All caulking must be inspected annually paying particular attention to any signs of loss of adhesion. Such faults or cracks should be repaired immediately using a superior grade caulking.
3. The weather stripping and the tracks on the windows and doors should be lubricated twice yearly.

The material used for lubrication can be either petroleum jelly, silicone, or a bar of soap on the tracks. Although windows and doors are weather-stripped they cannot be 100%leak-proof in extreme conditions such as rain driven by high winds.

## **Doors & Wood Trim**

As the construction materials dry and the house settles, the interior doors may eventually bind, not close properly, or not latch. Remember that they worked when you moved in, so again it is not a construction problem, but a result of natural settling. Do not be too hasty in adjusting, planing or cutting your doors. If in doubt, call your service representative first, since it is possible to correct one problem while creating another.

Trims and moldings, such as baseboard quarter-round, may separate from the floor, leaving a small space that will catch dust and dirt. This separation is part of the normal process of settling and shrinking in your home. Loosening the quarter-round or other trim and renailling it in its proper position will remedy the problem.

If a small separation occurs at corners or other seams, it can be patched with wood filler; however, sometimes further settling will bring the pieces together. The filler can be stained or painted to match the molding. A thick piece of cardboard or heavy paper slipped under the molding will protect the floor or rug while you are painting.

## **Walls**

Your house has two types of walls:

- bearing
- non-bearing

Non-bearing walls may be altered without fear of structural damage; however, alteration of a bearing wall must be done carefully to avoid reducing its bearing capacity. All exterior walls are bearing walls, and some interior walls are bearing walls.

Any alterations to a wall, either bearing or non-bearing should be left to professionals.

## **Ceramic Wall Tile**

Ceramic tile is easily cleaned, and should be wiped dry after every shower. When tile is applied to the walls around bathtubs and shower stalls, the backing material must be water-resistant. Joints between bathtubs and tiles must be caulked and sealed using materials that conform with CGSB 29-GP-22M, "Sealing Compound, Mildew Resistant, for Tubs and Tile." Remember that the tile is not waterproof and the grout is not waterproof. The backing is water-resistant. If cracks should form in the grout, as will happen with normal settling, water can seep past the grout onto the drywall behind. If this is allowed to happen and left uncorrected, the drywall behind the tile can break down and deteriorate to the point where the tile falls off the wall. Since it is the homeowner's responsibility to ensure that any cracks in the grout are repaired immediately, this would not be a warranty item.

To regROUT a tile joint, first use a putty knife to scrape out any old grout, taking care not to mar any tile surfaces. Use a wet toothbrush to scrub the joint clean. Let the joint dry thoroughly. You can purchase grout premixed from most hardware or building supply stores, or you can mix the individual ingredients to make your own. If you make your own, be sure to follow the manufacturer's recommendations.

When applying the grout, use a rubber-gloved finger to press it into the joint, filling the joint almost level with the adjacent tile surfaces and smoothing away bubbles and gaps. Use a damp sponge to wipe excess grout off the tile surfaces. Let the grout set for 15 minutes (or as recommended by the manufacturer), then use a soft, dry cloth to polish off any remaining haze from the wiped tile surfaces. To protect the re-grouted joint, you can seal it with silicone sealant when the grout is completely cured - which may take up to 4 weeks, depending on the grout or sealant manufacturer's instructions. To seal the cured grout, wash and rinse the joint, then let it dry. Using an artist's brush, smooth an even coat of sealant along the re-grouted joint, taking care not to drip sealant on any tile surface. Let the sealant dry 24 hours before getting the joint wet. Be sure to check the instructions with the grout you used. Perhaps they do not recommend a silicon seal with their product.

## **Caulking**

The tub and tile were also caulked with a waterproof sealant prior to your taking possession of the house. This also needs to be kept in good condition.

Caulking and grouting are materials that shrink, dry or crack; therefore, they are not warranted. They are included under home maintenance, along with washers and other materials that tend to wear out. Do not allow the caulking and grouting to go unattached as it may result in leakage and damaged walls or ceiling. This would not be covered under our standard warranty.

To recaulk a joint, first pull out any loose caulk by hand, then use a putty knife to scrape out adhered caulk. Be careful not to scratch the surface of the tub or tile. Use a wet toothbrush and a non-abrasive commercial cleaner to scrub the joint clean, then rinse the joint with fresh water. Let the joint dry. To remove any remaining soap film, wipe the joint with a soft cloth dampened with rubbing alcohol; for any remaining mildew use household bleach. Before caulking the joint between a

bathtub and wall, fill the bathtub with water to expand the joint; then tape the edge of the wall above the joint and the bathtub below the joint with masking tape. To caulk the joint, select a caulk of suitable colour that is moisture and mildew resistant. Load a caulking gun with the caulk. Starting at one end of the joint, hold the gun at a 45 degree angle to the surface and squeeze the trigger to eject a continuous bead of caulk along the joint - keeping the caulking tube moving at a steady rate to keep the size of the bead constant. Remove the masking tape. Then, wearing rubber gloves, run a wet finger along the caulk, pressing it in to the joint. Let the caulk set for 24 hours before draining the bathtub.

With fiberglass tub and shower enclosures, the problems associated with cracked tile are eliminated.

## **Basement**

During the first year, you may experience some minor dampness in the basement of your home resulting from condensation, water beading may appear on the poly covering the insulation. Condensation, as you are probably aware, is caused by warm moist air coming into contact with a cold surface, such as a window, pipe, or basement wall. There is a high level of humidity in a new house caused by the drying out of the material from which the house is constructed, and it is this humidity which may result in condensation occurring in the coolest area of the house - the basement.

The following comment on this subject is taken from the Tarion Warranty Corp. manual:

"...even a perfectly dry basement can have wet walls and floors, (even running water, in some circumstances), due to condensation of moisture in the air because they are up against the earth, which has a lower temperature than the air in the basement."

If it is your intention to finish the basement area, we strongly recommend that you delay this until after the second year. If you are using the basement as a storage area, take care to keep possessions away from the walls and up off the floor. Windows should be closed during humid weather and opened during dry weather.

Cold cellars vary in coolness depending on interior and exterior temperatures, as well as basement wall and cold cellar wall layouts. (see 'Condensation' page 29)

### **Coldroom**

The Cold room is a un-conditioned area. Room temperature and humidity levels are entirely subject to exterior weather and soil conditions. Frost may often be visible on the interior during cold spells. Materials stored in the room are subject to extended periods of wetting and/or drying. This can result in the growth of mildew.

Please adhere to the following guidelines to obtain the most efficient use of this space;

DO NOT Store paper products or wood composite products ("Chip-board", Plywood, Cardboard, pressed-wood board, etc) in this room. These items are susceptible to mildew growth.

DO NOT Cover the 4" ventilation holes at the top of cold room walls.

DO NOT Place boxes or items around sump pails thus restricting the operating arm of the pump.

DO NOT Store clothing, fabrics (furniture, etc) or un-enclosed food sources (vegetables, fruits, etc) in this room. These items are susceptible to mildew growth.

DO NOT Leave the door to this room open for extended periods of time. This can result in frost / condensation on walls and ceiling of cold room during cold spells.

Traditionally cold rooms have been used to store canned goods or non-perishable items. Any shelving installed should be made of galvanized non-corrosive metal or plastic (PVC).

## Heating Furnace & Air Conditioning

### Furnace

Your heating system was designed with the Canadian climate in mind, and your local community in particular. You should acquaint yourself with its proper operation, and if in doubt contact the installer or Utility Company directly.

Regardless of which type of furnace you have, the controls are powered by electricity. There is a furnace switch, either located near the furnace or by the basement stairs, that shuts off this supply of power. In the event of severe basement flooding, or other unusual situations, you should know where this switch is located, in the event that you have to turn it off. If the switch is located where it could be confused with a light switch, it should be clearly labeled and all members of the household should be aware of its location and function.

The heating system should be balanced to ensure enough heat gets to all of the rooms before the furnace turns off. Since this is more of a personal preference than a Building Code item, you should look after this yourself. There are vanes in each heat register that can be opened or closed. It may take a little time to get it right, and will require seasonal adjustment if you have air conditioning. As soon as the temperature in the room with the thermostat gets warm enough, the furnace shuts off. If necessary, restrict the air flow from getting to this room until after the other rooms in the house are warm enough for you.

Furnace filters need to be checked and cleaned/replaced on a regular basis (at least every month or two). Dirty filters not only reduce the life expectancy of the furnace, but will also increase the fuel consumption.

When checking the filters, turn off the power to the furnace. Locate the filter in the slot between the return duct and the blower, then slide it out. Clean a metal or foam filter with water, using a high-pressure nozzle on a garden hose. Let the filter drip dry before replacing it. Dirty fiberglass filters should be replaced. When replacing a filter, be sure to use an identical size and style. These should be readily available at any building supply center. Slide the filter back in place and then turn the power back on.

If you experience a lack of heat:

- Check thermostat.
  - In “Heat” position ?
  - What is temperature set for?

(Thermostat can be off by 1.5 to 2 degrees. This is a significant difference. If set temp is 19,20 or 21- try setting thermostat 1-2 degrees higher)

- “Furnace Switch” in basement is turned ON ?
- Check hydro-panel- is furnace breaker in on position ?
- Pull furnace filter out and check for debris, dirt blocking airflow.
- What Type of filter is being used. Nothing more than medium particulate filters should be used. High Particulate or HEPA filters will significantly decrease furnace effectiveness in circulating warm air. (Refer to [www.cmhc.com](http://www.cmhc.com) for further information).
- Check furnace vent pipe at exterior of house to make sure nothing is blocking exhaust. Snow, etc...
- Registers are “Balanced”?
  - If basement is unfinished, Close registers LEAVING 2 REGISTERS OPEN.
  - On main floor, partially close registers located close to furnace or in rooms that are quite warm
  - 2nd floor partially close registers in very warm rooms.
  - ALL REGISTERS & RETURN AIR GRILLS must be free of obstruction by furnishings, etc.
  - ALL REGISTERS Must have operating levers located on the right side, thus forcing air UP along exterior walls and windows, bathing the cool surfaces with warm conditioned air.
  - After balancing the house and interior will take approx 48hrs to adjust and “get-up-to-speed”.

## **If Problems Continues,**

- Call HYMARK MECHANICAL - 1-800-727-0750

## **Air Conditioning**

Determining the appropriate size of Air Conditioner for any given home, is a very delicate and complicated procedure. Each house design is reviewed with floor space, windows, number of rooms, and exterior surfaces all included in the calculations. This process of such calculations is determined by the C.S.A. - Canadian Standards Association, and approved by the appropriate Government Regulator agencies.

It is good to remember that installing a correctly sized AC unit is beneficial to your comfort and your health. Air conditioning is different from heating. As an AC runs, it removes moisture as well as cools the air. If the unit is improperly over-sized, it may cool the house but it may not run long enough to dehumidify the air properly. This leads to a cool but damp, uncomfortable home. The unit size is calculated for your home to achieve optimum comfort.

If you intend to install air conditioning in your new home, consult local municipal authorities regarding rules pertaining to placement of cooling units. The installation of additional equipment will void the Furnace Warranty, if installed by a contractor other than "original" furnace installer. This includes Air Conditioning, Humidifiers, Electronic Air Cleaners, Thermostats, etc.

Whenever these pieces of equipment are installed, it has to be electronically wired into the furnace circuitry. During the installation process, balancing dampers or burners often get dislodged, delicate ignition components can be damaged or broken and airflow patterns can be changed. Sometimes mistakes are made and even if corrected immediately, damage may appear weeks or even months afterwards. When having any of the above installed, ensure it is by a reputable company and that taking responsibility for the balance of the Builder's Warranty is part of your contract with them.

If your house has a central-air conditioning system, the following information can help you get the maximum benefit from it.

Registers - The registers throughout your house help to regulate the flow of air and maintain the desired temperature. By opening and closing the registers, you can regulate the amount of cool air that enters a room. Once the registers and dampers are adjusted, they will work with the thermostat to maintain the temperature of your home. Closing registers and doors of rooms not in use is a good way to reduce cooling costs. If you have a combined cooling and warm-air heating system, the same registers and dampers will be used to regulate the flow of air to the rooms. You will need to balance such systems between heating and cooling systems.

Balancing – Balancing your heating system involves restricting the flow of heated air to some areas while increasing air flow to other ‘cool’ areas in order to achieve a consistent temperature across the house. To balance your heating system, close registers in ‘hot’ rooms, close significantly (50%) of registers in ‘warm’ rooms and fully open registers in ‘cold’ rooms. Wait two days after making adjustments prior to making further changes, allowing the system sufficient time to warm not only the air volume but also the furnishings, etc. Make any additional adjustments if necessary. You can balance the air conditioning in the same manner... just reverse the process.

In addition to the air outlets, your house will have at least one return air grill per floor. Many houses have more than one on each level. Neither these nor the heat registers should ever be obstructed by furniture, drapes, or other objects.

Filters – Your furnace and the heating/cooling system have been designed for use with a disposable, open-weave, glass fiber filter. This filter is considered to be an ‘equipment’ filter and is intended to prevent construction debris and larger particles from getting into the blower chamber of the furnace. The filter is not intended to clean the air in the house. The use of high density filters such as those available from 3M is strongly discouraged since they reduce air flow drastically which in turn adversely affects heat distribution and equipment efficiency.

Insulation - Your home has been insulated so that you can regulate the inside temperature in a cost-effective manner. Open doors, windows, and fireplace flues, along with clogged filters can negate the effect of insulation and cause inadequate cooling (or heating).

Annual Inspection - Like any heating system, a central air-conditioning system should be checked and cleaned periodically by a professional (see your instruction manual for the frequency of this care).

### **Fireplaces - Gas Burning**

When cleaning the Fireplace glass, do not use any Ammonia-based products, such as Windex. These products leave a thin film on the glass that, when heated, will bake a brown, crust-like layer on the glass. You can purchase an appropriate fireplace window glass cleaner at your local hardware store.

If your fireplace mantle is a pre-finished white or a lighter coloured wood grain, it is important to run the fan installed inside the unit. If these mantles continue to heat up with no circulation, the finish on the mantle will become slightly discoloured.

Your fireplace can be operated by two single switches located on adjoining walls of the room. One switch will ignite the flame, the second switch will turn the fan on inside the unit. Note: The fan will ONLY run once the fireplace has reached 130F.

Direct vent gas fireplaces are sealed units, air is drawn from the exterior for combustion and exhausted directly to the exterior. Do not remove glass except to clean. Follow manufacturer directions and do not attempt to burn any other materials.

**KEEP CHILDREN AWAY AS SURFACE TEMPERATURES CAN BECOME VERY HIGH**

# Plumbing

## General

Plumbing systems in residential houses must be designed and constructed to fulfill the following functions:

- Provide potable water (both heated and unheated) for washing, bathing and laundry
- Discharge wastes to public or private sewage disposal systems
- Be integrated into the structural framing of the house

The intention of the plumbing and electrical provisions of the housing code is the safe and reliable distribution of water and electricity throughout the building.

Your new home has been equipped with quality plumbing fixtures that should provide a lifetime of use, given reasonable care.

The surface of your plumbing fixtures are smooth and glossy. Harsh, abrasive cleaners will eventually wear down this surface, making the fixtures dull and the finish porous. Since all household cleaners are slightly abrasive, use them in moderation with plenty of water. Avoid steel pads and products with ammonia. Damage caused by improper maintenance are not warranty items.

Please try to minimize the amount of grease, fat and other cooking wastes that pass through the plumbing system. Not only will the continued practice tend to clog the inside of the pipes, it will also have an adverse affect on the municipal sewage system.

Normally any plumbing problems associated with construction will become evident within the first two weeks of occupancy. Beyond that, it is most likely created by the homeowner. Avoid using the toilet as a garbage can. The most likely cause of toilets becoming plugged are the disposal of lint, rubbish, "disposable diapers", sanitary napkins, excess amounts of toilet paper, facial tissue, paper towels and

Q-Tips. We have also found the occasional child's toy. If your toilet fails to flush properly, consider the above likely causes and try the use of a toilet plunger before calling Service. If the blockage was created by a "domestic item" you will be invoiced for the work performed, as it is not a warranty item.

## **Faucet Repairs**

Faucet washers, because their life expectancy is affected by usage, are not a warranty item. Forcing faucets to close tightly will often result in cuts to the washer, causing leaks. Turn the faucet just enough to stop the flow of water.

Many household faucets are of the washerless type. This may mean that there are no washers to replace, but that does not mean there will be no maintenance required.

If a compression faucet leaks from under the handle, the likely cause is a worn "O"-ring. If the faucet drips from the spout, it is likely a worn washer. If you have a washerless system, you can buy replacement parts at most hardware stores, and complete instructions are normally on the back of each package. If you have not done any plumbing repairs in the past, we would strongly suggest you visit your local library prior to tackling any plumbing jobs yourself. They have excellent materials for the do-it-yourselfer.

Whether you are changing a washer or a washerless assembly, the first thing to do is to turn the water supply off to the fixture in question. If there is not an individual shutoff valve, you must turn off the main water supply. This will be located in the basement, often in the utility room. Once the water supply has been shut off, turn on the faucet you wish to service, and open at least one other valve in the house - preferably in the basement, such as the laundry taps. This will help ensure the water line has been properly drained before you begin.

We know of one individual who shut off the valve to the hot water tank, then proceeded to remove his kitchen deck set - needless to say, there was water everywhere before the main water supply valve was located and shut off. If in doubt, ask for help before you start.

## **Cleaning Aerators**

Your bathroom and kitchen faucets have aerators that break up the water flow. These should be cleaned periodically since dirt and scale can build up in them.

To clean or replace an aerator, close the faucet and put the drain plug in the sink - in case you drop something. For this one repair, there is no need to shut off the water supply. Fit the taped (masking tape or electrical tape is ideal) jaws of a pair of adjustable pliers onto the aerator and give the pliers a sharp clockwise turn to loosen it; then unscrew the aerator from the faucet by hand. Take the washer and screen out of the aerator noting their order for later re-assembly. If any part is worn, replace it. Soak a dirty screen in vinegar for a few minutes; then scrub it with an old toothbrush and rinse it. Reassemble the aerator and screw it onto the spout by hand; then use the pliers to tighten it. Do not over tighten. The same instructions will apply if you wish to change shower heads.

## **Bathtubs, Sinks & Showers**

Vitreous China and Porcelain enamel: The surfaces are smooth and glossy like a mirror and harder than steel, but they are not indestructible. Carelessness causes chipping, scratches and stains. A blow from a heavy or sharp object will chip the surface, and scraping or banging metal utensils will gradually scratch and dull the surface. Shiny new fixtures can also be dulled or stained within a short time through improper or excessive use of strong abrasive cleaners. Most household cleaners are mildly abrasive but are safe if used with plenty of water. A non-abrasive cleaner is safer. If you prefer a dry material, baking soda is non-abrasive.

Acrylic Tubs or Sinks: Do not use powders or abrasive cleaners (Ajax, Bon Ami, Comet, etc.) to clean the unit as they may scratch and dull the tubs surface. Liquid cleaners (Mr. Clean, Formula 409, Ivory) or others with similar chemical content should be used.

Avoid allowing caustic drain cleaners (Drano, Janitor in a Drum, Liquid Plumber, etc.) to stand on the surface. When these are used, clean the tub thoroughly after pouring them into the drain.

**Stainless Steel:** Stainless steel fixtures generally resist staining and require a

thorough scrubbing only occasionally. Use a non-abrasive cleanser or a commercial stainless steel cleaner. Products such as Cameo are excellent for maintaining chrome fixtures.

**Plastic and Other Substances:** Plastic and other substances (eg. Marble resins) usually will respond to a non-abrasive cleaner, but the best approach is to check with your plumber contractor to see what is recommended for the particular material in question. Special commercial cleaners are also available.

**Glass Shower Enclosures or Stalls:** To clean glass shower enclosures, an ordinary dishwashing detergent (not soap) will do a good job unless hard water minerals have built up. If such a build-up has occurred use a commercial glass cleaner.

**WARNING:** Use ample ventilation, avoid breathing the vapour from the spray and wear rubber gloves.

**Food Stains:** For most food stains, use a mild solution of chlorine bleach (about 3 tablespoons to a quart of water), and rinse well. For stubborn stains wait 5 minutes before rinsing. (Do not use chlorine bleach on stainless steel). You can also use a paste of equal parts of cream of tarter, 6 percent hydrogen peroxide and a household cleaner. Leave paste on stain for 10 to 15 minutes before rinsing.

To prolong the life of bathtubs and sinks, follow these precautions:

- Do not let food waste stand in the sink
- Do not use bathtubs or sinks to hold paint cans, trash, or tools, when you are redecorating; cover them when you are painting walls and ceilings.
- Do not step in a tub with shoes on for any reason. Shoe soles carry hundreds of gritty particles that will scratch the surface.

By observing these suggestions and using proper cleaning techniques, bathtubs and sinks will retain their newness and luster for many years. However, once damage has occurred, the best plumber in town cannot undo it completely.

If you should accidentally chip your sink or tub, the chip should be touched up as

soon as possible. A matching touch-up enamel can be obtained at your nearest plumbing supplier.

## **Plugged Drains**

Today's conservation regulations require that we install "Low flow" or "water saver" toilets in all new homes. These toilets use approximately 1.6 gallons or less per flush. Older toilets used as much as 5.5 to 7.5 gallons per flush. While the new toilets conserve our water resources, they are not as efficient as the older toilets. At times; two flushes will be required to clear toilets of debris. Also, you may find that if you hold the flush handle in the down position during the flush for 3 seconds, more water will be available and the toilet will clear more efficiently.

Chemical toilet cleaners that are installed in the water tank should NEVER be used. This includes the popular blue chlorine "pucks". Since most of these chemicals are highly corrosive, they can severely damage the working parts of the tank. As a result, water will leak from the tank to the bowl causing the toilet to run continually. It may also result in leaking from the tank onto the washroom floor. Use of these chemicals in the tank will result in voiding the manufacturer's warranty.

The most common cause of blocked drains in modern toilets is:

- Tampons and other feminine hygiene products. These items are extremely absorbent and expansive.
- Toys and other objects that are placed in toilets by small children.
- Kitchen paper towels. It is a good rule to avoid storing kitchen paper towels in bathrooms. If the towels are in the bathroom they will, eventually find their way into the toilet. These towels are designed to be strong when wet, unlike bathroom toilet tissues, which disintegrate when wet.
- Q-Tips

Most blockages in plumbing drains, including toilet drains, are progressive; they begin slowly and get worse over time until the drain is completely blocked. To avoid clogged drains, use a plunger at the first sign of a slow drain. This simple remedial step will prevent most serious drain blockages. If you are not aware of how to use a plunger, please inquire at the retailer where you purchased it. They will be pleased to demonstrate how to maintain your toilets.

## **Sinks**

Next to dripping faucets, the most frequently encountered home plumbing problem is blocked drains. The first step to take when a blockage is encountered is to check other drains in the house to determine whether the main waste line itself is blocked. If only one sink is blocked, you know it is a localized problem.

To free a stopped-up sink, plug the fixture's overflow vent and use a plunger. Remove the stopper, cover the cup of the plunger with water, and stroke with up and down motions. Any particles drawn up into the sink should be removed, then continue until the line is clean. If this doesn't work, scoop out all the water and try a chemical cleaner. The same procedure will work with a toilet, except there is no vent to plug. To avoid clogged drains, chemical cleaners should be used at the first sign that water drainage is slowing down in fixtures. Be sure to read the instructions carefully, including antidote and safety precautions - and keep them safely out of the reach of inquisitive children. When using chemical cleaners, you should wear rubber gloves, protect your eyes, and make certain that you never use a plunger immediately after using chemicals; your skin can be severely burned by liquid that splashes back. Give the cleaner plenty of time to do its job. It is also a good idea to have someone else in the house when you use any potentially dangerous materials, in case you need assistance quickly. A little advance planning can save you a lot of grief later. Be careful not to mix cleaners - the mixing of some standard household cleaners can give off poisonous gases.

## **Toilets**

The water level in the toilet tank should be 1/2 to 1 inch below the top of the overflow valve. If the water is too low, causing incomplete flushing, adjust the float arm to raise the water level. If the water level is too high, running down the pipe and into the toilet continuously, inspect the ball; if it is more than half submerged in water it may be punctured, and should be replaced. Otherwise, adjust the float arm to lower the water level. If problems persist, you may need to consider replacing the float assembly.

If only one toilet is plugged, the problem is not likely with the plumbing system, but with that one toilet. The first thing to do is try using a plunger to force the blockage down the waste pipe. If that does not work, try using a "snake" to break up the

blockage. Both of these are readily available at most hardware stores and building supply centres. When using the snake, be careful you do not scratch off the enamel surface. Of course, the best method is prevention. (see 'Plugged Drains', page 51)

## WHEN ALL ELSE FAILS . . .

If you've tried everything you can think of without success, the obstruction may be between the toilet and the main cleanout in which case the toilet itself may have to be removed. You may wish to hire someone to do this for you. If the obstruction is between the house and main sewer, a professional is required. They have the specialized tools and expertise for clearing clogs - which may even be caused by tree roots. They can also do so with a minimum of fuss and inconvenience to the family.

### **Sump Pumps**

Some municipalities require that a house be provided with a sump pit and/or pump, while others do not. A sump pit is a large container positioned below the basement floor level, and can be connected to the weeping tile around the foundation. Should the water level around the foundation get too high, the hydrostatic pressure may force this water through the foundation. Should this happen, the purchaser can have a sump pump installed inside the pit. Once installed, the lining in the pit can be broken, allowing the water from the weeping tile to enter the pit. The pump then discharges this water into the storm sewer or to the exterior, where surface drainage will help carry it away from the house. In municipalities which require a sump pit and pump, this pump will be fully operational when you move in. Never puncture the pit liner without first ensuring a serviceable and functional sump pump is installed and ready to discharge the water that enters the pit. Do not stack boxes on top of the control arm

Due to the drainage characteristics of some sites, many sump pits and pumps will never be put to use. However, as the weeping tiles around the foundation terminate in the pit, there will be a small amount of seepage into every pit. To keep the pit clean and odour free, simply put 1 cup of Javex and 3-4 gallons of water into the lid opening by the sump motor. Lift up on the float arm of the pump and allow the unit to run for 30 seconds. Following this process once a year is generally sufficient.

## Hot Water Tank

The water heater must be able to provide an adequate supply of service hot water with a temperature up to 48C (120F). Building code requires installation of a temperature control valve which has a max. temperature range of up to 48C (120F).

(NOTE: At 130 degrees F, a serious burn can occur in 30 seconds. At 140 degrees, only 5 seconds are required. These times may be reduced by 50% or more for children under the age of 5 and some adults over the age of 65.)

Each year, thousands of people are needlessly burned by tap water being too hot. As a general rule, a child's bath water should not be higher than (38C) 100F. Before placing a child in the bathtub, check the temperature of the water by moving your hand through the water for a few seconds. If the water feels hot, it is too hot for the child. Another method is to place your elbow in the water. While not quite as easy to do, the skin on the elbow is more sensitive than your hand.

You may wish to turn the water heater down if you are going on a long vacation, as a matter of economy. Remember when resetting the temperature, not to set it so high as to cause a possibility of scalding. Not only is it unsafe, it can also reduce the life expectancy of the water heater. The principal causes of tank lining damage are excessive hard water and excessive water temperatures.

If the tank stops working:

- Check the circuit breaker
- In the case of a rental water heater, call the utility company
- Remember that there is hot water under pressure in the tank, so be sure you know what you are doing if you attempt any service work yourself. If it is a rental unit, do not do any work on it yourself.

Over time, sediment may build up inside the water heater, which will settle to the bottom of the tank. This will act like a layer of insulation, making it more difficult to heat the water, and using more energy to do so. This sediment can easily be removed by opening the valve at the bottom of the hot water tank. Let the water drain away until the water runs clear. In hard water areas you may wish to do this

every 6-12 months. Before you start, ensure the water heater has been set to a cool temperature long enough for the water to cool down.

The main causes of tank lining damage are hard water and overheating. If super hot water is needed for special purposes, be sure to reset the tank dial to normal when finished. It is advisable to turn the water temperature down, or switch off the tank when going on vacation.

Under the cover plates you will find reset buttons and adjustable temperature settings. When making adjustments, be careful not to contact adjacent wire ends on terminals located near the temperature setting screw. Should the tank cease to operate (the unavailability of hot water), first check the fuses or breaker panel before calling a plumber, electrician, or the appropriate utility or fuel supplier in the case of a rented tank. If hot water is discoloured, the probable cause is sediment at the bottom of the tank. This sediment has an insulating effect, especially with immersion type elements, causing the heaters to operate longer than necessary. This results in an increase in energy consumption and cost. Sediment can usually be removed by opening the valve at the bottom of the tank and using a piece of stiff wire to remove the blockage. Be sure to shut off the power and close the cold water supply valve to the tank before removing the valve.

The lower the temperature setting, the less fuel you will use, which could produce considerable savings on your utility bills. You may wish to further increase your savings by reducing the temperature setting if you will be away on vacation for an extended period of time.

Additional savings will result from putting an insulation jacket on the water heater. On gas heaters be sure the air intake is not obstructed.

Some people still have a tendency to turn the water heater down at night and back up in the morning; there is no cost savings to this.

Avoid storing anything near the heater that obstructs the flow of air or creates a fire hazard.

## Flexible Plumbing Systems

A recent change in some of our homes involves the installation of water supply systems using AQUAPEX - Professional plumbing Systems. Your home has this flexible white tubing rather than the traditional Copper tubing and fittings. This unique material is unlike any plastic or metal tubing made today. It is durable, flexible and able to withstand extreme temperatures and pressures. The fittings and tubing, alike, are made from materials which have been utilized for more than a decade in the manufacturing of medical and food processing components.

AQUAPEX has many impressive characteristics. It has no harmful ingredients that could potentially add toxins to the water. The product will not corrode or scale. Furthermore AQUAPEX provides a sound insulation against unpleasant noises such as “water hammer”.

One serious concern, specific to this region, is the potential for freezing water pipes. While no piping is totally freeze-proof, AQUAPEX is remarkably freeze resistant, and is not susceptible to damage caused by freezing.

When altering the original plumbing of your home, it is imperative that the work is done by experienced and licensed professionals.

### Pipes

Noisy Pipes - Noise in the pipes can be caused by a variety of reasons. Among the most common are a worn washer, a loose part in a faucet, or steam in the hot water pipe. The condition causing noisy pipes should be corrected promptly because sometimes the noise is accompanied by vibration. A strong vibration can cause fittings to loosen and leak.

Frozen Pipes - To prevent pipes from freezing, never leave a house unheated during cold weather. During an extended period of severe cold, provide at least a little heat for unused rooms and baths that are not generally heated. Ordinarily antifreeze will provide protection for toilets and drain pipes, but it cannot be used in the water distribution pipes.

If a pipe should freeze, proper defrosting may prevent damage. The pipe must be thawed slowly to prevent the formation of steam, which could cause it to burst.

1. You should first restore heat to the affected part of the house. The pipe is most likely to be on an outside wall exposed to winter winds.
2. Open all faucets connected to the line so that steam can escape if any forms before thawing.
3. Begin the thawing at the frozen point nearest the faucet. A thermometer held against an exposed pipe helps to locate this point.
4. Thaw using one of the following methods:
  - A heat lamp set at least 6 inches from a plasterboard or panel-type wall will thaw the pipes behind it.
  - In some houses the baseboard panel can be removed and the nozzle of a hair dryer inserted with the warm air directed parallel to the pipes.
  - A hair dryer or heat lamp is also suitable for defrosting exposed pipes. Again the air from the hair dryer should be directed parallel to the pipes.
  - A soldering iron or a regular clothes iron set on warm may be strapped to an exposed pipe for safe thawing, but be sure that the iron touches only the pipe. (NOTE: Only for copper water lines, NOT plastics pipes.)
  - If a sink trap is involved, boiling water poured into it may solve the problem.
  - Small cooking appliances can be set under exposed horizontal pipes. Be sure the appliance does not touch the pipe.
  - You can rent a heat cable to wrap around the pipe.
5. As the pipe thaws, move the source of heat toward the frozen area until the job is complete.

## Electrical

As Electrical code changes, your new home may include some additions that previously built homes did not have.

### Electrical System

We often receive calls advising us that one of the light switches in the living room does not work. Normally a switch will be wired to a wall plug for use with a table

lamp. Please check this prior to calling for service.

In many Master Bedrooms there will be two switches available. The one switch will operate the overhead light fixture, while the other will operate one of the outlets in the room. This second switch allows for the operation of a table lamp.

Most of us take a reliable electrical system for granted. In all likelihood, the only electrical service work you are likely to be involved in will be the replacement of burned out light bulbs. When replacing any burned out light bulbs, make sure you do not exceed the manufacturer's maximum wattage recommendations. A sealed light receptacle should not exceed 60W - the heat that builds up could cause the globe to crack, sending showers of glass below.

If an electrical outlet fails to work it is usually an indication that a circuit breaker has tripped. The most likely cause will be from having too many electrical appliances operating at the same time on a single circuit. It could also be from a faulty power cord or defective appliance. Electric motors also draw a surge of power when they start, and this start up surge may have tripped the breaker. It is possible to get circuit breakers and fuses designed to accept this initial startup surge.

Labels on service panels are designed to help you identify which circuit breaker or fuse to check for a specific outlet or light. These markings will fade with time, so it is a good idea to check them for legibility periodically.

Take a sketch of the layout of your house, and walk around each room, mapping out exactly where each outlet, switch, appliance and other electrical appliances are located. Don't forget to include the exterior outlets, as well as those in a garage (such as an automatic garage door operator).

Check to make sure all appliances and lights work, and using a portable light or tester, check the upper and lower outlets of each receptacle to ensure they all work. Then turn off one circuit, and going around the house, list all the appliances, outlets and lights that do not work. These will all be on the circuit that you have just turned off. Record these lines on the sketch with a number that corresponds to the number beside the circuit breaker/fuse. Turn that circuit back on, and repeat the above steps

for each circuit breaker. Keep in mind that the kitchen will have a number of split plugs, where the top outlet is on a different circuit than the bottom one. These split plugs should be listed as well. (Note that a circuit can serve more than one room or floor, and cover both inside and outside lights and outlets).

Post your map at the service panel for future reference - and do this before you have a need for it (see the section on emergencies).

You will notice in the bathroom or powder room a receptacle that is referred to as a GFI (see 'Ground Fault Interrupter' page 63). This outlet is specially designed to sense a fault, and shut off the power supply before someone gets a shock. They have two buttons, one labeled "test" and the other "reset." Periodically, push the test button, which will turn the unit off. Then reset it for use. Several outlets can be routed through this receptacle, so if an exterior, garage or bathroom outlet does not work, check the test/reset buttons either at that location, or wherever you have another one. (see 'Ground Fault Interrupter', page 63)

Before resetting a circuit breaker, reduce the load on the circuit (refer to the notes you made when you identified which outlets are on which circuit). Otherwise, the surge of power drawn when you restore power may cause it to trip again. If the breaker should trip again, regard this as a warning. Locate the source of the trouble (usually a faulty appliance or cord) and have the proper repairs made. If you suspect the problem is with the household wiring, contact Home Service if you are within warranty, or a qualified contractor. The last thing you want is a house fire. Do not let an amateur handyman alter your home wiring or repair your electrical equipment. Pay a little extra and have a qualified service technician take care of it.

When a circuit breaker trips, it breaks the electrical connection. The circuit breaker itself will move towards the "off" position. Unplug the appliance that caused the problem, reduce the electrical load on the circuit, then move the circuit breaker fully off, then back on. Just moving the breaker to the "on" position may not be enough - always move it fully "off" first.

Never replace any circuit breakers or fuses (including those in your appliances) with one of a higher amperage. The size of the fuses are related to the size of the

electrical wire used, and a fuse of the wrong type could result in a fire. Generally speaking, fuses greater than 15 amps should never be used in ordinary lighting and receptacle circuits. If fuses or circuit breakers keep blowing or tripping, then the circuit is overloaded, defective or has a defective unit plugged into it and must be checked by a qualified electrician.

Flexible extension cords should be checked regularly for:

- Bare or badly deteriorated condition
- Cords running under rugs
- Cords nailed to baseboards, door and window frames, etc.
- Cords with splices. Splices in electrical extension cords are not permitted by your local utility provider.
- If a cord heats up when an appliance is in use, the cord should be checked for possible problems. It will only heat up if it is carrying more current than it was designed for.

When replacing a cord set for an electrical appliance which has a heating element (such as a kettle, iron, toaster, etc.) try to purchase the set made by the manufacturer of the appliance. If it costs a little more, that is because the attachment cord for such an appliance is a special heater cord, designated as HPN.

Interference on radio or television receivers may be caused by poor electrical connections in the wiring system. It may also be caused by some electronic games and appliances, or your neighbour may have just connected some amateur radio equipment that is causing a problem. If you are unable to determine the source, call an electrician to have the system checked.

Do not add to your electrical system without having a qualified electrician check your work. Not only is this potentially dangerous, it may nullify both your electrical warranty and your home insurance policy.

Avoid creating an "octopus" with multiple connections to an electrical outlet. Each 15 amp circuit is designed to permit 12 outlets and/or lights. If you exceed this limit, you risk the possibility of problems.

Finally, do not handle cords, appliances, fuses, circuit breakers, etc. when your hands are wet or the floor you are standing on is wet. Never touch anything electrical (including telephones) when you are in the shower or bath tub.

NEVER ATTEMPT TO WORK ON THE ELECTRICAL POWER HOOKUP ENTERING THE HOUSE BETWEEN THE UTILITY WIRES AND THE SERVICE PANEL. THESE WIRES CARRY HIGH VOLTAGE AND ARE DANGEROUS. NOTIFY YOUR LOCAL UTILITY COMPANY IF THEY ARE DAMAGED. NEVER WORK ON ANY CIRCUIT THAT CANNOT BE DE-ENERGIZED BY SHUTTING OFF THE MAIN POWER AT THE SERVICE PANEL.

Remember that children are naturally curious. You may wish to consider safety plugs for your electrical outlets. They are not expensive, but may be all it takes to prevent an unfortunate accident. This of course should not replace training children about the hazards involved in and around the house.

While we are on the topic of electrical problems, you may wish to ensure you have a supply of candles and matches, as well as flashlight and batteries. Not for any fault of the household current, but for possible emergencies during winter storms and such. A portable radio might be a good thing to keep on hand as well.

## **Central Vacuum**

The installation of a Central Vacuum system is an optional upgrade in many of our homes. Each vacuum location in the home is placed conveniently so the standard 30ft hose will reach each area of the house. A outlet will be placed within 3ft of each vacuum location to provide for a power-head central vacuum accessory. The central vacuum rough-in will terminate, generally, in the garage. There you will find an outlet with its own circuit designated to serve your central vacuum canister.

## **Telephones**

Normally the builder agrees to provide the rough-in for four telephones. This is strictly the wire inside the wall. The type of wire currently used for phone lines is referred to as Category 5, or 'Cat 5'. This wire can provide up to 4 potential lines, and relay high-speed DSL transmission. Should you wish to have the phone utility make the appropriate connections, they will install jacks for as many connections as

you wish, and charge you accordingly. If you require additional telephones or telephone services, please contact your phone company directly.

### **Cable**

As with the phone, the builder arranged for rough-in locations for cable. Similarly, you will only be charged by the utility when and if you request they make the appropriate connections. With the increasing popularity of high-speed internet access, your home will be roughed-in with RG-6 cable. This cable is capable of handling high-speed services and satellite transmission.

### **Utilities**

Do you know someone who, because of health or language problems, has difficulty paying their bills on time? Do you know someone who could mislay or misunderstand a collection notice? Ever gone on vacation and forgot to pay your utility bill in advance?

Some utility companies have set up a "buddy" system to assist in the payment of bills. This can be a friend, neighbour or relative. Should a problem arise, the "buddy" can act as a go-between to explain the situation to the customer or to help to make satisfactory payment arrangements. The third party will not be held responsible for the actual payment of the bill, but if the utility company can get in touch with the "buddy" it may help to settle a problem and eliminate an unnecessary disconnection of service.

If this sounds like a program that would help you or a friend, contact the utilities themselves and see if they offer such a program in your area.

### **Power Failure**

In case of a complete power failure, first determine if your neighbours have power. If your neighbours are also without power, notify the power company. If the power failure affects only your house, check the master switch and circuit breakers. If you cannot find the problem, call an electrician. The chances are that a short circuit needs to be fixed before it causes a fire.

If a power failure occurs in a house circuit, the circuit breaker box in the basement or garage should be checked to see if the breaker is in the "ON" position. If this is so, the Homeowner should contact the Service Department. If the stove does not operate, the fuses located as shown on the stove manual should also be checked in addition to the circuit breaker.

In all instances, when checking the circuit breaker, the switch should be switched off and on as the switch does not always move fully to the off position when the circuit is tripped. Circuit breakers should be tested in this manner at least once a year.

### **Ground Fault Interrupter**

The Ground Fault Interrupter (GFI) is a safety feature that is mandatory for bathrooms and exterior electrical receptacles. Note that usually one GFI in one bathroom is connected to the other bathrooms. Its function is to interrupt the electrical power in the event of exposure to water. It may take the form of a test and reset button right on a receptacle in one of the washrooms itself or there may be a separate breaker in the electrical panel with the GFI function.

Recently, the code required all kitchen sinks to have one GFI outlet within one meter at either side of the sink. these GFI outlets operate the same as those in the bathrooms, protecting you from getting shocked.

If the GFI is a separate breaker in the electrical panel, there is an "on", "neutral" and "off" position. When tripped, the breaker will go to the central neutral position. If the breaker is tripped, move the breaker all the way to the "off" position and then all the way to the "on" position to reset it.

If your home is equipped with a whirlpool, the GFI protection is located either in the bathroom as a device similar to a GFI receptacle without the outlet portion , or it may be located beside the main panel as an additional GFI receptacle marked for whirlpool use. Please do not plug any additional devices into this receptacle as it may overload the circuit. On some occasions, the GFI protection will be a separate breaker in the panel that has a test button as well.

## **Arc-Fault Circuit Interrupter (AFCI)**

A new addition to the code now requires that all outlets serving sleeping areas (Bedrooms) of the home must be protected by an Arc-Fault Circuit Interrupter (AFCI). You will find this AFCI breaker in your hydro panel. Next to the breaker switch will be a small button labeled “TEST”. It is advisable to press the test button once a year to confirm the breaker is working correctly. The AFCI detects and “Arcing” in the circuits serving these bedroom plugs. The Breaker will trip if wiring is done improperly, if the wire in the wall is accidentally cut or nicked, and if a device with a broken or damaged cord is plugged into an outlet. As this AFCI must be a highly sensitive device to protect your home, you may find it activated by small ceramic space heaters or electric motors (i.E. vacuum cleaners, etc.) If this happens, simply reset the breaker in the panel and plug the device into an outlet in the hallway outside of the room

## **Appliances**

For any appliances purchased through the Builder, please remember that you should ensure that they are level and remove all braces and packing blocks, if not already removed, before operating. Also read the service manuals enclosed with them and properly complete the warranty registration cards.

If any problems occur with the appliance during the warranty period, contact the manufacturer's agent, as we are not able to service appliances.

Whether you obtained appliances from the builder as part of your house purchase, or supplied your own, these units will require occasional maintenance. Be sure to check your owner's manual for specifics.

### **Refrigerator**

With the frost-free units on the market today, there is very little maintenance required other than occasionally changing a light bulb. Be sure to check your manual for specifics.

## **Stove**

Be sure to acquaint yourself with the controls, and ensure that everyone in your household is aware of the potential danger of working near a hot stove. We know of some people that even after using the same stovetop for 15 years, get confused as to which dial operates which burner. As a safety precaution, do not place anything on a burner that you do not mind getting heated.

If the stove fails to work at all, check the main circuit panel. Flip the appropriate breaker fully off, then back on. (See 'Electrical Section' page 57). If this does not restore power, check the individual appliance fuses (your manual will show you where these are). If only one element does not work, and the fuses are okay, the burner itself may need replacing. In most cases, you can pick up the replacement parts and do the work yourself. Be sure you disconnect the power to the appliance before working on it. If the appliance is still under warranty, contact the service department listed with your warranty papers. Of course, if it is beyond the warranty period, and you do not wish to do the work yourself, you can always check the yellow pages (or other directories) for assistance.

## **Range Hoods and Exhaust Fans**

Unvented range hoods have a filter that acts as a grease trap, and another one with granules of activated charcoal. This charcoal filter should not be cleaned, but could be reactivated by baking the filter in a hot oven for about an hour at the highest possible setting. Beyond that, you need to buy a new one every couple of months.

With a vented range hood, you still have the grease trap type filter, which should be cleaned regularly in hot water and detergent.

Periodically check the condition of the flapper outside, checking that it is in good condition, free to move, and not being used as a bird nest. While you are outside, check the condition of the vent for the clothes dryer at the same time.

## **Dishwasher**

If you have a dishwasher, be sure to check the manual for recommended maintenance and operation.

Due to Building Code regulations, some homeowners in Guelph and Cambridge may need to alter their dishwasher hookups. In these areas, the supply line provided under the sink is a 1/2 inch copper line. In order to connect a standard 3/8 dishwasher line, you will simply need to provide an adapter fitting these extra fittings can easily be purchased at any hardware store.

If you requested a dishwasher rough-in (RI), you can expect to find a wire looped at the main service panel, but not connected. The other end of this wire will be under the floor in the vicinity of the RI location. There is usually a cabinet, complete with doors and shelves, in the dishwasher RI location. Once the cabinet has been removed and the toe kick cut, the dishwasher should just slide in. Be sure to have the appropriate electrical and plumbing connections made by qualified personnel.

### **Washing Machine**

These days there appears to be very little to go wrong with washing machines. Because anything mechanical will eventually need servicing, a little preventative maintenance will go a long way. At the first indication of unusual noises, you should have the unit checked. This of course applies to any of your appliances.

### **Clothes Dryer**

The clothes dryer is another one of those appliances that you always take for granted - until it breaks down. Again, you can minimize the repair bills with a little planning.

When you moved into the house, there was a dryer vent in the wall. It is up to you to connect the dryer to this vent. (Be sure to check the section on Condensation if you are operating the dryer unvented or plan to use a heat saver unit).

The easiest type of connection, and the least expensive, is the flexible tube type that is readily available in most hardware and building supply centres. The main advantage of this is its flexibility - it can easily go around corners, and be tucked out of the way. At the same time, the main disadvantage of this is its flexibility - the ribbing can cause aerodynamic drag, reducing the dryer's effectiveness as well as putting undue strain on the motor. It also tends to let lint and condensation settle in the crevices and eventually clog the system.

Although it is more expensive and more cumbersome to install, you should consider using the smooth piping (usually available wherever the flexible hose type is sold).

On your list of things to do, you should periodically check the connections in case the piping should become disconnected from the dryer, and you end up using an unvented system. Also check the condition of the exterior vent cover for signs of wear, cracked parts and animal life. If the vent should become broken, have it repaired as soon as possible. The constant draft of unchecked cold air going back down the pipe into the dryer could damage the blower assembly which would eventually lead to a service call and replacement parts. Make it part of your spring cleanup list to disconnect the vent from the dryer and clean out any lint that has gotten past the filter and settled in the pipe.

Front-loading washer and dryer appliances can conserve substantial amounts of water. Due to the tremendous spin-cycle speed of these machines manufacturers recommend they be located on solid concrete floors. Occasional problems have been encountered as the machines can send rhythmic vibrations into the house structure. Tiles can be cracked and noisy operation can be bothersome.

## Countertops

### Countertops & Plastic Laminates

Care - Countertops are generally heat and stain resistant under proper care, but they should be protected from hot irons as well as pots, pans or baking dishes taken directly from an oven, broiler or burner. Countertops are also susceptible to scratching and scuffing from pottery, ceramic and certain types of dishware (eg. Stoneware). Always use a cutting board when using a knife as it may dent or nick the surface of the countertop.

Please note that metre joints are not waterproof, only water resistant, you can use candle wax to seal. Please see items listed below for maintenance.

Cleaning - Kitchen and bathroom cabinets (or vanities) should never be cleaned with harsh abrasive. Countertops or cabinets made of plastic-coated wood or metal may

be cleaned with a detergent solution or Windex.

To assure your countertops keep their looks, the following is recommended:

- Hot pans or activated electrical appliances should not be placed on laminated surfaces, protective insulating pads should be used at all times.
- Never use abrasive cleaners or steel wool to clean these surfaces.
- Do not allow household bleach to remain on the surface.
- Do not use the surface as an ashtray or cutting board.
- Avoid a concentration of water or wet cloths at or near junction of the counter top and back splash or other joints. Excessive water standing in the area of the seam may cause glue failure. Damage caused by excessive water in seam area is not warranted.
- Clean with a damp soapy cloth: for stubborn stains use a household solvent, rinsing thoroughly with clean water.
- For a high luster, use a good grade of lemon oil occasionally. Be sure to keep lemon oil and all other cleaning products in a safe place out of the reach of children.

### **Manufactured Marble**

Sinks made of manufactured marble are durable but also require care. As for any highly polished surface the use of abrasive cleaners and most chemical products is to be avoided.

### **Cabinets**

You should treat the cabinets as you would any other piece of wooden furniture. Because they are hinged, the hinge could eventually loosen. Periodically check all screws for tightness, being careful not to tighten so much that you strip the wood. If the hinge squeaks, you may wish to use a lubricant (such as WD-40), being careful not to get any on the wood surface.

Upon installation, all of your doors and drawer fronts will be properly adjusted. Due to the house settling and use, your doors and drawer fronts might require adjustment, the hardware has screws for this adjusting. If hinges are pushed farther than their limit the door will crack and are then not covered under warranty.

The wood grain in cabinets is natural and will not be consistent in each door as no tree is consistent, therefore the patterns you see are unique to your cabinets. Doors and drawer fronts cannot be replaced due to woodgrain differences.

Stain chipping or swelling is not a common occurrence in the cabinets. The main reason for this damage is caused by water, usually from wet cloths being left to dry over doors and drawers. Do not leave wet cloths to dry over cabinets. Always dry off doors immediately.

We recommend you wipe your cupboards down with a damp cloth only. Do not use any cleaning products on your cabinets as they may stain or fade the finish. Dry immediately.

Small scratches and chips in your doors can happen during shipping, installation or the everyday use in your kitchen. We try our best to ensure that upon completion of the installation that all chips and scratches are attended to. Our kitchen cabinet suppliers use the most technically advanced equipment available to produce cabinets of the highest aesthetic standards, finishings and coatings of improved fade resistance, consistent colour matching and excellent durability. However as in woodgrain patterns, wood colours vary from piece to piece, therefore colour variances can occur even though the stain has been applied evenly.

Follow the instructions outlined at the beginning of this section if the cabinets are finished with a plastic laminate.

## **Flooring**

### **Resilient Flooring**

Resilient floors include vinyl, asphalt and rubber. For daily care, remove loose dirt with a broom, dust mop or vacuum. Wipe up soil immediately, but if a spill or spot dries, remove it with a damp sponge, cloth or mop. To prolong the period between cleaning, occasionally wipe resilient floors with a damp mop. When floors are dull or cannot be refurbished by mopping, clean them thoroughly with a good detergent, diluted as recommended by the floor manufacturer. Use just enough mechanical action with a mop, cloth or floor scrubber to loosen dirt. Then remove the cleaning

solution, rinse the floor and let it dry. Some resilient floors are designed to never need waxing, but most of them require a coat of floor polish. Your flooring contractor can tell you what kind of flooring you have.

To preserve the appearance of tile or composite sheet materials such as vinyl, precautions against indentations from furniture should be taken. Furniture cups, which prevent heavy furniture legs from cutting or marking resilient flooring, are available at many stores as are smooth flat glides for lighter pieces of furniture such as chairs and small tables. Metal domes will mar the floor surfaces and should not be used on furniture legs. All resilient flooring is subject to some marking and should not be regarded as a material defect. Telegraphing is a situation that often arises with vinyl flooring, this is where slight bubbles appear visible.

Perhaps the most common flooring damage is caused by the purchaser moving the fridge and stove in and out during cleaning. Remember, the flooring is soft, and needs to be taken care of. In most cases there are extra pieces of the flooring left behind after construction. This was not left by accident, and should be stored somewhere in case of future service needs. Due to different dye lots being used, it may be difficult, if not impossible, to get a good colour/pattern match in the future. If you keep the smaller pieces, a patch job could be done in such a way that no one would know it had been patched. Your other option would be to replace the entire floor.

Since there are many people walking on the floor during construction, it is possible to have some small nicks. These are normally repaired with a vinyl weld material.

### **Hardwood Flooring**

Hardwood floors are made from kiln dried material but are subject to natural shrinkage and expansion. Lower household humidity during the winter, especially near the heating outlets, can cause the wood to separate slightly. Too high a humidity level, on the other hand, will cause expansion and may lead to cupping or swelling in the centre of the board. These movements may be related to the time of the year during which the flooring was installed and can vary seasonally. Please be advised some species of wood will darken rapidly (i.e. cherry) and some may be affected by UV light. Some species of wood are harder than others as well.

Parquet laminated wood block flooring sometimes has a tendency to "crack" or "pop" during expansion and contraction. Do not be alarmed. High relative humidity may cause this type of flooring to lift. This occurs especially during periods of hot humid weather - or if the house is closed such as when you are on vacation.

In order to keep its beauty and enjoy a great looking floor longer, follow these simple instructions:

- Regularly sweep or vacuum the floor to prevent sand or abrasive dust from accumulating and scratching the finish.
- Protect your floor from all sources of water. Wood expands when it absorbs water and contracts when drying. All spills must be quickly wiped dry in order to prevent stains and damage to the finish or to the wood.
- Wood and water don't go well together.
- Over time, natural and artificial lighting will slightly darken the wood grain. This phenomenon with wood surfaces is normal and natural. The lighter the colour of the natural wood, the more apparent this will be.
- Clean spills immediately. Using a damp (not wet) cloth or sponge, wipe up as much liquid as possible before it dries and becomes sticky. Spray some wood cleaner on the spot and wipe clean.
- Do not pour any cleaner directly onto the floor.
- Never leave any liquid standing on the floor.
- Avoid dripping mops which can leave extra water on the floor.
- Never use wax, oil-based detergent or any other household cleaner. These may dull or damage the finish, leaving a greasy film and making the floor slippery and more difficult to clean.

## **Carpeting**

Carpeting is relatively easy to maintain and a simple, regular care plan is all you really need. Weekly vacuuming will take care of most of the dirt that is tracked in, although some people prefer a light daily vacuuming of the traffic areas, and a more thorough job once a week. Be sure you clean up spills as soon as possible, before permanent staining occurs.

Perhaps once or twice a year you might wish to do a thorough job, moving all the furniture and either using a dry method (there are several powder cleaners on the market) or a wet method. Equipment can be rented for this (use the detergents recommended by the equipment supplier), or there are several commercial operations that would be glad to give you a quote on doing the job for you. It is important to avoid using soaps, ammonia, washing soda or any of the strong household cleaning agents. If in doubt, check with the carpet supplier or manufacturer about their recommendations.

With longer piles, there is sometimes a colour variation in the carpet. In most cases, this is just a case of the nap being brushed down by normal usage. By running your hand along the carpet to raise the nap again, the colour variation will usually disappear. Again, this is not a fault of the carpet, but a result of the way the nap falls as you walk on it, and the angle the light strikes it. Vacuuming can help alleviate this.

Berber style carpeting requires extra care when vacuuming. This carpet is made from a continuous series of loops. If the beater-bar on the vacuum cleaner is set too low, a loose strand could become entangled and pulled into the vacuum. The strand will unravel across the carpet like a thread being pulled on a sweater or garment. Often pets will “play” with the strands, resulting in similar damage. **THEREFORE ALWAYS ENSURE THE BEATER-BAR ON YOUR VACUUM CLEANER IS TURNED OFF OR RAISED TO THE HIGHEST CLEARANCE SETTING.**

If using a vacuum cleaner that uses bags, discard the bag when it is half full. The vacuum cleaner works on the principle of suction, and is designed to draw air into the bag - but it must have an "air space" in order to do this. If you fill up the air space where the vacuum is created, there will not be enough suction to draw in the dirt. You may vacuum in any direction, but the best cleaning action is probably obtained by working against the nap. If you want a uniform appearance when you are finished, you can always do a final run in one direction once the carpet is clean.

More information is available regarding seams and acceptable carpet installation practices at [www.tarion.com](http://www.tarion.com)

## Carpet Stain & Removal Chart

This chart covers most common household spills on carpets and fibers. If a stain does not come out, call a professional carpet cleaner immediately for advice. Some stains require specific chemicals and procedures best handled by experts.

On occasion dark stains may show up along carpet edging, at doors and on stair treads. Typically, this occurs as a result of candle burning, plug-in air-scenting products or cigarette smoke. The stains are soot (carbon) clinging to the carpet fibers as air currents wash across the surface. Please note the following cleaning procedures:

DISSOLVE THESE OILY TYPE SPILLS IN DRY CLEANING FLUID: (POUR DRY CLEANING FLUID ON A DAMP CLOTH BEFORE APPLYING TO STAIN.)

- |                                |                     |                 |
|--------------------------------|---------------------|-----------------|
| 1. Ball Point Ink              | 6. Oils             | 11. Shoe Polish |
| 2. Butter                      | 7. Grease           | 12. Tar         |
| 3. Cosmetics (except lipstick) | 8. Gum              | 13. Vaseline    |
| 4. Crayon                      | 9. Household cement | 14. Wax         |
| 5. Food Stains                 | 10. Metal Polish    |                 |

DISSOLVE THESE WATER SOLUBLE SPILLS IN DETERGENT SOLUTION:

- |              |                 |                   |
|--------------|-----------------|-------------------|
| Alcohol      | Fruit Juice (A) | Permanent Ink     |
| Beer (B)     | Gelatin         | Soft Drinks       |
| Bleach (B)   | Glue            | Soot              |
| Blood (AB)*  | Grass           | Syrup             |
| Chocolate    | Gravy           | Tea               |
| Carbon Black | Ice Cream       | Urine (B)         |
| Coffee       | Ketchup         | Vomit             |
| Crepe Paper* | Milk            | Water Colours (A) |
| Egg          | Mustard         | Wine (B)          |
| Food Colour  |                 |                   |

Some combinations of material spills may need both dry cleaner and detergent to dissolve all the ingredients. Apply the solution recommended for the group it

belongs to. If repeated applications produce no effect then apply the other solution and repeat until stain is removed.

- (A) APPLY A SMALL AMOUNT OF THE DETERGENT SOLUTION TO NEUTRALIZE THE ACIDITY OF THE STAIN.
  
- (B) APPLY A SMALL AMOUNT OF A VINEGAR-WATER (A VERY MILD ACID) SOLUTION TO NEUTRALIZE THE ALKALINITY OF THE STAIN.
  - IF YOU CANNOT DETERMINE WHAT WAS SPILLED, APPLY DRY CLEANING FLUID FIRST AND BLOT, REPEATING IF EFFECTIVE. THEN TRY THE DETERGENT SOLUTION AND BLOT, REPEAT IF EFFECTIVE.

### **Tile Floors**

Ceramic tile normally needs only a wipe with a damp sponge mop using a small amount of soapless detergent in warm water to stay clean and new looking. If necessary, a more thorough cleaning is possible with one of many specialty cleaners for tile. DO NOT clean ceramic tiles with a mixture of vinegar and water. Vinegar has an acid base and will gradually remove the glossy coating of the tile face.

To clean the joints between tiles, use a fibre brush and a mild cleanser. A special sealer for grout will make it more stain resistant. Staining agents should be mopped up promptly, even though they rarely affect ceramic tile.

Care should be taken to avoid moving heavy objects across a tile floor as the tiles can crack. Ensure that movers use a dolly or put plywood down on the floor before moving a refrigerator and stove.

### **Floor Squeaks**

The most common cause of squeaking floors is a result of the natural drying of construction lumber. As the wood continues to dry, moisture is released - which results in the physical shrinkage of the wood. The wood actually shrinks around the nails, resulting in a portion of the nail heads being raised above the surrounding wood. Now when you put your weight on the floor, as by walking, you force the two

pieces of wood together. The wood rubs against the nail, causing the squeak. The simplest solution is to locate the head of the nail (even by rubbing your hands over the carpet to find any high spots) and bang it back down with a hammer. This will force the nail deeper into the wood, removing the gap. No gap, no squeak. If this does not work (and you have made sure there are no other nails poking through), and you have access to the floor joist from below (ie. from the basement if a main floor squeak) you can add shims between the floor joists and the subfloor. This will also remove the gap between the two layers of wood, preventing the nail from rubbing.

## Safety

### Smoke & Carbon Monoxide Detectors

Under the Ontario Building Code, smoke detectors are now required in every home. Little up-keeping is needed but you should be aware of what steps to take. Check smoke detectors regularly to make sure they are in working order.

Current building codes now require CO detectors in every home. They are to be placed on every level where sleeping areas are present. They are to be mounted on ceilings. High concentration levels of carbon monoxide can cause death. If your CO detector alarm sounds, call the fire department. Open up the doors and windows to get fresh air into the house and turn off your ventilation system, including all exhaust fans, and get out of the house. (see 'Carbon Monoxide' page 79)

According to the Ontario Fire Marshall's Office, most fire deaths occur in homes where there are no working smoke detectors.

Smoke detectors have been provided on each level of your home near sleeping areas, and normally near the stairs. These units are "hard-wired" into the household electrical system, so there are no batteries to replace. If you install any additional units yourself, be sure to change the batteries regularly. You change the clocks every spring and fall - why not change the batteries at the same time? Remember, these are warning devices only, and do nothing to prevent fires. See the Emergency Section.

Can everyone in your home hear your smoke detector? If not, or if any residents are hearing-impaired, install additional detectors inside the bedrooms. For the hearing-impaired, smoke detectors are also available that are wired to high-intensity strobes that flash.

To ensure that your smoke detector continues to function, test it weekly following the manufacturer's instructions - which usually involves pressing a test button. In all cases, follow the instructions in the owner's manual. The manual should be kept in a safe place for future reference. Be sure that everyone in your household has heard the smoke alarm during a test, and that each one knows what to do if it goes off.

These units work by detecting ionized particles. Consequently, they do not only warn of smoke. High moisture, dust and accumulated dirt can all set it off. If the unit goes off with no apparent cause, disconnect the power supply (at the circuit panel) and vacuum the outside vents only. Be sure you reconnect the power when you are finished! If you have added additional battery powered units, you can vacuum the inside using the soft bristle brush (to remove excess dust). If you do not have a vacuum, an alternate method is to take a drinking straw and blow the dust out. If this does not work, call for service or take the unit in for servicing. Do not attempt to repair the unit yourself! If the unit is removed for servicing, replace it as soon as possible.

Just like everything else, smoke detectors do wear out. If you suspect your detectors are more than 10 years old, consider having them replaced.

How well your family responds when the detector sounds, depends on how well you've prepared them.

Make sure everyone is familiar with the sound of the detector's alarm.

## **Storage**

Set aside a storage area for children's bicycles, skateboards, toys and other play equipment. Many household accidents are caused by such items being left about. Unless designed for the purpose, attics and crawl spaces should not be used for storage. Such usage may overload ceiling joists causing ceiling cracks and disturb

ceiling insulation and air barriers. It may also interrupt the moisture resistance offered by the ground cover in crawl spaces. Access ways to both areas are to be used for service and inspection only.

## **Fire Safety**

- Plan escape routes. Know at least two ways out of each room. Agree on a meeting place outside your home where all residents will gather after they escape.
- Have you considered how your loved ones are to get out of the second floor rooms if the stairs are blocked off? It is possible to purchase emergency ladders that are compact to store, yet can be hung from a bedroom window quickly.
- Practice your escape plan at least twice a year, and teach every member of your household fire survival techniques.
- Crawl low under smoke. If you must escape through an area with smoke, crawl to the nearest safe exit on your hands and knees. Smoke and many poisonous gases rise. So keep your head 12 to 24 inches (30 - 60 cm) above the floor. (See the section on Carbon Monoxide).
- Stop, Drop and Roll. If your clothes catch fire, stop, don't run. Drop to the ground, cover your face with your hands, and roll over to smother the flames.
- When an alarm sounds, leave the building immediately and go to your meeting place. Then call the fire department from a neighbour's phone.
- Once you're out, stay out. Never return to a burning building.
- Although no one wants to admit they may be involved in a house fire, the possibility exists. By taking steps to prevent a fire from occurring, then taking steps for early detection, followed by a realistic plan of action, your safety and peace of mind are looked after.
- Fire requires three basic elements to ignite: fuel, heat and oxygen. Removing any one of the three will prevent the fire from starting, or will extinguish one that has started.

- Do not leave combustible materials next to heat sources; do not store flammable liquids (including solvents and paints) near the furnace; do not leave inside Christmas lights on when you are not at home; Etc.
- Do not leave the stove unattended, especially when cooking with hot oil or grease, or when using a self-cleaning function.
- Do not operate electrical appliances with faulty power cords; do not remove the third prong (grounding wire) from a power cord.
- Keep a supply of baking soda in the kitchen for use as a fire extinguisher, and consider having at least one fire extinguisher readily accessible. You may wish to have one in the basement and another in the kitchen. Baking soda (bicarbonate of soda) could be used to put out a grease fire if it is small, but do not use baking powder, which contains flour or starch and could cause the fire to spread, and never use water on a grease fire, since it also increases the chance of this kind of fire getting out of hand.

## **Cooking Fires – Fat, Grease, etc.**

- Turn off the heat.
- Never leave the pan unattended.
- Smother the fire with a tight fitting lid - or use a fire extinguisher.
- Do NOT use water or baking powder on a grease fire.
- Watch your clothes.
- Never carry a burning pan.
- If a fire starts in your microwave, close the door and unplug the unit. Opening the door will only feed the fire. Do not use the oven again until it is serviced.
- When cooking with grease, keep the pot lid handy to smother a small grease fire.
- Don't try to move or carry a pan in which there is a grease fire. Even though moving the pan is a common reaction when a grease fire is discovered, it often results in burns to the carrier and additional fire damage.
- If a fire is a big one, don't try to fight it - call the fire department.

## If Fire Breaks Out

Shout "FIRE." Alert everyone. Don't panic. Out you go. Get everyone out fast. Close doors. Don't take time to get dressed. Stay close to children and the elderly - they may get excited or confused, and try to reenter the building.

## Clothing Fire

Smother the fire. Don't run, it spreads the flames. Make the person lie down and roll in a blanket or coats. Gently beat the fire out.

## In All Fires



### *Ordinary Combustibles*

Fires in paper, drapes and upholstery require an extinguisher labeled "A"



### *Flammable Liquids*

Fires in fuel oil, gasoline, paint, grease in a frying pan, solvents and other flammable liquids required an extinguisher labeled "B"



### *Electrical Equipment*

Fires started in wiring, overheated circuit panels, conductors, and other electrical sources require an extinguisher labeled "C"

The first few minutes are vital. Keep calm, act quickly. Always have an escape plan. If you would like some assistance in developing an escape plan, or have any other questions regarding fires, contact the Fire Department, and ask for the Fire Prevention Officer.

## Carbon Monoxide

First it stops you from thinking, then it stops you from breathing. That in a nutshell is how carbon monoxide poisoning works.

Carbon monoxide is colourless, odorless and tasteless. It could be caused by something as simple as a bird building a nest on your chimney. If the nest prevents the CO (carbon monoxide) from escaping, the fumes could come back down into the house.

Carbon monoxide bonds with the hemoglobin in the blood, preventing oxygen from bonding. Symptoms of CO poisoning are pretty much the same as a bad case of the flu. Tiredness, headaches, nausea, dizziness, and eventually a feeling of confusion and disorientation.

Carbon monoxide gas can be anywhere and everywhere. CO gas is equal to or slightly lighter than air, and disperses evenly with the air in a room. Therefore, install this CO alarm where air circulation is best. DO NOT mount the CO alarm within one foot of the ceiling/wall or wall/wall intersection, or other dead air spaces.

Since most CO fatalities occur while families are sleeping, we recommend that you install at least one CO alarm in the hallway outside each separate sleeping area and one inside each bedroom or sleeping area.

We also recommend that you install a CO alarm on every separate living level of the home where household members frequently spend time, as well as in the basement, if bedroom in basement.

Here are some tips on how to avoid CO poisoning:

- Have a qualified service technician check the furnace and other fuel-burning equipment for safety and efficiency
- Do not operate a gasoline-powered engine, kerosene stove or charcoal grill in an enclosed area
- BBQ grills should never be used indoors, including in garages attached to a living area
- Check forced air vents and dryer vents for obstruction
- If you suspect carbon monoxide in your house, get everyone out and call the fire department

## What To Watch For

Indications that you may have CO in your house include:

- Persistently stuffy, stale or smelly air that never clears
- Very high humidity
- Soot around the outside of the fireplace, furnace or chimney

- No draft in the chimney
- Hot draft from the chimney into the house
- Smell of exhaust fumes

## **Circuit Breakers**

Circuit breakers protect the electrical wiring and equipment in your home. They are the safety valves of your home's electrical system. Every house has a master circuit breaker. Which is generally larger and separate from the other circuit breakers in the electrical panel. When the master circuit breaker is tripped, the electricity to the whole house is cut off. Circuit breakers may be reset by first switching the breaker to full off and then back to full on. See also "POWER FAILURE".

## **Building Permits**

As a general rule, any changes to the electrical or plumbing systems of the house require a permit. Do not consider this to be a money grab by the Building Department. There is a possibility that what you have in mind will not work safely or properly, and having an inspector review your plans can save you a lot of time, money and aggravation.

### **Why Do I Need A Permit?**

You will need a permit for any plumbing work with the exception of changing fixtures or simple repairs. Residents may normally do the plumbing in their own single family home if they can complete the Plumbing Application form without help. Otherwise all plumbing must be done by a master plumber. Contact your local building department for further information or clarification. No construction, alteration or conversion . . . shall occur until a building permit is applied for and issued. Starting construction without a permit is illegal and an offense under the Ontario Building Code Act.

As a general rule, any time you build a new home or an addition, do any structural repairs (such as adding dormers, balconies, canopies or rooms), adding a chimney, woodstove, fireplace, carport or garage, installing a pool or deck, building a shed larger than 10 square meters (108 square feet), installing plumbing or finishing your basement, you will require a permit. The reasons are threefold:

1. To prevent legal complications when trying to sell or re-mortgage your home
2. To ensure your project complies with the Ontario Building Code, Electrical Code, Plumbing Code and Zoning By-laws
3. To prevent unsafe conditions that may cause personal injury to the occupants or to neighbouring residents

By obtaining a building permit:

- Your project is inspected to verify compliance with the minimum construction standards,
- A measure of life safety and structural capability for the project is ensured,
- Person(s) you have hired to do the work are encouraged to produce a product that meets or exceeds the minimum standards as set out in the applicable Codes.
- You can obtain assistance from the Building Department on proper methods of construction. Going to your local City Building Department with the following information will enable the staff to process your application in a quick and orderly manner:
  - Scaled working drawings.
  - Up-to-date site plan (or survey) if you are erecting an addition (such as a deck) or installing a pool.
  - Manufacturers specifications for woodstoves or fireplaces.
  - Estimated costs.
  - Names, addresses and telephone numbers of contractors.
- Some Building Departments will require payment of the permit at the time of application, while others will require payment when the permit is picked up. Call first to find out if you need payment with the application before you go down.
- It is the homeowner's responsibility to obtain the permit, and to ensure the permit is posted and the approved plans are kept on the job site.

You can start construction only when the permit is in your hands, and is signed and dated by the Chief Building Official. NOTE: The fact that you have applied for a permit does not mean you can commence construction.

Calling for an inspection at the correct time is vital. A sheet is normally provided when the permit is issued which indicates which inspections are required for your project and the times when each inspection must be called for. NOTE: 48 hours notice should be given to your local building department to schedule any inspections.

### **When Do I Not Need A Permit?**

The following is a general guideline of work that is deemed not to be construction as defined in the Building Code Act and is exempt from the requirement to obtain a permit.

A building permit may not be required for the following:

- Wooden decks, with no roof, where the finished deck level is 24" (600mm) or less above finished grade.
- Skylights, provided not more than one rafter, joist or other similar structural member is cut or removed.
- Installing non-combustible cladding, excluding brick veneer.
- Window and door replacement.
- Add-on cooling systems, air cleaners, heat pumps or electric plenum heaters, in-line humidifiers and set-back thermostats.
- Changing or adding eavestroughs, kitchen or bathroom cupboards, landscaping, driveways.

### **When Do I Need A Permit?**

The Ontario Building Code has certain restrictions concerning ceiling heights, minimum room and hall dimensions, bedroom window sizes, heating and ventilation, etc. Not only will building officials review your plans prior to construction, they will check your progress to ensure you will end up with a safe addition.

Alterations to heating systems that do require a building permit will include:

- Replacement furnace when converting to different type of fuel.
- Replacement furnace when changing from conventional to high efficiency furnace.
- Changes in ductwork.

Flooring must be water-resistant in bathrooms, kitchens, laundry rooms, the main entry to the home and general storage areas. Floor finish types that are acceptable in these applications include resilient flooring, felted-synthetic-fiber flooring, concrete, terrazzo, ceramic tile, or mastic. Standard carpeting is not acceptable in this application.

Resilient flooring used on concrete floors may be asphalt, rubber, vinyl-asbestos, unbacked vinyl, or vinyl with inorganic backing. The adhesive for these types of flooring must be waterproof and alkali-resistant.

We received a call from a homeowner who wanted to remove a post from the middle of the basement floor to make room for a larger family room. The idea was good, except that the post in question carried the load for the main floor, second floor and roof. By removing this post, there would be nothing to keep the house up. By applying for a permit, this type of problem can quickly be identified.

The primary consideration of the Building Code is the safety of occupants, both under normal conditions of use and under emergency conditions, such as in the case of fire. Under normal conditions of use, means of egress are intended to be functional and permit occupants to safely perform tasks such as moving furniture, carrying in groceries or serving food.

Under emergency conditions, the Code intends that occupants are provided with a safe means of egress to exit from the dwelling. Based on this intent, the means of egress must not only be safe with respect to pedestrian movement, but must also be properly illuminated. Keep this in mind when planning renovations.

Depending on the work you are proposing, you may also need approval from other agencies for:

Electrical work	Ontario Hydro
Telephone connections	Bell Canada
Cable connections	Local cable company
Sewer connections	Public works
Water or gas connections	Local Gas Company

## Conclusion

This manual has been prepared to help homeowners understand their new home. Many of our purchasers are first time buyers. Having come from rental situations, some of the requirements of a new homes basic maintenance may be totally alien to them - but it is now their responsibility. They can no longer call for the building superintendent for service (especially after the warranty period has expired), but must face this challenge themselves.

To those second and third time purchasers, we hope this guide has been of benefit, perhaps reminding you of things you had since forgotten. We hope you have been patient enough to read through this guide, too. You already know that most of the problems that were mentioned rarely occur, and we hope that those of you who have just bought your first home will come to understand this as well.

Your home has been constructed with the aid of many skilled craftsmen, using quality materials. With reasonable care, and some basic maintenance, it will provide you and any subsequent purchasers with years of trouble-free enjoyment.

We wish you the very best, as you turn one of our houses into your home.

Thank You

### **Reid's Heritage Group *HOME SERVICE***

Providing excellence in after sales service and a commitment to customer satisfaction.

Servicing:

**Kitchener/Waterloo/Cambridge/Guelph**

Your contact number: (519) 658-6656 Fax: (519) 654-9746

**Collingwood**

Your contact number: (705) 444-2587 Fax: (705) 445-7699

**Owen Sound/Kincardine/Port Elgin**

Your contact number: (519) 832-6656 Fax: (519) 832-6659

Please see the enclosed emergency contact list at the front of this manual.









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